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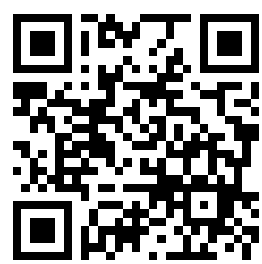
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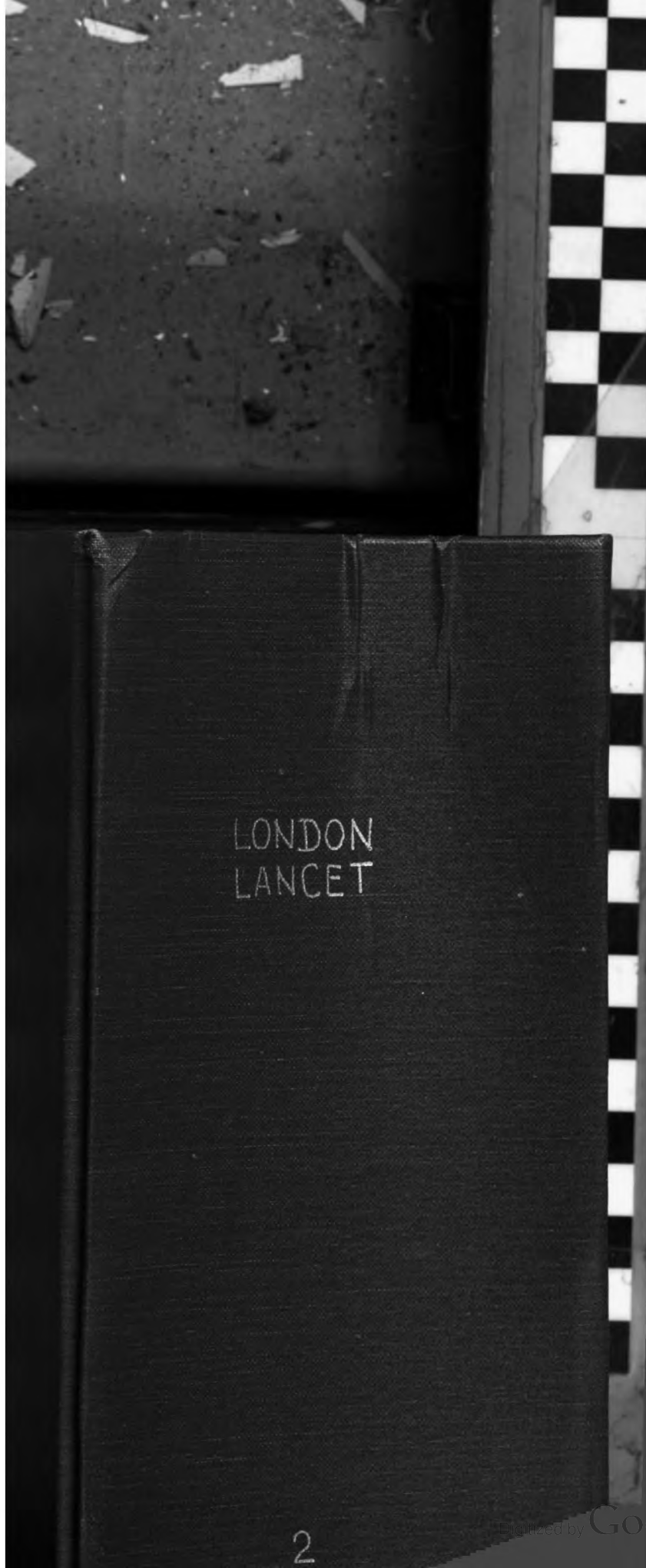
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The Lancet.]

THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

IN TWO VOLUMES ANNUALLY.

VOL. II. FOR 1895.

SEVENTY-THIRD YEAR.

EDITED BY THE PROPRIETORS:

THOMAS H. WAKLEY, F.R.C.S. Eng.,

AND

THOMAS WAKLEY, Jun., L.R.C.P. Lond.

LONDON:

PRINTED AND PUBLISHED BY THE REGISTERED PROPRIETORS, AT THE OFFICES OF "THE LANCET," No. 423, STRAND, AND Nos. 1 & 2, BEDFORD STREET, STRAND.

MDCCCXCV.

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PRINTED and PUBLISHED by the REGISTERED PROPRIETORS at No. 423, Strand, and Nos. 1 and 2, Bedford-street, Strand, in the Parish St. Martin-in-the-Fields, Westminster, in the County of London.—Saturday, Dec. 28th, 1895.

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The Cavendish Lecture
ON
DREAMY MENTAL STATES.

Delivered before the West London Medico-Chirurgical Society on June 20th, 1895,

BY SIR JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S.,
LORD CHANCELLOR'S VISITOR.

MR. PRESIDENT AND GENTLEMEN,—I have first to thank you for the honouring invitation conveyed by your council to deliver this Cavendish Lecture—an annual discourse established, I understand, to perpetuate the memory of the noble and benevolent peer by whom the West London Hospital was founded, but the title of which also recalls another scion of the same house — that great, silent, sagacious Henry Cavendish—who a hundred years ago helped to found that natural philosophy to which modern medicine owes so much, and one of whose experiments actually foreshadowed our most recent scientific triumph—I mean the discovery of argon. But while thanking you for your invitation I cannot but feel that there was perhaps some rashness in my acceptance of it, for, confined as I now am to the narrow precincts of officialism and without command of clinical material, I am scarcely entitled to follow in the footsteps of those who have hitherto addressed you from this chair, who have always had practical aims in view, and have communicated to you the fruits of their own experience in such a manner as to be immediately serviceable in your professional work. But medicine is many-sided and touches, or is touched by, almost all human affairs, and it occurred to me that I might not unprofitably conduct you this evening into a bypath of pathology, and ask you to leave the bedside for a little and consider with me certain mental conditions that are encountered in daily life that have a literary and philosophical interest, and that are not, I believe, without great medical significance. I have therefore culled from the faded leaves of an old notebook some observations on curious, fleeting, but elaborate psychical modifications, which have been designated "dreamy mental states," also "voluminous mental states," likewise "intellectual aurae," and which have not yet received in this country the amount of attention they deserve. Now, the simplest form of these dreamy mental states—a sense of reminiscence it has been called by some, a sense of prescience by others, and the application to it of such apparently contradictory names suggests that it is somewhat mysterious in nature and difficult of interpretation—is to be found described vaguely, but recognisably, in the works of many of our most gifted writers. It consists in an impression suddenly taking possession of the mind that the passing moment of life has been once lived before or must be once lived again—that surrounding objects have been seen once before exactly in the relations in which they at the instant present themselves. "How often," says Sir Walter Scott in "Guy Mannering"—"how often do we find ourselves in society which we have never before met, and yet feel impressed with a mysterious, ill-defined consciousness that neither the scene nor the subject is entirely new; nay, we feel as if we could anticipate that part of the conversation that has not yet taken place." "We have all some experience," says Charles Dickens in "David Copperfield," "of a feeling which comes over us occasionally of what we are saying or doing having been done in a remote time, of our having been surrounded dim ages ago by the same faces, objects, and circumstances—of our knowing perfectly well what will be said next, as if we suddenly remembered it." Rossetti says in "Sudden Light":

> "I have been here before,
> But when or how I cannot tell:
> I know the grass beyond the door,
> The keen, sweet smell,
> The sighing sound, the lights around the shore.
>
> "You have been mine before—
> How long ago I may not know:
> But just when at that swallow's soar
> Your neck turned so,
> Some veil did fall—I know it all of yore."

Edward Dowden says:

> "There is a murmur in my heart I hear,
> Faint, oh! so faint, some air I used to sing,
> It stirs my sense, and odours dim and dear
> The meadow breezes bring.
>
> "Just this way did the quiet twilight fade
> Over the fields and happy homes of men,
> While one bird sang as now, piercing the shade,
> Long since, I know not when."

Without multiplying illustrations of this simple, dreamy mental state as experienced by masters of the literary craft, I would point out that almost invariably when these masters have attempted to explain it or have speculated as to its origin, they have regarded it as a vestige of a previous state of existence, as an echo from a life anterior to the present one. The thought that is of the essence of the state is transient and vanishes before it can be grasped; it is often connected with circumstances of the most commonplace or trivial description—Oliver Wendell Holmes says it used to occur to a poor student when he was blacking his boots—and yet it startles as if it were a flash of revelation, and leaves behind it a sense of solemnity and doubt. Those who are visited by it know well that it is no ordinary reminiscence, no error of memory, no mere poetical fancy, but an absolute identification of the present with the past; and it is little wonder that they should translate the perplexity which accompanies it into ghostly glamour and trace it back to prehistoric times.

> "Our birth is but a sleep and a forgetting:
> The soul that rises with us, our life's star,
> Hath had elsewhere its setting,
> And cometh from afar;
> Not in entire forgetfulness,
> And not in utter nakedness,
> But trailing clouds of glory do we come
> From God Who is our home."

Thus Wordsworth wrote, and it is to the cloudy remnants, which may, according to him, be detected in infancy, that dreamy states in adults have been most commonly referred. Coleridge, who was very subject to dreamy states of all sorts and sizes, seems to have been disposed to take this view of their hidden meaning, for he said:

> "Oft o'er my brain does that strange fancy roll,
> Which makes the present, while the flash doth last,
> Seem a mere semblance of some unknown past
> Mixed with such feelings as perplex the soul
> Self-questioned in its sleep; and some have said
> We lived ere yet this robe of flesh we wore."

And Russell Lowell was evidently of the same way of thinking, for he said:

> "And now sometimes we seem to find,
> In a dark crevice of the mind,
> Some relic which, long pondered o'er
> Hints faintly at a life before."

Coventry Patmore, too, dealing with the same topic, arrives at the same conclusion, set forth in these words:

> "At times some link of harmony seems missing, and we anon
> Remember states long ended ere we left the womb,
> And see an awful something flashing to us from the tomb,
> The zodiac light of new states dashed tremendously with gloom,
> We tremble for an instant, and a single instant more
> Brings absolute oblivion, and we push on as before."

It is not at all improbable that the doctrine of human pre-existence owed its origin to unaccountable reminiscences of the kind alluded to in the passages quoted. To imaginative minds in superstitious ages they may have seemed to afford glimpses of real insight into an otherwise impenetrable past, and even to matter-of-fact minds at the present day it must be admitted they sometimes bring with them convictions of metempsychosis which it is difficult to shake off. But with the transcendental aspects of these reminiscences or dreamy mental states we are not here concerned. It is ours to deal with them from a purely medical point of view, and so we must regard them, not as intimations of immortality, but as revivals of hereditarily transmitted or acquired states in new and special combinations.

Dreamy states, as I have already remarked, have been experienced and recorded by many of our most eminent writers, and as regards their general prevalence it has been assumed that they are a universal human experience. Dickens says we have all had them, and the usual introduction to any description of them is that they are a feeling with which everybody is familiar. "Everybody is familiar," says Thomas Hardy in "A Pair of Blue Eyes," "with those strange sensations we sometimes have that our life for the moment exists in duplicate, that we have lived through that moment before

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or shall again." No doubt these dreamy states are very common amongst us at the present day, but it will, I am sure, be found on inquiry that they are by no means all-embracing, and that while they abound amongst the educated, the refined, and the neurotic classes, they are comparatively rare amongst the unlettered, the prosaic, and the stolid masses of our people. The difficulty of getting information about them is considerable, for those who have experienced them generally manifest a disinclination to talk about them, from a not unwarrantable suspicion that they are somehow morbid in their nature; and those who have not experienced them cannot comprehend what is meant by them, and often treat questions bearing on them with a levity like that of the young American, who, when interrogated respecting them, replied that he never lighted a cigar without the deepest conviction that he had done the very same thing not once, but many times before. Still, a little careful investigation as to their distribution will, I am satisfied, conduct to the conclusion that dreamy mental states, although widespread, are by no means universal and cannot with propriety be called normal phenomena. The fact is that they emerge only at a certain state of mental evolution, rarely occurring in a child under eight years of age or in a man or woman of less than average mental development, and are not themselves a part of the evolutionary process, but one of the accidents by which it is attended. They do not present themselves before that stage of intellectual growth at which the capability of entertaining abstract ideas is attained, and they find no place in a scheme of natural and organic mental expansion, but are an interference with the chiaroscuro of perfect mental health, and the first step in a series of changes which, extending through many degrees of mental dissolution, ends in complete coma or obliteration of mind. I shall hope to show that these dreamy states, so far from being normal even in their slightest and simplest form and occurring in presumably healthy persons, involve disorder of mind, trifling and transitory no doubt, like cramp in a few fibres of a muscle, but disorder nevertheless dependent on a defect of consciousness in one direction, indicated by vagueness as to present surroundings, and an increase of consciousness in another direction, indicated by the too vivid revival of former surroundings. There is in them a negative element in the loss of control of the highest centres and a positive element in the raised activity of other nervous arrangements, permitting of new cerebral combinations somewhat akin to those which take place during the activity of the imagination and flights of genius. If the sense of beauty is vision raised to a higher power, a dreamy mental state is memory diving to a lower than its accustomed level and bringing to the surface deeply submerged personal annals, or even still more unfathomable ancestral traits. A dreamy state it may be conveniently called, and dreamy in some aspects it undoubtedly is, and yet, strictly speaking, it is not comparable to a dream, for it involves a residuum of object consciousness larger than a dream contains and a volume of subject consciousness to which a dream rarely reaches. It has peculiar features of its own and stands in the same relation to a dream that the darkness of an eclipse does to the more frequently recurring darkness of night.

I have hitherto spoken of dreamy mental states of the most ordinary and uncomplicated type—those that are least removed from normality and consist in reminiscence: but it must be pointed out that such states are of many different kinds and that those that commence in reminiscence sometimes branch out into more elaborate manifestations. They have not yet been classified, and this is to be regretted, for the accurate observation and arrangement of them would in all likelihood throw much light on their nature and almost certainly reveal that, notwithstanding their diversities, they often closely resemble each other as occurring in different individuals, and fall into several groups corresponding probably with disorder of several different cerebral areas. As yet, however, all we can do is to enumerate some of their characteristics and varieties. The most general description of them is that they are indescribable and transcend all common experience, and the crudest analysis discloses this much—that they consist in an exaltation of subject consciousness and a degradation of the power of attention for the time being, and are almost invariably concerned, however vaguely, with those ultimate scientific ideas—space, time, matter, motion, force, and the like—which are beyond the domain of certain knowledge, and, according to Herbert Spencer, unthinkable. Contrary to all experience, they have yet apparently the highest experiential validity. They declare themselves now as tamperings with those intuitions that yield the consciousness of continued existence, and again as excursions into that infinite field that lies behind appearances and of which it is dangerous to affirm or deny anything. Plunges they are into these depths of outer mystery in which the certitudes of science lose themselves and out of which, it has been said, the certitudes of faith arise. Momentary realisations they become of Nirvana or the cessation of being, or foretastes of purgatorial pains more searching than any that Dante conceived. "Dream not, Coleridge," Charles Lamb wrote, "of having tasted the grandeur and wildness of fancy till you have gone mad." "Think not, Lamb," Coleridge might have replied, "of having touched the skirts of immensity and mystery until you have had a dreamy mental state." The victims of dreamy mental states, striving to convey some notion of them, tell us that they consist in a feeling of being somewhere else—in double consciousness—in a loss of personal identity—in a going back to childhood—in the vivid return of an old dream—in losing touch of the world—in a deprivation of corporeal substance—in a loss of a sense of proportion—in momentary black despair—in being at the Day of Judgment; and they supplement whatever phrases they use with the assurance that it is impossible to put into words such strange and incomprehensible visitations.

That dreamy mental states, even of the most familiar type—those, I mean, which consist in reading into the present some version of the past—are abnormal in their essence and morbid in their tendencies may, I think, be demonstrated by a study of their transitions, their associations, their congeneric conditions, and their consequences. As represented to us in literature, these simple dreamy states are occasionally linked with other mental states akin to them, but of a more pronounced pathological character. In Tennyson's writings, for example, we have several references, that are not all obscure, to what may be termed the ordinary dreamy mental state. In "The Two Voices" he sings:

> "Moreover, something is or seems,
> That touches me with mystic gleams,
> Like glimpses of forgotten dreams—
>
> "Of something felt, like something here;
> Of something done, I know not where;
> Such as no language may declare."

And in the "Early Sonnets" he thus delivers himself:

> "As when with downcast eyes we muse and brood,
> And ebb into a former life, or seem
> To lapse far back in some confused dream
> To states of mystical similitude;
> If one but speaks or hems or stirs his chair,
> Ever the wonder waxeth more and more,
> So that we say, 'All this hath been before,
> All this has been I know not when or where.'"

But in Tennyson's writings we have also references to other mental states which have about them quite as convincing a ring of personal knowledge, and the morbidity of which cannot be questioned. Thus in "The Princess" we are told that the hero, who belonged to a race haunted by a hereditary nervous affection, was himself afflicted by—

> "Weird seizures, Heaven knows what:
> On a sudden in the midst of men and day,
> And while I walked and talked as heretofore,
> I seemed to move among a world of ghosts,
> And feel myself the shadow of a dream."

In these words it is not difficult to recognise an outline of *petit mal*, and Tennyson himself names these seizures epilepsy, and we have, therefore, in his poetical biography appreciations of a simple dreamy mental state and of the epileptic state, of which these dreamy mental states are so often the prelude or accompaniment. In Tennyson's poems these two states are not brought into immediate relation, but in our professional experience it is no uncommon thing to find the one state signalising the onset of the other or alternating with it; and it is no uncommon thing for us to observe that with or without some subjective sensational warning of an approaching epileptic fit there arises a dreamy mental state, which in that connexion has been designated an intellectual aura. It is not suggested that the dreamy mental state under such circumstances is directly due to the epileptic discharge, but there are grounds for holding that it depends on the heightened activity and increased energising of nervous arrangements intimately linked with those in which the true epileptic discharge begins. A truly epileptic or sudden and excessive discharge of the highest nervous arrangements results, not in ideas however vague, but in the negation of thought or loss of consciousness, and ideas properly so

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called attend the excitation and not the explosive discharge of these arrangements. Intellectual aurae or dreamy mental states are, therefore, precursors and not integral parts of epileptic fits. A medical man who, five-and-twenty years ago, contributed to the *Practitioner* an interesting memoir of his own case, said that he had suffered from boyhood from dreamy mental states of reminiscence, or a startling conviction that he had once before been placed in the exact circumstances in which he found himself, and that immediately before his first epileptic fit, which occurred in middle life, these dreamy states recurred with unusual frequency and intensity. "Since my first attack," he went on, "I have only had few recurrences of the feeling, but on two occasions these were followed the next day by an epileptic seizure." One patient of Dr. Hughlings Jackson reported that his fits began by "a sort of referring to old things that have happened," after which he lost himself; another intimated that old scenes reverted for hours before a fit; another said, "If I were walking along and had a fit I should think, 'Oh! I saw that before'"; and a patient of my own, before each fit—and his fits were marked by violent convulsions and tongue-biting—had a similar impression accompanied by intense terror and alarm. Dr. Joseph Coats of Glasgow has narrated the case of an intelligent man who stated that with few exceptions his fits had been preceded by giddiness and "a peculiar "thought," as he expressed it. He attached great importance to this 'thought," saying that if it were known his whole case would be explained, and although he could not tell what the thought was he was confident that it was always the same. He always recognised it when it occurred, and tried to fix it in his memory, but he invariably forgot it when the fit was over. Now this case recorded by Dr. Coats, and another case in which "a dreadful queer feeling" gave notice of fits when they first commenced, but was gradually lost as they became confirmed and severe, suggest that dreamy mental states perhaps prelude epileptic fits more frequently than the testimony of those who suffer from such fits would lead us to suppose, for it is undoubtedly true that when consciousness is suddenly interrupted there is often obliteration of the records of conscious experience for a period, longer or shorter, before the exact moment at which the interruption occurred. The impressions received, the ideas developed on the sensitive plate of the brain, can only apparently be fixed there so as to be capable of reproduction while conscious activity is maintained, and an abrupt cessation of brain function not only arrests sensation and perception, but prevents the due registration of some sensations and perceptions that have taken place immediately prior to the break in the chain of conscious life. The blackness of insensibility casts a dark shadow behind it. In cases of concussion or injury of the brain inducing coma we frequently find that there is after recovery a mental blank as to incidents that occurred some time before the accident, and in cases of epileptic seizure it may sometimes be demonstrated that events occurring a few minutes before the actual invasion of the fit or of any premonitory symptom of it, at a time when the intellect was clear and conduct rational, cannot by any effort be recalled after the fit is over. It may well be, therefore, that mental experiences in juxtaposition to the fit—and constituting, indeed, its initial symptom or warning—are irrecoverable in memory, and so the assurances of persons subject to dreamy states and epileptic fits, that the former do not usher in the latter, cannot be received as trustworthy. The late Professor Laycock of Edinburgh recorded a case of epilepsy in which the paroxysms were inaugurated by a peculiar cry, a cry which, however, came sometimes independently as a false alarm, not being followed by unconsciousness or convulsions, and whenever that cry came alone the man was aware of it and discussed it afterwards, wondering what it meant; but when it was followed by a fit he had no after knowledge of it, and denied its having been emitted; no permanent record of it had been made. And just as with that cry, dreamy states, dread thoughts, or emotions of terror, which when standing alone can be remembered, may be, when linked with a fit irretrievably blotted out. The frequency with which a cry begins an epileptic fit might perhaps be regarded as some indication of the frequency of dreamy states at that juncture, for the cry is mostly strongly suggestive of acute mental trouble, and is probably, in some cases at any rate, determined by a feeling of fear present at the moment, but not subsequently recollected, and it is not to be lost sight of, in this connexion, that a sudden fright is believed to be one of the most common exciting causes of epilepsy.

But whatever may be the frequency of dreamy mental states as psychical aurae in epilepsy, I feel satisfied that the risks attending them in connexion with epilepsy may be measured by the degree in which an emotional element enters into them or in which they tend to pass over into action. Those states that are colourless or agreeable are comparatively innocent, whereas those that are attended by fear, pangs, anguish, horror, or visceral disturbances are peculiarly apt to lead up to convulsions. Many cases have been noted—I shall shortly refer to some of them—in which dreamy mental states mingled with fear have ultimately merged in epilepsy, and this danger seems to me to be peculiarly great when the fear is connected with visceral sensations, such as difficulty of breathing, oppression of the chest, palpitation of the heart, or a feeling of sinking at the epigastrium. A girl who was under my care in the West Riding Asylum, and who had suffered for years from what she called "a frightened belly-ache" and could only further explain as a feeling of fear at the pit of her stomach, after a time became epileptic, her fits being always immediately preceded by the "frightened belly-ache," which lasted for about five seconds, and allowed her time to give notice of the impending seizure, which she invariably did by piteously shouting out, "Bump my back." If before the actual appearance of convulsive spasms anyone could reach her and obey her mandate by giving her four or five smart blows over the lower dorsal vertebrae the fit was very frequently averted. Another girl under treatment at the same time, who before becoming epileptic had been subject to slight fainting feelings accompanied by the dread of being killed, gave notice of her attacks by crying out, the instant before she dropped, the words "Dangers and bolsters!" which were understood to convey an announcement of the revival of her old apprehension and the expression of a wish that a pillow might be brought on which to rest her head. Still another girl, who was epileptic, alleged that for several years before her fits came on she had had occasionally an indescribable feeling of "awful disgust"—a feeling that had once or twice ended in vomiting, and that had often recurred when a fit was impending.

In many cases of epilepsy that have been associated with dreamy mental states the infusion in these states of a feeling of fear and of obscure visceral sensations may, I believe, be made out, visceral sensations in this connexion being more frequent than crude sensations of coloured vision, or noises in the ears, or more elaborate sensations of spectral faces or hearing voices.

But not less ominous than visceral sensations in connexion with dreamy states are actions which are repeated whenever these states recur, for these indicate a deepening or diffusion of the cerebral disturbance which makes it correspond with somnambulism rather than with dreaming. Running movements may only betoken the dominant emotion of fear; masticatory movements, smacking of the lips, and spitting, which Dr. Hughlings Jackson has observed, may mean a crude sensation of taste; but spasmodic movements are premonitory of convulsions. In one case of dreamy mental states which ended in epilepsy there were during these states rapid clutching movements of the hands. In dreamy mental states that are to prove harmless there is mostly tranquillity, but where muscular agitation accompanies them they are not unlikely to advance into something worse than themselves.

I have endeavoured to indicate the morbid character and tendencies of dreamy mental states by illustrating their transition into epileptic seizures or interspersal amongst them; but this is not the only pathological transformation that they undergo, for a history of them is not rarely discoverable in those who have become insane without the intervention of epilepsy, and the passage from them into states of mental disease may occasionally be traced out. St. Pierre, the author of the ever-fascinating "Paul and Virginia," when overcome by disappointment and humiliation and tottering on the brink of madness, was harassed by seizures which had certainly much in common with dreamy mental states. "I was struck," he says, "with an extraordinary malady; streams of fire like lightning flashed before my eyes; every object appeared to me double or in motion. In the finest day of summer I could not cross the Seine in a boat without experiencing intolerable anxiety. If in a public garden I merely passed a piece of water I suffered from spasms and a sudden feeling of horror." A patient of my own, who had a sharp attack of mania with delusions of suspicion and suicidal impulses for two years before its development, suffered from dreamy mental

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states. These first took the form of a sudden dead feeling in the head, said to be both psychical and somatic, which came on almost every day; but after three months they assumed a new shape, a sudden sense of fear, during which all objects around him seemed to grow distant and afterwhich there was violent palpitation of the heart. Still a third transformation took place, when the sense of fear changed into a wild desire to run round in a circle and scream, and after that came mania. The whole insanity of a patient of mine seemed to consist in an endless chain of dreamy mental states of a claustrophobic nature. She was of good memory, intelligent, and rational, but whenever awake was distressed by constantly recurring painful impressions or obsessions, which she described as a feeling of "entombment." Every few minutes she felt as if she was in a house in the middle of a great wood and could never get out of it, knowing all the time quite well where she really was. Whenever she looked at the door of the room in which she was sitting she had a horrible feeling that it was too small and that she could never get through it.

But not more by their transitions than by their associations is the true character of dreamy mental states betrayed, for almost invariably they occur during impaired bodily health or in states of exhaustion, or have bound up with them, either in the sufferer himself or in the family to which he belongs, other and unmistakable symptoms of nervous disease. They rarely stand alone, but have for the most part side by side with them other sure signs of a want of equilibrium or of degeneration in the nerve centres. Dr. Hughlings Jackson has reported a case in which dreamy mental states consisting in the impression of having fallen down a coalpit were associated with epileptic seizures and left hemiplegia, due to a coarse lesion of the right hemisphere; and it is noteworthy that of the distinguished men of letters whose confessions of dreamy mental states have been quoted Scott, Dickens, and Rossetti died of brain disease. One of the most striking and persistent cases of dreamy mental state that I have ever met with was that of a man whose father was epileptic, who had one brother a dipsomaniac, another a confirmed opium-eater, another an epileptic, another a lunatic, and one brother and several sisters free from nervous taint. I cannot, perhaps, better convey to you some notion of the associations of dreamy mental states, personal and hereditary, than by recounting the history of a family in which, by a lucky chance, I have been able to trace them through four generations.

A lady who lived at the close of the last century and up to the middle of the present one was subject from girlhood to what were then called "spells of absent-mindedness," but which, seen now, by the light reflected on them by the experiences of her descendants, may be safely pronounced to have been dreamy mental states. This lady was always nervous and peculiar, and is reported at one period of her life to have displayed insane jealousy; but she bore a family of ten children to a healthy and vigorous husband and died at an advanced age from epilepsy, from which she had suffered for some years, the fits being heralded by an aura of the left hand and arm, and being sometimes prevented by the firm ligature of that limb. It was not possible to ascertain the pathological histories of her ten children beyond this—that one boy died from convulsions in infancy, and one daughter from phthisis at adolescence, and that two of them, a boy and a girl, manifested neurotic derangements clearly derived from her. One son was distressed in youth and manhood by brief seizures which may be described now as loss of orientation, but which he himself nicknamed "a topographical topsy-turvy." Generally when out walking and alone his consciousness of his geographical bearings became confused, and this without vertigo or apparent movement of objects to one side. In an instant the world seemed to him to have whirled round, and he could not for the life of him make out the points of the compass, although the landscape and all objects around him remained unchanged in appearance. He felt that it was a matter of pressing moment that he should recover his true position in space, and for a few seconds was in a tremor of perplexity and dread, and then all at once everything was righted and he knew where he stood and said to himself with delight, "That is the north, and I know now exactly how the south and east and west lie." The seizures or bewilderments continued to annoy him, but at widening intervals, until he was about forty years of age, when one day, while standing on the edge of a rock and looking at a waterfall in the Scottish Highlands, he fell suddenly in a violent epileptic fit, and was only saved from death by the presence of mind of a companion. From that date he never again experienced loss of orientation, but he had from time to time epileptic fits, chiefly nocturnal, which did not, however, impair his intellect or health, for he died at a ripe age from Bright's disease. His sister, a woman of great intelligence and energy, was subject from girlhood up till middle age to periodical attacks of migraine with fortification outlines and vomiting, which may be regarded as an allotropic form of a dreamy mental state or a sensory epilepsy. She married and had eight children, one of whom died from acute hydrocephalus and two from typhoid fever. Of the five survivors two, a son and a daughter, became the victims of dreamy mental states at about ten and nine years of age respectively, and continued to suffer from them with gradually diminishing intensity and frequency up till middle life. In these two cases the dreamy mental states were identical in nature, and although the sufferers had never compared notes about them, being somewhat ashamed of them, were described in precisely the same terms to the physician who ultimately made inquiries about them. They were called "frightened feelings" and consisted in a loss of personal identity The youth, who gave the fullest account of them, said that suddenly he lost his hold of the universe and ceased to know who he was. Everything seemed changed in a twinkling, and he lost his relations to time and space. He felt intense terror while the attack lasted lest he should never become himself again, and after it was over there was always violent palpitation of the heart. He was never unconscious during the attack, which lasted ten or twelve seconds at the most, for he could pass from one room to another or run upstairs and voluntarily call out certain names while it lasted. He generally called out repeatedly and in a hurried manner his own name or that of a sister who was about his own age, and he affirmed that the calling out of these names helped him to recover his identity. The frightened feelings almost invariably came on when he was alone, and when assailed by them he ran to seek society, as the presence of anyone drove them away. They never came on when he was engaged in conversation or in work, mental or bodily, involving effort, but always when he was ruminating or carrying on some routine employment. At one time he could bring them on by gazing intently at his own face in a looking-glass, or by allowing himself to drift into a particular train of thought or becoming "abstract and metaphysical," as he termed it. If he asked himself, "Who am I?" "What am I?" "Where do I come from?" "How do I stand related to persons and things around me?" he inevitably had an attack, and the very fear that he might drift into this current of speculation often irresistibly drove him into it, and ended in a repetition of his sufferings. Fear of any other kind, however, or emotional excitement never induced an attack; but he distinctly recalled that after being taken to the Whispering Gallery of St. Paul's, and being terrified by looking down from its height into the cathedral below, he had several times an attack when the terrific impression he then received recurred to him in memory and created a sense of his own insignificance. The attacks never occurred in the morning, only occasionally in the afternoon or early evening, and by far most frequently as he was undressing to go to bed. As they wore off in adult life the last vestiges of them were experienced while he was drowsy and just falling to sleep. Suddenly he would spring up in bed, conscious that his old terror was upon him again, though in a dim and distant way, and always after he did so there was palpitation of the heart. He led an active life, but his health and mental condition were, he himself thought, appreciably affected by his attacks, for he never fulfilled the intellectual promise of his boyhood, but was impulsive and irritable and suffered much from depression and general debility, and finally from angina pectoris. His sister, whose attacks were in all respects similar to his in character and consisted in a temporary loss of personal identity, with a feeling of infinite distress, embarrassed breathing, and palpitation, but less severe and frequent, was also of a highly nervous temperament and had an attack of mental depression with rupophobia. The brother married and had two children, a boy and a girl, both of whom suffered from dreamy mental states, and whose cases I was able to observe. The boy began at the age of ten, when fragile and delicate, to have odd and horrid feelings. They generally came on when he was in bed, but they have happened in church, and at a time when he was not

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apprehending them. Except in church he never had them in the presence of anyone, but always when alone. He could not explain the attacks further than by saying that he felt as if he were "just nothing" while they lasted, and was terribly frightened, his heart beating very fast. During the continuance of the attacks, which never exceeded a few seconds, it was usual for him to touch or pinch his body and limbs with his fingers and thumb and say to himself, "Who am I?" "Am I alive?" It was for the most part while he was thinking deeply on "religious or out-of-the-way subjects," as he phrased it, that the attacks came on, and occasionally he was able, on feeling one approach, by thinking to himself, "Oh, it is all nonsense, I am in a room, that is a chair and this a bed," to ward it off; thus by a strong effort recovering his object consciousness when it began to fail. While suffering from these attacks he was disturbed by violent muscular jerks as he was dropping off to sleep, and on one occasion had a numb feeling followed by shaking down the left arm. He cried out for help and was found sitting up in bed and holding his left arm, which was trembling. At the same time he had a strange dream which recurred again and again, and with which he became painfully familiar. In the beginning of the dream he felt enormously large in all dimensions, as if he were the length of the room, and swollen out so that if he moved his leg it felt like the leg of a giant. Then there came a vast haze, and vacancy and great fear, and in the haze black sticks or stripes appeared all round and seemed to be closing in upon him, and then in terror he awoke. Under the impression that they were just "silliness," and that he would be laughed at if he spoke of them, this boy concealed his dreamy states until he was nearly fourteen years of age, when they became so severe and distressing as to make his life miserable, and he was obliged to acknowledge them. He was sent to the country, freed from brain work, carefully scrubbed, and put upon bromides, and the attacks rapidly diminished in number and severity, but up till his twentieth year he continued to suffer from them from time to time.

This boy's sister at eight years of age began to suffer from attacks similar to his, which she also for a time kept to herself because she thought they were due to "conscience," but which were brought to light when his were revealed. They came on, she said, never when there was bustle around or when anyone was talking to her, but always when she was alone, especially when she was sitting doing nothing, looking at her dress or at the floor, and she could induce them when alone by gazing at her hands, saying to herself it was funny that she was alive, and wondering how it was that she came into the world. "The lost or funny feelings" in her, for thus she labeled them, did not cause terror, but only uneasiness, and made her feel like "a nonentity," and were not followed by any disturbance of the heart's action. They lasted only for a few seconds. Once or twice she had numbness of the left hand and transient lateral hemianopia. Like her brother, she had startings on going to sleep and constantly recurring dreams, in her case of skimmings over the surface of the ground and flying downstairs. Objects at which she gazed intently sometimes grew smaller and smaller and receded into distance, and this experience was always followed by a feeling of sleepiness for a few minutes. When just falling asleep she would often hear a low murmuring, crooning noise, as if someone were sneering at her—a sound which was horrid and created alarm, and was so real that she was obliged to jump up in bed and rub her ears. At other times when falling asleep she would have a loud dinging in her ears, and while still awake, but lying with closed eyes, she often saw long black figures which changed into little dumpy white ones. On one occasion she saw a spectral face, and having raised herself in bed watched it grinning at her in a corner of the room and noted that it had very white teeth and red hair. She also was put under treatment as soon as her dreamy states were discovered, and improved rapidly when relieved from educational pressure and carefully nourished. As the dreamy states diminished in number she became visibly happier and more animated, but she continued to suffer from them once or twice a month until she was eighteen years old, when after an attack of chlorosis they again became very troublesome. In another year, however, they again yielded to treatment, and now she is, she reports, altogether free from them.

I am afraid I have wearied you by this tedious story of the dreamy mental states of a family. It is, however, I believe, unique in affording conclusive evidence of the hereditary transmission of these states through four generations, and it is assuredly instructive as regards their affinities. I cannot now touch upon the many points of interest which this story presents, and even what may have seemed irrelevant details in it have an interest of their own. But I should like to direct your attention to one or two of its more suggestive features.

In the first place then I would ask you to note that it illustrates to us not merely the transmission of dreamy mental states, but of a particular dreamy mental state, and that one of a very elaborate description. The account given of the dreamy mental state in the first generation is too indefinite to enable us to decide its real nature, and in the second generation that state had reference to ideas of space; but in the third and fourth generations, and in four different individuals, it consisted in a loss of personal identity. We have thus a particular aberration of mind springing up spontaneously and independently in four persons, that aberration being exactly the one which the dreamy mental state assumed in the late Lord Beaconsfield, who wrote: "I was not always assured of my identity or even existence, for I sometimes found it necessary to shout aloud to be sure that I lived, and I was in the habit very often at night of taking down a volume and looking into it for my name to be convinced that I had not been dreaming of myself."

In the second place I would ask you to note in the story rehearsed the relations of dreamy mental states to evolutionary changes in the brain. The age at which these dreamy states first occurred is recorded in four cases; it was ten in the cases of two boys and eight and nine in the cases of two girls, and it is to be remembered that at that period of life cerebral development in the female is from one to two years ahead of that in the male sex. In these four cases, too, the dreamy states persisted only while cerebral and mental development was going on actively and vanished when maturity was attained.

In the third place I would ask you to note in this story that in four cases the dreamy states came on almost invariably in solitude, which is favourable to subjective contemplation, and that in three cases they were particularly prone to show themselves, like the hallucinations of chorea, during the invasions of sleep, when the brain is freed to a large degree from external solicitations and volitional control, and is in a transitional state.

In the fourth place I would ask you to note in this story that in three cases—all right-handed persons—indications were given by modifications of sensation and movement in the left arm that along with dreamy states there was, or had been, damage or disorder of the right hemisphere of the brain. Dr. Hughlings Jackson, whose guesses in neurology are more valuable, trustworthy, and enlightening than most other men's lifelong observations and carefully reasoned conclusions, long ago suggested that in epilepsy with the dreamy state the first spasm or abnormal condition would be observed on the left side of the body corresponding with involvement of the right or more subjective of the two hemispheres of the brain, and these three cases are, as far as they go, corroborative of his view.

In the fifth place I would ask you to note in this family chronicle that in two cases the impression of looking from a height was apparently influential in inducing cerebral disturbances of the kind which begins in dreamy mental states and culminates in epilepsy. In one case the first epileptic fit occurred when falling water was being looked at from the edge of a precipice, and when unusual ocular movements were therefore rapidly taking place; and in the other dreamy mental states were brought on by the mere remembrances of the agitation caused by looking down from an altitude.

(To be continued.)

TESTIMONIAL TO MR. BARNARDO, F.R.C.S. EDIN.

It is felt by many who are interested in the practical side of social philanthropy that the occasion of Mr. Barnardo's fiftieth birthday should not be allowed to pass without some recognition of the services which he has rendered to the cause of humanity by his work in the rescue and care of waif and destitute children. With this object in view, a movement has been set on foot to promote a jubilee testimonial to him, and we are asked to say that cheques may be forwarded to the Bankers, Messrs. Barclay, Bevan and Co., 1, Pall Mall East, S.W., with whom an account has been opened by the committee, whose names are as follows: Lord Brassey, Lord Kinnaird, Lord Polwarth, the Archdeacon of London, Colonel Howard Vincent, M.P., Mr. Samuel Gurney Sheppard, and Mr. Howard Williams.

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The Croonian Lectures,

BEING A

CONTRIBUTION TO THE HISTORY OF THE RESPIRATION OF MAN.

Delivered before the Royal College of Physicians of London on June 18th, 20th, 25th, and 27th,

BY W. MARCET, M.D. EDIN., F.R.C.P. LOND., F.R.S.

LECTURE III.[1]

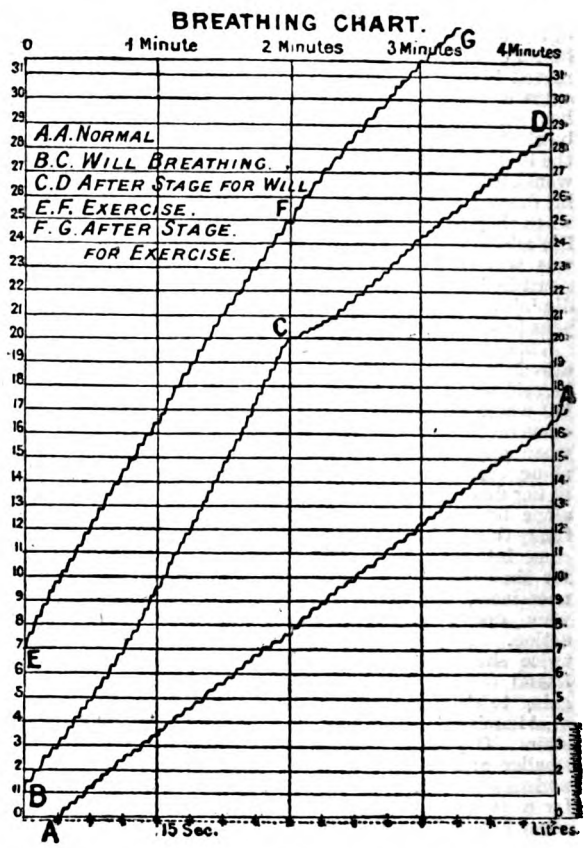
Delivered on June 25th.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture the first three forms of breathing were considered; let us now proceed to the fourth, which applies to respiration under the influence of volition; but before doing so allow me to recall the remarkable experiment of Professor Mosso of Turin. This gentleman constructed a metal instrument, a sort of glove, through which his fingers were inserted, with the exception of the middle one; with this finger he worked a weight up and down until the digital muscles concerned in the labour were completely exhausted; at this stage the muscular contraction was carried on by means of electrical excitation, and he found that if, after a short period, the excitation was discontinued the finger was able still to maintain its work, showing that the muscles had not ceased contracting from actual fatigue, but from exhaustion of the will which had been exercised to move them.

There is an interesting borderland between psychology and physiology which is narrowing daily. The discovery of the electrical excitability of the brain by Fritsch and Hitzig, and of the motor centres by Ferrier and Yeo, followed by Horsley and Schäfer, has opened altogether a new field of research and brought the mental and physical functions nearer to each other. We do not know much of the physical effects exerted on the body by the perception of our senses. Moleschott, as far back as 1855, showed that from one-tenth to one-fourth more carbonic acid was exhaled by frogs under the influence of light than when in the dark, and also that this increase varied directly as the intensity of the light, which acted through the eyes and skin. It occurred to me that, if light exercises a distinct physical action on the living body, perhaps sound would produce a similar effect; but even a fairly loud sound, such as that produced by the beating of a gong close by, gave no positive result, the carbonic acid emitted under the influence of the sound being sometimes a little more and sometimes a little less than normal, and the same could be said of the oxygen absorbed. There was, however, a slight excess of air breathed (expired) while the noise was continued, which varied from 0·036 litre to 0·733 litre per minute in eleven experiments; and this slight excess was balanced by a corresponding diminution of the volume of air exhaled during the first five or six minutes after the sound had ceased.

The perceptions of our senses are certainly independent of our will, still the sight and hearing may not be entirely unconnected with volition; or it would, perhaps, be more correct to say that objects may act on the brain through sight, and sounds through hearing, without producing any corresponding impression. Take the case of a person lost in a brown study, he does not see objects though with eyes wide open, nor will he hear a sudden noise. By submitting our senses to the exercise of volition we train them and improve their perception. Thus we train the sight to the better appreciation of the beauties of nature. Those thrilling descriptions of Alpine scenery must be the outcome of the training of the sight to the thorough enjoyment of mountain views. The rapture into which Sarasate and Joachim throw their hearers requires a certain training of the audition. Mosso has shown that volition is a cerebral act attended with fatigue. I need hardly remind you of the fatigue experienced in listening to good music; two hours thus employed will, as a rule, be amply sufficient, and it often happens that in less time the attention begins to flag and the impression to subside. Operatic music may be listened to much longer, for the obvious reason that in an opera the exercise of volition is distributed between two brain centres—those of hearing and of sight—instead of being concentrated on a single one, and is on that account less exposed to fatigue.

We now come to the influence of volition on muscular movements. There are instinctive muscular movements in which volition is not concerned—for example, those required to balance the body; but these have been acquired in the first instance by the exercise of volition or by training. Hence it appears that training is of fundamental importance in all muscular exercise, such training being at the same time applied to the *volition* excited by the cerebral motor centre concerned in any special form of muscular work. Learning to play on a musical instrument is certainly training volition quite as much as, if not more than, training the muscles. The surprising rapidity with which the fingers run over the notes of the piano in response to the will is also a case in point; although, if I understand rightly Dr. Bastian's views, contained in his book on "The Brain as an Organ of Mind," it is very possible that such training, especially in young people, should develop a certain set of nerves through which these rapid impressions are conveyed, becoming automatic in their character. We shall see that volition has a direct action on respiration, hence training volition is at the same time training respiration. Let us now pass on to the subject which forms the substance of this lecture—the Influence of Volition on Respiration.



The tracing "under exercise" is shown to contrast with that of breathing "under volition."

Under ordinary circumstances, when sitting in repose, the mind is at rest as well as the muscles, and the breathing quiet and regular. Should a strong effort of volition be made, although unattended by any muscular contraction, it may be observed to react immediately on the respiration. If after a tracing of normal respiration has been obtained the person under experiment sets his mind to work and exerts his volition strongly towards carrying a heavy weight, running to catch a train, or pursuing another person uphill, the tracing

[1] Lectures I. and II. were published in THE LANCET of June 22nd and 29th, respectively.

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recorded on the chart will be observed to ascend more rapidly than in the case of mental rest, showing a greater volume of air breathed in the same time. After, say, one or two minutes, let the influence of the will be withdrawn and respiration continued under mental repose, the first effect will be the production of a respiratory pause, the tracing taking a more horizontal direction, as seen in forced breathing, though perhaps somewhat less marked, after which the breathing will return to the normal, the tracing obtained being much like that of forced breathing. Similar experiments on different persons invariably yielded the same kind of curve on the chart. It follows that the influence of the will is to increase the volume of air breathed, and that on releasing volition a pause is produced very like that which follows forced breathing; but there is this difference with forced breathing, that when the will is applied say to the act of locomotion the increased pulmonary ventilation is absolutely automatic, while forced breathing is the direct effect of volition applied towards the expansion of the chest. An explanation of the pause or apnœa after forced breathing is that forced breathing produces an increased absorption of oxygen, and this oxygen, being used for the requirements of the body, lessens for a few seconds the calls for pulmonary ventilation. This idea suggested that perhaps such an accumulation of oxygen in the body might be employed by the muscles for a temporary increase of power. The following experiment was therefore made. While sitting in an armchair a weight of 10 lb. was alternately raised and lowered with the hand in keeping with the striking of a metronome, and to my surprise it was observed that after a succession of deep inspirations the weight could be raised a much greater number of times than after normal breathing; indeed, the increase of power was such that the weight could be lifted to the same height before exhaustion, perhaps two-thirds or twice as often after forced breathing as after natural respiration. For a time this effect of forced breathing was to me absolutely unaccountable, as there was no apparent call for an accumulation of oxygen in the tissues, and no proof of any such absorption; moreover, the excess of carbonic acid formed by the muscular power added was infinitely greater than could be accounted for from any excess of oxygen absorbed in the body. But perhaps in forced breathing there was really an excess of oxygen absorbed, which was taken up by the brain centres of forced breathing and gave "volition" the power of doing so much additional muscular work through increased respiration. This view was subsequently investigated and its correctness shown by experimental methods.

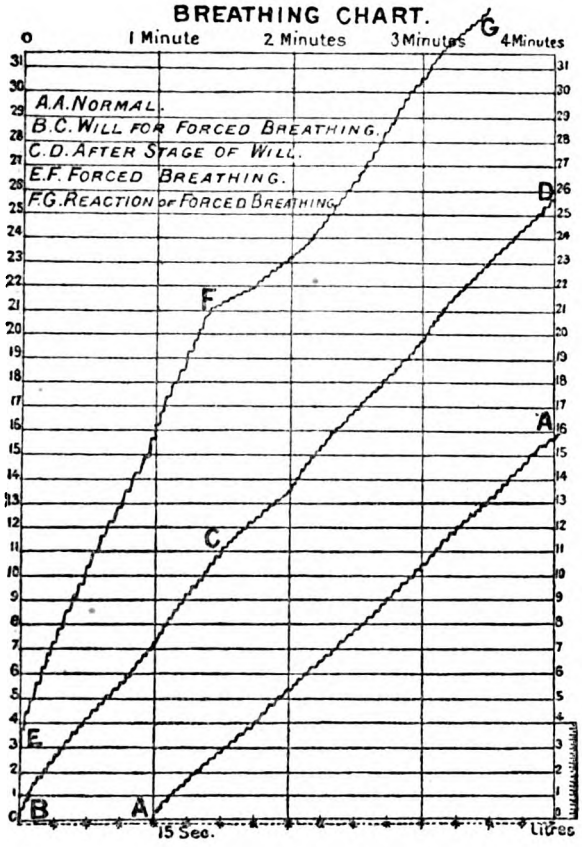
Allow me to quote the experiments which show to what extent muscular power may be increased by the preliminary exercise of "volition" exerted in the form of forced breathing. It might be added that, in order to succeed with these experiments, the attention, or "volition," should be given to the act. It failed once or twice when first tried, though successful on every other occasion with that same person, probably because the "will" was not applied with sufficient power or was not yet possessed of sufficient training for that kind of experiment.

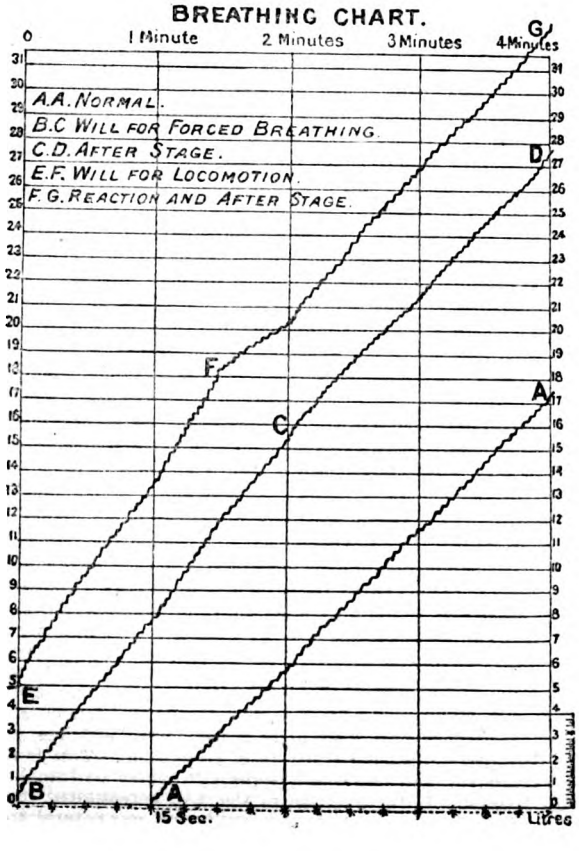
Person under experiment.	Weight lifted.	Number of times weight lifted normal.	Time of forced breathing.	Number of times weight lifted after forced breathing.	Ratio of increase.
	lb.		min.		
Author	8	24	2	65	2·71
,,	8	28	2	50	1·92
,,	8	28	1	34	1·31
,,	10	21	2	36	1·71
Assistant	8	30	2	32	same
,,	8	33	2	49	1·47
,,	8	33	2	41	1·26
,,	8	39	2	63	1·62
,,	10	41	2	69	1·68

It is remarkable to what extent the arm becomes accustomed to this kind of work and can develop more and more strength with time from mere training. This is seen in the figures given later on, but it is important to observe that the present remark does not apply to the experiments taken singly, when the increased work was clearly due to increased power from a temporary cause. This point was set at rest by a very simple experiment. Two consecutive series of liftings were made without the intervention of any forced breathing. The weight was lifted till stopped by exhaustion 26 times in the first series and 26 5 in the second; hence it cannot be said that any influence of training was exerted in the comparative experiments. The effect of forced breathing in increasing muscular power can be tested by anyone while sitting quiet in his own room. My friend Dr. Louis Parkes lifted a weight of 8¼ lb. fifty times while in a state of physical and mental repose; and after forced breathing for one minute and a half, applying his mind to the act, he raised the same weight to the same height 125 times. A lady reclining in an armchair lifted with her right arm a tea-kettle weighing 4 lb. 13 oz. sixty times, and after resting ten minutes and breathing forcibly for one minute raised the same tea-kettle 100 times to the same height. The greatest effect was produced on a medical friend, who after ordinary breathing lifted a weight of 4 lb. 203 times in succession, and after a rest and forced breathing for two minutes lifted the same weight the same height no fewer than 700 times. In this case volition taxed the muscles to the utmost, and the arm remained tired and stiff for some days afterwards. The weights in all these experiments were lifted under natural or automatic respiration after forced breathing had been discontinued.

The absorption of an excess of oxygen in the body under forced breathing was so far an assumption, and it became necessary to determine experimentally if such were the case; the methods in use for the determination of carbonic acid and oxygen in the expired air being extremely delicate, the results obtained may be looked upon as thoroughly reliable. The experiment was undertaken in the following way. After resting for some time in the armchair the expired air in normal breathing was collected for subsequent analysis, then forced breathing was taken for about two minutes and the air expired collected separately. As soon as the appointed time had elapsed a signal was given, and the person under experiment relapsed suddenly into automatic breathing, while at the same time, by means of a three-way stopcock, the air expired was diverted into a third receiver, breathing being continued until it had come back to its normal condition in repose, which took place within six or seven minutes. There were thus three samples of air for analysis. The volumes of air inspired in each stage were calculated, as previously explained, from the nitrogen found, which underwent no change; the volume of nitrogen obtained yielding by a simple proportion the volume of air inspired. The difference between the volumes of air inspired and expired (after the application of a correction for carbonic acid emitted from the blood, into which subject it would take too long to enter at present) gave the volume of oxygen absorbed, and it is the excess of this oxygen absorbed in the body in forced breathing over the oxygen absorbed in normal respiration which concerns the present question. In eight experiments the increase per minute above the normal of oxygen absorbed under forced breathing, or rather under volition for forced breathing and response, varied from 0·8 to 36·4 c.cm., with a mean of 13 9 c.cm. (53 0 c.cm. mean absorbed normal, and 67·3 mean absorbed under forced breathing). At the same time the volumes of air expired were greater under forced breathing by 69 per cent. of normal. Therefore, in these experiments considerably more air had been inspired, and there was a marked increase of oxygen absorbed. If the excess of oxygen absorbed in forced breathing has for its object the exercise of volition, surely this absorption must take place in the motor centres of the brain concerned in forced breathing, and therefore in the medulla oblongata. So far the argument stands thus. Forced breathing is accompanied by an excess of oxygen absorbed in the body and leaves in its wake increased muscular power, but this excess of oxygen absorbed is very insufficient to account for the increase of carbonic acid produced, hence it does no such thing. Nothing, therefore, is left to explain the excessive development of power but an increased effect of volition, brought about by the absorption of an excessive amount of oxygen in its motor centre, which is, in the present case, the motor centre of respiration. This is a new departure, and one which appears to me to be fraught with interest. If the exercise of the will necessitated the absorption of oxygen in forced breathing, it was natural to conclude that the exercise of "volition" for forced breathing,

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though without response, would be attended by a similar result; and, if so, it should also produce an increase of muscular power as observed after forced breathing. This reasoning gave rise to the following experiment. When in a state of mental repose I lifted a weight of 10 lb. 42 times to a height of 18 in., after which the arm became too tired to continue the work. After a sufficient rest, the will was applied to forced breathing, but without response, for two minutes; and on suspending its action I was able to lift the weight 76 times, being an increase of 34 liftings. A similar experiment with another person gave 70 liftings for normal, and 96 after the exercise of volition towards forced breathing without response; therefore, in both these instances the increased development of muscular power was clearly the effect of volition only. The proof that the effort of volition in the present case was unattended with response is to be found in the form of the tracing obtained.

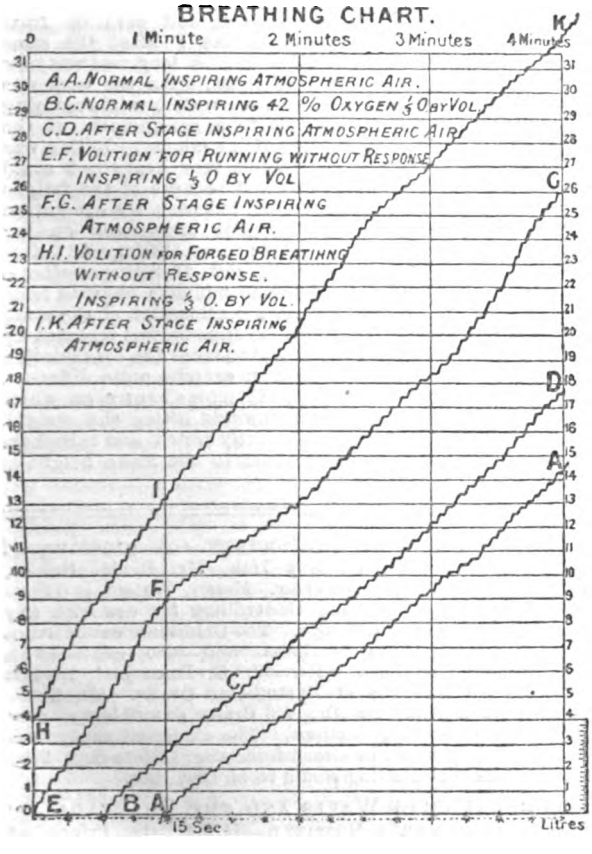
When volition attended with response is exerted towards forced breathing the record on the chart invariably shows a pause or state of apnœa on returning to automatic breathing in repose; but when volition towards forced breathing is unattended with response there is no pause, or the pause is barely appreciable, as seen in the above charts. The same experiment was repeated with volition applied to various other forms of exercise, and an increase of power was invariably obtained; thus after volition for running without response I raised a weight of 8¼ lb. seventy-seven times against forty-seven for normal. This increase of power must have been produced through the agency of the respiratory centres, as, whatever be the form of volition, it must supply the oxygen necessary for the heat required towards the increased muscular exercise.

If, after exerting volition without response greater development of muscular power is obtained in the same way as when exerting volition towards forced breathing, and if the latter is, as I have shown, attended with an increased absorption of oxygen, it appeared probable that an excess of oxygen would also be absorbed under volition, though without response, exerted towards various forms of muscular exercise, and a number of experiments were made which showed most conclusively that such was the case. In a first series of seven experiments, the will being applied without response to running or rowing, the excess of oxygen absorbed in four of the seven experiments varied from 7·7 c.cm. to 19·4 c.cm. per minute, with a mean increase of 12·4 c.cm. per minute, while in two of the other three there was a slight decrease in the volition stage by 2·1 c.cm.; one of these, however, showed an increase in the after-stage, as if in this case the oxygen in excess had been taken in the first instance from that in store in the muscles and other tissues, and returned from the atmosphere on the resumption of mental repose. On releasing volition and relapsing into normal automatic breathing, the mean oxygen absorbed was less than normal, the deficiency compensating very nearly the excess taken in under volition. Therefore, after the phenomenon was over, the absorption of oxygen had apparently undergone no change or combination in the motor centre. The oxygen absorbed was now determined on three different occasions after applying the will without response towards lifting a heavy weight; the results in these cases were well defined. In one experiment the excess of oxygen absorbed per minute under volition was 15·6 c.cm., in another 13 8 c.cm., and in the third 35 8 c.cm., with a mean of 21·7 c.cm. The oxygen absorbed in the after-stage again very nearly compensated the excess under volition. This series, though consisting of only three experiments, therefore confirms the former in every way and shows that volition towards lifting a weight causes an accumulation of oxygen in the body—clearly in the motor centres of the muscles of the arm. A third set of six experiments was made by applying volition without response towards forced breathing. The increased absorption of oxygen in the volition stage varied from 1 5 c.cm. per minute to 48 0 c.cm. per minute, with a mean of 23 9 c.cm., and this excess was also nearly balanced by a corresponding diminution of oxygen absorbed in the after-stage. Probably these experiments, in which the oxygen determined "as absorbed" is taken from the air, do not show the total volumes of oxygen absorbed by the motor centres, as it is impossible to ascertain how much is supplied from the tissues. It thus appears that whenever volition is applied towards any form of exercise there is an absorption of oxygen in the cerebral centres concerned in the

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phenomenon; and apparently with an excess of oxygen absorbed more work can be done than if the excess be wanting. The following experiment, in which a mixture of oxygen gas and air was breathed, is a striking confirmation of this view. The author lifted a 10 lb. weight forty-one times before being exhausted. After a rest he exercised his volition strongly towards lifting a weight for one minute and a half, and then raised it sixty-one times in succession. Again, after another rest, he exercised the same kind of volition as before, while inspiring a mixture of two-thirds of air and one-third of oxygen, containing nearly 43 per cent. of oxygen, instead of 20·9 per cent. as in atmospheric air, and immediately afterwards lifted the weight eighty-seven times before being arrested by fatigue; therefore under the influence of volition and air twice as rich in oxygen he could lift the weight twenty-six times oftener than when inspiring atmospheric air, the will being applied in a similar manner. This experiment repeated on another person gave with volition and atmospheric air seventy-seven liftings, and under the influence of volition and a mixture of air and oxygen, similar to the previous one, ninety-four liftings, or an increase of seventeen liftings.

Returning to the respiratory tracings under the influence of volition, we find that, whether the will be applied without response to locomotion, to manual labour, or to forced breathing with response, the curve is about the same—that is, first



the tracing is steeper than normal, and then, on releasing volition, there is a pause, followed by another rise, showing an increased volume of air breathed beyond the normal. One tracing under volition differs from all the others: it is that for volition towards forced breathing without response, when the pause is altogether wanting or hardly visible. This pause at first appeared to be due to the accumulation of oxygen in the motor centre under the action of volition, but the absence of any pause in the records of respiration under volition for forced breathing without response, even after breathing air mixed with oxygen gas, showed the present view to be mistaken since this form of volition is also attended with an accumulation of oxygen in the respiratory centres. The only explanation I can now offer for this pause is the following. All the centres concerned in volition, whether they be the motor centres for locomotion or manual labour, &c., act on the centres of respiration; and when volition is accompanied by response a very large increase of breathing is produced, which is controlled by the requirements of the centres concerned. As soon as volition without response is arrested there is no longer any excess of pulmonary ventilation required, and normal automatic breathing follows; but before the centre of respiration has shaken off the influence of the other centres a short lapse of time intervenes during which the oxygen stored up in the tissues comes into use; this is the reason which appears to me to account for the pause, a view confirmed by the fact that, as shown in the breathing records, immediately after the pause there follows a slight but decided increase of air inspired beyond the normal, whose object would be to replace the oxygen taken from the tissues. Now in volition towards forced breathing without response, when the will is suddenly released no lapse of time is needed as there is only one centre concerned in the phenomenon—that of respiration; hence there is no pause, and the tracing returns immediately to the normal. Even if a mixture of two-thirds of air and one-third of oxygen be inhaled whilst volition is exercised towards forced breathing there is no pause; but a considerably increased pause is observed after inhaling the mixture of air and oxygen, and at the same time applying the "will" to other forms of exercise, as seen in the above chart.

It might be objected that the oxygen absorbed from the air in natural respiration is possibly liable to change every few minutes, and that the increase obtained under volition is due to some other cause than the exercise of the "will." In order to answer this objection the following experiments were made. Air was expired while in mental repose, and reclining in an armchair, in three successive bell jars, each receiver taking seven or eight minutes to fill. The three samples of air expired were analysed separately, and the experiment, being repeated on three different days, gave the following figures for oxygen absorbed per minute:

Cubic Centimetres of Oxygen absorbed per Minute.

Experiment I.	Experiment II.	Experiment III.
a—49·5	*a*—43·0	*a*—42 3
b—53·9	*b*—42·0	*b*—41·5
c—48·6	*c*—46·6	*c*—38 5

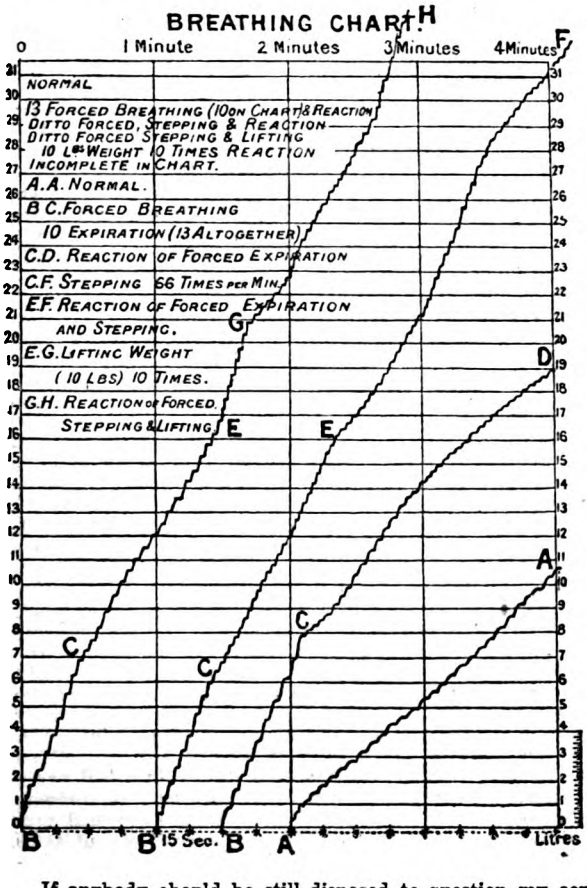
The greatest difference per minute in each experiment was therefore 5·3 c.cm. in the first experiment, 4 6 c.cm. in the second, and 3·8 c.cm. in the third, showing but little change in the oxygen absorbed in three successive experiments and giving much confidence in the method of analysis.

It may therefore be safely concluded that in the experiments on volition it was the effort of the will, and no other circumstance, which increased the volume of oxygen absorbed. Out of 24 experiments there were 3 with an increase of less than 1·5 c.cm. per minute and 2 with a decrease of 2 c.cm. The increase was marked in the other 19. In two series of experiments it amounted to 22 and 23 c.cm. There is no other way of accounting for that increased absorption of oxygen but through the agency of volition. Now, where can that oxygen go to in the body? It cannot remain in the blood, as hæmoglobin on leaving the pulmonary circulation is considered as charged with oxygen as it can be. On the other hand, there must be a demand for oxygen somewhere, because, as I have shown in my first lecture, no oxygen is taken into the body unless it be required. Of what use can be that oxygen taken in for the requirements of volition if not to exercise some sort of direct action on the motor centres concerned in volition? A parallel case would be the absorption of increased volumes of oxygen for the performance of muscular exercise, although the mode of action in volition appears to be of a very different character. The fact that oxygen is required in the body towards volition is shown by the increased volume of air breathed under volition. If this air was wanted for an excess of carbonic acid, we should find an increase of carbonic acid produced. There is indeed a very slight increase, but it is wanted for the extra work done by the muscles of respiration, and there may be some slight oxidation of hydrocarbon in the brain substance; in some cases it is impossible to find any production in excess of carbonic acid, this being probably due to physiological irregularities which it is impossible to control. We find, also, a certain volume of carbonic acid displaced from the blood by the

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increased volume of the air breathed. It might perhaps be objected that out of twenty-four experiments five results failed to agree with the other nineteen; but these exceptions occurred in the early part of the inquiry, and volition had very possibly not been brought to bear so earnestly as it was in subsequent experiments. It is a fact that, the more experienced we became—my assistant and myself—in these volition experiments, the greater was the volume of oxygen which was found absorbed. There is evidence in favour of this view in addition to chemical analysis: this is increased muscular power, and I shall again beg to direct your attention to this phenomenon.

If additional power is given to the muscles by a preliminary effort of volition, naturally there must be an increased amount of carbonic acid produced in proportion to the increase of strength developed. Three experiments were made which showed clearly that such was the case. The mean relation of the strength developed was 1 to 1·300, and of CO_2 to CO_2 while engaged in the extra work was 1 to 1·396; there was not, therefore, much difference between those relations for such a small number of experiments. If after exercising the will, instead of returning immediately to the state of physical and mental repose the weight of 10 lb. be raised in the usual way for one minute, followed by repose, while a record of breathing is taken on the chart, the pause which has been checked by the exercise now appears, and afterwards respiration returns much increased in volume. Finally, if immediately after the exercise of volition for one or two minutes stepping exercise is taken for one minute, followed at once by a return to the sitting position, and lifting the weight, say, ten times in succession, on assuming the state of rest the pause will again appear, though perhaps less marked, and there will be for a time a considerable increase in the pulmonary ventilation beyond the normal in repose. This is clearly seen in the subjoined chart recording the experiment.



If anybody should be still disposed to question my contention that the increased muscular work in these experiments is due to the influence of volition, the experiment of Mosso showing that fatigue of "volition" suffices to arrest muscular contraction would go far to dispel any doubt in that respect. The following experiment, which I have not seen quoted, confirms remarkably Mosso's discovery, while at the same time it is a strong argument in favour of the view advocated in this lecture, and differentiates very clearly the motor centres of the brain. Let a person, while sitting in an armchair, raise a weight, as in the experiments related above, until his arm is too tired to continue the work. He then takes a rest in mind and body of, say, one minute, and again resumes lifting the weight as long as he can. The number of times the weight is lifted is counted in both cases. Next a rest is taken, perhaps, for ten minutes, and the same kind of exercise repeated until the arm is exhausted. At the expiration of that time the arm is placed in a state of repose, but the "will" continues being applied as strongly as possible towards the exertion of lifting the weight, and this is continued for one minute. At the end of that minute the weight is again raised with that same arm, when it is found to be so tired that it is not equal to raising the weight by perhaps more than about one-half the number of times the weight was lifted under precisely similar circumstances without the application of the will. If, however, during the interval of one minute between the liftings, the will be directed towards a different kind of muscular work, such as running uphill, on resuming the lifting, the arm is found to be fresh and rested, and can raise the weight the same number of times as if the mind had been at perfect rest for that minute.

The following are two experiments which illustrate the phenomena. While reclining in a deck chair I raised a weight of 10 lb. 49 times and gave up from fatigue; after resting for one minute I lifted the same weight to the same height 40 times. A long rest was now taken and the weight lifted 47 times, when the work was stopped by fatigue; then the arm was rested, while applying volition as strongly as possible to a continuation of the same effort of lifting for a lapse of one minute. Lifting was now resumed, when the weight felt very heavy and could only be raised 21 times—clearly not because of the fatigue of the muscles, as they were rested, but from the exhaustion of the power of volition. A similar experiment on my assistant gave the following results: normal liftings, 42; after one minute's mental and physical rest, 41 liftings; after a prolonged rest, 44 liftings; after one minute's physical rest, but with volition exerted towards a continuation of the same exercise, 31 liftings. The same experiment was repeated by both of us without applying the will towards the continuation of the same exercise, but towards an exercise quite different, such as running, thereby resting the motor centre on which volition had exerted its action towards lifting the weight. After a minute the arm felt perfectly rested and raised the weight the same number of times to the same height as before.

ROYAL MICROSCOPICAL SOCIETY.—A meeting of this society was held on May 15th, Mr. E. M. Nelson, Vice-President, being in the chair. Messrs. Watson and Sons exhibited a simple Centring Underfilling for use with any ordinary student's microscope. The Chairman exhibited a new Low-power Lens by Zeiss, and also exhibited a new Photographic Lens. Mr. W. C. Bosanquet, read a paper on the Anatomy of Nyctotherus Ovalis. Mr. G. C. Karop read a paper by Dr. A. Bruce describing a new Microtome for cutting Sections. The chairman announced that the library would be closed from Aug. 12th to Sept. 9th, and that the next meeting would be on Oct. 16th.

THE PRINCE OF WALES AND THE SHAHZADA AT ST. BARTHOLOMEW'S HOSPITAL.—H.R.H. the Prince of Wales, the President of St. Bartholomew's Hospital, on Friday afternoon last visited the institution, accompanied by the Shahzada. The visit was private, and but few of the public were present at their arrival. Having passed through the gateway of King Henry VIII. they entered the quadrangle, where they were greeted with loud cheers from large numbers of students and the members of the staff. All those patients who could be safely brought out had been thoughtfully accommodated with seats and couches in the square, where they were able to get a good view of the Royal visitors, and, as they waved their handkerchiefs and cheered, the Prince of Wales and the Shahzada smilingly acknowledged their welcome. The governors of the hospital had assembled in the large hall, and after their reception the Royal visitors proceeded to view the various wards in the hospital as well as the new theatre. The building had been suitably decorated for the occasion.

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ABSTRACT OF AN

Address

ON THE RELATIONS OF SCIENTIFIC TO PRACTICAL WORK IN THE UNIVERSITY OF CAMBRIDGE.

Delivered at the opening of the Summer School of Medicine for Qualified Medical Practitioners, at Cambridge, on Monday, July 1st, 1895,

BY SIR GEORGE MURRAY HUMPHRY, M.D. CANTAB., F.R.C.S. ENG., F.R.S.,
PROFESSOR OF SURGERY AT CAMBRIDGE UNIVERSITY.

GENTLEMEN,—To me, as senior member of our teaching staff, has been assigned the pleasurable duty of welcoming you to this ancient and delightful seat of learning so full of interests and opportunities of various kinds. Here all, or nearly all, the branches of science are cultivated and taught, cultivated and taught in as free, open, and genial a spirit as the laws and restricting prejudices of our country permit. Here men and women are seeking education when minds are most plastic, when impressions are quickest and most durable, at the important time of life when growing freedom from restraint exercises, and needs, growing self-control, and when the mental training most requires to be balanced and furthered by corresponding training of the energies and vigour of the body. To have lived and moved for more than half a century in such a place, and taken during the whole of that time an active part in its work, and to have been associated with and stimulated by the gifted men similarly occupied, has, you may suppose, been an inestimable privilege for which I cannot be too thankful. I came here reluctantly, simply as a professional bread-winning duty, with no thought of taking part in university work, and would have contentedly gone away had I failed in my object of obtaining the surgeoncy to the hospital; but I soon learned to appreciate and enjoy the great and special advantages of the place; and you may judge what a pleasure it has been to see these advantages gradually developing and increasing, to witness the removal of all religious, or rather ecclesiastical, restrictions without the weakening, rather with the strengthening, of religious feeling, to watch the gradual increase of the area of study and teaching, to note the liberality of the university, exercised to the full extent of its limited but inadequate means, in building laboratories, museums, and workshops, and in providing professors and other teachers in the several branches of science, and, lastly, to see medicine taken so fully and generously within the university range, and the medical school placed upon a flourishing and, I hope, assured basis.

The two old universities were from an early period regarded as the special seats of the higher learning and the more intellectual cultivation. To this feeling with regard to them they probably owed the Royal patronage and countenance which gave them charters and other privileges, and which discouraged the foundation of similar institutions in other parts of England, it being thought better to concentrate the teaching power in these two places than to diffuse it elsewhere. To this feeling were due the donations and bequests by which the colleges were founded and enriched, and also made the means of conferring those social advantages which are to be found in no other places in the world. To live up to this estimate of being the seats of the higher learning and the higher education must be the great effort and ambition of the universities at the present time and in the future. The doing this becomes increasingly difficult as the stream of time bears upon us and floods us with an ever-increasing amount of material which has to be sorted, analysed, and appropriated, and which throws so much labour upon the teaching and the acquisition of recognised facts that little time is left for that real appreciation of them in which higher study consists. Doubtless the old, and to some extent the modern, ideal of the higher learning and the higher perceptions was based upon the study of the literature and art of the ancient Greeks, in whom thought could deal with and dominate over fact, in whom the mind was comparatively free from the trammels of the surroundings, in whom the appreciation of beauty of form was not hindered by detail of structure, and in whom the intellectual energies were not diverted from philosophical thought by the necessities of what we may fancy to be a more civilised, and which is certainly a more complicated, life. At present in the study of a science the mind is so choked by the in-pouring of facts that little room is left for reflection upon them. Knowledge of laws and principles has too much to give way under the pressure of accumulated details, and the higher, the more valuable, the more really mind-strengthening education is proportionately sacrificed. There can be no doubt that the examination system which rules over teaching in all our schools—primary, secondary, and university—is partly accountable for this. A knowledge of facts is more easily acquired and more easily and quickly shown and appreciated in an examination than a knowledge of principles. To state that a thing is we recognise to be far easier and more rapidly done than to state how or why it is. To give a chemical formula is easier and quicker than to give the principles illustrated by it. Many a man will flourish off the description of a bone without its having ever occurred to him to think of the purposes served by the conformation of its several parts, and the examiner usually requires no more. Hence the production and profitable sale of little cram-books, and the cramping of interest and intelligence and enjoyment in study. How terribly serious is this. How greatly has it increased since the halcyon days when I began and throughout my pupilage enjoyed the study of medicine, when I felt no thraldom of examination, when an hour of *vivâ voce* at the college was all that was needed, and cram-books did not exist.

To turn the wheel of time back and revert to the old ways, however good and pleasant they may have been, is impossible. We must march ever on. It is useless to try to stop the course of events. Facts must grow and examinations must continue, and, I fear, become more stringent and more crushing of freedom and pleasure in study. Still, it must be the great duty of the universities to meet these difficulties, to maintain reason and thought in their proper status, and to prevent their being weighed down and stunted by fact-cramming and examinations. A great power and responsibility exist with examiners, for it is with them to set not only the standard but the quality of the knowledge required; and one cannot but feel that by demanding less range of study, but more depth of knowledge with clearer perception of laws and principles, they would do great service and would promote higher and sounder teaching and better learning. These remarks apply in their full extent to medicine. Let it be remembered that we are not better than our forefathers, that none of us are wiser than the wise men of old, that mental power is not increased by the new ideas and new discoveries handed down to us. These have added immensely, especially of late, to our means and opportunities, but not to our ability in employing these means; and experience tells me that the ground over which the medical student has now to travel is too much for him, and rather jades than strengthens him. My effort, too often, as I think, ineffectual, has always been to curtail the syllabuses and lessen the number of subjects which are required of him; and when I was a member of the General Medical Council I always resisted the tendency to demand of him special knowledge of special subjects, because I felt that the more that tendency was yielded to the less likely would he be to acquire a sound and intelligent knowledge of the great principles which lie at the root of the whole science and practice of medicine. I desired to see the preliminary subjects made simpler, easier, narrower in range, more thought-inspiring by the inculcation of principles, more truly educational. I am sure that the student would thus be better fitted than he now is to enter thoughtfully upon the ground of medicine proper, better prepared to dig deeply into its most fertile soil, better prepared to interest himself in, and exercise his reason upon, the many facts which medical science affords. Far be it from me to detract from the practical study of medicine. My life has been mainly spent in it, and I regard it as supreme and more important than any other subject. I can little sympathise with the learned mathematician who drank to the toast of "Pure Mathematics, the Science which has never been degraded by Practical Application." But I have ever felt it to be the business of the university in an especial manner to associate scientific study with practical work, believing that thus the best practitioners are made, and knowing that the men who have stood foremost in our profession have ever signalised themselves as the chief cultivators of its science. Human anatomy is a good example of what I mean, not only on account of its high practical value and its direct bearing on diagnosis and operative surgery, but also as being

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a medium of cultivating accuracy and attention and reflection upon the physical construction of the human body, and the adaptation of its parts to the purposes they have to serve. A fact in anatomy, as I tell my pupils, should be regarded as a peg to hang a thought on, and without the thought it loses much of its interest and educational value. Physiology and pathology are linked together in disclosing processes, healthy and morbid, as well as the deviations of the morbid from the healthy; and they, together with the investigation of the Therapeutical means by which the morbid processes are to be brought back to the healthy, carry us into Alpine and difficult heights of experimental and philosophical science, in climbing which the energies of many ages will find ample scope. In Morbid Anatomy, Medicine, and Surgery, where we deal with the results of these processes upon the fluids and solids of the body, with the symptoms to which they give rise and their treatment, and the relations of causes and effects, we find problems which long have, and long will, occupy the minds and call forth the skill of thoughtful and keenly observing men. Indeed, medicine is so vast, so difficult, and in its practical bearing so important, a science, making, perhaps more than any other science, so great demands upon body and mind, that too much attention cannot be paid to the education for it.

We have invited you, Gentlemen, to come and consider with us for a short time this great subject of medicine from a university—that is, as I have before said, from an educational and a higher learning—point of view—the point of view from which it and every subject taught in this place should be considered. We shall be glad to have your opinions and to hear your criticisms, for those who are in the busy struggle of professional life can form good judgments as to the best means of equipping for it; and assuredly in the matter of teaching we have yet much to learn. We propose to take you back, in a measure, to school life and school thought, and demonstrate in our laboratories some of the new methods which the quickly advancing work of the last few years has brought about, with their practical applications. There will also be demonstrations of specimens from the Museum of Morbid Anatomy; and there will be demonstrations of cases at the hospital, as well as special lectures by the Regius Professor of Physic and, I wish I could add, the Professor of Physiology. You will see, therefore, that our object is to connect scientific and practical work, to make your brief sojourn here not, as might be supposed, a festive but a really working period, a period for observation, study, and mutual instruction. At the same time, it would scarcely have been in harmony with the spirit of the place if we had forgotten the great principle conveyed in the aphorism, "Otiare quo labores." Accordingly, opportunities will be afforded for visits to the colleges, and there will be a garden party in the Fellows' Garden at King's College to-morrow afternoon, at which members of the *séance* and ladies accompanying them will be welcome. We had some hesitation about attempting this new departure in the present summer, feeling that the great attractions of the meeting of the British Medical Association in London would divert so large a proportion of those who can spare a short time from the pressing requirements of medical practice; but we determined to take courage while the spirit was upon us, and to carry out our plan if a few only expressed their willingness to come. We relied upon the interest common to the members of our profession in the advancing science of medicine—an advance which has been greater in recent years than in any former corresponding period. The response to our invitation has proved that we are not mistaken. It has shown that the proposal was generally acceptable to the members of the profession, though many, of course, could not avail themselves of it. I trust you will not be disappointed.

I must not omit to mention the willing and generous manner in which the professors and their assistants have rendered us their aid by opening the laboratories, making the requisite preparations, and giving up their time, in some instances at much personal sacrifice. Their reward will be in your appreciation of, and profit by, their efforts. Our thanks are also due to the authorities of the colleges, who, with their accustomed liberality, have placed their rooms, dining-halls, and kitchens at our service; and our thanks are pre-eminently due to our honorary secretary, Dr. Griffiths, upon whom the arrangements have almost entirely devolved—no light task. His energy and organising ability have, however, proved equal to the occasion, in spite of the distractions—the not inconsiderable distractions—preceding and attendant upon an interesting and important ceremony which took place a few days ago, and the curtailed honey period consequent on it. You will, I am sure, join in hearty congratulations and good wishes on that auspicious event, and also on the fact of his having been this day elected to the surgeoncy of Addenbrooke's Hospital.

I will detain you, Gentlemen, no longer, for you will find in the next room matters more worthy of attention than I can give you. Yet there is one thing further to which, with much regret, I must allude. This morning's papers have told you of the great loss which England and the world at large, more especially the world of science, have sustained by the death of the Right Honourable Professor Huxley, which throws a chill of sorrow over us all. Few persons were gifted with his ability in investigation, with his reasoning power and his power of putting his thought into clear, vigorous, incisive words, whether as a speaker or a writer. He was in the foremost rank of men, and would have been so whatever line he had chosen to take; and in many directions might have gained far more material wealth than in that which he chose to follow. In the last speech I heard him make, at the Royal Society dinner, he told us that an influential relative urged him when he was a young man to go to the Bar, feeling that his talents would find their scope there, but he replied that "his desire was to work out and state truth, not to conceal or pervert it." This was the key-note of his life—kind, genial, humorous, a warm and steadfast friend, loved by those who knew him well, he was stern, even fierce, as a champion of truth. Still, though he might hit hard there was no malice in his blow, and he was respected by opponents as well as followers. All things come to an end, but the good and evil that men do live after them. Huxley leaves much of the former, but, so far as I know, none of the latter, behind him. This sad event necessitates an important change in our evening programme which all of us much regret. Our Professor of Physiology, Dr. Michael Foster, from whom we anticipated the lecture he had kindly promised to give on Wednesday, who was endeared to Huxley by long friendship and many ties, will, we fear, not be free to address you, which I need scarcely say is no small disappointment.[1]

THE PARASITE OF MALARIA AND MALARIAL FEVERS.

[WITH COLOURED ILLUSTRATION.]

BY GEORGE THIN, M.D. ST. AND.

THE remarkable progress of scientific medicine in recent years is characterised by three great discoveries, and in each case by the discovery of a parasite. The mysteries of leprosy and tuberculosis were unveiled by Hansen and Koch, who have shown that the pathological changes peculiar to these diseases are due to bacilli which are essentially distinct, though they have many superficial features in common. Not less remarkable, and certainly of not less practical importance, is the great discovery of Laveran that malarial fever, the perennial scourge of many of the most densely populated countries in the world, is due to an animal parasite, a hæmatozoon, which lives in and destroys the blood of its host. It is difficult to estimate the extent of the destruction of human health and life caused by this minute creature. As a cause of death and of illnesses that undermine the health, it is the predominant factor in populations which in the aggregate can be counted by hundreds of millions. The blood tax which it levies on the inhabitants of the temperate zones who enter the tropics renders the maintenance of our Indian empire onerous and costly, whilst it makes the colonisation of many rich and fertile countries an impossibility. Only those who have lived in fever-stricken countries can form a conception of the extent to which happiness and success are influenced by the poisonous and exhausting effects of this parasite. It was thus to be expected that Laveran's discovery would stimulate the investigations of the Italian pathologists whose close attention had been long given to the malarial fevers which prevail so largely in the peninsula, and it is in Italy that additional facts of great importance regarding the parasite

[1] We learn that the change was not necessary, and that Dr. Foster was able to give his lecture as had been arranged.

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and its effects have been discovered and appreciated. It was, therefore, to many of us one of the attractions of the International Medical Congress at Rome last year that an opportunity was given of coming into closer contact with the important work which was being done there in connexion with these fevers than was otherwise possible. In addition to the usual papers and public demonstrations, Professor Marchiafava and his assistant, Dr. Bignami, gave up their time with untiring courtesy to those who, like myself, desired to obtain more detailed information than could be given in the sectional meetings, and, what has been of much importance to myself, they placed at my disposal portions of brain and spleen from malarial patients which enabled me after my return to London to experiment with various dyes in order to satisfy myself as to the most successful methods of demonstrating the presence of the parasite in the tissues. This material has supplemented usefully the examinations of fresh and dried malarial blood which can be obtained in London. During the period which has elapsed since the Congress I have devoted much time to studying specimens of blood taken from the fingers of patients actually suffering from fever, and to staining and examining preparations sent to me from various malarial countries by medical friends. The results of this investigation will, I hope, be eventually brought before the profession. Meanwhile, I trust it will serve a useful purpose if I give the results of my experience regarding the best methods of demonstrating the parasite.

To begin with, I may remark that many good workers with the microscope have failed to see the parasite, and more than one of my friends practising in malarial countries tell me that they have not been able to find it. It is very desirable to appreciate the reasons of this failure, for there are several. First of all, of course, there is the difficulty of recognising an unfamiliar object, but in the present case I am satisfied that this has not been the chief difficulty. The malaria parasite assumes various forms and sizes. Some of these are so characteristic in shape and comparatively so large as microscopic objects that their recognition should present no difficulty to observers with ordinary training and ordinary instruments. Others, on the contrary, are so small in size, and so colourless, and are found for such short periods in the blood taken from the finger, that it is often very difficult to find them at all, and when they are present only a skilled microscopist would recognise them, and only excellent instruments would enable them to be distinguished. These latter forms are specially characteristic of many fevers which occur in the tropics, and that is one reason, I am satisfied, why some of my friends have failed to find them. They did not see them because they were not there at the time when they were looked for; and after a number of ineffectual efforts to observe the parasite in the blood of patients suffering from severe forms of fever the search was given up, although if it had been continued for a sufficiently long time at sufficiently short intervals the stage during which the small parasite could be seen would have been hit.

After Laveran's demonstration of the hæmatozoon came the remarkable and important observations of Golgi, who showed that tertian and quartan agues are due to special and distinct varieties of parasites, having different periods of evolution, and characteristic features which, with a little experience, can be readily distinguished under the microscope. The detection of the parasite in these two classical types of fever ought not to be difficult to anyone accustomed to use the microscope in ordinary clinical work and provided with ordinarily good microscopical apparatus. The tertian parasite during the second day of its development, when there is free pigment formation, and when it fills nearly the whole of the red corpuscle, is not a difficult object to see. Still easier is the detection of the quartan parasite in the later stages of its development, the large central block of pigment after spore formation has begun being a fairly conspicuous object. But the greater proportion of the fevers with which we have to deal either in England or in the tropical countries from which patients come are neither tertians nor quartans. It would indeed be strange if, with the comparative benignity of tertians and quartans, and the readiness with which their parasite is destroyed by quinine, many patients should be found who were not cured long before they reached our shores. In many parts of the south of Europe, in Africa, India, and other tropical countries fevers prevail which are more or less continuous or irregular, or approach regularity with long periods of apyrexia, in which the parasite (with the exception of one form to be shortly noted) is only found in blood from the finger in an early stage, disappearing so rapidly that its existence may easily be overlooked. Fortunately, for the purpose of diagnosis there is in these fevers the exceptional form to which I have alluded. I refer to the crescent-shaped body, so-called "of Laveran" (though why this particular form should be capriciously selected to bear the name of the man who made this immortal discovery, seeing that he saw and described all the other forms as well, is not very clear). The detection of the crescent-shaped body is easy—as easy, if not easier, than that of the fully developed quartan parasite, being found free in the blood, unlike in shape to anything else that occurs there, and being always marked by a central patch of pigment. In addition to these forms, of all of which my experience has been sufficient to enable me to speak with some confidence, I have observed in blood from fever patients sent to me from the West Coast of Africa a minute parasite whose characteristic feature would appear to be the rapid and early development of a small, central, comma-shaped mass of pigment previous to any sign of spore formation. Not having been able to study this parasite in stained preparations I shall have no more to say regarding it, except to add that in the specimens I examined high powers of the best kind were required.

The physician who seeks the aid of the microscope in the study and treatment of malarial fevers must also devote his attention to the appearances presented by the pigment which is found in the white corpuscles. There are cases of severe malarial fever in which repeated examination may fail to find the parasite in blood from the finger, but in which blocks of pigment in the leucocytes testify to the destructive work of the hæmatozoon in the internal organs.

These are the forms with which it is necessary to be familiar if we desire to treat malarial fevers on a scientific basis. The technique is not easy nor rapidly acquired, in this respect, unfortunately, differing much from that which is applicable to the study of the parasites of leprosy and tuberculosis. Having carefully tested the methods which have been recommended by recent writers on malaria, and having made many experiments in order to test the applicability to this study of the procedures employed in histological work, I believe a short account of what may be attained by the use of those methods which I have found best will be useful to others who are working at this subject, and particularly to residents in the tropics, whose comparative isolation renders it difficult for them to test the various methods for themselves. It will be convenient if I treat separately, first, the literature which it will be found useful to study; secondly, the microscopical apparatus necessary; thirdly, the examination of the blood; fourthly, the use of dyes in preparations of malarial blood; fifthly, the staining and studying of sections; and sixthly, add a few remarks on the clinical aspect of the question suggested by the experience of the cases which are seen in England.

1. *Literature.*—The bibliography of malarial fever since the discovery of the parasite has already become fairly extensive. Fortunately, all that is essential for the beginner can be found in small compass. As an introductory work I recommend in the first instance Laveran's book, "Paludism and its Hæmatozoon." The clearness and simplicity of style of this work, its lucid descriptions of the parasite, and the excellent illustrations render it, in my opinion, eminently fitted to interest the reader in the subject. After that comes the useful manual of Mannaberg, "The Parasites of Malaria." This observer has arranged in a systematic form all the knowledge that has been obtained regarding the parasite up to a recent time. He has thoroughly digested the literature bearing on it, has himself added much that is important regarding the minute structure of the parasite, and has offered suggestions regarding certain phases in its development of an attractive and suggestive kind. The numerous and well-executed coloured figures in the four plates which are appended to the book are indispensable to anyone who wishes to pursue the study in its more scientific aspects. It also contains much useful information regarding the technique which it is necessary to acquire. Both these works being translated for the Sydenham Society are available for English readers to whom the French and German languages present difficulties. To many readers Mannaberg's work is almost indispensable for another reason. I know no other book written in English which gives so good an account of the remarkable observations and theories of Golgi, an acquaintance with which is necessary

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to anyone who attempts to bring his knowledge of malaria abreast with the results of recent work. None of the summaries of Golgi's papers which are known to me, however, take the place of the original papers of that observer. To those who can read the languages in which they are written I specially recommend the paper published in the *Fortschritte der Medicin*, No. 3, Feb. 1st, 1889: "Ueber den Entwickelungskreislauf der Malariaparasiten bei der Febris tertiana, Differentialdiagnose zwischen den endoglobularen Parasiten des tertianen und denen des quartanen Fiebers," in which it is clearly shown that tertian fevers are caused by a special variety of the parasite, and the points of difference between the tertian and quartan parasites are pointed out. Golgi's original drawings, showing the various phases of these parasites, which have been so often copied since (and not always advantageously), are found in the plate which accompanies the memoir. The *Zeitschrift für Hygiene*, vol. x., 1891, contains his paper on the "Development of the Amœba Malariæ Febris Quartanæ as Illustrated by Photographs." Twelve photographs from blood preparations of quartan fever are printed, in which the size of the quartan parasite and the amount and grouping of pigment which are characteristic of it are demonstrated. The action of quinine on the parasite in its various stages of development is discussed in a paper in the *Deutsche Medicinische Wochenschrift*, 1892. Nos. 29–32: "Ueber die Wirkung des Chinins auf die Malariaparasiten und die diesen entsprechenden Fieberanfälle." Two other papers by Golgi specially deserve study because they apply to forms of fever regarding which our knowledge is still very defective. I refer to a paper on intermittent malarial fever with long intervals, published in the *Archivio per le Scienze Mediche*, vol. xiv., N. 14, under the title: "Sulle Febbri Intermittenti Malariche a Lunghi Intervalli." It is written in Italian, and I am not aware that it has been translated. The other paper, written in French, is on the malarial summer-autumn fevers of Rome: "Sur les Fièvres Malariques Estivo-Automnales de Rome: Lettre du Dr. C. Golgi au Prof. G. Baccelli" (Turin: Hermann Loescher, 1894). This last paper should be read in conjunction with the valuable work published by Marchiafava and Bignami on the "Summer-autumn Fevers of Rome,"[1] which contains a large number of observations on the severe and pernicious fevers which occur at that season in the Roman Campagna. The writers have attempted to reduce these fevers to a system based on the leading idea that they are caused by parasites which they distinguish as malignant tertian and quotidian, the latter having two varieties, a pigmented and an unpigmented quotidian parasite. This work is a storehouse of facts, is admirably illustrated, and its study is indispensable to observers who are engaged in the investigation of tropical fevers. The opinions of the writers have been criticised on clinical grounds by Baccelli, and their observations have been recently reviewed by Golgi in the light of observations made by himself in Rome in the summer and autumn of 1894. In his published letter to Baccelli, Golgi not only shows how far we yet are from possessing an accurate knowledge of the forms of the more malignant parasites whose development takes place in the internal organs, but indicates in a very suggestive manner the lines on which subsequent investigations should take place. The study of Marchiafava and Bignami's work should be followed by that of Golgi's "letter."

It is to be desired in the interests of the medical men who practise in malarial countries that translations of Golgi's papers should be provided for their use. They are too important to be taken at second-hand, and do not receive full justice in the necessarily brief notices which have been given in the more accessible works, but a fair knowledge of their scope can be obtained by reading Mannaberg's Manual.

2. *Microscopical apparatus.*—Although it is possible to see the larger forms of the malarial parasite with an ordinary dry objective of moderate power, its satisfactory study, even that of its larger forms, requires high powers and immersion objectives. This will be evident from a comparison of the drawings made to scale, which I have given in illustration of the next divisions of my subject. Although the observer who has at his disposal a good magnifying power of 500 diameters need not despair of using it successfully, even for purposes of diagnosis, one of the earliest results of its use will be to satisfy him of the necessity of providing himself with higher powers. A good water immersion objective is much better for this work than the dry lenses, but these again fall far short of the advantage to be had by using an oil immersion. Very fair objectives of this kind can now be had at a moderate price, but the cheaper the oil immersion the more necessary it is to have a careful selection made in purchasing one, for undoubtedly these cheap objectives vary considerably in excellence. Where a few pounds extra cost is not of importance I strongly recommend the use of an apochromatic oil immersion by a maker whose name is a guarantee of quality. The advantages which a good objective of this kind possesses are much out of proportion to the additional expense. A magnifying power of 1000 diameters is frequently desirable, and considering that this can only be attained by the use of a high eye-piece, which, of course, magnifies the faults of the objective, it is clear that only systems of great excellence can be satisfactory. An apochromatic oil immersion, then, is the objective which I recommend, and if with a compensating eye-piece, so much the better. But to use a system of this kind a good condenser and a stand to carry a condenser are indispensable, which at once excludes the use of the small Continental models which have so long sufficed for the wants of students in the elementary histological work of practical classes and for ordinary clinical work. For solidity and adaptability of position the English microscope stands are unsurpassed. The apochromatic condenser of Powell and Lealand is admirably suited to bring out the best qualities of an apochromatic oil immersion, and the general utility of the Abbé condenser is well recognised. I cannot too strongly urge those workers who intend seriously to take up this study to provide themselves with a good microscope stand, a good condenser, a good oil immersion, and by preference an apochromatic oil immersion.

3. *The examination of the blood.*—The technique of the examination of fresh blood has been well explained and its importance demonstrated by Hayem in his valuable work, "Le Sang," the perusal of which I earnestly recommend to all those who propose to make systematic blood examinations for any purpose. Blood is so sensitive to the action of any foreign substance that the glasses used should be freed as far as possible from all extraneous matters. Slides and cover-glasses should be rinsed in mineral acids to remove fatty matters, and then in alcohol, or, better, a mixture of alcohol and ether, and not touched with the fingers afterwards. It is convenient to keep them in a bottle of alcohol until required. Only the thinnest cover-glasses should be used. Neither slides nor cover-glasses are perfectly flat, and it is therefore desirable in order to obtain a thin, even layer of blood that the cover-glass should be very fine, the thin glass yielding better than the thicker. It is necessary in order to prevent the formation of rouleaux to make the preparation as quickly as possible after the drop of blood exudes through the epidermis, and it is desirable to have the blood uninfluenced by moisture. To secure these objects the following hints should be attended to: 1. Spring forceps are very convenient for the preparation of dried specimens. The clean, dry cover-glass is grasped with these forceps, which are placed on a table on the left hand. 2. The finger to be pricked should be washed with soap and warm water, well dried, and then dipped in alcohol, which should be wiped off with a clean cotton or linen rag. The patient should be placed slightly to the left of the operator, an elastic band being passed (not too tightly) round a finger of the left hand at the last joint. The swollen bulb is then pricked with a sharp-edged needle, and the assistant (or patient himself) with his right hand wipes off the first drop of blood with a dry linen cloth. 3. The operator, who has a cover-glass held in forceps in his right hand, squeezes the bulb of the finger gently and catches the small drop of blood in the centre of the glass the instant it exudes, and immediately lays it diagonally on the cover-glass which is held by the spring forceps. As soon as the blood has spread out into a uniform layer between the glasses the upper cover-glass is withdrawn from the under one and both are allowed to dry. This is better done with forceps, so that the fingers may not come near the blood; but it is not always easy to withdraw the upper cover-glass with the forceps without breaking it, and the unpractised operator will often be obliged to use the thumb and forefinger for the purpose, which in most cases will not interfere with the preparations being sufficiently useful. The size of the drop of blood is of some importance, particularly in preparations examined fresh; if it is large the corpuscles are massed together; if it is too small it does

[1] Translated by the Sydenham Society.

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not spread out sufficiently. Anæmic blood, as would be expected, spreads out more quickly than thick, rich blood. The right size of the drop of blood can be only learned by experience, but it will be found to be a very little larger than the head of a pin. If the preparation has been well made the red corpuscles will be found separate from each other, with sufficient space between each to admit of easy observation. Very often one part of the preparation will be useless, while the other part is good. For fresh preparations the charged cover-glass is laid immediately on the clean slide, and several should be made. Before taking a second drop of blood the bulb of the finger, which has been moistened by the previous drop, should be thoroughly dried with the linen cloth. The bulb is then again squeezed and the drop of blood taken as before. To prevent alteration of the blood by evaporation it is well to seal up each preparation as soon as it is made, which is easily done by brushing round the edges lightly with melted paraffin of a high melting-point. A small piece is melted over a spirit-lamp, and a fine camel's hair brush, after being dipped in it, is quickly drawn round the edge of the cover-glass, care being taken that the paraffin overlaps both the glasses. It dries almost immediately and the preparation is available for examination for hours afterwards. In examining fresh blood for the parasite the points to be looked for in the red corpuscles are alteration in size and defined clear spaces of various shapes with or without pigment. In the corpuscles the presence of pigment in these spaces is indicated either by very minute separate particles or by small rod shapes or by clumps, and the movements seen in the earlier stages of the parasite are indicated by the rapid changes in form of the clear outlines. In the mature parasite, in which spore formation is taking place, the corpuscle is found to be filled with a round colourless body dividing into spores, with the pigment at the periphery or in a block in the centre, or passing in lines towards the centre. In the stage between that of the small, round, clear parasite which has recently attacked the corpuscle and the fully developed stage in which spore formation begins to take place, minute grains of pigment are found in active motion. This appearance is very characteristic and cannot fail to catch the eye even of the inexperienced observer. The pigment is coarser in the quartan than in the tertian parasite, slightly lighter in colour, and with much more sluggish movement. The coarser pigment, the small number of spores—usually about eight—and their larger size, and the fact that the affected corpuscle does not increase in size are the distinctive features of the quartan as compared with the tertian parasite, the increase of size of the red corpuscle, its rapid discolouration, and the swiftly moving pigment being the chief appearances to be noted in corpuscles which harbour the latter. If it is a case of tertian or quartan with which the observer has to do he will not have much difficulty in detecting the parasite, more particularly if he examines about eight or ten hours before the attack. In cases of double tertian he will find it still more easy on account of the different stages of development which he will observe at the same time. But if he has to do with a case of the more malignant forms of malaria, or the chronic irregular tropical fevers, he may have great difficulty in observing the parasite, which in these cases is very often found only at long intervals in the blood from the finger, and then only for the short time that it is in the condition of the small, round, colourless amœba, without pigment and either in motion or motionless; or, in addition to this colourless state, the parasite may be indicated by the presence of small clear spaces in the corpuscles containing minute rod- or comma-shaped pigment forms or surrounded by a very small amount of pigment in fine grains. In these cases he will not observe the large parasite filling up a considerable portion of the corpuscle or dividing into segments. In this class of patients the diagnosis is rendered much easier by the observation of two appearances of a different kind. The crescent form, lasting over a longer or a shorter period, is usually found in these fevers if persistently looked for and can be easily recognised. Also, during a period not well defined for these fevers, white corpuscles may be found containing rounded or irregularly shaped blocks of pigment. Both these appearances are characteristic.

It is in the examination of fresh blood that high-power objectives of fine quality are more especially necessary. The small colourless parasite may be easily confounded with vacuoles in the red corpuscle, and their detection requires the combination of a certain amount of experience and good optical apparatus.

4. *The use of dyes in preparations of malarial blood.*—The use of stained dried blood preparations is not only valuable for confirmation of inferences drawn from the appearances seen in the fresh blood, but possesses special additional advantages, which render it, in my opinion, indispensable. I will therefore describe what I have found in my own experience to be the most satisfactory methods of staining the parasite, after having tried most of the methods recommended in Mannaberg's monograph and many of the dyes and staining processes described in Lee's useful work, "The Microtomist's Vade-Mecum," a book I cannot too highly recommend to those who are engaged in any kind of microscopical work in which the use of dyes plays a prominent part. To save space I shall only notice the methods which, so far, I have myself found most useful.

The cover-glasses which are destined for staining, after being prepared as I have already described, may be placed with advantage in absolute alcohol for three minutes before the blood has become quite dry, although this is not quite necessary. When dry they are wrapped in soft paper and put aside for subsequent use. The most convenient dye is the well-known combination of eosin and methylene blue, but it is far from being a matter of indifference how these dyes are used. Eosin is an acid and methylene blue a basic colour, and when used successively one may destroy the other unless the exact time and strength are hit. For this reason I found that using the dyes one after the other was very troublesome, and not so serviceable as the use of methylene blue alone—as, for example, Löffler's alkaline solution;[2] but the eosin has the advantage not only of being a contrast to the blue, but, from its property of staining hæmoglobin, it facilitates the distinction of a red corpuscle containing a round-shaped parasite from the small mono-nuclear white corpuscles. It is well, therefore, to use a mixture of the two dyes in proper proportions. After trying various formulæ I have found Chezynsky's the best for general purposes, which is made by mixing "half per cent. solution of eosin in 70 per cent. alcohol, 20 parts; concentrated solution of methylene blue in distilled water, 40 parts; water, 40 parts."[3] In preparing this mixture I think the precise strength of the alcohol is of importance.[4] For "concentrated" solution of methylene blue it would be more precise to write "saturated" solution. I have found the results most satisfactory by taking care that the solution of blue was really saturated. Some of this solution is filtered into a watch-glass, and the cover-glass with the blood surface downwards is floated on the fluid. The length of time which should be allowed for the staining is, I think, generally understated, and depends on the temperature. I generally use an incubator at a temperature of about 98° F., and at this heat a quarter of an hour to about twenty minutes amply suffices; at room temperature half an hour to two hours may be found necessary, according to the time of the year. If the preparation is an important one it is advisable to watch the staining process by washing off the dye occasionally with distilled water and looking at it unmounted with a low power, putting it back in the dye if necessary, until the requisite degree of staining is obtained. When this has been found the cover-glass is washed in distilled water and allowed to thoroughly dry, and is then mounted as a dried preparation, being kept in position on the slide by a margin of melted paraffin brushed round it in the manner I have described for fresh blood. It may be examined at once or after a period of weeks. After a little practice the parasites can be easily picked out in such preparations with a very low power. For this purpose I use successfully a low-power objective with Powell and Lealand's No. 10 compensating eye-piece. This gives me a very large, clear field, the magnifying power being 210 diameters, and the blue-stained parasite stands out distinctly and boldly (although a very minute object) in the red corpuscle. When a parasite has been found it may be examined by a high-power objective, an $\frac{1}{8}$th or higher, when the pigment, if present, should be seen more or less distinctly according to its fineness and distribution; but

[2] Thirty cubic centimetres of saturated solution of methylene blue in alcohol: 100 cubic centimetre solution of potash of strength 1 in 10,000.

[3] It is very important that aniline dyes should be pure. Dr. Gruebler of Leipzig supplies them in a reliable condition for histological purposes, and Dr. Ranthack, 21, Golden-square, London, W., acts as agent for the supply in England and will forward any of the dyes or solutions referred to in this paper.

[4] Seventy per cent. alcohol is made from methylated alcohol, which must be free from naphtha, by diluting 100 measures to 121; from absolute alcohol (0·793) by adding 34¼ volumes of water to 100 volumes of the alcohol. In working with aniline dyes it is best to avoid the use of methylated alcohol.

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for satisfactory examination, particularly as regards the stage of development of the parasite and the distribution of the pigment granules, an oil immersion objective should be used.

For the size and form of the parasite and its relations to the red corpuscle, and for the presence and condition of the pigment, the use of methylene blue and eosin is sufficient. Eosin is particularly useful in showing the poverty in hæmoglobin of the large, swollen red corpuscle which harbours the tertian parasite. In order to render the detection of the parasite by this method easier to those who are beginning the work I have thought it useful to show by definite outlines, drawn to scale, the size of the objects which have to be looked for, according to the magnifying power which is used. Although I recommend every observer to provide himself with apparatus which will give him a magnification of 1000 diameters, it must happen to many to be obliged to use a lower power, at all events for a time. I have therefore made the drawings which are printed in the accompanying plate chiefly to two scales, one of 500 and one of 1000 diameters; 500 diameters being within the reach of most—even of the commoner—microscopes, if the highest system with which they are provided is of sufficient quality to bear a fairly high eye-piece. For the finer details of the structure of the parasite, more particularly of the spores, hæmatoxylin should be employed. It is by the use of this dye that Mannaberg has made a distinct advance in our knowledge of this difficult subject. The process which he recommends, although apparently somewhat complicated, is not difficult to carry out. "The dried preparation is floated for five minutes in distilled water, and after being dried with blotting-paper is passed several times through a weak solution of acetic acid (a drop of acetic acid in twenty centimetres of distilled water) until the hæmoglobin disappears. The colourless preparation is then laid for two hours in the following fixing fluid: concentrated aqueous solution of picric acid 30, distilled water 30, glacial acetic acid 1. From this mixture it is placed for another two hours in absolute alcohol, and then placed from twelve to twenty-four hours in an alum hæmatoxylin solution. Differentiation of the stain is effected by using a quarter per cent. hydrochloric acid alcohol (alcohol of 75 per cent.) and then ammoniated alcohol (3 drops of ammonia in 10 cubic centimetres of 75 per cent. alcohol), which is washed out in 80 per cent. alcohol. The preparation is mounted in Canada balsam dissolved in xylol." The process is a tedious one, and care must be taken regarding the strength of the hydrochloric acid alcohol. If the ammonia is used too strong, or for too long a period, it acts very destructively. Unless the preparation is allowed to dry thoroughly before mounting in balsam I recommend a stronger—say, absolute—alcohol. Some of the most interesting appearances shown in Mannaberg's book, such as those in the Plates III. and IV., were obtained by this process, and these drawings cannot be neglected by anyone who studies the structure and development of the parasite. I have made some experiments with the view of ascertaining whether we cannot get similar results by a simpler method. These are not quite finished, but so far as they have gone they show that the selective action of hæmatoxylin on the chromatin of the spores can be obtained by a shorter procedure. It had been known for some time that appearances indicative of nuclear structure could be observed, particularly in the large spores of the quartan parasite, and Mannaberg has shown by his methods that nuclear structures can be clearly stained in the spores of the tertian parasite. I have found that the same appearances as those described by Mannaberg can be demonstrated by the simple use of hæmatoxylin, and, as I shall subsequently show, the same structural appearance can be brought out in the parasite of perniciosa comatosa by an analogous method. For this purpose I recommend the use of Mayer's hæmalum instead of the ordinary hæmatoxylin solutions, according to the formula given in Lee's Vade-Mecum. One gramme of hæmatein dissolved by heat in 50 cubic centimetres of 90 per cent. alcohol is added to a solution of 50 grammes of alum dissolved in a litre of distilled water. The mixture is allowed to cool and settle, filtered if necessary, and a crystal of thymol is added to preserve from mould. The preparations are placed in this dye until sufficient staining is produced, or, which I think is better, until the preparation is considerably over-stained, the excess of colour being then removed with a half per cent. solution of alum. After washing with water the preparation should be further placed for a few seconds or a minute (it is easily overdone) in a weak solution of eosin, in order to stain the hæmoglobin of the red corpuscle. If the eosin is used sufficiently diluted the desired tint can be obtained without excess of colouring, and the hæmalum stain is not obscured, the result, I think, presenting some advantages over the absolute decolouration by Mannaberg's method. As the object in this mode of preparation is to bring out the extremely small nuclear elements it is obvious that it is useless except when very high magnifying powers are used. In preparations stained in this way, and examined by Powell and Lealand's apochromatic $\frac{1}{12}$th oil immersion (numerical aperture, 1·40), with No. 10 compensating eye-piece, the chromatin elements described by Mannaberg as nucleolus and the surrounding protoplasm of the spore can be distinctly seen. In order to obtain sufficient enlargement to make these points clear in the Plate I have made some camera lucida drawings of the tertian sporulating parasite with Powell and Lealand's apochromatic $\frac{1}{50}$th (numerical aperture 1 40), with the No. 10 eye-piece, which gives a magnification of 2000 diameters, whilst retaining sufficiently good definition to enable the details of the preparation to be clearly seen. A more easily managed contrast stain than eosin, which I have so far used more in sections, but which deserves to be more tried in preparations of the kind with which I am now dealing, is Mayer's cochineal, which, like eosin, stains the hæmoglobin of the red corpuscle. Eosin, when used a little too strongly, stains also the protoplasm of the white corpuscle, and the difference between the red and the white corpuscle is then less marked than when cochineal is used. This dye leaves the protoplasm of the white corpuscle unaffected, and it is useful in some cases to be able to distinguish easily and with certainty in stained preparations the red corpuscle from the small mononuclear or the lymphoid white corpuscle. The presence of pigment in the white corpuscle is valuable as a diagnostic mark, and can be well studied in blood preparations and sections stained with eosin and methylene blue. The drawings (Fig. 13, *a*, *b*, *c*, and *d*) show the form and size which it frequently assumes.

5. *The staining and studying of sections*.—The staining of sections of malarial tissues is very useful, as it is from this line of research that we must look for information regarding the life history of the parasite (from the clinical point of view very important) which produces the deadly fevers occurring mostly in the tropics, and which have given to malaria its most terrible significance. Golgi in his letter to Baccelli (p. 44) refers to a case in which during life blood from the finger gave constant negative results, whilst blood from the spleen showed a great number of parasites in different phases of development. So far as he could judge from the examination of the specimens (incomplete at the time he wrote), the affection was localised exclusively in the spleen. He refers to another case, in which a surprising localisation of the malaria parasite in all its phases of development was found in the intestine, whilst in the other organs the number was either very few or there were none at all. Similar specimens were shown by Marchiafava at the Congress at Rome. Golgi suggests the question whether the parasites which are found in these malignant fevers in the medullary or splenic cells, instead of undergoing a process of phagocytosis, are not undergoing in these cells a process of development, accomplishing there a true endocellular cycle. It is clear, then, how important it is that the post-mortem tissues should be examined under the best possible conditions. This is a part of the subject to which I can contribute very little, my experience being limited to a prolonged series of experiments in staining, made on sections of the brain and spleen prepared from tissues from cases of perniciosa given to me by Professor Marchiafava and Dr. Bignami when I was at Rome last year. As Dr. Bignami has had a large experience in the examining of malarial tissues, I quote from his "Ricerche sull' Anatomia Patologica delle Perniciose" (Estratto dagli Atti della Accademia Medica di Roma, anno xvi., vol. v., serie ii.). "In the greater number of cases tissues have been fixed in absolute alcohol, some in the liquid of Kleinenberg, some in perchloride of mercury. The best methods are fixation in absolute alcohol, and fixation in 1 per cent. solution of perchloride of mercury in distilled water, to which $\frac{3}{4}$ per cent. sodium chloride and from $\frac{1}{2}$ to 1 per cent. acetic acid are added. This fluid combines the conditions of Carnoy's and Deny's liquids. It penetrates easily into tissues, fixes them rapidly, preserves the red corpuscles without removing the hæmoglobin, a distinct advantage in studying the endoglobular parasite. In this solution, which I have found

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more especially useful in studying the spleen and the medulla of the bones, the portions of the tissue remain for a quarter of an hour to an hour, or several hours, according to size, and are then passed through iodised alcohol, and finally to absolute alcohol." I would suggest that the portions hardened should be small in size, say not larger than half an inch cube, and those which are to be kept some time should, when sufficiently hardened in absolute alcohol, be preserved in 70 per cent. alcohol. The brain, the spleen, and the liver are best cut by the paraffin process, the success of which depends on a number of details which are very well explained in Lee's book. After trying a great many methods of staining by aniline and other dyes, I have come to the conclusion that for the demonstration of the parasite nothing is better than the various solutions of methylene blue, with or without eosin. Some of the substitution methods which are described in Lee's book are useful in showing the composite character of the chromatin elements in the early stage of the parasite and I would specially recommend that by vesuvin and gentian violet for this purpose. For the study of the nuclear structures, however, I have found hæmalum better than any of the other dyes I have tried, and the best results I have got were obtained by double staining in hæmalum and cochineal. The method which was most successful consisted in long staining with hæmalum, a day or even longer, and washing out the excess of colour by soaking in ½ per cent. solution of alum; the section is then washed in water and stained slowly in cochineal. The cochineal as a contrast stain has been for this purpose, in my hands, better than eosin, being less intense and more selective. The tissues with which I experimented had been kept for a considerable time in alcohol, and sections of the brain and spleen with many dyes did not show a trace of the red corpuscles, the parasites being represented in the apparently empty capillaries by very minute, round, stained bodies, which Mannaberg would call the nucleolus, and which can be seen by a good objective to be composed of minute, round, separate points of chromatin. In similar sections treated by cochineal the contours of the red blood-corpuscles were well marked, and the more deeply stained parasite could be seen within the corpuscles. (See Fig. 3.) In very successfully stained preparations of the brain the parasite, which, in the tissue examined by me, was still in an early stage of development, could be seen to be composed always of two and sometimes distinctly of three parts, the chromatin made up of fine points very darkly stained by the hæmalum, the protoplasma mantle slightly stained, and occasionally between the nucleolar chromatin and the protoplasma mantle a small unstained space, the appearance being similar to that figured by Mannaberg in the spores of the tertian parasite. The advantages of this method of staining consist in bringing out successfully these separate elements. In the various illustrations which I have seen of the parasite of pernicious malaria, as observed in the capillaries of the brain, I have not noticed these three elements figured, and although analogy would lead us to expect to find them, it is satisfactory to be able to bring them under direct observation. They can be very clearly observed by Powell and Lealand's apochromatic $\frac{1}{12}$th, but from the small size of the bodies I have thought it better to draw them as seen when very highly magnified. The drawing in the plate (Fig. 3) to the scale of 2000 diameters was made by using Powell and Lealand's apochromatic $\frac{1}{12}$th oil immersion with the No. 10 eyepiece. The size of the red corpuscles in the drawing, compared with that shown in Fig. 1, *a*, will give an idea of the shrinking which had taken place from the action of the alcohol, but it does not follow that the parasite had shrunk in an equal degree with the corpuscular substance. The fullest representation of the parasite of malignant malaria (pernicious comatosa) with which I am acquainted is given in one of the plates in Bignami's paper already referred to, "Ricerche sull' Anatomia," &c. Both the pigmented and the unpigmented parasite of pernicious quotidian, as seen in the bloodvessels of the brain, are copiously illustrated in these plates, all the stages of development being represented.

Cases of chronic malaria in which the crescent form of the parasite is found often present a difficulty caused by the small number of parasites which can be observed in blood taken from the finger. A person in whom there is no history of febrile symptoms for several weeks, who possibly considers himself well and free from fever, betrays by the pale lips, creamy conjunctiva, and general bloodless expression the probable existence of chronic malarial poisoning. Examination of blood from the finger will probably show no endoglobular parasites, and no pigment-bearing white corpuscles may be observed. If a crescent parasite is seen the diagnosis is easy, but a short examination may show no crescents, and the long, repeated examinations which are necessary to settle the point may become extremely irksome to a man actively engaged in practice. It occurred to me, therefore, to try some method by which large drops of blood could be examined, so as to greatly multiply the chances of detecting crescents, and after a considerable experience I can recommend the following procedure. If a small drop of filtered saturated solution of methyl green, to which 1 per cent. of acetic acid has been added, is placed on the slide, and the cover-glass with the freshly drawn blood is placed over it, the drop of methyl green solution mixes rapidly with the drop of blood, and after sealing with paraffin the preparation is ready for examination. What has happened is this—the hæmoglobin is no longer visible, and the decolourised red corpuscles, being only detected by their fine contours, no longer impede observation, and if any crescents are present they can be readily picked out by a low power. The white corpuscles are seen as round bodies bounded by a thin line, their protoplasm is almost colourless, and their nuclei are stained pale green. The crescents when present are easily detected by the central accumulation of pigment, the body of the parasite being seen as a smooth, cleanly contoured body of a pale green colour. (See Fig. 5, *a*, *b*.) Some of the crescents appear to undergo very little change in this solution, others appear to be considerably shrunk, the more stable portion of the parasite being that which is next to the central pigment. I have added a weak chromic acid solution to this mixture, and I have also mixed it, with and without weak chromic acid solution, with glycerine without notably modifying the results. I have found, in a preparation in which glycerine had been mixed with the solution, that the crescents lost nothing in their definition and colour for some months. After eleven months the contour and definition were well marked, but the colour was much faded. This method, then, is useful for permanent preparations, but, as paraffin is apt to crack, it is well to brush Bell's cement over it if they are to be kept. The ordinary forms of endoglobular parasite can also be observed by this method, but so far I have used it chiefly, and most successfully, in searching for crescents.

6. *Remarks on the clinical aspect of the question.*—The utility of examining blood for the malaria parasite in cases of fever is too evident to be enlarged upon, but its utility is much greater in some classes of cases than in others. It does not require a microscope to diagnose or treat successfully a case of classical ague, or even many of the cases of irregular and remittent fevers which are due to malaria, although microscopic observation is much more important in them than in tertian and quartan fevers. It is certain, however, that even in malarial countries many cases of fever are diagnosed and treated by skilled and experienced observers as of a malarial nature which are really due to other causes. There are cases in which a considerable time must elapse before the diagnosis can be made from the clinical symptoms alone. I conceive that it is very important to use the microscope in cases of so-called "fever from exposure to the sun," and I am afraid that occasionally cases diagnosed and treated as sunstroke are examples of pernicious malaria with coma. In all doubtful cases of fever, therefore, occurring in countries where, for example, the diagnosis may lie between typhoid fever and malaria and "sun fever," the microscope should be used, and it should also be employed for diagnostic purposes in many cases of coma with acute febrile symptoms which might perhaps more naturally suggest sunstroke. Very important is it to use the microscope in cases of a different class. Persons who have suffered from malarial fevers in the tropics and who have returned to England frequently suffer from what they believe to be malarial attacks, for which they take quinine, often in large and unmeasured doses. On simply clinical evidence, and long before I knew anything of the malaria parasite, I had satisfied myself that the great majority of these cases were not cases of malarial fever at all, and that the use of quinine was injurious. In many of these patients there is a slight daily rise in temperature, but in others it remains subnormal, notwithstanding that the symptoms of malaise, weariness, and aching pains in the bones are very similar to the symptoms with which they were familiar as accompanying the true attacks of malarial fever

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which they had in the tropics. Hence nothing can be more natural than that they should imagine that they have the same fever, and, if there is a slight rise in the temperature, it is equally natural that the medical attendant should be of the same opinion. By the use of the microscope I have satisfied myself that my belief as to the non-malarial nature of these cases was correct. Shortly after I began these investigations a young man was sent to me by a physician long experienced in tropical diseases as a subject well fitted to afford material for the study of the parasite. His bloodless look and shattered appearance gave me the same impression, and it was with some surprise that I found no trace of the parasite in his blood. Not content with one or two fruitless examinations, I spent a considerable time in examining his blood daily for a week, but always with a negative result. Looking back on the case now, I recognise that what this young man suffered from was not the malarial parasite in his blood, but the damage done to the viscera before he left India by the parasite which he then harboured. Quinine is of course useless in such cases. Quite recently a former patient, an anæmic, feeble man, was affected whilst in the country by chill. There was a daily rise in temperature, malarial fever was diagnosed, and he was treated by large doses of quinine. His condition did not improve, and when I saw him in London some weeks afterwards an examination of the blood, both before and after the slight daily rise in temperature, afforded no evidence of malarial disease. These are only examples of other cases of a like nature. My observations on the cause of the symptoms in this class of cases are yet so incomplete that I hesitate to use them in suggesting an explanation of the symptoms, but I hazard the theory that in most of them the discomfort, debility, and febrile accesses are associated with the damage sustained by the blood-forming organs when the patients suffered from malaria in the tropics. The destructive action of the malarial parasite on the tissues of the spleen, the liver, and the bone marrow have been well worked out and described, particularly by Bignami, and there is no doubt that in a certain proportion of these cases this damage is never thoroughly repaired.

Whether these people are well or ill, I find they are more or less anæmic, the change in the number and condition of the corpuscular elements of the blood being sometimes very marked. When they get chilled or suffer from continuous cold weather, or undergo much fatigue or experience depressing mental emotions, they become affected with many of the symptoms which are associated with the febrile state, and there is often a rise of one to two degrees of temperature. Quinine does them no good, but if they remain in bed for two or three days, and take an appropriate diet, the symptoms usually soon disappear. It is the frequent recurrence of these symptoms that has led to the idea that persons who have had malarial fever remain always liable to fresh attacks, even after they have returned to temperate climates. I am satisfied that not only is this not the case, but that a great proportion of the persons who have suffered from malarial fever in the tropics, particularly those who are not aged and are naturally robust, recover perfectly within a comparatively short time. I am familiar with many instances of men who have been sent home on account of fever and have recovered entirely before reaching England, and have never had another attack. To assume that all persons who have once had malarial fever are liable to it in the future is an assumption that is not based on evidence. On the other hand, we see in London two classes of true malarial fever. There are cases in which the patient may have recovered to some extent on the voyage home, but is seized shortly after his arrival in England with well-marked and often severe symptoms of fever, in which the nature of the disease is manifested both by the high temperature and the detection of the parasite in the blood. These cases, it is needless to remark, are more or less amenable to quinine, according to the dose and the manner in which it is administered, and as very large doses of quinine are sometimes required it is important to be fortified in the diagnosis by the detection of the parasite. Looking back on the pre-parasite days I can recollect the anxiety with which I recommended thirty grains of quinine daily for a small delicate woman dangerously ill from severe malarial fever which she had contracted in the south of Spain; twenty grains of quinine a day had been given by the medical man with whom I saw her without effect. Her condition being critical, I advised that the dose should be increased to thirty grains daily, with the result that there was a speedy fall in the temperature and a final cure. I can recall a similar case in a man from Mexico, who although not dangerously was seriously ill, and in whom the fever, which did not yield to the doses usually given in malarial fever, also yielded satisfactorily to a larger dose. The microscope is now a great stand-by in dealing with such cases, by giving much needed confidence when unusually large doses are indicated. Another class of case which we see in London is of a very different kind. The patient either has no febrile symptoms, or has them at such long intervals that he may possibly not suspect that he has fever at all. Last summer I was consulted by an officer who had contracted fever when on a shooting expedition in the jungle in India. He treated himself with quinine, and after a week the acute symptoms disappeared and he considered that his fever was cured. He had nothing to complain of except that he was supposed to have had a deranged liver for some days on his way home, but his listless manner and marked anæmic appearance impressed his relatives so strongly that they recommended him to consult me. Microscopic examination showed at once the presence of a fair number of crescents in his blood. I sent him to Scotland, where, about three weeks afterwards, he had a distinct febrile attack which I have no doubt was malarial; but under the judicious use of arsenic and iron and moderate doses of quinine he recovered a healthy appearance, and two months later one long examination failed to show any malaria parasites in his blood. As he remained in good health he shortly afterwards returned to India. Two other cases may be briefly quoted as types of the cases in which the crescent form is found. A young man who had acquired fever in Bombay, the attacks being characterised by much nausea and vomiting, had not had for a considerable time any active febrile symptoms or rise of temperature, but his extreme pallor and great weakness were strongly indicative of the slow destructive effect of some noxious agent upon the blood. Continuous diarrhœa, which had lasted for weeks, yielded at once to exclusive milk diet. Crescents were found for about a fortnight, and although I examined his blood every two or three days during that time I only once found another form of the parasite. He was liable once in two or three weeks to attacks of fever, the chief symptom being frequent retching, with great debility and malaise, lasting for two days. After one of these attacks I found on one occasion a considerable number of small colourless amœbæ attached to the surface of the red corpuscles, some of them simply round, some of them ring-shaped—a form of parasite which can only be recognised with certainty by the use of high powers and a good objective, and which might easily be confused with the vacuoles in the red corpuscles. I refer to another case chiefly with the object of indicating the treatment under which the patient recovered. This man had acquired fever in India some six months previously, the disease being attended at the outset with severe continuous febrile symptoms and great nausea and vomiting. After about a week his febrile symptoms abated, but he had never been quite well since the beginning of the attack, and every twelve days he was prostrated with symptoms of fever, always accompanied with severe vomiting. I examined the blood three times at intervals of five or six days when no fever was present, and each time found crescents but no other form of parasite. He had taken much quinine during the six months his illness had lasted, and, as it was possible to calculate with some certainty the time that the fever would recur, I recommended him to take twenty grains of quinine daily in two ten-grain doses for two days before the next attack. This did not prevent the expected attack, but I directed him to repeat the same dose in the same way two days before the next expected period of recurrence. This time the attack did not appear, and he entirely regained his health. It is difficult to be sure which of these doses of quinine cured him, but, judging by analogy from Golgi's observations on the action of quinine on the malarial parasite, it is probable that, although the first series of doses did not prevent the attack, the brood of young amœbæ succumbed to the effects of the quinine which was in the blood when they were set free. The favourable action of the quinine was probably assisted by the return of the patient to the climate of England.

The slight sketch which I have given of these few illustrative cases will suffice to indicate the improved position we now occupy in treating cases of malarial fever in the light

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Fig. 1

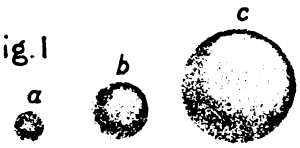


Fig. 2

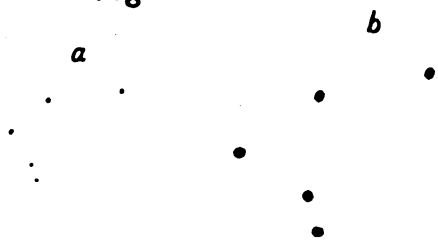


Fig. 3

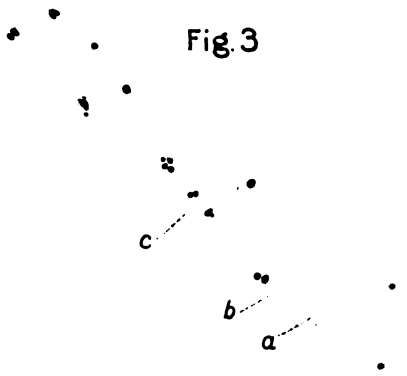


Fig. 4

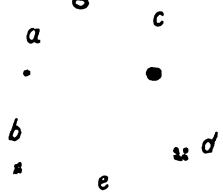


Fig. 5.

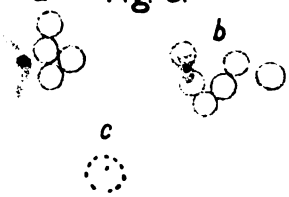


Fig. 6



Fig. 7



Fig. 8



Fig. 9

Fig. 10

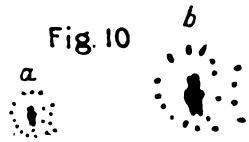


Fig. 11

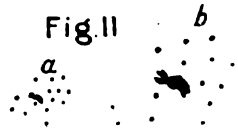


Fig. 12

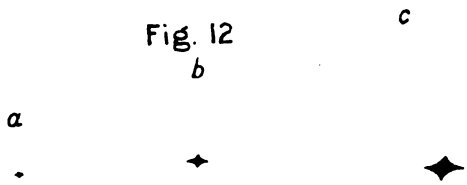
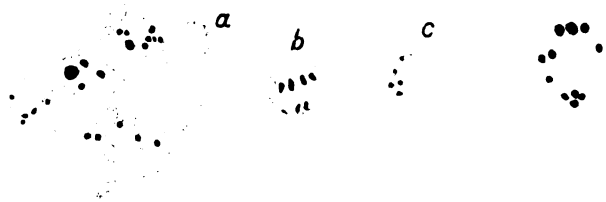


Fig. 13



TO ILLUSTRATE DR THIN'S ARTICLE ON THE

MALARIA PARASITE.

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afforded by microscopical examination of the blood. Unfortunately the technical skill needed for this examination can only be acquired by serious application to a study which has many difficulties and pitfalls. These can, however, be overcome by any medical man living in a malarial country who will give sufficient time to the subject and will provide himself with the necessary apparatus. I hope the hints that I have given in this paper, which are based on my own experience, may prove useful to workers who are absent from great centres and by whom all technical work must be carried on at a disadvantage. It is my pleasant duty to record my obligation to my friend Dr. Marshall of Rio Tinto, who has been a zealous coadjutor in this study for more than a year, and who has furnished me with much valuable material.

EXPLANATION OF THE PLATE.

Fig. 1.—A red blood-corpuscle from fresh normal blood, drawn to scale by camera lucida, to form a standard for comparison with the figures of dried and stained blood which follow. (The colour of the fresh blood is not reproduced.) *a* × 500 diameters; *b*, × 1000 diameters; and *c*, × 2000 diameters. (In this and the subsequent figures the objectives employed were, for the 500 diameters, a dry objective by Powell and Lealand; for the 1000 diameters Powell and Lealand's apochromatic $\frac{1}{12}$th oil immersion with the No. 10 eye-piece, or the $\frac{1}{16}$th apochromatic oil immersion of the same makers with a low eye-piece; for the 2000 diameters the $\frac{1}{16}$th with No. 10 eye-piece.)

Fig. 2.—Blood from a dried preparation stained in hæmatoxylin and mounted in glycerine; chronic irregular fever; sporulation in internal organs. The blood, which is from the finger, shows the red corpuscles being attacked by the parasite in its earliest stage. In one corpuscle two parasites are observed. The part chosen for drawing contained an unusual number of affected corpuscles. *a*, × 500 diameters; and *b*, × 1000 diameters.

Fig. 3.—A bloodvessel from a section of a portion of brain given to me by Dr. Bignami from Professor Marchiafava's laboratory in Rome. The section, which was cut in paraffin, was stained in hæmalum and cochineal. *a*. a red corpuscle containing no parasite; *b*. a red corpuscle containing an eccentrically situated parasite; *c*. a red corpuscle containing two parasites. The protoplasm of the parasite is stained a deep pink, the nuclear elements a very dark purple. (In this and similar preparations the resolution of the stained nuclear elements into separate minute spheres depends to a considerable extent on the excellence of the objective used). The darkly stained nuclear elements of the parasite as shown in this figure must not be confounded with pigment. No pigment was observed in the section, and the case was therefore probably one of quotidiana perniciosa caused by the pigmentless quotidian parasite described by Marchiafava and Bignami.

Fig. 4.—The crescent-shaped form of the parasite found in the blood in irregular chronic fever. The dried blood from the finger was stained by hæmalum in excess, and subsequently partially decolourised by weak hydrochloric acid. (See Mannaberg's process, as described in the text). *a*. The parasite with arc-shaped line indicating the contour of the red corpuscle in which it had developed. *b*. Free parasite × 500 diameters. *c* and *d*. The same × 1000 diameters. *e*. Red corpuscles in the same preparation × 1000 diameters.

Fig. 5.—Crescent-shaped parasites in the blood, sealed in solution of methyl green in 1 per cent. acetic acid. The colour of the methyl green is not shown in the plate. *a*. A crescent sealed in the solution, to which a little glycerine has been added. *b*. A crescent in the solution without glycerine, drawn shortly after being sealed. Many crescents seen in this staining solution have the shortened, mutilated appearance shown by this one. The red corpuscles, which are much shrunk in size, are quite colourless, and are indicated only by very fine lines, much fainter than is shown in the drawing. The magnification in this figure was not accurately estimated, but that of *a* is about 700 to 800 diameters, and that of *b* nearly 1000. The red corpuscles in *b* had shrunk more than those in *a*. *c*. A red corpuscle containing a round parasite with peripheral pigment from a case of irregular fever with the formation of crescent bodies. Sporulating forms were not found in blood from the finger. This drawing is shown under this figure because it is typical of forms that are found (in my experience, sparingly) in cases with crescent formation. The drawing was not to scale by camera lucida, but the magnification is slightly over 1000 diameters; eosin and methylene blue.

Fig. 6.—A red corpuscle containing the tertian parasite before the formation of pigment; eosin and methylene blue; the parasite is stained blue. × 1000 diameters.

Fig. 7.—A red corpuscle containing the tertian parasite with the beginning of pigment formation and two normal red corpuscles beside it; eosin and methylene blue. The larger size of the corpuscle which contains the parasite is to be noted. × 1000 diameters.

Fig. 8.—A red corpuscle containing the parasite in a more advanced stage of pigment formation. Note the serrated appearance at one part of what remains of the red corpuscle, caused by the destructive action of the parasite. × 1000 diameters; eosin and methylene blue.

Fig. 9.—The tertian parasite with spore formation and central pigment. The number of spores is unusually small for the tertian parasite. Note the disappearance of the hæmoglobin from the red corpuscle and its comparatively large size as compared with the normal corpuscles around it, which appear to have been considerably shrunk by the drying process. × 1000 diameters; eosin and methylene blue.

Fig. 10.—*a*. A red corpuscle containing the tertian parasite with spore formation complete; hæmalum and eosin. The nuclear element of each spore is stained by the hæmalum. × 1000 diameters. *b*. The same × 2000 diameters. Note the contour of the perfectly colourless red corpuscle, and that in the parasite between the spore zone and the mass of central pigment there is a structureless substance less deeply stained than the spores.

Fig. 11.—The tertian parasite. A group of spores just separated from the corpuscle; hæmalum and eosin. The position of the central mass of pigment shows that the relative position of the spores has been comparatively little changed by drawing the one cover-glass over the other in making the preparation. Each spore contains a distinct hæmalum-stained nuclear element. *a*, × 1000 diameters; *b*, × 2000 diameters.

Fig. 12.—Sporulating form of the quartan parasite stained by alkaline (Löffler's) methylene blue. Sporulation is complete, with central pigment. *a*, × 500 diameters; *b*, × 1000 diameters; *c*, × 2000 diameters. Note in *b* and *c* that there is still a narrow rim of corpuscular substance preserved, that the spores are the usual number in this parasite (8), that the corpuscle which contains the parasite is hardly larger than the unaffected red corpuscles which surround it, and there is an absence of the zone between the spores and the pigment which is seen in the tertian parasite.

Fig. 13.—*a*. Phagocyte white corpuscle containing small pigment spheres. The patient was suffering from chronic malaria, acquired in Bombay. He was weak and anæmic, his spleen was slightly enlarged, and at considerable intervals he had slight fever, lasting for a day at a time. I found no parasite in the blood from the finger, but several pigment-bearing white corpuscles. The figure was drawn by camera lucida from a sealed preparation of fresh blood the day after it was prepared; × 1000 diameters. *b*. White corpuscle containing rod-shaped blocks of pigment from blood preserved in Pacini's fluid, kindly sent me by Surgeon-Major Sharpe from Sierra Leone. The patient was said to be suffering from ague, and when the blood was taken his temperature was 105° F. No parasites were found in the red corpuscles, but there was an unusual number of white corpuscles heavily laden with pigment. (Not a camera lucida drawing, but magnifying power probably about 1000 diameters.) *c*. Phagocyte white corpuscle from dried preparation of blood from a case of chronic irregular fever. There were crescents in the fresh blood. The dark outline on the left, which did not take on the eosin colour so deeply as the rest of the corpuscle, contained minute spheres of pigment, and seemed to be formed by extremely minute powdery pigment, the particles of which were too small to draw, and is suggestive of a parasite, probably a crescent, enclosed in the corpuscle; eosin and methylene blue; × 1000 diameters. *d*. A white corpuscle containing pigment spheres in a bloodvessel in a malarial spleen. For the section from which it is taken I am indebted to Surgeon-Captain Duggan, who prepared it in the British Institute of Preventive Medicine; × 1000 diameters.

Queen Anne-street, W.

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SOME CONSIDERATIONS ON THE CHLOROFORM QUESTION, SUGGESTED BY THE REPORTS OF THE HYDERABAD AND "THE LANCET" COMMISSIONS.

BY T. LAUDER BRUNTON, M.D., F.R.S.

[THE following paper was begun at the request of the Editors of THE LANCET, and was originally intended to be published as an introductory article to a reprint of the Report of THE LANCET Commission appointed to investigate the Subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint, published in THE LANCET of March 18th and 25th, April 1st, 15th, and 22nd, May 6th and 20th, and June 17th, 1893. In spite of considerable curtailment, Dr. Lauder Brunton finds that it has now grown much too long to serve the purpose for which it was originally intended, and the further shortening required to adapt it for this purpose might, he thinks, prevent neuro-paralysis as a cause of death during anæsthesia being presented with sufficient clearness to the medical public. The Editors of THE LANCET gladly avail themselves of the opportunity of publishing Dr. Lauder Brunton's views with regard to this most important question before the issue of the reprint.]

THE POSITION OF THE QUESTION.

Amid the burning questions bearing on the advancement of medical science during the last decade, so fruitful of progress in every department of the medical art, perhaps none has been the subject of so much elaborate discussion and research as the action of anæsthetics in general and of chloroform in particular. But the views held by investigators regarding the action of chloroform on the human organism are not harmonious, and in many cases present complete divergence on some most important points.

In any disputed question, if diametrically opposite views are held by large numbers of intelligent, honest, and well-informed people, we may consider that there is almost certainly some truth on both sides, but that neither side has apprehended the whole truth. In regard to anæsthetics, there is little or no dispute regarding the immense advantages which are conferred on mankind by their use. They not only lessen the pain of operations and remove the dread of them, which would otherwise keep the patient from having them performed until too late, but they also allow of time and care being bestowed upon operative procedures which could not otherwise be given, and they thus ensure an amount of success which would otherwise be impossible. But the dread of pain has of late years been replaced by a dread of the anæsthetic which would relieve it, and many people will now suffer the short, but extremely severe, pain caused by the extraction of a tooth rather than run the trivial risk of using an anæsthetic.

So long as we are ignorant of the exact causes of death during anæsthesia this dread must remain. It can only be removed by such a knowledge of the conditions which endanger a patient's life during the administration of an anæsthetic as will enable us to ensure the complete absence of risk in any individual case. For this we require a detailed consideration of the factors which produce death, and the question to be settled is, whether death during anæsthesia is due to (*a*) the operation itself, (*b*) the anæsthetic *per se*, (*c*) the mode of administration, (*d*) the condition of the patient, or a combination of two or more of these factors.

METHODS OF RESEARCH, EXPERIMENTAL AND CLINICAL.

In order to ascertain the exact dangers of anæsthetics and the best methods of averting them, many experimental researches have been made, and an immense amount of clinical evidence has been accumulated. The most extensive of all the researches hitherto made is undoubtedly that of the Hyderabad Chloroform Commission, appointed by His Highness the Nizam at the suggestion of Surgeon-Lieutenant-Colonel Lawrie, and the most important collection of clinical records is that of THE LANCET. There can be no doubt whatever that it is only through the combined study of clinical observation and experimental research that the truth can be obtained.

ADVANTAGES OF EACH METHOD.

Experimental Method.

It is quite clear that in spite of the millions of times that anæsthetics have been given to patients we are yet far from having attained this knowledge. The lives of human beings are too valuable to allow of any experiment being tried on them which will endanger them in the very least. We are thus prevented from testing on them the action of various alterations in the nature of the anæsthetic, the mode of applying it, the condition of the nervous system, the position of the body, the freedom or obstruction of the respiration, the effect of shock, and other factors which may tend to bring about a fatal result. It is here that experiments in the laboratory come in usefully, for, the lives of the lower animals being of little value as compared with those of men, we can without fear give anæsthetics under various conditions so as to ascertain the effect of each. Every medical man is obliged by his office to do the best he possibly can for every patient under his care, and although the imperfection of our knowledge may oblige him to administer anæsthetics without his being certain that no bad result will follow, yet he cannot try them on patients simply with a view to increase our general knowledge of their action; he can only do it for the purpose of doing the utmost good he can to the individual patient. The death of one of the lower animals from an anæsthetic is simply to it a painless and pleasant way of ending life, and it is the method chosen by humane people of saving their four-footed favourites from the weariness, discomfort, or pain which would attend a natural death either from disease or old age. But the death of a human being from an anæsthetic, though painless to the individual, may deprive a family of a father's support or a mother's guidance, wreck the lives of the survivors, and cause misery incalculable. In order to prevent such a catastrophe it is the bounden duty of those who have the necessary opportunity and training to make experiments on animals, and thus, in the words of His Highness the Nizam, when he explained the objects of the Hyderabad Commission to his staff, "to save men's lives." The number of experiments with anæsthetics on animals is perfectly insignificant in comparison with the number of times they have been tried on man, yet their value is comparatively great, not only because they are to be ranked with the fatal, rather than with the ordinary, cases in man, but also because the conditions under which death occurred have been voluntarily produced and carefully noted.

Clinical Method.

The number of cases observed by the bedside is immensely greater than that of experiments in the laboratory, and we must remember that every time an anæsthetic is administered to a patient the imperfection of our present knowledge compels us, much against our will, to make, to a certain extent, an experiment upon that patient. We try the anæsthetic; we hope that it will suit, and we do so with fair grounds, knowing that in the great majority of cases no bad result will ensue. But at present we are not absolutely certain, for occasionally and most unexpectedly untoward results follow, and patients die during the administration of an anæsthetic, even though they may have taken it before, and that repeatedly, without any misadventure. The knowledge that we require is such as will enable us to predict before the administration, either (*a*) that all anæsthetics will suit, or (*b*) that all anæsthetics must be abandoned, or (*c*) that a particular anæsthetic will be harmless in that particular case, while another might be dangerous or fatal, so that in every case we shall know with certainty what course to pursue, and thus prevent deaths from anæsthetics ever occurring.

"THE LANCET" INQUIRY.

There can be no doubt whatever that it is only through the combined use of clinical observation and experimental research that this desideratum can be supplied. It was with a view of rescuing from forgetfulness and of collating in a form available for purposes of study the clinical records which have been made up on this subject by a host of observers, that the Editors of THE LANCET undertook a commission of inquiry into this great subject the publication of which in separate form will represent the most complete collection of records on the subject of anæsthetics. In the introduction to the report of this Commission it is stated that the inquiry was meant to supplement the labours of the Hyderabad Chloroform Commission as far as possible. The investigation began by collecting statistics from the great hospitals

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throughout the world. The newspaper accounts of mishaps were also sifted and every effort made to render the accounts accurate. Dr. Snow's records were also utilised, and those of the Registrar-General from which additional information was obtained. From all these sources light was sought. Yet up to the present neither clinical observations nor laboratory experiments have given such convincing proof of the action of anæsthetics that unanimity of opinion prevails on the subject. On the contrary, complete divergence of opinion exists in regard to some of the most important points. All that can at present be done, then, is to sum up as far as possible what we do know, and to point out as far as we can the direction in which work is still required.

CLASSIFICATION OF DEATHS.

One reason of our failure to understand clearly why deaths occur during anæsthesia is that we do not sufficiently know the causes of sudden death, apart from anæsthetics altogether. We sometimes see a man suffering from heart disease, and especially from fatty heart or aortic regurgitation, suddenly fall down dead. We are contented to say that it is failure of the heart, but we do not know the exact mechanism, nor do we know at all fully the mode in which death occurs from what we term "shock." Death from shock was a frequent occurrence before the introduction of anæsthetics, and we are sometimes apt to forget that death from shock may still occur although anæsthetics have been administered. Deaths under anæsthetics may be divided into (1) deaths *from* the anæsthetic; (2) deaths *during* the anæsthesia but not due to the anæsthetic and caused by shock from the operation, failure of a fatty heart, or any other cause which might have led to the patient's death even if no anæsthetic had been given; (3) deaths *during* anæsthesia, and due to the combined action of the anæsthetic and of the operation or some other cause. It is useless for any individual or committee to pronounce *ex cathedrâ* that any particular death belongs to the first, second, or third of these three classes. Each member of the medical profession will form his own judgment, and it is with the view of enabling him to form his judgment correctly that, in this paper, certain physiological and pathological data are included which cannot be readily obtained without easy access to a large library.

CARBONIC ACID AND ALCOHOL AS TYPICAL ANÆSTHETICS.

The most universal anæsthetic is carbonic acid. Very few people are anæsthetised and rendered insensible by the actual inhalation of carbonic acid in the shape of charcoal fumes,[1] of the gas in brewers' vats and old wells, or of the choke damp in coal mines. But its action as an anæsthetic when generated within the body and imperfectly excreted is almost universal. Very rarely indeed does it happen that the brain retains consciousness to the last, and the insensibility which precedes death is chiefly due to the anæsthetic action on the brain of carbonic acid accumulating in the blood from failure of the respiration. The oldest anæsthetic deliberately administered is alcohol, and in Solomon's description, the drunkard gives the anæsthetic action of strong drink as a reason for drinking again. "They have beaten me," he says, "and I felt it not. I will take it yet again." Alcohol is also the most convenient drug for studying the stages of anæsthesia, inasmuch as they are slowly produced, and each stage is sufficiently prolonged, to allow of its being carefully observed, while the usual stages of anæsthesia produced by ether and chloroform are much shorter and not so distinctly marked off from one another. The effects of anæsthetics are all, however, very much alike in character, with the exception that the stages differ in intensity and duration according to the anæsthetic employed. Thus the stimulant effect of laughing-gas is well marked, while it is hardly perceptible in the case of carbonic acid. The first symptoms produced by an anæsthetic, whether it be nitrous oxide, alcohol, ether, or chloroform, usually are increased circulation, dilatation of the blood-vessels, and a more rapid pulse. These are naturally accompanied by a glow over the surface and a feeling of general stimulation. Succeeding these is a stage of impaired action of the cerebral centres, usually accompanied by lessened sensibility to external impressions, which may be termed the "narcotic action." Then comes the anæsthetic action, when the individual becomes insensible to external impressions, painful or otherwise, but the respiration keeps steady and the pulse is regular and strong. Even with alcohol, however, a further stage may be reached, when the respiration will cease and the pulse also, as in cases where enormous quantities of liquor have been drunk for a wager.

[1] In charcoal fumes there is a large proportion of carbonic oxide as well as carbonic acid.

STAGES OF ANÆSTHESIA.

The action of anæsthetics may thus be divided into four stages:—

(1) The stimulant stage.
(2) The narcotic stage.
(3) The anæsthetic stage.
(4) The paralytic stage.

In the case of alcohol the stage of stimulation is much prolonged, and is capable of many subdivisions. The later part of this stage is sometimes indicated in popular language as "jolly drunk," the narcotic stage as "stupid drunk," while the term "dead drunk" is applied to the anæsthetic stage.

DEATH "FROM" AND "DURING" ALCOHOLIC INTOXICATION.

Usually recovery takes place, even from the "dead drunk" stage, though it does not always do so, and the condition may pass into the paralytic stage and death occur. The death in such a case is due to the action of the alcohol, pure and simple. It is death *from* the administration of alcohol. But in the earlier stages of intoxication death may be caused by the man falling over a precipice which he would have avoided had he been sober, or he may fall on his face in the road and be drowned in a puddle two inches deep when too drunk to know what has happened. In such cases death is no doubt due to alcohol, yet it is not caused by the action of alcohol pure and simple. It is death *during* intoxication rather than death *from* intoxication. The proximate cause of death is not the action on the nerve centres or heart of the alcohol which has been absorbed, but that of *shock* from falling in the former and that of *suffocation* by drowning in the latter case.

DEATHS "FROM" AND "DURING" ANÆSTHESIA.

What is true of alcohol is true also of other anæsthetics, and the death of patients during anæsthesia produced by chloroform or ether may be no more due to the action of the anæsthetic than the deaths of the men who were smashed or drowned in the cases just mentioned were due to alcohol. They may die from the shock of an operation, from emotion, from failure of a fatty heart, from hæmorrhage, or from suffocation. The suffocation may be caused by spasm of the glottis, plugging of the windpipe or bronchi, obstruction of the nose and mouth by position, or by pressure on the thorax or abdomen. In all such cases, death, though occurring *during* anæsthesia, ought not to be said to be *from* the anæsthetic.[2] If a murderer throttles a man who has been rendered insensible by the action of a narcotic or anæsthetic, it is absurd to ascribe the death to the anæsthetic, and the same would be true if, instead of compressing the windpipe, he choked his victim by making him breathe a strongly irritant vapour such as strong ammonia or chlorine. Nor would the case be altered if, instead of chlorine, he used chloroform containing free chlorine or other irritating substances or if he used the vapour of chloroform itself in such concentration as to prove a local irritant to the air passages. In such a case it is not the anæsthetic which is to be blamed but the mode of administration. Every now and again cases occur in which the whole blame for the patient's death is laid upon the anæsthetic because the patient died after two or three whiffs of chloroform, and before the operation had ever been begun. Instances of this may be found in Case 267. "The patient got a whiff or two of chloroform and was dead." In Case 415 the patient "had hardly taken two whiffs when the respiration ceased, and he was dead." In 420, in an operation for cancer of the tongue, the patient died before the operation was commenced. Yet such occurrences may simply be due to death from fright, from suffocation by spasm of the glottis, or still more likely to neuroparalysis, a condition which we shall presently discuss. There are cases on record where a man has died simply from a touch when he was expecting to be killed. The touch was not capable of doing him any harm, but it was the mental condition which affected him and not the touch upon his skin.

USE OF ANÆSTHETICS IN LESSENING SHOCK.

During partial anæsthesia by alcohol shock is frequently lessened to a considerable extent, and drunken men

[2] Whenever reference is made to the cases of death recorded by THE LANCET Commission, it must be remembered that the cause of death entered in the report is the one assigned by the original reporter and not by THE LANCET Commission.

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will sustain falls or other injuries without any trace of the shock which would have been expected to occur had the accident happened to one who was perfectly sober. At the same time, an intoxicated man may be killed by the shock of a fall when thrown from his horse with sufficient violence, notwithstanding the lessened susceptibility to shock which the alcohol has produced. What happens in alcohol happens also in the case of other anæsthetics. How interesting a light would be cast upon the causes of deaths under chloroform if an approximation of the numbers of sudden deaths during operation previous to the introduction of chloroform could in any way be ascertained. Many deaths used to occur then. Deaths still occur during imperfect anæsthesia, and it is possible that deaths may occur from shock, even during profound anæsthesia. A consideration of the table on page 635 of the report is most instructive in this connexion as showing the nature of the operation as a factor in determining death. The table records in all 83 deaths as having taken place during the reduction of some dislocation. For extraction of teeth 53 deaths are recorded; for amputation of finger, 21; for fistula in ano, 20; for avulsion of the toe-nail, 13; for opening abscesses, 14; for catheterisation, 8; and extracting thorns, 3. On the other hand, in any of the large operations, such as amputation of the thigh, 6 deaths only are noted out of the many thousands of cases dealt with. Although a certain amount of fallacy, due to the larger number of trivial cases, may affect these statistics, yet such facts as these not only point to shock as being a more important factor in death during anæsthesia than the anæsthetic itself, but also to the diminution of shock by other anæsthetics in the same way as by alcohol. But it may be said that shock will not explain the occurrence of death during the administration of the anæsthetic, when the operation has not yet been commenced, and the number of these is large, no less than 40 being mentioned in the report. Yet this objection, apparently well founded, is fallacious, because shock or neuroparalysis may arise from emotion or from interference with respiration as well as from operation or accident. In order to understand the causes of death during anæsthesia it will be advisable to consider shortly the modes of death in general.

MODES OF DEATH.

The heart, lungs, and brain have been termed by Bichat the tripod of life, but, as Huxley has very truly observed, the essentials are the heart and lungs. The cerebro-spinal nervous centres are only essential in so far as they maintain the respiratory movements and thus enable the lungs to aerate the blood. The two supports of life thus are the heart and lungs, and death may begin by failure of either. Death beginning at the lungs is usually termed asphyxia, and death beginningat the heart is called shock or syncope.

SYMPTOMS OF DEATH BEGINNING AT THE LUNGS (ASPHYXIA).

The course of death beginning at the lungs is well seen in puppies or kittens drowned in shallow water or suffocated by occlusion of the air passages in other ways. The supply of air to the lungs being cut off the blood gradually becomes more and more venous. The venous blood acts first as a stimulant and then as a paralysant to all the nerve centres, the respiratory, the vaso-motor, the cardio-inhibitory, and the cardio-accelerating. In consequence of this the respiratory efforts are first increased, then the accessory muscles of respiration are called into play, and finally convulsions of the whole body set in. As the nerve centres become paralysed all movements cease, the animal becomes motionless and to all appearance dead; but if the heart be examined it will be found to be still beating. The blood, however, becomes more and more venous. The venous blood acts as a poison to the heart so that its pulsations become gradually slower and feebler, and cease altogether about five minutes after the stoppage of respiration. In this case both heart and lungs are healthy, and if artificial respiration be begun before the heart is too thoroughly poisoned by the venous blood to render its recovery impossible, the blood will be aerated, the heart will continue to beat, the other organs of the body will regain their vitality, and the animal will recover health.

SYMPTOMS OF DEATH BEGINNING AT THE HEART.

When the heart suddenly ceases to beat the circulation is still maintained for about a minute by the elastic pressure of the aorta and arteries. After this time the blood stagnates, and, becoming venous, acts as an irritant to the nerve centres. The effect of this varies according to the condition of these centres. If they are healthy and not already dulled by narcosis through drugs or imperfectly aerated blood previously circulating in them, gasping respiration, with possibly convulsions, may occur, just as in death from the lungs; but if the heart be examined it will be found to be no longer beating. If the nerve centres be dull the respiration will simply stop shortly after the heart, and artificial respiration will not have the same power of resuscitation that it has in death from the lungs.

MECHANISM OF THE HEART.

In order to understand why the heart should suddenly stand still we must consider the mechanism by which pulsations are maintained. It is now generally acknowledged that the muscular fibres both of the heart and bloodvessels have the power of contracting rhythmically independently of nerves; but their contractions are coördinated by nervous arrangements which are partly contained in the heart and vessels themselves, and partly in the central nervous system, and more especially the medulla oblongata. These mechanisms[3] are so complicated that it is impossible, on account of want of space, to discuss them here in detail. Speaking very generally, however, we note that in the heart itself there is one mechanism which causes it to beat more quickly and to contract more strongly, or even to stand still completely in systole. Another mechanism has the opposite action, and causes the heart to beat more slowly, to contract less strongly, to dilate more completely, and even to stand still in complete diastole. Usually these mechanisms act alternately, so that each systole is followed by a diastole and *vice versâ*. It would appear, however, that this arrangement may be disturbed, so that they act together, and then the heart is like the wheel of a steam-engine at the dead point, when no amount of force will make it move. Usually the stimulating mechanism in the heart itself is more powerful than the inhibitory, and irritation of the heart, either mechanical or electrical, will cause it to contract; but during every cardiac cycle there is a time—the "refractory" period of Marey—when irritation of the heart instead of causing contraction, tends to prevent it and prolong the diastole. This refractory period is usually short, but Kronecker and Schmey have found that irritation of a certain point in the septum ventriculorum appears to disturb the coördination of the contracting and dilating mechanisms permanently, so that the heart stands still and cannot be induced to contract by stimulation. Both of these mechanisms are connected with the brain, in which there are inhibitory and stimulating centres, the inhibitory sending impulses to the heart chiefly through the vagus, and the stimulating chiefly through the sympathetic. In the brain, however, the relative strength of the two centres is the reverse of that in the heart, the inhibitory being the stronger of the two, so that cerebral irritation tends to make itself evident by slower pulsation of the heart or stoppage in diastole. The arteries likewise have in themselves a contracting and dilating mechanism, but these also are under the control of the central nervous system.

MECHANISM OF RESPIRATION.

It should not be forgotten that a similar mechanism for respiration exists in the medulla oblongata, consisting of expiratory and inspiratory centres which act alternately under ordinary circumstances, but which may be altered in their relations to one another by poisons or injury, so that respiration ceases entirely.

STIMULATION OF CARDIAC AND RESPIRATORY MECHANISMS.

All the mechanisms in the heart, vessels, and nerve centres, may be first stimulated and then paralysed by venous blood or reflexly by sensory irritations. But the result of stimulation will differ according to (*a*) the strength of the stimulus and (*b*) the condition of each centre. The effects of a strong and weak stimulus are different. Thus a moderate mechanical irritant such as the stroke of a switch acts as a powerful stimulant while a severe blow from a heavy club acts as a paralysant. The inhalation of the dilute ammonical vapour from smelling salts is a powerful stimulant but sudden inhalation of strong ammonia will cause choking and might cause death by neuroparalysis.

[3] The word mechanism has been purposely chosen on account of its indefiniteness as it allows us to include under it various arrangements of muscle, nerve endings, nerve fibres, and nerve cells, without attempting to assign to each the part which it plays in the function performed by the whole.

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Just as the effects of stimuli on a nerve centre in a certain condition differ according to the strength of the stimulus so the effects resulting from the same stimulus may be of an opposite nature, according as one set of mechanisms or another preponderates.

MODIFICATION BY ANÆSTHETICS OF THE EFFECTS OF STIMULATION.

These mechanisms are not all affected with the same rapidity by anæsthetics, although they are all rendered inactive if the anæsthetics are pushed sufficiently far. Thus it happens that a different result may occur from a sensory stimulus during partial anæsthesia from what occurs either when no anæsthetic has been given or during complete anæsthesia. Thus a powerful irritation of a sensory nerve when no anæsthetic has been given stimulates reflexly both the vagus and vaso-motor centres. The heart is thus slowed, but the fall of blood pressure which this would produce is counteracted, or more than counteracted, by the simultaneous contraction of the arterioles due to stimulation of the vaso-motor centre. The blood pressure may thus remain constant, or even rise instead of falling. When anæsthesia is complete, sensory stimulation has no effect on either centre, and consequently produces no change in the blood pressure. But during imperfect anæsthesia by chloroform Bowditch and Minot have found that the vaso-motor is sooner rendered inactive than the vagus centre, so that a sensory stimulus will tend to stop the heart without contracting the vessels, and will thus lead to a great fall of blood pressure. This unequal failure of nervous mechanisms during anæsthesia they regard, and probably rightly, as one great source of danger when operations are performed in a state of imperfect instead of in complete anæsthesia.

DEATH BEGINNING AT THE BRAIN.[4]

Although death really begins either at the lungs or heart, yet the brain affects both, and we may thus have death from the brain occurring in three ways—(1) through the lungs (coma), with the symptoms of asphyxia; (2) through the heart and vessels (syncope or shock); and (3) through lungs and heart simultaneously (neuroparalysis or shock). When heart and respiration are both affected, they may not be so in the same degree, and thus we may have different varieties of shock, such as the extreme depression, with more or less mental clearness, which occurs after some severe injuries, and the sudden extinction of all the vital processes which occurs after others.

1. Death beginning at the brain is generally a form of death from asphyxia, even when the cerebral injury is sudden or violent, as from a bullet wound. The course of events is nearly the same as that already described under death beginning at the lungs.[5] Death is rapid, if the injury be very severe—e.g., a bullet wound in the brain or a very severe blow on the head; convulsions may occur just as they do in drowning or suffocation. But if the death is slower, as in cases of ordinary apoplexy or of coma from disease or drugs, the gradual accumulation of carbonic acid in the blood acts like an anæsthetic, the cerebral motor centres become paralysed before the respiratory centres cease to act, and thus convulsions do not occur. This is also the case when the motor nerves are paralysed by poisons such as curare, so that the respiratory muscles can no longer obey the stimuli sent to them from the nerve centres. In such cases the timely use of artificial respiration may have most satisfactory results. In poisoning by curare I have by long continued artificial respiration restored an animal to health after it had been apparently dead for four hours, and Schiff has had similar results in animals where respiration had been arrested by slight lesions of the medulla oblongata.

2. The symptoms of the second form have been described under death beginning from the heart.

3. In the third class of cases not only respiration and circulation, but all the functions of the nervous system fail together, the breathing stops, the pulse stops, and the person dies instantaneously and quite quietly without convulsions. This form of death occurs "*far more frequently* than is generally supposed" in cases of hanging, throttling, and strangling.[6] It was certainly new to me to learn, as I did when reading up this subject in one of the best text-books in existence,[7] that nearly one-half of those who die from falling into water are *not drowned*, but are killed by shock, or neuroparalysis, as Casper terms it. A number of the people who died during the destruction of Pompeii died from suffocation, as is evident from the convulsions apparent in the contorted forms which the casts of their bodies present. Some, however, died from shock, and their bodies have remained flaccid and limp.

POST-MORTEM APPEARANCES.

In death by asphyxia, whether it has begun at the brain or lungs, the lungs are found congested; the right side of the heart, pulmonary artery, and great veins are distended with dark fluid blood, and the left side of the heart is empty or nearly so. Capillary ecchymoses occur in the lungs, and there is marked injection of the larynx and trachea. The usual idea that in suffocation the face is bluish-red and swollen, with protruding eyes, is incorrect. Most frequently the countenance after *every kind* of suffocation, and not only where death has occurred from neuroparalysis, differs in no respect from what is observed after other kinds of death.[8] To recapitulate shortly, the appearances observed after death from *asphyxia* are on a large scale precisely the same as those which are seen on a small scale whenever any vessel is obstructed—e.g., by a ligature while the circulation is going on—viz., accumulation of blood on the proximal and diminution of blood on the distal side of the obstruction. In asphyxia the stoppage of the circulation occurs in the minute vessels of the lungs themselves. The right side of the heart and all the vessels connected with it are gorged with blood, while the left side and arteries are empty.

Death from *neuroparalysis* or *shock* "leaves no trace discoverable by the anatomist's knife."[9] The appearances are of a "perfectly negative character," and "not one single organ in the whole body displays any unusual alteration."[10] The lungs are not hyperæmic, and the right side of the heart is not engorged, but both sides are either empty or contain only a small quantity of blood.

What has now been said may possibly enable the readers of THE LANCET report of clinical cases to form their own opinions regarding the mode of death in such cases as are sufficiently reported to classify them according to their causes, and to decide whether they are due to the anæsthetic or the operation, or both.

(To be continued.)

[4] The word "brain" is here used for the sake of brevity and is intended to cover the whole cerebro-spinal and sympathetic system, as the part played by each division of the nervous system cannot be discussed here.

[5] Horsley.

[6] Casper's Handbook of Forensic Medicine, Sydenham Society edition, vol. ii., p. 160. The italics are Casper's.

[7] Casper, op. cit., p. 231.

[8] Casper, op. cit.

[9] Casper, op. cit., vol. ii., p. 123.

[10] Op. cit., p. 183.

AN INQUIRY INTO THE RELATIVE ADVANTAGES OF VAGINAL HYSTERECTOMY AND THE SUPRA-VAGINAL AMPUTATION OF THE CERVIX IN CANCER OF THE CERVIX UTERI,

BASED ON AN OBSERVATION OF FORTY-THREE CASES TREATED BY ONE OR THE OTHER OF THESE TWO OPERATIONS.

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NEARLY two years and a half ago I read a paper before the Royal Medical and Chirurgical Society, in which I recorded my results in nineteen cases of the supra-vaginal amputation of the cervix for cancer of the cervix. Since then I have performed this operation in seven additional cases, making a total of twenty-six operations of this kind. I have also up to the present time (June 3rd, 1895) performed vaginal hysterectomy for cancer of the uterus in twenty-three cases. Six of these were cases of primary cancer of the body of the uterus, and they formed the subject of the paper which I read before the Obstetrical Society of London in December last.[1] In the remaining seventeen cases vaginal hysterectomy was performed for cancer of the cervix. These two series of cases afford material for an inquiry as to the relative advantages of the two operations—the supra-vaginal

[1] THE LANCET, Dec. 15th, 1894.

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TABLE I.—*Twenty-six Cases of Supra-vaginal Amputation of the Cervix for Cancer without a Death.*

No.	Date of operation.	Age.	Complete or incomplete.	Stage of disease.	Recurrence.
1	July 27th, 1885	29	Complete	Moderately advanced	Remained well for six months; then recurrence in pelvis.
2	Aug. 6th, 1885	43	Incomplete	Considerably advanced	—
3	Feb. 12th, 1886	41	Complete	Early	Quite well Jan. 24th, 1888; not seen or heard of since.
4	July 20th, 1886	33	Complete	Considerably advanced (deep conical ulcer)	Remained well and free from recurrence nearly twelve months; then recurrence in pelvis at some distance from the stump.
5	Jan. 7th, 1887	39	Incomplete	Moderately advanced	—
6	March 17th, 1887	42	Complete	Early	Still remains well (May, 1895), more than eight years since the operation. Patient sent to me by Dr. Dundas Grant. Specimen has been shown at the Obstetrical Society and at the Royal Medical and Chirurgical Society.
7	April 5th, 1887	51	Complete	Moderately advanced	Well for six months, then recurrence in stump.
8	Sept. 15th, 1887	52	Complete	Moderately advanced	Remained well nine months, then recurrence in stump.
9	Dec. 6th, 1887	65	Complete	A large, soft, brittle growth protruding through os uteri, and attached a little way up cervical canal, bleeding readily when touched	Remained well more than two years; recurrence took place about six months later.
10	Jan. 16th, 1888	39	Complete; was four months pregnant on admission; abortion induced; supra-vaginal amputation done eighteen days later	Large "cauliflower" growth, chiefly affecting posterior lip	Came up to the hospital soon after the operation; not examined on that occasion; was not seen afterwards. I heard she died in a fainting fit some months later.
11	April 17th, 1888	39	Apparently complete; a previous operation had been done before by another practitioner	Apparently early	Recurrence took place in about six months.
12	May 31st, 1888	42	Complete	Moderately advanced; soft "cauliflower" growth over area, size of half-a-crown, on posterior lip of cervix	Still remains quite well (May, 1895), seven years since the operation. Patient sent to me by Mr. Cursham Corner. Specimen has been shown at the Obstetrical Society and also at the Royal Medical and Chirurgical Society.
13	Sept. 22nd, 1888	32	Apparently complete; the operation was done nine weeks after a confinement at term; symptoms had been present during pregnancy	Considerably advanced; large mushroom-shaped growth, chiefly involving anterior lip	Recurrence in stump in three months.
14	March 28th, 1889	37	Complete	Advanced	Well three months after operation; not seen since.
15	May 2nd, 1889	31	Complete	Moderately advanced; soft growth chiefly affecting posterior lip	Not seen since she left the hospital.
16	August 26th, 1889	40	Complete; was three months pregnant at time of operation; miscarried two days after it; Douglas's pouch slightly opened; cervix cut off with the cautery	Moderately large "cauliflower," chiefly affecting posterior lip	Still remains quite well (May, 1895), more than five years since the operation. She has attended regularly at the London Hospital about once a month since the operation. Specimen has been shown at the Obstetrical Society and at the Royal Medical and Chirurgical Society.
17	Feb. 18th, 1890	53	Complete	Moderately advanced "cauliflower" growth, size of half a walnut, springing from right side of cervix just within os uteri	Still remains well, more than five years since operation. She was sent to me by Dr. Godson. I last saw her on June 1st, 1895. Specimen has been shown at the Royal Medical and Chirurgical Society.
18	May 7th, 1891	38	Complete	Moderately advanced; anterior vaginal wall slightly infiltrated; naked eye appearance that of cancerous growth; microscopically only a glandular structure seen	Was well for more than a year; then symptoms of recurrence, and the last time I saw her there was a large, evidently malignant, ulcer at the top of the vagina. It is interesting to observe that the microscopical characters of the growth in this case were not such as to make it clear that the case was one of cancer. The recurrence, however, placed the nature of the case beyond doubt.
19	Feb. 18th, 1892	—	Incomplete	Advanced	—
20	Jan. 29th, 1893	37	Complete	"Cauliflower"; moderately advanced	Still remains well (June, 1895), more than two years since the operation. Patient sent to me by Mr. Garry Simpson of Acton.
21	Feb. 8th, 1893	60	Complete	Am doubtful as to malignancy, though clinically the symptoms and signs were suggestive of cancer	No sign of recurrence.
22	March 22nd, 1893	47	Complete	Moderately advanced	Still remains well (June, 1895), more than two years since operation. This patient was sent to me by Dr. Godson.
23	Jan. 18th, 1894	32	Complete	Large conical ulcer	Still remained well (May, 1895) when I examined her at the London Hospital.
24	Feb. 6th, 1894	—	Complete	Am doubtful as to malignancy, though clinical appearances suggestive of cancer	—

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TABLE I.—*Twenty-six cases of Supra-vaginal Amputation of the Cervix for Cancer without a Death*—(continued).

No.	Date of operation.	Age.	Complete or incomplete.	Stage of disease.	Recurrence.
25	Feb. 20th, 1894	—	Incomplete; the uterus was much enlarged, apparently by fibroids; when the cervix was cut off at level of internal os it was evident that there was some malignant growth above the line of section. The patient refused to have the remainder of the uterus removed by a combined operation; the body of the uterus was too large to have removed per vaginam.	Moderately advanced	—
26	Jan. 10th, 1895	46	Complete	Conical ulcer	Remains well at present. The patient was sent to me by Mr. Vernon of Poplar.

TABLE II.—*Twenty-three cases of Vaginal Hysterectomy for Cancer, with three Deaths.*

No.	Date of operation.	Place.	Part affected.	Complete or incomplete.	Immediate result.	Subsequent history.
1	March 1st, 1886	London Hospital	Primary cancer of the body	Complete	Recovered	Well for nearly a year, then recurrence.†
2	—	London Hospital	Cancer of cervix	Complete	Died.*	—
3	Nov. 7th, 1889	London Hospital	Primary cancer of the body	Complete	Recovered	Known to be well Oct., 1893, about four years after the operation; not seen since. For full record see THE LANCET.‡
4	Oct. 23rd, 1890	London Hospital	Cancer of cervix	Complete	Recovered	Still remains well (May, 1895), four years and a half since the operation; I see her regularly at the London Hospital.
5	March 17th, 1892	London Hospital	Primary cancer of body	Complete	Recovered	Remained well for more than two years and a half; early this year (1895), and before it was three complete years since the operation, she came to the hospital with undoubted recurrence.
6	June 16th, 1892	Private (with Mr. Russell of Forest-gate)	Cancer of cervix	Complete	Recovered	Remained well more than two years after the operation; recurrence, however, took place early in the third year—i.e., about August, 1894.
7	Feb. 1st, 1893	Private (with Mr. Stott of Highgate)	Primary cancer of body	Complete	Recovered	Remains well (May, 1895).
8	June 8th, 1893	London Hospital	Primary cancer of body	Complete	Recovered	Remained well (May, 1895) when she came up to the London Hospital and I examined her. Patient sent to me by Mr. Best of Dover.
9	July 20th, 1893	London Hospital	Cancer of cervix; large "cauliflower"-like growth of posterior lip	Complete	Recovered	Remained well for a little more than a year, then recurrence.
10	Aug. 4th, 1893	London Hospital	Cancer of cervix; large "cauliflower" growth of posterior lip	Complete	Recovered	Recurrence took place in less than a year, and the patient died on Feb. 23rd, 1895.
11	Aug. 21st, 1893	London Hospital	Primary cancer of body	Complete	Recovered	Quite well Oct. 11th, 1894; not seen or heard of since.
12	Aug. 28th, 1893	London Hospital	Cancer of cervix	Incomplete; the perimetric tissue evidently partly involved	Recovered	Sent to me by Dr. W. Duncan when Middlesex Hospital was closed.
13	Feb. 1st, 1894	Private	Cancer of cervix	Complete	Died	—
14	Feb. 22nd, 1894	London Hospital	Cancer of cervix; large "cauliflower"	Apparently complete	Recovered	Recurrence took place in August, 1894.
15	Feb. 27th, 1894	Private (with Mr. Howse and Dr. Williams of Barking)	Cancer of cervix; "mushroom"-shaped growth	Complete	Recovered	Remains well at present (May, 1895).
16	Aug. 13th, 1894	Private	Cancer of cervix; large "cauliflower" with a nodule in left broad ligament	Seemed complete	Recovered	Symptoms of recurrence within a few weeks of patient's return home.
17	Aug. 16th, 1894	London Hospital	Cancer of cervix	Incomplete	Recovered	—
18	Aug. 30th, 1894	London Hospital	Cancer of cervix; large "cauliflower"	Complete	Died	—
19	Oct. 18th, 1894	London Hospital	Cancer of cervix; ulcerative type	Complete	Recovered	Well at present (May, 1895). Sent to me by Mr. Howse of Barking.
20	Dec. 6th, 1894	London Hospital	Cancer of cervix	Incomplete	Recovered	—
21	Feb. 14th, 1895	London Hospital	Cancer of cervix	Complete	Recovered	Well at present (May, 1895). Sent to me by Mr. Cory of Bournemouth.
22	April 25th, 1895	London Hospital	Cancer of cervix; large "cauliflower"	Doubtful	Recovered	—
23	June 1st, 1895	Private (at Fitzroy House). Sent to me by Mr. Garry Simpson of Acton	Cancer of cervix; growth entirely in canal. Body of uterus greatly distended, containing about half a pint of fœtid pus	Complete	Recovered	—

* Died on the second day with gradual heart failure and œdema of lungs; no local complication.
† Transactions of the Obstetrical Society, vol. xxx., p. 218.
‡ THE LANCET, June 10th, 1893.

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amputation of the cervix on the one hand and vaginal hysterectomy on the other—in cases of cancer of the cervix. If I were only able to bring forward a series of cases of one of these operations, it might appear as if I were, to some extent at least, prejudiced in favour of the operation performed in the series I was bringing forward. As, however, I bring forward a series of each of these operations, I think I may fairly claim that I approach an inquiry into their relative merits without any bias. As is well known, there has been a considerable difference of opinion as to which operation should be the recognised routine treatment for cases that are not too far advanced for operation. There is undoubtedly at the present time, so far as a mere enumeration of names is concerned, a majority in favour of treating all such cases by total extirpation. If we consider what are the chief points for comparison in operations for cancer of the cervix we find the principal ones to be three: (1) the mortality of the operation; (2) the amount of mutilation involved; and (3) the length of time for which the patients operated on remain free from recurrence.

1. *Mortality.*—In bringing forward data on this point it seems to be the fairest way to mention *all* the cases in which a radical operation has been performed for cancer of the uterus. My total number of radical operations for cancer of the uterus has been 49, with 3 deaths, a mortality of 6·1 per cent.; 23 were vaginal hysterectomies, and of these 3 died; and 26 were supra-vaginal amputations of the cervix, and all these recovered. Of the 3 deaths among the cases of vaginal hysterectomy the first was from shock, the patient dying on the second day with gradual heart failure and œdema of the lungs; there was fatty degeneration of the heart. There was no local complication such as hæmorrhage or peritonitis. It appeared that she was unable to stand the shock of so severe an operation. The second death was from hæmorrhage. In this case there had been a deep laceration of the cervix quite up to the vaginal reflection on the left side and there was a firm cicatricial band running outwards from the laceration. This prevented the uterus being properly drawn down, and when the cervix was being freed in the neighbourhood of the laceration a large vessel, probably the uterine artery itself, retracted at once out of reach, and though it was ultimately secured a fatal quantity of blood had been lost. I consider the lesson of this case to be that either the supra-vaginal amputation of the cervix or vaginal hysterectomy is either absolutely contra-indicated, or becomes, at all events, an extremely hazardous operation if for any reason whatsoever the uterus cannot be fairly drawn down to the outlet of the vulva. This may happen on account of old perimetritic adhesions, or, as in this case, in consequence of cicatricial bands in the neighbourhood of a deep laceration, and equally so if there is extension of the disease beyond the limits of the uterus into the broad ligaments or utero-sacral ligaments. In all such cases, if the uterus is tethered so that it cannot be brought down fairly into reach, either operation becomes on this account alone extremely dangerous. The third death was from peritonitis, due, I feel satisfied, to an infection of the peritoneum by the breaking down of plastic adhesions in the neighbourhood of the wound when the pressure forceps were being removed. Up to and including this case I was in the habit of removing the pressure forceps at the end of forty-eight hours, by which time there is no risk of hæmorrhage. Since this case I have left them on, and also left the gauze plug undisturbed till the fourth day, by which time the adhesions shutting off the peritoneum must be considerably stronger than on the second day. As my list of 49 cases includes all the cases in which I have performed either vaginal hysterectomy or the supra-vaginal amputation of the cervix for cancer, it includes my early cases as well as those operated on quite recently; and, although I regard a mortality of 6·1 per cent. as satisfactory, and, indeed, encouraging, I think I may fairly expect that, profiting by the experience already gained, the mortality in a future series may be even less. My own feeling certainly is that, although vaginal hysterectomy for cancer is not a very dangerous operation, it is still distinctly more dangerous than the supra-vaginal amputation of the cervix. It is scarcely necessary, however, to mention that there are others who consider the supra-vaginal amputation as dangerous or even more dangerous than vaginal hysterectomy. I do myself consider that the supra-vaginal amputation, properly performed, is as difficult as vaginal hysterectomy; and, as regards the latter operation for cancer of the cervix, that, generally speaking, the only difficult part about it consists in the preliminary liberation of the cervix.

2. *Mutilation.*—As regards the amount of mutilation incidental to the two operations, obviously vaginal hysterectomy involves much more mutilation than the high amputation of the cervix, and still more so if the uterine appendages are removed at the same time, as is the practice of some operators. After the supra-vaginal amputation of the cervix the rest of the uterus generally remains freely movable, and, if the menopause has not occurred, menstruation may continue normally, and even pregnancy may occur, though I have not met with an instance of this among my own cases. The whole organism of the woman is not profoundly altered as it must be when the entire uterus is removed. After the supra-vaginal amputation the floor of the pelvis remains nearly in the same condition as before, while after vaginal hysterectomy it is necessarily much altered. Adhesions necessarily form to close the wound through which the uterus has been removed. Coils of intestine or portions of omentum may adhere to the scar, and may subsequently become a source of discomfort or of actual danger to the patient. On vaginal examination a condition of more or less fixity of the tissues at the top of the vagina is often felt after vaginal hysterectomy. Shock varies largely in proportion to mutilation; the more mutilation the more shock. After the high amputation I have not met with any degree of shock worth mentioning. It is quite true that in cases of vaginal hysterectomy also there is generally no shock. At the same time it appears to me that the latter operation is a more searching test of the resisting powers of the patient; if these are all that can be desired there will be no shock, but if they are seriously impaired there may be a severe or even fatal degree of shock. I have already mentioned a case (No. 2, Table II.) in which there was fatty degeneration of the heart, and in which the patient's death seemed solely attributable to the fact that her vitality was unequal to the strain of so severe an operation. In other words, patients can stand the supra-vaginal amputation of the cervix who would succumb if submitted to vaginal hysterectomy.

3. *Length of time patients remain free from recurrence.*—The next point—and it is an extremely important one—concerns the remote result in each series of cases. Are patients with cancer of the cervix ever cured by either supra-vaginal amputation of the cervix or vaginal hysterectomy? In order to find a satisfactory answer to this question there are at least two essential points. 1. In any case operated on for cancer where no recurrence has taken place after some years, and where, therefore, it is claimed that the patient has been cured by the operation, it is essential to have indisputable evidence that the growth removed was really malignant. The best way of doing so is for the specimen to be exhibited to the observation of independent experts, as may be done by showing the specimen before one of the medical societies. This has been done in all my cases of supra-vaginal amputation in which the disease has not recurred. 2. The second point—and it is one which involves the coöperation of the patient or her medical attendant or of both—is that it should be possible to keep the patients who have been operated on under observation. Only those who have tried it are aware of the difficulty of doing this, more especially among patients of the hospital class who are so constantly changing from one place to another, often leaving no address by which to trace them. I have tabulated in chronological order the 26 cases in which I have performed the supra-vaginal amputation of the cervix. An analysis of it brings out the following conclusions. Taking account only of those cases in which a period of two or more years has elapsed since the operation it will be seen that there are 22 cases in this category. Of these 22 cases three (Nos. 2, 5, and 19) were incomplete; one case (No. 21) was of doubtful malignancy. Subtracting these, it will be found as regards the remaining eighteen cases that eight (Nos. 1, 4, 7, 8, 9, 11, 13, and 18) were known to have had recurrence. In six of these (Nos. 1, 4, 7, 8, 11, and 13) recurrence took place within *one* year of the operation; in one case (No. 18) within *two* years of operation; and in one case (No. 9) within *three* years of operation. In the large majority of cases, then, recurrence, if it was going to take place, occurred within one year of the operation. In four of the eighteen cases the patients were lost sight of; these were Nos. 3, 10, 14, and 15, and were all hospital cases. They, of course, may or may not have had recurrence. In the remaining six cases, out of the 18 (Nos. 6, 12, 16, 17, 20, and 22) the patients are still quite well at intervals of 8, 7, 5, 5 2, and 2 years respectively—that is, 33 per cent. remain well. Of the cases 23 to 26, one (No. 25) was incomplete; one (No. 24) was of doubtful malignancy; and two

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(Nos. 23 and 26) are still quite well, but it is less than two years since the operation. I have also tabulated in chronological order the 23 cases in which I have performed vaginal hysterectomy for cancer of the uterus. Of these 23 cases 6 were cases of primary cancer of the body of the uterus, and do not concern this part of the question, though it seems right to include them when estimating the mortality. Subtracting these and the three fatal cases, there remain fourteen vaginal hysterectomies for cancer of the cervix. Four of these (Nos. 12, 17, 20, and 22) were incomplete; that is, although the whole uterus was removed I had reason to think that infiltrated tissue outside the uterus had been left. Of the remaining ten cases, five (Nos. 6, 9, 10, 14, and 16) were known to have had recurrence—in No. 6 within three years of operation; in No. 9 within two years; and in Nos. 10, 14, and 16 within one year. Of the remaining 5 cases, No. 4 remains well four years and a half since operation; No. 15 remains well one year and three months since operation; and Nos. 19, 21, and 23 remain well, but it is less than a year since operation. So that, although 5 out of 17 operated on by vaginal hysterectomy remain well, or 29·4 per cent., in only 1 case of those 5 has a period of two years or more elapsed since the operation. Only 5·8 per cent. of the cases then are in the class of two years' standing and upwards since the operation. In the series of cases of supra-vaginal amputation of the same standing 33 per cent. remain well.

The only conceivable explanation, as it seems to me, of the above figures, which show such favourable results for the supra-vaginal amputation and such unfavourable results as regards recurrence for vaginal hysterectomy, is that in the cases operated on by the supra-vaginal amputation the disease was in an earlier stage than in the cases treated by vaginal hysterectomy. The ultimate conclusions which a consideration of these two series of cases seems to warrant are: (1) that, when the disease is in a stage in which a cure by operation may be hoped for, the supra-vaginal amputation performed according to the method I adopt (which is fully described in my paper published in the Transactions of the Royal Medical and Chirurgical Society[2]) gives the patient as good a chance of cure as vaginal hysterectomy, and with somewhat less risk; and (2) that when the disease has become too far advanced for complete removal by the supra-vaginal amputation of the cervix it has also—at least, in the large majority of cases—passed beyond the reach of cure by vaginal hysterectomy. In the uteri I have removed for cancer of the cervix I have never met with an isolated simultaneous malignant deposit in the body of the uterus. In one case (No. 19) where there was a white nodule the size of a pea in the wall of the body of the uterus it proved on examination with the microscope to be only a small fibroid. This is an important point, because if it were the fact that isolated malignant growths occur at all commonly in the body of the uterus in cases of cancer of the cervix it would be a conclusive argument in favour of always performing vaginal hysterectomy. Such an association, however, if it really ever occurs, appears to be so rare that it may be neglected for practical purposes. It may be objected that my comparison of vaginal hysterectomy with the supra-vaginal amputation is unfair, because hysterectomy was generally adopted in cases rather more advanced than those in which the supra-vaginal amputation was performed. But I think the comparison is a proper one, more especially on this very ground, since the point for consideration is whether vaginal hysterectomy is *superior* to the supra-vaginal amputation, not whether it is as good as the supra-vaginal amputation. Obviously, among my six cases of supra-vaginal amputation, in which from two to eight years have elapsed without recurrence, the same result would have followed if vaginal hysterectomy had been performed instead. But there would clearly have been a fallacy in considering such a result as an argument in support of the superiority of vaginal hysterectomy. Vaginal hysterectomy must always be at least equal to the supra-vaginal amputation from the point of view of recurrence. The point to be decided is whether it is superior to the supra-vaginal amputation. One way in which this superiority might be proved would be that vaginal hysterectomy should be effectual as a means of cure in cases more advanced than those in which the supra-vaginal amputation has been shown to be efficacious. My own series of cases tells the other way, and goes to show that when the disease is too far advanced to be cured by the supra-vaginal amputation it has passed beyond the reach of cure by any operation whatever.

Wimpole-street, W.

[2] Vol. lxxvi., p. 101.

A CASE OF CHRONIC DYSENTERY OF MORE THAN FOUR YEARS' STANDING CURED BY REST IN BED AND A MILK DIET.

BY W. HALE WHITE, M.D.,
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ALMOST the only form of dysentery we see in England is that which has become chronic. Often the sea voyage and the change of climate suffice to cure it, but when this is not so the treatment becomes a matter of great interest to us here. The chronic form is so different in its symptoms from the acute variety that we ought probably to regard it more as a chronic colitis left by the previous acute attack than as a specific disease, just as those patients whom we see in this country with anæmia subsequent to tropical malaria are, when examined in England, to be considered as suffering rather from the anæmia left as a result of the invasion of the blood by the plasmodium malariæ than from the actual presence of the parasite. Even if the amœba of dysentery be found in the stools passed in England it does not follow that this view is wrong, for the creature may be powerless for harm here, and further we know that long after an attack of diphtheria, diphtheritic bacilli may be met with in the mouth, and the bacilli of enterica may be found in the pus of an abscess which forms in a patient who has suffered from this disease months before. It has often seemed to me that the treatment of intestinal affections is frequently too active, and that the great principle of giving an inflamed part rest is neglected; all sorts of drugs, many of which may cause enteritis, are given, and it is forgotten that lying in bed is one of the best ways of keeping the bowels quiet. The simplest way to give the surface of the colon freedom from irritation is to feed the patient on small quantities of milk at frequent intervals, say every two hours, a total of two pints a day for an adult being quite enough. If undigested curds are passed in the motions it may be peptonised; if the monotony of the taste is disagreeable it may be flavoured with a very little coffee. Should this diet lead to much constipation from four to eight ounces of olive oil thrown up the rectum every third day will give relief. Complete rest in bed is essential. I have seen this treatment cure long-standing cases of simple colitis without the administration of any drugs. In a very bad case of membranous colitis which had lasted ten years I have recently carried out the principle of giving rest so far as to have a right colotomy done, all the fæces for six weeks being allowed to pass through the artificial anus, thereby giving the colon absolute rest. When I suggested this in THE LANCET[1] Mr. Skene Keith wrote to say that he had adopted the same procedure. The principle of giving the colon rest was acted upon in the case described below. It will be observed that the patient had been in England, suffering from chronic dysentery four years and a quarter, that he had been going to many medical men who had given him all sorts of drugs, but that he had never been kept in bed for months on a milk diet. Nevertheless, this simple plan succeeded so well with him that although it is ten months since he was allowed to get up he has had no sign of a relapse and is now in robust health. That this is the correct treatment for chronic dysentery is borne out by such great authorities on the subject as Dr. Ward,[2] who says that most of the vaunted remedies are useless, but rest in bed and milk are essential for success; and Mr. Harry Leach,[3] who says the same, and adds that success with drugs is the exception, and that those cases do best which are least drugged. My reasons for publishing my case are to redirect attention to the papers of Dr. Ward and Mr. Harry Leach—and this is the more important as the subject of the treatment of chronic dysentery is almost ignored in many books which

[1] THE LANCET, March 2nd, 1895.
[2] Medical Times and Gazette, Feb. 22nd, 1873.
[3] Practitioner, December, 1870.

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deal specially with dysentery—and to show that when the disease has lasted many years the patient may be restored to complete health. The milk diet should be continued until the pain, diarrhœa, and passage of blood or mucus have all ceased and formed motions have been passed for some time; the patient should not get up till at least a fortnight or three weeks after he has passed from milk to farinaceous diet. It will be noticed that the restricted diet was continued although the patient lost weight; provided that he is not allowed to become too weak this is of little importance compared with the advantage gained from rest to the colon.

On March 17th, 1894, Dr. H. J. Dring asked my opinion on the case of a patient aged thirty-three years. He was originally a healthy subject. In 1882 he left England for Minnesota, where life was rough and work hard, but except for a slight attack of malaria he kept well. In 1885 he went to Fiji; he was never well there and had dysentery severely in 1888. As he got no better he was sent to Melbourne and admitted into the hospital, where he was twelve weeks. When he left there he was better, but he relapsed immediately, and gradually getting worse and worse he finally started for England, arriving at Christmas, 1889. From then till 1894 he went to numerous medical men, who gave him drugs, but none of them put him to bed for long together, and although often the dysentery would entirely disappear for a short time it always returned, and he was consequently quite unable to follow any occupation, and had had to resign various posts. When I saw him the bowels were open four or five times a day, the motions contained much mucus and blood, he complained greatly of dull abdominal pain, especially in the left iliac region, his tongue was covered with a thick white fur, he was very anæmic, sallow, and wasted. He weighed 11 st. 2 lb., his height being 6 ft. 1½ in. I gave it as my opinion that the only treatment likely to cure him was complete rest in bed and milk diet for many months, and he consented to undergo it. He was put to bed on March 31st, 1894. On this day the bowels were opened five times, and the stools contained much blood and mucus, with a few small, hard lumps of fæces; there was much pain before the act of defecation. Some observers thought amœbæ could be seen under the microscope in the fæces, but others could not find them. The patient was allowed no food except two pints of milk a day. He was ordered ten grains of ipecacuanha powder thrice a day; and twenty grains of carbonate of bismuth, twelve minims of tincture of opium, twenty grains of compound tragacanth powder, and water to make one ounce thrice a day. The accompanying table shows the frequency with which the

Table showing the Frequency with which the Bowels were Open.

Date.	No. of motions.	Date.	No. of motions.	Date.	No. of motions.
March 31	6	April 13	1	April 26	0
April 1	2	,, 14	4	,, 27	0
,, 2	1	,, 15	4	,, 28	0
,, 3	3	,, 16	3	,, 29	0
,, 4	3	,, 17	2	,, 30	1
,, 5	1	,, 18	1	May 1	1
,, 6	2	,, 19	0	,, 2	0
,, 7	2	,, 20	0	,, 3	0
,, 8	6	,, 21	0	,, 4	0
,, 9	4	,, 22	0	,, 5	0
,, 10	3	,, 23	0		
,, 11	0	,, 24	2	The bowels were never open oftener than once a day after this.	
,, 12	1	,, 25	2		

bowels were open. On April 6th the motions contained no mucus, but still a little blood. The pain was better. The mixture was stopped and the ipecacuanha was given in the form of a five-grain pill thrice a day as the patient was very sick. On April 10th, as the pills were passed unchanged, the ipecacuanha was put in cachets, but he continued to be sick, and so the ipecacuanha was in a few days left off. On April 16th there was still some blood and mucus in the motions and some pain in the abdomen. He was put upon a mixture containing ten grains of carbonate of bismuth, ten grains of bicarbonate of sodium, and ten minims of liquor morphiæ hydrochloratis. On April 25th the patient was allowed four oysters a day in addition to his milk. On May 1st he passed a formed motion for the first time. The pain in the side had decreased and the mucus and blood were much less abundant and less frequent than formerly. By May 25th the motions were always formed. Often there was neither blood nor mucus, and when either was present the amount was very slight. The pain had almost disappeared. From this date the progress was uninterrupted. Blood and mucus were only seen in the motions on one or two occasions. By July 3rd he had improved much in all respects. He was allowed some coffee. On July 27th the improvement continued. He was allowed some custard. On Aug. 22nd bread-and-milk made without crust and a little bread-and-butter were added to his diet. On the 27th he got up for a short time, having been in bed continuously for five months. His weight was 9 st. 6 lb. He thought he probably weighed less a month before. On Sept. 8th he was allowed fish; on the 14th he went out for the first time; and on the 21st he took ordinary meat. On Oct. 8th he went away into the country. He was directed to keep warm, to lie about as much as possible, to walk but little, and to avoid rich dishes, indigestible food, fruits, and most vegetables. On Dec. 2nd he wrote from the country saying that he had been "getting on steadily, gaining in strength and weight. I turned the scale at 12 st. 11 lb. yesterday, and can walk a good deal without getting tired." He went on to say that he had been most careful in his diet, and that he had lived chiefly on milk. During the spring of 1895 he was to all intents and purposes quite well, playing golf daily and taking ordinary plain food; and in May he went back to business, just thirteen months after the treatment began. He is still in excellent health. During the time he was under treatment an occasional enema of olive oil was given when it appeared necessary on account of constipation. None of the medicines above mentioned, nor some de-emetised ipecacuanha which was ordered, were continued for long, for it was found that on the whole he did better when he was not taking drugs.

Harley-street, W.

ON MALIGNANT DISEASE OF THE PERIDENTAL MEMBRANE.

BY A. HOPEWELL SMITH, L.R.C.P. LOND., M.R.C.S., L.D.S. ENG.

DURING the course of some recent investigations in the subject of the patho-histology of the peridental membrane I found among my specimens several marked examples of a new growth intimately associated with and springing from the fibrous periosteum of the teeth—a condition which seems to have escaped the attention of the writers of surgical and dental text-books. These periosteal tumours present on examination appearances which warrant more than a passing notice and afford a subject of great interest and importance to general and dental surgeons alike. The cases under consideration are not absolutely unique. For instance, Mr. Oakley Coles, at the annual meeting of the British Dental Association held at Cambridge in 1885, mentioned that he had at a previous meeting of the Odontological Society of Great Britain, exhibited a specimen of round-celled sarcoma attached to a molar tooth, the microscopic examination of which had been made by Dr. Klein. As a result of the study of my morbid anatomy specimens, of which I possess more than half a dozen, I have been induced to place on record my observations on this particular and somewhat rare affection.

To those unfamiliar with the microscopical appearances of the peridental membrane a brief description of its histology is needful for a larger comprehension of the patho-histology of the disease. The alveolo-dental periosteum is a thin layer of connective tissue which surrounds the roots of teeth and occupies a position between them and their osseous sockets. It consists of bundles of large white connective-tissue fibres arranged chiefly in a transverse direction, and is, in fact, "much like any ordinary fibrous membrane,"[1] being freely supplied with bloodvessels and nerves. The cellular elements vary considerably, and include cementoblasts, osteoblasts, osteoclasts, and fibroblasts, together with cells and tissues of

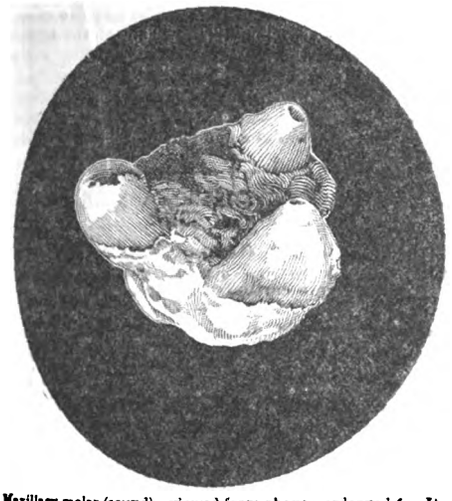
[1] Tomes: Dental Anatomy, p. 93. 1894.

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an "indifferent" nature.[1] In addition, there are occasionally found cementoclasts, calcospherite spherules, and the so-called "lymphatic spaces" described by Dr. G. V. Black. Of all these the fibrous tissues and fibroblasts predominate.

The chief points of interest in connexion with these peridental tumours are that they are found in connexion with the roots of sound teeth, and that their characteristics are those of round-celled (alveolar) sarcomata.

FIG. 1.



Maxillary molar (sound); viewed from above; enlarged ½. It shows the growth in its early stage, springing from the peridental membrane of the region between the roots.

1. *Seats of occurrence.*—The growth is confined, as its *locus principii*, to the periosteum of the molar teeth, the maxillary being much oftener affected than the mandibular series. It is generally seen to rise from a point situated at the junction of the roots with the body of the tooth (Fig. 1); but it may have its origin from the sides of one or even two roots (Fig. 2). Later, it generally fills up the whole of the inter-radicular region of the tooth (Fig. 3).

2. *Macroscopical appearances.*—The tumours vary in size from that of a split pea to a small nut, and have a smooth,

FIG. 2.



Maxillary molar (sound); side view; enlarged ½. It shows the growth springing from the sides of the two buccal roots. A more advanced stage than Fig. 1. There is a slight deposition of tartar on the distal aspect of the tooth.

convoluted, rarely ragged surface. They are firm to the touch and are of a deep-red colour. The teeth themselves are non-carious and exhibit in their hard parts no traces of disease except slight attrition of their cusps and (in some cases) absorption of the apices of the roots. They are markedly loose, and signs of chronic inflammation of the periosteum, accompanied by an accumulation of tartar, are often noticed.

3. The *etiology* of the disease is obscure; but there seems to be a predisposition on the part of the growths to attack the fibrous membranes of the teeth of females about the period of the menopause. Long-continued and powerful friction, as shown by the wearing down of the cusps, is probably the exciting cause.

FIG. 3.



Portion of right maxilla excised for malignant disease; distal view; enlarged ½. It shows the first maxillary molar *in situ* with its peridental membrane greatly increased in size by the growth, and also the secondary infiltration of the neighbouring parts. The tooth is sound, but loosened to a considerable degree. The sound canine tooth is seen in position at the back of the figure, the roots of the two bicuspids occupying the interspace. From original photographs.

FIG. 4.

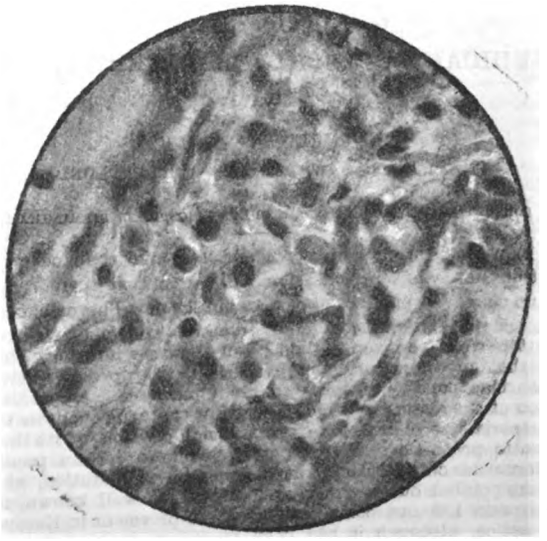


Photo-micrograph of a section (× 500 diam.) of a peridental sarcoma exhibited at a recent meeting of the Odontological Society of Great Britain.

4. The *subjective symptoms* point chiefly to long-continued sharp pain, increased on pressure, the course of the disease lasting sometimes several months. The pain is excruciating at times, and such as to render necessary immediate extraction of the loosened organ.

[1] Black: A Study of the Histology of the Periosteum and Peridental Membrane, p. 72. 1887.

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5. *Objective symptoms.*—On examining the mouth, at first there is sometimes almost entire absence of swelling or of any usual inflammatory signs, and the tissues are not markedly indurated. There may be slight suppuration. If the disease is not far advanced diagnosis is only complete after removal of the tooth. Later, well-marked symptoms of malignancy appear.

6. *Microscopical appearances.*—The growths consist of masses of cells held together by a fine network of fibrous tissue which is very dense here or very loose there, and is in some places apparently undergoing fibrification or chondrification. In the centre of the growth this network is scanty, but the intercellular tissue is conspicuous outside. Vessels are scanty in the centre and have extremely thin walls; they ramify among the cells. In the outer portion they are larger (but not dilated) and have normal walls. The cells themselves are for the most part rounded in shape and considerably larger than red blood-corpuscles (Fig. 4). They contain one or more nuclei and are devoid of any definite cell wall. Great numbers of spindle cells exist. There is little hæmorrhage into the tissues, probably because of the small size of the growth, and because it has not advanced sufficiently to allow of large hæmorrhages to take place in its substance; but small extravasations of blood corpuscles are noticed here and there. Microscopically the growth is practically indistinguishable from granulation tissue, as has been pointed out by Mr. Knyvett Gordon; considered from a clinical aspect, however, there can be no doubt as to its malignant nature, as Fig. 3 shows. The jaw was excised for malignant disease of the antrum by Mr. W. J. Pilcher of Boston, to whom I am indebted for the specimen. The photograph exhibits the first right maxillary molar *in situ*, with its peridental membrane greatly enlarged by the new growth. Infiltration of the surrounding parts has taken place, the gum, antral mucous membrane, and alveolar process being alike affected, and the latter partially absorbed. There is also absorption of the apical regions of both the labial roots. The patho-histology of this growth is identical with that of the isolated cases already mentioned, and from the evidence at hand it seems to be clear that the latter are only earlier stages of the former.

To sum up, it may be said that sarcomatous disease of the peridental membrane is not rare in its earlier forms, but that it is very seldom met with in an advanced condition; and that removal of the molar tooth fortunately cuts short its career if taken sufficiently early, but if it is allowed to continue it constitutes another starting-place for malignant disease of the maxillæ.

Boston, Lincs.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TINCTURE OF CUSPARIA.

BY SIR JAMES SAWYER, M.D., F.R.C.P. LOND., F.R.S. EDIN.,
CONSULTING PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

FEW drugs are better known and less used than cusparia. I think many of our profession will agree that there should be a spirituous tincture of cusparia in the new Pharmacopœia. In officinal tinctures of mild aromatic and non-astringent bitters we are not too well off; and a watery infusion, which is the only preparation of cusparia in the present British Pharmacopœia, is unwieldy for many purposes. A consideration of the history and constitution of the drug suggests that cusparia has claims to a professional revision of its therapeutic properties. Perhaps it is owing to certain peculiar circumstances of fraudulent commercial substitution, which were pointed out long ago and which are well known, that cusparia has not come into usual employment in European practice, although it has been much vaunted as the chief ingredient in a popular cordial, and although it appears to have found extensive therapeutic consumption in South America and elsewhere. I have been prescribing a tincture of cusparia bark, which I have had made with proof spirit, and of the strength of two and a half ounces of the bark to one pint, and I have directed its preparation in a manner similar to that given in the officinal directions for tincture of cascarilla. Recent researches (1892) of Beckurts and Nehring show that cusparia bark contains, besides a volatile oil and other constituents, four alkaloids—namely, galipine, galipidine, cusparine, and cusparidine—all of which are crystallisable bases. I think it will be found that a proof spirit tincture would better represent the essential constituents of the drug than an aqueous preparation, such as an infusion. The profound and practical Paris, in his classic "Pharmacologia," wrote of cusparia bark: "Its active matter is taken up by cold and hot water, and is not injured by long decoction, but the addition of alcohol precipitates part of the extractive. Alcohol dissolves its bitter and aromatic parts, but proof spirit appears to be its most complete menstruum." I find that a weaker tincture than that which I have indicated—namely, of the strength of one ounce of cusparia to one pint of proof spirit—is given as a non-officinal formula by Beasley.

Birmingham.

A CASE OF FORWARD DISLOCATION OF THE SEMI-LUNAR BONE.

BY LEONARD P. GAMGEE, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE GENERAL HOSPITAL, BIRMINGHAM; SURGEON TO THE CHILDREN'S HOSPITAL, BIRMINGHAM.

A MAN aged fifty-two was admitted to the General Hospital, Birmingham, on April 9th, 1895, complaining of a swelling over the front of the left wrist and of inability to flex the joint. He stated that four months previously, while working in a mine, he was standing with his back to the wall, with his left elbow flexed and with the back of his left arm pressing against a beam which projected from the wall. While he was in this position a truck came along and struck his left hand in such a way that his wrist was forcibly hyperextended. He found, immediately after the accident, that he was unable to flex his wrist, and very soon a great deal of swelling appeared all round the joint, both back and front. This general swelling subsided during the next fortnight. At the end of that time the condition was the same as on his admission. When he was admitted the following conditions were present. The power of extension of the left wrist was normal, but the joint could not be flexed beyond the horizontal position. On the front of the carpus in the middle line was a hard and fixed swelling, apparently immediately under the skin. From the size and position of the swelling I diagnosed that it was one of the carpal bones—probably the os magnum—dislocated forwards, and, from the fact that the patient felt numbness and tingling along the palmar surfaces of the first three fingers, that the median nerve was stretched over the surface of the bone. It was quite impossible to reduce the dislocation, and so two days after his admission I made a longitudinal incision over the swelling and found it to be caused by the semilunar bone, which had been dislocated forwards and then displaced downwards over the os magnum, the median nerve being stretched over the front of the bone. The nerve was freed and the bone removed, the wound healing by primary union. I last saw the patient on June 11th and found that the movements of his left wrist-joint were perfect, the left hand being practically as useful as the other. Subluxation backwards of one of the carpal bones, especially of the os magnum, is not very uncommon and is generally caused by forcible flexion of the hand. Forward dislocation of one bone, unless compound, is, on the contrary, extremely rare, the chief obstacles to displacement being the concave form of the palmar surface of the carpus and the resistance offered by the anterior annular ligament. In this case removal of the bone was the only possible way of restoring the function of the wrist, reduction such a long time after the injury being quite out of the question.

Birmingham.

PRESENTATIONS.—Dr. James W. Norris Mackay, of Elgin, has been presented by the members of the Northern Counties branch of the British Medical Association with his portrait (painted by Sir George Reid), in recognition of the "valuable, disinterested, and unremitting services rendered by him as secretary and treasurer of the branch since its inauguration in the year 1863."—Mr. S. Boake, L.K.Q.C.P., L.R.C.S. Irel., who has conducted, at Chard, classes in connexion with the St. John's Ambulance Association, has been the recipient of a gold pencil-case and an illuminated address from the members of the classes as a tribute of their esteem.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL INFIRMARY, LIVERPOOL.

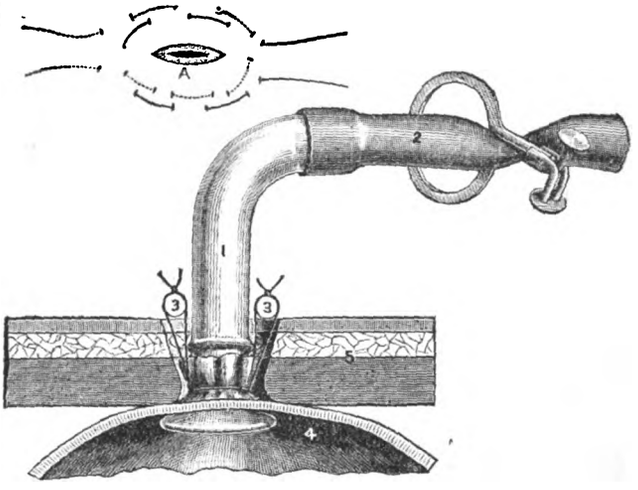
A CASE OF PERFORATED GASTRIC ULCER; LAPAROTOMY; GASTROSTOMY; RECOVERY.[1]

(Under the care of Mr. F. T. PAUL.)

IT is well known to the readers of THE LANCET that we have constantly urged the publication of cases in which operation for perforating gastric ulcer has been performed, whether successful or not, and have done our best to spread a knowledge of the results obtained by different surgeons under the many and varied circumstances amid which cases have presented themselves for relief. There is probably no class of case which is calculated to cause greater anxiety to the medical attendant than one of this nature. Any additional success attained, any fresh suggestion of value in the treatment such as that made by Mr. Paul, may induce those in responsibility to recognise that not to recommend operation is to deprive the patient of a very good chance (and usually the only one) of recovery. The case of successful operation by Mr. Maurice, referred to by Mr. Paul, was published in THE LANCET. We have also given an abstract of a paper by Mr. Warrington Haward,[2] in which he described the case of a woman aged twenty-six who had been under his care, and on whom he had operated. As excision of the ulcer was not possible he had sutured its edges to the wound. The patient died from abscess of the lung six weeks after the operation.

About 1 A.M. on Dec. 13th, 1894, Mr. Paul was requested by Dr. Sidney Palmer to see with him a woman in whom he suspected that a gastric ulcer had recently perforated. The patient was thirty-one years of age, married, and a sufferer for years from dyspeptic symptoms. Six months previously the pain had become worse after food, so that she frequently induced vomiting to obtain temporary relief. The vomited matter was often dark brown and sometimes nearly black. Notwithstanding her constant pain and the advice of her medical attendant, she was far from careful in her diet, and on the night of Dec. 12th had a cold meat supper. This was shortly followed by the usual pain and vomiting, upon which there immediately supervened the most violent and agonising pain in the upper part of the abdomen. Her friends gave her a teaspoonful of brandy and applied hot fomentations, but without relief. Dr. Palmer was sent for. He found her in a condition of profound collapse and still suffering intense pain, so he injected morphia and took means to encourage reaction. About midnight the patient was beginning to get warm again, and the pulse to regain a little vigour. Mr. Paul was consulted as to the desirability of attempting relief by operation. On his arrival reaction was still further established. The skin was fairly warm, the pulse 130, the pain still severe, and the abdomen as rigid as a board from muscular contraction. The diagnosis seemed to be unquestionably correct, and there was no hesitation in advising the patient to submit to an operation. Unfortunately it was not convenient that it should be done where she was staying, so she was removed to the Royal Infirmary, Liverpool, and left in charge of the house surgeon, Dr. J. P. Nixon, with instructions to telephone as soon as she had fully recovered from the collapse, which of course had been somewhat deepened by the necessity of removing her. Mr. Paul went to the hospital on receipt of the message and commenced to operate at 7 o'clock, which was nine hours after the first onset of the symptoms. An incision was made four inches in length between the ensiform cartilage and the umbilicus. As soon as the peritoneal cavity was opened sour-smelling gas and greenish liquid escaped, and the neighbouring viscera showed signs of commencing peritonitis. The ulcer, though in a most awkward position, was easily found on account of its very large, hard, and thick base, which made it feel like a malignant infiltration. It was placed at the cardiac end of the lesser curvature, and it required some tension to keep it in view, even although the left rectus muscle was cut across to the margin of the costal cartilages. The rent was transverse and measured about half an inch in length. Excision of the ulcer was out of the question, and so awkwardly placed was the orifice that it appeared doubtful if it would be possible to close it with sutures. However, with small curved sewing-needles held in dressing forceps and armed with fine green catgut Mr. Paul was able to make some sort of a closure, over which he drew and stitched a tag of fatty omentum. But the coats of the stomach were so friable, and the position of the orifice so difficult to get at, that he did not consider the closure trustworthy. The front end looked pretty well, but at the back, where it was out of sight, the condition of the wound was very doubtful, whilst very little reliance could be placed on the sutures, even where satisfactorily tied, on account of the extreme friability of the tissues. It seemed that the first accumulation of either gas or fluid in the stomach would find a ready exit through the stitches, and therefore it was determined to drain the stomach by introducing a glass tube as recommended for gastrostomy and shown in the accompanying engraving. This is very easy to accomplish, and apparently is not a source of danger, but

GASTROSTOMY IN ONE STAGE.



A, Method of passing the ligatures in the stomach. 1, Glass tube. 2, Rubber tube with clip. 3, 3, Sectional view of glass rods over which the ligatures are tied. 4, Interior of the stomach. 5, Abdominal wall.

it remains for time and experience to approve or condemn such a proceeding. Stomach drainage was employed here because Mr. Paul believed that the ulcer would certainly leak again unless placed under the most favourable conditions, and because it is a known fact that this secondary leakage is one of the prominent causes of failure in otherwise hopeful cases. The glass gastrostomy tube was fitted with a short piece of rubber tubing, which was closed for the present. Next the peritoneal cavity was well washed out with simple warm water, and the wound closed without drainage by passing fishing-gut sutures through all layers of the abdominal wall. On taking the patient back to the ward the stomach-tube was allowed to discharge in a jaconet bag containing antiseptic wool. She was kept warm and a brandy enema given. At first there was some abdominal pain, but it was not very severe. She felt sick and twice brought up a mouthful of brownish fluid. Copious vomiting was probably impossible with an open tube in the stomach. Thirst was avoided by frequent sips of warm water in which small doses of salol were occasionally given. For the first few days there was no great cause for anxiety. The temperature ranged between 98° and 100° F., and with the help of a little morphia she slept sufficiently and suffered but little pain. The pulse came down to 100. The urine was drawn off by catheter, and nutrient enemata were given every three hours. On Dec. 16th, the fourth day after the operation, stomach feeding was attempted by giving a little meat essence, but it had to be discontinued

[1] Read at the Liverpool Medical Institution on March 28th, 1895.
[2] THE LANCET, May 6th, 1893.

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on the 17th on account of fresh hæmorrhage from the ulcer, which continued on the 18th and 19th, and was unfortunately followed by a severe diarrhœa, which so reduced the patient that stomach alimentation became imperative. She was consequently fed on the 20th with prepared peptonised milk, and her condition began to improve. From this time there was no further cause for grave anxiety, and the rectal feeding, though not entirely discontinued, was no longer relied on. The sweetness of the peptonised milk caused her to turn against it in a few days, and the foods which proved the most successful were soup made from beef with vegetables in a muslin bag, and to which raw meat juice was subsequently added, and raw scraped-meat sandwiches. The latter caused neither pain nor sickness, and she improved rapidly on them. Fresh milk was disastrous in any form; even when partially peptonised it caused vomiting and a return of the hæmatemesis. The necessity for so much care in the feeding was that, apart from the operation and after the patient had recovered from it, the case was still a very bad one of gastric ulcer with advanced chlorosis and loud hæmic bruits and possibly mitral disease, for she had had three bad attacks of acute rheumatism. The history of the gastrostomy tube is as follows. During the 13th and 14th the discharge was slight. From the 15th to the 27th it was copious, but none escaped beside the tube, even although the ligatures came away on the 22nd. On the 27th the tube was removed, but with so much difficulty that it was decided not to use such a trumpet-shaped end in future cases, unless it was intended that the tube should remain in permanently. For a few days the discharge continued free at intervals, then diminished, and at the end of a fortnight the opening had closed. On careful diet the patient continued to improve. In the middle of January, 1895, she was allowed to get up, and at the end of the month she was discharged in a perfectly satisfactory condition of health.

Remarks by Mr. PAUL.—The cases which have been reported since Mr. Pearce Gould opened a discussion on this subject at the Bristol meeting of the British Medical Association all tend to confirm the views he expressed, both as to the causes of failure and the best means to attain success. The former may shortly be stated as (1) collapse; (2) imperfect cleansing of the peritoneum; and (3) further leakage of stomach contents. There is a general agreement as to the best way of dealing with the first two difficulties. Fatal collapse is to be avoided by operating at the right time—that is, during the stage of reaction and before peritonitis has fully developed. For this the surgeon must depend chiefly upon the promptness of his medical *confrères*, and also by making his operation as short and simple as is consistent with the object in view. The peritoneum is, I think, best cleansed by thorough flushing with simple hot water at a temperature of about 100°, and if boiling the water limits the supply or causes a moment's delay it is far better to use it unboiled. What are the few germs in the water to the myriads already in the peritoneal cavity, a proportion only of which can be washed out? Peritoneal drainage is better not resorted to, except in those cases where peritonitis is fully established, and most of these will end fatally any way. The third cause of failure—further leakage—is generally due to the inaccessibility of the ulcer, and the best means to be taken to avoid it have not yet been agreed upon. When the orifice can only be imperfectly closed it seems to me that it may prove wise to drain the stomach by a temporary gastrostomy, as in the case just related. When it is quite inaccessible I think it might possibly be sutured through an incision in the anterior wall of the stomach. This sounds severe, but it is decidedly less so than excision of the ulcer, which has been done, and in experimentally performing gastro-enterostomy upon dogs through a similar incision it was found that the healing of the wound in the stomach was always very perfect. However, it is not every ulcer that could be got at even in this way, though I can imagine cases in which I would be willing to give it a trial. The readiest method of meeting the difficulty was adopted by Mr. Maurice of Reading when he introduced an indiarubber tube into the stomach through the perforation and packed it round with gauze. In so doing I suppose one would probably frequently pave the way for future difficulties, but when the patient is too collapsed to permit of a more prolonged operation it seems to be the best and, indeed, the only reasonable method to adopt. I cannot think that washing out the stomach is generally a desirable proceeding. It prolongs the operation and must tend to increase the size of the perforation; moreover, if the sutures have any holding power at all they will outlast the time that the contents can remain in the stomach. Excision of the ulcer gains no support from the cases recorded by English surgeons, and if simple suture is sufficient, as has been amply proved, the much more severe operation of excision ought to be abandoned. The impression given to me by the case recorded above is that when taken at the right time, in a fairly good subject and with an accessible ulcer, laparotomy for perforated gastric ulcer will be a very successful operation; and the only reason why there are so few recoveries reported up to the present is that the medical world has not yet fully recognised that success depends mainly upon early operation. In conclusion, I would like to call attention to a point in the etiology of these gastric ulcers insisted on by my friend Dr. William Williams of Liverpool. He believes that the original cause is in many cases to be traced to the use of corsets. I am strongly of opinion that he is right, and have on more than one occasion confiscated my patients' stays and replaced them with the knitted woollen article with shoulder straps, which may be obtained from the sellers of Jaeger clothing. It contains a few "bones," but cannot be laced, and is, therefore, free from the worst defects of this pernicious article of female dress. Several of the so-called Jaeger stays are as harmful as any others, being, indeed, nothing but the vicious Parisian corset dressed up in Jaeger material.[4]

Medical Societies.

BRITISH GYNÆCOLOGICAL SOCIETY.

On Some Difficulties in the Use of the Curette.—Exhibition of Specimens.

A MEETING of this society was held on June 13th, Dr. CLEMENT GODSON, President, being in the chair.

Dr. MACPHERSON LAWRIE showed three specimens:—1. Removal of Suppurating Ovarian Tumour with Purulent Peritonitis and Adhesions. 2. Fibroma of the Uterus removed by Enucleation. 3. Total Extirpation of the Uterus and Ovaries for Prolapse. The patient, aged thirty, single, was confined of a child five years ago. Later she suffered from "bearing down" and hæmorrhage. When seen the uterus was prolapsed. An attempt was made to retain it in position with pessaries, but ineffectually, and it was decided to remove the uterus and appendages. Later she suffered from rectocele, which was cured by a plastic operation.—The PRESIDENT questioned the advisability of removing the uterus and ovaries for prolapse in a woman aged thirty.—Dr. ROUTH took exception both to the removal of the uterus, the prolapse of which might have been treated by some less radical method, and also to the removal of the ovaries. There was very little likelihood of menstruation persisting after hysterectomy; and the presence of the ovaries helped to retain the womanly characteristics.

Mr. CHRISTOPHER MARTIN showed two Uteri removed by Total Extirpation, after removal of the appendages two years previously, in the first case for double pyosalpinx, and in the second for double cystic disease. Menstruation persisted, in the first case very profusely, and in the second with great pain. Other means having failed, the uterus was removed. It was found that a piece of ovary had been left behind in the first case, and in the second part of the tubes, whilst the anterior wall of the uterus in this case contained a myoma. Mr. Martin attributed the persistence of menstruation to the fact that the menstrual nerves had been left intact.—Dr. LEITH NAPIER observed that the thickness of the uterine wall in the second case was suggestive of fibrosis, which often caused a continuance of hæmorrhage, even after removal of the ovaries.—Mr. TAYLOR (Birmingham) said that these were examples of a class of case in which hysterectomy had an important place, contrasting in this respect with Dr. Lawrie's case, in which the procedure was open to criticism.

Mr. TENISON COLLINS (Cardiff) showed an Impacted Ovarian Cyst which simulated a Myoma of the Uterus.

Dr. FANCOURT BARNES read a paper on Some Difficulties in the Use of the Curette. Curetting, he said, though a simple procedure, was not devoid of risk; it should, therefore, be undertaken with care. The first step was dilatation, which should be sufficient to admit the passage of

[4] The patient has gained 23 lb. in weight since the healing of the ulcer and the adoption of a "rational" corset.

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the index finger. There were two methods of dilatation. The rapid method was by the use of Hegar's or other dilators; at the best it was a somewhat rough procedure, involving tearing and bruising of the cervix. He therefore preferred, as a rule, the gradual method, which was done by means of tents. They were safer and produced greater dilatation. Laminaria tents were the best, as the salts with which they were impregnated rendered them aseptic, and even antiseptic. They should be four inches long. Spoon tents were to be condemned. Under an anæsthetic the curetting was next proceeded with; a sharp curette or spoon might be used, or the dull wire curette or finger nail. The immediate risks were perforation of the uterus and hæmorrhage; later, atresia of the canal and pelvic inflammation. The two principal conditions calling for the use of the curette were chronic endometritis and retained products of conception. Cases were then related illustrating these conditions. In conclusion, the following questions were submitted for discussion: (1) What are the symptoms which point to the clear necessity of curetting the uterus? (2) which is the safest and most natural method of dilating the uterus? (3) should the curette be used in cancer of the uterus, more especially when the growth is at the fundus? (4) is it advisable to resort to the use of the curette for diagnosis? (5) is it possible to establish a satisfactory system of drainage of the uterine cavity after curetting?—The PRESIDENT, in thanking Dr. Fancourt Barnes for his paper, said he believed it was the first time the subject had been brought before the society. As curetting was a popular operation, it was advisable that the selection of suitable cases and the best method of its performance should be discussed. Whilst many operations rose for a time into prominence and then lapsed, he thought it unlikely that this one would fall into disuse because the resulting benefits were often strikingly evident.—Dr. MACPHERSON LAWRIE had done many curettings, but felt a certain anxiety about every case; yet no operation gave more satisfactory results. He used laminaria tents and a sharp curette; the cavity was then flushed with boiled water. Complete rest was required for some days after.—Surgeon-General HARVEY had operated in India both on Europeans and on natives, and had not found an anæsthetic necessary. He agreed with Dr. Barnes that sponge tents should be abolished. Even laminaria tents were not always satisfactory, for sometimes they expanded in an hour-glass fashion and their extraction was then difficult.—Professor JAPP SINCLAIR had also not found chloroform necessary; he gave a hypodermic injection of morphia an hour before the operation, and an alcoholic stimulant half an hour before. He had never seen any bad symptoms follow curetting, nor need there be any if care was used. Tents were the best dilators; it did not matter much how long they were left in. It was seldom necessary to introduce a finger, but when desired Hegar's dilators could be used, up to No. 12. The curette was valuable for diagnosis of cancer of the body, whilst in cases of suspected cancer of the cervix if a sharp curette were drawn across the diseased part, if it brought away tissue, the disease was cancer; if not, it was erosion. He believed this sign to be pathognomonic.—Dr. GREIG SMITH doubted the value of the sign given by Professor Sinclair in his last remarks. In his experience a sharp curette applied to an erosion would certainly bring away tissue. He usually neither dilated nor gave an anæsthetic; by pulling the uterine canal straight by means of a vulsellum on the posterior lip any moderate-sized curette could be introduced.—Mr. CHRISTOPHER MARTIN said there was one condition which had not been referred to, but which was capable of causing serious trouble after curetting—viz., slight disease of the appendages. In America curetting was done for this very condition, but he did not think it safe. A careful examination of the appendages should therefore always be made before curetting. In Birmingham they always gave an anæsthetic and used metallic dilators; a sharp curette was used, after which the cavity was swabbed out with iodised phenol and packed with iodoform gauze. He felt sure it was generally better to use an anæsthetic.

The discussion was then adjourned to the next meeting.

SUCCESSFUL VACCINATION. — Mr. T. Davies, public vaccinator for the suburban district of the Whittlesea union, has been awarded for the second time in succession the full amount of the Government grant for efficient vaccination.

Reviews and Notices of Books.

Diseases of the Ear. By A. MARMADUKE SHEILD, M.B. Cantab., F.R.C.S. Eng. Cassell and Co. 1895.

MR. SHEILD'S excellent little work on Diseases of the Ear is a vindication of the fitness of a surgeon on the general staff of a hospital to manage with success the aural department in conjunction with it. The pages he has written afford a clear demonstration of the methods of treating aural disease in accordance with the established principles of general surgery. He views the subject from no cramped and narrow standpoint, but brings ably to bear the experiences gained in the treatment of disease in other regions of the body. The divergencies from accepted traditions are not a few, but Mr. Sheild's defence of them is sustained by copious illustration from his case-books. The necessity of a sound knowledge of the principles of general medicine and surgery is his watchword throughout. The usual lengthy chapters on the anatomy and physiology of the ear are replaced by a brief and readable "sketch" in which the main facts are concisely summarised; the condensation has not been gained at the expense of accuracy, though on page 14 the statement that "the distance of the [mastoid] antrum from the lateral sinus is three to six *inches*" is clearly a misprint. In the chapter on examination for diagnostic purposes emphasis is rightly laid on the superiority of the watch and conversation tests over other more subtle methods; but the description of the use of the tuning-fork is for no very obvious reason divided into two portions separated by some pages dealing with other matters.

The diseases of the auricle and external auditory canal are fully described, and Mr. Sheild takes up a firm position with reference to the effects of impacted cerumen, holding that when perforation of the tympanic membrane coexists the latter is due to pre-existing disease of the membrane or of the middle ear. This view, though running counter to the commonly received opinion, is certainly supported by the previous history of many of these cases.

The subject of aural exostoses receives full attention, and the value of the electro-motor for drilling and removing these growths is pointed out. The remarks on impacted foreign body are very practical, but the author states that he has had no experience of the use of the galvano-cautery, which has proved most useful in the hands of others when dealing with these cases. The chapters on the inflammatory affections of the middle ear are well written, and especially that dealing with chronic otitis media associated with perforation. The cerebral complications of ear disease are the subject of a brief but clear sketch, though it would have been well if more details had been given concerning the operative treatment of these cases. The operation preferred for adenoids is that performed by means of the steel nail, the patient being placed on his side, with the head over the edge of the table. Mr. Sheild insists strongly on the importance of after-treatment in these cases, relying chiefly on the application of astringents to the naso-pharynx and a methodical use of the Politzer bag. The chapter on nerve deafness is good, and an intelligent account is given of the methods of detection of malingering. At the end of the book are arranged some useful prescriptions for local and general medication. The little work is neatly got up and is freely illustrated. It may be regarded as a safe guide to the treatment of diseases of the ear.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D. Edin. Vol. III., Parts I. and II. Edinburgh: T. and A. Constable. 1894 and 1895.

THE bulk of the first of these two parts of Dr. Byrom Bramwell's admirable Atlas consists of the substance of

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an address to the Dermatological Society of Great Britain and Ireland delivered about a year ago. It deals with the subject of the thyroid treatment of skin diseases—a subject which the author has taken up with enthusiasm and prosecuted with assiduity. The cases, which are here given in full detail, and are abundantly illustrated by a large series of photo-lithographs, seem to speak strongly in favour of the plan; but it may be pointed out that the majority of them were cases of psoriasis, and that few skin affections are more amenable to treatment, or perhaps we should say tend so frequently towards temporary alleviation under the influence of rest, diet, and local applications. Nevertheless, the results recorded by Dr. Bramwell, not only in psoriasis, but in lupus and some other skin diseases, are so uniformly successful, and, as the photographs show, so complete in result, that scepticism is disarmed, and we are forced to admit the beneficial influence of the administration of thyroid extracts (local treatment not having been used), although it may be difficult to explain the precise *modus operandi* of the remedy. It might be thought that in cutaneous affections the determination of the efficacy of any particular line of treatment could be easily determined, but it must not be forgotten that even here, as in other therapeutic trials, much depends upon the attitude of the observer. Thyroid therapeutics in skin disease have been found wanting by other observers; but Dr. Bramwell hints that in many cases want of faith in the efficacy of the remedy may in such instances have led to a too early abandonment of the trials or a too timid exhibition of the drug. At the same time, the remedy is one which does require caution in administration, and whether, after all, in such an affection as psoriasis it is worth while to substitute this powerful measure for treatment of a less heroic kind must be left to dermatologists to determine. Besides this exposition the first part of this third volume of the Atlas contains an excellent account of acute anterior poliomyelitis (infantile paralysis) and the record of an interesting case of malignant disease. The second part, just issued, also enters fully into progressive muscular atrophy and the muscular dystrophies in general. These conditions are admirably adapted for pictorial representation, as may be seen in Professor Curschmann's recent "Klinische Abbildungen." Dr. Bramwell gives several plates to illustrate this part of the text; the issue also including descriptions and drawings of hereditary syphilis, ichthyosis, and an excellent coloured portrait of cyanosis. The thoroughness with which the author treats his subjects and the high standard of excellence maintained in this Atlas render it one of the most valuable publications of the day, and testify to the energy and clinical enthusiasm which have produced it.

The Natural History of Plants. By ANTON KERNER. Translated and edited by F. W. OLIVER, M.A., D.Sc., with the assistance of MARIAN BUSK, B.Sc., and MARY EWART, B.Sc. Parts 7 to 11. London, Glasgow, and Edinburgh: Blackie and Son. 1895.

WITH the seventh part of the serial issue of the English edition of the work of the Vienna professor of botany the first volume was completed. That portion of the book dealt with questions of morphology in a manner at once attractive and profound, for the work, whilst being strictly scientific, is written in so lucid and charming a style that its popularity on the Continent is not surprising. The present translation enables the botanical student in this country to share in the rich storehouse of instructive facts that are arranged so plentifully in these pages. There is a masterly freshness and originality of treatment that show that the author has attained to the most intimate familiarity with the conditions of plant life and the innumerable adaptations of structure to environment that the plant exhibits. No less interesting are the sections of the second volume which have so far been published; indeed, in many particulars they open up questions of surpassing interest which have engaged the attention of the greatest masters in science, for they deal with the subject of the reproduction of plants, which is introduced by descriptions of the asexual modes as seen in the spores and thallidia of cryptogams and the buds on stems and roots of higher plants. But the main share in perpetuating the cycle of vegetable life on the globe is effected by fertilisation and fruit formation, and it is in the study of the various means adapted to this end that so much has been learnt by the patient researches of botanists. This subject is introduced by the description of fruits and fruit formation in cryptogams and phanerogams, the fruit being defined as "the product of fertilisation, and at the same time constituting the first step towards the renewal of the fertilised plant." It is shown how cryptogams—e.g., ferns and mosses—are fertilised under water, and most phanerogams in the air, hence it is that most of the latter are provided with blossoms which are lacking to the former. The various means for the preparation, storage, and distribution of pollen, the part played in fertilisation by wind and by insects, which go far to explain the diversity and beauty of the floral world—these and a multitude of cognate questions are handled by the author in a most fascinating way. We can well imagine how the perusal of even a few pages of such a book as this would arouse an enthusiasm for botanical study in the most indifferent, and now that the season is at hand when the material for this study abounds in every field and hedgerow we can recommend no sounder guide, at once instructive and alluring, than this work, which we think will do not a little to revive an interest in botany beyond the circle of the specialist. Many a hard-working practitioner of medicine has in times past gained wholesome recreation and renewed his energies by devoting his spare moments to the contemplation and study of the natural phenomena that surround him in his daily walks, and not a few members of our profession have aided considerably the advance of natural knowledge. And, although the mass of other technical subjects may have crowded botany out of the ordinary curriculum of medical study, we do not doubt that its pursuit will still be taken up from a pure love of nature. To such we heartily commend this work, the great feature of which is that it has imparted a fresh interest in a subject too long under the thraldom of a rigid system of classification. Botany, or, as the title of this book gives it, "The Natural History of Plants," has gained immeasurably in interest by the study of plant life as distinct from plant form.

LIBRARY TABLE.

A Handbook of Pathological Anatomy: Based upon the Catalogue of the Pathological Museum, University College, Liverpool. By RUBERT BOYCE, M.B., George Holt Professor of Pathology, Pathological Superintendent, Royal Infirmary, Consulting Pathologist, Royal Southern Hospital; and J. HILL ABRAM, M.D., M.R.C.P., Assistant to the Professor of Pathology, Assistant Physician, Stanley Hospital, Pathologist, Royal Infirmary. Liverpool: T. Dobb and Co. 1895.—This volume, consisting of about 500 pages, is an elementary treatise on selected subjects in pathological anatomy, combined with references to, and short notices of, illustrative museum specimens. The general plan is excellent and has been well carried out. Even without inspection of the specimens, anyone having a moderate acquaintance with pathology is likely to profit by a perusal of the full and clear account of the various lesions and abnormalities described. Beginners, however, would probably find one of the systematic elementary manuals more useful,

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Access to the specimens being presupposed, illustrations are naturally not supplied in the text, and the references to minute structure are comparatively few. The sections on the abdominal and pelvic viscera and on the bones and joints are especially copious and worthy of attention.

St. John Ambulance Association. Hints and Helps for Home Nursing and Hygiene. By E. MACDOWEL COSGRAVE, B.A., M.D., Ch M., F.R C.P.Irel. With a Chapter on the Application of the Roller Bandage by R. J. COLLIE, M.D. Ninetieth Thousand. London: St. John's Gate, Clerkenwell. 1895.—This is the authorised text-book on nursing issued by the St. John Ambulance Association, and is arranged according to the syllabus of the second (or nursing) course of lectures. It contains a large amount of useful information on the general management of a sick-room, as well as on dietary and the use of medicines and other remedies. There is a short special chapter on the nursing of sick children. In the chapter on baths, those from 110° to 120° F. are described as "very hot." This is strictly correct, and the author might have added that no one ought to be suddenly immersed in water even at 106°. For very hot baths the temperature should at first be about 103°, from which it may be raised by successive additions of hot water to about 110°, and the attendants should keep in mind that faintness may result.

Venice ("Story of the Nations" Series). By ALETHEA WIEL, author of "Vittoria Colonna" &c. London: Fisher Unwin. 1894.—Venice, or rather the Venetian Republic, occupies too conspicuous a place in the history of medicine to make its political and social life other than profoundly interesting to physicians and surgeons. To know and to appreciate under what vicissitudes the great school of Padua—the *alma mater*, among others, of William Harvey—rose and fell and rose again must be matter of more than mere "intelligent curiosity" to the profession. For such knowledge and for the intellectual "coign of vantage" it gives Madame Wiel provides admirably in the flowing, picturesque, and exceptionally sound narrative conveyed in this volume. Amid what environments Luigi Cornaro practised what he preached towards attaining his hundredth year, or Geronimo Mercuriali composed his masterworks on the lines of that Hippocrates whom he so usefully edited, may be pleasantly learned from her animated and impressive pages. The book is one of the best of the series to which it belongs, a recommendation to which no student of contemporary literature can fail to attach its true value.

MAGAZINES FOR JULY.

The Practitioner.—This estimable little monthly keeps up its usual high standard of excellence. In one of the annotations on events of the past month is a reference to Sir Richard Webster's Insurance of Children Bill, in which the writer regrets its withdrawal—a regret which we are sure all our readers will share. If that mysterious entity "the feeling of the country" is not ready to accept Sir Richard Webster's Bill, it surely would accept one for forbidding the insurance of illegitimate children; for it is to everyone's interest that these should be got out of the way, and every medical man whose practice lies among a certain class knows perfectly well that the "removal" is effected and how it is done. Dr. Stephen Mackenzie contributes an interesting and useful paper upon a very distressing and common condition—namely, Flatulence. Mr. Victor Horsley gives five cases of Operation in Leontiasis Ossium, and Mr. Walter Jessop writes on Ocular Headache. Dr. Fletcher Beach continues his paper upon Feeble-minded Children, and there is a good article upon Waters and Baths for the Gouty.

Chapman's Magazine.—When a magazine starts as well as Chapman's did there is always an idea that the first standard of excellence will not be kept up, but of this there is no sign. Mrs. Andrew Dean contributes a clever sketch of some singularly disagreeable people, and Mr. Crockett describes a vision of fiends equal to that appalling one of the pig demons under the gallows reported by Dr. F. G. Lee, and they were the *premier cru* of bogeydom. However, no doubt the visions were due in both cases to some error of refraction accentuated by dyspepsia. Mr. Bret Harte's serial gives a life-like picture of "road agents" and their doings, and Miss Violet Hunt continues to evolve in her admirable manner the character and little ways of Mrs. Munday, as fascinating a woman as Becky Sharpe. We are sorry to see there is one blemish in the shape of an in-set advertisement.

The Contemporary Review.—Professor Lombroso writes on Atavism and Evolution, showing how a return to primitive ways may be coexistent with the most modern developments. Mr. Herbert Spencer contributes a paper on Dancers and Musicians, where, in speaking of religious dances, he quotes an instance of Christian religious dancing "in a remote region" among the Pueblos. He might have quoted an instance much nearer home—namely, the solemn dance before the high altar at Seville (we think the town is) on the festival of Corpus Christi. Mr. Charles Roberts contributes an interesting paper on the Physiology of Recreation, and Mr. A. W. Hutton writes an earnest plea for a national opera house. This last, though an excellent idea, we fear, would fail if not very carefully organised. The Albert Hall, the only musical institution in any way connected with the State that we have, is a disastrous failure from a musical point of view, excepting as regards the Royal Choral Society.

The Scientific Roll and Magazine of Systematised Notes: Climate—Baric Condition Conducted by ALEXANDER RAMSAY. Nos. 1 to 6. London: The Castle Printing and Publishing Company, Elephant-road, Elephant and Castle. 1894.—Temperature, rainfall, sunshine, and the prevailing directions of the wind are the principal atmospheric conditions taken into account in the investigation of existing diseases or in the selection of health resorts. To an important section of the community, however, sea voyagers, and the shipping interest in particular, the barometric movements are of at least equal consequence, and it is this branch of meteorology which Mr. Ramsay has taken up in the volume now issued in serial form. In subsequent volumes he contemplates dealing with the questions of carbonic acid and chemical rays, dust haze, electrical condition, &c. In an essay introductory to the present work he discusses the cause of the rise and fall of the barometer, arguing that it cannot be directly accounted for by variations in temperature and aqueous vapour, but suggesting that when currents of air are set up by differences of temperature and dew-point they meet with unequal resistance. In consequence of its elasticity the air may be held back when flowing over a surface presenting more than usual friction, and, at the same time, will flow rapidly over the smoother tracts. More air, therefore, flows in one direction than in another, and in proportion as the weights of the incoming and outgoing columns of air differ so the barometer rises and falls. He then gives a *résumé* of the barometric observations of various eminent meteorologists and their comments thereon as recorded up to the year 1845.

The *Twentieth Century* has an appreciative article by Karl Blind upon Jacob Moleschott, the eminent physiologist of Heidelberg. The article deals mostly with the political side of Moleschott's career, as might be expected from its author. Moleschott and his successor Huxley had many things in common, both as to their work and the way it was received,

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and both, to use Moleschott's words, tried "to describe in clear, easily understandable language the incessant course of the elements throughout the animal and vegetable world." There is an interesting paper on the Dawn of the Railway Era. The necessary characteristics for an engine-driver in 1841 were "that he should not be deaf, shortsighted, or subject to fits, and should be of affable manners, so that in the event of an accident he might prevent dissatisfaction among the passengers by his intelligent conversation." Even though testing for colour blindness and acuteness of vision is not made compulsory by the Board of Trade, it must be admitted that the standard of qualification for driving an engine has been raised since 1841. There is an essay by George Morley on George Eliot's country, and Mr. William Graham tells the story of the Byron separation.

The Westminster Review.—The first article in this magazine has a melancholy interest at the present time. Apart from the metaphysical subjects of which it treats, it deals with the late Professor Huxley's views on Hume and Berkeley written by a "humble disciple," Mr. G. G. Greenwood. The paper entitled the "Mystery of the Pacific" treats of Easter Island and the Atlantic tradition. An Irish Protestant has a really admirable paper on Education in Ireland, showing the manifest superiority of Roman Catholic education in Ireland. Anyone who has read the Stonyhurst manuals will agree with the writer that the Jesuits are admirable teachers.

The Humanitarian.—There is an interesting article by Mr. R. H. Sherard, "An Interview with Daudet," who mentions amongst other matters the great increase of drunkenness in France owing to the ruin of the vineyards, so that instead of the light wholesome natural wines, the people are compelled to use artificial wines, absinthe, &c. The Rev. W. J. Wood has a sensible article on the purity question and the avoidance of syphilis.

Analytical Records
FROM
THE LANCET LABORATORY.

"LIQUEUR ADVOCAAT."

(SIMUNDT, SLATER, AND CO., 2, GUILDHALL-CHAMBERS, BASINGHALL-STREET, E.C.)

ALTHOUGH only recently introduced into this country by the above firm, who are the original manufacturers, this "liqueur" appears to be well known on the Continent. Its formula is certainly not new, since it is composed of yelks of eggs with a blending of certain choice liqueurs and mature brandies. In the present preparation, however, the combination of these ingredients has been very satisfactorily effected. The taste is delicately and agreeably aromatic and its consistence uniform. Such a mixture is, of course, well known as a vigorous restorative, and scientifically it is a distinct advance on liqueurs, which are mostly and simply composed of syrup, spirit, and flavouring.

VINOLIA SOAPS.

(BLONDEAU ET CIE: LONDON DEPÔT, RYLAND-ROAD, N.W.)

No less than twelve varieties of this well-known soap have been submitted to us for examination, and it is sufficient for us to record, as affording evidence of their economic value and admirably balanced composition, that in the analyses we made the moisture was found to range from, in one instance, as low as 4·66 per cent. to 7·44 per cent., the mean of the total number examined being 6·20 per cent.; alkali in combination with fat ranged from 8·23 per cent. to 10·60 per cent., the mean of the total examined being 9·70 per cent. soda (Na_2O); free alkali was not found in any single instance. These, as well as other satisfactory indications obtained on testing—as, for instance, the freedom from foreign substances sometimes, but unjustifiably, used in the preparation of soaps—are such as to satisfy both requirements of a soap intended for toilet purposes—i.e., being emollient as well as cleansing. The delicate fragrance of these soaps enhances their attractiveness.

ANTISEPTIC MOUTH PEARLS.

(S. RADLAUER'S KRONEN-APOTHEKE, 160, FRIEDRICHSSTRASSE, BERLIN, W.)

These pills, containing thymol, saccharin, menthol, eucalyptol, vanillin, and volatile oil, afford a convenient, portable, and effective form of mouth wash. Though, as will be seen from their composition, they must possess very distinct antiseptic properties, yet they are not likely to be injurious; in addition, their taste is agreeable rather than the contrary. They supply an important requisite.

DRY ANTI-DIPHTHERITIC SERUM.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

We have received from Messrs. Burroughs, Wellcome, and Co. a specimen of dry anti-diphtheritic serum in the form of fine golden scales, which they claim they were the first to prepare. The dried serum is freely soluble in about twice its volume of cold water. One gramme contained in a glass tube represents ten cubic centimetres of the normal liquid anti-diphtheritic serum, and it is stated that to obtain the full potency of carefully prepared liquid serum it is merely necessary to dissolve the contents of the tube in this quantity of cool but previously boiled water. We cannot speak here as to its therapeutic activity (which, however, is guaranteed by the makers), but the convenience of this preparation is obvious; while the fact that in the dry state the serum is permanent is a very important additional advantage. The sample is labeled with the date of preparation, the number of the horse from which the serum was derived, and the degree of immunity it possesses, all of which are attested by the signature of the medical director in charge of the biological laboratory.

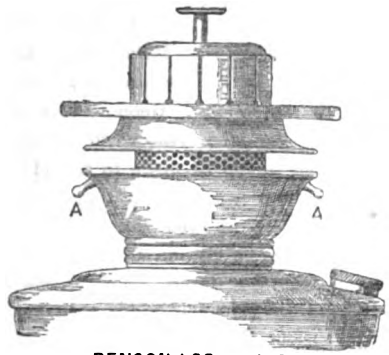
New Inventions.

THE BENSON-LEE SAFETY LAMP CONSTRUCTED WITH CARBON BURNER.

IN seeking to overcome one objection it occasionally happens that more than one improvement is effected, and this would appear to be the case in regard to the Benson-Lee lamp. Primarily the object of the invention was probably only to improve upon the wick by substituting for the cotton wick a more or less solid wick of some porous and indestructible material, which would not require trimming or levelling or adjusting in any way. Not only have the inventors, we find, succeeded in the present instance in carrying this out, but by the introduction of a collar of gas carbon, which was subsequently chosen to replace the ordinary cotton wick, the burning of oil of comparatively low flashing-point, like the petroleum at present supplied for lighting purposes, is made quite safe, without its lighting efficiency being in the least degree affected. We find, for instance, that on tilting the lighted lamp through a right angle or by turning it completely upside down the light is immediately extinguished and not a drop of oil is spilt. It would appear, therefore, that the hard gas carbon wick affords an efficient barrier against the ignition of the oil in the reservoir, besides which, by means of an arrangement which allows air freely to play round the tubes containing the small cotton wicks supplying the carbon burner with oil, the latter is kept comparatively cool. As will be seen from the accompanying illustration, the wick is compound—that is, it consists first of a series of small cotton wicks enclosed in the small tubes comprising the centre column of the burner. These convey the oil to the carbon wick or burner, so that on its way it passes over a large cooling surface before it reaches the flame. The size

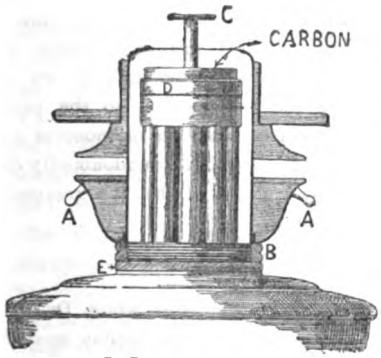
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of the flame is not regulated by moving the wick up or down, but by controlling the air-supply, which enters just above the points A A, which are the knobs for screwing the lower cup, to which they are attached, right up to the top if necessary, and so stopping the air-supply altogether and extinguishing the flame. The lamp gives a white, steady, and brilliant flame, which never presents an unsightly or



BENSON-LEE LAMP

uneven appearance, because the wick always keeps the same level and never requires trimming. Apart from the very important advantage of the security which this device affords against explosion or ignition of the oil, it is obviously an improvement which those who know the inconvenience and trouble of keeping wicks constantly trimmed, and the nuisance caused by detached and half-consumed pieces of wick getting into the fittings, will thoroughly welcome. Indeed, it removes not a few of the strongest drawbacks to the system of lighting by oil; the wick cannot get out of



SECTION OF BURNER

order, objectionable smells are consequently avoided, while from the fact that it fits perfectly the burner tube it affords an effectual precaution against accidents arising either from the spilling of the oil or the ignition of the vapour in the reservoir. The "life" of the "carbons," which may easily be replaced, is said to be from two to four months. New carbons take some time before they give the maximum light, until, in fact, they are saturated with oil and the oil is travelling freely through them. Messrs. W. A. Benson and Co., 82, New Bond-street, are the makers.

ASEPTIC CATHETERS.

MESSRS. MAW, SON, AND THOMPSON have introduced at my suggestion an alteration in the manufacture of flexible catheters which I believe to be an improvement of considerable value. A great deal of attention has been paid to the outer surface of catheters, to the shape and position of the eye, to the neck, and to the end beyond the eye; the interior, the part that comes into closest contact with the urine, has not been touched. It is left rough, irregular and uneven, with in some instruments the fabric exposed so that the urine can cling to it and even soak into it. Proper cleansing without elaborate appliances and unlimited leisure is almost impossible. Anyone who will split open an old catheter, one that has been in use for some time, and will inspect the interior will see at once what I mean. The new ones that Messrs. Maw, Son, and Thompson have made for me are as highly polished and as finished upon the inner surface as they are upon the outer. They can be cleansed and rendered aseptic with the greatest ease. There is no need for any elaborate apparatus. If they are placed at once, after having been used, end upwards in a deep bottle filled with a solution of boracic acid, every trace of urine is expelled immediately and replaced by the antiseptic, and the instrument is fit for use again. It is not possible for an old man with enlargement of the prostate who has to pass an instrument many times in the twenty-four hours and often at night to cleanse an ordinary catheter effectually. With these there is no difficulty. They can be rendered aseptic at once and in a manner so simple that the most ignorant cannot make a mistake.

Wimpole-street, W. C. MANSELL MOULLIN.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual general meeting of this society was held at 429, Strand on June 28th.

Mr. Joseph Smith was elected President for the year, Mr. George Brown honorary treasurer, and Mr. W. G. Dickinson (Southfields, S.W.) hon. secretary.

The Secretary reported the correspondence between the committee of the society and the Home Office in connexion with the recent amendment of the by-laws of the College, the result of which met with the approval of the meeting.

The following resolution was proposed by Mr. Nelson Hardy, seconded by Dr. Thos. Morton, and carried unanimously: "That this meeting is of opinion that the time has come when active steps should be taken to secure for Members of the Royal College of Surgeons of England their due share in its management, in accordance with the request of nearly 5000 Members contained in the petition to the Privy Council in the year 1887."

The honorary secretary will be glad to receive the names of any Members of the College wishing to join the society. The annual subscription is 2*s.* 6*d.*

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE foundation stone of the New Lower School will be laid by His Royal Highness the Prince of Wales, K.G., at 3 P.M., on Monday next, July 8th. Tickets of admission to witness the ceremony, which will be issued in priority of application, can be obtained by letter from the Secretary, at the Office, 37, Soho-square; or of the Bursar, at the College, Epsom. H.R.H. the Princess of Wales has graciously announced her intention of being present.

A special train will leave Victoria Station at 1 P.M., calling at Clapham Junction, Mitcham Junction, and Sutton Station, and leaving the Downs Station for the return journey about 5 P.M. Return tickets from London, which must be taken at Victoria Station, will be issued at three shillings. It is requested that those applying for tickets will give notice if they will travel by the special train. The return tickets will be available by the ordinary trains of the London, Brighton, and South Coast Railway at the Downs or Epsom Town Stations.

It is hoped that as many members of the profession as possible will attend the ceremony out of compliment to their Royal Highnesses the Prince and Princess of Wales, no less than out of a due sense of the excellent work that has been done by the authorities of the institution. And while writing of this work it will not be out of place to call attention to the fact that an election by the Council of the College to a scholarship, giving free education and maintenance at the School of St. Anne's Society will shortly take place. Candidates must be between the ages of seven and twelve, and must be necessitous orphan daughters of duly qualified medical men who have been for not less than five years in independent practice in England or Wales. Forms of application can be obtained at the office, and applications must reach the secretary not later than the morning of July 16th.

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THE LANCET.

LONDON: SATURDAY, JULY 6, 1895.

THE time is approaching when the claims of the Members of the Royal College of Surgeons of England to a share in the government of the institution must receive the careful consideration of the Council of the College. There can be very little doubt that there is among the Fellows of the College a growing feeling in favour of some concessions being made by the Council to its immense constituency of Members. Strange as it may seem to all who are acquainted with the elementary facts concerning the constitution of the College, we do not hesitate to assert that one of the main causes of denial of due recognition to the Members has been ignorance of the actual position of the Members of the College as an integral part of the "body politic and corporate of the said College." More than once have we heard Fellows of the College asseverating that the Members of the College have no more right to consideration than the Licentiates of other corporations—the Royal College of Physicians, for instance. When this ignorance is liable to be carried even into the council chamber of the College, how can it be expected that the claims of the Members can advance very speedily to a favourable solution? In the hope that this may meet the eye of Fellows who still entertain an erroneous view of the position of the Members in the constitution of the College we will quote a paragraph from the Charter of March 18th, 1852.

"Whereas the body politic and corporate of the said College at present consists of persons created Members of the said College by the said first-mentioned charter, or constituted such Members by letters testimonial under the common seal of the said College, of the respective qualifications of such persons to practise the art and science of surgery, and also of persons created Fellows of the said College under the provisions of our said letters patent, and elected and declared to be Fellows of the said College by one general diploma under the seal of the said College, enrolled in our High Court of Chancery, and also of other persons appointed under the powers of our said letters patent by the Council of the said College, to be Fellows of the said College by diplomas under the seal of the said College, and also of other persons who, after having attained the age of twenty-five years and complied with the rules and regulations directed by the bye-laws of the said College, and having passed a special examination by the examiners of the said College, have been admitted Fellows by diplomas under the seal of the said College." In short, "the body politic and corporate" of the Royal College of Surgeons of England consists of the Members of the College and the Fellows of the College. Licentiates of the other licensing corporations do not belong to the corporate bodies.

It is this fundamental fact that the Members of the College are a part of "the body politic and corporate" of the College that forms the basis of the claims of the Members to a share in the government of the institution. The claims are upheld by many considerations, amongst which the most cogent is that the College derives its main pecuniary support from the fees of candidates for the Membership, for those who do not admit that the maxim that taxation and representation should go together is applicable to the case of the Members must acknowledge that it would be for the good of the College that the Members of the College should be interested in its welfare and not alienated by exclusion and repression. Hence it is that many Fellows are, we have good reason to believe, anxious that some concessions should be made to the Members, and that, without derogation from the position of the Fellows, the Members should be allowed to participate in some degree in the Government of the College. The progress of these opinions amongst the Fellows of the College is specially gratifying to THE LANCET, which has from the earliest period upheld the claims of the Members as deserving of far more consideration than they have ever yet received, and at an early date we hope to recur to the subject, and to point out how the legitimate aspirations of the Members may be satisfied with advantage alike to the Members, the Fellows, and the Council. During the progress of an election of representatives of the Fellows to serve on the Council of the College it is almost impossible for those who sympathise with the Members in their desire for an adequate share in the management of the College with a view to increasing the influence of the institution to do much to advance the cause. Now, however, that the election is over we trust that the importance to the College and to the profession of uniting the whole constituency in harmonious relationship will receive the attention which it undoubtedly demands at the hands of all loyal scions of this the greatest of all our professional institutions.

THE subject-matter of the paper which Dr. THIN contributes to our columns to-day is a forcible reminder of the invaluable services which the microscope is rendering to medical science. He does well to place in the forefront the remarkable fact that the most striking discoveries which have been made by means of this instrument are those which have demonstrated the existence of parasitism as the etiological factor in important group of diseases. The three examples which he specially cites—tuberculosis, leprosy, and malaria—are in themselves accountable for so large an amount of disease and premature death that the discovery in them of the causal agent would alone make the latter half of the century memorable in the history of medicine. But when to those are added septic diseases, anthrax, glanders, actinomycosis, relapsing fever, diphtheria, and enteric fever, besides other affections in which the evidence of parasitism is less crucial, the additions made to knowledge and the gain in insight into the causes of disordered function during a comparatively brief period are so vast as to amount to the opening of an entirely new chapter in that history. The subject upon which Dr. THIN especially dwells is one of the most interesting and important of them all. For in the first place the class

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of parasites which LAVERAN discovered in malaria is wholly different from that revealed in connexion with other diseases; and in the second place, the seat of operation of the invading host is quite special and peculiar. For the malaria parasite is of animal nature, belonging to the lowest forms of protozoal life, and its particular object of attack is the red corpuscle of the blood, the destruction of which goes far to account for the phenomena of malarial fevers and their sequelæ. Not that LAVERAN'S parasite stands alone amongst hæmatozoa, but rather that those other parasites which make the blood their habitat—e.g., the filaria sanguinis hominis—are quite different from the malaria organism in their action, just as they differ in their position in the zoological scale. Indeed, with the exception of this one, human hæmatozoa are not in the strict sense blood parasites. They inhabit the blood, and are conveyed in its stream or impart to it toxic properties; but they do not, as the malaria organism does, fasten themselves on the formed elements and live at their expense. Remarkable as this property may be, it has its counterpart in the lower animals, for parasites, very analogous in type and in mode of attack, have been discovered in the blood corpuscles of frogs and of certain reptiles and birds, and have been termed "drepanidia." The progress of research into the malaria organism, as sketched by Dr. THIN—and later carried on by GOLGI, MANNABERG, MARCHIAFAVA, BIGNAMI, and others,—has considerably extended our knowledge of the developmental changes of the parasite and of the various forms associated with different types of malarial fever. It has been shown that the character of the fever—the clinical type to which it conforms—is related to the length of time taken by the parasite to develop in the blood corpuscle, assimilate its colouring matter, and eventually break up into "spores" the dissemination of which coincides with each pyrexial paroxysm. Thus in the quartan type—as GOLGI showed—the parasite may be seen to grow within the blood corpuscle, and at the end of sixty hours, or twelve hours before the next attack, to almost entirely fill it; then it begins to subdivide, and in six hours more to get free from the investing sheath, the last relic of the destroyed corpuscle, and appears as a congeries of radial bodies ranged around a mass of pigment, the final separation into free "spores" occurring at the close of the apyrexial interval. The tertian parasite goes through its evolution in a proportionately shorter space of time—forty-eight hours—and the quotidian in only twenty-four. There are varieties of form as well as variations in the rate of growth, and a special form has been described as characterising the pernicious types of fever. It would be too much to say that all lacunæ in our knowledge of the life-history of these organisms have yet been filled; but it is at least surprising how much has been established, thanks to the patient work of microscopists. One great discovery yet remains to be made, and that is the demonstration of the parasite outside the body and the route whereby it gains access to the blood. We infer that it must be in soil or water, but its presence therein has not been proved. This link in the chain is also wanting in the case of the sporidia which have been alluded to as attacking the blood corpuscles of certain other vertebrates.

One great merit of Dr. THIN'S paper lies in the careful details he gives to enable others to detect these minute organisms in the blood of malarial subjects. Himself a skilled microscopist and fully aware of the importance of attention to the smallest detail in a research so delicate as this, he has placed it within the power of all engaged in the task of dealing with these formidable fevers to add largely to their diagnostic appliances. The carefully executed coloured drawing which accompanies his paper will be of further assistance as enabling such medical officers to recognise the characters of these organisms. He shows, too, that this microscopical work has a direct practical value, for when the diagnosis of the true nature of the attack of "fever" is thereby placed beyond dispute there can be no hesitation as to the course of treatment to be followed. Not the least interesting fruit of LAVERAN'S discovery has been the demonstration that the efficacy of quinine lies in its parasiticidal property. Thus does science give proof of the direct action of a remedy long known and prescribed on purely empirical grounds, whilst at the same time it demonstrates the limits within which such remedial action alone can operate.

IF charity ever should fail in reference to our voluntary hospitals it will be largely due to the faults of their administration, and especially to that of the out-patient department. We insert to-day an interesting letter from a clergyman on one crying evil of the out-patient system—the delay and detention of patients. Our columns, as is well known, are reserved chiefly for the use of members of our own profession; but this is a point and the present is a time at which the clergy have a good right to a special hearing. They have just been making a collection in their various churches, forgetting all distinctions of creed, and so supplying a much-appreciated contribution to the maintenance of our hospital system. "That other church—the hospital," was the eloquent and happy expression of a deep truth which we owe to one minister of the Gospel on the recent Hospital Sunday. We have much pleasure, therefore, in finding room for the letter of one of a class to whom our hospitals owe so much, and who, it will be admitted, owe much to our hospitals. A clergyman in one of our poorer parishes without facilities for securing the medical treatment of the poor whom he visits, and especially their admission, in urgent circumstances, to a hospital, would feel deprived of one of his chief pleasures. We recognise the force of the objection of our clerical correspondent to a system which "keeps many delicate invalids in the melancholy waiting-room for four, six, or even eight hours, waiting the convenience of physicians, surgeons, and apothecaries." We have no hesitation in admitting—indeed, we have often pointed out—that such a system "is a cause of intense mental, and not infrequently physical, suffering to the patients." The case is aggravated in those who have come a distance or have to give up a day's work to attend the hospital. Our correspondent thinks this evil so obvious and so great that he is at a loss to understand how it is allowed to go on without any efficient attempt to remedy it. He is so puzzled at the want of reform in this direction as to have come to rather an uncharitable theory for one of his

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profession—namely, "that the physicians and surgeons are in league to resent the smallest interference," and that the governors or secretaries will not attend to details so minor in their estimation.

We agree almost entirely with our correspondent as to the evil and as to the propriety of finding a remedy for it. But we scarcely agree with him as to the causes of the evil and the remedies it requires. There is one class of persons who are grievously to blame for the crowded state of the out-patient department and for the irksome detention of patients in pain, and that is the out-patients themselves, or rather that large section of them who have no business to be out-patients at all. It is undeniable that thousands of them could get all the medical attention they need without detention at the house of a private practitioner, and for the payment of sums that are quite within their reach. This mode of procedure on their part would have the enormous advantage of bringing them and their families into medical contact with a practitioner of their neighbourhood, who would have some chance of becoming acquainted with their constitution and circumstances, and would acquire a human interest in their health and well-being. In the out-patient department they are mere units in a crowd. We need not say, too, that this large section of the frequenters of the out-patient department are not fit objects of charity. They are unfit, and the suspicion that they absorb the funds supplied by the charitable is a part of the explanation of the inadequate support of hospitals which we all lament. The clergy can do no greater service to the really fit cases for the out-patient department than by exerting their influence to deter others from using institutions which were never meant for them. But though we are of opinion that the number of cases of suffering from prolonged detention in the out-patient department mentioned by our correspondent would be much diminished by respectable people of the working classes and smaller tradespeople recognising that the out-patient room is no place for them, and being in fact rather ashamed to be seen there, we by no means entirely acquit the "governors and secretaries" of all blame for the abuses which everybody sees and by which it is calculated that one-fourth, or even one-third, of the metropolitan population comes into contact with the hospital system every year. The governors and secretaries are very much misrepresented if they do not connive at these abuses. Do they not parade these bloated numbers in their reports as facts to be proud of, as the basis for a still larger subscription list? Our sympathetic interest in hospitals is great and ever increasing. But this shall never prevent us from demanding that the out-patient department shall be reformed for various and important reasons, of which to-day we emphasise one—that those persons whose cases are grave and sad may have prompt attention from skilled officers, agreeing, as we do, with the Vicar of St. Philip's, Sydenham, that under present conditions such cases are often made grievously worse by prolonged attendance in the waiting-room.

WITH the death of Professor HUXLEY there passes away a man of robust mind and great intellectual power and intrepidity, an original and independent thinker, and a master of vigorous, masculine English, as well as a man of very wide range of thought, varied attainments, and rare learning. He was one of the most conspicuous figures of the latter half of this century in science, literature, philosophy, metaphysics, and education. Any contribution bearing his name was always read with avidity, because he wrote both vigorously and tersely, was singularly happy in his use of illustrations, with the additional charm of touches here and there of wit and humour and an occasional dash of poetry and pathos that afforded glimpses of the broad sympathies and pitifulness of his deeper nature. Apart from the scientific work he had accomplished, and the reputation he had won from the special jury of science, these qualities, and the generous, enlightened, and fearless character of his writings, made him a leader of popular thought and a reformer of popular misconceptions. As a strong swimmer, confident in his own powers, plunges into the stream and finds a pleasurable exercise in breasting the tide, so did HUXLEY love to sound the depths and encounter the difficulties of a controversial or abstruse subject. Some writers, like the late JOHN STUART MILL, have dwelt upon the mergence of individual character in a dead level of uniformity as the bane of modern civilisation: the manly independence and intellectual force and honesty of men like HUXLEY provide the best antidote. That he was regarded by some as too assertive and aggressively dogmatic in the expression of his views is of little importance now. Who cares to regard these things in recollecting the nobility of the man, his honesty and hatred of cant, his pride that preserved him from all mean and sordid motives, his manly sympathies with the sufferings of humanity, and his courage in following without wavering, or shadow of turning, what he conscientiously thought to be the light of truth and reason? Nature had endowed him with great gifts, and he bestowed them on his fellow-man with an open palm. On his sacrifices and laborious exertions in the cause of science, and on the bold and striking generalisations and the achievements he accomplished in that field, there is no need to dwell here, for these have been universally recognised by his friends and foes alike. As an educational lecturer he was admirable; his scientific knowledge and tone were as conspicuous as was his easy and lucid exposition, and, as we have said, his use of illustrations was always specially happy in that they really did illustrate what he was elucidating or describing. His writings are models in their way, so transparently clear that the reader can see to the bottom of the deepest subject, because their author had himself penetrated those depths and previously examined and ascertained the meaning underlying the phenomena he was describing. Not only had HUXLEY genius, but he had cultivated nature's rich soil with rare assiduity; he was an excellent classic, a modern linguist, a draughtsman, and a highly cultured man. And it may be confidently asserted that he exercised his powers with a dominating love of truth for its own sake, and an abiding sense of responsibility. As he has himself told us, he held the conviction that there was no alleviation for the sufferings of mankind except veracity of thought and action. It was this conviction that made him try to promote the increase of natural knowledge and encourage the application of scientific methods of investigation to all the problems of life. We

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need scarcely dwell upon the fact that the medical profession may recall with pride that it had the great honour of numbering the late Professor HUXLEY among its members, and that he began his career and first made his mark whilst serving in the Royal Navy. But HUXLEY belonged to his generation and mankind. The news about a change of Government and a pending election, and the list of titular honours and distinctions conferred by the outgoing Government, which appeared in the papers contemporaneously with an obituary notice of the Right Honourable T. H. HUXLEY, will be obliterated from the memory like a last year's almanack, but his name will always remain on the scroll of fame of the Victorian age.

Annotations.

"Ne quid nimis."

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

THE annual conference of gentlemen interested in this Association took place on the 21st ult. at the house of Mr. Claude Montefiore, 12, Portman-square, and included Mr. Gerald Balfour, M.P. (who presided), Lord Battersea, Sir Spencer Wells, Mr. T. Holmes, and others. It is impossible not to recognise the good motives of the gentlemen who constitute the executive of these dispensaries, and the amount of time and trouble they expend over the dispensaries. The provident principle has long been recognised by the medical profession. It is the essence of the club system which in an unostentatious way has been of immense service to the working-classes. It is difficult to say how a large section of these classes could be attended without some such adaptation to their means, though it is undeniable that not a few working-men have their own medical adviser for themselves and their families, and contrive to pay him two or three pounds a year, which the medical man appreciates as much as twenty or thirty from his richer patients. The sum is easily raised in a respectable family in these days when so many steady branches of employment are open to its various members. The Metropolitan Provident Medical Association has for its main object what every one must approve—the prevention of the abuse of hospitals. Its promoters are never weary in exposing this abuse and in trying to establish a system of friendly coöperation between hospitals and provident dispensaries, by which members of the latter institutions shall be favourably considered when their cases are grave enough to need the accommodation of a hospital. They have established twelve dispensaries in the metropolis, about half of which are self-supporting. The others need to be subsidised from the central fund, and receive help, like other dispensaries, from the Hospital Sunday Fund and the Hospital Saturday Fund. It cannot be said that this experiment has been a success. The medical men are poorly paid, the dispensaries without extraneous help would break down, and the hospitals are not materially relieved of work. In other words, the easy terms of the dispensaries and their general arrangements are not such as to attract the thousands who crowd the out-patient departments of our hospitals. The cause is not far to seek. At the hospitals medical work is given away, and the patients know that as a rule they will receive the advice of practitioners of the consultant class. Neither have these dispensaries succeeded in attracting the medical profession, whose members have regarded them with some suspicion. The reasons of this are not difficult to discover, and may be thus stated. The dispensaries compete with private practitioners; there seems no strict enforcement of wage limits; small handbills are printed which are apt to get into circulation, and that among the patients of other medical men; and those gentlemen who do join them are not rewarded by any adequate compensation for the work done. We should be glad to see some escape from these faults in institutions which have a provident basis. If the authorities of hospitals would do their duty and repress the crowds which throng their out-patient departments, the promoters of these dispensaries might be able to offer both the patients and the practitioners who attend them better terms. Meantime, it is enough to say that they are more in favour with laymen of a certain economic cast than with members of the medical profession. Like too many other medical institutions, they are worked at the expense of the medical profession and for the benefit of classes who can make a better recompense to their medical attendants than is provided for in the tariff of these dispensaries.

HOW DO PLANTS OBTAIN THEIR NITROGEN?

NOT the least remarkable part of the knowledge that we have gained during the last few years has been our insight into the life processes of plants, especially as regards their manner of assimilating nitrogen, admirably summed up by Professor H. Marshall Ward, F.R., in the current number of *Science Progress*. The mere narration of the details of the struggle with nature for the possession of this momentous secret is as exciting as the record of the discovery of the North-West Passage. After Sachs had determined the function of chlorophyll in splitting up the carbonic acid of the air into carbon and oxygen by means of the sun's radial energy, the question of the supply of nitrogen to plants came into prominence. As the leaves of the plant are bathed in an atmosphere of nitrogen, it was supposed first of all that the nitrogen was obtained from the air, but a crucial experiment of Lawes and Gilbert with different varieties of agricultural plants seemed to disprove this. The experiments, indeed, made it perfectly clear that a green plant was unable of its own accord to fix the nitrogen of the air. The only other sources of nitrogen are the nitrates derived from animal excretions, the decomposition of animal and vegetable tissues, and the nitric and nitrous acids produced by electrical discharges in the atmosphere. Nitrates are exceedingly soluble in water and are rapidly removed from the land by surface drainage, so that these sources seem hardly sufficient to account for all the nitrogen used by the vegetable world. In this dilemma a fresh path was opened to the investigators by the progress of bacteriology on the one hand, and of researches into the functions of the roots and root-hairs on the other. In a thimbleful of soil there are present from one to ten millions of minute organisms in more or less close contact with the rootlets of the plant. The mode of life of these bacteroids in relation to the plant was a fertile subject for investigation. There are present, of course, a certain number of merely destructive organisms, and a further cohort of nitrifying and de-nitrifying germs, but what of the others? Their function was not fully understood until 1887, when Professor Marshall Ward found that the soil contained a perfectly definite living organism that invades the tissues of leguminous plants, causing fleshy nodules to form on the rootlets. Further investigations by a number of observers since that time have elucidated the curious relations that exist between the plant and the bacteria of the soil. It appears that the organism, having entered the root hairs, stimulates the deep cells of the cortical tissues to form a layer

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of hypertrophied cells. These cells are filled as fast as they are formed with quantities of bacteria, which do not injure the cells, but stimulate them to intense physiological action. During this time large quantities of carbohydrates are taken from the plant and converted into carbonic acid, the energy thus obtained being used to do the necessary chemical work in splitting up the nitrogen molecules obtained from the surrounding air and compelling them to enter into combination. When the activity ceases the partially disorganised contents of the nodule are absorbed by the plant, the shell, together with a few bacteroids that have escaped destruction, being rejected as débris. Leguminous plants seem to be the only ones capable of fixing nitrogen with the assistance of the bacteria of the soil, and a crop of peas or beans adds remarkably to the fertility of a field, so that by a proper succession of crops the farmer will be enabled to dispense to a large extent with nitrogenous manures. By the application of our growing scientific knowledge to practical agriculture there is no reason why our fields should not yield many times their present stores of food to supply the needs of our population and make it worth while again to grow English corn to feed English mouths.

THE GOVERNMENT OF THE WORKHOUSE.

THERE are few things of more importance to the development of our national character than an intelligent application of the Poor-laws. On the one hand, there is a tendency innate in all proper-minded persons to render the lives of their less fortunate brothers as little irksome as is possible under the circumstances; and, on the other, it is obviously expedient to control within moderate limits the practical expression of this spirit of pity and sympathy. In other words, in tempering justice with mercy it is necessary that the tempering process shall be guided by an intelligent estimate of the effects—immediate and remote—which such action is likely to produce. The condition of our workhouses throughout the country may, broadly speaking, be regarded as an index of the interest that is taken by the guardians in the several unions in the practical administration of the Poor-laws, and where we find bad management existing there we shall probably discover either a blameworthy ignorance on the part of the guardians of their duties and powers, or an equally culpable neglect of their responsibilities. The election of guardians held in December of last year was instrumental in introducing into power a large number of persons of varying degrees of education and intelligence, whose experience of Poor-law administration was practically *nil*, and whose knowledge of the duties and responsibilities of their office was in all probability but small. Although the education of these newly elected guardians in at least the recent history of the Poor-law is a matter of paramount importance, it will probably be admitted that some at least of those elected are hardly of the class to master all the complicated technicalities of the Poor-law as contained in the standard works on the subject, even although they are no doubt anxious to obtain a knowledge of their newly acquired duties. Under these circumstances we are glad to be able to welcome a little volume compiled by the editors of the *Poor-law Officers' Journal*, and published at 74, Market-street, Manchester, which contains so much of the General Consolidated Order of 1847 as relates to the workhouse, and also the subsequent Orders and Acts of Parliament dealing with workhouse management. There is, too, in the appendix of the volume the report of the recent Royal Commission on the Aged Poor, so far as it relates to in-door relief and the classification of the inmates; explanatory notes are added where necessary, and the whole forms a compact little volume which should, we think, be of the greatest service to all guardians. We are afraid that in the Poor-law, as also in public health administration by local bodies, there is sometimes too great a tendency to be guided exclusively by the clerk. In the volume to which we are here referring we would especially commend to the notice of guardians those parts having reference to visiting committees. We hear from time to time of scandals in our workhouses and infirmaries which are a disgrace, not so much to our Poor-law system, as some would infer, but to the guardians who fail to act up to the responsibilities which they have incurred. If the visiting committees, which, we are told, are usually appointed at the commencement of each financial year in accordance with the provisions of Article 148 of the General Consolidated Order, would do their duty and "carefully examine the workhouse once in every week at the least, examine the stores, and afford, so far as is practicable, to the inmates an opportunity of making complaints," and, in addition to this, from time to time make surprise visits, we venture to think that scandals, of which we too often hear, would diminish in number.

THE MILK-SUPPLY OF NEWCASTLE-UPON-TYNE.

DR. HENRY ARMSTRONG has recently presented to the Newcastle Sanitary Committee an interesting report upon this subject. Newcastle, we are told, consumes nearly 2,000,000 gallons of milk annually, part of which is produced by cows located in the city and its vicinity, and part imported by rail or steam-boat. Dr. Armstrong reports that, as a rule, the milk houses and milk vessels on dairy farms are kept "scrupulously clean and sweet," a condition of affairs which, we must confess, does not always obtain in southern England. Considerable progress has been made in Newcastle in the matter of cowhouses in recent years, and since July, 1892, when regulations under the Dairies, Cow-sheds, and Milk-shops Order were made, no less than thirty-nine cow-houses have been pulled down or closed. Under the regulations in question 800 cubic feet of space are prescribed for each cow, but there seems to be some difficulty in enforcing this amount, and we are told that this part of the regulations has not yet been put in force; in fact, from the 800 cubic feet standpoint 65 per cent. of the cowhouses are overcrowded, and Dr. Armstrong draws attention to the danger to the health of the cows of such overcrowding. There are in the borough no less than 488 places for the sale of milk by retail, but many of these are not, Dr. Armstrong states, suitable for the purposes of milk storage, and he draws attention to the difficulty of properly controlling persons who hawk about the streets milk taken from railway cans temporarily lodged in their premises, but who do not use these premises as sale shops. In that part of his report which deals with milk in relation to disease in cattle and in man Dr. Armstrong points out that different diseases of cows are transmissible by means of the milk to the persons who consume it, and that milk serves as a nidus for the development of the germs of the disease, both "before and after yield." In the matter of tuberculosis reference is naturally made to the recent report of the Royal Commission, and Dr. Armstrong remarks, we notice, that "the milk of cows with tuberculosis of the udder is much more virulent than that of animals affected with the disease in other parts only." It would seem, however, that in the opinion of the Commission, milk drawn from tuberculous cows whose udders were unaffected by the disease, was not at all potent for harm—for instance, in Paragraph 60 the Commissioners state: "According to our experience, then, the condition required for ensuring to the milk of tuberculous cows the ability to produce tuberculosis in the consumers of their milk is *tuberculous disease of the cow affecting the udder.*" (The italics are theirs.) The Newcastle Improvement Act of 1892 enacts that no dairyman shall sell the milk

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of any cow which to his knowledge is affected with tuberculosis or milk fever, and the same Act also provides for the notification by dairymen of the same diseases. These are both excellent provisions, but it appears to us likely that their usefulness may be in some degree impaired by the presence of the words "to his knowledge," which would appear to offer a tempting loophole for escape from the provisions of the Act. With regard to the notification of tuberculosis and milk fever the provision has, it appears, been inoperative, and "no case has been notified." During the last four years an average annual number of 108 samples of milk have been analysed; but, as Dr. Armstrong remarks, this number is altogether inadequate to control a milk-supply of some 2,000,000 gallons, and arrangements have been made for increasing the number in future. In the conclusion of the report suggestions are submitted for the consideration of the committee, and among them we observe "that every cow with tuberculosis (proved or reasonably suspected) on a dairy farm should be slaughtered." No doubt slaughter is a very efficacious method; but perhaps in dealing with a cow only "reasonably suspected" such a proceeding would be a little too drastic, more especially when regard be had to the opinion of the Commission already quoted, and probably the isolation of the cow and the withdrawal of its milk from consumption would suffice. Dr. Armstrong's report should prove of much service to the sanitary committee.

THE DANGERS OF COCAINE.

FEW drugs in recent times have received more general commendation than cocaine; its advantages as a local anæsthetic, received with some incredulity when it was first introduced, have been so abundantly proved that there may be a tendency to overlook the fact that there are certain dangers attendant upon its too frequent or reckless employment. As a local anæsthetic it has won golden opinions where small operations were required upon superficial parts; in ophthalmic and laryngeal surgery it may fairly be said to have revolutionised the methods of a few years back. But every now and again warnings are brought forwards which indicate that with cocaine, as with opium and other modes of producing local or general anæsthesia, there is danger in the familiarity which breeds, if not contempt, at least disregard of ordinary precautions. Verdicts of misadventure are no consolation to those concerned, if there is an underlying conviction that the fatality might never have occurred if there had been any due appreciation of danger. Cocaine is a drug which shares with opium and many others the questionable credit of developing a "habit"—i.e., of leading, by the beneficent effects experienced after small doses, to a desire for the repetition of the relief; and as a consequence the dose employed tends to become greater, and the precautions which, perhaps, were taken at first are gradually relaxed. "Cocainism" is not so well recognised in this country as in America, but it undoubtedly exists as a form of self-indulgence or as a practice which, like morphinism, originally employed as a means of alleviating some chronic trouble, has ultimately developed into a form of self-indulgence, in which the need of restraint and of precautionary measures are entirely lost in the fascination of the relief afforded by the drug. In a recent inquest the evidence showed that the drug had been originally prescribed for the relief of pain in the gums, and the symptoms immediately preceding the termination were merely those of collapse; there was no indication of the amount employed or taken. In most cases collapse is the most marked feature, and this symptom may arise when the drug has been employed as a local application in the form of hypodermic injection or spray, and may frequently call for stimulant treatment after employment of the spray in laryngeal examinations. It must not be forgotten, however, that a true cocaine habit may be developed when the drug is taken internally in any quantity, and that this condition is occasionally marked by curious hallucinations and perversions of moral sense, which, if the use of the drug is not discontinued, may lead to more serious central disturbances. The summary of the whole matter may be expressed in the proverb that "fire is a good servant but a bad master." Cocaine, or any other drug which allays pain, has its limitations, and these are reached when the craving for the relief afforded leads to disregard of the attendant dangers.

ROYAL FREE HOSPITAL: THE OPENING OF THE NEW BUILDINGS.

WE print in another column a letter from Lord Dufferin announcing that the new front building of the Royal Free Hospital will be opened on July 22nd by the Prince and Princess of Wales. The charity thus honoured by Royalty has had a long and useful career, having been founded in 1828 and removed to its present site in Gray's-inn-road during the year 1842. It has no endowment, and, like most of the metropolitan hospitals, is under the necessity of making strenuous and persistent efforts to maintain an equilibrium between income and expenditure. Between 1855 and 1879 the north, south, and east wings were reconstructed, the old front building remaining until 1892, by which time it became so dilapidated that rebuilding was unavoidable. The cost of the new structure, together with a laundry, a modernised drainage system, fire-extinguishing appliances, and other necessary improvements, has been about £30,000, towards which sum the committee have obtained £24,000, thus leaving a balance of £6000 still to be raised. The hospital now contains 160 beds, and the wards are always filled with the most urgent and necessitous cases presenting themselves for admission, no letters of recommendation being required, only the poverty and sickness of the applicants being considered. The committee, therefore, in their need of £6000 make an urgent appeal for aid to the charitable public. In this application they are sustained by the confident assurance that the work which they are conducting under circumstances of so much difficulty, not only benefits the poor and afflicted, but promotes the cause of medical education by the thorough instruction which is here imparted to female students.

FURTHER CONTRIBUTIONS ON HELIUM.

NEW discoveries, however astonishing, soon get left behind by the advancing army of science, like milestones on the road of progress. Scarcely have we overtaken argon and helium when Professor W. Ramsay is promising us not one but two new elements belonging to the same series. According to his paper, read before the Chemical Society on June 20th, there is no doubt that argon and helium contain as a common ingredient a gas not hitherto identified, with a probable atomic weight of about 10 referred to hydrogen as unity; for two lines in the spectra of the newly discovered elements are absolutely identical. From the anomalous position of argon in the periodic scale, Professor Ramsay regards the presence of another element with argon, having an atomic weight of a little more than 80, as almost certain, and, indeed, this would account for many discrepancies. The velocity of sound in helium has been determined, and it has been proved that helium, like argon, is monatomic, and that all its energy is taken up in motion of translation, there being no internal work. It follows from this that the hypothetical element common to the crude helium and argon is also monatomic. The density of helium is about 2·2 as far as we can tell at present, and not 3·9 as wrongly reported previously. When the second

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element has been separated from helium its density will be brought down still lower. To clear up a possible misconception we may state that argon has never been obtained from any other source than the air, and that helium has been extracted from various rare minerals by the action of acids. It is impossible for helium to exist in our atmosphere, as the gravitational force of the earth is not able to keep these light atoms, which are thrown off into space by the centrifugal force of the earth's rotation. All the uncombined helium of our planetary system is probably concentrated in the sun, unless that enormous planet Jupiter has managed to retain some. It is interesting to note that helium is by far the most insoluble gas known, for water dissolves only about half as much helium as hydrogen or nitrogen. This will afford a convenient means of separating helium from other gases, and as it seems to be contained in many rare minerals of the uranium and thorium type we may hope that before long larger quantities will be available for the purposes of experiment. Besides the isolation of the two hypothetical gases we have spoken of, Professor Ramsay looks forward to investigating the actual condition in which helium exists in minerals, for he has found that these substances will not reabsorb helium when once it has been extracted from them. The last meeting of the British Association was marked by the discovery of argon, and it is reasonable to hope that the forthcoming session may witness further additions to our knowledge of these remarkable gases.

MENTAL DISORDERS AND BODILY DISEASE.

A PAPER of great interest and suggestiveness by Dr. Goodall and Dr. Bullen on this subject appears in a recent number of the *Journal of Mental Science*, and the particular importance of this subject is at the present time much enhanced by the work recently carried out at the Royal Asylum, Morningside, by Dr. Bruce, with reference to the effect of thyroid treatment on the insane, to which we referred in a leading article in a recent number of THE LANCET.[1] This work was entered upon at a hint, so to speak, derived from the observation of the effect of intercurrent maladies upon mental states. It has long been recognised that in certain feverish conditions morbid mental states undergo a marked improvement, just as epileptic attacks so frequently cease during an acute illness, to recur during convalescence. The administration of thyroid gland substance, especially in doses which are to a certain degree toxic, is now known to be associated with a rise of temperature sometimes of several degrees, and it was thought by Dr. Bruce that by administering this potent substance to patients the subjects of chronic mental disorder, especially the forms in which subnormal temperature is the rule, some approach to the beneficial effect produced on the mental state by acute illness might be looked for. These expectations were not disappointed, and the degree to which they were realised will be found summarised in the leading article to which we have already referred. Dr. Clouston some years ago expressed the opinion that we shall some day be able to inoculate a septic poison and get a safe and manageable counter-irritant and fever by means of which acute attacks of insanity will be cured. This conception, which appeared only a few years ago to be both vague and visionary, may now be said to have entered into the field of practical mental therapeutics. The beneficial effects of an attack of erysipelas in cases of acute insanity and in certain cases of malignant disease are facts which are highly significant, and which seem to convey the suggestion that we have here the mutually destructive effects of one toxic process upon another, and Dr. Goodall and Dr. Bullen in this relation refer to several instances of mental disease in which there has been evidence of the presence of some toxic substance. Thus in a case of acute delirious mania Rasori described a bacillus in the subarachnoid fluid. Bianchi and Piccinino have reported a case of acute delirium in which a bacillus was found in the blood drawn during life, while other observers have made similar observations. Perhaps one of the most interesting points is that two observers have independently described a coccus in hæmatoma auris, and although its causal connexion with this phenomenon still remains to be proved its discovery seems to open up a way into a future full of promise. Much is to be hoped for from the concentration of attention on the acute mental cases, and from the association, in regard to these, of clinical and pathological observation as urged in the recent report of the Whittingham Asylum, Preston, by Dr. Wallis; and we cordially endorse the view expressed in the paper which is here immediately under our notice, that "for the elucidation of the problems connected with the influence of intercurrent maladies on mental disorders the association of the trained clinician and the laboratory worker, skilled in the methods of bacteriology and organic chemistry, is particularly needed."

[1] THE LANCET, March 9th, 1895.

MEDICAL WORK IN CHINA.

WE have received the report for 1894 of the Presbyterian Mission Hospital at Swatow. The most noticeable point about the report is the light it throws upon the curiously phlegmatic temperament of the Chinese, except as regards matters which concern their supply of food. Thus Dr. Cousland says that the rice harvest in the south failed, the importation of rice from the north was stopped, owing, we suppose, to the war, and in October it looked as if a rice riot were imminent. "Fortunately, the timely arrival of steamers relieved the acuteness of the situation. People were seen in the streets of Swatow actually jumping for joy at the sight of steamers coming into the harbour." Contrast this outburst of mental emotion with what follows. Speaking of the diminished attendance Dr. Cousland says: "Wild rumours as to the dreadful practices of foreign doctors in Hong-Kong on plague patients, *and perhaps the vague idea that China was fighting some other country*, have also had some effect on the attendance." Having read this, we cease to wonder at the following. There were 492 operations, 201 dental extractions, and a considerable amount of minor surgery not included in the foregoing numbers was performed, and yet "chloroform was administered only eighty-eight times, as the Hoklos have remarkably little sense of pain." This insensibility, both mental and bodily, probably accounts for the horrible severity of the Chinese criminal code and the agonising nature according to Western ideas of the punishment.

INSANITY AND COMMERCIAL DEPRESSION.

THE report for 1894 of the Inspector-General of the Insane for New South Wales affords some interesting details showing the connexion between an increase of insanity and a decrease of commercial prosperity. The years 1892, 1893, and 1894 were all years of commercial depression, and the increase in the numbers of insane persons on the official register was respectively 178, 113, and 162. The inspector-general points out that commercial depression operates in two ways in bringing under official care a number of insane persons in excess of the average. First it directly predisposes insanity, especially in the neurotic and weak-minded, who are unable to stand up against conditions of life more than usually hard; and secondly, by compelling persons formerly able and willing to support idiot and imbecile relatives to throw them on the charity of the State.

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Be this as it may, if we turn to the table showing the occupations of those admitted, readmitted, and under care during 1894 we are struck by a rather curious fact. Adding together the numbers of those included in the professional and commercial classes the total comes to 344; whereas the numbers of those included under miners, labourers, seamen, and shepherds come to 1475. Of course, the percentage of these various classes to the total amount of the population ought to be taken into consideration, but it seems curious that sailors and shepherds should be included in the list. Perhaps loneliness may have somewhat to do with it in the case of the shepherd. A life in the wilderness is apt to engender mental trouble. "Vertebantur ad melancholiam" was said of the old hermits in the Egyptian desert; and there is a woeful story on record of a haggard man who crawled to an Indian station crying, "There is no God, but I have walked with the devil," and was recognised as one who had been sent to take charge of a lonely district by himself. "Man is a social animal," as Aristotle said, and perhaps the cares of town life, wearying as they are, are more than counterpoised by the daily communication between a man and his fellows.

THE POISON OF THE ORNITHORHYNCHUS.

WE have received a pamphlet from the Physiological Laboratory of the University of Sydney containing observations by Dr. C. J. Martin and Dr. F. C. Tidswell on the femoral gland of the Ornithorhynchus and its secretion, with an experimental inquiry concerning its supposed toxic action. It will be remembered that we noticed at some length in THE LANCET of March 16th the conclusions arrived at by Dr. Anderson Stuart on this subject. The essay before us contains a good historical *résumé* of our information in regard to the spur of the ornithorhynchus and the gland attached to it, from the first notice of it by Home in 1802, who thought the spur was a copulative organ, to Jamieson, who in 1817 discovered the gland connected with the spur, the duct of which traversed the spur, and the secretion of which he had observed to produce a poisonous effect on a man who had been endeavouring to capture a specimen after it had been wounded. Bennett and Owen were disinclined to admit that it was an organ of offence, whilst Dr. Anderson Stuart has no doubt that it is, and adduces cases of dogs which suffered severely from the action of the poison, and his opinion coincides with those of Dr. Martin and Dr. Tidswell. These observers have carefully examined the anatomy of the organ in question, with the following results. The glands are whitish, uniform, situated on each side of the spine over the acetabulum and the femur, and just outside the gluteus maximus, and rest on the rectus, iliacus, and glutei medius and minimus muscles. The duct emerges from the posterior half of the outer border of the gland, runs down the back of the leg to the tarsus, where it dilates into a sac and is then continued along the spur. The spur is about half an inch long and is attached to a supernumerary tarsal ossicle. The gland is invested by a layer of smooth muscle and is of a compound racemose type; the alveoli are buried by a single layer, or in one case by four layers, of epithelial cells, the contents of which are granular. The duct, though apparently single, contains two or three channels embedded in white fibrous tissue, without any admixture of smooth, muscular tissue. Neither in the living nor in the dead animal can the secretion be made to exude by pressure. Chemical examination of the secretion showed that it contains proteids, and that these consist chiefly of some form of albumin, with a little proteose, but no nucleo-albumin. The results of experiments on various animals showed that there was an analogy between the venom of Australian snakes and the poison of the platypus, since both owe their toxic properties to proteid constituents; that they both retard or prevent the coagulation of the blood when slowly introduced into the system in small doses; that they both cause intravascular clotting when injected into the veins in sufficient doses; that they both cause an almost instantaneous drop in the pressure of the blood; and that they both cause capillary hæmorrhages and œdema when locally applied. There is reason to believe that the secretion of the platypus is chiefly venomous at some particular season of the year, especially about the month of June.

SIR HENRY DUNCAN LITTLEJOHN.

GENERAL satisfaction will be caused throughout the profession, especially in Scotland, by the announcement that Dr. H. D. Littlejohn of Edinburgh is to receive the honour of knighthood. Dr. Littlejohn's ample claims to distinction are connected mainly with his labours in the cause of sanitation and public health, in the manifold departments of which he has long been a recognised authority. His medical career commenced more than fifty years ago, and he graduated as M.D. of Edinburgh University in 1847. To the general public he is chiefly known as the medical officer of health of Edinburgh. He has also filled the office of President of the Royal College of Surgeons of Edinburgh, and has for many years been Lecturer in Medical Jurisprudence at the Edinburgh School of Medicine.

CREDULITY AND FANATICISM.

THE remarkable ignorance and credulity of the lay mind with regard to any medical matter concerned with the process of generation is well shown by a case which occurred at Ballymacarrett, Belfast, and which is recorded in another column by one of our Irish correspondents. A young married woman gave birth to a child on May 4th, and went on satisfactorily for two days. She was then attacked with pain and vomiting, and a tumour was detected in the abdomen. A diagnosis of ovarian tumour was made and an operation advised. She was taken to the hospital, but no operation was permitted, and she died on May 11th. No post-mortem examination was allowed, and the common talk in the neighbourhood was that a second child existed and had not been delivered. Finally, the authorities determined to exhume the body and hold a post-mortem examination. On this being done on June 25th, a ruptured ovarian cyst with a twisted pedicle was found. The jury returned a verdict in accordance with the medical evidence and exonerated the medical men from blame. The case is only one more instance of what mischief and annoyance ignorant tongues can work.

CASTRATION FOR OVERGROWTH OF PROSTATE.

THE *New York Medical Record* of June 1st and June 8th reports the proceedings of the annual meeting of the American Surgical Association, the president being Dr. Fred. S. Dennis. *Inter alia*, an interesting discussion is given on the above subject. It was opened in a paper by Dr. J. William White of Philadelphia, Pa. Dr. White inclined to the view that the cause of prostatic enlargement was the survival of that function of the testicle which imparts masculinity to the individual and perpetuates the secretion of spermatic fluid long after it ceases to contain spermatozoa. He had collected 111 cases of double castration by competent surgeons for enlarged prostate in extreme and exaggerated forms which he said "had resulted in cures." All the same, he went on to show that twenty of these had died. In 87·2 per cent. rapid atrophy of the prostate follows, and in 52 per cent. great lessening of long-standing cystitis. In gauging the mortality, he thinks that twelve of the twenty fatal cases should in fairness be excluded, leaving 7 per cent. instead of 18 as the mortality. Even in the fatal cases

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shrinking of the prostate had occurred before death. He thought the operation more promising than any alternative ones, as it is more easy of performance and free from the objection of subsequent fistula &c. From the discussion which followed it is clear that American surgeons are not yet quite satisfied with the evidence of the safety of the operation. Dr. L. S. Pilcher made a thoughtful speech, in which he said he thought the operation most indicated where the overgrowth was soft and glandular in nature. He detailed a case of operation in a man aged sixty-seven where gradual enlargement of the testicles had occurred. The operation was followed by delirium, pyrexia, albuminuria with casts, and death, in spite of primary healing of the wound. Dr. Pierson related three cases. In one, after good progress for six days, bad symptoms supervened. Opening up of the scrotal wound revealed gangrene, and death occurred on the eleventh day. Another speaker reported a case in which benefit followed the operation; but since the castration the patient had been subject to sudden flushings, heat, and sweating, which atropin and other remedies failed to relieve. Dr. Alexander feared that the operation was liable to be performed too readily from its being easy, and thought we had not yet passed the stage of physiological experimentation.

THE DAVOS INVALIDS' HOME.

A MEETING was held on June 27th at the house of Dr. Hermann Weber in support of this excellent institution, which has been the means of restoring to health and usefulness many whose limited resources could not otherwise have procured for them the advantages of the climatic treatment of Davos. The "Home" was founded eleven years ago, and has been entirely supported through the private benevolence of three English ladies, whose names are familiar to all those who have visited Davos. Mrs. Lord's unavoidable retirement through ill-health from the charitable work to which she has devoted so many years, and which owes everything to her admirable management, necessitates an appeal to public charity for the purchase of the freehold. With a view to collecting the necessary funds and to providing for the future management of the "Home," the following committee was appointed: the Right Rev. the Bishop of Marlborough, the Hon. Evelyn Ashley, Rev. D. Harford-Battersby, M.A., Rev. R. R. Resker, Dr. Hermann Weber, Dr. Symes Thompson, Dr. C. T. Williams, Dr. Wm. Ewart, and Mr. Arthur Herbert. None can better realise the importance of keeping the "Home" open for the benefit of the class to whom it has been so great a boon in the past than members of the profession. Their valuable help, whether direct or indirect, is earnestly invited. Contributions will be gratefully acknowledged by any members of the committee, or may be sent to Messrs. Williams Deacon, and Manchester and Salford Bank, Limited, 20, Birchin-lane, E.C., or 2, Cockspur-street, S.W.

THE PURIFICATION OF WATER.

THAT disease is conveyed by drinking-water is a truth which is now tolerably well established in the lay mind, but that water, even though not actually used for drinking or cooking, may convey enteric or other germs is far from being generally recognised. Professor Hankin, the bacteriologist to the Government of the North-West Provinces of India, has recently been studying the ways of native servants, with somewhat disquieting results. I have seen, he says, "a cook cooling a jelly by standing it in a small irrigation drain that ran in front of his cookhouse. The water running in this drain came from a well in which I had detected the cholera microbe. He cleaned a spoon by dipping it in the drain and rubbing it with his fingers; then he used it to stir the jelly." Professor Hankin's account of the way plates and dishes are washed during dinner is also calculated to make us speculate on what might happen, for the Oriental scullery boy seems to have a very fair notion, though of course in an amateur way, of cultivating microbes. In this country perhaps we are not so much exposed to danger from these causes; but anyone who has been in and out of the houses of the poor knows the painfully inadequate water-supply—the uncovered cisterns and the lack of cleanliness in the preparation of food which too often exist. We think that the issue of a small leaflet, now that August is coming on, pointing out the necessity for cleanliness in the preparation of food and the washing of plates and dishes, might be the means of obviating many a death from summer diarrhœa.

THE NEW MEDICAL OFFICER OF HEALTH FOR LAMBETH.

BY a majority of fifty votes Mr. Joseph Priestley, B.A. Lond., M.D. Edin., D.P.H. Cantab., was elected medical officer of health for the large parish of Lambeth by the vestry at their last meeting. Six candidates were selected to go before the vestry, and after being interviewed and questioned were balloted for by the eliminating ballot. Their names were: Mr. Alexander, medical officer of health, Poplar and Bromley; Dr. Bond, medical officer of health, St. Olaves and Holborn; Dr. Cooper-Pattin, medical officer of health, Norwich; Dr. Priestley, medical officer of health, Leicester; Dr. Wilde, medical officer of health, Bedfordshire County Council, and assistant medical officer of health, Croydon; and Dr. Wheaton, inspector under the Local Government Board, London. Dr. Joseph Priestley is well known in the public health service, more especially on account of the firm stand he made at Leicester during the small-pox epidemic, having to fight a very strong antivaccinating opposition. This opposition Dr. Priestley overcame successfully, without giving in one iota in regard to his views as to the efficacy of vaccination and revaccination in modifying and preventing attacks of small-pox, whilst his reports on the outbreak will go far to enhance that view. Before going to Leicester Dr. Priestley was assistant medical officer of health to the vestry of Camberwell, and whilst there had the advantage of being trained by Dr. Bristowe, F.R.S.

WE wish to call attention to the change that has been made in the date of the Prince of Wales's visit to Epsom. His Royal Highness, who will be accompanied by the Princess, will lay the foundation stone of the additional buildings to the Royal Medical Benevolent College on Monday next, July 8th (for full particulars see p. 37), instead of on Tuesday, July 9th, as originally arranged.

DR. RICHARD DEANE SWEETING, one of the medical inspectors of the Local Government Board, and late medical superintendent of the Western Fever Hospital, has won the Holt Scholarship at Gray's-inn. We congratulate our professional brother on his successful progress in the study of the law.

H.R.H. THE PRINCE OF WALES has graciously accepted the Chancellorship of the University of Wales in succession to the late Lord Aberdare.

BY direction of the Dean a special meeting of the School Committee will be held in Charing-cross Hospital to-day (Friday), at 3.30 P.M., to receive a suggestion from a member of the committee to found a "Huxley" memorial prize or scholarship.

DR. EDWARD WAYMOUTH REID, late Assistant Lecturer on Physiology at St. Mary's Hospital, Professor of Physiology in University College, Dundee, has been selected for one of the Grocers' Company's Research Scholarships.

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Pharmacology and Therapeutics.

ESSENTIAL OILS.

THE relation of essential oils to the British Pharmacopœia and to trade purposes has lately been considered by Mr. J. C. Umney in the *Pharmaceutical Journal*. He thinks the use of the following so limited that they might be excluded from a new Pharmacopœia: chamomile, copaiba, rue, savin, and perhaps spearmint; but he recommends the inclusion of the following oils: bergamot, bitter orange, rose, and possibly synthetic winter-green oil (methyl-salicylate). He objects to the present restriction "distilled in Britain," thinking that it is only in exceptional cases that climate and soil influence for the better the character of the oil obtained from plants of the same species, and he maintains that it would be better for the pharmacopœial description, characters, and tests to include the source and the range of specific gravity at convenient temperatures. He also desires to see the following included: optical rotation, solubility in alcohol or other solvents, boiling point, and qualitative and quantitative chemical tests. The chief difficulty in the way of including the various essential oils in the Pharmacopœia lies in the fact that they are only to a relatively small extent employed in medicine, while enormous quantities are used for soap scenting, culinary and other industrial purposes by others than pharmacists. This has necessarily led to the importation of quantities of cheap and more or less impure oils. If these are required for trade purposes only, and not for employment by medical men, it is difficult to realise the need for their inclusion in the Pharmacopœia. Mr. Umney's paper contains a very careful summary of the characters of the principal essential oils handled by pharmacists, and it therefore calls for, and will doubtless receive, full consideration from those engaged upon the work of revision.

ARGENTAMIN AND ARGONIN.

As substitutes for ordinary aqueous solutions of nitrate of silver two organic compounds have been recently introduced which are said to have a still greater microbicidal action and to be less irritating than the nitrate. Argentamin consists of a solution of ten parts of phosphate of silver with an equal quantity of ethylene-diamine, $C_2H_4(NH_2)_2$, in a hundred parts water. This does not throw down chloride of silver when mixed with a solution of common salt, nor does it precipitate albumen. Clinically it is said by Dr. Schäffer of Breslau to act more energetically than a common nitrate of silver solution of the same strength, both destroying microbes of a pathogenic character better and also penetrating more deeply into the tissues. He found it especially valuable in the form of injections for gonorrhœa, and Lang has used it with good results in a large number of cases of abscesses of glands and of the connective tissue. Sometimes its irritant action is too great, but inconvenience from this may be avoided with due care. Another organic combination of silver has just been prepared by Dr. Röhmann and Dr. Liebrecht with casein. This new preparation, which they style argonin, contains only one quarter the amount of silver that the nitrate does. It is soluble in water, the solution being, however, opalescent and of a yellowish colour. It is said to be far less irritating to the tissues than argentamin. Like it, too, it forms no precipitate when common salt is added in solution, and according to Dr. R. Meyer of Breslau it has a remarkable microbicidal action, especially on the gonococcus.

GALLICINE IN OPHTHALMIC PRACTICE.

Gallicine, which is the methylic ether of gallic acid, is a white crystalline substance, soluble in hot water, in warm spirit, and in ether. Chemically it presents certain analogies with resorcin and with pyrogallol, and as these substances are of use in catarrhal and some cutaneous affections, it occurred to Dr. Mellinger, assistant to the Basle Professor of Ophthalmology, Dr. Schiess, to try the effect of gallicine in catarrhal conditions of the conjunctiva and in eczema of the eyelids and some other affections of the eye. The powdered substance, which is very light, is dusted into the eye or applied to the cutaneous surface by means of a brush, according to circumstances, in the same manner as calomel is employed. The application, which is made once or twice a day, is usually followed by a smarting sensation, which, however, soon passes off, but can be relieved by cold water compresses or entirely prevented by the previous use of cocaine. From an experience of some 200 cases Dr. Mellinger warmly recommends this remedy as superior in a good many eye affections to dermatol and gallinol. Conjunctivitis, whether catarrhal, suppurative, or phlyctenular, yielded to the gallicine treatment in a few days, and superficial keratitis, which had resisted the application of nitrate of silver, acetate of lead, compresses saturated with lead lotion, white precipitate ointment, atropin drops, &c., rapidly improved under gallicine. In phlyctenular affections gallicine has the advantage of being suitable, even when there is hyper-secretion, which, according to Dr. Mellinger, is a contraindication to the employment of calomel.

THE EXTERNAL APPLICATION OF PILOCARPINE IN NEPHRITIS.

Dr. Humbert Molliere has made some interesting researches on the value of pilocarpine applied externally in cases of nephritis. The treatment consists in rubbing into the skin an ointment composed of white vaseline (100 gr.) and nitrate of pilocarpine (5 to 10 centigrammes), and then covering up the part with cotton-wool and securing with bandages. The patient generally soon experiences a feeling of comfort, dyspnœa abates, and respiration becomes more regular, and only in very rare cases is the treatment badly borne. Perspiration quickly occurs, and is very profuse, in spite of the small quantity of alkaloid used, and at the same time there is abundant diuresis, and Dr. Molliere has drawn up interesting charts, showing a rise and fall in the quantity of urine corresponding to the pilocarpine applications. All varieties of nephritis have been treated by this method, but the best results have been obtained in acute cases, where the albumen has often quickly disappeared and a general amelioration of symptoms rapidly taken place, these good results being chiefly attributed to diminished congestion caused by the drug. Less favourable cases are naturally those in which the cardio-vascular system has already become secondarily affected. Where actual uræmia has set in this method is not so satisfactory, but is found to be successful if applied after the more pressing symptoms have been relieved by more energetic methods. The physiological action of pilocarpine when thus applied is found to be almost entirely local, and does not cause excessive secretion of the salivary and other glands, as it does when given by the hypodermic method.

We noticed in this column recently a preparation called airol, mentioning that it had been used with success as an antiseptic and styptic dressing. We are asked to say that the sole agents for this substance are Messrs. R. W. Greeff and Co., of 3, Eastcheap, E.C., to whom inquiries should be directed.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE ADMINISTRATIVE COUNTY OF LONDON.

III.[1]

THE only other topic in Mr. Shirley Murphy's report to which space permits allusion is a special report to his authority on the water-supply of London. On the issue of the report of the Royal Commission on Metropolitan Water-supply the County Council referred it to their medical adviser for his opinion; and this, when received, was held to be of so great public interest as to render expedient the printing of it for general circulation. It accordingly appears as an appendix to the annual report before us. The general drift of the conclusions arrived at by the Commission as to the wholesomeness of the London drinking water is matter of common information; it is far otherwise, however, with regard to the evidence upon which these conclusions are supposed to have been based, and this evidence has therefore been subjected to detailed and searching criticism in the appendix referred to. Mr. Shirley Murphy passes in review much of the

1 Parts I. and II. were published in THE LANCET of June 22nd and 29th respectively.

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expert evidence produced, his remarks upon this, and the judgment of the Royal Commission thereupon, being given by Mr. Shirley Murphy under the following headings: (1) Dilution of polluting matter in water; (2) viability of the typhoid bacillus; (3) number of organisms in water required to produce disease; (4) storage and filtration of water; (5) evidence of experience as to typhoid fever prevalence (especially that dealt with by Dr. Barry in his report on the typhoid fever epidemic in the Tees Valley; and (6) definition of the term "efficient filtration" of drinking-water. Mr. Shirley Murphy's remarks and arguments under each of the above headings are clear, forcible, and apposite, and, whether they meet with general acceptation in our profession or not, they certainly leave us in no doubt of their author's determination to secure in future and to maintain the utmost possible purity in the water-supply of the metropolis. In many important points Mr. Shirley Murphy traverses the report of the Royal Commission and gives his reasons for so doing, which are in all cases weighty and evince a thorough acquaintance on his part with the minutest details of the subject.

It is very obvious that the reason why the medical officer of the County Council regards the question of water-supply as of primary importance from a public health point of view is because of the admitted tendency of certain fatal diseases, especially typhoid fever and cholera, to disseminate themselves through the agency of drinking water. We strongly suspect, therefore, that the question of our water-supply is to Mr. Shirley Murphy very much on all fours with the question of typhoid fever (and possibly cholera) prevalence in the metropolis. In this attitude towards the water question he may rely upon the hearty support of the medical profession. It is probably immaterial to Mr. Shirley Murphy whether the water undertakings of the metropolis continue, as at present, in the hands of a number of private companies, or whether these rights are acquired on behalf of the public by the London County Council, as recent events would seem to render it probable that they will be at no very distant period from the present. But he would have our complete sympathy did he contend, as he is obviously entitled to do, that the officer upon whom devolves the chief guardianship of the public health of this vast metropolis should enjoy every facility for satisfying himself that those who provide the public with drinking-water adopt every known device for protecting that commodity from contamination. This is not a matter of mere sentiment. It is true that, according to the table published in another part of Mr. Shirley Murphy's report, typhoid fever mortality has shown a continued decrease during the last two complete decennia, and, in fact, down to the end of 1892; but the fact is a disquieting one that in the year 1893 a very serious rise in the mortality from this disease was observed. There does not appear to have been any noteworthy change in the sanitary condition of London which could account for this increase, and although the report contains no indication of the kind it is at least conceivable that in searching for its cause the medical officer may have desired to examine carefully the relation of water-supply to the local and general prevalence of the disease. Under existing arrangements it is very evident that any effective supervision of the metropolitan water-supply as a whole by the medical officer of the County Council is impracticable, and this for reasons which on reflection will be sufficiently apparent.

Returning now to the report of the Royal Commission, we find that the Commissioners insist very strongly on the necessity of proper treatment of the river water as a condition of its admissibility for drinking purposes. They state explicitly that the water which flows down to the intakes must be carefully subjected to certain processes of subsidence and filtration before it is brought into a suitable condition for delivery and consumption, and that the quality of the water when delivered depends largely on the thoroughness with which these processes are carried out. They do not go the length of prescribing exact regulations as regards the process of filtration, subsidence, &c., but they conclude their report with the following incisive statement: "We cannot shut our eyes to the fact that the provision for these processes [filtration &c.] differs enormously in the different companies, and in some of them is, to our mind, inadequate. Regulations on these matters should be drawn up after competent inquiry, and adherence to these regulations should be strictly enforced." Of this important judgment Mr. Shirley Murphy pertinently remarks that "the necessary corollary to the report of the Royal Commission on Metropolitan Water-supply is the issue of another Royal Commission to make such inquiry and such experimental investigation as may be required to determine the precise conditions to which polluted streams must be subjected in order to make their water uninterruptedly fit for domestic use." Mr. Shirley Murphy closes his most valuable and interesting report with these weighty sentences, which we give *verbatim*. "In view of the changes effected in the rivers, and subsequently in the filters, the risk to Londoners is, I believe, small, and certainly intermittent, and, indeed, may be thought of as comparable to those possibilities of injury from accident in the street to which every human being is subject during the whole of his life. The risk, indeed, is to each a possibility and not a probability, *but, such as it is, I believe it exists.* If we recognise, as I believe we may, that the safety of London residents is dependent upon the efficiency with which deleterious matter in the London rivers is by artificial means removed from the water supplied to the metropolis, the conditions under which this removal is to be continuously ensured must obviously be determined with absolute precision, and *an administration must be provided to secure that the object in view shall be attained.*" This is the deliberate conclusion arrived at by the medical officer of health of the administrative county of London, writing under a keen sense of responsibility, and as such we trust it will be appreciated as it deserves and acted upon by the administrative authority to whom this report is addressed.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

THE School Board is developing a large amount of casuistry. In our issue of June 8th we called attention to the following resolution passed by the Board on the motion of Mr. Sharp:—"That the West Lambeth Divisional Committee be authorised to appoint for one year, upon the under-mentioned conditions, six doctors in that division to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful, or in which it is desirable to have a definite medical opinion. (*a*) That each case be first referred to the divisional member in charge of the school where the child ought to attend. (*b*) That a payment of 2*s.* 6*d.* shall be made for each case examined. (*c*) That the number of cases to be dealt with in this manner shall not exceed 100 in a year. (*d*) That the names of the doctors selected shall be forwarded to the magistrates having jurisdiction in the division." Mr. Athelstan Riley (whose amendment that all words after "produced" in the first paragraph should be struck out and "not signed by a properly qualified medical man" substituted was rejected) asked Mr. Sharp at the meeting of the Board on June 27th the following questions, amongst others:—

1. The names of the doctors in the Tower Hamlets and East Lambeth divisions who have consented to examine medical certificates considered by the divisional superintendents to be doubtful.
2. The number of certificates signed by properly qualified medical men in the above divisions which, being considered by the divisional superintendents to be doubtful, have been submitted for examination to the aforesaid doctors.

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3. The proportion these bear to the total number of certificates issued in these divisions.

4. Whether the certificates signed by the aforesaid doctors are examined with (*a*) the knowledge and (*b*) the permission of the signatory in each case.

The following is the answer by Mr. Sharp (Chairman of the School Accommodation and Attendance Committee) to the foregoing questions:—

"It may be well to premise my remarks by observing that Mr. Riley labours under a misconception in assuming that the local medical men appointed by the Board have consented to 'examine medical certificates,' or that medical certificates will be 'submitted for examination to the aforesaid doctors.' These local medical men have been appointed 'to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful, or in which it is desirable to have a definite medical opinion.'"

Mr. Sharp then said that categorical answers would be misleading to the Board, so he preferred to make the following statement. After quoting his letter, which appeared in our columns of April 30th, 1895, he continued:—

"From the foregoing statement it will be seen that it is incorrect to suppose that all the cases which have been submitted to the local medical men appointed by the Board have been cases in which certificates have been given by other medical men, but which have been considered for some reason or other to be unsatisfactory. As a matter of fact, so far as I have information, the majority of the cases which have been submitted to these gentlemen have been cases in which no medical certificate has been produced by the parent, and in which it was considered by the divisional members to be difficult, if not impossible, to obtain such certificate. With reference to the latter cases, I might mention that, in some parts of London, at any rate, I have evidence that district medical officers of the guardians refuse to furnish, without payment, such certificates to persons in receipt of parochial medical relief. In these cases, therefore, the divisional committee must, in order to satisfy themselves as to the correctness, or otherwise, of the statement made by the parent as to the alleged illness of the child, either at once proceed with the prosecution before a magistrate or obtain a medical opinion in their own behalf. In those cases in which the child is ascertained to be unable to attend school, the Board are saved both the expense and the odium of unsuccessful legal proceedings, and the parent is saved the unnecessary pain and annoyance of a prosecution before a magistrate."

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Mr. Sharp's statement is simply playing with words. We will put the whole case in plain language. 1. The Board, by means of its divisional superintendents, considers certain medical certificates to be doubtful. 2. These certificates are presumably signed by qualified medical men. 3. The Board has appointed certain other medical men to examine these particular cases in which the certificate is considered doubtful. 4. That is to say, the Board has appointed one set of medical men to revise or examine, or set aside the diagnosis and opinion of another set of medical men. Let Mr. Sharp deny this if he can without beating about the bush. We warn the School Board, as we warned it in our issue of June 8th, that the result will be that no medical man will sign certificates at all, but will rather give evidence in case of a prosecution, and then, as Mr. Sharp pathetically puts it, the Board will "incur the odium of unsuccessful legal proceedings," and, in our opinion, it will well deserve this result.

CONSECRATION OF THE RAHERE LODGE OF FREEMASONS.

SATURDAY last was a red-letter day for St. Bartholomew's Hospital. In the great hall of the hospital a new Masonic Lodge was consecrated, named after Rahere, the founder of the hospital seven and a half centuries ago. Everything combined to make the function a success—a bright and sunny summer's afternoon, the presence of H.R.H. the Prince of Wales, the Grand Master, and a brilliant representative gathering of those whose names are equally well known in Masonry and Medicine.

At 5 o'clock lodge was opened, the Master's chair being occupied by Bro. E. Letchworth, Grand Secretary. Shortly afterwards the Prince of Wales arrived, accompanied by the Crown Prince of Denmark, who is Grand Master of the Freemasons of his own country. The Earl of Lathom, Pro-Grand Master of England, acted as consecrating officer and then took the chair. He was supported on his right by the Prince of Wales and the Crown Prince of Denmark, while the Senior Warden's chair was occupied by Lord Roberts of Candahar, Grand Senior Warden, the Junior Warden's chair being filled by Lord Skelmersdale. The duties of director of ceremonies were undertaken by Bro. Frank Richardson; the Dean of Gloucester, Grand Chaplain, acted as chaplain; and Bro. P. H. Waterlow, Past Grand Deacon, as inner guard.

The brethren received the two Grand Masters in due Masonic fashion, and accorded to each the salute due to his rank. The lodge presented a very brilliant spectacle, over 300 grand officers and brethren being present. Among them we noticed:—Viscount Dungarvan, Provincial Grand Master of Somerset; Colonel Le Gendre Starkie, Provincial Grand Master of East Lancashire; General Laurie, Past Grand Warden; W. M. Stiles, Grand Treasurer; Rev. Cooper Smith, D.D., Past Grand Chaplain; Lennox Browne, Past Grand Director of Ceremonies; R. Loveland Loveland, President of the Board of General Purposes; R. Horton Smith, Q.C.; H. F. Frost, Grand Organist; E. Cutler, Q.C., Past Grand Organist; Dr. Balfour Cockburn, Provincial Grand Master of Guernsey and Alderney; Dr. Hugh Mackintosh and Bro. Chas. Martin, Past Assistant Grand Directors of Ceremonies; the Earl of Euston, Provincial Grand Master, Northamptonshire and Huntingdonshire; Alderman Walter Vaughan Morgan; General J. C. Smith, Past Grand Master of Illinois. There were present a large number of medical brethren, including Bros. Reginald Harrison, Henry Morris, Edmund Owen, W. P. Herringham, Samuel West, Arbuthnot Lane, A. A. Bowlby, R. J. Reece, Essex Wynter, Leopold Hudson, Howard Tooth, Alban Doran, W. H. H. Jessop, Bruce Clarke, H. J. Waring, C. A. Parker, Danford Thomas, and F. W. Clark.

The impressive ceremony of the consecration was proceeded with, the Earl of Lathom giving the invocation, while the Dean of Gloucester delivered the oration, and the anthems were sung by Bros. Frost, Kenningham, Fryer, and Stubbs. The Grand Master then constituted the lodge, the following officers being appointed:—Bros. Clement Godson, M.D., P.G.D. (W.M.); Thomas Trollope, M.D., P.G.D. (Acting I.P.M.); Alfred Cooper, F.R.C.S., P.G.D. (S.W.); W. J. Walsham, F.R.C.S., P.M. (J.W.); D'Arcy Power, F.R.C.S., P.M., P.G.J.W. Warwickshire (Treas.); T. G. A. Burns, M.R.C.S., P.M., P.P.G.D. Surrey (Sec.); Walter Gripper, M.B., P.M. (S.D.); Phineas S. Abraham, M.D. (J.D.); G. H. R. Holden, M.D. (I.G.); F. Swinford Edwards, F.R.C.S., P.M. (D.C.); J. H. Gilbertson, M.R.C.S., P.M., P.P.S.G.D. Herts (Stwd.); C. B. Lockwood, F.R.C.S., W.M. 1150 (Stwd.); C. P. White, M.B. (Stwd.); Ernest Clarke, F.R.C.S. (Org.); Madden, Librarian of St. Bartholomew's Hospital (Tyler).

Among the other founders of the Lodge are Bros. W. Haig Brodie, B. Latter Tandy, A. G. R. Foulerton, H. D. Lanchlan, G. H. Forman, J. E. Sandilands, C. A. Parker, A. A. Bowlby, F. W. Clark, W. T. Partridge, J. Pickett, and R. J. Reece.

The first act of the new Lodge was to enrol its first honorary member in the person of the Prince of Wales. The Benediction having been pronounced, Their Royal Highnesses took their departure, and on leaving the hospital received an ovation from the students gathered in the quadrangle. The guard of honour was furnished by the St. Bartholomew's Hospital Company of the Volunteer Medical Staff Corps. The brethren afterwards adjourned to a banquet at the Albion, Aldersgate-street, the toast of "The Visitors" being responded to by General Smith of Illinois.

We wish this new professional lodge every success; it has received a magnificent christening, and the number of joining members is already very large.

A MAHOMEDAN DOCTOR ON THE MECCA PILGRIMAGE.

MUCH has been written concerning the pilgrimage to Mecca, but, as a rule, such writings are somewhat one-sided. Either the writers are Mahomedans who know nothing of the Western exigencies with regard to sanitation, or else they are not Mahomedans, and are therefore out of sympathy with the pilgrims, are not allowed to approach the

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holy places, and consequently often criticise what they have not been able to see. Dr. Saleh Soubhy, as Doctor and Laureate of the Paris Faculty of Medicine, may be expected to take a Western European view of the sanitary difficulties attending the pilgrimage; while, as a good Mahomedan, he is in full sympathy with the pilgrims. This sympathy does not render Dr. Soubhy blind to the grave dangers caused by the utter want of sanitation. Speaking of the town of Djeddah, where the pilgrims land, he says: "The cleansing of the town is a matter of the utmost simplicity; the rain does this work, and I must hasten to add that it only rains once or twice in the year—and then! It is not necessary to make a great effort of imagination to have some idea of the state of affairs within the town. The entire surface of the soil is encumbered with the débris of vegetables, with spoilt fruits, and refuse of all descriptions, and giving off all sorts of odours. Horned animals, donkeys, horses, camels, and wild dogs leave the trace of their passage, but we must not complain of this, for the dogs and goats which wander everywhere are, after all, the only scavengers of the town, as they eat much of what would otherwise decompose on the soil. On the other hand, the population which crowd on a relatively restricted space have a system of drainage that is really surprising. It is a country of expedients. Nothing is more simple. When a cesspool is full a hole is dug close at hand and the contents of the cesspool are emptied into it. The hole is then covered over. Of course, infiltrations from these holes reach the neighbouring wells, whence the water is drawn which the pilgrims drink." When we consider the great heat that prevails in the daytime, and the damp that reigns at night, it is not surprising that cholera often breaks out at Djeddah. The water is extremely foul. Large animalcula can be seen in it, even without the aid of a microscope. The Turkish Government has given a considerable sum to construct an aqueduct to bring good water to the town, but somehow the canal has never worked properly. This failure is attributed to the action of the proprietors of the wells, who desire to preserve their lucrative privilege of selling foul water to the camel drivers and pilgrims.

Dr. Soubhy next protests against the folly of women attempting the pilgrimage during the period of gestation. He describes how the oscillatory movement of the camel produces miscarriages, followed frequently by hæmorrhage and the death of both mother and infant. The caravan, however, cannot stop, and it is impossible to nurse efficiently the mothers while the march continues. If any portion of the caravan stopped it would certainly be attacked by the Bedouins, who, Dr. Soubhy explains, are not true Mahomedans. On questioning a Bedouin as to the nature of his harvest he cynically replied, "My harvest is the pilgrim." Speaking of Mecca, Dr. Soubhy contents himself with saying that the condition of the town is very similar to what he saw at Djeddah. Nor does he say anything about the danger of contamination at the holy well of Zimzim. He simply relates that, according to popular belief, this well leads to Paradise. Consequently several pilgrims have thrown themselves into the well. As the bodies were never recovered it is natural to conclude that there are subsoil currents of water of considerable dimensions and power. This may be some protection. The Sultan has, however, now caused a high railing to be placed round the well so that the faithful cannot so easily jump into the water, and must perforce wait till a more natural death opens the gates of Paradise. Speaking of the Courban-Baïran festival, Dr. Soubhy estimates that at Mouna some 900,000 animals are sacrificed. This custom, at least, he has the courage to denounce. "It is easy to imagine what dangers this state of things may engender, what epidemics may be caused by these thousands of carcases in putrefaction, and how insufficient is the recent order, emanating from the Turkish Government, to bury this multitude of carcases." To burn the carcases and convert them into animal manure would be a better and more profitable solution of the problem.

In an appendix dealing purely with the sanitary question Dr. Soubhy suggests that a railway from Djeddah to Mecca, then to Medina and Yambo, would pay and would save a great loss of life resulting from the painful journeys on foot across the deserts. He also urges that children under ten years of age, women in the period of gestation, the old and infirm, those who have not been vaccinated within three years, and those who have not sufficient means for their maintenance, should not be allowed to embark on the pilgrimage; that those who are allowed to start should have a circular given them indicating what sort of clothes and provisions they should take; and that portable pharmacies should form part of the luggage of every caravan. There are no pharmacies, it appears, at Mecca, Mouna, and Yambo, yet thousands of pilgrims pass through these places suffering from diarrhœa, fever, purulent ophthalmia, and abscesses. Then the Red Sea ships are not only overcrowded by pilgrims, but also by the unnecessary luggage they take with them; and we are assured that there are often more pilgrims on board than the number sanctioned by the law. Nor are the rules as to the presence on board of a surgeon and of a medicine chest strictly observed. As for the sanitation of the towns, as there is the desert close at hand it would be easy enough to dispose of the sewage if a system of drainage was established.

Finally, Dr. Soubhy quotes the Prophet, who said, "You must avoid entering a country contaminated by an epidemic, so as to respect the will of God (God having said, Thou shalt not throw thyself into danger), and you must not leave a contaminated country, so as not to show that you are flying from the will of God." In accordance with this Dr. Soubhy proposes that pilgrims from the south—India, Java, &c.—coming from countries where cholera is endemic should visit Mecca alternate years, taking the uneven numbers, 1895, 1897, &c. Pilgrims from the north—Turkey, Egypt, Morocco, Algeria, &c.—could go in the years with even numbers, 1896, 1898, &c., and thus avoid meeting those who came from cholera-infected countries, and in this manner carry out the precept laid down by Mahomed.

THE NEW WATER SCHEME FOR BELFAST.

ON June 25th, on the invitation of the Chairman of the Belfast Water Commissioners, a number of Belfast merchants and others visited the "Silent Valley," the site of the proposed new reservoir, which it is thought will be completed within another year. This Silent Valley is situated in a remote but charming district in the Mourne Mountains, about five or six miles from the well-known seaside resort, Newcastle, in county Down. This new water scheme is by far the most important ever undertaken for Belfast, and it is said it will cost upwards of three-quarters of a million pounds sterling. The new catchment area is upwards of 9000 acres in extent, but it can be added to in the future. It has an elevation varying from 450 ft. to nearly 2800 ft. above sea-level, and it consists of high mountain slopes, largely composed of granite and boulders on the surface; hence it is of the very best description for a domestic water-supply. Another advantage it possesses is that it is free from cultivation and pollution of any kind, is uninhabited, and is in close proximity to the sea. The whole of the lands in this area will be purchased by the Belfast Water Trust to preserve its present character and to prevent risk of any future pollution. At present the water is collected by the Kilkeel and Annalong rivers, which empty themselves into the sea between Kilkeel and Newcastle. The Kilkeel river will be intercepted in the "Silent Valley" by means of a large storage reservoir having an earthen embankment some 520 yards long across the valley, and it will be upwards of 90 ft. high over the present river-bed. The top water area will be nearly 250 acres, and the total holding capacity will be 2850 million gallons of water. The total supply available from the whole of the Mourne districts will be, when fully developed, about 30,000,000 gallons per day. The supply will be drawn from this reservoir for use in Belfast through a number of large-geared valves at different levels on the outlet standpipe, which will allow the water to pass in large or small quantities through the main outlet tunnel into the main gravitating conduit, which will be formed of concrete, having a maximum carrying capacity of 30,000,000 gallons per day, the size being 5 ft. 6 in. by 5 ft. 6 in., and with a regular fall of 18 in. per mile. The main conduit will be continued along the mountain slopes to near Newcastle, where it will be carried through Slieve Donard and St. Thomas's Mountains in a tunnel some two and a quarter miles in length, with a fall of 12 in. per mile, and a maximum capacity of 30 000,000 gallons per day. Some parts of this tunnel will be 600 ft. below the surface of the ground. The service reservoir will be made large enough to meet the demands of the city, having a storage capacity

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At 5 o'clock lodge was opened, the Master's chair being occupied by Bro. E. Letchworth, Grand Secretary. Shortly afterwards the Prince of Wales arrived, accompanied by the Crown Prince of Denmark, who is Grand Master of the Freemasons of his own country. The Earl of Lathom, Pro-Grand Master of England, acted as consecrating officer and then took the chair. He was supported on his right by the Prince of Wales and the Crown Prince of Denmark, while the Senior Warden's chair was occupied by Lord Roberts of Candahar, Grand Senior Warden, the Junior Warden's chair being filled by Lord Skelmersdale. The duties of director of ceremonies were undertaken by Bro. Frank Richardson; the Dean of Gloucester, Grand Chaplain, acted as chaplain; and Bro. P. H. Waterlow, Past Grand Deacon, as inner guard.

The brethren received the two Grand Masters in due Masonic fashion, and accorded to each the salute due to his rank. The lodge presented a very brilliant spectacle, over 300 grand officers and brethren being present. Among them we noticed:—Viscount Dungarvan, Provincial Grand Master of Somerset; Colonel Le Gendre Starkie, Provincial Grand Master of East Lancashire; General Laurie, Past Grand Warden; W. M. Stiles, Grand Treasurer; Rev. Cooper Smith, D.D., Past Grand Chaplain; Lennox Browne, Past Grand Director of Ceremonies; R. Loveland Loveland, President of the Board of General Purposes; R. Horton Smith, Q.C.; H. F. Frost, Grand Organist; E. Cutler, Q.C., Past Grand Organist; Dr. Balfour Cockburn, Provincial Grand Master of Guernsey and Alderney; Dr. Hugh Mackintosh and Bro. Chas. Martin, Past Assistant Grand Directors of Ceremonies; the Earl of Euston, Provincial Grand Master, Northamptonshire and Huntingdonshire; Alderman Walter Vaughan Morgan; General J. C. Smith, Past Grand Master of Illinois. There were present a large number of medical brethren, including Bros. Reginald Harrison, Henry Morris, Edmund Owen, W. P. Herringham, Samuel West, Arbuthnot Lane, A. A. Bowlby, R. J. Reece, Essex Wynter, Leopold Hudson, Howard Tooth, Alban Doran, W. H. H. Jessop, Bruce Clarke, H. J. Waring, C. A. Parker, Danford Thomas, and F. W. Clark.

The impressive ceremony of the consecration was proceeded with, the Earl of Lathom giving the invocation, while the Dean of Gloucester delivered the oration, and the anthems were sung by Bros. Frost, Kenningham, Fryer, and Stubbs. The Grand Master then constituted the lodge, the following officers being appointed:—Bros. Clement Godson, M.D., P.G.D. (W.M.); Thomas Trollope, M.D., P.G.D. (Acting I.P.M.); Alfred Cooper, F.R.C.S., P.G.D. (S.W.); W. J. Walsham, F.R.C.S., P.M. (J.W.); D'Arcy Power, F.R.C.S., P.M., P.G.J.W. Warwickshire (Treas.); T. G. A. Burns, M.R.C.S., P.M., P.P.G.D. Surrey (Sec.); Walter Gripper, M.B., P.M. (S.D.); Phineas S. Abraham, M.D. (J.D.); G. H. R. Holden, M.D. (I.G.); F. Swinford Edwards, F.R.C.S., P.M. (D.C.); J. H. Gilbertson, M.R.C.S., P.M., P.P.S.G.D. Herts (Stwd.); C. B. Lockwood, F.R.C.S., W.M. 1150 (Stwd.); C. P. White, M.B. (Stwd.); Ernest Clarke, F.R.C.S. (Org.); Madden, Librarian of St. Bartholomew's Hospital (Tyler).

Among the other founders of the Lodge are Bros. W. Haig Brodie, B. Latter Tandy, A. G. R. Foulerton, H. D. Lauchlan, G. H. Forman, J. E. Sandilands, C. A. Parker, A. A. Bowlby, F. W. Clark, W. T. Partridge, J. Pickett, and R. J. Reece.

The first act of the new Lodge was to enrol its first honorary member in the person of the Prince of Wales. The Benediction having been pronounced, Their Royal Highnesses took their departure, and on leaving the hospital received an ovation from the students gathered in the quadrangle. The guard of honour was furnished by the St. Bartholomew's Hospital Company of the Volunteer Medical Staff Corps. The brethren afterwards adjourned to a banquet at the Albion, Aldersgate-street, the toast of "The Visitors" being responded to by General Smith of Illinois.

We wish this new professional lodge every success; it has received a magnificent christening, and the number of joining members is already very large.

A MAHOMEDAN DOCTOR ON THE MECCA PILGRIMAGE.

MUCH has been written concerning the pilgrimage to Mecca, but, as a rule, such writings are somewhat one-sided. Either the writers are Mahomedans who know nothing of the Western exigencies with regard to sanitation, or else they are not Mahomedans, and are therefore out of sympathy with the pilgrims, are not allowed to approach the

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sympathy of medicine with the work of the epidemiologist. Professor Michael Foster was an especially welcome guest, for his life had been spent in providing a scientific basis for medicine. The presence of Mr. Cope, the chief adviser of the Board of Agriculture, marked the need which the epidemiologist felt in the association of human and animal pathology with the study of epidemic disease; and of Dr. Tatham, the head of the Statistical Department of the State, of the necessity of using the statistics which he provided, and of submitting to the stern test of figures the work upon which the members of the society were engaged. He commented on the support he had always received from Sir Walter Foster in the performance of his official duties.

Mr. Christopher Heath and Professor Clifford Allbutt replied to the toast. Mr. Heath discussed the examination of medical officers of health and dwelt on the excellence of the examination of the united colleges. Professor Clifford Allbutt, referring to the self-denying labours of the medical profession in preventing disease and in thus depriving themselves of the work upon which they as a profession depended for their livelihood, instanced the work of one whose efforts had resulted in the reduction of disease, and especially the abolition of enteric fever from the locality in which he practised, and the consequent reduction of his income.

The President, in proposing the toast of "The Epidemiological Society," commented on the fact that the number of persons who associated themselves for the study of epidemic disease had always been small, but, from the foundation of the society, among those who took part in the proceedings were some of the best thinkers and most distinguished members of the profession, and he alluded to the loss the society had recently sustained by the death of a beloved leader whose own work had largely added to our knowledge of epidemic disease. He then referred to the history of the study of epidemiology, of which the published proceedings of the society were an index. The beginnings of this study were to some extent gropings in the dark, and theories were often formulated which had to give way to the teaching of the facts which were observed. Theory and fact were sometimes struggling against each other, but by degrees the facts were accepted. Scientific epidemiology had thus come into existence and paved the way to a better knowledge of the diseases which attack communities.

Sir Benjamin Ward Richardson, in proposing "The Health of the President," referred to the work in London in which he was engaged, and congratulated him on his recognition of the need for sound and scientific knowledge to be made the basis of the health administration of London.

After a suitable acknowledgment by the President the society adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Leicester Urban Sanitary District.—Dr. Joseph Priestley in his current annual report has continued his interesting observations on the distribution of enteric fever in Leicester, which he commenced in his 1893 report, and it appears that the 1894 experience led to much the same conclusions as did that of 1893—i.e., it showed a greater incidence of the disease on houses provided with pails, privies, or water-closets with ashpits than upon those provided with water-closets and bins. We imagine, however, that there are some who would object to the classification of houses furnished with waterclosets and ashpits with those provided with pails and privies. Dr. Priestley also gives an account of a localised outbreak of enteric fever comprising 47 cases and thirty-seven houses, which he considered due to the interchange of infected pails. In this account two series of cases are given; in the one, no less than 7 cases were, Dr. Priestley thinks, directly infected from the first case; in the other, 8 cases of the disease were apparently contracted either directly or indirectly from the first. Of the total thirty-seven houses invaded in the outburst 81 per cent. had pails and 18·9 per cent. waterclosets. Dr. Priestley, after discussing the causes to which outbreaks of enteric fever are usually attributable, considers that a thesis of typhoid fever infected pails is the one which best explained the distribution of the disease. Apart from the disuse of pails altogether—which is the course Dr. Priestley advocates—or the return of each pail to the house from which it was taken, it is difficult to devise a remedy for the risks which the pail system would seem to incur. Obviously there must often be in a large town cases of unrecognised enteric fever, and probably in those instances where diarrhœa is a prominent symptom there is considerable danger of infection occurring before the nature of the disease is recognised. As regards the distribution of typhoid fever on pervious and impervious formations, Dr. Priestley observes that the figures for 1894, like those for 1893, show that the greatest incidence of the disease occurred on gravel and sand and the least on clay. The experience as regards diarrhœa in Leicester during 1894 fully bears out Dr. Ballard's classical researches on the relation between the prevalence of this disease and the temperature of the earth at a depth of 4 ft. The registered vaccinations in Leicester for the year 1894 show a considerable falling off on those of the previous year, the respective numbers being 133 and 249. As, however, Dr. Priestley observes, the Vaccination Acts are practically a dead letter, the number of certificates received by the vaccination officer is really little or no criterion of the actual number of vaccinations performed, and many persons have apparently had their children vaccinated by private practitioners. In commenting upon the high death-rate among illegitimate infants Dr. Priestley suggests that the sanitary committee should keep a register of the illegitimate children born in the town, so that any suspicious cause of death might be inquired into; and he also reports that the percentage of uncertified deaths in Leicester has been increasing, while inquests seem proportionately to be decreasing. The proper certification of all deaths should, he observes, be enforced by law. In that section of his report which refers to the fever hospital Dr. Priestley draws attention to the fact that the present small-pox hospital is only a temporary building, providing a maximum accommodation of twenty beds, and he points out that no trouble should be spared to find a suitable site for a proper small-pox hospital well outside the town, so that in the event of small-pox appearing again it may not be necessary to discharge the scarlet fever patients. Dr. Priestley alludes, too, to the necessity of providing a new fever hospital, one that shall be worthy of "a town that, in other municipal and sanitary matters, generally takes the lead." In Part III. of his report the vital and mortal statistics of Leicester are dealt with, but space prevents our touching upon them save to state that the general and zymotic death-rates recorded during 1894 were the lowest chronicled in the annals of the borough.

Eastbourne Urban Sanitary District.—Dr. W. G. Willoughby, in submitting his first annual report as medical officer of health of Eastbourne, gives a detailed account of the borough, describing its site, geology, water-supply, &c. He also enters thoroughly into the age and sex distribution of the population. The water-supply is, Dr. Willoughby states, of excellent quality, save for its hardness, and to remedy this defect he advises its treatment by some such process as the "Porter-Clark." Dr. Willoughby also observes that charges for water-supply to dwelling-houses should be inclusive, so as to embrace baths. In Eastbourne these very necessary fittings are treated as luxuries, and doubtless the visitors to Eastbourne have to pay their share of the charges. The isolation of infectious disease is increasing in popularity in Eastbourne, and the percentage of notified cases isolated during the past three years has been respectively 56·9, 64·5, and 72·9.

Kingston-upon-Thames Urban Sanitary District.—Mr. Beale Collins devotes a considerable portion of his report for 1894 to a discussion of the desirability or otherwise, from a public health standpoint, of the proposed extension of the borough so as to embrace the ecclesiastical parishes of Kingston and Ham. Without following Mr. Collins step by step through his interesting observations, it may be stated that he considers the proposal would tend to produce what he terms a normal community in the matter of age, sex, and class distribution, and that, as far as drainage is concerned, "there is nothing to be said against extension and everything in its favour"; while in regard to isolation accommodation and the control of infectious disease generally, Mr. Collins thinks that much good would result.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6166 births and 3394 deaths were registered during the week ending

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June 29th. The annual rate of mortality in these towns, which had been 15·4 and 16·2 per 1000 in the two preceding weeks, further rose last week to 16·7. In London the rate was equal to 16·9 per 1000, while it averaged 16·5 in the thirty-two provincial towns. The lowest rates in these towns were 9·6 in Brighton, 9·9 in Derby, 11·5 in Huddersfield, and 11·6 in Portsmouth, Leicester, and Preston; the highest rates were 19·2 in Bolton, 19·4 in Burnley, 21·0 in Salford, 22·8 in Gateshead, and 25·7 in Liverpool. The 3394 deaths included 493 which were referred to the principal zymotic diseases, against 399 and 400 in the two preceding weeks; of these, 177 resulted from diarrhœa, 140 from measles, 59 from whooping-cough, 55 from diphtheria, 32 from scarlet fever, 29 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Swansea, Nottingham, Derby, and Wolverhampton; and the highest rates in Cardiff, Leicester, Salford, Liverpool, and West Ham. The greatest mortality from measles occurred in West Ham, Plymouth, Cardiff, Bolton, Manchester and Newcastle-upon-Tyne; from scarlet fever in Burnley; from "fever" in Huddersfield; and from diarrhœa in Croydon, Leicester, Salford, and Preston. The mortality from whooping-cough showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 38 in London, 3 in Liverpool, 2 in West Ham, 2 in Portsmouth, and 2 in Birmingham. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 34 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 29th, against 23, 19, and 22 at the end of the three preceding weeks; 25 new cases were admitted during the week, against 5, 2, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 1589, 1637, and 1732 on the three preceding Saturdays, had further risen to 1894 on Saturday last, June 29th; 319 new cases were admitted during the week, against 179, 199, and 251 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 152 and 186 in the two preceding weeks, declined to 160 last week, but were 45 below the corrected average. The causes of 38, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Leicester, Sheffield, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Nottingham, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·1 and 19·4 per 1000 in the two preceding weeks, declined again to 19·2 during the week ending June 29th, but exceeded by 2·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·2 in Leith and 15·3 in Paisley to 20·9 in Greenock and 27·4 in Perth. The 566 deaths in these towns included 48 which resulted from diarrhœa, 14 from measles, 9 from whooping-cough, 3 from diphtheria, 3 from "fever," 1 from scarlet fever, and not one from small-pox. In all, 78 deaths were referred to these principal zymotic diseases, against 58 and 76 in the two preceding weeks. These 78 deaths were equal to an annual rate of 2·7 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 25 and 26 in the two preceding weeks, further rose to 48 last week, of which 29 occurred in Glasgow, 6 in Dundee, and 4 in Aberdeen. The 14 deaths referred to measles corresponded with the number in each of the two preceding weeks, and included 6 in Glasgow and 3 in Paisley. The fatal cases of whooping-cough, which had increased from 11 to 20 in the three preceding weeks, declined again to 9 last week, of which 6 occurred in Glasgow and 2 in Edinburgh. The deaths from diphtheria, which had been 3 and 4 in the two preceding weeks, were 3 last week, all of which were recorded in Glasgow. The 3 deaths referred to "fever" were within 1 of the number in the preceding week, and included 2 in Glasgow. The fatal case of scarlet fever occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 87 and 94 in the two preceding weeks, further rose to 99 last week, and exceeded by 18 the number in the corresponding week of last year. The causes of 25, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·1 and 20·1 per 1000 in the two preceding weeks, rose again to 22·4 during the week ending June 29th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 27·3 per 1000, the rate during same period being 16·7 in London and 18·8 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed an increase of 15 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 8 and 16 in the two preceding weeks; of these, 5 resulted from diarrhœa, 3 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, scarlet fever, or diphtheria. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 3·2 in London and 1·3 in Edinburgh. The 5 fatal cases of diarrhœa exceeded the number in any recent week. The deaths referred to whooping-cough, which had been 3 and 1 in the two preceding weeks, rose again to 3 last week. The mortality from "fever" corresponded with that recorded in the preceding week. During last quarter 23 fatal cases of small-pox were registered within the city, against 78 in the first quarter of this year. The 150 deaths registered in Dublin last week included 26 of infants under one year of age, and 32 of persons aged upwards of sixty years; the deaths of infants corresponded with the number in the preceding week, while those of elderly persons showed a slight further increase upon recent weekly numbers. Only one inquest case and no death from violence was registered; and 51, or rather more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 11 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL GREENHILL, retired pay, has been transferred from Lincoln to Guernsey. Surgeon-Major Morgan has been appointed to Woolwich, Surgeon-Major Maclean to Chatham, and Surgeon-Captain Watson to Glasgow. Surgeon-Captain Johnson has been granted sick leave to England from India. The following officers have completed a course of instruction in meat inspection at Edinburgh:—Surgeon-Majors O'Sullivan and Dick, Surgeon-Captain Kiddle, and Surgeon-Lieutenants Barnett and Master. The following officers have been placed under orders to attend a course at Edinburgh:—Surgeon-Lieutenant-Colonel Slaughter, Surgeon-Majors Robinson and Jencken, and Surgeon-Captains Cardew and Davidson. Surgeon-Captain Trask has been selected for duty with the Egyptian army.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant Herbert C. French to do duty with the Coldstream Guards as an attached officer, vice Surgeon-Captain M. T. Yarr, who vacates his post on appointment as physician to the Crown Prince of Siam.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major R. J. Baker (Bombay), Residency Surgeon and *ex-officio* Assistant to the Political Resident in Turkish Arabia, is appointed to officiate as Medical Officer of the 2nd Regiment Central India Horse, and of the Western Malwa Political Agency during the absence on leave of Surgeon-Captain C. M. Moore. Surgeon-Captain A. R. S. Anderson, Surgeon-Naturalist of H.M.'s R.I.M.S. steamer *Investigator*, is appointed to officiate as Superintendent of the Indian Museum during the absence of Surgeon-Captain A. W. Alcock, who accompanies the Pamir Commission as Surgeon-Naturalist. Surgeon-Captain J. B. Smith has delivered over charge of the Shikarpur Prison. The services of Surgeon-Captain W. Molesworth and Surgeon-Captain C. Donovan are placed temporarily at the disposal of the

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Government of Madras. The services of Surgeon-Major E. F. H. Dobson are replaced at the disposal of the Government of India, Home Department. Surgeon-Colonel H. Cook takes over the duties of Principal Medical Officer, Bombay Command from Surgeon-Colonel C. A. Atkins, A.M.S. Surgeon-Major C. L. Swaine proceeds to England on the recommendation of a medical board in anticipation of the leave which will be hereafter granted to him by the Government.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Arthur Taylor Wear, M.D., 1st Newcastle-on-Tyne Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Major. Surgeon-Lieutenant John Hugh Maclean, F.R.C.S. Edin., 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 2nd Middlesex: Surgeon-Lieutenant J. H. Gibson, M.D., resigns his commission. 1st Cornwall (Duke of Cornwall's) (Western Division, Royal Artillery): Surgeon-Captain W. Mason to be Surgeon-Major. *Royal Engineers:* 1st Gloucestershire: William Balfour Fergusson, M.D., to be Surgeon-Lieutenant. *Rifle:* 4th Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant E. Roe resigns his commission. 1st Volunteer Battalion the Royal Scots Fusiliers: The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels: W. Wilson, M.D., and W. Frew, M.D. 6th Volunteer Battalion the Gordon Highlanders: James Taylor, M.D., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Highland Light Infantry: Surgeon-Captain H. St. Clair Gray, M.D., resigns his commission.

THE PARKES MEMORIAL PRIZE FOR 1894.

According to the *Pioneer Mail* of June 12th last, we have to congratulate Surgeon-Major Donald Ross, Madras Medical Service, on having won the Parkes Memorial Prize for his essay on "Malarial Fevers: their Causation and Prevention." We learn, moreover, from the same source that the Maharajah of Patiala, acting on the suggestion of Surgeon-Major Owen, his medical adviser, has applied for the services of a medical officer to carry out an investigation into the fevers which prevail in his State during the rains, and that the Maharajah has named Surgeon-Major Ross for the work. The Durbar are prepared to bear all the expenses of the inquiry, and it is to be hoped that the Indian Government will accede to the Maharajah's request. Fever is of all the diseases of India that which prevails the most extensively and causes the largest mortality among the natives of that country, especially when the soil of certain districts becomes waterlogged. There are several questions of a scientific and bacteriological character respecting the micro-organism of malaria in India requiring thorough investigation, and Surgeon-Major Ross having made a special study of the subject, in addition to having gained the Parkes Memorial Prize, seems to be eminently qualified to undertake such an investigation.

THE MEXICAN ARMY MEDICAL DEPARTMENT.

The *Army and Navy Gazette* says: The Mexican Army boasts of a medical department which is clearly sufficient for the needs of the sick soldiers. The medical officers consist of one brigadier-general, head of the department; one brigadier-general, chief inspector; two colonels, seventeen lieutenant-colonels, fifty-four majors, and twelve lieutenants on probation. Apothecaries: One lieutenant-colonel, two majors, two first-class captains, and five second-class captains. Administrative hospital officials: One lieutenant-colonel, four majors, and five second-class captains. Commissaries: One first-class captain, four second-class captains, and five lieutenants. Medical Staff Corps: One captain, three lieutenants, three sub-lieutenants, sixteen first-class sergeants, twenty-three second-class sergeants, thirty-nine corporals, and one hundred and sixty-eight privates. These figures show 124 commissioned officers to a strength of 246 rank and file.

"THE 'KISSING CASE.'"

The case which has been so frequently alluded to and commented upon by the Anglo-Indian press under the above heading will be in the recollection of our readers. A statement has recently appeared in some of the Madras papers that Surgeon-Major Clarence Smith will be reinstated in the Indian Medical Service provided that he consents to be tried by court-martial and is acquitted by the court of the charges brought against him. Whether this rumour be well or ill founded is more than we can say, but we see no reason for altering the opinion that we formed from the narrative of facts given at the time in the press—viz., that Surgeon-Major Smith had, under all the circumstances, been very severely treated, and that there were, at any rate, grounds for having the matter more fully investigated and reconsidered.

THE UNHEALTHINESS OF OOTACAMUND.

A paragraph in the *Times of India* of the 14th ult. refers to the very unhealthy condition of this favourite station and health resort of the Madras Presidency. For some time past there has been a good deal of sickness in this station, but during the present season the number of sick people at Ootacamund is said to be unprecedented. The prevailing diseases are stated to be throat affections, low forms of fever, and typhoid fever, pointing to the existence of such causes as defective drains and bad water-supplies. Several cases of sickness have occurred at Government House as well as at other parts of the station, and it is alleged that some of the visitors have preferred to return to the plains rather than incur the risk of contracting disease by remaining at Ootacamund.

FEVER AT MOOLTAN.

According to the Indian papers enteric fever has been unusually prevalent of late at this station. Several fatal cases have occurred at the station hospital. The men belonging to the new draft have been sent up to the hills as a precautionary measure and in order to gradually acclimatise them to an Indian climate.

EXAMINATION FOR STAFF-SURGEONS.

An examination of naval surgeons who are eligible to qualify for the rank of staff-surgeons will be held at Haslar Hospital on the 10th inst. Notice should be sent to the Inspector-General not later than to-day (Saturday), July 6th.

SURGEON-MAJOR ROBERTSON.

We are very glad to learn that Surgeon-Major Robertson, who was at the time of the latest intelligence from India staying at Simla, has quite recovered from the wound he received at Chitral.

CALCUTTA.

The Calcutta death-rate, although it has decreased, still remains high—11 per 1000 above the average. Fevers, small-pox, and cholera are unduly prevalent.

DEATH IN THE SERVICES.

We regret to have to announce the death of Surgeon-Captain George Nelis, A.M.S., attached to the Poona District at Bombay, on the 9th ult.

Two officers and eighty-nine non-commissioned officers and men of the Hants Company of the Militia Medical Staff Corps left Aldershot on the 5th inst. for the annual training at Netley.

Correspondence.

"Audi alteram partem."

IS METEOROLOGY A SCIENCE?

To the Editors of THE LANCET.

SIRS,—I have not seen the article in the *Edinburgh Review*, but I have read your interesting notice of it, in which the above question is propounded. As you justly say, if facts be accurately observed and recorded, leading to certain conclusions however slight, the subject investigated deserves to be called a science. At the same time meteorology appears to stand on altogether a different footing from the various branches of scientific inquiry in which mankind is engaged. In every one of these the question to be investigated, whether in the organic or inorganic world, has reference to the position of the subject in relation to its environments. Whether this be an inert mass of rock or an organic substance we seek for the influences acting from without which affect its constitution. We never suppose that a spontaneous change can occur in anything whilst the surrounding conditions remain the same. For this reason, in order to discover the nature of any substance, we submit it to experiments—that is, put it under new conditions.

We know nothing of the characters of objects in this world as existing *per se*, as these depend largely on their surroundings. We ourselves as human beings could have no separate

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existence from the earth, for, if the normal human body implies the possession of various organs with their tubes and contents, then the lungs with their tubes are included in the idea of a perfect man, and yet the contents of these tubes—the air—are manufactured outside ourselves.

Now as regards meteorology we use different language, we speak of changes originating within the globe itself. It may be true that all that is said about Polar ice and the Gulf Stream is correct, but the question is, Why should the wind blowing from the north into a warmer region produce a cyclone at one time rather than another? Why were the conditions altered which caused it? If we are speaking of any object on the globe and we observe that changes are occurring in it we look for the causes in its environments; we never believe in the possibility of a change without the operation of an external cause. It may be true that the earth is a globe of fire and that we inhabit only a thin cooled crust, and therefore internal conditions are ever present to produce a change, but if we compare the earth as a whole with portions of it, such as we deal with in scientific inquiry, we should naturally look to the earth's environments as the causes of change; now the only variable ones are the position of the planets and the heat of the sun. As regards the former, I believe observers have discovered that their position produces no influence on the earth, and this leaves the varying heat of the sun as the only known external factor to affect us. As far as we know, the conditions of the earth in space are always the same. We know the inclination of the earth's axis, and we should conclude that the seasons would be invariably the same, together with the trade winds and certain other constant phenomena. Why there should be the slightest difference in corresponding days of different years is the puzzle. The causes of uniformity are clear, those of dissimilarity are obscure. My point is that all objects in the world are dependent for their characters, in an unknown measure, on their environments, and that all scientific inquiry has reference to the altered condition of these environments and the observations of the new phenomena thereby produced. Now as regards the earth as a whole we know nothing of its environments (and perhaps never shall), and therefore we cannot study the changes constantly occurring on its surface in the manner we do in various branches of science. It, therefore, may be well asked, Is meteorology in the true sense a science?

I am, Sirs, yours faithfully,

Grosvenor-street, June 29th, 1895. SAMUEL WILKS.

"THE DISCOVERY OF ANÆSTHESIA."

To the Editors of THE LANCET.

SIRS,—As it is a question of considerable historic interest to be settled, I beg leave to trespass a little further on your space to reply to the letter of Mr. W. Rogers Williams in THE LANCET of May 4th, in which he urges the claim of Morton as being the discoverer of anæsthesia by means of ether for prolonged surgical operations. Without doubt there is a vast difference between the discoverer or inventor and the one who popularises or makes widely known the discovery or invention. That has often been demonstrated in the cases of our most noted inventors. The original brain-work generally receives neither the credit nor emolument due to its genius. I take up the historical facts in Mr. Williams' letter and appeal to any fair-minded person to say whether or not all of the credit for the discovery of the anæsthetic properties of nitrous oxide gas is due to Sir Humphrey Davy? That this discovery did not excite general attention resulting in the extensive practical use of gas as an anæsthetic was simply owing to the general stupidity of mankind at that time. Does Wells deserve the name of discoverer of this application of the gas in surgery? He may have made the remark, "A new era in tooth-pulling," after he came from under the influence of the anæsthetic, but Sir Humphrey Davy had out his wisdom tooth painlessly by this means forty-four years before that time, and two years before that Long of Georgia had done his immortal operation under ether narcosis.

As for Wells having "thoroughly grasped the anæsthetic idea," and thus being worthy of laud, it may be stated that the "anæsthetic idea" had been evolved long before Wells' sojourn on our planet; alcohol, opium, hemp, and mandragora were well-known anæsthetic agents, and the "memorable sentence" of our opportune friend, Sir Humphrey Davy, shows plainly enough that he too understood quite well the idea of anæsthesia. It is impossible, likewise, that any man of average intellectual power should fail to appreciate the "far-reaching importance" of a good practical anæsthetic. Nor is the matter of publication in some journal a criterion in discovery, nor should such a standard ever be elevated.[1] Facts are facts whether they be published or not, and in this case we have certain plain cold facts that would tickle the palate of Mr. Gradgrind, were that gentleman capable of any feeling. Granted that "publicity" be the "touchstone of invention," I have proceeded to pour a little of the reagent of truth upon its marred surface, and lo! the tiny glittering streak of precious history appears, as the marks of the base-metal simulations are dissolved. In this metaphor let us put far from us the notion that the touchstone should be anything but a faithful touchstone, giving true reactions. No just man will admit, however, that "publicity" in the sense of energetic publication or widely diffused statements is any proof of right. Too much injustice has already been done by thus rendering imposition easy.

Facts may be piled up as high as the sky as to what Wells did, what Jackson did, and what Morton did, but the plain, unvarnished truth is that Long did the first well-authenticated surgical operation under ether, and that operation was performed in 1842, two years before Wells' tooth was pulled under gas, four years before Morton extracted Eben Frost's tooth by means of ether anæsthesia. It is to be hoped that the gyrations of Wells, Morton, and Jackson will not confuse the perception of the unprejudiced bystander. It is curious to observe the persistent indifference to Long's rights manifested by the standard histories of this subject. And I shall be happy if I live to see his name[2] taken from the depths of fast-thickening obscurity and placed upon its proper ledge, so that the waves of oblivion shall not close over it. It is left to the world and its posterity to measure out the amount of praise to be bestowed upon the discoverer of ether narcosis; nor is it my part to urge that one jot of rightful meed should be taken away. I call for exact differentiation. Give the discoverer his praise and the promoter or populariser his credit, to each such as may be his due. Giving heed to the value of your space and time, I shall not discuss this matter in the future unless, Sirs, you honour me with the signal for another tilt. I shall be glad to see a reply from Mr. Williams, however, as I feel fairly confident that he, at least, will "e'en gang his ain gait" regardless of what has been said to change the general opinion in this matter. With many thanks for your kindness,

I am, Sirs, yours very sincerely,

Lynchburg, Virginia, May 18th, 1895. S. P. PRESTON, M.D.

"THE REMUNERATION OF MEDICAL OFFICERS TO PROVIDENT ASSOCIATIONS, CLUBS, ETC."

To the Editors of THE LANCET.

SIRS,—As this question is in one form or another engaging considerable attention in the profession, it is most important that we should be accurate in our statements regarding it. In THE LANCET of June 22nd Dr. Paget Thurstan makes an elaborate calculation, based upon an assumption of one month's sickness per head per annum, which he states that he has taken from Mr. Neison's statistics. I fear that our great friendly societies would be in a bad way if this assumption were correct. The fact is, Dr. Thurstan has confused the "average duration of sickness per member sick" with the "average number of days' sickness per member per annum," which is, of course, a very different thing. The figure for the latter is as nearly as possible nine days (*vide* Newsholme). In a provident society of 1000 members, each paying 4*s.* per annum, the medical officer would receive £200 per annum. He would have to attend 9000 days' sickness, or 9000 ÷ 365 = 25 members constantly sick; this gives him

[1] In 1668 it became known to Halley, the eminent mathematician, that (Sir) Isaac Newton had discovered the principle of reciprocal attraction gravity which regulated the planetary movements, but such was his modesty that Halley could with difficulty induce him to claim the great discovery, afterwards elaborately embodied in the "Principia."

[2] Dr. Crawford W. Long was not an "English physician." He was born in Danielstown, Madison County, Georgia, Nov. 1st, 1815; died in Athens, Georgia, June 16th, 1875. Educated at Franklin College, Pennsylvania, 1835; University of Pennsylvania, 1839. Practised in Jefferson County, Georgia, and in 1851 moved to Athens, Georgia.—Appleton's Encyclopædia of American Biography.

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£8 per annum for each such member. In my experience, however, of a mixed provident society—containing men, women, and children—I find that nine days' sickness per member per annum is an excessive estimate, and that six days is nearer the mark—the reason being that in the large friendly societies (in which the members receive sickness pay) it is seldom the case that a man returns to work directly he is fit to do so; in fact, during the last third of his nominal sickness he often has no medical attendance at all. I quite agree with Dr. Thurstan "that it is possible for the profession to form an association amongst themselves," as this has already been done in many places, but that a shilling per member per month will be paid by the British artisan is an expectation which will not be realised for many years. We have to fight the lay societies, run on commercial lines, who want to "sweat" us for their own profit; and in order to do this we must accept the current rates, gradually raising them after we have obtained control.

I am, Sirs, yours faithfully,

Wandsworth, S.W., July 1st, 1895. W. G. DICKINSON.

ROYAL FREE HOSPITAL: THE OPENING OF THE NEW BUILDINGS.

To the Editors of THE LANCET.

SIRS,—As President of the Royal Free Hospital I have the honour to announce that their Royal Highnesses the Prince and Princess of Wales have graciously consented to open the new front building of the hospital on Monday, July 22nd.

The cost of the new buildings and of various other improvements which have been carried out during the past two years amounts to £30,000, towards which sum £24,000 has already been raised.

I now ask your favourable consideration to the appeal of the committee, feeling assured that I may rely upon your generosity to assist them in obtaining the sum of £6000 which is still required to enable them to carry on the benevolent work of the hospital free from debt.

I have the honour to be, Sirs, your obedient servant,

British Embassy, Paris, July 1st, 1895. DUFFERIN AND AVA.

DETENTION IN THE OUT-PATIENT DEPARTMENT.

To the Editors of THE LANCET.

SIRS,—Your interest in the sick poor attending our London hospitals, and your efforts for the success of the annual collections on Hospital Sunday are so well known that I feel sure I may rely upon your sympathy for that vast number of out-patients who daily throng the hospitals. In the *Graphic* of June 15th, beneath a picture faithfully representing the common spectacle at the receiving-rooms of most of the large hospitals, the following occurs: "In the waiting-room, depressing and rather murky looking in spite of its large area of window-glass and its ostentatious air of being well scrubbed every morning, the patients sit awaiting their turn to see the surgeon. They are of many ages and of one class; but the characteristic which is most strikingly common to all is their patience and their quietude." It is the experience of the parochial clergy that the weary hours of waiting to see the physician, or to obtain the medicine after the interview, are a cause of intense mental, and not infrequently, of physical suffering to the patients. Sometimes a mother will have to wait for hours with a sick child in a vitiated atmosphere, and amid most painful surroundings. For many delicate invalids suffering is prolonged in the melancholy waiting-room for four, six, or even eight hours waiting the convenience of surgeons, physicians, and apothecaries. Some come from a distance, while others have to give up a whole day's work and lose a day's wages for an interview of a few minutes. Why has there been so little reform in this direction? Is it that the physicians and surgeons are in league to resent the smallest interference? Or is it that governors or secretaries will not attend to details so minor in their estimation, so important in the eyes of the sufferer and his friends? We clergy are often called upon to defend in public, or in private, the hospital system from the attacks of antivivisectors, sectarians, and ignorant or prejudiced persons, but this is a grievance which has no defence, and will, if continued, alienate the best supporters of our hospitals. Will the authorities consider this matter from the patient's point of view and arrange for patients to attend in batches at various and fixed hours throughout the day? There can be no difficulty in arranging this by means of different-coloured letters for the unendowed hospitals with different hours appointed, and for the open hospitals mere receiving hours being fixed, or different hours arranged for the various London districts.

I am, Sirs, yours faithfully,

St. Philip's Vicarage, Sydenham. A. EDMUND KING.

"THE CAIRO LUNATIC ASYLUM."

To the Editors of THE LANCET.

SIRS,—In common with all who are interested in the medical and sanitary prosperity of Egypt, I am delighted to learn that at last a specialist in lunacy has been placed in charge of the Cairo Asylum, and have no doubt that before Dr. Warnock's two years have elapsed the advantages resulting from the appointment will have become so evident that it will be made permanent.

Notwithstanding her population of seven or eight millions, Egypt possesses one single establishment only for the reception of the insane of all classes; and hitherto, for lack of a competent physician, there has been no attempt to treat the demented patients in accordance with modern scientific methods; but you will, I trust, allow me to say that as soon as the asylum was placed under British control in 1884 an endeavour was made to find occupation for the inmates, so that they should not be obliged "to sit idly on their beds all day." Dr. Sandwith and Dr. Keatinge commenced the reform by instituting workshops on as large a scale as was practicable, and in my time lunatics were "engaged in the garden, laundry, and kitchen," while a few worked as tailors and carpenters, and a good many as matmakers, the latter industry bringing in a small revenue which was expended, by special permission of the Finance Committee, on the purchase of tobacco and other luxuries. Of course, the patients could not be compelled to work unless they chose, and in spite of the allurements of cigarettes and coffee it was impossible to induce the majority to do anything. Many of them, to the best of my belief, were simply incurably lazy, preferring a life of well-fed idleness in prison to hard labour and scanty food outside. I recollect the man who posed as the Mahdi, but never heard of his attainments as a gardener. It will be interesting to learn later Dr. Warnock's views regarding the cause of the wonderful freedom from mental derangement enjoyed by the Egyptian people. There is probably no country in the world where the insane are relatively so infrequent.

I am, Sirs, yours faithfully,

St. John's, Woking, July 1st, 1895. H. R. GREENE.

"CHOREA GRAVIDARUM."

To the Editors of THE LANCET.

SIRS,—I am interested to see from the summary of Dr. R. C. Buist's paper on Chorea Gravidarum, reported in THE LANCET of June 22nd, that the exaggerated statements regarding the mortality of this disease are being corrected. In a paper on this subject published in vol. xxxiii. of the Transactions of the Obstetrical Society of London, 1892, I drew attention to this point, showing that the chief reasons for these conflicting statements seem to be due (1) to the fact that only the severe cases are published, and (2) to the small number of authentic published cases from which conclusions may be drawn. With regard to the causation of maternal deaths, it is necessary to recollect that, owing to the cachectic state of the system, delivery either at term or prematurely is prone to be attended by additional risks, and more liability to septicæmia. The extreme exhaustion which takes place in severe forms of the disease leads to death before the fœtus is delivered. This is brought about by the anæmia, the rapid emaciation occurring in some cases, the intensity of the movements, and in addition the loss of sleep wearing out the already partially exhausted nervous system. In the paper mentioned the indications given for the induction of premature labour are these: (1) where the mother's system is showing signs of exhaustion from the intensity of the movements and the deficiency of sleep, and where a continuance of the pregnant state is dangerous; (2) where mania or a serious mental affection exists; and (3) where grave complications such as heart disease exist. When the literature of the subject is examined so many cases are found described as chorea

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gravidarum which have no resemblance to the true disease that it would be well for those who are fortunate enough to meet with examples of this malady to publish their cases fully. I have now seen twelve cases of chorea during pregnancy, all of whom recovered. The recurrence of chorea in subsequent pregnancies appears to resemble ordinary chorea in that relapses may or may not be more severe than the first attack. If chorea has occurred during childhood it is more apt to appear in successive pregnancies, and the younger the patient is during the first pregnancy the greater the liability to recurrence.

I am, Sirs, yours faithfully,

F. J. MCCANN.

Welbeck-street, Cavendish-square, W., June 27th, 1895.

"IN THE MATTER OF MR. T. R. ALLINSON."

To the Editors of THE LANCET.

SIRS,—Your report of the case before Mr. Curtis Bennett is so erroneous in view of the shorthand notes before me that I hasten to correct it, with an intimation that the shorthand transcript can be seen at my office. The magistrate held that Mr. Allinson was never entitled to use the letters of L.R.C.P. without the addition of E. or Ed. for Edinburgh, and that L.R.C.P. could in law be used for London only, and on this fined Mr. Allinson. Mr. Muir Mackenzie signified his agreement with Mr. Allinson's counsel (Mr. H. S. Schultess Young) that a medical man's name being removed from the Register did not interfere with his right to practise, and this fact has been expressed by Mr. Justice Matthews in Allbutt's case and Lord Justice Lopes in a subsequent action. The point practically decided by the magistrate was that L.R.C.P. meant of London only, and that a medical man using these letters may be convicted unless he has the London diploma or writes E., Ed., or Edinburgh after them. I venture to think this point is of general interest to the profession, and shall be obliged by your inserting this letter in your next issue. I am, Sirs, yours truly,

B. ALABONE CHEVERTON,
Solicitor for Mr. Allinson.

Essex-street, Strand, W.C., July 2nd, 1895.

DEATHS UNDER ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 29th one of your Irish correspondents relates a case of death occurring under chloroform in a patient suffering from empyema. I would suggest that, for incision and drainage of the pleural cavity in cases of empyema where the heart is so much displaced by the effusion that syncope is very liable to suddenly occur, a local anæsthetic is advisable. I have repeatedly seen large empyemata freely opened and drained, the skin over the line of incision having been previously frozen with ethyl chloride or anestile. The operation was done in the usual way and a large drainage-tube introduced. The patient from first to last did not complain of pain, nor were there any signs of shock. The operation of thoracoplasty, of course, requires a general anæsthetic, but as it is not an urgency operation there is usually time for the patient's general condition to be so far improved that a general anæsthetic can be better borne.

I am, Sirs, yours truly,

J. H. MARSH, M.R.C.S., L.R.C.P.,
Senior House Surgeon, the Infirmary, Macclesfield.

June 29th, 1895.

"THE MISUSE OF HOSPITALS."

To the Editors of THE LANCET.

SIRS,—As the point raised by Mr. Biddle is important, it may be well to state that our *Hospital Sunday Supplement*, which he quotes, deals with patients, not with attendances. Thus the tables for 1894 were prepared carefully by the authorities of the Hospital Sunday Fund, relate only to patients, and show that 1,383,634 distinct patients were treated in 1894 at the institutions whose names are given. The figures quoted by the preachers are as precise and accurate as it is possible to make them. They have been compiled from official sources, and the detailed tables are in our possession. Something will have been gained by their publication if the medical profession can be got to realise that, including the endowed hospitals, 1,695,276 actual patients found their way to the hospitals and institutions in 1893, all of whom received some kind of treatment. The only qualification of these figures that we know of is the possibility that in some cases the same patient may have attended at more than one hospital during the year.

I am, Sirs, your obedient servant,

THE EDITOR, *The Hospital.*

Strand, W.C., June 28th, 1895.

"DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT."

To the Editors of THE LANCET.

SIRS,—Your opinion on the following case will be highly esteemed. I am a young practitioner trying to work up a practice, and am conversant with public health work. A few days ago I notified a case of diphtheria occurring in a woman who had facilities for isolating herself and who preferred not to go to hospital. On calling next morning I found that the medical officer of health, who also practises, had visited my patient, and in addition to making his inquiries and examination of the premises went into all the circumstances of my patient's case, and then, saying he was a medical man (for my patient, not knowing him, was greatly surprised at his questions) asked to examine her throat, which he did. Having learned that he had done the same thing in another case I wrote charging him with breach of professional etiquette and rather ungentlemanly conduct towards me, as he had never even hinted at his intention; adding that I thought it probably due to a want of thought on his part, I could not allow anyone to interfere with my patients in that manner. He did not reply himself, but through the sanitary inspector begs to acknowledge the receipt of my letter and to say he has forwarded it to the council (local, I presume). If the council take up the matter should I decline to meet it on the ground that it is a private and professional matter outside its jurisdiction. And was I not justified in acting thus? I am, Sirs, yours truly,

July 2nd, 1895. PHAGOCYTE.

*** We are not inclined to regard the matter as of private professional concern only; and this because it is the conduct of a public official which is concerned, and because this official has referred the matter to the public authority whom he serves. The writer would do well to make himself fully conversant with the precedents and letters of the Local Government Board relating to this matter which are published in our articles of January and February last, entitled "Difficulties under the Infectious Disease (Notification) Act," notably the second article, issued on Jan. 26th. A communication should then be addressed to the district council in question, such communication to refer to the precedents which are most apt, and the council should be asked whether it is with authority that the action referred to was taken by their officer. Copy of the correspondence should be kept with a view, if need be, of appeal to the Local Government Board for their opinion and judgment.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENTS.)

City Recreation Grounds.

WHAT was begun some years ago as a doubtful experiment has become a great success. One by one the city churchyards are being converted into recreation grounds pleasing to the eye and a great boon to the poorer citizens living near them. A greater contrast than these spots before and since their conversion could hardly be imagined. There are good grounds for believing that this very desirable movement will continue until the old city churchyard, so graphically described by Dickens, becomes a thing of the past.

"Clerical Breakdown."

Sir Dyce Duckworth's paper and the annotation in the last issue of THE LANCET possess much local interest, the name of Duckworth being very familiar in Liverpool, while the subject of his lecture is brought very prominently before the local

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profession and the public by paragraphs announcing the fact that the Rev. —— has been ordered by his medical advisers to take several months' holiday, and that he has gone to the Canaries, the Mediterranean, or on even more distant voyages. The return of the reverend gentlemen from these travels to their sphere of duty is also duly chronicled, the rest and change being generally of great benefit. It is quite within the recollection of middle-aged men that a clergyman would have thought himself very hard-worked indeed had he been left to take two full services by himself on Sunday. The Rev. Charles Honeyman sighed when invited by Colonel Newcome to breakfast at nine; what would he have thought of services at eight or even an earlier hour followed by morning, afternoon, and evening services every Sunday, with daily services and frequent sick calls? The architecture of many local churches is rather behind date, and the lofty pulpit in which the preacher is subjected (especially in the evening) to an over-heated and vitiated atmosphere must be very trying to the health.

Grave-plots in lieu of Vaults.

At the seventeenth annual meeting of the Church of England Burial, Funeral, and Mourning Reform Association, which was held on Wednesday, June 26th, in Stafford House, London, by permission of the Duke of Sutherland, the report for the year was read. In this report the thanks of the society are rendered to Mr. F. W. Lowndes of Liverpool for suggesting that grave-plots be substituted for vaults, burial in a grave-plot being the only mode which really meets the wishes of those who desire to rest together in death. A vault becomes full, to the disappointment of the survivors, and a new vault, probably in another place, must be provided; whereas a grave-plot of sufficient length and breadth, surrounded and separated from the adjoining earth by coping, might contain the remains of families for generations if the practice be adopted of "side-by-side" burial in perishable coffins at reasonable distances of time. Such plots might be made small gardens, a tree planted, and flowers grown from year to year to tell of a joyful resurrection.

July 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Dr. Niven's Report for the First Quarter of the Year.

LAST winter was so exceptionally severe that a few facts, taken from Dr. Niven's summary of the weather, may well be noted. The mean temperature for the thirteen weeks was 4·4° F. below the average for the first quarters of the last ten years. There was much less than even our usual poor allowance of sunshine, the Jordan's Photographic Recorder in Oldham-road registering ninety-nine hours, which period only equals 11 per cent. of its possible duration. The average amount for the quarter during the previous three years was 164 hours. At the Stonyhurst Observatory the amount for the quarter was 210 hours and its proportion 23 per cent. The only factors likely to cause this difference are the sparseness of the population and the absence of manufacturing smoke at Stonyhurst. No doubt the severe cold caused increased smoke from household fires, which would add to the dark cloud above, but one manufacturing chimney equals in smoke production that of very many private dwellings, as evidenced by the immensely greater density of the fumes sent forth. The mean height of the barometer was 29·841 in., being practically identical with the average in the corresponding periods of the previous five years. The amount of rain measured at the City Observatory was 6·848 in., being about half an inch above the decennial average for the quarter. January was marked by squally weather with much rain and snow, becoming colder as the weeks passed by. The mean temperature was 33 6°—i.e., 5·7° below the average of the corresponding period of the previous ten years—the coldest day being the 28th, when the mean temperature was 25·0°. During the month we had twenty-two hours of sunshine—at Stonyhurst there were sixty-three hours—but our twenty-two hours were above the average of January, which for the last three years has been nineteen. February was colder even than January, the mean temperature for the four weeks being 31·5°, which is 7·9° below the average for the month during the previous ten years. On the 6th—the coldest day—the mean for the twenty-four hours was 22·4°. The mean height of the barometer was 30·130 in., being higher by 0·148 in. than the average of several years. Very little rain fell, and we had forty-three hours of sunshine in the four weeks, while the average for the month during the last three years was thirty-seven hours. Frost occurred on twenty-six days. In March the weather became rapidly milder, but there was very little bright sunshine. Rain fell on eighteen days of the four weeks to the aggregate amount of 3·181 in., being nearly 1·5 in. above the average. The mean temperature for the month was 42·3° which is slightly higher than the average and nearly 11° above that of February.

Births.—During the thirteen weeks of the quarter 4791 births were registered in the city, equalling an annual rate of 36·5 per 1000 of the population.

Sickness treated at the public expense.—The cases treated at the public hospitals and dispensaries were 12,030, an increase of 1678 as compared with the number treated in the first quarter of 1894.

Infectious sickness.—665 fresh cases were notified, against 1025 in the preceding quarter, and 820, the average for the first quarters of the previous three years. Small-pox was absent during the whole of the quarter. Scarlet fever was rather more prevalent than is usual, the notified attacks equalling an annual rate of 3·17 per 1000, the average being 2·96. In the last quarter of 1894 the rate was 5·57. Diphtheria was less prevalent than usual, the reported attacks being equal to an annual rate of 0·87 per 1000. Enteric fever also was less prevalent than usual. It is curious that there was less scarlet fever and enteric fever in the old townships than in the other and more salubrious districts of Manchester. The mortality returns indicate a greater prevalence of measles and fewer cases of whooping-cough than we generally have in the quarter. Influenza again visited Manchester during this quarter, 2 fatal cases occurring in January, none in February, and 106 in March. Since then it has been declining, but it has not yet left us.

Deaths.—These, influenced no doubt by the low temperature, equalled a corrected annual rate of 26·8 per 1000 of the population at all ages estimated to the middle of the year, which is more than 9 per cent. above the mean rate for the quarter. In the old township the rate was equal to 37·6 per 1000, in North Manchester it did not exceed 20·4, and in South Manchester it equalled 24·0 per 1000. The Manchester rate exceeded that of the thirty-three great towns by 1·6 per 1000. In London the death-rate was 26 0, in Edinburgh 30 5, in Glasgow 34·8, and in Dublin 37 1. The rate of infantile mortality was 165 per 1000 during the quarter, against 168 in the first quarter of 1894, and ranged from 138 in North Manchester to 208 in the old, or Manchester, township, this high rate telling plainly of bad sanitation and a degraded social and moral condition.

Dr. Niven again expresses his regret that in Manchester, with more than 500,000 inhabitants, so few direct complaints are made to him on matters concerning the public health—only sixty during the three months. The people themselves are apparently indifferent, but they owe a deep debt of gratitude to the Chief Constable and the police for the 2024 separate informations given to the medical officers of health during the quarter.

Degree Day, Victoria University.

On the 29th ult. a large assemblage took place in the Free Trade Hall to witness the conferring of degrees. The Vice-Chancellor, Professor Ward, presided, and was supported by the Principals of University College, Liverpool, and Yorkshire College, Leeds. He said that the annual statement was a plain record of steady progress, and spoke of the University having now "definitely made good its title to a place of its own among the chief educational institutions of the kingdom," and of the impress which time had already left in the death, at the beginning of the session, of Dr. J. G. Greenwood, the first Vice-Chancellor and late Principal of the Owens College, and within the last few days of Professor W. C. Williamson. To the memory of both he paid a graceful and touching tribute. The candidates presented for degrees numbered 118. In June, 1894, there were 115 and in June, 1893, ninety-one. Among them were a Doctor of Science and five Doctors of Medicine. Professor Ward said he had no doubt that the number of graduates in the faculty of medicine during the present session would make possible an equally favourable comparison, although for this the results of the July examinations would have to be awaited. He also mentioned the fact that the Victoria University has been included among the universities at which selected candidates for the Indian Civil Service are allowed to pass their probation.

July 2nd.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Mr. Gladstone's Farewell to Midlothian.

AT a meeting of the Midlothian Liberal Association held in Edinburgh on Wednesday afternoon last Mr. Gladstone's formal letter of farewell to his constituents was read. Such a communication can hardly be treated as a matter of politics purely, much less as a matter of party politics, by the most prejudiced of partisans. And to our profession it has a special interest, being the closing scene in a career of unexampled endurance. For sixty years Mr. Gladstone has been in the van of his party, ever contesting, pleading, conciliating, proselytising, and leading, and it is impossible to estimate the strain upon even his physical system that this perpetual intellectual restlessness, coupled generally with no light demands upon his bodily strength, must have been. Yet at the advanced age of eighty-five he remains the possessor of a physique that many a young-old man of forty might envy him. Politics purely apart, Mr. Gladstone must always be an object of respectful interest to the medical man as a remarkable example of a perfect combination of the highest intellectual and physical qualities.

Edinburgh Royal Infirmary.

The much-talked-of enlargement of the buildings of this institution has at last got one step forward, as the managers at their last meeting have adopted the report of a commission appointed to consider certain questions of rebuilding.

The Harveian Festival.

The Harveian Festival took place at the buildings of the Royal College of Physicians of Edinburgh on Friday last, June 28th, when Dr. David Yellowlees delivered the annual oration.

Sir Henry Duncan Littlejohn.

The announcement that Her Majesty has been pleased to grant to Dr. Henry Duncan Littlejohn, the medical officer of health of Edinburgh, the honour of a knighthood has been received with general satisfaction, not only by the friends of the recipient of the honour, but by the inhabitants of the city over whose public health he watches untiringly.

The New Secretary for Scotland.

The appointment of Lord Balfour of Burleigh to be the new Secretary for Scotland will be learned with more interest than usual by medical men, as his lordship is the sponsor of the Midwives Registration Bill. Lord Balfour is a Scotch representative peer, and therefore in possession for a term of a seat in the House of Lords, and has been Parliamentary Secretary to the Board of Trade.

July 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Workhouse Hospital Reform.

UPON June 25th a deputation organised by the Irish Medical Association waited upon the Irish Local Government Board to consider the subject of workhouse hospital reform. The deputation, which was received by Mr. George Morris, the Vice-President of the Board, and Mr. H. Robinson, consisted of the following members: Dr. Henry Oulton, chairman of council; Dr. Arthur Benson, secretary of council; Dr. Jacob, secretary of association, as representing the Irish Medical Association; Dr. Walter Smith, president; Mr. Andrew Horne, vice-president, as representing the Royal College of Physicians of Ireland; Dr. Thornley Stoker, president; Dr. William Thomson, vice-president, as representing the Royal College of Surgeons in Ireland; Dr. James Little, president, as representing the Royal Academy of Medicine in Ireland; and Drs. Moorhead (Cootehill), Wilson (Castleblayney), and Lesper (Rathdrum), representing the workhouse medical officers. There were no reporters but it was expected that the result of the conference would soon be made public.

Trinity College, Dublin.

Dr. Charles Ball has recently been appointed University Anatomist and Dr. E. H. Taylor University Examiner in Anatomy.

Ulster Medical Society.

At the annual meeting of the above society held on June 27th the following were elected office-bearers for the session 1895-96:—President: Professor Sinclair. Vice-Presidents: Dr. Bingham and Mr. Mackenzie. Honorary Treasurer: Dr. Kevin. Pathological Secretaries: Dr. Lorrain Smith and Dr. Lynass. Librarian: Dr. Shaw. Secretary: Dr. McKisack. Council: Dr. Lindsay, Dr. McCaw, Dr. Dempsey, Dr. Calwell, Dr. Bigger, and Dr. McDonnell. It was decided that during next session the meeting shall be held at 8.30 P.M. instead of at 4 o'clock.

The Ballymacarrett "Mystery."

On Friday, June 28th, an inquest was held in Soldierstown, near Moira, county Down, in reference to the death of a woman named Robinson, regarding whose decease some ridiculous rumours had been put in circulation through certain parts of Belfast. As the coroner (Dr. Mussen) stated in opening the inquiry, the deceased died on May 11th, and she was certified as dying from a certain disease; but rumours occurred among the relatives that the real cause of death was not what was certified by the medical men who attended her, and these coming to the ears of the authorities, they deemed it right that the matter should be cleared up and for ever set at rest in connexion with the death of the deceased. The coroner regretted that these suspicions had not been mooted earlier to the authorities, as it was now seven weeks from the woman's death; but he thought it was better they should be cleared now, both for the satisfaction of the relatives as well as of the medical men in charge of the case. From the evidence it would appear that Margaret Robinson, a young married woman twenty-seven years of age, living in Ballymacarrett, Belfast, gave birth to a male child on May 4th, the infant being born when Mr. Cathcart arrived. She went on quite satisfactorily until about eight o'clock in the evening of the second day, when in consequence of a message he paid her a visit (he had already seen her in the forenoon of that day) and found her in pain and vomiting, and on examination he detected a swelling on the right side. Looking upon her case as serious, Mr. Cathcart thought it advisable to have another opinion, and a neighbouring medical man, Dr. Smylie, was called in. After examining her they satisfied themselves that the uterus was empty, but that she had a tumour, and that as far as her confinement was concerned she was suffering from no ill effects from it. They then asked that another medical man should see her, and Dr. Campbell was brought in consultation. He agreed with them that there was a tumour, and told the husband that an operation would be necessary on an early day if there was any prospect of saving her life, and urged her removal to the Samaritan Hospital. Her husband declined to take this course, and Dr. Campbell retired from the case. The woman getting no better, Dr. Darling of Lurgan, who knew her and her friends, as they had come from his neighbourhood, was next brought to see Mrs. Robinson on Tuesday, May 7th, with Mr. Cathcart. He agreed with the diagnosis already made, and recommended the woman's removal to a hospital. The relatives said they thought a child was left in the uterus, but he assured them that there was nothing of the kind. Finding that his wife was getting no better, the husband at last had her removed to the Samaritan Hospital on Tuesday, May 7th, but on condition that no operation was done without his consent, and on Saturday, May 11th, she died in that institution, the husband not having given his consent to an operation being performed. Dr. Campbell was most anxious for a necropsy and recommended the husband to allow this to be made, and pointed out to him how dissatisfied he (Dr. Campbell) was that he had not been allowed to treat the patient in the way all the medical men had agreed was right. The husband asked Mr. Cathcart for a line to enable the body to be taken to Soldierstown, and after the medical man found that he (the husband) was averse to a necropsy being made he did so, but he also wanted a post-mortem examination. The woman's husband taunted Dr. Cathcart in reference to the certificate, remarking that if he knew what was the cause of death there was no reason why he should not give a certificate. When the husband asked Dr. Campbell for a certificate on the evening of the day his wife died, he declined, as he naturally wished the matter cleared up by a necropsy. This, however, as I have said, was refused, and when the husband returned to Dr. Campbell on the day he had buried the body he (Dr. Campbell) gave

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him the usual certificate to the effect that the primary cause of death was an abdominal tumour, and the secondary peritonitis. After the woman had been buried the people in the district began to talk; all sorts of rumours prevailed, and one of the most ridiculous was that there was a second child undelivered. Finally, the authorities in Dublin decided to hold an inquiry, and they instructed Dr. Macan to make a post-mortem examination. Accordingly Dr. Macan (the body having been exhumed) examined the remains on June 25th, and found the uterus empty, but there was an ovarian tumour of the right side with a twisted pedicle. There was not much peritonitis, Dr. Macan said, but possibly hæmorrhage; but the tumour was ruptured, and, in his opinion, the rupture of it caused death. The uterus was healthy; there were no remains of a child, and he thought an operation would have been the proper treatment, not in a little back room or kitchen, but in a hospital. A juror having asked what led to the inquiry being held, the coroner, producing a bundle of papers, replied that if he had read what they contained he would understand the matter. There was enough in them to hang a man. The medical men, however, he said, would leave that court without a stain on their professional reputation. One of the solicitors in the case, who appeared on behalf of Mr. Cathcart and Dr. Smylie, asked the coroner for copies of the depositions already sworn in the case, but the police authorities objected, saying the more regular way would be to apply for them elsewhere, and the coroner declined to give them. At the conclusion of the evidence the jury found "that Margaret Robinson died on Saturday, May 11th, 1895, at the Samaritan Hospital, Lisburn-road, Belfast, from natural causes—viz., the bursting of an ovarian tumour. The jury are of opinion that every care and attention was given to the deceased by the medical men who attended her." Thus has ended an inquiry in the complete vindication of the professional character of all the medical men concerned in the case. The only pity is that the jury did not add a rider to the effect that those were blameworthy who refused their consent to an operation.

The Queen's College Professors.

Mr. Rentoul, M.P., having forwarded to Mr. John Morley, M.P., a memorial signed by all the Ulster Unionist members and by a dozen Nationalist members, referring to the cases of Professor Meissner of Belfast and several other professors of Queen's College whose salaries had greatly decreased owing to the abolition of the Queen's University, Mr. Morley replied that the question had already been dealt with by their Lordships of the Treasury under a former Government, and on several occasions, and that after very careful consideration they did not feel able to grant compensation in such cases. Mr. Morley also stated that the question was tested by Professor Pye, M.D. Irel., of Queen's College, Galway, by means of a petition of right, and that the case was decided against him with costs.

Belfast Dispensary Committee.

At a meeting of this committee held on July 1st, Mr. Dundee resigned his position as medical officer of the Carnmoney district. His successor is to be appointed at the next monthly meeting.

The Listowel Guardians and the Irish Medical Association.

At the last meeting of the Listowel guardians the chairman, Mr. M. J. Nolan, J.P., delivered a very able and exhaustive speech, in which he contended that the strictures of the Irish Medical Association with regard to the management of union hospitals could not apply to the Listowel union. He compared the dietary of twenty years ago with that of to-day, and showed that whilst in 1875 seventy-three hospital patients got only thirty-three pounds of meat and twenty-four quarts of milk as extra diet, last week in their hospital 110 patients got 245 pounds of meat, 438 quarts of new milk, and 2408 eggs, besides bread, skim-milk, and tea. With regard to bedding, they had wire-woven spring bedsteads with fibre mattresses. "Nothing could exceed the cleanliness of their well-ventilated hospitals and the anxious care with which the wants of the sick poor therein were attended to by the medical officer, the sisters, and the attendant nurses in charge." A most remarkable reduction had also taken place in the death-rate amongst all the inmates of the workhouse: twenty years ago it was very nearly double what it is at present. The statement of a witness before the Financial Relations Committee that some of the Irish unions are mismanaged financially was also animadverted on by the chairman. He admitted that the rates in Listowel union had gone up enormously during the past twenty years. They are now 2*s.* 10*d.* in the pound as against 1*s.* 2*d.* twenty years ago—in other words, for every £1000 of poor's rates then levied they now required more than £2400. But many things tended to produce that result. For instance, expenses connected with Registration, Jurors, and Voters Acts, &c. were now levied off the poor's rates, and in addition to that the actual amount of poverty to be relieved has greatly increased during the past twenty years. This latter state of affairs he mainly attributed to emigration, which, he asserted, results in the vigorous and strong leaving the country, whilst the weakly, the very young, and the very old remain behind a burden on the rates. The guardians were so pleased with the chairman's statement that they decided to have it printed and circulated.

The Limerick District Lunatic Asylum.

A committee of the board of governors of the Limerick Lunatic Asylum last Thursday met the two medical inspectors and the engineer of the Board of Control for the purpose of conferring with them as to the best means of enlarging the accommodation of the asylum. As the result of the conference, the committee decided on recommending that a detached building shall be erected as a hospital for acute cases, and capable of receiving 150 patients. It is also proposed to erect a new residence for the medical superintendent, and the committee further suggest that thirty additional acres of land should be purchased for farming purposes.

Cork District Lunatic Asylum.

Upon the resignation of Mr. G. B. Wilson of his post as assistant medical superintendent on the ground of ill-health, the governors of the institution unanimously resolved to recommend the Board of Control to grant him the largest pension in their power.

July 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

International Statistics.

THE question of the depopulation of this otherwise highly favoured country is continually coming to the fore, and the seriousness of the situation was placed *en évidence* the other day at the Conférence Broca of the Société d'Anthropologie by M. Chervin, who gave the following figures:—

Number of married of both sexes per 1000 inhabitants aged above fifteen years.

Hungary	91·6	Holland	49·0
German Empire	53·0	France	45·8
England	52·6	Belgium	41·9
Denmark	52·0	Greece	41·6
Austria	51·3	Scotland	40·9
Italy	50·1	Switzerland	40·8
Finland	49·2	Ireland	23·0

The other table given by him is still more suggestive:—

	Legitimate living children born per 1000 women aged between 15 and 50 years.	Illegitimate living children born per 1000 women aged between 15 and 50 years.
German Empire	270	26·5
Scotland	269	19·9
Belgium	265	19·8
Italy	251	24·6
England	250	12·1
Austria	250	44·4
Sweden	240	(?)
Ireland	240	4·1
Switzerland	238	10·2
France	163	16·7

The position of France at the very bottom of the list must provide food for painful reflection to the thinking Frenchman, for it means that sooner or later this country will become politically and socially a *quantité négligeable*. How can we account for this inferiority on the part of France? M. Rochard[1] incriminates alcoholism. He says that the consumption of alcohol has in this country doubled within the last twenty years. In 1885 the annual consumption was 1,440,342 hectolitres, whereas the latest statistics give 2,476,387, or no less than 6 litres 45 centilitres per person per annum. In like manner insanity has within the last few years increased one quarter, and the Conseil Général has just voted 4,000,000

[1] Académie de Médecine, June 25th.

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francs for the construction of a Ville-Evrard of special pavilions to accommodate 700 male and 200 female alcoholic patients. Every visitor to this city must be struck with the prodigious number of wine shops existing. In 1890 there were no fewer than 29 583, or one for every three houses and eighty-two inhabitants. It is, however, very strange that in the discussions that so frequently occur on this subject of depopulation no mention should be made of the chief cause—viz., the Frenchman's innate thrift. There is nothing he dreads so much as poverty for his children, and he consequently is careful not to have too large a progeny. The urban Frenchman, moreover, marries late in life, and the recognition of that baneful institution—concubinage—must be held in great part responsible for this. The crushing expense of a residence in Paris must also act as a deterrent to marriage. The average Frenchman never dreams of emigrating, his reply to any such question being, "Pourquoi m'en aller aux colonies; on est si bien en France."

Hospital Ship for Newfoundland.

It will be a matter of surprise to your readers to learn that floating hospitals are things of the future in a country possessing such an extensive seaboard as France. It is announced that the first of the hospital ships of which the fleet of the *Œuvre de Mer* will be comprised will shortly be put on the stocks at St. Malo. It will be a vessel of 300 tons and will leave France for the fisheries of Newfoundland in March, 1896. The Breton fishermen who pursue their calling in these latitudes will doubtless greatly appreciate this attention on the part of their stay-at-home compatriots.

Hospital Charges.

When a patient is admitted into a Paris hospital a certain daily charge is made unless he be in such poor circumstances that payment is out of the question. A recent prefectorial edict fixes these charges as follows:—Daily charge for adults: medical wards, 3 francs 30 centimes; surgical and lying-in wards, 5 francs. Children: medical wards, 2 francs 80 centimes; surgical wards, 3 francs 50 centimes.

July 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The New "Regolamento d'Igiene."

PROFESSOR PANIZZA, who, as I stated in a previous letter, has been compiling for the Roman Giunta a "Regolamento Locale d'Igiene," has just submitted it to the authority in question. It is divided into five heads. The first deals with "assistenza medica" and "vigitanza sanitaria," and makes ample provision for the effective carrying out of both. It concerns, in fact, the *personnel* of local sanitation, while the second head has reference to the hygiene of the soil and the dwelling-house, particularly to everything affecting the purity of the water-supply as distributed through pipes, by wells, or by fountains. Under the third head cognisance is taken of the foods and drinks. These are to be safeguarded by a series of stringent conditions, controlled by inspectors, as to soundness and freedom from adulteration. The fourth comprises the measures adopted against the diffusion of infective maladies in man and animals and formulates the rules to be observed in "denunzie" (complaints) and disinfecting procedure. The fifth and last head deals with the "polizia mortuaria" (disposal of the dead). The new "regolamento" is a great improvement on its predecessors in simplicity and working. That which was previously in force contained as many as 591 sections, which even then were not exhausted, and from their confusion and complexity were more frequently honoured in the breach than in the observance. The "regolamento" now submitted by Professor Panizza under its five headings and in its whole *ensemble* contains less than a third of its predecessor's sections, with corresponding distinctness in defining the powers and responsibilities residing both in the officials and in the public. Henceforth evasion of the law will be difficult, if not impossible, on the part of the latter, and dereliction of duty on the part of the former will be easy of detection and promptly made subject to discipline. The sanitary procedure of the next few months will put the "regolamento" to the required test; and we shall then have practical proof of the superior conditions under which the health and comfort of the lieges in Rome and its provinces are protected and ensured.

Barbers and Contagious Disease.

A curious case has recently been before the Turin law courts. According to the official report a gentleman, on getting shaved at the barber's whose shop he "frequented" for that purpose, received a slight and involuntary incised wound, the result of which, after a few days, was the appearance of a cutaneous eruption which, when subjected to the examination of the consultants at the local policlinico, was declared to be syphilitic. The razor, it was held, had by a previous performance on the beard of a customer been infected with the malady and caused the characteristic eruption in the next comer, who was the complainant. The court, in punishment of the barber's negligence in cleaning his instruments, fined him 250 lire (£10). The occurrence has excited much comment here as well as in other cities of the kingdom. The public, particularly the travelling public, are apt to turn in at any barber's for shaving purposes, and these functionaries, it is remarked, are far from rigid in their observance of the good English custom of plunging the razor after each performance into boiling water. The matter has been under the consideration of the sanitary office, and henceforth, it is expected, every barber will be compelled to pass his razors through a solution of sublimate (1 in 1000) so as to destroy the infective microbes. Nor is it the razors only that should be thus vigilantly looked to. The combs and brushes of the Continental Figaro are, often after very promiscuous use, seldom as clean as ordinary prudence prescribes—another source of danger to the unsuspecting traveller, particularly in Southern Europe.

July 1st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Effect of Compressed Air on the Health of Workmen.

DURING the last few months a regulating lock weir has been in course of construction on the Danube Canal, the bottom of the water being made accessible to the workmen by means of submerged iron caissons, into which air is forced so as to displace the contained water. The men in the caissons work under a pressure of four and a half atmospheres, and in consequence suffer from peculiar symptoms, which have been investigated in the clinic of Professor Schrötter. Last Saturday a man died after some hours' work in a caisson, and the post-mortem examination, performed by Professor Hofmann, showed fluid in the larynx and air passages and extravasations into the brain, pharynx, and lungs. Death was due to suffocation from œdema of the lungs and gradual poisoning by carbonic acid. Respiration is retarded by the compressed air, for the red blood-corpuscles absorb an excessive amount of oxygen, and expiration is rendered more difficult. The contents of the superficial bloodvessels and lymphatics are driven inwards, the internal organs are overfilled with blood, the action of the heart and the circulation of the blood are retarded, and general distress, palpitation of the heart, headache, giddiness, and bleeding from the nose, mouth, ears, and lungs ensue. The compression of the muscles and nerves also produces arthralgia. The dangerous symptoms usually show themselves when the man on ceasing work passes from the compressed air in the caisson to the normal atmospheric pressure, the red blood-corpuscles then giving off the excess of absorbed oxygen, which forms gaseous vesicles in the blood, causing obstruction of the vessels, and thereby producing paralysis of the legs, arms, rectum, and urinary bladder. Professor Schrötter recommends as precautionary measures that elderly men or those who are in weak health should not be employed in this work, that the condensation of the air should be gradual, and that the time for working should be short (three or four hours a day). The Council of Hygiene has requested the eminent hygienist, Professor Max Gruber, to prepare a report on the subject, and it will be the duty of the Government to take such means as may appear to be necessary in the interest of the workmen.

True Gonorrhœal Cystitis.

A paper on the above subject was read by Dr. Wertheim at a recent meeting of the Vienna Medical Society. Hitherto the existence of a true gonorrhœal cystitis has not been satisfactorily demonstrated, for disorders of the urinary

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bladder occurring in consequence of gonorrhœa have been explained by an inflammation localising itself on the internal orifice of the urethra (urethro-cystitis). Some two years ago Dr. Wertheim had under his care a girl aged nine years, who was affected with vulvo-vaginitis in consequence of rape, and whose urine contained leucocytes charged with gonococci. An anæsthetic having been administered, a part of the mucous membrane of the urinary bladder as large as a millet seed was removed, which on microscopical examination showed gonococci in both epithelium and connective tissue. In the submucous connective tissue the capillaries and blood-vessels were found to be filled with gonococci partly involved, partly characteristically tinged. The occurrence of red blood-corpuscles proved that those vessels are to be regarded as capillary vessels and precapillary veins. Gonococci may enter the blood either indirectly through the lymphatic system or by direct penetration into the blood stream at the place of the primary patch. This explains the origin of gonorrhœal endocarditis and other gonorrhœal sequelæ.

Increase of Venereal Disease in Budapest.

According to statistical returns made by Dr. Marschalko, the number of venereal cases in Budapest has doubled since 1887. He supposes the insufficient regulation of prostitution to be the reason of this increase. Well-known prostitutes have hitherto been examined in their own lodgings by the police physicians twice a week; but at the end of 1893 there were 1131 prostitutes and only 14 police physicians; each physician, therefore, had to examine more than 100 prostitutes daily. Dr. Marschalko advocates the microscopical examination of the secretion of the genitals and ascribes the spread of the disease to the circumstance that women affected with syphilis are not allowed to remain in the hospital until their entire recovery. There are also a great many loose women not officially registered. In the clinic of Dr. Róna, among 140 patients there were 58 prostitutes.

The Antitoxin Treatment.

By order of the Hungarian Minister for the Home Department, Dr. Torday has performed 62 curative and 560 prophylactic injections in the district of Békés. In the former group seven children died. Among the children for whom injection was performed as a precautionary measure not one has fallen ill, although sixty-six of them were brought in contact with cases in an infectious stage.

July 1st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

The Tourist Season.

THE winter months from November to April are tempered, socially and financially, by the inpouring of European visitors in search of health, amusement, and sunshine. Ten years ago the numbers were hardly worth counting, and consisted chiefly of friends of the English army of occupation. Five years later the tourists reached an aggregate of 4000, and were nearly all English, though Americans had even then begun to include Egypt in their feverish treadmill round the world. During the winters of 1892 to 1894 the numbers were again raised to 5400, and it almost seemed as if a zenith had been reached, for in Cairo, where all the visitors take a more or less temporary rest, two hotels were obliged to close their doors for want of guests and money. But in the season just concluded there were no less than 7492 arrivals into the country either by way of Alexandria or by the Suez Canal, and of this unheard of number only 45 per cent. were English, 45 per cent. were American, and the remaining 10 per cent. were made up by German and other nationalities. The Americans themselves pretend that this great impetus from their country is a good deal due to the Cairo exhibit at the Chicago Fair. For next winter we are promised another bumper season, and some of the hotels are already building extra accommodation. Last winter lent itself kindly to the future development of Egypt, for it was exceptionally rainless, and though the temperature on the night of Jan. 6th fell to the unprecedented minimum of 32° F., and again on Jan. 19th to 35°, occasioning the death by frost of many astonished vegetables and flowers, the winter months passed away very pleasantly and have been followed by a very cool spring.

Anti-diphtheritic Serum.

The report of the Alexandria Committee formed in October last states that between November and May forty-four cases of diphtheria have been treated by serum obtained from Dr. Roux. Thirty-three patients recovered and eleven died, and tracheotomy was performed four times, with one death. To provide for the future wants of Alexandria and possibly some outlying towns of Egypt, two horses have been immunised and will supply serum in abundance. Great credit is due to our Greek colleagues, who are chiefly responsible for this item of progress. The Greek hospital lent a bacteriological laboratory, and a site for a special stable. One of the horses was bought by the committee, and the other was presented by the two Princes Toussoun. This is almost the first time that any of the Royal household have taken any intelligent or philanthropic part in the direction of science or medicine. In Cairo the serum from France or Germany is to be found for sale at all the chief druggists' shops, and is also sold by the Sanitary Department.

The Medical School, Cairo.

It is now five years since the first European was appointed to this school as Professor of Anatomy. During the past year fresh attempts have been made to emerge from darkness into light. A German has been appointed as Professor of Pharmacy and Materia Medica. Dr. Kaufmann is now to be Professor of Bacteriology, and is having a laboratory furnished for him, and a European librarian and secretary has taken the place of an Egyptian. Many important changes must still gradually be made, though in addition to French jealousy every proposal for reform is met by obstinate obstruction on the part of some of the higher native officials. Their fear of being ousted entirely by Europeans would seem to be premature, for the following branches are still exclusively taught more or less badly by native medical men—physics, natural history, physiology, histology, operative surgery and surgical anatomy, hygiene, jurisprudence, obstetrics, diseases of women and children, and the systematic lectures on medicine, surgery, and diseases of the eye and of the skin. The whole number of scholars is now 62, of whom 34 are male and 12 are female medical students, 14 are students of pharmacy, and 2 are the nucleus of a veterinary school.

The German Deaconesses' Hospital.

This is the best of the private hospitals in Cairo and admitted 457 patients during the year 1894. The admissions of the first and second classes have risen from 106 in 1893 to 168 in 1894, showing that the committee were quite justified in building new wards. Of the total admissions 100 were Egyptians, 72 were English and Maltese, and 69 were Greeks, the Germans themselves only contributing 46. The out-patient department was visited by 1033 patients for medical or surgical advice and by 23,058 for eye disease, and 698 operations were performed upon the eye patients. The infectious patients during the year were only 4—small-pox 2, diphtheria 1, and scarlet fever 1, and their nationalities were English, Swiss, and American. Of enteric fever there were as many as 31 patients, of whom 7 died.

Cairo, June 17th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Important Decision of the Supreme Court of the United State.

A WOMAN sued the Union Pacific Railroad Company for an injury to the spine, which she claimed had resulted from the fall of an upper berth of a sleeping car upon her. Three days before the trial the company asked the court for an order requiring the woman to submit to an examination by the company's physician, pledging to make it with as little exposure of the person as possible and in the presence of the medical man in attendance upon the woman. The court overruled the motion on the sole ground that it had not the right to enforce such an order. It was carried to the Supreme Court, which sustained the action of the lower one, saying that "such an examination is the invasion of the sanctity of the person to a degree that the law does not recognise, and that it is inconsistent with common law," and, further, the opinion said that "the court could not find that, until within a generation, it ever was thought that a court of common law had such a power as was claimed in this case." Justices Brewer and Brown dissented, and it is to be noted that they are the younger men on the supreme bench, who may be said to belong to, to understand, and sympathise with the generation now on the stage. Justice Brewer called attention to the "new times" in which we are living. He said that the actions for damages for personal injuries, now

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so common, were very infrequent years ago, and that it was an open question and not determinable under the old common law procedure. If a person permitted exposure for the purposes of examination by the physicians who were to be called to testify in his or her behalf, it seemed to him but common justice that an order should be made for examination by the opposite side. He did not think it right that any person, where his or her interests were promoted after making disclosures of the person, should be allowed to refuse this permission to a physician representing the company sued on the plea of "sanctity of the person."

Suit against an Optician.

A public school teacher of New York sued a certain firm for $5000 because she had taken them a prescription for glasses, which they had filled, and the wearing of which was followed by severe vertigo—so severe, she claimed, as to lead to the loss of her situation as teacher. The mistake which the opticians made was to put the lens for the right eye in the frame for the left, and *vice versâ*. Expert testimony was called in and it was easily shown that an error had been made, but by no means $5000 worth of error, and the jury were undoubtedly influenced by the ulterior effect it had had in depriving the lady of her occupation. They awarded her $750, but the opticians appealed to the General Term, for they are resolved to establish a precedent; for if this precedent is to stand every optician will have to exact an agreement from his customer to be exempted from responsibility for his subsequent health. The glass accused of such deeply seated mischief was only two degrees stronger than the ordinary window glass, and was of the kind that women who want to be in the whole fashion cause to be put in a lorgnette when there is nothing the matter with their eyes. The plaintiff wore the glasses six months before she went to the opticians on account of her illness. Their lawyer said: "The opticians were no more responsible for what happened to her than a shoemaker would be if a man bought a pair of shoes and allowed the ones that belonged on the left foot to be put on the right foot, and after he had worn them in that way for six months, relying on the maker's reputation, should sue the shoemaker for damages because his feet were injured."

Dispensing with kissing the Bible.

Anyone who has acted as a witness in court and kissed the court Bible in taking the oath should understand the sanitary reasonableness of Pennsylvania's new law to dispense with the kissing. Nathaniel Hawthorne described the Bible he used in administering the oath to American waifs and strays who came to his Consulate in Great Britain as "greasy with perjuries."

Honouring the Discoverer of Ether.

There are fifty-three names of men, inscribed as a roll of honour, in the dome of the new House of Representatives in the State House at Boston. Each one is intended to mark an epoch or to commemorate a man who has beneficently influenced the course of events. Among them is that of Dr. William T. G. Morton, who was the man who instituted the series of experiments that established the use of sulphuric ether in the practice of medicine and surgery. His name deserves the honour given to it. The present contest for honours among the men who have made the antitoxin usable and useful sharply recalls the struggle, now nearly fifty years ago, for the honour of first using anæsthesia, and there were several first men, as is often the case. There was a claimant in Hartford who had used it in the painless extraction of a tooth, Morton in Boston, who really gave the ether for an operation by Dr. Bigelow, and Dr. Jackson, to whom many think the honour is due.

June 30th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Laying of the Foundation Stone of the Wanganui Hospital.

NOT, indeed, before it was needed was the foundation stone of the new Wanganui Hospital laid on March 14th last. This has been brought about through the generosity of the late Mr. Richard Reid, who lived for a long series of years in the Wanganui district, and who left the sum of £5000 to the Wanganui Hospital Board. It is curious to reflect that the late Mr. Reid occupied as his first billet in the colony the position of custodian to the hospital to which he ultimately bequeathed such a very substantial and munificent gift. This sum has been augmented by the New Zealand Government to the extent of £1500. Unfortunately, the gross total is not sufficient to meet the initial expenses of the first contract, but the Wanganui Hospital Board has very wisely—regarding the general condition of the existing hospital—considered itself warranted in undertaking a work which was so greatly needed, relying for the remainder of the necessary funds to complete the structure upon the generosity of the people and a further grant from the Government. The foundation stone was laid by the Hon. Richard Seddon, the Premier of New Zealand. The occasion was taken advantage of by the various friendly societies and the local Volunteers, who, mustering in full force, gave the proceedings an *éclat* which would have been otherwise wanting. The building, which will contain about twenty-five beds and all recent hospital improvements, will probably be completed about the end of the present year. It will be the first building of any magnitude built of brick on the west coast of the north island of New Zealand.

Antitoxin.

This remedy has at last reached the shores of the colony, and in the few cases in which it has been exhibited very satisfactory results seem to have been attained. The successful issue of the few cases treated here at the antipodes with the remedy will be hailed with satisfaction by the antitoxin enthusiasts in the mother country. It does not, however, seem very clear to medical practitioners in the colony as to the length of time after "manufacture" that the antitoxin serum holds its special virtue. Some of the tubes forwarded to the colony become "cloudy" in transit. "Does this cloudiness deprive it of its specific action?" is the question which has been asked. It has been well established that it is a very wise precaution on the part of medical men to look upon—and diagnose as such, for the matter of that—all cases of suspicious sore-throats of a membranous character as diphtheritic at the onset for the purpose of preventing the spread of the more serious malady; but all cases thus supposed to be diphtheritic are not truly so. Unless the cases be associated with nephritic changes, and perhaps followed by the development of peripheral neuritis, or the diagnosis has been made by bacteriological cultures, the certainty of the disease cannot be established notwithstanding the statement that diphtheria is said to be easily diagnosed. Busy medical practitioners have not the time (and very often not the means) to obtain bacteriological cultures, and to await developments would be suicidal when we have the antitoxin remedy at hand and we are still uncertain. It may, therefore, act as a charm in cases of follicular tonsillitis which are just on the mend, and we praise its special influence when we ought really to pat nature on the back. How diphtheria seems to take possession of some of the very healthiest country surroundings in this colony almost without a trace of its ingress is very difficult to conceive, but numerous instances of its appearance in this manner might be recorded. The honorary secretary of the Wellington Branch of the New Zealand Medical Association has forwarded a special letter of thanks to the New Zealand Government for its forethought in obtaining a supply of antitoxin. The honorary secretary, Dr. F. W. Mackenzie, states through his branch "that the remedy arrived just in time to meet a severe epidemic of diphtheria at the Upper Hutt and Petone, and has already been the means of saving several cases which would almost certainly have proved fatal without it."

Deaths under Chloroform.

Four cases of death under the influence of chloroform have occurred in this colony during the past few months, two of them having taken place in the dentist's chair. Operations about the mouth and pharynx have their own special dangers and difficulties, not only on account of the operative measures themselves, but also on account of the great care with which the anæsthetic requires to be given. It will, I feel sure, be soon established that it is safer policy to look upon all dental operations of any magnitude in the light of a serious matter and give the anæsthetic with all the surroundings of a surgical proceeding—viz., by carefully preparing the patient beforehand and doing the extraction the first thing in the morning in bed, at the patient's own house, if found possible. By following out this course in all instances much danger is eliminated.

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Obituary.

THE RIGHT HON. THOMAS HENRY HUXLEY, P.C., F.R.C.S., M.D., F.R.S., LL.D., D.C.L., &c.

THE profession will have learned with deep regret of the death, on June 29th, of Thomas Henry Huxley, from complications following influenza, at Hodesles, Eastbourne, and will desire to express their sincere sympathy with his widow and family at their loss. With him a striking individuality has passed away and left the world distinctly the poorer. Besides contributing largely to the actual sum of knowledge that has accumulated during the past half century his clear and robust understanding exerted in this country, at a time when it was much needed, a very powerful, a very beneficial, and a very persistent influence on the pursuit and advance of science. Gifted with a quick and tenacious memory, possessing singular self-reliance, with the power of seeing at a glance into the very heart of things, abhorring shams, whilst thoroughly appreciative of sound knowledge derived from hard work and close observation, veracious and reliable in all that he said and did, though his sayings and doings often ran counter to established practice, he was one of the first to insist on the necessity for a material alteration in the method of education adopted in this country. And the modification he advocated with all the energy he possessed was the introduction of science into our schools and universities as a substitute for, or at least as holding equal rank with, purely linguistic or mathematical attainments so long held to be their chief or even exclusive function. That such scientific instruction should bear good fruit he maintained it should be taught objectively, through the senses of the learner and not by books, and he spared no pains to impress upon the public mind that it was the paramount duty of the Government, of wealthy individuals and rich companies, to found and endow research laboratories. The future predominance of the commercial power of England was, he maintained, essentially dependent upon whether her merchants had the wisdom to appreciate the gifts given to them by science, whilst the industries could only be properly developed by scientific methods and by a thoroughly scientific organisation. Earnest and painstaking to the last degree, he was himself a conspicuous example of the healthy and open mind that might result from this method of education; for, commencing life with fewer opportunities and poorer prospects than many of his associates, he raised himself by his indomitable energy and unwearied application to the foremost position amongst English men of science. The leading events of his life are given in the lively but unpretending autobiography prefixed to the recently published edition of his works. He was born on May 4th, 1825, at Ealing, his father being one of the masters in the large semi-public school of that place, then a village. He thought himself to be both in his physical and mental endowments the son of his mother, inheriting, however, an inborn faculty of drawing from his father. He notes it as a curious chance that his parents should have fixed for his usual denomination upon the name of that particular Apostle with whom he had always felt most sympathy. His school days were short, and he deliberately affirms that the society into which he fell during that period was the worst he had ever known. His great desire was to become a mechanical engineer, but the fates were opposed, and he commenced the study of medicine under a medical brother-in-law, becoming a student of Charing-cross Hospital in 1842. That part of the professional course which most interested him was physiology, because it deals with the mechanical engineering of living machines, and he felt through life a warm regard for Wharton Jones, who was then lecturer on physiology at the hospital, and from whom he received much kindly help, for his exact and extensive knowledge. When about fourteen years of age he attended a post-mortem examination, and in some unexplained manner, without cutting himself, was poisoned, became apathetic, and suffered from occasional paroxysms of internal pain, which he believed laid the foundation of his "constant friend, hypochondriacal dyspepsia." As a student he read discursively and unmethodically, but was able in 1845 to pass the First M.B of the London University, when he was placed second in honours, Dr. Ransom of Nottingham securing the first place. While still at the hospital he published his first paper, in which he described the layer of cells of the inner root sheath of the hair, which has ever since retained his name.

In 1846, having passed the examination of the Royal College of Surgeons of England, he applied to Sir William Burnett for a post in the medical service of the navy, and was speedily entered on the books of Nelson's old ship, the *Victory*, for duty at Haslar Hospital, where he was under the eye of Sir John Richardson, by whom he was appointed surgeon to H.M.S. *Rattlesnake*, commanded by Captain Owen Stanley, and bound for foreign service. The life on board ship in those days was not an easy one, but he justly remarks, "it was good for me to live under sharp discipline, to be down on the realities of existence by living on bare necessities, to find out how extremely well worth living life seemed to be when one woke up from a night's rest on a soft plank, with the sky for canopy, and cocoa and weevilly biscuit the sole prospect for breakfast, and more especially to learn to work for the sake of what I got for myself out of it." During the four years of absence he worked hard in the intervals of his duties and sent home his results to the Linnæan Society, by which they were ignored, and in 1849 forwarded one paper on the Oceanic Hydrozoa to the Royal Society, which was communicated by the Bishop of Norwich on June 21st, 1849. It constituted his first introduction to the scientific world. He declined an appointment to another ship and thenceforward devoted himself to natural history. That he applied for the chair of Natural History at Toronto and that Professor Tyndall was a candidate for that of Physics is well known. By their rejection of both candidates the Canadians lost and England gained two prizes. In 1851 he was elected a Fellow of the Royal Society, being then in his twenty-sixth year. In 1854 Sir Henry de la Beche, the Director-General of the Geological Survey, offered him the post, vacated by Edward Forbes, of Professor of Palæontology and Lecturer on Natural History at the School of Mines, which he held for many years. Here he delivered in 1863 to classes of working men his lectures on Man's Place in Nature, which led to an infinite amount of discussion and objurgation, and his lectures on Ethnology and on Our Knowledge of the Causes of the Phenomena of Organic Nature. In 1863 he was appointed Hunterian Professor at the Royal College of Surgeons of England, and held the post for more than five years. He twice filled the post of Fullerian Professor of Physiology at the Royal Institution. In 1869 and 1870 he was President of the Geological Society, and in the latter year President of the British Association for the Advancement of Science, when he delivered his celebrated address on Biogenesis and Abiogenesis. At this period of his life he was what other men would have called fully engaged with the duties of his office at the Geological Museum and School of Mines, and his work during the next ten years is to be found in the transactions of the various learned bodies of which he was a Fellow; but he found time to lecture or to write on the Physical Basis of Life, on Descartes, on the Automatism of Animals, on a Piece of Chalk, on Problems of the Deep Sea, on Some of the Results of the Expedition of H.M.S. *Challenger*, on Yeast, a Treatise on Comparative Anatomy, a Treatise on Physiography, another on Hume, an exhaustive article on Birds in the "Encyclopædia Britannica," and papers, essays, and reviews too numerous to specify, but which may be seen, or are referred to, in the pages of *Nature*. For some time he occupied a seat on the London School Board, but was compelled in 1871 to resign from failing health, after having untiringly urged the claims of science as one of the subjects to be taught. In December, 1872, he was elected Lord Rector of the University of Aberdeen.

In 1883 he reached the culminating point of his career and was elected President of the Royal Society, giving in the same year the Rede Lecture at Cambridge. His incessant work in physics, chemistry, physiology, biology, and geology began now to tell upon his powers, and after serving on the Select Committee of the House of Commons on the Education, Science and Art Departments, and inaugurating the Marine Biological Institute, he was obliged to go abroad and shortly after to resign the Presidentship of the Royal Society. In 1892 he received in recognition of his high position in science and his services to the public the honourable distinction of being appointed one of Her Majesty's Privy Councillors. He had previously been honoured with the diplomas and doctorates of all the leading European Universities. The relations of Mr. Huxley with Darwin and with Darwin's hypothesis will probably hereafter be regarded as the central point on which all his work turned. Without his powerful aid, his valuable corroborative evidence, and his telling and

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lucid exposition of the doctrines of Darwin, they would certainly have been far more slowly understood and accepted by those who had received no scientific training. The doctrine of the survival of the fittest had been advanced by Herbert Spencer. Mr. Huxley's own researches and observations were in the path simultaneously trodden by Wallace and Darwin. Evolution was in the air; but Darwin anticipated all his brethren by advancing the proposition that species originate by means of natural selection or through the preservation of the favoured races in the struggle for life. The value of this proposition, not as a proved theory, but as a working hypothesis explaining many facts that were previously unintelligible, was instantly perceived by Huxley, who was supported by the large experience of Hooker on the botanical side, and at first by Sir Charles Lyell on the geological, though the latter observer wavered at a later period. The conclusions which that hypothesis suggested, the gradual development of all plants and animals up to man himself from some low form or forms, the necessity for the lapse of enormous periods of time, and many other considerations gave a great shock to theologians; whilst it was rejected by naturalists of great eminence like Owen and Agassiz and was entirely ignored or ridiculed by the French *savants*. But the efforts of its champions in England, aided by the free thought of the Germans, won the battle; and few if any would be found to doubt the main doctrine of evolution now.

The originality of the opinions and doctrine he advocated, and the vigour with which he sustained them, were familiar to all who attended the meetings of societies in those days, and the bruit that there was likely to be a discussion in which Owen and Huxley were to take a part was sure to fill the room. As in so many similar cases, whether in speech or in essay, the older man, with assured position and accustomed to lead, seemed at first scarcely to recognise the force and acuteness of his adversary, and was inclined to look down as from a superior height "and smiling put the question by"; but this did not depress the younger combatant, and he returned to the charge again and again. Thus in the Proceedings of the Royal Society in 1854, Mr Huxley had stated that the intestine in terebratula ends blindly in the middle line or else terminates in a distinct anus between the pallial lobes. In the second edition of his work on "Invertebrata" (1855) Professor Owen, relying on the conditions present in orbicula and lingula as on his own dissections, commented on this statement and remarked, "There may be blindness somewhere, but not, I think, at the termination of the intestine of terebratula." In his lectures on the Elements of Comparative Anatomy (1864) Mr. Huxley vindicated his accuracy by quietly observing that his statements had been fully borne out by Mr. Albany Hancock and by M. Lacaze Duthiers, two of the best minute anatomists of the day. I trust, he adds, Mr. Owen is now fully satisfied as to where the "blindness" really was in 1855. It is delightful to find after these passages-of-arms that Huxley, in his charming obituary notice of Owen in the Proceedings of the Royal Society, wrote no line that betrayed remembrance of any bitterness, but, on the contrary, bestowed all due and kind recognition of the great qualities and influence on the age of the great anatomist with whom he had so often fought.

It is not surprising that amongst the many subjects upon which he concentrated the "dry light" of his understanding theology should constitute one—perhaps, as Herbert Spencer always maintained, from inborn clerical proclivities; perhaps from irritation arising, as he once said, from the "cackle of curates in the nearest cathedral town"; and perhaps from a still deeper feeling—the discovery of truth. He pursued doctrinal theology with ardour, attempting to apply the methods of science to the Old and New Testaments alike, and judging that by reason which can only be comprehended by faith. In the late Bishop of Peterborough, Principal Wace, and Mr. Gladstone he had three formidable antagonists; but no whit dismayed he returned blow for blow, and the discussion of the story of the Gadarene pigs amused, though it scarcely edified, the ordinary reader of magazine articles. From an early date there was, he found, so much that was inexplicable and unintelligible that he coined the phrase agnosticism, and avowed himself an agnostic, terms that, although they were inoffensive enough in themselves, were confused by laity and clergy alike with atheism, and gave rise to long and bitter controversy.

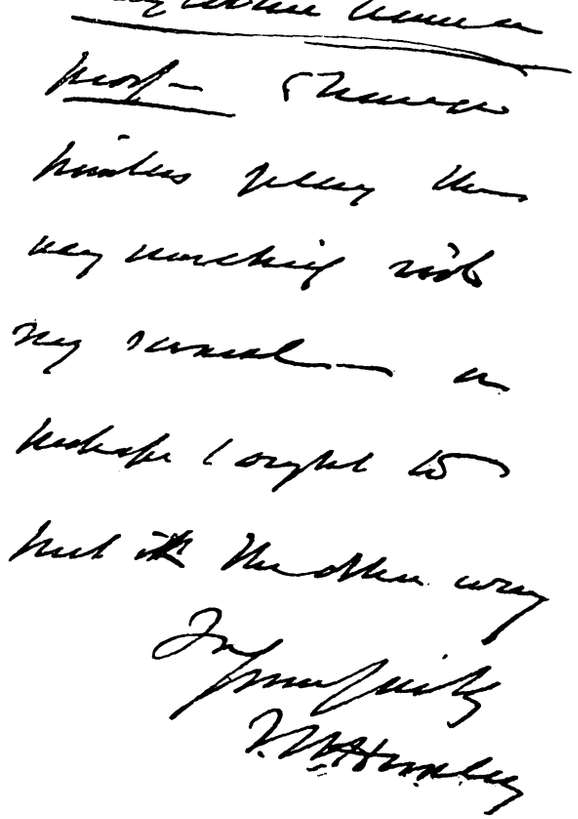
The term "agnostic," he avowed, came into his head as suggestively antithetic to the Gnostic of Church history who professed to know so much about the very things of which he was ignorant, and he took the earliest opportunity of daring it at the Metaphysical Society to show that he, too, had a tail like the other foxes, and to his great satisfaction the term took with the public.

His voice was not infrequently heard upon the social questions of the day, and he spoke with no uncertain sound, but not carelessly or without due inquiry into the merits of each case, as one or two examples which will occur to our readers at once sufficiently testify.

In person he was of moderate height, strongly but rather slenderly built, with a long head. His complexion and hair were dark, his face without a ray of colour in it. His eyes were very dark, with keen and lively expression; his jaw square, with mobile mouth and a deep dimple below the lower lip; the nose a little *retroussé;* his voice was musical; his movements were quick; his address pleasant and quiet. He tells us his mother used to say, looking at him almost reproachfully, "Ah! you *were* such a pretty boy," whence he had no difficulty in concluding that he had not fulfilled his early promise in the matter of looks.

It remains only to add that Professor Huxley occupied many positions and shone in them all. As a man of science he was at once accurate, profound, and versatile. As a speaker, lecturer, and teacher he was clear, fluent, and racy; his illustrations, drawn now from Greek or Roman history, now from the "Arabian Nights," from "Robinson Crusoe," or some nursery tale, were always apposite and amusing. As a writer his style was pellucid and forcible. As a debater and controversialist he was ready and good tempered, pugnacious but rarely vituperative—a terrible opponent, as many found who crossed swords with him. Perfectly fearless, with a singular faculty of discovering the weak point of an argument, he cared not with whom he engaged. Like Launcelot of old—"king, duke, earl, count, baron—whom he smote he overthrew." As a friend he was reliable and constant; in all the common relations of life, courteous, affable, cheerful and unpresuming. He was truly a king amongst men. His like will not soon be seen again.

We have pleasure in presenting to our readers a facsimile of part of a letter (dated Nov. 21st, 1893) from Professor Huxley, which includes his signature. It will be noted that with characteristic thoughtfulness he refrains from throwing all the blame for "the very mischief" of bad "proofs" upon the printers.



WILLIAM LEIGH, M.R.C.S. ENG., L.R.C.P. LOND.

THE sudden death of Mr. William Leigh of Chiswick, which occurred on Tuesday, June 25th, will be unexpected and sad news to a large number of his friends at Chiswick and in the profession. Mr. Leigh was educated at Epsom College and St. George's Hospital, taking the diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England in 1865. The succeeding five years he spent in the office of house surgeon and surgical registrar and chloroformist at the hospital, where he was well known and much liked. At the conclusion of his curriculum he joined his father, who had been practising nearly forty years, and continued the practice after his death about ten years later, when he succeeded to the surgeoncy of the Chiswick and Turnham-green Dispensary. William Leigh, in his education and traditions, was a thorough representative of the old-fashioned family practitioner. He possessed a sound practical knowledge of the several branches of his profession, gathered from close observation and contact with his teachers and cases in the hospital wards, and in practice, rather than from lectures and reading. A man of quiet and methodical habits, he was perhaps little known outside the sphere of his own immediate activity; but those who were brought in contact with him recognised his sterling qualities and liked him much. His wonderful uniformity of manner and undeviating regularity of conduct, with the self-confidence born of his thorough familiarity with his work, made him welcomed and trusted by his patients; but to the few who really knew him intimately his unhesitating self-sacrifice and steady devotion inspired such love and confidence as make the loss irreparable. But though his sudden decease came with such sorrow to his friends, to himself the end was apparently without suffering. He had left home for a few weeks to recruit after the strain of the early part of the year, and was enjoying the change up to the last minute, when he stepped on board a steamer to cross from Glasgow to Ireland, and with scarcely a moment's warning fell into a chair and expired in the presence of a brother practitioner, Dr. Speer of Belfast. The deceased was fifty-two years of age. At an inquest held on June 27th by Dr. J. Adams, coroner for Mid-Antrim, the jury returned a verdict of "Death from apoplexy," in accordance with Dr. Speer's evidence.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

THE seventh election of Fellows to fill the vacancies on the Council of the College under the new regulations was held in the library of the Royal College of Surgeons, Lincoln's Inn-fields, on Thursday, the 4th inst., between 2 P.M. and 4 P.M. The result of the voting was as follows:—

	Votes.	Plumpers.
MR. ALFRED WILLETT ...	... 415	1
MR. FREDERICK TREVES	... 326	5
MR. H. T. BUTLIN ...	... 323	2
MR. ALFRED COOPER ...	... 295	20
DR. J. WARD COUSINS ...	... 284	4
MR. J. N. C. DAVIES-COLLEY	... 249	30
MR. A. T. NORTON ...	... 247	4
MR. H. W. PAGE	... 237	7
MR. WILLIAM ANDERSON ...	... 210	18

Mr. Willett was declared to be re-elected a member, and Messrs. Treves, Butlin, Cooper, and Cousins were elected members. There were 621 voting papers received.

This is by far the heaviest poll that has ever been taken in the election of Members to the Council, a result to be attributed to the facilities offered for voting by the post.

We shall report the meeting of Fellows next week.

THE Secretary of the Royal British Nurses' Association asks us to state that it is impossible that the agenda for the annual meeting should appear in this week's number of THE LANCET, but that they will be ready for publication next week.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Monday, July 1st:—

Anatomy and Physiology.—Henry James Taylor and William Atkin Thompson, Owens College, Manchester; Herbert Sherwell Clogg, University College, Cardiff; Thomas Wafer Byrne and Michael Robert Maher, University College, Liverpool; Arthur William Statter Curtis, Oswald Herbert Rogerson, William Hearfield Galloway, Percy Ellwant Middleton, Richard Milnthorp, and Ernest Arnold Wraith, Yorkshire College, Leeds; James Phillips, Edward Mountjoy Pearse, and Franklin Cox, University College, Bristol; Irwin Browne Richardson, John Austin O'Dowd, William Alfred Henshaw, John Owen Harvey, and Richard Charles Baker Hall, Mason College, Birmingham; and Edgar Robert St. John Cars, Michigan University, U.S.A.

Anatomy only.—Charles Henry Bradbury, Owens College, Manchester, and Stanley Wellby, Oxford University and St. Thomas's Hospital.

Physiology only.—George Whittenbury White, Firth College, Sheffield; Stuart Bathgate Reid, Cambridge University; Charles Martin Mitchell and Frederick Charles Morgan, University College, Bristol; and Lionel Hugh Lewis, Guy's Hospital and University College, Cardiff.

Sixteen gentlemen were referred in both subjects, four in Anatomy only and one in Physiology only.

Tuesday, July 2nd:—

Anatomy and Physiology.—Sydney Henning Belfage and Charles Hugh Bidwell, University College, London; Alfred Gentel and Charles Dominic Leyden, St. Mary's Hospital; James Cowan, Queen's College, Belfast; Percy Dodd Pywell, St. Thomas's Hospital; Herbert Cecil Barlow, Westminster Hospital; William Ernest Amsden Worley and Egbert Coleby Morland, St. Bartholomew's Hospital; Donald Kilve Luttrell Nasmyth, Charing-cross Hospital; and John Penn Milton, King's College, London.

Anatomy only.—Robert Stanley Ransome, George Herbert Dominy, and Arthur Ernest Malaher, St. Thomas's Hospital; Owen Tredwell Atherley Phillips, University College, Cardiff; and Nicolas Buendia, St. Bartholomew's Hospital.

Physiology only.—Ernest John Distin, King's College, London; Thomas Hill Bailey, King's College, London, and Mr. Cooke's School of Anatomy and Physiology; Arthur Wellesley Penrose, Edgar Ashby, and Joseph Lewin Payne, Guy's Hospital; Walter Green and William Hodgson Park, Charing-cross Hospital; Albert John Pattison, London Hospital; John Maclean Carvell, London Hospital and Mr. Cooke's School of Anatomy and Physiology; George Beley, St. Thomas's Hospital; and Francis Augustus Pitts-Tucker, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Eleven gentlemen were referred in both subjects, eight in Anatomy only, and three in Physiology only.

Wednesday, July 3rd:—

Anatomy and Physiology.—Charles Gordon Watson, Arthur Oliver Bird Wroughton, and Ronald Hatfield, St. Bartholomew's Hospital; Cecil Maurice Goodbody, Ernest Frederick Charles Dowding, Bernard Featherstone Howlett, and Allan Gordon Graham, St. Thomas's Hospital; Thomas Leah, David Bellios, William Henry Singer Liddell, and John Henry Lightfoot, St. Mary's Hospital; Leonard Dimock Saunders, King's College, London; Horace John Maurice Drummond Sale Barker and Cyril Shepherd, Guy's Hospital; William St. Aubyn Fortescue Hubbard, Charing-cross Hospital; Henry Thompson Barrow, Westminster Hospital; Frank Mayo Morris, Herbert George Frankling, and James Alfred Patrick Cullen, London Hospital; and Christian Beverley Fairbank, University College, London.

Eighteen gentlemen were referred in both subjects.

THE VICTORIA HOSPITAL FOR CHILDREN.—Their Royal Highnesses the Duke and Duchess of York received a deputation on Monday morning at York House from the Victoria Hospital for Children. In the absence of the Right Honourable the Earl Cadogan, K.G., President, who was unavoidably prevented from attending by press of business in connexion with his appointment as Lord Lieutenant of Ireland, Mr. Martin R. Smith, Chairman, and Captain Blount, R.N., Secretary of the Hospital (at whose suggestion the Infant Prince Fund had been formed), presented to their Royal Highnesses, printed on a white satin roll inclosed in a dark-blue morocco case, the names of all the contributors to the "Infant Prince Fund," which fund had been inaugurated in commemoration of the birth of the Prince, as the fourth heir in direct succession to the throne. With the sum contributed—about £1400—a cot has been endowed in perpetuity in the Victoria Hospital for the use of the sick and suffering children of the poor and presented to His Royal Highness Prince Edward of York, on the first anniversary of his birth. Their Royal Highnesses, in accepting the gift on behalf of the young Prince, expressed their great satisfaction with the amount that had been so generously subscribed, and hoped that when old enough the Prince would fully appreciate the kindly feeling which had prompted this benefaction.

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LITERARY INTELLIGENCE. — Messrs. William Wood and Company, Medical Publishers of New York, have appointed Mr. Edward Arnold, 37, Bedford-street, Strand, London, sole agent for the sale of editions of their books in the United Kingdom.

A BAZAAR in aid of the funds of St. Mary's Hospital was opened by H.R.H. the Princess of Wales on June 27th at the Portman-rooms, Baker-street. Sir William Broadbent, senior physician to the hospital, received the Royal party, and after the usual ceremonies presented to the Princess Lady Broadbent, Colonel Stanley Bird, the Rev. C. J. Ridgway (chairman of the bazaar committee), Mr. Malcolm Morris, and Mr. Field, the Dean of the Medical School. A large stock of ornamental and fancy articles were offered for sale at the stalls, of which there were twenty, the most showy being the one conducted by Mrs. Field and Mrs. Anderson Critchett. The bazaar remained open for three days, and its attractions were enhanced by music, recitations, and dramatic sketches.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on June 26th, Dr. Pye-Smith, F.R.S., President, being in the chair.—Dr. Shephard Taylor showed a Hypertrophied Nail which had been removed by Dr. Collier of Yarmouth from a woman's thumb. It was about three inches in length and nearly straight; it had been growing for eleven years, and had originated after an accident.—Dr. Eddowes showed a woman with considerable Hypertrophy of the Nails of both Great Toes; they were curved like a ram's horn, and had not been cut for the last twenty-five years.—Dr. Stowers showed a young woman suffering from an Affection of the Nails, the matrix having receded from the nail, which, as it grew, became curved and brittle, similar to the condition seen in eczema and psoriasis, although there was no evidence of either disease in this case. The following cases were also exhibited:—By Dr. Eddowes, Angiokeratosis of the Right Leg; by Mr. Bidwell, a Rodent Ulcer of the Thigh; and by Dr. Abraham, a case of Bromide Rash in a woman aged twenty-six years who had been taking bromide on and off for thirteen years.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Friendly Societies Bill.

THIS Bill, which incorporates a number of the recommendations of the Royal Commission on the Provision for the Aged Poor, has been passed through both Houses of Parliament as an unopposed measure.

Food and Drugs Adulteration.

The Select Committee of the House of Commons on this subject, which has been taking evidence during last session of Parliament and this, held a meeting on Tuesday, July 2nd, when it was determined to report the evidence taken to the House, and suggest that the inquiry should be proceeded with in another session.

Factories and Workshops Bill.

The Grand Committee on Trade at its meeting on Monday, July 1st, completed the consideration of the Factories and Workshops Bill. At its previous meeting it dealt with a number of interesting points. For instance, it determined, on the suggestion of Mr. Asquith, to insert a proviso prohibiting for the future the use of underground bakeries unless they have been used as such before the passing of the Act. Mr. Asquith assured the Committee that this proviso will not interfere with trade, and intimated that in its favour there was a consensus of opinion among both masters and workmen. Mr. John Burns put forward the suggestion that in order to meet the case of existing underground bakehouses the Home Secretary should fix a date beyond which they should not be allowed to continue. Clause 25 of the Bill prohibited the use of lead or arsenic in any factory or workshop in the process of tinning or enamelling metal hollow-ware cooking utensils, but Mr. Asquith said he did not attach much importance to the clause, and the Committee decided to strike it out. At the final meeting, on Monday, July 1st, a considerable amount of time was spent over Clause 30, which in its original form provided that in every factory and workshop in which the business of making wearing apparel was carried on the temperature should be kept up to not less than 60° F. Mr. Hayes Fisher, acting on behalf of Mr. Bousfield, moved to extend the provision to all factories and workshops. Mr. Asquith said that the clause had been confined to places where wearing apparel was made—first, because it was in respect of those places that by far the larger number of complaints was made; and, secondly, because it was thought it would not be possible to apply the same figure to every factory. On further consideration, however, he had come to the conclusion that it would be desirable not to insert a fixed and invariable minimum temperature, and he was prepared to accept the proposed extension, as well as an amendment standing in the name of Mr. Gerald Balfour to insert the words "adequate measures shall be taken for securing and maintaining a reasonable temperature." The Committee agreed to this course, so the provision was made for "a reasonable temperature" in all factories and workshops. Sir Charles Dilke suggested the introduction of words with regard to ventilation, but it was felt by the Committee that in view of the provisions of the principal Act they were unnecessary. When the clauses in the Bill had all been gone through, Mr. Asquith made an appeal to members who had given notice of new clauses not to move them, but to allow the Bill to be regarded as complete in the meantime. This appeal had special reference to a number of new clauses dealing with half-timers, which were certain to have raised many points of controversy and occupied a considerable amount of time. Yielding to Mr. Asquith, the members concerned withdrew their proposals, with the result that at the close of the sitting the Chairman of the Committee found himself in a position to report the Bill to the House.

Hospitals and Sanitation in India.

A Parliamentary paper has been issued giving a statement with regard to the moral and material progress and condition of India during the year 1893–94, a large portion of which is devoted to the subjects of hospitals and sanitation. It says, *inter alia*, that the number of hospitals and dispensaries has increased from 1411 in 1886 to 2018 in 1893, that the number of in-patients treated has increased from 243,000 to 327,000, and that the total of in-patients and out-patients has increased from 10,309,000 to 17,075,000. The number of successful vaccinations has increased from 4,951,000 in 1886 to 6,716,000 in 1893; of this latter number two and a half millions were infants under one year, and three millions more were children between the ages of one and six years. Later there occurs the following passage: "Fevers are the great scourge of Indian populations; against fever quinine is the best known remedy; cinchona gardens have for years been established on the Sikkim and the Nilgiri Hills; quinine is made now at both these places by a new and simple process; supplies of the medicine are sent thence to hospitals and sold to the public; and during the last few years thousands of pounds of quinine have been made up into three-grain packets for sale to the public at local post-offices at a cost of one pice (less than a farthing) per packet. In 1893-94 between three and four millions of these packets were sold in Bengal alone." On the subject of sanitation, the report says that the work of procuring the regular registration of deaths and births has been diligently prosecuted throughout British India. Computations based on the census results of 1881 and 1891 have been held to justify an estimate that the average birth-rate of all India over a series of years is about 48 per 1000, and the average death-rate is about 39 per 1000. Among the native populations the great majority of deaths are ascribed to fever in all years, but the death-rate from zymotic diseases shows great variation, due apparently in great measure to climate. The reported cholera deaths for British India were 269,852 in 1888, 417,017 in 1889, 291,202 in 1890, 582,430 in 1891, 724,015 in 1892, and 216,827 in 1893. Much attention, it is added, has been given to improving the sanitary condition of pilgrims and of the crowds at great places of religious resort.

Inquiry as to Cause of Death.

On the motion of Sir Seymour King, the House of Commons agreed, on Tuesday, July 2nd, to present an address to Her Majesty for a "return of the report of an inquiry, ordered by the Secretary of State for the Home Department, into the causes of the death of a patient named Thomas Weir at St. Ann's Heath, Virginia Water, held by Mr. Gully, Q.C., assisted by Dr. George H. Savage."

Distress for Want of Employment.

The Select Committee on this subject has stopped its inquiry and presented a short report, containing one or two suggestions of minor importance and recommending the appointment of a committee in the new Parliament to complete the inquiry. The evidence already taken will be published as a Parliamentary paper.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Boulevard Saint-Germain, Paris.
Dictionnaire de Physiologie. Par Chas. Richet. Tome premier: A—B. Fascicules I. et II. 1895.

BAILLIÈRE, J. B., ET FILS, Paris.
Formulaire des Spécialités Pharmaceutiques. Par Dr. M. Gautier et F. Renault. 1895. pp. 297.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Diphtheria and its Associates. By Lennox Browne, F.R.C.S. Edin. Illustrated. 1895. pp. 272. Price 16s.

CHURCHILL, J. & A., New Burlington-street, London, S.W.
A Manual of Botany. By J. R. Green, F.R.S., Sc.D., F.L.S. Vol. I. Morphology and Anatomy. 1896. pp. 398. Price 7s. 6d.
Myxœdema and the Thyroid Gland. By John D. Gimlette, M.R.C.S., L.R.C.P. Lond. 1895. pp. 128. Price 5s.

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FISCHER, G., Jena.

Handbuch der Speciellen Therapie innerer Krankheiten. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. 19.-20. Lieferung. 1895.

GALE & POLDEN, Amen-corner, Paternoster-row, London, E.C.

The Art of Breathing as applied to Physical Development, with Respiratory Exercises for both Children and Adults. By A. L. Hoper-Dixon, Surgeon-Captain, Army Medical Staff. 1895. pp. 30. Price 2*s.* 6*d.*

GOVERNMENT PRINTING OFFICE, Washington.

Annual Reports of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1893. Vol. I. and II.

HIRSCHWALD, A., Berlin.

Die Zuckerkrankheit und ihre Behandlung. Von Professor Dr. C. Noorden. 1895. pp. 212.

LEWIS, H. K., Gower-street, London, W.C.

Hygiene and Public Health. By Louis C. Parkes, M.D., D.P.H. Lond. Fourth edition. Illustrated. 1895. pp. 531. Price 10*s.* 6*d.*

Mentally deficient Children: their Treatment and Training. By G. E. Shuttleworth, B.A., M.D. 1895. pp. 140. Price 4*s.*

LONGMANS, GREEN, & Co., London.

Mind and Motion and Monism. By the late Geo. J. Romanes, M.A., LL.D., F.R.S. 1895. pp. 170. Price 4*s.* 6*d.*

Text-book of Forensic Medicine and Toxicology. By Arthur P. Luff, M.D., B.Sc. Lond. In two volumes. Vols. I and II. 1895. Price 24*s.*

REBMAN, F. J., 11, Adam-street, Strand, London.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, in the Museum of the Saint Louis Hospital, Paris, with Explanatory Woodcuts and Text. Edited by J. J. Pringle, M.B., F.R.C.P., Middlesex Hospital, London. Part I. 1895. Price 10*s.* 6*d.*

SAUNDERS, W. B., Walnut-street, Philadelphia.

The Care of the Baby: a Manual for Mothers and Nurses. By J. P. C. Griffith, M.D. 1895. pp. 392.

SIMPKIN, MARSHALL, HAMILTON, & Co., London.

A Text-book of the Science and Art of Bread-making. By William Jago, F.I.C., F.C.S. 1895. pp. 648.

SMITH, ELDER, & Co., Waterloo-place, London.

Dictionary of National Biography. Edited by Sidney Lee. Vol. XLIII. Owens-Passelewe. 1895. pp. 446.

SOCIETÁ EDITRICE DANTE ALIGHIERI, Roma.

Trattato di Patologia e Terapia Chirurgica Generale e Speciale. Professor F. Durante. Vol. I., Lire 5. 1895.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.

La Cure de Baréges. Par le Dr. J. Bétous. 1895. pp. 146.

Mémento Formulaire de Posologie et Thérapeutique Infantiles. Par le Dr. H. Dauchez. 1895. pp. 95.

Manuel de Gymnastique. Par A. G. Fontana. 1895. pp. 51.

Le Moyen Age Médical. Par Dr. E. Dupouy. 1895. pp. 372.

La Prostitution dans l'Antiquité. Par le Dr. E. Dupouy. Troisième édition. 1895. pp. 219.

SWAN SONNENSCHEIN & Co., London.

The Cell Outlines of General Anatomy and Physiology. By Dr. Oscar Hertwig. Translated by M. Campbell, and edited by Henry J. Campbell, M.D. Illustrated. 1895. pp. 368.

WRIGHT, J., & Co., Bristol.

Leprosy: in its Clinical and Pathological Aspects. By Dr. G. A. Hansen and Dr. C. Looft. Translated by Norman Walker, M.D., F.R.C.P. Edin. With Photographs and Plates. 1895. pp. 162. Price 10*s.* 6*d.* net.

Vaccination Systems of India; by S. V. Kantak, L.M., Superintendent of Vaccination, Presidency Circle, Bombay (reprint from the Indian Medico-Chirurgical Review, Bombay) (N. K. Rao and Co., Tardeo, Bombay; and Baillière, Tindall, & Cox, London; 1895).—Catechism Series: Materia Medica; Part VI. (E. and S. Livingstone, Edinburgh); price 1*s.*—The Great Eastern Railway Company's Tourists' Guide to the Continent; edited by Percy Lindley; illustrated and with Maps (published at 30, Fleet-street, 1895); price 6*d.*—Annual Report of the Department of Health of the City of Chicago for the Year ended December 31st, 1894; A. R. Reynolds, M.D., Commissioner of Health (Cameron, Amberg, and Co., Chicago, 1895).—Apologia pro Oscar Wilde; by Dal Young, M.A. Oxon. (Wm. Reeves, Fleet-street, London, E.C., 1895); price 1*s.*—Magazines for July: The Strand Magazine, The Picture Magazine, Illustrated English Magazine, Hearth and Home, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Pall Mall Magazine, Chapman's Magazine London Home, Twentieth Century, Westminster Review.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, P. E., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Physician to the North-Eastern Hospital for Children, Hackney-road.

CASHMAN, JAS. P., has been appointed Assistant Medical Superintendent of the Cork District Lunatic Asylum.

CHRISTMAS, C. D., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Streatham Sanitary District of the Clapham and Wandsworth Union, vice Barker, resigned.

CRAIG, J. F., M.D., C.M. Aberd., has been appointed Medical Officer to the Post Office, Birmingham.

DAVIES, ALFRED O., L.R.C.P., L.R.C.S. Edin., L.M., M.R.C.S., has been appointed Medical Officer of Health for the Machynlleth Union District.

DODD, S., M.B., B.Ch. Irel., has been appointed Medical Officer of Health for Golborne.

DOUTY, EDWARD H., M.A., M.B., B.C., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon to Addenbrooke's Hospital, Cambridge.

EATON, J., M.R.C.S., L.M., has been appointed District Medical Officer by the Belvoir Rural District Council.

FAUSSET, A. G., M.B., B.Ch. Dub., has been appointed Medical Officer for the Second Sanitary District of St. George, Hanover-square, London.

GARLAND, EDWARD C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Yeovil.

HOWIE, ALEXANDER, M.B., C.M. Glasg., has been appointed Medical Officer for the Alberbury Sanitary District of the Atcham Union.

HUGHSTON, ROBERT W., M.B., Ch.B. Melb., has been appointed, *pro tem.*, Public Vaccinator for Fern Tree Gully, Victoria, Australia.

MACDONALD, J. A., M.B., M.S. Glasg., has been appointed Medical Officer for Harston, Knipton, and Croxton, by the Belvoir Rural District Council.

MALCOMSON, J. A., M.D., M.Ch. Irel., has been appointed Medical Officer of Health to the Eston Urban District Council.

MARTIN, ARTHUR W., L.R.C.P., L.R.C.S., D.P.H. Edin., has been reappointed Medical Officer of Health for the Gorton Urban District.

MILLER, J. M., M.B., C.M., D.P.H. Glasg., has been appointed Medical Officer of Health for the Burgh of Largs.

MORRIS, FRED. H., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health to the Wellingborough Rural District Council.

NOTLEY, W. J., M.D. Lond., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Post Office, Birmingham.

O'CONNOR, C. J., L.R.C.P., L.M., F.R.C.S. Irel., has been appointed Dispensary Medical Officer for the Celbridge District of the Union, Celbridge.

PALMER, A. M., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Whittington Urban District Council.

PARTINGTON, WILLIAM, M.B., C.M. Glasg., has been appointed District Medical Officer by the Tunstall Urban District Council.

PELLY, HUNTLEY N., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Second Sanitary District of the Winslow Union, vice Walter, resigned.

PRIESTLEY, JOSEPH, M.B., C.M. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Parish of Lambeth.

QUARRY, M. H., M.B., B.Ch. Irel., has been appointed Medical Superintendent of the Lambeth Infirmary, vice Lloyd.

QUENNELL, ARTHUR, M.R.C.S., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.

RIDING, EDWIN, M.R.C.S., has been appointed Medical Officer of Health to the Repton Rural District Council.

ROSS, JAS. M., M.B., C.M., B.Sc. (Public Health), F.R.C.S. Edin., has been appointed Medical Officer for the Burgh of Moffat, vice Grange, resigned.

SCANLAN, W. T. A., M.B., B.Ch. Irel., has been appointed Assistant Medical Superintendent of the Cork District Lunatic Asylum.

SLY, EDWIN, M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Resident Medical Officer to the Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.

SOMERSET, EDWARD, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Oundle Union District, vice Calcott, resigned.

WALKER, E. G. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Wrotham Urban District Council.

YOUNG, RALPH, M.D. Durh., L.M., M.R.C.S., has been appointed Medical Officer of Health for the Royton Urban Sanitary District, vice Gardner, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE, Great Russell-street, London.—Assistant Bacteriologist in the Antitoxin Department. Salary £150 a year.

CANCER HOSPITAL (free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CARMARTHEN UNION.—Medical Officer and Public Vaccinator for the Conwil district of the Union. Salary as Medical Officer £60 per annum, and the fees for successful vaccination. Applications to the Clerk to the Guardians, Hall-street, Carmarthen.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident), for six months. Salary at the rate of £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

COUNTY ASYLUM, Gloucester.—Third Assistant Medical Officer, unmarried. Salary £105 per annum, with board (no stimulants), lodging and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—Resident Assistant House Surgeon, for six months. Salary £15, with board (exclusive of beer, wines, and spirits), residence, washing, and attendance.

GUY'S HOSPITAL MEDICAL SCHOOL, London.—Lecturer on Public Health.

HIGHWORTH AND SWINDON UNION.—Medical Officer and Public Vaccinator for District No. 1 of the Union. Salary as District Medical Officer £80 per annum (inclusive of all drugs and medicines), with the usual extra medical fees for midwifery and surgical cases. Applications to the Clerk to the Guardians, Cricklade-street, Swindon.

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HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer (unmarried), at the North-Western Hospital for Fever Patients, Haverstock-hill, N.W. Salary £160 per annum for the first year, £180 for the second year, and £200 for the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Offices of the Board, Norfolk-street, Strand, London.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, locally situated at Bournemouth.—Resident Medical Officer. Salary £80 per annum, with board, lodging and washing.

NEWPORT AND MONMOUTHSHIRE INFIRMARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence. No stimulants provided.

PARISH OF CAMBERWELL.—Temporary Assistant Medical Officer for four weeks, at two and a half guineas per week, with board, lodging, and washing. Applications to the Clerk to the Guardians, Guardians' Offices, 29, Peckham-road, S.E.

QUEEN'S JUBILEE HOSPITAL, Earl's-court, London.—Surgeon.

ROYAL BERKS HOSPITAL, Reading.—Third or Assistant Medical Officer for six months. Board, lodging, and washing provided.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10 given, after six months satisfactory service.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House Surgeon. Salary £100 a year, with board, lodging, and washing.

UNIVERSITY OF GLASGOW.—Two Examiners in Medicine.

WILLITON UNION, SOMERSET.—Medical Officer and Public Vaccinator for the Stogursey District of the Union. Salary £80 per annum, together with the extra fees for operations and services, and for midwifery and vaccination cases, provided by the orders of the Local Government Board. Applications to the Clerk, Williton, Somerset.

LONDON HOSPITAL MEDICAL COLLEGE.—In our issue of the 22nd ult. the salary of the Senior Demonstrator of Physiology should have been £150 a year, instead of £100, and a proportion of the fees paid for classes.

Births, Marriages, and Deaths.

BIRTHS.

BARNES.—On May 31st, at the Public Hospital, George Town, Demerara, the wife of Walter S. Barnes, M.D. Irel., M.R.C.S. Eng., of a son.

BATTAMS.—On June 28th, at 123, Lavender-hill, S.W., the wife of J. Scott Battams, M.R.C.S., of a son.

BAYLOR.—On June 25th, at Chilton House, Ash, Dover, the wife of Edward A. C. Baylor, B.A., M.D. Dubl., T.C.D., of a son.

COOPER.—On June 29th, at Southwood, Birdhurst-road, South Croydon, the wife of Harry Joseph Cooper, M.A., M.B. Cantab., of a son.

MARRIAGES.

HOLMES—EDGELL.—On June 25th, at St. James's Church, Bury St. Edmunds, Thomas D. Holmes, M.D. Edin., eldest son of Francis Holmes, of Upper Grange, Stroud, Glos., to Mabel C. Edgell, only daughter of the late Capt. H. J. Edgell, 21st Fusiliers, Bury St. Edmunds.

LANGRIDGE—HOWARD-BARRETT.—On June 26th, at St. Pancras Church, by the Rev. H. L. Paget, Vicar of the parish, assisted by the Rev. C. F. Farrar, cousin of the bride, Francis Barton Langridge of Hampton Lodge, Highgate, youngest son of Henry Langridge of 42, Gordon-square, W.C., to Irene, eldest daughter of Howard Barrett of 49, Golden-square.

ROBERTSON—KEETON.—At Southwell, Albany, Cape Colony, on June 6th, by the Rev. W. R. Bruce, C. Robertson, L.R.C.P., M.R.C.S., J.P., Railway Medical Officer, Alicedale Junction, to Kate, second daughter of W. P. Keeton, Esq., J.P. of Lombard's Post, Southwell.

RUSSELL—RITCHIE.—On June 15th, at the Free Middle Church, Perth, by the Rev. J. Calder Macphail, D.D., Pilrig, assisted by the Rev. D. W. Kennedy, Perth, and the Rev. A. C. Watt, Comrie, William Russell, M.D., F.R.C.P.E., to Beatrice Ritchie, M.D., elder daughter of James Ritchie, C.B., Perth.

SINCLAIR—SCHRADER.—On June 27th, at St. Mary's Episcopal Church, Dunblane, Perthshire, W. Vernor Sinclair, L.R.C.S. and P. Edin., youngest son of the late Surgeon Sinclair, the 93rd Highlanders, to Bessie, youngest daughter of the late George Schrader, Glasgow.

DEATHS.

BARRETT.—On July 1st, at his residence, Appleton Mold, Stratford-on-Avon, Charles Albert Barrett, M.R.C.S. Eng., aged 63.

DAVIES.—On June 16th, at 23, Finsbury-square, E.C., Joyce Caroline, the dearly loved and only daughter of Arthur Tempter and Alice Davies.

DRAKE.—On June 27th, at his residence, Rownhams, Southampton, Arthur John Drake, L.R.C.P. Lond., M.R.C.S., late of Stratford, Essex, aged 46 years.

NELHAM.—On July 2nd, at Warwick-street, Eccleston-square, S.W., Ambrose Nelham, M.R.C.S., L.S.A., aged 62.

PEYTON.—On June 28th, at 15, Oxford-park, Ilfracombe, Joseph Peyton Peyton, M.R.C.S., L.S.A., aged 87 years.

SCATLIFF.—On June 16th, at Macaulay House, Macaulay-road, Clapham-common, S.W., Harriet, the devoted wife of the late J. P. Scatliff, M.D., formerly of 132, Sloane-street, S.W., aged 70.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 4th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 28	29·89	S.W.	67	59	127	78	56	....	Bright
" 29	29·80	S.W.	65	61	119	70	60	0·04	Cloudy
" 30	29·72	S.W.	63	58	121	73	58	...	Cloudy
July 1	29·69	S.W.	64	60	121	73	59	...	Cloudy
" 2	29·52	S.W.	63	57	123	73	56	0·19	Raining
" 3	29·98	N.W.	63	56	118	71	56	...	Cloudy
" 4	30·20	N.	63	56	117	68	55	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

THURSDAY.—BRITISH GYNÆCOLOGICAL SOCIETY.—Specimens by Dr. Purcell and Dr. Bantock. Adjourned Discussion on Dr. Fancourt Barnes's paper on "Some Difficulties in the Use of the Curette." Dr. Halliday Croom: A case of Glycosuria complicating a large Ovarian Cyst. Dr. Sambon of Rome will exhibit and explain some Roman Antiquities relating to Obstetrics and Gynæcology, mostly votive offerings dug up in Italy.

NEUROLOGICAL SOCIETY OF LONDON (National Hospital for Paralysis, Queen-square).—8.30 P.M. Dr. Risien Russell: Congenital Defect of the Cerebellum in a Puppy.—Dr. Colman: Disease or Defect of the Cerebellum in a Cat.—Dr. Alex. Bruce: (1) Acute Neuritis in Optic and Posterior Tibial Nerves, and Peculiar Degenerative Changes of Muscle; (2) Syringomyelia; (3) Double Facial and Double Auditory Paralysis from Syphilis of the basal Dura Mater and Bones.—Dr. Macintosh and Dr. Aldren Turner: (1) Exhibition of Tumours involving the Capsulo-thalamic Region; (2) Two cases of Syringomyelia; (3) A Rare Form of Infiltrating Glioma of the Spinal Cord.—Dr. G. Newton Pitt: Two Spinal Cords with Posterior Sclerosis associated with Profound Anæmia.—Dr. Hubert Bristowe: New Growth of Lumbar Cord.—Dr. F. W. Mott: Preliminary Note on the Chemistry of Degeneration of the Central Nervous System. Dr. Prandi (of Buda Pesth) will exhibit Specimens illustrating some cases of Alteration of the Posterior Columns in Pseudo Tabes, Arterio-Sclerosis, Diabetes, and Senile Alterations.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—6 to 6 P.M. Dr. Morgan Dockrell: Syphilis.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Pityriasis Rubra Pilaris.

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Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the current half-year was given in last week's issue, which completed the first volume of the year 1895. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half year's numbers are also ready. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

THE LANCET AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

FEES FOR CONFINEMENTS.

To the Editors of THE LANCET.

SIRS,—Will you kindly give your opinion as to what amount of attendance following a confinement is covered by the ordinary fee? In the particular case which I have in mind the confinement fee was paid within a day or two of delivery. Subsequently some fifteen or sixteen visits were necessary, owing not to any special complications, but to the general tardiness of recovery and to the prematurity of the child. In addition to this an attack of acute mastitis occurring in the fourth week necessitated two or three more visits. Your advice in such cases will be much appreciated.

I am, Sirs, yours faithfully,

June 29th, 1895. A SUBSCRIBER.

*** Something depends on the means of the patient. If these are good any attendance after the ninth day might reasonably be charged r.—ED. L.

THE LIABILITY OF FRIENDLY SOCIETIES FOR NEGLIGENCE OF THEIR MEDICAL OFFICER.

THIS question was raised in an action lately brought by Richard Barnes, a clerk, against the Lincoln Oddfellows Medical Association to recover damages in respect of a case of miscarriage in his wife attended by the medical officer of the Association. Certain very important points of law touching the liability of such societies for the negligence of their medical officers were reserved, on which judgment has just been delivered at the Lincoln County Court by his Honour Judge Shortt. The following is the report of the *Yorkshire Post* on these points. It would be well if the appeal granted by the judge were acted on, as they are of great interest both to friendly societies and the medical profession.

"On the points of law involved plaintiff contended that the defendants were liable on one, if not both, of two grounds—(1) by reason of their breach of contract to supply efficient medical attendance in accordance with the rules; (2) on the ordinary ground of the liability of a master for the negligent act of his servant. For the defendants it was replied—(1) that the contract to supply efficient medical attendance was fulfilled by securing for the members a fully qualified medical attendant; and (2) that they were not liable on the second ground, because the relation of master and servant could not be held to exist between the society and its medical officer, as that relation exists only in cases where the employer can not only order that a certain thing should be done, but can also direct and control the manner in which it is to be done. It was contended (thirdly) on behalf of the defendants that as to midwifery cases there was no contract with the society, nor did the society assume any obligation or interfere in such cases at all. His Honour held that the defendants could not be held liable either in contract or *in tort*. He considered that their general contract to provide efficient medical attendance was fulfilled by securing to the members the services of a fully-qualified medical attendant. It was admitted by counsel for the plaintiff that the defendants could not be charged with negligence in their appointment of him or in continuing to retain him. His Honour did not think it necessary to decide the abstract point (hitherto undecided in this country) whether the relation of master and servant could be said to exist in such a case as the present; for he was of opinion that, in dealing with midwifery cases at any rate, the medical officer could not be regarded as the servant of the society, as they could not order him to treat at all. That this particular case was a "midwifery" case was found by the jury—so far as the question was one of fact. So far as it was one of law he answered it in the same way. On this ground he held that the defendants were not liable, and that the plaintiff's remedy was against the doctor alone. If leave to appeal were necessary he should grant it willingly, as the points of law involved were of some nicety and difficulty. Judgment for the defendants, but without costs."

Greenhorn.—We do not know of any reliable book giving the exact information sought. In one or two such books the descriptions of symptoms are decidedly incorrect, and calculated to raise unnecessary alarm. In no very long time the services of a medical man will be required. Why not see the selected practitioner and state the difficulty now?

Mr. R. J. Wylie should consult a reliable advertising agent.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—On March 15th A and B met in consultation. On July 17th B is called by the patient to attend him. Prior to seeing the patient B inquires from patient's friends if A is aware that B is to be called in. They reply "that a letter on the subject has been written and forwarded to A." The case is of a chronic nature. B calls on A the same evening and reports what has taken place, A at that time making no objection whatever. Has B in any way acted unprofessionally?

I am, Sirs, yours faithfully,

New Zealand. ORNITHORHYNCHUS.

*** B's conduct appears to us irreproachable. He inquired if A had been made aware of the intention to call him in and he called on A after the visit. We cannot see, from the facts laid before us, what more could be expected from him, or what more he could do.—ED. L.

WANTED, A HOME FOR AN INEBRIATE.

To the Editors of THE LANCET.

SIRS,—A gentleman who has lately become an inebriate wants to enter a home for inebriates. He is eighty years of age and has an income of £60 a year. Will any of your readers kindly suggest such a place which would be suited to his limited income?

I am, Sirs, yours faithfully,

June 30th, 1895. R. E. P. S.

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"HOUSE SURGEONS AND CORONERS' INQUESTS."

To the Editors of THE LANCET.

SIRS,—May I be allowed, in reference to your recent annotation under this title, to call attention to what I consider is another hardship that we house surgeons have to bear in reference to coroners' inquests? We are called to give evidence at every inquest that is held on patients dying in hospital, no matter what is the cause of death, however evident it may be. Now, had many of these occurred outside, the medical man in attendance would not be called just because he would have to be paid, but we, poor wretches, who have to give evidence for nothing, always have to appear. Now, if the coroner calls us, it must be because he considers that our evidence is necessary; that being so, why does he not call the general practitioners in similar cases? The case I have particularly in view was one in which a child was severely burnt and died in two days, and yet the medical man who attended was not called at the inquest. We are always called in these cases.

I am, Sirs, yours truly,

June 23rd, 1895. H. S.

Gratis.—The case is peculiar. It seems to us that our correspondent's first step should be to complain to B. of the arrangement by which he sees the patients of other medical men. The fact that our correspondent is not on friendly terms with A. and B. does not affect his right or his duty to protest against such a system. We cannot say that B. is acting unprofessionally so long as no objection is made; but we should think otherwise if he disregarded a respectful protest from a neighbouring practitioner, whose patients he attended at the call of a midwife. Neither can we recommend our correspondent to attend cases for nothing by way of checkmating the objectionable arrangement described. The first thing to be done is to point out to his neighbour that he is, perhaps unwittingly, seeing the patients of other medical men.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—One statement made by Mr. Feeny in your last issue is not correct. In Germany, Switzerland, &c. every medical man who wishes to practise has to pass the State examination. This gives him the title of Arzt (Médecin), and the right to practise as such; but no one is allowed to call himself a doctor until he has passed the M.D. examination of a university, which is a different thing altogether. Whether the M.D. is a German, Swiss, or a foreign one matters little; because the M.D. alone does not give the right to practise, and all medical men, with very few exceptions, pass both examinations. If anyone abroad dared to propose, like Mr. Feeny, that the State examination should give to a man the right to call himself a doctor he would undoubtedly be lynched by the Rector Magnificus and the whole professorial staff of the nearest university. I am, Sirs, yours obediently,

Harley-street, W., July 2nd, 1895. J. KESER.

To the Editors of THE LANCET.

SIRS,—I must protest against the statement which appears in a letter signed "Not L.S.A." in your issue of the 29th ult.—that "the L.S.A. is by right entitled to call himself 'Dr.'" An L.S.A. is an apothecary, and nothing more, and has no more right to call himself "Dr." than a curate has to call himself "Archbishop of Canterbury." If the licence of the Society of Apothecaries gives its holder a kind of legal right to act as a general practitioner it gives its holder no right to assume distinctions that a *college* or a *university* alone can give. It is quite time that the Society of Apothecaries of London and the Apothecaries Hall of Dublin ceased to grant their licences, which are not now wanted, the pharmaceutical societies having supplied the want.

I am, Sirs, yours faithfully,

Erdington, July 2nd, 1895. WILLIAM DONOVAN, M.D.

To the Editors of THE LANCET.

SIRS,—Your correspondent "Not L.S.A." repeats a statement which has on two or three occasions been recently made—viz., that "the L.S.A. is by right entitled to style himself 'Dr.'" It would be interesting to know on what basis this assertion rests. I know that some of the dictionaries give the meaning of "doctor" as "a physician, an apothecary, one who has taken the highest degree in the faculties of divinity, law, physic, or music," but I should like to know what "right" the L.S.A. has to the title which is not equally that of any other licentiate in medicine. Perhaps "Not L.S.A." will explain.

I am, Sirs, yours truly,

July 2nd, 1895. A. Z.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of the 29th ult. "Not L.S.A." writes that "the L.S.A. is by right entitled to style himself 'Dr.'" May I ask him kindly to give his authority for the statement, as it does not appear to be generally known? I am, Sirs, yours faithfully,

July 1st, 1895. E. F.

THE SMALLWOOD HOSPITAL, REDDITCH.

Dr. Herbert Page.—The rule is open to the objection made by our correspondent; but it will not necessarily be abused, and there will be no harm in assuming till the contrary appears that the house committee will use it with due respect to the medical attendants of patients admitted and to their own staff.

S. A. H. T.—Our correspondent is advised to apply to "The Secretary, College of Preceptors, Bloomsbury-square, W.C." Much information of interest to medical students will be found in the Students' Number of THE LANCET, Sept. 1st, 1894, and in the number which we shall publish on Sept. 7th of the present year.

"A BOOK ON TOBACCO."

To the Editors of THE LANCET.

SIRS,—In reference to a query as to a book on tobacco I would recommend Mr. Ludwig Kohn to consult an article on smoking which appears in a work published many years ago on "Diseases of Modern Life," by Dr. Benjamin Ward Richardson.

I am, Sirs, yours truly,

July 1st, 1895. S. WESLEY WILSON.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Ludwig Kohn, in your issue of June 29th, will you allow me to inform him and others that a book upon the above subject, entitled "The Use of Tobacco condemned by Physicians, Experience, Common Sense, and the Bible"; also tracts, pamphlets, &c. may be obtained from this office? The price of the above book is 2*s.* 3*d.* cloth and 1*s.* 2*d.* paper covers.

I remain, Sirs, yours respectfully,

Manchester, July 1st, 1895. JAMES B. DAVIS.

*** Mr. Davis is secretary of the English Anti-Tobacco Society (Offices: 25, Market-street, Manchester), so that it is fair to suppose that the properties of tobacco are discussed from an antagonistic standpoint.—ED. L.

W. H. S.—Our correspondent cannot have told us all, though he may have told us all that he knows. From his account the conduct of a fellow practitioner would be "without known parallel," but the second opinion must have been sought by somebody. It could not have been given in the manner described *against* the wishes of the patient and her husband. We can express no opinion on the matter from the information supplied to us.

A QUESTION OF RESPONSIBILITY.

To the Editors of THE LANCET.

SIRS,—Kindly give your opinion on the following. A is paid a fixed yearly sum to attend accidents at D's factory. An accident takes place during A's absence and the patient is brought to B. B does everything necessary and tells patient to see A. A says he cannot remunerate B for his services. D considers himself relieved by salary he gives A. Who is responsible for B's fee?—I am, Sirs, yours truly,

July 1st, 1895. PERPLEXED.

*** If A did not actually delegate B to do a portion of his work for him, it would seem that A has incurred no legal responsibility. On the other hand, D's attitude is very comprehensible. Yet B must be paid. The responsibility will, we think, depend upon the circumstances of the case under which B's services were invited. Who sent for him, and how urgent was the case?—ED. L.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Leicester Post, Sussex Daily News, Glasgow Evening Mail, Morning Leader, Liverpool Courier, Weekly Budget, North British Daily Mail, Science Siftings, Manchester Guardian, Scotsman, Gray's Standard, Brisbane Courier, Cheltenham Free Press, Yorkshire Herald, Bradford Observer, Remarks, West London Observer, Irish Times, Newcastle Chronicle, Wolverhampton Chronicle, Cork Constitution, Truth, Public Opinion, Family Doctor, Times of India, Pioneer Mail, Architect, Sanitary Record, City Press, Builder, Brighton Gazette, Kensington News, Liverpool Daily Post, Bristol Mercury, Madagascar News, West Middlesex Standard, Yorkshire Post, Hertfordshire Mercury, Leeds Mercury, Weekly Free Press and Aberdeen Herald, Mining Journal, Reading Mercury, Weekly Times and Echo, Surrey Advertiser, Spalding Free Press, Local Government Journal, Temperance Chronicle, English Mechanic, London, Manchester Courier, Nottingham Daily Express, Tottenham Standard, Coventry Herald, Australian Medical Journal, Public Health, Evening Telegraph (Dundee), Cheltenham Mercury, Goole Times, Brighton Guardian, &c., &c.*

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Communications, Letters &c. have been received from—

A.—Dr. F. H. Alderson, Lond.; Dr. C. Aymer, Leslie, Fife; Dr. H. H. Aitchison, Wallsend-on-Tyne; Herr H. Audoyer, Bremenhaven; Ango-Swiss Condensed Milk Co., Lond.; Apollinaris Co., Lond.; American Academy of Medicine, Secretary of; Apothecaries' Hall, Lond., Secretary of; A. B. C., Lond.

B.—Dr. Lauder Brunton, Lond.; Dr. J. Braithwaite, Leeds; Dr. P. Boobbyer, Nottingham; Dr. C. Bodon, Paris; Dr. J. L. Bell, Driffield; Mr. C. Birchall, Liverpool; Mr. D. Biddle, Kingston-on-Thames; Mr. R. J. Beevor, Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Burgoyne, Burbidges, and Co, Lond.; Bootle Borough Hospital, Clerk of; Beta, Lond.; B. F. K., Lond.

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N.—Nottingham General Hospital, Secretary of.

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W.—Mr. J. W. Walker, Wakefield; Mr. Rivers Willson, Oxford; Messrs. Wright, Dain, and Co., Birmingham; Messrs. Wooldridge and Co., Lond.; Wolverhampton Hospital, Secretary of; West, Brighton.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Appleyard, Manningham; Dr. E. Antrobus, Great Malvern; Agricola, Blackburn; Aseptic, Lond.

B.—Dr. J. M. Barbour, Lond.; Mr. W. Burton, Ramsgate; Mr. H. Barrett, Lond.; Mr. R. Baker, Lond.; Mr. J. W. Blampied, St. Lawrence, Jersey; Mr. J. G. Bride, Lond.; Beta, Lond.; B., Lond.

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V.—Mr. W. Van Praagh, Lond.

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X.—Doctor X., Lond.

Z.—Dr. J. Zuill, Kincardine-on-Forth; Z., Lond.

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The Cavendish Lecture
ON
DREAMY MENTAL STATES.

Delivered before the West London Medico-Chirurgical Society on June 20th, 1895,

BY SIR JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S.,
LORD CHANCELLOR'S VISITOR.

(*Continued from page 5.*)

WE have all heard of these strange sensations and impulses, psychical reflexes, which have led to suicide by precipitation under such circumstances, and of the fascination which has caused bystanders to yearn to throw themselves in front of a swiftly passing train, and we may perhaps discover in these phenomena analogues of dreamy mental states. A friend of Arthur Hugh Clough once told me that on one occasion on which the poet was visiting him in Wales he took him for a walk and conducted him to a grassy slope terminating in a wall which formed the parapet of a huge cliff, with a sheer descent of three or four hundred feet. The wall, a rough stone one, looked simply the boundary of a field, and no one approaching it on the landward side could have any conception of what lay beyond it. The poet, being brought up to the wall, was asked to look over it, and on doing so had suddenly disclosed to him the beetling promontory, the wrinkled ocean beneath, and the circling flakes of white sea birds between, and with a very startling effect. He fell back on the grass pale and shivering, and exclaimed, "Oh, my God! what a fearful sight!" and then turned and said to his friend, "My life seems shrivelled up before me. For Heaven's sake give me some brandy!" But there was no brandy to be had, for the nearest house was four miles off, so nothing could be done for him in his distress but to sprinkle his face with water. He lay on the grass for half an hour ghastly and sick, like a man at the point of death, and it was then only with the utmost difficulty that he was helped to a farm where stimulants were procured for him. Never afterwards would he permit any conversation about that vision of the sea; he shuddered when any reference was made to it.

This height-terror of Clough, induced by visual impressions of a special kind, recalls one phase of the dreamy mental state, that in which it reaches supreme terror with physical prostration; but a closer analogy to that state is perhaps to be found in the thoughts which arise during the inhalation of certain anæsthetics, and notably of nitrous oxide gas—thoughts which are nebular and voluminous, but which have never in them any tinge of fear or alarm, but are always inflated and exhilarating. When nitrous oxide gas is breathed in the pure state it abolishes volition and consciousness so rapidly that it is not possible for the person breathing it to observe distinct stages in its triumph over him; but when it is inhaled diluted with air its successive effects may be and have been many times marked and recorded. A momentary sense of suffocation accompanying hurried breathing is followed by feelings of fulness in the head, fixedness in the eyes, and increased resistance in the feet, suggesting that they are on the point of acting involuntarily in throwing the body forward; after these come giddiness and inability to maintain equilibrium, thrilling and vibrating sensations throughout the body, impairment of the power of accommodation in the eyes, and increased acuteness in the sense of hearing, so that distant and otherwise faintly heard sounds are judged to be near at hand; and then come the mental symptoms, which consist in convictions of emancipation, relief, and happiness, in grand and sublime ideas, which in their expansion seem to break down all barriers of doubt and difficulty, and to make a wish and its realisation one, and which, as they dissolve into delirium and confusion, are accompanied by extreme susceptibility to suggestions from without and automatic movements, such as the rapid repetition of a gesture or the vehement shouting many times over of some word or phrase, symptoms which finally merge into convulsive spasms and complete insensibility. It is at the point where the habitual control or check of the highest centres is withdrawn, and where subordinate centres are free to indulge in unwonted activity, that the expansive dreamy thoughts and exalted feelings present themselves in the progress of nitrous oxide gas intoxication. These thoughts or feelings are probably present in all who inhale the gas, and they are always of an agreeable character, for patients sunk in profound melancholia who have had nitrous oxide gas administered have allowed on their recovery from its effects that they had forgotten their misery for a little, had felt lively and like themselves again, or had even had a foretaste of heaven. But these thoughts and feelings, although always agreeable, vary vastly in character, and range from a simple sense of well-being and enjoyment up to the most magnificent conceptions, their complexion and amplitude being apparently determined a good deal by the personal equation. In persons of average mental calibre they are pleasant and stimulating, but in no way remarkable; but in persons of superior intellectual power they become thrilling and apocalyptic. A working man who inhales the gas intimates on his recovery that he felt very happy, just as if he had had a little too much beer, and a philosopher announces that the secret of the universe had been, for one rapt moment, made plain to him, but only to be swallowed up again in returning consciousness.

The expansive and stupendous nature of the dreamy thoughts induced by nitrous oxide gas in persons of superior and trained intellect is well exemplified in the researches of Sir Humphrey Davy on this gas—researches which, although they were carried out a hundred years ago, have not been surpassed in interest and value by any since made in the same department, even with all the aids of modern scientific apparatus. Describing the effects on himself of long-continued inhalation of the dilute gas Sir Humphrey Davy said: "My emotions were enthusiastic and sublime. I endeavoured to communicate the discoveries made during the experiment, but my ideas were feeble and indistinct; one collection of terms presented itself, and with the most intense belief and prophetic manner I exclaimed, 'Nothing exists but thought; the universe is composed of impressions, ideas, pleasures, and pains.' When I was awakened from this semi-delirious trance indignation and pride were the first feelings produced by the sight of the persons around me." On another occasion Davy remarks: "The sensations were so intense and pure as to absorb existence, and I fell into unconsciousness." But Davy experimented not merely on himself but on his friends with nitrous oxide gas; and as among these friends were Coleridge, Southey, Edgworth, and Dr. Roget we have in their observations the best possible evidence as to the operation of the gas on the mental faculties of men of high intellectual endowment. Well, that evidence is uniformly to the effect that the gas induced delicious feelings and heroic or stupendous thoughts. Indeed, of all anæsthetics nitrous oxide gas seems to be definite and uniform in the emotions and dreamy thoughts it induces in cultivated people, and therefore in the lines and order of its invasion of the higher nerve centres in them. The emotions are always pleasurable, the thoughts are in nine cases out of ten connected with some great discovery, some supposed solution of a cosmic secret. A medical man upon whom my former colleague, Dr. Mitchell, experimented with nitrous oxide gas imagined before becoming unconscious that he had made a most important discovery explaining the whole action of the gas; and Dr. Mitchell himself had repeatedly the same experience, his mind being seized by expansive ideas which, while they lasted, made all dark things clear. So vivid is the impression as to the reality of the ideas met with in the vestibule of nitrous oxide gas anæsthesia, and as to the genuineness of the insight they give, that many attempts have been made by sudden interruptions of the inhalation and by strenuous exertions of will-power to hold and capture them, it need scarcely be said without success. We might as well look for phosphorescence on the sea in the blaze of midday sunshine as hope to reproduce such dreamy mental states in the full light of objective consciousness. Nothing but a vague remembrance that they have flashed across the mind remains when waking life is resumed, and endeavours to recall them or grasp them in passing, when not wholly futile, are apt to prove ludicrous in their results. I daresay many of us recollect the story of the professor who, having experienced a magnificent thought in the early stage of chloroform inhalation, resolved that he would by one bold sally lay hold of it and so read the riddle of the world. Having composed himself in his easy chair in his study,

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with writing materials at hand, he inhaled the chloroform, felt the great thought evolve in his mind, roused himself for an instant, seized the pen, wrote desperately he knew not what, for even as he did so he fell back unconscious. On coming to himself he turned eagerly to the paper, to find inscribed on it in sprawling but legible characters the secret of the universe in these words, "A strong smell of turpentine pervades the whole."

In rabbits the inhalation of pure nitrous oxide gas produces after brief excitement plunging convulsions, which have been said to be most marked on the right side and to be accompanied by drawing of the head to the right, but as regards the human subject I have only been able to find one case in which the invasion of the symptoms caused by inhalation was clearly unilateral. In that case the first physical effect noticed was a difficulty in moving the extensor muscles of the left arm, after which there came loss of power over the flexor muscles of the same arm, and then over the muscles of the other arm.

As the effects of asphyxia by submersion in water of an animal or human being are, as regards the higher nerve centres, not very dissimilar from those of the inhalation of an anæsthetic, we should expect to find during drowning some dreamy mental states analogous to those which attend the inhalation of an anæsthetic. And in this respect our expectations would be well founded, for it is even popularly believed that as life ebbs in drowning there is passed before the mind a panoramic review of its whole history, which we shall have no difficulty in recognising as a dreamy mental state. I am aware, of course, that the possibility of this panoramic review has been denied, and that many all but drowned witnesses have borne negative testimony as regards it and have represented their drowning thoughts as being of the most commonplace sort and occupied mainly with the weeds, pebbles, or sand that were seen around. I have no doubt the statements made about it have been greatly exaggerated, and that nothing like a complete picture of life ever passed before the mind under such circumstances; but still I am inclined to believe that very voluminous mental states do generally accompany drowning. The weight of evidence is in favour of them. Sir Francis Beaufort, in a letter published in the autobiography of John Barrow, described what happened to him when he was preserved from being drowned, when "every incident of his former life seemed to glance across his recollection in a retrograde succession, not in mere outline, but the picture being filled with every minute and collateral feature, each act of it accompanied by a sense of right and wrong." And since Beaufort's time many persons rescued from drowning have given an account of their expiring thoughts substantially the same and in harmony with what we are sometimes told of panoramic reminiscences in dreamy mental states. A domestic servant who consulted Dr. Hughlings Jackson, when communicating to him the warning of her epileptic seizures said: "It seems as if I went back to all that occurred in my childhood, as if I see everything so quick and so soon gone that I cannot describe it"; and dreamy mental states, apart from epileptic fits, have been recorded in which the whole coil of past existence seemed to be instantaneously unrolled.

I cannot further pursue what may be called the disguised forms of dreamy mental states, but I think, had I time, I should be able to show you that what used to be known in Scotland as second sight was sometimes only one of these states with a prescient intention.

I have touched upon the transitions which dreamy mental states undergo, on their associations and congeneric conditions, and I should like to say a few words about their consequences or the effects they exert on those who experience them. When they are linked with epilepsy or other serious nervous disease their effects are, of course, merged in those of the graver malady, and when they are an insulated ailment it may be questioned whether they have any effects that are clearly distinguishable. They carry with them, except when occurring while those who experience them are in positions of peril, no risk to life. They do not tend to self-perpetuation to anything like the same extent as epileptic fits, for in many instances they are, as it were, excrescences of childhood and youth, and wear themselves out in middle age. Even when they cling for life, it is often impossible to attribute to them pernicious results; and yet in many cases they do, I believe, have consequences of a painful and crippling description.

That dreamy mental states may persist throughout life without appreciable detriment to body or mind is, as has been said, undoubtedly true, but the same thing is true of epilepsy, which does occasionally go on into extreme old age without perceptible impairment of intellect or general health. It is sometimes even hinted that epilepsy, or the *morbus sacer*, is advantageous to intellectual development. We are told that Julius Cæsar and Mahommed and Marlborough and Napoleon and Wellington were epileptic, and are led to infer that that disease is almost an essential condition of great military genius, and the names of Molière and Sheridan and Balzac and Flaubert and other eminent writers who have been epileptic are mentioned in order to suggest that that disease is sometimes a valuable ingredient in literary talent. But a strict examination of all such cases brings out the truth that when the epilepsy did not come late in life, as a result of cerebral wear and tear, it did not promote, but to some degree marred, the genius or ability on which it was grafted. No doubt cases are encountered in which lifelong and violent epilepsy has proved not incompatible with great and sustained mental vigour. I have known a magistrate who at eighty years of age was a model of shrewdness and industry, and was still taking an active part in county business, and who had from puberty suffered from epileptic fits at short intervals; and there are, I believe, men similarly afflicted now filling important public positions with usefulness and distinction. Dostoieffsky, the great Russian novelist, was from youth subject to epilepsy of the worst type, and yet, notwithstanding this malady and intolerable hardships endured during imprisonment, penal servitude in Siberia, and enforced military service, he lived to the age of sixty, and went on to the end producing novels which will make his name live for ever, and in one of which he has delineated with minute observance and rare fidelity the symptoms of his own disease.

But such cases are exceptional. The rule is that epilepsy is a blighting, a crippling, a destroying disease. Our asylums, workhouses, prisons, and hospitals are full of the débris of its storms, and the flotsam and jetsam left by these may now and then be recognised floating hopelessly in the stream of population in our streets. And so, if dreamy mental states may coexist with brilliant intellectual powers, with robust health and energetic character, they may also on the large scale tend to undermine the mental and bodily constitution. It is difficult to gauge their effects. Even when occurring in great men they may to some extent limit the greatness to which they are attached; and in ordinary men they do assuredly sometimes blunt the fine edge of talent and induce dulness and stupidity or lower the breaking strain of the brain. When they occur at wide intervals their effects are probably immaterial; they are so slight and fugaceous as to escape notice. But when they come very frequently or in batches I have seen depression, mental torpor, and even temporary dementia resulting from them. They tarnish for a time the brightness of the brain and reduce the power of resistance of those who suffer from them, to other morbific agencies. John Addington Symonds, the historian of the Renaissance, suffered from dreamy mental states which left on him discernible traces. "Suddenly in church or in company," he said, "when I was reading, and always, I think, when my muscles were at rest, I felt the approach of the mood. Irresistibly it took possession of my mind and will, lasted what seemed an eternity, and disappeared in a series of rapid sensations which resembled the awakening from anæsthetic influence. One reason why I disliked this kind of trance was that I could not describe it to myself. I cannot even now find words to render it intelligible. It consisted in a gradual but swiftly progressing obliteration of space, time, sensation, and the multitudinous factors of experience, which seems to qualify what we are pleased to call ourself. In proportion as these conditions of ordinary consciousness were subtracted, the sense of an underlying or essential consciousness acquired intensity. At last nothing remained but a pure, absolute, abstract self. The universe became without form and void of content. But self persisted formidable in its vivid keenness, feeling the most poignant doubt about reality, ready, as it seemed, to find existence break as breaks a bubble round about it. The apprehension of a coming dissolution, the grim conviction that this state was the last of the conscious self, that I had followed the last thread of being to the verge of the abyss, and had arrived at demonstration of eternal Maya or illusion, stirred, or seemed to stir, me up again. The return to ordinary conditions of sentient existence began by my first recovering

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the power of touch, and then by a gradual though rapid influx of familiar impressions and diurnal interests. At last I felt myself once more a human being, and although the riddle of what is meant by life remained unsolved I was thankful for the return from the abyss, the deliverance from so awful an initiation into the mysteries of scepticism."

These subtly analysed experiences of Symonds were not, as one of his critics imagines, an efflorescence of the meditativeness and introspectiveness of his nature, but unmistakably dreamy mental states, and dreamy mental states, too, which left a permanent mark or blemish upon him. His achievements, as he has himself declared, fell far short of his own justifiable anticipations and of those of his friends, and throughout life he was haunted by melancholy and by painful but concealed misgivings as to his own weakness. "I feel so weak," he complains, "so unable to take hold of any subject"—and this was long before his pulmonary trouble commenced. "I wish and cannot will," he again exclaims; "I cannot concentrate myself on an end of action." There was, it must be admitted, something lacking in him, a disarray of the faculties, constant lassitude, and uncertainty as to the path to pursue. His life has been described as a great spiritual tragedy, and it was so apparently because his highest nerve centres were in some degree enfeebled or damaged by these dreamy mental states which afflicted him so grievously.

Seeing, then, that dreamy mental states—although occasionally an appanage of genius and often innocuous—sometimes lead up to epilepsy or insanity, sometimes are one of a series of morbid events, and sometimes impair the faculties of those who suffer from them, they are surely worthy of medical observation and research. Especially in children and in the young should they be sought for and studied. If we want healthy and vigorous men and women we must begin with the babies; and if we want strong and stable brains we must see that their foundations are well and truly laid in the springtime of life. Flaws then overlooked may cause disastrous subsidence long after, and as dreamy mental states are flaws I advocate their detection if possible while they are still remediable. I do not suggest that mere children should be promiscuously subjected to crooked questionings, should have strange fancies put into their heads, or should be encouraged in introspection; but I do counsel that when children exhibit anomalous nervous symptoms—forgetfulness, lethargy, paroxysms of passion, immorality, tremors or odd movements or tricks, habit spasms, insomnia or headaches—the possibility of dreamy mental states being present should not be overlooked. A few skilful exploratory queries by the medical man will generally bring them to light where they exist, even when they have been scrupulously hidden away, and their discovery will be a great relief to the little patient and a guide to treatment.

As regards the treatment of dreamy mental states, it need only be said that it does not differ from that of cerebral neurasthenia and epilepsy. In almost all cases in which these states mount to such intensity as to demand treatment there is a reduction in the standard of general health and inferentially abnormal nutrition of the brain; and it would seem, indeed, that they depend on the reduction of cerebral nutrition to a lower level in whole or in part, and to an attendant increased instability in the brain tissue. In those who suffer from them habitually they become aggravated in character during periods of ill health and debility, and in town-bred children they are often connected with anæmia and excessive mental fatigue, and occasionally in the case of boys—though not, I believe, as frequently as might be imagined—with self-abuse. Rest and liberal nourishment rarely fail to alleviate and sometimes remove them altogether; but the rest must be adequate and the nourishment wisely chosen. A diet too rich in animal food has seemed in one case in which I have seen it tried to make dreamy states worse than they previously were. This is, indeed, what we might have expected. Shakespeare, in "Twelfth Night," makes Sir Andrew Aguecheek say, "I am a great eater of meat, and I believe that does harm to my wit"; and, whatever the effect of a liberal diet of animal food may be upon the healthy understanding, there can be little doubt that it is prejudicial to the mental power of epileptics. Just twenty years ago one of my colleagues, Dr. John Merson, carried out at the West Riding Asylum in a masterly way a series of observations bearing on this point. He placed two groups of epileptic patients on a nitrogenous and farinaceous diet respectively for a fixed period, and then for a like period he changed the dietary of the two groups, giving those patients who had had a farinaceous diet a nitrogenous one, and those who had had a nitrogenous diet a farinaceous one. The patients on whom he experimented were of a chronic and confirmed class—patients in whom long-continued epilepsy had resulted in mental deterioration; and yet even in them marked results were obtained. In fourteen out of twenty-four cases there was a decided decrease in the number of fits during the farinaceous diet, and in a very considerable number of cases it was observed that soon after the nitrogenous diet was commenced mental dulness and stupidity supervened, the patient passing into a state of hebetude, which only disappeared when a farinaceous diet was again resorted to. Quite recently Dr. Sydney Short of Birmingham made observations on the same subject, and found that in a number of epileptic patients, also of a chronic class and inmates of the City Infirmary, a reduction in the amount of meat in their diet was followed by a diminution in the number of fits.

What we now urgently need are accurate and extended observations on the influence of diets of various kinds, including and excluding several classes of constituents, in epilepsy and allied conditions, and experiments, scientifically devised and carefully guarded, with drugs. We possess remedies which have elective affinities for certain nerve centres, and which, therefore, promise to be useful in epilepsies of certain kinds; and for my part I will not believe that there is any finality in treatment, or that we have not in store for us the discovery of means of dealing with epilepsy and its allies even more potent than that medicine which Sir Charles Locock with such happy perspicuity placed in our hands as a weapon against them, at the very time when it had been omitted from the London Pharmacopœia because of its supposed uselessness and inertness. It is disheartening to reflect, however, that so little is being done, and that the material at hand is not more largely utilised. There are in our asylums and workhouses to-day enormous numbers of epileptics, the majority of whom are, I believe, as far as medical treatment is concerned, left to jolt down the hill of fatuity, headlong and heedlessly or with only the temporary application of the bromide brake now and then.

The fact that dreamy mental states are sometimes at first and to some extent under voluntary control, so that they can be induced or arrested, affords ground for the hope that well-ordered education and mental discipline will yet be made to contribute largely to brain health. Hitherto the education of the schoolmen with all its advantages, which I would be the last to disparage, has, alas, been responsible for much cerebral sorrow and ruin. Let us hope that education, when carried on on physiological lines, will conduce to peace and stability in the higher nerve centres. Let us hope also that a further investigation of the moral treatment of disease will put us in possession of methods of controlling mental metabolism—if I may coin the term—more powerful and exact than any as yet devised. We shall some day perchance be able by certain courses of study to massage the brain as we now do the body, and by certain definite exercises to bring successively into hygienic activity all the faculties of the mind, as Schott now does the muscles of the trunk and limbs. Gentlemen, I fear I have by my prolixity induced in many of you dreamy states of a purely physiological kind. I can only trust that they have not been of a disagreeable complexion and will leave you disposed to extend to me the indulgence I feel I require.

THE REGISTERED NURSES' SOCIETY.—The first annual meeting of this society, whose offices are at 269, Regent-street, London, was held, by the invitation of the Duke and Duchess of Abercorn, at Hampden House, on Saturday last. The chair was taken by Dr. Bedford Fenwick, treasurer, and the report of the committee showed that the society has achieved success in its first year of working. It was formed in order to enable the public to obtain the services of registered trained nurses, it being an essential condition of membership that every nurse must have worked for at least three years in hospitals, and must possess the highest professional qualifications and personal character. The nurses obtained their entire earnings, less a deduction of 7½ per cent. to cover expenses of management. That the society has met a public want is evident from the fact that a large number of applications for nurses have been made that could not be supplied; while the average receipts of the sixteen senior nurses for fifty-one weeks' work (£111 12s.) are a proof of the benefit of the society to its associates.

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The Croonian Lectures,

BEING A

CONTRIBUTION TO THE HISTORY OF THE RESPIRATION OF MAN.

Delivered before the Royal College of Physicians of London on June 18th, 20th, 25th, and 27th.

BY W. MARCET, M.D. EDIN., F.R.C.P. LOND., F.R.S.

LECTURE IV.[1]

Delivered on June 27th.

MR. PRESIDENT AND GENTLEMEN,—So far we have dealt with the phenomena of respiration as carried on in the ordinary course of life. I now wish to draw your attention to breathing under circumstances which are not of daily occurrence, the first of these being under the influence of diminished atmospheric pressure as met with on ascending into high altitudes. This subject is important not only physiologically, but also with reference to the modern treatment of phthisis.

It must be clearly understood that the carbonic acid expired is unconnected with the consumption of the oxygen taken in the previous inspiration, as the oxygen derived from the air is carried into the circulation by the hæmoglobin and there serves the purpose of heat production and metabolism; the carbonic acid produced in the tissues passes out into the blood and is ejected with the expired air. Thus it is impossible to tell when a certain volume of oxygen taken into the blood may reappear as carbonic acid. This point I wish to establish clearly, as I believe an objection to my work has been made on that score.

If experiments on the respiration of man could be continued for a length of time—say the whole day—then the volume of air breathed would certainly compare with the weight (or volume) of carbonic acid produced; but it is not possible to do this, and the only alternative is to repeat the experiment as often as possible throughout the day, and take the means of the volume of air breathed and carbonic acid produced—a method invariably adopted in my experiments. I do not claim a relationship between the oxygen inspired and the carbonic acid expired immediately afterwards, but I claim a relationship between the mean volume of air breathed and the mean weight of carbonic acid expired in the course of one day. On ascending a mountain the air pressure diminishes and the pulmonary ventilation increases, in order to aerate the blood to its full extent. Now, although the volume of air breathed increases on rising above the sea level, still the weight of that air falls; in other words, its volume, reduced to dryness, freezing point, and seaside pressure, diminishes. Hence it may be said that, as one ascends, a less weight or volume (reduced to dryness and standard temperature and pressure) of air is breathed for the production of a given amount of carbonic acid. For instance, if at the seaside a person inspires a mean of 4 5 litres of air and expires 0·375 gramme of carbonic acid per minute, or, what is the same thing, inspires 12 litres of air, corresponding to the emission of 1 gramme of carbonic acid, on rising to such a height that the atmospheric pressure falls by one-fourth its amount at the sea level, the volume of air breathed corresponding to 1 gramme of carbonic acid will not exceed the original 12 litres by one-fourth, and thus become 15 litres, but will be less than 15 litres. It must be understood that the volumes of air breathed (reduced) decrease at increasing altitudes, a fact first published by a Swiss gentleman, Dr. Mermod, in 1875, and which I confirmed a few months later with observations made at much greater altitudes, his experiments being unknown to me at the time. A number of experiments made on the Peak of Teneriffe have also shown me conclusively that in perfect health the amount of carbonic acid expired remains unaltered with increasing altitudes, at any rate up to about 12,000 feet. According to Dr. Mermod, on the other hand, it becomes greater on rising above the sea level. On this point we therefore disagree. Discarding for a moment the idea of the influence of altitudes, it is well known that when the temperature of the atmosphere falls a greater volume of air is breathed and more carbonic acid expired, but the volume of air breathed for the emission of a certain weight or volume of carbonic acid is proportionately less; hence it appears that a fall of the atmospheric temperature gives rise to the same kind of effect on respiration as increasing altitudes without change of temperature. My earliest experiments made on the Alps were all attended with a fall of temperature at increasing altitudes, this circumstance necessarily producing an increased combustion in the body in order to overcome the action of the cold; it was therefore impossible by this means to determine the exclusive influence of atmospheric pressure on respiration, hence the necessity of selecting for these experiments a mountain of sufficient height near the tropics where one might expect to find the temperature fairly equal at different altitudes. With this object in view I spent three weeks on the Peak of Teneriffe in the summer of 1878, selecting for this inquiry four stations varying in altitude. The temperatures differed but very slightly at the four stations, though somewhat higher at the lowest, but there was no cause for any marked influence of temperature on the formation of carbonic acid. The air was expired into an indiarubber bag of known capacity, and a sample of the air was shaken with baryta water in a glass cylinder. The fluid, having absorbed all the carbonic acid, was afterwards collected in bottles, one for each analysis, and carefully stoppered, the final analysis being made at a subsequent period. In the following results every figure is the mean of the number of experiments entered in parentheses, the table showing the number of litres of air expired (reduced to dryness, freezing point, and seaside pressure) for 1 gramme of carbonic acid expired:—

—	Litres.	Temperature.	—
Seaside	12·0	75·7° F.	(20)
Guajara (7090 ft.)...	11·6	69·6° F.	(21)
Alta Vista (10,700 ft.)	10·4	64·0° F.	(20)
Foot of terminal cone (11,740 ft.) ...	10·3	64·0° F.	(5)

The difference is not great, still for 10,700 ft. it amounts to 1·6 litres; hence one-eighth less air was required at the two higher stations to produce through the respiration the same amount of carbonic acid as at the seaside. In other experiments made on the Col du Géant the reduction for an increased altitude of 9800 ft. amounted to about one-fifth in my own case, and rather more than one-twelfth for a young companion. On other occasions at various altitudes, from 8115 ft. to 13 680 ft., the mean height, 11,256 ft., gave a mean reduction of 2·03 litres of air breathed for 1 gramme of carbonic acid produced. These experiments show clearly that the aeration of the blood takes place more readily under diminished pressures than at the seaside, which is not easily accounted for. Paul Bert observed that the blood of various animals forwarded to Paris from the town of Mexico, situated at an elevation of 7480 ft., had the power of absorbing considerably more oxygen than the blood of similar animals kept in Paris, and concludes that the Mexican blood contained more hæmoglobin. This may be correct, but such a character could only be acquired after a number of years, perhaps of generations, while in my experiments the effect was produced, if not immediately, certainly after a few hours, when no change in the constitution of the blood could possibly have taken place. Frankland found that candles burn more brightly in air partially exhausted by an air pump than in the surrounding atmosphere, and concluded from this experiment that the molecules of oxygen have a greater mobility in the rarefied air. The more ready passage of oxygen into the blood at the lungs on reaching a high altitude may be due to a similar cause, but I cannot think that it is in any way connected with an increase of hæmoglobin.

As regards the medical aspect of the question, with reference to the treatment of phthisis in high winter stations, as Davos and St. Moritz, people residing there must live under circumstances facilitating the aeration of their blood, and I have no doubt that this is a primary and important cause of the beneficial effects produced. The extreme cold experienced must also be beneficial, since cold reduces the volume of air that has to be inspired for the production of a

[1] Lectures I., II., and III. were published in THE LANCET of June 22nd and 29th and July 6th respectively.

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given amount of carbonic acid, so that both altitude and cold join in facilitating the respiratory phenomena. There is another experiment of Frankland which throws light on the circumstance that cold is so little felt on high winter stations. He found that if a platinum wire carried through an air pump receiver was made red-hot by an electric current it rose to white heat when the air pressure was reduced in the receiver, although the source of heat remained unchanged, from which he concluded that rarefied air removed less heat by conduction than the same air under atmospheric pressure. In accordance with this observation Frankland accounts for the fact that cold is felt less than might have been expected in the still air of Davos, from the circumstance that the lightness of the air checks the removal of heat from the body by atmospheric conduction. This view gains support from the statement of Paul Bert, in his book on barometric pressures, that compressed air has a tendency to produce a sensation of cold, although the temperature of the compressed air chamber may be higher than that of the external air, and with persons subject to the impression of cold this effect of increased air pressure is observed to become greater the longer the exposure and the higher the pressure. I, therefore, cannot help believing with Frankland that increased lightness of the air, acting inversely to increased pressures, assists in accounting for the remarkable fact that patients at Davos are so little troubled with the intense cold. An easy respiration at great altitudes is in a great measure the result of training; thus, while practised climbers easily ascend Mont Blanc, tiros, after about 10,000 ft. are attained, have to stop frequently for a few seconds to take breath, and often give way to fatigue or to a sleepy sensation or mountain sickness. Perhaps the most remarkable illustration of the influence of training is shown in the case of Mr. Whymper, who, having fought his way slowly and patiently to the summit of Chimborazo in spite of the suffocating effect of the low atmospheric pressure, experienced no difficulty whatever in repeating the same ascent six months later, having been engaged meanwhile in explorations at great altitudes in the Andes.

It may be remembered that in my last lecture I traced a connexion between "volition" and respiration; it will now be interesting to observe the effect of low atmospheric pressure on volition. Paul Bert submitted himself to low pressures in a closed chamber. At a pressure of 17·5 in. of mercury, having attempted to whistle, he found it impossible to do so; at 17 in. he suffered from dizziness, which recurred at 16·6 in.; at 16·4 in. he felt rather unwell, and, having counted 28 pulsations at the wrist in 20 seconds, found great difficulty in multiplying that figure by 3. These statements show that Bert experienced in a marked degree what we might call want of power to respond to volition under that low pressure. When the pressure had risen to 22·2 in. he began to recover his ability to whistle. Is not this an illustration of the action of oxygen towards promoting the power of the will?

A more remarkable illustration of the effect of a deficient supply of oxygen towards the suspension of the action of volition is found in the account given by Mr. Glaisher of his balloon ascent with Mr. Coxwell on Sept. 5th, 1862, when, at an elevation of 29,000 ft., the balloon still rising rapidly, he lost consciousness. Allow me to extract *verbatim* from Mr. Glaisher's book, "Travels in the Air":—"At 1 o'clock and 51 minutes the barometer read 10·8 inches. After this I could not see the column of mercury in the wet-bulb thermometer, nor the hands of a watch, nor the fine divisions on any instrument. I asked Mr. Coxwell to help me to read the instruments. In consequence, however, of the rotatory motion of the balloon, which had continued without ceasing since leaving the earth, the valve line had become entangled, and he had to leave the car and mount into the ring to readjust it. I then looked at the barometer, and found the reading 9¾ inches, still decreasing fast, implying a height exceeding 29,000 feet. Shortly after I laid my arm upon the table possessed of its full vigour, but on being desirous of using it, I found it powerless; it must have lost its power momentarily. On trying to move the other arm I found it powerless also. Then I tried to shake myself and succeeded, but I seemed to have no limbs. In looking at the barometer my head fell over my left shoulder. I struggled and shook my body again, but could not use my arms. Setting my head upright for an instant only, it fell on my right shoulder; then I fell backwards, my back resting against the side of the car, and my head on its edge. ..... As in the case of the arms, so all muscular power was lost in an instant from my back and neck. ..... In an instant intense darkness overcame me so that the optic nerve lost power suddenly, but I was still conscious, with as active a brain as at the present moment while writing this. ..... While powerless I heard the words 'temperature' and 'observation,' and I knew Mr. Coxwell was in the car speaking to and endeavouring to rouse me before consciousness and hearing had returned. I then heard him speak more emphatically, but could not see, speak or move. ..... Then the instruments became dimly visible, then Mr. Coxwell, then shortly I saw clearly, next I rose from my seat and looked around as though waking from sleep. ..... I then drew up my legs, which had been extended, and took a pencil in my hands and began observations. ..... It is probable that three or four minutes passed from my hearing the words 'temperature' and 'observation' till I began to observe"

The case of Mr. Glaisher is very remarkable if taken in conjunction with the fact, which I look upon as proved experimentally, at all events as far as an experiment can go for the present, that the exercise of volition requires the direct action of oxygen on the brain centre concerned. In the present instance the conception of volition was not in abeyance, as Mr. Glaisher could direct his will as he pleased, but there was no response; he wished to move his limbs and could not. Hence as far as can be concluded from the experiment of Bert and the narrative of Mr. Glaisher the conception of volition does not require oxygen, but the manifestation or response of volition cannot be carried out without it.

Another effect of rarefied air when accompanied by intense cold is that it appears to check the mental faculties, producing the sensation of drowsiness so often experienced on high mountains.

Thus far the effects of diminished pressure have been considered; those produced by increase of pressure have been the subject of many inquiries. Paul Bert assimilates the effect of an increased atmospheric pressure to the respiration of a proportional addition of oxygen at ordinary pressure; this view, however, does not take into account the cooling influence of compressed air.

From Dalton's law the solubility of gases increases proportionately with the pressures, hence under increased atmospheric pressure a little more oxygen should be absorbed by the blood, and this is found experimentally to be the case. There is also a slight increase of carbonic acid expired, which, according to Bert, may be observed up to about five atmospheres, the maximum increase occurring at about three atmospheres. At pressures above five atmospheres oxidation falls below the normal, the excess of oxygen arresting rather than exciting combustion. Quoting from Bert's book, this cessation of the oxidation of tissues from excess of oxygen takes place in all living tissues; even seeds no longer germinate when maintained under pressure. Dr. G. von Liebig, from experiments made in 1875, found that at pressures of about 40 5 in. of mercury the carbonic acid expired was increased by less than 1 per cent. These experiments correspond with others I had occasion to make, when atmospheric air was inhaled in which one-third was replaced by oxygen gas. According to the views advocated by Bert, this artificial air, containing 43 per cent. of oxygen instead of 20 9 per cent., would be equal to a pressure of about two atmospheres. In every experiment there was a large increase of oxygen absorbed by the blood, an increase which very clearly exceeded the absorbing power of the blood corpuscles, but the carbonic acid expired was but slightly, and in some cases not at all, in excess of the normal, thus illustrating very forcibly the remark made in my first lecture, that it is not the oxygen which by offering itself to the blood and tissues promotes the tissue changes. The slight excess of carbonic acid expired when the body is subjected to increased atmospheric pressure is probably due to the greater conducting power of compressed air, which withdraws heat from the body. Dr. C. T. Williams, in his book on "Aerotherapeutics," states that in certain cases of asthma decided relief was obtained by the use of the compressed air bath. I account for this favourable action of compressed air in asthma by regarding the bath as a method of training the respiration. Dr. Williams observed that a larger volume of air was breathed after the use of the bath than before. This increased pulmonary ventilation will obviously assist in aerating the blood and ridding it of its carbonic acid, the percentage of which in the expired air would, I doubt not, be found lower than normal, thus assimilating the phenomenon to one of unconscious forced breathing.

To pass on to another subject. Allow me to draw your attention to the effects of the inhalation of carbonic acid,

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and first of all to the phenomena observed on rebreathing one's own expired air. I made experiments by rebreathing for five minutes 35 litres of air contained in a bell jar suspended over salt water. The air was inspired through nasal cannulæ connected with the roof of the receiver, and expired by the mouth into the bell jar in the usual way. At each inspiration the bell jar fell slightly, and rose at the following expiration. Little or no distress was felt during the first three or four minutes, though in the last minute a slight feeling of want of air was occasionally experienced, but this varied with different people. Tracings of this kind of respiration show that as rebreathing continues the respiration becomes deeper and more rapid, while the direction of the tracing is not quite horizontal, but has invariably a tendency to fall; this is due to the absorption of oxygen and carbonic acid in the blood and the consequent diminution of the volume of air in the receiver. The history of the phenomenon is very simple. Oxygen is consumed from the air and partly converted into carbonic acid, while the remainder is used up in other ways. Under ordinary circumstances the carbonic acid produced is exhaled; but in this case it accumulates in the bell jar, and, being inhaled, prevents the free diffusion of the gas from the blood into the lung cavity, and therefore carbonic acid becomes retained in the blood in gradually increasing quantity. Moreover, the amount of oxygen in the air inspired falls rapidly, and this air therefore becomes less and less fit to maintain life. In my inquiries five persons submitted to a total of forty-two experiments, each of which consisted of four stages. In the preliminary stage the carbonic acid was determined in normal respiration. In the second stage 35 litres of atmospheric air were rebreathed for five minutes and subsequently analysed. Immediately after rebreathing, the air expired was diverted into another bell jar, till about 35 litres had been expired, after which the air given out from the lungs was collected separately for a further period of four or five minutes, both quantities being analysed for carbonic acid. The broad results obtained from this inquiry were as follows: 1. On rebreathing air in a closed vessel, less carbonic acid is expired in a given time than in ordinary breathing, a certain proportion remaining absorbed in the blood. 2. When fresh air is taken into the lungs immediately after rebreathing, the volumes of air breathed and carbonic acid expired are greater than in ordinary breathing. 3. When after the rebreathing stage fresh air has been inspired for five or six minutes the blood has recovered its normal state of aeration, and given out the whole of the carbonic acid which has been absorbed in the rebreathing stage. Paul Bert has shown that animals, when left to die in closed vessels, are not asphyxiated from carbonic acid, but die solely from want of air, the phenomenon being the same as if they were submitted to diminished pressures corresponding to the proportion of oxygen left in the receiver in which they were confined. In five of the above rebreathing experiments the mean percentage of the original oxygen which had disappeared was 19·2; the pressure corresponding to this reduction of oxygen would be 24·23 in., equal to an altitude of about 7480 ft.; such a low altitude explains the absence of any difficulty or distress in the breathing. On one occasion rebreathing was continued till the air in the bell jar contained 13·64 per cent. of carbonic acid and only 5·40 per cent. of oxygen, this percentage of oxygen corresponding to a pressure of 7·74 in. of mercury. The person under experiment felt very giddy, and the vision was obscured by a dark mist. It is difficult to state the limit of altitude to which man can attain, because as he rises higher he needs less and less air; the secret of attaining to very great heights is training and time. Mr. Whymper reached an altitude of 20,517 ft. on the Chimborazo, and Mr. Conway to 22,600 ft. on the summit of the Pioneer Peak in the Himalayas.

Returning to the consideration of the influence of carbonic acid on respiration, it is often asked to what extent this gas can be breathed with impunity in the atmosphere. The subject has been investigated, amongst others, by Professor Emmerich and Dr. von Pettenkofer, who, in company with others, shut themselves up in a small vault of the Institute of Hygiene at Munich with bottles of liquid carbonic acid. Light was emitted from candles. The gas was allowed to escape from the bottles, and when the lights went out most of the visitors left the chamber. Professor Emmerich and Dr. Pettenkofer remained inside, and when seized with headache and discomfort took several samples of air and then left the vault none the worse for the experiment. The analysis of the samples gave a mean of 8 per cent. of carbonic acid, which proportion can therefore be breathed for a short time without producing any serious effects. Rabbits have, according to Professors Friedländer and Härter, withstood for more than an hour 34 per cent. of carbonic acid, and even 60 per cent. was breathed for three-quarters of an hour, after which cramp and coma set in; after being exposed for a quarter of an hour in this 60 per cent. mixture the rabbit quickly recovered in the open air.

ASTHMA.

Having said so much on respiration, allow me to offer a few remarks on a disease which is peculiarly one of the respiratory function—that is, asthma; and first of all, as an introduction to the subject, let us analyse the phenomenon of coughing. In coughing, a long breath is taken, which is exactly like a deep or forced inspiration, in which, as I have shown, a certain amount of carbonic acid is produced for work done, the oxygen being derived from that pre-existing in the contracting muscles, while a larger volume of carbonic acid is displaced from the blood by a purely physical process; but, though forced breathing is attended with but comparatively little work, in coughing the respiration is laboured, the muscles having to strain against the closure of the pharynx and forcibly expel the air from the lungs. This results in the production of an excess of carbonic acid; hence at the end of the expiration there is an increased amount of carbonic acid in the circulation. After the forced expiration of coughing a deep breath is taken to supply the blood with a fresh quantity of oxygen and rid it of the excess of carbonic acid produced, and this process goes on till the fit of coughing comes to an end; then deep inspirations and expirations follow till the blood is again perfectly aired and the carbonic acid in excess completely eliminated. It therefore appears that in coughing there is a tendency to a want of oxygen and a distinct excess of carbonic acid in the blood, which are conditions met with, though in a much intensified form, in asphyxia. Now asphyxia is occasionally productive of spasms of the glottis, as seen in some cases of recovery from drowning, and might not the momentary want of air produced by a bad fit of coughing be the cause of asthma in people who are subject to it? The following observation was made by a physician who at times had severe attacks of asthma, though usually in the enjoyment of good health. On Feb. 13th last, after taking a cup of tea at 2.30 A.M., loud wheezing and tightness of the chest came on, when a succession of forced inspirations had the immediate effect of arresting both the wheezing and tightness; a second attack the same night was averted in a similar manner. In this case the forced breathing returned to the blood the oxygen it was clearly in want of, while at the same time removing the carbonic acid.

I have shown in my third lecture that forced breathing is a means of supplying the centre of respiration with oxygen towards the respiratory phenomena; hence it appears to follow that a deficient supply of oxygen to the respiratory centres has also something to do with asthma. In keeping with these remarks it may be said that all circumstances productive of an excess of carbonic acid in the body, and therefore of a deficiency of oxygen, predispose to asthma. Cold and certain kinds of exercise do so pre-eminently, so does the ingestion of food, as happened in the case referred to above, where an attack of asthmatic coughing came on pretty regularly two hours after dinner, or at the time of the maximum production of carbonic acid from the meal. A bad attack of asthma usually sets in with a sudden loud dry cough, coming on in the evening or at night; then follows a bronchial spasm during inspiration and the acute feeling of suffocation. After fighting for breath for ten, twenty, and in some cases thirty hours the respiratory muscles become very tired, and also volition towards the respiratory effort. Moreover, the impediment to breathing prevents oxygen reaching the centres of respiration to promote the exercise of volition for forced breathing; hence the power of the will becomes less and less. It is difficult to reconcile the fact that some asthmatic persons find themselves better under lower atmospheric pressures, while others, on the contrary, suffer the moment they leave the sea level. This is apparently due to the circumstance that some persons take in oxygen more readily under low pressures, and others under high pressures. I cannot help comparing asthma in those who suffer under low pressures to a sort of mountain sickness—the higher they go the worse they are, and the moment they return into the lower plains the asthma passes

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off as by magic. If mountain sickness can be prevented by training for the exercise of climbing under low pressure, why should not asthma also yield to the training of the respiration carried out by practising the respiratory movements wanted to carry the tidal air through the lungs to oxidise the blood and emit the carbonic acid, while imparting to the circulation a better tendency to work in perfect harmony with the respiratory requirements? Of all means of training the respiration I think cycling is the best. When a person first takes to cycling he is troubled with shortness of breath, his heart beats uncomfortably, and his legs get tired, but after some training these discomforts all disappear. Why should not people liable to attacks of asthma also train their respiration by such a kind of exercise—of course, on condition of the heart and lungs being in perfect health? Cycling exercise first of all increases the depth of breathing, and that without fatigue, as the respiratory movements are automatic; at the same time it will accustom the rider instinctively to take in at each respiration the volume of air required to aerate the blood and to eliminate a fixed proportion of carbonic acid, leaving in the circulation the precise amount compatible with health. In cycling volition has also a good deal to do towards exercising the motor centres to take in the exact volume of oxygen required for that kind of work. Persons who do not care for cycling out of doors can take the same description of exercise at home by means of a dummy cycle. My experience of the results of this treatment is unfortunately only limited to one person; in which case it has proved eminently successful. This person took to bicycle riding three years ago, first for pleasure and then on account of his health. He observed last summer that attacks of asthma to which he was subject had become very much fewer, having only suffered two since last October, both of these being brought on by exposure to cold. The tightness and wheezing which occurred every night have nearly entirely disappeared; his sleep, which for years had been restless and broken, has very much improved; and all this he ascribes in a great measure to the use of the bicycle.

Allow me, Gentlemen, to summarise shortly the Croonian Lectures for the present year. In the first lecture the oxygen of the atmosphere was shown to be the main agent of life, and Hermann's discovery that oxygen is an integral part of the tissues was appealed to with the object of explaining the remarkable tenacity of life of certain organisms—such as seeds. Next came an attempt to explain that it is not the oxygen of the air which, by offering itself to the tissues, produces the phenomena of metabolism, but that the living tissues call upon the oxygen to effect the changes they undergo. The influence of tissues as the prime movers in the matter was shown by the action of cold, which, through the nervous system, first increases their vitality and consequently their demand for oxygen, though when the cold is excessive it exerts an influence the reverse in its character. Muscular exercise invariably tends to the production of carbonic acid in excess; and this led to some remarks on the temperature of the body while in the act of ascending. It was concluded that with some people there is a slight increase and with others a slight fall of temperature. The second lecture was prefaced with a short allusion to past investigations on human respiration; then followed the history of the different forms of breathing, which were illustrated by tracings (reduced in size) taken directly from the person under experiment. Attention was also drawn to the interesting phenomena of the absorption of oxygen in the body independently of the formation of carbonic acid, and a number of analyses were quoted showing to what extent this absorption takes place. The third lecture was given up entirely to the influence of volition on the respiration. It was shown that volition towards any kind of muscular exercise, including forced breathing, is attended with the absorption of oxygen in excess, and that this oxygen is necessary towards the performance of volition, and, if necessary to volition, it must be taken up by the motor centres of volition. A remarkable effect on the development of muscular force by this charging of the motor centres with oxygen was shown to take place. Finally, an experiment was described in which, volition becoming tired out, the muscles refused to work, this experiment being in keeping with Mosso's discovery. The fourth lecture was devoted first of all to an account of the influence of climbing on the respiratory changes and on the state of the respiratory phenomena at high altitudes. Next, rebreathing and air breathed under pressure were considered, and it was explained that the effect of rebreathed air was apparently due more to the want of oxygen than the absorption of carbonic acid. After a few remarks on the effects of breathing mixtures of carbonic acid and common air the lecture was concluded with an allusion to asthma and a method of treatment suggested by the considerations which may be looked upon as the substance of these four lectures.

THE VARIETIES OF RHEUMATOID ARTHRITIS.[1]

BY R. FORTESCUE FOX, M.D. LOND.

THERE is no class of affections for which relief is more commonly and, I may add, more justly sought at mineral waters and baths than painful enlargements of the joints, particularly those to which the adjectives gouty, rheumatic, or rheumatoid have been attached. It is the object of this paper to present some typical examples of the complex group commonly known as rheumatoid or osteo-arthritis out of a considerable number that have come under my observation at Strathpeffer Spa, to describe by their aid the several varieties of disease at present united under that name, and to deduce if possible some conclusions as to their actual nature. The material at our disposal is clinical—post-mortem examinations are happily rare—and no light has, so far, been shed upon the subject by the method of experiment.

CASE 1.—A young woman aged twenty-four years was placed under my care in September, 1888, by Dr. Chalmers of Stirling, with the following history. There was no known tendency to rheumatism or other illness in the family. The patient had been quite well until eighteen years of age, when in the spring of the year "rheumatism" began quite quietly to show itself in the feet and hands, but without fever or confinement to bed. The catamenia had commenced late—at seventeen—only six months before the onset of the joint troubles; these had been always irregular, two, three, or four times only in the year, and it was stated that the pain, swelling, and stiffness of the joints had been usually worse for a week or more before the periods. In the six years that had elapsed before coming to the Spa the patient had resided in an exposed situation near the east coast of Scotland, and the affection had gradually involved not only the feet, hands, and wrists, but, latterly, the knees and elbows also. In September, 1888, she was obviously much out of health, there being frequent neuralgic headache, malaise, anorexia, profuse perspiration, sometimes confined to the back of the neck and head and to the hands, which were cold, clammy, and sodden with moisture. The pulse was 90 and the heart was normal. Severe pains were present in the joints and in the body generally; these were always worse at night. A course of baths considerably relieved the symptoms, and she remained much better for three months, when the complaint returned and gradually incapacitated her, although, with great energy, she continued her occupation as teacher in a bleak country-side, and was carried to and from the schoolhouse in the winter months. This was followed by a long period of confinement to bed, with cod-liver oil treatment, and considerable improvement in general health resulted. In the following February (1890) she returned to Strathpeffer, presenting the following condition. The hands still had a white, sodden, œdematous appearance; the finger joints, formerly so much swollen, were nearly natural in size, but two or three were slightly stiff; the wrists were uniformly swollen and nearly immovable; the elbow-joints were both swollen and stiff, the left being almost immovable; the feet were swollen and painful; and the knees, hips, and shoulders were practically unaffected. In July of the same year, the joints being quiet and the general health much improved under a prolonged course of Spa treatment, I broke down the adhesions in the stiff elbow under an anæsthetic. In February, 1895, thirteen years after the onset of the malady, this patient wrote that she was confined to her couch or bath-chair; both legs and the right arm were stiff from adhesions and were useless, but the arm on which the

[1] Read before the Hunterian Society, March 27th, 1895.

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operation was performed five years ago remains a fairly movable and useful limb.

CASE 2.—A girl, a gamekeeper's daughter, had enjoyed good health until eleven years of age. No tendency to hereditary disease had been noted, excepting that her father, like most gamekeepers, had had rheumatism slightly. At that age she had influenza, with severe pains in the limbs and a skin eruption. Four months later, while going about during the summer of 1890, rheumatoid arthritis gradually set in, affecting, successively, the left hip and thigh, both hands, and the left foot. A year later (June, 1891) she sought relief at Strathpeffer, and her condition was then as follows. The patient was twelve years of age, tall, delicate, weak, anæmic, and subject to profuse perspiration. She had been growing quickly. The catamenia had not appeared. The right wrist was uniformly and evenly enlarged, painful and tender, with very limited flexion movement; the left wrist was similarly affected, but less so. There was in both wrists slight crackling on movement. The left ankle was slightly enlarged and tender. She remained for two months under Spa treatment, taking a course of douche baths in addition to sulphur waters internally; she left greatly benefited. In August, 1891, she returned; there were wasting of the interossei muscles and too great prominence of the styloid process of the ulna, the wrist remaining nearly stiff, but the inflammatory stage being confined to the middle joint of one finger. Three and a half years later (March, 1895) she wrote that she was quite well, but the right wrist remained stiff and swollen, and the one finger still affected.

These two cases illustrate the rheumatoid arthritis of young subjects, and it is, in my experience, in the young that the disease assumes its most severe and intractable, and, I would, add, typical, form. (See Figs. 1, 2, and 3.) A large number of joints are usually

FIG. 1.



Third and fourth fingers of right hand of female aged thirteen; two years after onset of arthritis.

FIG. 2.



The same one year later.

FIG. 3.



The same three years later; commencing affection of terminal joints.



The same, third right finger; first left finger (lateral view); soft rounded dorsal swellings.

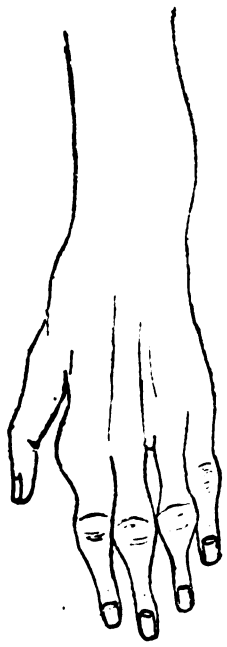
affected, and there are, from the first, profound debility, rapid heart, profuse perspiration, and progressive wasting. The articular symptoms vary according to the severity and duration of the malady. During the inflammatory stage, which commonly extends over several years, there is always swelling, usually (though not always) symmetrical and involving both the joints and the extra-articular structures. In the acute condition there are synovial effusion, heat, and extreme pain and tenderness. Mobility rapidly diminishes, and stiffness may ensue early in the case. Pain is present always and is referred not only to the joint but to the nerves and muscles. In the joint it is dull, aching, or burning in character when at rest; severe and acute on movement; and it is darting and lancinating when referred to the nerves. Neither season nor weather commonly affect the pains. In some cases it is specially noted that they are more severe in the hot days of summer; in others, especially in the early stages of the complaint, that the pains tend to subside in summer and return in winter. Increased stiffness is frequently complained of during a change in the weather, and it is usual for the pain to be more severe in the night-time, particularly from 3 to 5 A.M. The second period of the disease is marked by degeneration and atrophy both of joints and muscles. Certain joints are subject to occasional returns of inflammation, but the main condition now is one of atrophy, with stiffness and more or less—sometimes very little—deformity. Such deformity as exists is due to muscular wasting and subluxation of the phalanges rather than to lipping of the articular edges or osteophytic growths, which are rarely met with in rheumatoid arthritis of the young. The middle phalangeal joints, the wrists, and the tarsal joints seem to be particularly obnoxious to the disease, and are usually much swollen. Somewhat later in the disease one commonly finds several of the terminal phalangeal joints absolutely stiff and obviously atrophied. The joint is thinned and concave on the dorsal aspect, and covered by glossy skin, and yet I have seldom met with swelling or inflammation of these joints in rheumatoid arthritis; the fact of their becoming affected with simple atrophy is not without a bearing on the pathology of the disease. (See Fig. 4.)

Rheumatoid arthritis of the young is, in my opinion, a clearly outlined clinical variety of the disease. Out of forty cases of which I have full notes thirty-two are females—that is, four out of five; and of the eight males two should perhaps be excluded as gonorrhœa preceded the arthritis. The youngest of my cases was six years of age at the commencement of the disease. The average age is twenty-two years and a half; this is the age of catarrhal affections and of tubercle, not the age of adolescence or development, but the age at which the finished nervous and bodily powers are put to their first serious practical strain. It is also, therefore, especially in the female sex, the time of nervous and emotional tension and breakdown. In some cases (thirteen or fourteen out of forty) depressing illness preceded the arthritis, such as typhoid fever, great nervousness and weakness, influenza, suppurative otitis, double conjunctivitis, abscess of the right hand repeatedly lanced (in this case the disease began in the right thumb) dyspepsia and chronic diarrhœa, dyspepsia when at school in Germany, and exhaustion after childbirth. The exciting cause is stated in a good many (twelve) cases to be chill or cold, sitting on damp grass, &c., and in one case the shock of a railway accident. Certain localities, or rather climates, are favourable to the development of the disease, and eight of the forty cases came from the east coast or near the east coast of Scotland, particularly about the Firth of Tay. The following symptoms are noted as preliminary or pre-arthritic, and have some bearing on the nature of the disease: peculiar "want of animal heat" and a "sense of chilliness" (this was noted as continuing in one case for three years, and in another for some years, before the joints became affected, after which there was natural warmth; Sir Alfred Garrod has noted "languid circulation and cold extremities" as common in rheumatoid arthritis, but this common condition is not, I think, usually associated with the sensation of cold); pains under the balls of the toes and, as my friend Dr. Spender of Bath has noticed, pain at the root of the thumb; toothache-like pains in various joints—worse at night; numbness and aching in the fingers; heat and pain in the soles of the feet (a frequent observation); pains all over the body; flying pains, languor and sense of fatigue (several cases); pain, sweating, and restlessness; and pain and stiffness in the calves of the legs accompanied by dark blotches on the thighs. These are the symptoms recorded as existing for a variable time before the localisation of pain and swelling in the joints. Dr. Spender has dwelt upon the importance of recognising these early symptoms; and I have myself seen several cases in young people in whom the rapid pulse, localised sweating, neuralgic pains, and peculiar debility presaged, only too surely, the onset of this frightful malady. The following cases are typical of a somewhat similar condition met with later in life. (See Figs. 4 and 5.)

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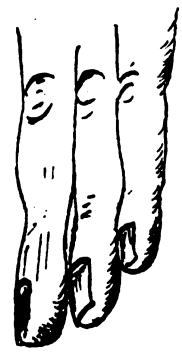
CASE 3.—A tall, robust, vigorous, married woman fifty-three years of age had suffered from no particular illnesses. Both parents were healthy and died when over eighty years of age. One brother died from phthisis, and a sister had had sciatica and muscular rheumatism. The patient was childless; a fibroid of the uterus had been discovered at forty, but had not inconvenienced her much, and the catamenia ceased naturally at forty-nine, since which time (four years) she had been subject to heats and flushes with occasional pains and swellings in the knees. At fifty-three years of age she contracted a chill when heated, and was laid up with severe pain in the left hip and wrist and to a lesser extent in the right ankle. The painful parts became swollen and she perspired profusely. Seven months later (October, 1892) she came for treatment to Strathpeffer. Both the knees were at this time greatly enlarged, in addition to the left wrist and right ankle. Although she was scarcely able to walk a course of warm douche baths were successfully given. In the following July she returned, reporting considerable improvement, but the knees still remained painful, and, indeed, rather more swollen, and there was much crackling on movement. Some of the terminal phalangeal joints, not obviously affected before, were becoming atrophied, with stiffness and glossy skin. (See Fig. 5) A full course of douche baths was ordered, in addition to sulphur waters internally, and in the following winter she took, by my advice a long course of arsenious acid with carbonate of iron. In June, 1894, she made a third visit to the Spa, reporting herself as much better and walking two miles. She was free from pain, excepting on damp days; the left wrist was almost absolutely stiff; there was dry crackling in the left thumb, and some of the fingers did not close properly. After further hot douching and massage a limited movement was obtained in the left wrist, and since then she had remained, but for the stiff joints, practically well.

FIG. 4.



Left hand of female aged twenty-five; two years after onset of arthritis.

FIG. 5.



Third, fourth, and fifth fingers of female aged fifty-four; eight months after onset of arthritis. Terminal joints stiff and atrophied, concave and glossy on the dorsal aspect. Nails longitudinally ridged and brown.

CASE 4.—A married woman aged forty-two came to Strathpeffer in June, 1888, having suffered from rheumatoid arthritis about twelve months. The family history showed no signs of rheumatism or gout, but one sister had died from phthisis at twenty-four. The patient, who had never had rheumatism before, was the mother of nine children, and the youngest, born when she was thirty-nine, she had nursed for fifteen months. The arthritis, for which no cause is assigned, came on in June, 1887, "simultaneously in all the joints," and confined her to bed or couch for nearly twelve months. On arrival at Strathpeffer the knees and hands principally were found to be affected, the former being very stiff, painful, and swollen, and the mid-phalangeal joints were becoming stiff and concave on the dorsal aspect. The general health was low, she being subject to frequent perspiration, especially of the hands, and acute pains. Although confined to the house and almost to bed, a course of waters was taken in 1888 and in the following year, on both occasions with benefit. Two years later (July, 1891) she returned, four years after the onset of the disease, presenting the following condition. The right hip-joint had been acutely affected, and was still much swollen and exceedingly painful on adduction and abduction. The disorganising process had gone on in the left knee, and a sudden attack of very acute pain on moving the joint (probably displacement of diseased cartilage) had been followed by almost absolute stiffness for the previous twelve months. The general condition had, however, improved; the hands were decidedly better, and the left wrist was stiff, but allowing the patient to use the sewing machine; she was, however, unable to walk or stand. After a prolonged course of douche baths I endeavoured to extend the left knee under an anæsthetic. It was fixed at an angle of about 120°, and so firm were the adhesions that it was with great difficulty I brought it to about 150° and put it up in a poroplastic splint. It is now three and a half years since the operation, and the patient has written stating that she is much better in health, that the perspirations have ceased, the hip and hands are much better, and although she still suffers occasionally from sharp pain in the left knee she can walk from half a mile to a mile.

The generalised rheumatoid arthritis of the climacteric epoch which these two cases exemplify is represented by thirteen cases out of a series of sixty-five. All, of course, are females, and the average age at onset is forty-eight years, the extremes being thirty-seven and fifty-four. In many cases the disease is certainly much less severe than in our first and much larger clinical group. Intermissions of one or two years are not very uncommon after the first onset, and after a few years comparative quiescence with localisation in one or two or a few joints is much more frequent than in arthritis of the young. (See Fig. 6.)

FIG. 6.



Right hand of female aged forty-nine; three years after onset of arthritis; wrist much affected.

There is at the same time less profound constitutional disturbance and thus a more favourable prognosis. In several of my cases the complaint has been almost or quite confined to the left side of the body. It is worthy of remark that this form of anthritis may be, and often is, complicated by any hereditary or other condition peculiar to the climacteric epoch in women. Thus gout in some form is not uncommon then, although entirely absent in earlier life; and more frequently there is a state of ill-health which it is difficult to name, and to which I referred at the International Medical Congress last year in these terms:—"A condition of deteriorated blood, loaded with waste products, frequently met with after middle age, but more particularly in women, and due apparently to some defect of metamorphosis or excretion. There is little or no organic disease, but the patient complains, it may be, of obstinate dyspepsia, acidity, shifting rheumatism, sciatica, or lumbago; perhaps cramps, tenderness and heat in the soles of the feet, or other ill-defined articular symptoms, and frequently headaches, cutaneous irritation and eczema. There is often in women a change in the symptoms after the climacteric, the articular pains and swellings becoming then more pronounced."

In climacteric arthritis prearthritic symptoms are very usual, such as neuralgic or shooting pains even for two or three years, burning in the soles of the feet, with or without profuse sweating, etc. In regard to the view advanced by Dr. Ord that the disease is induced by abnormal conditions or disturbance of function of the uterus or ovaries, the following notes may be added. Out of a total of forty-seven cases in women the catamenia are stated to have been irregular in five, there was fibroid tumour of the uterus in two cases, and ulceration and leucorrhœa in one case. The

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pains were frequently stated to be unaffected by the catamenial period, but in two cases they were worse beforehand, in two other cases worse at the period, and in one case worse afterwards. Climacteric arthritis attacks married women much more frequently than single, the proportion in my cases being eleven to two, and the patients are, as a rule, mothers of children. Taking all my cases together (Groups 1 and 2) in which the arthritis affected married women, I find that twelve out of sixteen were mothers. In one case, that of a mother of nine children, the arthritis was said to be always better after childbirth, and in another the onset of the disease immediately followed upon childbirth. One of the severest cases of rheumatoid arthritis I have ever seen, and fatal after only four years, was that of a young married woman in whom the disease appeared twelve months after her marriage at twenty-three. The catamenia were regular and painless throughout, and there was no sign of uterine or ovarian disorder. It is worthy of remark that in many of Dr. Ord's cases the arthritis was not general, but localised, and therefore, in my view, to be clearly distinguished clinically from the disorder we have now under consideration. Furthermore, a large proportion of his cases occurred about the climacteric period, when, as Haygarth first noted in 1805, nodosities of the joints were most common. To these local and separate forms of arthritis I shall again allude.

The third variety or group is generalised rheumatoid arthritis in the old, senile rheumatoid arthritis, of which the two following cases are examples.

CASE 5.—A man aged sixty-five had been for forty years a gamekeeper on an estate situated in an exposed part of the Highlands. Coming of a healthy long-lived family he was himself a healthy man. He had never had rheumatic fever, but at fifty-one was affected with pleurisy from exposure, and since reaching the age of sixty he had had some slight rheumatism in the right thigh. For some years past the long hours and long fasts upon the hills, with exposure and fatigue, had broken his health, and the sense of duty inadequately done had preyed upon a naturally anxious and overconscientious mind. At sixty-five, therefore, he was obviously failing and depressed, bodily and mentally. At this time an accidental fall in April or May, 1891, was followed by a sudden attack of acute arthritis in both hands, feet, and shoulders, with wasting, perspiration, and malaise. In July of the same year he was seized with acute pains in the arms and legs. On arrival at Strathpeffer in August the small joints of the hands and feet were swollen, tender, and painful. He was very weak and suffered from bronchial catarrh and spasmodic cough, had a double aortic murmur, and some œdema of the legs. The urine was very acid, of specific gravity 1030, was dark with lithates, and contained a trace of albumen. In the course of two months at Strathpeffer the articular symptoms slowly abated, but mental obscuration with delusions and much restlessness supervened, showing that the joint trouble was but a part of a general breakdown profoundly affecting the nervous centres. He died in the spring of 1894, three years after the onset of arthritis.

CASE 6.—A man aged seventy-four was sent to me by Dr. Thom of Crieff. The patient was tall and athletic, and had followed for many years the profession of an engineer. With the exception that his mother had had rheumatism the family history was good. He was naturally of a very energetic temperament, and in middle life had seriously overworked himself, incurring great fatigue and mental anxiety in the management of a large navigation canal. Although often laid up for short periods from cold &c., he had never suffered much from rheumatism until at seventy-four he was seized with lumbago. Loss of flesh and progressive weakness followed, with gradual involvement of many joints, especially the small joints of the hands. A few months later he was attacked by influenza, with increased debility. On arrival at Strathpeffer in June, 1893 (eighteen months after the onset of the illness), the hands and neck presented the typical appearance of subacute arthritis, the middle phalangeal joints being enlarged, tender, and painful. The hands and front of the chest were much pigmented. There were much anæmia and dyspepsia and a suspicion of a systolic murmur at the base of the heart. [Since the above was written Dr. Thom has been good enough to give me the subsequent history. Dr. Thom says: "He died about a year ago—that is, rather more than two years after the commencement of the disease—of cardiac incompetency, mainly aortic. He got rapidly feeble for two months before his death. He continued very dyspeptic, though he was improved by Strathpeffer. The rheumatic affection of the left hand and the back of his neck was most marked. I do not think the rheumatoid arthritis presented much change during the last year of his life."]

Twelve cases in all are included in this group of senile arthritis, comprising ten men and two women aged respectively fifty-nine and sixty-seven. In considering any disorder of the senile period it is of course impossible to forget that there is another age than that of years. If it be true, as Cazalis said, "L'homme a la vie de ses artères," may we not say with equal truth, Man is as old as his nervous centres? I have placed in this group the case of a man of delicate and highly strung nervous organisation who had rheumatic fever at fifteen, but in whom there was a complete nervous and mental breakdown at forty-four, followed by severe and intractable arthritis; also another the subject of alcoholism and erysipelas, in whose case arthritis (which I would call senile) set in after rheumatic fever at forty-five. On the average of the twelve cases the age at onset is fifty-six and a half years. In respect to etiology rheumatic fever in a debilitated subject is set down as the apparent cause in two cases; influenza in two cases; nervous or mental breakdown accompanied the arthritis in four cases out of twelve, and in one or two others there was a history of nervous symptoms in former years. This is the only form of polyarticular arthritis that can be truly said, in my opinion, to belong to the degenerative period. The arthritis of the second and third decades of life, to which I find but scanty reference in the literature of the subject, belongs to the period of nervous instability. The arthritis of the climacteric epoch, or what is truly called "the change of life," is equally associated with nervous disturbance. The incidence of insanity at these two epochs affords to my mind an instructive parallel. Lastly, in the aged, or rather the senile, whether from "toil or years," there is a depressed condition of nutrition in the joints, as is shown by the frequency with which localised arthritis follows trivial injuries. And in those predisposed by family tendency to such changes, degeneration and decay in the nervous centres readily light up the sluggish fires of arthritis, to which senile dementia forms a parallel. Generalised or polyarticular rheumatoid arthritis is the clumsy name by which, as Dr. Archibald Garrod has done in his valuable book, cases such as those I have noted in this paper are at present separated from the localised arthritis commonly due to injury, which, however similar may be the anatomical lesion, runs an entirely different clinical course. Sir Dyce Duckworth has truly said, "Identity in the morbid anatomy does not imply identity in the processes leading up to it."

Having now imperfectly described several clinical varieties of this disorder, some general features remain to be noted. I should say that the 65 cases of which I have full notes were all private patients and mostly persons in comfortable circumstances. Taken altogether there are 18 men and 47 women. As respects heredity, my experience corresponds with the results quoted by Dr. Archibald Garrod. In 33 cases (just one-half) there is a family history of diseases of the joints—namely, gout 9, rheumatoid arthritis 6, rheumatic fever 5, and rheumatism 13. Considering that family history reveals too little rather than too much, may it not be considered that a positive history of hereditary joint trouble in every second case is rather strong evidence of a family arthritic diathesis? In 5 cases near relatives had died from phthisis, but as I have not been much alive to the association with tubercle I think that figure may not fully represent the connexion between the two diseases. Much has been said about the connexion between rheumatoid arthritis and rheumatism, a question which has been, as Mr. Hutchinson reminds us, made more difficult by the obscurity of the terms employed. Rheumatic fever stands apart, to my mind, as a specific infective constitutional disease, and in my own limited experience its connexion with rheumatoid arthritis is altogether exceptional and accidental. In 65 cases there are 5 in which rheumatic fever is stated to have immediately preceded the arthritis. One of these, however, was a mixed case (arthritis and osteomalacia), and 2 were in elderly and debilitated subjects, and therefore, as I have shown, not typical. Moreover, the diagnosis of rheumatic fever is not always quite clear, and rheumatoid arthritis is occasionally acute and febrile in its onset. In 4 more cases an attack of rheumatic fever preceded the arthritis by a variable interval—in one case two years only, but in this case a gonorrhœa was probably the cause of the arthritis. In the 3 others the

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intervals were respectively five, twenty-five, and twenty-nine years. In respect to chronic rheumatism, the connexion with arthritis appears to me to consist in the two facts that both disorders may be set up by exposure to cold and damp, and that in both there is usually a painful enlargement of the joints. At Strathpeffer there are every year abundant examples of a painful affection of the muscles, nerves, or joints, arising from exposure to cold and damp, and particularly damp soils. It affects elderly and predisposed subjects, is essentially chronic, there is never the debility or cachexia of arthritis, and in my experience arthritis has never supervened on this form of rheumatism.

In regard to the order of onset, it appears that out of 51 cases the arthritis began in the feet in 28 and in the hands in 10. In 19 of these in which it began in the feet the disease went on by way of the hands in 13, and by way of the knees in only 6. My figures therefore support the statement that the invasion of the joints is usually centripetal, beginning from the small joints of the extremities.

With reference to mental disturbance in connexion with rheumatoid arthritis it should be mentioned that, in addition to its frequent occurrence in the senile cases, there are notes of two cases in the climacteric group in which partial and temporary insanity accompanied the arthritis. In arthritis of the young it is only exceptionally that one can learn the whole course of the malady, but three cases are known to me in this group which have a bearing on the point. In the first there was under my own observation a complete change in a cheerful person to morbid gloom. In the second case a girl developed arthritis at fifteen, suffered intense pain for seven years, and died from convulsive seizures at twenty-two. The third case is interesting from the patient's own observation of her mental state. I saw her first in 1885, and she had then suffered for eight years from the disease. She wrote me in February of the present year as follows: "To me the most trying turn the bomplaint takes is when I get in a great measure free from pain; it goes to my head, and my brain will scarcely work at all; my memory, too, gets very bad. So I may say I am always best and brightest when in pain." Dr. Ord has related a case in which mania came on when the arthritis subsided. There are, finally, two symptoms mentioned by Dr. Spender and pointing to a nervous origin of the disease. Gastric crises or unprovoked vomiting I have only exceptionally met with—in four cases only. Pigmentation in the neighbourhood of the affected joints is a much commoner observation, and one of my drawings shows a rather curious pigmentation of the nails.

It was my original intention at this point to describe briefly the localised forms of arthritis to which reference has been already made. It must suffice to say that they are, in my opinion, entirely separate from the generalised disease, and that no small confusion has arisen from confounding the two conditions under one name. I have a series of about thirty cases in which the shoulder, or hip, or knee, or one hand has been alone affected, and many in which the arthritis has been limited to the basal joint of one or both thumbs. The subjects are nearly always at or past middle age, the average age being fifty-one; and in their history, exciting causes, course, prognosis, and, above all, in the absence of constitutional symptoms, they present striking differences from arthritis in a generalised form. In the same manner I venture to separate from the latter and more serious affection numerous cases of nodi digitorum, Heberden's nodes, and lastly joint arthritis, which, in my view, are middle-age or senile changes almost always the result of hereditary gout. (See Figs. 7 to 15, which represent joint changes in advanced life.) I have already dwelt upon the fact that in rheumatoid arthritis such changes as occur in the terminal joints usually result, not in enlargement, but atrophy.

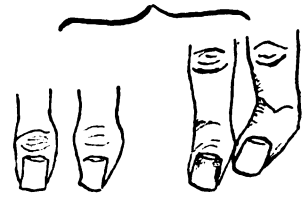
FIG. 7.



Terminal phalanges of a female about sixty years of age (gouty).

I could wish that the clinical pictures I have endeavoured to delineate were clearer and more exact in their outlines, as becomes a presentment of fact. It remains, in conclusion, to ask what inferences can be properly drawn as to the true theory and pathology of rheumatoid arthritis. In the first place the causation is evidently complex, for innumerable and diverse facts testify to an inherited local vulnerability both of the nervous centres and of the joints, and this should be placed first among the causes; next come particular conditions of disturbance incidental to different periods of life; then there is the depressing effect of antecedent illness; and, lastly, the external causes (cold, damp, and injury), which, as we know, first, and chiefly, affect the feet and hands, in which, as a rule, arthritis begins. To my mind there is strong evidence that some implication of the nervous system

FIG. 8.



Terminal phalanges of a female aged fifty-five.

The same, aged fifty-nine.

FIG. 9.



Terminal phalanges of a female aged sixty-five.

FIG. 10.



The same of a female about sixty years of age (gouty).

FIG. 11.



The same of another female about sixty years of age.

FIG. 12.



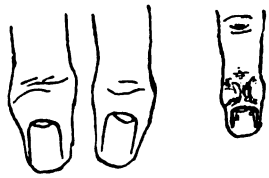
Terminal finger joint in a middle-aged female. Commencing nodes.

FIG. 13.



Middle finger of a female about sixty-five years of age (a subject of articular gout).

FIG. 14.



Gradual painless enlargement of terminal finger joints in a female aged fifty-three. (Strong family tendency to "crippling rheumatism.")

The same in a female aged fifty-seven.

FIG. 15.



Terminal phalanges in a female about sixty-two years of age (gout on both sides). Burning and swelling of last joints since climacteric.

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takes an essential contributory part. We have gone beyond the anatomical lesion, and a disorder is found manifesting not only a general progressive affection of the joints, but other characters, to which I have referred, pointing to changes in the nervous centres. It is also found that the disorder is most frequent and most acute at the period of greatest nervous instability—namely, in young womanhood and at the climacteric epoch. In the latter case it is less severe, sometimes confined to one-half of the body and subject to intermissions analogous to the fluctuating condition of the nervous centres at that epoch; and, moreover, in senile cases it often forms a part of a general nervous and mental breakdown, and the joint changes, according to the general character of senile disease, are less marked by inflammatory reaction than in younger life. One disease of the nervous centres is known in which organs of locomotion are affected, first by a brief inflammatory condition and then by degeneration and atrophic changes; this condition in infantile paralysis is confined to the muscles. Then again in another spinal cord affection, tabes dorsalis, we have occasionally affection of isolated joints with arthritis, in which the inflammatory stage may perhaps be veiled by anæsthesia of the parts. In the present case there is a disease of the organs of locomotion in which the inflammatory period stretches over years, a disease which is frequently associated with emotional or mental disturbance and which is commonest in women, during the years when such disturbance is most common; and in this disease, according to my belief, whatever may have been its genesis in ancestral maladies—gout, rheumatism, tubercle—yet, in the individual, nervous disturbance remains the preponderating element of causation and determines in rheumatoid arthritis a condition of neurosis almost akin to insanity, but of which the principal manifestation is found in the joints.

Strathpeffer Spa, N.B.

SOME CONSIDERATIONS ON THE CHLOROFORM QUESTION, SUGGESTED BY THE REPORTS OF THE HYDERABAD AND "THE LANCET" COMMISSIONS.

BY T. LAUDER BRUNTON, M.D., F.R.S.

(*Continued from p. 23.*)

ACTION OF ANÆSTHETICS ON TISSUES GENERALLY.

ALCOHOL, ether, and chloroform are all protoplasmic poisons. If pure alcohol be poured into a cut it will irritate the sensory nerves and burn like a red-hot iron, while it will coagulate and kill the blood, muscle, or any albuminous tissues, rendering them hard and unfit for the functions of life, and it will precipitate any soluble albuminous bodies. This can be well seen by mixing a little beef juice or albuminous urine with some pure alcohol, when the whole of the albumen will be thrown down as an insoluble precipitate. What we thus see happening in a test tube has been supposed to occur also in nerve cells, and the anæsthetic action of alcohol and its congeners has been supposed to be due to their causing a condition of semi-coagulation in the nerve cells, or at any rate such a change in the substances composing them, so as to render them sluggish and incapable of performing their functions. In the mucous membrane of the mouth we may see the same action of alcohol, for a little spirit held in the mouth will soon render the mucous membrane of the cheek white by causing superficial coagulation of its albuminous constituents. We can here notice how much stronger the action of chloroform is than that of alcohol, for it not only causes much greater irritation but much more rapid and excessive whitening, and, indeed, it causes similar whitening even on the skin.

LOCAL IRRITANT ACTION OF SOME ANÆSTHETICS.

On account of their action on albuminous substances both alcohol and chloroform have a powerful local irritant action, and if held long in the mouth or applied to a piece of skin denuded of epidermis will burn almost like a red-hot iron. If alcohol be applied to the skin and its evaporation prevented by covering it with oil-silk, it will cause a feeling of burning. This is still more marked in the case of chloroform, and the burning may become so painful that it can hardly be endured. If chloroform be put on the face or its concentrated vapour be inhaled it may cause much irritation of the sensory nerves of the face, nose, and trachea, and through them affect reflexly both the heart and respiration.

ACTION ON THE NERVOUS SYSTEM.

But the vapour of all anæsthetics when inhaled in such dilution as to produce no local or reflex irritation affects the nerve centres first, and usually does so in a definite order, the highest and most complex going first and the most fundamental going last.[1] Judgment and power of thought disappear first, next sensation and voluntary motion, next reflex action, then respiration and, lastly, cardiac pulsation.

ACTION OF ANÆSTHETICS ON THE CIRCULATION.

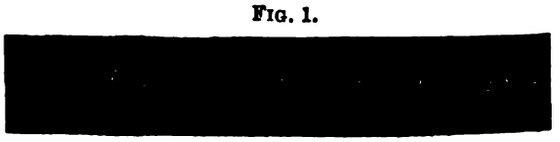
If instead of putting liquid alcohol or chloroform into the mouth the vapour only is inhaled no pain and no whitening will be induced. We thus see that the effects of the drug upon the tissue depend very much upon its concentration. What is true of the mouth is also true of the other tissues of the body. Alcohol, ether, or chloroform will destroy any one of them if applied to tissue in a concentrated form, but when diluted will act rather as a stimulant, and will produce no marked injury. When chloroform is injected into the artery of a limb it will coagulate all the muscles and make the limb as stiff as a board; when injected into the heart, or when the heart is plunged into it, the muscular substance of the organ will be coagulated and its motion arrested, and if the heart of a frog be suspended in sufficiently concentrated chloroform vapour its movements will also cease; even nitrous oxide gas will kill the frog's heart if sufficiently concentrated.

EFFECTS OF DILUTION.

But the effect is different when chloroform is inhaled, because the respiratory centre in the medulla oblongata is more readily affected by chloroform than is the heart, and, therefore, when the blood has taken up a sufficient quantity the respiration is paralysed, while the heart continues to beat. In this respect the action of chloroform resembles that of ordinary asphyxia, whether produced by the inhalation of carbonic acid, by clogging of the bronchial tubes with mucus, by consolidation of the lungs in pneumonia, or by collapse of the lung from a penetrating wound of the chest. Both clinical experience and physiological experiment conclusively prove that chloroform, as well as alcohol, ether, nitrous oxide gas, and carbonic acid, all cause death when *gradually* inhaled by producing paralysis of the respiration, and that a period of time, longer in some cases and shorter in others, elapses between the stoppage of the respiration and the stoppage of the heart. But long before the point of danger has been reached anæsthetics—alcohol, ether, and chloroform—lower the blood pressure. This primary and constant fall depends, at least in part, on that dilatation of bloodvessels, which leads to a glow on the skin after alcohol has been taken. It is not dangerous; on the contrary, it is rather associated with the rapid circulation and consequent stimulant effect which is so well known in the case of alcohol, and, like the fall of blood pressure produced by nitrite of amyl, may be useful instead of injurious in the case of a feeble heart by lessening the resistance it has to overcome. Some very interesting observations on this subject were made by the late Dr. Anstie and recorded by him.

Dr. Anstie says:[2] "If alcohol acts as a narcotic it lowers arterial tension, increases the frequency of the pulse, and increases the dicrotism of the curve. Here, for example, is the effect of an experimental dose of half an ounce of brandy. (*Vide* Figs. 1 and 2.) A healthy young man

FIG. 1.



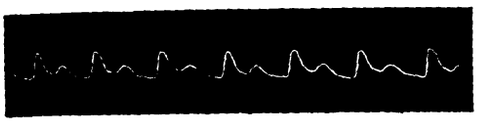
Pulse of a patient suffering from typhoid fever.

[1] Hughlings Jackson: Croonian Lectures, THE LANCET, March 29th and April 12th, 1884.

[2] THE LANCET, Sept. 29th, 1867.

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FIG. 2.



The same after the exhibition of half an ounce of brandy.

(*vide* Fig. 3) was experimentally intoxicated with fifty-six ounces of claret at 8 per cent. absolute alcohol (equal to four ounces and a half of absolute alcohol). The patient was in the stage of "noisy hilarity" when this tracing was obtained. The heart force was really very weak, but

FIG. 3.



Pulse of a healthy young man intoxicated by fifty-six ounces of claret.

the arterial tension resistance was so low that, as you see, the curve was a large one." As the primary fall of blood pressure is a constant consequence of the administration of an anæsthetic, even of alcohol, and occurs, so far as we know, in *all* cases, in those who become unconscious without a single bad symptom as well as in those who do not, we may dismiss it from consideration as a source of danger, and need not trouble ourselves much as to its cause. In all probability it is due, or chiefly due, to vaso-motor paresis, as held by the Hyderabad Commission, and proved by the experiments of Lawrie and Chamarette, of Hare and Thornton. It is probable that the fall may in some animals or some persons be aided by simultaneous weakening of the heart, as held by Gaskell and Shore. But whether this be so or not is of no practical importance in regard to death during anæsthesia, though it is of very great scientific interest. It is hardly necessary to add that this primary fall is carefully to be distinguished from that which occurs from an overdose, for if the administration of the anæsthetic be pushed too far all the functions will fail, and the heart will become feebler, the blood pressure will fall continuously, and its depression, at first slight and harmless, will finally become so great that the blood will cease to circulate and the animal will die.

ACTION OF ANÆSTHETICS ON THE PULMONARY CIRCULATION.

This subject was examined by the Glasgow Committee, consisting of McKendrick, Coats, and Newman. They found that the action of chloroform, ether, and ethidene upon the lungs consists in retardation and subsequent cessation of the circulation, first in the capillaries, then in the small arteries, and lastly in the larger vessels. The epithelial cells with their nuclei in the alveoli become invisible. The capillaries are contracted and their walls become less distinct, and the blood corpuscles present in them are partially dissolved. These phenomena are chiefly those of inflammation, due to the action of chloroform as an irritant. The consequences of arrest of the pulmonary circulation have already been considered under the head of death beginning at the lungs. When the vapour of any anæsthetic, even of chloroform, is sufficiently diluted its local action on the pulmonary circulation will be small; but if a concentrated vapour enters the lungs either from being driven in by artificial respiration or drawn in by a sudden deep inspiration it may prove a serious factor in stopping the circulation.

THE REAL DANGER FROM THE HEART.

The real danger which is dreaded, and most justly, by anæsthetists is not a mere weakening of the pulse nor even an occasional intermission, but a stoppage of the heart, which appears to be sudden and complete, which yields to no treatment, and persists in spite of all attempts to restore the cardiac pulsations. This may occur simultaneously with the failure of respiration, or may apparently precede it.

NATURE OF THIS DANGER.

The symptoms recorded are those of neuroparalysis, as given by Casper, and the question at once suggests itself, (1) Are these symptoms produced, as in Casper's cases, by suffocation; or (2) are they due to the shock of operation, or (3) are they really caused by the anæsthetic? Previous to the report of the Glasgow Committee it was generally believed that even though chloroform might weaken the heart its action was gradual, but that Committee observed in several experiments a sudden slowing or stoppage of the heart with a great consequent fall of blood pressure. These sudden, unexpected, and apparently capricious stoppages were attributed by the Committee to the action of chloroform. The cause of such stoppages was carefully examined by the Hyderabad Commission, which came to the conclusion that they were not due to the anæsthetic, but to irritation of the vagus by asphyxia. By the Glasgow Committee this action of the vagus was regarded as a source of danger; by the Hyderabad Commission, at the suggestion of Dr. Bomford, as a safeguard to the animal by preventing too much chloroform reaching the medulla. These opposite views have each experimental evidence in their support. The action of the vagus is indeed complex; it would appear that it may at one time be beneficial and at another prejudicial. It is certainly remarkable that in an animal like the rabbit, which may sometimes have difficulties in the way of breathing freely in its burrow, the vagus seems peculiarly easily irritated by stimulation of the nose or closure of the nostrils. Moreover, it is almost impossible to stop a healthy heart permanently by irritation of the vagus however strong or long continued. These facts seem to show that stimulation of the vagus is not dangerous, but rather beneficial so long as the heart is healthy. But, on the other hand, when an animal is suffocated and just about to die, the respiration and cardiac pulsations having both stopped completely, it has been found by Dastre and Morat[3] that the heart is not really paralysed, but is inhibited by the vagi, and when these nerves are cut it will again begin to beat. It would thus seem that just as the heart is failing the action of the vagus puts a final stop to it. Here the vagus seems harmful, and one would naturally think that if the division had been made earlier death might have been averted. But experiments showed that this was not so, the contrary being the case and the heart failing earlier. But whether we regard the effect of the vagus in stopping the heart as useful or prejudicial, the occurrence of such a stoppage during anæsthesia is a sign of danger because it indicates more or less interference either with the respiratory movements or the respiratory passages, a condition which, as Casper has shown, may lead either to death by asphyxia or by neuroparalysis (shock). The similarity between many cases of sudden death occurring during the administration of anæsthetics, and especially chloroform, and those of death by shock from simple strangling or throttling strongly suggests that they result from the same cause—viz., *neuroparalysis* due to interference with the respiratory passages.

ACTION OF CHLOROFORM ON THE RABBIT.

The objection is often brought against conclusions drawn from laboratory experiments on anæsthetics that the animals used were different from human beings. This is true to a certain extent, but the same objection may be made to applying to all men general conclusions drawn from any set of observations made on a certain number only of human beings. The truth is that most human beings react to chloroform in the way that dogs and monkeys do, but other people react more like rabbits. I have already mentioned that in rabbits the vagus is very easily excited, and these animals are very easily killed by chloroform. But there are two ways in which it can be used to anæsthetise rabbits with safety, and these two ways are as different as they can possibly be. The first way is to give the chloroform vapour in a very dilute state by putting the rabbit under a bell jar and allowing chloroform to diffuse very gradually into the air until the animal loses consciousness. This plan, though safe, is slow. The second plan is used for anæsthetising rabbits in the Pasteur Institute, and it seems both rapid and safe. A cloth nearly saturated with chloroform is wrapped round the rabbit's nose and head. For nearly a minute it ceases to breathe, and I believe its heart ceases to beat. Then it draws one or two long breaths and falls over at once, completely unconscious and fully anæsthetised. The way to kill a rabbit, during the attempt to anæsthetise it, is to combine careless administration with timidity, to use too strong a vapour to allow of its going off quietly—and alternately to withdraw and reapply the chloroform. The exact cause of death here I do not know, but

[3] Vide Dastre and Morat, who give the literature of the subject as well as original experiments. Archives de Physiologie Normale et Pathologique, 1884, série 3, tome lii., p. 1.

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suppose it is due to the disturbance of the cardiac and circulatory apparatus by the shock of the irritant vapour at a time when the healthy balance of these mechanisms is disturbed by partial anæsthesia. The danger of such a course in anæsthetising human beings also has been pointed out by Dr. Robert Kirk, with whose practical conclusions I agree, but whose physiology I cannot understand, for he considers the cause of danger to be a backward whirl of the circulation, whereas physiologists, from the time of Harvey onwards, are accustomed to regard such a backward whirl as impossible.

WHAT HAPPENS IN A CASE OF DEATH FROM ANÆSTHETICS *per se*.

Whatever views may be held regarding the cause of *death* during anæsthesia it will be generally acknowledged that in the much more numerous class of cases of simple danger during the administration of anæsthetics the heart continues to pulsate for a varying time after the respiration has ceased. This indicates pretty plainly the broad physiological fact demonstrated by the labours of the Hyderabad Commission, and demonstrated, indeed, long before in the pages of THE LANCET by Mr. Wakley, the present senior Editor, in his younger days, that the heart centres are the most tenacious—the first to develop, the last to disappear in the human organisation. This physiological relation does not cease when an anæsthetic has been administered. In this report, under the head of "untoward" cases, those cases have been dealt with "in which more or less grave symptoms occurred, but which eventually disappeared on resuscitative measures being adopted." No less than 245 are noted in this report. The inhalers were in no way to blame, and "none were absolutely to be relied upon as a certain preventive of grave symptoms of toxæmia." The immediate symptoms in almost every case were either respiratory or circulatory, and it is to be noted that "in a very large proportion of cases the respiration failed before the heart or pulse showed signs of flagging." Likewise the measures adopted in resuscitation were in most cases those which were applicable to cases "rather of cessation of respiration than to those of cardiac failure." Pp. 1112–18 contain some interesting records. What usually happens is this. The respiration gradually fails, and when the administrator, whose attention, perhaps, has been otherwise engaged, comes to notice the respiratory movements he finds that they have ceased; but the heart is still beating, and usually, though not always, artificial respiration suffices to bring the patient round. This is the kind of death which chloroform pure and simple causes either in man or in animals. It is the kind of death which has been observed by the Committee of the Royal Medical and Chirurgical Society, by the Hyderabad Commission, and by almost all other physiological experimenters; but this is not the kind of death which is so much feared by anæsthetists. What they dread is the sudden cessation of pulse and respiration together or the stoppage of the heart before the respiration. This sudden death may occur almost as soon as the administration of the anæsthetic has begun, and long before the patient is under its influence; it may occur at a later period after a violent fit of struggling, and sometimes appears to come on just after a fresh quantity of chloroform has been poured on to the inhaling apparatus and a more concentrated vapour thus administered; it comes on sometimes at a late period in the operation, without any cause that can be definitely assigned; it comes on also just when the operation is finished and the patient is beginning to come out of the state of anæsthesia—the state at which vomiting is usually to be expected. The cases of simultaneous failure of heart and respiration are so comparatively few that other factors besides the mere anæsthetic may be looked for to account for the occurrence in such cases. The tables contained in the report give only fifty-eight such cases out of a list of 506 records. Further, many of these cases appear to indicate that very accurate methods of clinical observation have not at all times been employed in obtaining the records which are summarised in tabular form on p. 633 of the report.

SUMMARY OF EXPERIMENTAL EVIDENCE.

The tripod of life consists of the heart, the lungs, and the brain. The immediate cause of death consists either in failure of the heart (syncope) or of the lungs (asphyxia). The brain may cause either (1) heart or (2) lungs to fail separately, leading to (1) syncope or shock, or to (2) coma and subsequent asphyxia. The brain may (3) cause the heart and lungs to fail together (neuroparalysis). These modes of death are distinguished by their symptoms and post-mortem appearances. The symptoms of rapid asphyxia from stoppage of the respiration are nearly the same as those from sudden stoppage of the heart, because they are due in both cases to the respiratory centre in the medulla oblongata being deprived of arterial blood. In the first case—viz, failure of the respiration—this occurs because there is no arterial blood in the body at all, the whole blood in the body having become venous, and in the second, because the blood becomes venous in the medulla itself when it stagnates from stoppage of the heart, although that in the aorta may still be arterial. These symptoms are—(*a*) increased respiration becoming more and more violent and ending with (*b*) convulsions if the brain be not dulled. If the brain be dull either from the effects of accumulating carbonic acid, as in ordinary coma, or from the effects of a narcotic or anæsthetic, the respirations gradually become weaker and finally cease. Sudden and violent gasps just before death usually indicate stoppage of the heart and consequent irritation of the respiratory centre by stagnation of blood in it before it has lost its functional activity. In slow failure of the heart the face is likely to be pale, and in slow failure of the respiration blue or livid; but, as Casper remarks, in rapid failure of the respiration there may be nothing distinctive in the appearance. In death from neuroparalysis there is simple stoppage of every function at once. In asphyxia the right side of the heart and lungs are engorged, and the left heart nearly or quite empty. In death from syncope in neuroparalysis the right heart and lungs are not engorged and both sides of the heart contain no blood or only a little. All experimental evidence goes to show that anæsthetics, when given without interference with the respiration, dull the brain and never kill by neuroparalysis, but cause death by gradual failure of the respiration, the heart continuing to beat for some time after the breathing has stopped. Death by neuroparalysis is an exceedingly common result of interference with the respiration in cases where no anæsthetic has been given. It is therefore probable that when death occurs from neuroparalysis during the administration of an anæsthetic, it is not due to the anæsthetic *per se*, but to some other cause, such as interference with the respiration by chloroform containing irritant substances, or even too concentrated vapour of pure chloroform, by too close application of the inhaler, by interference with the respiration in some other way, or by the "shock" of an operation.

CLINICAL EVIDENCE.

SUDDEN DEATH.

1. "*Shock*."

The causes of sudden death, apart from anæsthetics altogether, are very imperfectly known. Sometimes a patient suffering from heart disease, and especially from fatty heart or aortic regurgitation, suddenly falls down dead. Most people are contented to say that the occurrence is due to failure of the heart, but they do not know the exact mechanism, nor do they know at all fully the mode in which death occurs from what is termed "shock." Death from shock was a frequent occurrence before the introduction of anæsthetics, and we are sometimes apt to forget that it may still occur, although anæsthetics have been administered. In the tables on p. 632 of THE LANCET report this is borne out, for it appears that Dr. Snow records forty-nine cases of deaths during the administration of chloroform as due, or probably due, to shock. From Hospital Records,[4] p. 633, sixteen such deaths are recorded as attributable to shock from some cause or other. The report states on p. 761 that "many instances occurred in which whilst comparatively trifling operations were being performed a fatal accident occurred." On p. 631 THE LANCET Commissioner continues: "In some cases the causes alleged do not appear to correspond with the symptoms given. Thus one death is described as due to 'syncope,' although it is stated that 'food was found in the

[4] THE LANCET, March 13th, 1893.

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windpipe.'" There are numerous records of this kind. Again, on p. 634 cases are recorded "as having been due to syncope when from the symptoms and phenomena of narcotism described there was a strong presumption that the death was due to asphyxia." How far, therefore, the 154 cases recorded under the heading of "Syncope" may be due to shock originally it is hardly possible to estimate.

2. *Paralysis of the Nerves and Heart.*

The following cases are put down as paralysis of the heart or nerve centres, which implies the neuroparalysis which Casper defines as synonymous with shock. They are given here for reference—namely, Cases 130, 157, 163, 199, 204, 205, 225, 261, 269, 275, 343, 419, 437, 461, 513, 547, and 594. The terms used for describing these deaths—"shock," "paralysis of the heart," "syncope"—practically mean the same thing. Distinction may be made between them when the patient is awake; but when under the action of anæsthetics it is for practical purposes impossible to do this. In a great number of the cases enumerated above it is quite clear that the respiration began to show signs of disturbance before the heart failed, and had proper attention been paid at once to the symptoms of alteration in this respect it is quite possible that the fatal results might have been averted. Notwithstanding this the cases have been reported as those in which the pulse and respiration have failed simultaneously. In several cases the operation was such as necessitated the patient being turned over, so that while performing this movement the respiration might be partially impeded by the position, and, at any rate, the manner in which the respiration was being carried on would not be so evident to the anæsthetist as with the patient in the supine position. Again, the operation, it will be observed, was in many cases performed upon the face, and naturally the administration of anæsthetics for such operations is more difficult than usual. The respiration might in such cases easily have been interfered with without being at once obvious to the administrator. Taking all this into consideration, it is most probable, from a perusal of those cases in which the pulse and respiration are recorded as failing together under chloroform, that some are erroneously so stated. Still is there a sufficient number of authentic cases recorded to support the general proposition that the simultaneous failure of the pulse and respiration does occur during the administration of chloroform. This symptom is one which indicates death from shock or neuroparalysis.

CLASSIFICATION OF CONTINGENCIES.

Various accidents may arise from the use of an anæsthetic. These may be due either to the anæsthetic itself or to the operation occurring during the administration of the anæsthetic. Deaths may occur in the first stage before anæsthesia has been effected and before any operation whatever has been begun. We may find deaths occurring during the stage of excitement which succeeds the first administration of an anæsthetic, or we may find them occurring during the stage of complete anæsthesia during recovery from the anæsthetic. To these deaths may lastly be added another class, those which occur two or three days after the anæsthetic has been administered. These usually take place in cases where the anæsthesia has been kept up for a considerable length of time, and are said by some to be due to changes in the heart and kidneys produced by the anæsthetic—a sort of secondary death. A study of the cases catalogued will bear out this classifications, which differs in some respects from Snow's.[5]

GROUP I. DEATHS ARISING BEFORE ANÆSTHESIA HAS BEEN EFFECTED.

It is important to bear in mind not only that anæsthetics in general may produce death from failure of the respiration, but that chloroform especially tends to aid the toxic action of venous blood upon the heart, so that an animal that has received chloroform dies much more quickly from chloroform *plus* venous blood than from venous blood alone. The death which asphyxia alone would cause is quickened by the administration of chloroform, whereas anæsthetics containing no halogen do not seem to have such an action to any great extent.

In the first stage of the administration of anæsthetics we occasionally find a patient dying at once before the operation has been begun. The following cases illustrate this point:—

No. (Series A.)	Notes.
23.	Patient died at once.
28.	Died "after four or five inspirations."
(Series B.)	
9.	Had scarcely made four inspirations.
32.	Died in an instant; removal of small tumour of gum.
34.	Died instantly.
63.	Pulse and respiration ceased at same moment.
64.	In a moment the patient was dead.
95.	After three or four inspirations respiration ceased.
104.	Patient died instantly without warning.
116.	Pulse stopped suddenly.
122.	Pulse failed and patient died immediately.
126.	Suddenly became rigid and pulse stopped.
153.	Died suddenly.
158.	Respiration ceased; died suddenly.
187.	Pulse and breathing suddenly ceased.
253.	" " " " " Scrofulous tumour of jaw (which jaw not stated).
275.	Pulse ceased; died instantly.

The symptoms in these cases are those of neuroparalysis, and in all probability may be rightly attributed to interference with the respiratory passages, such as sudden reflex closure of the glottis, having a result exactly like that of throttling.

The following cases have a bearing on this point, Nos. 5, 8, 10, 16, 22, 28, 30, and especially 54 of this group. A similar result would in all probability have ensued if, instead of putting a handkerchief with chloroform upon it before the patient's nose, a dry handkerchief had been simply pressed over the face so as to obstruct the breathing, or if the patient had been strangled by a cord round the neck. The same accident has often happened when pure nitrogen or hydrogen has been inhaled. But some deaths may be due to another cause—namely, mental impressions, which may arise either from the simple thoughts of the patient, sometimes, perhaps, aided by the smell of the anæsthetics, or even from simple irritation of the skin by a slight operation. As showing that mere mental impression will cause death, there is an instance recorded in which the physician felt afraid to give an anæsthetic to the patient, and the patient felt afraid to take it. In order to give a semblance of an anæsthetic, and if possible lessen the pain by suggestion, the physician placed a cloth over the patient's nose as if he were going to administer an anæsthetic, but poured upon it nothing whatever, yet the patient died from sheer fright. This condition finds further illustration in Case 517, on p. 914, with the accompanying footnote referring to the *British Medical Journal* case, Oct. 5th, 1889, page 778, where a case is recorded of a female insisting on taking chloroform for extracting teeth. "The dentist, pretending to comply with her wish, gave her eau-de-Cologne." After two or three inspirations she fell from the chair and died. We find also similar cases occurring where the patient has died immediately after a little chloroform has been given and the operation has just begun—the first stroke of the knife has killed the patient. But patients have died from the shock of very trivial operations without the administration of any anæsthetic whatever, and Sir James Young Simpson has recorded the case of a man who died simply from the slight incision necessary to open a boil. The cause of death in this case was "shock." The nature of shock, as I have already pointed out, is a very complex thing. At one time I was disposed to regard it as due to some sudden change in the distribution of blood, probably either from stoppage in the heart, dilation of the arterioles, or paralysis of the veins, so that the blood, instead of coursing through the arterial system, became accumulated in the venous system. There is one experiment, however, that shows that shock is due in a great measure to an influence upon the nervous system apart from the circulation. When a frog is decapitated it falls at once into a condition of shock apparently due to the action of the operation on the whole nervous system, and it does so whether the circulation be free or whether the heart be ligatured and the circulation stopped, although recovery occurs much more rapidly when the circulation is strong. Shock may be to a certain extent induced by mental impression, as was noticed long before the introduction of anæsthetics. In

[5] It is to be borne in mind that the causes of death are those assigned by the original reporters of the cases and not by the Commissioners of THE LANCET.

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his book on "Gunshot Wounds" Guthrie tells us that when butchers were ordered to be bled they almost invariably fainted, whereas other people did not faint. The butchers apparently fainted almost at the first sight of blood, and Guthrie's explanation is that in the minds of butchers, who are engaged constantly in killing animals, the shedding of blood is connected inevitably with the occurrence of death. In the animals they slaughter death happens on all occasions, and the connexion was established in their minds so firmly that they thought whenever they saw the blood death was inevitable, and they fainted from psychical excitement.

SYME'S REASONS ADDUCED.

Professor Syme used to say that he had never seen in the Infirmary of Edinburgh a single case of death from chloroform. Now this was a great admission, especially by Professor Syme, because chloroform was introduced by his great opponent Sir J. Y. Simpson, and if any flaw had existed in his rival's statements Syme would have been sure to point it out. "The reasons for this," he said, "are twofold. First of all, we always use the best chloroform, and, secondly, we always give plenty of it." Now the second part of his advice was very forcibly illustrated when I was a student. A young lady was going to have her teeth put in perfect order by the dentist just before her marriage. A surgeon gave her chloroform. The young lady was well known in society, and the fact of her marriage was known very widely, and one may be quite sure that the chloroform was administered with the greatest possible care. She died while the tooth was being extracted. It is unlikely that the surgeon gave too much upon that occasion. Ten days afterwards this same surgeon gave chloroform a second time for a similar operation, and it is quite certain that if he had given too much on the first occasion he did not give it in too large quantities the second time, but the second patient died also. The reason why these patients died was almost certainly that they got too little chloroform. If it had only been pushed a little further so as to prevent shock in all probability they would have recovered.

As with alcohol, so with anæsthetics—one must push the anæsthetics so far as to paralyse the reflex nerve centres, through which shock is likely to occur. These then are some of the precautions to be used at the beginning.

EFFECT OF POSITION.

But shock is likely to occur much more readily according to the position which the patient is occupying. Cases bearing on position as a factor may be found on p. 1114; Nos. 20, 21, and 38 may be carefully noted; also on pp. 704 (No. 44) and 767 (Nos. 170, 771, 228, and 229). A mixture of chloroform and ether has been used in Case 8 (page 1487) for division of the hamstrings. The death is put down to "shock" rather than to the anæsthesia. When a man is in the upright posture bleeding tells much more quickly upon him than if lying down. A much greater quantity of blood can be withdrawn without the patient fainting when he is in the recumbent position, and when fainting does occur, from whatever cause, one of the first things usually done is to lower the head or even to put the patient in a sloping position, with the head at a lower level than the limbs, so as to make the blood flow towards the head. The patients should therefore always be, if possible, lying down or more or less recumbent, but never upright, when chloroform is being administered. It is in the dentist's chair that the greatest risks from anæsthetics occur.[6]

HOW TO COMBAT PSYCHICAL EXCITEMENT.

Psychical excitement ought to be combated as far as possible by an assurance to the patient that there is no danger, and also by allowing the anæsthetic to be very gently inhaled at first, so as not to cause any fear. If a cloth dipped in chloroform or a mask containing a quantity of ether be held before the patient's nose the psychical excitement is increased, and actual embarrassment of the respiration may thus be induced. In administering anæsthetics it is advisable to give the anæsthetic gently, so as to avoid exciting the patient's mental condition, and also to avoid irritating the upper nasal passages.

HOW IS SHOCK TO BE AVOIDED?

The question now arises: How is neuroparalysis or shock to be avoided in the first stage of anæsthesia? First of all it is clear that the towel or inhaler used should not be too closely applied at first to the patient's nose and mouth, so as to cause choking. It is well known that as patients become insensible they are able to inhale a stronger vapour without apparent disturbance than they can do at first. My late colleague, Dr. Patrick Black, in an admirable essay on chloroform, quotes a case in which two patients in good health had chloroform administered. The first one passed quietly into the anæsthetic condition; the second became excited and struggled, the arms became rigid, the face congested, and the respiration suspended by spasmodic fixture of the chest. The reason of this difference was that the chloroform was well diluted at first and the vapour strengthened afterwards. In the second the strong vapour was used at the beginning, the valve not having been altered after the first patient had been removed.

IRRITATION OF THE RESPIRATORY PASSAGES.

Care ought to be taken that only pure chloroform, free from any irritating products, is used, because decomposition products may cause by themselves spasm of the glottis apart from anything else. Deaths from this occurrence are not due, in the strict sense of the word, to the effect of the anæsthetic upon the system generally, but in all probability are caused by local irritation in the respiratory passages. This irritation is not necessarily connected with chloroform anæsthesia, but is due either to an impure preparation of it or to its faulty administration.

SPASM OF THE GLOTTIS AS A CAUSE OF DEATH.

I once had a curious experience. I was in a swimming bath, luckily for me only in about three feet of water. A drop of water got up my nostril, and at once intense spasm of the glottis came on. The chest was completely empty of air; and, although I put my hands upon my hips so as to get a purchase for the auxiliary muscles of respiration, it was only after a considerable space of time had elapsed that the spasm relaxed a little and some air entered the lungs. In this case a single drop of water getting into the nose produced this reflex spasm. A somewhat similar spasm may be produced by inhaling very strong liquor ammoniæ, but it is not so violent. Now, this kind of spasm is not at all uncommon during the administration of anæsthetics, and its existence is shown by a particular kind of stridor evidenced in the breathing. It is somewhat like the stridor of croup, or laryngismus stridulus, sometimes termed a "crowing inspiration," so that one of the risks here is danger from asphyxia due to the contraction of the vocal cords by spasm. Now, in my own case in the swimming bath, although at one time I seemed to be very near death, I came round very rapidly. If I had been in deep water I should have been drowned, and if I had been under the influence of anæsthetics I might not have come round; for they have the power of depressing the respiratory centre to a great extent, and at the same time of interfering to a certain extent with the heart as already described. An interesting case in this connexion is No. 19 on p. 1114. Another form of this kind of death is that recorded on p. 694, Case 4, in which the patient said "I choke," and immediately died. A second experience I have had may also be interesting as possibly throwing some light upon deaths which occur during recovery from chloroform anæsthesia, where the patient has had slight symptoms of vomiting, but where the glottis has not been mechanically obstructed by vomited matters. One day when walking sharply immediately after breakfast a little food regurgitated into my mouth. It seemed in some way to have caused reflex spasm of the glottis because, although no coughing occurred, I immediately became almost asphyxiated, unable to walk, and had the utmost difficulty in getting air into the chest. Spasm of the glottis such as occurred from this slight regurgitation might very possibly have proved fatal during an operation. The tendency towards this effect, which is developed in chloroform after prolonged keeping, has been demonstrated over and over again. Pure chloroform is very slightly irritant as compared with chloroform containing chlorinated compounds, and it is evident that freedom from such contaminations is an important element in the safe administration of chloroform. But the preceding report shows that it is not sufficient always to rely upon the purity of the chloroform as originally made, because if the bottle has been exposed to light, and possibly quantities taken out of it and poured back again several times, the chloroform is almost certain to undergo an amount

[6] The effect of posture on the blood pressure was shown by the Hyderabad Commission in Experiments 31, 32, 33, 40, 79, 81, 83, 104, and 106.

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of decomposition and become irritating. To avoid this Professor Ramsay of University College has suggested that it should always be freshly distilled from caustic lime, but this precaution can only be employed in large hospitals, nor, indeed, is it usually required if a pure chloroform be got at the first and kept in a cool dark place in well-stoppered bottles, which should be small, so that the quantity they contain should not be long in being used up after the bottle has once been opened.

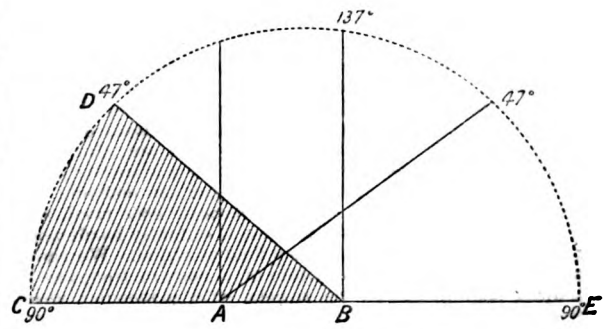
(To be continued.)

ON THE DISADVANTAGES OF MONOCULAR VISION.

BY SURGEON-MAJOR H. R. WHITEHEAD, F.R.C.S. ENG.,
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ALTHOUGH this subject has a very particular military application, at the same time few subjects possess a more important and practical interest from a public point of view. At the first glance it may seem somewhat unnecessary to lay great stress on the possession of binocular vision, provided that the vision of the sound eye is good; but when we fully inquire into the subject we shall appreciate the difference which really exists between binocular and monocular vision, and wherein lie the essential differences which separate the one from the other. Monocular vision imposes serious disadvantages on men who are following, or are anxious to follow, certain special occupations which demand for their proper performance a high degree of visual efficiency. We may be sure that nature has provided us with two eyes for a very good reason, and not merely reduplicated the organ in case of the loss or injury of one member, although this, no doubt, is a very wise provision. From our knowledge of the intricate arrangement of the fibres of the optic nerve and optic commissure without the eye, and the expansion of the optic nerve into the retina within the eye, it is evident that a very elaborate arrangement exists for the proper performance of binocular vision. Physiologically we know how perfect this system is and what comparatively slight causes may disarrange it. Evidently great loss of function must result from the absence or impairment of the sight of one eye. The tendency of the age is, and rightly so, to demand an increase in the severity of the tests for eyesight in those avocations in which a certain standard of acuteness of vision is considered necessary, and a more stringent application of the tests which actually exist; and not to regard this part as the least important of the physical examination of a candidate, and therefore to be conducted in a haphazard and perfunctory manner. It becomes more and more evident, not only to the medical profession, but also to the general public, that many distressing disasters which shock us from time to time—such, for instance, as railway collisions, collisions at sea, &c.—appear as if they must have been produced by the inability of some individual to recognise a signal, the colour of a lamp, or the relative position and distance of vessels. The conflicting and unsatisfactory evidence which too often follows at the subsequent inquiry into the causes of such accidents frequently appears to point to this solution as the only feasible explanation. The case is still further, unfortunately, liable to be left in doubt by the loss of the individual primarily responsible for the accident, and the inability, therefore, to completely clear up the case by physical examination. The obvious duty of medical men entrusted with the application of the tests for visual acuteness is not only to know how to apply the tests, but also the exact qualities of the vision required, and to thoroughly comprehend what constitutes reliable vision in the case of men who are to be entrusted with responsible positions where good sight is a necessity. In studying the phenomenona of binocular vision we are aware that when each eye is directed towards an object the eyes are slightly turned inwards, so that the central rays from the object fall on the yellow spot of each eye; if this were not so diplopia would result. If the object is solid certain parts of the image are focused on corresponding parts of each retina. Images of certain other parts of the object are formed in each eye singly. The result is, however, that a combined impression of the object is presented to the brain. It follows from the mental impression produced that binocular vision gives information on three heads—namely, the length, breadth, and depth or thickness of the object observed. The relative position of a series of objects situated at different distances from each other will also be discerned. Now, if one eye alone is used we shall find that only the length and breadth of the object are discerned, and that the third factor—viz., depth or thickness—is wanting. The power also of distinguishing the relation of the various objects in the landscape is also in a large measure lost. A series of objects at various distances from each other will consequently appear as if they were on the same plane, and will resemble in this respect a photographic picture. These defects of monocular vision can be remedied to a certain extent by intelligence, practice, and experience.

The fact that the acuteness of vision is duller in monocular than in binocular vision is also well established. The alertness or quickness of vision is also sensibly diminished. Another immense disadvantage of monocular vision is the contraction of the field of vision which this necessarily implies. In experimenting with the perimeter on the field of fixation it will be found that the prominence of the nose absolutely limits the field of fixation on the inner side, and therefore the field does not reach in this direction a greater extent than about 45°. If the field of fixation be taken for each eye separately, it will be found that about from 10° to 15° are added when both eyes are used. Perhaps, however, the contraction of the field of vision is more clearly shown when the field of indirect vision is taken for each eye separately in the horizontal plane, and the two charts are shown together as in the accompanying diagram. It will be found



that each eye is capable of about 90° of peripheral or indirect vision in the horizontal plane on the outer side, and about 47° in the same plane on the inner side. If both eyes were used the indirect vision would be equal to about 180°. One eye acting alone is capable of about 137°, and therefore the actual amount of the field of vision lost when one eye alone is capable of seeing is about 43°. This is shown in the diagram by the shaded part.

I have mentioned that the alertness of vision is less in monocular vision. We must also bear in mind that the alertness of vision for colours is also sensibly diminished in monocular vision. The brightness and saturation of the colour appear less than when both eyes are used. It will be apparent from what I have already said that certain disadvantages result from monocular vision. These may be summarised as follows: (1) loss of power to interpret the relative position of objects; (2) contraction of the field of vision; (3) decrease of acuteness of vision; (4) decrease of alertness of vision; and (5) diminution of alertness for colour vision. To these I may add two purely military objections—viz.: (6) difficulty in firing from the left shoulder, as proposed in cases where the right eye has been lost or damaged; and (7) liability to catarrh of the socket when an eye has been enucleated. I will now examine a little more closely into each of these disadvantages and try to assess the actual amount of disability they impose.

1. *Loss of power to interpret the relative position of objects.*—It will at once occur to us that there are some special occupations in which it is absolutely necessary that this power should be present. The impairment of it, from a military point of view, would lead to great loss of efficiency. In the first place a soldier, to be a good marksman—which, after all, is one, if not the most important, of his qualifications—must be able to judge the distance of the mark at which he wishes to fire. In practice this is very often a fixed distance, and he knows without any effort of judgment to

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what distance to sight his rifle. If, however, he be afflicted with monocular vision and has to judge the distance, as he has to do in certain exercises in peace and nearly always in actual warfare, he will find very great difficulty. A soldier judge the distance of an object a good deal by its relative size and relation to other objects. If he were the subject of monocular vision and the object were moving and altering its relative position to other fixed landmarks quickly, he would not be able to estimate with sufficient rapidity the distance for which to sight his rifle. Many minor defects would also come to light on parade, and his inability to properly appreciate distance would tell greatly against him. In seafaring life the dangers arising from this cause would be very marked. In a crowded water the safety of the ship depends on the officer in charge fully appreciating the relative position of his ship to others, and he instinctively relies on this power to tell him if he has room and time for certain evolutions. We can imagine no more serious defect for a seaman than the loss of this sense. Although its absence would be most detrimental in the case of the ships' officers, yet in a certain degree its loss would act prejudicially in the case of the men.

2. *Contraction of the field of vision.*—We have only to consider the question for a minute to be convinced of the vital objections that exist to placing reliance on the possessors of monocular vision in those positions where a high standard of vision is requisite. I have previously stated the amount of the contraction in the horizontal plane, and the exact loss not only that the direct but also that the indirect vision sustains in substituting monocular for binocular vision. I take as an example an incident in military life. Let us imagine the position of a sentry in a hostile country where a war is being waged against savage tribes. The whole attention of a man employed on such a duty should be directed to detect the slightest movement near his post, and by a timely appreciation of danger to prepare his comrades for attack. The experience gained from the history of our campaigns will probably suggest not a few instances where, in spite of the most close and attentive watch, especially in savage warfare, the enemy have been able to steal up to the position and deliver a most unexpected assault. If such instances are common with men of presumably full visual acuteness, how much more likely are they to occur when a man is seriously handicapped by the loss of part of his normal field of vision. We should be very wrong to trust the safety of a body of troops to the limited field possessed by a man with monocular vision. Supposing his attention to be directed to some object in front of his post, some 40° in the arc of normal vision would be entirely lost to him, and he would be absolutely blind to this extent. The same remarks would hold good as regards the sailor. The man on the look-out, on whose vision the life of the entire ship's company might depend, would be to all practical purposes blind to the extent mentioned when his direct vision was occupied by objects in front, and it is at once recognised how serious this loss of function would become under these circumstances. Even the best shipping companies are not as particular, perhaps, as they might be with regard to the acuteness of vision of their sailors, and it is impossible not to have an uneasy feeling when thinking, if this is so with the best, what must be the condition of the vision of some of those employed on the inferior lines.

3. *Decrease of acuteness of vision.*—I have previously stated that it is an undoubted fact that monocular vision is not so acute as binocular vision; the tests for eyesight as a rule admit of such a low degree of acuteness that we cannot afford to allow a still further reduction of this by substituting monocular for binocular vision. What, perhaps, is more important, however, is the loss of alertness of vision.

4. *Decrease of alertness of vision.*—This function is quite different from the mere acuteness of vision and deserves a greater measure of attention than is usually paid to it. It is the power to recognise with celerity objects presented in the visual field. The power to do this can be very greatly increased by practice. Soldiers and sailors should be trained in this respect. As an example of how much may be done in this way I may instance the rapidity with which signallers can with practice communicate by either flags, heliographs, or lamps. From a military aspect it is of the first importance that men who may be employed as sentries or vedettes should have this faculty fully developed. The gleam of a spearhead or the raising of a head for a moment over the brow of a neighbouring hill may be all the warning a sentry may receive of the presence of foes near at hand, and the ability to receive and distinguish aright such impressions may be of incalculable benefit to the force to which the man belongs. An engine-driver running at a high rate of speed has only a momentary glance at his signal, and this often in such states of the atmosphere as to interfere seriously with the normal acuteness and alertness of vision; if he fails to interpret correctly the signal the result may be a great disaster. This power is not less important to the sailor, who may be able by its aid in thick weather to catch a perhaps instantaneous view of a light, landmark, or neighbouring ship.

5. *Diminution of alertness for colour vision.*—This very important factor is liable to be overlooked in estimating the disadvantages of monocular vision. Many people who would not be described as colour-blind still have some confusion in detecting colours, and depend a good deal for their appreciation of the shade on the amount of luminosity. Any physical condition which diminishes the acuteness and alertness of colour vision must be regarded with concern, as any circumstance which would hinder the immediate recognition of a coloured lamp or signal, or cause any confusion in doing so, might lead to very serious results. The engine-driver, the ship's officer on watch, or the seaman on the look-out must be able, for the safety of the charge confided to him, to recognise, even under unfavourable conditions of the atmosphere, without any hesitation whether a given signal or light is red or green. When we consider the rate at which an express train may be running, the possibility of the light being hidden until close to a curve, and the varying states of atmosphere and illumination we shall understand the value of the alertness of colour vision. The question of the quantitative determination of colour vision is still in its infancy, and but little attention has been paid to it. The ingenious apparatus devised by Mr. Brudenell Carter and described by him in THE LANCET[1] is, however, a step in the right direction and affords the means to record accurately, if desired, the exact acuteness of colour vision. I shall not do more than draw attention to the two distinctly military disadvantages, explaining shortly the reasons for such.

6. *Difficulty in firing from the left shoulder if the right eye has been lost or damaged.*—The handle of the bolt projects from the right side of the new (Lee-Metford) rifle. In firing from the left shoulder, which, if the right eye is damaged, is the proper position, the bolt of the rifle is apt to catch against the belt and accoutrement on the left side of the soldier.

7. *Liability to catarrh of the socket if an eye has been enucleated.*—Under no circumstances would it be advisable to pass a man fit for active service if the eye has been removed. The dust, smoke, and dirt inseparable to a campaign would almost assuredly set up a catarrhal condition of the socket. Apart from all other considerations this would disqualify him.

I have hitherto limited my remarks to monocular vision due to the complete loss of the sight of one eye. I must not, however, fail to recognise the fact that many of the dangers attendant on monocular vision may be established in those cases in which the sight of one eye is normal or nearly so, while the sight of the other eye is bad. Although the effects of such are not so pronounced, perhaps they are not less serious. In such cases the better eye does practically all the work, and unless the loss of vision in the other eye is simply due to an error of refraction, which can be fully corrected, to all intents and purposes the person is devoid of binocular vision. It is therefore absolutely necessary in formulating tests for visual efficiency that the sight of both eyes should be tested separately and a limit placed on the loss of acuteness of each eye. The test, for instance, for candidates for commissions in Her Majesty's army is that the candidate shall read at least $\frac{6}{36}$ with each eye separately, and that the loss of acuteness, if present, shall be due only to an error of refraction and be capable of correction by lenses to $\frac{6}{6}$ in one eye and $\frac{6}{12}$ in the other eye, thus allowing only a small difference in the acuteness of vision between the eyes after lens correction. Dissatisfaction is often expressed that, although a candidate may be emmetropic in one eye, yet if he fails to see $\frac{6}{36}$ with the other eye he is rejected. From the foregoing remarks it is seen why it is so desirable that a limit should be placed on the deficiency of sight of the worse eye. For the same reason strabismus is a condition which debars from military service, and should also cause disqualification in any occupation where a high degree of visual efficiency is required. Here, again, the field of vision may be seriously

[1] THE LANCET, March 17th, 1894.

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interfered with, and, apart from the significance of strabismus in other ways, rejection on this ground alone is sufficient.

I have said enough, probably, in the narrow limits of the present article to demonstrate clearly the chief disadvantages of monocular vision. I might enter much more into detail and point out further the many occupations in which monocular vision is distinctly objectionable; their own experience will suggest many such instances to the readers. It is perhaps questionable if the full value of periscopic vision is sufficiently understood, and the amount of loss of function which any interference with it causes. As a practical suggestion in connexion with my remarks I wish strongly to urge the importance of a more thorough and systematic examination into the eyesight of the employés of railway companies and of the mercantile marine service. Much has, I know, been done in this way of late years, but much is still required to give greater security to the travelling public. The very great danger, especially in the case of the mercantile marine, of an inefficient examination should be recognised, and the Board of Trade pressed to place such restrictions as would prevent not only the officers but also the men afflicted with indifferent vision of one or both eyes from serving. Men who are employed in such pursuits should not only be tested on first appointment, but should also be subjected to re-examination at stated intervals. These examinations should be carried out by independent examiners specially appointed to these positions, and who thoroughly understand not only the application of the tests, but also the reason for imposing them, and the quality of vision they demand.

TWO CASES OF SEVERE TRIGEMINAL NEURALGIA DUE TO NASAL DISEASE.

BY M. P. MAYO COLLIER M.S. LOND., F.R.C.S. ENG.,
VICE-PRESIDENT OF THE BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

OF the numberless cases of "tic" recorded in the various journals and other publications an extremely small proportion have been attributed to nasal disease. In an immense majority of the recorded cases the nose has apparently never been examined at all, and this in face of the fact that there exists a ganglion called the spheno-maxillary or nose ganglion, and that this ganglion is closely associated with the main trunk of the second division of the fifth nerve, and distributes branches to almost the whole of the interior of the nose and naso-pharynx. Granted that a very large number of these cases of trigeminal neuralgia are due to peripheral irritation, common sense would suggest an examination of such an extensive surface of peripheral distribution as the interior of the nasal cavities. In the two cases I am about to relate the nose was never examined until I was consulted, and in the first case a distinguished surgeon had counselled the serious procedure of the removal of the infra-orbital nerve without looking into the patient's nose. To be brief, in the early part of last summer my colleague, Dr. Cagney, requested me to see a poor woman who was a martyr to facial neuralgia of a severe type and of some twelve years' duration, with a view to the examination of her nose. Even a breath of air, or, indeed, the slightest contact with lips, tongue, or face, would precipitate an attack of agonising pain, the patient moaning and grinding her teeth with the severity of the paroxysms. The removal of teeth and the exhibition of medicines and galvanism failing, an operation on the infra-orbital nerve was about to be performed just previous to my being consulted. My examination revealed extensive disease of the middle turbinated bone on the same side as the neuralgia. I sat down there and then in the presence of Dr. Cagney and removed with the cold snare the greater portion of the diseased structures. From that day and hour the neuralgia practically ceased, and, with the exception of a few slight relapses due to the accidents incidental to the healing process in the nose, the woman was and still is completely relieved of her misery. A short time after this another colleague, Dr. Leonard Guthrie, hearing of this woman's case and having under his care, in concert with Dr. Turner of the Regent's-park Hospital, a severe and intractable case of trigeminal neuralgia, kindly suggested that I would take the case in hand also and see what I could make out of it. Curiously, this was a repetition of the last case. The nose had not been examined. The disease had lasted four years and the attacks were becoming more frequent and more severe. In this case a marked deflection of the nasal septum would have baulked any but a skilled observer, but the probe told a tale of diseased middle turbinated bone with numerous polypi. These were at once removed, and but for one or two occasional twinges the neuralgia has disappeared, apparently never to return again. Both these cases were residents in the wards of the North-West London Hospital, and have been exhibited cured, after some months, before the British Laryngological Society, the North-West London Clinical and other societies.

Harley-street, W.

NOTES OF A CASE OF CONCEALED ACCIDENTAL HÆMORRHAGE.

BY WILLIAM BLIGH, M.D. LOND.,
LATE HOUSE SURGEON AND OBSTETRIC RESIDENT, GUY'S HOSPITAL.

ON Dec. 2nd, 1894, I was called at 4 P.M. to see a woman aged forty-three, the wife of a labourer, who gave the following history. She had had ten children and two miscarriages; seven children are alive and healthy, the last one having been born in October, 1893 She was of temperate habits, had enjoyed good health, and had had no previous trouble in her labours. She now considered herself to be eight months pregnant, her catamenia having been regular up till the last week in March, when the last period took place; she had noticed that she had not increased in size during the last month. Six weeks previously she had been alarmed by one of her neighbours waking her in the morning to tell her that another neighbour had fallen downstairs and injured herself. She dressed hurriedly in order to render assistance, but on reaching her kitchen she was seized with a sudden faintness and became conscious of a peculiar sensation, as though "something had turned over in her womb." After lying down for the day, however, the faintness passed off, and she went on in good health up till Dec. 1st. On the afternoon of that day she did a good deal of scrubbing, and in the evening had epistaxis, to which she was not liable. On the morning of the 2nd she was awakened at 6 A.M. by uterine pain, described as a "distended, stretched sensation," continuous in character, and accompanied by faintness and by an enlargement in the size of the uterus. This pain continued throughout the morning, and on attempting to rise about 2.30 P.M. to micturate she fainted, and I was accordingly sent for. On my arrival at 4 P.M. I found her anæmic, with dark circles round the eyes. The pulse was 126 per minute and of low tension. The uterus reached within three inches of the costal margin and was extremely tense to the touch, but not tender; there was continued uterine pain, with no rhythmical exacerbations. Per vaginam the cervix was found to be softened, the external os patulous, and the internal os closed. The finger could be coaxed through, however, and the membranes felt, with the fœtal head presenting. On withdrawing the finger a little bright blood was noticed on it, but whether this was the effect of dilating the os, or whether it had previously been passed into the vagina, could not be determined. A diagnosis of concealed accidental hæmorrhage being fairly obvious, the membranes were at once ruptured with a probe and the liquor amnii (unstained with blood) was let out, a drachm and a half of the liquid extract of ergot was given by the mouth, and the os dilated with the fingers. The uterus acted well, and at 8 P.M. a dead fœtus was delivered. The placenta was expressed, and with it two large clots were expelled. The fœtus was apparently about seven and a half months old and had evidently been dead some little time, the epidermis being sodden and easily detached, and the cranial bones loose; it measured 16½ in. and presented nothing of note. On examining the placenta, which measured 6¾ × 5½ in., a roughly oval depression 4 × 3¾ in. was noted on it. This depression was half an inch below the general surface, and over it the normal placental structure was atrophied, producing a fibroid, nearly smooth base; it reached the point

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of junction of the placenta and chorion at one point only, the latter being stained with clot for half an inch beyond. The opening in the membranes through which the fœtus had escaped was almost central. On examining the clots a portion of the smaller was found to be obviously old, being firm and partially decolourised, and this portion fitted with considerable exactness into the placental depression; around and on one side of this clot recent clot had been deposited. The larger clot, which measured 9 in. × 6 in. × 2 in., was recent. It would appear, therefore, that the original hæmorrhage six weeks previously had separated sufficient of the placenta to destroy the fœtus and had produced by pressure the depression noticed, and that a second hæmorrhage had given rise to the symptoms which caused the patient to seek medical advice. No local cause in the fœtus or placenta, and no general cause in the mother, could be found to account for the hæmorrhage. It only remains to add that the patient, though considerably blanched and with a pulse-rate of 142 immediately after delivery, made a steady recovery and was convalescent on Dec. 16th.

Caterham Valley.

RECURRENT CANCER OF THE STOMACH.

BY W. H. CARTHEW DAVEY, M.R.C.S., L.R.C.P. LOND.,
ASSISTANT SURGEON, CHILDREN'S INFIRMARY, LIVERPOOL.

IN THE LANCET of April 12th, 1890, I reported a case of carcinoma of the pylorus for which pylorectomy was performed, and in which the patient recovered, the operation having been done by Mr. Rawdon. I regret now having to report the death of the said patient, five years after the operation. I believe the case is unique, so far as recurrence and prolongation of life are concerned. Mr. Jacobson, in "Operations of Surgery," quoting Mr. Butlin, says: "All save one died in a period of from four to eighteen months. The exception was one of Woelfler's cases, which remained well for a year and then had recurrence in the cicatrix, which was operated on. Later, the glands of the groin became affected, and four years after the pylorectomy the patient was dying slowly of cancerous recurrence." The history of the present case is briefly as follows. After the operation the man remained perfectly well for three years and a half, with no dyspepsia or gastric trouble whatsoever, and could take any kind of food without discomfort, when in June, 1893—that is, just three years and eight months after the operation—he was prostrated with an attack of hæmatemesis. The hæmorrhage soon ceased with the usual remedies, and he apparently recovered perfectly. There was no tumour or sign of any fresh growth to be felt at the epigastrium. This attack of hæmorrhage was the first evidence we had of recurrence; it was, to say the very least, disappointing, as we were congratulating ourselves on the non-recurrence of the disease, hoping we had eradicated it, so long a time having elapsed since the operation (close upon four years). Some six months after the hæmorrhage symptoms of dyspepsia presented themselves, and one could now feel a small tumour just beneath the old cicatrix in the skin. This gradually increased in size. He began to lose flesh, and it was now evident that the disease was making rapid progress, for he was no longer able to sit up, and, taking to his bed, he gradually sank and died from suppurative meningitis and exhaustion on Dec. 21st, 1894. The necropsy showed a large excavating ulcer, with indurated edges and sloughy base, infiltrating nearly the whole of the mucous membrane of the stomach. The stomach was adherent to the liver, pancreas, and diaphragm—in fact, one had to remove these organs with the stomach, as the adhesions were so firm that it was quite impossible to dissect it off without tearing. There were no secondary growths in any of the organs. The disease appeared to be quite localised to the stomach. The suppurative meningitis would no doubt be due to septic embolism from the sloughing mass in the stomach. Microscopical examination showed the cancerous nature of the growth. Dr. Barendt, pathologist to the Royal Southern Hospital, very kindly assisted me at the necropsy.

Liverpool.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF OBSTINATE HICCOUGHING WHICH CONTINUED FOR TWELVE DAYS WITHOUT INTERMISSION.

BY P. SLEVIN, L.R.C.S., L.R.C.P. IREL.

ABOUT two years ago I was called to see a man aged seventy-eight, of remarkably fine physique, who had enjoyed good health all his life, with the exception of an occasional attack of gout. I found him suffering from great prostration, with gastric catarrh and hiccough. Thinking the latter was caused by the catarrh, I prescribed a suitable diet and gave him a mixture of bismuth with some morphia. On arriving next morning I found him more prostrate and the hiccough as persistent as ever, the latter symptom being as active during sleep as in a waking state. I tried chloral, bromide of potassium, hypodermic injections of morphia, and atropia over the epigastrium, ice pressure on the carotids, and, in fact, every remedy of any repute for that complaint, but each morning I saw him he was hiccoughing as persistently as ever. He then consulted a well-known London consultant, who wrote to me recommending a large blister over the sterno-mastoid; this I did not apply, as I thought the remedy too severe. On the evening of the twelfth day of the hiccough I thought of exciting a new reflex, so procured him a box of very pungent snuff. He took several pinches during the night, which produced sneezing. On the following day I found him in the best of spirits, being quite free from the hiccough. He has not had any return of the troublesome affection since.

West Drayton.

A CASE OF ACUTE ŒDEMA OF THE LUNGS.

BY HENRY WALDO, M.D. ABERD., M.R.C.P. LOND.,
PHYSICIAN TO THE BRISTOL ROYAL INFIRMARY.

ON June 12th, 1895, a male patient aged thirty-one was admitted to the Bristol Royal Infirmary. He was well nourished and of good physique. He told me he had been out of work for some time and had lived poorly, chiefly upon bread. There was no alcoholic history. He complained of pain in the chest after food and nausea. His temperature at the time of his admission was normal, but at 8 o'clock the same night it was 101·2° F. The following morning at 8 o'clock it was 100·6°, and at 12 noon 102·4°. There was no rigor or chilliness. The skin was dry. The legs were moderately swollen and "pitted" on pressure. He was somewhat anæmic. His back, abdomen, and thighs were covered with petechiæ, which I took to be purpuric. Upon examining his retinæ there were no visible hæmorrhages. The cardiac sounds were clear, with no audible murmurs. The gums were in a natural condition. The urine did not contain albumen. After being in bed for twenty-four hours he quite suddenly became breathless and cyanosed, a condition which was attended with incessant coughing up of a scanty pink frothy fluid. Râles were heard all over the chest, and he complained of feeling suffocated. This condition of things lasted for two hours and a half, when he died. At the necropsy (twenty-four hours after death) the liver was found to be soft and looked fatty. The spleen was large and pulpy. The stomach was empty and distended with gas. The intestines were almost empty. There were hæmorrhagic spots all through, from the œsophagus to the rectum, and in some parts of the small intestine the hæmorrhagic surface was rather widespread, extending for 6 or 8 inches in several places. The heart was normal, with the exception of the tricuspid orifice, which was rather distended, and the aorta was decidedly small in calibre. There were 2 or 3 oz. of clear fluid in the pericardium. The kidneys were healthy. The brain was normal, although the lateral ventricles were distended. Both lungs were most actively engorged with blood and very œdematous (fluid pouring out of an incision abundantly). There were no signs of infarcts. The left lung was adherent

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to the chest wall. Such a case as this leads one to believe that "active congestion" of the lungs, distinct from pneumonia and from phthisis, is a real malady.

Clifton, Bristol.

A NOTE ON A SIMPLE MANNER OF OVERCOMING THE CATARRH CONSEQUENT ON THE ADMINISTRATION OF POTASSIUM IODIDE.

By GEORGE COHEN, M.B. EDIN.

I HAVE often observed that patients taking iodide of potassium suffered in a marked degree from "iodism," the chief symptoms being coryza with a sometimes profuse discharge, sneezing, pains over the frontal sinuses, swelling of any part of the mucous membrane of the mouth, and a sense of heat in the chest. The foregoing phenomena are identical with those attendant upon the inhalation of free iodine (Mitchell Bruce), and it has been observed that one is more likely to be attacked with catarrh if the iodide of potassium contains free iodine as an impurity. This seems to justify the belief that the catarrh of iodism is due either to iodine being secreted by the salivary glands or to the circumstance that iodide of potassium is broken up in the mouth after its secretion and free iodine liberated. The latter view is supported by Schmeideberg, who has proved that iodide of potassium in the presence of carbonic acid is decomposed, the latter being abundant in the expired air in the region of the salivary glands. Whilst taking charge of Dr. Herschell's out-patients at the National Hospital for Diseases of the Heart, I have been able to stop the catarrh in three well-marked cases by adding to the mixture (being in each case ten grains of iodide of potassium and half an ounce of water) five minims per dose of tincture of belladonna, my object being to reduce the salivary secretion, and in each case the result was satisfactory. Any antisialagogue would doubtless have a similar effect, but belladonna is, in my opinion, the most useful, as it can easily be given in the form of a mixture with the iodide, and in the small dose that is used in such cases it counterbalances the so-called "depressant" action of the potassium.

Hull.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Bella autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, Lib. iv. Proœmium.

GREAT NORTHERN CENTRAL HOSPITAL.

A CASE OF S-SHAPED DISTORTION OF THE SEPTUM NASI SUCCESSFULLY TREATED BY A SERIES OF OPERATIONS AND THE USE OF RETENTIVE APPARATUS.

(Under the care of Mr. W. SPENCER WATSON.)

THE account of this case of operation for deformity of the nose is of interest, as such cases do not often present themselves for treatment. The deformity resulting from an injury such as that described below is usually remedied soon after the accident by the surgeon who is called in, and at that time it is easy to replace the damaged parts. Mr. Watson's case shows how difficult it may be to remedy the displacement when some years have elapsed before application is made for relief and when the accident was inflicted at an early age.

A young woman aged nineteen was sent by Mr. Charles Wray to consult Mr. Watson about a twist of the nose to the left dating from early infancy. She was a well-grown and well-nourished girl of healthy and comely aspect, which, however, was marred by the want of symmetry of the nose. The twist commenced at the point of junction of the cartilaginous septum with the lower border of the nasal bones, which retained their central position. Both the upper and lower lateral cartilages of the left side were thrust outwards by a thickening of the left side of the septum, and were also more prominent than in the normal condition from thickening and enlargement. The disfigurement was, therefore, very marked, but there was also much obstruction to the breath-channels of both sides from thickening and twisting of the septal cartilage, the right side being, however, more obstructed than the left. This was due in great measure to the posterior convexity

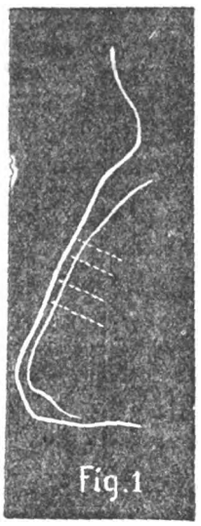


Fig. 1

of the S-shaped curve being very pronounced in the back of the right fossa, and also to the presence of an enlargement of the inferior turbinal of that side. The patient was one of a family of nine, all of whom were healthy and without any facial deformity. She attributed the disfigurement to an injury received when an infant. She and her brothers and sisters were playing, and she was thrown to the ground, striking her nose with considerable violence.

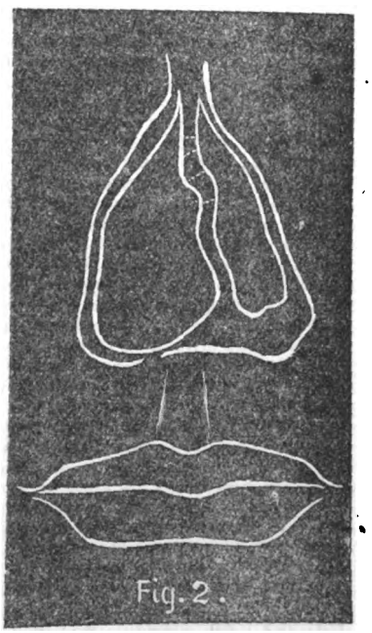


Fig. 2.

On April 26th, 1894, she was ordered to wear a No. 5 vulcanite nasal plug several hours each day in the left nostril. She continued to do so till May 4th, when Adams' septal compressor was substituted. These measures were taken as preliminaries, in order that the nasal mucous membrane might be rendered accustomed to their use after the intended operations. With the same view a nose truss was applied to the skin surface and worn for a certain time every

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nose was in a central position and showed no sign of returning to its faulty position when the truss was removed. The outward contour was perfectly symmetrical. There had been no return of the neuralgia, or of any untoward symptoms, and very little pain had been complained of. From this date until Sept. 21st the truss was worn for an hour or two every day. The position of the nose remained central, with, however, a scarcely noticeable prominence of the left side. The patient and her friends were very well pleased with the result. There were still some adenoids in the pharyngeal vault, and she was, therefore, directed to apply with a throat brush a solution of perchloride of iron in glycerine night and morning. On Nov. 7th there was some post-nasal obstruction, and this was found to be due to hypertrophic enlargement of the inferior turbinal on the right side. A fourth operation was now performed. Cocaine was applied, and a portion of the hypertrophied turbinal of the right side was cut away by the use of Walsham's angular nasal scissors. The bleeding was not great, but

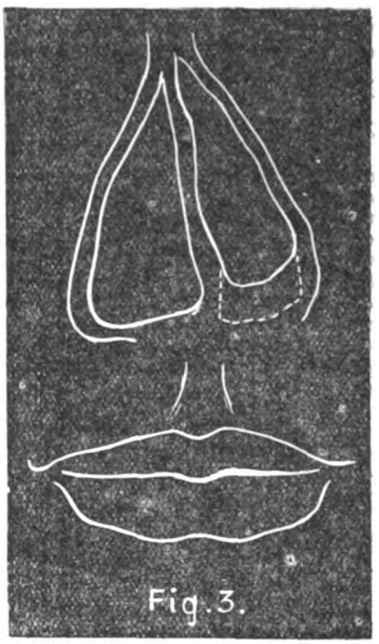
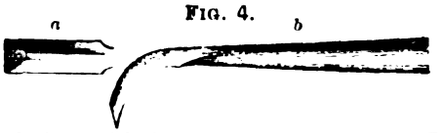


Fig. 3.

in order to avoid trouble the nostril was plugged with eucalyptus gauze. On Nov. 29th the patient said her breathing was free, and there were no pharyngeal crusts or other troubles such as she had previously experienced. On posterior rhinoscopic examination there was seen a somewhat prominent portion of the inferior turbinal of the right side. She was directed to use a spray of borax, soda, and common salt with oil of eucalyptus globulus. On Dec. 12th the obstruction in the right nostril had quite disappeared and the nose remained symmetrical. When last seen, on March 14th of the present year, the improvement in her condition remained. She was seen by Mr. C. Wray, who was much pleased and rather surprised at the result. She was seen again on May 12th, when the improved appearance was still maintained and the breath channels remained perfectly free.

Remarks by Mr. SPENCER WATSON.—This case presented complications and consequently required a greater number of operations

FIG. 4.



a, back view, and *b*, side view of scaling instrument. The width of the blade is somewhat exaggerated in the illustration.

which, though tedious in description and some of them novel, were not severe and were not complained of as painful by the patient. The principal novelty in the treatment was the use of the rectangular dental "scaling" instrument for the division of the partly bony and partly cartilaginous dorsal ridge. (See Fig 4.) In order to appreciate this part of the

treatment it must be borne in mind that the upper lateral cartilages, which are generally described in anatomical works as separate from the septum, are really united to it and form with the septal cartilage a single piece, the ridge of the dorsum of the nose being, in fact, the union of these lateral pieces with the septum, and when, as in the present case, this ridge is thickened and distorted it offers a formidable obstacle to the ordinary methods of restoring the symmetry of the parts. The ordinary resiliency of the cartilage is much greater the thicker it becomes. Hence it is necessary to make cross cuts in it at right angles to the line of deviation, and then by the use of the nose truss and plugs to retain the divided ridge in position until the faulty resiliency and distortion have been overcome by union in the central position. This method was resorted to rather late in the case because my attention was in the early period diverted to the distortion of the deeper parts, which were much thickened and seemed to offer the greatest resistance to attempts at restoring symmetry. Had I recognised the importance of the thickened dorsal ridge at an earlier period the two methods of operating might with advantage have been combined in one proceeding. This would have shortened the treatment, but might also have rendered the use of retentive apparatus less easy. On the whole I think in a similar case much the same methods would have to be employed, but the attack on the dorsal ridge might be commenced sooner and with more precise aims in the light of the experience gained. The nose truss employed in this case was a modification of Mr. Adams's depicted in the second edition of my work on Diseases of the Nose at p. 251. The pads, however, were not kept in their positions by levers and cogwheels, but by springs attached to the frontal band. I am indebted to Mr. Kendall, house surgeon of the Great Northern Central Hospital, for his skilful assistance in the management of the case. The figure of the dental scaling instrument and the instrument itself were kindly lent to me by Messrs. Ash and Sons of Broad-street, Soho.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Adjourned Discussion on the Development of the Human Placenta.—Placental Polypus.—Exhibition of Specimens.

A MEETING of this society was held on July 3rd, Dr. F. H. CHAMPNEYS, President, being in the chair.

On the resumption of the adjourned discussion on Dr. Eden's Demonstration on the Development of the Human Placenta, Dr. DAKIN asked Dr. Eden how the specimens of placentæ and deciduæ from which the sections were made had been obtained and prepared, so as to exclude the possibility of the hæmorrhages into the deciduæ in the earlier stages being artificially produced. It was highly probable that the hæmorrhages were normal, for the process thus resembled that of the formation of the menstrual decidua, which was another example of intense activity of function. The resemblance was interesting as bearing on the connexion of ovulation with menstruation. Hæmorrhages as part of an early stage in the formation of the placenta were known from the observations of Hubrecht and others to take place in the trophoblast of some of the lower animals, where cleavage occurred in this part of the chorion; and produced spaces which became filled with maternal blood. Dr. Eden had said that what had been described as multinucleated cells by many observers were practically always sections of buds of the chorionic villi lying in the sinuses. These cells had, however, been demonstrated in the sinuses of the uterus itself and more deeply than the villi were likely to penetrate, and had been described by Helme as collecting around the vessels in the uterine wall towards the end of pregnancy in connexion with the hyaline degeneration of the sinus epithelium which took place then. This change had been first described by Friedländer and in the Society's Transactions by Sir John Williams.[1]—Remarks were made by Dr. GRIFFITH and Dr. GALABIN.—Dr. EDEN, in reply, said that the specimens of early ova shown at the last meeting might be fairly regarded as healthy; they were examples of abortion occurring from accidental causes, not from intrauterine disease. In answer to Dr. Galabin, he said that the maternal vessels became to a great extent opened up by the destructive action of the trophoblastic buds, and this process was the principal factor in the development of the circulation through the intervillous spaces. Similar changes had been described in the development of the placenta of many other animals besides man. The question of fibrinous and calcareous degeneration in the placenta he hoped to discuss in a subsequent paper.

Mr. ALBAN DORAN read a paper on Placental Polypus. In examining the clots from tubes which he had recently removed in cases of suspected tubal gestation, he compared the clots with sections of true placenta and of retained placental fragments. He also examined, for the second time, sections from a polypoid growth found in the uterus of a woman aged twenty-nine who died many years ago after the removal of a cystic kidney by Sir Spencer Wells. There had been no hæmorrhages; in fact, the patient believed that she was pregnant on account of the absence for several months of menstruation. The uterus, with the polypus attached to its wall, and the ovaries showing a large corpus luteum on one side, are preserved in the Museum of the Royal College of Surgeons of England (No. 4659, Pathological Series). In 1877 Mr. Doran believed that the polypus was a cavernous angioma. Dr. Boldt has, it must be noted, quite recently detected a tumour of that kind in the uterus. The College specimen, however, proved on careful examination to be made up of placental tissue. It is a true placental polypus. In all other recorded cases uterine hæmorrhage was present. He dwelt on recent opinions concerning placental polypus. According to the recent researches of Klasson of Kieff, and Lejars and Lévi of Paris, the so-called "fibrinous polypus" is only a form of placental polypus, if not identical, the placental tissue having been overlooked. He finally referred to Hartmann and Toupet's important investigations on the results of retention of placental tissue when, instead of septic changes, organisation occurs. They find that this tissue may develop into innocent deciduoma (that is, placental polypus), hydatidiform mole, and chorion-celled sarcoma. This last growth is the "malignant deciduoma," or cancer following gestation, which has been so frequently described of late, on indisputable evidence, by Continental authorities. Mr. Doran asked why, if this grave disease be so frequent in Europe, it has hitherto escaped the notice of British teachers and practitioners.—Dr. HERBERT SPENCER had six years ago met with a case which he believed to be of the nature of the deciduoma malignum of Continental authorities. A woman about twenty-five years of age died two months after delivery with symptoms of septicæmia and signs of uterine cancer. During life several pieces of putrid "placenta" had been removed. At the post-mortem examination growth and ulceration were found in the situation of the placental site, where the wall was almost eaten through, and also (unlike most cases) in the cervix. The microscopic examination of the uterine growth was somewhat unsatisfactory, but it appeared to be sarcomatous. In the lungs there were many secondary growths, some as large as a walnut; under the microscope they were evidently sarcomatous. He had hoped to meet with another case in which the microscopic examination of the primary growth would be more satisfactory; but as the above-mentioned appeared to be the only case of the kind in this country he would be happy to bring it before the society. The specimens were in University College Museum.—Remarks were made by Dr. GALABIN and Dr. GRIFFITH.—In reply to Dr. Galabin Mr. ALBAN DORAN said that hydatidiform moles undoubtedly displayed malignant characters in certain cases. They were myxomatous, but it must be remembered that general pathologists are not all agreed as to the limits of the term "myxoma." Sometimes mucoid tissue was normal and not in any sense a new growth; sometimes it was clearly associated with sarcoma. Dr. Griffith's tumour seemed to be a true fibrinous polypus, as no placental tissue was detected in its substance. Dr. Herbert Spencer's case was of the highest interest; it appeared to be the first instance of malignant deciduoma in the British Isles. In conclusion, Mr. Doran recommended careful inspection of all specimens of malignant disease of the uterus from patients under forty already preserved in museums. In future, in any patient of this kind close inquiry should be made as to the occurrence of abortion within a few years of the appearance of evidence of malignancy.

[1] Vol. xx., p. 172.

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The following specimens were exhibited :—

Mr. DORAN (for Mr. BRADBURY and Dr. LOWE) : A Monster, Acardiacus Paracephalus.

Dr. BLACKER : Uterus affected with Fibroids and Carcinoma of the Cervix obtained eight years after Oöphorectomy.

Mr. TARGETT : (1) Abscess in Ovary caused by direct Infection through Connective Tissue ; and (2) Casts of Vaginal Mucous Membrane.

Dr. AMAND ROUTH : Macerated Skull of an Anencephalic Fœtus.

Dr. CULLINGWORTH : Pedunculated Fibro-myoma of the Broad Ligament with Twisted Pedicle.

Dr. PLAYFAIR : Tubal Abortion.

Dr. GALABIN : (1) An Improved Form of "Sanitary Towel" ; and (2) Pregnancy in a Rudimentary Uterine Horn.

In the report of the proceedings at the June meeting of the society it should have been stated that the President announced that the General Medical Council had approved of a form of certificate to be given to candidates successful at the society's examinations in midwifery. Copies of the form were handed round.

OPHTHALMOLOGICAL SOCIETY.

The association of certain forms of Myopia with Disease of the Nose and Pharynx.—Exhibition of Cases.

THE annual general meeting of this society was held on Thursday, July 4th, Mr. E. A. BROWNE, the Vice-President, being in the chair.

Dr. RAYNER BATTEN read a paper on the association of certain forms of Myopia with Disease of the Nose and Pharynx. After referring to a former paper read before the society in July, 1893, in which he held that certain constitutional diseases produced myopias distinguishable and differing from each other according to their cause, he proceeded to describe a special form of myopic fundus which he associated with certain diseases of the nose and pharynx. The chief characteristics of this form of myopia were (1) the existence of localised posterior staphylomata at or in the immediate neighbourhood of the optic disc, or on the nasal side of the fundus ; (2) the tilting of the optic disc in the direction of the staphyloma ; and (3) the œdematous condition of the more prominent margin of the optic disc. This œdema, or "pseudo-neuritis," he considered as secondary to and caused by the tilting of the disc. The conditions of the nose and throat with which he associated this form of fundus were adenoid vegetations, enlarged tonsils, deviation of the septum, blows on the nose and forehead, ozœna, syphilitic disease of the nasal bones, and chronic otorrhœa. He quoted cases in which myopia had immediately followed the onset of some of these conditions, and in conclusion said that the presence of the œdema was generally a sign that the cause was still in active operation, that the visual acuity was seldom good in these cases, even when the degree of myopia was low, and was especially bad when the staphyloma was on the nasal side of the optic disc, that the whole condition was one indicative of a progressive myopia, and that the œdema and tilting both tended to disappear with the progress of the myopia.—The CHAIRMAN, in commenting upon the subject of the paper, considered that the evidence adduced was insufficient to convince those who had not given it special attention. Many constitutional causes required to be eliminated, such as scarlet fever or rheumatic fever, as well as other exhausting diseases, before myopia could be reasonably attributed to a local lesion.—Mr. SPENCER WATSON was disappointed that Dr. Batten had not put forward a theory to explain the relationship between nasal disease and myopia. He was disposed himself to regard both conditions as dependent upon some common constitutional cause. He quoted instances where interstitial keratitis had been followed by myopia in constitutional syphilis, indicating, he thought, that there was softening of the whole eye.—Dr. BATTEN, in reply, said he had dealt with constitutional causes in a previous paper. The connexion between the sphenoidal cells and fissures and the blood supply to the eye was very close. The eyeball should be regarded as an end organ, and interference with its blood-supply was likely to lead to changes analogous to those produced in clubbed fingers.

Mr. ADAMS FROST showed a complete set of instruments which had belonged to an Indian oculist, and which had been presented to the society by Surgeon-Colonel Drake-Brockman. Describing the method of operating, he stated that there was no attempt at asepsis or even ordinary cleanliness ; the lower lid was everted, a puncture made in the ciliary region with a lancet, and the lens couched by passing an instrument through this incision. The whole performance was done under a cloth, and most eyes were lost by panophthalmitis or secondary glaucoma.—Surgeon-Colonel DRAKE-BROCKMAN said that these instruments were handed down from father to son for generations and were extremely difficult to secure. Less than 10 per cent. of the operations could be considered successful cures.

The following cases and card specimens were shown :—

Dr. E. H. CARTWRIGHT : Modification of Thomas's Arrangement of Holmgren's Wools.

Mr. FISCHER : Symmetrical Ulcers of both Cornea.

Mr. D. MARSHALL : Double Enophthalmos.

The following gentlemen were elected as office-bearers and members of the Council for the session 1895-96 :—President : E. Nettleship. Vice-Presidents : Stephen Mackenzie, M.D., Henry Power, Edgar A. Browne (Liverpool), Thomas Barlow, M.D., G. Anderson Critchett, J. B. Story (Dublin), John Couper, G. A. Berry, M.D. (Edinburgh). Treasurer : George Cowell. Secretaries : Samuel Herbert Habershon, M.D., John Bowring Lawford. Librarian : W. Adams Frost. Other members of Council : M. A. Adams (Maidstone), Charles E. Beevor, M.D., T. H. Bickerton (Liverpool), Ernest Clarke, M.D., A. Deas Davidson, M.D. (Swansea), E. F. Drake-Brockman, A. Hill Griffith, M.D. (Manchester), Gustavus Hartridge, Joseph Nelson, M.D. (Belfast), D. Argyll Robertson, M.D. (Edinburgh), A. E. Sansom, M.D., James Taylor, M.D. At the same time Dr. J. S. Bristowe, F.R.S., was elected an honorary member of the society.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases.—Treatment of Fractures.—Ruptures of the Pancreas.—Alcoholism and its Effects.

THE thirteenth meeting of this society was held on July 3rd, Dr. CLOUSTON, President, being in the chair.

Dr. W. ALLAN JAMIESON showed a case of Hydroa Vacciniforme in a girl aged seven. The eruption was limited to the exposed parts—the hands and face. It had persisted two years, being worst in the warm months. The aspect of the rash closely resembled impetigo contagiosa. A case of Ichthyosis illustrating the effects of purely local treatment was also shown.—Dr. NORMAN WALKER showed a case of Lichen affecting the back in a small boy.—Dr. JAMES showed a boy who had been trephined for a Compound Fracture of the Skull some months previously. There was now a considerable interval in the bony skull. The pulsation of the brain could be easily perceived, and was demonstrated by means of a water manometer. The column of water rose and fell with the pulse and with the respiration. On muscular effort and holding the breath the water rose. Very slight mental effort was required to produce extra bulging and extra pulsation. The slightness of the stimuli necessary to cause alteration in the pressure was remarkable. Dr. LEITH showed :—1. A Ruptured Pancreas and Rupture of the Duodenum at the duodeno-jejunal junction ; a Rupture of the Liver ; and a Rupture of the Kidney, all caused by direct violence. 2. A Brain with Multiple Tuberculous Tumours of the Cerebellum. The symptoms during life gave rise to doubt between bulbar paralysis and general paralysis of the insane. The brain also showed chronic hydrocephalus from pressure on the veins of Galen. 3. Photographs and specimens from a case of Omental Hernia, Perforative Appendicitis, and Retro-cæcal Abscess.—Mr. A. G. MILLER showed an Abscess in the Temporo-sphenoidal Lobe, the result of middle-ear disease.—Dr. EDWARD CARMICHAEL showed a specimen of a Sarcoma of the Skull. The convolutions of the brain were compressed, but there had been no symptoms till within a few weeks of death.

Mr. A. G. MILLER read a paper on the Treatment of Fractures near a Joint aided by Massage and Movement. He quoted the recent opinions of Mr. Arbuthnot Lane and Mr. Marmaduke Sheild in relation to the unsatisfactory nature of the ordinary treatment of fracture near a joint. He agreed that the present treatment was unsatisfactory, as the limb was frequently stiff and comparatively useless for

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a considerable period. He believed the cause of this to be the long period of rest maintained for the treatment of the fracture. In the case of a fracture near a joint there was generally a double injury—both joint and bone were injured. The fracture was treated and the sprain was ignored. Rest alone would not cause ankylosis, but rest and injury would. In the case of a Pott's fracture, for example, besides the fracture of the tibia there was tearing of ligaments, damage to synovial membrane, and effusion into and round the joint. Such an injury should be treated with rest for the fracture and movement for the joint. A box splint should be applied, taken down twice a week and massage applied, and passive movement carried out with every precaution. The advantages of such a combination of rest, massage, and passive movement were that swelling was rapidly got rid of, adhesions were prevented, and time was saved. A patient was shown on whom this treatment had been carried out with excellent results.—Mr. JOSEPH BELL from a study of recent literature thought the young surgeons were laying on themselves a burden of responsibility which they had no right to do when they implied that fracture should be treated with absolute success. There were certain fractures in the vicinity of joints from which, do as they like, they would have bad results. In fractures at the elbow in young people he thought that they should be kept quiet for one day for each year of the child's age. He never used splints in Colles' fracture. He had treated a case of Pott's fracture recently with full and free massage from the beginning, with excellent results.—Dr. LAING said that as soon as effusion into the joint was over massage should be begun, and in the case of a sprain movement might be begun on the second or third day. A patient with a bad sprain should be able to walk in a week. Fracture was much better and sooner mended with massage than if left in a stiff splint the whole time.—Mr. ALEXIS THOMSON and Mr. STILES spoke.

Dr. LEITH read a paper on Ruptures of the Pancreas, their relations to Pancreatic Cysts, with some remarks upon Treatment. He remarked on the position of the pancreas and the difficulty of reaching it by injury. In most cases there was rupture of a more important viscus, but in two recorded cases in which this did not take place there was little hæmorrhage, and had the patient survived there was no reason why the rupture should not have healed. What hæmorrhage there was was into the sac of the lesser omentum, and a cyst might be formed. The post-mortem evidence of this was not conclusive. In the treatment of pancreatic cysts aspiration was deprecated. Drainage was the best treatment. Some of the cysts were best reached from behind. He described the method of operation.—Mr. COTTERILL had used the method in a case in the previous week.—Mr. BELL also spoke.

Dr. A. LOCKHART GILLESPIE gave statistics concerning the patients admitted into the Royal Infirmary suffering from Alcoholism and its Effects during the last five years. The statistics were founded on over 1000 cases. The tables showed an increased number of admissions after the trades holidays. It was found that outside workers were most numerous in summer, and inside workers in winter. The numbers of drivers, coachmen, &c. were greatest in the wettest months. Peripheral neuritis had occurred as often in men as in women. Delirium tremens and pneumonia were most common in July.

Reviews and Notices of Books.

The Malarial Fevers of Baltimore. By WILLIAM SYDNEY THAYER, M.D., and JOHN HEWETSON, M.D., Assistants in the Medical Clinic of the Johns Hopkins Hospital. Baltimore: The Johns Hopkins Press. 1895.

THIS work, of 215 pages, and illustrated with some excellent plates, is reprinted from the Johns Hopkins Hospital Reports, Vol. V., 1895, and is an analysis of 616 cases of malarial fever, with special reference to the relations existing between different types of hæmatozoa and different types of fever. The work is of an exhaustive character, and embodies the results of an extended series of clinical and bacteriological observations and researches. There were 616 cases of malarial fever treated in the wards and in the out-patient medical department of the hospital during the five years from 1889 to 1894. The examination of the blood in a considerable number of the cases occurring in the out-patient department, having commonly been too hasty or insufficient, has not been included in the authors' analysis, but in all the cases treated in the wards of the hospital the specific micro-organism was, we are told, discovered. As a result of their observations the authors believe that they "have been able to recognise certain distinct types of parasites which appear to be related in turn to certain almost equally characteristic types of fever." The principal object of their paper is, they tell us, to determine by a careful analysis of all the cases how far these impressions may be justified, and to compare these results with those of other observers. The work, moreover, contains an historical summary of the more important literature concerning the malarial parasite and a fairly complete list of the publications that have appeared since the parasitic origin of malarial fever has been recognised, as well as references to works and articles on the hæmatozoa of birds and other animals. It will be seen from the foregoing that the authors have not only produced a very exhaustive and useful treatise for all engaged in these bacteriological studies, but they have also done original work and undertaken a large amount of scientific observation in connexion with the varieties of hæmatozoa found in the malarial fevers of Baltimore. Almost all their examinations were made with fresh specimens of blood, which, when carefully and properly carried out, have always seemed to the authors to be simpler and more satisfactory than the different staining methods, although they have had recourse to these in many instances. The method of conducting their observations and the precautions which must be rigidly adhered to are fully described. We notice that the authors prefer in practice to take the blood for microscopical examination from the lobe of the ear for reasons stated by them. In connexion with the researches which have been carried on in the medical clinic of the Johns Hopkins Hospital at Baltimore we cannot do better than refer our readers to the excellent paper by Dr. G. Thin on "The Parasite of Malaria and Malarial Fevers," with its coloured illustration, and to our leading article on the same subject, in THE LANCET of last week.

Malarial fever, relatively rare in Baltimore, as elsewhere, during the winter months, is stated to reach a maximum of prevalence in September, the majority of all the cases occurring in August, September, and October. The relative susceptibility of the negro is said to be less than that of the white population by nearly two-thirds. The varieties of the malarial parasite distinguished and described by the authors are: the tertian parasite, the quartan, and the æstivo-autumnal parasite. Nothing in their experience has led them to believe that these varieties are interchangeable: they are distinct varieties, though closely allied to one another biologically. Combined infections with parasites of different varieties may occur, though rarely. The crescentic bodies, associated with the æstivo-autumnal parasite, develop from the small hyaline forms. Our authors have seen nothing to support the views of Mannaberg that they are the result of conjugation. They have never seen sporulating forms which they believe to have developed from crescents, and are not inclined to accept the view that these are degenerate forms, but rather that their true nature is still undetermined. The nature of the flagellate bodies which may develop in all types of malarial fever is not yet determined. As regards the action of quinine, which is undoubted, upon those three varieties of the parasite, they say that its influence is most strongly exerted when the parasite is undergoing the process of segmentation, before the entrance of the fresh segments into the red corpuscles. The drug is best administered just before the beginning of a paroxysm if we wish to obtain the greatest effect with a single dose.

It is almost needless to add that in our opinion the work

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under review is a very valuable contribution to the interesting series of investigations that have been published concerning Laveran's parasite.

Dictionary of National Biography. Edited by SYDNEY LEE. Vol. XLI., Nichols—O'Dugan; Vol. XLII., O'Duinn—Owen. London: Smith, Elder, and Co. 1895.

FROM the general reader's point of view the most interesting articles in Vol. XLI. are probably those on two politicians of widely different careers, who were nevertheless to some extent contemporaries. Stafford Henry Northcote, the first Earl of Iddesleigh, was born in London in 1818, and succeeded to a baronetcy in 1851. He first entered Parliament in 1855, became Chancellor of the Exchequer in 1874 under Mr. Disraeli (after whose death he led the Conservative opposition), was created Earl of Iddesleigh in 1885, and died in 1887. Daniel O'Connell, the "Liberator," was born in county Kerry in 1775, and was called to the Irish Bar in 1798. In 1800 he publicly identified himself with the agitation for the repeal of the union with Great Britain, and from that time until his death at Genoa in 1847 he was the leading political champion of the Irish Nationalists. In the words of the biographer, "few other men have possessed his personal influence, and no other man has used such influence with greater moderation or self-abnegation."

The medical biographies are neither numerous nor important. Brinsley Nicholson, born in 1824 at Fort George, Scotland, was the eldest son of B. W. H. Nicholson of the Army Medical Staff. Having studied medicine in Edinburgh University, he graduated there as M.D. in 1845, became an army surgeon, and served in the Kaffir War in 1853 and 1854, the war with China in 1860, and the Maori War, which ended in 1864. About 1870 he retired from the army, and in 1875 he edited for the newly formed New Shakspere Society the first folio and the first quarto of "Henry the Fifth." In 1886 he brought out an excellent reprint of Reginald Scot's "Discoverie of Witchcraft" (1584). He died in 1892, and his edition of "The Best Plays of Ben Jonson" appeared in the following year. Whitlock Nicoll, born in 1786, studied medicine at St. George's Hospital and gained the diploma of the College of Surgeons of England in 1809. The degree of M.D. was subsequently conferred on him by three several authorities—Marischal College, Aberdeen, in 1816, the Archbishop of Canterbury in 1819, and Glasgow University in 1826. Besides contributions to medical periodicals he published five medical and five theological treatises. He was elected F.R.S. in 1830, and died in 1838. William Nisbet, M.D. and F.R.C.S. Edin., published volumes on various medical subjects between 1787 and 1808. William Norford, born in 1715, became an extra-licentiate of the College of Physicians in 1761, practised in Suffolk, and was the author of essays on the Treatment of Cancer and also of Fever. He died in 1793. Edward Norris, born in 1663, graduated as M.D. at Oxford in 1695; he was elected a Fellow of the Royal Society in 1698, and a Fellow of the Royal College of Physicians in 1716. In 1699 he accompanied his brother, Sir William Norris, as secretary of his embassy to the Mogul Emperor in India. He afterwards practised medicine in Cheshire and died in 1726. William Northcote, who was a naval surgeon from 1757 till about 1783, wrote on "The Marine Practice of Physic and Surgery" (2 vols., London, 1770), and also brought out smaller works on anatomy and pharmacy for the use of naval surgeons. John Northleigh, born in 1657, graduated as M.D. at Cambridge University and practised at Exeter. His principal writings were in defence of James II. He died in 1705, and was buried in Exeter Cathedral, where there is a monument of him. John Nott, born in 1751, studied surgery in Birmingham and London, travelled much on the Continent, made a voyage to China, became an extra-licentiate of the College of Physicians in London, and ultimately settled in practice near Bristol, where he died in 1825. His works, which were numerous, consisted chiefly of fiction, poetry, and metrical translations of Latin poets. His versions of the poems of Catullus, Propertius, and Johannes Secundus Nicolaius are reprinted in Bohn's Classical Library. Edward Nourse was born in 1701 at Oxford, where his father had practised from 1686. He was elected F.R.S. in 1728, and in 1731 was appointed assistant surgeon to St. Bartholomew's Hospital, ultimately becoming the senior surgeon. He was the first surgeon at that hospital who gave regular instruction in anatomy and surgery. He died in 1761. Christopher Nugent, a native of Ireland, graduated as M.D. in France and practised at Bath. In 1764 he removed to London and was one of the nine original members of the Literary Club. He was highly esteemed by Johnson, Edmund Burke, and other celebrities, and became a Fellow of the Royal Society. He died in 1775. None of these names of departed medical worthies are so familiar to the present generation as that of Thomas Nunneley of Leeds, who studied medicine at Guy's Hospital and took the diploma of the Royal College of Surgeons in 1832, becoming a Fellow in 1843. He settled in practice in Leeds, where for twenty years he filled the post of surgeon to the Eye and Ear Hospital, and lectured on anatomy, physiology, and surgery in the Leeds School of Medicine. The only well-known scientific man noticed in this volume is Dr. Noad, who was lecturer on chemistry at St. George's Hospital from 1845 till his death in 1877, and wrote several works on chemistry and electricity.

Among celebrities in other and lighter branches of literature allusion may be made to Mrs. Norton, the poetess, of whom there is a kindly memoir by Dr. Garnett of the British Museum. A great sensation was created in 1836 by this lady's vindication of her character in the Court which in those days dealt with marital questions. The biographer, however, does not mention that her unhappy story has been related by Mr. George Meredith in "Diana of the Cross-ways." At the end of the book there is an account of the adventurous life of Edmund O'Donovan, well known as a war correspondent of the *Daily News*, and especially distinguished by his journey to Merv in 1879.

In Vol. XLII. the most important memoir is that of Sir Richard Owen, the naturalist. He was born at Lancaster in 1804, studied medicine in Edinburgh University and St. Bartholomew's Hospital, became a Member of the Royal College of Surgeons in 1826, and in 1827 was appointed assistant conservator to the Hunterian Museum. In 1832 his "Memoir on the Pearly Nautilus" directed general attention to his abilities; in 1834 he was elected F.R.S., and in 1836 received the appointment of first Hunterian Professor of Comparative Anatomy and Physiology at the Royal College of Surgeons, his lectures on these subjects being continued regularly down to 1856, when he relinquished his professorship and became superintendent of the natural history departments of the British Museum. His original work was henceforth mainly confined to fossil osteology, but in 1861 he published two volumes of essays and observations by John Hunter, compiled from copies of Hunter's MSS., the originals of which were destroyed by Sir Everard Home. In 1866 and 1868 he published in three volumes his encyclopædic work on the "Anatomy and Physiology of the Vertebrates." He had not been long in office at the Museum when he began to urge the necessity for obtaining more suitable accommodation for the collection under his charge, a project fully realised in 1880 and 1881, when the specimens were transferred to the Natural History Museum at South Kensington. He retired from official life in the close of 1883, was immediately created K.C.B., and died in December, 1892. Next in the order of professional eminence comes James Adey Ogle, born in 1792 in London, where his father

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was a successful general practitioner. Having studied medicine in Edinburgh and London he settled in Oxford, where he graduated as M.D. in 1820, and was appointed mathematical tutor of his college (Trinity) in the same year. He was elected F.R.C.P. in 1822, physician to the Radcliffe Infirmary in 1824, and F.R.S. in 1826. He delivered the Harveian Oration in 1844 and was appointed Regius Professor of Medicine at Oxford in 1851. He died in 1857, leaving no published works beyond a pamphlet on university education. Two accoucheurs of last century, well known, though not in the front rank, were Sir Fielding Ould in Dublin and Dr. William Osborne in London. The latter in 1783 published "An Essay on Laborious Parturition, in which the Division of the Symphysis Pubis is particularly considered." Osborne was opposed to this operation, and Dr. Norman Moore, the learned, careful, and suggestive author of many of the best medical biographies in previous volumes, adds that "it is now never performed." It has, however, lately been revived, and in 1893 THE LANCET had several lengthy articles on the subject, and recorded at least nineteen successful recent cases; of these operations thirteen were performed at the Clinique Baudelocque in Paris during 1892,[1] at least five in the United States,[2] and one at the London Hospital by Dr. A. H. N. Lewers.[3] Among the numerous memoirs contained in the volume there are several others of exceptional interest, both medical and general.

Horses, Asses, Zebras, Mules, and Mule Breeding. By W. B. TEGETMEIER, M.B.O U., F Z.S., and C. L. SUTHERLAND, F Z.S. London: Horace Cox. 1895.

IN the preface to this book we are informed that upwards of four thousand works on horses and their utilisation have been published, of which number about one-half have been printed in Great Britain. But recently new animals—such as Prejevalski's horse and Grevy's zebra—have been discovered, species hitherto untamed have been pressed into the service of man, and new hybrids have been reared which hold out the promise of great usefulness, while a vast amount of information has been accumulated proving the advantages obtained from utilising the hybrid between the horse and ass known as the mule, in almost all civilised countries except England, in which country it is stated no book on this useful hybrid has ever been published. To supply this deficiency, besides furnishing some account of a number of solipeds, to demonstrate the great value and economy of the mule as a beast of draught and burden, that could be as advantageously employed in this country in agricultural and general draught purposes as it is by other nations, and by ourselves in all military operations abroad, was partly the object the authors had in view in publishing the little work recently issued.

About seventy pages are devoted to a description of horses, asses, and zebras, chiefly from a zoological standpoint, and the remainder of the book—a little more than seventy pages—deals with the utilisation of mules, so that it is not a work on the mule alone. It would be a mistake to assert that nothing has been written on the mule in this country, for an article is devoted to it in the "Encyclopædia Britannica," and two War Office publications deal with the subject in a very complete manner. Since the Crimean War, at any rate, the utility of the mule as a most useful animal in field operations has been fully recognised by our military authorities, and our little campaigns in remote and mountainous parts of the world have proved and justified this recognition. In the Crimean War we employed an immense number of mules, especially for transport and hospital purposes; and in Abyssinia, and more particularly in recent times in India, they have been invaluable as pack animals. Their endurance, sure-footedness, steadiness, and capability of doing hard work on meagre fare are well known to all who have had experience of them on active service, and these qualities render them preferable to horses for some purposes, though for others they are not at all fitted. In civil life in this country they are certainly little employed, though they have frequently been tried; there may be prejudice against them, but this would disappear eventually were they to be found as useful as horses in the everyday demands of town and country. There are objections to their employment for some kinds of work, and there would not be much economy in price between them and horses, as in those countries in which they are extensively in use they are more expensive than the latter. They are not nearly so well adapted for the saddle as horses, and for weight and strength the largest of them could not compete with the splendid Clydesdales and Shires that play such a large part in town traffic and agricultural labour. Then there is the peculiar asinine temper displaying itself now and again, no matter how gently some mules may be treated. But, as has been said, for hospital and general transport work in the field, and more particularly in hilly and rugged countries where forage may be scanty, no animal can compare with the hybrid between the male ass and the female horse.

The subject of the fertility of mules is touched upon in the book before us, and the instance of the female mule "Catherine," said to be still existing at the Jardin d'Acclimatation, Paris, which had offspring by a horse, is stated by one of the writers to be the only one of a *possibly* fertile mule that has ever come under his observation after a rather wide experience. Several instances, however, of female mules becoming pregnant are on record, and one of these cases is particularly interesting, as it was reported upon by a distinguished veterinarian, Professor Nanzio of the Naples Veterinary School, who published an account of it in 1873 under the title of "Altro Caso di Figliatiera di Una Mula, con l'Analisi del Suo Latte." This instance appears to have escaped the attention of recent writers on the subject.

The Management and Medical Treatment of Children in India. By EDWARD A. BIRCH, M.D. Brux., F.R C P. Lond., late Principal of the Medical College, Professor of Medicine, and Physician to the Medical College Hospital, Calcutta. Third edition. Calcutta: Thacker, Spink, and Co. 1895.

IT may suffice to say of this work that the present edition has been revised and enlarged, and that the author has successfully tried to convey a simple idea of the principles which should prevail in the rearing of children in India and in the treatment of their maladies in that country. The remarks on the management of the infant, nursing, principles of diet, dentition, artificial feeding and the diet of childhood, general hygiene, the nature and prevention of the more common diseases, on fever generally, and the examination of sick children, strike us as very good and judicious. We recognise that the circumstances under which families are so frequently placed in a country like India are a sufficient justification for the publication of a book of this nature. The information it contains cannot fail to be useful to parents and others possessed of ordinary intelligence and judgment under the conditions in which families are so often placed in situations abroad, where skilled professional aid is not always available, or until it can be made so. Mothers and nurses will be the better in any case for being acquainted with the principles of the topics we have indicated; and as regards children's diseases and their treatment the author has succeeded in producing a practical

[1] THE LANCET, Feb. 18th, 1893, p. 347.
[2] THE LANCET, Feb. 25th, 1893, p. 445.
[3] THE LANCET, Aug. 5th, 1893, p. 300.

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and trustworthy guide, taking care, as he says, to err rather on the side of caution than otherwise.

LIBRARY TABLE.

The Great Eastern Railway Company's Tourist Guide to the Continent is a useful little book published at the low price of sixpence. It contains a clearly printed map of West Central Europe and the South of Scandinavia, with railway routes from Harwich *viâ* the Hook of Holland. Interesting information is given about Holland, Belgium, Germany, and Switzerland. The first three countries are eminently places in which to take a holiday; but Switzerland is spoiled, the hunting-ground of the cheap tripper, the Salvation Army, and the ingenious gentlemen who combine coöperative educational tours at so much per head with instructions by leading ministers and talk about reunion. Belgium, Holland, and the Ardennes are still unspotted, and the Harwich route is an easy and comfortable way to get there.

A Guide to the Income-tax Law and Practice, with Illustrative Cases of Returns, Accounts on Appeal, Repayment Claims, &c. By JOSEPH AFFLECK, Jun. Manchester: 72, Market-street.—This useful book, the work of an expert, appears at an opportune moment, when the gentlemen with the well-known buff papers are busily engaged depositing them at our doors. Commencing with a brief history of the income-tax, from its introduction to the present day, the author carefully and lucidly explains the many intricacies with which, as such, we are mostly only too familiar, and from which we usually turn in despair of the prospect of ever fathoming. The different schedules are ably treated, and Chapter XIII. will be found most useful to medical men, the author setting out *in extenso* a simple form of profit and loss account, showing how to correctly arrive at the proper amount to be returned for assessment. The chapter on partnerships, too, remarks on the large sums annually overpaid in income-tax through partners' neglect to take advantage of the provision for separate assessment to claim exemption or abatement. Not less valuable is the information as to the method to be adopted for claiming repayment of tax in those cases (and they are legion) where the profits have been over-assessed. Unfortunately, the price of the book is not stated; but it is well worth a few shillings to every man, and may save many pounds to not a few.

A Book of Detachable Diet Lists, for Albuminuria, Anæmia and Debility, Constipation, Diabetes, Diarrhœa, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis, and a Sick-room Dietary. Compiled by JEROME B. THOMAS, A.B., M.D. Philadelphia: W. B. Saunders. 1895.—The author has drawn up appropriate diet lists for the use of patients suffering from the ten morbid conditions above mentioned, and has supplemented them by enumerations of the various solids and fluids which are to be specially avoided in each case. About a dozen copies of each of these ten lists are bound into a book, each leaf being perforated near the back, so that it can be torn out and left with the patient's nurse or friends. The idea is good, and the lists are copious, but they are in some respects more adapted to American than to English households. The sick-room dietary is also in leaflet form, and gives plain directions for peptonising several articles, and for making various beverages and soups.

The History of the Pennsylvania Hospital, 1751–1895. By THOMAS G. MORTON, M.D., Fellow of the College of Physicians, President of the Medical Staff and Senior Surgeon of the Pennsylvania Hospital, and President of the Philadelphia Academy of Surgery. Assisted by FRANK WOODBURY, M.D., Fellow of the College of Physicians, and Honorary Professor of Clinical Medicine in the Medico-Chirurgical College. Philadelphia: *Times* Printing House. 1895.—The province of Pennsylvania was occupied in the seventeenth century by Quaker settlers under energetic and conscientious leaders, and it soon became a prosperous community whose general tendency was highly favourable to well-considered works of philanthropy. The question of providing for the sick poor was seriously taken up in 1751 by Dr. Thomas Bond, who secured the coöperation of Benjamin Franklin and was the principal originator of a combined lunatic asylum and general infirmary, erected in the suburbs of Philadelphia in 1755 and 1756 and designated the Pennsylvania Hospital. The institution continued to fulfil this dual purpose until January, 1841, when all the insane were removed to a new building specially constructed for their accommodation some distance away in West Philadelphia. In the course of the next ten years the old hospital was extensively remodelled, and additions have been made at intervals up to the present day. The history of these various events is related by Dr. Morton and Dr. Woodbury in a graphic and entertaining narrative, which is in every way a model of what such a work should be. The book itself is a handsome volume of 570 pages, and contains 140 illustrations, many of which are full-page size.

New Inventions.

AN ASEPTIC SPONGE-HOLDER.



WHEN seeing my colleagues using the ordinary sponge-holders I have always been struck by the difficulty of cleaning them, and also the difficulty of removing either sponge or cotton-wool. In the sponge-holder I have had made all these difficulties are, I think, removed, and any number of sponges or swabs can be used in turn on one sponge-holder. A thread is attached to the sponge or swab, passed through the cup (A), pulled tight, and held in position by a turn round the little catch (B) shown near the handle. The sponge-holder can be used in throat, abdominal, or gynæcological work. It has been made for me in various sizes by Messrs. H. Hilliard and Son, 7, Nicolson-street, Edinburgh.

R. W. FELKIN, M.D.

A NEW SKIN-GRAFTING KNIFE.



THE accompanying plate is that of a new skin-grafting knife made for me by Messrs. Weiss and Son. It is 8 in. long in the blade, 2 in. wide, and the handle is 5 in. long. The advantages I claim for it are: 1. No force is necessary to cut the graft as the weight of the knife carries it quite easily through the skin. 2. A large graft can be cut as the blade is a long one. 3. The width of the blade allows of the graft being kept flat, with the right side up, and not curled on itself in any way. 4. The blade being flat, the edge or back of the knife can be approximated to any part of the wound, and the graft pulled directly on to the part where it is intended to place it without any fear of the graft rolling up or turning over, as so often happens with the knives used at present for this purpose. The knife has been in use now for some time, and I am much pleased with the way it works.

F. C. WALLIS, M.B., F.R.C.S.

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THE LANCET.

LONDON: SATURDAY, JULY 13, 1895.

THE recent election to the Council of the Royal College of Surgeons of England presented some remarkable features which will always render it a memorable election. The number of vacant seats—viz., five—was unusually large, and two of the vacancies had been occasioned by death, and one of these two death vacancies by the death of the President. The number of the candidates—viz., nine—for the five vacant seats was not excessive, but the candidates were distinguished by the strength of their claims on the constituency, and the very even level of those claims, thus rendering selection difficult and almost invidious, and foreshadowing that close contest which actually occurred. Another distinctive feature of the election was the first operation of an amended by-law, under which voting papers were sent to every Fellow of the College whose address was known without being previously applied for, and were made returnable up to the latest possible time on the day of election. These altered conditions ensured the participation in the election of the largest number of Fellows who have hitherto voted at the College. The number of Fellows actually voting on the 4th inst. was 681; 621 by voting papers sent by post, and 60 by voting papers handed in personally. Two of the voting papers were invalid, one by reason of the voter having employed a dash instead of a cross to indicate the candidates for whom he wished to vote. Moreover, one or two voting papers arrived at the College after the election, and even on the following day, thus affording fresh evidence, if any were needed, of the small amount of attention which the busy practitioner is able to give to collegiate interests. The fact that the voting papers would this year be distributed to every Fellow whose address was known in the office of the College introduced into the contest a greater element of uncertainty because it seemed probable that Fellows would vote for the first time who had hitherto concerned themselves little, if at all, with College politics, as shown by their previous abstention from applying for voting papers. Such Fellows might be expected to be readily amenable to solicitations on the part of enterprising candidates and their friends. Curiously enough, this element of solicitation or personal canvassing was brought into play in a manner which, however successful, must be a source of regret to all who place a high value upon the maintenance of an elevated standard of professional conduct and the preservation of professional dignity. It is bad enough when Fellows or Members of the Royal College of Physicians write letters to Fellows of the Royal College of Surgeons of England soliciting votes for a candidate for the Council of the Royal College of Surgeons of England, but it is an outrage upon the honour and dignity of the profession when ladies of title indite letters to Fellows of the College to obtain votes for their professional friend or adviser. Are we returning to the manners of one hundred years ago? and are we going to assimilate the elections at the College to the old Parliamentary elections in the days when a duchess might descend from her chariot to bestow a kiss upon a butcher to secure his vote and interest? The reasonable limits of canvassing in an election to the Council of the College can be readily stated. It is perfectly legitimate for candidates themselves to issue addresses to the Fellows defining their views on current questions. This course was pursued in the election in 1889, when considerable excitement prevailed in regard to certain claims which had been advanced by Members of the College. The example was set by the late President of the College, Mr. HULKE, and the present President, Mr. HEATH, and was followed by Mr. HOWSE, Mr. RIVINGTON, and Mr. LAWSON TAIT. It is also perfectly legitimate for any body of Fellows interested either in the promotion of certain reforms at the College or in securing representation for any local centre to send out letters to the Fellows. All these processes have the merit of publicity and ensure the interchange of opinion, which is favourable to progress and the interests of the College. Personal canvassing, however, stands on a very much lower level than political canvassing, and though, perhaps, we cannot hope to arrive at a time when it will not be indulged in, we sincerely trust that it will in future be discouraged by the Fellows of the College generally.

Looking at the issue of the election, the return of Mr. WILLETT at the head of the poll, and followed by Mr. TREVES, Mr. BUTLIN, Mr. ALFRED COOPER, and Dr. WARD COUSINS, is a result by no means unsatisfactory to THE LANCET, four out of five of the successful candidates having been on the list of candidates recommended for the support of the Fellows. We were not prepared for that remarkable exhibition of canvassing which disturbed our forecast and interfered with a more triumphant issue for the friends of reform at the College. Had Mr. ALFRED COOPER been away, we have little doubt that Mr. WILLETT, Dr. WARD COUSINS, and Mr. NORTON would have been returned in company with Mr. BUTLIN and Mr. TREVES. As it was, the name of Mr. ALFRED COOPER frequently took the place either of that of Dr. WARD COUSINS or Mr. NORTON, with the result that Dr. WARD COUSINS came in as the fifth successful candidate and Mr. NORTON stood seventh on the poll, two votes only behind the first of the unsuccessful candidates, Mr. DAVIES-COLLEY. The return of Mr. TREVES and Mr. BUTLIN is not surprising, for they were evidently the strongest surgically, and Mr. BUTLIN possessed in common with Mr. WILLETT and Mr. COOPER that very great advantage at a College election of being an *alumnus* of St. Bartholomew's Hospital. The strength of the St. Bartholomew's connexion is shown in every collegiate contest. Whenever a member of the staff of St. Bartholomew's Hospital comes forward he is successful, and now that great institution is represented on the Council by five members of its staff and by Mr. ALFRED COOPER. To the strength of St. Bartholomew's Hospital the strength of Guy's Hospital is weakness, for, notwithstanding his personal and professional claims, all the

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exertions of the Fellows connected with Guy's Hospital have been unable as yet quite to carry Mr. DAVIES-COLLEY into the Council.

There is one other point which strikes us in regard to the election, and that is that there were three candidates who had seats on the Court of Examiners and not one of these has been elected to the Council. This result is entirely congenial to our own predilections; for we believe that membership of the Court of Examiners, if not entirely antagonistic to progress, acts, at least, as a sedative and sometimes as a soporific. All the five successful candidates will be free from the Circean influence of the Court of Examiners and all have exhibited liberal tendencies. Mr. WILLETT and Dr. WARD COUSINS belong to the Association of Fellows, and Mr. BUTLIN has not long severed his connexion with that body. Mr. TREVES has spoken well at the Society of Fellows and in the conference of that society with the Association of Fellows. Mr. ALFRED COOPER was in former years, we believe, favourable to reform, and as he is entirely independent we have good hope of his proving himself a useful councillor.

THE Factories and Workshops Act passed through the House of Lords in one day. The Lords adopted its provisions precisely as they left the House of Commons, and gave a hurried assent to a measure which had been much discussed in the Commons, but which they themselves had no time to amend. If the Bill were to become law this course was inevitable; any change meant delay, which would have been fatal to it passing, and its adoption in its entirety was no doubt not only the best but the only practical way of dealing with the subject. It now only awaits the Royal assent.

The Bill in several respects required amendment, but on the whole it must be regarded with satisfaction, for it contains many useful provisions, to which we may briefly refer. Considering in the first instance the sanitary provisions, we note that for the first time in English law there is a statutory definition of overcrowding. The requirement which the new Act contains is that a factory or workshop is to be deemed overcrowded if every person within it is not provided with 250 cubic feet of air space, or with 400 cubic feet during any period of overtime, and beyond this the Secretary of State may by Order prescribe a requirement of greater air space under particular circumstances. Power is given to a court of summary jurisdiction, on the complaint of an inspector that the condition of a factory or workshop causes danger to health, to prohibit its continued use until the necessary works have been executed. Both these are good provisions; but the section relating to overcrowding will, we trust, not give the impression to employers that the permissible minimum of the law is under all circumstances adequate provision. A further very necessary section requires a sanitary authority to inform the factory inspector of the proceedings taken by them on any complaint made by him as to a factory or workshop. This is a requirement of which there has been much need, for the inspector has hitherto been left in doubt as to the result of his representations, and frequent inspection has been necessary to procure information which will now be more readily obtained. Mr. ASQUITH'S determination to make the Act effective has led to the incorporation of two sections which apply to work which is given out. If the employer receives notice from an inspector that the place where the work is done is dangerous or injurious to health he is prohibited under penalty from giving out work to be done in that place. He is also liable to penalty if he knowingly allows work to be done in a dwelling-house in which any person is suffering from small-pox or scarlet fever. These provisions are good so far as they go, but it is not obvious why some other maladies are not referred to. It is now many years since CHARLES KINGSLEY wrote the story of "Alton Locke," but we should have thought that the risks of typhus fever being spread by clothing would have been in the mind of the late Home Secretary.

One of the most important provisions in the Act is contained in the twenty-ninth section, which requires the notification by medical practitioners of cases of lead, phosphorus, or arsenical poisoning or of anthrax contracted in factories or workshops. This is the first requirement of notification of chronic maladies, and experience will be required as to how it will work. As a safeguard in this respect the notice is only to be sent when the case has not been previously notified, but obviously this is a point upon which the medical practitioner may have no knowledge. Mr. ASQUITH may, however, rely upon the willingness of the profession to coöperate with him in this useful demand. The one serious objection we see to the section is that the medical officer of health is not the recipient of the notice, but the Chief Inspector of Factories. Obviously the medical officer of health, if he does his duty in a district, must concern himself with the diseases of occupation, and we regret to see any statutory provision which might seem to imply that his duties did not include the prevention of these maladies.

We observe with satisfaction that factories and workshops are to be maintained at "a reasonable temperature." The need for such a demand has no doubt been found necessary in practice, and certainly compliance with it should be insisted on. The Committee of the House of Commons to which the Bill was referred experienced some difficulty in determining whether a specified temperature of 60° F. should be prescribed in the Act, or whether the general expression which is now contained in the section should be substituted for it. Probably the wiser choice has been made, especially as the difficulty of preventing excess of heat in summer renders a specified temperature almost impossible. As the section now stands it at any rate gives opportunity for the prosecution of flagrant offenders. Among other useful provisions may be noted the requirement that every occupier of a workshop shall give notice of the address of his workshop to the factory inspector, and shall further make annually a return showing the number of persons employed by him, with particulars as to their age and sex. There are also two further new provisions of considerable importance. The first of these makes laundries subject to the Factory Acts, some modification being made as to their

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application. Exception is made with respect to laundries in certain public institutions and in institutions conducted for charitable purposes. The second is the prohibition of the occupation of underground bakehouses which are not in occupation at the time of the commencement of the Act. This is obviously a somewhat crude way of dealing with the subject, but we are not disposed to take exception to it. The effect will, no doubt, eventually be not only to ensure better conditions in new bakehouses, but also to enable sanitary authorities to judge by a higher standard any underground bakehouses previously existing in their districts.

Further restrictions are imposed upon the employment on overtime of young persons and especially of women. The limitation of the hours of labour can only be enforced by successive statutes as public opinion approves the adoption of such measures, but this opinion has already decided in favour of the prevention of the overworking of women. The Act is an important advance in factory legislation, and one of its beneficial effects will be to make preceding Acts more workable. Its tendency is, no doubt, towards centralisation of the duties of supervision, but this is inevitable if its provisions are to be enforced throughout the country with more energy than those of the Public Health Act are by some local authorities.

IT has been said recently that, apart from collision and deliberate destruction by an enemy, no well-found ship should ever be lost at sea. Strength of construction and engine power have minimised danger from wind and storm; position can be gauged to a yard or so by means of charts and Lord KELVIN'S ingenious compass and sounding apparatus; lightning stroke is, or ought to be, rendered perfectly innocuous by conductors; and fire can be combated by discipline. But collision is an evil which claims a yearly tale of victims—witness the *Elbe* disaster the other day—and one which it seems very hard to avert. The subject of defective vision in connexion with accidents both at sea and on land has recently been discussed at some length in our columns, and many correspondents have written showing how commonly guards, engine-drivers, signalmen, and seamen employed on look-out duty have been found to be wofully deficient in colour sense, or acuity of vision, or both. Now, we maintain that this country is specially interested in safe locomotion, either by land or by sea, for there is more railway mileage for its size than in any other country in the world, except possibly Belgium, and we own about half the ships afloat. Wherefore, seeing that a defective look-out man is a perpetual source of danger, not only to his own ship but also to the other which he may run into, it behoves the Government to ensure that all means are taken for securing, so far as may be, that all seamen, other than firemen perhaps, should have their vision tested by a medical officer. We are far from saying that the Board of Trade does not take trouble to have the tests for colour sense and acuteness of vision applied, but we have reason to believe that the tests in question are applied by the nautical examiners and not by medical men; and we think it not unlikely that the examiners themselves, if questioned on the subject, would allow their unfitness to adjudicate upon such delicate questions of scientific medicine as refraction and Daltonism. The East Indian Railway, as a correspondent who has every right to speak tells us, have made their "medical officers responsible for the sight and colour vision of every candidate for employment who can in any way have anything to do with the working of trains or signals." If this can be managed in India, there is no reason why the same rule should not be enforced here, in the matter both of railway and shipping companies. Testing for defects of vision ought to be in the hands of experts, and we think the Board of Trade would do well if it insisted upon this being the case.

On Feb. 1st, 1895, a deputation, which included almost all the most prominent ophthalmic surgeons in this country, laid before the then President of the Board of Trade various evidence to show the supreme importance of arranging for a proper system of tests to be applied by experts to employés working on railways and in ships. Mr. BRYCE'S reply was of the stereotyped official character. He could not but acknowledge the great weight and influence of the deputation, but he could assure them that the Board of Trade was fully alive to the importance of the matter, that it had only limited statutory powers, that candidates for the posts of master mariner and mate were tested, that they had no statutory powers with regard to railway officials, and so on. Now this sort of answer is not enough; the importance of the matter warrants our urging in the strongest manner that measures should be taken to assimilate British testing examinations, as far as thoroughness goes, to those which are held in India. If the new Ministers wish to lead off with a thoroughly necessary measure of reform—one, moreover, which touches the interests of every class without interfering with the privileges of any—let them consider and act upon our suggestions.

HE must be a very casual and superficial student of the history of the profession who has not noticed the conspicuous and important part that is played at the present time by societies which exist for the defence and protection of the profession, and especially of its individual members. No profession is more in need of such societies than our own. It has no recognised representation in Parliament as the other two great professions have. Its members in the very course and nature of their duties are exposed to misrepresentation and attack as the other professions are not. Neither is there any body within the profession, constituted by law, for protecting and guarding the reputation and the interests of its members. There are, indeed, medical bodies, so-called medical authorities, as specified and set forth in the Medical Acts, which pose as the *alma mater* of their respective members; but these act rather as a stepmother than a real one, and display little interest in their children after the latter have once paid for their degrees or diplomas. Even the General Medical Council, which has some powers of punishment, has no power of protection and is slow to exercise its powers of discipline over those practitioners who by disgraceful professional conduct

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injure the profession and bring discredit on its members. Such members would remain unnamed and unpunished were it not for the action of such societies as the Medical Defence Union (Limited) and the London and Counties Medical Protection Society (Limited). When it is considered that these societies are purely voluntary associations, having no legal status, and that they have only existed for a few years, it is cause for wonder that they have done so much for the profession. It is not easy to see how the General Medical Council would be able to fulfil its functions without them or some such association.

It may be argued that the General Medical Council should be armed with the power and with the duty of taking the initiative in bringing to judgment those who violate the traditions and the unwritten and written laws of the profession. This is a question that merits attention at the hands of those who seek to promote amendments of the Medical Acts. Be this as it may, we are for the present dependent on the two societies which we have mentioned for watchfulness in the detection of defects or faults in medical conduct and for any attempt to bring them under the notice of the individual medical authorities or of the General Medical Council. The efficiency of these societies cannot, therefore, but be a matter of enormous interest to the profession. It is recognised that they have attained to a high degree of efficiency. We see them fail occasionally in their endeavours to induce the medical authorities or the General Medical Council to remove from the Register those who, according to them, have forfeited their right to a place there. But this is no proof that they have not acted rightly in submitting such cases to the judgment of the Council. Their powers of investigating facts are limited as are their means of doing so. When this limitation is considered the wonder is that they have done so much as they have. They have made themselves felt as a terror to evil-doers, and they have given a new sense of security to every honest and honourable practitioner within their membership. It is difficult to say which of these associations has deserved best of the profession or has the claim to be preferred. Each is represented by a president, who stands on a professional eminence which commands universal respect and who has little personally to gain by his office. There is, in fact, no other criticism to make concerning these associations save that at present there are two of them, we will not say acting in rivalry, and most certainly not acting in opposition to each other, but by their duality weakening the defensive power of the profession which, united, would be irresistible.

It is not easy for outsiders to understand all the influences which have led to this division. Some time since it seemed possible to hope that it was to be healed; but the hope was not then realised. An honest and earnest and we trust successful attempt has just been made to bring about this most desirable consummation, and the proceedings at the meeting will be found reported in another column. It is intelligible that there are difficulties still in the way which need frank expression. There should be no raw haste: let them be fairly considered. But we would impress on the executive of both associations that unity is strength, and that there never was a time when the interests and the very reputation of the profession made it more necessary for unity and strength to exist in its counsels. It seems sanguine to expect the British Medical Association to undertake such work as that done by the Medical Defence Union and the London and Counties Medical Protection Society. It is otherwise employed, and, intentionally or not, it has allowed this function to pass into other hands. The function is a grave and lofty one, and calls for the help of members of the profession of experience, of judgment, and of honour, with a disposition to keep practitioners with a little tendency to err, in right lines rather than to accuse them. Out of these two associations it should be possible to construct an executive which would answer to all these qualities, and we have no doubt that the amalgamation will soon be *un fait accompli*. The two societies will gain the gratitude of the profession by earnestly studying the conditions of a just and sound amalgamation which will provide each practitioner with a refuge from unmerited malice and detraction and a protection against unjust and unprofessional competition. We feel very keenly that enormous benefit will be secured by amalgamation, and, as will be seen from a letter which was read to the meeting on Wednesday, and which is published in another column, we have endeavoured to lend a helping hand towards such a desirable result.

Annotations.

"Ne quid nimis."

EXPERIMENTS ON LIVING ANIMALS.

IN the return made to the House of Commons "showing the number of experiments performed on living animals during the year 1894, under licences granted under the Act 39 and 40 Vict., c. 77," some most interesting and instructive features are brought out. It is evident that the greatest care is taken (*a*) as to the qualifications of the holders of the licences, (*b*) as to the places for which licences are granted for the carrying on of experiments, and (*c*) as to the complete organisation of the system, and inspection of these licensed premises. Dr. Poore's return gives the following information. The total number of licensees during the year 1894 was 185, of whom 56 performed no experiments, and 129 performed 3104 experiments. Of these experiments 1054 were physiological, 1602 pathological, and 448 therapeutical. These figures suggest a somewhat too artificial division which, however, is not borne out on reference to the details of the elaborate tables given, as many of the experiments classified as physiological and pathological should really come under the heading of therapeutical, though they should come there only through the direct bearing they have on therapeutics. It is of importance to bear this point in mind in dealing with these statistics. Under the licence alone 942 experiments, and under Certificate C. 128 experiments were performed; and in these cases the animals can suffer no pain or discomfort even, as complete anæsthesia is maintained from before the commencement of the experiment until the animal is killed. Under certificates A, A and E, and A and F 1549 hypodermic injection or inoculation experiments which involve no more pain than is given by the prick of a needle were made. Under certificates B and B and E E 495 experiments were performed, and, as the inspector points out, these animals were all anæsthetised during the performance of the operation, but were then allowed to

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recover. "These operations," he says, "in order to ensure success, are necessarily done with as much care as are similar operations upon the human subject, and the wounds being dressed antiseptically no pain results during the healing process." That careful supervision is exercised and that the law is carried out most strictly is abundantly evident from the report. A full list of the "licensed places" is given. "All licenses were restricted to the licensed place or places specified on their licenses, with the exception of these who were permitted to perform inoculation experiments in places other than a 'licensed place,' with the object of studying outbreaks of disease amongst animals in remote districts." It is certainly evident, then, from a study of the report that all experimental work has been conducted in suitable places; that licenses and certificates have been granted and allowed only upon the recommendation of persons of high scientific standing; and that the licensees are persons who, by their training and education, are fitted to undertake experimental work and to profit by it. Dr. Poore and Sir James Russell have reported on all these points, and the result is a most interesting document—especially interesting from the point of view of those who, whilst approving of facilities being granted for the carrying out of necessary experiments on living animals, are anxious to be satisfied that these experiments are carried on under careful independent supervision. From Ireland Sir Thornley Stoker has much the same to report, except that here the number of experiments made was exceedingly small. Only nine experiments were performed, and these were all of a painless nature, "and were directed to useful ends. Eight of them were investigations of the effects of bacterial poisons, and one an examination of the secreting power of the kidney."

APPOINTMENT OF POLICE SURGEONS: A NEW DEPARTURE.

IT will be remembered that early in the year a deputation from the United Kingdom Police Surgeons' Association waited upon Mr. Asquith with suggestions on four points. Two of these were the desirability of appointing special police surgeons in those districts which at present have none, and the importance of issuing to all provincial police surgeons the instructions furnished for some time past to the metropolitan police surgeons as to the examination of prisoners charged with criminal assaults on females. It is gratifying to see that the efforts of the deputation have borne fruit. From the *Surrey Advertiser* we learn that a committee of the Surrey county council recently had before them a circular letter of the Secretary of State pointing out the advantages to be derived from the appointment of recognised police surgeons to examine prisoners arrested on certain charges; and the committee were of opinion that it was desirable such appointments should be made. They had therefore selected certain medical practitioners residing in the various districts of the county to act as police surgeons in the cases referred to at a reasonable fee, not exceeding one guinea for each case. We certainly hope it will not be less. In Taylor's Medical Jurisprudence it is laid down that "in all these cases there should be good medical evidence and a corroboration from circumstances." We trust that the gentlemen appointed to perform these important duties will be experienced practitioners duly impressed with the very serious nature of their duties and fully competent to perform them. While, on the one hand, it is imperative that no man should be convicted of so serious a charge unless it be fully brought home to him, it is no less imperative that when the charge is fully proved by medical and other evidence a conviction should follow. That some females are ready to prefer false charges against innocent men is too true, but it is no less true that there is a vile class of male offenders for whom a long term of imprisonment is the only proper punishment. Skilled medical evidence is required in all these cases, as well for the innocent as for the guilty.

THE RECENT PROSECUTION OF AN UNQUALIFIED ASSISTANT.

AT Southwark Police Court, before Mr. Kennedy, Mr. Francis Morny Coppin was prosecuted by Mr. Braxton Hicks for giving false certificates. There were six summonses in all. Mr. Braxton Hicks began by drawing attention to the fact that Mr. Coppin was an unqualified man and that his employer had been already dealt with by the General Medical Council. He added that on certain technical grounds five out of the six summonses would be withdrawn. He would now proceed to the first case, that of Harriet Bates. This certificate stated: "I last saw her alive on Feb. 17th, 1895, and she died on Feb. 18th, 1895," and the certificate was dated Feb. 19th, and signed G. F. McCarthy. Now the last day that Mr. McCarthy saw the patient was the 13th, and on the 19th he was at Brighton. Mr. Coppin, when the representatives of the child came for the certificate, filled it up, signing Mr. McCarthy's name. He (Mr. Coppin) would plead guilty in this case. Mr. Braxton Hicks went on to point out how, if an unqualified man was at liberty to represent or to use the name of a qualified man, much crime might be hidden. Mr. Braxton Hicks having mentioned the facts, said he wished to withdraw all the summonses except the first, in the case of Bates, and Mr. Coppin was fined £10 and 2*s.* costs. Mr. Braxton Hicks deserves the warmest thanks of every right-thinking person for his conduct of this case. Actions like that of Mr. McCarthy and Mr. Coppin are fraught with danger. The power to give a death certificate is one which ought to be guarded in the most jealous manner, and any methods which go to show that this power is abused are most reprehensible. Mr. McCarthy has been dealt with by the General Medical Council, but we would wish him to bear in mind the legal maxim, "Qui facit per alium facit per se."

A PROSECUTION UNDER THE INFECTIOUS DISEASES NOTIFICATION ACT.

AT the Edmonton bench, on July 4th, Dr. Benjafield, the medical officer to the Strand Union Schools, was fined 10*s.* and costs for not "forthwith" notifying a case of infectious disease in one of the school children. The London and Counties' Medical Protection Society, represented by Mr. Stone, defended Dr. Benjafield. It appears that a case of scarlet fever was diagnosed on June 8th, and the case was ordered to be removed. But the 9th being a Sunday, the information was not received by the Metropolitan Asylums Board in time to send their ambulance until the 10th. The medical officer of health of Edmonton saw the ambulance and followed it to the school on the 10th, and it was only then that the superintendent of the school wrote out a form of notification; but the medical officer's certificate, even if posted on the 13th, was not received till the 14th. A delay between the 8th and 13th cannot be regarded as compliance with the terms of the Act; the more so as no defence as to uncertainty of diagnosis in this case was maintained. If the Act is to be useful, the notification should, apart from reasonable cause being shown to the contrary, be despatched on the day when, or at latest the day after, the medical practitioner becomes aware of the existence of the infectious disease. We do not know how far the difficulty which arose in this case has been due to any objection to notify, lest there should be interference on the part of a medical officer of health in an institution which

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is under the medical charge of a special officer. This has arisen in workhouses and other places. But these establishments come within the provisions of the Act as to notification, and no attempts should be made to avoid compliance with its terms. The ordinary courtesies of the medical profession should suffice to avoid needless action and interference of health officers in cases where a special medical officer is responsible for the administration of a public institution. Mr. Stone contended that when every precaution had been taken to prevent the spread of the disease, and the authorities had been made duly cognisant of its occurrence, the whole spirit of the Act had been complied with. The bench, however, were of opinion that the letter of the law had not been complied with and inflicted the small penalty on Dr. Benjafield. Although not wholly successful in their ministrations (and, as will be seen from what we have already said, we do not think it possible for the magistrates to have come to any other decision), we consider that the society were actuated by quite the right sort of motive in taking up the case. Any prosecutions under this most useful but most ticklish Act which have the appearance of being vexatious are greatly to be deplored as being calculated to interfere with the proper working of the regulations.

MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ON the 4th inst. and on the following day an exhibition was held in the council room at the Royal College of Surgeons of England of all the specimens added to the museum during the past year. The additions have been very numerous, and include many of great interest. Among the pathological specimens may be mentioned the following. A case of sarcoma of the patella, which was shown at the Pathological Society by Mr. D'Arcy Power. A case of sarcoma arising in the subscapularis muscle and invading the chest wall; an attempt was made to remove the growth, but the patient died. Two specimens showing trophic changes in the lower limb in locomotor ataxy. A roll of human hair weighing five pounds, removed successfully from the stomach of a woman who had been in the habit of biting and swallowing her hair; there were no signs of insanity in the patient. A vermiform appendix about nine inches in length. A secondary carcinoma growing from the transverse portion of the arch of the aorta of a dog, causing pressure on the trachea with dyspnœa. A recurrent carcinoma of the breast in a man who had had a similar growth removed from the same situation ten years previously. Several specimens of old injuries to the beaks of birds, resulting in much deformity from the unequal growth of the beaks. In the teratological series two specimens were worth noting. One was a fœtus with an additional arm and leg on the left side, and also an additional left kidney. The other was a field vole (Arvicola agrestis) with absence of the hind limbs and the posterior region of the body. Several specimens illustrating diseases of the liver and gall-bladder which accompanied the Jacksonian Prize Essay for 1894. A humerus removed from an Egyptian tomb of a date about 4000 B.C. showed an old injury to the head of the bone, resulting in much deformity. Several excellent dissections have been added to the department of normal human anatomy; they chiefly refer to the muscles and ligaments of the foot. There are some admirable dissections of the nervous system of animals; and many dissections to show endo-skeletal structures, and among them may be mentioned the cartilaginous skeleton of the lamprey (Petromyzon fluviatilis) and of Raia maculata. Two hundred and five skulls were purchased from the Anthropological Society, and among them were the skulls of many races not previously represented in the collection. Several examples were shown of the assumption of male plumage by old female birds; the specimens include golden pheasants and Japanese pheasants. No satisfactory explanation of this change has been given.

INQUESTS WITHOUT MEDICAL EVIDENCE.

A REMARKABLE and flagrant instance of a policeman being permitted to give medical evidence at an inquest is published in the *Somerset County Gazette* of June 22nd. The body of a woman having been found in the Bridgwater Canal near Fordgate, Somersetshire, the police sergeant at North Petherton is reported to have stated, among other evidence: "The body was very rigid, the hands were clenched, and there was a frothy mucus round the mouth and nostril, which are indications of death from drowning. I had the body conveyed to her residence, where I had all the clothes removed and made an external examination of the body. I found no bruises or signs of violence whatever." Comment on this case is superfluous. There is at least one medical man in the district, and the circumstances, if correctly reported, appear even more indefensible than any of the inquests without medical evidence recently recorded in THE LANCET.

SWEET ARE THE USES OF ADVERTISEMENT.

WE have received a pamphlet containing a "list of names of some of the medical men who have sent testimonials (unsolicited) in favour of ——'s extract." Thackeray once wrote a paper of suggestions to a young novelist for bringing in the names of various firms, which firms would then supply the writer with assorted articles mentioned; but we do not think it becoming to see medical men's names and addresses prominent in a commercial advertisement, although in many cases we can hardly credit the letters being written by educated men. The varying styles of testimonials would form a valuable nucleus for a "complete commercial letter-writer." Here, for instance, is the simple straightforward, business-like style:—

25th September, 1885.

Mr. —— begs to enclose P.O.O. (£1 3s. 6d.). It is a most valuable restorative. Send two gallons directed as before.

——, M.R.C.S.

Two gallons of Post Office Orders would be a valuable restorative to many persons! Next comes the Joseph Surface or extreme courtesy style:—

15th May, 1884.

Gentlemen,—I am enabled to speak commendably of your "Extract ——," which you so kindly sent me. I have found it a most agreeable stomachic, and for pleasantness to the palate is certainly most inviting. My recommendation to many has, I hope, been productive of gain to you, as well as a very pleasing duty on my part.

Ever your obliged and grateful servant,

——, L.R.C.S.

In contrast to this is the involved third-person style:—

March 13th, 1885.

Doctor —— will feel obliged by Messrs. —— sending one dozen pints of their "——" to —— railway station. Dr. —— has used a small portion of the Extract in cases of diarrhœa with extreme debility, and with marked success. Dr. —— feels satisfied that when its efficacy in various affections becomes more generally known in this locality that it will be largely availed of, seeing that it combines the many excellent qualities of therapeutic and diatetic (*sic*) with rapidity and cheapness. Amount will be forwarded on receipt.

"Diarrhœa with extreme debility, and with marked success," is, we suppose, a synonym for cholera. And what are "the qualities of therapeutic and diatetic"? Lastly, we have the pathetic:—

Sunday, 12th October, 1884.

Gentlemen,—I have tried your sample bottle of "——" with a very urgent and chronic case of asthma and heart disease in a gentleman sixty-seven years of age. I am now with my patient, and he has found comfort and support from the —— when champagne, brandy and milk, and turtle soup fail. Send me a pint through post as quick as possible, or a little more of it will come through post.

Case extremely urgent. Will fear no delay. I materially doubt the issue of this illness, being ten years suffering, but wish to try your remedy. I will send you cheque or P.O.O. immediately I hear from you I am, Gentlemen, yours faithfully,

——— M.D., L.R.C.P.

This appeal would melt the heart of a stone. Picture the anxious physician sitting at the bedside. Champagne,

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brandy and milk, and turtle soup have all failed. But Messrs. ——'s extract, the veritable ambrosia, arrives, and all is well. Seriously, though, is it fitting that this sort of puffery should go on unchecked? The compound in question, we daresay, is nutritious enough, but the pamphlet seems to advertise the testimonial-writer as much as the preparation.

THE WORTHING WATER-SUPPLY.

IT is now some time since the yield from the well which has been sunk at great cost by the Worthing corporation on the South Downs equalled the million gallons per day which were required by the Local Government Board before application for pecuniary help would be sanctioned. This week the undertaking of the West Worthing Waterworks and Baths Company has been handed over to the council, which is now, therefore, in possession of the water supply of the whole borough. By a majority of one the council has decided to adopt the system of private loans as against corporation stock to cover the expenses of a trying term.

PROPOSED MEMORIAL TO PROFESSOR HUXLEY.

IT has been decided to establish in connexion with the Charing-cross Hospital Medical School a permanent memorial to one of its most distinguished students, the late Professor Huxley. To this end the following committee has been formed: Sir Joseph Fayrer, K.C.S.I., F.R.S.; Sir Guyer Hunter, K.C.M.G. (both old friends and fellow students of Professor Huxley at the Charing-cross School); Dr. Watt Black (honorary treasurer), Mr. J. H. Morgan, Mr. Stanley Boyd, Dr. Montague Murray, and Mr. H. F. Waterhouse (honorary secretary). It is proposed that the memorial shall take the form of an annual lecture and a science scholarship and medal; but the final decision will depend upon the wishes of a general meeting of the subscribers. A meeting will be held at Charing-cross Medical School on Tuesday, July 16th, at 3 P.M., Sir Joseph Fayrer in the chair, to further the establishment of the memorial. It is hoped that all former students of the school and others interested in the memorial will attend. Subscriptions will be received and acknowledged by Dr. Watt Black at the Charing-cross Hospital Medical School.

SUMMER SCHOOL OF MEDICINE AT CAMBRIDGE.

THE "Summer School of Medicine for qualified practitioners" held in Cambridge during last week was a signal success. Eighty members were present from all parts of the country, this being about as many as could conveniently and without crowding be accommodated at the demonstrations in the laboratories and in the hospital. They were provided with rooms, dinners, and breakfasts in King's and Downing Colleges; and they were most enthusiastic in their praises and thanks for all that was done for them. They, with one accord, said that they had never passed so agreeable and instructive a week. Each day was fully occupied, and they were most diligent in availing themselves of the opportunities offered. The only complaint made was that they would gladly have paid more than the sum charged, which was barely sufficient to cover the expenses of board and lodging in the Colleges. The meeting was opened on Monday evening by an address from Sir George Humphry, which was published in the last issue of THE LANCET. Lectures were given by Professors Allbutt, Foster, Humphry, and MacAlister, Dr. Anningson, and Mr. Douty; demonstrations in the laboratories (physiological) by Dr. Shore and others, (pathological) by Dr. Kanthack and Dr. Lazarus-Barlow, and (therapeutical) by Mr. Marshall; also demonstrations of patients at the hospital by Professor Bradbury, Dr. Laurence Humphry, Mr. Wherry, Mr. Deighton, and Dr. Griffiths. A remarkable exhibition of beautiful drawings of ophthalmoscopic views of the retinæ of various animals, including the lion, tiger, rhinoceros, &c., taken by Dr. G. Lindsay Johnson, who has long been working at this subject and is preparing a book on it with illustrations, and shown by him, was very attractive. The whole programme was carried out in such a manner as to be decidedly encouraging to a repetition of the same in any future year in which the several professors and others concerned may be willing to undertake the trouble of offering a similar boon to the medical men of the country. At the conclusion of a smoking-concert on Friday evening a pair of handsome silver candlesticks was presented to Dr. Griffiths by the visitors as a wedding-gift and as a token of their appreciation of, and obligation for, the pains he had taken to ensure their comfort and to organise and promote the success of the meeting.

A SERIES OF COMPLAINTS.

AT the last meeting of the Petersfield (Hants) board of guardians the Local Government Board Inspector (Mr. Baldwyn Fleming) made a series of remarkable complaints. At the dead-house that morning he had discovered a woman in her coffin with the shroud unfastened. In the infirmary he had seen a paralytic patient who had "been allowed to lie in bed under such conditions as to almost cause bedsores." There were two people in the house who had been married forty years. The man was paralysed and bedridden; the woman eighty-two years of age, blind and unable to walk. They had only met four times in the last six months; the inspector thought they should be together at least once a week. Mr. Fleming objected to the lying-in ward as inconvenient in every way and altogether inadequate. Lastly, he objected to the proposed amalgamation of two relief districts in view of the recent recommendations of the Aged Poor Commission. If the board pressed the latter they must take the responsibility. He told them plainly he did not like it and could not agree with their views. A certain amount of suspicion is apt to be raised by five grave grumbles in one day. There may have been carelessness in the first two cases; the inspector may have been correctly informed by the aged couple whose cause he espoused; the lying-in ward may be useless as such; and the proposal of the board may be unwise. It is certainly a case, however, in which the other version ought to be heard before judgment is pronounced. The inspector's report is very sweeping in its ubiquitous fault-finding.

THE SELECT COMMITTEE ON FOOD PRODUCTS ADULTERATION.

IT is now fifteen months since a Select Committee was appointed to inquire into the working of the Margarine Act, 1887, and the Sale of Food and Drugs Act, 1875, to report whether any, and if so what, amendments of the law relating to adulteration were in their opinion desirable. On the close of the Parliamentary session on Aug. 1st last the committee reported that it was not in their power to conclude their inquiry, and the evidence taken up to that time was published in a Blue-book which was dealt with in THE LANCET of Oct. 20th. It embodied the evidence of witnesses who consisted chiefly of, firstly, Government officials and then wholesale dealers. Comparatively bulky as this Blue-book was, we ventured to think it could not contain but a tithe of the complete hearing. Since then a number of witnesses have been examined who are likely to afford valuable evidence from the public analyst's point of view. Not the least interesting aspect to ourselves of this important section of the inquiry will be the opinions expressed by these gentlemen on the question of standards, of samples for

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reference, and of the manner of the purchase of samples. With these points we propose to deal on a future occasion as soon as the minutes of evidence are published. The labours of the committee are by no means finished, and, as we predicted, the inquiry has become more arduous and more prolonged than was probably anticipated. On the 2nd inst. the Committee met to receive the draught report of the chairman, which was to the effect that further evidence upon the matters referred to them had been taken, but that they have not had sufficient time to conclude their investigations. This is practically the same conclusion as was reported at the end of the previous session. They therefore agreed to report to the House the evidence already taken and to recommend that a committee on the same subject should be appointed in the next Parliament. The coming general election may therefore have an important bearing on the constitution of the new committee next session, since a change of administration will of course lead to the appointment of many new members.

SELF-POISONING BY CHLOROFORM.

FEW practices are at once more pernicious and more common than auto-intoxication by means of chloroform. Within a few days two persons have done themselves to death by inhaling chloroform. Mr. F. C. Banks, as a result of a poisoned wound inflicted by pricking his finger with a toothpick, suffered great pain. It appears from the evidence of his wife that he inhaled chloroform to obtain relief. It is almost incredible that this man had for eighteen months received regularly daily at his house two ounces of chloroform for auto-intoxication. He poured a small quantity upon a paper cone and inhaled it. The wife awakened to find the unfortunate man comatose and stertorous, and from this state he never recovered. It seems to us perfectly monstrous that the victim should ever have had the chloroform supplied to him. The laity know so little of the perils of inhaling anæsthetics that they ought at least to be protected from themselves and others equally incompetent to administer the drug. In the second case, a young surgeon, Mr. T. G. Sloan of West Calder, suffering from neuralgia and sciatica, inhaled chloroform to secure sleep and forgetfulness of his pains. While comatose he appears to have fallen forward and so inhaled a lethal dose and died. Thus two lives are sacrificed to a reckless use of one of the most beneficent drugs given to man to assuage those ills to which flesh is heir.

PLATO AND THE PHYSICIANS.

IN a curious passage in one of the most famous of his dialogues—the Phædrus—Plato sketches his view of the doctrine of the transmigration of souls. The soul which has seen most of truth in its former state comes to the birth as a philosopher, or artist, or musician, or lover; that which has seen truth in the second degree shall be a righteous king, or warrior, or lord; the soul which is of the third class shall be a politician, or economist, or trader; the fourth shall be a lover of gymnastic toils or a physician; the fifth a prophet or hierophant; to the sixth a poet or imitator will be appropriate; to the seventh the life of an artisan or husbandman; to the eighth that of a sophist or demagogue; to the ninth that of a tyrant. "All these," says the philosopher, "are states of probation, in which he who lives righteously improves, and he who lives unrighteously deteriorates his lot." The order of precedence in the above list is very curious and highly characteristic of the Hellenic mind. The philosopher at the top of the scale and the tyrant at the bottom show that even Plato was not free from the prejudices of his nation and his caste. The place he assigns to the physician—viz., fourth in the scale—is not a very elevated one, and it is somewhat singular to find him bracketed with the lover of gymnastic toils. It is something, however, to find that the "prophet or hierophant"—the ancient representative of an important profession—is placed even lower—viz., fifth. Plato's comparatively low esteem for the profession of medicine is not difficult to understand, since at a time when anatomy consisted of a few crude facts and physiology did not exist, it was impossible that medicine could command the reverence of any profound and penetrating intellect. We find Plato constantly in his dialogues alluding to medicine as if it consisted of little else but giving a purge or an emetic. No doubt Hippocrates was a man of profound genius and of immense knowledge, considering his time, but it is very unlikely that the average practitioner rose above the level of the mere drug-giving empiric. Lovers of Plato, who, we trust, are not few in the profession, may read their favourite author without feeling aggrieved that in his appreciation of medicine he did not rise above the level of his time. It is probable that the average practitioner of those days combined much presumption and not a little chicanery with a "plentiful lack" of real medical knowledge, and it can hardly be a matter of wonder that the philosopher looked askance upon such pretenders.

THE RESTORATION OF ST. MARY OVERIE.

WE have received an appeal from the restoration committee of the ancient Church of St. Mary Overie, better known as St. Saviour's, Southwark. This church, so well known and studied by travellers on the South-Eastern Railway owing to the kindness and thoughtfulness of the S.E.R. Company in not infrequently stopping their trains between London Bridge and Cannon-street just opposite to it, is, after Westminster Abbey, the finest example of mediæval architecture remaining in London. It was anciently served by the Augustinian canons regular, a religious order to which medical men owe much, for in their hands, too, was the great Hospital of St. Bartholomew. £8000 are urgently required, and we earnestly hope that the complete restoration of a building so interesting historically, and which after its long slumber may again be a centre of good works, may not be delayed for want of money. Subscriptions may be sent to the Bishop of Rochester, the Bishop of Southwark, to the treasurers, Sir Frederick Wigan and Mr. Robert Barclay, or to the Rector of St. Saviour's, Southwark, S.E., or to Mr. James F. Field, lay honorary secretary, 54, Borough High-street, S.E.

"THE EVICTION OF MR. T. M. WATT."

IN our issue of June 22nd last we commented, under this heading, severely upon the action of Sir William Worsley of Hovingham towards his tenant, Mr. T. M. Watt, basing our strictures upon a statement laid before us by Mr. Watt and upon an uncontradicted report of the circumstances of the eviction which appeared in a lay contemporary of more than local importance—the *Leeds Mercury*. Owing to communications we have since received from Sir William Worsley's solicitors and from residents in the neighbourhood of Hovingham, we see reasons to modify the opinions then expressed; while we feel that, whatever our sentiments in the matter might have been—altered or unaltered—it would have been our duty, and in accordance with the impartiality with which we have ever striven to discuss disputes between medical and lay citizens, to give to our readers Sir William Worsley's side of the matter, having expressed ourselves upon Mr. Watt's version. First, then, Mr. Watt's statement (which he supplied to us in pamphlet form) that it was his attempt to secure a better sanitary environment for the people of the neighbourhood which had placed him in opposition to the great man of the place is absolutely traversed

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by Messrs. Hugh W. & R. Pearson, Sir William Worsley's solicitors. They find it to have "no foundation in fact" and to be "absolutely ridiculous." Secondly, the suggestion that Mr. Watt has been driven from Hovingham under circumstances "from which no single element of hardship would seem to be absent"—an opinion of ours based upon Mr. Watt's words to us that his landlord had so far as in him lay confiscated the practice, and so deprived Mr. Watt of his livelihood, without entertaining the question of arbitration concerning compensation—is flatly contradicted by Messrs. Pearson, who write that Sir William Worsley "has repeatedly, beginning in 1886 (long before the Local Government Act and the elections under it to which Mr. Watt and the *Leeds Mercury* ascribe the notice to quit), offered to purchase Mr. Watt's practice on the usual terms, and ..... these offers were renewed down to the time that ejectment proceedings had to be taken." Thirdly (and this is a matter of far less moment) it would appear that our interpretation of the views of the neighbourhood cannot be maintained. The large number of names appended to a petition asking Sir William Worsley to reconsider his decision led us to the inference that the majority of Mr. Watt's fellow residents were in sympathy with him. But we have since received communications from sources beyond reproach that Mr. Watt did certainly bring upon himself his own misfortunes, and that he did this in such a manner that even those who sympathise strongly with him—in which category more than one of our correspondents may be classed—hold Sir William Worsley void of reproach in the matter. We have reflected upon Sir William Worsley's conduct in a manner which the facts now brought before us show us to have been undeserved, and we desire to place this on record in reparation before closing our columns to all discussion of the topic.

THE DIFFUSION OF SMALL-POX.

MATTERS have not tended to improve during recent weeks in London as regards the prevalence of small-pox, the cases newly arising in the four weeks ended Saturday, June 29th, having been 5, 6, and 8, with a further considerable increase to 24 attacks, and a single registered death from the disease—namely, in an unvaccinated adult aged between twenty and forty years. The deceased belonged to the St. Giles sanitary area. The malady is thus seen to be on the increase in the metropolis, the patients remaining under treatment at the close of the last three weeks of June having risen from 19 to 22, and again to 34. Near at hand the borough of Bedford continues to suffer to a slight extent, though the disease makes no headway despite its presence in small amount. In the Midlands, Derby is still the chief centre of small-pox prevalence, though there the malady is dying out apparently, the cases having been only 2 or 3 in each of the last two weeks of June, as compared with more than 12 in the preceding week, but the deaths registered were 3 in the early part of the month. At Hayfield the guardians have had some little to-do on account of the presence of small-pox in their workhouse, and have been much exercised as to the best course to pursue in connexion with the feared spread of the disease by means of tramps, especially in view of the recent experience of Derby and New Mills in the matter of tramp-carried small-pox. There have been 5 cases in the house, including 1 fatal attack in a male adult. At Liverpool a death over a fortnight ago has been followed by one or two cases in and around the city, and Manchester has had a few cases in the past month, districts of the city previously free from the disease having been invaded, but every care has been taken to promptly isolate the infected persons. One case has occurred at Salford and some attacks are chronicled at Wigan, whilst at Oldham two deaths have been recorded in the last month, and the fresh cases have increased of late, until in the last fortnight of June there were a score of attacks heard of in the borough. But energetic measures are being adopted with a view of combating the disease. Small-pox wanes slowly in Dublin, where, in the two weeks ended June 22nd, the admissions to hospital were 13 and 11 respectively, with 9 and 13 discharges; 6 deaths were registered in the period, 4 in vaccinated adults aged over twenty years, and 2 in unvaccinated children under five years of age. The acute cases of the disease remaining under treatment on the 1st of the month numbered 41, and on the 22nd they were 31, besides 17 convalescents at Kilmainham. Sir Charles Cameron, the health officer of the city, fears that the disease will not die out before the winter recrudescence sets in.

THE POST OF PATHOLOGIST TO THE LONDON COUNTY COUNCIL.

DR. FREDERICK W. MOTT was elected on Wednesday last to the post of Pathologist to the London County Council. In securing the services of Dr. Mott, who, after a most distinguished career at University College, became assistant physician to Charing-cross Hospital and lecturer on physiology at the Medical School, we congratulate the Council upon choosing a man of wide practical knowledge of medicine and proved ability in the direction both of original work and scientific literature. Dr. Thomas D. Savill was, we understand, a close second to Dr. Mott, while Dr. W. Lloyd Andriezen, the pathologist and assistant medical officer to the West Riding Asylum at Wakefield, was also on the selected list.

AN OLD STORY.

"IT has been suggested that the facts are sufficiently remarkable and mysterious to make it worth while stating a case for THE LANCET." Such are the closing words of a newspaper cutting dated May 6th. We have waited patiently for the case to be stated, but so far it has not reached us, and all we can gather from the somewhat meagre materials to hand is that someone thought he vomited some wasps or bees which he imagined he had swallowed in the shape of one insect full of ova last summer. Of course the whole story is quite impossible. To begin with, we doubt the possibility of swallowing a live bee or wasp—dead ones, of course, would not be difficult—but either dead or alive they would soon be partially digested, and the idea of wasp or bee grubs hatching in the stomach is too ridiculous. The tale is only a variant of that which exists in all countries of people who have swallowed newts, earth worms, fish, frogs, &c. when little and which have grown to vast proportions and given rise to most distressing symptoms. Readers of Max Adeler may remember his delightful story of the man who swallowed the frog, which sat in his stomach and said "Blood an' oun" in a sepulchral voice at inopportune moments; but this kind of thing does not occur in real life.

THE EXTENSION OF EPSOM COLLEGE.

ON Monday, July 8th, His Royal Highness the Prince of Wales laid the foundation stone of the new Lower School at Epsom College. This extension has for long been desired by the Council, and by an Act of Parliament obtained last year the Council were enabled to open the school to all classes, special privileges being reserved for the children of medical men. We are glad to think that the boys will, since the passing of this Act, number representatives of all occupations and professions, for to live perpetually in an atmosphere, so to speak, of only one interest tends to narrowness, and we all know that the essence of education at a public school is not the mere book learning, but the self-government arrived at by intercourse with one's fellows—the learning

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that individual interests must be subordinated to those of the whole body, and the *esprit de corps* which remains throughout after life. There is no body of men, perhaps, who deserve a place where their children can be taught and nurtured at a low cost more than medical men. They are very hardly worked, and they share with ecclesiastics the proud feeling of knowing that the more zealously and thoroughly they carry out their work, by so much the more they limit their opportunities for work. Many of both professions fall by the way; for the sons of the clergy there are already plenty of helpful institutions, but for those of medical men there is but one, and for this reason we are glad to see its foundations strengthened and its scope enlarged. We would impress upon members of the medical profession and upon those indebted to them that the present occasion is a fitting opportunity to afford the College that support without which its function, both as a great benevolent society and also as an educational institution, must be seriously impaired.

THE CENTRAL AUTHORITY AND A HEALTH OFFICER'S SALARY.

THE Millom urban council have decided to reduce the salary of their medical officer of health, and the Local Government Board have urged them not only to reconsider their decision, but they have suggested that the appointment should be made for a longer period than one year. The Millom authority then explained the reasons for the reduction, which reasons the Local Government Board declare to be inadequate. The Millom people now reveal their hand; they answer that if the post were advertised—which, by-the-bye, ought already to have been done—"there are other efficient medical gentlemen in the town who ..... would doubtless compete against the present medical officer." It is to be hoped that the Local Government Board will refuse to sanction half payment of the salary out of county funds if this attitude on the part of the Millom council is maintained; but it is infinitely more to be hoped that the medical profession will stand firm against the suggestion that they will underbid a colleague who, as the central authority declare, is by no means overpaid. A united front against such local action and a refutation of the calumny involved in the resolution of the local council are wanted in this instance.

THE VESICATING CONSTITUENT OF CROTON OIL.

IN a communication made to the Royal Society, Mr. Wyndham R. Dunstan, M.A., F.R.S., and Miss L. E. Boole, Lecturer on Chemistry in the London School of Medicine for Women, record the results of an experimental inquiry into the nature of the vesicating constituent of croton oil. According to the research of Buchheim, and more recently of Kobert and Hirscheydt, the vesicating action of croton oil is due to an acid closely allied to oleic acid, which has been given the name of crotonoleic acid, and which is now prepared for medical purposes on a large scale in Germany. The process consists, broadly, in the formation first of barium crotonoleate, and the subsequent decomposition of this with dilute sulphuric acid, and extraction of the liberated crotonoleic acid as a viscid oil with ether. By a process of fractional precipitation, using lead salts, the above investigators were able to separate from this so-called crotonoleic acid a large proportion of inactive oily acids, till at last they were successful in obtaining, by a series of operations in which alcoholic extraction and separation by means of lead oxide were made use of, a resinous substance having extraordinary power as a vesicant. The composition of this resin is expressed by the empirical formula $C_{13}H_{18}O_4$. All attempts to crystallise or to obtain crystalline derivatives failed. It is a hard, pale-yellow, brittle resin, nearly insoluble in water, light petroleum, and benzene, but readily dissolved in alcohol, ether, and chloroform. In regard to its constitution it is concluded that the vesicating constituent of croton oil is a lactone or an anhydride of complicated structure.

CAMBRIDGE MEDICAL GRADUATES' CLUB.

THE annual dinner of this club was held at 8 P.M. on July 4th at the Hotel Victoria, Northumberland Avenue, under the chairmanship of Sir G. M. Humphry, M.D., F.R.S., the president of the club. The Rev. Canon W. Page Roberts, Mr. Oliver Pemberton of Birmingham, and Mr. T. Pridgin Teale, F.R.S., of Leeds, were the guests of the club. The Chairman gave the toasts of "The Queen" and "The Club," Dr. Norman Moore proposed "The Health of the Guests," and Professor C. S. Sherrington, F.R.S., gave the toast of "The Chairman."

THE PHOTOGRAPHING OF PATIENTS.

AT a recent meeting of the guardians of St. George's-in-the-East the Rev. L. S. Wainwright complained that the medical officer of the infirmary had photographed a female patient of weak intellect in a nude state, and that thereby the friends of the patient were much incensed. The medical officer explained: (1) that he took the photograph in the interests of science, the woman having a peculiar malformation; (2) that the patient was not mentally deficient; and (3) that she was suitably attired and the matron or a nurse was present. A resolution was then passed to the effect that the medical officer should be instructed not to photograph any person thought to be of weak intellect without obtaining the consent of the board. At a meeting held on June 28th it was proposed to rescind the resolution, but the motion was lost. If the reports submitted to us be correct, a great deal of fuss seems to have been made about nothing. In the case of persons of weak intellect it would seem advisable to throw the responsibility of deciding whether they should be photographed or not upon the relatives or persons interested in the patient, and not upon the board. Boards should never have any responsibility laid upon them; however able the individual members may be, a board as a board is generally a useless body. Of course, no photograph of any patient should ever be published without the consent of the patient or the patient's representative; but we fail to see why a photograph should not be taken.

THE FUNERAL OF MR. HUXLEY.

THE very funeral of a great man has a peculiar interest of its own. This was peculiarly true of Huxley's. The place—which might have been Westminster Abbey—was the pleasant and rural cemetery for Marylebone at Finchley, looking beautiful, as even cemeteries do in July. The company was not numerous, but it was highly distinguished, including men representing all branches of science and learning. The Royal Society was personified in Lord Kelvin, the President; Professor Michael Foster, the secretary; and Sir John Evans, the treasurer. There were present, too, Mr. Lecky, Sir J. D. Hooker, the Rev. Dr. Dallinger, Professor Ray Lankester, and Dr. E. Frankland. The medical profession was not unrepresented, though the Presidents of the Royal Colleges of Physicians and Surgeons, respectively, were unable to be present. Sir James Paget, accompanied by Miss Paget, was there; also Sir Joseph Lister, Dr. Lauder Brunton, Mr. Henry Power, Dr. Burney Yeo, Dr. Felix Semon, Dr. Glover, and others. It was noticed that many working men were present. It was gratifying to see the great Agnostic buried with all the amenities of

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Christian burial. One humble man asked if the ground was consecrated ground. The reply was that it was so, and the feeling of the reverent mourners was that henceforth it would be more consecrated than before. The service was read with much simple force by the Rev. John Llewelyn Davies, now Rector of Kirkby Lonsdale, formerly Vicar of Christ Church, Marylebone. Never was the momentous fifteenth chapter of the first epistle to the Corinthians read with more acceptance than over the great apostle of science who was more religious than he would admit or, perhaps, knew, and who, it is said, wished, a few days before his death, to be buried with the service of the Church of England. We scarcely regard this wish as one of the inconsistencies of a great man. Like other great men, with all the boldness of his thought, he knew the sharp limitation of his own knowledge. No deep student of his philosophy can charge him with irreverence or fail to see in his writing the conception that there is in the universe a Being whose "intelligence was as far beyond his own as that was beyond a blackbeetle's," "endowed with powers of influencing the course of nature as much greater than his as his is greater than a snail's."

CEREBRAL HÆMORRHAGE IN PURPURA HÆMORRHAGICA.

DR. NEWGARDEN of the United States army records in a recent number of the Philadelphia *Medical News* the case of a Swede aged thirty-eight who first sought advice on account of persistent oozing of blood from the cavity from which the second right upper molar had been removed on the previous day. Under appropriate treatment the bleeding ceased, and there was no recurrence in the few days during which he was kept under observation. A few weeks later, however, he again sought advice on account of weakness in the legs, and he stated that there were some spots on the skin. Examination revealed the existence of a number of large purpuric spots scattered over the legs from the ankles to the middle of the thighs. They underwent the usual changes and were rapidly disappearing when he one day complained of severe headache, became convulsed, lost the use of the left side, and passed into a comatose condition. Consciousness returned in an hour, but he soon lapsed into his former condition, and died four days after the initial headache and convulsion. During the few days that elapsed before his death there was incontinence and hæmaturia. At the necropsy it was found that the left ventricle was greatly dilated, with vegetations on both aortic and mitral valves, the latter being bound down by adhesions. The right ventricle was dilated, and the kidneys granular and cystic. A large hæmorrhagic extravasation was found over the right cerebral hemisphere, and there was also a clot in the middle lobe from rupture of a branch of the middle cerebral artery. The case is a curious one, and it might be suggested that the symptoms were the result of the cardiac and vascular conditions secondary to granular kidney, and not of the real but mysterious disease known as purpura hæmorrhagica.

THE testimonial to Sir Joseph Lister, to be given to him by his former colleagues and pupils on the occasion of his retirement from the active staff of King's College Hospital, will be presented to him at the Hospital on Tuesday, July 30th, at 4 P.M. The presentation will be made by Sir John Eric Erichsen, and in order that the necessary arrangements may be made Dr. J. Fredk. W. Silk, the honorary secretary of the undertaking, will be glad to hear from gentlemen intending to be present.

THE profession has heard with pleasure of the Knighthoods conferred upon Dr. Thornley Stoker, the President of the Royal College of Surgeons in Ireland, and Dr. Christopher Nixon, the Physician in Ordinary to the Viceregal household.

REPORT OF THE COMMITTEE ON PRISONS.

V.[1]

THE Committee deal at some length with the subject of the "nine months' separate confinement of convicts." This is ever a favourite topic for criticism when our prison system comes under consideration, and it was not likely to escape the scrutiny of the Committee.

"In the consideration of several matters contained in the reference we had to touch upon the practice of confining convicts for nine months' solitary imprisonment either in local or convict prisons. Objection was taken by some witnesses to the presence of these men in local prisons, though others specified that no special difficulty was thereby caused. As, however, the practice establishes in certain local prisons, which are the collecting centres for convicts, a class of men who have to be kept distinct from other prisoners, and who require special individual treatment, we felt it necessary to investigate the reasons for the practice. The history of it is interesting and suggestive. It was organised in 1842 by Sir James Graham, then Home Secretary." At this time, we are told, Pentonville Prison was designed on new and approved ideas for the reception of convicts sentenced to transportation, and was to be restricted generally to those who were convicted of their first offence and whose age was between eighteen and thirty-five. It was to be a prison of instruction and probation; the convict was to undergo eighteen months' solitary imprisonment, but he was to be freely visited by the chaplain and prison officials; he was to be trained in a productive industry; he was to be subjected to a progressive system of education on the class system; lectures were to be given to him in the prison chapel; he was to be kept in a state of cheerfulness; hope, energy, resolution, and virtue were to be imparted to him, and he was to be trained to be fully competent to earn his own way and become a respectable member in the penal settlements. If during the eighteen months he behaved well, he would at once receive a ticket of leave on arriving in Van Diemen's Land. It would have been sad indeed to its promoters if such a programme had proved a failure. Whatever may have been its permanent effect on the convicts in the penal settlements, we are told that the plan was worked apparently with great success so far as home treatment was concerned. The Commissioners for Pentonville thus report in 1844: "The effects produced on the minds and conduct of the prisoners by this system of separate confinement have been highly satisfactory." And they thus describe the general results: "Most satisfactory proofs of these beneficial impressions have been manifested in the great improvement which has taken place in the moral condition and conduct of the prisoners within a short period of their reception. In the course of our visits to the cells we have had the gratification of witnessing to a great extent their just appreciation of, and the deep interest which they take in, the moral and religious instruction which is imparted to them; the removal of the debasing effects produced on their minds by their former criminal pursuits; their progress in self-improvement; their cheerful obedience to the prison rules; their acquirements in the trades which have been allotted to them; and their gratitude for the treatment they have received under a discipline which combines instruction and reform." If we could bring ourselves to accept this eulogium as a fair criticism and not merely as a pæan of hope and trust, we would say "happy convict," and regret that only convicts had such a moral and religious opportunity. But it was too good to last and "in 1848 it was determined that, eighteen months being too long a period for isolated confinement, a system should be introduced based on a period of separate confinement, followed by a term of associated labour, with a maximum of twelve months. This was reduced by Lord Palmerston in 1853 to nine months." Our Committee go on to say that the original intention of Sir James Graham, which was that this period should be primarily of a reformatory character,

[1] Parts I., II., III., and IV. were published in THE LANCET of May 4th, 18th, 25th, and June 15th respectively.

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appears fifteen years later to have been lost sight of. "It would appear," they add, "from Sir Joshua Jebb's evidence in 1863 that the main object of separate confinement had come to be deterrence." "An educated prisoner," he said, "would much prefer separate confinement instead of being driven to associate with people of bad character and difference in social position. With burglars and reckless bad characters, I think that separate confinement is dreaded more than any other kind of discipline." The Royal Commission of 1863 insisted on the necessity of enforcing the full nine months, and they proceed to say, "we think, too, that though separate confinement, even under the present system, is, as has been said, extremely distasteful to convicts, this wholesome effect on their mind might be increased. ..... There appears to us to be much force in the reasons which induced the directors of Irish convict prisons to adopt these means (lower diet, monotonous work, and less frequent visits) for rendering separate imprisonment more formidable, and we, therefore, recommend that attempts should be made, with due caution, to give a more deterrent character to separate imprisonment in the English prisons." From this it is to be gathered that there were reasons for looking upon the results of Sir James Graham's scheme as not being an unmitigated success. Our Committee say that the passage quoted "shows that Sir J. Graham's intention and scheme had perished, and that the period of imprisonment originally designed to train and improve prisoners for a good and useful life was now looked upon and intended to be the most formidable and coercive part of the punishment of penal servitude. In effect this is the purpose which it must be regarded as now designed to serve. It must, however, be admitted that the evidence seems to show that the Commissioners and the officials of the prisons have not either a complete knowledge of the history of the matter or a very clear idea of its working and effect. It is certainly a practical convenience in the sense that the expense of sending convicts immediately after sentence to convict prisons, either singly or in small detachments, is curtailed by the system of gathering prisons. This consideration alone is not sufficient to justify the practice. The argument that it is a necessary discipline for penal servitude, if true, is no argument for sending the convicts to local prisons. We do not regard the system with favour. We see no objection to short periods of detention in local prisons for the purpose of collecting parties for transfer to the convict prisons, but if the system is a good one at all we think it ought, so far as possible, to be worked out in convict prisons from first to last. We think that it cannot be denied that cases occur in which a nervous condition, agitated by remorse and by a long continuance of the separate system, may be injuriously affected by it. From the evidence before us we have no reason to believe that such cases are of other than exceptional occurrence. We think it is worth considering whether the severity of the system might not be mitigated by a substantial reduction in the period of separation and by the wise and carefully guarded introduction of such reformatory influences as were brought to bear on convicts at Pentonville when first established, and of such philanthropic agencies as appear to be engaged in behalf of separated convicts in the Belgian prisons." We have quoted the words of the Committee in full, lest, on a subject to which they naturally attach some importance, we should run the risk of mutilating their views. It is, to say the least, unfortunate that the Committee in various parts of their report do not restrict themselves to the use of the term "separate" in regard to the phase of prison life under consideration, because the idea of "isolation" which they introduce in the terms "isolated confinement" and "isolated imprisonment" has no place in connexion with the English prison system, and the use of the phrases is apt to mislead the uninitiated. We should have been glad if the Committee, in the expression of opinion which we have quoted above, had made it more clear to the ordinary reader that they were dealing with two totally different questions. It is a vital question as regards any prison system whether a period of "separate confinement" is or is not desirable; but it is quite unimportant, except as a matter of administration, whether that separate confinement is carried out in a convict or in a local prison. The Graham scheme of separate confinement has admittedly "perished"; but we are not informed whether it was departed from because it failed (latterly), or whether it failed because it was departed from (as to its conditions). The Committee are disposed to proclaim the ignorance of the Commissioners (we suppose they include the directors of convict prisons) and the officials of the prisons in this matter; but we are bound to say they do not attempt to clear it up themselves, and we should be glad to see the evidence upon which they base their assumption. We have already quoted the views held by the Commissioners of 1863 on this subject, and the Penal Servitude Acts Commission of 1879 state that "it has been suggested by some witnesses that the period of separate confinement which precedes removal to public works might be prolonged with advantage; but the limitation of the period to nine months is the result of much experience, and although the period might possibly be extended to twelve months without mental or physical injury to the majority of prisoners, we do not see any sufficient reason for disturbing the present regulation." Coming to more recent times, in their report for the year 1887-8 the directors of convict prisons deal with this very subject, while in Appendix No. 19 to that report is published a most valuable memorandum on separate confinement by the Medical Inspector of Prisons. If the Committee will take an opportunity of reading what is there stated they will find that neither the history of the subject nor its working and effect have been overlooked by officials of prisons who are responsible in the matter. In the beginning of his memorandum the medical inspector says: "The term 'separate confinement,' though convenient as a technical term by which to indicate a particular kind of prison discipline and management, is apt to convey to persons not familiar with the subject an erroneous impression of the circumstances under which a prisoner is placed either when undergoing a term of imprisonment in a local prison or when passing through the 'probation stage' of a sentence of penal servitude. He is not separated from his fellow creatures. On the contrary, he sees and hears as much of them as do many persons at liberty; quite enough to prevent the growth of any sense of isolation from the rest of mankind. The visits of the various officers, instructors, and schoolmasters are sometimes so frequent as to occasion discomfort, and I have no doubt that many prisoners would like to be left rather more to themselves. The prisoner of the present day is well cared for; he is supplied with all the necessaries, and not a few of the comforts, of life; and his existence is, to say the least, rendered very endurable." He concludes his remarks in the following terms: "I trust that I have succeeded in showing that the apprehensions formerly entertained as to the effects of separate confinement were groundless, and that it is as compatible with a healthy state of body and mind as any other form of imprisonment."

We await with interest the long-delayed publication of the evidence given before the Committee because at the present moment we are not satisfied that there exist any well-established grounds for "mitigating by a substantial reduction in the period of separation" what the Committee refer to as the "severity of the system."

OCULISTS' SEALS.

THE valuable articles which have from time to time appeared in the *Révue Archéologique* from the pen of le Capitaine Espérandieu upon Roman Oculists' Seals have now been gathered together and published in the form of a book.[1] This corpus of all the known oculists' seals, although modestly alluded to by the author as "a not useless work until another performs it better," is really an admirable specimen of what a monograph upon such a subject should be, and indicates prolonged and careful research in reference not only to the seals themselves, but to the many statements in classical authors upon medicine bearing on the matter. It is peculiarly complete because of the arrangement in a series of tabular forms of the whole of the seals; then of the collyria mentioned upon them; followed by another series giving every ocular disease mentioned upon the seals, together with the one or more collyria stated to have been effectual for their remedy; then a list of every collyrium is given with all the diseases each is said to have been curative of. These tables are all elaborately furnished with cross references, and the second one giving the list of collyria on the

[1] Recueil des Cachets d'Oculistes Romains. Par le Capitaine Émile Espérandieu. Paris: Leroux.

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stamps is rendered immensely more valuable by being supplied with citations from the chief medical writers of antiquity, and also a list giving the name of the place where an oculist seal bearing the name of the collyrium has been found. In addition to these tables Captain Espérandieu also supplies an alphabetical list of all the oculists' names, and a chronological one of dates of discovery of the seals, commencing with 1606 and citing the authority for the texts engraved upon them. As is well known, these seals when found in perfect preservation usually bear the name of the oculist, manufacturer, or vendor, of the collyrium they were used to impress, then the name of the medicament itself, followed by instructions as to its usage, and sometimes indications for its mode of employment. The writer's diligence enables him to give about 200 seal inscriptions enumerating 149 different collyria and approximately eighty various titles for diseases of the visual organs.

One of the most interesting portions of the subject is the series of remedies and their constituents, and to this question the writer has devoted a great deal of attention. In one case we are enabled to have an absolute chemical analysis of several collyria. This is in the instance of those belonging to C. Firmius Severus, whose case of instruments and about 40 grammes of his collyria were found at Reims in 1854. The latter were analysed by M. Duguenelle, but apparently not separately according to their stamps. They contained organic matter, silica, peroxide of iron, black oxide of copper, oxide of lead, and carbonate of lime. It might naturally be supposed that the titles of the collyria, together with the names of the one or more diseases they were remedial of, and the references to them in ancient medical treatises, would certainly enable us to form a fairly correct idea of their various ingredients; but this frequently is not the case, for the necessary evidence fails. Nearly all the names are of Greek derivation only four or five at most being of Latin origin. Many of them manifestly are indicative of their manufacture, especially those commencing with the preposition διά, such as diaceros, or diacislas (of ivy), or diasmyrnes (from myrrh). Others merely supply the Greek word for the chief remedial ingredient, such as arpaston, amber; crocodes, saffron; stactum, oil of myrrh. But, on the other hand, many titles afford no clue to the substances referred to, such as hyginon, salutary; diatessarium, the fourfold ingredients; and the following names, which are plainly derived merely from a eulogistic encomium of the properties of the material, as with some more modern preparations. Ambrosium, basilium, isochrysum, theochristum, theodotium, speak eloquently of their divine or regal origin; whilst simpler titles, such as chloron or cirron, allude merely to their colour.

M. de Mely, in an essay upon the subject some years ago, pointed out that in nearly a score of cases the appellatives are derivatives of the names of stones, such as the amethyst, sapphire, and turquoise; but these titles again are, doubtless, used merely to further impress upon the vulgar the extreme value of the preparations, and are not to be taken literally as the name of their actual constituents. The most important contents of the work are the maladies set forth in the list with explanations of their true meaning, as far as possible derived from classical medicine, each furnished with a full mention of all the collyria said to be designed for their cure. For instance, to the term "ad caliginem"—that is, obscurity of vision—no less than eleven names of collyria are given, but not satisfied with these, derived solely from the inscriptions, Captain Espérandieu refers us, giving chapter and verse, to Celsus, Paulus Egina, Dioscorides, Scribonius, Nicolas Myrepsus, Ætius, Galen, Actuarius, Marcellus, and Pliny for further knowledge.[2] For "ad lippitudinem," or ophthalmia, there are a score of remedies, and we are referred to Actuarius, Galen, Celsus, Ætius, and others. Among the remedies are dialibanum, or incense; spodiacum, or metallic fragments; amber, myrrh, and nard. The following may be given as a specimen of the inscriptions upon the stamps, because this one evidently belonged to a specialist on ophthalmia; it was found at Naix, in the department of the Meuse, and is now in the Louvre:—"Junii Tauri theodotium ad omnem lippitudinem: Junii Tauri anthermerum ad epiphoras et omnem lippitudinem: Junii Tauri penicille molle ad omnem lippitudinem: Junii Tauri diasmyrnes post impetum lippitudinis." Another seal of Junius Taurus has been found, and also four belonging to a Quintus Junius Taurus. Of all remedies myrrh and oil of myrrh seem to have been held in highest esteem, if we are justified in forming a definite conclusion from the 200 seals at present exhumed.

Our space will not permit of further notice of this interesting volume, as with all well-got-up modern works it is supplied with a bibliography of the subject, and also a list of ancient "oculists" mentioned in lapidary inscriptions other than their seals; and, finally, there is a supplement containing six new signets discovered in 1893–94, to which the publisher appends four blank pages, so that the student can fill in fresh ones as they come to light. Enough has, perhaps, been said to induce our readers to turn to the work for themselves; it is to be had for less than 10 francs, and will prove a welcome addition to the library of any medical man who desires, in his, perhaps, too rare moments of leisure, to ascertain something of the antiquarian history of his profession.

[2] Much information may be derived when the "Dynameron" of Elius Promotus is published. From a table of its contents preserved in a manuscript in the Escurial we are told that Chapters 92 to 107 are devoted to eye diseases, 96, 97, and 106, 107, and 108 being specially concerned with collyres, and Chapter 98 with liniments.—See Annuaire des Études Grecques.

THE MEDICAL DEFENCE UNION (LIMITED) AND THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY (LIMITED).

ON Wednesday, July 10th, the conjoint councils of the above organisations for the defence of the medical profession assembled at 20, Hanover-square, to consider the question of amalgamating the two bodies. Previously to the commencement of the meeting it was, we understand, decided that reporters should not be admitted, but on Mr. Hutchinson being voted to the chair the question was discussed, and on the motion of Dr. Purcell, seconded by Dr. Bridgwater, a resolution was put and carried deciding that members of the press should be admitted.

The Chairman then read the following letter which had been addressed to him by the Proprietors and Editors of THE LANCET:—

July 10th, 1895.

DEAR SIR,—In our position as Editors of THE LANCET we have never failed to be impressed with the urgent and crying need which exists for the foundation on a firm and assured basis of a really representative society devoted to the defence and protection of the interests of the whole medical profession. Various efforts have been made from time to time in this direction in the past, but until recent years they have been attended with little permanent success.

The establishment of the Medical Defence Union and later of the London and Counties Medical Protection Society has shown that with good organisation and management excellent results can be secured, but it appears to us to be an anomalous, unfortunate, and unnecessary circumstance that two different bodies, between which there must unavoidably be a certain amount of rivalry, should exist. No real good can be achieved without solidarity, cohesion, and practical unanimity.

We understand that at the meeting to-day the question of the possibility of fusion of the two societies will be seriously entertained. As a practical, and we hope helpful, token of our anxiety that this much to be desired result may be attained we shall be happy *on the completion of the amalgamation* of the Medical Defence Union and the London and Counties Medical Protection Society into one body to hand to the treasurer or treasurers of the newly-formed union or society or association a cheque for 100 guineas, and to place the columns of THE LANCET at the reasonable disposal of the union or society or association in whatever way may be mutually found to be most convenient and best calculated to promote the truest interests of the profession as regards the defence and protection of its individual members.

We are, dear Sir, yours faithfully,
(Signed.) THOMAS WAKLEY,
THOMAS WAKLEY, Jun.,
Editors of THE LANCET.

To the Chairman of the Meeting of the Councils of the Medical Defence Union and the London and Counties Medical Protection Society.

In explaining the object of the meeting Mr. Hutchinson said the members of the councils of each society had been summoned to an open conference to discuss the desirability and practicability of amalgamation. He suggested that the best method of conducting the business would be to move a simple resolution to the effect that these two societies should be amalgamated.

Mr. Victor Horsley moved, and Dr. Heron seconded, the following resolution, which was carried: "That in the opinion of this meeting it is most desirable that the amalgamation of the London and Counties Medical Protection

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Society and the Medical Defence Union should forthwith be carried out."

Dr. Heron, in the hope of avoiding much discussion which might not altogether tend to smooth the way of amalgamation, proposed that their difficulties in the condition in which they at present stood should be referred to arbitration. He proposed that the legal advisers of the Medical Defence Union and of the London and Counties Protection Society should cause to be drawn up for submission to counsel and other competent persons a joint case, stating in a way fair to both societies the legal difficulties which beset their amalgamation, and also a joint requisition that counsel and other competent persons should advise the two societies as to the method best calculated to help their amalgamation in the way which would best secure the true interest of all concerned, with special regard to finance, dispatch, and reasonable economy of expense. He did not think that much good could result from this meeting discussing the history of the negotiations that had passed between the delegates of the two societies since 1893, but he thought that great and speedy good would come from the adoption of the principle of the proposal he had just made. He had purposely somewhat vaguely stated that the difficulties should be submitted to "counsel and other competent persons" because he did not wish to suggest to the meeting more than the lines on which they might run with comfort. By "competent persons" he meant men chosen by each society who would meet counsel specially skilled in company law, and so form a board to which their difficulties might be submitted. Personally, he thought it would be a wise thing if these men were made plenipotentiaries, and whatever decision they arrived at followed out loyally. All his council were in favour of amalgamation, but they wished to have an assurance that every step would be taken with the due observance of the safety of all, the saving of money, and expedition.

Dr. Alderson seconded the motion.

Mr. Victor Horsley was extremely unwilling to appear in this discussion in any degree in the sense of opposition to any reasonable proposition that might be laid before them, and no one could contend that they had not had a reasonable proposition, but he earnestly desired to see amalgamation carried out as speedily as possible, and he should very much regret the loss of time if this meeting came to an end without coming to a definite conclusion on the subject.

A long discussion then followed on the power of the meeting to vote, and on the question of certain details upon which the opinions of the lawyers, Mr. Hempson, Mr. Oakley, and Mr. Eustace Smith, were taken.

Mr. George Brown wished to substitute for Dr. Heron's resolution a similar one in simpler words, but Dr. Heron did not feel inclined to accept this. His resolution was again read to the meeting.

Mr. Stamford Felce thought they had advanced a stage since Dr. Heron proposed his motion.

Dr. Heron thought that the proposition would only cause matters to end in a deadlock.

Eventually Mr. Bruce Clarke suggested that two delegates from each society with legal advisers be appointed, with power to consult Mr. Buckley if necessary, to draw up a scheme to be laid before an adjourned meeting of the conjoint councils. This was agreed to, and a vote of thanks to the chairman terminated the proceedings.

On the motion of Mr. Hutchinson, seconded by Mr. Victor Horsley, thanks were returned to the Messrs. Wakley for their interest in the meeting and for their kind offer.

ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

MONDAY, July 8th, 1895, the occasion of the laying of the foundation-stone of the New Lower School buildings by His Royal Highness the Prince of Wales, will be rubricated in the annals of Epsom College. All Epsom seemed to take an interest in the event, and although the decorations cannot be described as profuse there could be no doubt that the inhabitants had done their best to do honour to the occasion. From Epsom Town Station, where a guard of honour of the East Surrey Volunteers received their Royal Highnesses the Prince and Princess of Wales shortly after 3 o'clock, along Church-street to the College, flags fluttered on either side. Banners bearing words of welcome to the Royal party were suspended along the route, and festoons of bunting decorated many of the houses. When the Royal party arrived at the College they were received by a guard of honour of the College Cadet Corps, and, accompanied by the President of the College, his Grace the Duke of Abercorn, and the Duchess, they were conducted to the dais by the Reception Committee, consisting of Sir Joseph Fayrer (chairman of the council), the Rev. Edward W. Northey (vice chairman), Dr. Constantine Holman (the treasurer), Mr. George C. Croft, Mr. Lumsden Propert, Mr. Lawrence, Mr. H. Vardon, Dr. Needham, Sir Arthur Watson, Q.C., and Colonel Gordon Watson. The Headmaster, the Rev. T. N. Hart Smith, was then introduced to His Royal Highness by Sir Joseph Fayrer, and Miss Alice Hart Smith, the Headmaster's little daughter, presented a bouquet of flowers to the Princess, which she received with her accustomed grace. At this stage of the proceedings the marquee in which the ceremony was performed presented an imposing spectacle. The glorious weather had tempted the ladies to put on their brightest attire, and the gay dresses, the decorations of bunting and flowers, blending with the cool of the evergreens, which, fanned by the soft breeze that pervaded the marquee, gracefully waved to and fro, the silent sea of interested faces—all this presented to the eye in the light of the sunshine subdued by the yellow and crimson striped awning a scene which is not likely to be soon forgotten by those who witnessed it.

After his introduction to the Prince the Headmaster read an address to His Royal Highness on behalf of the staff of the College, in which he tendered to the Prince their most respectful and hearty thanks for graciously consenting to lay the foundation-stone of the new Lower School and expressed the very great pleasure they felt in welcoming the Princess also on this occasion. Referring to the founder of the institution, John Propert, Mr. Hart Smith said his (the founder's) desire was to confer a lasting benefit on the medical profession by providing the means of best assisting their orphans and widows, and by founding a school where their sons might receive a first-rate education at as low a cost as possible; and with this end in view he appealed hopefully and boldly to the public at large to testify by their assistance of the scheme the gratitude they must ever feel to a body of men who gladly face many dangers and too frequently have their lives cut short in ministering to others God's merciful gifts of healing. These objects had been steadily kept in view, and after encountering periods both of sunshine and of gloom they were able this day to point with thankfulness to the firmly established position of Epsom College. The school had now for some years been quite full, and 250 boys, the sons of medical men and others with them, were being educated within its walls. Its scholars had succeeded in entering with credit the medical as well as other professions, and they had distinguished themselves by winning many open scholarships at the universities and at the London hospitals. No less than fifty boys were educated on the foundation, free of all cost, and in various ways, by means of scholarships and exhibitions; many others received assistance. The Council had recently been enabled to increase to £30 the yearly grants made to non-resident pensioners. The course of education given is similar to that in other public schools, and while fitted, especially in the direction of science teaching, to meet the wants of boys preparing for a medical career, it sought to impart to all classes of boys a healthy and liberal training, both mental and physical. The enlargement of the school on a free and wide basis had long been desired, and the new Act obtained by the Council last year had opened it definitely to all classes alike, while giving special privileges to the sons of medical men. It was now intended to place in this new building 100 of the younger boys, who will thus, in accordance with modern ideas, be separated from the main body of the school. Other necessary works were also in progress, foremost among them being the enlargement of the school chapel.

The Prince of Wales, in reply to the address, said: "I am very much obliged to Mr. Hart Smith for the address which we have just heard, and assure him and you and all who take an interest in the welfare of Epsom College the pleasure it gives to the Princess and myself to be present to-day and take part in this interesting ceremony. The account given of the school shows it to be in a prospering condition, and most

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sincerely do I hope that it will ever continue so. For myself, I take a great interest in it, because forty years ago I was here with my father, who was unable previously to lay the foundation stone at the opening of the College. I am glad on this occasion to be able to lay the foundation stone of this Lower School, which will increase the College and, I hope, in every sense its usefulness."

The Venerable Robinson Thornton, D.D., Archdeacon of Middlesex, the first headmaster of the College, then asked the blessing of God on the laying of the foundation stone, and Mr. J. Lumsden Propert, son of the founder of the College, handed His Royal Highness the coins of the current year, with a copy of the *Times* newspaper and an illuminated scroll, which the Prince deposited underneath the stone. Sir Joseph Fayrer handed the silver trowel to the Prince, who proceeded to lay the stone, assistance being rendered by the architects (Sir A. W. Blomfield, A.R.A., and Sons), by the Clerk of the Works (Mr. J. R. Harding, A.I.C.E.), and by the builder (Mr. J. Dorey). The ceremony was brought to a conclusion by the singing of the "Old Hundredth" Psalm, and (in the unavoidable absence of the Bishop of Winchester, the Visitor of the College, owing to ill-health) the Lord's Prayer was recited and the Benediction pronounced by the Venerable J. H. Sapte, Archdeacon of Surrey and Rector of Cranleigh.

The band of the Artists' Corps Rifle Volunteers, by the kind permission of the Colonel commanding, Robert W. Edis, T.D, F.S.A., was in attendance and rendered a good programme.

The Prince and Princess having visited the College library, their Royal Highnesses and suite left amidst a volley of cheers by the South gate and drove to the Epsom Downs Station, where a guard of honour was again formed by the East Surrey Volunteers.

The trowel with which the ceremony was performed was constructed of silver with an ivory handle and bore the following inscription: "Presented to His Royal Highness the Prince of Wales on the occasion of his laying the Foundation Stone of the New Lower School, Royal Medical Benevolent College, Epsom. July 8th, 1895."

The Royal Medical Benevolent College was first projected in 1851 by the late John Propert; the buildings at Epsom were commenced in July, 1853; and on June 25th, 1855, the College was formally opened by H.R.R. the late Prince Consort, accompanied by H.R.H. the Prince of Wales. Since then large additions have been made from time to time, and they now provide ample accommodation for over 200 boys, besides those who occupy the Headmaster's boarding-house. The new Act obtained by the Council last year definitely opened the school to all classes, and it was decided to build a lower school.

The new buildings consist of a new complete school for 100 boys; an addition to the present chapel at the east end, which is to form the commencement of an entirely new chapel to replace the present one. The new school buildings consist of a master's house, including bedrooms and sitting-rooms for five unmarried masters and a common dining-room, six dormitories, five classrooms, and all other necessary accommodation. The building will be warmed by the induction of fresh air warmed by hot-water coils, the foul air being extracted by ventilating shafts. Red brick is being used in the construction of the buildings, with Bath stone quoins and dressings. The roofs will be covered with permanent green slates. Messrs. Dorey and Co. of Brentford are the builders, and Mr. Harding of Epsom is clerk of the works. The total cost of the new school will be £12,320, that of the addition to the chapel being £2525. Sir Arthur Bloomfield, A.R.A., and Sons are the architects.

INAUGURATION OF NEW SANITARY WORKS AT PARIS.

(FROM A SPECIAL CORRESPONDENT.)

THE Congress organised by the Society of Sanitary Architects and Engineers of France was preceded by the inauguration of the aqueduct and the irrigation fields of Achères. At ten o'clock in the morning on July 7th the members of the Congress had assembled on the new iron bridge which crosses the Seine from Colombes, on the peninsula of Gennevilliers, where the first sewage farm was established, to Argenteuil. Under the carriage-way of the bridge are four large iron pipes, which receive the sewage raised by the pumps of Colombes. Here there are engines of 1200 horse-power that raise 2 cubic metres of sewage per second from the altitude of 24 metres to a point at Argenteuil at an altitude of 60 metres. From this elevation the sewage will be able to reach by gravitation the most distant irrigation fields. On the bridge a handsome verandah had been erected, with a platform underneath. The chair was occupied by M. Poubelle, Prefect of the Seine; and by his side were M. Baudin, Vice-President of the Paris Municipal Council, and representatives from the Ministers of the Interior, Public Works, and Agriculture. M. Poubelle delivered a very eloquent speech, giving a retrospect of the sanitary works accomplished. He explained that the Paris main sewers threw into the Seine 391,000 cubic metres of sewage per day, or 143,000,000 cubic metres per annum, containing per annum about 10,000,000 kilogrammes of nitrogenous substances which might be estimated at about 20,000,000 francs. Thus £800,000 worth of fertilising agents are lost annually. Three generations of engineers had sought to prevent this waste—Belgrand, Alphand, Mille, Couché, and Durand-Claye, the latter being "the sincere and persuasive advocate of the principle now accepted: 'all to the sewer and nothing to the river.' In 1900 the peoples of the world who would come to Paris to pacifically celebrate the advent of a new century will be able to admire and marvel at the perfect health the French capital would then enjoy. They will study the harmonious working of its organisation and will see in its innumerable canalisations the realisation for towns of the principles of the circulation of the blood in the human body. Like arteries reaching the utmost extremities, so will pure spring water be brought by pipes to every house and every tenement. Then from every dwelling, drain-pipes and sewers, like veins, will bring the sewage to be revivified in the pores of the earth, and by the action of the plants which will derive their nutriment from the impurities of these waters. The contemplators of this system will understand the lofty character of the lesson in natural philosophy that results from these phenomena. They will celebrate under a multiplicity of forms and appearances the grand unity of science, and they will carry away with them the conviction that the study of life and its laws can prove as beneficent for a town as for an individual, and that man is all the nearer to truth as he succeeds more and more in borrowing from nature its processes and in faithfully conforming to its laws."

M. Baudin spoke of the desire of the Paris Municipality not to compromise the interests of the neighbouring districts, but, on the contrary, to enrich their agricultural resources. They would find that the advent of sewage in the arid plains that would now be put under cultivation would not only save the Seine from pollution, but would enrich the suburban districts. After some more speeches the members of the Congress, whose presence greatly increased the imposing appearance of this function, went to Argenteuil, where a midday banquet had been prepared. This repast was, of course, followed by the toasts suitable to the occasion. Then the members of the Congress went by train to Herblay and crossed over the Seine to the 800 hectares of the plain of Achères which are to be fructified by the Paris sewage. They were able to see the first trenches made for the reception of this sewage and to inaugurate its advent on the farm.

On the following Monday morning the work of the Congress commenced at the Palace of the Liberal Arts in the Champ de Mars. On behalf of the Minister of the Interior the sitting was presided over by M. Monod, Chief of the Sanitary Services of France, who in his opening speech paid a handsome tribute to the fifteen representatives of the British Association of Sanitary Inspectors present at the Congress. On the previous evening these gentlemen, together with the other members of the Congress, had been entertained at the Ministry of the Interior by M. Leygues, the Minister. The band of the Republican Guard discoursed sweet music in the illuminated gardens of the Ministry, alternated by singing and recitations in-doors, given by some of the most celebrated performers from the Théâtre Français and other Paris theatres.

The Congress has been organised in a very practical manner. Its official sittings are held from nine to half-past eleven each morning, and two subjects only are set down for discussion. A reporter for each subject has been appointed, and his report, generally terminating in a series of resolutions, has been printed and circulated among the members. Thus all the members know what will be discussed

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and on what they will have to vote. In the afternoon the subjects of discussion are left to the initiative of private members, and then follow visits to sanitary services. Thus on Monday the Congress visited the disinfecting establishment of the Rue de Récollets. This is one of the most perfectly installed disinfecting stations in all Europe. It was fully described in THE LANCET during the course of the recent cholera epidemic. On Tuesday afternoon the Congress visited the pneumatic drainage works of the Société de Salubrité at Levallois-Perret. On Wednesday the Congress will inspect the sewers, and on Thursday the public slaughter-house.

Paris, July 9th.

THE CHANGES AND ALTERATIONS IN THE CHARTERS AND BY-LAWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND SUGGESTED BY THE ASSOCIATION OF FELLOWS.

THE deputation from the Association of Fellows which was received by a committee of the Council of the Royal College of Surgeons of England on the 10th ult. was requested to draw up a *précis* of the reasons adduced in support of their suggestions for the amendment of the charters and by-laws. This has been done, and the following is the paper which the deputation has sent in, and which is now being carefully considered by the committee of Council. Although we insert the paper with pleasure we do not wish to be considered as endorsing editorially the various suggestions of the Association of Fellows, many of them being open to criticism from our point of view.

1. That it shall be lawful for the Fellows in meeting assembled to appoint an annual committee or other committee to consider and report on subjects referred to them and to confer when necessary with the Council.

The concession of half-yearly meetings of Fellows already granted by the Council requires to be supplemented by power being given to the Fellows to appoint a standing committee. No large body of men ever meet without the capability of appointing a committee to thrash out and summarise subjects and elaborate details. Moreover, it is desirable that such a committee should be intra-mural and official, instead of the work of such a committee being left to voluntary and extra-mural associations or societies of Fellows. Such a committee would (*a*) elicit and collect the opinions of the Fellows on subjects of importance, and would (*b*) act as a medium of communication between the Fellows and the Council. The duties of the committee, therefore, would be to consider all subjects referred to them by the Council and by the Fellows at the half-yearly meetings, and to report thereon, and to confer, when necessary, with the Council. It appears to the Association that the committee could be advantageously organised as follows. The committee might consist of twenty-four Fellows, twelve of whom should be elected from the Fellows resident in the London postal district, and twelve from the Fellows in the provinces. The election of the committee should take place annually at the July meeting of the Fellows by the Fellows present at the meeting. The first committee should be elected at the next ensuing meeting of Fellows after the establishment of the committee, notice of the election having been given in the agenda of that meeting. Subsequent annual committees should be elected as follows. Each candidate should be nominated by three Fellows, such nominations to be sent in to the annual committee a month before the July meeting of the Fellows. It would be the business of the annual committee to prepare a list of candidates so nominated, and the candidates would then be balloted for at the July meeting. The twelve metropolitan Fellows and the twelve provincial Fellows with the highest number of votes respectively would be the successful candidates and constitute the annual committee for the ensuing year. Five members of the committee should form a quorum. The committee would appoint its own chairman. The meetings of the committee should be held in the common room at the College. Regular meetings of the committee should be held as often as requisite, but not less than once in three months.

2. That some change be made in the mode of election of the President of the College in accordance with the vote recently given by the Fellows.

At the recent poll of the Fellows upon this subject, out of 418 valid answers 268 voted in favour of election by the Fellows of the College, either with or without nomination by the Council, and 150 for the present method, thus showing a majority approaching to two-thirds in favour of a change being made in the mode of election of President. In view of such voting it appears to be due to the Fellows that the Council should take this question into careful consideration.

3. That no alteration in the constitution or external relations of the College shall be effected without the body corporate being convened to discuss such proposed alteration.[1]

This proposition has always been regarded by the Association as a fundamental principle, and as an almost self-evident constitutional axiom. Although this principle has never been seriously contested it has only been partially acted upon by the Council. It is, however, so vital to the well-being of the College that the Association feels it to be essential that it should be incorporated in a new Charter.

4. That the system of substitute members of council be abolished.

The Association is of opinion that all the members of the Council should be upon an equal footing in regard to their term of service, and that the apparent advantage to the constituency of the additional elections occasioned by the adoption of the system is outweighed by the inconvenience and possible hardship to the individual members of the Council elected as substitute members. If the more frequent elections are considered by the Council as an advantage, such advantage would be gained better by shortening the term of office of councillors to six years. It has been objected that the system of substitute members is necessary for the satisfactory technical working of the elections, but if the Charter was amended so as to give each elected member of the Council an eight-year term of office instead of compelling three members of the Council to retire annually there would be no difficulty. One year there might be more and another fewer vacancies, as, indeed, is the case at present more or less, but all the members of the Council would be on that footing of equality which is the object of the suggestion.

5. That members of the Council shall not be eligible for re-election after serving for two full periods of eight years.

It is felt by the Association that a period of sixteen years' service on the Council is ample from the point of view of the interests of the College, despite the fact that this period has been exceeded at present only in a limited number of instances.

6. That the Council shall have power to increase the number of the members of the Court of Examiners from ten, as now limited, to any number not exceeding twenty.

It is to be noted that the insertion of such a provision in a new Charter would not render an increase of the number of examiners compulsory upon the Council, but would allow the Council to appoint additional examiners if the necessity for an increase should arise, as it may do at any time. At present the work of members of the Court of Examiners is at least as exacting as they can discharge with advantage to the College and the candidates, and it cannot be expected that overworked examiners should discharge their duties satisfactorily. It would seem, therefore, obviously for the interest of the College that the Council should have power to increase the number of examiners, and such an increase might be of service either with a view to a fairer division of labour than now exists to admit of the appointment of examiners in special branches or for a more comprehensive representation of schools.

7. That members of the Court of Examiners of the Royal College of Surgeons of England shall be elected annually and that no member of the Court shall hold office for more than five consecutive years, and that at the expiration of this term he shall not be again eligible until after a period of two years has elapsed.

Under the present Charters a member of the Court of Examiners holds office for five consecutive years and is immediately re-eligible on the expiration of that term. This regulation is at variance with the general rules observed at

[1] In the original document sent to the secretary of the College the words "without the consent of the body corporate convened to discuss such alterations" were used owing to the transcription by mistake of an earlier form of a resolution passed at one of the general meetings at the College.

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other licensing corporations in the election of surgical as well as other examiners. It is also at variance with the regulations adopted by the Council itself in respect to the appointment of examiners at the College in other subjects. This discrepancy is the more noteworthy because examination of candidates in anatomy and physiology formed a part of the duties of members of the Court of Examiners for many years, so that this curious condition of things exists—viz., that the rules adopted by the Council for the Board of Examiners in anatomy and physiology separated by the Council from the Court do not conform to the regulations of the Charter in respect to that Court. This fact alone would justify the Association in asking the Council to consent to apply for a new Charter, even if it were not supported by the obvious necessity that the Council should have an equal control over the surgical as over other examiners of the College.

8. That the meetings of the Fellows, the change in the mode of election of the President, the limitation of the terms of office of members of the Council and members of the Court of Examiners, and the annual general meeting of Fellows and Members for the reception of the report of the Council shall be provided for in a new Charter, and that the conduct of the meetings at the College and other matters referred to shall be regulated by by-law.

The changes already made by the Council and those suggested by the Association are of so great and even vital importance that they should be enacted in due form and regulated either by Charter or by-law. Regulations of the Council are not of sufficiently stable a character to give due weight to fundamental constitutional enactments, neither should it be left to the good pleasure of a fluctuating body like the Council to withdraw the privileges deliberately conferred upon the Fellows and Members for the good of the institution, the profession, and the public.

THE HEALTH OF THE CITY OF BELFAST FOR 1894.

DR. WHITAKER, medical officer of health for the city of Belfast, has just submitted his annual report, in which there are several very interesting matters. The number of deaths registered in 1894 is less than in either of the two previous years, while the death-rate from zymotic diseases is lower than in 1893, nearly 50 per cent. being caused by measles; while the deaths from phthisis and diseases of the respiratory organs are less numerous than they have been for many years past. In speaking of the cases of infectious disease, Dr. Whitaker admits that the returns are of little value because he has no means of ascertaining the number of cases other than those treated by the dispensary medical officers or at the Union Hospital. The Notification of Infectious Diseases Act is not in force in Belfast, and hence Dr. Whitaker has not the information medical officers have in many other cities, and we are afraid the late trial in Dublin, where a medical man was cast in damages, will tend very much to delay the desire of the authorities, or indeed, of medical men, to see this Act working in Belfast. At present the dispensary districts are co-extensive with the registrar's districts, and the medical officer of each of them is registrar and medical officer of health for his own division. In his report Dr. Whitaker gives the boundaries of these districts; we hope in his next work he will improve on this by adding a map of the city with the various registrars' districts clearly indicated. It would be a valuable addition to his report. Dr. Whitaker assumes the population for the past year to have been 285,000, and on this basis he calculates the birth-rate as 32·8 and the death-rate as 23·2. There were during the year 9349 births and 6615 deaths. Of these deaths, in 1894 2511, or more than one-third, were due to phthisis and respiratory diseases. The deaths from phthisis would seem in Belfast to be little influenced by either the seasons of the year or the state of the weather. The deaths from diarrhœa were less numerous than in any of the four preceding years. The number of deaths from typhoid fever shows an increase on the preceding year, and some facts stated by Dr. Whitaker are of great interest as bearing on the *quæstio vexata* of the etiology of this complaint. He finds that the greatest number of cases occurred in the neighbourhood of the Crumlin and Shankhill-roads—that is, in a district of Belfast which it would be expected would be one of the healthiest occupied by the working classes. It is well elevated above sea-level, its roads and streets, as Dr. Whitaker points out, are wide and open, its houses comparatively newly built, and yet enteric fever is more prevalent here than in other parts of Belfast inferior to it both in position and in sanitation. But there are other more puzzling features to be explained. In this district are placed the military barracks and the city prison, built on somewhat similar soil and supplied with water from the same source, and yet typhoid fever is practically unknown in these institutions. In the union workhouse (with between 3000 and 4000 inmates) only one case of typhoid fever was returned as sent into the hospital from this disease during the year, and the disease was not contracted in that house. In the deaf and dumb institution, adjoining, the same state of affairs has occurred—viz., no cases of typhoid fever—while in the lunatic asylum (a place very much overcrowded) no case of typhoid fever, or, indeed, of any contagious or infectious disease, has occurred during the past three years. From these facts Dr. Whitaker concludes that there is nothing naturally present in the air, soil or water, which would make typhoid fever more prevalent at Belfast than elsewhere, and that, if the same sanitary arrangements and regularity of living were adopted by the public generally that is carried out in the public institutions, this disease would be almost unknown in Belfast. Another explanation for the prevalence of typhoid fever in the Crumlin and Shankhill districts was given at the meeting of the Belfast board of guardians, on July 2nd, by Dr. Gibson. He stated that no fewer than forty-seven cows were without any supply of pure drinking water and were compelled to consume sewage or water contaminated with sewage on grazing land inside the city. The district referred to by Dr. Gibson is near to the Crumlin and Shankhill parts of the city, and the natural inference is that in this way, by the milk of cows drinking sewage, the disease may be transmitted. He thought the public health committee should have seen that a proper water-supply was obtained for the cows in the fields. In the district from which he (Dr. Gibson) came, Ballymacarrett, typhoid fever was entirely absent. In referring to diphtheria, Dr. Whitaker says the disease seems to be increasing in Belfast, an experience similar to that in England. Typhoid fever is dying out, and there were only 4 cases of small-pox—a very interesting fact considering the close connexion of Belfast and Dublin, where there has been such a great epidemic. Dr. Whitaker attributes the comparative freedom from small-pox to the prompt action taken to isolate and disinfect any house in which the disease occurs, but more particularly to the care taken, not only by the medical profession but also by the people themselves, in the matter of vaccination. Here are a few facts on the vaccination question given in this thoughtful report. In the year 1891 there were 25 cases of small-pox; of these, 23 patients had been vaccinated of whom one died; 2 were not vaccinated, and both, though young and strong, died. In 1893 there were 19 cases of small-pox, all of which were treated in the Union Hospital, and, although some of the cases were severe, there were no deaths, and in every case the patient had been vaccinated. In reference to the water-supply of Belfast, Dr. Frankland of Dundee, to whom Dr. Whitaker sent a supply for analysis, reports that "as regards the fitness of the water for the supply of a large city, it is of a medium quality for such a purpose." Other matters referred to by Dr. Whitaker in his most interesting report are the high infant mortality, the want of a suitable hospital for phthisis, the question of disinfection—especially in cases of small-pox and typhoid fever, the sanitary defects in schools and in working-class houses, and personal and home cleanliness.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF FELLOWS.

A MEETING of Fellows of the College was held on the 4th inst. at 5 P.M., the President, Mr. Christopher Heath, being in the chair. Forty-five Fellows, including fourteen members of the Council, were present. The Secretary having read the minutes of the meeting in January, the President said that since the last meeting the College had had to deplore the

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loss by death of several distinguished Fellows; firstly, Mr. Hulke, who died while President and only a few days after the Hunterian Oration; he had perished through his devotion to duty, for his fatal illness had resulted from his going in the middle of the night during the severe winter weather to operate on a hospital patient; Sir William Savory also, who had held the position of President of the College for four years; Mr. Arthur Durham, who was for many years an active member of the Council; and, lastly, Mr. Thomas Huxley, who was elected a Fellow in 1883, who had the great honour of being a Privy Councillor, and whose wide knowledge had done so much to advance science.

The President then reported that the alterations in Sections 4, 16, and 25 of the By-laws had been approved by the late Home Secretary and the late Lord Chancellor, and had become by-laws of the College. The alterations in Section 4 provided that voting papers for the election of members of the Council be sent to all Fellows and permitted them to be received up to the time of the commencement of the election, and under this modified by-law the election on the 4th inst. was held. The alteration in Section 16 was to give increased power to the Council in dealing with cases of unprofessional conduct on the part of Fellows or Members of the College. Some opposition had been offered to the suggested change by some Members, and the late Home Secretary had advised the insertion of the words "after due inquiry," and in this modified form the by-law had been ordained. The third alteration increased the fee for the dental licence from ten to twenty guineas.

The President further stated that the Council had decided that it was not expedient to accede to the resolution passed at the meeting in January, but that a committee of the Council had been appointed to receive deputations from the Fellows of the College upon the subject of the resolution—viz., the question of the mode of election of the President. One deputation had been received, the matter was discussed, and a further meeting was to be held shortly. This concluded all the business on the agenda.

QUARTERLY MEETING OF THE COLLEGE: ELECTION OF PRESIDENT.

A quarterly meeting of the College was held on Thursday, July 11th, Mr. Christopher Heath, President, in the chair.

The President reported the result of the meeting of Fellows held on the preceding Thursday for the election of Members of the Council.

Mr. Christopher Heath was re-elected President of the College, and Mr. Reginald Harrison and Mr. Pickering Pick were appointed Vice-Presidents.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6420 births and 3564 deaths were registered during the week ending July 6th. The annual rate of mortality in these towns, which had risen in the three preceding weeks from 15·4 to 16·7 per 1000, further increased last week to 17·5. In London the rate was equal to 18·0 per 1000, while it averaged 17·2 in the thirty-two provincial towns. The lowest rates in these towns were 9·1 in Croydon, 10·0 in Brighton, 10·6 in Nottingham, 11·0 in Bristol, and 12·2 in Portsmouth; the highest rates were 20·1 in Newcastle-upon-Tyne, 20·4 in Blackburn, 21·4 in Bradford, 21·8 in Salford, and 24·4 in Liverpool. The 3564 deaths included 665 which were referred to the principal zymotic diseases, against 400 and 493 in the two preceding weeks; of these, 337 resulted from diarrhœa, 131 from measles, 71 from diphtheria, 62 from whooping-cough, 31 from scarlet fever, 25 from "fever" (principally enteric), and 8 from small-pox. No fatal case of any of these diseases occurred last week in Brighton, Huddersfield, or Halifax; in the other towns they caused the lowest death-rates in Gateshead, Portsmouth, and Croydon; and the highest rates in Liverpool, Leeds, Wolverhampton, West Ham, and Leicester. The greatest mortality from measles occurred in Newcastle-upon-Tyne, Plymouth, Manchester, Blackburn, and West Ham; from whooping-cough in Norwich, Derby, Burnley, Sunderland, and Bolton; and from diarrhœa in London, Cardiff, Salford, Wolverhampton, and Leicester. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 71 deaths from diphtheria included 53 in London, 4 in West Ham, 3 in Salford, and 3 in Leeds. Four fatal cases of small-pox were registered in Oldham, 3 in London, and 1 in Liverpool, but not one in any other of the thirty-three towns. There were 42 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 6th, against 19, 22, and 34 at the end of the three preceding weeks; 17 new cases were admitted during the week, against 2, 8, and 25 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2044, against 1637, 1732, and 1894 on the three preceding Saturdays; 311 new cases were admitted during the week, against 199, 251, and 319 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 186 and 160 in the two preceding weeks, were again 160 last week, and were 38 below the corrected average. The causes of 58, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Nottingham, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 19·2 per 1000 in the two preceding weeks, rose again to 19·4 during the week ending July 6th, and exceeded by 1·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 14·9 in Leith to 21·4 in Glasgow and 25·1 in Greenock. The 560 deaths in these towns included 57 which were referred to diarrhœa, 18 to measles, 10 to whooping-cough, 5 to scarlet fever, 4 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 98 deaths resulted from these principal zymotic diseases, against 76 and 78 in the two preceding weeks. These 98 deaths were equal to an annual rate of 3·4 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had increased from 25 to 48 in the three preceding weeks, further rose to 57 last week, of which 43 occurred in Glasgow, 3 in Edinburgh, and 3 in Paisley. The deaths referred to measles, which had been 14 in each of the three preceding weeks, rose to 18 last week, and included 7 in Glasgow and 5 in Paisley. The 10 fatal cases of whooping-cough exceeded by 1 the number in the preceding week, and included 5 in Glasgow and 3 in Aberdeen. The deaths from scarlet fever, which had been 7 and 1 in the two preceding weeks, were 5 last week, of which 4 occurred in Glasgow. The 4 fatal cases of diphtheria were within 1 of the number recorded in the preceding week, and included 2 in Glasgow, where the death from small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 94 and 99 in the two preceding weeks, declined again to 79 last week, but exceeded by 22 the number in the corresponding week of last year. The causes of 33, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·1 and 22·4 per 1000 in the two preceding weeks, further rose to 24·9 during the week ending July 6th. During the thirteen weeks of the last quarter the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 16·7 in London and 18·8 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed an increase of 17 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 16 and 9 in the two preceding weeks; of these, 6 resulted from diarrhœa, 2 from scarlet fever, 1 from diphtheria, 1 from whooping-cough, 1 from "fever," and not one either from small-pox or measles. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 4·0 in London

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—JUNE, 1895.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.														
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	4,392,346	43	1375	844	2	172	10	10	364	3	2823	8·4	2	262	58	151	83	1	24	1	178	765	2·3	5019	14·9	123
West Districts.																										
Paddington	122,756	—	43	20	—	3	—	1	9	—	76	8·1	—	1	—	3	—	—	—	—	2	6	0·6	116	12·3	134
Kensington	167,671	—	30	19	—	2	1	1	12	—	65	5·1	—	—	1	4	—	—	—	—	12	17	1·3	149	11·6	152
Hammersmith	108,429	1	20	15	—	3	1	—	5	—	45	5·4	1	1	1	3	1	—	1	—	5	13	1·6	97	11·7	165
Fulham	117,745	—	25	35	—	1	—	—	8	—	69	7·6	—	2	1	10	4	—	—	—	2	19	2·1	135	14·9	110
Chelsea	99,930	—	44	16	—	2	—	—	—	—	62	8·1	—	1	—	4	2	—	—	—	7	14	1·8	93	12·5	139
St. George Hanover-square	74,037	1	23	6	—	1	—	—	9	—	40	7·0	—	—	—	—	2	—	—	—	2	4	0·7	79	13·9	112
Westminster	54,003	3	19	9	—	1	—	—	5	—	37	8·9	—	—	2	—	—	—	—	—	2	4	1·0	71	17·1	120
St. James Westminster	23,149	—	7	1	—	—	—	1	3	—	12	6·8	—	—	—	—	—	—	—	—	—	—	—	15	8·4	136
North Districts.																										
Marylebone	137,392	—	30	20	—	11	—	—	24	—	85	8·1	—	—	1	1	1	—	1	—	5	9	0·9	135	12·8	86
Hampstead	77,592	—	22	8	—	3	2	—	1	—	36	6·0	—	—	1	—	1	—	1	—	1	4	0·7	57	9·6	107
St. Pancras	233,543	1	64	40	—	11	—	—	25	—	141	7·9	—	—	4	6	3	—	1	—	9	23	1·3	257	14·3	135
Islington	335,929	1	110	34	—	4	1	1	26	—	177	6·9	—	21	1	4	6	—	—	—	15	47	1·8	343	13·3	119
Stoke Newington	35,214	—	9	6	—	3	—	—	1	—	19	7·0	—	1	—	—	1	—	—	—	2	4	1·5	27	10·0	15
Hackney	215,623	—	78	29	—	2	—	—	19	—	128	7·7	—	14	7	6	6	—	1	—	11	45	2·7	219	13·2	121
Central Districts.																										
St. Giles	37,654	1	16	7	—	1	—	—	3	—	28	9·7	1	—	1	2	3	—	—	—	2	9	3·1	46	15·9	92
St. Martin-in-the-Fields	13,536	—	2	1	—	2	—	—	—	—	5	4·8	—	—	—	1	—	—	—	—	—	1	1·0	16	15·4	250
Strand	22,586	2	3	1	—	—	—	—	1	—	7	4·0	—	—	1	—	—	—	—	—	—	1	0·6	39	22·5	136
Holborn	32,188	1	11	3	—	2	—	—	5	—	22	8·9	—	3	—	1	—	—	—	—	—	4	1·6	37	15·0	119
Clerkenwell	66,036	1	35	7	1	1	1	1	3	—	50	10·0	—	—	3	1	3	1	—	—	4	12	2·4	110	22·1	193
St. Luke	40,763	—	15	11	—	1	—	—	3	—	30	9·6	—	26	—	2	2	—	—	—	6	36	11·5	96	30·7	185
City of London	33,824	—	9	4	—	1	—	—	2	—	16	6·2	—	4	—	1	—	—	1	—	1	7	2·7	54	20·8	140
East Districts.																										
Shoreditch	122,932	—	40	22	—	3	—	—	15	1	81	8·6	—	17	2	6	2	—	—	—	15	42	4·5	191	20·3	182
Bethnal Green	130,061	1	46	29	—	7	—	—	19	—	102	10·2	—	10	4	9	4	—	1	—	8	36	3·8	180	18·0	125
Whitechapel	75,820	—	20	21	—	5	—	1	7	—	54	9·3	—	20	2	5	2	—	2	—	5	36	6·2	129	22·2	134
St. George-in-the-East	45,227	—	20	10	—	3	—	—	1	—	34	9·8	—	24	3	5	1	—	—	—	2	35	10·1	88	25·2	155
Limehouse	56,885	—	24	7	—	—	—	—	9	—	40	9·2	—	13	1	3	2	—	—	—	3	22	5·0	97	22·2	174
Mile End Old Town	108,443	—	43	42	—	1	—	—	7	—	93	11·2	—	21	2	8	4	—	—	—	4	39	4·7	156	18·8	139
Poplar	171,230	1	68	87	1	5	—	1	13	—	176	13·4	—	36	2	12	6	—	—	—	1	57	4·3	260	19·8	124
South Districts.																										
St. Saviour Southwark	26,570	—	4	6	—	1	—	—	4	—	15	7·3	—	—	1	2	4	—	—	—	2	8	3·9	29	14·2	113
St. George Southwark	60,168	2	13	11	—	1	—	—	4	1	32	6·9	—	4	2	—	5	—	—	—	4	15	3·2	101	21·9	199
Newington	119,358	2	19	33	—	2	—	1	8	—	65	7·1	—	1	—	3	8	—	1	—	7	20	2·2	156	17·0	130
St. Olave Southwark	13,065	—	—	—	—	1	—	—	—	—	1	1·0	—	—	—	—	—	—	—	—	—	—	—	14	14·0	91
Bermondsey	83,861	3	18	17	—	2	—	—	3	—	43	6·7	—	3	—	6	1	—	—	—	2	12	1·9	104	16·2	149
Rotherhithe	40,713	1	22	20	—	2	—	—	7	—	52	16·7	—	2	—	4	—	—	—	—	1	7	2·2	38	12·2	54
Lambeth	284,883	4	83	59	—	8	2	—	29	1	186	8·5	—	11	3	12	6	—	1	1	13	47	2·2	323	14·8	92
Battersea	165,130	—	78	37	—	2	—	1	22	—	140	11·1	—	18	6	6	2	—	—	—	6	38	3·0	193	15·2	122
Wandsworth	185,956	—	56	24	—	6	—	—	10	—	96	6·7	—	1	1	4	—	—	—	—	2	8	0·6	134	9·4	81
Camberwell	252,737	12	55	64	—	9	1	—	16	—	158	8·2	—	3	1	10	3	—	1	—	9	27	1·4	241	12·4	150
Greenwich	175,183	2	70	40	—	3	—	—	13	—	128	9·5	—	2	3	7	2	—	—	—	1	15	1·1	178	13·2	128
Lewisham (excluding Penge)	82,410	—	24	8	—	—	1	—	2	—	35	5·5	—	1	—	—	1	—	—	—	3	5	0·8	62	9·8	72
Woolwich	42,768	1	25	4	—	14	—	1	5	—	50	15·2	—	—	1	—	—	—	2	—	—	3	0·9	55	16·8	134
Lee	38,832	—	7	2	—	—	—	—	2	—	11	3·7	—	—	—	—	—	—	—	—	—	—	—	33	11·1	69
Plumstead	61,494	2	24	9	—	42	—	—	4	—	81	17·2	—	1	1	—	—	—	10	—	2	14	3·0	53	11·2	134
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 43 cases of membranous croup.

† Including deaths from membranous croup.

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and 1·3 in Edinburgh. The fatal cases of diarrhœa, which had 3 and 5 in the two preceding weeks, further rose to 6 last week. The mortality from "fever" corresponded with that recorded in the preceding week, while that from whooping-cough showed a decline. The 167 deaths in Dublin last week included 35 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in any recent week. Seven inquest cases and 3 deaths from violence was registered; and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JUNE, 1895.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during June in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·4 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 5·8, 5·7, and 6·8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Kensington, Hammersmith, St. Martin-in-the-Fields, Strand, St. Olave Southwark, Lewisham, and Lee; while they showed the largest excess in Bethnal Green, Mile End Old Town, Poplar, Rotherhithe, Battersea, Woolwich, and Plumstead. The prevalence of small-pox in London showed an increase during June, 43 cases being notified during the month, including 12 in Camberwell, 4 in Lambeth. 3 in Westminster, and 3 in Bermondsey sanitary areas. The Metropolitan Asylum Hospitals contained 33 small-pox patients at the end of June, against 54, 34, and 20 at the end of the three preceding months; the weekly admissions averaged 10, against 11, 7, and 5 in the three preceding months. The prevalence of scarlet fever in London showed a further marked increase upon that recorded in recent months; this disease was proportionally most prevalent in Clerkenwell, St. George-in-the-East, Limehouse, Rotherhithe, Battersea, Greenwich, Woolwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1845 scarlet fever patients at the end of June, against 1485, 1413, and 1481 at the end of the three preceding months; the weekly admissions averaged 229, against 145, 132, and 167 in the three preceding months. The prevalence of diphtheria in London showed a further increase during June; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, St. Luke, Whitechapel, Mile End Old Town, Poplar, Newington, and Rotherhithe. There were 633 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of June, against 435, 430, and 508 at the end of the three preceding months; the weekly admissions averaged 109, against 62, 69, and 81 in the three preceding months. The prevalence of enteric fever in London showed a marked decline during June; this disease was proportionally most prevalent in Marylebone, Woolwich, and Plumstead sanitary areas. Erysipelas was proportionally most prevalent in Marylebone, Holborn, Bethnal-green, Limehouse, and Rotherhithe sanitary areas. The 10 cases of puerperal fever notified during June were considerably below the average.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patient had previously resided. During the four weeks ending Saturday, June 29th, the deaths of 5019 persons belonging to London were registered, equal to an annual rate of 14·9 per 1000 of the population, against 30·0, 18·3, and 15·9 in the three preceding months. The lowest death-rates during June in the various sanitary areas were 8·4 in St. James Westminster, 9·4 in Wandsworth, 9·6 in Hampstead, 9·8 in Lewisham (excluding Penge), 10·0 in Stoke Newington, 11·1 in Lee, and 11·2 in Plumstead; the highest rates were 21·9 in St. George Southwark, 22·1 in Clerkenwell, 22·2 in Whitechapel and in Limehouse, 22·5 in Strand, 28·2 in St. George-in-the-East, and 30·7 in St. Luke. During the four weeks of June 765 deaths were referred to the principal zymotic diseases in London; of these, 262 resulted from measles, 178 from diarrhœa, 151 from diphtheria, 88 from whooping-cough, 58 from scarlet fever, 26 from different forms of "fever" (including 1 from typhus, 24 from enteric fever, and 1 from an ill-defined form of continued fever), and 2 from small-pox. These 765 deaths were equal to an annual rate of 2·3 per 1000, against 1·5 and 1·7 in the two preceding months. No fatal case of any of these diseases was registered during June in St. James Westminster, St. Olave Southwark, or Lee; in the other sanitary areas the lowest zymotic death-rates were recorded in Paddington, St. George Hanover Square, Hampstead, Strand, Wandsworth, and Lewisham; and the highest rates in St. Luke, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar. Only 2 fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 14; of these 2 fatal cases, 1 belonged to Hammersmith and 1 to St. Giles sanitary areas. The 262 deaths referred to measles were 23 below the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar. The 58 fatal cases of scarlet fever were 10 below the corrected average number; this disease showed the highest proportional fatality in Hackney, Clerkenwell, St. George-in-the-East, and Battersea sanitary areas. The 151 deaths referred to diphtheria exceeded by 37 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Bethnal Green, St. George-in-the-East, Mile End Old Town, Poplar, Bermondsey, and Rotherhithe. The 88 fatal cases of whooping-cough were less than half the corrected average number; this disease showed the highest proportional fatality in St. Giles, St. Luke, St. George Southwark, and Newington sanitary areas. The 24 deaths referred to enteric fever were 15 below the corrected average number; except in Plumstead, there was no marked excess of "fever" mortality in any of the sanitary areas during the month under notice. The 173 fatal cases of diarrhœa were 9 above the corrected average number. In conclusion, it may be stated that the mortality in London during June from these principal zymotic diseases was rather more than 12 per cent. below the average.

Infant mortality in London during June, measured by the proportion of deaths under one year of age to registered births, was equal to 123 per 1000, and was slightly below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Marylebone, Stoke Newington, Rotherhithe, Wandsworth, Lewisham, and Lee; and the highest rates in St. Martin-in-the-Fields, Clerkenwell, St. Luke, Shoreditch, Limehouse, and St. George Southwark.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR-GENERAL INKSON has proceeded to England on leave of absence, and the duties of Principal Medical Officer in Malta have been taken over by Brigade-Surgeon-Lieutenant-Colonel Lyons. Surgeon-Lieutenant Vaughan-Williams has been posted to Cork. Surgeon-Captain Hore has been transferred to York. Surgeon-Lieutenant C. M. Fleury, A.M.S., is ordered to York for duty in the North-Eastern District; he will return to Netley when his services are no longer necessary in that district. Surgeon-Lieutenant W. M. O'Connor, M.M.S., is attached to the Medical Division, and Surgeon-Lieutenant H. E. Mortis to the Surgical Division of the Royal Victoria Hospital.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major S. C. Sarkies is appointed to act as Surgeon, Third District, Madras, during the absence of Brigade-Surgeon-Lieutenant-Colonel H. J. Hazlett, on leave. Surgeon-Captain W. Molesworth is appointed to act as Additional Medical Officer, General Hospital, Madras, during the employment of Surgeon-Captain R. Robertson on other duty. Surgeon-Major J. Smyth is appointed to act as Fort Surgeon with Port and Marine duties, during the absence of Surgeon-Lieutenant-Colonel H. Allison on leave. Surgeon-Captain G. G. Giffard is appointed to act as Resident Medical Officer, General Hospital, during the employment of Surgeon-Major J. Smyth on other duty. The following appointments

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and transfers are ordered, consequent on the departure on leave of Surgeon-Lieutenant-Colonel O. Baker:—Surgeon-Captain T. W. Gibbard to hold Collateral Charge of the Civil Surgeoncy at Shwebo; Surgeon-Captain K. Prasad to be Civil Surgeon of the Toungoo District; Surgeon-Captain A. R. P. Russell to be Superintendent of the Rangoon Central Gaol; and Surgeon-Major R. E. S. Davis to be Junior Civil Surgeon and Superintendent of the Lunatic Asylum, Rangoon. The services of Surgeon-Major E. F. H. Dobson (Bengal) are replaced at the disposal of the Chief Commissioner of Assam, from date on which he was relieved of his duties as Officiating Protector of Emigrants and Superintendent of Emigration, Calcutta.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeon Horace E. F. Cross to the *President* (additional) for temporary service at the Royal Naval rendezvous. Surgeons: C. S. Facey to the *Widgeon;* Bernard Ley to the *Resolution;* S. H. M'Sherry to the *Wallaroo*, and E. Cuffey to the Haulbowline Hospital.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Major C. G. M. Lewis to be Surgeon-Lieutenant-Colonel; to resign his commission; to be granted permission to retain his rank, and to continue to wear the uniform of the Battalion on his retirement. 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant J. T. Walsh resigns his commission. 6th Volunteer Battalion the King's (Liverpool Regiment): Michael Joseph Mahony, M.B., to be Surgeon-Lieutenant. 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant E. L. Puddicombe resigns his commission. 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Major T. M. Dolan, M.D., to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Captain W. S. Cheyne, M.B., to be Surgeon-Major.

VENEREAL DISEASES IN THE ARMY OF INDIA.

The *Times of India* of the 14th ult. contains a correspondence in connexion with a quotation from THE LANCET on this subject in which this journal is alluded to as a "materialistic" organ. Well, it certainly strikes us as very material to the health and efficiency of our troops in India that unfortunate women when suffering from a highly contagious disease should not be allowed to follow their calling whilst in that condition, and we are glad to notice that the *Times of India*, in some very sensible and sarcastic remarks on the subject, takes the same view. Whether the amount of disease from this cause has been unduly raised or not by the inclusion of re-admissions among the admissions is a statistical matter that can be easily set right, but it does not seem to us to materially affect the question at issue. We repeat that it appears a monstrous absurdity to safeguard the troops against such diseases as cholera, small-pox, and infectious fevers by insisting on the prompt removal of the sufferers from them from cantonments and camps while we allow unfortunate women affected with venereal disease to carry on a calling that is highly dangerous to other people. It is surely a matter of common sense and common prudence to insist that a woman known to be suffering from this class of disease should either go to a hospital where she can be treated and cured or quit the cantonment. As it is at present, several soldiers may independently attribute the source of their infection to a common cause which we are powerless to treat or remove. This may be a very materialistic view to take of the subject, but it nevertheless seems to our medical apprehensions a very natural, common-sense way of looking at it. Whether, judged by past experience, the Lock Hospital system in India failed to accomplish all that was expected of it or not has little or no bearing on this point.

MEDICAL AND SANITARY ARRANGEMENTS IN MOUNTAIN WARFARE IN INDIA.

In a lecture recently delivered at the Royal United Service Institution by Major F. C. Carter, Royal Berkshire Regiment, on Mountain Warfare in India, special reference was made to the medical and sanitary arrangements for such expeditions. The lecturer said that however complete may be the organisation, equipment, and *morale* of our troops, they will avail little if the medical and sanitary arrangements are faulty. A great tendency to be avoided is the "cutting down" of the medical staff and the number of field hospitals required for hill campaigns, a tendency that has no doubt arisen partly from motives of economy and partly from the healthy state the troops have generally been in during our late frontier wars. The danger of such false economy was, however, clearly shown with the Isazai Field Force of 1892, when, owing to fever, sunstroke, and cholera following on an attempt to reduce the hospital establishment, the resources of the medical department with the force were severely taxed. Another medical question of some importance is the carrying of wounded men. The stretchers now in use are by no means suitable for steep hillsides. In mountain warfare, owing to the nature of the hills, the density of the jungle, or the ever-vigilant attitude of our foes, it is necessary for our camps and bivouacs to be confined within far closer limits than when fighting in the plains, and this alone necessitates a far more careful inspection of *minutiæ sanitatis* than is otherwise necessary. The necessity of ordinary precautions does not appeal to a native.

THE HEALTH OF THE FRENCH TROOPS IN MADAGASCAR.

It is not easy to form a correct estimate of the sanitary condition of the French force in Madagascar from the various reports that have been published on the subject. It seems, however, according to those received by the Minister for War in Paris, and published in the *Standard* of the 6th inst., that about one-fifteenth of the troops are in hospital, and about one-thirtieth, including the coolies employed with the French expeditionary force, are on the sick list, but not in hospital. The diurnal variations of temperature in Madagascar have to be taken into account—the nights are said to be very cool. From our experience in India and Afghanistan we know that much sickness is to be expected under such circumstances among the coolies and native followers with a force, and we are not therefore surprised to learn that a demand has been made on the French War Minister to send out woollen jerseys for their use. As might have been expected, the resistance offered to the French forces is comparatively small and easily overcome. A sanatorium has been erected at Nossi Bé, which when completed will accommodate 500 patients. It is occupied at present by about 200 sick soldiers from Majunga and elsewhere.

MILITIA MEDICAL STAFF CORPS.

The Hants Companies of the Militia Medical Staff Corps are encamped at Netley between the Royal Victoria Hospital and the lunatic asylum. The non-commissioned officers and men commenced their duties at the Royal Victoria Hospital on Monday, the 8th inst. They are employed as camp guards, cooks, messengers, and on fatigues, dispensary, pack-store, bathroom and ward duties. The companies parade daily in the morning with the Medical Staff Corps. The drills take place after 3 P.M. One non-commissioned officer and six men are furnished daily for night duty in the hospital.

THE VOLUNTEER MEDICAL STAFF.

His Royal Highness the Duke of Cambridge has accepted the invitation of the officers of Volunteer Medical Staff to dine with them at the King's Hall, Holborn Restaurant, on Wednesday, July 31st, at 7 P.M. Major-Generals Sir Francis Grenfell, G.C.M.G., K.C.B., Inspector-General for Auxiliary Forces, and Lord Methuen, C.B., C.M.G., Commanding the Home District, will be present on the occasion, when the chair will be taken by Surgeon-Lieutenant-Colonel W. R. Smith, M.D., F.R.S. Edin., 3rd V.B. the Queen's Own Royal West Kent Regiment.

WAR OFFICE POLICY OF THE NEW GOVERNMENT.

The army is waiting for a declaration of policy on the part of the new Government. As at present arranged, the Duke of Cambridge will resign his post in October, and all branches of the service are anxious to know who is to be his successor in the newly constructed appointment. Lord Wolseley, Lord Roberts, Sir Redvers Buller, and the Duke of Connaught have all been named, but nothing is definitely known as yet. It would probably not suit the Duke of Connaught to take the appointment (for five years) at the present time.

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 9th inst, Inspector-General T. Russel Pickthorn in the chair, the sum of £74 was distributed among the several applicants.

On Thursday afternoon last Captain Younghusband, in reading a paper upon the Chitral Campaign at the Royal

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United Service Institution, drew special attention to the gallant conduct of Surgeon-Captain Whitchurch in bringing in Captain Baird when mortally wounded. We hope to learn shortly that this "gallant civilian," to adopt the Commander-in-Chief's pleasantry—has received the honourable distinction of the Victoria Cross.

Surgeon-General William Campbell Maclean, M.D., C.B., Madras Retired List, has been appointed Honorary Surgeon to the Queen in the room of Inspector-General of Hospitals J. H. Orr, M.D., C.B., deceased.

Correspondence.

"Audi alteram partem."

"IS METEOROLOGY A SCIENCE?"

To the Editors of THE LANCET.

SIRS,—Will Dr. Wilks please tell us what a "science" is? Some years ago there was a discussion whether medicine and surgery are sciences. I have for long been groping for a criterion, but in vain. It seems to be mainly a question of words, yet beneath the "counters" are conceptions of no small importance. Unless we recognise as a science a defined region of knowledge to which observation and inference are specially applied I see no foothold. But this would make meteorology as much a science as astronomy, and chemistry a more definite science even than astronomy. It would be easy to narrow the definition until it included only mathematics and psychology? It seems to me a mistake to mix up with the question that of "art." Every science has its application, and the extent of this has no relation to the features that determine the recognition of a "science." Surely, however, we may go too far. As we descend from the heights of "pure science," to which most of us look up with awe, we come to lower strata, with less distinction, to which, however, the adjective "scientific" is applicable, even with usefulness. And so we pass down to mere "knowledge." I write this in the hope of help from Dr. Wilks' clear thought.

I remain, Sirs, yours faithfully,

Queen Anne-street, Cavendish-square, W. W. R. GOWERS.

FRACTURE OF THE LOWER END OF THE FEMUR.

To the Editors of THE LANCET.

SIRS—In your report of the last clinical meeting of the West London Medico-Chirurgical Society you give prominence to the speakers who advocated treating the T-fractures (especially of the humerus) by the immediate application of plaster of Paris splints; in your abstract of the discussion that followed my cases you mention that Mr. Bidwell also recommended "that T-shaped fractures of the lower end of the humerus should be treated by a well-fitting plaster of Paris splint, which ought to be kept on for a month, and if the fracture had been kept completely immobilised the movements of the elbow-joint quickly returned without much trouble"—*vide* THE LANCET, June 29th. This is so contrary, I think, to what is unfortunately most usually the result of this description of accident, and also to the teaching of classic literature on the subject, that I would be glad to obtain the opinion of some of your surgical readers with large experience in this matter. In Mr. Christopher Heath's useful Surgical Dictionary, at page 746, when referring to T-fractures of the elbow-joint, Mr. Howard Marsh writes: "They are apt, particularly those which directly involve the joint, to be followed by impairment of movement in the limb, a fact of which it is best that parents at the onset should be informed." And this appears to me a prudent and timely caution; but if Mr. Bidwell's experience is usual it is both unnecessary and inadvisable, for it might tend to give needless anxiety to parents or guardians, as well as, perhaps, to tend to less careful attention and watchfulness of the surgeon.

I am, Sirs, your obedient servant,

July 8th, 1895. FREDERICK H. ALDERSON, M.D.

"THE POSITION OF THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Your leading article on the question of the position of Members of the College of Surgeons in respect of their College is singularly opportune. There can, I think, be little question that the policy pursued by the great corporations with reference to the great mass of the profession has not been well advised, and it is doubtful whether it would even have been allowed in any profession but our own. When I say the policy, I mean the policy of denying to the mass of the profession, corporate existence, and I condemn this policy because the success of any body of citizens must depend upon the individuals composing that body; it must depend upon their efforts and not upon the action of the comparatively few who have arrived at coveted positions. The important question before the profession really is, What is the best method of quickening interest in affairs connected with the profession? At the present time the attitude assumed with regard to those who take an interest in professional politics is that they are the agitators, the riff-raff, the trades unionists of the profession. Now anyone who has in anyway studied the trades unions questions must arrive at the conclusion that the working men of this country, notwithstanding grave faults made in the working and management of those unions, have achieved a gigantic success, not only with reference to themselves, but also with reference to the community. One has only to compare labour conditions in Continental countries with those in our own to appreciate the fact that the working men of this country, by adhering to the principles of coöperation, friendly societies, and trades unions, have saved this country from a large amount of suffering and trouble. The best method, then, for advancing the interests of our profession must be one, I believe, which will induce each individual member to become alive to his professional responsibilities and to feel them. There is an association ready formed which has in it all the elements of success. I refer to the British Medical Association, which is representative and which is democratic in constitution. As yet this association has not become conscious of its latent power and force. In a few weeks it will be called upon to decide upon the following resolution, drawn up, after careful consideration, by a number of representative practitioners: "That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and the collective interests of the medical profession, and the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties." I think that if members of the profession will come forward and help to carry this resolution they will be doing something much more practical than merely hammering at the old corporations. It appears to be much better policy to leave these close boroughs alone, and to convert the British Medical Association into a body powerful enough to cope with them. When the latter is done little fear need be felt as to the result. The association has the numbers besides possessing practically an unlimited field for raising funds. What would £1 per head alone mean for the campaign chest? The working men of this country subscribe very much more, in proportion to their means, to their own unions, and I do not believe for one instant that the members of our own profession would be unwilling to subscribe less in proportion to their earnings, supposing they felt that something substantial was being done for their interests.

I am, Sirs, your obedient servant,

Hatfield, July 7th, 1895. LOVELL DRAGE.

"THE REMUNERATION OF MEDICAL OFFICERS TO PROVIDENT ASSOCIATIONS, CLUBS, ETC."

To the Editors of THE LANCET.

SIRS,—Mr. W. G. Dickinson, in THE LANCET of July 6th, declines to accept the figures I used in my letter of June 22nd. I will accept his. In his illustration a club contributes £200 a year, subscribed by 1000 members, for the maintenance of a medical officer who may expect to have to pay 9000 visits in a year. That is 5·3*d.* per visit. Ignoring the home consultations, the value of the certificates, and the fact that the officer has to

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find medicines out of this, as well as furnish, warm, and light a waiting-room and surgery, he has, moreover, to provide his own conveyance or walk. Is there a cabman in all London who would take a medical man on a round of twenty-five visits for half-a-guinea? Even accepting Mr. Dickinson's figures we find that a club officer's pay is less than that of a cabman! The amount of benevolent work done, over and above all this practically unpaid work of parish and club, is perhaps shown by the following calculation. Take the number of patients seen by the charities included in the Hospital Sunday Fund appeal at 1,500,000. At one shilling each this is worth £75,000. Take the profession as being in the proportion of 1 to 1000 of the total population, and it follows that before the public subscribe equally to the relief of the indigent sick they must contribute, not £40,000, but £75,000,000!—I am, Sirs, yours faithfully,

July, 1895. E. PAGET THURSTAN.

"THE MISUSE OF HOSPITALS."

To the Editors of THE LANCET.

SIRS,—The statistics published in the special supplement of the *Hospital*, showing that during 1894 no fewer than 1,300,650 separate out-patients were treated in the metropolitan hospitals, may well excite comment and surprise. There is good ground to doubt whether entirely satisfactory means exist at the different hospitals for separating the first visits from the second and subsequent visits of the same out-patients, in which case the number of these out-patients is probably to some extent over-stated in the *Hospital* statistics. The independent figures which were published in THE LANCET Hospital Sunday Fund Supplement, however, to a considerable extent corroborate them, and it will be useful to compare some of the figures in the two returns. THE LANCET figures purport to show the number of out-patients' visits. Thus, in twenty-four of the principal general hospitals 1,565,978 out-patients' visits were recorded during 1894, whereas the *Hospital* in the same twenty-four hospitals reports 622,399 distinct patients under treatment. Assuming that both these returns are approximately correct, the figures show that each patient averaged 2·5 visits during the year. Without hazarding any opinion as to the probable degree of accuracy of these two sets of returns, their comparison shows, at any rate, that the *Hospital's* figures cannot be explained away by the suggestion of blunder made by your correspondent, Mr. D. Biddle, although he correctly points out that a considerable number of the institutions draw both in-patients and out-patients from a far larger area than that of London proper. The editor of the *Hospital* asserts that the only known source of error in his figures is "the possibility that in some cases the same patient may have attended at more than one hospital during the year." It is impossible to doubt that this source of error is more than a possibility, but, unfortunately, there are no means for gauging the extent of the error. It should, however, be borne in mind that of the 1,300,650 distinct out-patients recorded in his tables, 622,399 were stated to have been treated in the larger general hospitals, 429 894 in special and in smaller general hospitals, and 248,357 in dispensaries. Nothing is more certain than that many of the out-patients, who were treated at the dispensaries and at the dental, ophthalmic, and other special hospitals, also repaired during the year to the out-patient department of one or other of the general hospitals.

The figures to which I have referred are doubtlessly startling, and, after due allowance for a certain amount of exaggeration from causes referred to above, afford abundant evidence of the misuse of hospitals. We must all entirely agree with Mr. Biddle in denouncing the recent enormous extension of hospital accommodation, more especially in the out-patient department, which not only tends to pauperise a rapidly increasing proportion of the community, but severely over-taxes the resources of institutions many of which are on the brink of bankruptcy.

I am, Sirs, yours faithfully,

July 10th, 1895. F.S.S.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows on July 4th Mr. John Lentaigne, F.R.C.S., surgeon to the Mater Misericordiæ Hospital, was unanimously elected a member of the Council of the College in the room of Sir George Porter, Bart., deceased.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

THE twenty-first annual collection just concluded has realised the handsome sum of £12 500, including a donation of £223 15*s.* 4*d.* from Mr. J. C. Holder. In the disposition of this large amount it was stated at the meeting that £10 000 was distributed among the medical charities of the city, £2000 was transferred to the credit of the convalescent homes, £137 10*s.* was appropriated under the terms of the agreemant with the District Nursing Society, and £150 was placed at the disposal of the applications subcommittee, among other objects, to enable them to provide surgical appliances and instruments and artificial limbs. The expenditure amounted to 4 0 per cent. of the amount received. The report of the Tyn y Coed stated that during the year 645 patients had been admitted; the average length of stay was 17·53 days; the cost per patient, including wages and all expenses of administration, was 15*s* per visitor per week. The sum expended in railway fares was over £100 a year. Altogether the outlook was very promising, and the success of the movement in its various directions undoubted.

Poisoning by Phenacetin.

A manufacturing chemist, aged fifty-four, was subject to attacks of headache. Recently he called at a shop for a dose of phenacetin, as this drug had often given him relief. On taking the dose given to him by the chemist he noticed that it had a bitter taste. He became stiff, convulsed, and in pain; a medical man was sent for who advised his removal to the hospital, and on his way there he died. The preliminary inquiry was adjourned in order that an examination might be made of the contents of the bottle from which the powder was taken. Any expression of opinion at the present time would be unjustified.

Steam Trams.

Periodically the residents on the lines of the steam trams write to the papers complaining of the vile effluvia and the dreadful noise caused by the engines. The hot weather intensifies these evils; but, apart from this, the grievance is a real one, and sadly interferes with the comfort of those whose lives are spent along the route of these unwieldy, odious monsters.

The New Small-pox Hospital.

The first patient was admitted to the new building on the first day of the present month. Up to that day there had been no case of small-pox in the city for ten weeks. In this instance the case was a mild one, but the officers of the Health Committee have not been able to trace the source from which it started. The health of the city continues to be good. The death-rates for the weeks ending June 22nd and 29th were only 16 9 and 16·1 respectively, and the zymotic rates were 1·6 and 1·9. During the latter week there were no deaths from measles or from typhoid fever. There were but two each from scarlet fever and diphtheria, but there were ten from diarrhœa, no doubt due to the effect of the hot weather upon children.

The Kyrle Society.

Health and happiness is the object of this society. The annual meeting of June 28th showed how largely the various influences of the society contributed to promote the interest and occupations of the young. An energetic executive and a willing staff work ungrudgingly to realise the object of those who devote time and money to the cause.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday and Sunday Fund.

A MEETING of delegates from firms subscribing annually to this Fund in Manchester and Salford and surrounding towns was held on Tuesday last in the Lord Mayor's Parlour. It was called to consider a proposal for the formation of a Workman's Auxiliary Society to coöperate with the general committee of the Fund in the arrangements for collections for the various hospital and charities in Manchester and Salford. The Mayor of Salford presided in the absence of

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the Lord Mayor. Mr. F. Scott, the secretary, explained the scheme in detail, saying that the committee had long felt that the amount coming from the working classes had very inadequately represented their powers of contributing to these charities, which were so great a boon to them. Certainly these towns do not stand well when compared with Birmingham, which collected this year no less than £13,000, or with Glasgow and Leeds, the former of which contributed rather more and the latter rather less than £6000, while Manchester and Salford, with a population of 750,000, only raised £4000. The proposed society will provide a much more efficient organisation than has hitherto existed, and will be composed as follows: In the case of firms contributing to the Hospital Sunday collections, the workpeople should appoint a delegate, and these delegates should form the Society. The Society should then appoint a general committee, which should select, say, a dozen representatives to serve on the committee of the hospital fund, and help that committee to distribute the funds. The general committee of the Workman's Society would be further divided into smaller excutive committees, whose duty it should be to look after the collectors, who should, as far as possible, consist of the delegates sent by the workpeople. The delegates would undertake the duty of collecting the contributions of the workpeople in the respective works. It seems that last year the total deficit of the various local charities was £14,500. If this cannot be reduced curtailment of "the beneficent work of the hospitals" must follow. In appealing to the working classes of Manchester and Salford Mr. Scott said he was only appealing to their self-reliance and independence. The suggested scheme was warmly approved, and a number of proposals from the delegates present were submitted to the meeting. One very practical suggestion was to change the date of the annual collection from February to Midsummer, as it was thought the poorer classes would then be able to contribute more freely than in winter when money was more needed.

Potato Pie at the Salford Workhouse.

The dietary at the above institution has from time to time been commented on more or less adversely in the local press and in your columns, and although the medical officer does not seem to have drawn attention to the negative virtues of the tea, he has something positive to say about the potato pie. The minutes of the house committee contain the following report by him: "July 2nd, 1895. The pastry of the potato pie given to the children is quite unfit for them, as it is doughy and indigestible. The children refuse to eat it in the sheds. The pastry is from three to four inches thick. Potato pie for children aged from three to five years is not proper food." Few will dispute the soundness of this opinion, except, perhaps, the Salford guardians. However, the committee very considerately recommended "that the pies be better cooked, and the crust made thinner, so that it can be properly baked." Lancashire mouths are sometimes said to have a character of their own, and it would be interesting to observe the effect of a course or two of pastry four inches thick on the human face divine in the early and plastic period. It is satisfactory to see that the salary of the medical officer, Dr. A. C. Clarke, is to be raised from £100 to £130 per annum, notwithstanding his report on the qualities of the potato pie.

Manchester Medical Staff Corps.

The annual inspection of the 4th (Manchester) Division Volunteer Medical Staff Corps took place on the 6th inst. It was established in 1887, its original members being ten medical students, but its progress has been remarkably rapid and the full complement has been exceeded for several years. Surgeon-Major W. H. B. Crockwell, V.D., was in command of the corps, and the other officers on duty were Surgeon-Captains W. Coates, I. J. Renshaw, J. J. Kent Fairclough and H. B. Mann, Captain B. R. Howell, Quartermaster Dickinson, and the Rev. Canon J. D. Kelly, chaplain. About 250 of all ranks paraded, exclusive of 36 band and buglers. Surgeon-Colonel Muir, principal medical officer of the north-western district, from the Chester depôt, was the inspecting officer, and the visitors included Surgeon-Lieutenant-Colonel Cayzer of the 6th Lancashire Artillery. The members of the corps were in heavy marching order, carrying the full Slade-Wallace equipment which is in use in the army, but of which they are the only possessors among the Lancashire volunteers. After marching past in very good style a considerable time was passed in the exercise of the companies under their own officers in drills specially connected with medical staff work. No. 2 company had stretcher drill, whilst No. 1 company formed a collecting station, sending out parties to deal with and bring in wounded men from the field. Forty men of the Royal Welsh Fusiliers played the part of the wounded. Colonel Muir, in addressing the members of the corps, said the turn-out was exceedingly creditable to them, and he thought he could tell from the way in which they had performed their duty that day that they all took an interest in their work. It showed that they had been well trained, and great credit was due to their officers and instructors.

Vagrancy.

The Chorlton board of guardians at their last meeting resolved to send a petition to the Local Government Board praying them to institute an inquiry into the present mode of dealing with the casual poor, and into the best way of dealing generally with the great increase of vagrancy. The board state that there is a very prevalent opinion among Poor-law guardians that such an inquiry would lead to some more satisfactory scheme for placing casual relief on a better basis, both as regards the relief administered, the classification of the recipients, and the reimbursement of the cost, and they pray the Board to institute such an inquiry without delay, and adopt such other measures in this behalf as may seem to them to be either expedient or necessary.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Officer of Health of Edinburgh.

AT the last meeting of the public health committee of the town council of Edinburgh the convener congratulated Sir H. D. Littlejohn on the honour which the Crown had conferred upon him. Sir Henry Littlejohn, in thanking the committee, said the honour was due to his being medical officer of health for the city.

The Edinburgh Obstetrical Society and Midwives.

An afternoon meeting of the Edinburgh Obstetrical Society is to be held on Wednesday, July 10th, when there is to be a discussion on "The condition of midwives in Scotland, with special reference to the question of registration. Should midwives be registered in Scotland?" It is expected that the country Fellows will take a prominent part in the discussion. The raising of this question in Scotland has been the outcome of the interest manifested in it on the other side of the Border. The question in Scotland does not appear to be so acute as in England; in fact, little or nothing was heard of it until the question of registration was raised. After the discussion the Fellows are to dine together, and it has been proposed to make Professor Simpson the guest of the evening, as the twenty-fifth anniversary of his appointment to the chair of Midwifery in the University occurs near this date.

The Extra-mural School of Medicine in Edinburgh and the Royal Colleges.

For some time past a movement has been in the air, if not exactly on foot, to bring the Royal Colleges of Physicians and of Surgeons in Edinburgh into closer relations with the extra-mural school than has been the case in recent years. Proposals have been made to the Colleges, and these are now being discussed and decided on by them. It is understood that the University is hostile to any arrangement which would more closely identify the extra-mural school with the Royal Colleges than it is at present, presumably because they fear that anything which might add to the prestige or status of the school might be hurtful to the University. If the view of the University continues to be expressed as it has been, it will probably lead to some scheme being adopted which, without this opposition, would have little chance of being accepted by the Colleges.

The Proposed New City Hospital for Edinburgh.

As was mentioned in THE LANCET some time ago, alternate sites for a new city hospital have been suggested to the town council. One of these—namely, that at Craiglockhart—has been visited by the Lord Provost and some of the town council, and a suitable site provisionally approved of. The ground extends to nineteen acres, and is situated near the Craiglockhart Poorhouse. The matter will come up before the town council at its next meeting.

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Complimentary Dinner to Professor Simpson, Edinburgh.

Last week Professor Simpson was entertained to dinner by a number of his old assistants, it being the semi-jubilee of his appointment to the chair of Midwifery in the University. Dr. Halliday Croom occupied the chair, and there were a number of guests present.

St. Andrews University and Dundee.

Principal Peterson, in his closing address to the students of University College, Dundee, referred at length to the litigation as a result of which the agreement between the College and the University of St. Andrews has been dissolved. He denied that those at whose instigation this had been brought about represented the genuine opinion of the University, and denounced their action as based upon a desire to maintain a monopoly of teaching. In his view union would be advantageous to both institutions, and he would have no hesitation in leaving the question for settlement in the hands of a commission duly appointed for the purpose. The Dundee authorities were quite ready to discuss any practicable scheme and to give effect to any reasonable demand that might be made upon them. The Principal acknowledged the encouragement and sympathy offered to Dundee in the present trying circumstances by the Universities of Edinburgh and Glasgow, both of which have agreed to recognise the medical curriculum at Dundee as qualifying for graduation. This will be the last appearance of Mr. Peterson as Principal of Dundee College, as he has accepted the Principalship of the M'Gill College, Montreal.

St. Mungo's College, Glasgow.

The closing address of the present session of the Medico-Chirurgical Society was delivered by Dr. D. C. McVail, who took for his subject the Life and Work of the Doctor. The lecturer discussed the contrasts afforded by a comparison of the work of the merchant or the manufacturer and that of the medical practitioner, pointing out the self-sacrifice demanded of the latter if he would attain a high ideal of professional duty. He warned the students against the danger of becoming mere students and practitioners of the art of pleasing, and impressed upon them the grave responsibilities, both to their patients and the public generally, which they would undertake when they entered on the practice of their profession. A cordial vote of thanks was awarded to Dr. McVail for his address.

St. Andrews Ambulance Association.

At the annual meeting of the association the executive committee reported that the number of pupils trained during the year had been 6066, and there had been 3150 calls upon the waggons of the association. The total income for the year was £963 0*s.* 5*d.* and the expenditure £994 11*s.* 2*d.* The report also stated that a third edition, completing the fifteenth thousand, of the "Ambulance Handbook" by Dr. George T. Beatson is almost exhausted, and that the sale of Dr. Brodie's manual on stretcher-drill and exercise had also been large. Since the foundation of the association in 1892 a total of 21,126 patients have been conveyed in the society's waggons.

The Sanitary Association of Scotland.

At a recent meeting of the Board of Examiners certificates of competency in sanitary science were granted to ten out of eighteen candidates. The examiners were Dr. J. C. McVail, Dr. Eben. Duncan, Mr. Peter Fyfe, and Mr. G. A. D. Mackay.

Presentation to Dr. George Halket, Glasgow.

The members of the Royal Thistle Lodge of the Order of Foresters have presented their medical officer, Dr. George Halket, with a bookcase and aneroid barometer as a token of their esteem and respect. The presentation also included a gold ring set with rubies for Mrs. Halket.

The General Election.

The name of Mr. Robertson Watson, the lecturer on chemistry in Anderson's College, is mentioned as a probable candidate, representing the Labour interest, for the Bridgeton Division of Glasgow. This is the division of the city represented in the last Parliament by Sir George Trevelyan. Professor Murdoch Cameron is, as at a former election, appearing on the platform as an energetic supporter of Sir Charles Cameron, the Gladstonian candidate for the Central Division. There is no rumour of opposition to Mr. James A. Campbell, LL.D., who has for many years represented the Universities of Glasgow and Aberdeen. Mr. Campbell is a brother of Sir Henry Campbell-Bannerman, but sits on the opposite side of the House.

Glasgow Royal Infirmary.

Dr. Charles Workman has been appointed pathologist in place of Dr. Lindsay Steven, who has been promoted to be physician to the infirmary. Dr. Workman has for some years acted as assistant to the pathologist. He is a graduate of the Queen's University, Ireland.—Dr. Luke has been appointed one of the surgeons to the out-patient department of the infirmary.

Anderson's College Medical School, Glasgow.

The summer session at this school closed on the 5th inst. It has proved the most successful summer session in the history of the institution, upwards of 175 students having been in attendance, a number far in advance of any previous year. This, following on such a successful winter session as that of 1894-95, augurs well for the future of this school, which seems now to have entered upon a career of renewed usefulness and prosperity.

University of Aberdeen—the Quatercentenary Celebration.

The modified programme proposes that the celebrations should extend from Tuesday, Oct. 22nd next, to Friday, Oct. 25th, inclusive. On the Tuesday from 8 to 11 it is intended to have a grand reception of delegates. All the halls and laboratories of Marischal College will be open for inspection, and there will be a musical performance in the Mitchell Hall. This splendid hall will be inaugurated on Wednesday, the 23rd. The clock will be started at 11 A.M., and all the tower bells in the city will chime their best. The inauguration of the Students' Union will follow. The Students' representative council will present an address to Dr. Charles Mitchell, of Jesmond Towers, Newcastle, the donor of the union, who will afterwards entertain a number of them and other gentlemen at luncheon. On Thursday, at noon, Dr. Mitchell will be presented with the freedom of the city, and, in accordance with ancient custom, will be expected to deliver an address. A distinguished company will afterwards be entertained at luncheon by Lord Provost Stewart, who is himself a graduate (in arts) of the university. At 4 P.M. on the same day the Marquis of Huntly will deliver his rectorial address in the Graduation Hall, and a great torchlight procession of students will start at 8.30. On Friday a commemorative medal and address on behalf of the university authorities will be presented to Dr. Mitchell. At the same time the honorary degrees of D.D. and LL.D. will be conferred on a number of gentlemen. A service *in memoriam* of Bishop Elphinstone, founder of the university, will be held in King's College chapel, and the Duke of Richmond and Gordon (the Chancellor of the University), the Marquis of Huntly (Lord Rector), Dr. Mitchell, and others will be entertained at dinner by the University Court and Senatus. In view of these ceremonials the builders are pushing on the building operations at the north wing. The Mitchell Hall will be ready in good time. The Mitchell Tower (260 feet high) is finished. The only fatal accident in connexion with its erection occurred in the removal of the scaffolding, when a young man was killed by a fall of about 75 feet. *Alumni* abroad have not forgotten their *alma mater*. Further contributions (700 rupees in all) have just been sent from India through Dr. King, Botanic Gardens, Calcutta, including subscriptions from Surgeon-Captain Roberts, Bengal Medical Service; Surgeon-Colonel G. Thompson, Bengal Medical Service; Surgeon-Captain W. H. Gray, Bengal Medical Service; and Surgeon-Lieutenant-Colonel Hugh Johnston, Bengal Medical Service. The Liberal Government declined to give any further contributions from Imperial funds to the extension scheme. Should the Unionists succeed a further application will be made.

Forfarshire Medical Association.

The thirty-seventh annual general meeting of the Forfarshire Medical Association was held in the County Hotel, Forfar, on July 4th, Mr. Cable, President, being in the chair. The members present included Drs. J. W. Miller, Duncan, Stalker, Johnstone, Templeman, and Peter Campbell (Dundee), Drs. Alexander, McLagan-Wedderburn, Hunter, and M'Alister (Forfar), and Mr. Anderson Peters (Arbroath). Apologies for absence were intimated from Drs. A. M. Buchanan and Samson Gemmel (Glasgow), Surgeon Sharples, R.N., Dr. Urquhart (Perth), and from the President and Secretary of the Fifeshire Medical Association. The

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minutes of the last meeting having been read and approved, the secretary then read the financial report, which showed the association to be in a satisfactory condition. The office-bearers for the ensuing year were elected as follows: President, Dr. Adam (Brechin); vice-presidents, Dr. Johnstone (Dundee) and Dr. Hunter (Forfar); council, Drs. J. W. Miller, Sinclair, Buist, Mackie Whyte, Mackay, and Mr. Steele Moon; secretary, Dr. Peter Campbell; treasurer, Dr. McGillivray; local secretaries, Dr. Key (Montrose) and Mr. Cable (Forfar), Dr. Laing (Arbroath) and Dr. Adam (Brechin). On the motion of Dr. Templeman, seconded by Dr. McLagan-Wedderburn, it was agreed that the usual donation of three guineas be handed over to the British Medical Benevolent Fund. The President afterwards delivered an address on Micro-organisms and Disease, for which he was awarded the cordial thanks of the meeting. It was arranged that the next meeting of the association should be held at Edzell.

July 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Medical Honours.

WE have had pleasure in hearing that his Excellency Lord Houghton, on retiring from the post of Lord-Lieutenant of Ireland, has conferred the honour of Knighthood upon Dr. Christopher Nixon and Mr. Thornley Stoker, of Dublin. Dr. Nixon was Physician-in-Ordinary to the Lord-Lieutenant. He is senior physician to the Mater Misericordiæ Hospital, Professor of the Practice of Medicine at the Roman Catholic University of Dublin, and visiting physician to the Central Asylum at Dundrum. Mr. Stoker is President of the Royal College of Surgeons in Ireland, and M.D. of the Royal University of Ireland. He is surgeon to the Richmond Hospital, and is a Government inspector for Ireland under the Vivisection Act. Sir Philip Smyly, M.D., F.R.C.S.I., has been appointed Surgeon-in-Ordinary to the Queen in Ireland, in the room of Sir George Porter, Bart., lately deceased. Sir Philip Smyly is the representative of the Royal College of Surgeons in Ireland on the General Medical Council. He is also surgeon to the Meath Hospital and held the post of Surgeon-in-Ordinary to the Lord-Lieutenant from 1869 to 1892.

Trinity College, Dublin.

The board of Trinity College, acting on the advice of a committee of the professors in the School of Physic, has elected Dr. A. C. O'Sullivan, M.A., M.B., Professor of Pathology to the school.

Supposed Case of Poisoning in Larne.

A good deal of uneasiness and excitement occurred recently in Larne owing to the sudden death of a woman aged seventy on June 11th. She fell ill shortly after eating veal, and notwithstanding everything Dr. Killen (who gave it as his opinion that the disease was caused by the veal) did she died. At the inquest, on the suggestion of the coroner, the viscera were sent to Mr. J. F. W. Hodges, F.I.C., Government analyst, and an adjournment made until last week, when Mr. Hodges reported that he could not find mineral or animal poison, but that he had succeeded in extracting an alkaloidal body having almost all the characteristic reactions of ptomaines. The verdict was that she died from inflammation of the bowels and stomach following on the ingestion of veal, the said veal being at the time unfit for food. The jury added that they considered that the man who sold the veal did not know that it was diseased.

Belfast Lunatic Asylum.

At a meeting of governors of the Belfast Asylum held on July 8th the committee appointed on June 10th to consider the whole question of accommodation to be provided for in the asylum district reported that at present there were on asylum books 425 patients, while it was proposed to transfer 150 from the workhouse; that meant 575 to be provided for. Now the existing City Asylum will accommodate 400, Purdysburn House 80, while the estimated increase for seven years was 155. The committee recommended that a detached self-contained building to accommodate 250 chronic patients should be erected at Purdysburn, the building to be so arranged as to be capable of being hereafter adapted for 150 acute cases, and that competitive plans and estimates for such a building should be invited, and that the competing architects (restricted to the profession in Belfast) should submit complete plans and estimates for a large asylum capable of containing 600 patients, and that a conference should be held between the professional members of the Board of Control, its consulting architect, and the governors, to determine the site for the proposed buildings, and to discuss the subject of the proposed competition. The report was adopted with the substitution of "sketch" plan for "complete" plan. The report of the committee advising the new asylum to be lighted by electricity was passed.

Peculiar Committal to the Belfast Lunatic Asylum.

Dr. Merrick, resident medical superintendent of the asylum, reported to the governors at their meeting on June 8th a very peculiar case. It appears that a militiaman who had been ill some four months ago was sent to the asylum last week on a committal order signed by the military authorities. However, when the man was examined by Dr. Merrick and his colleagues he was found to be not insane; but as their order was to place the man under surveillance for a month they had no option but to do so. Dr. Merrick thought that the detention of the man was a grave interference with the liberty of the subject, but as he said, in reply to several inquiries, that the board had no power to interfere, the matter dropped.

The Summer Session, Belfast.

The present summer session will come to a conclusion at the hospital this week, and at Queen's College next week.

Extensive Poisoning in a Young Ladies' Boarding School: Seventy Inmates attacked, with two Deaths.

Laurel Hill Convent in Limerick is an educational institution of considerable repute in which Roman Catholic young ladies are trained by a community of nuns. Considerable consternation existed there last Wednesday, when it was found that nearly all the inmates were suddenly attacked by diarrhœa and vomiting. The services of Dr. M. Malone, physician to the convent, were requisitioned, and as he found that he had to deal promptly with seventy patients, all more or less seriously ill, he prudently called in the assistance of Mr. Humphrys, Dr. Graham, Mr. Shanahan, and Dr. Haran, but, despite all their exertions, two of the nuns succumbed. One died shortly before 12 o'clock on Friday night, and the other died on Monday morning. An inquest was held on Saturday to inquire into the circumstances attending the death of the former. The evidence showed that the nuns and young ladies dined at 12 o'clock on Wednesday, the dinner consisting of soup, roast mutton, cabbage, new potatoes, custard, and strawberries. There was afternoon tea at 4 o'clock, and at that meal nothing but bread-and-butter and tea were served. The deceased was the first attacked, and she complained at half-past five o'clock. All the others were invalided soon afterwards. The only members of the whole household who escaped were the reverend mother, who was confined to her room owing to ill-health, and the sister who attended her. Attention was naturally riveted on what those two ladies had or had not partaken of, and it was ascertained that the reverend mother had not eaten either the soup or the custard. The attending sister had not taken any of the custard, but she thinks she had had some of the soup. Apparently, then, the irritant poison, whatever it may have been, was in either the custard or the soup. Possibly, of course, the water, which was the only drink at dinner, or one of the articles at afternoon tea may have contained it. The evidence of the cook, who is herself one of the victims, was taken. She states that the roast mutton was quite good; the custard consisted of eggs, milk, cornflour, and sugar; the soup was made from beef and mutton, flavoured with young celery with all the green leaves attached; the kitchen utensils she used contained neither copper nor brass. It also transpired that Sir Charles Cameron of Dublin found nothing deleterious in the sample of cornflour submitted to him for analysis. That being so, it is important to recollect the evidence given by the cook with regard to the celery, as botanical works state that unblanched celery is capable of producing poisonous results. The inquest was adjourned, and the coroner directed that a post-mortem examination should be held with a view to ascertaining whether an irritant poison such as arsenic could through any chance have been mixed with the food. The parents of the young ladies are naturally in a great state of anxiety, but I am glad to learn that nearly all the remaining sufferers are now convalescent.

July 9th.

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PARIS.

(FROM OUR OWN CORRESPONDENT.)

Presentation of Medals to Dr. Roux.

AT the end of last year the Municipal Council decided to offer, on behalf of the City of Paris, a medal to Dr. Roux, "pour rendre un solennel hommage à ses beaux travaux scientifiques si utiles à l'humanité." The Conseil Général of the department of the Seine adopted a similar resolution a few days later. Two gold medals were accordingly struck bearing on one side the effigy of the Republic designed by Chaplain, and on the other the words "A Docteur Émile Roux, le Département de la Seine," and "Au Docteur Roux, la Ville de Paris." The ceremony of presentation took place on Thursday last at the Hôtel de Ville, where there awaited our eminent confrère the members of the Bureaux of the two Councils, the Prefect of the Seine, and the Prefect of Police. In the course of the complimentary references made by the President of the Municipal Council to Dr. Roux's researches on diphtheria, he said: "Vous avez droit au plus précieux des remerciements, à celui des mères que vous avez rassurées et dont vous avez calmé les angoisses." The following letter from M. Pasteur was then read:—

"Monsieur le Président,

"Je regrette infiniment d'être dans l'impossibilité de me rendre à l'invitation que vous m'avez fait l'honneur de m'adresser. Lorsqu'en 1892 le président du Conseil municipal m'exprimait les vœux des élus de Paris et me parlait de la reconnaissance populaire, il me causait une de ces émotions qui font que toute une vie de travail se trouve récompensée en une minute et par un mot. Rien ne semblait pouver dépasser la joie que vous m'aviez donnée en ce jour de mes soixante-dix ans. Et cependant, ce que la municipalité de Paris veut faire aujourd'hui me touche encore davantage. Vous fêtez celui qui fut mon élève, mon cher collaborateur, M. Roux. Ce que j'aurais voulu dire devant lui et après vous, Monsieur le Président, c'est qu'en dehors des services rendus à la population parisienne par le traitement de diphtérie M. Roux contribue par ses cours à l'Institut Pasteur à répandre dans le monde entier une part d'influence française. Ainsi se continue, grâce à lui, aux chefs de service et aux préparateurs, l'œuvre que j'ai rêvée: laboratoires de recherches, laboratoires d'enseignement, travaux de longue patience pour arriver soit aux découvertes, soit au développement de certaines méthodes et leçons professées pour faire connaître une science nouvelle. Je remercie encore le Conseil municipal de ce qu'il a fait pour moi, de l'hommage qu'il offre aujourd'hui aux services rendus par M. Roux, et des bourses que le Conseil municipal a fondées à l'Institut Pasteur en faveur d'hommes pleins de mérite. Veuillez agréer, Monsieur le Président, l'assurance de ma haute considération. "PASTEUR."

Ambulatory Delirium.

In the *Gazette des Hôpitaux* of July 2nd there appears a communication from Professor Raymond, the late regretted Professor Charcot's successor, on the above-named curious malady, to which he gives the supplementary denomination "fugue." He points out that the condition is not part and parcel of amnesia, or even a consequence of it. In retrograde localised amnesia, due, for example, to an injury, the events of the forgotten period are ordinary occurrences, whereas the acts characterising the fugue are quite special. What imparts to ambulatory delirium a special "*cachet*" is the association of certain cardinal symptoms, the most important of which are three in number. They are: 1. An irresistible impulse to perform certain acts. In a case quoted it impelled the patient to walk, to undertake journeys; but the impulse may take some other channel of expression. 2. The act, whatever form it may take, is accomplishable in an intelligent manner; in other words, the movements are regular, coördinated, and in harmony with surrounding circumstances. The patient does not fall nor does he stumble against obstacles. He even does not omit to pay for his railway ticket. 3. The impulsive act performed, there is complete forgetfulness of the total period covered by the said act. The fugue may accordingly be defined as an impulsive, complicated, and quite coördinated act followed by amnesia. These impulsive acts, or fugues, may be met with in three different disorders—viz., epilepsy, hysteria, and in the *dromomania* of Régis. May they not also occur in senile dementia? Only last Wednesday afternoon an aged patient of mine inhabiting the Victoria Home, Neuilly, wandered away, bonnetless, and, discovered the same night by a policeman on a bench at Batignolles, some miles away, was forthwith lodged at the Prefecture of Police, where she remained until discovered by us on the Friday afternoon. Questioned by me on Friday at the home, she assured me that she had never left her room. Her memory is a complete blank as to the events that occurred during her two days' absence from home. This poor old Englishwoman had lived in Paris for over thirty years, and was well acquainted with the topography of the city.

A Dental School at Bordeaux.

It is intended to create at no distant date at Bordeaux a school of dentistry. The promoters of the scheme are a few local dentists and a group of Doctors of Medicine, most of whom are members of the teaching staff at the Bordeaux Faculty of Medicine.

Medicine and Politics.

Our French *confrères* dabble in politics much more freely than ourselves. There is a fair sprinkling of them in both Houses of Parliament, and Conseils Généraux and municipalities are full of them. Woe to the practitioner who, having imbibed during his university career anti-clerical ideas, establishes himself in practice in a "reactionary" community, and ventilates his advanced and, according to him, enlightened opinions. His existence soon becomes a burden, and unless he be endowed with a thick skin and a long purse he may soon have to seek a more congenial field for the exercise of his profession. Nor are the Republicans more tolerant, as witness the enclosed advertisement culled from the current number of the *Progrès Médical*.

On demande un médecin républicain pour une commune importante du département de la Vendée. Tête de ligne de chemin de fer pour un port de pêche et une station balnéaire. Gare à 2 h. 1-2 de Nantes et à une demi-heure de la mer. Pays de vignobles. Pas de pharmacien. S'adresser à la rédaction du journal, le jeudi de 3 heures à 6 heures.

July 9th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Carcinoma Antitoxin.

THE article communicated by Professor Emmerich and Dr. Scholl to the *Deutsche Medicinische Wochenschrift*, which was mentioned in my letter inserted in THE LANCET of May 4th, was received here with general scepticism. That this feeling was justified is now proved by the published observations of Professor Bruns (Tübingen) and Professor Augerer (Munich). Professor Bruns was quoted by the authors as vouching for the efficacy of the treatment, but he now states that in no instance was a curative effect remarked, whilst in some cases the general state of the patients was very unfavourably influenced. Cardiac trouble and raising of the temperature were very frequent, and must have been due to a septic condition of the fluid. To this suggestion Professor Emmerich answered that the antitoxin was originally aseptic and must have been spoiled by Professor Bruns or his assistants. Professor Bruns replied that the fluid was examined immediately after its arrival in the bacteriological laboratory of the University, and numerous streptococci were found in it. Professor Augerer stated that two of his cases were attacked with real erysipelas during the antitoxin treatment. The controversy between Professor Emmerich and his opponents sometimes assumed a very personal character and continues to fill the columns of the medical papers. The general impression is that the real carcinoma antitoxin has not yet been discovered.

The Annual Meeting of the German Practitioners' Association.

This meeting was held on June 28th and 29th in Eisenach, under the presidency of Dr. Aub (Munich). As probably your readers are not acquainted with the organisation of the Practitioners' Association (Deutscher Aerztevereins-Bund) it is right to explain that it has no scientific objects, but was founded in order to improve the social condition of the profession. The association, like the British Medical Association, consists of district branches whose delegates meet every year and form the "Deutscher Aerztetag." At these meetings questions of general professional interest are discussed, especially those concerning the relations between medical men and the public. The delegates have as many votes as they represent members, and the district branche, salthough independent, are required to observe the decisions of the meeting. There is also a council elected annually, which meets from time to time to prepare the business of the general meeting and to deal with urgent questions. The institution has no official character, but depends entirely upon the voluntary agreement of the individual urban and district branches. The meeting was opened by the chairman, Dr. Aub, who in his introductory address pointed out that the workmen's insurance laws, by which every workman was compelled to become a member of a sick-club, had materially affected

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some departments of medical practice. Individual practitioners being powerless to struggle against the predominancy of the clubs, it becomes the duty of every medical man to join his district association, when he will be supported against any unjustifiable pretensions of the sick-club committees. Another matter of importance, which requires the close attention of the representatives of the profession, is, in Dr. Aub's opinion, the obvious deficiency of the qualifying examinations. For instance, a knowledge of mental diseases, which is not required by the existing regulations, ought to be regarded as a necessity for every practitioner. Alluding to the Mariaberg Asylum trial, the chairman said that a lack of knowledge of this branch of medicine had unfortunately caused medical men to appear at a disadvantage in the courts of law. After this introductory speech the secretary reported that the association had now 249 district branches, with 14,139 members, and that 117 delegates, representing 13,407 medical practitioners, were present at the meeting. The first subject discussed was the so-called "free choice" system (freie Aerztewahl), which I explained in THE LANCET of Feb. 2nd, 1895. According to this system, a sick-club does not appoint a fixed number of medical officers, but any practitioner of the district who agrees to the club terms is allowed to attend the members. There are only a few places where this system is still in operation, but the desire to have it adopted everywhere is very strong, not only in the profession, but also among the working men, the latter, of course, wishing to exercise the right of selecting the medical attendant in whom they have most confidence. The principal opponents of the new system are the specially appointed medical officers, who fear that they will lose much of their income if the fees paid by the clubs are distributed among all the practitioners of the place. The opinion of this meeting, where very numerous adherents of both the old and the new system were present, was therefore anxiously awaited. After a very long and sometimes heated debate the following motion was adopted: "That this meeting is of opinion that the free choice system is the most satisfactory both to the profession and to the club members, and that it is therefore desirable to have this system accepted throughout the empire; that, in order to avoid unjustifiable demands on the part of club committees, the contracts with the clubs ought to be made, not by the individual practitioner, but by the district branches of the association." A contrary motion, proposed by Dr. Windels, to the effect that the free choice system, although theoretically preferable, would lead the clubs to ruin, was rejected by an immense majority. On the second day the meeting discussed the mutual relations between medical practitioners and insurance companies. Several anomalies exist in these relations and ought to be abolished. In some companies, for instance, it is usual for the insurance agents to appoint the medical officers for the companies. At a joint conference of the council of the Practitioners' Association and the managers of the insurance companies it was agreed: (1) That the medical officers shall be appointed by the managers only and not by the individual local agents; (2) that the medical examination shall take place in the consulting-room of the medical man and not in the house of the proposer; (3) that the results of the examination shall be kept strictly secret; (4) that a fee of at least ten marks shall be paid by the company for every examination; and (5) that a permanent commission, consisting of medical men and insurance officials, shall be instituted in order to settle disputed questions. In the discussion it was stated that some medical men had been made liable to legal prosecution because they had given information as to the health of a proposer's relatives without having previously obtained their permission. It was thereupon decided that the companies should arrange these matters with the families before applying to their medical officers for a certificate. All the other propositions of the council were unanimously adopted. The next meeting will be held at Nuremberg.

June 9th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italy out of Town.

"TWO voices are there, one is of the sea, One of the mountains," sings Wordsworth in a magnificent sonnet, and all Italy, professional or lay, is divided as to which it shall respond to. There is so much that is to be said for either that many will declare for both—if Romans, alternating between the Sabine or Alban Hills and Porto d'Anzio; if Neapolitans, between Capo di Monte and Sorrento; if Tuscans, between Vallombrosa and Viareggio. Italy, indeed, suffers from an *embarras de richesses* of summer haunts, and nothing but her backward hotel enterprise explains the fact that she does not detain on her uplands or on her seaboard the thousands of winter residents who would gladly avoid the Swiss tourist hive or the Tyrolese ant-hill. But she must take not one, but many leaves out of the Helvetian hotel-book before she can keep the visitors she attracts, and particularly on the less familiar lines of travel she must bring her cuisine and her accommodation, above all her drainage and her water-supply, out of the rut of mediæval tradition if she is to spare herself the mortification of witnessing the paying public deserting her picturesque, historic towns for Swiss hamlets which are neither and have not even the advantage of more invigorating air. No British practitioner in her more frequented winter cities but has lamented the sad necessity he has been under of sending his convalescents, often at great risk and greater expense, "over the watershed," when Nature was literally holding out her hands to detain them, and nothing but the rough, sometimes revolting, hotel appointments frustrated her kindly invitation. Improvement is, indeed, manifest in some of the provinces; but, in Mr. John Morley's phrase, the pace is "killingly slow," and we shall be well into the twentieth century before Italy returns to the social refinements and attractions even of Baiæ or Præneste in the first.

A Mixed Blessing.

This, as THE LANCET[1] has pointed out, is a proper characterisation of the introduction of the new remedy for diphtheria so successfully practised in many a European city. It has had the effect of paralysing that hygienic or sanitary movement which, in these centres, was just beginning to combat the diphtheritic poison at its source. By the opportune injection of the "siero difteritico" a Roman child well-nigh moribund from the disease was the other day rescued in the most striking manner, and the names of the physicians in charge of the patient received an attention which these able practitioners would gladly see bestowed on the faulty health conditions to which the little patient owed his malady. But the old adage, "Prevention is better than cure," is a plant of tardy growth in a semi-superstitious society, where the prestige of a "sovereign remedy" will always countervail the humbler calls of sanitary observance. Happily "igiene locale" has been vigorously taken up by the communal Giunta and a "regolamento" formulated for Rome and its province which will shortly be extended, on express application, to 150 other communes throughout the kingdom.

The Health of the Pope.

After nearly ten months of in-door life, His Holiness has resumed of late his saunter in the Vatican Gardens—that spacious and beautifully disposed expanse of wild wood and flower bed which slopes gently uphill from behind the Palace to the ridge of the Janiculan. The frequent fountain, "shaking its loosened silver in the sun," the winding watercourses "still murmuring, as they run, to the hushed ear of noon," are not less grateful to sense than to respiration, from the delicious coolness they impart under the vertical heat. After threading his favourite walks in this "maze of amenities," as it has been called, the Holy Father retires to the tower of Leo IV., recently adapted as a summer retreat by the architect Vespignani, from whose able hands it passed into others not less able in the department of internal decoration and appointments. There the supreme Pontiff can, on occasion, give audience to the high functionaries of his court; there he can spend the forenoon and afternoon in study and *siesta* with a degree of comfort that prompted the suggestion that he might have sleeping apartments fitted up in the tower as well. But the project found no favour with the medical advisers who keep watch over his person, the Mons Vaticanus still retaining through the hours of night that character for insalubrity it received from the Augustan poets. So before sunset Leo XIII. is conveyed back to the Palace and up the successive flights of stairs in his *sedia gestatoria* to the traditional dormitory of his predecessors. How well the life he now leads is suiting him may be inferred from the fact that not for many months has the august octogenarian been more vigorous in mind or body. Indeed, no

[1] THE LANCET, Jan. 12th, 1895, "Sero-therapy and Sanitation."

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later than the 4th inst. he gave an audience, at the close of the day, to Don Paolo Rossignoli, the missionary hero who effected so romantic an escape from the dungeon of the Mahdi—an audience which lasted nearly an hour, during which His Holiness, after listening attentively to his guest's thrilling narrative, examined him minutely as to the progress of the Roman Catholic missions in Upper Egypt, and having elicited from him much valuable information imparted the Apostolic benediction with quite unusual fervour.

The Origin of the Red Cross.

Italians have always claimed priority in conceiving and formulating those proposals for the international care of the wounded in war which culminated in the Geneva Convention. True, the French d'Arrault published on June 10th, 1861, his "Notice sur le Perfectionnement du Matériel des Ambulances Volantes," and the Swiss point complacently to their countryman Dunant's "Un Souvenir de Solferino," which, however, is dated 1862. But there is no doubt that before the former of these Professor Palasciano of the Naples Medical School read on April 28th, 1861, before the Accademia Pontaniana his "La Neutralità dei Feriti in Tempo di Guerra," in which, with arguments at once humanitarian and technical, he called on belligerent Powers to recognise on the battlefield a reciprocal neutrality in aid of the wounded, so as, by the greater efficiency of relief, to diminish the number of fatal cases among those who had to undergo amputation, and to withdraw from the necessity of amputation those on whom conservative surgery might be practised. Professor Palasciano, moreover, not content with enunciating the principle, developed, on Dec. 29th following, before the same Accademia, the following scheme for securing the neutrality desiderated: (1) That the belligerent armies should reciprocally give up all their wounded prisoners immediately after battle; (2) that all the wounded who could not be given up should be treated medically in the places occupied by the respective ambulance corps; and (3) that the ambulance corps should be furnished with a safe-conduct to pass the hostile frontiers and to remain there as long as required by their attendance on the wounded. Professor Palasciano continued his humane propaganda in every possible way, especially in his journal, begun after 1866 entitled "Archivio di Memorie ed Operazioni di Chirurgia." It was, in truth, a logical sequence of this propaganda that gave rise to the Geneva Society, which, after the International Congress of 1863 culminated in the Geneva Convention of Aug. 22nd, 1864. Out of this grew the Committee of the Red Cross, having its seat at Geneva, to which branches are affiliated from nearly every civilised nation in the world. In commemoration of Professor Palasciano's beneficent life-work a monument has just been unveiled to him in the Campo Santo at Naples, the spokesman of the occasion being Professor Pasquale Fiore, whose eloquent discourse insisted on the above facts and on many others in illustration of them before a distinguished audience, chiefly medical. The monument, a fine work of art, is of granite, and consists of a tomb, on which rises a great marble cross inscribed with the words: "Quod Deus conjunxit, homo non separet" (What God hath joined, let not man put asunder).

The Waters of San Genesio.

The Turin Medical School, mainly in its clinical and therapeutic departments, was largely represented the other day in an expedition to the source of San Genesio. From 1824 these waters were styled Fonte Regia from their proved efficacy in the case of more than one member of the Royal House of Savoy. In chemical quality they were classified as "saline-iodobromo-sulphurous," and as such they continued in much request. In 1870 an addition to the attractions of the spot was made by the discovery of a new spring classified as "ferrugino-alkalino-bromide," in which, by means of spectrum analysis, the Cavaliere Celestino Bonelli of Turin found a considerable proportion of lithia. The excursion party was formed to report upon the improvements effected in the balneary service and appointments as well as in the accommodation at San Genesio and the entertainment afforded to the invalid public. The result of the visit was altogether satisfactory, an impression which found eloquent voice in the after-dinner oratory of more than one distinguished professor of the sub-Alpine University, conspicuous among whom were Dr. Cesare Lombroso, the Lecturer on Animal Anthropology, Professor F. Porro, the eminent physicist, who holds the chair of Astronomy, and the well-known analyst the Cavaliere Bonelli.

The Health of the Kingdom.

The Consiglio Superiore di Sanità has just received the Commendatore Pagliani's report for the first *semestre* of the current year. The "condizioni sanitarie" are described as "relativamente buone." There were a few cases of small-pox, but whenever the malady declared itself it was promptly met, thanks to the efficacious measures at once set on foot by the Minister of the Interior. Professor Pagliani concludes by remarking that the "public health, satisfactory in the past *semestre*, represents a state of things which is steadily improving. Not only is the mean of 'morbosità' declining, above all in the infective diseases, but also the mean of the 'mortalità,' which marks a still more pronounced diminution."

July 7th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Suicide and Crime in Russia.

PROFESSOR SIKORSKI of the University of Kief, writing in the *Kievlianin* upon the psychology of the Russian people, brings forward some interesting statistics concerning the frequency of suicide in the different nations of Europe. According to these figures the death-rate from suicide per million living is in Saxony 311, in France 210, in Prussia 133, in Austria 130, in Bavaria 90, in England 66, while in Russia it is as low as 30. Further, it is found that during the last thirty years the suicide-rate has in Russia remained stationary, while in all other European countries it has increased by 30 or 40 per cent. The exact significance of figures such as these, relating to so complex a phenomenon as suicide, is not easily brought out. Few, however, will be disposed to question the assertion that much of the explanation of the low rate in Russia is to be found in the patience and long-suffering of the Russian peasant under even the worst misfortunes. Among other characteristics Professor Sikorski also finds a certain indecision of character which fears to say a word or do an action which shall not admit of retreat or withdrawal. Crime is comparatively rare in Russia; thus, the number of persons tried for murder per million living in the year 1887 was in Italy 96, in Spain 55, in Austria 22, in France 15, in Russia 10, in Germany 9, and in England only 6.

Cholera.

Little has been heard of cholera in this country during the present summer. For many weeks past the only district in which the disease has been present has been the government of Volhynia. The latest returns from there are as follows: from May 14th to 20th, 42 cases and 9 deaths; from May 21st to 27th, 37 cases and 11 deaths. (The dates mentioned are Old Style dates.) St. Petersburg is so far free from cholera. In 1892 the earliest cases here were at the end of July; in 1893 the disease reappeared early in August; and last year it began as early as June 8th (20th).

The Government and the Harvesters.

A commission was recently appointed to inquire into and regulate the movements of peasants who leave their own districts to find harvest work in other and distant districts. The commission is appointed mainly with an economical object—the distribution of the labourers with the greatest advantage both to the labourers themselves and to the local requirements of the harvest. Some control, however, of this great annual movement of peasants should be of benefit from a public health point of view. Every year many thousands, attracted by the richer harvests of the south and east, have left their homes and, hitherto without any control, have made their way in those directions. Only too often they have found the market already overstocked and have had to return home destitute, although at the same time in other districts there was a dearth of labourers. Apart from this waste of force, the uncontrolled movement of so many peasants has been a fruitful means of spreading diseases. Among these syphilis holds perhaps the first place. Every year the report of the Medical Department brings forward evidence of this. I have already quoted the striking instance of one peasant who returned to his village and in the course of a few months infected with syphilis, which he contracted while

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away, no less than twenty-three people. It is the same with zymotic diseases, the most striking example of which was the cholera epidemic of three years ago, which was largely spread by these "migrant labourers." The commission consists of representatives of the Ministries of the Interior, of Agriculture and Imperial Domains, of Finance, of Justice, and of Ways and Communications.

The Giliaks.

In my last letter I gave a short account of the Siberian tribe of Buriats. The following notes, relating to a still smaller tribe, the Giliaks, are from a Siberian newspaper (the *Tobolsk Government News*). The race appears to be rapidly dying out; there are now only some 3000 of them living. They are found in the island of Sakhalin (the penal convict island of Russia in the Pacific) and along the banks of the river Amur. Like the Buriats they smoke and drink inordinately. For *vodka* a Giliak will sell anything—his wife, his daughter, his sister, his mother, and even the bear which he looks upon as a god. Drink and syphilis are rapidly exterminating the race, and the end is hastened by the barbarous treatment of their women in childbed. When labour begins the woman is taken to a rapidly prepared shed, and is there left absolutely alone until all is over. In summer this may perhaps matter little, but in the intense cold of a Siberian winter it often happens that either mother or child dies, and sometimes both. Their religion consists solely of the worship of the bear. Young bears, it is said, are caught alive and carefully fed until they attain maturity; they are then led out into the woods at night time, and by the light of bonfires and with much singing and dancing are slaughtered. The flesh is torn from their bones and, while still smoking, eaten by the Giliaks, who look upon it as holy food. Altogether, the picture of these remote Siberian tribes is not an inviting one.

St. Petersburg, June 24th (July 5th).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Insanity in New South Wales.

THE annual report of the Inspector-General of the Insane in New South Wales has just been published. On Dec. 31st, 1894, the number of insane persons on the register was 3587, as against 3425 at the close of 1893, or an increase of 162 during the past year, which is very much above the average for the past twenty years. The chief factor in the production of this increase has been the general commercial depression, which has operated in two ways: first, by directly producing insanity, especially in the neurotic and weak-minded, who are handicapped in the race when the conditions of life are more than usually hard; and, secondly, by obliging persons, formerly able and willing to support idiot children and imbecile relatives of older years, to throw them upon the charity of the State. The proportion of insane to population, which in 1893 was 1 in 357, had at the close of 1894 risen to 1 in 348. The total number admitted was 712, and of these 644 were admitted for the first time. The discharges numbered 350, and of these 296 had recovered and 54 were relieved so far as to permit of their being left in the care of relatives. The recovery and death rates compare very favourably with the returns from institutions in Great Britain. For the first time for twenty-eight years the whole of the patients at the charge of the Government are housed within the wards of its own hospitals. The average weekly cost for maintenance was 10*s.* 7*d.*

Medical Practitioners Bill for New South Wales.

The Bill for the registration of medical practitioners and imposing penalties on any unqualified person who assumes any title implying that he is a legally qualified medical practitioner, has been considered in committee in the legislative assembly and passed its second reading.

New South Wales Medical Union.

From the report of the New South Wales Medical Union, read at the annual meeting of that association, it appeared that 46 new members had been elected during the past year, and there were on Feb. 28th, 1895, 127 members. Several cases had been considered. In the case of the late Dr. Struthers *v.* White the defendant apologised and withdrew all charges, and paid all costs. In the case of Hull *v.* Dr. Cummings the jury found for the defendant. Another case was still *sub judice*. The election of office-bearers resulted as follows:—Trustee: in place of Dr. C. Dagnell Clark Dr. T. Fiaschi. Hon. Treasurer: Dr. W. H Crago. Joint Hon. Secs.: Drs. A. Jarvie Hood and G. Lane Mullins. Members of Council: Dr. G H. Macswinney, Mr. J. Foreman, Dr. A. MacCormick, Dr. S. T. Knaggs, Dr. P. J. Collins, Dr. R. Scot-Skirving, Dr. E J. Jenkins, Mr. B. J. Newmarch, Dr. R. L. Faithfull, and Mr. P. M. Wood.

Action against a Private Hospital.

A case of some interest to the profession was recently tried in Melbourne. The plaintiff, Mr. C. J. Carter, sued Miss Macartney for negligent treatment while an inmate of the defendant's private hospital. Mr. Carter was originally a patient in the Melbourne Hospital, suffering from typhoid fever. Abscesses then formed in many places and were opened and drained. He went home and then went into Miss Macartney's private hospital, where other abscesses were opened and drained, and it was alleged that a drainage-tube three inches long was left in one of the wounds, which closed over the tube. He returned to the Melbourne Hospital, where the tube was extracted. He claimed £500 damages. For the defence it was stated that no incision was made in the right thigh (from which the tube was extracted) during his stay at Miss Macartney's hospital, and that there was no negligence in nursing there. The judge said the plaintiff had proved negligence, and gave a verdict for £25.

Gynæcological Cases.

The current number of the *Australian Medical Journal* is characterised by the number of cases of gynæcological interest it contains. Mr. F. D. Bird records two cases. The first was a suppurating ovarian hydrocele, the diagnosis of which was puzzling, the symptoms coming on suddenly and simulating appendicitis at one time and intestinal obstruction at another. When the acute symptoms had subsided laparotomy was performed and the cyst removed. The patient made a perfect recovery. The second case was one of ovarian abscess, admitted with symptoms pointing to perforative peritonitis and in a state of collapse. Laparotomy was performed a month after admission, and the condition found to be salpingitis, with an abscess in the ovary, a leakage from which, it was assumed, was the cause of the acute symptoms. Mr. W. Moore records three cases. The first was a case of ovarian hydrocele, the second was an abscess in the ovary, and the third salpingitis with adhesions. Laparotomy was successfully performed in each case. Dr. James A. Reid records three cases. Two were tubal pregnancies, one ruptured, and the other unruptured. The first case died from intestinal obstruction after laparotomy attributed to a kink in the bowel; the second case recovered. Dr. Reid inquires whether a tubal fœtation is ever arrested in its growth and absorbed without going on to rupture or suppuration. In his second case the growth had apparently come to a standstill about the sixth or seventh week of its life, and at the eleventh week showed no evidence of any tendency to rupture. Dr. Reid also reports a case of complete prolapse of the uterus, vagina, bladder, and rectum treated by hysterectomy and perineorrhaphy, and complicated by hydronephrosis due to calculi blocking the right ureter, but at first suggesting ligature of the ureter during the operation. At the last meeting of the Victorian Branch of the British Medical Association gynæcology was again *en évidence*, Dr. Felix Meyer reading Notes on Six recent Cases of Abdominal Section. Two were for uterine fibro-myoma, one for ovarian cyst, one for pelvic peritonitis, one for cyst of the broad ligament, and one exploratory, the condition found being a pregnant uterus with fibro-myoma.

Case of Carcinoma of Perineum and Urethra.

Mr. G. A. Syme records a case of growth in the perineal region associated with urinary fistulæ and following an injury received ten years before. The growth occupied the perineum, blocked the urethra, and projected into the rectum. Microscopic examination showed that it was an epithelioma.

Appointment.

Mr. C. P. B. Clubbe has been appointed surgeon to the Prince Alfred Hospital, Sydney, and Lecturer on Clinical Surgery at the Sydney University, in place of Mr. Twynam, resigned.

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Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Thursday, the 4th inst. :—

Anatomy and Physiology.—Arthur Henry Michael Saward, Oswald Marriott, Albert Henry Beaumont Kirkman, William Pennington Grellet, Vincent James Crawford, Arthur Richard Thomas, John Edward Powell, and Arthur William Nourse, Guy's Hospital; Penry William Rowland, Llewelyn Arnold Baiss, and Cyril Pinchard Burd, St. Bartholomew's Hospital; Guy Hemming Coltart, Westminster Hospital; Henry Herbert Johnson Edwards, Hugh Campbell Ross, Hugh Basil Greaves Newham, and Edward Ernest Nicholl, St. Thomas's Hospital; William George Porter and James Warburton Brown, Charing-cross Hospital; Vernon Cyril Bensley, St. Mary's Hospital; and Alexander Mercer, University College, London.

Anatomy only.—Sidney Herbert Mason, Guy's Hospital.

Fifteen gentlemen were referred in both Anatomy and Physiology.

Friday, the 5th inst.:—

Anatomy and Physiology.—John Haselwood Roberts, Charles Deane Outred, Charles Bertram Thomson, Thomas Hamlyn Whittington Landon, and William Langworthy Baker, Guy's Hospital; Arthur Ruscombe Crane Parsons, King's College, London; Frank Horridge, George Ernest Gask, and Richard Strike Flemying Hearn, St. Bartholomew's Hospital; David Davies and Samuel Lee Craigie Mondy, University College, London; William Frederick Willis, George Arnold Hutchinson, and Henry Thomas Mann, St. Mary's Hospital; Stanley Arthur Lucas, Cambridge University and St. Thomas's Hospital; James Herbert Robinson, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology; Herbert Wortley Fisher, London Hospital; and Arnold Saxty Good, St. George's Hospital.

Eighteen gentlemen were referred in both Anatomy and Physiology.

Monday, the 8th inst. :—

Anatomy and Physiology.—Frederic Hasler and Evelyn Kempson Brown, London Hospital; Edward Erratt Parrett and Kenneth Bush Alexander, Guy's Hospital; Thomas Denman Dawson and Howell Davies, St. Bartholomew's Hospital; Charles Edward Fenn and George Oliver Pierce, King's College, London; Charles Ernest Turner, University College, London; Percy Gardiner, Middlesex Hospital; and Philip Dare Cogswell, St. Mary's Hospital.

Anatomy only.—Geoffrey Stuart Moore, London Hospital and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Edgar Curnow Plummer, King's College, London; Francis Ryalls Eddison, St. Bartholomew's Hospital; Edward Simpson Shave and William Walton Claridge, Middlesex Hospital; and Henry Priest Shanks, University College, London.

Nineteen gentlemen were referred in both subjects, five in Anatomy only, and one in Physiology only.

Tuesday, the 9th inst:—

Anatomy and Physiology.—Edmund Frederick Rose, St. Bartholomew's Hospital.

Anatomy only.—James Michael Aloysius Manning and Charles Nugent Chadborn, St. George's Hospital; Winstan St. Andrew St. John, St. Mary's Hospital; Frederick Arthur Johns, London Hospital; Lanyon Edward Owen, University College, London; Cyril Cecil Poole, Guy's Hospital.

Physiology only.—John James Cecil Hamilton, King's College, London; Charles Arthur Craven Salmon, Guy's Hospital; Frank Voller, St. Thomas's Hospital; Alfred Edward Seller, London Hospital; Frederick John Waldmeier, Syrian Protestant College, Beyrout, and London Hospital.

Four gentlemen were referred in both subjects, four in Anatomy only, and four in Physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the Primary Examination, Part I., July, 1895 :—

Chemistry.—F. R. Greenwood, St. Bartholomew's Hospital; and E. C. Scarlett, Royal Free Hospital.

Materia Medica and Pharmacy.—C. E. C. Child, Charing-cross Hospital; L. T. Lavan, St. Bartholomew's Hospital; E. E. H. Madden, Royal Free Hospital; G. H. Williams-Parry, Sheffield; A. Ross, Guy's Hospital; and C. H. Thomas, London Hospital.

Primary Examination, Part II. :—

Anatomy and Physiology.—M. E. Bennett, Royal Free Hospital; G. E. Brooke, Cambridge and London Hospital; H. J. Clutterbuck, Middlesex Hospital; A. M. Edey, Sheffield; T. A. E. Fawcett, Leeds; C. L. Francis, St. Bartholomew's Hospital; C. Franks, Westminster Hospital; G. C. Hobbs, St. Bartholomew's Hospital; W. E. G. Maltby, St. Bartholomew's Hospital; H. D. Matthews, Middlesex Hospital; C. Powell, Cambridge and St. Thomas's Hospital; B. G. Roscoe, Manchester; and C. H. Thomas, London Hospital.

Anatomy.—W. F. E. Ashton, Birmingham; G. F. Beacher, Sheffield; H. J. De Saram, Middlesex Hospital; E. P. Marett, St. Thomas's Hospital; G. L. Meredith, London Hospital; H. Morris, St. Bartholomew's Hospital; and G. Parnell, Charing-cross Hospital.

Physiology.—T. H. Bailey, King's College; F. E. Bissell, Birmingham; M. Caldwell, Dublin; R. F. W. Crawford, St. George's Hospital; G. A. Crowe, London Hospital; G. W. Dutton, Middlesex Hospital; M. B. Hebron, King's College; C. E. Hibbard, Guy's Hospital; B. Hogan, London Hospital; H. M. Maitland, Royal Free Hospital; S. J. Meredith, Birmingham; C. E. Proctor, Liverpool and Edinburgh; F. L. Roper, Dublin; E. G. Smith, Westminster Hospital and London Hospital; W. A. Sugden, St. Mary's Hospital; and D. L. Thomas, Birmingham.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bordeaux:* MM. Cannieu and Pachon have been appointed *professeurs-agrégés* of Anatomy and Physiology respectively.—*Lyons:* MM Siraud and Durand have been appointed *professeurs-agrégés* of Anatomy, and M. Doyon *professeur-agrégé* of Physiology.—*Melbourne:* Dr. F. D. Bird has been appointed Lecturer on Surgery.—*Montpelier:* MM. Mouret and Delezenne have been appointed *professeurs-agrégés* of Anatomy and Physiology respectively.—*Palermo:* Drs. Mirto, Ficano, di Blasi, and Foderà have been recognised as *privat-docenten* in Psychiatry, Laryngology, Hygiene, and Pharmacology respectively.—*Nancy:* MM. Jacques and Lambert have been appointed *professeurs-agrégés* of Anatomy and Physiology respectively.—*Naples:* Drs. Jappelli, Baculo, Costabile, and Screvini have been recognised as *privat-docenten* in Physiology, General Pathology, Pharmacology, and Odontology respectively.—*Paris:* M. Thiéry has been appointed *professeur-agrégé* of Anatomy.—*Prague* (German University): Dr. von Wunschheim has been appointed *docent* in Pathological Anatomy. Dr. Hugo Rex, Dr. J. Pohl, and Dr. Steinach have been promoted to Extraordinary Professorships of Anatomy, Pharmacology, and Physiology respectively.

MEDICAL MAGISTRATES.—Mr. William Evans, L.R.C.P. Edin., M.R.C.S., of Llanerchymedd, has been placed on the Commission of the Peace for the County of Anglesey.—Mr. R. D. Evans, M.R.C.P., L.R.C.S. Edin., of Llysmeddyg, Blaenau-Festiniog, has been placed by the Lord Chancellor on the Commission of the Peace for Merionethshire.

PRESENTATION.—Mr. Hugh Lewis Hughes, L.R.C.P. & S. Edin., Dowlais, was on the 14th ult. presented with a massive solid brass timepiece, together with a pair of candelabra to match, elegantly designed and bearing the inscription: "Presented to Dr. Hughes by the members of the Women's Ambulance Class, Dowlais, June 14th, 1895." This is the sixth occasion on which the local members of the St. John Ambulance Association have shown their appreciation of his labours as surgeon-instructor.

BEQUESTS AND DONATIONS TO HOSPITALS.—Sir Donald Currie, M.P., has sent a donation of £100 towards the Royal Infirmary, Newcastle-upon-Tyne, as a memento of his recent visit to that borough.—The late Mr. Thos. R. Harding of St. Ann's Tower, Leeds, has bequeathed £100 to the Leeds General Infirmary.—A legacy of £36,236 has been received by the Court of Governors of the London Hospital from the late Mr. W. A. Gursden.—Mr. John E. Davies, late of Park-street, Bristol, has bequeathed £200 to the Bristol Hospital for Sick Women and Children.—The late Mrs. A. T. Hall of Lowndes-square, London, has bequeathed £20,000 to St. George's Hospital, Hyde-park-corner, in memory of her late husband, Major Hall.—Mr. John Howarth Ormerod, late of Beechwood, Birkdale, has bequeathed (free of legacy duty) £1000 to the Halifax Infirmary.—The last Sheffield Hospital Sunday Fund collection, which amounted (after paying expenses) to £1941 8*s.* 10*d.*, has been apportioned as follows:—The Sheffield General Infirmary, £1073 10*s.* 7*d.*; the Royal Hospital, £462 8*s.* 11*d.*; the Jessop Hospital, £296 10*s.* 2*d.*; and the Children's Hospital, £108 19*s.* 2*d.*—Lady H. M. R. Robinson, late of Penzance, has bequeathed £500 to the Royal Hospital for Incurables.—The trustees of Smith's (Kensington Estate) Charity have granted a donation of £500 to the special fund now being raised for St. Thomas's Hospital, London; and the Corporation of the City of London has voted 200 guineas towards the same fund.—A gift of £1000 has been received by the treasurer of the Royal Hospital for Diseases of the Chest, City-road, London, from a lady who does not wish her name to be announced.—The Great Northern Central Hospital, London, has received a further grant of £400 from the trustees of Smith's (Kensington Estate) Charity.—The late Mr. John Hughes of Liverpool has bequeathed £300 to the Liverpool Eye and Ear Infirmary, £200 each to the Liverpool Royal Infirmary and the Liverpool Royal Southern Hospital, and £100 to the Stanley Hospital; and after the decease of Mrs. Hughes the following bequests are left—viz.: £500 each to the Liverpool Eye and Ear Infirmary, the Liverpool Royal Infirmary, and the Royal Southern Hospital, Liverpool, and £250 to the Stanley Hospital.—The treasurer of the Dundee Royal Infirmary has received a donation of £1540 from Mr. James Key Caird, being the amount of the deficit on the last year's accounts.

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DURING the meeting of the British Medical Association the President and Fellows of the Obstetrical Society of London intend to give a banquet at the Whitehall-rooms on Friday, Aug. 2nd, at 7 P.M., in order to entertain distinguished foreign obstetricians and gynæcologists.

VACATION COURSES IN BELGIUM.—Some of the Belgian universities are making arrangements for vacation courses for practitioners to be held in the month of September. These will be of the same character as the well-known courses in the German universities, and may be useful to English practitioners who want a little insight into Continental methods, especially if their knowledge of French happens, as is frequently the case, to be far better than their knowledge of German. Brussels, Liége, and Ghent are opening their doors this summer for vacation courses, but up to the present Louvain appears to be holding aloof from the movement.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Close of the Session and the Parliament.

On Saturday, July 6th, the work of the session was brought to a close, and the prorogation took place, and on Monday, July 8th, the Parliament was dissolved by Her Majesty the Queen, acting on the advice of the Marquis of Salisbury.

Weights and Measures.

The Select Committee of the House of Commons appointed to inquire into and report upon our system of weights and measures has recommended that the metrical system be at once legalised for all purposes, that after a lapse of two years it be rendered compulsory by Act of Parliament, and that the system be taught in all public elementary schools as a necessary and integral part of arithmetic, and that decimals be introduced at an earlier period of the school curriculum than is the case at present.

HOUSE OF LORDS.

FRIDAY, JULY 5TH.

Factories and Workshops Bill.

In order to get the Factories and Workshops Bill passed into law before the close of the Session their lordships suspended the standing orders of the House and took all the stages of the Bill at this sitting. On the second reading stage there was a debate of considerable length.

The Marquis of Ripon, in moving the second reading, said that the Bill introduced no new principle, but simply extended the existing factory legislation. In these days, when every one felt so great an interest in all matters connected with sanitary legislation, and when sanitary science had advanced so much and impressed itself so strongly on the mind of the public and Parliament, he felt confident that there were no members of the House who would object to make the provisions of factory and workshop legislature more stringent and more complete in respect to sanitary matters so as to secure the safety of the workers. There was one provision which would specially commend itself, and that was the provision for the imposition of a penalty for allowing wearing apparel to be made up in places where there was any infectious disease. There was another provision which prohibited children from being engaged in the cleaning of machinery in motion. There were also provisions for the maintenance of a register of accidents, which he was quite sure all their lordships would approve. In attempting to pass the Bill, he must depend, of course, upon the new Government, and he appealed to the members of it in the House to give him their aid.

The Marquis of Salisbury said that the Bill belonged to a class which had always been received with great favour in this House, and he agreed that our experience of the Factory Acts was such as to make it desirable to extend their principles as far as we could do so with success. He had nothing to say against this Bill, except to express some slight apprehension with regard to the provisions affecting laundries. He was afraid it would aid the tendency to crush out the smaller industries in this country.

Viscount Cross, speaking as the Minister who was responsible for what was now the principal Act affecting factories and workshops, said that the Act had stood the test of twenty years, and had been the charter of all workmen in factories and workshops.

After some further discussion the Bill was passed through its various stages in exactly the form in which it left the House of Commons.

Fatal Accidents Inquiries (Scotland) Bill.

There was also some discussion before this Bill was passed. Lord Balfour of Burleigh, the new Secretary for Scotland, intimated that it had his approval. He thought it desirable that inquiries into accidents occurring in industrial employments in Scotland should no longer be conducted in secret, although he did not altogether feel confidence in the method of inquiry proposed in the Bill.

HOUSE OF COMMONS.

THURSDAY, JULY 4TH.

The Case of Dr. Cornelius Herz.

On the order for the second reading of the Extradition Bill, Sir Edward Reed said that, while the measure was understood to be intended to meet the case of Dr. Cornelius Herz, it would be of no use in that case unless it contained a provision enabling an accused person to be tried, although not present in court.—Sir Albert Rollit explained that during the period that Dr. Herz had been in England his health had so declined that unless the hearing of his case could be taken in a private residence the Bill would not benefit him.—Mr. Asquith said that undoubtedly the Bill had been suggested to the late Government by the case of Dr. Herz. Without going into the general question of the treatment of Dr. Herz, or the suggestions that he had been subjected to unreasonable espionage, he desired to state that, within the limits which the existing law allowed, the treatment of Dr. Herz, so long as the late Government were responsible in the matter—and he had no doubt it was so still—had been not only humane, but most considerate. Dr. Herz had from first to last been treated with indulgence, and there was no foundation whatever for the statement that, so far as the existing law permitted, he had been subjected to any hardship.

The Bill was read a second time, and at the following day's sitting passed through its other stages.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BALLANTYNE, J. W., M.D., F.R.C.P.E., F.R.S. Edin., has been appointed Examiner in Midwifery in the University of Aberdeen.

BEASLEY, J. G., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a District Medical Officer by the Rowley Regis Urban District Council.

BRIDGES, ERNEST C., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Great Northern Central Hospital.

BUCHANAN, ROBT. J. MCLEAN, M.B. Univ. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the Liverpool Hospital for Consumption and Diseases of the Chest.

BURTON, A., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Addenbrooke's Hospital, Cambridge.

CARVER, E., M.D. Cantab., F.R.C.S. Eng., has been appointed Consulting Surgeon to the Addenbrooke's Hospital, Cambridge.

COCKCROFT, M.D., St. And., M.R.C.S., has been reappointed Medical Officer for the Masham Sanitary District of the Leyburn Union.

ERSKINE, R., M.D., M.Ch. Irel., has been reappointed Medical Officer for the Camborne Sanitary District of the Redruth Union.

GOODMAN, GODFREY, L.R.C.P.I., L.R.C.S.I., L.M.R.C.P.I., has been appointed Medical Officer of Health to the Rural Sanitary District of the Brigg District Council, vice Moxon, resigned.

GREIG, W. C., M.B. and C.M. Edin., has been appointed Honorary Physician to H.B.M.'s Legation at Tangier.

GRIFFITHS, JOSEPH, M.D., C.M. Edin., F.R.C.S. Eng., D.P.H. Cantab., has been appointed Surgeon to the Addenbrooke's Hospital, Cambridge, vice Carver, resigned.

HALPIN, J. E., L.R.C.S.I., L. and L.M.K.Q.C.P.I., has been appointed Public Vaccinator for the Fifth District of the Mansfield Union, vice H. Parry Jones.

HALPIN, J. E., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Mansfield Woodhouse Urban Sanitary District, vice Jones.

HINES, JOSEPH, C., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Burwash Sanitary District of the Ticehurst Union.

JOHNSTONE, E., L.S.A., has been appointed Medical Officer for the Clayton Sanitary District of the Prestwich Union.

KELLY, CHAS., M.D., Lond., F.R.C.P., M.R.C.S., has been appointed Medical Officer of Health to the East Preston Rural Council.

LANGDALE, H. M., M.R.C.S., has been reappointed Honorary Medical Officer to the Uckfield Cottage Hospital.

LUCAS, G., M.R.C.S., has been reappointed Honorary Medical Officer to the Uckfield Cottage Hospital.

MCLEAN, C. J. R., M.D., C.M. Edin., has been reappointed Medical Officer to the Yeadon District Council.

MCWEENEY, E. J., M.D., M.Ch. Irel., has been appointed Analyst to the Richmond District Lunatic Asylum, Dublin.

OLDMAN, C. E., M.D. Cantab., has been appointed Medical Officer of Health for the Godstone Rural Sanitary District.

PECK, E. G., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Queensbury District of Yorks.

PERMEWAN, W., M.D. Lond., F.R.C.S. Eng., has been appointed Honorary Laryngologist to the Royal Southern Hospital, Liverpool.

PHILLIPS, EDGAR V., M.R.C.S., L.R.C.P. Lond., D.P.H., R.C.S.I., has been appointed Medical Officer to the No. 5 District Market Harborough Union, Medical Officer of Health Market Harborough Rural Sanitary District, and Medical Officer of Health to the Oxenden Rural Sanitary District, vice Thomas Macaulay, resigned.

RHIND, THOMAS, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the No. 1 Western District, Billesdon Union, vice E. V. Phillips, resigned.

SALT, A. H. D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the Blean Union, vice Wheeler, resigned.

SELBY, EDMOND WALLACE, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Doncaster General Infirmary and Dispensary.

SEWILL, J. SEFTON, M.R.C.S., L.R.C.P., L.D.S., has been appointed Dental Surgeon to the St. Marylebone General Dispensary.

SHILLITOE, ARTHUR, M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Registrar to the Lock Hospital, Paddington.

SYMONDS, CHARTERS T., M.S., M.D Lond., F.R.C.S. Eng., has been appointed Consulting Surgeon to the Stockwell Orphanage, vice Durham, deceased.

TODD, H. B., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health to the Charlton King's District Council.

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Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF LEICESTER.—Medical Officer of Health and Public Analyst). Total salary £500 per annum (£400 as Medical Officer and Superintendent of the Fever Hospital, and £100 as Public Analyst). Applications to the Town Clerk, Town Hall, Leicester.

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District £100 per annum, for the Port Sanitary District £20 per annum, and as Medical Attendant at the Sanatorium, £30 per annum. Applications to the Town Clerk, Lowestoft.

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE, Great Russell-street, London.—Assistant Bacteriologist in the Antitoxin Department. Salary £150 a year.

CANCER HOSPITAL (free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for two years. Salary to commence at £30 per annum, with residence and maintenance in the house.

CHICHESTER INFIRMARY.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident), for six months. Salary at the rate of £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

COUNTY ASYLUM, Gloucester.—Third Assistant Medical Officer, unmarried. Salary £105 per annum, with board (no stimulants), lodging and washing.

COUNTY BOROUGH OF WEST HAM.—Resident Medical Superintendent for the Borough Hospital for Infectious Diseases at Plaistow. Salary £200 per annum, with annual increments of £10 up to a maximum of £250, and apartments and washing. Applications to the Town Clerk, Town Hall, West Ham, E.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—Resident Assistant House Surgeon, for six months. Salary £15, with board (exclusive of beer, wines, and spirits), residence, washing, and attendance.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Junior House Surgeon for six months. Board, lodging, and laundry in the hospital provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician, non-resident.

LEICESTER INFIRMARY.—Assistant House Surgeon for six months. An honorarium of £21 for that period will be given, and board, residence at the Infirmary, and washing provided.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Joint Lecturer on Physiology. Salary £150 a year and a proportion of the fees paid for classes. Not less than £250 in all.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Assistant House Surgeon. Board and residence provided.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—Senior Assistant House Surgeon. Salary £80 per annum, with board and lodging.

SALFORD UNION INFIRMARY, Hope, near, Eccles.—Assistant Medical Officer. Salary £130 per annum, with furnished apartments in the Infirmary. Applications to the Clerk to the Guardians, Union Offices, Eccles New-road, Salford.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10 given, after six months satisfactory service.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging and washing.

UNIVERSITY OF GLASGOW.—Two Examiners in Medicine.

YORK DISPENSARY.—Resident Obstetric House Surgeon to attend midwifery cases at their own homes, unmarried. Salary £150 per year, with furnished apartments, coals and gas.

Births, Marriages, and Deaths.

BIRTHS.

FRAZER.—On July 2nd, at Upton Lodge, Devonshire-place, Eastbourne, the wife of Kenneth Frazer, B.A., M.D. Dubl., of a son.

HOWARD.—On July 1st, at Wealdstone, Harrow, the wife of Arthur Walters Howard, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MARRIAGES.

WATKINS—ASTEY.—On July 6th, at St. Mary Magdalen, St. Leonards-on-Sea, C. Stuart Watkins, M.R.C.S. Eng., of Warrior-square, to Henrietta Elizabeth Astey, of St. Leonards-on-Sea.

WHEELER—ARUNDEL.—On the 5th inst., at St. Mary's, Stoke Newington, by the Rev. Richard Holmes, B.A., Charles B. Wheeler, M.D., eldest son of Henry Wheeler, M.R.C.S., L.R.C.P., to Ethel, eldest daughter of the late Samuel Drew Arundel, of Stamford-hill, N. (No cards.)

DEATHS.

CASSIDY.—On June 14th, at Purnea, Bengal, Cecil Valois Clemons, son of Surgeon-Captain and Mrs. C. Clemons Cassidy, aged four months and ten days.

HARRISON-CAPES.—On June 25th, suddenly, at Poitiers, on his return to England, George Augustus Harrison-Capes, M.R.C.S., of Sible Hedingham, Essex, and Rue du Lycé, Pau, aged 82 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to the Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the half-year ending June, which was given in the number of the 29th ult., completed the first volume of the year 1895. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half year's numbers are also ready. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

THE LANCET AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

MEDICAL ADVERTISING.

THE following card cannot be commended in any sense. "Dr." Gill appears in the Medical Register as having the Licence of the Apothecaries' Society and as having received it in 1894. We trust that he will reconsider his titles and his methods.

> Dr. Gill's Surgery, 28, Stainsby-road (corner of Hind-street), Poplar, E. Hours: Before 12; after 6. Fees: Consultation and Medicine, 6*d*.; Visit and Medicine, 1*s*.; Midwifery, from 15*s*.; Vaccination, 1*s*. For many years Assistant to the late Dr. Sharp, of Guildford Road and Burdett Road.

Kasak.—It is not possible for us to give definite replies to our correspondent's queries. We recommend him to be cautious in what he says. Possibly his remarks would be held to be privileged, but this is a debatable question.

Medico-Chirurgico (London) has not complied with the regulations in regard to his name and address.

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THE SKOPTZY.

THERE is, it seems, a very singular religious sect in Russia, whose chief tenet consists in castration. These ridiculous fanatics are said to be convinced that mankind can only obtain admission to Paradise in a mutilated condition, and consequently all males who join their ranks must submit to be deprived of their testicles, but whether the females have to undergo spaying or any analogous operation is not clear. According to M. E. Teinturier, who has written a book entitled "Les Skoptzy," these blind enthusiasts are tolerably numerous; but, happily, there is one good point connected with their particular form of madness—it cannot be transmitted hereditarily.

Carpenter.—The authority for tolling a church bell is to be found at the end of one of the prefaces to the Book of Common Prayer, headed "Concerning the Service of the Church." The direction applies to morning and evening prayer only. The Prayer Book is scheduled to an Act of Parliament, and is therefore of statutable authority. There is no direction whatever for the tolling or ringing of a bell previously to the celebration of the Holy Communion, and any such ringing stands, therefore, in just the same position as the ringing of a bell by any person for any purpose—neither more nor less.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Dr. Donovan surely flatters himself when he says, in your last issue, that an L.S.A. has no more right to call himself "Dr." than a curate has to call himself Archbishop of Canterbury, as he thereby implies that there is as great a difference between an L.S.A. and an M.D. as there is between a curate and the Archbishop of Canterbury. When Dr. Donovan says that "the licence of the Society of Apothecaries gives its holder a kind of legal right to act as a general practitioner he is probably unaware that it is the same kind of right, neither more nor less, that an M.D. has, as an L.S.A. qualified since 1887 is qualified in medicine, surgery, and midwifery. I am sure many will agree with me that the degree or qualification a man holds is alone no criterion either to his professional abilities or his moral qualities. I myself have known several M.D.'s who display the grossest ignorance of their profession, and I also know several M.D.'s who resort to means to obtain patients which show a complete absence of all sense of honour or gentlemanly feeling. Of course, there are good and bad with all degrees and qualifications, but surely it would be more fair to judge a man by his actions and apparent abilities than by the letters he has after his name. As to title, it is my humble opinion that it is simply a matter of taste; it makes very little difference what a man has on his door-plate, as some most successful general practitioners have simply "Mr. So-and-so" It has struck me that several letters under the above title were written by men who have either been disappointed or are suffering from dyspepsia, and who would have been better employed doing something to prove their own superiority than crying in vain to prove the inferiority of men who are perhaps at least their equals, but do not happen to possess the same qualifications as themselves. I am, Sirs, yours faithfully,

July 9th, 1895. L.S.A. Lond.

To the Editors of THE LANCET.

SIRS,—May I venture to ask space in your columns to reply to "M.D.'s" statement in THE LANCET of last week with reference to the new L.S.A. (Lond.)? First, "M.D." states that an L.S.A. is an apothecary, and that only. Now, I question very much whether "M.D." understands the meaning of apothecary, otherwise he could not have made so untrue a statement, as the apothecary is almost, if not completely, one of the past, as "M.D." applies the designation. To the second part of this statement I say an L.S.A. is a surgeon and entitled to style himself so. Secondly, I would remind "M.D." that the Society of Apothecaries are apothecaries in name, and name only, having the power to grant a licence in medicine, surgery, and midwifery—a triple qualification; and I ask "M.D." what body whose examination is a pass examination only has more power than to grant licences? Further, I would remind "M.D." that the persons who examine and thus grant the diploma of the Society of Apothecaries are not men who only hold a sort of legal right to practise medicine, but some of the leading and best surgeons and physicians in London. Thirdly, "M.D." states that the L.S.A. only holds a sort of legal right to practise medicine. Pray what more legal right, or any other right, has "M.D." to practise than the L.S.A.? Fourthly, "M.D." thinks the Society of Apothecaries should be done away with, as it is not wanted. I ask him, Are all the universities that grant a degree in medicine wanted? I think a few of the many universities in Great Britain that give degrees in medicine might with advantage be deprived of this power, and then perhaps the status of "M.D." would be higher than at the present time.

I am, Sirs, yours faithfully,

July 8th, 1895. A NEW L.S.A.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to protest against the manner in which Dr. Donovan speaks of the L.S.A. London. When he says "it is quite time that the Society ceased to grant its licence" I take it that he considers the diploma too easily obtained, and that its holders are "inferior articles." To-day the Final L.S.A. is quite equal to, if not better than, that of the Edinburgh College. True the holder of the latter diploma can affix almost half the alphabet to his name, whereas the former only gets L.S.A., but I think the L.S.A.'s chance of getting an appointment is no less than his Scotch brother's. Had an M.D. of a *good* university or even a conjoint (London) man wished for the abolition of the L.S.A., I could have bowed my head and remained silent, but under the circumstances I cannot, and am not ashamed to sign myself—Yours faithfully,

July 10th, 1895. L.S.A. LOND.

To the Editors of THE LANCET.

SIRS,—May I be allowed to protest against the tone of Dr. Donovan's letter in your last issue, which seems to me to be lacking in courtesy towards a large body of his fellow practitioners? When he states that the L.S.A. has "a kind of a right to act as a general practitioner" the sentence would have been more correct, as well as being in better taste, with the word "kind" omitted. He also seems to be under a misapprehension when he says that the Pharmaceutical Society has supplied the place of Apothecaries' Hall. Perhaps he is not aware that the L.S.A. is now a qualification that compares favourably with those granted by many other licensing bodies, and is not merely a licence for the compounding of drugs. The L.S.A. has as much, and no more, right than any other diplomate to the courtesy prefix of "Dr."

I remain, Sirs, yours faithfully,

July 8th, 1895. M.R.C.S., L.R.C.P., L.S.A.

To the Editors of THE LANCET.

SIRS,—Kindly allow me to say that there is no such statement in my letter as that which Dr. Keser imputes to me. I have not stated that the State examination in Germany confers any title. As Dr. Keser possesses Swiss diplomas I assume that he is Swiss. I have travelled a good deal in Switzerland, but have felt no temptation to draw medical models from that country. I can only attribute Dr. Keser's misstatement to an imperfect knowledge of our language. To this same cause may also be attributable his strong language on the State examination in his country, which can only reflect upon its M.D.'s who are prohibited from practising till they have passed this test of professional competency. I am, Sirs, your obedient servant,

July 9th, 1895. M. H. FEENY.

To the Editors of THE LANCET.

SIRS,—I confess that I am quite taken aback by the vigorous protests aroused by my statement concerning the L.S.A. and the title. I have so often heard the assertion made without contradiction—not only by men holding the diploma in question, but by others, who have referred to it as a great grievance—that I believed it to be a fact well known and unquestioned. Obviously, however, I must either substantiate my words or withdraw and apologise for them; and if you and my challengers will allow me until next week, or even the week after next, I promise that I will do one or the other.

I am, Sirs, yours obediently,

July 9th, 1895. NOT L.S.A.

EMBALMING.

WE have received from Mr. Halford Mills, of Cambridge-place, a pamphlet in which he directs attention to the advantage in some cases of preserving the dead body by the American method of embalming. For the purpose of conveying bodies of the dead to distant places embalming has been largely resorted to in the United States, and as there practised it is shorn of the repulsive features usually associated with this process. The system consists in the withdrawal of the decomposing gases and fluids and the thorough washing out of the circulatory system with an antiseptic and preserving fluid. In most cases a small opening in the arm is all that is necessary to accomplish this; and after the operation the corpse has an appearance which renders unnecessary any after "touching up," and the substance of the structure is preserved, as well as the lineaments of the countenance and complexion. As the fluids are extracted from the body, the corpse may be deposited in a wicker coffin without any of the unpleasant results which usually attend the use of such coffins.

Inquirer.—Applications for the appointment of prison surgeon should be made to the Prison Commissioners at the Home Office, Whitehall, S.W. (Secretary: Col. M. Clare Garsia), for English appointments, and candidates are selected on their merits. Surgeons in Scotch and Irish prisons are appointed by the same department, but under separate regulations.

LYSIDINE.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me some information as to the action of the new remedy "lysidine" in gouty affections? Does it produce any disturbing symptoms, and is its effect permanent or merely temporary? I am, Sirs, yours faithfully,

July 4th, 1895. A SUBSCRIBER.

Mr. T. C. Hubbard.—It would be difficult to take any action before identifying the medical men who are responsible. If there is any clue to them their names and their bills should be forwarded to the respective bodies whence they derive their qualifications.

M.P.S.I.—The board of guardians, who are on the spot and conversant with the details, ought to see that our correspondent is not wronged in the way that he considers himself to be.

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PENALTIES ON MEDICAL PRACTITIONERS.

THE following amusing passage from *Health News* will show that even though the medical practitioner's life, like the burglar's, may not be an invariably happy one, yet times have changed for the better:—

> There was a time when physicians were bound to a strict attention to the welfare of their patients by something besides the consideration of their own credit and profit, for at Dijon, in 1386, a physician was fined by the chief magistrate fifty golden franks (as well as being imprisoned for a time) for not having completed the cures of some persons whose recovery he had guaranteed. And the beautiful Austrigilda, Consort of Gontran, King of Burgundy, was in the sixth century permitted by her husband, in compliance with her dying request, to have her two physicians slain and buried at the same time as herself. St. Foix, who chronicled this fact, omitted to mention whether this cruel deed occurred by way of punishment for their ill-success or out of her attachment to them. It has been suggested that this arrangement had the advantage of relieving the king from any indebtedness to those ill-used and ill-requited doctors, possibly a consideration which had some weight with the too indulgent Royal husband in inducing him to accede to his consort's singular request.

A Practitioner at Blackpool.—Judging by the facts as set out by our correspondent, we cannot but regret that such medical men as desire to do so should not be allowed to continue attendance on their patients when these are removed to the Blackpool infectious hospital. As a rule, the most advantageous plan is to favour such attendance, provided it is carried out at the cost of the patient and subject to the rules as to general control laid down by the local authority under the advice of their medical officer. Such a plan has often been found to do more than anything else to secure the admission of better-class patients, such as those in tradesmen's houses, who, by reason of their occupation, constitute a risk of infection to the public. But we are bound to admit that in some large hospitals this scheme is not found to work well, and hence the ordinary medical practitioner only visits cases in consultation with the hospital medical attendant. The circumstances of each individual town and district must settle which is the best line to be taken, and local opinion can generally best decide which method will tend to make the hospital most attractive to the public and most useful in preventing the spread of infection. In some towns medical men are by no means unwilling to get rid of attendance on the bulk of their infectious cases, especially if this can be done without the risk of the patients being handed over to a competing medical practitioner. We do not doubt but that a general expression of opinion, one way or the other, by the medical men practising in Blackpool would receive every consideration at the hands of the town council.

Perseverance.—The title is one of courtesy only. Our correspondent must judge for himself how far it should be adopted. The scale of fees must be dictated by the circumstances of the patients.

PROFESSIONAL RISKS.

To the Editors of THE LANCET.

SIRS,—In Max Nordau's "Degeneration" (Heinemann's edition) occurs the following capital rendering of a passage which should afford food for thought in many particulars to busy practitioners of the healing art. It may well be left to produce its effect unaided:—

"In an exceedingly amusing French farce, *Le Homard*, a husband suddenly returning home one evening surprises a stranger with his wife. The latter does not lose her presence of mind, and says to the husband that, having suddenly been seized with illness she had sent her maid for the first available doctor, and that this gentleman was the doctor. The husband thanks the gallant for his speedy appearance, and asks if he has already prescribed anything. The gallant, who, of course, is not a doctor, tries to make himself scarce; but the anxious husband insists on having a prescription, so that the Galen, bathed in cold perspiration, is compelled to give one. The husband casts a glance at it; it consists of wholly illegible marks. 'And will the chemist be able to read that?' asks the husband, shaking his head. 'As if it were print,' asseverates the false physician, again trying to make his escape. The husband, however, adjures him to remain, and holds him fast till the maid returns from the chemist. In a few minutes she makes her appearance. The Galen prepares himself for a catastrophe. No. The maid brings a phial of medicine, a box of pills, and some powders. 'Did the chemist give you those?' demands the Galen in bewilderment. 'Certainly.' 'On my prescription?' 'Of course it was on your prescription,' replies the astonished maid. 'Has the chemist made some mistake?' interposes the troubled husband. 'No, no,' our Galen hastens to reply; but he contemplates the medicines for a long time and becomes lost in reverie." (*Vide* page 394)

I am, Sirs, yours faithfully,

July 8th, 1895. PLACEBO.

"LIQUEUR ADVOCAAT."

IN regard to our analytical notice of this preparation last week, Messrs. Simundt, Slater, and Co. write that they are not, as stated, the original manufacturers, but the agents of the original manufacturers, Messrs. Kruijmel and de Wit of Arnehem, Holland.

MEDICAL ADVERTISING AT SOUTHPORT.

To judge from the *Southport Visiter* Southport seems a collection of hydropathic institutions, supported by advertisements in which the medical officers figure in a way that cannot be approved. The advertisements are jumbled together with that of a remedy for "restoring regularity in married women."

PRACTICE IN NEW ZEALAND.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me any information concerning medical practice in New Zealand? I am, Sirs, yours truly,

July 3rd, 1895. M.B. & C.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 11th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 5	30·23	N.E.	59	56	107	68	55	0·04	Cloudy
" 6	30·22	N.W.	60	56	117	75	56	...	Hazy
" 7	30·21	S.W.	71	62	117	81	56	...	Bright
" 8	30·14	S.W.	69	59	125	84	59	...	Bright
" 9	30·04	S.W.	69	60	120	80	59	...	Hazy
" 10	29·93	N.W.	67	59	122	80	60	...	Cloudy
" 11	29·89	S.W.	64	58	114	71	60	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 to 6 P.M. Dr. Morgan Dockrell: Syphilis.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 to 6 P.M. Dr. Morgan Dockrell: Lichen Planus.

During the week marked copies of the following newspapers have been received:—*Glasgow Herald, Sheffield Independent, Birmingham Post, Carlisle Express, Science Gossip, Irish Daily Independent, Scotsman, Times of India, Brighton Gazette, Builder, Liverpool Daily Post, Architect, Pioneer Mail, Yorkshire Post, North Star, City Press, Leeds Mercury, Wisbech Standard, Morning, Bristol Mercury, Midland Counties Express, Sanitary Record, Hertfordshire Express, Family Doctor, Provincial Medical Journal, Princess, Manchester Courier, Bristol Times, Nature, East-end News, Courrier de la Presse, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Mining Journal, Reading Mercury, The Gas World, Surrey Advertiser, Cape Times, Weekly Herald and North Middlesex Advertiser, North Wales Chronicle, Milom News, Southport Visitor, East London Observer, Guy's Hospital Gazette, Local Government Journal, Derby Mercury, Alliance News, Putney News, Midland Times, Rugby Advertiser, Kelso Mail, Preston Herald, Hawaiian Gazette, Umpire, Thanet Guardian, Sandgate Telegraph, North Queensland Herald, Tenby Observer, South Australian Register, Cambridge Express, Brisbane Courier, &c., &c.*

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Communications, Letters &c. have been received from—

A.—Mr. B. Armitage, Wailuku Main, Hawaiian Island; Rev. J. W. Atkinson, Lond.; A. B., Bristol.

B.—Dr. A. Bronner, Bradford; Dr. A. M. Buchanan, Glasgow; Dr. D. Bargellini, Toscana, Italy; Mr. G. R. Baldwin, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; British Pharmaceutical Conference, Bournemouth, Secretary of; Borough of Lowestoft, Town Clerk of; Borough of Leicester, Town Clerk of.

C.—Dr. J. G. S. Coghill, Ventnor; Dr. Christoff, Varna; Dr. R. H. Coombs, Becford; Mr. A. Carney, Leeds; Mr. T. J. Croke, Harrogate; Mr. W. T. Colman, Steyning; Messrs. Callard and Co, Lond.; Chichester Infirmary, Secretary of; Chester General Infirmary, Secretary of; Clavus, Lond.

D.—Mr. J. D. Dixon, Newcastle-on-Tyne; Mr. H. G. Dixon, Lond.; Mr. J. Domakin, Manchester; Madame Dean, Lond.; Messrs. Douglas and Foulis, Edinburgh; Dorchester Asylum, Secretary of.

E.—Mr. B. Edwards, Birmingham; *Evening News*, Lond., Managing Editor of.

F.—Dr. F. Fox, Strathpeffer Spa; Mr. Foulerton, Lond.

G.—Dr. D. M. Gill, Haslingden; Mr. T. Green, Lond.; Mr. G. C. Grant, Rubery Hill; Globe Advertising Co., Lond.

H.—Dr. S. Hyde, Buxton; Dr. B. de W. Hutchinson, Bridlington; Dr. B. R. Holmes, Lond.; Mr. J. Heywood, Manchester; Mr. C. Hunt, Cheltenham; Mrs. J. J. Hundley, Brooklyn; Messrs. J. Hopkinson and Co., Nottingham; Messrs. J. Haddon and Co., Lond.; Messrs. Harvard and Co., Lond.

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P.—Dr. S. W. Plummer, Durham; Mr. Y. J. Pentland, Edinburgh; Mr. C. H. Powers, Gosforth; Messrs. H. W. and R. Pearson, Malton; Principal, Croydon.

R.—Dr. G. K. Richards, Paris; Dr. H. D. Rolleston, Lond.; Dr. R. R. Rentoul, Liverpool; Mr. H. M. Riley, Leicester; Mr. R. Redpath, Newcastle-on-Tyne; Royal Aquarium, Lond., Manager of; Romo y Füssel, Madrid; Redcliffe-square, No. 40, Lond.; R. B. F.

S.—Dr. J. M. B. Scatliff, Brighton; Dr. H. Snow, Lond.; Dr. Schacht' Lond.; Surg.-Capt. R. R. Sleman' Lond.; Mr. B. G. Stowe, Doncaster; Mr. J. Sampson, York; Mr. R. Stuart, Lond.; Messrs. Simundt, Slater, and Co., Lond.; Messrs. Slinger and Son, York; St. Mungo's College, Glasgow, Dean of; St. Thomas's Hospital Medical School, Lond., Secretary of; Salford Union, Clerk of.

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V.—Mr. J. A. Van Horn, Hoopeston, Illinois, U.S.A.

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Z.—Dr. J. Zuill, Kincardine-on-Forth.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. H. H. Aitchison, Wallsend-on-Tyne; Dr. A. Abilbery, Johannesburg; Mr. H. Astley, Edinburgh; Mr. P. Armour, Kilmarnock; Anderson's College Medical School, Glasgow, Secretary of; Apollinaris Co., Lond.; A. B. C., Lond.; Alpha, Lond.; A. B., Sunderland; A. B., Lond.; A. J., Lond.; Aleph, Lond.

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K.—Dr. L. Kidd, Enniskillen.

L.—Dr. R. Liveing, Lond.; Mr. J. R. Lynn, Lond.; Mr. G. B. D. Levick, Pinner; Louis, Ballymahon; L.R.C.P., Lond.

M.—Dr. W. Maule, Southport; Mr. W. J. Macfarland, Smallborough; Mr. W. Mason, Southsea; Mater, Lond.; Medicus, Lond.; Medicus, Crewe; M., Lond.; Medicus, Keighley.

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R.—Dr. R. R. Ross, Rio Tinto, Spain; Messrs. A. Riddle and Co., Lond.; Messrs. Read and Donald, Perth; Rhonda, Lond.; Rus, Lond.

S.—Dr. B. Sutcliff, Torrington; Dr. D. McP. Stevenson, Bradford, Yorks; Mr. C. Simpson, Sheffield; Mr. C. L. Sansom, Lond.; Mr. S. P. Smith, Edinburgh; Messrs. W. H. Smith and Son, Manchester; Saarbach's News Exchange, Mainz; Sulphonal, Lond.; Surgeon, Grimsby; S. B. S., Lond.

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U.—Union Assurance Society, Lond., Secretary of.

V.—Mr. C. C. O. Van Lennep, Lond.

W.—Dr. J. Watson, Newbury; Dr. W. M. Whittaker, Lond.; Dr. J. Wallace, Fearn, N.B.; Mr. J. C. Wilson, Haworth; Mr. J. F. Walker, Swallowfield; Mr. J. W. Walker, Sketty; Mr. H. Wheeler, Lond.; Mr. A. Wroughton, St. Ives; Mr. C. A. Wickham, Willesborough; Mr. R. C. Worsley, Ramsgate; Mr. F. Weaver, Bourne End; W. A., Long Stratton.

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Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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Amyloid Indigestion,

ITS PREVALENCE AND TREATMENT.

A MOST interesting and instructive paper was read by Dr. J. H. Kellogg at the meeting of the American Medical Association this year. Under the title "New Methods of Precision in the Investigation of Functional Disorders of Digestion," he proceeded to lay before the Congress the results of his observations of no less than 4000 cases of Dyspepsia.

This searching investigation of the whole subject led him to the surprising conclusion that the failure to digest starch is one of the most common forms of dyspepsia, and he produced convincing statistical proof of his contention.

This seems to throw a new light upon the great difficulty that many practitioners find in dealing with the many forms of indigestion. It is a matter of common knowledge and regret that such cases are among the most persistent with which the physician has to deal, and it would perhaps be as well therefore to see how far the researches of Dr. Kellogg will help to solve one of the most difficult problems of modern medicine. If, as we can but believe from the results of his painstaking investigations, amyloid indigestion is so very common, it would seem that the part played by the saliva in the digestive process has been very much underestimated.

The reason for this is not far to seek. It is generally believed that ptyalin, the active enzyme of the salivary secretion, will not produce amylolysis in any but neutral or alkaline media. This opinion appears to be not altogether well founded in the light of the latest research. For instance, in criticising Dr. Kellogg's paper, Dr. Webster of Chicago stated that it is not generally known that salivary digestion may continue in the stomach for from thirty to sixty minutes after ingestion of food. Chittenden and Griswold even go so far as to say that a small proportion of acid promotes the activity of the salivary ferment. Dr. Arthur Gamgee, in his exhaustive work "Physiological Chemistry of the Animal Body" (Macmillan, 1893), summarises past and present investigation by saying—

"We may safely conclude that in the first stage of gastric digestion—i.e., for a period up to about half an hour—the conversion of boiled starch into dextrin and maltose doubtless proceeds actively, but that it then ceases, under the influence of acid proteid and free acid."

If then, the symptoms point to amyloid rather than albuminoid indigestion—and according to Dr. Kellogg's statistics the former is far more common than the latter—it would seem to be necessary to apply a digestive agent directly after a meal, so that complete amylolysis can take place before the gastric juice becomes sufficiently acidified to stop the process. As the cause of the disease is either a deficiency in the supply of saliva, or of enzymic potency in the saliva, it is evident that the administration of routine stomachic sedatives and stimulants will be valueless in this variety of indigestion. It is not the stomach but the salivary gland that is at fault.

A fresh difficulty arises if stimulation of the salivary glands is attempted by means of acids, because the increased quantity of acid in the stomach will neutralise the increased quantity of ptyalin. The only course open is to find some substance which will do the work of the deficient ptyalin and thus imitate as closely as possible the normal digestive process. In beating about for an artificial enzyme to replace the natural one, malt-diastase occurs to the mind at once. This substance, called from its marked amylolytic powers, vegetable ptyalin, is closely allied to animal ptyalin in chemical composition, and acts powerfully on starch, converting it into maltose. The ultimate product of the digestive process by means of this enzyme is chemically identical with that produced by animal ptyalin, and like the latter it acts in alkaline, neutral, or feebly acid media.

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The Baillie Lectures

ON

THE CARDIO-VASCULAR CHANGES OF RENAL DISEASE, WITH SOME OBSERVATIONS ON THE LARGER ARTERIES.

Delivered at St. George's Hospital on June 19th and 26th and July 3rd, 1895,

BY W. HOWSHIP DICKINSON, M.D., F.R.C.P. LOND.,

HON. FELLOW OF CAIUS COLLEGE, CAMBRIDGE; CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

LECTURE I.

Delivered on June 19th, 1895.

GENTLEMEN,—Excepting what has to do with bacteria it may be said that no observations in pathology have been so fruitful in results as the great discovery of Bright. I do not now propose to deal with this as regards the kidneys themselves, but only to touch upon some of the systemic consequences of renal disease which Bright partly, I may say in large part, made known. Bright noticed the hypertrophy of the left ventricle, and attributed the muscular increase to abnormal resistance. He inferred that there was an obstacle in the outward course of the blood, and assigned the capillaries as its probable situation. The immediate cause he considered to be in the impurity of the blood, which in some way interfered with its transit through these channels, which expose to the blood so large a surface and maintain with it such intimate relations. This theory held its ground without modification or question until Dr. (now Sir George) Johnson observed the thickening of the muscular coat of the arterioles, and was led to the belief that the hindrance was not in the capillaries, as Bright had supposed, but in the minute arteries thus thickened. Johnson argued that the capillaries were not muscular, and therefore not contractile, while the arterioles were both. In this view the arterioles became hypertrophied in their efforts to keep the impure blood out of the tissues; the heart became hypertrophied in its endeavours to overcome the resistance thus occasioned. The muscularity of the arterioles is not to be disputed, and it is known to physiologists that under certain influences, connected particularly with the nervous system, these vessels have the power of contracting, and so cutting off the blood from the tissues; but whether this stopcock action, as Johnson called it, is the essential factor in the cardio-vascular change of heart disease remains to be seen. The capillaries have been shown to be contractile, though not muscular, and the observations of Johnson do not disprove the theory of Bright.

Leaving this contest as yet undecided, I must note the appearance of another combatant, or rather hostile alliance, upon the field. Sir W. Gull and Dr. Sutton, neither of whom, I grieve to say, are with us now, came down in force upon the position of Johnson, and a great battle ensued, which was waged with obstinacy and even with asperity. The allies disputed the muscular thickening of the arterioles, and maintained that the only thickening was of the fibrous tissue. Johnson, in upholding the muscular increase, denied the fibrous, the appearance of which he held to be delusive and the result of reagents. The contest was the more obstinate because there was right on both sides, and the more embittered because on both sides there was wrong. Without staying to recall the fortunes of the fight, I may say that I took then, and have taken since, some pains to satisfy myself of the actual condition of the arterioles, and will briefly repeat, what I said at an early stage of this controversy, that the muscular thickening as described by Johnson is a fact which does not admit of doubt. On the other hand, it is equally certain that with this there is fibroid overgrowth, however brought about. The champions of fibrosis did not attribute the vascular change to the renal or acknowledge any steps in the pathological process, but they regarded both as the parallel and simultaneous results of a baneful tendency which pervaded the whole body like original sin, affected at the same time the vessels and the viscera, and produced a general deterioration, which they likened to the effects of age. This comprehensive theory is probably not entirely without foundation; there *is* such a thing as general fibrosis, particularly as a form of senile decay, and of this general fibrosis the granular kidney may sometimes be a part. But it is abundantly clear that this explanation suffices but for a small minority of the cases in which cardio-vascular changes are associated with renal. By far the greater number begin with disease local to the kidney, and proceed from step to step through the blood to the vessels and the heart. Inflammation limited to the kidney, produced by cold or scarlet fever, perhaps in a child where there can be no question of general fibrosis, except as a result of renal disease, is constantly and rapidly followed by the special cardio-vascular hypertrophy, and that in its most extreme and characteristic shape. That the granular kidney is essentially a local matter and not a mere subdivision of a general fibrosis, as Gull and Sutton tried to make us believe, is borne out by what happens to the liver. Of all the organs in the body the kidney and the liver are the most liable to fibrotic change. If the kidney is affected thus merely as part of a general change the liver surely ought to participate. But it does not do so. I found that in 250 cases of granular degeneration of the kidney, the liver displayed the corresponding change—that is, cirrhosis—in only 37 instances, a proportion of 1 in 7.[1] Granulation of the kidney and cirrhosis of the liver do not go together, as they should do if the fibrotic change in each were due to a common cause. The fact is that, putting aside the general effects of valvular disease of the heart, the liver and kidney are each influenced by causes proper to themselves, not common to the whole body. The liver is made fibrotic chiefly by alcohol, the kidney chiefly by climate, lead, gout, heredity, and as the sequel of acute nephritis. It has always seemed to me that the morbid independence of these organs is a strong if not a conclusive argument against the theory of general fibrosis as propounded by Gull and Sutton. On every ground, therefore, we must accept that as a *general rule*—I do not say there are no exceptions, but I am sure they are few—the renal change is the initial mischief, the *fons et origo* of which the cardio-vascular changes are the results.

The only question that presents itself as admitting of doubt is by what process the renal change brings about the cardio-vascular. The impurity of the blood due to the imperfect action of the kidneys may be accepted as an intermediary, but how does it produce the effects in question? There is presumably an obstruction which gives rise to increased blood pressure, and this to hypertrophy of both muscle and fibre. But where is the obstruction? Is it in the capillaries, as Bright supposed, or are we to place it with Johnson in the arterioles? It seems unlikely at first sight that the heart and the arteries should become hypertrophied by acting against each other—it looks like a want of the common consent which we usually find in nature; but how shall I say it is not so? There are many things which are too wonderful for us, four of which have been mentioned by a royal and inspired author. The action of the heart and vessels may be, like these, beyond our comprehension; but it is not beyond our inquiry. I have ever found, when a difficulty presented itself, that the best way was not to argue or even to reflect, but to seek for additional facts. Being able to get them is the great advantage we have over our brethren the theologians. The facts at their command cannot be added to by observation, whatever talent may be expended in reconsidering the stock in hand. With us the main endeavour is to collect fresh particulars, and nothing further is necessary than to let them speak for themselves. Unlike the students of theology, we are able to push our inquiries beyond death, and take for our motto, "Nec silet mors."

As possibly throwing light upon the rival theories of obstruction in the capillaries and in the arterioles, I thought it worth while to look more widely than had hitherto been done at the distribution of the arterial hypertrophy. If this should prove to be limited to the smaller vessels, which alone can be credited with the stopcock action, then the stopcock or inhibitive action may be the cause of the hypertrophy, or of as much of it as concerns the muscular coat; if, on the other hand, the large arteries should be found to partake of the same alteration, then we must look for some cause which acts alike on large and small. With this view I have examined a series of arteries, including some of the largest: the aorta, the innominate, the common femoral, and the renal. Sections of these vessels made carefully in the same respective

[1] Albuminuria, second edition, p. 171.

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situations were placed under the microscope and outlined on paper with the camera lucida and a uniform magnifying power of 6·35 diameters. The tracings thus obtained were then measured both as to the thickness of the wall and the circumference of the vessel. The number of vessels thus treated amounted to 139, which were supplied by forty-nine individuals mostly chosen as the subjects of marked renal disease or as presenting the type of health. The conclusions are based upon the whole number of vessels of each kind and not derived from selected specimens. As a standard of health I have taken eighteen post mortems, generally after accident or acute disease—ten of males and eight of females. In the male series I have added two cases of acute nephritis, in which, as there was no time for, nor any evidence of, cardio-vascular change, the vessels may be taken as healthy and as furnishing a second standard of comparison. The granular kidney is represented by sixteen male subjects and seven female. In the latter series I have thrown together, as exhibiting virtually the same condition, and that the fibrotic, kidneys described as *granular* and as *white contracting*. The male series shows that with the granular kidney the aorta is thicker than in health as 42 to 39, and thicker than with acute nephritis as 42 to 31. The innominate with the granular kidney gives a thickness of 0·41 in., that with health 0·35 in., and that of acute nephritis 0·30 in. The common femoral gives with the granular kidney a thickness of 0·33 in., with health that of 0·26 in., and with acute nephritis that of 0·24 in. The renal gives with the granular kidney a thickness of 0·25 in. in health, and with acute nephritis one of 0·18 in. Both coats are thickened, as will be seen on reference to the accompanying table. The muscular shows the change with more exactness than the fibroid, for it is not exposed in removal, or liable, as the outer coat is, to have any part left behind. The circumference of the vessels of each kind is also increased with the granular condition, that of the aorta giving 13¾ in., as compared with 11¼ in. in health and 10¾ in with acute nephritis. The innominate, femoral, and renal showed similar increase under the same circumstances, as is displayed in the table. The comparison, as far as relates to the female sex, will be seen to give similiar evidence. The aorta, the innominate, and the femoral are all increased under the renal change in question in the total thickness of the wall, in the thickness of the muscular coat, and in circumference The only exception is in the case of the renal artery in the female, which presents an increase of circumference, but none in the thickness of the wall; only eight specimens, however, of this vessel in this sex were examined, and the number is too small to give weight to the exception.

I have added as collateral illustrations two instances which show the absence of arterial thickening, as of cardiac hypertrophy, with the large white and the lardaceous kidney; and a third which presents a large amount of aortic thickening in connexion with atheroma without renal disease. This aorta, which displayed a large endoarterial deposit, gave a total thickness of 0·57 in., which was greater than those in any of the renal cases, the thickest aorta with renal disease measuring 0·55 in. With the aorta thus thickened by atheroma the change did not extend to the innominate, which was thinner than the average of health.[2] The above measurements will, of course, be understood to apply not to the actual dimensions of the vessels but to those of the representations uniformly magnified as stated.

It has been well known since the observation of Sir G. Johnson—which represents a great truth, however it is to be interpreted—that with the chronic granular kidney the arterioles, even to the smallest, become hypertrophied. For the purpose of this inquiry I thought it would be of interest to ascertain as far as practicable how the degree and kind of thickening here compared with that of the larger vessels. To this end I have examined afresh a number of minute arteries belonging to the pia mater and median fissure of the brain, which are in my possession as the results of former work. Some have been preserved in Canada balsam, others in glycerine. I have dealt with these specimens graphically, making outlines of them with the camera lucida, as in the case of the larger vessels. I may say that I have made no selection—by judicious selection it is possible to prove anything—but I have taken all that came to hand as either typically healthy or connected with typical granular kidneys. The results are before you. The outlines show that under renal disease there is generally, but not universally, thickening of the wall, and that this affects both the muscular and the fibrous coats. The total thickening, and that of each coat, is, judging by the eye, generally greater in the small vessels than in the larger, though demonstrably present in both.

Putting all the facts together, and including what is common knowledge as to the left ventricle, we may formulate the general statement that in connexion with the chronic granular kidney we have hypertrophy of the muscle and of the fibrous tissue belonging to the whole arterial system connected with the left side of the heart, and of the muscle of the heart itself. It is probable that had the inquiry been carried into the pulmonary vessels similar changes might have been found there. We see indications of them in the hypertrophy of the right ventricle, which in these circumstances is almost invariably associated with that of the left, though on a smaller scale. Looking at the import of the changes which have been recorded, we recognise, first, the general application of the ancient dictum that muscle becomes hypertrophied when resistance is opposed to its contraction. We next see the influence of another law, which may act together with, or independently of, the first—namely, that tissues, whether epithelial, fibrous, or muscular, become over-nourished and overgrown as the result of habitual congestion or over-pressure, or undue retention, of blood within them. As

[2] I may introduce a word as to the methods employed. Sections of the arteries were cut with the microtome and mounted on slides for the microscope. These were reflected on paper with the camera lucida and carefully outlined, all with exactly the same microscopic and optical arrangements. With the magnifying power used the vessels were presented as large enough to be accurately measured. The thickness of the wall was ascertained with a rule graduated to hundredths of an inch. The circumference, taken along the outer edge of the muscular coat, was measured with a rotating instrument such as is used for estimating distances on maps. This gave the circumference in inches and fractions of an inch. The enlarged figures to which I have referred were displayed in the course of the lectures. I believe the measurements may be accepted as accurate.

THICKNESS AND CIRCUMFERENCE OF ARTERIES (MAGNIFIED 6·35 DIAMETER). (Mean Measurements in Inches.)

Male Adults.

State of kidney.	Number of cases observed.	Aorta.			Innominate.			Femoral.			Renal.		
		Total thickness.	Muscular thickness.	Circumference.	Total thickness.	Muscular thickness.	Circumference.	Total thickness.	Muscular thickness.	Circumference.	Total thickness.	Muscular thickness.	Circumference.
Healthy	10	0·39	0·29	11⅜	0·35	0·27	8¼	0·26	0·13	4½	0·18	0·10	3
Acute nephritis; no cardio-muscular changes	2	0·31	0·26	10¾	0·30	0·22	7⅛	0·24	0·14	4⅛	0·18	0·08	4
Large white kidney	1	0·35	0·25	12	0·40	0·30	8	0·30	0·20	5	—	—	—
Granular	16	0·42	0·31	13⅜	0·41	0·29	8¾	0·33	0·21	6¼	0·25	0·14	3½
Lardaceous kidney	1	0·30	0·27	12	—	—	—	0·35	0·25	5½	—	—	—
Highly atheromatous aorta ...	1	0·57	0·38	15½	0·30	0·23	6½	—	—	—	—	—	—
Female Adults.													
Healthy	8	0·34	0·26	11	0·26	0·24	7	0·24	0·15	4⅛	0·21	0·13	3
Granular or white contracting kidney	7	0·38	0·30	12⅛	0·36	0·27	9	0·29	0·16	5	0·19	0·11	3⅛

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regards renal disease, it is impossible to separate the question of obstruction ahead from that of over-pressure by their contents upon the arterial walls. Some of the forms of renal disease are attended from their outset with increased blood pressure, others are not. When the pressure is increased, then, sooner or later, there is hypertrophy; when it is not increased there is none. This state of pressure or tension precedes the hypertrophy, for it is evident to the finger, the sphygmograph, and the stethoscope long before there has been time for any structural change. The granulating kidney and the lardaceous may be instructively contrasted. The granulating kidney — beginning, say, in nephritis—is attended from the very first with increased tension and followed as surely by hypertrophy. The lardaceous condition begins with no increase of tension or even with a lack of it; the heart remains small to the last, or, at least, until other renal changes are superadded. It is clear that there is a necessary connexion between the over-tension and the hypertrophy; and as the cause precedes the effect, it must be supposed either that the tension causes the hypertrophy or else that both are the results of some common cause. Searching for the immediate cause of the increase of tension and the hypertrophy which follows upon it, we can only attribute one and both to a difficulty in the emptying of the arterial system caused by an obstruction at or near its outlet, due to the morbid condition of the blood. So far all seems clear. The increased retention of blood within the arterial system is an adequate cause for vascular and cardiac thickening, on the principle which has been already adverted to, by which congestion causes hypertrophy. This would seem to be the essential and simple cause of the fibroid thickening. With regard to the muscular there are other considerations. The arteries are alternately filled by the ventricle and emptied by their own contractility. Peripheral resistance will oppose their contraction and thus occasion muscular hypertrophy. With the large arteries this rule seems of obvious application; they are in the same case as the heart and owe their hypertrophy to similar means. With regard to the minute and terminal arteries, other modes of action are to be taken into view. These vessels, which are known under certain circumstances to exert a special contractile power and thus cut off the blood from the capillaries, have been supposed to do this in renal disease and to owe their hypertrophy to their efforts not to accelerate, but to retard the current. I will not argue for this view or against it, but content myself with stating the facts, or what appear to me to be such, which bear upon it. I think it must be allowed that the smaller vessels are generally more thickened than the larger—at least, I have seen some examples of extravagant thickening among the smaller which I have failed to find in the larger vessels.

It often appears that the calibre of the small vessels is lessened in comparison with the thickness of the walls, whereas with the larger there is dilatation as well as parietal thickening. It looks as if the smaller vessels had some special cause of hypertrophy beyond that which affects the larger. There may be a special inhibitory mandate addressed to their muscular tissue, but against this we have to place the fact that the fibrous tissue, to which no such mandate could be held to apply, is at least equally thickened. Whatever be the cause of the hypertrophy, it must relate equally to both coats.

In searching for the primary seat of obstruction, however our attention may be arrested by the arterioles, we must not disregard the capillaries. These have been proved to be contractile, though they are not muscular.[3] These vessels are in more intimate relation to the blood than any others, and may be supposed to be the first to be influenced by its abnormal conditions; and as evidence that they are so influenced we have the appearance of dropsy—or, in other words, of abnormal capillary transudation—at the outset of renal disease. This process is capillary and not arterial, and at least points to a morbid condition of which the capillaries, not the arterioles, are the seat. Arterial obstruction, indeed, must be prohibitive of dropsy by cutting off the blood from the vessels which are its source. These considerations appear to indicate that, whatever be part of the terminal arteries, the capillary system is the point of departure of the series of changes which have been described. Whether these terminal arteries have any special sympathy with the capillaries with which they are so immediately connected is a question which suggests itself. Whatever be the explanation of the vascular changes upon which I have dwelt, it must include the fibrous thickening as well as the muscular.

Without attempting to pursue these questions to the end I will content myself for the present with having demonstrated the fact that under renal disease, putting aside the pulmonary department to which the same rule probably applies, there occurs a hypertrophy of the cardio-arterial system which is universal from its origin to its termination, and comprises not only the ventricle and the arterioles, but affects also the intermediate arteries of every size.

In conclusion, I have to thank Dr. Rolleston, Dr. Lee Dickinson, and Dr. Cyril Ogle for procuring the specimens of which I have made use. My especial thanks are due to Dr. Rolleston—and to a larger extent to Mr. Fenton—for cutting and mounting the sections.

[3] Paper by Dr. Roy and Dr. Graham Brown on "The Blood-pressure and its Variations in the Arterioles, Capillaries, and Smaller Veins." (Journal of Physiology, 1879-80, Part 2, p. 323.)

A Clinical Lecture

ON

CHRONIC INFLAMMATION OF THE UTERUS.

Delivered at the Middlesex Hospital on June 20th, 1895,

BY WILLIAM DUNCAN, M.D., F.R.C.S.,

OBSTETRIC PHYSICIAN TO THE HOSPITAL; SENIOR PHYSICIAN TO THE CHELSEA HOSPITAL FOR WOMEN.

GENTLEMEN,—The subject which I have chosen for this afternoon's lecture is probably the commonest disease to which a woman is liable, and it is not often that one or more of the beds in Prudhoe Ward are not occupied by a patient suffering from chronic inflammation of the uterus. Under the disease just mentioned I include inflammation affecting not only the parenchyma of the uterus (metritis), but also that involving the membrane lining the cervical canal (endocervicitis) and that lining the uterine cavity (endometritis). All the tissues of the uterus are more or less involved in chronic metritis, so that usually endometritis cannot clinically be dissociated from metritis, although in some cases the endometritis is predominant—in others the metritis. The microscopical appearances, thanks to Wyder, Ruge, and others, are now well known, and in briefly mentioning them I will follow the views of Wyder.

When the uterine wall is the chief seat of inflammation we find the whole uterus enlarged—perhaps even to the size of a man's fist—by hypertrophy of the connective tissue with usually some muscular hypertrophy also. The arteries and veins are much thickened by hypertrophy of the tunica adventitia. The connective tissue remains permanently hypertrophied and does not undergo cicatricial contraction. When the membrane lining the uterine cavity is chiefly affected the changes are such that they can be classified under the following heads: (*a*) chronic hæmorrhagic or villous endometritis, (*b*) chronic catarrhal or glandular endometritis, and (*c*) chronic interstitial endometritis.

In the villous or hæmorrhagic form the mucous membrane is greatly hypertrophied, perhaps to four or five times its usual thickness; it is deeper in colour and, instead of being smooth, has become fungoid, and the projections may form true polypi. In some cases there are found small transparent vesicles, which under the microscope are seen to be dilated glands, the openings of which are closed by connective tissue. The inter-glandular tissue is very vascular. In the glandular or catarrhal form the glands are enormously increased in size and become convoluted at their deep extremities; there is also an increase in their number, so that both hypertrophy and hyperplasia coexist, but otherwise the glandular tissue is normal in structure. In the interstitial form a new connective tissue is developed between the glands, and in some parts it converts the latter into cysts; in others of longer duration the glands may have disappeared altogether, so that the mucous membrane is represented by a layer of connective tissue lined by epithelium.

Causation.—It is becoming more and more a well-recognised fact that in the vast majority of cases of chronic inflammation of the uterus the origin is due to bacterial infection. This infection may be, and too often is, gonorrhœal in character,

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and then not infrequently the inflammation tends to extend beyond the uterus to the Fallopian tubes. A husband may infect his wife directly after marriage if he have the slightest trace of gleet the result of a gonorrhœa which he contracted it may be many years previously and of which he considered himself perfectly cured. Bacterial infection, too, is very common after parturition, especially where any bits of placenta or membranes have been left behind, or where the attendant has examined with a dirty finger or used unclean instruments. Apart from bacterial infection, parturition may be the starting-point of chronic metritis owing to the woman getting up too soon, to the uterus being retroflexed, or to deep lacerations of the cervix, all of which tend to produce subinvolution, congestion, and subsequently inflammation. Again, the disease may be caused by catching cold during menstruation, by the use of a cold injection, which is often had recourse to directly after coitus, and when the pelvic organs are full of blood, in order to prevent conception. Excessive coitus, and especially all operations on the uterus which are not conducted with strict antiseptic precautions, may cause chronic metritis Not a few cases can, I fear, be traced to the careless use of the sound, for it is very easy to carry into the uterus on its point some pus from the vagina.

Symptoms.—With regard to symptoms there are none peculiar to the disease under consideration. The patient usually complains of weakness and a bearing-down pain in the pelvis, which is aggravated by walking or the jolting of a carriage, and which very often shoots into the back and down the thighs; pain over the left ovarian region is three or four times more common than on the right side, and this frequency of left-sided pain is due probably to the left side of the body being weaker and having less resisting power than the right. The "periods" are painful and excessive, lasting perhaps a week instead of three or four days, during which time the patient has to use several diapers daily. This excessive loss is the chief characteristic of villous endometritis, and the periods may be so profuse that a woman sometimes becomes as blanched as is seen in cases of hæmorrhage from fibroids. Clots are often passed, and the pain complained of usually begins just as the period comes on and is relieved in a day or so when the flow is fully established. There is a more or less profuse yellow intermenstrual discharge. Various reflex symptoms not infrequently manifest themselves, such as dyspepsia, a peculiar spasmodic cough, neuralgia of various kinds, and especially often does a woman complain of a severe stabbing pain running round under the left breast. Lastly, hysteria in its various forms may be present, especially in women who are naturally of a neurotic disposition; but it is a grave mistake in these cases to ignore, as some practitioners do, the uterine symptoms and to put them all down to hysteria. A typical instance of this kind I met with only last week, in which a lady aged twenty-five had a miscarriage three years ago. Since then the periods have been excessive and she has suffered from more or less constant severe pelvic pain; during all this time she had taken medicine prescribed by her medical attendant, a very able practitioner, but no local treatment was made. On examining her I found she had an enlarged and very tender uterus, with some erosion round the os uteri and a purulent discharge exuding from it. I communicated with the medical man, and he told me he had diagnosed the enlarged and tender uterus, but as the patient was a neurotic woman he thought general rather than local treatment was indicated. In my opinion the chronic metritis present was the cause of the nerve symptoms and called for prompt local measures.

Physical signs —These are usually the same as those met with in the case just mentioned: a uterus felt on bimanual examination to be enlarged and tender—it may be retroflexed; the cervix is hypertrophied, and instead of being conical it is either cylindrical or bulbous, more or less purplish in colour, and often lacerated; the pain caused on examination is most severe when the uterus is jerked up as in ballottement of the gravid organ. With the speculum the cervix may be seen to be eroded, it may be studded with yellowish vesicles as a result of cystic degeneration, and a yellow discharge may be seen exuding from the os uteri. If the sound be passed it causes pain, sometimes very severe, it enters to an increased distance, three inches and a half or even four inches, and its withdrawal is followed by some blood.

In diagnosing chronic metritis we sometimes have to exclude cancer; but in metritis the discharge is never so offensive or of the peculiar character met with in cancer. When the chief symptom is hæmorrhage we might suspect fibroids or polypi. Now in a case of fibroids the uterus would feel harder and irregular in outline on bimanual examination, whilst perhaps the sound would enter five or six inches. In polypi the symptoms and physical signs—if the polypi be of the small mucous variety—may be precisely the same as in chronic metritis; and it is impossible to distinguish between the two until the cervical canal has been sufficiently dilated to permit of digital exploration. As a matter of fact, in some cases of chronic metritis the mucous membrane assumes, as I have already mentioned, the polypoid form. The treatment for both the diseases is precisely the same. It must not be forgotten that disease of the uterine appendages is a by no means infrequent accompaniment of chronic metritis, and should be carefully searched for, as the complication may modify the treatment, and it certainly renders the prognosis a less hopeful one. Disease of the uterine appendages is in the majority of cases secondary to uterine inflammation, but it may be the primary condition and induce metritis secondarily. Careful examination of the pelvis will always reveal whether the tubes and ovaries be enlarged or not. The rectum should have been previously emptied, and then by the bimanual or, better still, the abdomino-rectal examination—preferably with the patient anæsthetised—we can assure ourselves of the presence or absence of diseased appendages.

Treatment.—We now come to the very important question of treatment. Remembering that most cases of this disease have a bacterial origin, and the starting-point is either a miscarriage or a confinement, the necessity of thoroughly emptying the uterus and of using the most stringent antiseptic precautions in all manipulations on the female generative organs cannot be too strongly insisted upon. Anything that interferes with the proper involution of the uterus—such as the patient getting up too soon after labour—should be avoided. I always give my patients after the third day a mixture containing quinine, strychnine, and ergot, and continue this for three or four weeks. It should be the invariable practice of every medical man to make a vaginal examination about three weeks after delivery in order to ascertain the position of the uterus, so that if, as not seldom happens, it be found displaced backward it can be at once gently replaced and kept in its proper position by a well-fitting Hodge's pessary; this pessary need only be worn for a couple of months, at the end of which time the uterus will have regained its normal size and the flexion have been cured. If, however, the displacement be unsought for and undetected until months later, after the patient has been going about and begins to suffer, then the cure of the displacement is very problematical unless and until the patient again becomes pregnant, and this she is, under the circumstances, much less likely to do; besides which the foundation of chronic metritis may have been laid in the subinvolution which usually results from retroflexion. At all events, the patient may have to wear a pessary for months or years, whereas if the displacement had been detected and rectified early a few weeks would have sufficed for a cure. Backward displacement of the uterus after labour and abortion is by no means infrequent. In a paper read by Dr. Herman before the Obstetrical Society in 1892,[1] he said that in the out-patient practice of the London Hospital he found backward displacement in 19 per cent. of the women who had been delivered or had aborted within the previous three months. According to my experience in private practice the percentage is nearly double this, for of the last 50 cases I have attended, 32 of which were multiparæ and 18 primiparæ, I found within three weeks after labour the uterus displaced back in 18 of the cases, or 36 per cent. This shows the importance of being on the look-out for the displacement after a woman has been delivered.

Other prophylactic measures are—(*a*) care in use of the sound, so that no pus be carried into the uterine cavity; (*b*) that in all operations on the uterus strict antiseptic precautions be used; and (*c*) that the use of cold injections immediately after coitus be stringently prohibited. When chronic inflammation of the uterus is in actual existence the treatment to be adopted will depend on what part of the organ is chiefly affected. In all cases it is advisable to keep the bowels acting well by a morning dose of either Hunyadi Janos, Friederichshall, or Vichy water; tonics, especially preparations of strychnine, are indicated; over-fatigue from

[1] Transactions of the Obstetrical Society, vol. xxxiv., p. 14.

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too long walks or prolonged standing, as in the case of shop-women, should be avoided. The uterus should be fomented night and morning with a warm douche of at least a quart of water containing two drachms of alum or zinc sulphate. For this purpose a proper douche ought to be used, as the ordinary vaginal injection which a patient gives herself with a Higginson's syringe whilst in a sitting posture is of little use. When the cervical canal is the part affected chiefly we can, after removing the tenacious secretion by means of cotton-wool on a probe, apply some caustic such as pure phenol, iodised phenol, or nitric acid on a cotton-wool probe, or we may introduce a pencil of zinc alum or copper sulphate into the canal and retain it there by a glycerine tampon in the vagina. If the cervix be eroded as well it is a good plan to pass a Ferguson's speculum, then partly fill it with either pyroligneous acid or a 15 per cent. solution of copper sulphate. This is allowed to remain bathing the cervix for four or five minutes, and some of the fluid can be carried into the cervical canal by passing a cotton-wool probe through the fluid. When the cervix is much hypertrophied and congested it has a purplish appearance; in these cases puncturing it in two or three places, and drawing off two, three, or even four ounces of blood gives great relief to the pain and discomfort the patient suffers from. This little operation is only very slightly painful, and can be repeated with advantage several times. There is just one point to be noted—viz., that a small artery may be punctured. If so, the spouting point should be touched with a little liquor ferri perchloridi fortior. Some years ago I punctured the cervix of a lady in my consulting-room one morning, and I was sent for to see her early next day as she had been losing blood all night after using a hot injection the previous evening. I found a little vessel spouting, and at once stopped it with a drop of liquor ferri. The patient expressed herself as greatly relieved from the large loss of blood, and she quickly got well.

When the endometrium is involved, as evidenced by the excessive menstruation and the thin purulent discharge from a tender uterus, two methods of treatment are chiefly in use. One is the application of caustics twice a week to the diseased lining membrane as mentioned for the treatment of cervical catarrh. Now this plan is not altogether devoid of the risk of setting up peritonitis; it is very slow and uncertain in its results, as it must be persevered in for two or three months, and as the cervical canal is small most of the fluid in the cotton-wool gets squeezed out before it ever reaches the diseased endometrium. In my experience it is a far safer and speedier method of cure to give the patient ether, then, having rapidly dilated the cervix up to No. 14 Hegar, to thoroughly remove the mucous membrane down to the muscular coat with a curette. After this is done the uterine cavity is washed out with a hot 1 in 2000 perchloride of mercury solution passed in through a Budin's double catheter. A probe with dry cotton-wool is next introduced to absorb any blood in the interior of the uterus; this being withdrawn another probe charged with iodised phenol is quickly passed in and allowed to remain for two or three minutes. On its withdrawal a pencil of iodoform is inserted into the uterus and kept there by a couple of iodoform tampons in the upper part of the vagina. These tampons need not be removed for forty-eight hours unless there be considerable oozing, which is rare. I much prefer a sharp curette to the dull wire one recommended in books; it is more certain to thoroughly get rid of the thickened and diseased membrane, whilst with ordinary care no possible harm can be done. The after-treatment consists in keeping the patient in bed for ten or fourteen days and ordering an iodine douche (2 drachms to 2 pints) night and morning, at the same time prescribing a tonic with strychnine and ergot. As a rule, very little pain is felt subsequently, so that it is rarely necessary to administer a half-grain morphia suppository. Of the very many cases in which I have adopted the foregoing treatment, in not a single one has any pelvic inflammation ensued; in the great majority of cases the result has been eminently satisfactory. Some require a few intra-uterine applications subsequently, whilst in a small percentage the new endometrium also takes on a villous condition with recurrence of the hæmorrhage and necessitating a repetition of the curetting or, better still, intra-uterine application of electricity. That electricity is distinctly beneficial in some affections of the female pelvic organs, such as the disease we are now considering, some forms of dysmenorrhœa, &c., can only be doubted by those who have not given it a trial. As with all new methods of treatment, it has been said by some enthusiasts to be a cure for almost every disease peculiar to women, as uterine fibroids of all sizes, pelvic exudations, and even uterine cancer; but whilst such magnificent results have not been obtained at the hands of those who have given electricity a fair and unbiased trial, the two cases I am about to relate prove indisputably that its use is followed by most excellent results.

CASE 1.—A woman aged thirty-five was brought to me on Feb. 27th, 1894, by Mr. Coomber of Fakenham, Norfolk. She had six children, the youngest being six years old, and she had had no miscarriage. The patient complained of excessive loss at the periods, pain in the pelvis and over the left ovary, for the last two years, during which time she had been getting thinner and had been obliged to lead the life of an invalid. She had had yellow discharge in the intervals, which for the last three months had been offensive. The patient was a tall, somewhat cachectic-looking and emaciated woman. On examination the uterus was found to be bulky and tender and the cervix was hypertrophied. The sound passed four inches and caused pain and some little bleeding. Nothing abnormal was to be felt in the fornices. Chronic metritis was diagnosed, and I advised dilatation and curettage of the uterus. This was performed by me at the patient's residence in Norfolk. The mucous membrane was very much thickened and dark in colour. The two following periods were less in amount, and then all the old trouble gradually recurred. I advised a course of electricity, and this was accordingly carried out, the patient coming to London for the purpose. She was under treatment three months, and had altogether twenty-nine applications, with the result that she returned home feeling and looking a totally different woman. The periods became perfectly normal in every way, the loss being slight and accompanied with no pain. The uterus on bimanual examination felt much smaller and not the least tender, and the sound can only be made to pass barely two and a half inches. A few days ago I received a very grateful letter from this lady, in which she said she had not felt so well for many years, and that she was putting on flesh so quickly that she was almost afraid to be weighed.

CASE 2.—This was a woman aged thirty-one, who had been married twice and had had two children by her first husband, and none by her present one, to whom she has been married four years. Since her last marriage her periods had been getting excessive, with much pain and clots; the periods lasting seven instead of three days, and about thirty diapers having to be used. In the intervals there was almost constant pelvic pain radiating down the legs and into the back, a yellow inter-menstrual discharge being present. On examination the uterus was found to be bulky, low in the pelvis, the cervix lacerated, together with some follicular degeneration. The sound passed three inches and a half, causing pain and bleeding. I recommended that the uterus should be curetted, but the patient had such a dread of being anæsthetised that she refused to have the operation done. She agreed, however, to undergo a course of electricity, and this was accordingly carried out, with the result that in thirteen weeks the patient was completely cured. My last note is as follows: "The period just over lasted only four days; loss quite moderate, and unaccompanied by pain or clots; on examination the uterus is not tender on ballottement, feels less bulky, but is still rather low in the pelvis; the sound passes just three inches, and does not cause pain or bleeding. A ring pessary introduced in order to raise the uterus. The patient expresses herself as feeling greatly benefited by the treatment."

The method of applying the electricity is as follows. A vaginal douche of 1 in 2000 perchloride of mercury solution is given before and after each application. The patient being in bed and lying on her left side, the intra-uterine electrode, which may be of carbon or platinum (I prefer the latter), is introduced in the same way as an ordinary sound. The patient is now gently turned on to her back and the electrode kept in position by placing an unfolded towel against the end of the handle; the abdominal electrode—the best is, I think, a large carbon one covered with flannel—is soaked in a hot salt-and-water solution, the superfluous fluid is squeezed out, and the electrode applied to the abdomen. A piece of oil silk over it prevents the bedclothes from getting wet. The wires are now joined to a Leclanché battery, in connexion with which is a Gaiffe's galvanometer, in order that the exact amount of electricity administered can be accurately measured. Where a cauterising effect is desired

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¼ in. to ½ in. in thickness, being bright-red in colour; it resembled the appearance of fresh blood-clot, only it had a membranous consistence; and on pressure between the fingers no crepitation or gurgling could be discovered. This I concluded must be the omentum. On raising the omentum upwards the cavity of the pelvis could be distinctly seen—the brim of the pelvis most distinctly so. The anterior vesical wall of the bladder was wanting, so that its cavity was fully exposed to the outer surface. The valve-like openings of the ureters could be seen, separated about a quarter of an inch from each other, in the floor of the bladder. There was no urethra, it being only a shallow groove leading forwards in the middle line to the pubis, where it terminated in a small gargoyle-shaped papilla which represented a rudimentary penis. The scrotum was developed in a fairly normal manner, but was perfectly empty so far as the testes were concerned. The anus was situated in its normal position. On July 7th the child's bowels were moved in the early morning, the discharge being meconial. Urine continued



Lower portion of trunk showing abdominal cleft with liver and cavit of bladder.

to be secreted, and soaked the piece of lint and absorbent cotton applied about the pubes. The hepatic tumour was very distinctly less, being reduced to half its former size, its lower border being level with the cleft in the abdominal wall. The omentum only projected downwards to the level of the bladder, and was of a light-red colour; its lower border was found to be continuous with the posterior wall or roof of the bladder, as the mucous membrane of the posterior wall of the bladder could be seen extending upwards to a level corresponding to that of the double fold of the omentum, in such a way that the peritoneal coat of the posterior bladder wall and the omentum were joined together, so that this membranous partition became a closed sac, enclosing and covering the bowels and other abdominal viscera. On the 8th the condition of the liver remained much the same. The child slept well most of the night, and was being fed with diluted milk sweetened with milk sugar. On the 9th slight irritation of the exposed parts around the bladder was noticed, and caused the child to cry frequently. The lower border of the abdominal cleft was painted with olive oil to modify the action of the urine. The milk sugar was stopped, and a weak solution (1 per cent.) of bicarbonate of soda was used instead along with the milk. The difficulty with the urine continued to be kept in check, but on the 14th the lower edge of the liver and the omentum presented an irritable appearance. Benzoated lard on lint was applied to the skin at the edges of the cleft to keep down the irritation. From the 15th, or the ninth day after the birth of the child, till the 21st, when the child

died, the irritation gradually gave place to ulceration and necrosis of the omentum, and also of the serous or peritoneal surface of the exposed portion of the liver, as it was utterly impossible to keep the exposed parts free from the action of the urine. The child became gradually comatose and died on the fifteenth day, tremors being frequent.

Remarks.—I have to state in conclusion a very remarkable fact regarding the action of cathartic remedies, which completely substantiates and confirms the classic experiments carried out by Rutherford on the lower animals, such as the rabbit—viz., by stimulating the exposed mesentery with various active principles of cathartic remedies and studying the peristaltic action of the bowel induced by their application. In the case just described I have actually on three different occasions—twice on the third day and once on the fifth day—applied by means of a fine camel-hair pencil a small quantity of castor oil to the omentum, merely flicking it over, with the result that there was evacuation of the child's bowels in from five to seven minutes, showing the speed with which absorption must take place in the abdominal cavity—far greater, in fact, than can be conceived. In every instance the motions were fluid and yellowish-green in colour. The engraving (which is from a photograph) represents the post-mortem appearances twenty-four hours after death. The position of the omentum and liver is very well shown, as is also the interior of the bladder, in the floor of which indications of the valve-like openings of the ureters can be seen. The other anatomical peculiarities are quite apparent. The sloughs on the omentum and surface of the liver appear to be lightish-grey in colour, as also the patches of slough on the edges of the abdominal cleft.

Hillhead, Glasgow.

SOME CONSIDERATIONS ON THE CHLOROFORM QUESTION, SUGGESTED BY THE REPORTS OF THE HYDERABAD AND "THE LANCET" COMMISSIONS.

BY T. LAUDER BRUNTON, M.D., F.R.S.

(*Concluded from page 89.*)

GROUP II.—DEATHS IN THE STAGE OF STRUGGLING.

In the second stage, the stage of struggling, death is more likely to occur from the effect upon the heart of simple choking than from any other cause. It is probable that struggling is usually induced by a feeling of suffocation, and that if the anæsthetic were sufficiently diluted, struggling would not occur. In this stage a certain amount of danger may also arise from the efforts of the assistants to restrain the struggles of a powerful patient because, in trying to keep him quiet, pressure may be inadvertently made on his chest or his respiratory movements otherwise interfered with. A practical but difficult question sometimes arises in this stage: whether to push the anæsthetic during this choking stage or to allow the patient partially to recover. Some administrators consider that it is best if the patient be strong and healthy rather to push the anæsthetic, so as to overcome the spasm which causes the choking, provided always that there is no obstruction to the passage of the air. Others prefer to stop the anæsthetic until the patient has got over the choking, and then to administer it again. There is more danger in this stage with chloroform than with ether, because with ether it seems necessary to produce a certain amount of asphyxia to aid its anæsthetic action. If ether is given along with a large quantity of air it is very difficult, at least in animals, to produce anæsthesia, but it is easily produced if asphyxia is brought about at the same time by limiting the supply of air breathed along with the ether vapour.

GROUP III.—DEATHS DURING THE STAGE OF ANÆSTHESIA.

During full anæsthesia deaths are most likely to occur from carelessness. It is very unlikely that deaths from shock should arise in this stage except in very rare cases. But even when the patient is thoroughly well under there seems to be a danger of reflex stoppage of the pulse through the vagus. This occurs in comparatively deep anæsthesia for operations on the eye, on joints, and sometimes for operations upon the intestinal canal, and especially upon the rectum, and urinary passages. There seems to be a tendency even during complete anæsthesia for reflexes to persist from these parts, so that both the respiration and circulation may be affected by the reflex irritation of these parts during complete anæsthesia. Anæsthesia thoroughly complete is very advisable in such cases. The chief danger in this stage seems to arise from the anæsthetist being present in body and absent in mind. His attention should always be undivided. With instruments and operations he should have no concern. If his attention is diverted to watching the operation he is apt to forget what is going on with the patient's respiration, and this is one of the causes of death from anæsthetics. They are alluded to in this report and cases. We had in the Hyderabad Commission some striking examples of this. The experiments were generally very successful, and though it was not always intended that the animals should be chloroformed to death, every now and again the animals died before the experiment was over with a curious regularity, when we did not want them to die. These unwished-for deaths did not occur in the morning, when the operators were all attentive, but generally in the afternoon, when the things were hurriedly put together and when the anæsthetist was not so attentive to his work as he might have been. They occurred more frequently when the anæsthetist who usually gave the chloroform was absent at the hospital, and when somebody else who was not accustomed to the duties was administering the drug. On two or three occasions with the ordinary anæsthetist deaths occurred, but this was only when we were doing something new in which he was much interested. He became engaged in watching the operator. The same thing happened to me when I was giving chloroform and doing an operation at the same time. We wanted to make some comparative experiments, and I was doing tracheotomy upon one monkey and another operator on a second. In attending to the operation I forgot to attend to the respiration, and allowed the chloroform to remain too long, and the animal died. The successful anæsthetist is the man who seems able to concentrate his attention most of all upon the patient and attends to nothing else. It is the man who attends to his own business and leaves other people's alone who is the most successful, and this is the best rule for the administration of anæsthetics.

HOW SHALL THE ATTENTION BE DIRECTED?

The next question which arises s the mode in which the anæsthetist's attention should be given. This is the point around which there has been great discussion—whether he is to attend to the respiration or to the circulation, or to both. It is interesting to inquire whether these clinical reports throw any light on this subject. The figures are given thus:

Statement.	Cases.
Cardiac failure	227
Respiratory failure	80
Simultaneous failure...	77
Total	384

Thus in all only 384 cases had statements appended regarding heart failure and respiratory cessation out of a total of 637 which have been noted, leaving 253 unaccounted for. But this report throws much light upon the conditions under which the "untoward" cases occurred in which recovery took place. On this point it is very definite. It says:—"The immediate symptoms of danger in these cases are practically in every case respiratory or circulatory. We are told that in a very large proportion of cases the respiration failed before the heart or pulse showed signs of flagging, and it will be seen that the measures adopted for resuscitation were in most cases those which were applicable to cases rather of cessation of respiration than to those of cardiac failure" (p. 1112). This is also borne out by the records of the administrations of the A.C.E. mixture. "Respiration appears in the majority of cases to have given out before the heart." These groups of cases are important as indicating that the detection of the respiratory failure at the appropriate moment led in nearly every instance to a catastrophe being averted. Now the evidence in favour of anæsthetics producing death from the respiration is this. In almost every case where anæsthetics pure and simple have been given by inhalation death is found to occur from the respiration, and the heart continues to beat for a considerable length of time afterwards. Chloroform injected directly into the heart, or driven into the lungs by

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artificial respiration, would cause it to stop, but this could not be done by natural inhalation. The moment the chloroform begins to act upon the respiratory centres the respiration ceases, so that the anæsthetic cannot be introduced into the blood in sufficient quantities to stop the heart. What is to be feared is the combined action of the anæsthetic and of asphyxia.

In the face of this clinical evidence, supported as it is by a vast mass of experimental evidence, it seems to me that, if any choice has to be made between attending to the respiration and watching the circulation, only one answer can be given. My advice is: "Attend to the respiration and leave the circulation alone." The anæsthetist should not attempt to feel the radial pulse; but there is no objection to putting the fingers upon the temporal pulse, because it forms a convenient way of supporting the head of the patient. Without actually attending to the temporal pulse, if the finger rests upon the temporal pulse any changes which may occur will make themselves evident to the consciousness without interfering with the watch upon the respiration. If the pulse were to become flickering or to stop, one would at once detect it by the finger on the temporal artery, and might thus be led to examine the condition of the respiration before it was too late.

How to watch the Respiration.

There is sometimes a fallacy in watching the respiration, arising from apparent movements of the chest when there is very little air entering the lungs. It is advisable in all cases to hear the respiration. The patient may appear to be breathing very freely indeed while there is not a particle of air entering the lungs. It is possible for the upper air passages to be blocked by the tongue or by food getting into the larynx, or by the glottis becoming closed so that no air passes through it, and yet the movements of the thorax may be going on while the patient is dying from asphyxia the whole time. The only ways of ascertaining that air is entering the lungs freely are either to see the movements of the thorax and abdomen together or to hear the air entering and leaving the chest. The necessities of the operation often completely prevent both thorax and abdomen being seen together, and while the thorax is heaving the abdomen may become retracted or *vice versâ*. The entrance and exit of air from the nose and mouth may be heard by the unaided ear of the anæsthetist, or by the ingenious adaptation of a binaural stethoscope to the mouthpiece of an inhaler.

Group IV.—Deaths in the Stage of Recovery.

Of this group of fatalities some very interesting records have been tabulated, notably in Case 20, on p. 1114, and Case 57 on p. 1115, in which the patient laughed and talked after the operation. This ceased, and suddenly pulse and breathing were observed to have stopped. On p. 766, Case 162, it is recorded that "difficulty of breathing came on about one hour and a half after operation and no restorative measures were of avail." Many other instances of this form of dissolution are recorded. In the stage of recovery stoppage of the respiration has also to be guarded against, and the administrator has here to be particularly watchful that the air-passages are not stopped by fluid or solid matter passing down them, more especially as during this stage vomiting is apt to occur. Greater care has to be exercised in this respect towards the termination of the operation. An operation should not be done on a full stomach, because that organ when distended interferes with the respiration by its bulk as well as by its own weight. Further, a full stomach tends to give rise to vomiting, and the contents, when brought up, are apt to obstruct the air passages and thus prevent respiration or cause neuroparalysis. It has been advised to give a little brandy or some other stimulant shortly before the operation. In many cases this has done good. If the patient's circulation is much depressed this seems to be a useful thing to do, but in ordinary cases, and where the circulation is not exceedingly feeble, the patients are perhaps better without stimulants.

Group V.—Death some Days after the Operation.

In those cases in which death has occurred three or four days after the operation I have been unable to discover any means by which their occurrence may be foreseen and avoided. It has struck me that one cause of death may possibly be the poisoning of the individual by ptomaines formed in the body, because the mode of death in these cases is a very curious one. It occurs quickly, almost without any forewarning symptoms, and examination of the body reveals nothing but a little fatty degeneration of the heart. I have thought that these deaths were due to the presence of some poisons in the blood which had killed the patient, not primarily but secondarily, by fatty degeneration; that, in fact, these deaths might be looked upon as resembling deaths from phosphorus poisoning, in which fatty degeneration of the organs is caused by phosphorus. In those which occur several days after the administration of chloroform the fatty degeneration of the heart and death have been attributed to the action of the chloroform *per se*, but I have seen one case of death in a precisely similar way after the administration of ether. The idea that this fatty degeneration is due to some toxin may be regarded as fanciful, but it is at any rate worth while to observe cases, and especially cases of abdominal surgery, with a view to ascertaining its truth or falsehood.

Ptomaines and Fatalities.

The report throws some interesting light upon this by recording Cases 59, 60, and 61. During the operation the pulse became irregular and sank alarmingly. Nélaton's method was adopted with apparent success, and for a time the process had to be repeated four times, and the patient did not get over the symptoms of chloroform poisoning for three days. Case 60 recovered also after three days, and Case 61 after thirty-six hours. Among the untoward cases, after the administration of nitrous oxide gas, a similar occurrence (Case 2) is reported. The patient walked 400 yards to the station, and in the train was seized with a faintness, pallor, and active convulsion, became unconscious, and did not recover completely for several weeks. Professor Poehl of St. Petersburg told me that he had been making a number of investigations upon the urine, having special regard to the alkaloidal substances present in it, and he was able to tell by the condition of the urine whether an anæsthetic would be badly borne or not. As a rule, it was badly borne when a large number of alkaloids were present, but if there were few alkaloidal substances the patient could take the anæsthetic without fear. This would seem also to explain some other curious facts, such as that although a patient has taken anæsthetics well on several previous occasions he may yet die from the administration of the anæsthetic. From the report we learn that of the cases examined 11 males who died under chloroform had taken it safely once before; 11 females and 13 males more than once; and 1 is stated to have died from chloroform after having been under its influence on eight previous occasions. There is, of course, one cause of death that must not be overlooked. If the person has taken the drug three or four times without the least risk the operator or administrator may become careless upon the next occasion; but still it is quite possible also that the difference may occur in the individual and may depend upon something that the patient has had in his food or formed in his system.[1]

The Influence of the Geographical Position.

It has struck me a good deal when thinking over anæsthetics that in choosing one the decision depends a good deal upon the geographical position of the operator. Writers who live in the Northern States of North America state that ether is the anæsthetic which ought always to be employed. Those in the Southern States choose chloroform. Those who live in India, Egypt, and other hot climates will, as a rule, prefer chloroform. There is one marked exception to this general law, which is that in Edinburgh ether is very rarely employed, and chloroform has there always held its ground. On trying to make out why this should be I was at first sorely puzzled, because ether has one great disadvantage over chloroform in its irritating action upon the air passages. Ether tends to cause great secretion from the air passages and a rather severe bronchitic condition—so severe sometimes that some operators have given up its use on account of its after effects; and yet in cold countries, where this objection would tell more than in hot climates, ether is preferred. One reason of this, no doubt, is the difficulty of keeping ether in hot climates. But it occurred to me that it is just possible that the food of the people may have some effect upon the action of the anæsthetics, and it seemed to me that in Edinburgh there have been more fatalities of late years than there used to be. Now, there is one change which has come about within the

[1] Compare Experiments 31, 81, 84, 104–109, 119, 146, 147, 148, 156–161, 163, 164, 165, 170, 183, and 184 of the Hyderabad Commission.

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last twenty years: the introduction of foreign meat has taken place, and large quantities—quantities which now are really enormous—are imported from America and Australia, so that meat-eating is much more common than before. More people eat meat, and those who were accustomed to eat meat seem now to eat more as a sort of general average per head. The consumption of meat per head has greatly increased within the last twenty years.[2] In hot climates people do not eat much meat, and even dogs do not get a chance of eating much meat, so that we must always remember that experiments made in hot climates differ not only in regard to warmth of the atmospheric air, but in regard to the food upon which the men and animals have lived, and I think it quite possible that many of the accidents which have occurred during the administration of chloroform have been due really to the condition of the patient as regards alkaloids present in the blood.

GENERAL CONCLUSIONS.

(1) Experiments on animals have conclusively shown that chloroform given by inhalation and not blown artificially into the lungs, kills by paralysing the respiration. (2) Clinical observation has shown that cases of simple danger without death during anæsthesia are due to failure of the respiration. (3) Cases of death may arise from the same cause, but may also be due to stoppage of the heart (syncope) or to stoppage of the heart and respiration together (neuroparalysis). (4) The most common cause of neuroparalysis has been found by Casper to be throttling, strangling, or drowning, which kill by neuroparalysis as often as by asphyxia. (5) Anæsthetics have no tendency to produce neuroparalysis except when they are given in such a manner as to irritate the respiratory passages either mechanically or chemically. (6) On the contrary, they tend to lessen shock. (7) During imperfect anæsthesia, both at the very commencement of administration of an anæsthetic and during recovery from its influence, choking may occur and cause death by neuroparalysis as well as by asphyxia. (8) The neuroparalysis is the result which is most to be dreaded, as simple asphyxia may be usually recovered from if artificial respiration be maintained. (9) It is therefore most important in the administration of anæsthetics to avoid anything which is likely to interfere with respiration, as such interference may act like throttling and cause death by neuroparalysis. (10) During complete anæsthesia, the reflexes being almost or entirely abolished, there is little risk of neuroparalysis, but the nerve-centres being weak there is more of asphyxia. (11) At the commencement of administration and during recovery, when the reflexes are present but may be deranged, the danger of death from neuroparalysis is greatest, and the respiration then requires to be watched with especial care. (12) Although there may be no objection to the anæsthetist keeping his finger on the temporal artery, and thus unconsciously watching the pulse, yet the respiration must be his main care, and anything that will withdraw his attention from it is studiously to be avoided. (13) The practical rules for administration, according to Syme and Lister, as given by Surgeon-Lieutenant-Colonel Lawrie in the Report of the Hyderabad Commission and in THE LANCET of Jan. 18th, 1890, are correct.

THE DIAGNOSIS OF SMALL-POX.

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ACCURACY in the diagnosis of those infectious diseases which are notifiable to the sanitary authority has now acquired an importance which it is difficult to over-estimate. The majority of well-regulated communities have not only adopted the Notification Act, but have provided special isolation hospitals for the treatment of small-pox. It is the common experience of all such hospitals that from 5 to 10 per cent. of the cases notified as small-pox are really the victims of some other disease. These cases of "wrong diagnosis" are a source of grave anxiety to all concerned. They cast a serious responsibility on the hospital staff. They are even more annoying to the practitioner notifying the case, who, according to recent experience in Dublin, may find himself the defendant in an action for damages. Almost equally harassing is the mischievous gossip which arises from that section of the public which appears not only to expect, but to demand infallibility from their medical adviser. Failure to recognise and notify a mild case of small-pox may lead to even more disastrous consequences, as, in addition to the risk of an action for not notifying, there is the possibility of the undetected case giving rise to a house epidemic and possible grounds for an action for damages incurred thereby. During the last three years I have had exceptional opportunities in Birmingham and elsewhere of realising the responsibilities and difficulties involved. Not only have over 3000 cases been sent to the hospitals of which I have had charge, but it has been my lot to visit, on behalf of the medical officer of health, every case notified as "possible small-pox." It may not be out of place to remark how very much more easy it is to avoid friction in revising a diagnosis if the case is seen at the patient's own home. There is no unpleasant dread that the patient may have been exposed to infection, and there is no grumbling about injury to health from removal to hospital. In those frequent appeals to the Local Government Board as to the right of the medical officer of health to visit notified cases, no distinction is made between those diseases which it is intended to isolate in hospital and those which are to be treated at home. There can be no doubt among those who have had any experience that visiting the former cases before removal greatly facilitates the working of the Notification Act. If the case goes to hospital the diagnosis has to be revised, and this revision can be far more pleasantly and far more conveniently done at home.

Errors in the diagnosis of small-pox are readily explained. Apart from the intrinsic difficulties occasionally involved general practitioners are further hampered by the fact that small-pox has become a comparatively rare disease, while those cases which do occur are hurried off to special hospitals where only a limited number of men have the opportunity of studying their clinical history. The following notes are the result of a study of some 500 cases in which a provisional diagnosis of small-pox was referred to me for revision, and are written with full appreciation of the difficulties of those who find themselves betwixt a very Scylla and Charybdis while endeavouring conscientiously to discharge a legal obligation and a public duty.

My list of "wrong diagnoses" includes in order of frequency varicella, measles, scarlet fever,[1] erythema exudativum, syphilis, acne vulgaris, sweat eruptions (especially sudamina), impetigo contagiosa, influenza, psoriasis, urticaria, generalised vaccinia, vaccinia lichen, varicella gangrænosa, papular eczema, pemphigus, rötheln, glanders, scabies, purpura, folliculitis, antipyrin rash, iodide rash, herpes zoster, herpes facialis, sycosis barbæ, and no obvious disease. It would hardly repay to discuss the differential diagnosis in each of these diseases. It must be remembered that during most of the time during which my notes were made, small-pox was epidemic, and certain provisional diagnoses were due to very excusable panic—e.g., acute psoriasis, herpes facialis in the course of continued fever, sudamina in rheumatism, and so forth. In many cases the fatal omission to *see all the rash* was responsible for the opinion arrived at. This was especially true of varicella. Most common of all, perhaps, was absolute reliance on the presence or absence of some particular so-called "pathognomonic sign"—e.g., umbilication, pain in the back, or what not. The diagnosis is best discussed in relation to the various stages of the disease, and I shall adopt the very convenient convention of the Clinical Society[2] of limiting the term rash to the initial erythemas and purpura, while "eruption" is reserved for the true variolous exanthem.

1. *Diagnosis in the pre-eruptive stage.*—A combination of vomiting, pyrexia, and lumbar pain can be regarded only as suggestive, but would be highly suspicious if small-pox were prevalent and would certainly justify isolation of the patient and vaccination of those associated with him if there were a definite history of exposure to infection about twelve days previous to the onset of symptoms. In most cases a certain diagnosis will be made on the appearance of the eruption, though in very rare cases there is no exanthem.[3] As regards

[2] A friend informs me that the increase in twenty years from 1873 to 1893 amounts to 13½ per cent.

[1] Here the error was, except in one case, that of mistaking small-pox for scarlet fever.

[2] Supplement to Transactions, vol. xxv., p. 178.

[3] These cases of variola sine variolis are very puzzling. If presenting typical symptoms and occurring after exposure to infection they should be isolated and revaccinated.

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the prodromal rashes, the general scarlatiniform rash gives rise to most trouble. In about a dozen instances this variety has been diagnosed as scarlet fever and sent to hospital as such. As far as the rash itself is concerned it is often absolutely indistinguishable from scarlet fever, while pyrexia and vomiting are common to the two diseases. Severe lumbar pain[4] and epigastric pain are greatly in favour of small-pox, especially if circum-oral pallor, strawberry tongue, and adenitis are absent. The condition of the throat is of most importance. In small-pox at this stage the throat is either unaffected or one finds a varying number of bright-red macules[5] about the size of a split pea scattered over the soft palate and pillars of the fauces. This is very typical and quite different from the œdematous injected arch seen on the palate in scarlet fever. More typical still is the appearance of opaline vesicles in the same region. Careful examination of the throat will, at any rate, arouse suspicions of small-pox. Morbilliform prodromals are often mistaken for measles, but these rashes are rarely seen on the face, are not so papular as measles, and are not accompanied by catarrhal symptoms. Urticarial prodromals are fortunately uncommon. They are extremely deceptive, and a certain diagnosis can only be made after the appearance of the eruption. It is important to remember that a prodromal may take this form. If a patient who has been exposed to the infection of small-pox develops pyrexia, with an urticarial-like rash, he should certainly be placed in quarantine to watch developments. The so-called "bathing-drawers" rash, which may be erythematous or petechial, and is confined to the groins and axillæ, affords certain grounds for diagnosing small-pox if accompanied by the ordinary symptoms of that disease.[6] The diagnosis of purpura variolosa is very easy if the existence of this type is borne in mind. The rash may not be distinguishable from ordinary purpura, but is usually accompanied by the petechial "bathing drawers" rash. This, combined with more or less pyrexia, hæmorrhages from mucous membranes, hæmorrhagic chemosis of the ocular conjunctiva, extreme pigmentation of the lower eyelids, slight lividity, complete consciousness, with a general aspect of intense weariness and prostration, form a clinical picture which can hardly be mistaken.[7]

2. *Diagnosis in the early eruptive stage* (*i.e., stage of papules and papulo-vesicles*).—The eruption usually appears on the third day, is distinctly shotty on the fourth, and vesicular on the fifth day of the disease. Any eruption following constitutional symptoms which has this course is very probably small-pox, and is almost certainly so if the eruption is accompanied by a fall in temperature, if it is most marked on the wrists and face, if the developed papulo-vesicles are about the size of a split pea and of a greyish-blue colour.[8] A small-pox eruption is for the most part uniform in development except that the lesions appear earlier on the wrists and face than on the trunk and legs. The subsequent evolution of the rash follows the same course, so that vesicles on the wrist or face may be accompanied by papules on the legs. Some of the vesicles will usually show umbilication, but far too much importance has been attached to this sign, which is frequently absent altogether. Measles is frequently taken for confluent small-pox and *vice versâ*. Attention to the following distinction will prevent mistake. The eruption of small-pox most commonly appears on the second or third day, that of measles on the fourth or fifth day of illness. Coryzal symptoms of measles and especially a laryngeal cough are absent in small-pox. The temperature tends to fall in small-pox, but rises in measles as the eruption develops. The condition of the soft palate and fauces is very different in the two diseases; in measles there is general injection combined with mottling, while in confluent small-pox there are flat opaline vesicles or at any rate the red macules previously described.[9] Too much dependance is perhaps placed on "Griselle's sign"; small-pox is not shotty in the first few hours when it is most likely to be mistaken for measles, and measles papules can occasionally be just felt when the skin over them is stretched. In case of doubt time will solve the problem, as after the lapse of twenty-four hours some of the papules will have become vesicular if the disease is small-pox.[10] Typical varicella, in which the clear superficial vesicles look like drops of water, has little resemblance to any stage of small-pox. The eruption is evidently quite superficial in chicken-pox, apparently not deeper than the Malpighian layer of the epidermis, while in small-pox the true skin is usually involved. Constitutional symptoms are little marked as a rule in chicken-pox, while they are rarely absent in small-pox. Too much reliance cannot, however, be placed on this. A temperature of 102° to 103° F., with some backache and vomiting, is quite compatible with an uncommonly severe case of varicella. The eruption is usually the first symptom noticed in varicella. It differs from small-pox in being most marked on the trunk, and comes out in irregular crops instead of having the orderly progression noticed in small-pox. It is distinctly vesicular from the very first day, and as the disease advances it exhibits a medley of papules, vesicles, pustules, and scabbing lesions in every part of the body. Umbilication[11] is occasionally seen, and appears to depend on accidental relations to sweat glands or hair follicles, but is very rare apart from the pseudo-umbilication referred to later. One is sometimes asked, Could not a given varicella eruption be modified small-pox? Abortive small-pox vesicles always exhibit a typical infiltrated papular base, which is absolutely distinct from the hyperæmic areola of varicella. It may be repeated that most mistakes are due to not seeing the whole eruption.

Papular syphilides are occasionally diagnosed as small-pox, but the different constitutional symptoms, the onset, the polymorphic character of the rash, cachexia, general glandular enlargement, and primary sore are sufficient to make the distinction once suspicion is aroused.

3. *Diagnosis in the late eruption stages; vesico-pustules and scabbing lesions.*—Varicella is again the stumbling-block. Polymorphism and history of symptoms and development are again all important. It cannot be too strongly insisted that early papules and scabbing lesions are never contemporaneous in small-pox, though frequently so in chicken-pox. Typical scabbing varicella lesions are common between the scapulæ and on the loins. Such a lesion is irregular in outline, varies in diameter from one to three lines, has a central depressed scab[12] consisting of dark brown or almost black sugary-looking dried serum, and is quite unlike the yellowish smooth scab seen in unmodified small-pox, and is still more unlike the reddish-brown circular discoid scab found on the apex of a papule in abortive small-pox. It need hardly be pointed out that the scarring consequent on the two diseases is very different, but I have known the diagnosis of chicken-pox to be doubted because a certain amount of subsequent scarring resulted. Scarring in chicken-pox appears to be due to a secondary ulcerative process, and not to the lesion being primarily situated in the cutis vera. This ulceration leaves irregular, pigmented, flat, smoothed, punched-out depressions, instead of the foveated or conical pits seen after small-pox.

The diagnosis from acne vulgaris is occasionally difficult, but the pre-eruptive symptoms, uniformity of rash, presence of lesions on the scalp, wrists, and the palate, and absence of comedones will usually clear up any doubt. Great care is needed to avoid missing mild small-pox occurring in a patient already suffering from acne. I have a very lively recollection of being misled by such a

[4] A certain amount of back-ache is of course common in most pyrexial conditions, and severe lumbar pain is absent in about 50 per cent. of all cases of small-pox.

[5] These macules subsequently develop into the flat, opaline vesicles of small-pox. The endanthem is never distinctly papular, and the vesicles are at most very slightly raised above the general surface of the mucous membrane.

[6] Very occasionally scarlet fever patients exhibit a marked concentration of rash on the lower part of the abdomen and groins. In these cases the throat, tongue, and adenitis settle the diagnosis.

[7] Undiagnosed hæmorrhagic small-pox has often been the starting point of a localised epidemic. I remember one such case which was certified as death from "German measles." Some friends from a distance who attended the funeral developed small-pox twelve days later.

[8] This is generally very well seen in the vesicles on the wrist. They are absolutely different from the straw-coloured vesicles of varicella. The difference in colour is due to the varying thickness of the epidermic roof of the vesicle.

[9] A minutely granular condition of the soft palate is not uncommon in measles, and indeed in health, but should not be confused with the macules and vesicles of small-pox. As already stated, raised papules are practically unknown on the palate in small-pox.

[10] For practical purposes measles may be said never to become vesicular. So-called vesicular measles is of the nature of an epiphenomenon, and consists of minute miliarial vesicles occurring in rare cases at the centre of the papules.

[11] Absence of umbilication appears to depend on varicella vesicles being altogether in the epidermis proper, where there are no strands of tissue, epithelial ducts, and so forth, to tie the vesicles down.

[12] This pseudo-umbilication is a very common source of fallacy, as Dr. McVail recently pointed out. (Journal of State Medicine, vol. i.) True umbilication may, however, undoubtedly be seen in varicella.

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combination, and not being set right until typical small-pox lesions made their appearance among those of acne. The rash of glanders *per se* is certainly very like pustular small-pox, and vomiting and pain in the back are common to the two diseases. In glanders, however, the eruption does not appear till well on in the second week; it comes out in crops, very rapidly pustulates,[13] and is generally distributed without any predilection for face and wrists. More important than all, glanders is a discrete eruption, but exhibits constitutional symptoms as grave as if it were confluent small-pox. Once glanders is suspected, the history of association with horses and, if needs be, a bacteriological examination will clear up the case.

The only case of iodide rash with regard to which I have notes of any difficulty was in the instance of a patient suffering from acute Bright's disease. The renal pain and vomiting of nephritis simulated small-pox, but the grouped pustular eruption situated on an inflamed base was easily recognisable as due to iodide or bromide. Inquiry soon elicited the fact that he had been taking iodide of potassium for chronic pleural effusion.

It is customary to lay stress on the vaccinal state as affording presumptive evidence. Personally, I prefer to be unbiased and make up my mind apart from any such consideration, as it is impossible to lay down any absolute rule as to the duration of the immunity enjoyed by the vaccinated. Still, it may be remembered that a copious vesicular eruption in a well-vaccinated child or occurring more than fourteen days after revaccination is very unlikely to be variola. Vaccination rashes, especially vaccinia lichen, are now and then mistaken for small-pox. More important is it to remember that successful vaccination performed a few days previously to the appearance of a given eruption does not exclude small-pox. I have notes of one such case in which the presence of normal vaccine vesicles led to the diagnosis of generalised vaccinia—a diagnosis which was even maintained when the "cow-pox" spread to several members of the patient's family. It is not, however, my intention to dwell on my own or on others' mistakes. "We are none of us infallible, not even the youngest of us," and I will conclude by bearing my ungrudging testimony to the conscientious and unselfish way in which the members of our profession have endeavoured to aid the sanitary authority by the early notification of small-pox. Early notification is of vast importance in prophylaxis, but adds immensely to the difficulties of those on whom the responsibility is made to rest.

Birmingham.

ON THE CAUSE OF ROTATION IN SCOLIOSIS.[1]

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It is acknowledged by all except a few pathologists who would seem never to enter a museum that the peculiar shape of the scoliotic spine is almost entirely the sum of changes in its component vertebræ—i.e., it is only in a small degree the result of changes in the ligaments and articulations. What are the changes in an individual vertebra? They are greatest in a certain very small number, chiefly those at or near the centre of each curve. They have been many times described; for example, by Bouvier, by Nicoladoni, and by Lorenz, the last two authorities having in their minds during the description each a special theory to account for the "rotation." Lorenz's description is very minute. If we look at the front of a vertebra chosen from the centre of a curve with convexity to the right, we should expect to find the outline of its body wedge-shaped, with the apex towards the concavity of the spinal curve, and more or less marked, with a horizontal groove on the left side, as if the force of growth, having been checked perpendicularly, had spread laterally, so as to form two lips. If the same vertebra be viewed from behind it will probably be found that, although not strictly symmetrical, especially as regards the articular processes, the wedge-shape is not at all pronounced, and may even be not discoverable except by measurement. If, now, a third view be taken of the vertebra—viz., from above—it will, if at all a typical case, be seen to be strangely "slewed," as it were, in such a manner that the posterior segment of the vertebra, including the pedicles, the transverse processes, the laminæ, and the spinous processes, appear to have struggled to retain their normal relations and positions in the particular human frame to which they belong, while the body of the vertebra has been equally determined to deviate to the right. "Struggle" is, in one respect at least, a good word, because it suggests a certain amount of confusion, such as might produce the minor varieties in the pathological anatomy of such bones as I am describing. But the chief peculiarities are both orderly and almost uniform. If it be granted that the prime cause of scoliosis is, in young children, ordinary rickets, and in older ones and in youths "rachitis adolescentium," it cannot be forgotten that in rickets it is at the so-called "epiphysial" cartilages that the greatest abnormality of growth, leading to the major part of each rachitic deformity, takes place. Now the epiphysial cartilages of the vertebral body are placed above and below the main bony masses, but the cartilages of growth of the transverse processes and the spinous process, and in fact of the whole segment of the vertebra posterior to its body, are placed horizontally with regard to one another. There is also the equivalent of an epiphysial cartilage in each vertebral body near the root of the pedicle. Hence rachitic deformity would have a much greater tendency to produce lateral inclination in a vertebral body than in the more posterior constituents of the vertebra. Further, the external projection of the transverse and articular processes gives them an increased mechanical power, like that of buttresses and of cross-trees, to check a tendency to lateral inclination. On the other hand, the comparative thinness from side to side of the pedicles, arches, and spinous processes offers diminished resistance to horizontal "slewing" of those parts. Therefore, the fact that the layers of cartilage of growth or epiphysial cartilages above and below each vertebral body do not extend backwards to the posterior parts of the vertebra is the prime cause of torsion, and the arrangements of the cartilage of growth of the pedicles, transverse and spinous processes, together with their shape, greatly contribute to the production of torsion by facilitating "slewing" of these parts in a horizontal direction. The only explanation of torsion which I have been able to find at all analogous to that just given is Lorenz's. He finds the cause of torsion in the existence of the cartilage of growth in each side of the posterior part of the vertebral body near the base of the corresponding pedicle. That this is a most important factor I grant, but I think it causes, not the torsion, but the great degree to which torsion may reach. It is a specially important fact that near the junction of the anterior with the posterior segment of each vertebra there is a cartilage of growth which is, like others of its kind, no doubt specially sensitive to rachitic influences. But I maintain that unless the vertebral bodies had their principal cartilages of growth placed above and below them, they would have no more tendency to lateral curvature than the rest of the vertebræ, and therefore the action of the pedicle cartilage would not come into play.

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[13] In one case of which I have notes it was pustular on the third day.

[1] A paper read at the opening meeting of the British Orthopædic Society on Jan. 31st, 1895.

NOTE ON THE LIMERICK POISONING CASE.

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On July 3rd, 1895, about seventy inmates of a convent and boarding-school in Limerick became very ill after dinner, and for several days suffered from vomiting and purging of a severe character. Three ladies died and many of the other inmates were for several days in a precarious condition. Poison being suspected, portions of the vomited material and dejecta were sent to me for examination on July 5th, together with a portion of corn-flour which it was suspected might contain poison, but none was detected in it or in the other matters sent to me. Suspecting the case to be one of ptomaine poisoning I telegraphed for portions of everything the

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patients had had for dinner, but the only items available were sugar and sodium bicarbonate, both of which were pure. It has been clearly ascertained that the poison was not in the meat used, for some persons who had partaken of it were not ill, and the history of the carcass that furnished it was made out and negatived the hypothesis of unsoundness or disease in it. It appears that a custard formed part of the dinner and that all who partook of it sickened. The cook (one of the sufferers) states that she prepared the custard as follows: "Tuesday, July 2nd: Took four quarts of skimmed milk of previous night, boiled it, added about half a pound of loaf sugar, added two tablespoonfuls of cornflour and boiled again. This was done in a tin vessel. 3 or 4 P.M.: Resumed making of custard; beat up eight or ten eggs, all fresh except one which had a reddish-brown colour but no bad smell, poured them into milk which was then about the temperature of tea, and then poured into earthenware bowl; removed to a cold place during night. Wednesday, 3rd, 9 A.M.: Custard had become quite thin, of consistence of cream; poured it over seven or eight quarts of strawberries, about one and a half quarts of which had been gathered on previous night, whipped the whites of eggs used above, with one pound of sifted sugar and spread over strawberries and custard on glass dishes." That the strawberries were the cause of the illness is negatived by the fact that three or four persons who took gooseberries and not strawberries with the custard were amongst the sufferers. The inquiry is therefore narrowed to the question, Was the *materies morbi* in the milk or eggs. It would seem that some surprise was manifested by the custard remaining thin. When I first heard of this fact I thought the fluidity might be due to the liquefying influence which certain bacilli have on gelatine and albuminous matters, though the rapidity of their action in this particular case seemed surprising; I therefore had a custard made similarly to that described by the cook, and found that it remained as thin as rather thin cream. This want of consistency was, however, due to the albumin of the eggs not having been coagulated by heat, for when my custard was heated to near the boiling point (as should always be done) it became on cooling quite thick. That a highly poisonous substance (tyrotoxicon) is generated in milk (not necessarily very stale) is well known. In the Limerick case the milk was at least two days old when consumed, as at eleven o'clock on the previous day it was skim-milk of "the previous night." It was, however, boiled, and after the addition of cornflour and sugar again boiled. The question is, Could the milk in the presence of sugar and cornflour have generated tyrotoxicon from the time it was boiled at eleven o'clock on Tuesday until it was produced at dinner at one o'clock on Wednesday? The time of the year was favourable to the fermentation of the unstable mixture. The temperature of the mixture was favourable to incubation of micro-organisms. Suspicion falls more strongly on the eggs. I have learned that they were market eggs, and had been purchased four or five days before they were used. Though not putrid, they were more or less stale, and one had a curious colour, described by one person as resembling that of claret. Now after the addition of the eggs to the luke-warm milk, sugar, and cornflour, there was no further heating, and it is clear that the egg albumin was not coagulated. There is reason to believe that the discoloured egg was cracked, and if so micro-organisms had access to its interior. The viscera of two of the patients who succumbed to the attack were examined for ordinary poisons, with negative results. A substance was extracted from them which gave all the characteristic reactions of ptomaines. The quantity available for examination was altogether insufficient to differentiate the ptomaine or ptomaines present from others of which there seems to be a very large number. I am not aware that in any case of ptomaine poisoning the ptomaine was extracted from the viscera and identified. In this case it is much to be regretted that neither the custard nor the matter ejected from the patients on the first or even second day of their illness was available for bacteriological and chemical examination. A fourth patient died yesterday, and there is only one now whose state causes anxiety. The inquest was held yesterday, and the verdict was in accordance with my evidence.

Dublin, July 17th.

ST. THOMAS'S HOSPITAL.—The Corporation of the City of London has granted a donation of 200 guineas to the special fund for the closed wards of this hospital.

ON THE MECHANICAL TREATMENT AFTER PARTIAL EXCISION OF THE LOWER JAW.

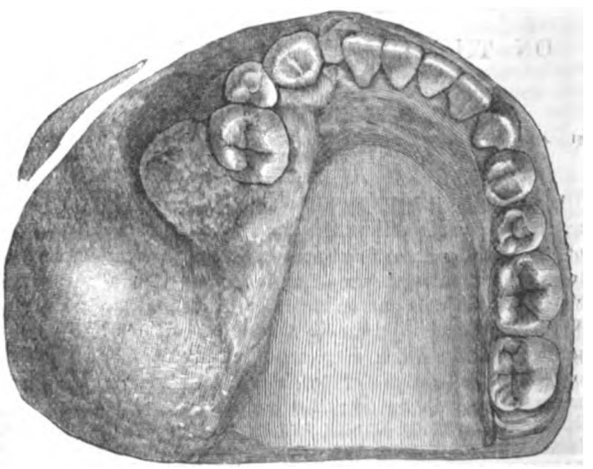
BY F. NEWLAND-PEDLEY, F.R.C.S. ENG.,

DENTAL SURGEON AND LECTURER ON DENTAL SURGERY, GUY'S HOSPITAL.

No great difficulty is experienced in artificially restoring portions of the jaw lost from disease or removed in surgical operations, provided that sufficient bone be left to maintain the dental arch and give support to a denture. Even when a large fragment of the jaw, including the base, is lost from necrosis, we may hope that in a young patient the bone will be reproduced, and the treatment consists in holding the fragments at rest by means of a splint whilst repair is progressing. The most difficult cases, however, are those in which it becomes necessary to remove the ascending ramus or half the jaw in order to arrest a malignant growth, for the remaining fragment quickly undergoes remarkable displacement, falling inwards until it rests upon the tongue, and occupying a position in the median line of the mouth. Here, as a rule, it becomes fixed by cicatricial tissue, rendering the jaw useless as a masticatory organ and occasioning great permanent deformity. Few of these cases have come under my treatment during fifteen years of hospital practice, and doubtless excision of large segments of the lower jaw for advanced malignant growths in elderly patients only prolongs life for a time, and mechanical treatment is not attempted. This, at least, has been my experience, for I cannot recall a single previous case in which treatment was commenced early enough to be successful; the rest, without exception, were failures, because the remaining segment of the jaw was firmly fixed, the muscles were shortened, and further surgical operation seemed contra-indicated. Unsatisfactory results could be averted if the dental surgeon was consulted before the bone became fixed, as may be proved by a case recently treated at Guy's Hospital.

A girl aged twelve years was admitted under Mr. L. A. Dunn for a large sarcoma of central origin, situated in the left side of the lower jaw, extending backwards to within half an inch of the sigmoid notch and forwards to the second bicuspid tooth. The annexed model of the growth (Fig. 1)

FIG. 1.

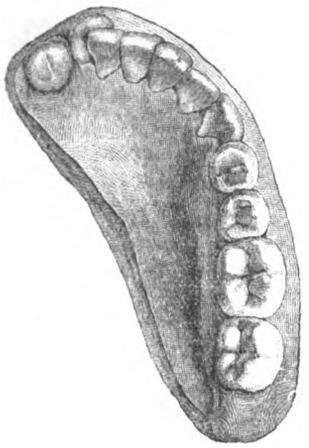


was taken by Mr. Parfitt, who was dresser to the case. The whole of the ascending ramus was removed and nearly half the body of the jaw, reducing the dental arch to the limit indicated in Fig. 2. The wound healed rapidly, and Mr. Dunn, foreseeing the deformity that would necessarily result from the operation, transferred the patient to my care for mechanical treatment some ten days after the operation. I then found the characteristic displacement, which, however, yielded to pressure; but it was clear to me that any contrivance to keep the lower jaw in place must take its fixed point from the upper jaw, for no continuous pressure should be applied over the recent wound. I therefore made a Gunning splint which covered

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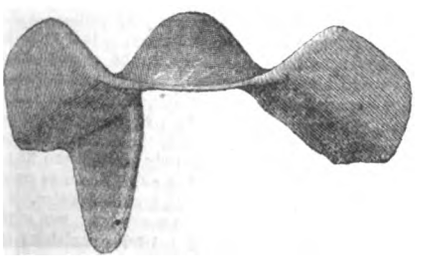
the upper and lower jaws, uniting them together; but the contrivance was unsightly and would have been a great impediment to mastication; so, after several attempts, I made a modification of Gunning's splint by covering the upper jaw with vulcanite and gold, and affixing to it a shield of vulcanite passing almost vertically downwards and preventing the lower jaw from deviating inwards when the mouth was opened to an ordinary extent. The patient can

FIG. 2.



remove the plate easily, and can replace it by pushing the jaw into the shield with her finger. She can now masticate her food satisfactorily and is looking in good health. In constructing one of these contrivances for a child twelve years of age it must be remembered that the jaw is far from fully developed, and allowance must be made for erupting teeth; on the other hand, the erupted teeth must be kept in their positions by antagonising with the plate, or they will rise unduly in their sockets. The age of sixteen is usually

FIG. 3.



considered quite early enough for a patient to wear a denture, and I purpose retaining the use of the present contrivance for about four years. At the end of that period I shall probably find some dense cicatricial tissue occupying the site from which the bone was removed, and this may prove firm enough to support a denture and keep the right side of the jaw in place. Fig. 3 is from a drawing of the plate now worn.

Devonshire-place, W.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of directors of the society was held on July 10th at 8 30 P.M. Sir James Paget, President, took the chair. One fresh application for a grant was read from a widow and assistance given. The death of a widow had occurred who had received grants since June, 1877, and had had £1247 in all, her husband having paid thirty-eight guineas to the funds of the society. One new member was elected and the deaths of two were reported. A sum of £1264 was voted to be distributed among fifty-three widows, nine orphans, and four orphans on the Copeland Fund. A grant of £52 10s. was made to a widow under By-law 70. A legacy of £200 Stock, duty free, was announced from the executors of Dr. Bissett Hawkins. The expenses of the quarter came to £62 11s.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON A HEAVY BRAIN.

BY GEORGE COWIE GRANT, M.B., C.M. ABERD.,
JUNIOR ASSISTANT MEDICAL OFFICER, BIRMINGHAM CITY ASYLUM, RUBERY HILL.

AT a post-mortem examination recently made at the Birmingham City Asylum, Rubery-hill, a brain of very large dimensions was examined. It belonged to a man aged forty-three, who suffered from epilepsy for seven years and died from congestion of the lungs following upon a succession of fits. He was admitted to Winson-green Asylum in April, 1892, suffering from epileptic dementia, and was in January, 1893, transferred to Rubery-hill. His sister stated that the fits began about seven years previously, and occurred for some time only at long intervals; that prior to his having fits and for some time afterwards he was a very intelligent man, much given to reading books and discussing politics. He had been fairly strong, but suffered from periodical headaches. Occasionally he went in for heavy drinking bouts. The necropsy disclosed the following. The circumference of the head above the eyebrows was 25⅝ in. The bones of the skull were not unduly thickened. The dura mater was thickened throughout, and at several points was firmly adherent to the skull-cap. The falx cerebri was ossified from its attachment to the internal occipital protuberance as far forward as the fissure of Rolando. The pia arachnoid was milky and opaque and as thick and tough as an ordinary dura mater, while its vessels were varicose and tortuous. It was adherent to the brain in several places, but mostly so in the frontal region. Recognising that weighing a brain with so thickened a pia arachnoid would give quite an erroneous idea of its real weight, the membrane was removed with as little brain substance adherent as possible. Clear of all membranes and free from all fluid—as it was afterwards found that the ventricles contained none—the brain weighed sixty-seven ounces. The convolutions were plump and well-formed. To the naked eye and microscopically no pathological changes were evident in the organ except an enlargement of both choroid plexuses of the lateral ventricles and a partial ossification of the left one. In the free extremity of this plexus several delicate plates of bone were deposited. I might here remark, from what I have observed myself and from what I have learned from men of long experience in asylums, that it is the practice in many asylums to weigh the brain with the pia arachnoid attached. Had such a method been followed in this particular case quite an erroneous result would have been arrived at, as the pia arachnoid scaled four ounces. It would be interesting to know whether the brain weights published in THE LANCET of June 15th are the weights of the brain alone or the brain *plus* membranes.

Rubery-hill.

A CASE OF SULPHONAL POISONING IN A DIPSOMANIAC.

BY W. WRIGHT HARDWICKE, M.D. ST. AND.

A MARRIED woman, aged thirty-seven, separated from her husband owing to her habits of intemperance, had been abstemious under moral restraint for about three months, when, on May 24th, 1895, she showed signs of an approaching attack of alcoholism. She was watched carefully for a time, but owing to illness and removal of her attendant she was left in charge of a maid. Her first dose, on June 1st, was about one pint and a half of methylated spirit, partly procured from a lamp in the house; then two-pennyworth of the same was obtained from a lamp shop (about six ounces), the druggists in the district having received notice not to serve her; thereupon, her thirst seemed to be so extreme that she

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resorted to some painters, from whose can of turpentine she took a drink. She next discovered a bottle containing 100 tabloids of sulphonal, containing five grains in each, which had previously been taken from her, and which she had received by post; these she chewed up in her mouth one after another till she had swallowed fifty-three (equal to 265 gr.). About 5 P.M. the same day she was found by the maid (who had unfortunately been obliged, owing to domestic duties, to leave her a great deal to herself) in a state of stupor on the floor, and was carried to bed. At 11.15 P.M. I was summoned to her, and found her sleeping on her side with her knees drawn up, and the pupils slightly contracted and insensible to light. When roused she smiled graciously and lapsed off to sleep again; she tried once to raise herself in bed, when she fell powerlessly back again. Next day the legs were found to be extended, and the soles of the feet were arched in a state of extreme flexion. The bowels were confined. She slept from 5 P.M. on June 1st till 5 A.M. on the 4th—sixty hours—and did not regain speech till the 7th and the power of locomotion till the 9th. This case is interesting as showing the irritation produced to the plantar branches of the post-tibial nerve—presumably by the sulphonal—and the long period that elapsed before the toxic flexion of the soles made itself manifest, thus showing the slowness of the action of the drug.

PAROSTEAL LIPOMA CLOSELY RESEMBLING A PERIOSTEAL SARCOMA OF THE FEMUR.

BY FREDERICK PAGE, M.D. EDIN., M.R.C.S. ENG.,
SURGEON TO, AND JOINT LECTURER ON CLINICAL SURGERY AT, THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

IN Mr. Bland Sutton's work on Tumours nine reported cases of parosteal lipomata are referred to. Another has just come under my observation. A woman some five-and-forty years of age showed me a few days ago a swelling on the inner side of the lower end of the right thigh, which she told me she had noticed slowly growing for about four years. It was evidently closely connected with the bone; the superficial veins over it were enlarged, and the swelling closely simulated a periosteal sarcoma. It turned out, however, to be a parosteal lipoma about the size of a flattened goose-egg, encapsuled, and so closely connected with the periosteum that it could not be separated from it. The case is worth recording for more reasons than one. I know of only one other example of parosteal lipoma of the femur—namely, that recorded by Mr. D'Arcy Power in the Transactions of the Pathological Society of London. The great interest of the case I am reporting, however, lies in the resemblance the tumour bore to a sarcoma—a resemblance which might have led to amputation of the limb instead of the removal of the growth.

Newcastle-upon-Tyne.

A MEMORIAL BED.—On Monday, July 15th, a meeting of the Ladies' Association of the Great Northern Central Hospital was held in the board-room, the occasion being the presentation of a bed endowed with a sum of £1050 by the Ladies' Association to Dr. William Cholmeley, the consulting physician to the hospital, in appreciation, as the commemoration plate says, of "many years' devoted and unselfish labour." The present building originated in a little private hospital started in 1856 by Mr. F. S. Statham, which was taken over by a committee of management in 1857. Dr. Cholmeley was one of the first members of the medical staff, the others being the late Sir William Savory, Dr. Handfield Jones, Mr. William Adams, and Mr. George Lawson; the last two are happily still alive. The Hon. Reginald A. Capel, who made the presentation, referred to the history of the hospital, and pointed out how for thirty-eight years Dr. Cholmeley had worked for the hospital both as physician and on the committee of management, and how the present building with all its modern improvements was largely due to his exertions. He concluded by saying that a memoir to a man's worth during his life was, he thought, preferable to one erected after his death. Thanks were returned on behalf of Dr. Cholmeley, who has of late been in somewhat feeble health, by his brother, the Rev. C. H. Cholmeley.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF PLEURAL AND PERICARDIAL EFFUSION FOLLOWING ENTERIC FEVER AND ATTENDED WITH THE EXPECTORATION OF A FIBRINOUS CAST OF THE BRONCHUS; PARACENTESIS OF PLEURA AND PERICARDIUM.

(Under the care of Dr. CHEADLE.)

HOLSCHER reported 2000 fatal cases of typhoid fever in which post-mortem examination was held. Lung complications had proved fatal to the following extent: œdema of the lungs in 15 per cent.; bronchitis, 10 per cent.; lobular pneumonia, 8 per cent.; croupous pneumonia, 7 per cent.; and hæmorrhagic infarction of the lungs, 6 per cent. Plastic bronchitis was not met with, but in 15 of them tracheotomy had been performed, usually for perichondritis of the larynx. Landgraf considers that little importance can be attached to the marginal ulcers sometimes seen, especially about the epiglottis. Other deeper ulcerations, which occurred not only on the epiglottis but within the larynx, might be complicated with perichondritis, and were of grave import. The rarest lesions were ulcers which, from the time of their appearance, the infiltration of their bases, and the undermining of their edges, must be considered specific typhoidal lesions. The operation of paracentesis of the pericardium is but rarely required in cases of effusion into it. Dr. West collected a series of 79 cases in 1883 in which it had been performed, and of these 36 recovered. He considered that it was not only justifiable, but could be done without any great danger. It is not, however, an operation which is likely to be lightly undertaken, especially in rheumatic cases. Dr. Churton has reported a case of hæmorrhagic pericarditis, with serous effusion into the right pleura, in which he performed aspiration of the pericardium thirteen times and of the pleura seven times. The patient was a man aged forty-six, and at one time 46½ oz. were withdrawn. For the notes of this case we are indebted to Mr. Athelstan J. H. Saw, late house physician.

The patient, a man aged twenty-four, was admitted to St. Mary's Hospital on Oct. 3rd, 1894, complaining of shortness of breath and swelling of the abdomen and legs. His father died of phthisis. The history of the present illness is as follows. On May 12th, 1894, he was taken ill with enteric fever, and the temperature ranged between 100° to 103° F. There were typical stools and spots during the illness. The attack was not severe, and there was not an unusual amount of bronchitis. On June 26th the patient, having previously progressed satisfactorily, was attacked by pericarditis and pleurisy, after which the pulse was lost at the wrist. The patient's condition remained unsatisfactory, and at the end of July he went to Torquay. Whilst there he had œdema of the feet and legs, and eventually returned to London. On admission to hospital the patient appeared cyanosed. The veins in the neck, especially on the right side, were distended, also over the front of the chest. There was great œdema of the legs and of the chest wall and abdomen. He was unable to lie down in bed, especially on his right side. The pulse at the wrist was very small, hardly perceptible on the left side, but slightly larger on the right; it was easily compressed. The apex beat of the heart was neither seen nor felt. The cardiac dulness extended one finger's breadth to the right of the sternum, but could not be determined to the left and above owing to surrounding dulness. The sounds were heard very distinctly at the apex, but were louder at the base. The first sound was weak. He had an irritable cough, with but little expectoration. There was marked dyspnœa,

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especially in the recumbent posture and when he was lying on the right side. The left side of the chest measured 19½ in. at the level of the nipple. The right side measured 17¾ in. The right lung was hyper-resonant over the whole of the right front and the back with good entry of air. The percussion note was absolutely dull over the whole of the left front and back. The entry of air was much impaired, especially at the base. The breathing was bronchial over the left front and the upper part of the left back. Vocal fremitus was diminished especially at the left base. The vocal resonance was slightly œgophonic at that base with marked whispering pectoriloquy over the front on that side. The abdomen was resonant. The liver reached four fingers' breadth below the costal margin. The specific gravity of the urine was 1026, acid; one-eighth albumen. A small quantity was passed of high colour. There were no casts. On Oct. 3rd an exploring needle was introduced into the left pleura and clear fluid removed, after which it was aspirated very slowly and with but slight pressure, 50 oz. of clear serous fluid being removed about 3.30 P.M. Immediately after the aspiration the patient started coughing incessantly, with expectoration of frothy, slightly blood-stained sputum. Inhalations of vapor coninæ and a hypodermic injection of one-sixth of a grain of acetate of morphia with one-fiftieth of a grain of sulphate of atropine gave no relief. He expectorated about a pint of this frothy serous fluid, which on examination was found to contain mucin and a large quantity of albumen. Notwithstanding the coughing he expressed himself as feeling better. About 10·45 P.M. he was seized with urgent dyspnœa, became pulseless, markedly cyanosed, his face being bathed in perspiration. His condition was extremely critical, and he was given hypodermically in quick succession five minims of liquor strychniæ, two minims of liquor atropiæ, twenty minims of ether, and a capsule of nitrite of amyl to inhale. Artificial respiration was performed and inhalations of oxygen were commenced as quickly as possible, from which he derived great relief. An hour and a half later (12.30 A.M., Oct. 4th), during a fit of coughing, he expectorated a large fibrinous cast of a bronchus with its ramifications, after which he was much easier. The inhalations of oxygen were kept up at intervals until 2.30 A.M. He passed a fair night, the breathing being easier. The cough was not so troublesome, though he still expectorated a frothy serous fluid. On the 6th the colour was better. The cough was not so troublesome. He had coughed up several (about half a dozen) blood casts of the bronchi, some of them branched, smaller than the fibrinous one alluded to above, much softer, and easily broken. The pulse was 126, small, irregular, slightly stronger than the day previous to the aspiration. The temperature, which was 101° on the night of the 5th, was 94·8° next morning. There was a Skodaic note over left front. The breathing was bronchial, and fine crepitations were heard during inspiration. Bruit d'airain was not obtained. The heart sounds were slightly more distinct. Note on percussion of the left back was still impaired. Air entered more freely. Crepitations were heard all over the left back during inspiration. The patient was ordered a mixture containing two grains of carbonate of ammonia, five minims of tincture of digitalis, and one ounce of chloroform water every four hours, also a hypodermic injection of five minims of liquor strychniæ every four hours. The patient improved somewhat and coughed up no more casts, but the fluid in the pleura gradually reaccumulated, and on Oct. 9th he was aspirated again, 50 oz. of clear fluid being withdrawn. After the aspiration he had a good deal of irritable cough. On the 17th the left pleura was drained by means of a Southey's tube, and 27 oz. of clear fluid drawn off. The patient bore this much better than the aspiration, and the subsequent cough was not nearly so troublesome. This was repeated on the 20th, when 48 oz. were removed. On the 24th the heart sounds still remained distant, and the area of cardiac dulness was much enlarged above the second space and a finger's breadth external to the right margin of the sternum and just external to the left nipple line. It was decided to aspirate the pericardium. The needle was introduced in the fifth space just internal to the left nipple line, and the bottle was only partially exhausted; 14 oz. of turbid serum were removed, quite different in character from the clear fluid obtained from the pleura, which became very thick towards the end of the aspiration. Microscopical examination of the fluid showed dead leucocytes and granular débris. After the aspiration the patient felt much relieved, and the dulness on percussion extended above to the fourth rib to the right margin of the sternum and just internal to the left nipple line. The heart sounds became a good deal more distinct and were accompanied by a to-and-fro crackling sound, which was not, however, due to air in the subcutaneous tissues, for pressure with the stethoscope made little or no difference. On Oct. 25th the left pleura was drained by Southey's tube, and 26 oz. of clear fluid removed without exciting any cough. On Nov. 8th the left pleura was aspirated by means of the bottle and vacuum; 35 oz. of clear fluid were removed, the last ounce being, however, blood-stained. An hour after the aspiration the patient had severe fits of coughing which became very distressing. The sputum was blood-stained, and of a frothy, serous nature, resembling that after the first tapping on Oct. 5th, but no fibrinous casts were expectorated. On Nov. 10th the pulse was distinctly better in force and volume. The apex beat of the heart could not be seen or felt. Dulness extended above to the third space, to the right to mid-sternum, and to the left half an inch external to the nipple line. At the apex the heart sounds were heard more distinctly. The first sound was somewhat sharp and followed by a second sound. There were adventitious sounds. The cough was still troublesome, and the expectoration was blood-stained. The note over the whole of the left front was good and resonant. A resonant note was obtained over the whole of the left back, but towards the base the note was not quite so good as on the right side. The entry of air was good except at the base. There were fine crepitations below a point midway between the spine and angle of the scapula during inspiration. The liver was one finger's breadth below the costal margin. On Nov. 15th the patient went home against advice. His general condition had improved very markedly, there being neither dyspnœa, distension of veins, nor œdema. Since his return he had been heard of several times through the medical man who was attending him. The last letter, dated March 1st, 1895, says:—"The patient remains in very much the same condition. Pulse quick, feeble, but regular. Heart sounds feeble and distant. No increase of pericardial dulness and no bruit. He has evidence of a slight amount of fluid at the left base, and since his discharge from the hospital has been aspirated twice, 36 oz. and 37 oz. respectively being obtained. He suffers from periodical attacks of very severe fits of coughing, when he becomes very cyanosed and veins much engorged. He expectorates small quantities of tenacious mucus, but has never expectorated any more fibrinous casts. He has marked signs of back pressure, his legs and genitals being very œdematous."

Description of cast.—The length of the main stem before subdivision was about 1½ in.; the diameter was about ¼ in. From the main stem there sprang about seven branches, each of which underwent still further subdivision and terminated in fine filaments. The colour was pure white. In consistence it was firm and tough. On section it appeared solid throughout and revealed a laminated structure. After placing in spirit it shrank considerably. Microscopically it showed a beautiful reticular arrangement, with some leucocytes entangled in the meshes. When stained by Weigert's method for staining fibrin the whole section took on the purple stain.

Remarks by Dr. CHEADLE *and* Mr. SAW.—We were at first disposed to think that the pleural and pericardial effusions might be due to the pressure of a mediastinal tumour. The subsequent history of the case negatives that view, we think, although it does not positively exclude it, for after the removal of the fluid we were never able to detect any evidence of a tumour. We also obtained a history of the case from the medical man who attended the patient at the onset of the illness, and there can be no doubt but that the patient had enteric fever complicated by pericarditis and pleurisy. There are two cases on record in which fibrinous bronchitis occurred either during or subsequently to typhoid fever, and in view of the invariable accompaniment of bronchitis in typhoid fever it is not surprising that casts of the bronchi should form, for no doubt one of the most potent disposing causes of fibrinous bronchitis is ordinary catarrhal bronchitis. But there may be another explanation of the occurrence of fibrinous bronchitis during typhoid fever. We know that ulceration of the upper part of the respiratory passage—viz., the larynx—is a by no means rare occurrence in typhoid fever. Only a few months previously to the admission of this case Dr. Cheadle had under his care a patient

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suffering from typhoid fever, on whom tracheotomy had to be performed, owing to obstructive dyspnœa from this cause. Fagge[1] says: "Sometimes a thin pellicle of lymph has been found lining both the interior of the larynx and the epiglottis, and still more rarely a membranous layer resembling that of diphtheria." In a case under the care of Hoffman[2] tracheotomy was rendered necessary by the formation of a polypoid blood clot which hung down into the interior of the larynx. The cause of this ulceration, whether due to a specific poison or to the prolonged pyrexia, is uncertain. With this, however, we are not concerned. The fact remains that it is of fairly common occurrence, and if it occur in the larynx it is conceivable that it may also occur in the bronchi. Now von Gumoens[3] found in a necropsy on a case of fibrinous bronchitis that there was deep ulceration of the trachea and bronchi, which doubtless was the cause of the fibrinous exudation. In this way, therefore, we may explain the occurrence of fibrinous bronchitis during typhoid fever. That the cast had lain in the bronchi for some considerable time was, we think, manifest from its whiteness and toughness, differing entirely in its appearance from those coughed up the following day, which were softer, more yellow, and tinged with blood, resembling very closely "ante-mortem clot." There can be no doubt that ten hours previously to the expectoration of this cast there was no obstruction in the bronchi leading to the right lung, for there was a hyper-resonant note over the whole of this lung, with free entry of air; but it is very probable that it was lying in the bronchi of the left lung, which was collapsed, the auscultatory signs being concealed by the pleural effusion. Another explanation is possible, although we think not probable, as to the origin of this cast—namely, that after the aspiration of the left pleural cavity, the pressure being taken suddenly off the pulmonary vessels transudation of serum into the alveoli occurred, which was indicated, indeed, by the abundant serous expectoration; that this coagulated and became moulded in the bronchus; and that it was owing to the blocking of the bronchi that the urgent symptoms ensued about 11 P.M But had this been so we cannot suppose that the cast would have been as firm and tough as it was. Neither, assuming that it was formed in the left bronchus, do we think it would have caused such urgent symptoms; for the left lung, must have been lying collapsed for months from the pressure of the pleuritic fluid, and can have been of but little value for respiratory purposes; hence the blocking of its bronchus would make but little difference. On the other hand, had so large an obstruction occurred suddenly in the bronchus of the right lung we think the patient must have inevitably succumbed, for the left lung was collapsed, and there was also considerable pericardial effusion. What seems far more probable is that the fluid transuded after the aspiration and loosened the cast which was lying in the left bronchus, and that the violent coughing detached it, forcing it higher up the respiratory passages and so causing it to obstruct bronchi previously free. From the size of the cast the main stem probably occupied a primary division of the left main bronchus, probably that leading to the left lower lobe. Unfortunately, no clue as to the exact site occupied is afforded by the physical signs, for previously to the aspiration they were simply those of pericardial and pleural effusion with collapse of lung, and after the sudden onset of urgent symptoms prior to the expulsion of the cast our attention was directed to alleviating the patient's symptoms and so no precise and accurate examination of the lungs was made. The question arises, Why did the fluid in the pleural cavity reaccumulate so often? We think this was owing to the inability of the lung to expand, being perhaps bound down by adhesions, or so long collapsed that a return to the normal was impossible.

SIDCUP COTTAGE HOSPITAL.

TWO COMPLICATED CASES OF INGUINAL HERNIA IN WOMEN TREATED BY RADICAL CURE.

(Under the care of Dr. G. W. DAVIS.)

IN the first of these cases of inguinal hernia the presence of a second sac is of interest, although such a condition is not very uncommon, especially in the case of the male. It is probable that an old hernial sac became obliterated at the neck by inflammatory adhesion, and that it was afterwards pushed down by the descent of the hernia for which the operation was performed. The presence of the fluid in the first sac was either caused by extension of the inflammatory process from the second, in which the adherent omentum and intestine were found; or it may have been the site of a hydrocele. The second case is an example of a different arrangement of the two sacs, in which the second hernia had passed by the orifice of the first, which had become contracted in a way not infrequently seen in old-standing herniæ which are tending to become cured by contraction of the neck of the sac. Le Dran noted this tendency of empty hernial sacs, and found the entry of the sac contracted in several instances, especially where the patients had worn effective trusses.

CASE 1.—This case was remarkable, firstly, in having a distinct double sac, each of which contained fluid; secondly, in the embarrassment caused by the extremely tough adhesions; and, thirdly, in the absence of urgent symptoms in the face of the existence of strangulation. A widow aged forty-two years was seen by Dr. Davis for the first time for her hernia on June 3rd, 1893, at 10 P.M. She complained of having had a swelling in the right groin for ten years. This tumour had caused some discomfort during the whole of its existence and had never entirely disappeared; it had given rise to more pain for the last three years, during which time she had followed the calling of a laundress. Especially had she suffered from the swelling for the previous three days, and each day's suffering had been more acute than that of the one preceding. The swelling was egg-shaped and of the capacity of about one and a half ounces. It was very tense and both tender and painful, but not markedly so. There had been occasional vomiting during the day, but not feculent. The bowels had acted slightly in the morning. No food had been taken during the day. Efforts at reduction, both by taxis and ice, having been already made, it was decided to admit her at once into the Sidcup Cottage Hospital, which was accordingly done at 11 P.M. on June 3rd. Dr. Burrell gave chloroform, and Dr. Lionel Burrell assisted at the operation. The usual incision having been made and the superficial tissues incised, a thin-walled sac tense with fluid bulged forward; this, being nicked and freely opened, disclosed a second sac of a bluish-black hue; in pinching up this second sac in order to ascertain its thickness its distension caused it to burst and the fluid which had given rise to its colour to escape. The sac contained a portion of gut just protruding through the ring and firmly attached to the sac by old fibrous adhesions on all sides except internally, where it was adherent to a nodulated mass of omentum, and this omentum in its turn was attached to the sac wall. Some considerable time having been spent in endeavouring to break down the adhesions between the gut and sac without much result, the adhesions between the gut and omentum were broken down, so that the fingers could travel with difficulty along the canal to the internal ring, at which was felt a tightly constricting narrow orifice; this being cut in the usual manner, the omentum was dealt with by first drawing it further out and then ligaturing it in two parts with chromicised gut, removing the part above the ligature and returning the stump into the abdomen. The adhesions on the gut were now separated from the sac, and the gut and adhesions returned into the abdomen. The canal being examined and found to be clear, the sac was ligatured with silk and removed, the stump being returned. The wound, after being irrigated with a 1 in 2000 perchloride of mercury solution and dusted with iodoform, was brought into accurate apposition by means of silkworm gut sutures; the dressing was of double cyanide gauze and pine-wool pad. A drainage-tube was inserted and removed in twenty-four hours. The patient made an uneventful recovery, with the exception of having much distressing retching and vomiting of clear, olive-green, bilious matter. A light truss was procured, and the patient left the hospital. In November, 1894, there was a very slight impulse during severe coughing.

CASE 2.—This case was remarkable from the complicated nature and number of the protruding masses. These were, firstly, an elongated mass of fat, perhaps subperitoneal; secondly, an encapsuled mass of omentum; and, thirdly, a sac which was empty and had so constricted a neck as to resemble the sac of a water-bottle hydrocele, but had apparently no intimate connexion with the round ligament. A young woman aged twenty-six had suffered for three years from a swelling in the left groin. During the night and before

[1] Text-book of Medicine, 1891, vol. i., p. 158, article on Enteric Fever.
[2] Quoted by Fagge, loc. cit.
[3] Schweizer Zeitschrift für Medecin, 1854.

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rising she was not conscious of there being anything wrong, but during the day, or in the performance of any work, the swelling appeared and became a continuous source of discomfort and occasionally of pain. On examination of the swelling on Oct. 7th, 1894, it appeared to consist of two parts—viz., one irreducible, but defined with difficulty, and the other not reducible in the ordinary sense, but rather insensibly disappearing during the exercise of the pressure incidental to examination. These conditions were not easy to appreciate, and from the first impression a truss was ordered, but the endeavour to wear it caused great pain and even retching; it was therefore at once discarded and an operation advised. A further examination in consultation with Mr. F. Shapley having confirmed this opinion, the patient was admitted on Oct. 16th into the Sidcup Cottage Hospital. The operation had, however, to be postponed on account of menstruation. For a few days previous to the operation she was kept a good deal in bed and given a dose of Æsculap every morning. Dr. Crombie gave chloroform, and Mr. C. de S. Hoar assisted. The patient commenced to retch at once, but no appreciable impulse was communicated to the tumours. An incision three inches long was made, crossing the external ring and extending in the direction of the canal. A soft mass of fat the size of a walnut was almost immediately found at the anterior part of the wound; on the fat of the superficial fascia having been removed from this mass, it was found to be encapsuled and to have a pedicle passing through the external ring. The tough capsule enclosing the mass having been opened and stripped from it, a mass of nodulated omentum was disclosed; the pedicle, being drawn up, was ligatured with catgut, cut off with scissors, and allowed to retire through the canal. A second long and narrow mass of fat, non-encapsuled, was found above the first and was taken to be some of the subperitoneal fat; its pedicle was ligatured as was that of the other mass, and the stump was returned. Further dissection disclosed an empty, tough, fibrous sac capable of holding about one and a half ounces of fluid; this after careful inspection was opened and found to be continuous with the peritoneum lining the canal, along which the little finger could be inserted with difficulty. The pedicle of this sac was tied with a threefold ligature of catgut, the sac being removed and the stump returned to the inner ring. Finally the pedicle of the fibrous covering of the omental mass was ligatured and removed, and the stump remained within the external ring. The wound surfaces, having been cleared of a gland and some redundant pieces of fat, were covered with iodoform, and the two surfaces brought into accurate apposition with four deep sutures of silkworm gut and five superficial sutures of horsehair. The dressing was of double cyanide gauze wrung out of a 1 in 20 carbolic acid solution and covered with a pine-wool pad. A great deal of retching followed the operation and continued throughout the night, and was the next day associated with green vomit. At 1.30 P.M. the patient fell asleep, the vomiting having ceased; it, however, recommenced and was again very distressing throughout the night. The temperature was not high (99·2° F.), the pulse was 98, and there was no tenderness of the abdomen or tympanites. A hypodermic injection of half a grain of morphia relieved the vomiting. The tongue was very much furred. On Nov. 4th the patient appeared to be going on quite well. The temperature was 100 on Oct. 26th, but fell to 99·4° on the 27th, was the same on the 28th, and from the 29th to Nov. 4th remained normal, the bowels being opened daily. On Nov. 5th, exactly fourteen days after the operation, the patient, who had been up for six days, was seized with a rigor accompanied by pains in the back and head, and the temperature reached 103°. The wound was a little tender and there seemed to be some infiltration in the underlying tissues, but nothing sufficient to justify one in opening the wound. She was therefore sponged and given salicylate of soda. On Nov. 6th the temperature was 100°, on the 7th 99·6°, and on the 8th it fell to normal and did not rise again subsequently. During the night a quantity of pus and serous-looking fluid escaped into the dressings. On the 9th a drainage-tube was inserted through the wound in its entire length. On the 25th, all efforts to close the sinus through which the drainage-tube had been inserted having failed, cocaine was injected and the sinus was opened upon a director. The after-progress was extremely tedious. The wound was packed each day with iodoform gauze, but after healing to about half its extent it appeared to become chronic and to remain so in spite of applications of sulphate of copper, of nitrate of silver, of chloride of zinc, &c. Finally, the application of lead paper as a dressing seemed to hasten the process, and the application of a leaden shield with a depression, which was made for the purpose, fitting into the wound, certainly did some good. On Dec. 26th the wound had healed.

Remark by Dr. DAVIS.—A remark is called for on account of the omission in each case of any attempt to close the canal by suture. In Case 1 the length of time already expended in breaking down adhesions led me to omit this precaution. In Case 2 the canal did not appear abnormally patent, and the sutures were omitted by design.

Medical Societies.

EDINBURGH OBSTETRICAL SOCIETY.

The Condition of Midwives in Scotland.

A MEETING of this society was held on July 10th, Dr. A. H. FREELAND BARBOUR President, being in the chair.

Professors A. Martin (Berlin), A J. C. Skene (New York), and Pinard (Paris) were elected honorary Fellows.

Photographs of a Fœtus sent by Dr. Farquharson (Newcastle) were exhibited, showing a case of anencephaly, retroflexion of the spinal column, cleft palate, and hare-lip. There was a distinct family history of spinal and brain disease.

Dr. D. BERRY HART opened the discussion on the Condition of Midwives in Scotland, with special reference to the question of registration; Should midwives be registered in Scotland? Lord Balfour's Bill had passed the second reading in the House of Lords, but the Dissolution had postponed its progress. He had little doubt it would be reintroduced, and it might be considered in the meantime. It only applied to England, but if passed it would soon be extended to Scotland and Ireland. It was named the Act for the Compulsory Registration of Midwives. Lord Balfour had shown an undoubted evil: the returns reported 800,000 to 900,000 births yearly in England, and one-half of these were attended by midwives only, and these midwives were wholly or almost wholly untrained. This was the only European country where midwives were not registered. It was estimated that there were 10 000 to 15 000 midwives in England and Wales, and uneducated. In the Bill as introduced the midwife was defined as one who should only attend natural labour; but in the amended Bill no definition was given. He then explained some portions of the Bill. The Bill had defects, and the question attempted to be solved was difficult, and he thought the best plan was to obtain a satisfactory compromise. We must admit that 500 000 births were attended by midwives, in many cases ignorant; and yet this Bill provided at a reduced fee for the registration of those now practising, even if ignorant. Registration does not mean education. Then this Bill does not make any provision for the education of the candidates. In this country there is not sufficient hospital accommodation for the purpose. As a compromise, he advised a Bill for the registration of midwifery nurses.

Dr. BUIST (Dundee) viewed the Bill with favour, and stated that this was the general opinion of the profession in Dundee. A large part of the population was poor and unable to pay the fee of a medical man, and the alternative was that the medical man should work for 10*s.* 6*d.* or have the case attended by a midwife. His experience was to trust the midwives if supervised. He gave instances where he had been sent for in complications and found the previous treatment satisfactory. At present the midwives were under no control at all, whereas if registered they could be made liable for malpraxis and their sphere of practice limited. He had known one to give quinine, another to give opium pills to a patient with albuminuria, and another to prescribe ergot during pregnancy. If such women had been registered their certificates could have been dealt with. The question of midwives was entirely one of cost, affecting those people who were too poor to pay for medical attendance. Matters could be left as at present, or these might be dealt with by the Poor-law, but the feeling associated with this was against it. Another suggestion was a municipal or dispensary system, the

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latter supplying the need in Edinburgh. Another plan was the insurance system, but these people do not at present even insure against sickness; or, lastly, cheap midwifery fees. The aim should be to protect the poor.

Dr. CONNEL (Peebles) preferred registered qualified nurses to registered midwives. Thirty years ago the usual practice in his district was to send for some woman; now they send for a medical man, but they do not all pay. Medical education has now permeated the general public, and accordingly they trust medical practitioners and see that the uneducated person is not to be trusted. To register these uneducated women would be a retrograde step; if they were only to attend natural labour, who was to define it? Perhaps the State should take care that the woman was insured against labour—this was surely a matter of public health.

Dr. MACVIE (Berwickshire) stated that midwives were unknown in his district. He considered it was all a question of cost. If a man could not pay the rent of a good house, should a Bill be brought in to allow him to occupy an unhealthy dwelling? All improvement of medical education was for the benefit of the public, and education was becoming more costly. The difficulty of the position was really the matter of poverty, and to make provision for the improvident; the provident get the medical man.

Other speakers agreed that if there was registration there should be some medical qualification and education for it. One stated that he had always found trained nurses acting satisfactorily in conjunction with medical men, and that a country practitioner's life would be intolerable if there were no midwives.

Professor SIMPSON felt strongly that the creation of this special group of women as advanced was a dangerous experiment. The worst feature was that women imperfectly educated were put in charge of a case that required the training of a full medical curriculum. The training given to women at the Maternity Hospital extending over three months was useful and satisfactory. These might be registered.

Sir WILLIAM TURNER stated that from his position as chairman of the committee appointed by the General Medical Council to inquire into this Bill, he had found it necessary to consider this subject. The amended Bill, of which he had only received a copy at this meeting, was very different from the Bill that was under the consideration of the Council. The definition of midwife was entirely dropped out. This definition was a limitation—to limit its scope to women who attended natural labour without a medical man. The amended Bill allowed women to attend all cases, natural or unnatural. The objection to the term "midwifery nurse" was that it placed the woman on the same status as medical or surgical nurses. The latter only acted under the direction of a medical practitioner, whereas the midwife is to attend cases by herself and take an initiative in these matters; and thus there would be a new definition for the term nurse. There were other alterations in the amended Bill; the suggestions of the General Medical Council had not been incorporated by the Government. One thing should be prevented, and that was to allow this register to become loaded with women inefficiently qualified. The Council had had experience of this trouble in the registration of dentists, some of whom seemed to be placed on the register whose sole claim was that on one occasion they may have drawn a tooth. Any woman could be put on this register, but the Council recommended that they should present certificates from a person of authority in the district. This had been ignored, and action should be taken in this matter. He drew attention to the constitution of the Midwives Board; as amended, three other persons were added. It was composed of fifteen members, and one at least must be a woman. The Incorporated Midwives' Institute was to be represented—and what was it? He found it to consist of a body of philanthropic ladies, who had applied to the Board of Trade and received a charter, so that they had now a certain legal status. They were excellent ladies, but what special claim had they to form part of a board composed of representative physicians &c.? In Scotland the Bill did not seem to be required; in England a great want was met by it. There was a great amount of malpraxis; the people needed midwives, but surely these women should be educated. He must support any measure to register women who were properly qualified, and that was by proper education. The General Medical Council inserted words to show that the women should have a proper training; they could not be examined unless they had a previous education, and in England provision must be made for their education. The General Medical Council does not countenance any examination which does not show proper and *bonâ fide* education. Examination must precede registration; but the registration must apply to the new woman, not the old midwife. After the passing of the Act the Council would insist on the women having a knowledge of midwifery. The main difficulty was because the limitation was left out of the amended Bill, and it also contained some minor objections.

Dr. BATTY TUKE considered that registration was not required in Scotland. They had now to face an entirely new position since the definition had been left out of the Bill. A midwife would now become a fully qualified practitioner. The Bill should be resisted as far as possible in the absence of the definition of the term "midwife."

Dr. NORMAN WALKER stated that this proposal would only affect the poor, and was entirely due to the expense of attendance. Newcastle had solved the difficulty by its system of dispensaries with a staff of medical men and midwifery nurses, who called in the medical attendant if necessary. Abroad registration of midwives was in force. He gave the experience of two German medical men. One had been called to a patient and found that the midwife had injected pure carbolic acid into the vagina; he was bound to report this to the authority, and it resulted in the loss of his practice. Another medical man in Hamburg found he was succeeding for two years, but in one month all his midwifery practice disappeared. On investigating he discovered the fact that new practitioners had come who were giving a percentage to the midwives for all cases sent them. In a certain district of England it was known that the medical men paid commission to the midwives when sent for to their cases. He hoped that if any Bill passed a thorough system of education would be demanded, and that the midwives would act under the supervision of some medical man.

Mr. THATCHER, from his experience as a teacher of nurses for twenty years, considered midwives absolutely essential in Scotland for populous and large colliery districts. To have properly qualified midwives is a protection to women in their confinement. He considered a three months' course rather short, it could be made longer with advantage.

Dr. BARBOUR, in referring to the practical conclusion of the discussion, remarked that in Scotland there was not any great need at present for this Bill, but that it should be watched very closely, as if it were passed for England it would soon be extended to Scotland. In doing so attention should be given specially to the definition of midwife, to the provision for their education, and to the composition of the Midwives Board, where it was absurd that members of the Institute should be placed on the same level as the representatives of the Royal Colleges of Physicians and Surgeons.

After the discussion a large number of Fellows and friends dined together in the Waterloo Hotel. The occasion was a special one, Professor Simpson being made the guest of the evening as the twenty-fifth anniversary of his appointment to the Chair of Midwifery had occurred a few days previously. Dr. Barbour presided. Dr. James Ritchie proposed the toast of the guest of the evening, which was enthusiastically received by the company. Professor Simpson, in reply, gave some pleasant reminiscences of his early professional life and his association with Sir James Simpson, and made special reference to his different assistants. The toast of the University was appropriately replied to by Sir Wm. Turner.

PRESENTATIONS.—Dr. Samuel Grose, of Westbourne, Melksham, Wilts, on the occasion of his leaving that town, where he had been in practice for twenty-two years and upwards, has been presented with a handsome silver-clasped wallet and a purse of money, on which is inscribed: "This purse, with 50 guineas, was presented to S. Grose, Esq., M.D., by friends and patients on his departure from Melksham."—Mr. Alexander Gordon, L.R.C.P. Irel., L.R.C.S. Edin., of Rathmines-road, Dublin, has been the recipient of an illuminated address and a gold medallion, highly embellished and bearing a suitable inscription, from the president, committee, and members of the Dublin Hebrew Society for Visiting the Sick, in recognition of the services he has rendered for many years to the members as medical officer to the society.—Dr. George W. H. Tawse, house surgeon to the Whitehaven Infirmary, has been presented by the members of the Whitehaven Police St. John Ambulance Class, to whom he has given a course of lectures on "first aid," with a handsome dressing-case and meerschaum cigar-holder.

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Reviews and Notices of Books.

The Value of Electrical Treatment. By JULIUS ALTHAUS, M.D., M.R.C.P., M.R.I., Consulting Physician to the Hospital for Epilepsy and Paralysis, Regent's-park. London: Longmans & Co. 1895.

THOSE who remember the third edition (1873) of Dr. Althaus' work on Medical Electricity may possibly be disappointed in the present volume. How far there are grounds for such disappointment is not quite easy to determine. Compared with its predecessor this book must be judged rather by its more limited scope than by its less imposing dimensions. "Having been in intimate touch with the subject through a long professional life," the author now submits "once more" his "views on the uses and limits of usefulness of electricity in medicine." He deals with the three currents ordinarily used in the treatment of disease, giving special attention to the constant galvanic current, which he considers "by far the most important form of electricity for medical purposes" (p. 4). The views and methods advocated by the author in former works have in some instances undergone modification, and there is the important addition that, with improvements in electrical measurement, current strength (intensity) can now be accurately stated in milliampères. Density, an important factor in dosage, is also in most instances definitely expressed by giving the superficial area of the electrodes used. Would it not be desirable to adopt throughout the method originally suggested by C. W. Muller, and explained in this book, of giving this information in the form of a fraction where the numerator is the strength of the current in milliampères and the denominator the number of square centimetres of surface of the electrode? Thus $\frac{10}{30}$ would express the fact, not only that the intensity of the current is ten milliampères, but that its density is one-third of a milliampère to the square centimetre of electrode surface. Regarded as an exposition of the individual views of the author on the question of electrical treatment, this volume of 100 pages has a distinct interest and a unique value. Were it to be regarded as an attempt to bring the work of 1873 into line with present science it could not be pronounced a success. It is true that a few pages are devoted to a consideration of ohms and volts, and ampères and coulombs, with a short description of the faradimeter and plates of Lewandowski's rheostat and Edelmann's galvanometer; but contemporary and recent work, notably that of the French and American schools, is almost completely ignored. Thus D'Arsonval's investigations as to the effects on nutrition of different forms of electrical energy—including sinusoidal currents, as well as currents of great frequency and high potential—are not even alluded to. Apostoli's treatment of uterine fibroids is dismissed with the remark that space is too limited to consider it. "Metallic electrolysis" is not mentioned; nor is the opportunity taken of formally withdrawing the opinion expressed in the volume of 1873 that the idea "that electricity may serve to introduce drugs into the system is untenable" (p. 708). For the latter sentence something like the following might now have been substituted: "The transference of drugs through the uninjured skin by means of the directional influence of the constant current has been experimentally demonstrated by physicists and is now a recognised practice in medicine." The suggestion (p. 708) that Fabré-Palaprat's proposition was due to "ecstatic spasms" might at the same time have been gracefully withdrawn, and this is scarcely atoned for by the slight reference to cataphoric medication at p. 63 of the present book. The author might also have availed himself of this opportunity to modify the commencing sentence of the former work, which is this: "In the present state of physical science it is generally admitted that all substances contain a very subtle and imponderable fluid called natural electricity ....." For this it would have been fairly correct now to write as follows: "In the present state of physical science few things are more certain than that electricity is not a fluid." Such points are adverted to simply to warn the reader that he must not expect in the present volume an "up-to-date" book covering the whole ground of medical electricity, such as was Dr. Althaus' work of 1873. Passing from what the book is *not* to what it is, the author believes that "Pflüger's researches on electrotonus supply the key to the large majority of the therapeutic applications of the constant current" (p. 18). Thus the anode will prove curative in suitable cases of hyperæsthesia, neuralgia, tinnitus aurium, muscular spasms, contractions, &c. The cathode will "find its appropriate sphere of action where excitability of a nerve or neurone requires to be increased, that is in paralysis and anæsthesia." The existence of electrotonic modifications of excitability under the influence of electric currents is of course beyond doubt. But, admitting this, and even admitting that neuralgic pain points to an increase of excitability, and paralysis to a diminution thereof, there still remain the old and destructive arguments against accepting the electrotonic theory as a basis of electrotherapeutics. These cannot be entered into here. Judged by the rules of procedure laid down in this book, the induction of anelectrotonus and catelectrotonus would seem to be as easy and as certain as to induce contraction in the long flexors of the fingers. Thus regarding, as Dr. Althaus does, shaking palsy as a "neurosis of the Rolandic convolutions, and as the symptoms are more those of debility than of irritation" (p. 44), the procedure at once becomes obvious—simply to induce catelectrotonus "in the motor portions of the cortex," and for this purpose the use of one milliampère of current through an anode of 130 square centimetres seems to be recommended—i.e., a current density of $\frac{1}{130}$ of a milliampère to the square centimetre. It seems almost time to enter a protest against the retention of the term "catalytic action." That uniform direct current known as the galvanic may be stated to have certain physical and physiological properties. These can be discussed each under its own name—as proved, probable, possible, or impossible; none of them need be lumped together under a term whose only claim to usefulness seems to be that it has no definite meaning of its own. Turning to the consideration of faradaism, its stimulating or excitant effects only are mentioned. Reference might have been expected to the well-established sedative and "numbing" effect of the fine wire coil. In discussing Franklinism (p. 4) it would almost appear that there exists in the author's mind some confusion between ordinary disruptive discharge (sparks) and Morton's "static induced currents." It is the former that Dr. W. J. Morton of New York recommends in the treatment of locomotor ataxy but it is the latter (obtained by adding condensers to the static machine and other special disposition of the apparatus) that Dr. Morton first described, and with which his name ought therefore to be associated. Amongst the diseases dealt with is "spinal debility," and the author considers that "many persons, especially young women," suffer from it. Here electrical dosage is not entered into with the author's usual exactitude, but it is satisfactory to learn that the "constant current applied to the spine, both horizontally and longitudinally, had an excellent effect." Another of the diseases considered (p. 33) is "failure of brain power," which "may be defined as paresis or want of action, and as undue excitability or over-action of the different functions of the brain" (p. 34). This condition, the author states, "is often called neurasthenia." Possibly some readers will still prefer to regard both one and the other of these terms as "question-begging epithets," and to adopt the word "neurasthenia" merely as a term signifying a clinical entity of a pathogenic origin as yet unproved,

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but displaying itself by certain well-marked preponderating symptoms or "stigmata." The cerebral condition here described as "failure of brain power" is one of those stigmata. One very striking and instructive feature of the book is the comparatively feeble strength of current recommended. For the brain ½ to 2 milliampères with an effective electrode of 16 to 130 square centimetres, and for the spine 2 to 10 milliampères with an electrode surface of 40 to 130 square centimetres, give a fair idea of the intensities and densities used. There will be many who differ from this, but those who clamour for a treatment more heroic must do so with eyes open to the formidable power of the energy they employ, and never forgetting the old Hippocratean precept, "Imprimis non nocere."

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. XLIII. Owens — Passelewe. London: Smith, Elder, and Co. 1895

THE proportion of medical biographies in this volume is relatively considerable, including those of three presidents of the Royal College of Physicians of London and one president of the Royal College of Surgeons of England. Sir William Paddy was born in London in 1554, graduated as M.D. at Leyden in 1589, and became a Fellow of the Royal College of Physicians of London in 1591. He was elected a Censor in 1595 and 1597, and was four times President—in 1609, 1610, 1611, and 1618. Having been appointed physician to James I. soon after that monarch's accession, he was knighted in 1603, and was in attendance during the King's last illness in 1625. Sir William died in 1634; his tomb is in St. John's College, Oxford. Another Court physician contemporary with the preceding was Richard Palmer, who was elected a Fellow of the Royal College of Physicians of London in 1597; he was nine times Censor between 1599 and 1619, and was President in 1620. He also possessed the degree of M.D., but the name of the university is not recorded; he died in 1625. Dr. Palmer was one of the physicians who attended Prince Henry, eldest son of James I., during his fatal illness in 1612. John Ayrton Paris was born at Cambridge in 1785, studied medicine there and in Edinburgh, and graduated as M.D. Cantab. in 1813. He was elected a Fellow of the Royal College of Physicians of London in 1814, and from 1819 to 1826 lectured there on Materia Medica. He was also Censor for several years, Harveian orator in 1843, and President for twelve years, commencing from 1844. He died in 1856. He had a large practice, and his published works passed through many editions; the principal of them are his "Pharmacologia," "Medical Jurisprudence," "Treatise on Diet," and "Life of Sir Humphrey Davy." Richard Partridge was born in 1805 at Ross, in Herefordshire, studied medicine in Birmingham and at St. Bartholomew's Hospital, and qualified as M.R.C.S. in 1827. On the foundation of the medical faculty in King's College, London, in 1831, he was appointed the first demonstrator of anatomy, and held the position till he became, in 1836, Professor of Descriptive and Surgical Anatomy. In 1837 he was elected a Fellow of the Royal Society, and in 1840 he was appointed surgeon to King's College Hospital, then newly established, and retained this office till 1870. He was made a Fellow of the Royal College of Surgeons of England when the Fellowship was instituted by the Charter of 1843, and was elected Hunterian orator in 1865 and President in 1866. Although a good lecturer and skilled in drawing, he published nothing beyond contributions to the "Cyclopædia of Anatomy and Physiology" and to the Transactions of various societies. A far more distinguished representative of medical science than any of those just mentioned was Edmund Alexander Parkes, who was born in 1819, studied medicine at University College, and graduated as M.B. of London University in 1841. From 1842 to 1845 he served as a military surgeon in Madras and Moulmein, retired from the army in 1845, graduated M.D. at the University of London in 1846, and in 1847 published a work "On Asiatic and Algide Cholera," which was chiefly written in India, where he had witnessed two epidemics. In 1849 he was elected Professor of Clinical Medicine at University College and Physician to University College Hospital. During the Crimean War the hospital accommodation at Scutari was found to be insufficient, and the Government having resolved to provide an additional civilian hospital, Parkes was sent to Turkey to select a site for the building and to undertake the organisation and general management, duties which occupied him till 1856, when hostilities terminated. In 1860 an Army Medical School was established at Fort Pitt, Chatham, and Parkes accepted the chair of hygiene, thereby bringing to a close his connexion with University College. In 1863 the school was transferred to the Royal Victoria Hospital, Netley, and in the following year he published his celebrated "Manual of Practical Hygiene." Several other works were written by him, as well as numerous important contributions to periodical literature. He was elected F.R.S. in 1861. He died in 1876, leaving an imperishable name as the principal founder of the science of modern hygiene and furnishing a remarkable object lesson of the ingratitude of Governments, for his transcendent merits were almost entirely ignored. Thomas Heazle Parke was born in county Roscommon in 1857, studied medicine in Dublin, qualified there in 1878, and entered the medical department of the army in 1881. Next year he saw service in the Egyptian campaign, and subsequently took part in the expedition sent to rescue General Gordon. In February, 1887, he accompanied, as a volunteer, the expedition into the Congo forest organised by Mr. H. M. Stanley for the relief of the German traveller, Emin Pasha. Emin could not be persuaded to leave Africa; but the expedition was otherwise completely successful, and Parke returned to England in May, 1890. He was heartily welcomed by the medical profession there, and the biographer does not omit to mention his enthusiastic reception at the office of THE LANCET. Mr. Stanley freely acknowledged how invaluable was the aid rendered by Parke to the expedition. His military service was now resumed with the 2nd Lifeguards and at Netley Hospital; but his health was permanently injured, and he died in 1893. Of the other medical biographies included in this volume, the most notable is that of Sir George Edward Paget, Regius Professor of Physic at the University of Cambridge from 1872 to 1892. Denis Papin was born at Blois in 1647, and studied medicine at the University of Angers, taking his degree in 1669. He devoted himself to natural philosophy and mechanics, came to London in 1675, and was elected Fellow of the Royal Society in 1680. His principal invention was the digester, an apparatus for boiling food under pressure, which was shown to the Royal Society in 1679, and which is in use at this day.

Thomas Parr—known as "Old Parr"—who died in 1635 at the alleged age of 152 years, was not equal in longevity to his contemporary, Henry Jenkins, a Yorkshireman, who is said to have seen 169 years. These, however, were pre-registration days, and verification of the date of birth was not easy in the case of centenarians in humble life. The opening memoir of the volume is that of John Owens, founder of Owens College, Manchester; the longest, extending over almost twenty pages, is that of Charles Stewart Parnell, the Irish political leader.

St. Bartholomew's Hospital Reports. Edited by SAMUEL WEST, M.D., and W. J. WALSHAM, F.R.C.S. Vol. XXX. London: Smith, Elder and Co. 1894.

THE contributions from members of the staff and others, which occupy the first part of the contents of the volume

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chiefly consist of notes on cases which have been under treatment in the wards or out-patient department of the hospital, rather than of contributions of higher importance, but some of them are of unusual interest. Dr. Samuel Gee contributes a case of Aneurysm of the Ascending Part of the Arch of the Aorta, taking the Natural Position of the Heart. Dr. W. P. Herringham writes on the somewhat rare disease Primary Cancer of the Pancreas, and gives an abstract of seventeen cases which had been under observation at the hospital; he also analyses forty others collected from various sources. Dr. A. E. Garrod contributes a paper on the Association of Cardiac Malformations with other Congenital Defects. Dr. Lauder Brunton gives a note on Hydroxylamine Hydrochlorate as a Substitute for Nitrite of Amyl or Nitro-glycerine. Dr. H. Lewis Jones writes on the Treatment of Nævus by Electrolysis. Amongst the surgical contributions the most remarkable is the account of a case by Mr. Thomas Smith in which the superficial femoral, the deep femoral, and the popliteal arteries, with their corresponding veins, were tied in the course of an operation without damage to the vitality of the limb. Mr. H. T. Butlin gives an account of his experience of a Second Year's Surgery at St. Bartholomew's Hospital, chiefly with regard to the treatment of wounds by an antiseptic method. The results are better than they were during the previous year, but do not attain the high standard expected at the present day; for instance, in operations for varicose veins suppuration occurred in one out of five cases; for radical cure of hernia in nine out of twenty-seven; and in amputations of the breast in two out of fifteen. Mr. Walsham writes on Purulent Catarrh of the Accessory Nasal Sinuses. Other contributions are as follows: Mr. Richard Gill, Notes on Chloroform Anæsthesia; Dr. C. Hubert Roberts, the History and Present Position of Symphysiotomy; Mr. E. Percy Paton, a Case of Peri-cæcal Suppuration followed by interesting Cerebral Symptoms; Mr. R. Cozens Bailey, the Treatment of Senile Gangrene; Mr. W. McAdam Eccles, the Great Omentum, Notes on its Development &c.; Mr. E. Willett, a Case of Lymphangioma of the Skin; the Rev. G. Henslow, the Dietetic Value of Food-stuffs prepared by Plants; Dr. H. M. Bowman, a Case of Congenital Absence of both Pectoral Muscles; Mr. J. J. Macan, the History of Diphtheritic Paralysis; Dr. J. A. Hayward, the Diagnosis of Diphtheria; Dr. James Adams, Diphtheria, Immunity of Puerperal Women from its Infection; Diagnostic Value of the Patellar Reflex; Dr. Harry Campbell on the Gradations of Health and Disease; Mr. Thomas J. Horder, the Life and Works of Percivall Pott, being the Wix Prize Essay for the year 1894; Dr. W. J. Horne, Notes on a Case of Fugitive Œdema of Obscure Origin ending fatally; Dr. G. C. Garratt, a Case of General Tuberculosis, with Cortical Tubercular Meningitis producing Localising Cerebral Symptoms; Mr. D. H. Goodsall, Three Cases of Right Iliac Colotomy for Intestinal Obstruction; Dr. S. West, Blood Casts in Phthisis; and Mr. C. A. Morton, a Case of Aural Pyæmia (fatal).

The second part of the book contains: (1) an account of the proceedings of the Abernethian Society for the Session 1893–94; and (2) a list of the specimens added to the museum during the year ending Sept. 30th, 1894, described by Mr. Edgar Willett, amongst which there are many of considerable interest and rarity.

The third part really contains the Hospital Reports—the statistical tables of the patients under treatment in the wards during 1893 by the medical registrars, Drs. Ormerod and Herringham, and the surgical registrar, Mr. James Berry. The medical cases under treatment during the year were 2515, and of these 511 died. The surgical cases were 3986 cured or relieved, and 233 died. Whilst members of the profession will be fully appreciative of the appendices to the surgical tables, in which some of the most interesting cases are summarised, they would be thankful, we think, if sufficient information was given in them to make the abstract of them available for useful reference.

LIBRARY TABLE.

Hygiene, with Anatomy and Physiology. By JOSEPH F. EDWARDS, A.M., M.D., Fellow of the College of Physicians of Philadelphia. New York: Edward P. Slevin. 1895.—The author states expressly (p. 19) that this book is not written for "medical students," and on the title-page it is described as being intended for schools and for general reading. The style is often colloquial and the various arguments are sometimes illustrated by far-fetched comparisons and sensational engravings. For instance, the evils attendant on the escape of sewer air from faulty drain-pipes in the basement of a house are represented by large serpents issuing from the crevices of the pipes and thrusting their formidable heads into the sitting-rooms and bedrooms. A strict observance of the laws of health is what the author seeks to inculcate, mainly through the medium of quaint analogies. Some of these may not be very appropriate, but all the practical recommendations as to personal hygiene are excellent.

The Theory of Physical Education in Elementary Schools. By THOMAS CHESTERTON, Organising Teacher of Physical Education to the London School Board. London and Aldershot: Gale and Polden, Limited. 1895.—About four years ago the author of the present volume published a "Manual of Drill and Physical Exercises," which has passed through several editions, and he now enters on fresh ground with a treatise on the theory of the subject, intended mainly for the use of teachers in elementary schools. Its principal object, in fact, is to prepare candidates for the examinations held by the London School Board and other educational bodies in order to test the proficiency of school teachers in the theory of physical education. The first eighty pages contain an outline of human anatomy and physiology sufficiently full and accurate except that on p 71 "the highest temperature of the body" is given as 40° C., without any mention of the co-existing ill-health. The remaining sections are on the utility of dumb-bells and music as adjuncts in the physical training of children, on the distinction between games and formal exercises, on spinal curvature, &c. Mr. Charles Roberts, F.R.C.S., contributes a few pages on singing and declaiming as physical exercises, and numerous examination papers are subjoined. The book is well adapted to the end in view.

The Phonographic Record of Clinical Teaching and Medical Science. London: Sir I. Pitman and Sons.—The June issue of this excellently lithographed magazine contains a clinical lecture by Professor T. Grainger Stewart on a Case of Renal Disease, and a paper on Neurasthenic Asthenopia by Mr. Edward Nettleship. A short note from the clinic of Dr. Judson Bury on Functional Aphasia is reported by Mr. Leonard Sessions, and Dr. W. R Gowers contributes an interesting and important paper on Problems in Practical Diagnosis. The July number, which is a double one, contains several papers of interest to both student and practitioner. Dr. Gowers continues his Problems in Practical Diagnosis.

The Treatment and Education of Mentally Feeble Children. By FLETCHER BEACH, M B.Lond.—In a small book of thirty-two pages Dr. Fletcher Beach summarises his observations resulting from twenty years' experience in the treatment of cases of mental deficiency. He speaks, of course, of the importance of treating defects in the bodily condition before undertaking the moral and intellectual training. The bodily and mental deficiencies commonly met with in such cases are shortly enumerated, and treatment is considered under the following heads: (1) Attention to Hygienic Conditions; (2) Adaptation of the Principles of Medicine to the Infirmities which exist in this class of Patients;

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(3) Improvement of the Physical Defects and Imperfections; and (4) Education and Training of the Moral and Intellectual Faculties. Under the second head the treatment of microcephaly by craniectomy is adversely commented on, the author agreeing with Dr. Bourneville's opinion in this matter. Reference is, of course, made to the successful treatment of cretins by thyroid extract. The book closes with a few remarks on the importance of the early commencement of training in such cases.

New Inventions.

THE THERMO-ETHER INHALER.

DR. CARTER of Weymouth has devised an ether inhaler made for him by Messrs. Krohne and Sesemann, of which figures are appended. It is constructed upon the same principle as Junker's inhaler for giving chloroform. It consists of two main parts—a water jacket with receptacle for a Japanese tinder cylinder, and a bottle like the Junker bottle, but graduated to hold two ounces of ether. As seen in the illustration, the water-jacket is suspended in front of the anæsthetist by a strap passing over the shoulder, and the ether bottle, placed in position, is about three-fourths of its circumference surrounded by the water-jacket, sufficient space being left for reading its graduation. About two or three ounces of warm water at about 100° F. are put into the jacket. This will be sufficient for one case, but if there are

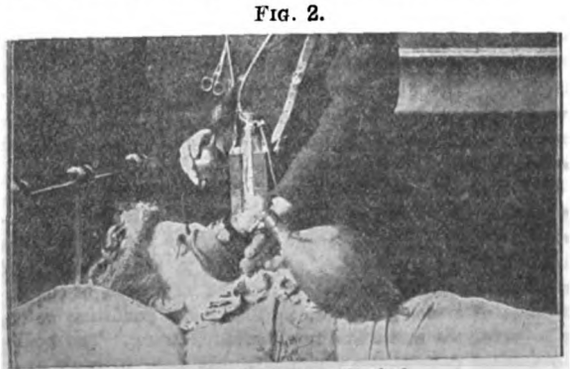
FIG. 1.



Inhaler without the bag attached.

several the temperature of the water may be maintained or increased by regulating the current of air passing over the lighted Japanese tinder in the cylinder, and thus causing a slower or more rapid smouldering of the charge. One charge lasts one or two hours. The air is pumped by means of the hand bellows through the ether, and when the patient requires a deeper anæsthesia than can be so obtained the "bag accessory" shown in the woodcut is placed in position. This is taken off and replaced as occasion requires.

FIG. 2.



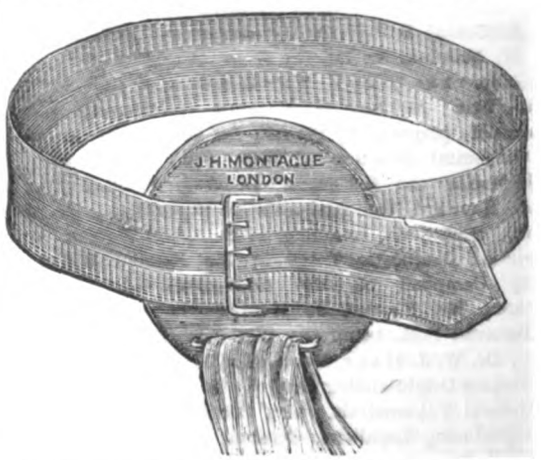
Inhaler showing bag attached.

The advantages claimed for it are: 1. It produces little, if any, asphyxia; it is pleasanter for the patient both at the time of inhalation and subsequently; a cyanotic condition is rarely observed, its absence being due to pumping air through the slightly warmed ether. 2. The complete control over the ether it affords. 3. The ether is in view all the time and does not get contaminated with the products of exhalation; the residue of ether is little, if at all, altered from its original state, an advantage in cleanliness. 4. With management the ether can be kept at an equable temperature. 5. It reduces the equipment of the general anæsthetist—that is, if he uses Junker's inhaler for chloroform,—for pretty nearly the same apparatus does for both, with the addition of a Clover's bag, and substituting the thermo-ether bottle for the smaller chloroform bottle.

Eighteen cases, of which full notes were taken, in which the thermo-ether inhaler was used give the following results: The patients were all females aged from seventeen to sixty-two; all were in good condition save three, one of whom was "delicate," one had a feeble intermitting heart, and one was cachectic-looking, with a "weak heart." The average time of going under with this inhaler and Salomon's purest ether was 4·8 minutes. The operations were from 8 to 38 minutes' duration. Cyanosis only appeared once and the after-effects were few and trifling. There was a total absence of laryngeal irritation and coughing and perspiration. Dr. Carter is able to speak in favour of this inhaler, which, although producing anæsthesia more tardily than is usual, yet completely does away with the undesirable asphyxial symptoms which appear when some methods of giving ether are adopted.

POST-PARTUM UTERINE COMPRESS.

MR. O. T. SLATTER of Green-lanes, N., has submitted to us a useful addition to the gynæcological bag in the form of a pad invented by him and named "post-partum uterine compress," which is made by Mr. J. H. Montague of 101, New Bond-street, W. It consists of a concavo-convex round piece of metal six inches in diameter, padded and covered with white kid, which is kept in position by an abdominal belt made of webbing three inches broad connected to and buckling over it. The bar at its lower edge gives attachment to the sanitary towel or diaper, through a loop of which the belt is threaded posteriorly, the one thus



assisting to keep the other in place. The inventor claims for it these advantages: that after delivery it forms a firm and equable pressure (the amount of which can be regulated to a nicety), and is to be applied subsequently to manipulation and expression of the uterus in cases of imperfect contraction due to an atonic condition of its muscular walls, and in dilatation and flaccidity often met with in women of a neurotic temperament; that it is rapidly and most easily adjusted, no movement of the patient being required, retains its position, and enables the accoucheur to leave earlier and with a greater feeling of confidence, knowing that he has done all that is possible by way of prevention of post-partum hæmorrhage so far as pressure is concerned, which cannot be claimed for the old time-honoured ordinary binder, always difficult and often tiring to the female to adjust with any degree of accuracy, and equally useless on account of the impossibility of obtaining dependable pressure on the one part where only it is of any advantage. Lastly, Mr. Slatter does not represent it to be an instrument for compression only or to be applied to a non-contracted uterus, but to prevent redilatation of the organ after contraction.

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THE LANCET.

LONDON: SATURDAY, JULY 20, 1895.

WE recently read in the *American Medico-Surgical Bulletin* an instructive article on Specialism by Dr. CHARLES B. MĔDING, in which the author does not seek to disguise the possession of uncompromising views. He declares much of present specialism to be empirical, and rather an art than a due combination of art and science. The tendency of all special treatment, he holds, must be to adopt local measures to the absolute exclusion of general considerations in diagnosis or treatment. A man who looks only into the ear cannot see far into the nose. He whose largest operation is the removal of adenoids will scarcely have a proper estimate of the possible urgency of a hæmorrhage, while those who view female life through the vagina will have little respect for the stomach. After explaining the increase of specialism upon purely commercial grounds, Dr. MĔDING remarks with much acuteness that "extravagant development leads to decline." It is upon this dictum that we desire to found a few remarks with reference to practice in our own country. The subject of specialism in medicine and surgery is such a well-worn one, and has been so often discussed in these pages, that it may be thought that nothing is left to say; but this is not so, for the position of matters has changed. There can be no doubt that a remarkable alteration in the position of the specialist is coming over London and the larger medical centres, and in our opinion this change will in no long period of time work a remedy of a condition of things in which many right-minded people have seen need for improvement. To use Dr. MĔDING'S words, extravagant development is leading to decline. With competition in specialism there will assuredly come an abatement of a certain desire to rush into specialisation that has of late seized upon the younger of our profession. The general idea that would seem to have pervaded the minds of practitioners and even students, that all specialism pays, is disappearing. When it prevailed it was dangerous, for as it is a simple matter for anyone to term himself a specialist upon any of the various orifices of the body he may elect as the one most congenial for his observation, the risk that badly endowed specialists should multiply with micro-organic rapidity could not be overlooked. And that such rash persons existed may be taken as proven by the frequency with which—at least so we are credibly informed—the two questions which follow are asked. Are needless operations performed for fees? Are methods of treatment urged upon patients for commercial rather than pathological reasons?

Now we are, as we should be, the last to go outside our legitimate domain to say anything reflecting on the character and status of members of the profession in whose behalf we ever write; yet we should be wanting to the trust that has been confided to us if we did not utter a word of warning. We know that practically neither abuse exists. Yet these questions have become matters of discussion in the profession, and this being so it is our duty to ask them out loud, furnishing such reply as is in our power. The practice of medicine and surgery is so inadequately rewarded in this country that the temptation to stray from the paths of rectitude is necessarily very great to those whom circumstances have contrived to make especially susceptible of the value of money. Acute competition may lead to sharp practice in medicine as much as in other avocations of a meaner sort and a more commercial nature. This much is admitted. But in spite of the admission we make bold to say that the answer to the two questions we have propounded is, and is emphatically, No. Here and there the medical man, as now and again the lawyer and even the priest, may be found so wanting to his trust as to give advice from the point of view of his own purse rather than of his patient's welfare—to deny this would be to claim for the medical man a universal and resplendent infallibility—but the profession at large is pure of such reproach—absolutely pure. Only one point requires our serious attention, and it is the point which has dictated all our treatment of this necessarily invidious subject. Is the small section of the profession known as specialists equally clean-handed? And, if so, has it always been, or do some of Dr. MĔDING'S pungent reflections upon the specialists of his own country recoil upon the specialists on this side of the Atlantic? The answer is contained in the incontrovertible proposition that only those men who have been educated, and have educated themselves by long and laborious work as all-round surgeons or physicians as a preliminary, can take a proper grasp of a special subject. Men may by circumstances and individual bent become specialists, but in fundamental knowledge and initial training their medical learning must be general, if they are to be first-class scientific authorities. A specialist whose learning and work have been of a limited character must perforce be narrow-minded, and will with perfect good faith advise an operation of which a fellow practitioner of wider views would see the danger in its disproportion to the condition; and we may safely assert that any consulting surgeon in large practice in London would be able to confirm the statement that not an inconsiderable portion of his time is spent in the useful work of pointing out the inadvisability of performing the very surgical exploit for the endurance of which the patient has been sent to him. But if this occurs often one unfortunate thing must follow: the reputation of the profession as a whole will suffer with the public. If it be known that the performance of a needless operation has been recommended, even though the motive may have been of the best, the public is not likely to condone the ignorance, or to see in the motive anything but evidence of corruption.

General practitioners have the matter largely in their hands. When one of their patients needs advice they cannot inquire too carefully into the reputation for special work of the proposed consultant before sending their patient to him or sanctioning an operation of any sort. That specialism in this country as in the United States has been over-developed there can be no doubt, but we venture to think that the writing is on the wall, and that the period of decline is at hand, and we are certain that it is in the hands of general practitioners to restore a healthy condition immediately. Special knowledge means

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special training and special experience. Granted; but the more general and wide the learning upon which these are founded the more sound must be the claim to special skill. If this fact is properly recognised by the professional advisers of the public the temptation to the younger members of our order to arrogate to themselves the position of peculiar knowledge witnout the acquisition of sound general learning or the opportunities of first-class practical experience will be gone; the stress of over-acute competition in one or two popular branches of medicine and surgery will be abated; and the grounds for certain reproaches, now justly or unjustly urged, will be removed.

EXCELLENT though the motive may be, the practice of subscribing to every charitable scheme which well-meaning people may bring before the notice of the benevolent is often productive of harm. True charity, like mercy, carries with it a blessing to both the giver and to the receiver; but as mercy must be tempered with justice, so charity must be combined with prudence or it ceases to exercise its double beneficent *rôle*. At this time of the year benevolent people freely respond to the many appeals which are daily made for funds to send the children of our urban poor into the country for a holiday, and so far as this is carried out on right lines no form of charity can be more worthy of support. But these holidays are not always carried out on right lines; thousands of children are constantly taken by van or train for a day's outing to the country or to the seaside under conditions which are contributive neither to health nor to morality. This kind of treat is rightly deprecated by Canon S. A. BARNETT, who has done much for the social uplifting of the East-end, and who has contributed greatly to our knowledge of right methods in raising the status of the poor generally. We cannot do better than quote his own words. These children, he says, "crowd and scramble into the van or train; they scream and shout during the journey; they show by their greed of the best places a complete forgetfulness of their lessons in manners and unselfishness; and at the journey's end make a wild rush to the field or corner of the beach where the contractor has prepared the food he has brought from town. Here they are besieged by vendors of ices, sweets, whips, and whistles; they are hustled on and off donkeys or merry-go-rounds; they are called to listen to niggers and to concerts; they are tempted to penny 'shies' and shows. All this day, under the hot sun, fed on unwholesome food, excited by noise, they keep in the crowd to which they belong to breathe one another's breath. ..... At the day's end the children—weary, irritable, almost drunk with self-indulgence—once more crowd the carriages, and return home to show by noise and uncontrolled shouts that they have had a happy day." This is no exaggerated picture of what daily takes place during the summer holiday season, and as the tendency is to greatly widen the scope of these excursions year by year, nothing but positive harm can result whilst they are carried out under such conditions. The motive which prompts these good people to take poor children away from their squalid surroundings even for a day, and to place them in a healthier and purer atmosphere, is to be highly commended; but, however excellent the object, such outings as those described can only frustrate the result desired, for the children in many instances return home no better than they left, and in some cases, we fear, far worse.

The only remedy, as Canon BARNETT suggests, is to send the children in small parties in charge of a competent person, who should have absolute control over them, but far better would it be if the public, instead of subscribing to these day treats, would liberally support the already existing societies for sending children out of town, not for a day only, but for a fortnight. Of these there are many, and those who are interested in the matter—and all should be—will find a short but interesting account of the work which they do in the current number of the *Leisure Hour*. The well-organised holidays planned by these societies must do an enormous amount of good to the children both physically and morally, for not only is their bodily vitality renewed, but, their whole environment being changed, they are brought into contact with scenes and objects which otherwise they would possibly never see, and their minds receive an education not very dissimilar in effect to that which foreign travel has on those who can take advantage of it. So complete is the change to many of these poor children, so strange the scenes presented to the eyes whose only horizon has hitherto been formed by bricks and mortar against a leaden sky, that the impression produced on their brains is for ever afterwards present, and mothers have been heard to threaten that they shall never be sent for a holiday again, so wearying and incessant is their prattle of the things they have seen and heard. We cannot suggest a more striking contrast than that presented by the arrival home of the children after a fortnight's holiday, with the bloom of health upon their cheeks and full of tales of wonder, with the boisterous, mentally intoxicated, uncontrolled return of a party from the doubtful advantage of a day trip. As has already been said, no form of charity is more worthy of support than that which endeavours to minister to the health of the children of our urban poor, and while we earnestly trust that subscriptions may continue to flow freely in for this noble work, we hope that those who are tempted to subscribe to day treats will at least see that they are organised on a satisfactory basis—satisfactory both to the donors and to the recipients.

To the medical names on the national roll of valour—to the names of Surgeon-General Sir JAMES MOUAT, K.C.B., Surgeon HENRY THOMAS SYLVESTER, Surgeon-General Sir ANTHONY DICKSON HOME, K.C.B., Inspector-General JOSEPH JEE, Surgeon-General WILLIAM GEORGE NICHOLAS MANLEY, C.B., Brigade-Surgeon WILLIAM TEMPLE, Brigade-Surgeon CAMPBELL MELLIS DOUGLAS, Surgeon-Lieutenant-Colonel EDMUND BARON HARTLEY, Surgeon JOHN FREDERICK MCCREA, Brigade-Surgeon JAMES HENRY REYNOLDS, Surgeon-Captain JOHN CRIMMIN, Surgeon-Captain FERDINAND SIMEON LE QUESNE, Surgeon-Major OWEN EDWARD PENNEFATHER LLOYD, and Surgeon-General HERBERT TAYLOR READE, C.B.—must now be added the name of Surgeon-Captain HARRY FREDERICK WHITCHURCH, whose receipt of the Victoria Cross we announce in another column, for reasons tersely yet stirringly recapitulated in the official

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gazetting of the honour, and perfectly well-known not only to all our readers but to all the nation. As a journal written for the medical profession, while we are properly anxious to dwell upon all topics by which honour may accrue to the profession, we are necessarily chary of outspoken laudation of any whole class or department of its members; but the enumeration of these names, redolent of the stories of their associated feats of valour, impels us to ask our readers to consider the singularly practical testimony that is thus afforded to the high qualities of our militant brethren.

The Victoria Cross was instituted after the Crimea by a Royal Warrant dated Jan. 29th, 1856, and was designed to be a visible reward for individual acts of bravery performed by officers, commissioned, non-commissioned, warrant, or petty, in the naval and military services, by marines, seamen, and privates. Three years later a further warrant declared that non-military persons who, as volunteers, had borne arms against the mutineers in India, should be considered eligible to receive the decoration. A complete list of those alive who have earned the V.C. shows that 179 persons can wear the justly coveted distinction—179 persons only. We are not intending to give accurate figures or attempting to express in mathematical terms the valour of the medical officer in our services as compared to that of his companion in war by calling attention to the proportionately huge share of Victoria Crosses that have been awarded to the officers of the army medical staff—the data for such accuracy are not forthcoming and the deductions would not be free from error—but we desire to point out broadly what this proportion is, using the figures of the estimates in the current issue of Whitaker's Almanac. At the present moment the standing Army of Great Britain numbers a little under 700,000, this figure includes the army reserve, the militia, the yeomanry, and the volunteers. The estimated total number of officers, seamen, coastguardsmen, and marines available for sea service in our Navy is a little over 80,000. Thus the total number of the men employed in the two services amounts to a little less than three-quarters of a million. If, then, all the Victoria Crosses now held (179) were held by persons still on the effective lists the proportion of decorated to undecorated in the whole army and navy would be roughly 1 to 4000. But 2500 of this three-quarters of a million are the medical officers who hold commissions in the two services. If the 15 Victoria Crosses held by the two medical departments were all held by officers on the effective list—the same supposition that we have made above in relation to the whole army and navy—the proportion of decorated to undecorated would be, roughly, 1 to 170.

The figures are in no way vitiated because the proportion should be calculated with reference to all the living servants of the Crown in either service, retired, pensioned, and on half-pay, and not only with reference to the effective lists; for among the retired, the pensioners, and the half-pay soldiers and sailors will be, of course, found a due proportion of medical officers. We do not wish to lay an improper stress upon these figures. We do not desire to take the reward of the Victoria Cross as the sole gauge of valour, and nothing could be further from our object in instituting these comparisons than any foolish idea of exalting our brethren in medicine at the expense of their brethren in arms. Our object has been solely to place before our readers an additional reason why the profession at large should be proud of its members in the services, who, albeit so-called non-combatants, have yet reaped on so many occasions the reward of personal valour in the field. In congratulating Surgeon-Captain HARRY FREDERICK WHITCHURCH upon the just recognition of his splendid and self-sacrificing deed of bravery, we congratulate him also upon being enrolled in a select band of heroes of whom the profession is justly proud—the medical holders of the Victoria Cross. He is a good companion in right good company.

Annotations.

"Ne quid nimis."

THE DUTIES OF MEDICAL SOCIETIES.

IN the account of the meeting of the British Gynæcological Society which was published in THE LANCET of July 6th, it is stated that the first business of the society was to witness three specimens: (1) that from a case of suppurating ovarian tumour with purulent peritonitis and adhesions; (2) fibroma of the uterus removed by enucleation; and (3) total extirpation of the uterus and ovaries for prolapse. With regard to the third case a few remarks are, we think, called for. The surgeon who narrated the case explained that for the prolapse he tried the use of pessaries, and not succeeding therewith he decided to remove the uterus and appendages, the patient being a woman aged thirty. We do not pretend to write as gynæcologists; but we do not for that reason feel it at all less binding on us to say that in our opinion the reasons for this procedure require to be more fully set out than appears to have been done at the society. We note that the president (Dr. Godson), Dr. Routh, and Mr. Taylor of Birmingham criticised the procedure in a tone of disapprobation. Ordinary surgery has become more conservative with its increased powers. The removal of a leg is felt to be an unsatisfactory and opprobrious proceeding, except as a last measure of relief. *A fortiori* any operation involving a much more serious mutilation must be so regarded, and we are of opinion that a society before which such cases are recorded does not discharge its duty without investigating the case by a committee appointed for the purpose, and placing its deliberate judgment on the facts on record. The amount of suffering and disability experienced by the woman, the precautions taken by the surgeon before operating, and the degree to which he shared his responsibility by consultation and by full statement of the facts to the patient are obvious matters for inquiry. We gather that the operator acted with perfect satisfaction to himself in what he did, and doubtless when the full facts are known we shall find with perfect propriety. But for the sake of the reputation of surgery, and especially of gynæcology, we maintain that the facts should be fully investigated and published by the society, which has in a degree incurred responsibility in connexion with the case.

FUNERAL AND BURIAL REFORM.

IT is satisfactory to see from the reports of the Church of England Burial, Funeral, and Mourning Reform Association that efforts are being concentrated on those two points where reform is most needed. Those are the coffin and the grave. In other words, burial is gradually coming to be a

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reality and not a sham. It is no longer necessary to attach the scarves, hat-bands, plumes, and palls; these relics of undertaking frippery have almost disappeared, and it is no use slaying the slain or even the moribund. The coffin still requires reforming. In his immortal work, "Vanity Fair," Thackeray observed: "As long as we have a man's body we play our vanities upon it, surrounding it with humbug and ceremonies, laying it in state, and packing it up in gilt nails and velvet." In "The Newcomes" he returns to the subject, and at the funeral of Lady Kew refers to that "bedizened box of corruption" and "yonder velvet-palled box spangled with fantastic heraldry and containing within the aged slough and envelope of a soul gone to render its account." Is there not still a lingering relic of these "vanities" in the strong oak coffin with French polished sides and lid and shining brass furniture? For if the burial is to be a reality, and if the body is to be committed to the ground, the handsome coffin surely becomes an incongruity. This last lingering relic of undertaking monopoly will die very hard; but die it must when its absurdity once becomes patent. Perhaps there is some feeling for the undertaker shorn of all his other profits but this, and some echoing of the question of the elder Mr. Weller, "What would become of the undertakers?" Possibly some persons argue that the providing of handsome coffins gives employment, and therefore bread, to a larger number of persons than if they were of a simpler character. These and all other excuses—reasons they cannot be called—must give way to what is expedient. If burial is to continue as a means of disposal of the dead, it must be, as defined by Lord Stowell, the carrying of the body to its parent earth for dissolution in a decent and inoffensive manner. The use of a readily perishable coffin becomes every day more and more imperative, bodies entombed in vaults and bricked or walled graves being a source of danger to the living as well as a mockery of burial. And the strong coffin, when deposited in the earth, has the disadvantage of retarding the dissolution of the body and defeating the very object for which it is placed in the ground. Wood, whether in the form of oak, elm, or deal, will always be required for the living, and if the provision of a perishable coffin should create a new industry so much the better. Then there is the question of expense. Is it reasonable that the coffin, the very name of which implies "basket" or "wicker," should cost a sum varying from £5 to £20? A coffin sufficient to convey the poor body to the grave could be provided for less, leaving the balance for survivors.

THE GENERAL ELECTION.

"Election, election, and reprobation—
It's all very well, but——."

So sang a great poet, using the words in their theological sense; but they may well serve as a text at the present time when there is a great deal both of election and reprobation on foot throughout the country. Medicine has, or ought to have, no politics. Its sphere of labour is the same whether east or west, and disease attacks every class and creed with absolute impartiality. Still, all medical men must remember that they are citizens as well, that citizenship brings with it responsibility, and that this responsibility must not be shirked. We all have our own private views as to what things are desirable and right, but in a general election there are certain broad issues which touch every man, on which everyone is bound to give his judgment, and which stand out above the flood of petty personal wishes and interests. A word of warning may be said upon political excitement, to which three deaths at least have been set down during the present election. The turmoil and stress of modern life, perhaps, tend to unsettle those whose nervous system is not very strong, and the tendency to over-pressure which has been a feature of national education for the last twenty years or so has no doubt succeeded in producing a generation of nervous, irritable, and mentally ill-balanced men. The average school-board taught voter, from the age of eight to thirteen or so, is crammed with scraps of knowledge most of which are utterly useless to him in after life, and this cramming naturally reacts on a brain ill-nourished, and so lays the foundation for future nerve troubles. The old kind of election, such as those described in "Handy Andy" and "The Newcomes," doubtless presented a variety of undesirable features. The drink, the bribery, and the free fights have all passed and gone; but are matters really in a more healthy state—physiologically, we mean? In an election nowadays attention and excitement are kept perpetually on the stretch by news coming from far and wide. No wonder, then, that when the inevitable reaction arrives its results are shown by increased attendance at hospitals for sleeplessness, headache, and other forms of nerve fatigue. We would counsel, then, our readers, as forming an important part of the body politic, to use their privileges dispassionately, to vote for the side which they think right, and not to be led away by the clamour of rival party newspapers, but also to bear in mind that the Parliamentary vote is not a thing to be thrown lightly into the political cauldron, but one to be used with discretion, and that if the issue is decided by these means it may be said of our country, even as of another long ago, "And the land had rest forty years."

ALPINE MISADVENTURE.

WE have before us the official report of the "Saison Alpinique" in Switzerland for 1894, from which we learn that the deaths by misadventure on the Alps were in all thirty-seven. This total is a little below the yearly average, which, according to the same authority, is forty-one. Of four out of these thirty-seven "accidents" there are no details; but as to the remaining thirty-three, we know that fourteen persons had fallen over precipices; that eight met their deaths on comparatively easy routes; and that six were the victims of their own imprudence, from having ventured on dangerous tracks. Finally, one climber slipped into a crevasse from which his corpse was recovered, two were crushed to death by the descent of avalanches, and two others by the fall of rocks. This, however, by no means exhausts the list of those who have shortened their days by ascending to Alpine elevations. Cases of heart failure, due to "high tension" at "high altitudes," have been frequent enough to evoke a medical warning against the practice, so recklessly indulged in by gouty and atheromatous subjects, of getting "ballooned up" by funicular railways to points at or immediately under the snow-line. Indeed, so common has fatal syncope from this cause become that two years ago a Congress of Swiss physicians met at Arosa to formulate their protest against the multiplication of such means of rapidly conveying passengers in all states of health to elevations at which only the young and sound can respire with ease and safety. Powerless to arrest railway enterprise, the Congress suggested that at the departure and arrival stations of those lines the companies should have medical aid within immediate call, with the appliances and restoratives necessary. Many of the adventurous middle-aged might, before gratifying their ambition to ascend the Jungfrau, for instance, have themselves examined as to their fitness for the ordeal; others, in whom heart failure had declared itself on arriving at their destination, might, by prompt and effective treatment, be rescued in the nick of time. Had such a preliminary examination been practised in the case of Baron Peccoz, whose tragic death in the presence of the Queen o Italy on the Lysjoch last autumn was described in THE

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LANCET, he would certainly have had full warning of the fate he was courting. As it turned out, his condition was such that his death should have found its place among those due to syncope, instead of being classed, as it was, in the list of "accidents." The fact suggests considerations of the highest medical interest, such as might well engage the attention of another Congress like that which met at Arosa. How many cases of slipping down crevasses or falling over precipices are not really the result of antecedent heart-failure supervening suddenly in a perilous position? That is the question on the solution of which will depend a system of classification totally different from that adopted in the report of the "Saison Alpinique" for 1894.

AN EXAMPLE TO BE FOLLOWED.

"WHAT Lancashire thinks to-day England thinks to-morrow," is a saying much in evidence at the present moment, and we may hope that this remark will hold good of at least one other matter whatever may be the case as regards party politics, with which we are not concerned in these columns. It had been for many years the custom of the members of the legal and medical profession in Preston to have an annual cricket match, and some three years ago it was decided to combine this match with the social function of a garden party. The event became very popular, and on the occasion of this year's match some 1200 invitations were issued. The expenses are met by the two professions, not merely the players, but by all the practising members, so it is easy to see the good fellowship and *camaraderie* that exist, not only between individual members of each profession, but also between the two bodies in their corporate capacity. We think that the example of Preston might well be followed by other large towns, for any opportunity of inducing professional men to take interest in subjects outside their daily toil is not only a benefit to themselves, but also to those for whom their work is done, inasmuch as by such mental and bodily recreation they are prevented from getting into what a prominent medical man recently called "grooviness." In the single innings match which has recently been decided we notice that the medical men won by 63 runs, the scores being—"Medical," 121; "Legal," 58.

PROPOSED MEMORIAL TO PROFESSOR HUXLEY.

THOUGH we hope shortly to see a national memorial raised worthy of that great man of science who recently passed away from us, yet it is none the less fitting, we think, that the students and friends of the medical school where Huxley commenced his scientific studies should establish among themselves some form of lasting testimony which, if it had no other object in view, may at least be calculated to inspire the future students of Charing-cross Hospital with that excellent spirit of scientific progress and love for the truth and the truth only which was so marked a characteristic of the late Professor Huxley. We are glad to learn that the interest in the proposed memorial is not likely to wane. At the meeting which we announced to take place in our last issue at the Charing-cross Hospital Medical School on the 16th inst. there was a good attendance, and letters expressing inability to attend, but the tenour of which was in sympathy with the movement, were read by Mr. Herbert Waterhouse, the secretary, from the Duke of Saxe-Coburg, Sir Guyer Hunter, Mr. Henry Huxley, Sir James Paget, the Hon. W. F. D. Smith, M.P., Mr. John B. Martin, Sir Savile Crossley, Dr. T. Henry Green, Dr. Mitchell Bruce, and others. Sir Joseph Fayrer, who presided, gave a short but impressive sketch of the friendship which subsisted between himself and Mr. Huxley while students together at Charing-cross Hospital. He claimed to have largely influenced Huxley in the choice of a career. After a warm eulogy of the splendid abilities and personal qualities of the distinguished student of nature Sir Joseph Fayrer moved: "That it is desirable, by means of a suitable memorial in connexion with the Charing-cross Hospital Medical School, to permanently record the fact that the late Professor Huxley received his early scientific and the whole of his medical education at the Charing-cross Hospital School, and thus to keep the example of his life and work constantly before succeeding generations of Charing-cross students." This was duly seconded and carried. In accordance with the terms of a further motion proposed by Mr. Barrett, and seconded by Dr. Watt Black, it is proposed that the memorial shall take the form of a Huxley scholarship and medal, to be awarded annually at Charing-cross Hospital Medical School, and that if funds permit an annual lecture at the Charing-cross Hospital Medical School dealing with recent advances in science and their bearing upon medicine shall be instituted. We learn that subscriptions have already been received which it is hoped may meet the requirements of a scholarship and medal, and the committee trust that funds sufficient to establish the annual lectureship will be forthcoming. The scheme is a worthy one, and we trust that no part of it will languish for want of adequate support.

ENGLAND'S QUARANTINE STATION.

ONE intended piece of legislation has unfortunately to be postponed until next year owing to the sudden dissolution of Parliament. Last year the House of Commons was promised that they should never again have submitted to them in the Estimates the item for maintaining an establishment and staff under the Quarantine Act; and it is no secret that a Bill had been drafted, and was to have been brought in by Sir Walter Foster, in order to settle once for all that England would no longer maintain even a semblance of quarantine, whether for commercial or international purposes. Now the matter must stand over, and in addition to the reproach so often levelled at us of possessing Crown colonies which maintain the system of quarantine in the Mediterranean, we are still open to the retort that the hulks at the Motherbank are a standing proof that, whatever our motive, we have not finally abolished quarantine in this country in connexion with yellow fever. It is to be hoped that at an early date in the Session 1895–96 steps will be taken to remove this blot from our statute-book, and that the fulfilment of the promise made by the last Government will not be delayed.

A GROWING DEMAND FOR LIGHTER WINES.

AN interesting return of statistics, giving, degree by degree, the strength of wines imported into this country during the year 1894, has recently been printed in response to an order of the House of Commons. From the point of view of the evils of alcoholic drinking it is especially interesting, since the figures show pretty conclusively that the demand of the people is steadily increasing for lighter alcoholic beverages, and it is a fact on which we think the nation may well congratulate itself that the supply of wines of a lighter and more wholesome character is sufficiently met as to present no obstacle to this healthy movement. Taking the total wine imported in cask, it will be found that 7,503,044 gallons were imported of a strength not exceeding 30 degrees, while of a strength exceeding 30 degrees, up to 42 degrees, and beyond, 4,596,283 gallons were imported into this country. Spain sends to our shores the largest quantity of wine (3,748,974 gallons), but it is distinctly stronger than the generality of French wines. Thus, the strength of the highest proportion supplied (677,753 gallons) was 28 degrees (11 degrees more than the bulk of French wines). France stands

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next in regard to the total quantity imported, but the largest proportion of the importation (855,634 gallons) consisted of wine of 17 degrees strength only, the supply of wine of greater strength than 30 degrees being quite insignificant, till it falls to absolutely *nil* after 38 degrees. Portugal supplies almost as much wine as France, but here again the bulk of it is stronger even than Spanish wines. Thus, the highest figure representing gallons imported occurs in the 35 degrees strength column. Coming to our Australasian colonies, whose supply in regard to quantity stands next, it is again satisfactory to find that the largest number of gallons imported stands at 24 degrees strength. These results will surely convey a crumb of comfort even to our strictly abstemious friends; but if, as M. Daudet is said recently to have stated, the ravages of the phylloxera and the consequent fabrication of alcoholic liquors, which to a large extent replaced the supply of light and wholesome wines, are leading to distinct increase of crime in France, then we may with some justification regard these figures as sure and certain evidence of moral progress.

MODERN MEDICINE AS A SCIENCE.

THE claim of medicine, in some of its departments at least, to take a place among the exact sciences has just been ably vindicated by Dr. Alfred Carter of Birmingham. Writing in the current number of the *Birmingham Medical Review* he adduces several familiar instances in which from given conditions certain phenomena may be confidently predicted. No doubt many branches of medical inquiry are still in the inductive stage, and the laws which operate therein have yet to be worked out, but the same condition of incompleteness exists more or less in every one of the natural sciences. Modern medicine has a rational and scientific basis. This is Dr. Carter's theme, and he justly condemns the narrow utilitarian views according to which a student's hospital work should be devoted solely to the acquisition of so-called practical experience. Considering the multiplicity of intricate subjects with which a student has to gain some acquaintance in the space of five years, it should be his object to grasp general principles and to lay the foundations of a stock of knowledge which more mature experience will enable him subsequently to increase.

MEDICAL EDUCATION IN THE UNITED STATES.

THE efforts of the best men in the profession of the United States to raise the tone and standard of medical education there have often been alluded to in our columns. The case of the United States is singular as that of a settled, well-ordered community of over fifty millions, mostly English speaking, in which there is no central law governing the practice of medicine. Each State does what it pleases, and most of them please to do very little in the way of exacting from medical practitioners any evidence of sufficient or satisfactory education, either general or medical. There is no central endowment of medical schools or universities with which medical schools are connected. Any group of needy or enterprising men may combine in any town or State to create a medical school, and till lately have had no difficulty in getting it recognised after a fashion. In this way it has come to pass that "in this unhappy country," as Artemus Ward would say, there is an unprecedented number of medical schools and of medical practitioners, charlatanism triumphs, and the reputation of the profession suffers. Whereas there is in the Austro-Hungarian Empire 1 physician to 3857 people, and in England and Wales 1 to 1484, in the United States there is 1 to 500. So with medical schools. In the Austro-Hungarian Empire there is one medical school to 5,153,917 of the population; in Great Britain one to 2,358,767 of the population; and in the United States there is one medical college to 440,151. There is no general medical council to supervise all and to see some sort of fair play to all. The results have been disastrous. But the evil is now too faithfully admitted and exposed to be of much longer continuance. The last statement of it and of the attempts to remove it are to be found in an admirable "Plea for Efficient Legislation Regulating Medical Practice," read before the American Academy of Medicine at Baltimore on May 6th, by Perry H. Millard, M.D., of St. Paul, from which we take most of the above figures. The reformers began with requiring a curriculum extending over three years. They now aim at requiring six months' courses in separate years for four years and propose to exact this after 1896. They recognise that legislation is indispensable to secure this, and that it is necessary in the interest of the public and of the medical profession alike. What can be more obvious than the truth of these views? How can men be expected to cultivate medical learning and efficiency if every charlatan is allowed to use medical titles and to enforce medical charges? The anomaly of low medical education in the States is the more remarkable, Dr. Millard shows, as the founders of the United States showed their wisdom in establishing a system of common school education that challenges the admiration of the world. The promoters of sound medical education in the United States deserve all sympathy, and they have it. They must appeal boldly to high public sentiment in their own country for powers to control the number of medical schools, and to secure a good minimum of preliminary and medical education in all who call themselves medical practitioners, and for the body or bodies with such powers of control the power of censuring or degrading those who act unworthily of their high calling.

THE REWARDS AND HONOURS FOR CHITRAL.

No one who has followed the history of the heroic defence of Chitral and of the splendid efforts that were made for the relief of that garrison can deny that all who took part in it deserved well of the country. It adds another and a very brilliant chapter, of which any nation might well feel proud, to the long record of successful and distinguished military services of the British in the East. England has become an empire and has extended her boundaries from sea to sea and land to land by the possession of those qualities—force of will, pluck, and fortitude—which were probably never better exhibited than on this occasion. The forces that took part in the defence and relief of Chitral defied climate and disease, and laboured under a tropical sun or amid snow and icebergs with the same indomitable perseverance, scornful alike of obstacles and difficulties, ready to fight and unconscious of defeat. Their services belong to history, but we are proud to point to the fact that members of the Indian Medical Service were among those who most distinguished themselves. We sincerely congratulate Surgeon-Major George Scott Robertson, C.S.I., of that service, on being made a Knight Commander of the Most Exalted Order of the Star of India, and Surgeon-Captain Harry Frederick Whitchurch, also of the Indian Medical Service, on his having obtained the decoration of the Victoria Cross for his conspicuous bravery during the sortie from Chitral Fort on March 3rd last. The brief history of the circumstances under which Her Majesty has been pleased to confer this much-coveted decoration on Surgeon-Captain Whitchurch can only be read with a glow of pride and a feeling that he has thoroughly earned it. Sir George Scott Robertson, who is attached to the Bengal Medical Department, was appointed surgeon on March 30th,

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1878, and subsequently became a surgeon-major. He displayed great courage, ability, and judgment under very trying circumstances throughout the siege of Chitral. We have previously alluded to the splendid services of Colonel Kelly, who, in our opinion, has not been sufficiently rewarded for them. We sincerely congratulate him, however, and all the other officers who played a distinguished part in the operations of the Chitral Expedition on the recognition of the brilliant and important services they rendered. It is presumed that in a subsequent *Gazette* the services of other portions of the Expeditionary Field Force will also be recognised and rewarded.

JACKSONIAN EPILEPSY FROM OLD CEREBRAL ABSCESS.

DR. LEPINE has recorded, in the last number of the *Revue de Médecine*, a curiously interesting case of a woman aged sixty-two who, ten years before her admission to hospital, had had a series of convulsions with loss of consciousness, and these were succeeded by left hemiplegia, which lasted fifteen days. Since then she had had frequent attacks, which had been regarded sometimes as Jacksonian attacks, sometimes as hysterical. In December last she had one day several attacks, and these continued to recur day after day. There was loss of consciousness in the severe ones, but there were also slighter ones in which there were jerkings of the fingers and forearm, but no loss of consciousness. On the day after her admission, following a severe attack, left hemiplegia was noted affecting both arm and leg, but sparing the face. The attacks came on more frequently, and although bromides lessened their severity it did not control them, and the patient gradually sank and died. At the necropsy it was found that in the right frontal lobe, rather nearer to the anterior border of the hemisphere than to the fissure of Rolando, there was a cyst two to three centimetres in diameter with caseous contents. It was, in fact, apparently a cold abscess, and there seems every reason for believing that it must have existed for the ten years during which symptoms, only explicable on the hypothesis of such a lesion, had been present.

TREATMENT OF THE OPIUM HABIT.

IN a recent number of the *Philadelphia Medical News* Dr. M. V. Ball has a short note in reference to the treatment of what practically amounts to a disease by the sudden withdrawal of the opium and the withholding of treatment for the severe symptoms which sometimes follow its removal. He briefly relates the histories of three patients treated in this way. The first was a man aged twenty-six who had been an opium smoker for four years; the second, a man aged thirty-six who had been taking twelve grains of morphine daily for twelve years; and the third, a man aged thirty-one who had used gum opium, laudanum, and morphine for fifteen years, taking about 50 cents' worth in a day. All three had been convicted of crime and were treated in the Eastern Penitentiary. They were carefully searched, all intercourse with the outer world was prohibited, and they were fed on the ordinary prison fare. The sudden deprivation of the drug produced the usual symptoms—severe diarrhœa, vomiting, and insomnia, as well as weakness and irritability. The patients were visited daily and reassured, but no drugs were administered. Within ten days all desire for the drug had ceased, and the symptoms alluded to had passed off. The loss of flesh was soon made up, and they declared themselves as feeling better than ever. Dr. Ball has now treated six cases in this way, and is inclined to think that this mode of treatment by sudden and complete withdrawal of the drug, without any symptomatic or dietetic treatment, is followed by as speedy and satisfactory results as any other course. One curious point which he mentions is that in several cases in which the drug has been gradually withdrawn and the emesis and diarrhœa treated with other medicine the suffering, although not so acute, was prolonged, and the desire for the drug persisted for a much longer time. As Dr. Ball remarks, the treatment here recommended is only possible under conditions in which restraint can be used.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

THE following incident took place at the Board meeting on July 18th:—Mr. Athelstan Riley asked the chairman of the school accommodation and attendance committee whether, since the letter received from Captain Blount, R.N., secretary of the Victoria Hospital for Children (stating that, until the resolution passed by the Board on May 30th, 1895, is rescinded, the staff will decline to give certificates to children attending the hospital, though they may think it desirable that the child should be excused from attending school), the following letter had been received from the secretary of the Paddington Green Children's Hospital:—

"10th July, 1895.

"GENTLEMEN,—I am desired by the medical staff of this hospital to inform you that, should the resolution passed by your board on May 30th, 1895 (a copy of which I enclose) be carried into effect, they will decline in future to give medical certificates of unfitness to attend school for children under treatment here."

To the foregoing question Mr. Sharp (chairman of the School Accommodation and Attendance Committee) answered "Yes." There is a simplicity and directness about Mr. Sharp's answer which it would be a pity to spoil by any comment.

THE ORGANISATION OF GENERAL PRACTITIONERS IN GERMANY.

OUR readers will have been much interested in the account given in THE LANCET of last week by our Berlin correspondent of the proceedings at the annual meeting of the German Practitioners' Association. The association, which is purely voluntary in its nature, concerns itself rather with the social interests of the profession than with scientific matters. It would almost seem as if one association, however large, were unfitted to discuss both social and scientific questions. The British Medical Association has never succeeded in organising discussions on questions of general professional interest, affecting general practitioners as it has succeeded in the sections devoted to scientific work. Division of labour applies to associations as it does to individuals. The chief feature of the General Practitioners' Association was the address of the president, Dr. Aub, who pointed out that the Workmen's Insurance Laws, by which every workman is compelled to be a member of a sick club, have materially affected some departments of medical practice. Individual medical men find it hard to compete against the clubs. The association is utilised to treat with the clubs as to terms, treatment of medical officers &c. Surely in this country there is room for the action of a large and powerful defence association for protecting medical men from the unfair dictation of associations of workmen who fail to realise the nature and value of medical service. The one remedy for the crushing and humiliating pressure brought to bear on our own members is the organisation of the profession for dealing with these powerful associations of workmen. One point was much discussed with reference to the number of medical officers that a sick club should have. In a few districts what is known as the "free system" (described in THE LANCET of Feb. 2nd) is in force. According to this plan every practitioner in the district of a club who chooses to do so is allowed to attend the members. After a warm debate a resolution recommending the adoption of the "free

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system" throughout the German Empire was adopted. To avoid unjustifiable demands on the part of the club it was strongly advised in the resolution that contracts with it should be made, not by individuals, but by the Association, which has branches all over the country. We commend this association and its proceedings to the attention of the many medical men who are now justly anxious about the interests of the profession. It is only fair to say that the educational and professional efficiency of medical men was insisted on by the President. In this connexion Dr. Aub pointed out the deficiency of the qualifying examinations, especially in respect of mental diseases. This deficiency had been shown in courts of law in Germany to the disparagement of medical witnesses and the discredit of the profession.

A SALVATION ARMY SHELTER AND SMALL-POX.

DURING the last fortnight 13 cases of small-pox have occurred in the district of St. George the Martyr, Southwark, and of these 5 came directly from the Blackfriars Salvation Army Shelter. Several of the cases also occurring in the workhouse sprang directly from the original patient, Benjamin Levi, whose case was reported on June 19th. Besides these cases others have been reported from the districts of St. Giles, Limehouse, and Whitechapel, all occurring in patients who had slept in the shelter during the period of infection. Five cases which had been exposed to infection in this particular shelter were also reported by the Asylums Board. After the reporting of Benjamin Levi's case the medical officer of health (Dr. F. J. Waldo) determined to inspect the shelter, and attempted to do so on the night of June 24th in company with two sanitary inspectors. The party were refused admission, and accordingly a justice's warrant to enter and inspect the premises was obtained on July 6th. Armed with this warrant the party proceeded to the shelter on the morning of July 8th, and were forcibly prevented from entering, but on a threat of bringing up a strong force of police Dr. Waldo was allowed to enter, when, to use his own words, he found "overcrowding of the grossest character along with utterly inadequate ventilation." The St. George's Vestry have passed a resolution to serve a notice on the occupier of the shelter to abate the nuisance. This is as it should be, and we only hope that steps will also be taken to punish those who forcibly resisted the entry of the medical officer. Sanctuary for tramps and valiant beggars used to be the peculiar privilege of the Church, and now that this is in abeyance the right must certainly not be given over to a body which has assimilated the worst excesses of primitive and mediæval mysticism, and which, if allowed to go on its way unchecked, will be a danger to the health of the community.

THE MATERNITY CHARITY AND DISTRICT NURSING HOME, PLAISTOW.

THIS charity dates from 1889, when Sister Katherine, the Lady Superintendent, went to Plaistow and started the institution in coöperation with the parish authorities as one of the charities of the parish of St. Mary's. The work soon extended over eleven parishes. Maternity cases have been nursed for thirty-four medical men, and district cases have been nursed for seventy-four medical men. We are glad to see that the authorities of the charity approve of the poor being attended where practicable by medical men. They properly observe that even among the poorer classes there are many women who can afford to employ a medical man at their confinement, and that such an arrangement is desirable. We agree with this, and regard all midwifery practice not under the care of a medical practitioner with some misgiving; but in such districts as Plaistow it seems that about half the population cannot afford even a half-guinea fee. It is for them that a maternity charity exists. The cases are attended by nurses and midwives; various medical men give their assistance when necessary. There is besides a large amount of district nursing. There were 1088 midwifery cases. Of other cases there were 1540, the whole involving 986 special day attendances and 1095 special night attendances, and a total of 63,478 visits. The poverty of this district has been emphasised in the last winter, and we cannot but think that such charities as the above have a strong claim on the benevolent of all parts of London. They are in considerable debt, and help will be very gladly received by Sister Katherine.

THE LATE PROFESSOR HUXLEY.

THE *Spectator* of the 13th inst. contains a communication illustrative of the kindly sympathy of the late Professor Huxley with the efforts of obscure scientific investigators. It appears that a man of the labouring class devoted his spare time to original research, aided by a sixpenny magnifying glass, and that he had forwarded a paper to Professor Huxley giving a vivid and scientifically accurate description of the multiplication by fission of a lowly organism observed by him in an infusion of his own preparation. It was suggested by a clergyman, of whom Professor Huxley had inquired how he could best help such a man, that the gift of a microscope and a few scientific books would probably be very acceptable in the meantime. These were duly forwarded, and a splendid microscope and some books were handed over to the labouring man as a gift from an unknown hand. The gratified recipient, however, shrewdly guessed the source whence the gift came, with an expression of extreme satisfaction at the generous interest and kindly sympathy it evinced.

QUACK DOCTORS IN INDIA.

MR. R. CARSTAIRS, of the Bengal Civil Service, after an experience of many years as a magistrate in the Mofussil, has produced a remarkably interesting work entitled "Human Nature in Rural India," which is published by Messrs. William Blackwood and Sons. Books treating of Indian topics have become rather numerous of late years, but the writers, for the most part, select some salient point or special characteristic as their theme; whereas in the present instance there is no attempt whatever at striking novelty or attention-compelling originality, the writer contenting himself with the production of a sober-tinted picture wherein the actual life led by the vast majority of the inhabitants of our great dependency is faithfully depicted. The province of Bengal, with which Mr. Carstairs is chiefly concerned, is by far the most densely populated portion of the huge peninsula, but its teeming millions are utterly devoid of all ambition, and have no hopes or desires beyond the petty horizon of their native villages. They seem to be a people of an unalterable type, upon whom climate and food (aided doubtless by unbridled sensuality) have affixed the seal of inertia, depriving them entirely of self-reliance, energy, and capacity for self-government. In common, we imagine, with most people in this country we were under the impression that the shroff or usurer was the principal scourge of the Bengal villager, but according to Mr. Carstairs this much maligned individual is in reality a blessing in disguise, being as a matter of fact far too wise to slay outright the geese that lay him silvern eggs. He charges a high rate of interest, it is true; but where are there money-lenders to be found who will distribute their stock-in-trade for love? And often, if it were not for his timely aid, the peasant would be irretrievably ruined. A far worse friend to the native is the quack doctor,

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who of late years has multiplied at an astonishing rate. Formerly the species was unknown save in the larger towns, but nowadays the creature is to be met with everywhere, making money chiefly by the sale of medicine, but also extracting fees whenever he can induce his patients to disburse. Mr. Carstairs characterises the Bengal quack as a "reproach and a hindrance to English medicine," and states that in one village of about two thousand inhabitants with which he is acquainted there are no fewer than sixteen of these irregular practitioners.

THE PROFESSION AND FORCED STATE LABOUR.

ALBERT SMITH in one of his novels describes the opening address at one of the London hospitals, wherein the speaker, a prosperous consultant, pointed out how the future practitioners would receive their reward, not perhaps in the wealth that perishes, but in the consciousness of duty done, and the feeling that they had done something to lessen the burden of human misery. Many members of all the professions do work for nothing, but the medical profession not only do this but are forced to do so by the State for its own benefit. This we have no hesitation in saying is a gross injustice. During the recent election at Bradford a series of questions bearing on this matter was submitted by some medical men in the town to all the candidates. The Liberal candidates either gave no answer or a very vague one. The Unionist and Labour candidates expressed themselves opposed to forced labours exacted from medical men. In the result Bradford sent three Unionist members to Parliament, and we may hope that the step taken by the Bradford practitioners may be the first towards recognising that the medical profession does bear an unjust burden.

A BATTLE OF THE CLUBS AT BRUSSELS.

A GRAND struggle is taking place in Brussels between the medical profession and the clubs—a struggle which is due to much the same cause as that recently occurring in Cork, viz., the admission of well-to-do people who are quite able to pay ordinary medical fees into clubs where the payment to the medical men, though it may perhaps be all that a labourer or mechanic can afford, is quite unremunerative. The Brussels College of Medical Men is determined to stand by the club surgeons and to assist them pecuniarily. Negotiations have been carried on for some time past between the club official delegates and the representatives of the Medical College, but recently they came to a termination, with the result that every club surgeon in the district resigned on the 6th of this month, refusing to attend anyone but those on whom he was actually in attendance. This has made the clubs offer all kinds of inducement to outside medical men, but fortunately, as far as our last information goes, they have not been enabled—as the Cork clubs were—to find any medical men willing to accept such an invidious position as they offered them. It it to be hoped that this united action of the Brussels club officers will result in all persons, except the really poor, being compelled to pay reasonable fees for their medical advice, for, as the editor of the *Scalpel* remarks, it is altogether wrong that men belonging to the Commercial Travellers' Society, some of whom are known to have more than £1000 in the funds, should get medical advice for themselves and their families for 1*s.* 8*d.* a year.

A CORRECTION IN MEDICAL BIBLIOGRAPHY.

MR. BAILEY, the accomplished librarian of the Royal College of Surgeons of England, has just made a discovery which will be of considerable value to those who are interested in the medical bibliography of last century. Dr. John Elliot, a native of Edinburgh and graduate of St. Andrews University, became a Licentiate of the College of Physicians of London in 1762, and soon acquired a lucrative metropolitan practice as well as a good social position. His only misfortune seems to have been that Mrs. Elliot was much younger than her husband and addicted to frivolity, which resulted in a divorce after three years of wedded life. Dr. Elliot was knighted by George III. in 1776, was created a baronet in 1778, and became physician to the Prince of Wales. He resided in Cecil-street, and died in Hertfordshire in 1786. His biographers have hitherto attributed to him the authorship of six treatises, including an edition of the works of the celebrated Dr. Fothergill; but Mr. Bailey shows conclusively in the current number of the *Athenæum* that the real writer of these volumes was John Elliot, a native of Somersetshire, who practised medicine in Great Marlborough-street and Newman-street. He, like his more prosperous namesake, was crossed in love, and for having fired a pistol at the object of his affections was committed to Newgate, where he died in 1787. The publications in question have been before the world for more than a hundred years, and anything connected with the life and work of Dr. Fothergill must have commanded some attention. Mr. Bailey is therefore the more to be congratulated on his sagacity, and literary men of a bibliographical turn will easily understand the satisfaction he must have felt in tracing out the successive steps of the correction which he has presented so clearly.

MEDICAL MEN AND TRADE IN ARTICLES OF FOOD.

YET another question in the ethics of medical men in relation to limited companies. They may receive—as some of our correspondents have—a circular from the managing director of such a company urging them to take first mortgage debentures which pay 6 per cent. per annum. So far so good. But the debentures will also give the holders a strong inducement to promote the sale of the particular articles by which they are to realise this high interest. The circular states as a fact that the debentures are held largely by medical men. This is a vague expression. We should be sorry to think that any considerable number of medical men had put themselves into what we consider an undignified and somewhat tied position. At any rate, for the sake of those who have not so committed themselves we venture to discuss the point and to discourage such investments. The preparations may be as good as the managing director represents. They may have all the dietetic virtues of meat and wine, of stout and champagne. But it is not for medical men to have commercial interests in a commercial monopoly of the dietetic class, on the merits of which they should have a perfectly open mind. They should be so free from interest in it as to be under no inducement to order it other than arises from its scientific claims. We cannot see that the debenture holders in this company are so free. They trade in articles which, however good to-day, may be surpassed to-morrow. To tempt medical men by direct appeals and a high rate of interest to buy debentures is not very commendable in the managing director.

PHYSICAL TRAINING IN BOARD SCHOOLS.

WE have so often had occasion to rebuke the School Board of late that it was with a feeling of relief we read the account of the Physical Training Exhibition at the Albert Hall. Competitions were held in military drill and other physical exercises, together with the interesting display by blind School Board children trained at the Normal College for the Blind. The Duke and Duchess of York were present, and her Royal Highness presented the prizes. There can be but one opinion as

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to the value of instruction and training in physical exercises, and until quite lately England was sadly behind every other country in the provision made for education of this kind. Of course the upper classes and the members of the army and navy received more or less physical training, but there was nothing like the systematised instruction which exists now, and even that lags behind the training given to the youth of both ancient Greece and Rome. Having succeeded so well in this branch of education the School Board had better give up teaching physiology and the other "ologies" and devote its attention to teaching children to swim. We do not hesitate to say that the money squandered since 1871 upon insanitary buildings, and upon equally useless subjects of instruction, would have provided plenty of baths; and the sooner the board realise this fact and eliminate at least a third of the subjects they teach the better.

MEDICAL FEES AT PETTY SESSIONS.

AT the Farnham Petty Sessions on the 11th inst. a man named Claytonhill was brought up in custody from the Farnham Workhouse charged with attempting to commit suicide. The case presented no unusual features beyond the injustice to which Dr. Scott, the medical man subpœnaed, was subjected. Dr. Scott, acting on his summons, attended the court, a distance of ten miles from his home. Not only was he compelled to leave his private professional work, but in addition had to pay his travelling expenses. Moreover, he was expected to give evidence without any fee or remuneration whatever. The clerk of the court said that the justices had no power to allow Dr. Scott's expenses unless the case was sent for trial. The magistrates agreed that it was a great hardship to Dr. Scott, but that they were helpless in the matter. Under these circumstances Dr. Scott had to choose whether he would give evidence on the chance of being paid if the prisoner was committed, or decline to be sworn without a guarantee that he would receive a fee for his services. He adopted the latter alternative, whereupon the bench, who were in full sympathy with Dr. Scott, directed that a note of his refusal to testify should be taken. The chairman quite agreed that "the sooner the law was altered the better it would be for justice." It is difficult to realise that the law should be so harsh and defective as to order or even sanction that a medical man should be compelled to attend on a subpœna, and that on being sworn he must give evidence without other surety of remuneration than the contingency of the accused being committed for trial. We must admit that we were ignorant that such a state of things obtained, for in the police courts of the metropolis a medical man is paid according to a scale sanctioned by the Home Secretary for his attendance, independently of the issue of the magisterial investigation. If the petty sessional justices have no equivalent powers the sooner they acquire them the better. A system that casts such an indignity and injustice on our profession is nothing short of a public scandal.

A SUPPLEMENTARY Charter, by warrant, under the Queen's sign-manual, has been granted to the University of Durham. This Charter enables Convocation to grant to women any degrees, excepting only degrees in divinity, which they have the power to grant to men. The degrees of the University of Durham in medicine, science, arts, literature, and music are, therefore, now obtainable by women.

THE Council of the Royal College of Surgeons of England has appointed a Committee to receive a deputation of the Members of the College regarding the proposed Amended Charter on Friday, July 26th, at 3 P.M.

WE are asked to state that a meeting of members of the profession who are opposed to the proposed Bill for the Registration of Midwives will be held at St. Martin's Town Hall, Charing-cross-road, London, W.C. (small hall), on Monday, July 29th, at nine o'clock P.M. (the night before the annual meeting of the British Medical Association).

THE Dental Hospital of London will give a conversazione at the Royal Institute Galleries, Prince's Hall, Piccadilly, on Thursday, July 25th. At 8 P.M. there will be a reception by the staff of the hospital, and later Sir William MacCormac will distribute the prizes.

THE Members of the British Medical Association are invited to visit Guy's Hospital on Friday, Aug. 2nd, between 3 and 6 P.M. Cases of interest will be exhibited and tea provided.

WE are very glad to be able to inform the profession that Dr. M. Armand Ruffer, the director of the British Institute of Preventive Medicine, has made a good recovery from his recent illness.

Pharmacology and Therapeutics.

ITROSYL—STANDARD CONCENTRATED NITROUS ETHER FOR MAKING NITROUS ETHER OF B.P. STRENGTH.

To the practitioner there is probably nothing more uncertain in the whole range of the Pharmacopœia than the composition of spiritus etheris nitrosi. Its common drawback, as is well known, is its instability, leading to an excess of acid and a deficiency in the quantity of real nitrite of ethyl. Yet in view of its undoubted value in therapeutics, how important is it that it should be of uniform and standard strength. We recognise, therefore, a departure of more than ordinary importance and value in the introduction by Messrs. Fletcher, Fletcher and Co., of Holloway, of a concentrated form of nitrous ether, which, with spirit, can be diluted at will, or to the maximum strength of the British Pharmacopœia. One ounce of Itrosyl contained in twenty ounces of rectified spirit forms, we find, a spirit fully in accordance with the requirements of the Pharmacopœia. The concentrated ether is supplied for the first time by Messrs. Fletcher in hermetically sealed glass "cartridges," which, moreover, are impervious to the action of light. Each tube contains one fluid ounce of a strength which cannot alter, since there can be no loss by leakage or evaporation, and by the use of amber-coloured glass no change by the action of light can take place. Apart from the fact that the practitioner can thus be provided with a well-known unstable drug in a permanent and reliable form, it admits also of transportation into those climates where alteration in composition is especially liable to occur. In a word, Messrs. Fletcher and Co. have taken all the precautions it is possible to take to afford the practitioner one of the most valuable drugs at his disposal which shall be of a reliable and unfailing strength.

THYROID POWDER IN PALATINOIDS.

The value of the protective influence of the palatinoid in preserving many of the organic extracts and presenting them in an undeteriorated condition is brought into further prominence as this line of treatment advances. We have recently received some palatinoids from Messrs. Oppenheimer, of 14, Worship-street, Finsbury-square, each containing thyroid powder equivalent to one-tenth of a grain of the fresh thymus gland. As with the other animal extracts

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now used so largely in the treatment of disease—as, for instance, pituitary and supra-renal extracts—the jujube cover of the palatinoid acts as a hermetic seal against the decomposing influences engendered by exposure to the air, added to which the palatinoid is obviously a convenient form for the administration of these therapeutic agents.

THYROID TREATMENT OF GOITRE.

Professor Kocher of Bern has communicated to the *Correspondenzblatt für Schweizer Aerzte* his experience of the treatment of goitre by means of thyroid administration. The effect is unmistakable, he says, the swellings becoming distinctly smaller. Symptoms of suffocation may be abolished by the treatment in consequence of the diminution in size of the goitre, but in no case did the swelling entirely disappear. Only in three cases was the treatment unsuccessful, and one of these was that of a large cystic goitre in which success could scarcely be looked for; but in spite of this success Professor Kocher utters a warning against too sanguine views as to the success of thyroid treatment of goitre and expresses the opinion that this mode of treatment is not more efficacious than that by iodine. Success is only to be expected if the treatment is undertaken at the right time and is carried out with energy and patience.

BENZO-NAPHTHOL IN TROPICAL DYSENTERY.

Benzo-naphthol has been employed by Dr. José A. Clark in an epidemic of dysentery which occurred in Alquizar, Cuba, and during which he had 137 cases of the disease under treatment; of these he considered 23 as serious and 114 as of a mild type. The mortality amongst those treated with ipecacuanha and calomel, opium, &c. amounted to 9 per cent., while that amongst those treated by benzo-naphthol was scarcely more than 2 per cent. This drug had the great advantage over the more usual ones of not causing vomiting, salivation, or depression of the circulation, and it also brought patients through the attack more rapidly. Forty-five grains per diem were given to adults and but little less to children.

HYPODERMIC INJECTIONS OF CARBOLIC ACID IN TETANUS.

By means of a series of subcutaneous injections of carbolic acid Dr. Osherovski has successfully treated an apparently hopeless case of tetanus. The patient was a man who had a gunshot wound in his left leg, which was followed ten days later by tetanus, commencing in the muscles of the lower jaw and going on to general spasmodic contractions. Morphia, opium, and chloral in large doses were given without any effect, the spasmodic seizures only becoming more frequent and more severe. After the tetanus had lasted for ten days subcutaneous injections of carbolic acid of the strength of 2 per cent. were tried, twelve drops being injected every three hours. After two days of this treatment a marked improvement manifested itself, the spasmodic attacks becoming less violent and the respiration more easy. The injections were continued until twenty-eight had been given, and a few days later the patient was discharged completely recovered.

FORMOL AS A DISINFECTANT.

As a substitute for sulphurous acid, now commonly used in the disinfection of rooms and articles of wearing apparel after the occurrence of infectious disease, MM. Berlioz and Trillat some time ago proposed the use of formol or formaldehyde, and M. Bardet has recently undertaken a series of experiments in conjunction with M. Trillat which appear to show that the substance in question when prepared in considerable quantity and disengaged in a room, or even in one of the rooms of a house where all the internal doors are open, is a perfectly safe and efficacious disinfectant. They found that by the use of an apparatus converting one litre of methylic alcohol into formol per hour for six hours a set of rooms with a capacity of 300 cubic metres could be absolutely disinfected, and this without the slightest deleterious effect upon furniture or other articles contained in the rooms, a few hours' ventilation being sufficient to restore all the contents of the rooms to their original condition. The experiments were conducted by means of injecting animals with cultures obtained from pieces of woollen, cotton, or other fabric which had been previously impregnated with various forms of virus and then subjected to the action of formol after various periods.

THE PARIS SANITARY CONGRESS.

(FROM A SPECIAL CORRESPONDENT.)

Money Value of Household Refuse.—Sanitation in Private Thoroughfares.—New Method of Pneumatic Drainage.—Certified Plumbers.—Width of Streets.—Cheap Dwellings. The Liernur System.—Warming Houses.—Hot Walls and Cold Air.—Testing Chimneys.

THE first practical question discussed by the Congress related to the disposal of domestic refuse, the contents of dustbins, &c. M. Petsché, engineer, presented a report on the subject, in which he pointed out that the domestic refuse of the Parisian houses contained per ton 3 to 5 kilogrammes of nitrogenous substances, worth from 4*s.* to 6*s.*; 3 to 5 kilogrammes of phosphoric acid, worth from 9*d.* to 1*s.* 3*d.*; 2 to 4 kilogrammes of potash, worth from 8*d.* to 1*s.* 4*d.*; and some 30 to 40 kilogrammes of lime, worth from 3*d.* to 5*d.* Roughly speaking, the value of a ton of refuse might be estimated at 6*s.* to 9*s.* Consequently the domestic refuse of the Parisian houses is, theoretically speaking, worth about £200,000 per annum! Yet the Parisian contractors sell this refuse, delivered on a railway truck, for 8*d.* to 1*s.* 3*d.* the ton; the maximum charge for transit on the railways is from 2*s.* to 2*s.* 5*d.*, so that by the time it is placed on a field as manure it costs from 2*s.* 8*d.* to 3*s.* 8*d.* The utilisation of this refuse for agricultural purposes may, therefore, be expected to increase; but the question arises whether public health may not be endangered by transporting to different parts of the country refuse that may be at times infected. M. Petsché then described at length the various destructors employed in America, England, &c. M. de Montricher, who has succeeded in fertilising some of the arid, stony plains of The Crau with the refuse brought from Marseilles, explained that the refuse was loaded on the railway trucks at night at a special depôt away from inhabitants and nowhere near to passenger stations. Some discussion ensued concerning the storing of refuse in the kitchens of houses let out in flats; and M. Bechmann, engineer of the town of Paris, proposed and the Congress adopted a resolution in favour of encouraging the building of shafts down which refuse from all the kitchens in a house could be thrown so as not to remain in the apartment. Some doubts were expressed as to whether such shafts could be kept clean and would not cause a nuisance. Such shafts already exist in many of the flats in Victoria-street, London. Unfortunately, Mr. Tidman, sanitary inspector for the Westminster district, was not present at this sitting of the Congress, and therefore no evidence could be adduced as to how the system works. The question is, however, important, for in large towns the number of houses built as flats is yearly increasing, and in such houses dustbins in the yard or garden are not readily accessible. The Congress passed a series of resolutions to the effect that domestic refuse should be collected every morning and conveyed in metallic and closed receptacles that could be easily disinfected; that to utilise such refuse for agricultural purposes the railway companies should lower their tariffs and establish special isolated depôts for loading the refuse into railway trucks; finally, that the destruction of such refuse by fire was a satisfactory solution of the difficulty from the health point of view if the temperature was sufficiently high and of long duration, but that further researches should be made so as to utilise the heat and the products of the combustion.

The question of private roads was next taken in hand, and it proved a very thorny matter. The Mayor of Marseilles explained that in his town there were many places that to all intents and purposes were public thoroughfares, but which he could not control or even inspect because they were, legally speaking, private property. The Congress ultimately voted a resolution to the effect that all roads that did not belong to a town or commune, but which were frequented by the public or inhabited by different individuals, should be subjected to the same regulations, inspection &c. as governed public thoroughfares.

During an afternoon unofficial sitting M. Chardon, engineer, described the pneumatic system of drainage applied to the Levallois-Perret district, which is a modification of the well-known Berlier system. He pointed out that all the gases from the drainage-pipe in which the vacuum

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was produced were burnt in passing through the furnace of his boilers. Thus, the vexed question of ventilation for sewers was avoided and the foul air sterilised. He did not pretend that the application, as made at Levallois-Perret, was perfect. The house drains were foul because the district was poor and employed little or no water; but they had at least abolished the abomination of cesspools. They removed the sewage from the houses without fouling the sewers and prevented all escape of sewer gas. The members of the Congress visited the works at Levallois-Perret and were able to see for themselves that no nuisance was produced. They were shown an ingenious method by which a vacuum could be produced in the receiving tanks by means of a steam jet which had cost £32, and did the same work as engines which had cost £1600. This invention will greatly reduce the cost of drainage by pneumatic suction.

The Congress in the morning and official sittings discussed at great length the building and draining of houses. M. A. de Baudot, Government architect, urged that architects had not progressed with the age; that they built houses as they used to build a century or more ago; that while they made thick, handsome street frontages, the walls at the back of the houses were flimsy and of insufficient protection for the inhabitants. Damp and uneven temperature resulted. M. George, architect, read a lengthy paper on house drains, concluding by proposing a series of resolutions in favour of trapping and ventilation, soil and other pipes, according to the principles well known and generally adopted in England. The only new point was a clause in the resolutions insisting that all traps and water-waste preventers or flushing cisterns should be surrounded with some non-conducting substance, so as to protect them from the frost. A good deal was said in the course of the discussion as to the necessity of enforcing the examination of, and giving diplomas to, sanitary plumbers. Mr. Tidman, secretary of the British Sanitary Inspectors Association, pointed out that in England sanitary inspectors received their diplomas from the British Sanitary Institute, and that the Plumbers' Company sent examiners all over the country to examine both in theory and in practice intending sanitary plumbers. He hoped the time would come when no plumber would be allowed to work at drains unless he possessed a diploma showing that he was fully qualified. M. Masson, sanitary inspector for Paris, explained that two schools of sanitary plumbing had been established in Paris which gave brevets of competence, after three years' training, to those who satisfactorily passed the examinations. The Congress finally adopted a resolution to the effect that such schools of plumbing should be encouraged and that certificates of competence, after examinations, should be given to working men plumbers.

The question which incidentally came forward as to the width of streets in comparison with the height of the houses elicited from M. Charles Lucas, secretary of the Architects' Central Mutual Defence Fund, a somewhat curious statement. He remarked that, as hygienists, they would be constantly tempted to vote in favour of what, as architects, they would have to combat. If a resolution proposed an ideal the majority would not vote for what as hygienists they considered as most excellent. Mr. Adolphe Smith argued that hygiene was a profession in itself. A hygienist must know something of medicine, of chemistry, of engineering, of architecture, of plumbing, and other handicrafts. They had not to consider any special professional interest or what was expedient or practical in any one particular locality, but to lay down the principle which all localities would try to realise when practicable. He thought that in this case the principle was that the direct rays of the sun should be able to reach once in the day the windows of all habitations. M. Bechmann, chief engineer of the town of Paris, protested that such a rule did not apply to tropical climates and that they were not going to pull down all Paris because of the vote of a Congress. M. E. Cacheux, engineer and administrator of the Society for the Creation of Cheap Dwellings, who read a paper on the drainage of such dwellings, also argued in favour of the direct rays of the sunlight for all inhabited rooms. Nevertheless, the Congress refused to pronounce an opinion on this point, the ideal of the hygienists evidently being thought impracticable.

M. Morin-Goustiaux, vice-president of the Government Commission on the Unwholesome Dwellings of Paris, read a paper on the necessity of an efficacious control of the sanitary appliances &c. in private dwellings. He quoted American State laws on the subject, and concluded by presenting resolutions demanding that the rules relating to plumbing work should be as uniform as possible in all towns, that all plans for drainage should be submitted to a competent authority, and no drains covered over till they had been verified and inspected and the various apparatus employed tested. M. Masson having stated that this was already done in Paris these resolutions were adopted. M. Charles Lucas brought forward a series of resolutions on cheap artisans' dwellings, demanding that in planning out such buildings greater attention should be paid to the direction of the most frequent winds; that the employment of non-conducting substances should become more general, especially for walls which, from motives of economy, had to be made very thin; that the disposition of the rooms should be such as to enable the mother to watch over her little children while attending to her ordinary domestic duties; that the walls, to admit of frequent washing, should be painted rather than papered; and that the corners should be rounded off so as to present no angles for the accumulation of dirt and vermin. All these recommendations were approved by vote.

A resolution urging that the Sanitary Bill adopted by the Chamber of Deputies, and now before the Senate, should become law at the earliest possible date was unanimously adopted; and to facilitate the creation in all localities of competent sanitary authorities, a chair of hygiene should be established in all schools of architecture. M. Jeannot explained what great service the Bureau d'Hygiene of Besançon had rendered, though its income only amounted to £28 per annum. Mr. A. Smith and M. Desmenard (general secretary of the Congress) both energetically protested that this meant work done gratuitously in their lecture hours by the medical men and the engineers who constituted such bureaux, and that none but a clerk or an office boy were paid for their services. This was not the way to bring about the sanitary reform of the country. Sanitary officials must be paid sufficiently to be able to devote their best energies to the great mission they had to fulfil.

A considerable number of papers were read in the afternoons on new inventions, such as a mask for protecting workmen from injurious dust, by Dr. Detourbe; a new method of purifying river water by propelling fresh air through the water, which was suggested by M. Robert, engineer; a system of closet pans, suggested by Dr. Châtelin, which, while offering a partial seat or rest, compelled those using the closets to assume a position in keeping with the laws of anatomy. Dr. Châtelin argued that the ordinary seat had injurious effects and created a predisposition to hernia. The spine and hips should describe an acute and not a right angle. M. de Montricher described how he had proposed to utilise large and badly constructed sewers by placing in them small and well-built sewers which would only overflow into the larger sewers when there was a heavy rainfall. Finally, Mr. Sijmons, engineer from Amsterdam, and Mr. Liernur both explained the working of the Liernur system. The latter gentlemen, however, persisted in showing that their system, as worked at Amsterdam, produced a handsome profit. It was easily shown that this profit was due to the fact that the population thus drained only yielded 2 litres per head per day of sewage and slop water. Under such circumstances the soil pipes could not be flushed, and must remain in a permanent state of filth. They claimed that they had apparatus with which they could evaporate and dry 36 litres of sewage by the consumption of 1 kilogramme of coal, but confessed that they did not raise the heat of the sewage to 100° C. How, then, was the sewage sterilised? Doubtless, under special circumstances pneumatic suction may prove a very useful motive power for drainage purposes, but as applied to the town of Amsterdam it certainly did not appear to meet with the approval of the great majority of members of the Congress. At the same time it may be admitted that, whether by suction or by propulsion, pneumatic power greatly facilitated the application of the separate system, which, it was pointed out, was becoming more and more popular in England. Two facts had helped more particularly to create the reaction in favour of the separate system. The density of population had rendered the disposal of sewage almost an impossibility. The combined system, by mixing the rainfall with the sewage, greatly added to the difficulty. With the separate system the quantity and quality of the sewage could be very accurately estimated; and whatever the condition of the weather it did not vary. It was therefore more easily treated. Secondly, we now strove to have self-cleansing sewers. But for a sewer to be self-cleansing it must be at least half filled once a day and have a sufficient fall to ensure that the water would

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travel at a velocity of 760 millimetres per second. If the sewer was large enough to take rain water it was impossible to obtain these conditions. Again, to obtain a sufficient fall to ensure this self-cleansing velocity it would be necessary to raise the sewage in a great number of different places, and the raising of rain water increased the cost twentyfold. M. Masson urged that the rain water, which had washed the streets of a town, was as foul as sewage proper, and should therefore be treated as such. The discussion on the Liernur system of drainage, though very animated, did not lead to the proposal or adoption of any resolution.

Another very interesting discussion was held on the warming and ventilation of dwellings. M. Ch. A. Gautier, president of the Society of Architects holding the Government diploma, read a paper on the subject. He denounced chimneys as warming badly; objected to the looking-glass placed on the mantelpiece as checking the heat that might otherwise come from the wall; found that stoves were unwholesome and sometimes dangerous; and proposed the warming of dwellings by steam coils in the walls of the rooms. M. Emile Trélat had here an excellent opportunity to bring forward his well-known theories on the subject, and it was gratifying to note how well these theories were appreciated and understood by all present. Everybody agreed with him that warming should be by radiation and not by convection. It was the walls, the floor, the ceiling, and the furniture that should radiate heat on the persons within, but the air should not be warmed; it should, on the contrary, be as cold as possible. Differences of opinion only arose when M. Émile Trélat urged that even unwholesome dried air or a portable stove might be employed to heat a room so long as no one was in the room; then the stove should be removed or the supply of dry, hot air cut off, the windows thrown open, and kept open while anyone was in the room. Some members of the Congress thought that traces of carbon monoxide might still remain in the room even when the windows were wide open. Many argued that the nearest approach to M. Trélat's ideal was the placing of hot steam pipes in the walls and the ample opening of windows. A great deal was said about the injury done by stoves, notably to people who lived in apartments above, and who suffered from the defective construction of chimneys. A resolution was passed that chimneys, before they are used, should be tested by the authorities in the same manner as soil-pipes are tested to see that there is no leakage. This was, perhaps, one of the most original and practical suggestions made during the whole of the Congress.

Such, briefly, are some of the main subjects discussed at the Congress during the course of the week. It must be confessed that some of the architects and engineers present showed that they had only just commenced to study sanitary questions. Several of the speeches were but lame reproductions of what had been said at previous congresses. This, however, was to be expected. The Congress was more disappointing in so far as the engineers and architects did not bring forward as many plans and projects for the practical application of sanitary principles as had been anticipated. Nevertheless, the Organising Committee and M. Desmenard, its energetic secretary, are to be congratulated on having grouped together some 300 persons in a congress, particularly as most of the members were architects and engineers, and there were, comparatively speaking, but few medical men and old tried sanitary reformers. So it may be said that new ground has been opened up, that a new class of sanitary reformers have come forward, and all this will help in the good cause.

Paris, July 15th.

YAWS OR FRAMBŒSIA.[1]

THIS large and voluminous blue-book, consisting of 368 pages and illustrated by numerous coloured plates and drawings, is an exhaustive contribution by Dr. H. A. Alford Nicholls, the Special Commissioner selected by the Secretary of State to conduct an investigation and furnish a report to the Colonial Office on the subject of which it treats. Dr. Nicholls in describing the nature and scope of his inquiry alludes to the fact that he had received a communication from the late Sir George Buchanan, the medical officer of the Local Government Board, containing suggestions as to certain matters relating to the investigation and the line of action to be followed. The question is one of great importance in those tropical countries in which the disease prevails, and the facts which Dr. Nicholls has been fortunate enough to make public are not only of interest in themselves, but they tend to throw a new light upon the subject and to call for a reconsideration of the theories respecting it which have been put forward by previous writers. Dr. Nicholls is of opinion that the great obstacle to the successful treatment of the disease in its different types has been the ignorance which has hitherto prevailed about its pathology. He has therefore set himself to work this out in order to place its treatment on a proper scientific basis.

It would be impossible within any reasonable compass to consider the large mass of material which accumulated in Dr. Nicholls's hands during the course of his mission to the various islands. The consideration which he has bestowed upon its arangement and analysis will no doubt prove of value in the way of reference to future inquirers, but the material is still very voluminous and not easily condensed for the purposes of a review. The disease known as yaws or frambœsia was, he tells us, unquestionably introduced into the West Indies by negroes brought from the coasts of Africa as slaves; indeed, some of the older West Indian medical writers mention the fact of negroes suffering from yaws being landed from slave ships from Guinea. But there is no definite information obtainable, in regard to each island, as to whether the spread of the disease among the slaves on the plantations was due to the direct importation of affected persons from Africa or to an introduction and spread of the infection from a neighbouring colony. Yaws is the name that has been applied to the disease by the English from the time of the slave trade. The name "frambœsia" was constructed by Sauvages in 1761 to designate the cutaneous tumours which, when divested of their crusts, were considered to resemble raspberries. The French word *framboise* was Latinised into frambœsia. Several other names have also been given to the malady. Dr. Nicholls considers that the Celtic word *ias*, pronounced *yas*, and meaning heat, boiling or bubbling up, is the source of the English derivation of yaws. His experience teaches him, he says, that yaws is not a cachectic, impetiginous, or an exanthematous disease, but that it properly belongs to the group which the late Dr. Tilbury Fox called the diathetic diseases, and is to be included in the same category as scrofula, syphilis, and leprosy. It is not simply a local cutaneous affection, but seems to be a general disease, of which the eruption is only the local manifestation. The mistaken belief of so many authors that yaws is identical with syphilis has caused the question of the origin of the two diseases to be brought into a state of confusion. The considerations of this matter, in view of disentangling the difficulties surrounding the origin of yaws and of those connected with the geographical distribution of the disease, are well worked out by Dr. Nicholls. Yaws prevails throughout the tropics of the New World. It is found in various parts of South America and Central America, and is especially prevalent in the West Indies and in Brazil—in fact, in those countries of tropical America to which most of the African slaves went. It is said to exist in all parts of tropical Africa, but the west coast appears to be its endemic focus. The African islands off Mozambique, including Madagascar, are also reported to be infected, and naturally cases are occasionally met with in the northern countries bordering on the Mediterranean. There does not seem to be any conclusive evidence, however, that it prevails in any Asiatic country. For a description of the symptoms of the disease our readers cannot do better than refer to Dr. Nicholls' report, to the plates illustrating its local features and manifestations, and the narrative of cases given by him and others. Without doubt one of the most important and disastrous complications of yaws is syphilis. When yaws and syphilis occur as intercurrent affections very destructive ulcerations may ensue. Mercury is necessary for the treatment of the syphilis, but its effect is very prejudicial in yaws.

Dr. Nicholls and Mr. Francis Watts, the Government chemist of Antigua, performed a good deal of pathological and bacteriological work together at the Chemical Laboratory in Antigua in connexion with this inquiry; and with the

[1] Report on Yaws in Tobago, Grenada, St. Vincent, St. Lucia, and the Leeward Islands, addressed to the Right Honourable Lord Knutsford, G.C.M.G., H.M.'s Principal Secretary of State for the Colonies, by H. A. Alford Nicholls, M.D., F.L.S. London: Printed for Her Majesty's Stationery Office. 1894.

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aid of scientific apparatus from England Dr. Nicholls was able to carry on and complete these investigations on his subsequent return to Dominica. Some of the results of these researches are summed up as follows :—

"A microbe in the form of a micrococcus was found constantly in the secretion from the granulomata characteristic of yaws, which was successfully cultivated in nutrient media, and pure cultures were obtained to the third generation. The microbe was discovered in abundance in the affected tissues of persons suffering from the disease, and no other pathogenic microbe was found in association with it. In no instance was this micro-organism discovered in the blood, although it was successfully multiplied in the serum in drop cultures. It was found and successfully cultivated in Antigua, St. Kitts, and Dominica, and under identical conditions in these three islands. Pure cultivations of the micrococcus of yaws showed that its microscopical characters were constant, and that its macroscopical appearances differed from those of micrococci already discovered and described in various works on bacteriology. The lower animals are probably immune, inoculations giving negative results, as did also the inoculations from the secretions of the granulomata. In the absence of the concluding proofs of the pathogenesis of the microbe—viz, the production of the disease in healthy animals by inoculation of pure cultivations and the after discovery of the micro-organism in the fluids or tissues—it cannot yet be positively declared that the micrococcus is the contagium of the disease. But Dr. Nicholls and Mr. Watts, in view of the attributes of the disease being clearly indicative of its origin and causal connexion with a microbe, and of the fact that they were able to establish that a micrococcus is its constant accompaniment, as well as of the subsequent discovery by Dr. Nicholls of the microbe in the lymphatic system and in various organs of a patient who died from yaws, consider themselves justified in inferring that the micrococcus is nevertheless the cause of the disease and that it invades the system through the lymphatics. It is important to observe, in connexion with the bearing it has on the mode of propagation of this malady, that the micro-organism has been found in the dust on the floor of rooms in which yaws patients have been living, and that, as a matter of experiment, it is capable of retaining its vitality of growth and multiplication for a considerable time. The clinging of the contagion to certain huts and localities, and the occurrence of a sudden outbreak of the disease when the heavy rains of a tropical climate moisten the earthen floors are therefore capable of explanation.

We have said enough to show that the results of the latest investigations, if ratified by subsequent researches, are likely to throw a new light upon the subject of yaws, and to call for a reconsideration of the views that have been previously held in respect to it. We may usefully conclude this article by referring our readers to one that appeared in THE LANCET of June 21st, 1873, on the disease in question.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE WEBER-PARKES PRIZE AND MEDALS.

WE have received from Dr. Edward Liveing, the Registrar of the College, the following particulars respecting Dr. Hermann Weber's Prize Foundation in the College, and have pleasure in calling the attention of the profession to them.

The prize is of the value of £150 or thereabouts, and will be awarded triennially to the author of the best essay upon some branch of the subject of Tuberculosis, especially with reference to pulmonary consumption in man. The first award will be made in 1897, and the adjudicators have selected as the subject for the essay "The Means, Prophylactic or Curative, deemed by the author to have value in the control of Tuberculosis, especial regard being had to their application to Human Tuberculosis." This subject was selected by Dr. J. E. Pollock, Dr. Thorne Thorne, and Professor W. S. Greenfield, who were nominated by the President of the College, and these gentlemen will have the onus of adjudicating between the essays. The essay must be based on original work and observations (experimental or other) of the author, and must include a detailed exposition of the methods employed and their mode of application.

The following are the full regulations for the guidance of intending competitors :—

THE WEBER-PARKES PRIZE AND MEDALS.

Regulations.

1. That the prize founded by Dr. Hermann Weber, in memory of the late E. A. Parkes, M.D., be termed the "Weber-Parkes" Prize.
2. That the prize be awarded triennially to the writer of the best essay upon some subject connected with the etiology, prevention, pathology, or treatment of tuberculosis, especially with reference to pulmonary consumption in man; that in making the award the College have regard to careful collection of facts and original research.
3. That the value of the prize be 150 guineas, or such sum as the interest accrued on the capital, after payment of expenses, will permit.
4. That a bronze medal be awarded to the holder of the prize, and a similar medal, to be distinguished as the second medal, to the essayist who comes next in order of merit.
5. That an Adjudication Committee be nominated on each occasion by the President from among the Fellows of the College, and that it be the duty of such committee to select the particular subject for competition.
6. That the same committee which selects the subject shall adjudicate upon the essays sent in upon that subject, the President having power to fill up any vacancies which may have occurred meantime in the committee.
7. That the adjudication be made every three years at some time previous to St. Luke's Day, when the prize and medals will be presented to the winners.
8. If, in the opinion of the judges, no essays are presented of sufficient merit to deserve either the prize and first medal or the second medal respectively, that the College be at liberty, on the recommendation of the judges, to award either one or both to the author or authors of any original work or works on the subject produced within the preceding three years which may be deemed worthy of the same; and in the absence of such work or works that the corresponding award or awards be not made, and the sum assigned for the same be added to the capital amount.
9. That the subject for the next ensuing competition be selected and advertised within a period of three months from the last presentation; or, failing any award, from the day on which the prize would have been presented had an award been made; and that the competing essays be delivered to the Registrar on or before July 1st in the year of the award.
10. That the competition be open to members of the medical profession in all countries. The essays to be typewritten and in English; or if written in a foreign language to be accompanied by a translation into English.
11. That each essay bear a motto, selected by the writer, who shall insert his name within a sealed envelope having the motto on the cover, the envelope being transmitted with the essay to the Registrar, who shall return the unsuccessful essays to their authors.
12. That the prize essay become the property of the College, and that the College may grant its author permission to publish it if he so desire.
13. That the medals shall present on the obverse the bust of the founder; on the reverse a design relating to the prevention and treatment of pulmonary tuberculosis, with the inscription (exergue), "Prevention and Cure of Tuberculosis," and that the name of the recipient and the date of the award be placed on the edge of the medal.

THE CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF DRINKING-WATER FROM THE STANDPOINT OF THE MEDICAL OFFICER OF HEALTH.

THAT there has within recent years been a decided change in the attitude of the medical officer of health towards the value to be attached to chemical analysis few will question, and it is perhaps a debatable point whether the reaction which has taken place in favour of the bacteriologist may not have led to a somewhat exaggerated importance being accorded to the results of the bacteriological examination of water. In former days the dictum of the chemist in regard to any given water was accepted as final, and the water stood condemned or absolved according to the results which the sample submitted yielded. At the present time the chemist has to some extent been superseded by the bacteriologist, and the dictum of the latter is now by some considered to be as conclusive as was that of the chemist in former days. Under these circumstances it is hardly to be wondered at that bacteriological methods should be subjected to some criticism at the hands of the chemist. To those who would seek to study the question from the chemist's standpoint we would commend an able article by Dr. Dupré, F.R.S., which appeared recently in the *Analyst*, and to those who, like ourselves, are approaching the subject from the standpoint of the medical officer of health we cannot do better than advise the perusal of a paper which appeared also in the *Analyst*, and which has now, together with Dr. Dupré's paper, been issued in pamphlet form. For the information of our readers we will,

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in the first instance, refer briefly to one or two of the salient features of these papers, and in conclusion will offer a few remarks upon the main question.

Chemical analysis shows us, Dr. Dupré contends, in ninety-nine cases out of a hundred whether a water is polluted by sewage or not, more particularly so if the plan proposed by himself and Mr. Hehner be adopted of comparing the water under examination with one from the same district and formation, which the surroundings show to be unpolluted. This latter proviso seems to us a somewhat important concession from the chemist's standpoint, since it practically means that apart from a study of a water's environment chemical analysis may be misleading. As far, however, as we are aware this method adopted by Dr. Dupré is not a universal one among chemists. By the detection of pollution the chemist is able, Dr. Dupré urges, to anticipate danger, whereas the bacteriologist is only able to discover pathogenic organism after disease has already been caused; or, as he graphically expresses it, the chemist can close the stable door before the steed is stolen, the bacteriologist can only close it after the steed has gone. The answer to this argument is obvious, and Dr. Dupré, anticipating the bacteriologist's objection that in the bacillus coli he has as fine an index of pollution as the chemist, replies that chemical analysis stands condemned because it is unable to detect pathogenic organisms, and he infers that on this ground the chemist and bacteriologist must fight their battle. The estimation of a water's safety by reference to a numerical standard of micro-organism is a method for which Dr. Dupré has little sympathy. Are we to be told, he observes, that the deep-well water of the Kent Water Company is an admirable drinking-water as it comes from the well, and absolutely unfit for drinking one or two days afterwards? For the detection of unfiltered sewage biological examination takes, Dr. Dupré thinks, first rank; but it is, he maintains, not pollution such as this which either the chemist or the bacteriologist is, as a rule, called upon to detect. In the case, for instance, of a well water, many of the micro-organisms may have been separated by filtration through the soil and subsoil, and it is in cases such as these that Dr. Dupré would claim for the chemist an easy victory. Experiment with artificially polluted water where a little fæcal matter and no urine are added is not, he contends, a fair test, as the conditions thus established unduly favour the bacteriologist. The "conveniently small measure" adopted by bacteriologists for recording their results is also matter for Dr. Dupré's criticism. "How beautifully free from impurity," he says, "would most water, or even sewage, appear if we stated our analytical results in parts per cubic centimetre instead of parts per 100,000." And, again, "What would be thought of a man who, if he found no fish in, say, ten cubic feet of sea water, were to pronounce that there are no fish in the sea?" Chemical and bacteriological examination of water should, Dr. Dupré considers, be used in conjunction with one another, but if one only is available that one should be the chemical. This, briefly stated, is the chemist's view. Dr. Thresh's paper is one which should certainly be read by every medical officer of health. He refers in a most lucid manner to the difficulties which beset the medical officer of health in his endeavour to find suitable water-supplies for his district; and he quotes cases where both chemical and bacteriological examinations have failed to indicate danger where the physical surroundings of the water have demonstrated it, and conversely where chemical analysis condemned a water when the environment absolved it from suspicion. Dr. Thresh approaches the subject as a medical officer of health, but in stating the fact it is well to remember that he is also a distinguished chemist. Without unduly deprecating the value of chemical and bacteriological analysis, Dr. Thresh insists upon the paramount importance of the physical surroundings of a water's source. Our expectations with regard to the value of bacteriological analysis have, Dr. Thresh observes, not altogether been realised, and its results are as likely to mislead as are those of chemical analysis. The numerical standard of the bacteriologist he considers as "illogical as the old chemical standards; both depend upon quantity, whilst the real issue is quality."

We confess that Dr. Thresh's attitude is one with which we feel ourselves largely in accord. It seems to us that in selecting a water to be used for drinking purposes *negative* evidence—i.e., failure to find evidence of suspicion—whether it be afforded by the chemist or the bacteriologist, is of very little value. Roughly, the one or the other expert reports, from his point of view, on one day only out of the 365 which make up a year. On the other 364 days samples submitted to the one or the other expert might have elicited a very different statement of fact. This being so, it is clear that the physical circumstances of the water's source are all-important, since they are, within moderate limits at least, constant for all the 365 days of the year. On the other hand, still referring to the selection of a water for drinking purposes, *positive* evidence against it as afforded by a single testing of the chemist or the bacteriologist is not to be accepted as absolutely convicting the water. It may be that the particular water is liable to an occasional and fleeting pollution from a contaminating agency that is no essential condition of its physical circumstances; and again, therefore, a strict examination of the surrounding circumstances of that particular water might altogether modify the adverse judgment arrived at by the chemist or the bacteriologist. As regards a water suspected of having caused epidemic disease just the same difficulty arises as to the value of *negative* evidence, whether chemical or bacteriological. In nineteen cases out of twenty neither chemist nor bacteriologist can speak of the water as it was at the time it was causing disease; and here again, therefore, the risk of specific pollution as evidenced by the surroundings is the all-important factor.

EVASIONS OF THE ADULTERATION ACTS.

WHILE it is impossible to withhold all sympathy for the retail dealer who has brought a conviction on himself by neglecting to use "reasonable diligence," we have none for the man who exercises his utmost ingenuity to deceive. The Sale of Food and Drugs Act legalises the sale of mixtures of chicory with coffee, and of margarine with butter, or alone, provided that the seller gives with it "a legible label" to that effect, the practice of taking the sample from a mass so labelled not being sufficient, since it is impossible to ensure the latter being in full view of the purchaser. But in any case the word "legible" is, like all relative terms, unsatisfactory—legibility depending on each person's acuity of vision, on the amount of light, and on the position and arrangement of the lettering. It is not at all unusual to find the qualifying words printed in the smallest type, or placed obliquely in a remote part of the label with the evident intention that they shall be unobserved. If the clause be more than a fiction or formality, the words which show that "things are not what they seem" should be as large and conspicuous as those which, taken by themselves, would convey a false impression—in fact, would be untrue. Mr. C. M. Atkinson, stipendiary magistrate at Leeds, ably argued the question, not of intent to defraud but of the sufficiency of such a label in a case in which a "purchaser" asking simply for "cheese," and pointing to a piece on the counter, was served with three pounds cut from it without a word of explanation. The label on the mass was "Valleyfield (finest oleine) Cheese," in three lines, the words "finest oleine" being in small, the others in capital letters; and the magistrate maintained that the words "oleine" and "cheese" should have been equally legible, if not combined in one. We might add that the word "oleine" does not either scientifically or technically meet the requirements of the Act, for oleine is a normal constituent of butter fat, and the legal description of these added fats is "margarine." The public have learnt the purport of the word; but in the case in question the purchaser, a labourer acting under the direction of the inspector, read the word on the label as "Curline," and was naturally unable to attach any meaning to it. Nor would he, as the magistrate remarked, have been much wiser if he had read it correctly, and, as he himself had done, found it defined in a dictionary as "the thin oily part of fat." It conveys no suggestion of the addition of foreign matter, whereas "margarine," having been discarded from scientific nomenclature, has been happily appropriated by the Act as a designation for all such artificial mixtures of extraneous fats. The Sale of Food and Drugs Act has now been in force for twenty years, and must be submitted to revision. Not only

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should the qualifying words be connected with those they qualify and equally *legible*, but they should be equally *intelligible*. "Mixed" and "prepared" do not by themselves sufficiently indicate the nature of the process—the removal of a portion of the fat and of the woody fibre to make a fine soluble cocoa being no less a "preparation" than the addition of equal weights of brown sugar and potato starch.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on the 11th inst., the President, Mr. Christopher Heath, being in the chair. The President reported the result of the election of members of the Council, as given in THE LANCET of July 6th; and Mr. Alfred Willett, Mr. Treves, Mr. Butlin, Mr. Alfred Cooper, and Dr. Ward Cousins were introduced, and made a declaration in the terms of the oath prescribed by the Charter of 1800, and took their seats as members of the Council.

A recommendation by the Museum Committee was adopted, to the effect that the skeleton of a Diornis Maximus be purchased from the Canterbury Museum, Christchurch, New Zealand, for £70, and that Mr. Barlow of the Natural History Museum be employed to set up the skeleton.

The gift by Miss Greenhill of several volumes in MS. of a lexicon of Greek medical terms, compiled by the late Dr. Greenhill of Hastings, was accepted with the best thanks of the Council.

The President reported the half-yearly meeting of Fellows on the 4th inst., at which forty-five Fellows, including fourteen members of the Council, had attended, but that as no notices of motions had been given for the meeting no discussion of any kind took place.

The Council proceeded to elect two members of the Board of Examiners in Dental Surgery, Mr. Barrett being re-elected and Mr. Frederick Canton being elected.

The Council directed that the annual calendar should be completed to this date, and that the usual number of copies thereof be printed and offered for sale at 1*s.* per copy.

The following statement of attendance of members of Council during the past collegiate year was read:—

(Eleven meetings of the Council in the year.)

Name.	Meetings attended.
Sir T. Spencer Wells, Bart.	9
Mr. Jonathan Hutchinson	9
Mr. Wm. Cadge	10
Mr. Thomas Bryant	11
Mr. Thomas Smith	11
Mr. J. W. Hulke (died after seventh meeting)...	7
Mr. Christopher Heath, President	11
Sir William Mac Cormac	10
Mr. A. E. Durham (died after ninth meeting) ...	8
Mr. N. C. Macnamara	11
Mr. Oliver Pemberton	9
Mr. Reginald Harrison, Vice-President	11
Mr. Alfred Willett, Vice-President	11
Mr. T. Pickering Pick	10
Mr. H. G. Howse	11
Mr. John Langton	11
Mr. W. Mitchell Banks	9
Mr. W. Rivington	11
Mr. T. R. Jessop	9
Mr. F. Howard Marsh	11
Mr. J. Tweedy	11
Mr. Henry Morris	11
Mr. A. W. Mayo Robson	9
Mr. J. Hardie	6

A letter was read, dated the 6th inst., from Mr. W. G. Dickinson, asking the Council, on behalf of the Committee of the "Society of Members," to appoint a committee to confer with a deputation on the subject of the proposed alterations in the Charter. The Council appointed for this purpose the committee which already exists for the purpose of receiving deputations from Fellows. A petition was read from the London School of Medicine for Women, asking the Council to admit women to the examinations for the diploma of Membership. The matter was referred to the Committee of Management.

Mr. Christopher Heath was re-elected President, and Mr. Reginald Harrison and Mr. Pickering Pick were appointed Vice-Presidents, as we announced last week.

Mr. J. H. Targett was reappointed Pathological Curator.

The next ordinary meeting of the Council is to be held on Monday, the 29th inst.

THE HOME OFFICE INQUIRY INTO THE CASE OF THOMAS WEIR.

WE have received the report of the inquiry ordered by Mr. Asquith, as Secretary of State for the Home Department, into the cause of death of a patient named Thomas Weir of St. Anne's Heath, Virginia Water. The inquiry was held by Mr. Gully, Q.C., the present speaker of the House of Commons, assisted by Dr. Savage, and the specific direction it was to take is given in the following words:—"To report to the Home Secretary upon the treatment of Thomas Weir, upon the sufficiency of the supervision under which it was carried out, and on the regulations, rules, and by-laws in force in the said hospital so far as relates to their adequacy to secure the proper treatment and supervision of insane patients." The inquiry showed that Weir had been subjected to the form of restraint known as "the dry-pack" (an apparatus consisting of a blanket, straps, and webbing, so arranged as to limit the movement of the limbs in cases of maniacal excitement with violence), and that he died of exhaustion and collapse after undergoing the treatment. Dr. Savage, while finding the dry-pack a useful remedy in cases of mania both as a curative and restraining process, is of opinion that in Weir's case the use of the apparatus was excessive. The report goes on to say that in the administration of the treatment "almost every ordinary and proper precaution seems to have been neglected," and gives in detail the reasons for arriving at this severe conclusion. Certain recommendations made by the Lunacy Commissioners last autumn with reference to this case are published as an appendix to the report and receive the concurrence of Mr. Gully and Dr. Savage. The three more important ones run as follows:—(1) That the use of the "dry-pack" in the form employed at the Holloway Sanatorium ought not to be permitted, the older form of packing in blankets without straps being much preferable; (2) that mechanical restraint in institutions for the care of the insane should only be employed upon the direct authority of the superintendent or his official deputy; and (3) that restrained patients should be continuously watched by skilled attendants and visited at short intervals by members of the medical staff.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Helens Urban Sanitary District.—We cannot notice the report as to this district without a brief reference to the former medical officer of health, the late Mr. Robert McNicoll, to whose memory the present medical officer of health, Dr. John Robertson, contributes a fitting obituary notice. Mr. McNicoll practised medicine in St. Helens for fifty years, and for over twenty of those years he acted as medical officer of health to the borough; he was one of the first medical officers of health appointed in England. Those of our readers who can recall Mr. McNicoll's valuable annual reports will not need to be reminded of the excellent and conscientious work which he performed, and as Dr. Robertson aptly puts it, had Mr. McNicoll lived but a few days longer he would have seen the completion of a public testimonial to him in the founding of "The McNicoll Scholarship" at the Cowley Middle Schools. This is a fitting testimony to his memory. There was, Dr. Robertson observes, a decrease in the birth-rate of St. Helens in the middle of 1894, and he attributes it in all probability to the

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coal strike in the autumn of 1893. Commercial disaster such as this generally, as he points out, influences both the marriage and birth rates. Out of every 1000 births in St. Helens during 1894 31·5 were illegitimate, a proportion higher than in any other of the previous twelve years. In deploring the high infantile mortality Dr. Robertson expresses his satisfaction that the sanitary authority have appointed a female sanitary inspector, and one of her duties is to advise as to the feeding and rearing of young infants. Female factory labour does not, according to the report before us, operate as a cause of infantile mortality in St. Helens, and there is, therefore, Dr. Robertson remarks, no need for artificial feeding. Infantile vaccination appears to be well carried out in St. Helens, and this is in large part due, we are told, to the excellent influence which Mr. McNicoll, as public vaccinator, had in the district.

Blackpool Urban Sanitary District.—Calculated on the average number of persons per house in the case of the six wards of which Blackpool is made up, the population is estimated at 30,337, while on the assumption that the last intercensal increase has been maintained the population is estimated at 28,203. The corrected death-rate for 1894 was 13·45 per 1000. Dr. Jasper Anderson has constructed an interesting table showing the length of residence in Blackpool of each person dying during 1894, and from this it appears that out of 481 deaths only 170 were of persons who were born in the district. Dr. Anderson has also continued his investigations into the causes of the high infantile mortality-rate in Blackpool, and he furnishes a table showing the cause of death and the ages at death of children dying in the district during the ten years 1884–93. The figures obtained he compares with those of 1889–91 for Preston, Leicester, and Blackburn, the three towns having the highest infantile mortality, and also with those for the counties of Hertfordshire, Wiltshire, and Dorsetshire, where the infantile mortality is lowest. The comparison shows that in Blackpool a larger proportion of children are born who only survive their birth for a few days than in any other of the districts with which comparison is made. Taking the deaths in the first month of life it appears that 5078 deaths would occur in Blackpool out of 100,000 births, as compared with 3488 in the three counties and 4947 in the three towns. We wish we had space to reproduce Dr. Anderson's tables, as they are very instructive. Coming to the causes of death, Dr. Anderson finds that prematurity and atelectasis accounted for 3289 deaths out of 100,000 births in Blackpool, as against 1436 and 2428 for the counties and towns respectively, and he thinks that possibly this excess in Blackpool may be due to the fact that the stamina of the inhabitants of Blackpool is not up to the average of that in the three towns, owing perhaps to the immigration of partially worn-out townsfolk into the borough, and he is, too, inclined to think that the social conditions of Blackpool favour premature confinements. In this connexion he refers to the fact of the Registrar-General having drawn attention to the gradual increase in deaths from prematurity and congenital defects in England and Wales during recent years. Particulars are also given by Dr. Anderson of the feeding of 225 children who died between the first and twelfth months of life, and the results show that 51 per cent. were never fed at the breast, whilst of the total number only 25·5 per cent. were fed at the breast during their whole lives.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6395 births and 4033 deaths were registered during the week ending July 13th. The annual rate of mortality in these towns, which had risen in the four preceding weeks from 15·4 to 17·5 per 1000, further increased last week to 19·9. In London the rate was 21·0 per 1000, while it averaged 19·0 in the thirty-two provincial towns. The lowest rates in these towns were 8·9 in Huddersfield, 10·2 in Swansea, 10·5 in Brighton, 11·7 in Halifax, and 12·4 in Cardiff; the highest rates were 22·1 in Leicester, 26·0 in Salford, 26·4 in Preston, 27·4 in Wolverhampton, and 30·2 in Liverpool. The 4033 deaths included 877 which were referred to the principal zymotic diseases, against 494 and 665 in the two preceding weeks; of these, 564 resulted from diarrhœa, 126 from measles, 72 from diphtheria, 54 from whooping-cough, 37 from scarlet fever, 23 from "fever" (principally enteric), and 1 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Brighton, Swansea, Derby, and Huddersfield, and the highest rates in Salford, West Ham, Leicester and Preston. The greatest mortality from measles occurred in Manchester, and West Ham; from whooping-cough in Birkenhead, Oldham, and Burnley; from "fever" in Sunderland; and from diarrhœa in Wolverhampton, Bradford, Salford, Leeds, Preston, and Leicester. The mortality from scarlet fever showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 50 in London, 5 in West Ham, and 4 in Liverpool. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 72 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 13th, against 22, 34, and 42 at the end of the three preceding weeks; 36 new cases were admitted during the week, against 8, 25, and 17 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2241, against 1732, 1894, and 2044 on the three preceding Saturdays; 342 new cases were admitted during the week, against 251, 319, and 311 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 160 in each of the two preceding weeks, rose last week to 187, but were 5 below the corrected average. The causes of 53, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Oldham, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2 and 19·4 per 1000 in the two preceding weeks, further rose to 20·3 during the week ending July 13th, and was 0·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Dundee and 16·5 in Edinburgh to 26·8 in Greenock and 32·0 in Paisley. The 585 deaths in these towns included 72 which were referred to diarrhœa, 18 to whooping-cough, 14 to measles, 10 to "fever," 6 to scarlet fever, 1 to diphtheria, and not one to small-pox. In all, 121 deaths resulted from these principal zymotic diseases, against 78 and 98 in the two preceding weeks. These 121 deaths were equal to an annual rate of 4·2 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 28, 48, and 57 in the three preceding weeks, further rose to 72 last week, of which 40 occurred in Glasgow, 11 in Paisley, and 7 in Greenock. The deaths referred to whooping-cough showed a further increase upon the number recorded in recent weeks, and included 10 in Glasgow and 3 in Dundee. The fatal cases of measles, which had been 14 and 18 in the two preceding weeks, declined again to 14 last week, of which 5 occurred in Glasgow, and 2 each in Edinburgh, Leith, Paisley, and Greenock. The deaths from scarlet fever, which had been 1 and 5 in the two preceding weeks, further rose to 6 last week, and included 3 in Edinburgh and 2 in Glasgow. The 10 fatal cases of "fever" considerably exceeded the number in any recent week, and included 4 in Glasgow, 2 in Edinburgh, and 2 in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 99 and 79 in the two preceding weeks, declined again to 60 last week, but exceeded by 19 the number in the corresponding week of last year. The causes of 46, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 20·1 to 24·9 per 1000 in the three preceding weeks, declined again to 20·0 during the week ending July 13th. During the thirteen weeks of last quarter the death-rate in the city averaged 27·3 per 1000, the rate during the same period being 16·7 in London and 18·8 in Edinburgh. The

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134 deaths registered in Dublin during the week under notice showed a decline of 33 from the number in the preceding week, and included 16 which were referred to the principal zymotic diseases, against 9 and 11 in the two preceding weeks; of these, 10 resulted from diarrhœa, 3 from "fever," 2 from small-pox, 1 from diphtheria, and not one either from measles, scarlet fever, or whooping-cough. These 16 deaths were equal to an annual rate of 2·4 per 1000, the zymotic death-rate during the same period being 5·3 in London and 2·3 in Edinburgh. The fatal cases of diarrhœa, which had increased from 3 to 6 in the three preceding weeks, further rose to 10 last week. The 3 deaths referred to different forms of "fever" exceeded the number recorded in any recent week, and the 2 fatal cases of small-pox were the first registered within the city during the past three weeks. The 134 deaths in Dublin last week included 26 of infants under one year of age, and 27 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Seven inquest cases and 5 deaths from violence were registered; and 41, or nearly a third, of the deaths occurred in public institutions. The causes of 13, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

CHITRAL.

THE following paragraphs have been published in the *London Gazette*:—

"War Office, July 16th, 1895.—The Queen has been graciously pleased to signify her intention to confer the decoration of the Victoria Cross upon the following officer, whose claim has been submitted for Her Majesty's approval, for his conspicuous bravery during the sortie from Chitral Fort on March 3rd last, as recorded against his name:—Surgeon-Captain Harry Frederick Whitchurch, Indian Medical Service. During the sortie from Chitral Fort of 3rd March last, at the commencement of the siege, Surgeon-Captain Whitchurch went to the assistance of Captain Baird, 24th Bengal Infantry, who was mortally wounded, and brought him back to the fort under a heavy fire from the enemy. Captain Baird was on the right of the fighting line, and had only a small party of Gurkhas and men of the 4th Kashmir Rifles. He was wounded on the heights at a distance of a mile and a half from the fort. When Surgeon-Captain Whitchurch proceeded to his rescue the enemy, in great strength, had broken through the fighting line; darkness had set in, and Captain Baird, Surgeon-Captain Whitchurch, and the Sepoys were completely isolated from assistance. Captain Baird was placed in a dooley by Surgeon-Captain Whitchurch, and the party then attempted to return to the fort. The Gurkhas bravely clung to the dooley until three were killed and a fourth was severely wounded. Surgeon-Captain Whitchurch then put Captain Baird upon his back and carried him some distance with heroic courage and resolution. The little party kept diminishing in numbers, being fired at the whole way. On one or two occasions Surgeon-Captain Whitchurch was obliged to charge walls, from behind which the enemy kept up an incessant fire. At one place particularly the whole party was in imminent danger of being cut up, having been surrounded by the enemy. Surgeon-Captain Whitchurch gallantly rushed the position, and eventually succeeded in getting Captain Baird and the Sepoys into the fort. Nearly all the party were wounded, Captain Baird receiving two additional wounds before reaching the fort."

"India Office, July 15th.—The Queen has been graciously pleased to nominate and appoint Surgeon-Major George Scott Robertson, C.S.I., Indian Medical Service, British Agent, Gilgit, to be a Knight Commander of the Most Exalted Order of the Star of India."

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments and transfers are ordered:—Surgeon-Captain T. W. Gibbard to hold collateral charge of the Civil Surgeoncy at Shwebo, vice Surgeon-Captain K. Prasad; Surgeon-Captain K. Prasad to be Civil Surgeon of the Toungoo District, vice Surgeon-Captain A. R. P. Russell; Surgeon-Captain A. R. P. Russell to be Superintendent of the Rangoon Central Gaol, vice Surgeon-Major R. E. S. Davis; and Surgeon-Major R. E. S. Davis to be Junior Civil Surgeon and Superintendent of the Lunatic Asylum, Rangoon, vice Surgeon-Lieutenant-Colonel O. Baker, who departs on leave. Surgeon-Major S. J. Thomson (Bengal), Deputy Sanitary Commissioner, North-West Provinces and Oudh, to be Sanitary Commissioner, North-West Provinces and Oudh, *sub pro tem*, from date on which he assumed charge of the office from Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson, M.D. Surgeon-Lieutenant-Colonel A. S. Jayakar (Bombay), Agency Surgeon at Maskat, is appointed to hold Charge of the current duties of the Office of Political Agent at Maskat, in addition to his other duties, until further orders. Surgeon-Captain H. E. Drake-Brockman, Civil Surgeon, 2nd class, whose services have been replaced at the disposal of the Government of the North-West Provinces by the Government of India, Home department, to the Muttra District. Surgeon-Major E. S. Brander, Civil Surgeon, from Muttra to Sitapur. Surgeon-Major C. C. Vaid, Civil Surgeon, from Sitapur to Hardoi. Surgeon-Captain D. W. Scotland, Officiating Civil Surgeon, from Orai to Azamgarh.

NAVAL MEDICAL SERVICE.

The following appointment has been made:—Surgeon and Agent: William Doughty at Torcross and Hallsands.

VOLUNTEER CORPS.

Artillery: 1st Kent (Eastern Division, Royal Artillery): Surgeon-Major. C. Arrol, M.D., to be Surgeon-Lieutenant-Colonel. 1st Lincolnshire (Western Division, Royal Artillery): The undermentioned gentlemen to be Surgeon-Lieutenants:—Thomas William James Allen; George Henry Grimoldby. 2nd West Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Lieutenant J. C. Wright is appointed Lieutenant. *Rifle:* 2nd Volunteer Battalion the Royal Welsh Fusiliers: Surgeon-Lieutenant W. D. Fraser, M.B., to be Surgeon-Captain.

INDIA: MEDICO-MILITARY NEWS.

THE latest Anglo-Indian papers contain several interesting items of intelligence, some of which may be briefly summarised for the information of our readers. The question of the future policy as to the retention or not of Chitral is engaging very serious attention, and a great difference of opinion prevails on the subject. The advocates and followers of a "forward policy" are, of course, for its retention, but the opponents of this policy are, it seems to us, able to urge many very weighty objections, especially from a statesmanlike and finance point of view. The matter is one for grave consideration, and as the force will, it is understood, remain until September before returning to India the present Government will have ample time for deliberation. Meanwhile we learn that there is a good deal of sickness amongst the European troops at Chitral and heavy casualties among the baggage animals, and the daily cost incurred by the forces remaining over the frontier is very heavy irrespective of what will be the amount of the initial and final expenditure. Enteric fever is said to be somewhat prevalent in the Chitral relief force and the British troops suffer a good deal from exposure. The field hospital at Chitral is hard worked. According to telegrams from Simla there were on June 19th last 18,964 troops engaged on the relief expeditionary force. Of these 6611 were British, of whom 286 were on the sick list, while out of 12,348 native troops only 228 were returned as ineffective from sickness. The chief sickness was amongst the Gordon Highlanders, King's Own Scottish Borderers, the Buffs, Bedfordshire Regiment, and King's Royal Rifles. The native force is comparatively healthy. The season in India has apparently been a very hot one, but the occurrence of the rains has diminished the temperature and lessened the sickness. Heat apoplexy has been prevalent among the troops at Peshawar and Kurrachee, and several deaths from this cause have occurred.

THE QUEEN AT ALDERSHOT.

Accompanied by Princess Beatrice, the Marchioness of Lorne, and Prince and Princess Henry of Battenberg, Her Majesty arrived at Aldershot on Friday, July 12th, for a two days' visit, and evinced great interest in a physical display by a class of non-commissioned officers who have just completed a six months' course of training. As we pointed out in our article on the Royal Military Tournament[1] these men are trained under the direction of Colonel Fox,

[1] THE LANCET, June 1st, 1895.

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by a system which develops every muscle of the body, while the mental powers, so far as they affect alertness and presence of mind, are trained to a degree that could not be attained under the old system. Other physical displays also took place, including one by the Egyptian fellaheen under Sergeant-Major De Vere. The Royal visit was brought to a close by a review of the troops on Laffan's Plain on the following Saturday.

A PORTABLE COOKING APPARATUS.

According to the *Army and Navy Gazette*, Staff-sergeant Fowler of the Medical Staff Corps has invented a portable cooking apparatus which presents some new features. The object is to furnish the army medical service with the means of providing patients under all circumstances with the same varieties of diet that are obtainable in station hospitals. It is claimed that the apparatus will cook with half the camp allowance of fuel and is capable of supplying large quantities of boiled or distilled water.

HOSPITAL FOR INFECTIOUS DISEASES AT PESHAWAR.

The Government of India have sanctioned the estimates for the erection of a special hospital for contagious diseases for all native troops at Peshawar.

Surgeon-Lieutenant-Colonel Coates, A.M.S., Surgeon-Captain Russell, A.M.S., and Surgeon-Captain Key, Volunteer Medical Staff, have been selected as medical officers at the Camp of Instruction of the National Artillery Association at Shoeburyness on Aug. 3rd.

The examination at the end of the seventieth or summer session of the Army Medical School will commence on July 23rd and terminate on July 29th. The session will be brought to a close on July 31st, when the prizes will be presented to the successful candidates by Surgeon-General Sir Joseph Fayrer, K.C.S.I.

It is stated that the Government of India has sanctioned an estimate of Rs. 11,964 for building a special hospital for contagious diseases for all native troops at Peshawar.

Correspondence.

"Audi alteram partem."

"THE PHYSICS OF CARDIAC SOUNDS AND MURMURS."

To the Editors of THE LANCET.

SIRS,—Under the above heading there is in THE LANCET of June 15th and 22nd a long article by Dr. J. T. R. Davison which ought not to be allowed to pass without comment. We may agree with Dr. Davison that the closure of the aortic valves is due to the increase of tension in the aorta caused by the incoming current of blood. By the laws of fluid pressure, and in consequence of the existence of the pouches of Valsalva, the sigmoid valves will close as soon as the pressure on their aortic aspect exceeds that on their ventricular aspect. But his theory that the second sound "is directly produced by the latter part of the ventricular contraction, owing to the semilunar valves being thrown into sonorous vibrations by the latter part of the ventricular stream impinging against the ventricular surface of these valves in the act of their closing in," is at once condemned by the observations of Roy and Adami with the myocardiograph.[1] For the tracings obtained by means of this instrument from the hearts of mammals by these skilled and careful experimenters prove conclusively that the second sound does not occur until the ventricular contraction has ceased, at the end of an interval, measuring two-thirteenths of the whole cardiac cycle, subsequent to the closure of the sigmoid valves and synchronously with the sudden diastolic expansion of the ventricle. Again, we may agree with Dr. Davison that the mitral valve closes as soon as the ventricular tension has been raised so as to exceed the auricular. But his theory that "the first sound is the direct result of the auricular contraction," being caused by the impact of the stream from the auricle on the closed mitral valve, is easily disproved by the myocardiograph. For the commencement of the first sound is precisely synchronous with the sudden systolic rise of the ventricular tracing, and it continues during nearly the whole period of the ventricular contraction. And this extraordinary theory involves the astounding proposition that while the mere tail-end of the contraction of the thin-walled auricle is capable of producing the loud first sound, the contraction of the thick-walled ventricle, which must cause great strain of the mitral segments (as is proved by the very existence of the chordæ tendineæ), is incapable of producing any sound at all. Dr. Davison even maintains that the cardiac impulse is due to the auricular and not to the ventricular contraction, and he offers as proof the observation that it occasionally distinctly precedes the carotid pulsation. As if the blood-current took no time at all to pass from the ventricle to the carotid, and as if the time required might not be, by various circumstances, occasionally prolonged.

Dr. Davison attempts to explain cardiac murmurs by observations of the sounds heard on auscultating "a small piece of fresh intestine" filled with water and ligatured at both extremities, when an oblique stream of water is suddenly introduced into it through a tube fastened into one of its ends, quite regardless of the dissimilarity between the continuous wall of such an intestine and the damaged valves of heart disease, and of the obvious fact that "a small piece" of intestine full of stagnant fluid and with its ends ligatured can in no way represent the physical conditions either of the empty ventricle at the instant of diastolic expansion or of the aorta through which the blood stream is flowing.

I am, Sirs, yours truly,

DAVID B. LEES, M.D., F.R.C.P.

Weymouth-street, W., July 14th, 1895.

[1] Roy and Adami: Heart-beat and Pulse-wave, Practitioner, vol. lxiv.; Roy and Adami: Physiology and Pathology of the Mammalian Heart, Philosophical Transactions of the Royal Society, 1892, B.

IRISH WORKHOUSE REFORM.

To the Editors of THE LANCET.

SIRS,—In a communication addressed to you on May 31st by Sir Philip Smyly and Mr. Hepburn on behalf of The Irish Medical Association it was stated that "on carefully examining in detail the replies from seventy-nine (medical) officers of workhouses who had furnished information), we find that forty-three infirmaries have no trained nursing, the nursing being entirely in the hands of pauper women." It has since been pointed out to this council that the latter part of this sentence is inaccurate. We are informed, and believe, that in forty-three out of the seventy-nine infirmaries no trained nurse is employed, but that, in many instances, the nursing is under the supervision of untrained nurses, many of whom are as competent as an untrained nurse can be expected to be. As regards these infirmaries it is not correct to say that "the nursing is entirely in the hands of pauper women," and the council therefore begs to withdraw that statement and to express its regret that a statement capable of such an interpretation should have been made. The presence of a single untrained nurse in a workhouse infirmary containing (on average) sixty-three patients cannot however materially modify the assertion that the nursing arrangements of such a hospital are totally insufficient, especially when the multifarious duties devolving upon this untrained nurse are considered. She is practically the porter of the infirmary, must keep all doors leading to the house and to the female wards locked, and must open them herself when egress or ingress are needed; must serve out all food and keep an account of it, be responsible for all clothes received from the laundry and sent to it, and generally oversee all the pauper women employed. Manifestly an official charged with those duties is more of a matron than a nurse, and can contribute very little to the care and comfort of the sick inmates.

The council has learned with much satisfaction that the Local Government Board has addressed to the guardians of each union a circular note requesting them to obtain from the medical officer a specific report as to the nursing, sanitation, and diet in the workhouse hospital, and suggesting that the visiting committee of the guardians might with advantage confer with the medical officer respecting any changes which would conduce to the comfort of the sick inmates. The council, while highly approving of the course suggested, submits that the reports and conferences indicated would prove much more effective if the visiting committees and the medical officers were supplied with some brief suggestions as to the requirements of a well-ordered workhouse

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infirmary, and with a series of definite questions as to whether such requirements are or are not fulfilled. It is scarcely to be expected that all visiting committees and their officers are *au courant* with the conditions as to air, space, ventilation, sanitary accommodation, &c., which are regarded by modern sanitarians as an indispensable minimum for a workhouse infirmary, and the council, therefore, apprehends that unless some guidance in this direction is afforded to the administrators of workhouses, the efforts of the Local Government Board to arrive at the truth may prove to some extent abortive. It is, unfortunately, quite unnecessary to exaggerate the deficiencies of the workhouse infirmary system, and the association has no other object than to elicit the truth, the whole truth, and nothing but the truth, respecting the accommodation for the sick poor throughout the country.—We are, Sirs, yours truly,

AUSTIN MELDON, J.P., D.L.,
Past President R.C.S.
Dublin, July 15th, 1895. ARTHUR H. BENSON, F.R.C.S.I.

"IS METEOROLOGY A SCIENCE?"

To the Editors of THE LANCET.

SIRS, — Dr. Gowers invites me to define the word "science." I should be sorry to attempt to do what he finds so difficult, but I agree with him that the term turns much upon the use of words. I also agree that the expression may be applied in a very general sense to all regions of knowledge where observations are made and inferences drawn. I have already said that in this large sense as a branch of knowledge meteorology may be classed amongst the sciences. At the same time, it seems to me to stand quite alone and is not amenable to the usual methods of scientific inquiry. Observation does not make a science. The ancients were good observers, but it was left to the moderns to adopt altogether new methods of investigation and experimentation. At the present time if we wish to discover the nature of any object we do so in connexion with its surroundings. If these are changed the qualities of the object itself change, so that under different conditions the same thing may be solid or liquid; it may freeze or scorch the hand which touches it. Its qualities could not spontaneously change in this manner; they must be due to an external force. Man can have no existence outside the atmosphere any more than a fish out of water. In astronomy all the laws have reference to the relation of the heavenly bodies to one another. Newton first showed us how all their movements are dependent on the forces of attraction between them. The slanting axis of the earth, causing the rays of the sun to fall upon the earth with different obliquities, determines the characters of the animal and vegetable world. Even in astronomy we have a counterpart of the experimental method, for should the sun be eclipsed men of the greatest eminence will traverse the globe to study its light under the new conditions, or to observe a transit of Venus to enable them to calculate the sun's distance. Moreover, should any irregularity appear in the celestial world we seek for a cause, for it was considered impossible for Uranus to display perturbations in its orbit without the existence of a Neptune. I cannot, therefore, agree that meteorology is as much a science as astronomy. It seems to me that in all branches of inquiry which are called scientific we are investigating the relation of different bodies to one another. We alter the surroundings, and the phenomena or character of the object also alter. If we discover that a change has taken place in an object in nature we ask what is the external force which has been acting upon it. Now, as regards the earth and its satellite we know enough to understand why the seasons and the tides occur, but we know nothing of the altered conditions which produce the daily changes styled "weather." We know nothing of the earth's environments except the sun. All we do at present is to make use of the telegraph to inform us as to what is going on at a distance, but we predict nothing. No one foresees whether we shall have a cold or hot winter and a dry or wet summer. It seems to me that we have no data whatever to guide us. In all other branches of science we study the effects of the surroundings on objects, or the relation of things to one another, since every object is conditioned or depends in an unknown measure on its environments. In meteorology no method of this kind is or can be pursued, for we know nothing of the earth's environments but the sun and moon, and the latter has long been put out of court. It was this view of the matter that made me say it was a fair question to ask, Is meteorology a science? Dr. Gowers asks, What is the difference between science and knowledge? I should answer, They run into each other. Science is systematised knowledge—as, for example, in the case of the rotundity of the earth. At the time when people believed the earth was flat the arguments for its being round might be called scientific, but now that the shape of the earth is accepted by everyone it becomes common knowledge and ceases to be science. I must trespass no more on your space with a subject foreign to the designs of THE LANCET.

I am, Sirs, your obedient servant,
Grosvenor-street, W., July 15th, 1895. SAMUEL WILKS.

To the Editors of THE LANCET.

SIRS,—In reference to the leading article in THE LANCET of June 29th last, on the scientific position of meteorology, I beg to offer a few comments on the position taken up by the writer in the *Edinburgh Review*. He suggests that "it is not a science" if it consists merely in observing and recording temperatures and pressures, but he may be referred in confutation of this opinion to a paragraph further on on astronomy. He there says "that thousands of years had passed in patient observation before the motion of the heavenly bodies was understood." Astronomy has usually been considered a sublime and respected science for ages past; yet it chiefly consists in observing the heavens daily and hourly by instruments and recording the matters seen. Meteorology really should be considered a kindred and allied science to astronomy, of equal calibre and scientific position, as both are founded on the observations of natural phenomena and require the use of instruments of precision. Further on, forecasting of weather is considered derogatory to the scientific position of meteorology, but the laws of probabilities are included in the science of mathematics, and prognosis is part of the science and art of medicine.

A serious view of the character of meteorological science has not yet, however, been entertained by the British public, and the results of its labours and aspirations are still tabooed and neglected officially. We have seen the consequences of this abnegation in the disasters that befall water companies in winter by frozen pipes, and in summer by dried-up reservoirs, by ignoring past meteorological investigations and results. We have seen it neglected in warlike operations, when John Bull could not believe that the Crimea would be visited by such an Arctic winter (in 1854-55), as he estimated that it would only be like such as he was accustomed to see in Hyde Park. The authorities fifty years further back (in August, 1809) had not the means of knowing what the climate of Walcheren was like, or that it was any different from that of the Thames; and so they saw thousands of our soldiers die and perish under a broiling sun and the paludal mists of the Polders. It is scarcely credible that the War Office of the time had not provided our medical officers with meteorological instruments for use in the expedition in 1801-2, and so they came and went knowing nothing of the climate they lived in. Both the French and Indian armies had seen to this provision having been made in 1801-2 for ascertaining the features of the weather and atmosphere of Egypt during their marches through the country and in stationary camp quarters. If meteorology, then, is to be of any good it must be acknowledged as a science fit to minister to the wants and life of the nation, by its professors and workers being recognised as investigators and accumulators of valuable information. I am, Sirs, yours faithfully,

July 16th, 1895. OBSERVER.

P.S.—In a lecture by Mr. Clement Wragge before the Royal Society of Tasmania, reported by the *Hobart Mercury*, May 22nd, 1895, the following words occur:—"Mr. Wragge, who was received with applause, referred to the distinction between the sciences of astronomy and meteorology. The study of the latter enabled forecasts to be made which were of infinite value to all kinds and conditions of men."

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

To the Editors of THE LANCET.

SIRS,—Will you kindly grant me space to express a hope that any members of the profession who use shorthand, and may be intending to join our society, will do so at once by

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communicating with Dr. Neil, Wasneford Asylum, Oxford? We are anxious to include as many as possible before the general meeting on the 30th. Although we have now 154 members we find that there are still many who should join and have not yet done so. Among the visitors whose presence we hope for on the 30th (at 4 P.M. at 20, Hanover-square) are General Sir Charles Wilson, K.C.B., K.C.M.G., the Director-General of Military Education, and Dr. J. H. Gladstone, F.R.S., who has used phonography in scientific work since 1846. I may add that the varied service the society is rendering to its members far exceeds, both in degree and character, our early anticipations. To this many members could bear strong testimony.

I am, Sirs, yours faithfully,
W. R. GOWERS, President.

Queen Anne-street, Cavendish-square, W., July 13th, 1895.

"THE REMUNERATION OF MEDICAL OFFICERS TO PROVIDENT ASSOCIATIONS, CLUBS, ETC."

To the Editors of THE LANCET.

SIRS,—If Dr. Paget Thurstan accepts my figures, I must ask him to do so having some regard to the statements which accompany them. My illustration represented an outside estimate, for the reasons which I gave, but Dr. Thurstan has fallen into two further errors—first, in assuming that each person was necessarily attended professionally on each of his nine days' sickness; and, secondly, in concluding that all of the attendances were visits. At least two-thirds of the patients call on the medical officer. I am far from upholding that the present rates are adequate; in fact, I distinctly said the opposite—viz., that we must look forward to raising them. But I say that when a medical man receives regularly £200 a year for attending daily either at their homes or at his surgery some fifteen persons (1½ per cent. of 1000) he is in most instances glad to get it.

I am, Sirs, yours faithfully,
July 16th, 1895. W. G. DICKINSON.

*** This correspondence must now cease.—ED. L.

"THE DANGERS OF COCAINE."

To the Editors of THE LANCET.

SIRS,—Your annotation on "The Dangers of Cocaine" in THE LANCET of July 6th will, I hope, attract attention to the increasing use of cocaine. You speak, however, of persons getting "into the habit" of taking it. But in the inquest to which as I suppose you refer there was no evidence whatever that the deceased had used it in this way. On the contrary, the evidence was conclusive that this bottle of medicine had been in the possession of the deceased for at least twelve months. The points that need to be elucidated are whether, say, ten grains of the mixture, as prescribed for application to the gums, could kill in a short time if taken by mistake, or whether the explanation is not rather to be found in the possibility of a fungus growing in the bottle if kept for a length of time. In either case it is surely time that cocaine should be scheduled as a poison or that at any rate some special label should be placed on the bottle as a caution.

I am, Sirs, yours faithfully,
July 13th, 1895. ONE WHO WISHES TO KNOW.

ERRATUM.—Dr. Alderson's letter in the last issue of THE LANCET should obviously have been headed Fracture of the Lower End of Humerus, not "Femur."—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Small-pox: Vaccination and Revaccination.

DR. HOPE, the medical officer of health, in his last annual report dealt very exhaustively with small-pox as it appeared last year, and showed very conclusively that but for the activity with which every case was traced and followed up there would most certainly have been a very serious epidemic of the disease. Liverpool has always a very large proportion of what may be called "migratory citizens," and it must be obvious that these have in times of epidemic the capacity of carrying the infection to all parts of the city, and even beyond this limit. The lamentable case which occurred on board the *Clarence* training ship will be remembered as a notable instance. It is to be hoped that the scare produced will induce all those citizens who have not been revaccinated to adopt this most satisfactory mode of protection. It may also be remembered that the local watch committee passed a resolution to the effect that all candidates for the police force should undergo revaccination to the satisfaction of the police surgeon. How necessary this is may be judged from the fact that out of thirteen candidates who presented themselves to the surgeon on a recent occasion only two had been revaccinated, one of these cases being very doubtful. Of the remaining eleven, one refused to undergo vaccination, and the remainder submitted. Another candidate, who appeared more recently, had been vaccinated in infancy and had contracted small-pox mildly during the recent epidemic in Warrington. He was, therefore, excused from revaccination.

An alleged Female Thief aged ten simulating Fits.

A local detective was induced to watch the movements of a girl aged ten, which were somewhat suspicious. He saw her with her hand in the pocket of a passer-by, and on seizing it the girl apparently went into a fit. On taking her to the hospital the resident surgeon pronounced it to be a case of shamming. The girl was accordingly taken to Bridewell, and on the house of her parents being searched several articles of stolen property were found secreted there. The parents professed to be wholly ignorant of the girl's alleged thefts. The case is still *sub judice*.

Assaults on the Police.

In consequence of the action of the stipendiary magistrate in sending to prison those charged with assaults on the police (unless it were a first offence), a period of two months recently passed without any member of the force being incapacitated from duty. Unfortunately, the spell has been broken and assaults have again become serious. In one case an officer was struck on the head with the buckle of a belt, producing a scalp wound, with very severe hæmorrhage; in another the officer was bitten, a dangerous and disgusting form of assault which has too often followed a drinking bout. In each case the offender was sent to gaol with hard labour.

July 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. David J. Brakenridge, Edinburgh.

AFTER an illness of about two months' duration Dr. David J. Brakenridge died at his residence in Edinburgh on July 10th, at the age of fifty-six years. Dr. Brakenridge was a graduate of the University of Edinburgh and a Fellow of the Royal College of Physicians of Edinburgh. Although comparatively young he had completed his years of service as a physician to the Royal Infirmary, and on his retirement a few years ago was made a consulting physician to the institution. He was also a physician to Chalmers Hospital at the time of his death. Dr. Brakenridge took a somewhat active part in medical affairs, especially at the Royal College of Physicians, and being a man of decided individuality made himself a good deal felt. He was always honest and honourable, however wrong his policy and attitude might be considered by those disagreeing with him. As a clinical teacher he gave great promise in the earlier years of his connexion with the Royal Infirmary, and he always attracted a select body of students. His mind was, perhaps, too subtle and critical to attract the ordinary student, who was seeking hard and fast rules and indications to enable him to pass examinations. The best known of his contributions to medical literature are those which dealt with the administration of disinfectants for the prevention and treatment of scarlet fever and other infectious diseases, caffein as an adjunct to digitalis in cardiac cases, and more recently his introduction and advocacy of blood transfusion in the treatment of pernicious anæmia. He took a great interest in the epidemic of influenza which appeared in Edinburgh in 1890, and opened a discussion on the subject at the Medico-Chirurgical Society. Had he lived he would in ordinary

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course have been offered the presidential chair at the College of Physicians. He was much esteemed by those who knew him intimately, and his loss is very deeply mourned by a large circle of friends. He was buried on Saturday, his funeral being attended by almost every member of the profession in Edinburgh. His wife survives him, but there are no children.

Public Health Matters in Edinburgh.

At the meeting of the town council of Edinburgh last week it was remitted to the Public Health Committee "to consider the suitability of the ground adjoining Craiglockhart poorhouse belonging to the city parish council as a site for the new city hospital, with powers to employ experts, if so advised, to negotiate with the parish council to complete a provisional agreement for the acquisition of a portion of the property at a price to be fixed by arbitrators mutually chosen." It was also stated that there were 193 patients in the city hospital, of whom 134 were suffering from scarlet fever. There had been no cases of small-pox for six weeks, and negotiations were being carried on with the Trinity Hospital Committee for a piece of ground to which it was hoped the small-pox hospital in the Queen's Park would be soon removed.

Medical Examinations in Edinburgh.

The July examinations in Edinburgh for the Scottish Triple Qualification are almost concluded; and this week the second professional examination will begin at the University, while at the end of the week the first professional will begin.

Edinburgh Royal Society.

At the Edinburgh Royal Society this week Professor T. R. Fraser made another communication on snake poison and immunity produced by the action of anti-venene. In serum therapeutics immunity was obtained by subcutaneous injection, but the method was attended with inconvenience which might be avoided by introducing the poison through the stomach. Serpent's venom was destroyed or nearly so in the stomach, so that when introduced in that way it was inert. He had, however, made experiments which showed that a measure of resistance could be induced by administration in this way. Some of his results he thought might explain the immunity enjoyed by certain snake-charmers in India, for subcutaneous injection was not likely to be the method employed by them for the introduction of the protection-producing venom. The results might also explain the protection possessed by venomous serpents. The anti-venene obtained from serpents themselves was, however, not so effective as that obtained artificially, but he thought the natural anti-venene might be increased, and a sufficiently powerful anti-venene obtained very rapidly by injecting successive doses of venom into the serpents themselves. If this should prove to be the case, a most valuable means of rapidly producing anti-venene would be available, and Professor Fraser will have not only thrown light on a most interesting question, but provided means for saving many lives by counteracting the bite of the more poisonous snakes. Our medical officers in the East will doubtless put this work to the test of practical application as soon as material is available for the purpose; for it is there, and not at home, that the value of Professor Fraser's work will have to be practically tested.

University of Glasgow.

The following appointments to lectureships at Queen Margaret College are intimated:—Mr. James Blyth, F.R.S.E., Natural Philosophy; Mr. Thomas Gray, B.Sc., Chemistry; Dr. C. O. Hawthorne, Materia Medica and Therapeutics; Dr. J. Lindsay Steven, Pathology; Dr. J. Wallace Anderson, Practice of Medicine; Dr. Alexander Tille, German Language and Literature. Dr. W. J. Fleming has resigned his lectureship on Surgery and Clinical Surgery, as his term of office as Surgeon to the Royal Infirmary will expire before the commencement of the next winter session. The University Court will proceed to fill the vacancy at their meeting on the 26th inst. On the same date the Court will also make an appointment to the Chair of Divinity, rendered vacant by the resignation of Professor Dickson. The term of office of Dr. Ralph Stockman as Examiner in Materia Medica and Therapeutics and that of Mr. Aikman, B.Sc., as Examiner in Chemistry having expired, these positions are now declared vacant. Candidates must send in their applications before the 25th inst. Whatever views may be held as to the general policy of the Scottish University Commissioners, one of their latest ordinances will almost certainly receive unanimous approval. This is the ordinance abolishing the stamp duty on the degree of M.D. It has been the law hitherto that on proceeding to that degree the graduate must pay the sum of £10 3*s.* as Government duty. He will now only have to pay the University fee of five guineas. I observe from the University Calendar just issued that the application of the medical lecturers at Queen Margaret College to take part in the degree examinations has been refused. It is difficult to understand the reason for this refusal. The policy of the Scottish University system insists upon the importance of the teacher taking a prominent part in the examination of his own students, but under the present arrangement, whilst this policy is put into practice with regard to the men students, the teachers of the women students are excluded from any part in the examination. This is certainly not equal treatment for the two sexes.

Medical Magistrates.

In the list new of justices of the peace for Ayrshire are the names of Dr. Alexander Macleod M'Rae, Rankinston, and Dr. William Alexander Caskie, Largs.

The Ambulance Challenge Shield.

The Ambulance Challenge Shield, which has been won this year by the 1st Volunteer Battalion Highland Light Infantry, was on the 9th inst. formally presented to Colonel R. C. Mackenzie on behalf of the battalion, and by him handed over to Bailie Primrose for safe custody for the year by the Corporation of Glasgow. The ceremony took place in the City Chambers and was witnessed by a large number of volunteer medical officers as well as by representatives of the general public. The presentation was made by Surgeon-Lieutenant-Colonel William R. Smith, vice-president of the Volunteer Medical Association. He explained that the challenge shield had been instituted for the purpose of stimulating ambulance work in the volunteer regiments throughout the country, and he hoped that the fact that it had come north of the Tweed would have a good influence on ambulance training in the whole of Scotland. He congratulated the successful competitors, and paid a tribute to Surgeon-Lieutenant Swanson, under whom the winning team had been trained. Surgeon-Lieutenant-Colonel Smith also intimated the reception of a letter from the Duke of Cambridge, in which His Royal Highness expressed it as his wish and pleasure that it should be publicly announced that he congratulated the 1st Volunteer Battalion Highland Light Infantry on the distinguished honour which their representatives had obtained. The shield has been placed in the Corporation galleries, and has aroused much interest in the city.

University of Aberdeen.

The following gentlemen have been appointed examiners in the Faculty of Medicine for 1895–96:—Botany: R. J. Harvey Gibson, M.A. Aberd., University College, Liverpool. Zoology: J. A. Thomson, M.A. Edin., School of Medicine, Edinburgh. Chemistry: John Hunter, F.I.C., F.C.S., School of Medicine, Edinburgh. Anatomy: Thos. W. Griffith, M.D. Aberd., Yorkshire College, Leeds. Physiology: W. H. Thompson, F.R.C.S., Queen's College, Belfast. Materia Medica: Francis Warner, M.D. Lond., London. Medical Jurisprudence and Public Health: Fras. J. Allan, M.D. Edin., London. Pathology: Jas. Lorrain Smith, M.A., M.D. Edin., Cambridge. Medicine: J. Rose Bradford, M.D., D.Sc. Lond., F.R.S., London. Surgery: John C. Ogilvie Will, M.D. Aberd., Aberdeen. Midwifery: John W. Ballantyne, M.D. Edin., School of Medicine, Edinburgh.

July 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Poisoning in a Young Ladies' Boarding School.

ANOTHER death has occurred in the Limerick Convent. The victim in this instance was one of the boarders, a young lady aged eighteen, the daughter of Mr. Edward O'Flynn, J.P., a resident of Cork. A sad feature in the case was that the holidays were at hand and the parents were looking forward to the pleasure of seeing their daughter within a few days. Sir Charles Cameron has not yet completed his analysis, and the nature of the poison still remains a mystery.[1] However,

[1] Sir Charles Cameron's description of his investigation will be found on page 147.—ED. L.

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a statement of the cook may tend to elucidate matters. In her evidence she says she was doubtful with regard to the freshness of one of the eggs used in making the custard, and the custard was made on the day prior to that on which it was eaten. It must be remembered that the weather was very hot, and it is quite possible that this egg caused an extensive development of ptomaines in the whole custard. As I have already mentioned, two nuns were the only inmates of the institution who escaped poisoning, and they had not partaken of the custard. Sir C. Nixon was brought down from Dublin to assist the local medical men in treating the sufferers and investigating all the circumstances of the extraordinary occurrence. Though the lives of all the patients cannot yet be pronounced to be out of danger, the medical men are very hopeful that no more deaths will occur. Meantime the report of the analyst is anxiously looked forward to, not alone by the general public, but also by medical practitioners, who are naturally interested in the scientific aspects of the case.

The Elections: Attack on a Medical Man.

The contest in Cork lies between Parnellites and Anti-Parnellites, and the political leanings of one of the local medical men are well known to incline towards the Anti-Parnellites. Last Sunday whilst driving in the suburbs he was met by a crowd returning from a Parnellite meeting and was struck on the head by either a hand or stick. His hat was broken, but he received no serious injury. I must say this is a very unusual occurrence, for even in times of great excitement the populace in Ireland treat medical practitioners with the greatest courtesy.

Health of Irish Cities.

The following death-rates show that Cork and Waterford are in a healthy condition:—Belfast, 27·1 per 1000; Limerick, 26·7; Dublin, 24·3; Cork, 18·0; and Waterford, 10·0.

Out-door Musical Promenades for the Working Classes of Cork.

The Mayor of Cork has taken an important step towards procuring healthful amusement for his poorer fellow citizens. Through his instrumentality an Amusements Committee has been formed for the purpose of providing bands to play in the evening in the beautiful suburbs surrounding Cork. Captain Adam, Band President of the 1st South Lancashire, wrote to say that the band of his regiment, with the entire approval of the officers, proposed to give a military concert in one of the city halls for the purpose of raising a fund in aid of the Mayor's project. This generous offer was gladly accepted, and a strong inducement will be held out to the working classes to enjoy the fresh air.

The Disappearance of Typhus Fever in Belfast: a Correction.

In the report on the health of the city of Belfast for 1894 in our last issue (p. 117) it is said that "typhoid" fever is dying out; this should be *typhus* fever.

Irish Workhouses and the Irish Medical Association.

I understand that the Local Government Board has sent circulars to the various boards of guardians, asking for information in reference to the serious allegations made by Sir Philip Smyly, M.D., and Mr. W. J. Hepburn, F.R.C.S. Edin. (the chairman and honorary secretary of the Irish Medical Association), relative to the condition of Irish workhouses. The committee appointed by the Belfast board of guardians to look into this matter reported that, as a result of their investigations these complaints did not apply to the Belfast Workhouse. The nursing staff, they say, is ample and efficient; the food is of excellent quality, and is varied and suitable for different ailments under treatment; the beds are of the newest and most improved description for infirmary and hospital use; and the sanitation and ventilation are both good. The medical officers have no suggestions to submit at present, as all their previous recommendations have been carried out. The committee add that they regret that the allegations should have received so much publicity in view of the fact that the workhouses concerned are not indicated. At a meeting of the Lisburn board of guardians Dr. Mackenzie, medical officer, reported on July 9th in reference to the condition of the workhouse and inmates, in accordance with the desire of the Local Government Board. The report was generally favourable, but the medical officer stated that the diet of the inmates was insufficient and would require revision. One of the guardians present said he was astonished to learn that yellow Indian meal, which the farmers gave to their cattle, was one of the articles of diet. He disapproved of this, and thought with Dr. Mackenzie there should be a change. The report was referred to the House Visiting Committee.—The committee appointed by the board of guardians overseeing the Ballymoney Workhouse handed in a report stating that the house was in a satisfactory condition, with which the medical officer concurred, and that the remarks of the Irish Medical Association did not in any way apply to their institution.—Dr. Fleming, medical attendant at the Omagh Workhouse, reported to the guardians, in reply to the Government Board Circular, that the nursing and caretaking of the patients in the infirmary was insufficient. There are six wards in the infirmary proper and two large ones in the main body of the house all under the care of one nurse. He recommended the employment of an assistant nurse under the supervision of the present one, whose health is endangered by hard work and confinement. He approved of the food as being fair.

Proposed Extension of Belfast Boundary.

It is stated that the Corporation of the City of Belfast intend to have an Act of Parliament introduced during the next Parliamentary session in order to extend the borough boundary so as to take in the area embraced within the Parliamentary boundary. One great advantage of this extension will be that certain districts in which there is at present a defective sanitary arrangement will be properly drained. The Ligoniel suburb is at present in a most unsatisfactory condition, and in the east side of the city the Connswater River is in a deplorable state. Both these areas would be made right under this new scheme.

Portrush Waterworks.

The Local Government Board have sanctioned a loan of £2000 for the improvement of these waterworks. It is hoped that the proposed changes in these works will give a water-supply that both in quantity and quality will be sufficient for such a popular and rapidly-growing seaside resort as Portrush now is.

Death of Mr. English, of Keady, co. Armagh.

I regret to have to announce the death of Mr. English, at his father's residence, Keady, co. Armagh, of pneumonia, on July 14th. He had been in failing health for some time. Mr. English was a Licentiate of the Royal Colleges of Physicians and Surgeons, Edinburgh. He was a young medical man, greatly liked.

Cork Societies' Medical Officers' Indemnity Fund.

Mr. Donovan, the honorary secretary of the above fund, has received £10 from the Yorkshire Branch of the British Medical Association.

Mr. Joseph Edward Kenny, L.R.C.P., L.R.C.S. Edin., L.A.H. Dub., the newly elected member of Parliament for the College Green division of Dublin, is the coroner for the city of Dublin.

July 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Chronic Poisoning by Coffee.

DR. GILLES DE LA TOURETTE[1] has rendered useful service by reminding the profession of the possibility of toxic symptoms following the inordinate ingestion of coffee. No mention is made of this danger in standard works on medicine. Taking into account, however, the growing popularity of coffee drinking amongst the "upper ten" and their close imitators "the middle million," it is important that a habit which in moderation is in nowise hurtful, but in excess may act as a disturbing factor, should be strictly regulated. Dr. Gilles de la Tourette tells us that chronic coffee poisoning is almost always mistaken for the troubles engendered by the abuse of alcohol. In both cases the stomach and the nervous system bear the brunt of the attack. In effect, caffeic and alcoholic gastritis are nearly identical as to their symptoms—morning vomiting of glairy mucus (*pituites*), pain in the pit of the stomach, thickly-coated tongue, and loss of appetite. The disgust excited by even the idea of solid food is such that these patients eat nothing else but bread soaked in their poison—coffee. There supervene then nausea, vomiting, and painful acid eructations, and

[1] Société Médicale des Hôpitaux, July 5th.

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the sufferer finally becomes a victim to caffeic cachexia. The circulatory system becomes in its turn attacked, the pulse being slowed to a marked extent. Insomnia is common, and if sleep persist it is disturbed by dreams of a terrifying or professional nature, recalling the nervous disturbance met with in alcoholism. The resemblance is rendered closer by the existence of marked tremor of the muscles of both extremities, and a fibrillar trembling of the tongue muscles, which may extend to the facial muscles. Cramps, often very painful, of the thigh and calf muscles are frequently noted. In certain patients sensibility is diminished, but the reflexes generally remain normal. Paralyses have not yet been seen. The above-mentioned symptoms are not persistent, the suppression of coffee sufficing to bring about their prompt disappearance. It would seem that elimination was in this case more rapid than in the case of alcohol, for suppression is followed by improvement more quickly in one instance than in the other. The abuse of coffee by children has in several instances determined an arrest of development. It is not often that children make an immoderate use of coffee in England, but the same cannot certainly be said of tea, the alkaloid of which is identical with that of coffee. English parents would do well to restrict the supply of tea to children. Neglect of this rule is, I suspect, responsible for many digestive and nervous troubles, the origin of which is vainly sought by the puzzled family medical attendant.

The President of the Republic at the Hôtel-Dieu.

M. Félix Faure has signalised his tenure of office by frequent visits to the Paris hospitals, where his affability has rendered him most popular amongst both patients and students. His stature has, during these friendly visits, generally sufficed to single him out when surrounded by our *confrères*. A few weeks ago, however, when visiting the St. Louis Hospital he had to "take a back seat" in this respect, for he was accompanied by the tallest of French hospital surgeons, M. Marchand, and their appearance side by side was greeted by an amused laugh. On Thursday last the popular Chief of the State inspected the wards of the Hôtel-Dieu and afterwards addressed the entire *personnel* in the courtyard in the following terms :—

"Je ne veux pas quitter l'Hôtel-Dieu sans remercier les chefs de service, les savants médecins, les internes, les sœurs, les infirmiers, tous ceux, en un mot, qui se dévouent, dans cette maison de la souffrance, au service des malheureux. Vous avez pu voir que je m'informe fréquemment, auprès des malades, de leur état et des soins qui leur sont donnés. Ils sont unanimes à reconnaitre les délicates attentions dont vous les entourez. Je suis heureux de me faire leur organe et de vous remercier tous, en leur nom et au nom de la patrie. Comme chef de l'État, je tiens à vous dire combien vos services sont appréciés, combien nous vous en sommes reconnaissants. J'ai voulu venir à l'Hôtel-Dieu à la veille de notre fête nationale, parce qu'il me semble que d'ici je m'adresse à tout le corps médical de Paris et que le lieu était bien choisi pour remettre les récompenses accordées à l'occasion du 14 juillet. Vos médecins recevront leurs décorations dans cette maison, dans ce jardin, comme des soldats reçoivent le ruban sur le champ de bataille, comme des chefs au milieu de leurs troupes."

He then affixed to the coat of Professor Tillaux the Cross of Commander of the Legion of Honour, and handed the Cross of Officer of the same Order to Dr. Nicaise, surgeon of Laënnec Hospital, and Dr. Constantin Paul, physician to the Charité Hospital. On Dr. Deleus, surgeon to the Lariboisière Hospital, Dr. Ferrand, physician to the Hôtel-Dieu, Dr. Landrieux, physician to Lariboisière Hospital, and Dr. Kirmisson, surgeon to the Hospice des Enfants Assistés, he conferred the Cross of Chevalier of the Order. The President did not forget the more humble contributors to the relief of human suffering, for he distributed amongst several nurses silver and bronze medals. The interesting ceremony ended by a vote of thanks to M. Félix Faure, proposed by Dr. Peyron, director of the Assistance Publique.

Price of Tobacco to Hospital Patients.

The Minister of Finance has just decreed that the fragrant weed shall be supplied to the in-patients of French hospitals at the under-mentioned rate :—

Tobacco for smoking purposes,	1½ franc the kilogramme.
,, ,, snuff	ditto.
,, ,, chewing	2 francs the kilogramme.

We may well echo the expression of surprise uttered by the *Bulletin Médicale* at the toleration of chewing in the wards of hospitals, such a disgusting practice being obviously incompatible with the maintenance of that state of cleanliness that should obtain in all nosocomial establishments.

A Sign of the Times.

The *Union Médicale* informs us that it is the intention of the *Assistance Publique* to provide at each Paris hospital for the convenience of students accommodation for the storing of bicycles. If the current continues in the same direction we may soon expect to see hospital physicians and surgeons alight at the doors of these establishments not from their carriages, as at present, but from their cycles.

The French Army.

Of 320,048 young men called upon to serve in the army in 1894, 26,081 were declared unfit for service. During the same year 365 soldiers were discharged because of maladies or infirmities contracted during their term of service, whilst no fewer than 11,807 were in like manner discharged on account of ailments having no connexion with the exigencies of their military duties.

July 16th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Blind Graduate.

AN incident not less touching than interesting occurred at the graduation ceremony held the other day at the Istituto di Studi Superiori in Florence. A young gentleman, Signor Luigi Ansaldi, of Rocca Scrivia, blind from birth, took his degree in the department of Literature and Philosophy, after a brilliant course of study in which he won the admiration and esteem of teachers and class-fellows alike. His graduation thesis was a kind *apologia pro vitâ suâ*, entitled "Compensazioni dei Sensi nei Ciechi" (Compensations in the Senses of the Blind). It was an acute and well-thought-out monograph conveyed in excellent style, and was pronounced by the "Commissione di Professori" (examining professors) to be an important contribution to the methods already in use for aiding the moral and intellectual culture of the blind. In fact, on the motion of his Excellency Signor Pasquale Villari, sometime Minister of Public Instruction (the well-known author of the "Lives of Machiavelli and Savonarola"), it was recommended by the Istituto di Studi Superiori for the honour of publication. One of the medical faculty said of it: "E lavoro fisico-psicologico di grande importanza e affatto nuovo" (It is a physico-psychological work of great importance and quite original). Needless to say that Signor Ansaldi received an "ovation" from his class-fellows of all faculties as well as from the general public.

Heat and Snake-bite.

The excessive heat prevailing these last few weeks throughout the kingdom has had one remarkable effect—to increase the virulence of snake-bite and the mortality thence arising. This is a very common lesion in Italy, where so many of the agricultural poor are employed in the *macchie*, or tracts of stunted forest growth, mainly in gathering fuel for the charcoal burners. As a rule the vipers with which these places abound are not deadly—at least, the wounds they inflict are nearly always susceptible of a few days' cure in the local hospital. With the intense heat, however, that since the middle of last month has made itself felt throughout the peninsula a distinct exacerbation of the lesion has declared itself, and cases of death have been so common, particularly in the Alta Italia, as to engage the serious attention of practitioners. On the 13th inst. (I hear from Brescia) a youth of fifteen was bitten on the foot by a viper at Lumezzano, and in a few hours the familiar symptoms of virulent snake-bite (swelling, pain, and ultimately coma) developed themselves, and he died in violent convulsions—all medical aid notwithstanding.

The Sale of Mushrooms.

Poisoning of another kind, still more frequent, is that from the use of mushrooms, particularly those which, in the dry state, are hawked about by the so-called "vivenditori ambulanti." A municipal edict has just been issued to check this constantly recurring calamity at its source, and accordingly fresh mushrooms are allowed to be brought into the city only at certain fixed hours and at certain gates, where sanitary inspection is at once put in practice on them. Even after their being passed as belonging to the edible kind, the mushrooms thence consigned to the dealers' stores are once more subjected to expert examination, and their sale is limited to certain officially permitted quarters—that is, where the sanitary authority has stations. Hawking them about in the thoroughfares and by-streets is a penal offence.

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Indeed, the sale of them is allowed only by special licence. This is a most salutary regulation, to be applied (let us hope) to other articles of food hardly less dangerous when vended by irresponsible dealers.

July 16th

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Female Physicians and Pharmaceutists.

SOME weeks ago Miss Possaner, a lady who graduated in medicine at Geneva and is at present practising as "hospitant" in the obstetrical clinic of Professor Schanta, petitioned the Austrian Ministry for permission to practise in Vienna. Her request was refused, but, on the other hand, Mrs. Kerschbaumer was allowed some years ago to establish an ophthalmological home in Salzburg, where she carries on a practice in partnership with her husband, who is a physician. Several women have also received appointments as physicians in Bosnia, where the female portion of the population decline to be examined by a medical man. Although, according to the new sanitary law, every municipality is obliged to pay a fixed salary, complaints of the dearth of medical men are nevertheless made in some districts, because not every physician is willing to settle down in a dull country life, where he is surrounded by rustic prejudices and where his annual income hardly exceeds £80. The admission of women to medical practice is, therefore, an urgent necessity. The Hungarian Ministry is inclined to appoint women as pharmaceutists, and the majority of the pharmaceutical profession is in no way opposed to the innovation, for the new regulations as to study have caused a great want of assistants in this country.

Legal Penalties for Medical Negligence.

The Vienna Medical Chamber at the present moment has the following question under its consideration. A poor law medical officer having been called to see a man who had fallen ill with gastric symptoms he diagnosed acute alcoholism without making any examination, and prescribed soda-water with cold cataplasms. The condition of the patient became worse and another practitioner who was sent for found him unconscious and apparently in a fit of apoplexy. The patient died, and a charge of causing bodily harm was brought against the original medical attendant, in accordance with paragraph 431 of the Penal Law. The expert who gave evidence explained that although a careful examination might not have led to a different diagnosis, there was, in his opinion, a neglect of duty, for the poor law medical officer had not fulfilled his obligation of trying to find out the cause of the illness. The accused was fined £5 with twenty hours' imprisonment, a sentence which was confirmed by the Court of Appeal. By this decision the court declared that the neglect of examination had caused no injury to the patient, but that the medical officer ought to have known that his conduct might endanger life. This result has caused a great sensation throughout the profession of medicine, for it throws serious obstacles in the way of medical treatment. Who would perform a surgical operation if the above-quoted paragraph be interpreted in this manner? Every operative procedure exposes the patient to danger, and the surgeon will have to justify himself even in the cases where operations are successful. The law punishes the infliction of bodily injury by a medical man's ignorance or negligence, but does not punish the endangering of the patient's life or health when caused either by medical treatment or by neglect. The Medical Chamber has taken up this question, and at the last meeting a member brought in a motion referring to the provisions of the law as regards offences committed by medical men. Paragraph 431 is inapplicable hereto, for it imposes penalties amounting to £40 fine or three months' imprisonment, whereas paragraph 358 imposes only a fine of £40 in the case of actual injury or death due to neglect. The Chamber adopted this motion and will take steps to defend the profession against decisions which are not in conformity with the spirit of the law.

Loretin.

Dr. Trnka has published in the *Wiener Medicinische Wochenschrift* a paper on the utility of loretin in surgical practice. It is an inodorous, sulphur-coloured, mealy powder, producing neither local nor general toxic effects. It is employed instead of iodoform, for it causes but trifling granulation, limits secretion, and is also cheaper than iodoform. A compound of equal parts of loretin and calcined magnesia is well adapted for favouring primary healing of wounds; a solution of five parts of loretin with two parts of tragacanth and glycerine in one hundred parts of water possesses the same quality as collodion of depositing a filmy coating.

Professor Hering.

In Professor Hering, who has been elected successor to the late Professor Ludwig, the German University of Prague loses one of its best known members, and Austria its most able physiologist. I need mention only his ingenious theory of colours wherein he explained that the action of seeing is an expression for a tissue change in the visual purple, his experiments on anomalous contraction, and his interesting objections against the psycho-physical law of Fechner. He felt himself slighted because he did not succeed in obtaining the object of his ambition—the chair of the late Professor Brücke. At that time the Government gave him fair hopes of being appointed to a second chair of Physiology which was to be established in Vienna. Professor Hering and the late Professor Fleischl have been the most celebrated followers of the far-famed Brücke, to whom physiology owes so much.

July 14th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera in the Quarantine Camp.

SOME special Providence seems to have averted an explosion of cholera in the Holy Places, and we no longer hear of the dropping cases which preceded the feast days. Dr. Gauthier is now in charge of the pathological and bacteriological investigations into the sick and dead at the Tor quarantine camp, and it would seem from his reports that matters have been placed upon a more scientific basis than in former years. He reports on June 18th that he has made bacteriological researches in the case of eighteen suspected hospital patients suffering from diarrhœa, but that in every instance the result was negative. Fortunately, now, however, it is the rule, and not the exception, to conduct necropsies, and by this means two cases of certain cholera were found, though there is no record of these two men having been under any medical treatment before death. Both men came from the same steamer. The more typical case of the two showed great sinking in of the eyes without emaciation, intense congestion of the abdominal contents, enlarged liver and spleen, with bladder retracted behind the pubes and containing no urine. The stomach and small and large intestines were full of liquid holding white flakes in suspension, and this liquid eventually showed under the microscope rods, micrococci, staphylococci, and eventually comma bacilli upon all the cultures of peptone.

The Origin of Massage.

An annotation in THE LANCET of June 22nd invites search for the derivation of this word and the origin of the custom. At present I think we can hardly do better than accept the Greek μάσσειν, to knead, connected with the Sanskrit *mack*, to pound. The only Arabic word in Turkey or Egypt for massage after the bath or elsewhere is *takbees*, from the root *kubas*. There is an Arabic word *muss'h*, but it means to wipe away dust, and is never used for rubbing or kneading. Lastly, the operation of cracking the bather's joints, which occurs after the hot bath and before the muscles are kneaded, is called *tuck tuckah*. Medical rubbing has been used in Egypt for centuries, but whether before Roman times I do not know. Among the curiosities of Old Cairo are occasionally found stones which were used for massage. Visitors to Pompeii will call to mind a picture in the bath of a person undergoing massage, and readers of Cicero may remember his friend Asclepiades of Bithynia, who, after having learnt his profession at Alexandria under the best teachers of the day, settled in Rome in the beginning of the first century B.C.,

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and there introduced into medical practice both hydrotherapeutics and massage.

The Tourah Prison.

The chief prison in Egypt for male hard labour convicts is at Tourah, about eight miles south of Cairo, where the adjacent quarries, which once furnished limestone to the builders of the Great Pyramids, supply unlimited scope for labour six days a week. There are 950 convicts, and though 100 of them are "lifers," there are others whose term is only for six months. Strict discipline is maintained by sixty-five warders who are unarmed and do not carry even a stick or whip; but by night there are nine sentries and by day there are four, who patrol the roof and the outside of the prison, and who know how to use their loaded rifles with deadly aim. These sentries are blacks from the Equatorial provinces, and have prevented more than one attempted escape. Nearly all the convicts are natives of Egypt, the blacks only supplying five per thousand and the Nubians averaging only two per thousand. Any extra bad characters among the convicts, such as the ringleaders of attempted revolt or escape, are locked up at night in solitary cells to lessen their chances of contaminating their fellows. As a whole the convicts are by no means of a ruffianly type and their physiognomies are very like those of the ordinary peasant. In this country, where crime is at such a minimum and where even the lunatics are as quiet as sheep, it is not too much to hope that education and improved environment may one day do much to improve the lot of the townsfolk from whom the convicts are mostly drawn. The "ticket-of-leave" system has not yet been introduced into Egypt, and would certainly be worth a trial, for at present there is very little incentive to well-conducted convicts to lead a peaceful, hard-working life within the prison bounds. Every visitor cannot fail to be struck with the very healthy, well-fed appearance of the prisoners, and on inquiry I was told that there were only fourteen on the sick-list. The regulation space for the dormitories is a little over 700 cubic feet. A hospital consisting of two separate pavilions has just been built near the prison containing accommodation for twenty-four ordinary sick and forty infectious cases. Tourah prison went through a sad experience some years ago when its inmates were ravaged by typhus and relapsing fevers, and the remembrance of this epidemic has doubtless occasioned the remodelling of the cells and the present very satisfactory condition of the convicts. One man was pointed out to me as having killed his father, mother, wife, and children, and it might be easy to prove that he was suffering from homicidal mania, but we are not yet civilised enough to have a home for the criminal insane, and I doubt if he could be more profitably employed than in hewing stone and drawing water under medical supervision.

Detection of Criminals.

In Alexandria a special staff of European constables is being trained to apply the Bertillon method to prisoners, and so far good reports have been received. It may, perhaps, be doubted whether the Egyptian is a sufficiently accurate individual to profit by a careful series of measurements. On the other hand, it must not be forgotten that photographs of criminals are useless for the untrained eye of the native policeman.

Hospital for Infectious Diseases.

The first hospital devoted entirely to the treatment of infectious disease is now in full working order in the Abbassiyeh Desert, near Cairo, and is a natural development of the tents which have been in use until this year. The ground consists of several acres of desert, levelled and walled in, and roads to it are now being made by a gang of chronic lunatics from the neighbouring asylum. There are five detached buildings on the pavilion system for typhus fever, small-pox, disinfection, necropsies, &c. There are twenty-six beds and unlimited space for tents if that number should be exceeded. The disinfecting block is under the charge of a German engineer, who lives on the spot with the native doctor. Infectious clothing is submitted to dry heat (230° F.) for three hours in two stoves, and a bath-room and douche for the attendants have not been forgotten. The laundry is fitted up with English machines, and the store-rooms are a model of neatness and complete in every respect. The young native house physician is just recovering from an attack of typhus fever.

Cairo, July 1st.

Obituary.

CORNELIUS S. HALL, M.R.C.S. ENG., L.S.A.

THE death is announced, at his residence in Carlisle, on July 6th, of Mr. Cornelius S. Hall, one of the oldest practitioners in that city and one holding many appointments. After being "apprenticed" to a country practitioner he studied at the London Hospital, and during his course was one of the medical visitors appointed by Government in the cholera plague of 1854. He then volunteered for service in the Crimea, where he had for one "chum" the present surgeon to the Queen in Scotland, Dr. Patrick Heron Watson. On his return to England he spent eighteen months in Manchester, whence he moved to Carlisle, where he at once obtained an appointment at the Dispensary and Fever Hospital. In 1862 he became factory surgeon, in 1864 medical officer to the workhouse hospital, in 1875 medical officer to the Carlisle rural district authority, and in 1888 surgeon to the Police Force. He always took a great interest in Volunteer movements, and attained the rank of brigade-surgeon-lieutenant-colonel. Of scientific subjects he was especially fond, botany, geology, meteorology, and microscopy being special hobbies. He was president of the Carlisle Microscopical Society for many years, and Fellow of the Royal Microscopical Society. His papers on the Treatment and Burial of the Dead; Noise, Silence, and Sound; Pasteur and his Work, &c., were of great interest and were quoted by newspapers all over the country. Workhouse nursing was a subject needing special reformation, and into this he threw his whole heart. A paper on Workhouse Nursing was eagerly sought by many interested in the work and gave quite an impetus to hospital nursing. He was a man of wide sympathies and liberal-minded in all things. As a worker he was enthusiastic and accurate; no trouble was too great. He was universally respected and beloved, and his death will make a void not easily filled.

WILLIAM CROUDSON BARNISH, M.R.C.S. ENG., L.S.A.,

MEDICAL OFFICER OF HEALTH, WIGAN.

ON June 27th the profession lost a noble member and Wigan an efficient, courteous, discriminating, and obliging health officer. William Croudson Barnish was an excellent type of general practitioner and one who was able to discharge his duties as health officer without friction with his brother practitioners or clashing in an unreasonable way with his patients. Mr. Barnish in early life assisted his father, who was a chemist in the town; but his love of chemistry and natural science led him, on the advice of his brother-in-law (the late Dr. Birkenhead, who was afterwards Professor of Chemistry in the Liverpool School), to study medicine. He accordingly entered at the Manchester School of Medicine and qualified as M.R.C.S. Eng. and L.S.A. in 1868. After holding a couple of house surgeoncies he joined the late Mr. Fisher, who had an extensive surgical practice in Wigan, and the partnership lasted till Mr. Fisher's death some years ago. For twenty-five years Mr. Barnish was medical officer of health for Wigan. He was a genuine health officer, and numerous are the improvements which he has effected. Several epidemics of small-pox, typhus fever, and typhoid fever he was able to combat, and during the past ten years effected many changes, such as the abolition of the old small-pox hospital and the building of a new sanatorium, which is a model for a town of the size of Wigan. At the time of his death he was senior honorary medical officer to the Royal Albert Edward Infirmary, and the governors, to mark their sense of appreciation, two years ago made him one of its vice-presidents. He also gave numerous ambulance lectures to various classes, and latterly acted as examiner. Mr. Barnish was beloved by his patients and by all with whom he came in contact. This year in March he contracted influenza, which he appeared not to be able to throw off, and although he kept to his work up to within two months of his death his friends could see he had not his usual vivacity. Yet without murmur he stuck to his post till rest was absolutely necessary, and he was ordered away for a time, but this brought no relief to the cardiac failure from which he suffered; he returned

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home without improvement, bore his affliction manfully, and passed quietly away on the date above mentioned at the age of fifty-five years, leaving a sorrowing widow and six children to mourn their loss. He was interred in the family vault at the Wigan Parish Church on July 1st, the funeral being attended by his relatives, professional brethren, and members of the Sanitary Committee, of the Corporation, and of the Infirmary Board of Management.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Elias Rodriguez, Professor of Therapeutics and Forensic Medicine in Carácas; and Dr. José Maria Teixeira, Professor of Pharmacology and Therapeutics in the University of Rio de Janeiro.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen were, at the quarterly meeting of the Council on Thursday, July 11th, elected to the various offices for the ensuing collegiate year:—

Hunterian Professors.—Charles Steward, Conservator of the College Museum, M.R.C.S. Eng. (St. Thomas's Hospital); subject of lecture not stated.—John Alfred Coutts, M.B. Cantab., M.R.C.S. Eng., (St. George's Hospital), on Infantile Syphilis.—Leonard Erskine Hill, M.B. Lond., M.R.C.S. Eng. (University College Hospital), on Cerebral Pressure and the Cerebral Circulation.

Arris and Gale Lecturer.—Ernest Henry Starling, M.D. & B.S. Lond., M.R.C.S. Eng. (Guy's Hospital), on the Physiological Causation of Dropsy.

Erasmus Wilson Lecturer.—Walter George Spencer, F.R.C.S. Eng., M.B. and B.S. Lond. (Westminster Hospital), on the General Pathology of Bone.

Pathological Curator.—James Henry Targett, F.R.C.S. Eng., M.B., B.S. and M.S. Lond. (Guy's Hospital), re-elected.

Anatomical Assistant in the Museum.—Richard Higgins Burne, B.A. Oxon., re-elected.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bonn:* Professor Mikulicz of Breslau, who was invited to succeed Professor Trendelenburg in the Chair of Surgery, having declined to migrate, the post has been offered to Dr. Schede, director of the Surgical Side of the Eppendorf General Hospital, Hamburg.—*Tubingen:* Dr. Henke, Professor of Anatomy and Director of the Anatomical Institute, is retiring. Professor Curtius of Kiel has been appointed to the Chair of Chemistry, in succession to Dr. Lothar von Meyer.

DR. D. H. ATTFIELD, M.A. Cantab., English Quarantine Medical Officer of the Egyptian Government at Suez, who last year during the Mecca Pilgrimage months filled the post of subdirector of the quarantine camp at El Tor, has this year, during the similar period, been appointed the chief director of the extra Egyptian Camp at Ras Mallap. Dr. Attfield is the son of Professor Attfield, the editor of the British Pharmacopœia.

ROYAL COLLEGE OF SURGEONS IN IRELAND—Prize List, Summer Session, 1895:—The Barker Anatomical Prizes: N. H. Alcock and C. J. Patten (equal), £26 5*s.* each; W. J. Sweeny, special prize, £15 15*s.* The Carmichael Scholarship: F. J. Palmer, £15. The Theory and Practice of Surgery: L. McDowell, gold medal; G. A. Robinson, silver medal; Miss C. L. Williams, certificate. Practical Histology: D. Hadden, first prize; H. Hall, second prize. Practical Chemistry: P. A. Frazer, first prize; C. C. Meek and W. J. Anglim (equal), second prizes. Public Health and Forensic Medicine: A. I. Eades, first prize; Miss C. L. Williams, second prize. Materia Medica: R. H. D. Pope, first prize; G. R. McDonald, second prize. Practical Pharmacy: S. R. Godkin, first prize; M. Gavin, second prize. Biology: M. Gavin, first prize; W. McLorinan and W. J. Anglim (equal), second prizes. The preliminary Examination for the commencement of medical study of the Royal Colleges of Physicians and Surgeons in Ireland for sessions 1895–96 will be held on Tuesday and Wednesday, Oct. 1st and 2nd, 1895. Prospectuses can be had on application.

BOOKS ETC. RECEIVED.

BALE, J. & SONS, Great Titchfield-street, Oxford street, London, W.
Early Scoliosis, or Curable Curvatures of the Spine. By Percy G. Lewis, M.D., M.R.C.S. 1895. pp. 49. Price 2*s.* 6*d.*

BROGGERS, A. W., Kristiania.
Festskrift i Anledning af professor; Doctor medicine Hjalmar Heibergs; 25 Aars Jubilæum som professor ved Kristiania Universitet Fra forhenværende og nuværende Assisteuter. 24 de Mai, 1895. pp. 270.

CASSELL & COMPANY, London, E.C.
A System of Surgery. Edited by Frederick Treves, F.R.C.S. Vol. I. Illustrated. 1895. pp. 1152.

CHURCHILL, J. & A., New Burlington-street, London, W.
Chemistry of Urine. By Alfred H. Allen, F.I.C., F.C.S. 1895. pp. 212. Price 7*s.* 6*d.*
The Conditions of Radical Cure in Cancer. By Herbert Snow, M.D. Lond.; reprinted papers. 1895. pp. 63. Price 2*s.* 6*d.*

EDWARDS & DOCKER Co., Philadelphia.
Skiascopy and its Practical Application to the Study of Refraction. By Edward Jackson, A.M., M.D. Illustrated. 1895. pp. 112.

FISCHER, GUSTAV, Jena.
Lehrbuch der Allgemeinen Pathologie und der Pathologischen Anatomie. Von Dr. Ernest Ziegler. 8 Auflage. 1895. pp. 1025.

GRIFFIN, CHARLES, & Co., Exeter-street, Strand, London, W.C.
Poisons: Their Effects and Detection. By Alexander W. Blyth, M.R.C.S., F.I.C. Third Edition. Illustrated. 1895. pp. 724. Price 21*s.*
A Medical and Surgical Help. By William J. Smith, F.R.C.S. Illustrated. 1895. pp. 333. Price 6*s.*

HEINEMANN, WM., Bedford-street, London, W.C.
Conventional Lies of our Civilisation. By Max Nordau. Translated from the seventh edition of the German Work. Second edition. 1895. pp. 346. Price 17*s.* net.

LEA BROTHERS & Co., Philadelphia.
Remote Consequences of Injuries of Nerves and their Treatment. By J. K. Mitchell, M.D. 1895. pp. 245.

LEHMANN, J. F., Munchen.
Atlas des Gesunden und Kranken Nervensystems. Von C. Jakob. 1895.

MACMILLAN & Co., Bedford-street, London, W.C.
The Theory and Practice of Counter-irritation. By H. Cameron Gillies, M.D. 1895. pp. 236. Price 6*s.* net.

SWEET & MAXWELL, Chancery-lane, London, E.C.
The Law of Copyright in Designs. By L. Edmunds, D.Sc., L.L.B. assisted by T. M. Stevens, M.A., B.C.L., and M. W. Slade, B.A. 1895. pp. 291.

SWAN SONNENSCHEIN & Co., Paternoster-square, London, E.C.
Microbes and Disease Demons. By Edward Berdoe, L.R.C.P. Edin., M.R.C.S. 1895. pp. 93. Price 1*s.*
Nature *versus* Natural Selection: An Essay on Organic Evolution. By Charles C. Coe. 1895. pp. 591.
The Climates of the Geological Past, and their Relation to the Evolution of the Sun. By Eug. Dubois. 1895. pp. 167. Price 3*s.* 6*d.*

THACKER & Co., Newgate-street, London, E.C.
A Guide to Hindustani. By G. S. A. Ranking, B.A., M.D., Cantab. Third edition. 1895. pp. 246.

The Mystery of Ourselves; or Soul and Body; by Chillingham Hunt (Dean & Son, 160A, Fleet-street, London, E.C.); price 1*s.*—The New Treatment of Gout by Pitkeathly cum Lithia; written by an M.D. (Reid & Donald, George-street, Perth, 1895); price 1*s.*—Catechism Series: Surgery; Part I. (E. and S. Livingstone, Edinburgh); price 1*s.* net.—A Report on Salophen; by B. H. Waters, A.M., M.D. (reprint from the New York Medical Journal for May, 1895).—A German-English Medical Thesaurus; by Rev. H. Losch, M.D. (published by the Author, Philadelphia, Pa., 1895).—Manuel de Gymnastique; par A. G. Fontana (Société d'Éditions Scientifiques, Paris, 1895).—Science Progress; July, 1895 (the Scientific Press, 428, Strand, London, W.C.).—Report for 1894 on the Progress of Pharmacy in its Relation to the Future Revision of the "British Pharmacopœia," 1885; by J. Attfield, Ph.D., F.R.S. (Spottiswoode & Co., New-street-square, London, 1895).—The Sick Poor in Workhouses; by Ernest Hart, D.C.L.; second series (Smith, Elder, & Co., Waterloo-place, London, 1895).—Biographical Sketch of John Reid, surgeon, Glasgow, in whose memory was founded the "John Reid Prize," open to all Medical Students of Glasgow; by John Lindsay Steven, M.D. (A. MacDougall, Glasgow); 1895.—Report of 145 Operations done for the Removal of Ovarian Tumours and Pathological Conditions associated with the Ovaries and Uterine Appendages only; by A. Van der Veer, M.D.; reprint (C. F. Williams, Albany, New York); 1895.—National Righteousness: Letter from the Representative Board of the Anti-Opium Societies; July, 1895 (Morgan & Scott, London); price 2*d.*—The Natural History of Plants; Part XIV. (Blackie & Son, Old Bailey, London); price 2*s.* 6*d.* net.—Sir Henry Irving: a Record of Over Twenty Years at the Lyceum; by Percy Fitzgerald, M.A.; new edition (Chatto & Windus, Piccadilly, London; 1895); pp. 149.—Nursing in a Nutshell; by a Doctor of Medicine (Iliffe & Son, St Bride-street, London, E.C.); price 6d.—The Truth

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about Vaccination, being a Report on Vaccination as a Branch of Preventive Medicine; by Ernest Hart, D.C.L.; second edition (Smith, Elder & Co., Waterloo-place, London); 1895.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BISS, C. Y., M.D. Cantab., F.R.C.P. Lond., M.R.C.S., has been appointed Physician to the Hospital for Consumption, Brompton.

BRINDLEY, ALBERT E., M.D. Lond., M.B., Ch.B., B.Sc. Vict., has been appointed Resident Medical Officer to the Manchester Royal Infirmary, vice Brockbank, resigned.

BUNCOMBE, WM. DAVEY, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Superintendent of the City of London Infirmary, Bow, vice C. H. Buncombe, resigned.

BUTLER, T. H., M.B. Oxon., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road.

DRAKE, A. T., M.B., L.R.C.S., L.M. Irel., has been reappointed Medical Officer for the No. 4 Sanitary District of the Greenwich Union.

EGERTON, W. A. H., L.R.C.S., L.M. Irel., has been appointed Assistant Medical Officer to the Board of Guardians, Chelsea.

GAYLOR, EDWD., L.R.C.P., L.M. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Ripley Urban District Council.

GIDLEY, GUSTAVUS GEORGE, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Cullompton and Butterleigh and Kentisbeare and Blackboro' Districts of the Tiverton Union, vice Lloyd, resigned.

GOODING, ANGELO, L.R.C.P., M.R.C.S., has been appointed House Surgeon to the London Hospital.

HARPER, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, for the Thedwastre Rural Sanitary District.

HICHENS, F., M.D. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Redruth Urban Sanitary District.

KITE, EDWIN W. D., M.B., M.R.C.S., L.S.A., has been appointed Factory Surgeon to the Oulerton District, Sheffield, vice Payne, resigned.

LATHAM, HENRY, M.B., C.M. Edin., has been appointed House Surgeon to the Stockport Infirmary.

LODGE, G. H., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant House Surgeon to the Rotherham Hospital and Dispensary.

MILLSON, G., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for Newington.

MUDGE, Z. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Phillack Urban District Council.

NEVETT, ALFRED J., L.R.C.P., L.R.C.S. Edin., has been appointed Junior Assistant House Surgeon to the Stockport Infirmary.

STUART, J. A. ERSKINE, L.R.C.P. Edin., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Borough of Batley, vice Swann, deceased.

THOMSON, SAMUEL W., M.B., Ch.B. Univ. Vict., has been appointed Visiting Surgeon to the Stockport Infirmary.

WHITAKER, J. RYLAND, B.A., M.B. Lond., F.R.C.P. Edin., L.R.C.S. Edin., has been elected Lecturer on Anatomy at Surgeons' Hall School of Medicine, Edinburgh, vice Macdonald Brown, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £60, with board and washing.

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District £100 per annum, for the Port Sanitary District £20 per annum, and as Medical Attendant at the Sanatorium, £30 per annum. Applications to the Town Clerk, Lowestoft.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident), for six months. Salary at the rate of £100 per annum.

COUNTY BOROUGH OF WEST HAM.—Resident Medical Superintendent for the Borough Hospital for Infectious Diseases at Plaistow. Salary £200 per annum, with annual increments of £10 up to a maximum of £250, and apartments and washing. Applications to the Town Clerk, Town Hall, West Ham, E.

GRAVESEND HOSPITAL.—House Surgeon. Salary £80 per annum, with board and residence.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Junior House Surgeon for six months. Board, lodging, and laundry in the hospital provided.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician, non-resident, for three months.

MIDHURST UNION, Sussex.—Medical Officer for the Union Workhouse, situate at Eastbourne, near Midhurst. Salary £20 per annum, with extra fees for Midwifery cases. Applications to the Clerk, Midhurst.

MORPETH DISPENSARY.—House Surgeon, unmarried. Salary £120 per annum, with furnished house, coals, and gas. Applications to Mr. N. J. Wright, Morpeth, Northumberland.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Assistant House Surgeon. Board and residence provided.

PARISH OF CAMBERWELL, London.—Assistant Medical Officer and Second Assistant Medical Officer for the Infirmary at Havil-street, Camberwell. Salary of the Assistant Medical Officer at the rate of £120 per annum, increasing £10 annually to £150, with apartments, board, and washing; and that of the Second Assistant Medical Officer £50 per annum, with the same allowances. The latter appointment for one year only. Applications to the Clerk to the Guardians, 27, Peckham-road, S.E.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, London.—Resident House Surgeon, unmarried. Salary £100 per annum, with partial board.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Assistant Medical Officer. Salary £130 per annum, with furnished apartments in the Infirmary. Applications to the Clerk to the Guardians, Union Offices, Eccles New-road, Salford.

UNIVERSITY OF GLASGOW.—Lectureship on Surgery and Clinical Surgery at Queen Margaret College for one year. Salary £100 per annum.

UNIVERSITY OF GLASGOW.—Two Examiners in Medicine.

YORK DISPENSARY.—Resident Obstetric House Surgeon, unmarried. To attend midwifery cases at their own homes. Salary £150 per year, with furnished apartments, coals and gas.

Births, Marriages, and Deaths.

BIRTHS.

GRAY.—On July 8th, at Lansdowne House, Essex-road, London, N., the wife of Thomas Underwood Gray, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

HARFORD-BATTERSBY.—On July 14th, at Earlham-grove, Forest-gate, E., the wife of Charles F. Harford-Battersby, M.A., M.D. Camb., of a daughter.

HIND.—On July 9th, at 60, New-street, Jersey, the wife of Alfred E. Hind, F.R.C.S. of a son.

OWEN.—On July 10th, at Hampton-on-Thames, the wife of Arthur Deaker Owen, M.R.C.S., L.R.C.P. Lond., of a son.

RENDALL.—On July 7th, at Aix-les-Bains, the wife of Stanley Rendall, M.D. Paris, M.B. Edin., M.R.C.S. Eng., of a son.

TWEED.—On July 10th, at Upper Brook-street, Grosvenor-square, the wife of Reginald Tweed, M.D., of a son.

MARRIAGES.

BARNES—SMITH-GORDON.—At St. Andrew's, the Parish Church, Charmouth, Dorset, George Barnes, L.R.C.P. Edin., of Castle Hill House, Axminster, to Charlotte Maria, second surviving daughter of Sir Lionel Smith-Gordon, Bart., of Fern Hill, Charmouth.

COX—YELD.—On July 8th, at the Parish Church of St. Mary, Stockport, William Alfred Spencer Cox, M.R.C.S. Eng., of Sheffield-gardens, Campden-hill, W., to Florence Lucy, eldest daughter of the late William Walter Yeld, of Churchgate-house, Stockport.

DALTON—MOSSE.—On July 11th, at the church of St. Mary-the-Less, Cambridge, James Henry Cheshyre Dalton, M.D., Trinity College, Cambridge, to Alice Tenison, elder daughter of the late Rev. S. Tenison Mosse, Vicar of Somerby, Leicestershire.

GIPPS—POWER.—On July 10th, at St. Mary the Virgin, Datchet, Alexander G. P. Gipps, Staff-Surgeon R.N., to Mary, youngest daughter of the late Rev. Henry B. Power, Vicar of Bramley, Surrey.

NORTHCOTE—ANDERSON.—On July 11th, at Christ Church, Lancaster-gate, by the Rev. F. R. Hodgson, M.A., Rector of Little Gaddesden, assisted by the Rev. F. A. O'Brien, M.A., Vicar of Walton, Warwick, Ernest Augustus Northcote, LL.B. Camb., Puisne Judge of the Supreme Court of Judicature, Jamaica, son of the late Stafford Henry Northcote, of Belgrave-road, S.W., to Helena Jane (Lena), eldest daughter of Izett W. Anderson, M.D. Edin., formerly of Kingston, Jamaica.

PANTIN—HUTTON.—On July 10th, at the Parish Church, Pocklington, Charles S. Pantin, M.D., F.R.C.S., to Anna, daughter of the late Rev. Francis P. B. N. Hutton, Vicar of St. Saviour's, Leicester.

PRANGLEY—DOMMETT.—On July 18th, at St. Paul's Church, Upper Norwood, by the Rev. W. H. Graham, assisted by the Rev. C. W. Prangley (cousin of the bridegroom), Henry John Prangley, L.R.C.P. Lond., M.R.C.S. Eng., of Tudor House, Anerley, only son of the late John Peard Prangley, of Heytesbury, Wiltshire, to Clara Elizabeth, youngest daughter of Charles William Dommett, of Moorfield, Anerley. No cards. At home Sept. 9th, 10th, 11th and 12th, 3 to 6 P.M.

DEATHS.

COATES.—On July 10th, in Calcutta, Brigade-Surgeon J. M. Coates, M.D., Indian Medical Service (retired).

GREENE.—On July 11th, Walter Greene, L.R.C.P. Lond., M.R.C.S. Eng., of Wallingford, Berks, aged 57.

GRIFFIN.—On July 13th, at the residence of his mother, East Park-terrace, Southampton, John Griffin, M.B. Edin., of Port Elizabeth, South Africa, eldest son of the late R. W. Waudby Griffin, M.D.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 18th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M
July 12	29·61	N W.	61	53	115	69	59	0·19	Cloudy
" 13	29 86	N.W.	61	54	122	80	53	...	Cloudy
" 14	29·84	N.W.	66	54	121	72	61	...	Cloudy
" 15	29·95	N.W.	62	55	110	71	54	...	Cloudy
" 16	29·98	S.W.	60	56	105	70	56	...	Overcast
" 17	29·84	S.W.	64	60	121	81	56	...	Hazy
" 18	29·80	S.W.	65	69	111	73	62	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

THURSDAY.—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (Royal Medical and Chirurgical Society's Rooms, 20, Hanover-square, W.).—10 A.M. General Business. Reception of Visitors.—10.30 A.M. President's Address.—11 A.M. Discussion on the Surgical Treatment of the Accessory Cavities of the Nose, introduced by Dr. Luc (Paris), Dr. Bryson Delavan (New York), Dr. John N. Mackenzie (Baltimore), and Dr. F. H. Bosworth (New York).—3 P.M. Discussion on the Treatment of Chronic Laryngeal Stenoses, introduced by Dr. Sajous (Paris).

FRIDAY.—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (Royal Medical and Chirurgical Society's Rooms, 20, Hanover-square, W.—10 A.M. Exhibition of Cases.—11 A.M. Discussion on the Therapeutics of Diphtheria, with special reference to Antitoxin, introduced by Dr. G. Sims Woodhead and Prof. C. S. Sherrington.—3 P.M. Discussion on the Surgical Treatment of Laryngeal Tuberculosis, introduced by Dr. Heryng (Warsaw), Prof. Krause (Berlin), and Dr. Gleitsmann (New York).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

During the week marked copies of the following newspapers have been received:—*Todmorden Advertiser, Derbyshire Courier, Morning, Weekly Sun, Galignani Messenger, Westminster Gazette, Fortnight, Family Doctor, Leeds Times, Yorkshire Gazette, Hampshire Herald, North British Advertiser, Electrical World, Hereford Times, Kensington News, Llandudno Directory, Sheffield Independent, Essex Telegraph, Barnsley Independent, West London Observer, Worcester Herald, South Wales Daily News, Yorkshire Post, Builder, Leicester Post, Vegetarian, Architect, Times of India, Health, Manchester Guardian, Pioneer Mail, Leeds Mercury, Liverpool Daily Post, Irish News, Scotsman, Bristol Mercury, Glasgow Herald, Longford Independent, Brighton Gazette, Freeman, Englishman, Eastern Daily Press, Oldham Chronicle, Madras Weekly Mail, Science Siftings, Courrier de la Presse, Sanitary Record, City Press, St. Mary's Hospital Gazette, Local Government Chronicle, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Mining Journal, Bradford Observer, Surrey Advertiser, Kentish Mercury, Local Government Journal, Whitehaven Free Press, Cumberland Pacquet, Wiltshire Times, Birmingham Daily Post, Bridge of Allan Reporter, St. Bartholomew's Hospital Journal, &c., &c.*

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the half-year ending June, which was given in the number of the 29th ult., completed the first volume of the year 1895. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half year's numbers are also ready. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

THE LANCET AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

THE RULE AS TO CALLING IN LONDON.

Sigma.—We think that a new comer in London should call on those in practice in the neighbourhood. London is in this respect a place by itself. It is impossible that a medical man can know of the arrival of a new comer as he would in a country town.

"LYSIDINE."

To the Editors of THE LANCET.

SIRS,—In answer to "Subscriber's" inquiry, I beg to inform him that trials made with this drug in Germany have revealed no disturbing symptoms of any kind. As to the cure being temporary or permanent, enough trials of the drug have not yet been made to enable one to say with certainty. I am, Sirs, yours faithfully,

July 16th, 1895. H.

*** The agents for Lysidine are the Jeyes' Sanitary Compounds Co., Ltd., who will give any information in their power concerning the remedy.—ED. L.

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MEDICAL DIRECTORS OF COMMERCIAL COMPANIES FOR THE SALE OF ANTISEPTICS.

OUR attention has been directed to the name of a medical man as one of the directors of a company for the sale of a well-known disinfectant and germicide. It occurs on a circular inviting applications for shares. We are practically invited to express an opinion on the fitness of a medical man in such a position. It seems hard that medical men, who often sorely need to have their strictly professional income supplemented by other sources of profit, should be hindered from holding an office of this sort; but on closely considering the question we cannot fail to see the advantage of their perfect freedom. It is not in the interest of the company that they should be on the directorate; for the value of their medical judgment will be so far reduced in the public mind by their supposed commercial interest. And it is not in the interest of the medical man himself that he should be warped in any degree from perfect impartiality of judgment in the preference for antiseptics by such considerations. It is conceivable, of course, that a medical man might be perfectly efficient as a director though interested, and that he might be sincere, too; but, looking at the matter from a professional point of view and in the light of common-sense, our opinion is against the tenure of such offices by members of the profession.

H. H.—Will our correspondent kindly state his question at greater length and detail, explaining more exactly the pecuniary relations existing between himself and another?

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Will you allow me as a layman to contribute a few lines on the interesting question now under discussion in your columns? The difficulty respecting the use of the term "doctor" arises surely from what logicians call the equivocal or ambiguous character of the word. The term "doctor" is used (1) to denote a person professionally engaged in the practice of medicine—in the same manner that the term solicitor is used of those professionally engaged in certain legal work; and (2) as a title, signifying that the holder has been granted the degree of Doctor in one of the Faculties by some University (or by the Archbishop of Canterbury). This title belongs to many lawyers, clergymen, and scientific men, in company with a large number of medical men who are "doctors" in the former sense. As a layman I have made it a rule—sometimes, I fear, at the risk of seeming discourteous—to restrict the use of the title as a form of address to the actual possessors of a Doctor's degree, and consistently with this practice I should refrain, rightly or wrongly, from addressing as Doctor the B.D., the B.C.L., and the M.B. So far for the use of the word as a title. Now it is not customary in England for men to be addressed in ordinary intercourse by the name of the profession which they follow. We frequently say, "Send for my solicitor," "Send for my surgeon," "Send for my dentist," but we should never think of addressing our professional adviser as "Solicitor Jones," "Dentist Smith," or even as "Surgeon Brown," unless "Surgeon" were used as a title of military rank. Why, then, should we make an exception in the case of our medical attendant? In your issue of the 29th ult. your correspondent "Not L.S.A." asks why, if a patient may say, "Send for my doctor," may he not also say, "Good morning, Doctor." My answer is that there is no objection, provided that he uses the word doctor in the same sense in both instances; as a matter of fact, the word is used in two totally different significations—in the former case doctor (small *d*) is simply equivalent to "medical man," while in the latter case Doctor (capital *d*) is used as a title or prefix (analogous to "Colonel" or "Baron"), to which certain University graduates are alone entitled. If the word "doctor" is used in the same sense in both cases, the substitution of a synonym in either case should not affect the meaning. For "doctor" let us, then, substitute "medical man." Now in the former case the meaning is unchanged, "Send for my medical man"; but the substitution in the latter case presents a curious and unusual form of salutation, "Good morning, medical man." Can a better proof be required of the ambiguous use of the word, which I venture to suggest is the *fons et origo* of the difficulty?—I am, Sirs, your obedient servant,

New Oxford and Cambridge Club. R. B. F.

To the Editors of THE LANCET.

SIRS,—From the replies to Dr. Donovan's letter it is evident some Licentiates of the Society of Apothecaries are quite satisfied with the diploma of that body and believe it to be an exceptionally good one. What my own opinion on this matter may be, as it is not always easy to speak or write the truth without being highly offensive, I will not venture to state; yet it is beyond doubt there are a goodly number who hold the diploma of an apothecary who are absolutely ashamed of it and who strictly avoid mention of it on door-plate or certificate. These men usurp the titles conferred by universities and colleges, and unblushingly pose before the public as genuine medical men and physicians. It seems that if a man is on the Register, no matter what his qualification may be, he is in a position to filch what diploma or title he chooses without infringing on the Medical Act, as this simply deals with the unregistered persons who, without a registrable qualification, "makes use of any title, name, &c." It becomes more evident daily that it is long past time the Medical Council took up the subject of medical titles and made it easy for the public to distinguish an apothecary from a physician and a "doctor" from either. I can quite conceive how difficult it is for the Medical Council to enter on a campaign on titles. The Council is composed of the consulting members of our profession mostly, if not altogether. These depend on the general practitioner for consultations. Therefore, for any consultant to initiate a campaign on titles would undoubtedly place him in a position with a large number of his medical supporters that may safely be described as awkward. Self-interest shelves the question, as it does a host of others, and thus the apothecary will continue to pose as a Doctor of Medicine, or a physician, or both, until by some means it becomes a penal offence to practise medicine under false pretences.—I am, Sirs, yours faithfully,

July 16th, 1895. A SPADE.

To the Editors of THE LANCET.

SIRS,—With regard to this much-vexed question I believe it has been pointed out in your columns, not once but many times, that the title of "doctor" when placed upon a brass plate or card implies that such individual is nothing more or less than a Doctor of Medicine, and the same with a practitioner who holds the diploma of a Royal College of Surgeons; that individual alone is entitled to term himself surgeon. Or the practitioner who holds the diploma of the Royal College of Physicians; such individual is entitled to term himself physician. Therefore it is evident that a Licentiate of the Society of Apothecaries cannot be anything else but an apothecary. When the licence of apothecary was converted into a double qualification it was then distinctly pointed out by certain authorities upon the Medical Council that it would be the means of creating two classes of medical and surgical practitioners—viz., the apothecary and the physician and surgeon. I remain, Sirs, yours truly,

July 16th, 1895. L.S.A., LIC. IN MED. AND SURGERY.

To the Editors of THE LANCET.

SIRS,—The perennial question as to whom amongst legally qualified medical men the title of "Dr." belongs has again been opened in your columns. It is not my intention to enter into the discussion, and my only desire in writing is to direct the attention of those interested in the subject to the custom prevailing in Italy, with which I am well acquainted. There all medical men before they are allowed to practise must obtain from one of the numerous universities the degree of, not M.D., but Medico-Chirurgico, which in English is physician and surgeon. Notwithstanding this all these physicians and surgeons call, and are called by everybody, "Dr.," and they would be very much surprised to hear that they have no right to that title. In fact, the usual custom is when signing their names to place the much disputed title before them. Now, I would ask those gentlemen who object to a physician and surgeon in this country using the title, would they also object to his using it in Italy should he set up in practice in a large city there? I am, Sirs, yours truly,

July 6th, 1895. MEDICO-CHIRURGICO.

To the Editors of THE LANCET.

SIRS,—I do not, of course, pretend to understand either Mr. Feeny's English or his code of discussion. His last letter, if it means anything, shows that he is quite in the dark concerning the subject about which he writes. This is surprising; because a man of ordinary perspicacity who has travelled abroad might have been expected to give correct information, instead of simply indulging in personal remarks. I am, Sirs, yours obediently,

Harley-street, W., July 13th, 1895. J. KESER.

To the Editors of THE LANCET.

SIRS,—I have to offer to you and to your readers my apology for having stated that the L S.A. was by right entitled to style himself "Dr." I made the statement on hearsay evidence, and when I did so believed it so thoroughly that I never even thought of there being any necessity for inquiry. I find that I was completely wrong, and unreservedly withdraw my words, which I much regret having written.

I am, Sirs, yours obediently,

July 16th, 1895. NOT L.S.A.

To the Editors of THE LANCET.

SIRS,—Having written in my own name, I decline to answer your correspondents, who are fearless enough to write as they have done whilst hiding behind the hedge of a pseudonym.

I am, Sirs, yours faithfully,

July 15th, 1895. WILLIAM DONOVAN, M.D. Durh., L.R.C.P. Ed.

THE CLIMATE OF THAYETMYO.

To the Editors of THE LANCET.

SIRS,—Would any reader, army medical officer or otherwise, who knows anything of the climate of Thayetmyo, Lower Burma, kindly inform me whether or not it is a very deleterious one for young children, and if so whether there is a salubrious district near to which invalids could be easily removed in case of ill-health? Answers will be esteemed a great favour, as important interests are at stake.

I am, Sirs, yours truly,

Southport, July 17th, 1895. M D.

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PUBLIC LECTURES ON PROFESSIONAL SUBJECTS BY MEDICAL MEN.

THE *Cape Argus* contains an abstract of a lecture on the Eye and Eyesight, delivered to the Young Men's Christian Association by Dr. Fismer, a respected practitioner in Cape Town, who affects some special skill in eye disease, and who is also in general practice. Our opinion, which is asked for, must be general. We consider it a point of good taste that a medical man shall do nothing publicly with a mere purpose to advertise his skill or his professional opinions on moot points of practice. We are not disposed to say that a medical man is not to be permitted to give a lecture to young men that might instruct them. This would be a hard rule, which has been often violated by respected practitioners. But his lecture must savour rather of the teacher than the practitioner—must be physiological rather than medical in its drift.

THE MISUSE OF HOSPITALS.

To the Editors of THE LANCET.

SIRS,—The following two cases—and I could speak of many others—may help to throw some light on the above subject.

1. I had arranged to operate upon the child of A. for post-nasal growths. A. is a gentleman living in a good house of, I suppose, £80 or £90 rental, just home from a month's tour in Devonshire with his family. A few days ago I received a letter containing the following words: "On Saturday an old friend of mine, an influential member of the committee of —— —— Hospital, to whom I had spoken about ——'s throat, told me that he had arranged for Dr. —— of —— street to see —— specially at the hospital at 1.30 P.M. on Monday, and if the operation ought to be done at once they would arrange for her reception then and there." The child went, was operated upon, and taken into the hospital.

2. A gentleman of very good position and means, whom I had attended with alcoholic inflammation of the membranes of the cord, with considerable sloughing, but who recovered with a stiffish hip-joint, married again. His wife took him to see the senior surgeon of —— Hospital, who advised him to come in. He did so, was there treated, and on leaving the hospital is under the care of a gentleman educated under the said surgeon.

Cases might be multiplied; but surely it is going a little beyond the very low moral tone prevalent when "an influential member of the committee" becomes little less than a tout for other people's patients.

I am, Sirs, faithfully yours,

July 15th, 1895. A THIRTY YEARS' PRACTITIONER.

LORD BYRON'S LAMENESS.

To the Editors of THE LANCET.

SIRS,—Being much interested in the subject of club-foot, whether congenital or acquired, I should be obliged if you could tell me where I can find out the nature of the deformity from which Lord Byron suffered. In Moore's Life of Byron he says: "By an accident which occurred, it is said, at the time of his birth one of his feet (the right) was twisted out of its natural position, and this defect, chiefly on account of the mechanical contrivances employed to remedy it, was a source of great inconvenience to him. ..... The expedients used were adopted by the advice and under the direction of the celebrated John Hunter, with whom Dr. Livingstone of Aberdeen corresponded on the subject." Can any of this correspondence be unearthed? Or can any of your correspondents who have more advantages of national medical libraries than we have at this end of the world find out for me what the precise nature of the disease was?—I am, Sirs, yours faithfully,

Dunedin, New Zealand, May 22nd, 1895. M.B., C.M.

SANITARY SHIELDS FOR BABIES' FEEDING BOTTLES, &c.

THESE are discs of highly-glazed porcelain, designed to replace the familiar bone shields which are attached to the teats of infants' feeding bottles. The bone shields, even when of good quality, soon become roughened and porous, and are liable to absorb saliva and milk, drawbacks from which the sanitary shields are entirely free. In the artificial feeding of infants thorough cleanliness is indispensable, on which ground the utility of this device is at once apparent. The makers are Messrs. Kennedy and Co., 159, Kingsland-road, London, E.

THE METHODS OF CERTAIN PROVIDENT ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—Whilst in a shop talking to a patient an agent entered, presenting a list of medical names offering professional attendance for three half-pence per week. Without disclosing my identity, I ventured to object to such advantages being offered to any except the working-classes, on which the agent declared that all were fish to his net, even to a man with a rental of £150 per annum. He went on to explain that medical men, like lawyers, were only a "figment," and they were only too glad to accept such emolument. He then paraded the name of a new-comer who had "signed the contract." The agent was evidently prepared to tout to any extent, stating that he would accept the Prince of Wales if willing to join on the same terms.

I am, Sirs, yours faithfully,

July 17th, 1895. MEDICUS.

"ALLEGED TOUTING BY A PUBLIC VACCINATOR."

IN noticing under this title a dispute between a practitioner and the public vaccinator of his neighbourhood we found it our duty upon the facts supplied to us to comment severely upon the public official. We have since, however, received a letter from the public vaccinator's principal, which places a different complexion upon the matter, and we are much obliged to him for it, and we regret that its essential point was not previously perceived. In our former comments we were under the impression that the public vaccinator had acted on his own accord, for it was not previously brought to our notice that his visit had been made only in consequence of representations made to him by the vaccination officer with regard to defaulters. This point was not brought out in any of the previous letters submitted to us. Had it been we should certainly not have used the term "touting" with regard to the public vaccinator's action.

X.H.S.—We consider that our correspondent will be quite right to describe himself in the Medical Directory as a late officer to the institution under its present name.

"THE SKOPTZY."

To the Editors of THE LANCET.

SIRS,—In the Museum of the Royal College of Surgeons (Pathological Series, No. 25) your correspondent will find a dissection of part of the pelvic viscera of an adult member of this sect. The operation was performed in early adult life. The external organs were, as is the custom, entirely removed. In the specimen atrophy of the prostate is well marked, the vasa deferentia are threadlike, and the vesiculæ seminales are without their natural pouchings. The women submit to mutilation of the mammæ. Jules Claretie introduces two members of this sect in one of his works of fiction. Pelikan wrote an important and well-illustrated monograph on the subject — "Gerichtlichmedicinische Untersuchungen über das Skopzenthum in Russland."

I am, Sirs, yours faithfully,

July 15th, 1895. ALBAN DORAN.

THE "SANITAS" POCKET DISINFECTANT.

THIS is an ingenious method of putting up "Sanitas," so as to be conveniently and instantly available for inhalation in an offensive or unwholesome atmosphere. The liquid having been sealed up in small glass bulbs, these are varnished and rolled one by one in cotton-wool, over which a piece of white muslin is tied. The whole is then about the size of a filbert. When required for use a tap on the outside with any hard object breaks the glass bulb, and sufficient "Sanitas" is then liberated to saturate the cotton-wool and muslin, as well as to impart a little to the handkerchief if desired. The broken glass gives no trouble, being retained inside the wrappers, and the agreeable odour of "Sanitas"—suggestive of camphor and peppermint—remains for a considerable time. The manufacturers are the Sanitas Co., Ltd., Three Colt-lane, London, E.

THE TREATMENT OF TRISMUS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly give me any hints as to treatment in the following case?

A man aged thirty-three, saddler, suffers from chronic trismus. Three years previously had sunstroke in West Australia. Since then has had constant grinding of the teeth at night—so much so as to disturb others, although not cognisant of it himself. Nerve sedatives and tonics have been tried, but with no avail. Temporary relief with bromides; symptoms returning with discontinuance of treatment. Blisters and galvanism have also been used, but no relief obtained. General health is always good. I am, Sirs, yours faithfully,

July 13th, 1895. M.R.C.P.I.

POOR-LAW MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—I should feel obliged if you will kindly answer the following:—

1. Would the Local Government Board sanction my appointment as Poor-law medical officer for a few weeks pending permanent appointment being made, having only the surgeon's qualification? 2. When an appointment is made would the Local Government Board sanction my appointment as deputy? I am, Sirs, yours truly,

Wolverhampton, July 15th, 1894. QUÆSITUS.

*** 1. Yes, if appointed by the guardians.—2. The deputy appointment would rest with the guardians.—ED. L.

WANTED, ADVICE ON HEALTH RESORTS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers be kind enough to give me some information as to a good continental health resort where cases of rheumatic neuralgia are benefited? Also as to a good and suitable winter place (not Egypt) for a case of chronic nephritis?

I am, Sirs, yours truly,

July 15th, 1896. O. H.

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Communications, Letters &c. have been received from—

A.—Dr. McCall Anderson, Glasgow; Mr. H. W. Allingham, Lond.; Ancoats Hospital, Manchester, Secretary of; Alpha, Lond.

B.—Dr. D. C. Black, Glasgow; Dr. W. Bennett, Manchester; Dr. H. Boyden, Devonport; Mr. Blackett, Lond.; Mr. W. M. Beaumont, Bath; Mr. G. R. Butler, Lond.; Mrs. Bennett, Lond.; Messrs. Burgoyne, Burbidges, and Co, Lond.; Messrs. Burroughs, Wellcome, and Co, Lond.; Messrs. Blondeau et Cie., Lond.

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Q.—Quæsitus.

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Letters, each with enclosure, are also acknowledged from—

A.—Dr. W. Adye, Bradford-on-Avon; Mr. W. F. Abbott, Boscombe; Apothecaries' Hall, Ireland, Conductor of; Ashwood House, Kingswinford, Secretary of; Aleph, Lond.; A. J., Lond.; Alpha, Adam-st.; Alpha, Lond.

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F.—Dr. D. Fennell, Lond.; Dr. A. H. Frere, Wickham Market; Mr. P. V. Fry, Shanklin; Mr. R. Fitzgerald, Midleton, co. Cork; F. A., Lond.

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W.—Dr. A. T. H. Waters, Liverpool; Dr. J. C. Wilson, Blantyre; Dr. R. M. Wyckoff, Brooklyn, N.Y.; Mr. H. W. Walker, Sketty; Mr. B. Wheeler, Manchester; Mr. A. Wroughton, St. Ives, Cornwall; Mr. J. Walker, Stenhousemuir; Mr. F. Wilson, Lond.; Mrs. Whyte, Davos Dorf; L. West, Brighton; Messrs. R. R. Whitehead and Bros., Lond.; Western General Dispensary, Lond., Secretary of; Warneford Asylum, Oxford, Secretary of.

Y.—Mr. E. W. Young, Poona, India; Yorkshire College, Leeds, Secretary of.

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TRADE **Emol-Keleet:** MARK.

SINCE our first leaflet dealing with Emol-Keleet was issued we have received many encouraging reports of the beneficial effects of this substance in Surgery and Dermatology. It has been used not only for its absorbent, anti-pruritic, and emollient qualities, but also as a diluent for such antiseptic agents as Loretin, Dermatol, Iodoform, Boric Acid, Chrysophanic Acid, Hydro-Naphthol, &c. Owing to the fact that it is a natural powder containing a large proportion of native silicates, Emol-Keleet is chemically stable, and is therefore freely prescribed as a diluent for potent medicinal agents without fear of combination taking place. In addition to these chemical advantages, its soft silky texture, soothing influence, and other physical qualities enhance its healing action.



In a paper reported in the March number of the *Glasgow Medical Journal* Dr. G. A. Turner, President of the Glasgow Obstetrical and Gynæcological Society, speaks very highly of a mixture of Emol-Keleet with Loretin (meta-iodo-ortho oxyquinoline-ana-sulphonic acid) in the treatment of the umbilical cord immediately after birth. The proportions originally suggested for an absorbent antiseptic powder were:

Emol-Keleet, nine parts,
Loretin, one part;

but since then it has been found that 1 or 2 per cent. of the latter body is amply sufficient.

The following paragraph from the paper referred to will show what a wide field exists for the advantageous use of Emol-Keleet with Loretin.

"It has been suggested that Loretin, when mixed with a little magnesia, is well adapted for use as a dusting powder. For such use, undiluted, it would be too expensive, nor is it necessary. It may be used mixed with magnesia, or Fuller's earth, or with the dusting powder, Emol-Keleet, which was recently brought prominently before the profession at the meeting of the British Medical Association at Newcastle-on-Tyne, by a paper read by the president of the Dermatological Section, Dr. Allan Jamieson, of Edinburgh." He concluded that Emol-Keleet as a dusting-powder was a "perfectly innocuous and inoffensive material, therapeutically superior to any previously known."

"A short time ago I wrote Messrs. Burroughs, Wellcome, & Co. of London, making the suggestion that a mixture of Loretin and Emol-Keleet would probably prove a valuable dusting powder for infants. I received a reply, from which the following is an extract: 'The suggestion which was originally made to use magnesia as a diluent of Loretin was made on the grounds that magnesia is so good an absorbent, is comparatively cheap, popular with some continentals in this direction, and very harmless. The suggestion now made by yourself that Emol-Keleet be used as a diluent is, in our judgment, a most admirable one, and one which should have very excellent results.'

"What I have to suggest, then, is that by the use of some such dusting powder as this our treatment of the new-born infant will be brought more into line with present-day antiseptic midwifery and surgery; the common excoriations of the skin surrounding the genital organs, &c., will in great measure be avoided, and all such troublesome complications as excoriations and fungating excrescences of the umbilicus, or ulceration or sloughing of its margin, and erysipelas neonatorum and tetanus neonatorum will be things of the past."

Both Emol-Keelet and Loretin may be obtained from all first-class pharmacists, so that if practitioners prefer to use higher or lower percentages than those mentioned they can easily obtain them by prescriptions.

We append the testimony of a few eminent authorities on Emol-Keleet:—

THE LANCET says:—

"On account of its remarkable velvety smoothness it should possess a unique value as a dusting powder in the treatment of cutaneous diseases, &c., and for allaying irritation. We have not examined a more unctuous earth."

BRAITHWAITE'S RETROSPECT OF MEDICINE, says:—

"Emol-Keleet is the most beautiful impalpable mineral powder with which we are acquainted, and promises to supersede all the older forms of dusting powders. Beyond the purely mechanical effect of covering and protecting from friction or irritation the surface to which it is applied, Emol-Keleet is possessed of distinct emollient and soothing properties, as well as being a most efficient anti-pruritic. We have made use of it for some time past in the treatment of eczema, especially in infants and young children, where dry and soothing agents are most desired, and have found it to be a most excellent application in such cases, while the readiness with which it can be used and its absolute freedom from all risks of decomposition, add largely to its value. It has also proved to be of great use in the removal of epidermal concretions such as are seen in eczematous conditions of the palms and soles. We can most confidently recommend it as an addition of great value to the resources of the dermatologist."

The QUARTERLY MEDICAL JOURNAL says:—

"As a dusting powder it has the advantage that when the part to which it has been applied becomes moist, it forms a kind of natural soap, and is free from the 'balling' tendency of many insoluble powders. It forms a pleasant, effective tooth powder, not being liable to scratch the enamel."

The EDINBURGH MEDICAL JOURNAL:—

"Having ourselves extensively tested it, we can most warmly recommend it."

The DUBLIN MEDICAL JOURNAL says:—

"An excellent topical application after vaccination."

The SANITARY RECORD says:—

"Superior to other powders of this kind."

A CORRESPONDENT, PRACTISING IN THE NORTH OF SCOTLAND, writes:—

"Within the last fortnight I came across a very severe case of eczema infantiles of the face, head, and other parts of the body. After trying some other remedies with doubtful effect, I bethought me of your Emol-Keleet, and gave some to the mother to use as directed. Its effect has been most gratifying to myself, and highly beneficial to the little sufferer, who is only seven months old."

AS FURTHER EVIDENCE OF THE UTILITY OF THE NEW PRODUCT, WE QUOTE THE FOLLOWING EXTRACT FROM A LETTER FROM AN EMINENT SURGEON:—

"I beg to state that since Aug. 30th, 1894, I used 'Emol Keleet' to a big and sluggish ulcer on a man's arm with better results than I had previously obtained from dressings. The ulcer closed up rapidly after commencing with 'Emol Keleet,' and it is now practically healed up. It held on a stubborn course for about four months, but, being due to blood-poisoning, I was not surprised; yet I firmly believe that if I had had the 'Emol-Keleet' earlier the ulcer would not have been so sluggish in healing."

AN INFIRMARY HOUSE SURGEON writes:—

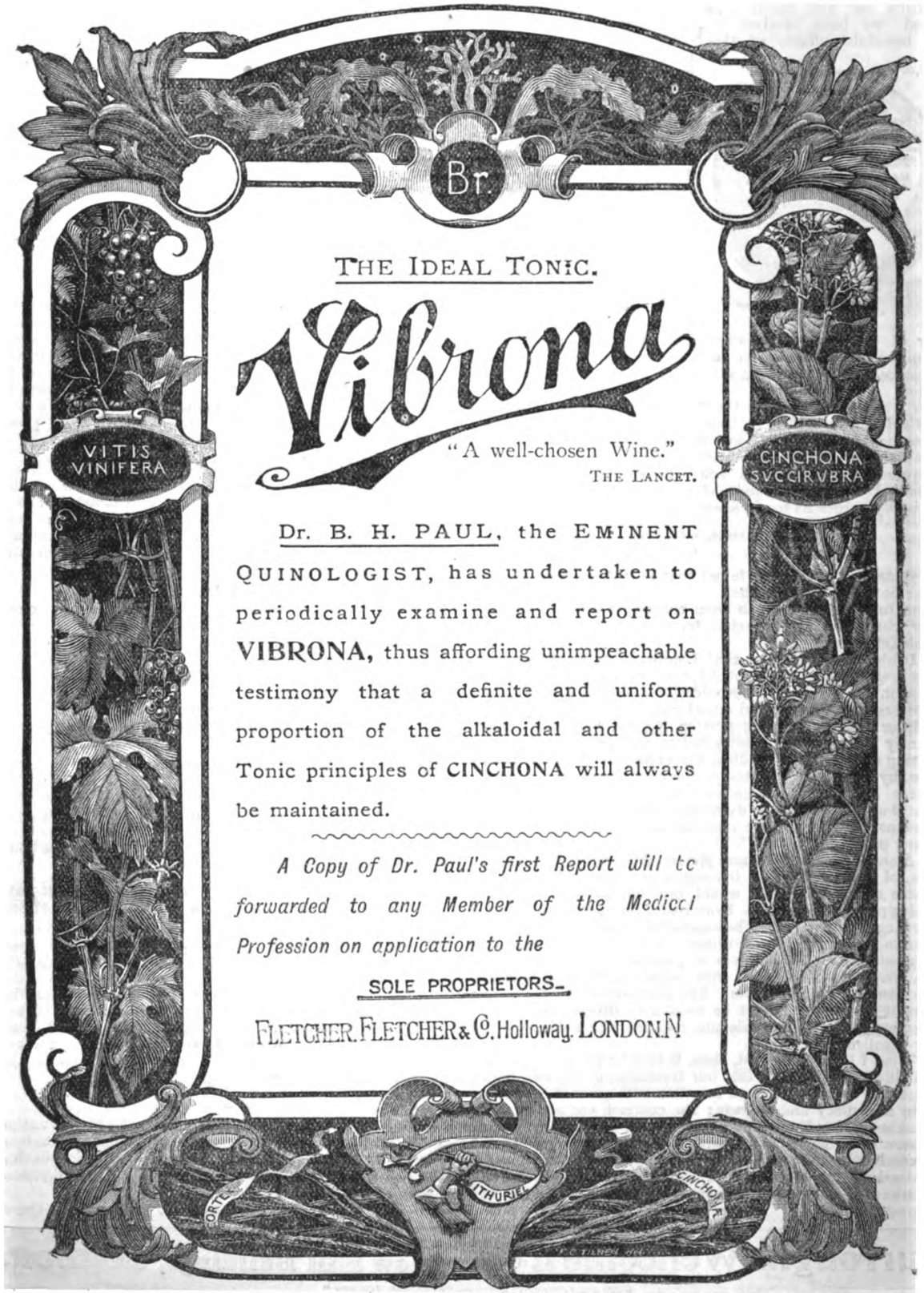
"I have used 'Emol-Keleet' in a case of acute irritation and rawing of the skin from bilious secretions through a fistulous opening. Everything I could think of having failed I tried the powder, and it has acted splendidly, and has been very comforting to my patient."

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The Baillie Lectures
ON
DROPSY.

Delivered at St. George's Hospital on June 19th and 26th and July 3rd, 1895,

BY W. HOWSHIP DICKINSON, M.D., F.R.C.P. LOND.,

HON. FELLOW OF CAIUS COLLEGE, CAMBRIDGE; CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

LECTURE II.

Delivered on June 26th, 1895.

GENTLEMEN,—I propose to devote the two remaining lectures to the subject of dropsy, one which has its points of contact with the cardio-vascular question which occupied the first, and is of paramount interest to the physician as connected with many diseases and productive of many results. Dropsy, like many other morbid conditions, is merely an exaggeration of a state of health. There is a continual outpour of lymph from the capillaries, some of which is employed in nutrition, some absorbed by the lymphatics, and some by the veins. In health this fluid is carried off as fast as exuded so that there is no accumulation; if there be accumulation it constitutes dropsy. This may be produced either by an increase of outpour or a diminution of removal; and the diminution of removal may be hypothetically attributed either to the veins or the lymphatics. I shall endeavour to show how these processes or failures to proceed are brought about, and what bearing they have upon the symptom in question; and my point of view, I need not say, will be mainly clinical or from the standpoint of human pathology. First let me exclude inflammatory effusions from present consideration. Looking at dropsy products for information as to dropsy processes we are at once confronted with the fact that this effused liquid in a given situation is much the same whatever the disease which has given rise to it. It varies much with place; little with origin. I have dwelt upon this fact in a paper to which I may venture to appeal[1] for particulars. I will here content myself with reproducing the average results of a series of estimations which I have made from time to time as opportunity offered; there to be found in detail.

sometimes the pleural more than the peritoneal, sometimes the reverse. When due to heart disease, the effusions contain more albumen than when due to kidney disease. The peritoneal effusions of cirrhosis of the liver occupy an intermediate place in this respect. The smaller amount of albumen under kidney disease corresponds with the reduction of this substance in the blood in the same condition. With this allowance it may be said that the effusions in each place are much the same in every disease, a resemblance which suggests that there must be considerable resemblance also in the processes by which they are produced. The saline ingredients are probably the simple results of dialysis. The albumen as a colloid body cannot traverse by this means but obtains its passage by pressure, by secretion, or by both together. Looking briefly at some of the physical facts which bear upon the subject we first have osmosis or dialysis, in virtue of which crystalloids traverse membranes until the liquid on one side is as fully charged as that on the other. This does not explain dropsy but only accounts for the saline constituents of dropsy fluids. Colloids such as albumen do not so traverse if the pressure on both sides is equal, but if it be unequal, then albuminous fluid-serum, for example, passes with facility in the direction of least resistance. In experimenting with membranes and liquids with regard to the processes of dropsy, so far as they could be imitated outside the body, the agent which presents itself as efficient beyond all others in moving albuminous fluids, and indeed fluids of all sorts, through membranes is pressure. If serum be placed at different levels on either side of a membrane the liquid will quickly traverse in the direction of least pressure until an equilibrium is attained. The action of osmosis is insignificant. It is true that if we put on either side of the septum liquids having opposite or very different chemical properties, acid and alkali, alcohol and water, &c., we may get osmosis which will be abundant against gravity and pressure; but such large transfer has always been between liquids which have been contrasted beyond what is possible in the process of serous effusion. As an agent in dropsy osmosis may be put aside as taking little part in it. Intravascular pressure and some process outside the vessel akin to secretion, the one physical, the other vital, remain for question. The action of the physical agent is certain and obvious, that of the vital is hypothetical. The overruling influence of pressure in the transmission of fluids, whether along vessels or through membranes, needs no insistence; it is the chief agent in the circulation and in all that depends upon it—exudation, nutrition, and cell function.

For the purposes of practical medicine dropsy may be described as having two modes of origin—(1) increased

Average Constituents of Dropsy Liquids in 100 Parts (from observations by Dr. W. H. Dickinson).

Disease.	Pericardium.			Pleura.			Peritoneum.			Cellular tissue.		
	Specific gravity.	Albumen.	Mineral salts.	Specific gravity.	Albumen.	Mineral salts.	Specific gravity.	Albumen.	Mineral salts.	Specific gravity.	Albumen.	Mineral salts.
Disease of kidneys	—	—	—	1011·6	0·816	0·824	1012·1	1·36	0·875	1008·3	0·121	0·844
Diabetes, no injection...	—	Much	0·64	—	—	—	1018·2	2·41	0·908	1012·2	0·362	0·893
Diabetes, after saline injection*	—	—	0·860	1016·7	2·10	0·845	1013·5	1·38	0·871	—	—	—
Disease of heart...	1018·5	3·08	—	1013·3	2·119	0·784	1014·5	2·63	0·783	1008·5	0·36	0·785
Disease of respiratory organs	—	—	—	1013·5	1·91	0·826	1017·9	3·13	0·840	1008·1	0 235	0·773
Cirrhosis of liver	—	—	—	—	—	—	1012·8	2·25	0·842	1009·5	1·39	0·804

* These estimations relate only to a single case.

The first fact to be noticed is the uniformity of the mineral salts. In every place and from every cause these salts present nearly the same proportions—almost exactly that in which they exist in the blood. This looks as if they owed their exit to some unvarying physical law like osmosis or dialysis, and to this we may fairly attribute the presence of these crystalloids in the effusions of dropsy. No such uniformity holds with the albumen, which varies much—more with the location than the disease. Œdema fluid contains only traces, whatever the cause may be; when cardiac, the albumen is greater by about one-half than when renal. Pleural and peritoneal effusions are always highly albuminous,

blood-pressure and (2) alterations in the blood itself, which two conditions often occur together. I am not about to dwell on the physiological or experimental aspect of dropsy as it relates to the lower animals so much as upon the clinical and human, but a word or two as to the results of experiments on animals may be introduced. The simple observation was made over two hundred years ago by Lower that ligature of the vena cava was followed by dropsy of the parts below. Subsequent experimenters failing to get œdema as the result of simple ligature found it to be produced when in addition to the ligature upon the vein the nerves of the limb were cut. That section of the vaso-motor nerves should enhance the effect of venous obstruction is only what would be expected. Venous impediment fills the capillaries much; vaso-motor paralysis,

[1] On Renal Dropsy. Transactions of the Royal Medical and Chirurgical Society for 1892, vol. lxxv.

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by increasing the arterial supply, must fill them more. Again, it has been found that ligature of the lymphatics promotes the process of dropsy. This, again, is only what might have been presumed. Dropsy fluid is the excess of capillary exudation over absorption; the less removed the more must remain. Practically, however, lymphatic obstruction may be put aside as a cause of dropsy in the human subject. Obstruction of the lymphatics causes, as we know, elephantiasis and chyluria, but not dropsy. Dr. Lazarus-Barlow, of this hospital and Cambridge, has recently made some careful experiments on this subject, which require to be considered in conjunction with those referred to. He showed that œdema did not come on *immediately* upon ligature of a vein—that is, not within an hour. I presume it did so ultimately. This negative result has little bearing on human pathology, where we have to do with long-continued conditions. Dr. Lazarus-Barlow is opposed to the mechanical theory of dropsy, and attributes much to anæmia of the tissues and the accumulation in them of waste products. Those who wish to follow Dr. Lazarus-Barlow's experiments must read his paper. As concerns human pathology it is not possible to doubt that increase of intra-vascular pressure, whatever be the intermediaries, has a paramount concern in the production of dropsy, while the establishment of toxic conditions—poisoning of the blood and tissues by excrementitious matters—has also a bearing on the morbid process.

Coming now to human pathology, the bearing of pressure upon dropsy is well illustrated in œdema. Everybody knows that a limb may swell from no other cause than a tight bandage, or ankles become œdematous only from long standing. Œdema of the legs, whether cardiac or renal, will continually go away under the influence of the horizontal posture; the fluid does not merely shift its position, but may be altogether removed. I have seen this over and over again, and regard the fact as of the first importance in the treatment of œdema of every kind. With mechanical advantage the veins empty themselves and allow the capillaries to do the same, while exudation lessens as intravascular pressure diminishes. The effects of venous obstruction, or, in other words, of increased pressure within the tributary vessels, are illustrated with sufficient simplicity by many forms of local dropsy. The consequences of the closure or narrowing of veins, whether by internal clot or external compression, are so well known that I need not dwell upon them. Œdema limited to the regions drained respectively by the vena cava, an innominate, or a femoral is so constant a result of venous obstruction that we have no hesitation in diagnosing a mechanical impediment as soon as we discern the local œdema.

One of the most instructive, and to the physician one of the most interesting, of the local dropsies is hepatic ascites. Cirrhosis puts a ligature, so to speak, or rather a multitude of ligatures, on the portal vein in its ultimate distribution in the liver, and all the portal tributaries become overfull and overtight until their contents in whole or part are forced through their walls by accumulating pressure and discharge blood or serum according to their position on a mucous or a serous surface. Thus we get hæmorrhage from the stomach and bowels in one case and in another ascites; seldom both together. The vessels are relieved either by bleeding or dropsical effusion; seldom by both in the same person. I have known the abdomen to break open through the umbilicus as a result of this form of ascites; and it is well known that gastric hæmorrhage as a result of portal obstruction may be fatal on the spot. In connexion with the mechanical and unyielding origin of hepatic ascites I may say a word as to the treatment of this the most obstinate of all the forms of dropsy. Ascites of other kinds—cardiac, renal, and tuberculous—will continually yield to treatment or time, but this seldom does so. It is remarkable how frequently ascites of tuberculous origin will take itself off notwithstanding the permanent nature of the cause to which it is due. I have got to regard a child with a tuberculous and watery abdomen with something of affection, as one which is likely to do me credit; so also may we obtain credit, though perhaps sometimes nature deserves it, with the ascites of heart disease and of kidney disease; but hepatic ascites usually holds medicine in scorn. Theoretically, purging should do good by relieving the portal pressure, but, as Sir Thomas Watson said, it must be hard purging, and even that is not productive of commensurate results. Practically we can do little. Reputed diuretics are in my experience useless. When extreme distension is reached, so far as to embarrass the respiration—and this is the rule I lay down for myself—we must tap, and the later the better, for tapping is generally the beginning of the end. The operation has to be repeated with lessening intervals until the patient succumbs. This is the rule; I will not say that there are no exceptions, but they are certainly few. I have often been struck with the enormous amount of fluid of this origin which may be carried about with the maintenance of fair general health and mobility.

I shall touch presently upon the general relation of drinking to dropsy, but in the meanwhile I will say with regard to hepatic ascites that in despair of other means I have tried dehydration by diet. Diminishing the volume of the blood must lessen the ascitic tendency by reducing the amount which has to make its way through the portal vein; we cannot widen the street, but we may diminish the traffic, and so do away with the block. In another point of view the blood has the property of maintaining or restoring its composition at the expense of anything else available; hence if we dehydrate the blood that fluid may recoup itself at the expense of serous effusion—for the effusion after all is chiefly water. A boy aged seven came under my care in this hospital on April 24th, 1886, with extreme ascites, a greatly enlarged liver, and a history of drink. According to his own account he "had beer to drink on week days and gin on Sundays, and liked the gin best." The distension was extreme, and the distress and dyspnœa such that early relief was imperative. He was tapped with Southey's tube six days after admission, again the next day, and, the fluid rapidly recollecting, for a third time four days later. To sum up, he was tapped ten times between April 28th and June 21st, and a total of fifty imperial pints removed; on an average he was tapped every five days and a half to the amount of five pints, pretty well considering that his weight was only 2 st. 9 lb. Knowing that this process could not go on much longer, I determined to try what could be done by dehydration—in other words, by dry diet. He was tapped last on June 21st; by the 29th the fluid had again reaccumulated to a large extent. I now put him on the following regimen:—Half the fish of fish diet, half a light pudding, two eggs, ten ounces of milk, an ounce and a half of brandy, and some acid drops. No medicine or a drop of liquid of any kind beyond what has been mentioned. On July 3rd the milk was further reduced to six ounces, so that the total daily liquid, including the brandy, was seven ounces and a half. His urine during this time (from July 3rd to July 26th) averaged fourteen ounces a day—nearly twice as much as the liquid he drank. Of course, there was a certain amount of water contained in his solid food which helped to make up the difference. Beyond this he lived upon himself and, so to speak, drank the contents of his own peritoneum. The beneficial effects were striking and immediate, the evil effects none. There was no inconvenient thirst, no dryness of the tongue. The dropsy rapidly diminished, so that by July 21st no evidence of abdominal fluid could be obtained. His appetite was good and he was practically cured of his dropsy, though the liver still remained of large size. He went to Wimbledon Convalescent Hospital on Aug. 18th, from which institution he was shortly dismissed for misbehaviour. He was readmitted into St. George's Hospital on Sept. 22nd of the same year, chiefly in order that he might be examined. There was then no fluid. He had no return of his dropsy. When at home he was allowed but little liquid. To use his father's words, "He was cautious and 'cute enough not to drink much." The last scene opened on Dec. 27th, 1888, when he was readmitted with acute head symptoms, which proved fatal on Jan. 2nd, and were found to have been connected with an abscess of the brain probably due to bone, though the origin could not be satisfactorily traced. This obviously had nothing to do with his former disorder. The peritoneum was universally adherent, the liver contracted and highly cirrhotic, weighing twenty ounces. What had occurred in the process of cure was clear: the peritoneum was emptied and kept empty by dehydration; the two surfaces, no doubt, more or less irritated by what they had gone through, or rather by what had gone through them, quietly stuck together and obliterated the cavity. I have tried this method in other cases of the same disease, but not with equally satisfactory results. The patients were all adults and proved less amenable than the child. I have generally been able by this means to reduce the circumference of the abdomen by two or three inches, but never succeeded in emptying it, and came to the conclusion that the relief was not so great as the inconvenience.

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To save repetition I will here venture upon a digression and say something about water-drinking in relation to dropsy in general. *Crescit indulgens sibi dirus hydrops* expresses the belief of antiquity, and that this has come down to modern times is known to the readers of Boswell.[2] Dr. Johnson described the wine in Scotland before the union as "weak stuff, the refuse of France, which would not make you drunk." Whereupon, says Boswell, standing up for the honour of his country, "I assure you, Sir, there was a great deal of drunkenness." "No, Sir," retorts Johnson, "there were people who died of dropsies which they contracted in trying to get drunk." The immortal Pecksniff[3] is at one with the great Lexicographer in attributing dropsy to aqueous drinks. "If we indulge in harmless fluids we get the dropsy; if in exciting liquids we get drunk. What a soothing reflection is that!" The fact is that water does not cause dropsy, but alcohol does, which should be "a soothing reflection" to those worthies the tee-totalers. *A priori*, it might have been expected that much water would cause dropsy by increasing intravascular pressure and diluting the blood; but practically so long as the natural exits are free the excess of water will make its way out by them and not by transudation into the tissues. Water is diuretic, diaphoretic, and purgative, and will not accumulate so long as it can escape. Water may even be a cure for dropsy instead of a cause of it. In acute renal dropsy dependent on tubal nephritis water may be the best diuretic we can employ. It increases the urine, washes out the tubes, carries off the accumulated excreta and relieves the dropsy, together with the other symptoms. I have given a pint of distilled water every four hours with the beneficial results I have mentioned. But if the kidneys are so far gone that they cannot respond the dropsy will be increased instead of diminished; this I have also seen. The contrary plan, the cutting off of water, is one which should never be employed in the presence of renal disease; the dropsy may possibly be lessened, but the tendency to uræmia will be increased. In some forms of chronic renal disease the urine is thin, poor, and copious, and the patient habitually thirsty. So long as he is allowed to drink according to his needs the urine may remain superabundant and make up in quantity what it wants in quality. If on any false theory the drink is restricted what we may expect is uræmia. I will bring this digression to an end with the conclusion that there is a little truth and much error in the old dictum. Water increases dropsy when the kidneys are incapacitated, not otherwise. It is actually a remedy for dropsy when this is caused by nephritis, mainly tubal, and not too obstinate. The great source, at least of abdominal dropsy, is not water, but alcohol.

ON FUNCTIONAL HEART MURMURS: THE MIMICRY OF ORGANIC DISEASE.[1]

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DOUBTLESS all will agree that an occasional survey of the clinical signs and their interpretation, which form the groundwork of our professional opinions, is of service, and that even commonplace subjects, if they happen to be of practical clinical interest, are deserving of our renewed attention. I have not, I fear, much that is new to say about heart murmurs in what I may call their pseudo-form; but if an excuse is necessary for the subject of this paper it will be sufficiently supplied if I succeed in showing that we are not standing still, and that the last word has not yet been said on functional heart murmurs. It is often urged that the study of the physical characters of murmurs is unprofitable, as everyone knows the significance of a morbid sound occupying a given position in the cardiac cycle; and it is further urged that the murmur, in conveying to the mind of a practitioner the impression that the patient is suffering from mitral or aortic disease, as the case may be, conveys precisely the same information to all, and in doing so has, so to speak, served its diagnostic purpose, and there is an end of it. Obviously this view is unscientific, because narrow, and tends to shut the door against further research; indeed, it forecloses discussion, and places the seal of finality on points which are still open to opinion. That murmurs are not always evidence of valvular disease and are seldom the measure of its extent are truths that are not sufficiently borne in mind in clinical diagnosis. And beyond question our stethoscopes often tell us too much or too little—too much if they constrain us to condemn a patient who has little, if anything, wrong with him; and too little if they suggest the bare fact alone of a certain valvular defect without an inkling of the nature or extent of the damage. The question that naturally occurs to us on discovering a murmur is: What does it signify? Is it organic? There are of course murmurs that bear the undeniable stamp of organic disease, as, for example, those belonging to aortic regurgitation and mitral stenosis; but the systolic murmurs of the mitral, tricuspid, and aortic areas have all a pseudo-form which resembles their prototype at times very closely. It is the characteristics of these functional murmurs that I wish to discuss. Belonging to this group there are at least three varieties which I may categorise as follows: (*a*) the cardio-hæmic or anæmic; (*b*) the neuro-typtic[2] or cardio-muscular; and (*c*) the cardio-respiratory. With the first all are familiar, and it requires but very brief reference. The murmur is, perhaps, best marked in typical examples of chlorosis, but it is by no means confined to the anæmic, and is often present in rosy and fairly-robust people. There are few delicate women, particularly if their chest walls are thin, who are without a trace of this murmur; and it is quite common to meet it in children who are below par from any cause, especially when they are examined in the recumbent posture. The hæmic murmur is usually a soft-blowing sound, and is, of course, systolic in time. It is best heard in the second interspace close to the left side of the sternum, but is often conducted into the lower reaches of the tricuspid area and downwards and outwards to the apex. In the mitral area it seldom outruns the limits of the heart walls, and is, consequently, so far as the apex is concerned, more limited than the somewhat analogous bruit of organic mitral regurgitation. The hæmic murmur is not always soft in character; it may be exceedingly rough, and is at times scratching. The roughness is often an added quality, and may be caused by unusual cardiac excitement. Particularly is the murmur liable to be rough when in addition to anæmia there is febrile excitement, as in rheumatic illness, a fact that adds to the importance of the diagnostic question. In common with other murmurs of this (functional) group, the hæmic is much influenced by the posture of the body. It is loudest when the patient is in the horizontal position, and at a minimum when the erect posture is assumed; but in some cases the difference under these conditions of posture is not great. It matters little, as a rule, whether the decubitus is dorsal or lateral. To the statement of Handford that the murmur is absent when the patient is lying on the face I am unable to subscribe. On the contrary, in several instances I have found that the bruit was loudest when the patient was placed in the prone position. It is commonly influenced by the respiratory acts, being generally loudest at the end of expiration and commencement of inspiration, and is often inaudible when the patient holds her breath at the end of forced inspiration. The physical causes of the cardio-hæmic murmur are no doubt still in dispute, but as I do not intend at present to discuss this point I shall content myself with the remark that I believe it to be the result of vibrations generated in the conus arteriosus of the right ventricle, at least in the cases in which its maximum occupies the second and third interspaces close to the sternum on the left side.[3] The question arises: For the murmur of what organic lesions may the hæmic bruit be mistaken? To which the reply is readily forthcoming. It may be supposed to indicate roughness or thickening at the aortic orifice, or perhaps mitral or tricuspid regurgitation. But, to be practical, it is most frequently mistaken for organic aortic and mitral systolic murmurs. I have been much impressed with the frequency with which organic aortic systolic bruits begin in the third left interspace close to the sternum, where they may be clearly audible for a considerable time before they spread into the right second

[2] Boswell's Tour to the Hebrides, p. 251.
[3] Charles Dickens: Martin Chuzzlewit, p. 11.
[1] A paper read before the Northumberland and Durham Medical Society.

[2] I have ventured to suggest this name from neuron and tupto as convenient and fairly expressive.
[3] It is only reasonable to suppose that under certain conditions mitral incompetency takes place in anæmia, when the murmur will be audible in the mitral area.

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interspace, or even before they are distinct in the mid-sternal region. For example, one of the first indications of gouty heart mischief in the contracting form of kidney disease may be a rough, often scratching bruit, best heard in the interspace below the third rib, close to the sternum. This murmur is at first audible over a very limited area, though not infrequently it extends down to the interspace below (fourth). I have known this murmur precede the appearance of albumen in the urine by two months, and on several occasions it has given the clue to the diagnosis of chronic Bright's disease, a diagnosis that is still further suggested by the accompanying rapid and high tension pulse. I repeat that hæmic murmurs may be erroneously taken to indicate organic mitral regurgitation, and endocarditis and atheroma at the aortic orifice the results of rheumatic, gouty, and possibly malignant endocarditis. The diagnosis is often difficult, and in few cases can be decided upon physical signs alone, yet attention to the character and behaviour of the murmur under test of careful examination may be of signal service. The true organic mitral systolic bruit usually extends beyond the apex; the hæmic rarely does, unless the anæmia is very pronounced. The organic bruit is not much influenced by posture; the hæmic varies markedly; the organic is only slightly modified by the respiratory acts. It is usually loudest at the end of expiration, and diminishes as the expanding chest wall separates the stethoscope from the heart in deep inspirations; but in no case, as far as I am aware, does a long breath (even when held) entirely conceal an organic bruit, whereas it is quite common for hæmic murmurs to disappear under these circumstances.

The fact that the hæmic murmur may be rough in quality is not, I am inclined to think, generally known; indeed, it is so usually credited with the properties of softness, and of undergoing abatement under the stimulus of exertion, that upon these points it stands or falls. It is obvious that we must hesitate before we condemn a patient, should he be the possessor of a murmur, as the subject of organic heart mischief because of the quality of roughness, and because it does not decline on exertion, for in truth the hæmic bruit often becomes louder and harsher on exertion. This change in the character of the murmur may usually be ascribed to the supervention of the shock-bruit—the neuro-typtic murmur presently to be described—as the result of excited muscular action. In addition to a modified hæmic bruit there may then be audible a rough buzzing sound, which is best heard at the commencement of the systole, and is loudest in the third interspace. The union of these pseudo-murmurs is common, and may closely simulate organic disease. Even the act of sitting up will at times induce this combined bruit, for the heart of an anæmic patient is easily excited. It is often audible in the left interscapular region, but it generally lingers here only so long as there is excitement, and disappears as the heart returns to its normal rhythm. This alliance of murmurs may be very puzzling, and many a young heart is condemned—I had almost said "unheard"—when the disturbance is purely functional. The difficulty is particularly great when, for example, we have to do with a nervous young person whose history is not entirely free from a suspicion of rheumatism. The fact that perfect rest—say, for ten or fifteen minutes, when the heart is reduced some twenty or more beats—modifies the bruit considerably, robbing it of its roughness and leaving the apex free, is very suggestive of functional disturbance. Hearts belonging to this group (combined hæmic and neuro-typtic) as well as to the next (neuro-typtic) possess a highly nervous mechanism, and are subject to a form of palpitation or over-action of which the patient may be entirely ignorant. To this excited action the morbid sound may be ascribed. The neuro-typtic bruit is of the greatest importance and is very often responsible for grave mistakes in diagnosis. I have known the life of an able and busy surgeon embittered in the belief that he was suffering from advancing mitral disease—he heard the murmur himself with the double stethoscope, and his neighbour confirmed the diagnosis; and in another instance I was called to see a medical man who had been confined to bed for a month with a supposed attack of endocarditis.

But it is chiefly in connexion with life assurance that mistakes arise. It has frequently been my lot to encourage and reassure by a hopeful opinion nervous young men who were rejected for life assurance on the medical report upon the condition of their hearts. I need scarcely add parenthetically that in attempting to establish under these circumstances the patient's confidence in himself, I have always been careful to avoid doing so at the expense of the reputation of the medical referee by recognising the existence of the heart mischief while expressing the hope that it would prove to be functional and temporary. Other cases have come under my notice apart from the question of life assurance, and, with rare exceptions, the patients have sought advice on account of their hearts. I have said that the patient is usually ignorant of the cardiac excitement or palpitation that accompanies the functional murmur I am about to describe; but this is only partly correct, for, though unaware of the existence of chronic palpitation, he is conscious of a feeling of discomfort of which the palpitation is probably the cause. The following case is fairly typical.

CASE 1.—A man aged fifty, holding a position the duties of which were chiefly clerical, consulted me for pains &c. in the chest and legs. He was a very nervous man, and after beating about the bush for some time stated that he had been the subject of heart disease for upwards of eleven years. It was with some degree of reluctance that he allowed me to examine his chest, as he had never submitted to examination before, owing to a morbid dread of having his fears confirmed. I anticipated an easy task, fully expecting to be able to dismiss from his mind all solicitude for the future; for, as a rule, a nervous patient who diagnoses his own case has absolutely nothing the matter with his heart. I found, however, that I was mistaken; for on auscultation I discovered a loud systolic murmur audible at the apex, but loudest at the union of the fourth rib with the sternum. The pulse-rate was 100 to the minute, and the apex beat was a somewhat violent shock. It was difficult to localise, but it was not displaced. The murmur was of a buzzing or whizzing character, and was only conducted a short distance beyond the apex. It was very distinctly audible with the single stethoscope, though loudest when the double was employed. After resting on his back for upwards of twenty minutes, when the pulse-rate was reduced to 86, it was observed that the shocking action and the murmur had absolutely disappeared. They both returned, however, on allowing him to stand up and talk about his symptoms. I formed the opinion that the bruit was the result of sonorous vibrations conducted to the stethoscope on account of the peculiar ventricular shock, which produced a somewhat sibilant buzzing murmur, and that there was no mitral incompetency.

A number of cases have come under my notice which resemble the above more or less closely, but I shall only refer to a few as illustrating different phases, particularly with reference to the maximum point of the murmur.

CASE 2.—A man aged thirty-five, the subject of facial palsy, stated that his medical man had discovered his heart was "wrong" about four years previously. He was an extremely nervous man, and complained, among other symptoms, of almost constant palpitation. Under examination the heart was excited and jerky (120 in the minute), and there was an apparent increase in the area over which the impulse could be felt and seen. A well-marked systolic murmur was audible at the apex and was conducted about two inches to the left. Its maximum was just above the apex beat. The murmur was rough and was rendered less distinct by pressing the stethoscope firmly on the chest. It entirely disappeared even during excitement, when he held his breath after a deep inspiration, and when he lay on the right side; nor was it any longer audible when the heart settled down after a prolonged rest.

CASE 3.—A young man aged twenty-two was sent to me by his medical attendant for an affection of the heart. He complained of dyspepsia, shortness of breath on exertion, and a sensation amounting at times to pain in the præcordium. The heart was rapid (about 100) and the impulse was distinctly heaving. There was no displacement of the apex. A loud systolic murmur was audible along the left border of the sternum from the second to the fifth interspaces. It was rough and vibrating at its commencement, and soft and blowing towards its termination. It was loudest in the fourth interspace and was feebly audible at the apex, in which area it became less distinct on placing him on his left side, whilst as the result of rest it receded altogether from the apex and remained limited to the left border of the sternum. On the two or three occasions on which I examined this case the murmur, though reduced in intensity and extent of area over which it was audible by rest, did not quite disappear. It is only fair to say that in spite of the repose the heart remained rapid and excited; in other words, that it did not respond satisfactorily to rest.

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It is common to find cases of this kind among children, but here the neuro-typtic bruit is usually associated with the true hæmic murmur—a fact that should be borne in mind when applying the repose test, for as the heart settles down the anæmic part of the bruit may become louder as the shock-produced sound diminishes. The fact, however, as I have already remarked, that the apex is left free from murmur as the result of rest is of great diagnostic value. In children it is, unfortunately, very difficult to manipulate the patient so as to abolish all agitation from the impulse, for the peculiar vibrating shock that would seem to underlie the murmur is apparently very easily aroused. I have often longed to examine the case during sleep, and I suspect some cases could only be cleared up in this way. It is also worthy of note that this murmur is not rendered more marked, but is rather lessened, by placing the patient on the left side, a manœuvre that nearly always intensifies organic bruits belonging to the mitral area. As a rule, in cases in which the neuro-typtic murmur is well marked, the morbid sound is audible whenever the patient is examined, under even slight degrees of excitement, in the erect posture, but in the following case the murmur disappeared entirely after a few weeks' rest and treatment. (Bromide of potassium and arsenic, with rest, were prescribed.)

CASE 4.—An athletic young man aged twenty complained of discomfort about his heart, with palpitation and shortness of breath on exertion. He was highly nervous. The apex beat was somewhat diffused, and was a little displaced to the left. It communicated a distinct shock to the hand, and the heart was rapid (90). A low-pitched, burring, systolic murmur was audible at the apex, but was not conducted towards the left, though it could be traced towards the right as far as the sternum in the fourth and fifth interspaces. After a few minutes' rest on the back it entirely vanished, but not until the cardiac excitement subsided. When examined a month later the murmur was no longer audible.

I pass now to a form of pseudo-murmurs that has long puzzled clinical observers. I refer to the so-called cardio-respiratory murmur. This adventitious sound is very common in nervous people during inspiration, but is frequently audible during the whole of the respiratory cycle. It is short and whiffing, and corresponds in point of time, as a rule, with the first sound. It can scarcely be said to favour any particular area of the præcordium, though it is perhaps most frequently audible in the neighbourhood of the apex, either to the right or to the left of the heart, or it may be below it, though it is often in the true mitral area itself. At times it can be heard to the left of the great vessels at the base, or, again, in the mid-sternal region between the fourth ribs, or in the aortic area, or beyond the sternum on the right side in the neighbourhood of the right nipple. These situations represent the positions in which the murmur is audible in different cases, for in the individual it seldom varies, but confines itself to a particular part of the heart area under certain circumstances. I have ventured to account for the cardio-muscular or neuro-typtic murmur by the shock or muscular vibration theory. To explain the cardio-respiratory bruit, on the other hand, it seems necessary to suppose a sudden reduction in the volume of the heart as the result of rapid ventricular contraction, the consequence of which is that the air is drawn in from the tubes, and thus the blowing or whiffing sound is produced. The following case I adduce as perhaps the most striking example of the cardio-respiratory murmur with which I have met.

CASE 5.—A man aged fifty-two was sent to me by a medical friend as a case of aortic disease. The patient stated that he had been in good health prior to an attack of pneumonia of the right lung some seven years before. This illness left him in a weak condition for a considerable period. Two years later he noticed beating in the epigastrium, and still later palpitation, with frequent intermissions. Then he became very nervous, and on one occasion he fell in the street during an attack of palpitation. After this his heart disturbance grew worse, and pains in the left side of the chest, shoulder, and down the left arm (pseudo-angina) were added to his other symptoms. At the time he came under observation the pain was a decided feature, and recurred two or three times a day, usually as the result of exertion. He was a tall, thin man, with a nervous, excitable temperament. The heart was rapid (generally about 90) and the impulse was diffused and heaving. The apex, as far as it was possible to localise it, was below the fifth rib, an inch and a half below and half an inch to inside of the left nipple. On auscultation when the patient was standing a loud systolic blowing or whiffing bruit was audible to the right of the sternum in the third, fourth, and fifth interspaces. The point of maximum intensity was in the fourth interspace, immediately below the right nipple; but the murmur was distinctly to be heard over an area which could be covered by a small hand, reaching from the right border of the sternum beyond and below the nipple. It was not audible at any other part of the heart region. It was loudest during the latter part of inspiration and grew weaker as the air left the chest, but was quite inaudible when the patient held his breath at the end of a long inspiration. The murmur at once diminished in intensity when the recumbent posture was assumed; thus, when lying on the back it was only audible towards the end of inspiration, whilst it disappeared entirely when on the right or left side. This murmur was quite distinct during the whole of the respiratory cycle when the patient was sitting, but it was noticed that after a prolonged rest in this position it became rapidly less and less distinct, until finally it vanished altogether. The brachial artery at the elbow was prominent and tortuous (atheromatous). There was marked pulsation of the abdominal aorta. To sum up the case briefly. A man over fifty was thrown out of a good situation on account of palpitation, with pain and discomfort in connexion with his heart, and on auscultation a loud systolic murmur was audible to the right of the sternum in the third, fourth, and fifth interspaces. The murmur simulated imperfectly the murmur of obstructive aortic disease. It was, however, audible outside the aortic area; it was not conducted over the manubrium sterni, and it became inaudible when the patient held his breath and when he lay on either side. It was, therefore, not an organic murmur. Its distribution, its soft, whiffing character, its crescendency during inspiration, and its total disappearance on altering the posture of the body, even under excitement, distinguished it from the murmurs to which reference has already been made.

In the following case the murmur possessed similar properties, but occupied a different position on the chest wall.

CASE 6.—A young man aged thirty consulted me for sexual and other nervous disturbances. There was a sharp, somewhat violent heart impulse (apex), which seemed a little below and to the left of the normal situation. A loud, soft, systolic murmur was audible in the sixth interspace below the extreme apex beat. It was loudest towards the end of inspiration and faint during expiration, whilst it disappeared when the patient held his breath at the end of a forced inspiration and when he lay down.

In another case, one of old-standing organic heart disease, in which pronounced double aortic and systolic mitral bruits were audible, and the heart was markedly hypertrophied, a similar soft, whiffing, systolic murmur could be heard quite independent of the organic murmurs, in the seventh interspace below and to the outside of the apex line. This murmur was only present when the patient lay on his left side at a certain very constant angle. On failing to attain this point, or on over-reaching it a little, the murmur could not be heard.

I now come to an interesting case, which I must describe rather more at length, as it possesses considerable interest from a life assurance point of view.

CASE 7.—A man aged thirty-two, following a sedentary occupation, came to me about his heart because he had been rejected on two medical examinations for life assurance. He had always been nervous, and of late his nervous symptoms had increased. For two and a half years he suffered occasionally from palpitation and violent action of the heart, but he had never known what it was to be breathless on exertion. He was able to take long walks and climb hills, and he frequently rode a bicycle. His father died suddenly some six years previously from thoracic aneurysm, and to the shock received at the time he ascribed a good deal of his nervousness, and especially his heart symptoms. He was examined in 1886 for life assurance (two years before his father's death), when his proposal was accepted. In January, 1893, he desired to add to the policy, but was rejected on account of his heart. In March, 1894, he made a further application, when another (independent) adverse report was made. He was a tall, thin, fair man, highly intelligent, but very nervous. He never suffered from rheumatism. The heart was rapid (110) and jerky in action. The apex beat was beneath the fifth rib, about half an inch to the inner side of the nipple line. Examined standing, a loud murmur was audible at and a little to the left of the apex. It was systoli

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in time and seemed to be formed of two bruits combined. It commenced as a rough buzzing sound and terminated in a soft whiff or blow, and could be traced up to the fourth rib beside the sternum, where, however, it became very feeble. There was also a loud blowing systolic murmur in the second interspace to the left of the sternum. During a slowly drawn, exaggerated inspiration the buzzing portion of the apical murmur became feebler, whilst the whiffing or terminal part grew louder. On the other hand, towards the end of expiration the rough part of the murmur increased in intensity, whilst the soft blowing part was reduced to a minimum. After half an hour's rest, when the heart was reduced to 85, the murmur vanished altogether from the neighbourhood of the apex except towards the end of a long inspiration, when a short systolic whiff could alone be detected. The murmur in the pulmonary area continued after all cardiac excitement had abated, and was obviously hæmic.

In this case the three functional murmurs united to produce stethoscopic signs that could with difficulty be distinguished from organic heart disease. The hæmic was represented by the bruit in the left second interspace, the neuro-typtic by the rough buzzing sound in the apical region, and the cardio-respiratory by the soft whiff which brought the systolic murmur to a termination. But the application of what I may call the rest, the positional, and the respiratory tests justified the diagnosis of functional disturbance. Not infrequently the murmur is at a maximum when the breath is held at the end of a deep inspiration, and this should be borne in mind.

CASE 8.—A woman aged twenty-seven, stout and full-blooded, consulted me for headaches and pain in the chest and left side. In searching for a cause of the latter pain I came upon a loud systolic murmur about an inch to the left of the heart apex, which was in its normal position. The murmur was short and blowing; it was best heard in the ninth and tenth interspaces in the posterior axillary line, and was loudest during inspiration and at a minimum at the end of expiration. On directing her to draw a long breath and hold it the murmur became markedly intensified. There was no hæmic bruit. The cardio-respiratory bruit is not always systolic in time, but may follow the first sound like an echo.

CASE 9.—A man aged sixty-nine, highly nervous but well-preserved, complained of palpitation, some pain in the left side, and increased frequency of micturition. He was nervous about himself, and suspected diabetes. He informed me that for thirty years he had been suffering from what medical men called mitral disease, but he had become used to the idea, and was not disposed to take a serious view of his heart condition. The heart was rapid (115 in the minute), with a jerking action. The apex was a little below and to the left of the normal position. Examined standing, a loud murmur was audible at the apex and to the right and left of this point; it was short and whiffing, and synchronous with the first sound, and was loudest during inspiration, but became much less distinct when the breath was held. When he lay down the bruit to the right of the apex in the fifth interspace was no longer synchronous with the first sound, but followed it, just coming in before the second sound, which was normal. At the apex and to the left this separation from the first sound was not recognised. After resting on the back for a while the heart came down to 84, and the murmur disappeared.

In some of the cases I have related there was more than a suspicion of cardiac hypertrophy, as evidenced by displaced apex beat. Indeed, it might almost be said to be the rule to meet with the impulse slightly lower and further out than the normal situation in cases in which the neuro-typtic murmur is well marked. In other words, it is not uncommon to meet with hypertrophy, real or apparent. Whilst admitting the possibility of some slight degree of hypertrophy, arising out of chronic palpitation or over-action, I am decidedly of the opinion that the increased area of impulse in these cases cannot be regarded as a sufficient indication of hypertrophy or dilatation; for even in the case of habitually quiet, normal hearts, a little excitement or exertion will at once cause an apparent outward displacement of the apex beat, which in some instances will continue in the new position for a while after the pulse has fallen to its normal rate. This point requires further investigation, for it is obviously of importance to determine the size of the heart, a task of considerable difficulty in cases of nervous palpitation. In very few instances was I able to satisfy myself that the area of percussion dulness was at all increased, and in none did I meet with increase in the area of deep dulness. It will possibly be thought that the explanation given above of the so-called shock and cardio-respiratory murmurs are inadequate, and so they may be; but I am not so much concerned just now with the theory of their production as I am to bring under the notice of the profession the fact that functional heart murmurs very often simulate organic disease. The accompanying table shows the chief clinical features of the various murmurs:—

Table showing the Characteristics of Different Murmurs.

—	Organic mitral.	Hæmic.	Neuro-typtic.	Cardio-respiratory.
Physical character.	Varied, soft, or rough.	Usually soft; may be rough.	Rough, scratching, whizzing.	Soft, whiffing.
Position of maximum.	Apex and conducted towards left.	Pulmonary area rarely beyond apex.	Little above and to right of apex. Loudest in fourth interspace close to sternum.	Varied in position; often not referable to any particular area.
Posture test.	But slightly influenced by change of position. Loudest when lying on left side.	Loudest when lying on the back. Faintest when standing.	Loudest when standing; often disappears when lying on either side.	Do. Do.
Respiratory test.	Loudest at end of expiration, but not much influenced by respiration.	Loudest at end of expiration, often inaudible at end of deep inspiration.	Do. do.	Loudest towards end of inspiration, faintest at end of expiration. On holding a long breath will often disappear, but may be intensified.
Rest test.	Not much affected by exertion. Well-marked after prolonged rest.	Loudest after rest.	Loudest after exertion or any excitement. Inaudible after prolonged rest.	Loudest during excitement, may be inaudible after rest.

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ON THE

PRESENCE OF TYPHOID BACILLI IN THE URINE OF PATIENTS SUFFERING FROM TYPHOID FEVER.

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THE fact that typhoid bacilli are to be found in the urine of patients suffering from typhoid fever is not a new fact. It is, however, a very important fact, and for these reasons. First, if it is true that the typhoid bacilli are present in the urine of patients suffering from typhoid fever, and if, as we shall see, typhoid bacilli are generally absent from the fæces, it will be evident that it is the urine, and not the fæces, of patients suffering from typhoid fever which is responsible for the spread of typhoid infection. Secondly, if typhoid bacilli are constantly present in the urine of typhoid patients, it may be possible to diagnose the presence or absence of typhoid fever by undertaking a bacteriological examination of the urine. Thirdly, if it is true that typhoid bacilli are constantly present in the urine in cases of typhoid fever while they are generally absent from the fæces, it will be evident that the conception of typhoid fever upon which the ordinary clinician proceeds is an entirely erroneous one. It will be convenient to proceed immediately with the discussion of this question. The theory of typhoid fever, which is currently held, and currently acted upon, is the theory that typhoid

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fever is an "intoxication process," much in the same way as cholera is an "intoxication process." In other words, it is assumed that the typhoid bacillus vegetates in the intestine, that it effects a lodgment in the intestinal walls, and that the poisons which are elaborated by the bacilli are absorbed into the system from the intestine. The systemic disturbance which characterises typhoid fever is attributed to this absorption. This theory of typhoid fever is brought into harmony with notorious bacteriological facts by the assumption that there is a certain leakage of typhoid bacilli from the intestine into the system. This leakage theory is supposed to dispose of the fact that typhoid bacilli are invariably found in the spleen and mesenteric glands of patients suffering from typhoid fever. Now, this "intoxication" theory of typhoid fever was originally based upon the fact that a bacillus which is morphologically indistinguishable from the typhoid bacillus is found in large quantities in the stools in every case of typhoid fever. Subsequent investigations, however, showed that this bacillus which predominates in the intestinal floor in cases of typhoid fever can be distinguished from the true typhoid fever bacillus by a series of chemical differences. The bacillus which is found in such large quantities in the stools of patients suffering from typhoid fever is therefore not the true typhoid fever bacillus. It is the bacillus which is known by the name of "bacillus coli communis." Recent research has, therefore, been directed to the question as to whether, in addition to the bacillus coli communis, the true typhoid fever bacillus is not also to be found in the stools of patients suffering from typhoid fever. The following are the results of Wathelet's careful examination of this question. The true typhoid fever bacillus was detected in the stools of only four of the twelve cases of typhoid fever which were studied by this observer. In the case of these four patients the typhoid fever bacillus was detected only four times in a total of twenty-four examinations; and even on these four occasions the true typhoid fever bacillus was outnumbered by the bacillus coli communis in the proportion of about three to one. In the case of the other eight cases of typhoid fever the bacillus appeared to be absent from the stools throughout the whole course of the disease. Wathelet has further shown that if the bacillus typhosus and the bacillus coli communis are implanted into one and the same tube of nutrient broth, the bacillus coli communis will outgrow and kill off the typhoid fever bacillus even when at the outset an enormous numerical preponderance is given to the typhoid bacillus over the bacillus coli communis. Again, Wathelet has shown that whereas the bacillus coli communis will flourish in a nutrient medium containing the toxines elaborated by the typhoid fever bacillus, the typhoid fever bacillus will not grow in a nutrient medium containing the toxines elaborated by the bacillus coli communis. If this holds true in every case—and it has seemed to hold true in the few test-experiments we have performed—we are evidently in a position to infer on *a priori* grounds that typhoid fever bacilli will be absent from the intestine whenever, as in the case of typhoid fever, we have to deal with a multiplication of the bacillus coli communis in the intestine. Both *a priori* reasons and actual observations, therefore, point to the absence of typhoid fever bacilli from the intestinal tract, and therefore the symptoms of typhoid fever cannot be interpreted as a result of the absorption of typhoid toxines from the intestine. We are therefore compelled to seek for a new theory of typhoid fever, and if typhoid fever is not the result of an intestinal intoxication process, we must evidently seek to explain it as a result of a blood infection. This is, if we understand it aright, the theory of typhoid fever which has recently been put forward by Sanarelli under the auspices of Metschnikoff. We have to see whether typhoid fever can be explained upon the basis of this theory. And evidently the first thing to be explained in the case of typhoid fever is the turgidity of the spleen and the presence of typhoid bacilli in the splenic tissue. Now, this turgidity of the spleen and this presence of micro-organisms in the splenic tissue is an invariable accompaniment of every septicæmic process. We find it in the case of such blood infections as anthrax in cattle and spirillum fever and malaria in man. And we have the explanation of this phenomenon in the experiments of Werigo, which show that the introduction of any foreign particulate matter into the blood invariably results in a deposition of that particulate matter in the spleen (and other internal organs), and in an aggregation of polynuclear white blood-corpuscles round the foreign particulate matter, and, finally, in a process of phagocytosis. Everybody who has a rabbit, and a little carmine, or any bacterial culture at his disposal can readily verify these facts for himself. The enlarged spleen and the presence of bacteria there are thus quite in harmony with the theory of a blood infection in typhoid fever. The fact that the white blood-corpuscles are diminished[1] in the circulating blood in typhoid fever is also in harmony with this explanation. We have further in connexion with typhoid fever to account for the eruption of pink spots on the skin. These were inexplicable on the intoxication theory of typhoid fever. They are, however, of the easiest explanation if we make the assumption that typhoid fever is characterised by a blood infection, for here, as in other cases, we may instance the skin eruption in the case of human glanders, the spots evidently correspond to lodgments of the bacteria in the capillaries of the skin. This interpretation of the skin eruption in typhoid fever has been borne out in the case of typhoid fever, just as it has in the case of glanders, by the fact that the specific bacteria have been cultivated from the spots. We have been able to confirm this observation in one of the cases of typhoid fever reported below.

The intestinal symptoms of typhoid fever are of somewhat uncertain explanation. Possibly they are to be explained, as Sanarelli explains them, as a specific effect of the typhoid fever toxine on the adenoid tissue of the intestine, and of the subsequent invasion of that tissue by the bacillus coli communis. We have, however, not been able to verify Sanarelli's observation that the injection of typhoid fever toxine will produce a swelling of the Peyer's patches in the guinea-pig. On the other hand, the inflammation of the Peyer's patches might evidently be due to a lodgment of typhoid bacilli in the adenoid tissue comparable to that which occurs in the capillaries of the skin. We thus see that the theory of a blood infection will account for the intestinal phenomena just as well as the theory which locates the source of the disease in the intestine. The occasional presence of typhoid fever bacilli in the intestine is easily accounted for by assuming that a certain number of the typhoid fever bacilli escape through the intestinal wall into the intestinal contents. The relapses which occur in typhoid fever may be compared with the relapses which occur in spirillum fever, which is a typically septicæmic process. In both cases the cause of the relapses would be some incompleteness in the original phagocytic reaction. Such incomplete phagocytosis would be followed up by a cultivation of the typhoid fever bacilli in the spleen, and ultimately by a dissemination of these bacteria through the body by means of the blood current. This would be evidenced by a fresh outcrop of spots upon the skin.

In addition to the points which have just been touched upon, we may refer to two others, which, though they have been comparatively neglected, throw an important light upon the pathological processes which are associated with typhoid fever. The phenomena in point are the presence of so-called "miliary lymphomata" in the kidney and the presence of the typhoid bacilli in the urine. We have had no recent opportunity of studying the miliary lymphomata which are described as occurring in typhoid fever, but they are probably quite comparable to the miliary lymphomata which are described as occurring in the spleen in cases of spirillum fever, and to the miliary lymphomata which are produced by the injection of fairly resistant bacteria, such as tubercle bacteria, into the blood. Such lymphomata correspond to aggregations of white blood corpuscles around bacteria which have lodged in the capillaries. They are a repetition in small of the aggregations of phagocytic white blood corpuscles which are seen on a far larger scale in the spleen. Lastly, with regard to the presence of typhoid fever bacilli in the urine. Even if typhoid bacilli were found in the urine only in occasional cases their presence there would be a strong argument in favour of the theory of a blood-infection and against the intestinal intoxication theory. But the argument in favour of the septicæmic theory of typhoid fever becomes irresistible if it

[1] It may be pointed out incidentally here that the paucity of white blood-corpuscles in the blood probably stands in some connexion with the fact that epistaxis is of frequent occurrence in typhoid fever. This epistaxis—if we may judge from a great many observations which one of us has made of the condition of blood-coagulability—is almost certainly an indication of a diminished blood-coagulability such as can be obtained by the injection of particulate matter into the blood. In an experiment made by one of us, the coagulation time of a dog's blood in the standard capillary tube was reduced from three minutes to fifteen minutes by an intra-vascular injection of carmine particles.

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can be shown that the typhoid fever bacilli are almost always found in the urine in cases of typhoid fever. With a view to ascertaining this point we have examined the urine in the the following typical cases of typhoid fever.

CASE 1.—A man aged thirty-five had a very severe attack of typhoid fever with a relapse, which was accompanied by a typical rash. A specimen of urine was taken on the seventh day of the relapse while the temperature was at its highest, reaching 103·6° F. The patient made a good and steady recovery. The disease was contracted at the Cape, and the primary attack lasted quite five weeks.

Bacteriological examination.—The urine was passed directly into a sterilised bottle. Plate cultivations were made from it a few hours afterwards and a considerable number of typical colonies appeared on the plates. These were planted out into gelatine, and typical stab-cultures were obtained. Tubes of milk, ordinary broth, and 2 per cent. cane sugar and chalk broth, were also inoculated. There was no curdling, indol production, or gas evolution.

CASE 2.—A girl (aged fifteen) had a mild attack of typhoid fever. The specimen of urine was taken on the fourth day after admission to the Royal South Hants Infirmary during the supposed third week of the disease. No rash was seen whilst she was in the hospital, and the temperature had been falling since admission. She made a speedy recovery.

Bacteriological examination.—The urine was drawn off by an aseptic catheter into a sterilised bottle. Plate cultivations were made a few hours afterwards, but no typical colonies could be detected on the gelatine plates.

CASE 3.—A boy aged fifteen had a severe attack of typhoid fever, and was admitted to hospital on the eighth day. On admission he was deaf and drowsy. The stools were typical; there was a trace of albumen in the urine and there were a few doubtful spots. There was considerable bronchitis. The temperature ranged between 102 4° and 104 8° F. from the eighth to the eleventh day, beginning to decline on the twelfth day. There was an eruption of typical spots on the tenth day, and on this day a specimen of urine was taken. The patient steadily improved on the decline of the temperature, and another specimen of urine was taken on the fifteenth day. The temperature had been 99·4° that morning and 102 8° the previous evening. He is now almost convalescent.

Bacteriological examination.—First sample of urine: Plate cultivations were made, as in the last two cases, within a few hours after the urine had been drawn off by aseptic catheter. Plates inoculated with one loopful of urine remained sterile. The remainder of the urine was incubated for forty-eight hours at 37° C., and plate cultivations were then made with 0·25 c.c. A considerable number of typical colonies developed upon the plates. These were further tested as to their chemical properties as in Case 1, and reacted in every respect as typhoid. No typhoid colonies were recognised on the plates which were made from the second sample of urine after it had been incubated for forty-eight hours.

CASE 4.—This was a boy aged nine, brother of the last patient. The attack was one of medium severity. He was admitted on the tenth day of the disease. He was deaf and drowsy. He had a profuse rash and some bronchitis. His spleen could be felt. There was no albumen in the urine, and he was constipated. The first specimen of urine was taken on the twelfth day, when the temperature had commenced to decline, but ranged from 102° to 103 6° F. On the seventeenth day a second specimen was taken. The temperature then ranged from 98·4° to 99·8°. On the eighteenth day there were still a few spots to be seen. Cultivations were made from three of these. The temperature had not exceeded 99° for five days, when on the twenty-fourth day it rose to 100 2° at 8 P.M., and a relapse began. This relapse was of a mild type constitutionally, but the temperature reached 104 8° on the third day (twenty-sixth day of the disease), and there were a few spots. On the twenty-seventh day there was a profuse crop. On the twenty-eighth day (fifth day of the relapse) a few spots were still to be seen. Cultivations were made from two of these, and a third specimen of urine was taken. The temperature on this day ranged from 99·6° to 103·2°.

Bacteriological examination.—The first sample of urine was passed into a non-sterilised chamber-pot. No colonies which resembled typhoid were detected on plate cultivations made a few hours after the urine had been passed. Numerous typical colonies made their appearance on plates made with urine which had been incubated for forty-eight hours. The bacteria which were planted out from three of these colonies curdled milk, and gave the indol reaction with ordinary broth and the bubbling reaction with 2 per cent. cane sugar and chalk broth. The bacteria which were planted out from nine other colonies corresponded in all respects to true typhoid bacteria. Plates were made from the second and third samples of urine after they had been incubated in each case for forty-eight hours. The results in the second sample were negative. Typical typhoid bacilli were cultivated from the third sample of urine.

Typhoid spots.—On the eighteenth day after sterilisation of the skin three typhoid spots were punctured with a sterile hypodermic needle mounted in a piece of sterile glass tube, and plate cultivations were made. A typical colony made its appearance on one of the plates. The bacteria corresponded in all their chemical and morphological characters to true typhoid bacilli. On the twenty-eighth day cultivations were made by the same method. Several typical colonies developed on one of the plates, and cultures made from these conformed in all respects to true typhoid.

CASE 5.—This was a girl aged fourteen, sister of the last two. It was a very mild case. She was admitted to hospital on what was probably about the ninth day, with constipation and a few typical spots. Her temperature was 103° F. that evening, but fell steadily. The first specimen of urine was taken by catheter two days after admission, when the temperature varied between 98·8° and 100·6°. The temperature remained below 98·4° during the whole twenty-four hours on the thirteenth day, and has continued so since. A second specimen of urine was taken on the sixteenth day, when there had been three clear days of apyrexia. She is now convalescent.

Bacteriological examination.—A single typical colony made its appearance on plates made from the first sample of urine a few hours after it was passed. The bacteria from this colony corresponded in all their chemical and morphological characters with true typhoid fever bacilli. No typhoid fever colonies appeared on the plates made from the urine after it had been incubated for forty-eight hours. This urine had turned alkaline. A second sample of urine gave negative results.

CASE 6.—This was a girl aged nine years, a lodger in the same house as the last three cases. She had a very severe attack, and was a delicate-looking child. She was admitted on about the same date of the disease as the last case. On admission she had a temperature of 103·2° F., and rapidly became unconscious and passed her evacuations into the bed. She had a rash and a great deal of bronchitis. For a week her temperature ranged between 103° and 104·8°, and for another week between 101° and 104°, and then began definitely to decline. The first specimen of urine was taken on the second day after her admission, and the second on the seventh day after admission—i.e., on the eleventh (?) and sixteenth (?) days respectively. About the twenty-fifth day a suspicious-looking gangrenous patch appeared inside the left cheek, which spread, and was scraped out on the twenty-seventh day under chloroform, and freely rubbed with a strong solution of chloride of zinc. It now appears to be doing well. On the twenty-eighth day a purulent discharge began from the left ear, which continues. At the present time the child is distinctly better and is quite conscious. Her temperature fell to 98 8°, and only rose to 101·4° on the twenty-eighth day.

Bacteriological examination.—First sample of urine: No typhoid fever colonies made their appearance on the plate made a few hours after the urine was passed; numerous typical colonies appeared on plates made after the urine had incubated forty-eight hours. Bacteria from these colonies corresponded in all respects to true typhoid fever bacteria. Second sample of urine: Numerous typical colonies made their appearance on plates made after the urine had been incubated for forty-eight hours. Bacteria from these colonies were true typhoid bacteria.

CASE 7.—This case was under the care of Mr. Chance, to whom we are indebted for the notes, of which the following is an abstract. The patient was a woman aged eighteen, who began to feel ill a few days before leaving New York on June 13th, 1895. From the 16th to the 19th, when she landed at Southampton, her temperature varied from 103° to 105° F. After this the temperature fell somewhat for a while, but made great daily excursions. There was a fair amount of diarrhœa, a well-marked rash, and unconsciousness with delirium. The urine was taken on the eleventh day, when the temperature varied from 103 4° to 99 2° F. Death occurred without any return of consciousness on the thirteenth day.

Bacteriological examination.—Very numerous typical

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colonies appeared on plates made after the urine had been incubated for forty-eight hours. Bacteria from these colonies correspond in all respects to true typhoid fever bacteria.

We thus see that in six out of seven cases examined the typhoid fever bacilli were easily detected in the urine. In view of this fact it seems to us that the bacteriological examination of the urine ought not to be neglected in any doubtful case in which typhoid fever is suspected. It is hardly necessary to do more than merely advert to the hygienic aspect of the matter. It was only a natural outcome of the intestinal intoxication theory of typhoid fever that the greatest precaution should have been enjoined with regard to the stools of the patient suffering from typhoid fever, while the disinfection of his urine was neglected. If, however, the recent observations on the almost constant absence of typhoid fever bacilli from the stools are to be trusted, the disinfection of the fæces will have to rank not as an article of faith, but as a mere "counsel of perfection." On the other hand, the most careful attention will have to be given to the disinfection of the urine. In some cases the urine even before incubation is absolutely turbid with typhoid bacilli. In conclusion, it is our pleasant task to thank Dr. W. P. Purvis, of the Southampton Infirmary, for the notes of the clinical cases which he has furnished and for much useful assistance in the conduct of the bacteriological examinations.

Netley, Southampton.

NOTES ON THE PLAGUE IN CHINA.

BY JAMES A. LOWSON, M.B., C.M.EDIN.

So far I have met with only five cases of plague in Hong-Kong, of which four were imported from Canton. The remaining patient must have contracted the disease in Hong-Kong, but the manner of infection has not been traced. At Macao the fatal cases have for some time averaged ten daily, but according to information just received (June 12th) there are now only three or four deaths daily. Canton city was absolutely free from the disease when I was there a week ago, but the surrounding villages are suffering severely. Hoihow is likewise practically free, only one or two straggling cases being known. The news from Swatow is also favourable, my medical correspondent reporting only from three to five cases per week, but intelligence of another outbreak not far from Swatow has just arrived. This is only to be expected. Plague travels very slowly, and we may anticipate that it will pursue an erratic course through many Chinese villages for the next few years. In the villages no methods of checking its advance are ever thought of, and consequently a sort of quarantine or prevention of immigration may have to be kept up perhaps for years unless wiser counsels prevail. Amoy is declared free from plague. Immigration from Macao, Hoihow, and Swatow is still prohibited—a somewhat unnecessary precaution, especially with respect to the two last-named places.

I have been able to carry on some experimental researches in conjunction with the colonial veterinary surgeon. Pigs are but slightly susceptible to the disease. Observations made in six cases show that their temperature is not raised by feeding them on plague-infected spleens. Inoculation in the flank is followed by a rise in temperature of from 2° to 4° F. in about twenty-four hours, the site of inoculation becoming œdematous. On careful bacteriological examination of the serum from the œdematous tissue no plague bacilli were found either by the microscope or by cultivation. In our experiments on cattle two animals have been inoculated about six times each, and they show the same symptoms as [redacted] pigs. The rise of temperature, however, is somewhat greater; 100° to 101° is the normal, and a temperature of 106° is frequent. They do not lose their appetites at all. An œdematous swelling appears round the place of inoculation; but, just as with the pigs, no bacilli are found in it. The inoculations were made from the bubo direct, from culture, and from rabbits which had previously been inoculated with the disease. I only want a few cases to try now in the hope of producing immunity in the cattle, but to all appearance I shall not be able to get them here. Yessin says that in Yunnan he has proved the presence of the same bacillus in cattle plague and that it is most deadly. I think he must mean the rinderpest, which is so common in Yunnan.

Hong-Kong, June 12th.

A CASE OF BELLADONNA POISONING.

BY S. R. SCHOFIELD, M.R.C.S. ENG., L.R.C.P. LOND.,
AND
C. S. PANTIN, M.B., B.S. LOND.

THE patient, a boy aged six, was brought to the Victoria Hospital for Children, Chelsea, at 1.15 P.M. on Aug. 2nd, 1894. At noon the boy had left his home, and at 1.10 P.M. he had been brought back by some children, who said that he had fallen on his head. The boy was found to be delirious and very restless. The movements were jerky and unexpected. He would sit up successfully for some time and then overbalance backwards or forwards. He could stand and walk a little, but in a very incoördinate manner. The pupils were equal and dilated; they did not react to light. The skin was dry and apparently itching, for he constantly scratched himself. He resented being interfered with and did not recognise his mother. No external injuries could be found. The history of a fall was discredited and belladonna poisoning suspected. The boy was admitted to the hospital under the care of Dr. W. Wallis Ord. From the stomach fragments of about half a dozen belladonna berries were removed, together with numerous seeds. No food was found in the stomach. Despite the struggles of the patient the washing out was continued until water returned without any seeds. For the next few hours he lay quietly in bed, apparently exhausted, but at 5 P.M. he sat up and swallowed some peptone with difficulty. He refused water. In the evening he became very restless and several times nearly fell out of his cot. He stared about him with eyes apparently focussed for distant objects, for he did not notice people who were close in front of him. The pupils remained dilated. On careful watching [redacted] was evident that in his delirium he was going through [redacted] events of the morning. After looking suspiciously round in all directions he would stretch out his hand to the screen at the head of the bed and appear to be plucking something; he would examine the supposed contents of his hand and then put it to his mouth and go through the acts of mastication and deglutition. Occasionally he put his hand to his nose, as if smelling, and once he seemed to be spitting something out of his mouth. Again he would seem to be picking up something, which he would throw into the air and catch or throw away to a distance. He called his late companions by name and made remarks bearing on the subject of the berries, such as "Have you got it?" "You said they were not cherries"; "Are there any stones in them?" "Give me one to taste"; "Eat that and I'll tell your mother." He gave the impression of being quite happy. The skin was dry, and his speech suggested dryness of the mouth. He frequently rolled his tongue about. The face was flushed, but there was no rash. The pulse was 120, regular, and of low tension. He passed urine unconsciously several times, but the [redacted] der remained distended until relieved after a fomentation. [redacted] morphia injection of one-tenth of a grain sent him to sleep for several hours. Next morning consciousness began to return. He could answer questions in a muddled way. The pupils remained large, but reacted slightly to light. The motions contained a few seeds, but no berries. The following day the boy was quite well. The berries and seeds were those of atropa belladonna (deadly nightshade). The patient led the way to the spot where he had picked and eaten them.

The case seems worthy of record, firstly, on account of the difficulty of diagnosis in the face of a misleading history, and, secondly, on account of the more than usually realistic manner in which the taking of the poison was rehearsed in the resulting delirium.

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AN UNPUBLISHED PHYSICAL SIGN.

BY WALTER BROADBENT, M.B. CANTAB.,
HOUSE PHYSICIAN AT THE BROMPTON HOSPITAL FOR CONSUMPTION.

BY the kind permission of the physicians at the Brompton Hospital I am permitted to publish the notes of four cases now under their care in the wards, in each of which there is visible retraction, synchronous with the cardiac systole, of the left back in the region of the eleventh and twelfth ribs, and in three of which there is also systolic retraction of less degree in the same region of the right back. In all the cases there is a definite history of pericarditis, and in three of them there are other conditions strongly suggesting an adherent pericardium. The only means of causing this retraction on both sides seems to be the diaphragm, which, if pulled upon, would have more effect on the floating eleventh and twelfth ribs than on the other more fixed ones. In cases of large heart with adherent pericardium there is a considerable area of the ventricles closely adherent to the central tendon of the diaphragm, and the powerful contraction of the hypertrophied heart must give a decided tug to this structure. That it should affect the ribs more often on the left side would be expected from the adhesion being mainly to the left of the middle line; the liver also, which is often large in these cases, may restrain the movement on the right.

CASE 1.—A youth aged eighteen years had rheumatic fever in 1890 and pericarditis in 1893. He is pale and thin, with carotid pulsation very marked in the neck. He also shows capillary pulsation. His pulse (80) is regular in force and frequency. The artery is large, and visible for two inches up the arm. The wave is sudden, large, bisferiens, and almost completely collapsing. The chest bulges on the left side from the second rib downwards. The apex beat is a very powerful thrust in the sixth space four inches and a half below and one inch and a half outside the nipple. There is systolic retraction of the third and fourth left spaces, and also of the epigastric region, and pulsation in the fifth and sixth left spaces. The apex beat does not change its position on his taking a deep breath, and moves barely half an inch when he lies on one side or the other. In the left back, between the posterior axillary and scapula angle lines, retraction, synchronous with the cardiac systole, is seen and felt in the tenth and eleventh spaces, and over the twelfth rib and just below it. In the right back systolic retraction of almost equal intensity is present over precisely the same area. The cardiac dulness is bounded above by a line from the mid-sternum opposite the fourth cartilage to the nipple; and in the sixth space extends from the right of the sternum to two inches outside the vertical nipple line. Deep inspiration only slightly decreases this area. The heart sounds are as follows: at the apex there is a blowing systolic murmur almost entirely replacing the first sound, and a long low murmur filling the diastole. Both murmurs are heard round to the back. In the tricuspid area there are a good first sound, a blowing systolic murmur, a second sound, and a blowing disastolic murmur. At the pulmonary cartilage a rough systolic murmur, slightly accentuated second sound, and a blowing diastolic murmur are audible. At the aortic cartilage there are a rough vibratory systolic murmur, a second sound, and a loud blowing diastolic murmur. In the neck there is heard a very loud vibratory systolic murmur, but no second sound. The liver is only just felt below the margin of the ribs. Respiration is almost entirely costal, and the epigastric region recedes on inspiration. There is slight dulness at the left base, and some rhonchi and crepitations are heard over the lower part of both lungs, especially the left.

CASE 2.—A girl aged eighteen years had pericarditis with rheumatic fever in 1893. She is a thin, anæmic girl with slightly flushed cheeks. Her pulse (116) is regular in force and frequency. The artery is of fair size, just felt between the beats; the wave is large and short, and very easily compressible. There is very little præcordial bulging. The apex beat is in the fifth space, an inch and a half below and half an inch external to the nipple; the sixth rib is also lifted. A presystolic thrill is felt, followed by a short powerful impulse. Slight pulsation is also visible in the second, third, and fourth spaces on the left side, and to the right of the sternum in the fourth and fifth spaces. In the epigastrium there is very slight systolic retraction. The apex beat does not alter its position on her taking a deep breath, and only moves very slightly on her turning on to either side. In the left back there is seen retraction, during the cardiac systole, of the tenth space and eleventh and twelfth ribs, with the region just below. In the right back there is a similar retraction of the twelfth rib with the space above and below. Cardiac dulness begins in the third space from the mid-sternum to the left vertical nipple line, and in the fourth space extends from half an inch to the right of the sternum to half an inch outside the left nipple line; in the fifth space it extends from three-quarters of an inch to the right of the sternum to one inch outside the nipple line. Deep inspiration does not decrease the cardiac dulness. The sounds heard are at the the apex, a short soft rumbling presystolic murmur leading up to a very loud banging first sound, and a whistling systolic murmur; no second sound is audible. The first sound and the systolic murmur are conducted round to the back. In the tricuspid area there are heard a first sound, a blowing and slightly whistling systolic murmur, and a second sound. At the pulmonary cartilage there are a first sound, a soft systolic murmur, and an accentuated and reduplicated second sound. At the aortic cartilage a loud first sound and a second sound are audible. The liver is felt two fingers breadth below the costal margin. The abdomen moves very poorly in respiration, even for a girl, and the epigastrium sinks in on inspiration. In the lungs there is tuberculous infiltration of the right upper lobe, and of the apex of the lower lobe, with some excavation. There is also slight want of resonance at the left base, with diminished breath sounds.

CASE 3.—This was a young man aged twenty-one years. In 1888 and 1890 he had rheumatic fever, and in 1892 pericarditis and left-sided pleurisy. He is fairly healthy-looking, being only short of breath on exertion. His pulse (108) is regular in force and frequency. The artery is rather large and just visible at the wrist, being nearly empty between the beats; the wave is short and large and is easily compressible. There is some præcordial prominence below the third rib on the left side. The apex beat is in the sixth space, four inches below and half an inch external to the nipple. There is a powerful thrust in the fifth and sixth spaces, with a shock at the end of systole; pulsation is also seen in the third and fourth spaces. There is slight systolic retraction of the epigastric region, but pulsation is felt on deep palpation. The apex beat appears in the seventh space when he takes a deep breath, and moves half an inch internally on his lying on the right side, and one inch and a half externally on lying on the left side. In the left back systolic retraction is seen from the tenth space to just below the twelfth rib, between the posterior axillary and scapula angle lines. On the right side the tip of the twelfth rib is seen to be drawn in during the cardiac systole. The cardiac dulness is in the third space two inches to the left of the sternum, in the fourth space from the mid-sternum to the left nipple, and in the fifth and sixth spaces from the right margin of the sternum to one inch and a half outside the vertical nipple line. This area is considerably decreased on deep inspiration. At the apex there are heard a short, loud, banging first sound and a harsh, systolic murmur, but no second sound. The first sound and murmur are conducted through the axilla to the back. Over the tricuspid area a loud first sound, a blowing systolic murmur, and a sharp second sound are audible. At the pulmonary cartilage there are heard a first sound, a systolic murmur, and slightly accentuated and reduplicated second sound. At the aortic cartilage a short first sound, a soft systolic murmur, and a fair second sound are audible. The liver is not enlarged. Respiratory movement is absent in the epigastric region and very poor in the lower abdomen. In the lungs there is diminished resonance at both bases, and the breath sounds are weak at the right base, but good at the left base.

CASE 4.—A girl aged seventeen years had rheumatic fever and pericarditis in 1890, and rheumatic fever again in 1892. She is delicate looking, small for her age; she becomes short of breath on the slightest exertion. Her pulse (92) is regular in force and frequency; the artery is small, and not felt between the beats; the wave is short and small and is very easily compressible. There is very marked bulging of the left chest below the second rib, and of the lower sternum; the apex beat is in the sixth space two inches below and one inch outside the nipple; it is a powerful thrust. Its position does not alter on deep inspiration or on her turning on to either side. There is systolic retraction in the third and fourth left spaces, also in the epigastric region, and in the fifth and sixth right spaces for one and a half inches from the

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sternum. There is well marked pulsation in the fifth and sixth left spaces, and the ribs are lifted. In the left back there is slight systolic retraction of the eleventh and twelth ribs and the region just below. There is no retraction in the right back. The cardiac dulness is in the second space for an inch, in the third space from the mid-sternum to the nipple line, in the fourth space from one inch to the right of the sternum to one inch outside the left nipple, and in the fifth and sixth spaces from one and a half inches to the right of the sternum to one inch outside the left nipple. On deep inspiration the dulness disappears from the second space, but the rest of the area remains. At the apex are heard a short loud first sound, a loud, rough systolic murmur, and an indistinct reduplicated second sound. The systolic murmur is conducted round to the back. Over the tricuspid area a first sound, a blowing systolic murmur, and a slightly reduplicated second sound, are audible. At the pulmonary cartilage there are heard a first sound, a rough systolic murmur, and an accentuated and reduplicated second sound. At the aortic cartilage a first sound, a soft systolic murmur, and a second sound are heard. The liver extends nearly three fingers' breadth below the costal margin. The epigastrium is a little drawn in during inspiration, and the rest of the abdomen moves only very slightly in respiration. The lungs are normal, with good resonance and good breath sounds at both bases.

Of these cases the first is one of aortic disease of rheumatic origin, and the others of mitral regurgitation, with a variable amount of stenosis. In Cases 1, 2 and 4 there is evidence of adhesion of the pericardium to the chest wall as well, but in Case 3 the heart moves freely under the ribs, and the lung expands well over it, so that the sign is much more important, as being the only clear evidence that the pericardium is adherent. This sign has long been pointed out by Sir William Broadbent in the wards of St. Mary's Hospital, but, so far as I have heard, has not had sufficient importance attached to it elsewhere. Adherent pericardium has frequently such a serious influence on the course of valvular disease, that any aid towards the diagnosis seems worthy of attention.

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THE NATURAL HISTORY OF HARDWAR FAIR CHOLERA OUTBREAKS.

BY SURGEON-CAPTAIN H. HERBERT, F.R.C.S. ENG.

BEFORE 1892 observation had definitely associated the outbreak of cholera at Hardwar with but one condition—the overcrowding at Kumbh fairs. The only two epidemics of the thirty-four years—1858 to 91[1]—had fallen on two of the three Kumbh years of that period, and these were the only two occasions on which the crush was especially remarkable.[2] The estimated attendance of pilgrims in 1867 was 1,250,000, and in 1879 500,000 or 600,000.[3] At the third Kumbh Mela, 1891, the number of pilgrims—269,345—was scarcely larger than at the Adh Kumbh of 1885, where it was 262,621. There can be little doubt that the holy water drunk at, and carried away from, these gatherings constitutes the only possible means of such immediate and general spread of the cholera poison as was seen in 1867,[4] for example. That is to say, the excessive crowding of bathers at the two greater Kumbh Melas must be regarded as having in some way helped in rendering the water of the Sacred Pool or of the Bhun Ghora tank, or of both, an efficient means of cholera diffusion. Obviously another factor—reduction in quantity of the sacred water—may, as far as the fouling of the water is concerned, have the same result as increase in the number of bathers. This is what happened in the big cholera year 1892. It was one of the driest seasons on record in Northern India. "In the submontane tracts many of the streams were dried up, and the water level in the tanks and wells was much lower than usual."[5] The table[6] here introduced shows that the river was lower in 1892 than in any other of the available series of years[7]; and the deficit at the sacred bathing Ghât was in this year rendered extreme by change in the channel of the river.

Volume of the Ganges at Hardwar in cubic feet per second at the time of the principal annual fair.

Year	Volume	Year	Volume
1881	8000	1888	7000
1882	7000	1889	12000
1883	7000	1890	5500
1884	7000	1891	9000
1885	10000	1892	5000
1886	12000	1893	11000
1887	6000	1894	11000

Though only 70,000[8] people had assembled, yet "it was impossible, however, to keep the water in the bathing-pool so fresh as on the former occasion (1891, Kumbh Mela, 269,000 pilgrims) on account of the smaller volume of water in the river and the direct obstruction to its flow in the sacred pool by recently-formed obstacles and foreshores."[9] "The section of the river channel varies considerably from year to year under the action of the annual floods."[10] Unfortunately, this introduces such an element of uncertainty, that although the sacred pool was fouler in 1892 than at the Kumbh Mela of 1891,[11] we cannot be perfectly certain that it was fouler than in other years, such as might have been characterised by only ordinary accumulation of pilgrims and only moderate drought. The evidence is suggestive only. Though it is possible, it is far from proved that the want of water in 1892 was sufficient to raise the foulness of the pool (and tank?[12]) to a level comparable with that of 1867 and 1879, and above that of all intervening years. Of the other cholera years, 1879 was characterised by moderate drought;[13] and the great mela of 1867 fell on a season at least as dry as ordinary.[14] The exemption from cholera attack of the last Kumbh Mela, 1891, was ascribed[15] to the very elaborate sanitary arrangements for the first time in force; but the evidence is very strong that it was due rather to a severe and prolonged winter season. The complete inefficiency of the sanitary arrangements was well shown by the cholera outbreak in the following year.[16] There were no extraordinary sanitary precautions in 1885, when the number of pilgrims was almost the same as in 1891; yet cholera did not break out. The winter was severe,[17] as in 1891, and the river consequently high. (See table.) And there have been other Kumbh and Adh Kumbh years—e.g., 1855 1861, 1873, with neither special precautions nor cholera. It is now fairly

[1] Epidemics spread from the fairs of 1857 and of 1892.

[2] Figures for the Adh Kumbh fairs of 1861 and 1873 are not available; they may safely be taken as very much less than at the two Kumbh Melas mentioned.

[3] 500,000: Government of India Sanitary Report for 1892, p. 139; 600,000: Government of India Sanitary Report for 1879, p. 124.

[4] "The simultaneous outbreak of cholera on the evening of April 12th in every section of the Hardwar encampment is a phenomenon of great interest. ..... We find a great multitude, which on April 11th was so little tainted with cholera as to be believed to be free from it, thoroughly contaminated in all its parts on the 12th."—Sanitary Administration Report for the Punjab for 1867.

[5] Government of India Sanitary Report for 1892, p. 141.

[6] This table was very kindly supplied by Mr. Bhordon, Under-Secretary to the Government Irrigation Department North West Province and Oudh. He states that the calculations are only very roughly approximate; the volumes given are too low for years of high discharge, i.e., wherever 7,000 cubic feet per second was exceeded. The table includes all the available years.

[7] The variation in the volume of the river is quite small compared with the variation in the number of pilgrims in different years. But it must be borne in mind that the effect of a small change in the level of a river is much exaggerated in its shallower portions.

[8] Surgeon-Colonel Hutcheson, late Sanitary Commissioner to the North-west Provinces and Oudh, tells me that this number is about half of the average accumulation actually present at the height of an ordinary annual fair.

[9] Government of India Sanitary Report for 1892, p. 140.

[10] Mr. Bhordon.

[11] In 1891 the river was full, probably more so than is indicated in the table. "The cold weather was characterised ..... by excessive snowfall in the Himalayas" (India Weather Review Annual Summary, 1891, p. 476). "The cold weather rainfall was the heaviest on record in many parts of Upper India" (India Weather Review Annual Summary, 1892, p. 529).

[12] The construction of a syphon bringing fresh water to the Bhun Ghora tank in 1891 renders its condition in 1892 not readily comparable with that of earlier years.

[13] "The cold weather of 1878-79 was remarkably free from storms in Northern India, and the rainfall of the period was hence considerably below the normal."—Indian Meteorological Memoirs, vol. iv., part viii., p. 580.

[14] The total rainfall at the nearest meteorological station, Roorkee, seventeen miles away, of the first four months of 1867 was practically normal in amount—viz., 4·05 inches; on the hills it was below normal for this period judging from the Naini Tal record, 11·90 inches (average over 17 inches).

[15] Brit. Med. Jour., 1894, vol i., p. 363.

[16] "The sanitary arrangements at the fair (1892) were those which proved so successful in 1891; it was impossible, however, to keep the water in the bathing pool so fresh."—Government of India Sanitary Report for 1892, p. 140.

[17] "The cold weather of 1885 was ..... unusually severe."—Indian Meteorological Memoirs, vol. iv., Part VIII., p. 661.

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well recognised that the essential sanitary requirement for the prevention of cholera spread here is a very free supply of fresh water, especially at the most crowded Melas, in very dry years, and when the disease is unusually prevalent elsewhere in India.

There was, however, another climatic feature which almost certainly helped in the development of the cholera of 1892. It was not only one of the driest, it was one of the hottest seasons on record.[18] It is significant that cholera broke out on March 22nd, and that the period, 21st to 27th, was the hottest portion of the hottest March on record.[19] Yet this does not mean very much after all, for the fairs have commonly lasted till April 12th, on which date the air temperature in other years must often have been as high as on March 22nd, 1892. On the other hand, it is readily conceivable that the unusually powerful heat rays may have worked to great advantage on the slow and shallow current of the sacred pool in 1892. In one of the other cholera years (1867) the weather appears to have been cooler than ordinary at the time of the outbreak (April); but in 1879 the mean air temperature at Roorkee for the month of April was 3° above the average.[20] Besides 1892 there have been only two Aprils (1875 and 1880) at all hotter than this. On the whole the temperature factor in the origin of the Hardwar cholera outbreaks appears to be of decidedly secondary importance to those affecting the cleanliness of the water.

I have left till last an important consideration—that of the varying prevalence of cholera at the time of the fair among the general population of India, whence the pilgrims are drawn. The cholera mortality of March, 1892, was the highest on record for that month;[21] it was specially high in Bengal. For 1867 the records are incomplete, but it is known that the disease was widely diffused in the country about Hardwar for months before the great Mela.[22] In the early part of 1879 cholera mortality was distinctly less than ordinary.[23] It is noteworthy that the spread from Hardwar in this year was very much milder than in the other two epidemic years. Excessive general prevalence at the time of the great fair must mean an increased introduction, or at least a greater certainty of introduction,[24] of the virus into the sacred water at Hardwar. The same thing is brought about also by the increase in the proportion of bathers, absolute or relative, which has been already discussed. And the question arises whether this may not explain in some measure the origin of epidemics here. But if so it must be in quite small measure, for nothing but the local reproduction of the organism will suffice to explain its wonderfully rapid general diffusion here. And in the laboratory the growth of a microbe depends much more on the character of the culture medium and on the original quality of the organism than on the quantity sown. Excessive prevalence elsewhere means not only increased chances of planting the microbe at Hardwar; it means the sowing of an unusually active organism, one more likely to thrive and multiply. In this way it may increase the tendency to outbreaks at Hardwar. While the effect of excessive crowding of bathers may also be explained in another way, the greater fouling of the water may render it an exceptionally favourable culture material.[25] There is substantial evidence[26] that cholera mortality in India increases with the shrinkage of tanks and other surface water-supplies; and the water of the tanks as it runs low has the same fouling influences at work in minor degree (the stirring up of the mud from the bottom and the direct pollution by the washing of clothes and bathing of the people) seen superlatively at the great fairs. And the suitability of liquid mud for cholera growth is possibly seen also in the enormous mortality attained in Berar when the great thirst of the black cotton soil is appeased by heavy rains, and when the whole country is "converted into a deep, tenacious mud." The vast importance of the culture material at Hardwar is seen in the fact that the cholera which spreads from the fairs is not that which is carried to them. Developing under special conditions in a place where the disease naturally has but a feeble existence,[27] the virus acquires powers of resistance well in advance of those possessed by ordinary Indian cholera. The new growth spreads rapidly and certainly over country where cholera is comparatively seldom seen,[28] and is credited with having been the origin of a European pandemic.[29] The influence of the condition of the culture medium is seen also in the fact that cholera may often be carried to the fairs and fail to spread there.[30] That the spread depends on the quality of the specialised local product rather than on its quantity is suggested also by the observation that the result in 1892 from the dispersal of 70,000 pilgrims was at least similar in magnitude[31] to that in 1867 from the scattering of probably a million people;[32] and Surgeon-General Cunningham, in his report on the epidemic of 1879,[33] notes that there was "no relation between the number of pilgrims and the extent of the disease in different districts." To sum up, there is substantial evidence to support the following suggestions: (1) the fouling of the sacred water by exceptionally large proportion of bathers to the quantity of water available may render it a very favourable medium for cholera development, and so determine the origin of far-reaching epidemics; while (2) the growth of the organism at Hardwar may be assisted by unusually hot weather; (3) virulent cholera elsewhere in India being effective rather in the character than in the quantity of the virus carried to Hardwar.

Bombay.

[18] "Higher day temperatures were noted in March, 1892, over the whole of the interior of India than have been observed during the previous twenty-five years, and the month is hence the hottest March on record."—Government of India Monthly Weather Review, March, 1892, p. 82. The highest temperature registered at Roorkee was 102·2° F., just one degree higher than the highest recorded in March of any other year.

[19] I know of no evidence to show that heat in India, however excessive, is ever in itself other than stimulant to cholera development.

[20] Monthly mean air temperatures have been recorded at Roorkee since 1866. The variations from average of the three cholera years are:—1867: March (about) + 0·6°; April (about) − 2·2°. 1879: March − 1·1°; April + 3°. 1892: March + 1·7°; April + 5·1°.

[21] The total cholera mortality of British India in March, 1892, was 46,089, the next highest record being in 1891—viz., 33,986,—the average for the fifteen years 1879-93 being 18,066. Out of the total of 46,089 deaths 31,235 happened in Bengal.

[22] See Bellew's "History of Cholera in India," p. 425.

[23] The mortality for March was 11,800, for April 29,324, the average for the fifteen years 1879-93 being 36,980.

[24] The great fair occurs near the height of the Bengal cholera season and when the mortality is rapidly on the increase in other directions, so that seldom can the disease fail entirely to be carried to these gatherings.

[25] The bathing pool at the Kumbh Mela in 1891 is thus described: "As the bathing went on the clear stream became a muddy one, and the water collected from any part of it smelt in a few hours offensively, and the micro-organisms developed from it were legion."—Brit. Med. Jour., 1894, vol. i., p. 361. Of the pool in 1867 it is said: "The water within this space was during the whole time thick and dirty, partly from the ashes of the dead brought by surviving relatives to be deposited in the waters of the river-god, and partly from the washing of the clothes and bodies of the bathers."—Government of India Sanitary Report for 1867.

[26] Indian Medical Gazette, 1894, p. 329 et seq.

[27] The average annual cholera mortality of twenty-seven years in the Saharanpur District, in which Hardwar is situate, is only 0·25 per 1000.

[28] Each of these epidemics spread rapidly over the Punjab (including its most immune tracts), Sind, and Cashmere.

[29] Macnamara in Davidson's Hygiene and Diseases of Warm Climates.

[30] Isolated cases of cholera are not uncommon at the fairs; the vibrio was detected in the water of the sacred pool in 1891; and in 1872 there was a localised outbreak confined to a single band of pilgrims who left their mark on the places they passed through.

[31] The mortality figures of the two years are not strictly comparable, owing to the imperfect registration of the earlier year.

[32] The estimate of the number present on the great bathing day made at the time is nearly as large as that of the total attendance of the whole period of the fair (see Bellew's History of Cholera in India, p. 518).

[33] Government of India Sanitary Report for 1879, p. 118.

ON VAGINAL HYSTERECTOMY.

BY F. A. PURCELL, M.D., M.CH. EDIN.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

THE three cases I am about to record are examples of a large class of cases of malignant disease of the os and neck, or lower third section of the organ, that come under observation, in which a mass of cauliflower epithelomatous growth occupies the cavity of the vagina and discharges a foul and copious sanguineo-purulent fluid, at times a flooding supervening, all tending to lower the patient's general health and strength. The mass of growth may either press on to the rectum, causing pain in the back and hips and difficulty in relieving the bowels, or it may press anteriorly on to the bladder, giving rise to the troubles suffered in consequence and being most distressing to the patient. The patient will present a pale, exsanguinated, and anxious look, and there are many who, if they think that they have not passed the time of the menopause, will attribute much of their pains and discharges to its

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cause; others, in whom the periods are still maintained, will perhaps seek advice sooner for the discharge complained of; but how numerous are the women, married or unmarried, whose attention is called to their unfortunate condition for the first time "then" by the examining surgeon or by a casual examination by their own medical man, shortly before being sent to a specialist or recommended to go to some hospital for further advice. It is not unusual to find a woman really ignorant of her state when the malady has reached the stage of deep excavation of the uterus and infiltration along the broad ligaments, with fixation of the organ from malignant disease, rendering her condition such that non-surgical interference is the only course to be advised, and although it may seem marvellous that such a state of things should exist unbeknown to the patient, yet such is the fact. It is in these border-line cases, so frequently met with, that it becomes a very serious question as to which is the best course of treatment to advise. In many instances I would most strenuously recommend that the patient be severely left alone so far as operative interference is concerned, only alleviation of the suffering being attempted by the exhibition of drugs; the vagina should be kept as sweet as possible by medicated douches or simple irrigation, and attention should be paid to the bowels, the patient being put in the best condition to cope with the advance of the disease, until death releases her from her sufferings. When operative interference suggests itself the question arises, What operation will best meet the case? and this will be answered by the condition found on examination. The first consideration is the amount of mobility of the uterus. If it is not mobile, it may be assumed that the disease has already extended or infiltrated along either or both of the broad ligaments; these should be critically examined, which is more easily done through the rectum, and possibly under an anæsthetic if the patient be nervous or cannot bear slight pain. If the broad ligaments are free from extension of the disease, then supra-vaginal amputation will suggest itself. I have treated cases by chloride of zinc paste; this treatment cannot be carried out in this class of cases, because invariably when supra-vaginal amputation is performed the peritoneum is of a necessity opened, which in itself would debar the preparing and excavating of a cavity in the fundus for the insertion of the chloride of zinc plug of cotton wool. This treatment must be reserved for those cases where the disease originated in the neck or fundus of the uterus, and in which the disease has not eroded the os, and where the mucous membrane of the vagina is intact. In all cases, before deciding on any operative interference, it is necessary to examine the vaginal mucous membrane, for if the disease has spread to the mucous membrane the deeper submucous tissues have already become infected and recurrence of the disease is bound to follow, and it is a contra-indication to removal by partial or total methods. In these border-line cases, when the growth is found to occupy the vagina the finger may be able to pass round the mass, and though the growth is found to emanate from either one lip of the os, or usually, as it does, from the neck, it may be observed that the fornices of the vagina and the mucous membrane around are free and therefore present a favourable prognosis, and operation may be justifiable. Before, then, deciding on total removal it is well to postpone its being undertaken until all the steps of supra-vaginal amputation have been performed and the uterus has been divided off at the internal os. Of a necessity the peritoneum will have been opened both behind and before, and the bladder stripped up. The portion then removed I have invariably handed over to our pathologist, Mr. Plimmer, or, if he was not present, to one of my colleagues, to examine. If it should turn out that the upper surface seems to be normal and free from disease, it is assumed that the stump of the uterus is also free and that we have got beyond the disease. In this case one stops short of doing more, but in case there should be even the smallest doubt of disease showing on the cut surface there must be no hesitation in then completing the entire removal of the organ. During the removal of the part by supra-vaginal amputation the lower uterine arteries of a necessity are divided and clamped and afterwards tied, which is the first stage towards total extirpation. If proceeding to total removal the fundus of the uterus is seized, usually on its anterior surface, with a pair or more of vulsellum forceps, and by drawing on the fundus anteflexion is produced and the fundus is coaxed down and delivered to view; it may so happen that retroflexion may be the more easy to do, when the posterior surface of the uterus is to be seized and the uterus is coaxed down in the posterior fornix. One cannot be wedded to either method, but should act according to the most expeditious plan that presents itself. The tube, round ligament, and remainder of the broad ligament on one side are transfixed with silk ligatures and tied; one end of the ligature is allowed to remain long and the other end is cut short, a pair of pressure forceps being applied near the ligature on the uterine side before the part is divided off. The second side is treated in the same way, when the uterus, being freed, is removed. The parts are douched out with warm boric acid solution, and any bleeding point that may show itself is caught and tied; the parts are then dried and the toilet is completed. I usually insert a glass drainage-tube and around this pack the vagina with a long strip of iodoform gauze, and after a wash-up if necessary the patient is removed to her bed. The position during operation is the lithotomy one, maintained by means of Clover's crutch, the buttocks being brought well over the edge of the table. Ether is employed as the anæsthetic; the time occupied is usually from forty to forty-five minutes. If the patient has passed the time of the menopause, although the ovaries may present themselves, I have in most of my cases allowed them to remain; I have observed that they form a buffer to the coming down of the bowel, and therefore it is advantageous to leave them. If in a younger woman I could be persuaded that they, if left, would cause no ulterior inconvenience I would be inclined to leave them with the same object as I have stated; however, if I have found an ovary cystic and much enlarged, I have removed it. After operation I usually give an anodyne, and guard during the first twelve hours against sickness from the anæsthetic or threatened collapse by giving, if necessary, some brandy in warm water. On the morning of the third day, or at least twenty-four hours after the operation, the vaginal packing and drainage-tube are removed, the parts are then irrigated with a warm solution of boric acid, and the vagina glass drain is reinstated and gauze packing plugged in, but not so firmly as before. At the end of the next twenty-four hours, if no discharge be noticed on the perineal pad, the glass drain may be altogether withdrawn and a strip of iodoform gauze alone inserted. About the fourth or fifth day possibly a discharge of pus will be noticed on the perineal pad. I say possibly, for in some cases pus is not formed; in case it is, I insert a red-rubber large-sized drain. Douching is continued night and morning. The ligatures come away between the tenth and twentieth days. A soft rubber catheter is kept in the bladder, having been inserted at the time of the operation and utilised as long as any dressings are applied. About the morning of the third day I generally give a saline aperient, and if the abdomen should be at all tympanitic, or the patient should suffer from flatulency, turpentine fomentations are applied, and possibly a turpentine enema is administered. The most critical period is about the fourth day, and in my experience if that day is passed favourably the patient makes an uninterrupted recovery, after which she must run her chance of recurrence. The risk of these operations, especially in such far advanced cases, is danger of damaging the bladder, as disease encroaches on its wall and weakens it, so that a rent is apt to be made into the viscus. In such a mishap it is necessary to keep the catheter in the bladder and await the healing and closing in of the vault of the vagina, when the fistula will be found in the vaginal cavity and may be healed by means of the cautery or nitrate of silver; these means failing, then only it will have to be treated by the usual operation for a vesico-vaginal fistula. We have tried vaginal bags to catch the urine when the fistula cannot be dealt with. The risk of damage to the ureters I only mention in order that the accident may be avoided.

In Dr. James Braithwaite's paper on the Micro-organism of Cancer, published in THE LANCET of June 29th, 1895, he states that out of a very large Jewish population in Leeds, in not one Jewess has he ever met with cancer of the genital organs, whereas it is extremely common amongst the Christian women, the inference being (assuming the existence of a micro-organism as the cause of cancer) that it is introduced or not introduced by the husband, according to his faith. On microscopic examination of the secretion frequently contained within the prepuce some spores were found, and also two minute loops of mycelium identical in appearance with that which he describes. If it should prove (after Dr. Braithwaite) from this discovery of his, that this micro-organism is the real explanation of the cause of malignant growth, then he sums up in No. 3 answer to the question he lays down—viz., It is possible

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that we may have to return to a certain Mosaic rite in order to save our wives from uterine cancer, unless the daily use of soap will do away with this necessity. I for one tender my greatest appreciation and thanks to Dr. Braithwaite for his very suggestive paper. It will be seen that in the first and third of these cases recurrence had taken place after a previous operation where removal of the os through the neck had been performed, and that the second was a primary case.

CASE 1.—A married woman aged fifty, mother of two children, had had good confinements; eight months previously she was first troubled with a white discharge from the vagina. In September, 1894, she was admitted into the Chelsea Hospital for Women under the care of Dr. Duncan, who operated and amputated the os. She was admitted into the Cancer Hospital on Dec. 3rd, 1894, and stated that since the previous operation she had had a continual bloody discharge. On examination the vagina was found to be long, and recurrence of malignant disease of the stump extending up the uterine canal was felt. The mucous membrane of the vagina posteriorly was diseased. The patient was of a more or less happy disposition, and was fairly well nourished. On the 8th I performed vaginal hysterectomy. The mucous membrane was incised well clear of the disease. Some of the ligatures came away on the tenth day after operation, and the last ligature on the twenty-second day; she made a good recovery and was discharged. I saw her six months afterwards and found a slight recurrence in the extreme vault. This I treated with iodine, what I call an iodine bath—that is, fixing the speculum firmly applied against the vault and then pouring sufficient liniment iodi down the speculum to cover the disease, which takes about half an ounce, and this is kept in contact for about five minutes and then run off and the parts dried. This has been frequently repeated at intervals of a week, and it has certainly done good. This case is an example of recurrence from previous implication of the mucous membrane.

CASE 2.—A married woman aged forty-five years was the mother of nine children, the last one born seven years ago; her labours had been natural. The patient was recommended by Dr. Fitzgerald of Harrow-road, and was admitted to the Cancer Hospital on May 6th, 1895. She had been troubled with a discharge for the previous two months, and had suffered from bearing-down pain and a dragging in the legs. She was always tired and everything seemed a trouble. She was pale and of a placid disposition. On examination the vagina was found to be occupied by a large mass of epitheliomatous disease; the finger was with difficulty got round and the vaginal mucous membrane was felt to be smooth and apparently not infiltrated; high up in the neck anteriorly a boss was felt pressing forward; the uterus was fairly movable. Vaginal hysterectomy was performed on May 11th. The disease was very extensive, and was first removed by working with scissors from before backwards through the neck; there was no bleeding. The parts were then freely douched out with carbolic solution and the further steps for total removal followed; the ovaries were allowed to remain. The specimen when opened showed extensive disease and had near the fundus a cancerous nodule. The patient made a good recovery.

CASE 3.—The patient had been a widow for twelve years and was mother of six children. She was admitted to the Cancer Hospital on April 25th, 1895, and complained of a purulent discharge, which was sometimes bloody. On examination the vagina was found to be occupied by a fungating cauliflower mass; the vaginal walls were not implicated, the fornices were high up, the uterus was movable, and the broad ligaments were free. Eight years previously she had been admitted into Middlesex Hospital, where the neck was amputated for disease of the os. On May 11th I performed vaginal hysterectomy. The diseased mass was first removed, and some difficulty was experienced in incising the mucous membrane. The operation of total removal was completed; the ovaries were left. Convalescence was somewhat protracted, but the patient made a good recovery and was discharged.

These three specimens I had the pleasure of exhibiting at the British Gynæcological Society's meeting on the 11th inst.

Manchester-square, W.

THE Gaskell medal and prize in mental and nervous diseases at the Royal Bethlem Hospital has been awarded after examination to Mr. George W. F. Macnaughton, M.B., C.M. Edin.

A FEW WORDS ON SOME COMMON FORMS OF REFLEXES OF NASAL ORIGIN.[1]

BY ADOLPH BRONNER M.D. HEIDL.,
SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL, AND LARYNGOLOGIST TO THE BRADFORD INFIRMARY.

A GREAT deal has been written on nasal reflexes. As far back as 1565 we find that Botallus records cases in which the scent of flowers brought on pain in the head and difficulty in breathing. Van Helmont in 1577 describes some typical cases of hay fever. Bostock[2] was himself subject to hay fever. No great importance was, however, attached to this subject until 1871, when Voltolini[3] published several cases of asthma in which nasal polypi were found, and where the removal of the polypi cured the asthma. Fraenkel, Lennox Browne, and others soon followed suit, and proved that the cases recorded by Voltolini were by no means uncommon. In 1881 Hack of Freiburg published his well-known book on Nasal Reflexes,[4] in which he attempts to prove that not only asthma, but many other similar symptoms can be caused by intra-nasal irritation. He divides these reflex symptoms into four classes—(1) spastic, (2) sensory, (3) vaso-motor, and (4) secretory. Numerous cases are recorded of asthma, hay fever, megrim, supra-orbital neuralgia, swelling and redness of the nose, vertigo, epileptiform attacks, &c., which had been cured by intra-nasal treatment. Hack's theory was that these reflex symptoms were due to irritation of the terminal fibres of the fifth nerve, which irritation was caused by the swelling of the cavernous tissue of the mucous membrane of the turbinated bones, especially the anterior part of the lower turbinated bones. His idea was to remove this cavernous tissue by the galvano-cautery, and then any irritation of the nerves would be impossible. Experience, however, soon proved that this theory could not be quite correct. Then, in the first place, the destruction of the cavernous tissue did not always prevent a recurrence of the reflex symptoms. Secondly, in many cases artificial irritation of this part of the mucous membrane brought on the reflexes without causing any swelling of the cavernous tissue. Hack himself, in 1885,[5] practically abandons his theory. In 1882 Fraenkel, J. Mackenzie, and others opposed Hack's theory, and stated that the reflexes were caused by some irritation of the terminal fibres of the fifth nerve, due to changes in the mucous membrane of the turbinated bones or septum, but that the swelling of the cavernous tissue need not have anything whatever to do with the irritation. Lublinski,[6] Heymann, and others think that the reflexes cannot occur unless there is a predisposing neurotic temperament. Boecker repudiates the reflex theory altogether, and states that the intra-nasal changes are mostly incidental complications or that they themselves form part of the symptoms of a central neurosis. In speaking of hay fever Morell Mackenzie[7] said: "The causes of hay fever may be conveniently divided into the predisposing and the exciting. Race, temperament, occupation, education, mode of life, sex, heredity, and age are some of the predisposing causes." Mackenzie did not seem to believe in local treatment for the cure of hay fever. Everyday experience, however, proves that many cases of hay fever, though of course by no means all, are due to a reflex action originating in the nose. Woakes[8] says that the reflexes are—(1) symptoms due to excitation of the sensory-motor nerve elements of the region implicated; and (2) those which involve vaso-motor nerves of the sympathetic system in relationship with the affected structures. As regards asthma, he thinks that it is due to irritation of or pressure on the nerve of Cotunnius, where it crosses the osseous part of the nasal septum. I myself am of opinion that we ought to divide nasal reflexes into two classes: (1) those cases in which there is some local irritation of the terminal fibres of the fifth nerve, due to nasal polypus, pressure of the mucous membrane of the turbinated bones on

[1] Abstract of a paper read before the Bradford Medico-Chirurgical Society, April, 1895.
[2] Transactions of the Royal Medical and Chirurgical Society, vol. x., 1819.
[3] Anwendung der Galvanokaustik, &c.
[4] Ueber eine Operative Radical Behandlung gewisser Formen von Migräne, Asthma, &c.
[5] Berliner Klinische Wochenschrift, Nos. 21 and 22.
[6] Deutsche Medicinische Zeitschrift, No. 41, 1886.
[7] Hay Fever: its Etiology and Treatment, with an Appendix on Rose Cold. 1885.
[8] Nasal Polypus, 1887.

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the septum, local atrophy or hypertrophy of the mucous membrane of the turbinated bones or of the septum, disease of the turbinated bones themselves, foreign body in the nose, &c.; and (2) those cases in which the nasal changes are not primary, but are themselves the outcome of some central neurosis. In the latter class of cases the local treatment of the nares, such as the use of the galvano-cautery, stops the reflex symptoms, not because it removes the irritation, but because it acts as a powerful counter-irritant. McBride[9] advocates this latter theory.

There can be no doubt that intra-nasal irritation can and frequently does give rise to reflex symptoms, such as asthma, hay fever, megrim, vertigo, and epileptiform attacks, but it does not by any means follow that it is always the cause of these symptoms. We know that in many cases gastric or uterine irritation can give rise to similar symptoms. It follows, however, that it is absolutely necessary that in all these and similar cases the nares and post-nasal space should be carefully and thoroughly examined. If we can find any obstruction to the free passage of air, such as hypertrophy of the mucous membrane, polypi, deviation of the septum, post-nasal growths, &c., or any changes in the mucous membrane (hypertrophy or polypoid degeneration, &c.), these must be treated and cured. Even if the treatment does not remove the symptoms it cannot do the patients any harm, but must be of benefit in other respects. I need not refer to the connexion between these diseases and those of the ear and throat, and how any nasal obstruction prevents the normal development of the lungs and arrests the growth of the body and of the mind. Innumerable cases of asthma, hay fever, megrim, and supra-orbital neuralgia have been cured by intra-nasal treatment, and a large number have been recorded. I can call to mind a series of typical cases of asthma, hay fever, sneezing, megrim, and redness and swelling of the nose, which have come under my notice, and which have been cured in most cases by removal of nasal polypi or by the application of the galvano-cautery to the diseased mucous membrane of the lower turbinated bones.

Bradford.

A CASE OF POST-PARTUM TUBO-OVARIAN ABSCESS IN A PECULIAR POSITION.

BY FREDERICK EDGE, M.D. LOND., F.R.C.S. ENG.

THE patient was a woman twenty-one years of age, of slight but active frame, and generally sound. Four months previously she was confined of her firstborn child, and she informed me that she had had a severe confinement. There was no special cause of obstruction or hæmorrhage, neither was laceration to any degree of the parturient canal noticed. After the birth of the child the patient did not gain strength and recover quickly, but had a severe illness with fever, pain in the left side of the pelvis and down the left leg, and a mass in the left side. When admitted there was no fever, but the pulse was from 90 to 100. She complained of pain in the left side and general debility. The pain was much increased if she was up for a short time. On examination of the abdomen a prominence in the iliac fossa was seen; this could be felt as a firm, rounded, crescentic mass, in which fluctuation was doubtful, and it was dull on percussion. Per vaginam the uterus was felt to be fixed to a mass on the left side which spread to the pelvic wall. Bimanually the uterus could be felt distinctly, and a boundary marking it from the lateral mass, but not separating it by any division, was perceived by a difference in consistence and roughness of outline. By the sound the uterine cavity was found slightly enlarged and dilated, but not more than one would find often at the same period after labour. The mass did not push down the posterior fornix, and the posterior wall of the uterus was free. As there were no urgent symptoms the patient was kept at perfect rest for six weeks, and her bowels were constantly emptied by saline aperients; alteratives and absorptives, counter-irritants, with ichthyol-glycerine applications in the vagina and hot douches and enemata, were all carefully tested, and their conjoint action was accompanied by a gradual lessening of the swelling, and would, perhaps, have attended its disappearance if the patient could have been rested indefinitely. At the end of six weeks she was allowed up for a couple of hours, and she next morning noticed a great increase in the size of the mass and in the pain and discomfort. From the shape of the swelling, its position, the absence of fever, and its history, I diagnosed the condition as one of pyosalpinx with cellulitis of the broad ligament, and as I could not keep the patient on her back indefinitely, she being a labouring woman, I thought it would be good practice to explore, and, if found, to remove the pyosalpinx. On opening the abdomen great adhesions were separated, and then for some time I could not make out the condition of the parts, or what I had to deal with, or what I was going to do. The pouch of Douglas was free, which rather put me off pyosalpinx, and I was inclined to think that I had to deal with a simple plastic cellulitis of the left broad ligament. The omentum was in a column or rolled bundle, and was adherent widely in the left iliac fossa, which is uncommon in simple cellulitis. I tried to separate its adhesions, but failed, as the bleeding became severe. I then tied the whole omental bundle in two places, cutting between. It was evident now that the tube and ovary were implicated, and the resulting mass, which contained a fluctuating cyst of Tangerine orange size, was fixed high on the left pelvic wall and in the left iliac fossa, where the omentum had covered it and adhered to it and the parietal peritoneum. The tube and ovary and broad ligament with omentum were removed, together with some parietal peritoneum which was torn off. The attachments were tied off in two pedicles, one at the horn of the uterus and the other at the pelvic wall. The separation was very difficult, and the sigmoid flexure, which was intimately adherent, was badly torn, but not sufficiently in any place, so far as was noticed, to require suturing. A Keith glass drainage-tube was used after washing out with Mr. Lawson Tait's apparatus. The patient's pulse and temperature before operation were 90 and 98° F. respectively. There were collapse and great pain, so that an injection of morphia was given (in my own abdominal sections I have only given morphia twice before, and each patient died, so that necessity is great before I use morphia). An enema of one teaspoonful of common salt, half an ounce of brandy, one ounce of milk, and five ounces of water was given three times in the night. On the evening of operation the pulse was 124 and the temperature 98°. The next day the pulse was 140 and the temperature 98·8°. Slight distension was treated by calomel and enemata of soap, turpentine, glycerine, and castor oil. At 9 P.M. the pulse was 152 and the temperature 99·2°. The bowels did not act either with flatus or fæces, and two days afterwards fæcal matter exuded from the abdominal wound freely. As the enemata were irritant they were changed into free irrigation of the rectum with normal saline solution, which, passing upwards, helped to clear the abdominal channel. The patient gradually improved, and although the fæces passed through the abdominal incision alone for three days she felt better. Gradually more passed per anum, and now the fistula is almost closed. She is walking about at present and gaining strength and flesh.

These fistulæ are very chronic, and no doubt the silk ligatures act as setons. The points of interest in this case are to my mind as follows. 1. The absence of fever when the patient was kept resting. This seems to point away from pus in any cellular tissue and is more in accord with pus contained in a cavity lined by mucous membrane or its homologue as an ovarian follicle. 2. The peculiar position of the mass of exudation and adhesions around the cyst containing pus. In these cases of post-partum suppuration of the appendages it must be remembered that the germs have already gained access to these parts often at or before conception from the other side has taken place. They are generally unilateral; hence the tube which is carried up into the level of the iliac fossa during pregnancy, if inflamed, would form adhesions at this level, and after labour the descent of the uterus would tend to drag upon the adhesion and permit leakage, which would excite peritonitis and fix the omentum. A condition similar to this, if not the same, was described by Mr. J. W. Taylor, and he pointed out in certain cases the difficulty of making out such a tube-sac owing to its position. 3. The frequence of post-partum suppuration in the tubes and ovaries. When we reflect on the possibilities which the corpus luteum of the ovary, a mass of lowly organised clot, offers, the widely patent tube in which ciliated epithelium must be merely side fringes at these times, and the uterine and vaginal states, we cannot be surprised at this. The abscess usually distends the ovary, but the tube mouth is spread on the ovary, and if detached the

[9] Brit. Med. Jour., Jan. 22nd, 1887.

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abscess ruptures, as did the abscess cyst in this case. 4. The passage of fæces and flatus through the fistula alone for three days. This only shows the extent of the deficiency in the bowel wall, and perhaps the collapse of the distal bowel. This exercised my mind somewhat as to treatment. At first I put a glass, then a thick rubber, drainage-tube into the rectum, thinking to prevent the passage through the fistula by providing a constant escape per anum; but I afterwards removed it because it occurred to me that by keeping the distal bowel always collapsed I might entirely defeat my purpose, since the laceration in the bowel would thus be brought to gape more widely, and thus offer a direct passage into the fistulous track. This is merely theory, but it may be useful to think of these *minutiæ* in certain cases. It may be asked whether the operation has been of use at all, and I can answer that I believe it has, because it has removed a sac of pus from the pelvis. This sac would not have become absorbed quickly (the lessening by treatment was of the surrounding inflammatory exudation and adhesion chiefly). It could not without rupturing an organised cellular wall escape externally, as a cellulitic abscess does, and finally heal after long discharge. If it had subsided for a time so far as to allow conception again to take place there would have been trouble during pregnancy and every possibility of rupture and fatal peritonitis at the confinement. Should the fistula not close within six months I shall, with the patient's consent, reopen and remove the silk ligatures if possible. At such a depth I should not try to find the opening in the bowel and close it, unless, indeed, I am mistaken as to the remoteness of the fistula. The fistula has now healed up (July, 1895).

Wolverhampton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

THE SURGICAL REPORT OF A CASE OF JACKSONIAN EPILEPSY WITH APHASIA, INTELLECTUAL IMPAIRMENT, AND PARTIAL HEMIPLEGIA, TREATED BY TREPHINING.

(Under the care of Mr. W. ANDERSON.)

IT is difficult to state the nature of the lesion which caused the symptoms in this case, but there can be no doubt as to the benefit which the patient has derived from the operation. It will be interesting to learn the ultimate result of the operation. For the notes of this case we are indebted to Mr. Cuff, late house surgeon.

The patient, a boy aged thirteen, was admitted into Arthur Ward, St. Thomas's Hospital, under the care of Dr. Payne, in September, 1894. He was the fifth and only living child of his mother, whose other infants were stillborn. Shortly after birth he manifested undoubted signs of congenital syphilis, including snuffles and sores on the nates and around the anus, which were treated successfully by mercurial inunctions. Up to the age of ten he was regarded as a bright boy; but from this period his mental and physical evolution came suddenly to a standstill without any apparent cause, and he became silent and morose. A year later he was seized by a fit of tremors and twitching of the mouth, followed by partial loss of speech and shuffling gait. He imperfectly recovered from this and continued to go to school, but six months afterwards he had an epileptic fit. Again an interval of improvement followed; but a few weeks later he suddenly became aphasic, and the defects in his intellect and gait became strongly marked. On admission to hospital he presented the aspect and development of a boy nine or ten years of age. His head appeared to be of good conformation, but his frontal eminences were unduly prominent, and his expression was stupid and rather vicious. The incisors were pegged, but there were no other marks of congenital syphilis. The intellect was gravely impaired; he was childish and irritable in manner, his speech was thick and hurried and usually limited to "Yes" or "No," but he appeared to understand when spoken to. He called things by the wrong names and did not recognise letters, although he could repeat words correctly when he heard the sounds. His legs showed a tendency to involuntary and sustained contraction of the extensor muscles, and in walking he kept the limbs widely separated. The arms were normal. The pupils acted to light and the right was smaller than the left. He improved up to Oct. 12th last, when he was attacked by epileptic fits, three in the day. On the 13th the fits were fourteen in number, and on the 14th as many as twenty. From this time they recurred in numbers of fifteen or twenty every day. During the fit the eyeballs turned to the right, the right arm was slowly raised and pointed forwards, the elbow was extended, the wrist flexed, the thumb flexed and adducted, and the third and fourth digits were bent. The right side of the face, with the right arm and sometimes the right leg, twitched, and the right pupil was dilated. The attack lasted for about two minutes, leaving the boy drowsy, with partial paralysis of the right side of the body. After the fits had set, in the right arm was found to be almost useless, all power of walking was lost, and the intelligence became infantile. After a consultation between Dr. Payne and Mr. Anderson it was decided to trephine over the motor area and explore the condition of the brain and membranes at that point. On Oct. 27th a circle of bone an inch and a half in diameter was removed from a point in front of the lower end of the fissure of Rolando, on the left side, exposing the membranes over the convolution of Broca and the lower parts of the precentral and second frontal gyri. The dura mater was found to be normal in aspect, and on incising this the brain with its arachnoid and pia mater bulged strongly into the wound, and it was noticed that the cerebral pulsations, at first indistinct, quickly assumed their natural character. The arachnoid was somewhat opaque and presented yellowish lines opposite the sulci. A grooved needle passed into the brain tissue in two or three directions revealed no abnormality. The incision in the dura mater was not closed, but the scalp wound was sutured and dressed. On the night of the operation the boy was very quiet, but spoke one or two words when addressed and seemed to be quite conscious of his surroundings. On the 31st the strength of the right arm appeared to have become greatly restored. No fits had occurred since the operation, but his temper was very irritable. The wound healed by first intention. From the time of the operation the patient made unbroken progress. The fits did not return, speech steadily amended and within a few days became fairly connected, the memory for names became stronger, and he was able to tell his own name and to write it, but there was still much to be desired. He recollected recent events vividly, and not only recognised a fellow patient who had just returned from a convalescent home, but mentioned the place from which he came. The irritability of temper subsided, and the power of observation and reasoning power rose daily to a higher plane. The gait became firmer, although in walking the legs were still kept somewhat wide apart, and the arm completely recovered its utility. When discharged on Jan. 6th, 1895, the restoration of his powers was still progressing, but he had not reached the full standard of his age. It was decided to await the course of events. The last report states that he is in good health, free from fits, and from paralytic symptoms, but his intelligence is still incomplete and his education at a standstill.

Remarks by Mr. ANDERSON.—Omitting all comments on the medical aspect of the case, it is sufficient to notice that the good effect of the operation, marked as it was by so rapid and extensive an amendment in the intellectual and motor powers of the boy and by the complete abolition of his epileptiform attacks, followed the mere removal of a portion of bone with a division of the dura mater, which could do little more than diminish intracranial tension and allow a better nutrition of the previously compressed structures. The bulging of the brain into the aperture and the speedy restoration of the normal pulsation immediately after the operation were significant in the same direction. It still remains to be seen whether a second operation over the upper precentral and frontal gyri may not be advisable with a view to influence further the still defective intellectual functions. It is not many years since cerebral surgery, except in cases of traumatic injury, was practically non-existent. It is true that in prehistoric times trephining was practised apparently as a remedial measure and without necessarily killing the subject of the experiment, and the operation was

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recommended in certain cases by Hippocrates. What were the conditions for which the earliest operations were performed it is impossible to say, but within the historical period it was employed more or less unscientifically by surgeons for head injuries and was sometimes prescribed by the physician in a rather reckless way for internal disease. We are told, for example, that Philip William of Orange was trephined seventeen times for headache by order of his physicians, and as he survived, the fact at least speaks well for the skill and care of the surgeon. And it is interesting to learn that our modern practice was to some extent forestalled over 200 years ago in a book of but little value or importance, published in 1685 by a surgeon named Hugh Ryder, who trephined over the left motor area to relieve "a paralysis of the right arm, head, and tongue" following an injury to the opposite side of the head. A circle of bone was removed on the seventh day, setting free a quantity of black grumous blood, which blood, explains Ryder, "by pressing upon the meninges and sending forth putrid steams had been the occasion of the ill symptoms." The result of the experiment was successful. The method of cerebral localisation adopted in the case now reported was that published by Mr. Anderson and Mr. Makins in THE LANCET of July 13th, 1889. In this, to secure the indications most needed by the surgeon, the fissures of Rolando and Sylvius, it is only necessary to measure a median sagittal line from the glabella at the level of the upper margins of the orbits in front to the occipital protuberance behind, to bisect this and mark the mid-sagittal point. From the latter a tape is run down to the "preauricular" point immediately in front of the tragus at a level with the upper border of the meatus, and a point, the "squamosal," is marked at the junction of the lower and middle thirds of this "frontal line." A third line, the "squamosal line," drawn from the external angular process through the squamosal point gives the line of the fissure of Sylvius, the commencement of which is five-twelfths of the distance between the external angular process and the squamosal point. The fissure of Rolando is now found by marking two points, one half an inch behind the mid-sagittal point above, the other half an inch in front of the squamosal point below, and joining these by a line. The whole process is effected far more rapidly than it is described, and can be completed in two or three minutes with a common tape measure. The advantages that may be claimed for it are rapidity, simplicity, and adaptability to heads of all sizes and shapes. The sole appliance required is a tape measure graduated in inches and lines.

CLAYTON HOSPITAL, WAKEFIELD.

A CASE OF COMPLETE INVERSION OF THE UTERUS; RECOVERY; REMARKS.

(Under the care of Mr. W. STANGER.)

COMPLETE inversion of the uterus after delivery is one of the rarer accidents met with in practice, and constitutes a condition of extreme gravity. The hæmorrhage which accompanies inversion is sometimes sufficient to cause death before help can be given, in other cases it is not a marked symptom, and the greatest danger is from complications. The rarity of this condition is explained by the fact that a combination of special causes is probably required for its production, although undue traction on the cord must be regarded as an important and sometimes as a sufficient one. For the notes of this case we are indebted to Mr. C. Hutley, junior house surgeon.

A patient aged twenty-three, a primipara, was on Feb. 9th sent to the hospital with a note saying that she was suffering from extreme prolapse, pain, and hæmorrhage. The history was as follows. She had been confined on the 5th. The child was born at full time, living and healthy. The patient had had pain and some bleeding since. On the 9th a large mass protruded from the vulva, after which the bleeding and pain increased. From the midwife it was afterwards learned that the labour was somewhat tedious; it was a head presentation. The cord was above the average length and the placenta came away by itself ten minutes after the child. On admission the patient was blanched and rather collapsed. The pulse was fairly good and the temperature was 99·8° F. On examination of the parts a rounded, dark, reddish mass larger than a cricket ball was seen protruding from the vulva, on which the placental site could be distinctly seen. A few small blood-clots were seen on the surface of it. The patient was put under the influence of ether and the inverted uterus was well washed in carbolic lotion (1 in 40) and replaced by Mr. Stanger and Mr. Jones with much difficulty. An intra-uterine douche was then given, and also a hypodermic injection of ergotin. Uterine douches were given twice daily, and vaginal douches every four hours. On Feb. 10th the douches returned quite clear and sweet; the temperature was slightly raised. On the 11th the morning uterine douche returned slightly turbid; on the 12th the douches were quite clear. On the 24th the patient was quite convalescent, being able to get up, and on the 26th she was discharged.

Remarks by Mr. HUTLEY.—The most striking peculiarities in this case are as follows:—1. The patient was a primipara. 2. The fact that the inversion did not show itself till nearly five days after delivery. The patient had pain and bleeding. These symptoms justify one in believing that after delivery there was a partial inversion, which, acting as a foreign body, caused violent contractions of the uterus, and became more and more inverted until it projected from the vulva.

NORTH DEVON INFIRMARY, BARNSTAPLE.

A CASE OF ACUTE GENERAL EXFOLIATIVE DERMATITIS (PITYRIASIS RUBRA).

(Under the care of Mr. WALTER COOPER.)

VON HEBRA described this disease as a specific form of skin eruption, but rarely met with and having a close affinity with psoriasis. Bristowe[1] writes: "Its progress is slow and it is doubtful whether a cure is ever effected. When fully developed there is nothing except the history and progress of the malady to distinguish it from universally diffused psoriasis. Patients suffering from it remain apparently healthy in other respects for a long time; but they ultimately emaciate, become cachectic, and sink from exhaustion." The account of the following case is therefore of considerable interest, and it will be more especially so if the apparent cure becomes a permanent one. For the notes of this case we are indebted to Mr. F. Penny, house surgeon.

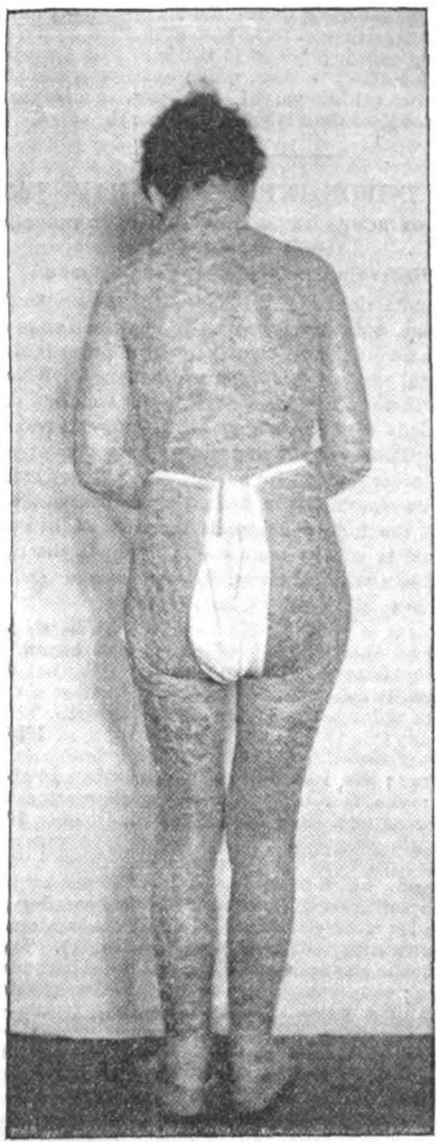
The patient, a woman aged twenty-eight, a widow with four children, she being one of a family of eleven, gave a good family history free from skin complaints, but she had been subject to epileptic fits. There was neither history nor evidence of either hereditary or acquired syphilis. Her first attack of any skin trouble was in the summer of 1884, when she had what seemed from her description to have been eczema on both legs; this lasted about two months and then disappeared; she had had somewhat similar attacks every summer or autumn since that time. In October, 1894, she had psoriasis (diagnosis of the medical man who attended her) on the calves of both legs and the flexor surfaces of both forearms, which in the early part of December began to spread, appearing on the trunk and rapidly becoming general, so that on her admission (Jan. 1st, 1895) she was completely covered with a dry scaly eruption (see Fig. 1). The scales varied much in size and were largest on the shins and around the ankles; they were irregular in shape, very thin, non-laminated, of a yellowish-white colour, very easily detachable, separate, never adhering into crusts, and excessively numerous, more than a pint a day being shed, and where shed fresh scales quickly formed. Under the scales the skin was a vivid red, except on the shins and around the ankles, where it was purple; there was no thickening of the cutis vera and no exudation and no puncta were visible to the naked eye. There was at times slight irritability of the skin, though this was never excessive and frequently altogether absent. The scalp was badly affected and the hair came out considerably during combing. (Fig. 2.) Her voice was thick and husky, and there was some congestion of the mucous membrane of the mouth, throat, and larynx. The urine was strongly alkaline, but contained neither albumen nor sugar. The temperature, pulse, and respiration were about normal and varied but little while the patient was under observation. On Jan. 1st the patient was sent to bed, and carefully protected from draughts and from chances of taking a chill. She was allowed a light and nutritious diet; cod-liver oil,

[1] Theory and Practice of Medicine.

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and a mixture containing potassii iodidum, liquor hydrargyri perchloridi, and decoctum sarsæ compositum were given. Ichthyol and oleum olivæ in equal parts were kept constantly applied by means of bandages to the right arm, while the remainder of the body was enveloped in a pair of combinations soaked in liquor plumbi subacetatis, 2½ oz., with oleum amygdalæ to make one pint. On Jan. 9th much less scaliness was present, especially so about the trunk, and irregular streaks of more healthly-looking skin appeared on the chest, but the legs were not much improved. The medicine ordered on Jan. 1st was changed for an effervescing mixture containing three grains of quinine, the patient being allowed

FIG. 1.



Condition of patient on admission.

ordinary diet. On the 14th the ichthyol application was used for the left leg, but as it caused considerable pain it was given up on the 15th, and the lead and almond oil used for the whole body. Until the 26th the improvement (except on the legs) was most satisfactory, but on that date a few fresh patches were seen on the face and chest, which had become almost clear; these appeared as roseolous blotches, and in about twenty-four hours were covered with fine scales. On the 30th the improvement was very marked, and five minims of liquor arsenicalis were added to the medicine. Very little improvement took place during the next few days, and on Feb. 6th the medicine was changed again to the mixture of Jan. 1st. On Feb. 12th the left leg was still very troublesome, and an application of 2½ per cent. oleate of mercury was used, but as this caused a crop of small pustules it was discontinued. By the 16th in many places the skin had become quite clear, and where the disease still existed very few scales were formed. A lotion of glycerine, zinc oxide, and lime water was then ordered. On March 4th the few small patches of eruption still remaining were dressed with unguentum boracis, and the decoctum sarsæ in the medicine was changed for decoctum cinchonæ. The patient was now

FIG. 2.



An enlarged view of the back of the patient, showing a more advanced stage than in Fig. 1.

allowed to get up, but she was cautioned to carefully avoid exposure. On the 19th the eruption had entirely disappeared, the skin had become clear, was free from any staining, and looked healthy; but from fear of too early exposure the patient was retained in hospital until April 9th, when she was discharged apparently well though not feeling very strong. On May 24th the patient was still free from any kind of eruption, but she was weak and debilitated, and though able to get about and look after her family, expressed herself as not being strong enough for half a day's good work; this, however, may in part be accounted for by the fact that that she was unable to get a very strengthening diet.

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Medical Societies.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Adjourned Discussion on Difficulties in the Use of the Curette.

A MEETING of this society was held on July 11th, Dr. CLEMENT GODSON, President, being in the chair.

Dr. PURCELL showed three specimens of Carcinoma of the Uterus, removed by Vaginal Hysterectomy. In two of the cases amputation of the cervix had been performed two months and eight months previously, respectively. All three cases recovered from the operation. The first showed signs of recurrence in the vaginal roof six months later. The other two, done more recently, were so far free from recurrence.—The PRESIDENT, Dr. MACNAUGHTON-JONES, and Dr. BANTOCK held that these cases illustrated the futility of amputation of the cervix for malignant disease as a rule, though they had had cases which remained free from recurrence for eight years (Dr. Bantock's case) and for twelve years (the President's case).

Dr. BANTOCK showed three specimens: (1) Large Pedunculated Myoma of the Uterus, with Twisted Pedicle (the tumour was found by microscopic examination to be fibro-sarcoma); (2) Pyosalpinx, with Fibroid Tumour (in both these cases hysterectomy had to be performed); (3) Par-ovarian and Large Ovarian Cysts on the same side.

Mr. H. BELLAMY GARDNER resumed the adjourned discussion on Dr. Fancourt Barnes's paper on Some Difficulties in the Use of the Curette. He had seen the operation performed fifty-seven times by twelve operators in the theatres of two London hospitals. He submitted the following points: (1) the cervix was best held by two volsella on each lip, to equalise the traction; (2) dilatation was facilitated by immersion of the dilators in very hot water; (3) hollow metallic dilators, wedge-shaped in longitudinal section were the best; (4) the best curette was the sharp-edged, spoon-shaped dashing curette; (5) after curetting the cavity should be swabbed out with iodised phenol, an iodoform pencil placed in the uterus, and the vagina packed with iodoform gauze; (6) the scrapings should be examined microscopically.—Dr. ROUTH, while thinking that tents were too much neglected, was glad to hear the sponge tent condemned. Even laminaria tents were not always safe unless properly prepared, and so he always prepared his own. If the os was small it was better to wait till the menstrual period, when some degree of dilatation occurred; and if the uterus was hard it could be softened by placing glycerine tampons in the vagina. It was not always necessary to dilate fully; the greater the dilatation the greater was the risk of perforation. He advised curetting for disease of the appendages, whereby the need for their removal was often obviated.—Dr. HEYWOOD SMITH remarked that the finger-nail was not much use for curetting, except in obstetrical cases, because of the difficulty in bending the finger inside the ordinary uterine cavity. The best curette was Bell's "dredge" curette or Jessett's modification of it; it ensured the complete removal of all the diseased tissues. By using tents first and metallic dilators afterwards, the risk of tearing was diminished. When there was inflammatory disease of the appendages it was safer to defer curetting till the inflammation had subsided.—Dr. MACNAUGHTON JONES said that he had heard nothing new on the subject of curettage in this debate, which had diverged rather into one on dilatation of the uterus than on curettage. Some views advanced on the last evening were certainly startling to any modern gynæcologist. Fifteen years' use of the curette had not, in a single instance, given him an untoward result. The adoption of strict antiseptic precautions before, during, and after operation; securing and maintaining sufficient dilatation of the cervical canal and suiting the use and action of the curette to the particular case requiring it, were the main points to attend to. Certain inflammatory states of the peritoneum and the adnexa were clear contra indications. The best means of dilating the uterus up to a certain point was the laminaria tent of sufficient length and calibre, assisted finally, if necessary, by uterine dilators, as it might often be needful to explore the uterine cavity with the finger. This we might not be able to do if the uterus were fixed and high up in the pelvis. The particular curette selected should depend as to shape and size upon the special action demanded of it. Much larger ones were occasionally used than those referred to. Chromic acid, in various strengths according to the case, was an admirable application after curettage. He invariably used iodoform gauze to carry into the uterus where there had been suppurative endometritis, tamponing the vagina with the same. Contrary to the practice of some, after the first forty-eight hours he replaced the iodoform roll, cleansing out the uterus before doing so with an antiseptic solution, daily. He believed the mischief arising from tents to be mainly attributable to their being left too long in the uterus. If tents of different sizes were used, dilatation under any circumstances was comparatively an easy and harmless process. If the curette were pushed through a friable uterus, or used where it should not be, a death followed, then the fault was not in curettage. It had given him splendid results in cases of suppurative endometritis, plastic and granular endometritis, and in adenomatous growths from the endometrium. Dr. BANTOCK agreed that it was impossible to curette without previous dilatation. He left the tent in till it came away easily, for he thought it did less harm to leave one in for twenty-four or forty-eight hours than to change it every twelve hours. Sponge tents were safe if properly prepared; their action was gentle, and in cases of fungous endometritis the granulations got caught in the meshes of the sponge, and came away when it was withdrawn.—Dr. FANCOURT BARNES said, in reply, that when he heard of curetting being done without dilatation he could only assume that the curetting had not been done at all. He had hoped to hear something said about drainage; he thought that for this purpose an iodoform pencil answered better than iodoform gauze. He was glad that his condemnation of sponge tents was in the main endorsed by the Fellows.

Reviews and Notices of Books.

Medical Partnerships, Transfers, and Assistantships. By WILLIAM BARNARD, M.A., LL.B., Barrister-at-Law, and G. BERTRAM STOCKER, Managing Director of the Scholastic, Clerical, and Medical Association, Limited. London: Stevens and Sons, Limited. 1895.

EVERY Englishman is legally presumed to be instructed in the laws of his country, and therefore there can be no harm in a medical practitioner, whether about to purchase a practice or a partnership or to engage an assistant or be engaged as such, becoming to a certain extent acquainted with the statutes and decisions applying to his transactions and the disputes resultant therefrom. Every medical practitioner also has, before duly qualifying as such, been brought into contact with a certain number of those who have been able to inform him of the difficulties which may surround his future career. Still, he may like to see the advice he has been offered imparted with the authority which print commands, and marshalled in an orderly manner. Hence the perusal of the volume produced by Messrs. Barnard and Stocker by anyone about to enter upon any of the enterprises suggested in the title will repay the trouble taken, as long as the reader bears in mind that no book can do more than occasionally prompt or supplement the recommendations of good sense or experience in practical matters; while in matters legal, directly any complication or difficulty has arisen, the best legal advice should promptly be sought and acted upon.

Mr. Stocker, as the managing director of the Scholastic, Clerical, and Medical Association, has acquired experience of the points which have to be considered from a practical point of view by those for whom he is in the habit of acting. From a practical point of view accordingly he contributes the first part of the book, setting-out draft forms of (1) articles of partnership; (2) a deed for the assignment of a practice; and (3) an agreement between a medical man and his assistant, with comments thereon, prefacing his contribution with a chapter on the valuing of practices, and concluding it with a few words on the system of entering an agreement for an assistantship with a view to becoming a partner. Such

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agreements as those last referred to Mr. Stocker unhesitatingly condemns, apparently on the ground that they frequently do not result in partnerships; but whether those who have been enabled by them to avoid an association which would have been distasteful or objectionable would view the matter in the same light is doubtful. But throughout the book Mr. Stocker is particularly careful of the wants of the beginner, probably holding that it is those whose experience is necessarily *nil* who are most likely to turn appreciatively to him for guidance. To them he is careful to supply every possible hint, giving an exhaustive list of matters for which money must be reserved in addition to the premium paid for the practice, as well as much sound advice.

Of the second half of the book we are almost inclined to say that there is not quite enough law in it for a lawyer and rather too much for anyone else. The Partnership Act of 1890 is set out, with notes on sections likely to affect medical men, and chapters follow on Goodwill and Restrictions on Practice, with an appendix of Cases on Restrictive Covenants; on Introduction to Patients; and on Assistants. No doubt of the cases which come before the courts a great number are those in which points of law as to the legality of a restrictive covenant arise, but it is open to doubt whether a medical man, having realised that such restrictions must be "reasonable in reference to the interests of the parties concerned and reasonable in reference to the interests of the public," either need or could be expected to wade through the numerous cases cited in an abridged form or otherwise referred to, while a lawyer either settling a covenant or certainly when advising on a dispute concerning one would require the authorities themselves. A fuller knowledge of the law relating to a particular subject and the principles governing it is sometimes gained by reading an exhaustive judgment, which criticises and compares all previous decisions, than by studying brief accounts of them isolated from one another. For instance, the elaborate judgment of Mr. Justice Hawkins in Robb *v.* Green, now confirmed on appeal, though presumably too recently delivered to be included, would have contained pretty nearly all that could be said as to a servant who makes wrongful use of information derived from the fiduciary position in which he finds himself. But, again, such a case is only in a measure practically applicable to medical matters, and in that and many others it is not easy for anyone not a lawyer to advise himself. In practical matters it is best for the medical man to use every means possible by judicious enquiry and otherwise to insure that his partnership or practice may if possible be purchased from a man of honour and integrity, and that no mistake on his own part may jeopardise his future peace of mind; while if he gets into a dispute and legal process seems inevitable, the sooner he refers the matter to a capable lawyer the better it will be for him. To deal with it by himself with the aid of the best text-book in the world will be only a shade less risky than for a lawyer to perform on himself a comparatively easy operation after borrowing a set of instruments and a manual of operative surgery.

With regard, however, particularly to Mr. Stocker's share of the book and the draft agreements which he gives, one thing must be borne in mind. It is of no use to go to a solicitor, who perhaps has never before drafted a deed disposing of a medical practice or a share of it, and to expect him to foresee all the contingencies which may arise and to guard against them. Nor, as has been suggested, can a medical practitioner always recall all that experience should teach him; hence it is not difficult to predict that Mr. Stocker's forms may often prove extremely useful as a foundation to work upon; while the whole of the book should be of service to country practitioners in the legal profession who have not large libraries to consult.

Allgemeine Physiologie: ein Grundriss der Lehre von Leben. Von MAX VERWORN, Dr. Med. et Phil., *Privat-docent* der Physiologie an der Medicinischen Facultät der Universität Jena. Mit 270 Abbildungen. Jena: Verlag von Gustav Fischer. 1895. (General Physiology: an Outline of the Science of Life. By MAX VERWORN, M.D., Ph.D., Tutor in Physiology at the Medical Faculty of the University of Jena. With 270 illustrations. Jena: Gustav Fischer. 1895.)

THIS is a work which we venture to think will attract widespread attention. Its author has already made some contributions to the study of vital phenomena amongst the lowest forms of organisms, but in the present volume he has done what has, we believe, not hitherto been attempted, that is, to analyse the aims and methods of physiology, and to contribute to the solution of the great problem that underlies it—the nature and meaning of life. It is a task for which few are fitted, for it demands a knowledge of natural science as well as a grasp of philosophic doctrine rarely to be found in unison. To ourselves the book has come as a revelation, not only from the depth of reasoning and the command of facts garnered from all sides that it exhibits, but for the lucidity with which the subject is marshalled and the wide knowledge that is herein displayed. That we are justified in this appreciation will become evident as we unfold the plan of the work. Its dedication to the memory of Johannes Müller, the founder of modern physiology, implies something more than a tribute to the life-work of that illustrious man. The author desires to recall the lines of modern physiological research to the sphere which Müller opened up, but which has been somewhat neglected in the highly specialised search after new facts in the intricate mazes of "advanced" physiology. Müller rightly appreciated the truth that physiology—the science of life and of living things—must embrace in its purview research into the conditions of existence in all organisms, that comparative physiology had as much to teach as human physiology as regards life itself. The complex manifestations of the activities of the living body, as witnessed in the highest scale of animal life, can be reduced to a few simple properties of living matter in the lowest organisms, and the secret of life which is concealed in the complex inter-actions of muscle and nerve may be found more readily in the properties of elementary protoplasm.

What is life? The answer to that question, which necessarily stands at the root of all physiological research, has not been invariably the same. Primitive man—nay, even the cultured Greeks and Romans—conceived the wind and storm, the rivers and seas, to be living, or the expression of the will of living beings—doubtless influenced in the thought by the association of movement with vital manifestations. But we know that motion is not essential to life; that death may be simulated by cessation of activities and yet life still be present; the dried seed contains within it potential life, which springs into activity when subjected to favourable conditions; and if the view be extended to microscopic objects, it is asked, how can one distinguish between the spores of torula and the oil-globules in milk—passive as they both are—whereas the minute lime crystals from the abdominal sacs of the frog, viewed under the microscope, are seen in constant movement? It is the first duty of physiology to determine the dividing line between the living and the lifeless in nature. The aim of research is the discovery of the causes of phenomena—to satisfy what Dr. Verworn terms the "craving for causality" (causalitäts-bedurfniss)—a craving which is never satisfied! In the inorganic world we speak of "matter" and of the "atoms" into which it is decomposed, without, however, being able to prove, but only to infer their existence. In the like endeavour to explain vital phenomena we are met with the apparent contradiction of psychical manifestations side by side with corporal, and even when they can be brought into the same

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causal relationship—and referred to the motion of matter—the problem of life is no nearer a solution. The author in an interesting review shows how physiological ideas and inquiries have progressed from antiquity through the age of Galen, of Harvey, of Haller, and Johannes Müller. In a few passages he sums up the gains to knowledge already obtained by the labours of physiologists, and shows how in every department of the functions of the body crucial questions have received no answer. Then—speaking of the relations of psychology to physiology—the question of the limits placed to natural knowledge is discussed, how we cannot explain "consciousness" in terms of matter; how, indeed, the riddle of matter and force is well-nigh insoluble, so that, as Du Bois Reymond said, the motto of natural science in this regard should not be "ignoramus," but rather, for all time, "ignorabimus." Passing this matter the author touches on the relationship between the material world and the Psyche, and it is interesting to find him practically adopting the Berkleyan philosophy, in the statement that the outer world exists only in our consciousness, nay, even that one's own individuality—the ego—forms but part of the general conception of external things. In other words, the author declares himself a "monist"—i.e., psychical rather than materialistic. From metaphysics he passes to consider the doctrine of "vitalism," and thence to the demonstration that in cellular physiology alone can we hope to solve the riddle of life. He says (page 56): "In physiology we must continually revert to the standpoint which made the researches of our great master, Johannes Müller, so fruitful. During his whole life Johannes Müller advocated practically and theoretically the view that there is no *one* physiological method, but that every method is right which leads to the goal. He chose his method according to the problem before him, never adapting the problem to the method. It is not the method which is uniform is physiology, but the problem. For the solution of this problem physiology must employ in equal share chemical and physical, anatomical and developmental, zoological and botanical, mathematical and philosophical methods of research, according as it fulfils the special aim. But all should lead to one goal—to the investigation of life."

The words just cited form the closing sentences of the first chapter of the work. In the succeeding five chapters there are treated in turn: the Living Substance, Elementary Phenomena of Life, General Conditions of Life, Stimuli and their Action, and the Mechanism of Life. These topics form the bulk of the book, and are treated in a manner at once systematic and philosophical. Living matter as now existing on the earth is only to be met with in the form of *cells*, either isolated or connected to form a compound organism. The substance of the cell is a viscous mass—protoplasm—investing a nucleus. Chemically, the materials of which living matter is composed form but a small number of the elements found in the inorganic world, but variously combined, some of these compounds—e.g., albumins—being limited to organic beings and not existing as such in non-living substances; and other compounds, as carbohydrates, fats, and simpler materials, which are derived from the breaking up of albumins or aid in their formation; and lastly, salts and water, common to the inorganic world, the last named being essential to the fluidity of living matter and inseparably bound up with it. One by one Dr. Verworn discusses the criteria which have been raised to distinguish between living organisms and non-living matter, dismissing them all as inadequate, until he comes to the final characteristic of the formation of albumin and of its metabolism, peculiar and special to living things, and therefore the essential basis of physiological study.

The elementary phenomena of life are discussed under the heads of Metabolism (Stoffurdesel), Morphology (Formurdesel), Dynamics (Kraft-urdesel), and constitute Chapter III. Here, as elsewhere, abundant illustrations are drawn from the animal and vegetable world, especially from the lowest forms of life, showing how the same factors are at work through all the vital processes. Metabolism consists in the processes which underlie what we term nutrition, the increasing formation and destruction of albuminous compounds. Morphology embraces a wide purview. It is concerned with those structural alterations which are seen on the large scale in the building up of specific characters, the acquirement and transmission of some and the gradual loss of others, according to the law of natural selection. It involves also those form-changes which are seen in the individual and the process of growth and reproduction. It is shown how the truth of Harvey's dictum, "Omne vivum ex ovo," is retained in the truer conception of "Omnis cellula e cellulâ," modern research showing that the union of germ-cell and sperm-cell there is a complete fusion of "protoplasm with protoplasm," of "nucleus with nucleus," of "centrosom with centrosom" prior to the segmentation that issues in the cellular basis of the future being. As regards what we have termed "dynamics," literally changes of "energy," it is shown that the production of motion, of light, of heat, and of electricity can be referred to chemical changes, and that in point of fact these, as all other of the "vital" phenomena, are owing to the continued metabolism of living matter. The next chapter, on the General Conditions of Life, opens up some highly interesting speculations. After showing the dependence of life upon its environment the question is raised whether under other conditions than those known to us life could exist, and this raises the problems of the origin of life on the earth and of its future destiny. There are many who, whilst denying the possibility of spontaneous generation in the present order of things, are fain to confess that there is no other satisfactory explanation for the origin of life on the globe than this—that when the molten mass had sufficiently cooled, and water—an essential of life—with other conditions suitable to the existence of living matter, appeared on the earth's crust, there was developed out of the inorganic materials the primal substance in which life was manifested. Haeckel, the protagonist of evolution, is fain to admit this; indeed, he sees no other way out of the dilemma. According to him the structureless primitive monera-mass of albuminous substance must have been formed in the primal seas, the birthplace of organic life. This hypothesis is, however, only one of many to explain the riddle of existence. Opposed to it is the theory of "cosmozoa," which was favoured by Helmholtz and W. Thomson, and assumes that in some way—possibly through meteorites—the earth received some of the living substance which gave rise to its varied and abundant fauna and flora. On this view the beginning of life on the earth would be only one incident in the life pervading the universe. Again, Professor Preyer, who is not satisfied with either of these theories, for he does not see why if spontaneous generation once occurred it should not continue to be manifested, and who sees no solution to the problem of life in the cosmozoic view, argues that living matter *preceded* lifeless, and that the molten globe contained it, although in different form from the protoplasm of to-day. This theory brings us back to primal conceptions, for it endows with life the great earth-mass itself. Lastly is mentioned the conception of Pflüger, who finds in the radical CN the primal basis of living matter. These theories are criticised by the author, who sums up the argument (p. 319) by declaring that Life is a "function" of the earth's development in a mathematical sense; that living matter could not exist so long as the earth was a fiery fluid globe without a firm crust; but that it *must* have arisen inevitably from chemical changes when the conditions became suitable, and that it must change its form and composition as the external

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conditions alter in the history of the earth. So that the formation of living matter from "earth-matter" was just as necessary a part of the development of the earth as was the formation of water. From these speculations he closes the chapter with a discussion of death, dealing first with necrobiosis and then with the causes of death, and concluding that as in past æons the earth could not sustain life, so in æons to come it will pass into the state of a dead world once more unable to be the habitat of any living thing. Of the remaining chapters—those on Stimuli and on the Mechanism of Life—we have no space to speak. Needless to say that they abound in suggestive statements and apt examples, derived from the study of the lower organisms. To do full justice to these topics would require lengthy treatment; but their perusal, and, indeed, the whole presentation of the subject, cannot fail to arouse interest and thought. It is to be hoped that this work will be translated into English. It is not a text-book, but rather a valuable and scholarly exposition of the teachings of science, not of biology merely, but of cell physiology, which is not only fascinating in itself, but of abiding interest in the light it sheds on ever-present problems.

Diseases of the Kidneys and Urinary Organs. Vol. I. By Dr. FÜRBINGER. Translated by W. H. GILBERT, M.D., with commendatory letter from Sir Thomas Grainger Stewart, M.D. London: H. K. Lewis. 1895.

THIS is a valuable work on the diseases of the kidneys, and evidently represents a very large amount of practical and literary research considering the enormous number of authorities which are quoted. The book is divided into two parts. The first part deals with the more general symptoms of renal disease, and includes chapters on the presence of albumen, blood or hæmoglobin, and casts in the urine, and also on dropsy and uræmia; the second part deals with the circulatory, inflammatory, and degeneratory forms of renal disease in their more particular aspects. In dealing with "physiological albuminuria" and discussing the clinical value of minute traces of albumen, discovered only by very delicate tests, the practical side of the book is well brought out by the following sentence: "Practitioners should adopt as much as possible the old and reliable procedures of testing for albumen, should not trouble themselves about small unimportant haze but should only reckon with decided deposits, which even at first sight show their importance." In the second part the inflammatory processes are all classed under the head of "Diffuse Nephritis," it being understood that the term does not mean an equal distribution of the process all through the kidney, which probably never occurs. This class is then subdivided into (1) acute diffused nephritis (corresponding to acute desquamative nephritis of Johnson and including the catarrhal or croupous forms of many German authors), (2) chronic diffused nephritis (corresponding to Wilks's large white kidney and Johnson's non-desquamative form), and (3) contracted kidney including all kinds of diffuse nephritis which have the following characteristics—(*a*) contraction of renal elements, (*b*) special clinical course, and (*c*) slow insidious development. The book is very nicely got up and pleasant to read; its views are wide, and if some differ from generally accepted ideas, they make the book the more interesting by the larger field of thought they set before us.

St. John's, Clerkenwell. By JOHN UNDERHILL. With etched plates and other illustrations by WILLIAM MONK, R.P.E. London: Cadbury Jones and Co. 1895.

AMONG the advantages which the world at large has derived from the improvements in the art of pictorial illustration, none is more conspicuous than the preservation of those antique buildings, interesting both in their architecture and associations, which are scattered up and down the old streets and out-of-the-way nooks of London. The photogravure or the burin of the etcher fulfils the condition which the Latin poet desired when he wrote of a monument more lasting than brass, and perpetuates for future generations the semblance of places no longer existing. The enterprise of Messrs. Cadbury Jones and Co. has done this good office for one of the most remarkable of our London antiquities in the very artistic volume, dedicated to the Grand Priory of the Order of the Hospital of St. John, which contains the etchings of Mr. Monk and the descriptive letterpress of Mr. Underhill. The last-named gentleman has told the history of the English branch of the great confraternity of the Hospitallers simply, concisely, and with a generous appreciation of their work both in ancient times and in the present day, while the views of the gatehouse, the church, and the other fragments of the once magnificent Priory now spared to us cannot fail to excite the admiration of lovers of picturesque antiquity, as well as of those who rejoice to see nineteenth century science and beneficence housed in the traditionary abodes of the monastic almoners of the ages of chivalry. Very appropriately have the publishers of this interesting book of remembrance included among their views one which, from its very remoteness in point of date and locality, brings out in conspicuous relief the perennial activity and far-reaching scope of the hospitaller energy. The modern walls of the Ophthalmic Hospice at Jerusalem are a standing witness that, though change and decay may obliterate the external landmarks of chivalric charity, the spirit which once raised these crumbling relics of hoary eld is vital yet; and that men like the late Sir Edmund Lechmere could translate into the formulas of latter-day benevolence the antiquated obligations of the monastic rule and carry the spirit of the crusader, without its intolerance, into the very cradle of the Ancient Order of St. John.

General Surgery and Pathology for Dentists. By EDMUND W. ROUGHTON. With numerous original illustrations. London: J. P. Segg and Co.; Philadelphia, U.S.A.: S. S. White, Dental Manufacturing Co. Pp. 134.

THE value of a manual of this character from an educational point of view is very questionable. Whatever part of medicine is practised as a speciality, be it the eye, the ear, or the teeth, a thorough knowledge of general pathology is requisite and should be obtained from some standard work, while the more minute knowledge of the speciality practised should be gained from books specially dealing with these subjects. We therefore fail to appreciate the title of this book — namely, "General Surgery and Pathology for Dentists." But outside these considerations the matter is insufficient for the wants of the examination in surgery required of candidates for the dental diploma. The author, however, states that it is his hope that the book will save the expense of purchasing a large work on surgery, but we feel that any dental student who trusts solely to the information contained in this book will regret having done so. As examples of this insufficiency of matter we may point out that gangrene receives a page the type of which is well leaded. The discussion of such important subjects as septicæmia and pyæmia occupies scarcely two pages. The style of the author is clear, and the only valuable use to which the volume can be put is for refreshing the memory just previously to examination.

LIBRARY TABLE.

Handbuch der Physiologischer Optik. Von H. v. HELMHOLTZ. 2te Auflage. II. Lieferung. (*Handbook of Physiological Optics.* By H. v. HELMHOLTZ. Second Edition. Part 2.) Hamburg und Leipzig: Leopold Voss.—This part deals first with the determination of distance, in

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regard to which it is shown that if we attempt to determine distance by the convergence of the visual lines the distance is habitually under-estimated. Then the conditions for seeing vertical lines are considered, those lines being seen vertical to the visual plane that depict themselves upon the meridians of the eye which in the median position of the eye would be actually vertical to the visual plane. In the next place the rules of stereoscopic projection are given and the various forms of the stereoscope are described. Professor Helmholtz has nothing new to tell in regard to the cases of incongruence of the retinæ, and we are still referred back to the old observations of v. Gräfe and of Donders, who are supposed to have proved that many cases of strabismus with single vision occur—a subject that certainly requires further evidence for its support. The difficult topic of the horopter is next discussed, and finally the question of the fusion of double images.

Mercantile Speller: containing the Correct Ways of Spelling Words used in Correspondence. London: R J. Bush. 1895.—This work is much more comprehensive than the older class of spelling books, among which Butter's was perhaps the most familiarly known. No doubt it will be useful to a large section of the writing community, but its value might have been increased by some indication of the preferable or more usual forms in those cases where a large number of alternatives are provided. For instance, nine different spellings are given for the word signifying an Asiatic sabre, all being apparently of equal correctness and varying from "cymetar" to "simitar." "Hallelujah" and "mistletoe" afford similar instances. It is true that these particular words will seldom be required in even the most extensive mercantile correspondence; but the reader encounters some of far less frequent occurrence and of uncertain signification. A few such taken at random are vambrace, vanfoss, vessicnon or vessignon, virose, vug or vugg or vugh or vogle, vughy, wangee or wanghee or whangee or whanghee, whapper or whopper, &c.

Nuova Antologia: Rivista di Scienze, Lettere, ed Arti. Anno xxx., vol. lvii., fascicolo xii. (*New Anthology: Review of Science, Literature, and Art.* Thirtieth Year, vol. lvii., No. xii.) (June 15th, 1895.) Rome. 1895.—This, the last instalment of a periodical which is to the Italian what the *Revue de Deux Mondes* is to the French reading world, maintains the character it has long established for science at once sound and versatile, and for literature at once masculine and elegant. Certainly the student in quest of a model of the most refined contemporary Italian style could not do better than familiarise himself with its successive *fascicoli*. For the medical public it has the honourable distinction, shared in rather less degree by its French counterpart, of giving prominence to biological, hygienic, and even clinical subjects. To its pages we owe many fine monographs on epoch-making physicians, surgeons, anatomists, and physiologists, conspicuous among such contributions being the *éloge* on Karl Ludwig by Professor Mosso, lately noticed in THE LANCET.[1] To those of the profession whose mental equipment includes a working knowledge of Italian we can confidently recommend the present instalment, not only for Professor Mosso's beautiful and touching tribute to his master, but for the other articles on themes of perennial interest in education, literature proper, and theology. The history of "University Reform in France from the Revolution to the Present Day," by Signor Carlo F. Ferraris, Professor of Statistics in the School of Padua, is well worthy of careful perusal.

Laboratory Guide for the Bacteriologist. By LANGDON FROTHINGHAM, M D.V. Assistant in Bacteriology and Veterinary Science, Sheffield Scientific School, Yale University. Philadelphia: W. B. Saunders. 1895.—This small work can scarcely be spoken of as a laboratory guide. It is rather a series of notes, somewhat disconnected in character, made in the laboratory. The author states that the technical methods are specially intended for convenience in laboratory work and that they are now given to enable the laboratory worker to avoid long search through various text-books in which these methods are published. We are afraid, however, that except for the most elementary students these methods are already described in most of the earlier text-books which are now at the disposal of most laboratory workers. The methods that are given are good ones, and some of the practical details may be of use to laboratory workers; but the book, taken altogether as a guide to laboratory work, is far from being complete. On the one hand, it could not take the place of the teacher, whilst on the other it would scarcely supplement his teaching in more than a few details. For these few details, however, we may recommend the little work to those who are already able to utilise them.

Index to the First Fifty Volumes of "The Practitioner, a Journal of Therapeutics and Public Health." London: Macmillan and Co. 1894.—Fifty volumes of the *Practitioner* form a great storehouse of information relating to most departments of medical knowledge, and this copious index is a means of referring to their varied contents, which a large circle of readers will cordially welcome. In turning over the pages the reader cannot help observing how the progressive character of medical science is evidenced by the frequent occurrence of words and expressions which were in very slight request when the journal was established in 1868. The first mention of chloral, for instance, is in vol. iv., of bacteria in vol. ix., of salicylic acid in vol. xiv., of cholecystotomy in vol. xxi., of acromegaly in vol. xlii., of nephro-lithotomy in vol. xlvi., and of thyroid extract as a remedy for myxœdema in vol. xlix. A somewhat puzzling feature is the indexing of the same author under separate but successive headings, sometimes without obvious motive and sometimes apparently only because he has in course of time acquired additional qualifications and titles—for instance, the late Dr. Murchison is entered once as "Murchison (Dr. C.)," and again as "Murchison (Dr., LL.D., F.R.S.)." Similar instances may be found under Gairdner (W. T.), Murphy (Shirley F.), Napier (A. D. L.), Nettleship (Edward), Noel Paton (D.), Pick (Professor), &c. A useful addition would have been mutual cross-references to synonyms lying some distance apart, such as Carbolic Acid and Phenol, Lead-poisoning and Saturnine Poisoning, Phimosis and Phymosis, &c.

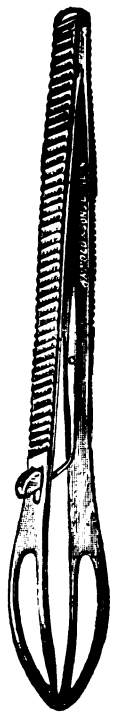
Vital Statistics of Boston and Philadelphia, covering a period of six years ending May 31st, 1890. By JOHN S. BILLINGS, M.D., Deputy-Surgeon-General, U.S. Army. Washington, D.C.: Government Printing Office. 1895.—This volume of 269 large pages is one of the publications of the United States Census Office, and presents with great fulness and minuteness of detail the vital statistics of the two cities named, containing respectively populations of 448,477 and 1,046,964. A prefatory letter, addressed to the Secretary of the Interior, states that "this report presents a number of features which are new in the line of census work, such as the sub-division of the cities into sanitary districts and the analyzation of the effect of immediate surroundings of stated conditions upon the death rates of different races and classes of people." Twelve coloured double-page maps, six for each of the cities, are a special feature of the work, which deserves, and will no doubt receive, the close attention of sanitarians and statisticians.

[1] THE LANCET, June 29th, 1895.

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New Inventions.

IMPROVED ARTERY FORCEPS.



ONE defect of nearly every pair of artery forceps is the smoothness of the handles for quite half their length. In the operation of tying an artery it is expedient that the assistant's finger and thumb holding the forceps should be as far from the wound as possible, so as not to be in the way and in the light; but it is not particularly easy to hold on to the smooth end of the forceps, and if the grasp be on the roughened portion further down there is a considerable chance of loosing the catch. Also artery forceps make admirable tenacula for small tumours and the like; here, again, the further the pull the easier the work. So I have had the accompanying artery forceps made to my design by Messrs. Arnold and Son, having the sides roughened for about three-quarters of their length, and so affording an excellent hold.

E. MANSEL SYMPSON, M.D.,
Surgeon, Lincoln County Hospital.

A SELF-LIGHTING GAS-BURNER.

ALTHOUGH the principle upon which the working of this attractive device depends has long been known, yet it has not until now been successfully applied in practice to the automatic lighting of gas. So far back as 1823 Döbereiner observed that when a current of hydrogen impinged upon that peculiar variety of platinum known as platinum black, or spongy platinum, heat was developed until the intensity of it was such as to cause the platinum to glow and eventually to ignite the hydrogen. Döbereiner constructed a lamp which consisted essentially of a hydrogen generator (zinc and sulphuric acid being employed for this purpose), provided with a jet from which the generated hydrogen issued upon a small cage containing spongy platinum. The explanation of this peculiar phenomenon is simply that platinum has the power of absorbing or "occluding" hydrogen and other combustible gases as well as the oxygen of the air within its pores, and bringing them into such intimate contact that union results. In short, combustion ensues and the platinum glows. Perfectly clean and chemically pure platinum effects the same thing, but it does not appear so active and reliable as the spongy variety. Even the latter fails from some cause or other now and again. To Mr. Duke, however, of 20, High Holborn, W.C., belongs the credit, so far as we have experimented, of overcoming this uncertainty. How this has been achieved we do not know precisely, but we are told that the self-lighting burner bearing his name was the result of several years' study, and, we may add, his labours have been rewarded with apparent success judging from the satisfactory results we have obtained with the new self-lighting burner recently examined. Its construction is simple enough. An ordinary batswing burner, provided with a governor, has soldered on the side of it a small brass rod, on the top of which is a cap of black spongy material, presumably platinum. From the apex of this cap projects a thin platinum wire in the direction and on a plane with the base of the flame. On turning on the gas a current, which forms the blue part of the flame when ignited, impinges directly on the metallic spongy mass, with the result that it soon begins to glow, heating the platinum wire to a bright red heat, which then ignites the escaping gas, the whole action being completed in the tests we have made in less than eight seconds. The convenience of such a device hardly needs emphasising. It is no small advantage of the electric light that it can be turned on by merely "switching" and without resorting to the use of matches. The little platinum automatic igniting torch which Mr. Duke has perfected would seem now to offer the same advantages in gas lighting. It will prove most useful where light is wanted in emergency, as in the sick room, while it dispenses with keeping a small jet constantly burning, the accidental extinction of which, as by a draught, may involve risks not only of coal-gas poisoning, but also of explosion. If it were possible to apply it this invention would obviously be a most valuable adjunct to gas fires.

HARTMANN'S HYGIENIC TOWELETTES.

THESE towelettes, also known as wood-wool diapers for ladies, have been for many years so favourably received that a detailed description is hardly necessary. The absorbent pad is very light and soft, closely resembling cotton wool, and is enclosed in coarse gauze, the ends of which are long, for the convenience of fastening. This material readily takes up fluids of the consistence usual in discharges, being comparatively free from the disagreeable tendency to become coated with them superficially. Towelettes which have served their purpose are burnt. They are of various qualities and prices, from a shilling per dozen upwards, the most substantial form being intended for use after accouchement. The manufacturers have adapted their wood-wool to several other purposes of a similar nature, such as infants' napkins and sheets for use during accouchement. These last are in three sizes, the largest being thirty-two inches square; in addition to being soft, comfortable, and inexpensive they absorb the discharges completely and are burned after use, thereby reducing the chances of septic infection. The office of the company is at 26, Thavies-inn, Holborn-circus. Another of their appliances for ladies' use is a stocking suspender, which serves also as a support for the towelettes.

A CABINET FOR PLASTERS AND DRESSINGS.

MESSRS. FERRIS AND CO. of Bristol have forwarded to us a wooden cabinet, about 18 in. long by 13 in. in height and 11 in. in breadth, which is divided into thirteen compartments, each of which contains one of their "ever-ready caddies." The caddy is an ingenious device for keeping in order plasters and other surgical dressings which the busy practitioner is constantly using. Each dressing is wound upon a hollow cylinder, which fixes upon a metal axis running through the middle of the caddy, the caddy itself being an oblong tin box, and when required the dressing can be pulled from its reel and the quantity needed cut off. At the end of the caddy is a metal slide, on which is distinctly printed the name of the dressing contained in the box. The caddy is refilled by removing the label slide and taking out the metal axis, which is put through the new roll of dressing, fixed in position in the caddy, and the label slide replaced. The cabinet is a handsome piece of furniture and will be found a useful addition to the fixtures either of the private surgery, or the public dispensary, or out-patient department.

OZANITE SANITARY RINGS.

THESE consist really of large wafers of vegetable parchment containing a definite quantity of pure permanganate of potassium, which, being crystalline, diffuses slowly out when the ring is floated on water. One advantage of such an arrangement is that the purity and strength of the permanganate is ensured. The ring is obviously convenient and useful for a variety of purposes, while it may be used with confidence for the delicate requirements of a gargle or as an application for cuts and wounds since the materials are quite pure and the paper free from injurious colouring substances. Meritorious as in many respects we concede this invention to be, we must enter a vigorous protest against the adoption of the name of a medical man in its title. "The Dr. Latham Ozanite Rings" is extremely objectionable, as our readers will agree.

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THE LANCET.

LONDON: SATURDAY, JULY 27, 1895.

THE discussion of the midwives question by the profession continues and does not become less interesting. Two valuable contributions to it were made last week, one by the Edinburgh Obstetrical Society and the other by the Parliamentary Bills Committee of the British Medical Association. The general result of the discussions may be expressed in the two following propositions—firstly, that midwives are needed; and, secondly, that they should act in touch with some medical practitioner. This was the suggestion of Dr. CAMERON of Leeds: "There must be something incorporated in the Medical Acts [rather, we should say, the Midwives Bill] which made it necessary for midwives attending cases being in touch with some qualified practitioner." The whole gist of the demand of the profession should be comprised in these two propositions. At neither of the meetings we refer to did any medical man argue that there was no evil to be remedied, and that the Mrs. GAMPS might be left to a process of slow and gradual extinction. In the Parliamentary Bills Committee of the British Medical Association it transpired that an amended Bill had been prepared by a subcommittee, which is being circulated among the branches. Dr. WOODCOCK of Manchester and Dr. SOMERVILLE of Galashiels spoke in favour of delay and postponement. This is reasonable enough if a definite amended Bill has been presented for consideration; otherwise it is not so. The case, whether simple or complicated, has been before the profession for twenty years. The suffering and the perils of labour go on. Women destitute of the most primary knowledge of the risks of a lying-in chamber or the lying-in condition continue to practise. According to Dr. D. BERRY HART midwives, wholly or almost wholly untrained, attend about half of all the cases. In these circumstances the question should be definitely settled. If the present arrangements are the best possible, by all means let them alone. But if they are not, indefinite delay is unworthy of the medical profession. The Committee alluded to above has so far yielded to the plea for postponing the consideration of the subject, but not before the following resolution, proposed by Dr. BRIDGWATER and seconded by Dr. GALTON, was unanimously passed:—

"That it is desirable that there should be a change in the present system in the practice of midwifery by unregulated, unrestricted, and uneducated women."

The debate in the Edinburgh Obstetrical Society deserves further notice. It was opened by Dr. D. BERRY HART, who remarked on the numbers of ignorant women who attended labours, and advised a compromise in the form of the registration of "midwifery nurses." Dr. BUIST of Dundee favoured the Bill. He would trust midwives if supervised. He had known midwives give opium for albuminuria and ergot during pregnancy. Registration would bring such conduct under notice and discipline. The aim of legislation should be to protect the poor. Dr. CONNELL of Peebles preferred "registered qualified nurses" to registered midwives. He thought it a matter of public health that the State should insure women against labour, doubtless meaning the risks of labour. One speaker said that the life of a country practitioner would be intolerable if there were no midwives. This remark was similar to one made by Mr. JONES MORRIS of Portmadoc at the other discussion, that it could be easily imagined how very convenient it would be for him in a hilly district to know of a woman in remote parts competent to attend cases of natural labour, and, if she found any difficulty, at once to send for a medical man.

Professor SIMPSON thought the creation of a special group of women a dangerous experiment, but considered that women trained for three months in a maternity hospital might be registered. It is not often that Sir WILLIAM TURNER and Dr. TUKE take part in a discussion of midwifery matters. They did good service on this occasion in saying that in an amended Bill, of which they had only seen a copy at the meeting, the restriction of the practice of midwives to cases of natural labour and the limitation of registration of existing midwives to those presenting certificates from a person of authority in the district—points insisted on by the General Medical Council—were omitted. This reading, however, is contradicted by Section 5 in Clause 12, p. 5. The point must be put beyond all doubt. The promoters of this Bill must know that any measure attempting to give midwives a *carte blanche* in midwifery as if they were medical practitioners would meet with the unanimous condemnation of the profession, and could have no chance of passing through Parliament. The discussion in Edinburgh was interesting with respect to the case of Scotland. Some speakers have said that Scotland had no need of midwives. This was a surprising statement to those who reflect on the scattered and sparse population of many parts of Scotland, and what must be the lot of parturient women there? Yet Dr. MACVIE of Berwickshire stated that midwives were unknown in his district. On the other hand, Mr. THATCHER, whose name is of some authority on midwifery in Scotland, on the strength of twenty years' experience as a teacher of nurses, considered that midwives were absolutely essential in Scotland for populous and large colliery districts. Dr. BARBOUR, by way of practical conclusion to the discussion, made some sensible remarks with regard to certain points which would have to be considered in the event of the Bill being extended to Scotland, a course which he seemed to think probable if legislation were once adopted in England.

We can best conclude our notice of these important discussions by commending them to those who are about to take part in what ought to be the larger discussion of the British Medical Association. The question should be raised out of all party and personal connexions. The profession must either attend all midwifery or consent to have part of it attended by midwives. It has the right to demand in the latter case that midwives shall act subordinately—in touch, as Dr. CAMERON says, with some medical practitioner; in short, that they shall be severely

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restricted to cases of natural labour and liable to censure when they exceed their duties.

THE opinion of clinicians has for years inclined more and more to the view that it is impossible to explain pneumonia as a simple inflammation of the lungs. The abrupt onset, well-defined course, and definite crisis characteristic of the disease, the fact that the pulmonary lesion and the clinical phenomena do not run *pari passu*, the occasional occurrence of epidemics,—these and many other facts point to the conclusion that the true nosological relations of pneumonia are with the specific fevers rather than with the inflammations. Naturally, the cause of pneumonia has been sought for in a micro-organism. There is a certain analogy between the course of the pyrexia in pneumonia and in the various agues, and the discovery of LAVERAN, that the febrile period in ague is coincident with the life-history of the parasite of malaria, has a suggestive bearing on pneumonia. If it could be shown that a special micro-organism is always present in the pulmonary tissue or in the blood of patients suffering from pneumonia, and if it could be demonstrated that the life-history of this micro-organism is coincident with the pneumonic pyrexia, we should have an adequate and satisfactory explanation of the true pathology of the disease. It cannot be said, however, that we have yet obtained satisfactory evidence on these points. FRIEDLÄNDER first described diplococci present in the sputum of pneumonic patients, and these diplococci were encapsuled. Further inquiry, however, proved that these diplococci were by no means constant in the disease; that their presence was, in fact, the exception rather than the rule. Subsequently FRÄNKEL was able to differentiate another micro-organism—the pneumococcus—which he believes to be generally present. This pneumococcus is usually a diplococcus; the prevailing shape, according to Dr. WASHBOURN, is lanceolate, although the individual cocci may be rounded or oval or rod-shaped. They are variable in size and often form chains of four or five cocci, and even in some cases of as many as forty or fifty cocci. They are sometimes with and sometimes without a capsule. The pneumococcus of FRÄNKEL is stated by Dr. WASHBOURN to be capable of exciting pleurisy, empyema, meningitis, and otitis, as well as pneumonia, and it is sometimes present in the secretions from the mouth, nose, and bronchi of healthy individuals. As he points out, this last fact is no argument against the pathogenic *rôle* of the pneumococcus, as the same applies to the diphtheria bacillus, which has frequently been found in the throats of healthy individuals without producing any injurious effects. Mice and rabbits are the most susceptible animals to inoculation of the pneumococcus, guinea-pigs are much less susceptible, whilst pigeons and fowls appear to be immune. The course of the temperature following inoculations in the rabbit would appear to bear considerable resemblance to that of pneumonia in the human subject as regards the nature of the rise and the height attained, but the course of the case is very much more rapid. Thus death or recovery generally takes place within two days. The blood is found to be crowded with cocci within a few hours of the performance of the inoculations.

The true explanation and consequent value of these investigations is eminently a question for experts in bacteriology, and it must be admitted that at present bacteriologists are much divided on the subject. Pneumonia was long the battle-ground of therapeutists. At the present day it is almost as much the battle-ground of pathologists. It is not too much to hope, however, that ere long some consensus of opinion will be reached on this much controverted and very important point. Bacteriologists may be fairly asked to furnish us with definite knowledge as to whether a characteristic micro-organism is uniformly present in pneumonia, and, if so, whether its life history affords any clue to the phenomena of the disease. While this question remains in abeyance the treatment of pneumonia—always one of the most disputable and difficult in the whole range of medicine—becomes more difficult than ever. If the disease be truly parasitic, and if the destruction of the parasite be the true object of therapeutics, then it is evident that the antiphlogistic treatment of former days and the stimulating treatment of the present day are both alike mistaken and futile. Quinine was known to control ague long before the explanation of this fact—viz., that quinine is a germicide to the amœba of malaria—had been attained; but how much more satisfactory is the treatment of malarious affections now that the logical basis of the accepted treatment has been made clear.

As regards pneumonia we have no specific remedy, but it may be fairly enough argued that the bacillary theory of the disease, however problematical it may still remain, suggests the wisdom of caution in pushing either an antiphlogistic or a stimulant line of medication. The reasonable and moderate treatment of symptoms must commend itself to every judicious practitioner; but wholesale bleeding on the one hand, or drenching pneumonic patients with alcohol on the other, seems, in the light of recent researches, more indefensible than ever. Similarly the routine use of antipyretics seems bad practice. All the evidence at our command appears to show that, apart from hyperpyrexia, the height of the temperature bears no direct relation to the danger of the attack in pneumonia. At this point again the uncertainty overhanging the pathology of pneumonia is very embarrassing. Is the pyrexia the reaction of the organism to the action of a morbid substance—whether bacillary or not—in the blood? Is it simply the effect of such a poison, or is it the effort of the organism to rid itself of the poison? In other words, as Dr. HALE WHITE puts it, is the pyrexia one of the "defensive mechanisms" of the body? We cannot answer these questions with any confidence or certainty in the present state of our knowledge, and yet until they are answered our treatment must remain halting and tentative. We trust bacteriology will come to our relief and accomplish in relation to pneumonia something comparable to its great achievements in other fields of enquiry.

THE employment of women, more especially of married women, is a question of admitted importance from a public health, as well as from an economic, point of view, and Miss COLLET'S recently issued report to the Board of Trade on this subject possesses more than a passing interest. The

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census returns for 1881 and 1891 do not, as she points out, confirm the general impression that the employment of women is rapidly extending—in fact, the proportion of women returned as occupied remained practically stationary during the decade 1881–91, while the employment of girls and women under twenty-five years of age showed an increase during the ten years. Miss COLLET'S report affords conclusive evidence that the employment of married women, and generally of women over the age of twenty-five years, had declined during that period. The increased employment of girls and young women, moreover, occurred, it appears, concurrently with a similar increase in the employment of boys and young men. It is true that a combination of causes, including a diminished probability of marriage, have recently tended to encourage middle-class girls to seek definite occupation in increasing proportion; but Miss COLLET points out that the "industrial position of women, speaking generally, varies with the degree of material prosperity of the men in the class to which they belong," and that the increase of wages and of the general standard of comfort among what are called the "working classes" have in recent years enabled the services of the daughters to be retained at home in increased proportions. In the general English population, of 100 girls and women over ten years of age 34·1 were returned as occupied at the census in 1881, while at the more recent census in 1891 the proportion occupied had only fractionally increased to 34·4 per cent. It is an eminently satisfactory fact that above the age of twenty-five years there has been a distinct decline in the employment of women in all factory and workshop trades (except tailoring), as well as in occupations giving merely casual employment. This necessarily implies a decrease in the employment of married women, and it is beyond doubt that the slight increase in the employment of girls and women generally is due to the increase under the age of twenty-five years and to the increased employment of middle-class women mainly in teaching and clerical occupations.

The unquestionable importance of the effect of the employment of married women upon infant mortality, more especially of employment in factory and workshop trades, gives special interest to Miss COLLET'S statistics on this branch of the subject. The census tables do not, unfortunately, afford any direct information concerning condition as to marriage of the women returned as following definite occupations. Indirectly, however, Miss COLLET has been able to show from these returns the minimum percentage of married and widowed women returned as occupied in different sections of the population. For instance, if the number of occupied women exceeds the number of single women in a given population, she correctly assumes that this excess represents the minimum percentage of employed women who are either married or widowed. In one of the tables in her report she gives this minimum percentage of employed married women in 19 industrial English towns, both in 1881 and in 1891, the figures showing a reduction in 1891 of the minimum percentage of married women aged between twenty-five and forty-five years engaged in industry in each of these towns, with the exception of Burnley. These figures undoubtedly justify the inference that, at any rate in these 19 industrial towns, the percentage of married women employed in industry is diminishing. Notwithstanding, however, this tendency towards the diminution of industrial labour among married women, the minimum percentage is still exceedingly high in many of the "textile" towns. For instance, this minimum percentage in 1891 was equal to 18·7 in Preston, 22·1 in Burnley, and 26·6 in Blackburn. Miss COLLET remarks, with reference to these figures, that "in such towns, where nearly all the girls under twenty, and half the women between twenty and forty-five, are engaged away from home, we may naturally look for a high rate of infant mortality, and expectation is justified by the facts." It is undoubtedly true that the rate of infant mortality is excessively high in each of these three Lancashire manufacturing towns, more especially in Preston; but it should be noted that the rate was very considerably lower both in Burnley and in Blackburn than in Preston, although the proportion of employed married women both in Burnley and in Blackburn was considerably higher than in Preston. It is evident that the factory employment of married women, deleterious as it must be to infant life, is not the controlling factor of infant mortality. In proof of this it may be noted from Miss COLLET'S table that the proportion of employed married women is nearly twice as high in Bradford as it is in Leeds and Huddersfield; the rate of infant mortality last year was, however, considerably lower in Bradford than it was either in Huddersfield or in Leeds. It is, moreover, a fact that infant mortality is persistently high in the mining districts of Durham, Northumberland, and South Wales, in which the industrial employment of women is considerably below the average.

From special returns furnished to the Board of Trade and utilised by Miss COLLET in her report, it appears that 32·9 per cent. of the women aged upwards of eighteen years employed in the cotton mills of Lancashire and Cheshire were either married or widowed; in the woollen mills in Yorkshire 29·8 per cent.; and in the worsted mills in Yorkshire only 21·2 per cent. Miss COLLET, after careful examination of these returns, comes to the conclusion that there is no ground for doubting their approximate accuracy, except that there may be a tendency to return unmarried women with children as married. It is evident, therefore, that the proportion of employed married women is far greater in Lancashire than in Yorkshire, and this may partly account for the greater excess of infant mortality in Lancashire, although the lower general sanitary conditions of the Lancashire towns cannot be ignored as an important factor of the excessive infant mortality therein. It is much to be hoped that Miss COLLET will be able to further investigate this important question of the factory employment of married women, with special reference to its influence upon infant mortality. A more exhaustive and elaborate analysis of the census returns in the various industrial towns, to which she has had access, with a view to determine the ages of the married women employed, and the numbers and ages of their children at the time of the census, would throw much additional light upon the extent to which young children in these towns are deprived of their mothers' care and attention, and would supply a more accurate basis for calculating the true effect of the employment

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of mothers on infant mortality. We cannot, however, speak too highly of the value of Miss COLLET'S report and of her conclusions that there has been recently no general increase in the industrial employment of women, and that as regards such employment of married women there has been an undoubted decline.

Annotations.

"Ne quid nimis."

THE GENERAL ELECTION.

THERE can no longer be any doubt as to the result of the General Election. The Unionists will be returned with a very large majority and untrammelled by any special pledges. About the general line of their policy there cannot, however, be much room for doubt. Its tendency will be the opposite of that pursued by the Government which it supplants. We have, as medical journalists, nothing to do with politics, except in so far as they are likely to affect questions of public health, the progress of national hygiene, and the interests of the medical profession. We are always ready to welcome and press forward to the best of our ability any earnest and good work and any legislative attempts in these directions from whatever source they may come. Like all stories worth the telling, the moral of this election lies upon the surface, notwithstanding that it will be differently read in the light of party bias and interest. The next parliament will see a strong Government, not harassed and embarrassed by doubtful votes, but homogeneous in its construction, and not dependent for its existence on adjusting in harmonious action a number of different parties, each intent on pursuing and obtaining its own end. The present Government is relatively unpledged. With such a majority the fear will rather arise from within than without lest it should disintegrate from the size of the Cabinet and the carelessness of Members in the performance of their duties and in their attendance at the House. There will, at any rate, be time, under the circumstances, for a policy of natural evolution, and the Government will have no temptation to keep itself *en évidence* by ambitious, far-reaching, and contentious legislative measures that, rightly or wrongly, in the eyes of many practical, sober-minded people, seem to be a policy of revolution. The interests of the nation, assured of the result of the General Election, is now focussed in the inquiry, "What will they do with it?" Whatever else may be done, there are several important matters of public health calling for attention, and there is plenty of room for the prosecution of work of a hygienic and domestic character affecting the health and well-being and every-day life of the people of the British Empire. Attention to these matters may not have the glamour attending legislative efforts of a larger and more ambitious sort, but it will be largely productive of the comfort and contentment of the people, give scope to successful commerce and labour, and sweeten the breath of society from the peer to the peasant. A late Prime Minister was not far wrong when he emphatically summarised the national importance of sanitation in a phrase, and the new Ministers will, among other things, have to fulfil the expectations they have raised by their expressions of sympathy with the social and sanitary requirements of those who live and labour in our large cities, towns, and villages.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE letters of the Lord Mayor, Sir Joseph Renals, and of Sir Sydney Waterlow appealing to the benevolent of this [illegible]hy metropolis to bring the Fund for this year up to £50,000 deserve a generous response. It is gratifying to learn that Sir Sydney Waterlow estimates already that the yield of this year's collection will be £46,000. The amount available for distribution will evidently exceed that of any previous year. This is one side of the question—the pleasing and the creditable side. But there is the other, neither pleasing nor creditable—1901 beds unoccupied and empty. There is no question here of abuse of hospital charity. It needs no excess of imagination to realise how many sufferers there are in the one-room and two-room families of London who would be immensely benefited by a few weeks in a well-found hospital. Let it never be forgotten that nearly one-sixth of the families of London, according to the last census, are living in one room each. A larger collection would give to them some or all of these 1901 beds. Is it too much to ask for a few large subscriptions towards this most desirable result? The clergy and the ministers have done their part. Many of them represent congregations of most limited means. Out of deep poverty much of this collection has come, and from churches which have enough to do to make ends meet. If the £50,000 on which the council has set its heart, and which is surely not an excessive demand, is to be completed it must be by rich men casting into the treasury. The Fund was never better administered. The unworthy are excluded, and the more meritorious and needy are taken into account. We trust that before the meeting of the council on Monday at 2.30 P.M. the Lord Mayor, whose efforts in this matter have been very praiseworthy, will be able to announce that the sum wished for has been raised, and that the hearts of all who believe in our voluntary hospital system have been rejoiced.

WATER-SUPPLY IN RURAL DISTRICTS.

To procure a proper water-supply for isolated houses and small groups of houses is a problem the satisfactory solution of which often taxes to the utmost the ingenuity of the medical officer of health, and it must be confessed that in some instances it seems as if the difficulty of obtaining a supply altogether above suspicion produces a condition of the executive in which all action is paralysed and the inhabitants are left to obtain their drinking water from shallow wells from which no attempt has been made to exclude surface water, or even from neighbouring ponds or ditches. How much the comfort of all classes of our rural population depends upon the knowledge, activity, and influence of the medical officer of health may be seen by comparing certain rural districts with one another, comparisons which probably many of our readers are quite capable of supplying from their own personal experience. As instances of what may be done by an energetic medical officer of health familiar with the local geology, may be mentioned certain rural sanitary districts in Essex, over the health of which one who has now been appointed the county medical officer of health has for some years past presided, and owing to whose efforts people of all classes living in the districts in question have been furnished with a pure water-supply. Dr. Darra Mair, the medical officer of health to the Croydon rural sanitary district, has, too, done much in a similar direction, and he has recently presented to his sanitary authority a report showing that the work is not yet finished. The district referred to is, we believe, as a whole well supplied with water, it being exceptionally situated in this respect by virtue of the many water mains which traverse or abut upon it. It appears, however, that in portions of the parishes of Coulsdon, Addington, and Woodmansterne there obtains a state of affairs which should certainly be at once remedied. Coulsdon is the parish where matters are worst, and here we learn there are between forty and fifty houses solely dependent on rain water for their supply. These houses possess underground covered

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tanks in which the water is collected from the cottage roofs, and the supply of which, owing to the recent drought, has been much reduced and in some cases quite exhausted. Even where there is still water, it is, Dr. Mair tells us, "muddy and crowded with visible animal life." Some of the houses possess no tanks and are dependent for their supply upon a pond which, we regret to relate, is vested in the sanitary authority and the water of which "has an abominable stench when disturbed, evidently due to decaying vegetable matter." It is hardly to be wondered at that under these conditions the tenants complain of their water-supply and fear to drink it unboiled, or that its consumption in persons newly arrived in the district tends to produce acute intestinal disturbance. Small wonder, too, that the cottagers convert their water into ginger-beer or lemonade in order to conceal its nauseous properties. How much of the "summer drink" of country tourists is thus concocted?. Dr. Mair, in his report, points out to the Croydon rural district council their powers and responsibilities under the Public Health Act, 1875, and the Public Health (Water) Act, 1878; and, in our opinion, he has adequately established that the existing supply of the houses referred to is both insufficient and unwholesome. Upon the rural district council now rests the responsibility.

NEWSPAPERS AND LIBEL.

A CASE has just been tried in the Supreme Court of West Australia which has great interest for medical men. The plaintiff, Mr. C. B. Elliott, Government medical officer in Geraldton, sued the Victorian Express Newspaper Company for libel. The libel was contained in the form of a letter, which letter implied that the large number of cripples in Geraldton was owing to the incompetence and neglect of the hospital medical officer, Mr. Elliott, and he accordingly asked for £2000 damages. There seems to have been a large amount of personal feeling exhibited by the writer of the letter, and a variety of witnesses were called to prove neglect and malpraxis on the part of the medical officer. After a trial which lasted eight days the jury awarded Mr. Elliott £500 and costs, the editor being also sentenced to fourteen days' imprisonment for some contempt of court occurring during the trial. While we congratulate Mr. Elliott upon his success, we feel bound to remark that the Geraldton Hospital does not seem up to the modern standard in many ways, and also that people should not set one man to do an amount of work which would be enough for ten.

DANGEROUS EXHIBITIONS.

AN incident recently took place at the Royal Aquarium which, though happily unattended with any serious consequences, shows forcibly the dangerous character of certain public exhibitions. A girl performer on the high trapeze missed the trapeze for which she was making, but managed to catch one of the tie-rods of the roof, where she had to remain some time until she let herself go and fell into the net. We have not the details before us, but it is evident that the child—for we believe she was no more—might easily have lost her life except for her pluck and presence of mind. We are fully conscious of the grace and beauty displayed in trapeze exercises, but the point we take exception to is the element of danger which enters into these feats when performed at a height of 90 ft. or 100 ft. above the ground. Just as much skill, just as much grace, just as much practice are needful for the performance of gymnastics on a trapeze ten feet from the ground; but the fact is that the British people, like all peoples, has a morbid liking for looking at spectacles when there is a possibility of "something happening." Hence the popularity of shows like the one of which we are speaking, fancy shooting exhibitions, where a mark is placed on a man's head, &c. It is just as difficult to hit the ace of hearts when nailed up on a board as when it is placed upon a man's head, if we except the possibility of nervousness on the part of the shooter; but the one exhibition will draw a crowded house while the other will be a "frost." We are no advocates for grandmotherly government. If a certain class of idiots like to go on to thin ice we see no reason why they should not, except for the fact of their spoiling the ice; but no trading company should be allowed to make money out of risking other people's lives. The management of the Aquarium is, we know, very careful to minimise risk as much as possible, but even a net is not always a certain safeguard; and when, as we have said, the skill of the performer is equally displayed when the danger is absent we fail to see why the element of risk should be allowed.

COUNTY COURTS AND MIDWIFERY ENGAGEMENTS.

IN another column will be found a report of a case in the Holywell (Flintshire) County Court, in which a physician and surgeon, Mr. J. William Parry, of Bagillt, sued John Venables Price for £2 8*s*. This sum represented 6*s*. balance of an old account and a fee of one guinea each for two engagements to attend Mrs. Price in her confinement. The first engagement was in July, 1893, and the second in April last. In neither case was the plaintiff sent for. He did not take any action to recover the first fee until the defendant again failed to send for him on the second occasion. The practice of so retaining medical men and then not sending for them being very common in this district, the plaintiff determined to bring the case into Court. The judge said the plaintiff had waived his claim for the 1893 engagement, but allowed a fee of 10*s* 6*d*. for the engagement of 1895. The amount is inadequate, as if the judge had accepted a fanciful theory of the defendant that when the medical attendant is engaged beforehand the fee is half a guinea, but when he is called suddenly a whole guinea. We cannot agree with this part of his Honour's ruling, but it is something to have to record his remark in, reference to people engaging an obstetrician and not sending for him, that "a bargain is a bargain."

RENAL DISEASE AND GENERAL PARALYSIS OF THE INSANE.

IN the last number of the *Journal of Mental Science* Dr. Hubert C. Bristowe recalls attention to a subject to which he has recently devoted considerable study. In a former paper he alluded to the high percentage of patients dying of general paralysis of the insane, who showed signs of chronic changes in the kidney. On considering the possible connexion between the clinical condition of general paralysis and the changes found post mortem in the kidneys, the condition of the arteries seemed to furnish a connecting link. At all events, as was pointed out, a diseased condition of the cerebral arteries occurred in those dying of granular kidneys very similar to, if not identical with, what is found in those dying of general paralysis of the insane. In the present paper an attempt is made to supply the deficiencies in the first. Reference is first made to the statistics of Mr. Beadles and Dr. Bond. The former found that in 2610 cases of insanity there were 1128 cases of chronic renal disease, or 43·21 per cent. Dr. Bond out of 154 cases found 74 cases of renal disease, or 48 per cent. Dr. Bristowe's numbers are 532 necropsies, 327 cases of chronic renal disease, or 61·466 per cent. The exclusion of patients over 60, in whom some chronic fibroid change in the kidney might be present without much significance, reduces the percentage to 52·9, a reduction of 8 per cent. Excluding also general paralytics, a further reduction by

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12 per cent. is effected; and after making certain allowances Dr. Bristowe makes his percentage of chronic renal disease among the insane, excluding general paralytics, 44 per cent. Among general paralytics he finds the percentage of chronic renal disease to be 72·11, a sufficiently striking difference. Dr. Bristowe next takes the statistics of the Dorchester, Bristol, and Gloucester Asylums with reference to renal changes in general paralysis. At Dorchester the total percentage of diseased kidneys in general paralysis was 71·875, at Bristol 54 per cent., and at Gloucester 74·157. To account for the differences several factors have to be taken account of, and not the least important is the personal factor of the observer. Dr. Bristowe now takes his own figures together with Mr. Beadles' and Dr. Bond's, a total of 3446 cases of insanity. Of these patients, 48·867 had renal disease. Reckoning 12 per cent. of these as general paralytics and 4 per cent. as over 60, there is a percentage of renal disease amongst the insane under 60, excluding general paralytics, of 32. Taking, on the other hand, the statistics of the Somerset, Gloucester, Dorchester, and Bristol asylums as regards general paralysis and renal disease, there are 266 cases, and of these 183, or about 68·8 per cent., had renal changes. As Dr. Bristowe remarks, from the statistics it seems justifiable to conclude that in general paralysis renal changes are much more common than in other forms of insanity—that, in fact, they are usually found. Dr. Bristowe briefly considers the question of the cause of these changes, and is of opinion that they depend upon some toxic condition in the blood—possibly alcohol, possibly syphilis, perhaps both; and in concluding his paper asserts that he is still able to maintain, after a wider examination of material, that renal disease of some form is exceedingly common in general paralysis. At the same time, he remarks, it is not clear that the form of renal disease is always interstitial nephritis, and he inclines to the view of Gull and Sutton that there is such a disease as arterio-capillary fibrosis, in which the kidneys are commonly affected. Dr. Bristowe would also suggest that disease of the brain—that disease which manifests itself clinically as general paralysis of the insane—is under some circumstances another result.

THE RED SEA PILGRIM TRAFFIC.

WE learn from the *Times of India* of the 5th inst. that a Government resolution has been passed announcing that a Bill is about to be introduced in the Supreme Legislative Council for the special regulation of this traffic. The changes about to be effected are mainly those resolved upon at the late Paris Convention, and it is proposed to get the Bill passed in time to give effect to the new regulations for next year's *Haj*. Speaking generally, the recommendations of the Paris Convention strike us as very necessary and good. As regards the increased space to be allowed to each pilgrim, the Convention required that twenty-one and a half square feet should be given for each pilgrim of whatever age. The British Government reserved, it will be remembered, the point at the time, but they have now intimated that they will make a minimum standard of sixteen square feet for each pilgrim irrespective of age. There can be no doubt that on sanitary grounds the Convention was right, but unfortunately other considerations come in. Increased space entails increased expense, with the result of raising the fares for the pilgrims and of consequently wholly excluding a large number of poor Mahomedans from making the *Haj*. From the public health standpoint this is a very good thing perhaps, but it must be remembered that the pilgrimage is to Mahomedans a religious act of the most important kind. As regards other matters—the extension of the notice of sailing to pilgrims, the provision that the upper deck shall be clear of all encumbrances and kept exclusively for their use, the increase of hospital accommodation, the medical inspection of all pilgrims previously to embarkation instead of on shipboard, and the new regulations as to water-supply and hygienic arrangements during the voyage—these are matters of common sense and prudence. As regards the embarkation of pauper pilgrims it has been wisely suggested that something should be done with a view to some limitation of the large number of these poor creatures, who yearly make the pilgrimage only to die of fatigue and starvation, by seeing that they are provided with sufficient funds before granting them embarkation tickets. The health officer at Bombay has suggested that the captains of pilgrim ships should be required to keep a return of the number of passengers on the outward and homeward voyages, and that such a supervision over the sale of tickets to passengers should be enforced as to ensure that it is not in excess of the measured accommodation provided on shipboard for each separate class. There are also other details of a minor character which we hope to see incorporated in the forthcoming Bill; but nothing is likely to prove efficacious until some radical changes are carried out at the Cameran lazaretto, and we hope that the British Government will not only put pressure upon the Turkish Government in this direction, but obtain the permission of the Porte to send out some one from this country to see and report upon what is done.

WOODEN-LEGGED PEDESTRIANISM.

NOGENT-SUR-MARNE, a city not hitherto celebrated as a sporting centre, has rendered itself famous by inaugurating a series of running contests for wooden-legged athletes. Not long ago, in response to a general invitation, no fewer than sixty-seven individuals who had lost either a leg or a thigh competed for a number of prizes, the distance to be covered amounting in every case to 200 metres. The enterprising cripples were divided into *cuissards* and *jambards*, and, contrary to what might have been expected, the "grand champion" turned up amongst the former class. M. Roulin, whose thigh had to be amputated in 1887 in consequence of an accident, succeeded in getting over the course (about 220 yards) in the very remarkable time of thirty seconds; whereas M. Florant, the most speedy *jambard*, took thirty-six seconds, and was, moreover, easily defeated by the second and third *cuissards* as well as by the champion. There was also a race for juniors, but the youngsters failed to approach the veterans, the winner's time being thirty-five seconds. The proceedings ended with a *course de consolation*, which was carried off in thirty-three seconds by M. Mansire, but whether this gentleman was a *cuissard* or a *jambard* is not stated. Altogether the meeting, or match as our French friends called it, was a great success, affording endless delight to both competitors and spectators. If a similar show were to be organised in this country it would doubtless be productive of a large sum in gate-money, which might be devoted to some charity connected with athletics, or, better still, be added to the Hospital Sunday Fund. Our contemporary, *Le Progrès Médical*, to whom we are indebted for the foregoing particulars, concludes its article in the following terms: "We have made a point of giving the names of all the *lauréats*, inasmuch as some surgeons may perchance in this way obtain tidings of patients on whom they operated, but whom they have not seen or heard of since, as convalescents, they quitted the hospital." This passage is very satirical (although the writer was probably not aiming in that direction), and might aptly serve as text for a homily on gratitude, or rather on the absence of that sentiment among patients in general. The author of the definition that gratitude is a lively sense of favours to come would of course argue that surgeons have no right to expect any recognition of

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their services. A man who has lost one leg under the knife does not look forward anxiously to parting with its fellow. Speaking in all seriousness, however, there is probably no class of men whose services to the community are as a matter of course received with less gratitude than those which are rendered by medical practitioners. No other toilers in the industrial hive lead such wearing lives as medical men in general practice, who are compelled to remain on duty perpetually, night and day alike, and yet the meed of recognition they receive is indeed scanty.

THE INDEX MEDICUS.

IN our issue of June 29th we pointed out how important a matter it was that the Index Medicus should not be allowed to perish. The yearly cost of production is about £1,000, and it is proposed to raise this sum by 200 subscriptions of £5 each. The United States, it is estimated, will supply 120, Great Britain 60, and the Continent 20. We think, however, that Great Britain with all her learned societies might well subscribe £400 by herself. If £5 is too heavy a tax for one individual to undertake, there are surely five medical men in every one of our large towns, each of whom would subscribe £1, and so form a group which would receive a copy of the Index for their common use; while institutions and societies should have no hesitation in voting the required amount. Those who are willing to subscribe are requested to communicate with the Librarian, Royal Medical and Chirurgical Society, 20, Hanover-square, London, W.

TREPHINING FOR EPILEPSY.

IN a recent number of the *Archives de Neurologie*, Dr. Hallager of Viborg relates a case which presents several points of interest. The patient was a single woman aged twenty-two, in whose family history pulmonary troubles played a considerable part. From the age of twelve the patient herself had at times suffered from chlorosis with palpitation, but had no serious illness until January, 1893, when she became suddenly ill, and was only able to utter the words "Ja" and "Nein." The day after the commencement of her illness she had the first convulsive attack. At this time the right arm was paretic, and a few days later the right leg also was affected. After some weeks she was able to speak, and the paresis gradually diminished, first in the leg and later in the arm. She remained in bed for five or six weeks, and at the end of this time was still unable to read, although she was able to see and recognise letters. Several convulsive attacks took place in the first week of her illness, and she then went for about two months without any. She then had an attack which commenced with shaking of the right arm, followed by elevation of this limb above the head. The right side of the face was then affected and general pain was experienced throughout the body. Consciousness was lost, the convulsions became general and were succeeded by coma. General headache was experienced on recovery from the comatose condition. Apart from some affection of memory the mental condition was unaffected and no distinct paralysis was present. Under treatment by bromides the convulsive seizures diminished in frequency and intensity, but did not cease. An attack which was witnessed, commenced with localised spasm in the right forearm, followed by a continued movement of flexion at the elbow and elevation of the arm. She then lost consciousness, fell down, and became convulsed generally. Attacks of spasm similar to what occurred at the commencement of this attack were also common, but consciousness was not lost and the convulsion was only local. There was no optic neuritis, and it was thought that the lesion determining the attacks was probably the result of hæmorrhage or embolism, and operation was determined upon as likely to afford at least some relief. Trephining was performed in front of the fissure of Rolando, and when the disc of bone was removed the discoloured dura mater bulged through the opening. The opening in the bone was enlarged until normal dura mater was visible all round the discoloured part; the membrane was incised and a sound passed through the congested pia mater into a cystic cavity as large as a nut. This cyst was incised, and its dark brown contents removed, together with the walls of the cyst. After the operation there was weakness of the limbs on the right side, and the patient occasionally experienced muscular spasm in the forearm. About a month after the operation she had two attacks similar to those which had previously occurred. She was put on bromides and remained free from attacks till the time at which the account of the case was written. She was free from pain also, and apart from some impairment of memory and a difficulty in effecting fine movements with the right hand was quite well. The cyst was probably the result of hæmorrhage, as hæmatoidin crystals were found in the detritus removed at the time of operation. As the writer remarks, it is not quite certain what the future of such a case will be. The irritative cyst has been replaced by a cicatrix, with, no doubt, at first some inflammation around it, but it is to be hoped that this will subside and that there will be no recurrence of the convulsive seizures. We would call attention to the similarity of symptoms and treatment in this case to those in Mr. Anderson's case occurring at St. Thomas's Hospital, a full account of which is given in our "Mirror of Hospital Practice" this week.

THE BOILER EXPLOSION IN YORKSHIRE.

ALTHOUGH it is not always possible to foresee and prevent accidents, risk may be greatly minimised when proper precautions are taken, and it is the duty of all employers to see that the rules and regulations made for this purpose are strictly adhered to. But accidents are constantly happening either from wilful disregard of rules by workmen themselves or from apathy on the part of employers or their subordinates in regard to their enforcement. At Warrenby, near Redcar, in June last, a most destructive boiler explosion occurred (recorded in THE LANCET, June 22nd, 1895), which resulted in the death of several workmen besides causing a terrible amount of distress in the district, the inhabitants of which depended almost entirely on the works at which the accident occurred for employment. The Board of Trade inquiry into this catastrophe has elicited the fact that, although the boilers had been pronounced to be dangerous, the heads of the firm were unaware of it through one of their servants failing to make the necessary report. Rightly, the firm has been held responsible, and ordered to contribute towards the cost of the inquiry; but this will not prevent similar accidents from occurring, and it is to be hoped that something may be done in the way of legislation to prevent as far as possible such a catastrophe in the future. This was perhaps the most destructive explosion of the kind that has ever occurred in the north of England, and in some respects unique; but while both men and employers remain apathetic or callous to their danger the occurrence of such accidents should not excite wonder.

MONUMENT TO CARL VOGT.

THE Helvetian Walhalla will shortly be enriched with a bust of Carl Vogt, for many years Professor of Natural History in the University of Geneva and one of the chief ornaments and attractions of the Swiss school. We have too recently put on record our appreciation of the nature-student and the man to warrant our recapitulating his many claims to the gratitude of his contemporaries. Suffice it to say that while the Darwinian hypothesis owes much to him for its early and widely diffused acceptance on the Continent, his

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"Zoologische Briefe" takes rank with Liebig's "Chemische Briefe" for the enthusiastic votaries it has attracted to the subject it presents so winningly. Long, indeed, after it has been superseded by the researches it has inspired it continues, like Watson's "Practice of Physic" or Latham's "Lectures on Diseases of the Heart," to be read as a model of scientific style. The many-sided genius of Vogt coinciding with a peculiarly benevolent and "magnetic" personality imposed a difficult task on the sculptor who has attempted to embody their expression in marble; but M. Auguste de Niederhausern, the artist in question, has achieved a brilliant and a gratifying success. Vogt's energetic vitality, his vigilant intelligence, his profound, sympathetic humanity, brimming over in the kindliest humour—all speak from the plastic work of M. de Niederhausern and perpetuate the character as well as the lineaments of the great naturalist for all nations and for all times. So felicitously rendered is the citizen as well as the *savant* that his Genevese compatriots are already grudging its relegation to the vestibule of the University, and are pleading for its being placed in the open air on the Promenade des Bastions—a position for which its lordly dimensions peculiarly adapt it. Vogt, they maintain, belonged to the public even more than to the school, and while the vestibule of the University is undoubtedly the proper *locale* for celebrities of a purely academic type, his large and versatile personality claims a post in fitter keeping with compatriot homage than the "groves of Academe." The controversy is a kindly as well as an interesting one; but however it may be settled, science may congratulate herself on having in perpetuity the "animated bust" of one of her truest votaries—a presence, in Lord Beaconsfield's language, calculated "not only to commemorate, but to inspire."

PSEUDO-BULBAR PARALYSIS.

IN the last volume of the Clinical Society's Transactions Dr. Newton Pitt has given full clinical and pathological details of a striking case of this interesting form of disease. The patient when first seen was a man aged fifty-one, who at Christmas, 1892, had an attack of slight right-sided weakness without aphasia. The face was markedly affected and inability to close the right eye persisted. Two months later he had an attack in which numbness about his left hand and the left side of the face was noticed. He was also speechless, but in the course of a few hours his speech returned, but was again lost, and it returned and was lost several times in the course of a few hours. It finally was lost and remained permanently in abeyance. He was first seen about sixty hours after the attack; then his face was expressionless, he was unable to raise or move his lips, and he could not close the eyelids tightly, although they were closed during sleep. He was unable to protrude his tongue or to swallow anything. His limbs were weak on both sides, but the knee-jerks were brisk, that on the left side being the greater. There was no impairment of sensibility and no wasting or fibrillary twitching in the tongue or other muscles. The urine contained albumen. The patient was carefully fed with the tube and gradually improved, so that he was able to return home, taking a tube with him. After six months, however, he was readmitted suffering from ascites. He was tapped on two occasions, but he gradually became more feeble and died. At the necropsy two patches of softening were found, one on the right side extending above the lenticular nucleus, and below, lying on its inner and posterior part, extending into the middle of the posterior limb of the internal capsule; the other on the left side, occupying the middle of the posterior limb of the internal capsule and below extending into the posterior part of the lenticular nucleus. The cerebral arteries were distinctly atheromatous. This case, it will be seen, is an excellent example of what is known as pseudo-bulbar paralysis—a form of paralysis in which the symptoms closely simulate those of bulbar palsy, but in which the lesion does not affect the cells of the bulbar nuclei, but consists of some change on each side of the cerebrum. Attention has been directed to the condition in this country, chiefly by Dr. Hughlings Jackson and the late Dr. James Ross of Manchester, and typical examples of the condition have been recorded by these observers as well as by Dr. Barlow and others. The explanation that has been offered is that with a lesion occurring on each side of the cerebrum there are movements lost which a unilateral lesion can only abolish temporarily, and especially those so-called bilaterally associated movements the muscles for which are subserved by the nerves whose nuclei are situated in the bulb. Of these muscles the chief are the tongue, the muscles of deglutition and mastication, and the facial muscles. Dr. Pitt's case is one of the most complete illustrations of this morbid condition that has ever been published, and he is to be congratulated on the manner in which he has put it on record.

THE BATTLE OF THE CLUBS AT BRUSSELS.

THE Brussels clubs are now, as we mentioned last week, without medical officers, the whole twenty of them having resigned, and no one else being willing to take the vacated posts—which, by the way, are only worth £48 per annum—until well-to-do people are excluded. The club officials are much incensed against their quondam medical attendants, and although these latter are continuing to visit—as a matter of charity—all the club patients who were on their lists at the time of resignation, notice has been given that the clubs will pay a fee of 2 francs when a member calls in a medical man, provided the latter be not one of those who have resigned. It is in this petty spirit of retaliation that the clubs are carrying on the contest. A hope is generally expressed that the university professors will make a point of impressing on the students who are completing their courses the necessity of working in concert with the whole body of the profession by utterly refusing to accept any of the vacated posts.

A SPLINTER IN THE TYMPANUM.

WHATEVER excuses may be made for the practical joker, it is not without reason that he is commonly regarded by the subjects of his operations with a feeling of uneasiness and suspicion. In him the craving for amusement is all too masterful, too heedless of the wishes and even the safety of his neighbours. His intention, indeed, may not be mischievous, but as much cannot always be said of its consequences. The truth of these remarks has been sadly and strikingly illustrated by the details of a recent fatal occurrence at Tottenham. The facts in this case were the following. A provision dealer's traveller called at a public-house for refreshment and there fell asleep. An attendant noticing this proceeded to amuse himself, as others may have done under similar circumstances, by tickling the sleeper's ear with a wooden spill used as a pipe-light. The danger of such a proceeding might have suggested itself to any reasonable person, but in this instance it does not seem to have been thought of. A quick unconscious movement buried the wooden point in the drum of the ear, and fatal inflammation of the brain resulted. A jest with a sadder or a less expected termination was, perhaps, never practised. One cannot help mingling with a natural feeling of indignation something of pity for the unfortunate cause of this accident as well as for the immediate sufferer by it, and we may surely entertain a confident hope that the lesson of precaution so sharply

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taught will not be forgotten. The history of punctured wounds of the tympanic membrane is not always as disastrous as in this case. We have here the history of a roughly inflicted wound, probably overlooked in its beginning and rapidly becoming a seat of septic absorption. We may gather from it a second moral—namely, the necessity of treating antiseptically and at once any injury at this site. So treated, wounds of the drum will often heal perfectly, while, on the other hand, a delay of a single day may result in lifelong deafness or worse. For the same reason every parent should view with anxious concern the dangerous but far too lightly regarded incident of earache with its associated inflammation in the ear-drum of a child.

BREATHING AND PHYSICAL DEVELOPMENT.

EVERYBODY breathes and many people breathe in quite a wrong manner. Medical men have known this for a long time, as have also teachers of singing, but it has never been clearly put before the public. This want is now supplied in a little work by Surgeon-Captain Hoper-Dixon, called, "The Art of Breathing as applied to Physical Development." It is the outcome of a lecture delivered by him before the Royal United Service Institution in March, 1894. He points out how the main respiratory muscle is the diaphragm and gives a number of simple rules and exercises for training the same. It is an important point, for a proper method of breathing means improved nutrition and consequently improved health. We await with interest Part II. of this unpretending little book, wherein the author proposes to treat the musical side of the question.

THE MODE OF DEATH FROM ELECTRIC SHOCK.

DR. J. MOUNT BLEYER of New York has advanced the view that death from electric shock is due to "dynamic apoplexy." He describes the post-mortem appearances in a criminal executed by electricity in whom the bloodvessels of the trunk and limbs were almost empty, while those of the head and neck were distended with blood. The violent muscular contractions produced by electric shock naturally tend to alter very considerably the distribution of the blood in the various parts of the body, and it is very probable that great cerebral engorgement, with hæmorrhages into the brain substance, may commonly occur in death from electric shock. The medical man who made the necropsy, however, would seem to overstate the case when he says that two quarts of blood escaped when the skull was opened. There is not room in the cranial cavity for that quantity. The immediate cause of death from electric shock is almost certainly due to stoppage of the heart, the injury to the brain here described not being an essential factor, though it may frequently coexist as a complication.

BACTERIOLOGICAL WORK IN CAIRO.

CAIRO has now a Professor of Bacteriology, who will shortly be provided by the Egyptian Government with a laboratory; but in the meantime Dr. Kaufmann has at his own expense set up a private laboratory in his house near the medical school. Here rabies inoculations were regularly carried on with virus obtained from Paris, Vienna, and Cairo itself, until the work was forcibly stopped by the summer heat destroying the virus and by the rabbits dying of an epidemic of coccidium oviforme. Some hundred examinations of false membrane have been made gratis for medical practitioners of all nationalities, about half of the cases proving to be diphtheritic. There is apparently no diphtheria in Cairo just now, and the general results of serum inoculation have been encouraging. Dr. Kaufmann and his assistant are also busily engaged in making an analysis of all drinking water in Egypt from the river, canals, wells, cisterns, and native filters, and of ice and of soda water. The native earthen filters are found to furnish a purer water when they have been used than when they are quite new. Cairo water taken direct from the Nile contains throughout the year from 2000 to 5000 microbes in one cubic centimetre. This compares very favourably with the water-supply (before filtration) of most European cities. The Cairo water is at its worst in June, when the Nile is lowest and is discoloured green by algæ, which are said to come from the Equatorial Lakes. This year the green water has been unusually evident, and has baffled the efforts of the water company by choking up the sand filter beds. Experiments are now being made to try to precipitate the colouring matter which appears in the Nile for three or four weeks every year. The soda water made in Cairo is said not to be above suspicion. The ice of the large town of Tantah was found to be extremely bad, and upon an official visit to the factory it was found that unfiltered water was partially used by the native workmen in preparing the ice. Analyses of the water supplied by the Cairo Water Company have been made every week or two by their desire, and it is to be hoped some day that an analytical control may be furnished every day. Such repeated analysis is obviously desirable, for the same filter-bed has been found during a few days to vary from under 50 microbes to more than 2000. However, as good results accruing from the bacteriological examinations already made, the company has agreed to separate their drainage-pipes from their intake-pipes, and also to deepen the filtering layer of their beds from eight inches to sixteen inches.

THE ASSOCIATION OF WORKERS IN ASYLUMS FOR THE INSANE.

THE inaugural meeting of this association was held on July 18th, under very favourable auspices, in the rooms of the Medical Society, Chandos-street. Its members, male and female, occupy ground apart from that of the popular and much-patronised hospital nurse, they are comparatively seldom brought into public notice, and it may be confidently hoped that one result of the movement now initiated will be to secure a more general recognition of the anxieties and responsibilities of asylum life. Sir Benjamin Ward Richardson presided and delivered an address, in the course of which he remarked that while hospital nursing had become a sort of profession during the last fifty years no commensurate improvements had been effected in the case of asylum attendants. Education and training raised the status and increased the usefulness of nurses, and this experience will no doubt be repeated when the same conditions are applied to attendants on the insane. Among the vice-presidents of the new association are the Earl and Countess of Arran, Cardinal Vaughan, and Sir William Broadbent. Dr. J. A. Wallis, one of the Lunacy Commissioners, also took part in the proceedings, and expressed his cordial sympathy with the objects of the meeting.

THE EAST LONDON WATER-SUPPLY.

THE state of matters in the East of London, owing to the scanty water-supply, is becoming very serious. The water company have for the last eighteen years or so been in the habit of giving a constant supply, and in consequence of this the sanitary authorities have wisely done away with domestic storage cisterns. The result of this is that now that the water company in exercise of their strict legal right have discontinued the constant supply owing to the drought the domestic supply is necessarily very insufficient. The house drains are not properly flushed, and consequently get blocked, and subsequently to this the death-rate from diarrhœa and the

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number of infectious cases notified are rising with startling rapidity, so that on July 23rd inquests were held on the bodies of three infants, and in all three cases medical evidence was given that death arose from diarrhœa, and that the smells from the drains were most offensive. We believe we are correct in saying that the company are bound to supply a sufficiency for domestic purposes; *vide* Section 53 of the Waterworks Clauses Act of 1847: "Every owner and occupier of any dwelling-house or part of a dwelling-house within the limits of the special Act shall, when he has laid such communication pipes as aforesaid and paid or tendered the water-rate payable in respect thereof, according to the provisions of this and the special Act, be entitled to demand and receive from the undertakers a sufficient supply of water for his domestic purposes." The water in some districts supplied by the company is said to be "on" for two hours only out of the twenty-four. We contend that such things ought not to be. Flushing drains is of far greater importance than the watering of roads and public gardens, and we hope that steps will be taken to enable Mr. Kyffin of Hackney to state a case to the Superior Courts, as he obtained magisterial leave from Mr. Bushby to do so.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND CHOLERA MEDICINES.

THE public is still under the delusion that the Royal College of Physicians of London has prescribed for it in view of all cholera seasons and complaints, and some druggists perpetuate the delusion by having on their counters mixtures made up purporting to contain the precious ingredients once recommended for ready use in a time of panic. It is time this delusion was exploded, and the profession has a right to expect the assistance of druggists in the matter. Whether it is ever the duty of the College to publish a general prescription, even on the invitation of Government, is a fine ethical point which deserves a little more attention from the College than it has received. But of one thing there can be no doubt—that the particular prescription referred to is somewhat antiquated and no longer represents the most enlightened views of physicians as to the best way of treating cholera and choleraic disease of a milder type. Happily, in the present year the element of panic does not exist; but, even so, there are right and wrong ways of treating choleraic attacks, and it is certainly true that among the wrong ways is the employment of a stereotyped prescription for general use.

FRONTAL TUMOUR WITH PSYCHICAL SYMPTOMS.

IN a recent number of the *Revue de Médecine* Dr. Lepine records the case of a woman aged forty-four, without a previous history of any significance, who had one night a convulsive seizure, followed by loss of consciousness and subsequently orbital headache, vertigo, and noises in the ears. On admission to hospital there was some psychical dulness, difficulty in walking, apparently from some impairment of equilibration, sometimes a tendency to retropulsion, and slow speech. Next day she had an attack in which she became comatose, with the head and eyes turned to the right. The pulse was slow, but unconsciousness only lasted a day. It was succeeded by a month of a condition similar to that in which the patient was on her admission. Then an attack of unconsciousness succeeded, with deviation of the head and eyes to the left and left facial paralysis. On emerging from the unconsciousness a curious psychical change was manifest. She had lost all recollection that her husband was dead (he had died seven years before), and she fancied that the patient in the next bed was her cousin. There was also left hemiopia. Another attack of unconsciousness was experienced, and this was followed by death. At the necropsy the pia mater and dura mater were found adherent at the anterior part of the right frontal lobe, and at this part a gummatous growth was found as big as a walnut. In the longitudinal fissure also on the left frontal lobe a little in front of the genu of the corpus callosum a smaller and apparently more recent gumma was found. No other appreciable changes in the cerebrum were discovered. The presence of psychical symptoms in this case is very interesting, especially in association with a morbid condition of the frontal lobes.

WE deeply regret if we have given the impression in a recent annotation upon self-poisoning by chloroform that the death of a distinguished young medical man, Dr. T. G. Sloan, was anything but the result of an accident. We understand that the statement published elsewhere that Dr. Sloan's face was found buried in his handkerchief is incorrect, and that his use of chloroform was not habitual. We sympathise very heartily with the Rev. John Sloan, the unfortunate young man's father, in the terrible loss that he has sustained, and deplore the fact that any misinterpretation should have added to his grief.

THE Executive Committee of the General Medical Council met on Monday last to consider the conveyance to the Council of 16, Hanover-square, in accordance with the resolutions passed at a recent meeting. Estimates for the proposed alterations were considered, and the lowest tender accepted, and it was decided to submit the plans for warming, lighting, and ventilating to Dr. Thorne Thorne and Mr. Teale.

BY the death of the venerable Professor Charles Cardale Babington, F.R.S., which occurred on Monday last, the University of Cambridge loses one of its best known and most popular, able, and respected teachers, and the scientific world a well-known botanist and antiquarian.

THE MIDDLESEX HOSPITAL.

NEW OPERATION THEATRE, &c.

THE new building comprises a large theatre, a room for the administration of anæsthetics, a surgeon's room, recovery room, and a small theatre for special operations, all on the ground floor; also a large work room for the instrument man and a boiler-house and rooms for the ventilating and heating apparatus in the basement.

The large theatre has accommodation for about 130 students in semicircular tiers of benches formed of teak and approached by a staircase outside the theatre corridor. This staircase gives access to a gallery which runs round three sides of the theatre, whence two teak staircases lead down to the top tier of staging. The walls of the theatre are lined with glazed tiles, the lower part of which are green and the upper part buff. The floor is of marble terrazzo, of which material also the floors of the gallery and corridor are formed. In a recess on one side of the theatre are two lavatory basins, an enamelled slate shelf for carrying the electric apparatus for boiling water, a sink for cleaning instruments, and a slop sink; a cupboard for dressings and a lift to the basement for conveying instruments, &c., up and down. In this recess also are four sets of plate-glass shelves carried on specially designed brass brackets.

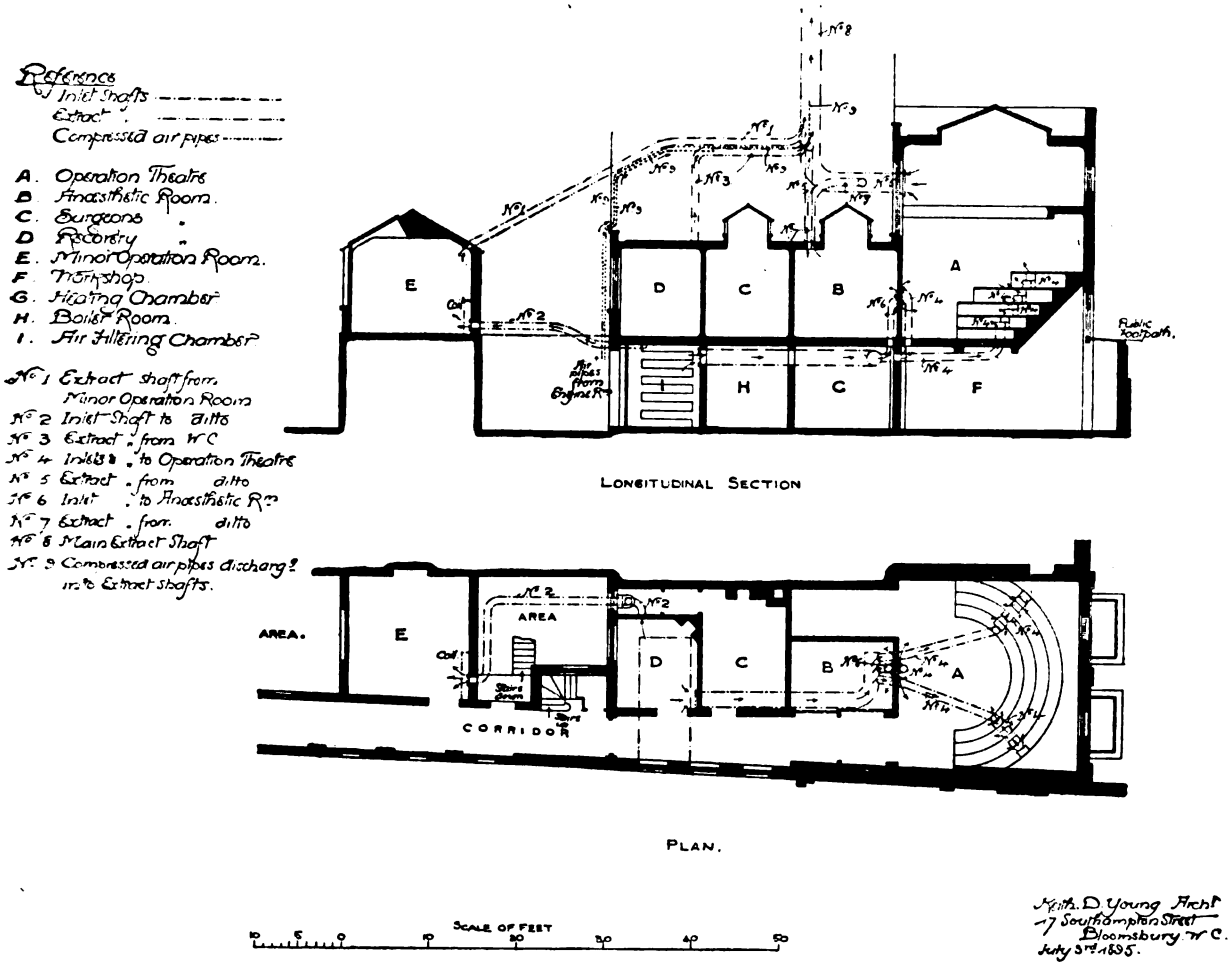
On the wall at the back of the operation table are two glass black-boards let in flush with the tiles. The instrument case, made entirely of glass and brass, stands in the recess to the left of the table. Facing this are two porcelain sinks for washing sponges, with the small wringer fixed between. Above these sinks is a glass shelf, on which stand the jars containing antiseptic solutions. All the pipes supplying the sinks are of copper and the taps and valves of brass. The glass jars for irrigation are fixed to the ceiling of the gallery

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to teak blocks let into the concrete. In the centre of the lowest tier of staging is a glass case containing electric plugs for cauteries, hand-lamps, &c.

The theatre is lighted by seven single-light pendants, containing one 16 candle-power lamp each and an adjustable pendant for the operation table, which travels on a brass rod fitted from one side of the gallery to the other. The anæsthetic room has a dado of glazed tiles above, while the walls provide the necessary warmth in cold weather. In each inlet trunk and also in each outlet trunk a pipe conveying compressed air is fixed and the air is discharged through a nozzle into the trunk. The high velocity of the air thus discharged causes the air in the trunk to move in the direction of the nozzle, and it is found that the air of the large theatre can be entirely renewed with no perceptible draught between ten and eleven times in the hour.

The Middlesex Hospital Mortimer Street W.
New Operation Theatre.



are painted and varnished. The door to this room, which is of oak, is hung on wheels at the top, and slides into a recess in order to give ample room for wheeling the ambulance in and out. The floor is of teak. The surgeon's room has painted walls and a teak floor.

The smaller operating theatre has its walls lined with tiles and a terrazzo floor similar to the large theatre. There is a large vertical window facing north with a roof-light over it. A lavatory basin, a sink, and glass shelves, similar to those in the large theatre, are provided here. The corridor of access is paved with terrazzo, and the walls and ceiling are lined with glazed tiles. The large and small theatre and the anæsthetic-room are warmed and ventilated partly by direct radiation from hot-water coils and partly by a mechanical system, the motive power of which is compressed air. The whole of the air which is to be admitted into these rooms is first passed through a filter-chamber containing a series of trays filled with cotton-wool, with, at the entrance, a vertical screen of hemp, over which a water-spray is projected to intercept the coarser particles. From this chamber the air passes by ducts into a room in which is a very large and powerful series of hot-water coils, which

An exhaust shaft only is provided to the w.c. attached to the surgeons' room, in order to guard against the possibility of air passing from the w.c. towards the theatre. The inlet tubes in the theatre and anæsthetic room are formed of copper, and have specially devised mouthpieces for spreading the air in all directions.

It will be seen that this addition to the hospital leaves nothing to be desired from the most modern point of view.

THE PERNICIOUS FEVERS OF EASTERN AFRICA.

STAFF-SURGEON-MAJOR STEUDEL, of the German army of occupation in Eastern Africa, who has been for some time past in medical charge of the hospital at Bagamoyo, has written a most interesting paper on the bilious hæmaturic fevers of the locality, which has been published in part by the authorities at Berlin. In twelve cases he made an

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examination of the blood by means of Fleischl's hæmometer, and found that the amount of hæmoglobin present oscillated between 50 and 21 per cent. of the normal standard. In two other cases the quantity was too small to be determined by the instrument, but it was estimated by the observer at not more than 5 and 8 per cent. respectively. He lays stress upon the prognostic value of hæmatological examinations, and furnishes details regarding two patients with a deficiency of hæmoglobin in their blood in whom bilious fever subsequently showed itself on several occasions when their ordinary mode of life underwent a change for the worse.

It seems only reasonable to conclude that a systematic use of the hæmometer cannot but render great service in the detection of the incipient stage of a disease which is invariably attended by more or less destruction of the red corpuscles of the blood. Staff-Surgeon-Major Steudel looks on the diminution of hæmoglobin as a certain index of latent or incipient malaria, and is satisfied that this important sign manifests itself long before the more salient symptoms become apparent. As long as the impoverishment continues slight the sufferer can be restored by appropriate treatment on the spot, but as soon as it passes certain limits he should at once be invalided to Europe, or at all events sent to a sanatorium. The means thus furnished for unmasking the insidious enemy while it is still comparatively impotent, and before it has had time to acquire the firm hold on the patient's constitution which it subsequently manifests, should enable the medical officer to save many a valuable life that otherwise would be sacrificed to the curse of Africa. In this connexion it is impossible to avoid calling to mind the untimely deaths of the two distinguished brothers cut off by African fever in well-nigh the bloom of their youth. Perchance if the hæmometer had been used, as the German surgeon suggests, the sacrifice of the Portals might have been averted.

In one case, where the hæmoglobin was reduced to less than 8 per cent. of the usual amount, Staff-Surgeon-Major Steudel had recourse to transfusion of blood with conspicuous success, the supply of vital fluid being furnished by a young negro. Almost immediately the percentage of corpuscles rose to 20, and eventually the patient made a good recovery. Transfusion in paludism does not seem to have been often essayed, and yet in the rare cases that are recorded the effects of fresh blood are said to be highly satisfactory. According to the Italian school, the physiological solution of chloride of sodium gives just as good results as the arm-to-arm procedure, if not better, but exact data with regard to the entire subject are still wanting. With reference to substitutes for human blood in transfusion, an anonymous writer in the *Archives de Médecine Navale et Coloniale* warns prospective transfusers against making a trial of the blood of mammifers for intravenous injection, the effects being disastrous to the integrity of the remaining red corpuscles. In some instances where the experiment was tried aggravation of the symptoms ensued, accompanied for the most part by hæmaturia. The same writer recommends venesection before transfusion, in order to free the system from a portion of the toxic products of the disintegrated hæmoglobin. Venesection alone without subsequent transfusion has been tried in the convulsive form of impaludism, and apparently with good effects. Kelsch and Kiener relate a case[1] in which Dr. Borius was satisfied that he had saved the life of a patient who was well-nigh *in extremis* by a copious depletory bleeding; but here, too, more detailed information is a desideratum.

In severe cases of paludal fever Staff-Surgeon-Major Steudel gives as much as ten grammes of quinine (154 grains) for a dose, the results of this somewhat heroic medication being extremely brilliant, not a single patient so treated having died. In the opinion of many medical men practising in malarious regions quinine in large doses is apt to provoke hæmaturia. This view is almost universally prevalent amongst Grecian practitioners, but the careful observations of the German surgeon would seem to prove the contrary. As a prophylactic he gives the drug in doses of from twelve to fifteen grains once a week in fair weather and twice a week during the rains.

There is one point bearing on the etiology of paludism which receives some elucidation in the Bagamoyo record, and is both novel and interesting. Bilious fever seldom or never attacks men when they are on the march or engaged in any occupation necessitating hard work. The disease waits, as it were, until they are enjoying an unguarded repose before pouncing down upon them. In the opinion of Staff-Surgeon-Major Steudel the reason of this is that so long as the body is maintained in a state of activity the products of disintegration are completely eliminated as soon as they are formed, whereas during inactivity the blood becomes more or less charged with detritus, which serves as nidus for the paludal poison.

Finally, Staff-Surgeon-Major Steudel lays down the following practical rules. Every man designated for service in Eastern Africa should be thoroughly examined as to his constitutional fitness. He should be in perfect condition as regards his heart, stomach, and intestinal tract, and should be quite free from all traces of anæmia and neurasthenia. Ear affections, interfering with the administration of quinine, should likewise be considered prohibitive, and so should the intolerance of that drug which constitutes an idiosyncrasy with some people.

[1] Traité des Maladies des Pays Chauds.

MEDICAL TRIALS.

COUNTY COURTS AND MIDWIFERY ENGAGEMENTS.

AT the Holywell (Flintshire) County Court on July 16th a case which raised a point hitherto undecided was heard, in which Mr. J. William Parry, a physician and surgeon practising at Bagillt, sued a man named John Venables Price for £2 8*s.*, balance of account and damages for breach of contract. Mr. H. T. Smith, solicitor, appeared for the plaintiff.

Mr. Parry stated that defendant owed him 6*s.* balance of account rendered. In July, 1893, defendant specially engaged him to attend his wife at her approaching confinement, it being agreed between them that plaintiff was to attend in any case, and not merely in the case of an emergency arising. Defendant said he wished him to attend his wife without a midwife, and plaintiff entered it in his book as an engagement, and held himself in readiness to attend when required. Defendant's wife was duly confined, but plaintiff was not called in. In April last defendant again came to engage him for a similar purpose. Plaintiff told him he had done wrong in not calling him in on the previous occasion, and said to him, "Is it right on this occasion?" and he replied that it was. Notwithstanding this plaintiff was not called in at the confinement. Plaintiff had brought this case as a test case in order to put a stop to a practice which was getting very common in Bagillt.

His Honour considered that the plaintiff had waived his claim to the £1 1*s.* for July, 1893.

Defendant stated that it was the custom to pay the medical man half a guinea "if you spoke in time," but a guinea if you called him in suddenly.

His Honour said a bargain was a bargain. Defendant had engaged the medical man to attend his wife, and if he had not come when called he would have found fault with him. He should give a verdict for plaintiff for half a guinea, together with the 6*s.* balance of account.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held at 101, Harley-street, W., on July 17th, at 5.30 P.M. The minutes of the last meeting were read and confirmed. Mr. Percy Dunn, the hon. secretary, drew attention to the result of the election of members of Council at the College on the 4th inst., and pointed out that two of the candidates supported by the Association had been successful. A vote of thanks was unanimously passed to Mr. A. T. Norton for representing the Association at the election.

The Hon. Secretary then read the following letter:—

Royal College of Surgeons of England, Lincoln's-inn-fields, London, W.C., 15th day of July, 1895.

DEAR SIR,—The attention of the President has been directed to THE LANCET of the 13th instant, in which are printed the alterations in the charters and by-laws of the College proposed by the "Association of Fellows," and in which a change has been made in paragraph 3 thereof, of which no notice has been received at the College. I am

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therefore desired to inquire whether this change is to be understood to have been adopted by the Association. I am at the same time to express the surprise of the President that the proposals of the Association, which are still under the consideration of the Committee of the Council appointed to report thereon, should at this stage have been published in a public journal.

I am, Dear Sir, yours faithfully,

H. Percy Dunn, Esq. EDWARD TRIMMER, Secretary.

After some discussion the Hon. Secretary was instructed to forward to the Secretary of the College the following reply :—

54, Wimpole-street, July 17th, 1875.

DEAR SIR,—Your letter of the 15th inst. was read at a meeting of the Committee of the Association of Fellows held this afternoon, and I am directed to inform you that the amended Clause 3, published in THE LANCET, was not inserted either with the sanction or knowledge of the committee. Nevertheless, I am instructed to say that the amendment itself meets with the approval of the committee, and accordingly the committee would wish that Clause 3 should stand as follows:—"That no alteration in the constitution or external relations of the College shall be effected without the body corporate being convened to discuss such proposed alteration." While regretting that this amended clause should have appeared in THE LANCET before it had been officially communicated to the College, the committee desire it to be understood that they have always courted the fullest publicity for their proceedings, and for this reason it has been, and still is, their rule to sanction the earliest publication of them in the medical journals.

I am, dear Sir, yours faithfully,

H. PERCY DUNN, Hon. Sec.

The proceedings at the half-yearly meeting of the Fellows at the College were then discussed, and attention was drawn to the fact that the President had declared the meeting closed without affording to the Fellows any opportunity of discussing the business which appeared on the agenda. This appeared to the Committee to be of such importance that the following resolution was proposed, seconded, and unanimously passed :

"That the attention of the President and Council of the Royal College of Surgeons be drawn to the fact that the half-yearly meeting of Fellows on the 4th inst. was closed without any discussion being possible in respect to the business on the agenda; and that in the opinion of the Committee of the Association of Fellows such a mode of conducting these meetings would be destructive of the privileges conceded by the Council to the Fellows, and would render the meetings nugatory." It was also agreed that a copy of the foregoing resolution should be forwarded to the secretary of the College with a request that it should be laid before the Council at the next meeting.

It was resolved that the annual general meeting of the Association should take place in November at or about the date fixed for the annual general meeting of Fellows and Members.

This concluded the business of the meeting and the committee adjourned.

THE ROYAL FREE HOSPITAL.

ON Monday, July 22nd, the Prince and Princess of Wales, accompanied by the Princesses Victoria and Maud, visited the Royal Free Hospital for the purpose of opening the new front buildings, which complete the reconstruction of the hospital. The cost of the new buildings, reconstruction of the drainage system, and other necessary improvements has been about £30,000, and accommodation for 160 beds is now provided, with every convenience for the treatment of the sick poor.

Their Royal Highnesses arrived at the hospital shortly after one o'clock, and were received by the Earl of Lathom and the reception committee.

The Earl of Lathom read an address of welcome, in which it was stated that the Royal Free Hospital was founded by the late Dr. William Marsden in the year 1828, and was the first hospital in the metropolis to admit the sick poor without letters of recommendation. Since its foundation its benefits had been extended to more than two millions of patients, who claimed and obtained its aid by reason only of their poverty and suffering. It was the only general hospital in London which had opened its doors to female medical students, and for the past eighteen years it had afforded means of clinical instruction to the students of the London School of Medicine for Women, which now had 150 students. In the year 1842 the hospital was removed to its present site. The north side was rebuilt in 1855 by the Freemasons of England as a memorial to the late Duke of Sussex, and in 1877 the south side was erected and named the "Victoria Wing," in honour of Her Most Gracious Majesty the Queen, who, shortly after her accession to the throne, became its patron, and ordered that the institution should be called the Royal Free Hospital. The erection of the new front completed the work of reconstruction commenced forty-three years since, and the hospital was now thoroughly equipped in every department for carrying on its beneficent work. The new front building was to be called the "Alexandra Building," in commemoration of the day's proceedings.

The Princess of Wales having received a gold key of the new front entrance,

The Prince of Wales said :—"Ladies and Gentlemen, In the name of the Princess, and in my own, I beg to tender Lord Lathom our thanks for the address we have just heard. The Princess desires me particularly to express the great pleasure it gives her to be here to-day and to inaugurate the new wing, which will complete this great hospital. As so many members of my family have been connected with this institution, it is, perhaps, an appropriate occasion for us to be here to-day. I cannot forget that King George IV. and King William IV. were patrons, and the Duchess of Kent and the Queen, before she came to the throne, were also patrons, and that Her Majesty has ever since then taken a most active interest in the prosperity of this institution. I am glad to think that I myself have been connected with this institution since 1863 as vice-patron. I thank you once more for your kind reception to-day, and assure you that we are most glad to come among you, and wish prosperity and success to this excellent hospital. The Princess now desires me to say that she declares the new wing open."

Prayers were then offered by the Rev. C. J. Parker, the chaplain, and the Princess of Wales received purses in aid of the building fund.

In the absence of Sir Gainsford Bruce, Mr. Burt, in a complimentary and gracefully delivered speech, thanked their Royal Highnesses for their presence, remarking that 2000 years ago Alexander the Great offered the citizens of Ephesus all the spoils of his Eastern campaign if they would allow him to have his name placed on the Temple. The citizens were proud and self-sufficient, and refused. Those present had for forty years been building up their temple, which was not so glorious and magnificent as the Temple of Diana, but which was raised to the glory of God and for the healing of the sick, and they were glad to be able to place the name of Alexandra on the final section of the hospital in remembrance of a Royal, gentle, and gracious Princess, whose nobility of character, kindness of heart, and tender sympathy for all the poor, sick, and suffering were known to all the world.

After visiting several of the wards and other parts of the hospital their Royal Highnesses left by the main entrance amidst cheers from the large crowd which had assembled outside.

THE MIDWIVES REGISTRATION ASSOCIATION.

WE have been desired by the secretaries of this Association to insert the following letter, that it may reach the eyes of those whom their notices have perhaps failed to reach :—

"DEAR SIR,—If you are in sympathy with the principle of registration of midwives please attend the meeting in Exeter Hall on Tuesday, July 30th, at 2.30, to vote, or to speak and vote, against the motion standing in the name of Mr. Lawson Tait, and subjoined, which will be taken in the discussion on the report of the Council of the British Medical Association produced to that meeting.

"Your presence is urgently requested.

"Yours truly,

"R. BOXALL, M.D.,

"F. R. HUMPHREYS,

"Honorary Secretaries, Midwives Registration Association."

Mr. Lawson Tait's motion to be seconded by Mr. Colin Campbell :—

"That we, the Members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing. We protest against the Midwives Registration Bill because it proposes to establish a class of midwifery practitioners who would be very incompletely trained in midwifery, and entirely uninstructed in medicine, surgery and pharmacy—a matter of supreme importance in midwifery practice. We, therefore, instruct the Council and the Parliamentary Bills Committee to use every means to oppose

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any Bill which proposes to give to persons registered under it power to conduct on their sole and independent responsibility any midwifery practice without the guarantee of a complete curriculum and qualification. That this Association recommends a sum not exceeding £1000 be expended for the purpose of opposing any such Bill."

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE COUNCIL OF THE COLLEGE.

As stated in our last issue the Council has appointed the same committee which recently received a deputation of Fellows on the subject of the proposed changes in the Charters to receive a deputation of Members with reference thereto. The deputation will attend to-day (Friday) and the following are the amendments to the Charters which the Society of Members will advocate:—

1. That no alterations in the constitution and external relations of the College shall be effected without the consent of the corporation convened to discuss such alterations.

2. That a statutory annual general meeting be held of the corporation, to which the Council shall present a report of its proceedings during the past year, together with a duly audited account of the income and expenditure of the College; this report must be submitted for the approval of the meeting and formally adopted.

3. That the number of the Council be increased to thirty-two, and that eight of these shall be Members (who are not also Fellows) and shall be elected by the Members only.

4. Provided that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council.

5. That the same by-laws and regulations which are at present in force for the election and admission of Fellows to the Council shall govern the election and admission of Members, the word "Member" being substituted for "Fellow" throughout.

6. That of the eight members first elected on the Council, two shall retire annually in rotation, commencing with those two who have received the lowest number of votes, but that these shall be immediately eligible for re-election; after the end of the fourth year, when the eight members first elected on the Council shall all have been retired, the two members to go out of office annually shall be those two who have been longest on the Council without re-election.

The deputation will further support the election of the President, as at present, from and by the enlarged Council.

We are informed that the committee of the society regard the first three clauses as the essentials of their proposal; and that they bring forward the remainder, as the absence of any detailed scheme has on previous occasions been made a subject of complaint.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham Urban Sanitary District.—Birmingham ranks in the matter of population as the fourth largest town in England including London, the only two provincial towns exceeding it being Manchester and Liverpool. Estimated to the middle of 1894 the population of Birmingham amounted to 492,301, and the number of persons per acre to 38·7. Average density of population goes, of course, for very little without detailed information as to local distribution, as one area may be much overcrowded and another almost unpopulated. It may be mentioned, however, that the density of population in Liverpool amounts to 97·3, in London to 58·2, and in Manchester to 40·3 persons per acre. Dr. Alfred Hill has been able in his current annual report to supply death-rates for the several wards in the city, the highest (St. Mary's) being 26·3 and the lowest (Edgbaston and Harborough) 13·4 per 1000. The infantile mortality for the year was 164 per 1000 births, as against rates of 179 and 174 for Liverpool and Nottingham respectively. The zymotic death-rate for 1894 was 2·4 per 1000, a rate comparing favourably with the average of the last eight years; but in the matter of enteric fever the report tells us that the cases notified were more numerous than in any year since the introduction of notification. As bearing upon this question it may be remarked that more than half the closet accommodation of Birmingham is on the conservancy system, and Dr. Hill estimates that the incidence of typhoid fever was nearly half as great again upon houses provided with pan-privies as upon those provided with water-closets. There were no less than 2074 cases of small-pox notified in Birmingham during 1894, figures that show that the epidemic was much more severe than that of 1883–84, but less so than the one culminating in 1874. Coming now to the question of vaccination, Dr. Hill reports that of the 2074 cases notified, 1769 were vaccinated, 224 unvaccinated, and 81 doubtful as to vaccination. The following table shows the fatality-rate among the three classes:—

	No. of cases.	No. of deaths.	Proportion of deaths to cases.
Vaccinated	1769	77	4·4 per cent.
Unvaccinated	224	75	33·5 ,, ,,
Doubtful	81	13	16·0 ,, ,,

We also furnish for the information of our readers the accompanying table taken from Dr. Hill's report, which shows the incidence of the disease on the several age periods. Dr. Hill observes that he has not calculated the percentages on less than 10 cases. The table in the main explains itself, and it will be seen that among the 241 vaccinated patients under fifteen only 1 died, a boy whose attack was complicated with scarlet fever; while among the 152 unvaccinated cases at the same age periods no less than 51 died. In other words, the fatality-rate among the vaccinated was 0·5 per cent., that among the unvaccinated 33 per cent. In face of figures such as these, showing the enormous protection afforded to our infant population by vaccination, who would wish to be responsible either directly or indirectly for the abolition of compulsory vaccination, unless, indeed, it be considered desirable to reduce the infant population?—

Ages.	Vaccinated.			Unvaccinated.			Doubtful.		
	Cases.	Deaths.	Case mortality per cent.	Cases.	Deaths.	Case mortality per cent.	Cases.	Deaths.	Case mortality per cent.
Under 1 year...	0	0	—	41	32	78	0	0	—
Between 1 and 5 years	5	0	—	38	13	34	6	0	—
Between 5 and 15 years	236	1	0	73	6	8	14	1	7
Between 15 and 25 years	707	13	2	38	8	21	19	1	5
Between 25 and 45 years	689	52	8	25	12	48	28	8	29
Between 45 and 65 years	119	9	8	7	2	—	12	2	17
65 years and upwards	13	2	15	2	2	—	2	1	—

Salford Urban Sanitary District.—This important county borough has a population, as estimated to the middle of 1894, of 205,828. The mean density of the population is equal to 39 8 persons per acre, but the ward density varies from 116 4 in Greengate to 21·9 in Pendleton. The general death-rate of the district for 1894 was 20·9 per 1000, a rate lower than any recorded during the last thirty-four years. In respect to district mortality rates there was an all-round fall on those for 1893, that for Greengate being 26·4 per 1000, and that for Broughton 16·5. There was in 1894 a very material reduction in the infantile mortality—i.e, it was but 174 per 1000 births, as compared with a quinquennial average of 194. An unsatisfactory feature in the birth-rate was a rise in the percentage of illegitimate births. As regards zymotic diseases, it is gratifying to note a decline in the mortality from diphtheria. Mr. Charles Paget refers in his report with much satisfaction to the fact that a greatly increased percentage of infectious disease cases seek isolation in hospital as compared with former years. Among the cases sent into hospital during the year under review were 31 in which the diagnosis was erroneous, and in this connexion it is very interesting to find that the percentage of erroneous diagnoses ranged from 8 6 in Greengate district to *nil* in the Broughton district. There were 35 cases of small-pox notified during 1894, the fatality rate among the 4 unvaccinated cases being 25 per

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cent., that among the doubtfully vaccinated cases 50 per cent., and that among the 29 vaccinated cases *nil*. A model lodging-house has been completed in Salford, and is proving, Mr. Paget reports, a great success. Male lodgers only are admitted, and each is provided with a separate cubicle. The charges are 4*d*. and 5*d*. per night, or 2*s*. and 2*s*. 6*d*. per week. Only persons of "cleanly and respectable appearance and free from filth and disease" are admitted. In an appendix to Mr. Paget's report is a copy of the general regulations appertaining to sanitary inspectors, and we notice with satisfaction the following paragraph: "The Health Committee wish it to be distinctly understood that every inspector is expected to do his duty with absolute impartiality. The committee undertake that no inspector shall suffer in any way from discharging his duty or reporting defects in property belonging to persons of position and influence."

Newcastle Urban Sanitary District.—In connexion with the relative incidence of enteric fever on households provided with water-closets on the one hand and pails on the other, Dr. Armstrong reports that during 1893 there were 0·3 per cent. of the former houses invaded, as against 0·6 per cent. of the latter. Commenting upon the number of deaths from scarlet fever during 1894 Dr. Armstrong observes that the total mortality from this disease at the present time is almost insignificant as compared with the returns of some former epidemic years, the disease having, he remarks, during the last quarter of the century been undergoing a gradual change of type from severe to mild. Instead of a fatality rate of 25 or 30 per cent., which was occasionally observed in former years, there was during 1894 one of but 3·3 per cent. It is probable, however, that together with a change of type in the disease there have been, owing partly to notification and partly to a better knowledge of the natural history of the disease, more mild cases brought to light.

Norwich Urban Sanitary District.—During the first three weeks of 1894 the general death-rate of Norwich amounted respectively to 37·5, 61·0, and 43·0 per 1000, rates which led the Local Government Board to require from Dr. Cooper-Pattin a special report. He considered that Norwich contained more inhabitants at and over sixty-five years of age han any other city or town of the same population, and the excessive death-rate he regards as being due to the effect of the influenza and the sudden variation of temperature which took place during the weeks in question. In dealing with the influences favouring the spread of scarlet fever Dr. Cooper-Pattin records that the headmistress of a certain school, who had contracted scarlet fever from one of her pupils and was isolated in the fever hospital, occupied her time to such good purpose as to become quite an adept at the diagnosis of the disease; and since her return to the school her freshly acquired knowledge has been turned to excellent account. The Norwich Fever Hospital accommodation is, it appears, insufficient for the demands likely to be made upon it, and in advising the enlargement of the building Dr. Cooper-Pattin observes that without the capacity for quickly extending its resources a fever hospital cannot do its best work. There is no provision for cases of enteric fever in the Norwich Fever Hospital, and in advocating such provision he states that he has been most painfully impressed by the unfavourable surroundings amid which he has found typhoid fever being treated in the dwellings of the poor. As he observes, "Within the cramped and narrow limits of a poor man's home typhoid fever becomes easily transferable from person to person." Notification has, he reports, brought to light many insanitary conditions, and he records that during his period of office no less than 1000 houses have had their sink-pipes disconnected with the sewers. In 1893 an offer was made to gratuitously disinfect the rooms &c. in any case where a tuberculous patient had resided, but it speaks badly for the appreciation by the public of this offer to have to record that during 1894 in only five instances was advantage taken of it. In the appendix to his report Dr. Cooper-Pattin inserts a paper on the Tuberculoses in England and Wales, with special reference to their prophylaxis, which was contributed to the State Medicine Section of the Eighth International Congress of Hygiene and Demography held at Budapest last year.

Derby Urban Sanitary District.—Mr. W. Iliffe records in his annual report an instance of the difficulty which may be encountered in enforcing dual notification. Under the Derby Improvement Act, 1879, it is enacted that the person having control of the building in which a case of infectious disease occurs shall, "as soon as he shall become aware of" the existence of the case, notify it to the medical officer of health. In the instance in question it was proved that the mother had acknowledged her child to have had a rash and sore throat, and that she thought it might have been scarlet fever; a possibility which she had apparently discussed with a neighbour whose child subsequently developed scarlet fever and died. When Mr. Iliffe visited the house he found the child soaking its legs and feet in hot water—in order, the mother admitted, to hasten the peeling, which at the time seems to have been profuse. In spite of all the foregoing facts, the magistrates were not satisfied that the mother had "become aware" of the existence of the disease. Mr. Iliffe thinks that the Derby Improvement Act requires amendment, and he suggests that instead of the words "so soon as he shall become aware of," the words "if he have reasonable cause to suspect" be substituted. There were 104 cases of enteric fever notified in Derby during 1894, the cases occurring in eighty-nine houses. In eighty houses there were single cases, in six 2, in one 3, in one 4, and in one 5. Mr. Iliffe regards the comparatively few houses in which the disease spread as an instance of the care which was taken with regard to the carrying out of the printed directions left at every house in which a case was reported. The dates on which the second and subsequent cases occurred in houses invaded by multiple attacks is not furnished, but it is to be inferred that the necessary incubation periods intervened. There always seems to us, however, to be a difficulty in eliminating a common source of infection in cases such as those referred to. The general death-rate of Derby for 1894 was 15 0 per 1000, the lowest yet recorded, and a rate which for the year in question places Derby third on the list of the large towns, Croydon having a rate of 13·2 and Leicester one of 14 7.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6267 births and 4446 deaths were registered during the week ending July 20th. The annual rate of mortality in these towns, which had increased in the five preceding weeks from 15·4 to 19·9 per 1000, further rose last week to 21·9. In London the rate was equal to 23·7 per 1000, while it averaged 20 6 in the thirty-two provincial towns. The lowest rates in these towns were 10·5 in Brighton, 10·9 in Croydon, 11·7 in Halifax, 12·1 in Huddersfield, and 12·3 in Bristol; the highest rates were 25·9 in Preston, 26·2 in Leeds, 26 8 in Norwich, 27·5 in Salford, and 30·3 in Liverpool. The 4446 deaths included 1137 which were referred to the principal zymotic diseases, against 665 and 877 in the two preceding weeks; of these, 798 resulted from diarrhœa, 138 from measles, 72 from whooping-cough, 67 from diphtheria, 39 from scarlet fever, 23 from "fever" (prinpally enteric), and not one from small-pox. No fatal case of any of these diseases occurred last week in Huddersfield; in the other towns they caused the lowest death-rates in Bristol, Portsmouth, Halifax, and Blackburn, and the highest rates in Salford, Leicester, Liverpool, Leeds, and Preston. The greatest mortality from measles occurred in Plymouth, Manchester, Newcastle-upon-Tyne, and West Ham; from whooping-cough in Birkenhead, Liverpool, and Gateshead; and from diarrhœa in Liverpool, Bolton, Bradford, Salford, Leicester, Leeds, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 39 in London, 5 in West Ham, 5 in Birmingham, and 3 in Cardiff. No death from small-pox was registered either in London or in any of the thirty-two large provincial towns. There were 89 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 20th, against 34, 42, and 71 at the end of the three preceding weeks; 23 new cases were admitted during the week, against 25, 17, and 36 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2267, against 1894, 2044, and 2241 on the three preceding Saturdays; 220 new cases were admitted during the week, against 319, 311, and 342 in the three preceding weeks. The deaths referred to

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diseases of the respiratory organs in London, which had been 160 and 187 in the two preceding weeks, further rose to 193 last week, and were 14 above the corrected average. The causes of 54, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Brighton, Birmingham, Liverpool, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 19·2 to 20·3 per 1000, declined again to 18·2 during the week ending July 20th, and was 3·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Edinburgh and 15·9 in Dundee to 21·8 in Paisley and 22·6 in Greenock. The 526 deaths in these towns included 61 which were referred to diarrhœa, 12 to whooping-cough, 8 to measles, 6 to scarlet fever, 3 to "fever," 1 to diphtheria, and not one to small-pox. In all, 91 deaths resulted from these principal zymotic diseases, against 98 and 121 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·2 per 1000, which was 2·4 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had risen from 25 to 72 in the five preceding weeks, declined again to 61 last week, of which 33 occurred in Glasgow, 10 in Dundee, 8 in Paisley, and 4 in Greenock. The deaths referred to whooping-cough, which had been 10 and 18 in the two preceding weeks, declined to 12 last week, and included 6 in Glasgow. The 8 fatal cases of measles showed a further decline from the numbers recorded in recent weeks, and included 4 in Glasgow and 2 in Greenock. The deaths from scarlet fever, which had increased from 1 to 6 in the three preceding weeks, were again 6 last week, of which 2 occurred in Glasgow, 2 in Edinburgh, and 2 in Leith. The 3 fatal cases of "fever" showed a decline of 7 from the number in the preceding week; and the death from diphtheria was recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 79 and 80 in the two preceding weeks, declined to 57 last week, and were 18 below the number in the corresponding week of last year. The causes of 40, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·9 and 20·0 per 1000 in the two preceding weeks, rose again to 25·1 during the week ending July 20th. During the past three weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the death-rate during the same period being 20·9 in London and 16·4 in Edinburgh. The 168 deaths registered in Dublin during the week under notice showed an increase of 34 upon the number in the previous week, and included 21 which were referred to the principal zymotic diseases, against numbers increasing from 9 to 16 in the three preceding weeks; of these, 16 resulted from diarrhœa, 3 from whooping-cough, 2 from small-pox, and not one either from measles, scarlet fever, diphtheria, or "fever." These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 6·5 in London and 1·7 in Edinburgh. The fatal cases of diarrhœa, which had steadily increased from 3 to 10 in the four preceding weeks, further rose to 16 last week. The 3 deaths referred to whooping-cough exceeded the number recorded in any recent week, while the 2 fatal cases of small-pox corresponded with the number in the preceding week. The 168 deaths in Dublin last week included 47 of infants under one year of age, and 34 of persons aged upwards of sixty years; the deaths of infants considerably exceeded those recorded in any recent week, and the deaths of elderly persons also showed a slight increase. Eight inquest cases and 7 deaths from violence were registered; and 40, or nearly a fourth, of the deaths occurred in public institutions. The causes of 13, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MAJOR has arrived at Singapore, and taken over Medical Charge. Surgeon-Lieutenant-Colonel Chapman, retired pay, has been appointed to Lincoln. Surgeon-Major Thiele has been granted sick leave from Malta. Surgeon-Captain Hickson has arrived in England from the Cape, and Surgeon-Captain Duggan has embarked for the West Coast of Africa. Surgeon-Captain Corkery has been transferred from Gravesend to Reading.

ARMY MEDICAL STAFF.

Surgeon-Colonel Samuel Archer is placed on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Services:—*Madras Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels: George Tucker Thomas, Arthur James Sturmer, and Archibald Adams, M.D. To be Surgeon-Major: Surgeon-Captain Arthur Owen Evans. *Bombay Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels: Arthur Henry Coles Dane, M.D.; John Philip Greany, M.D.; George Edward Elton Burroughs; and James McCloghry. Surgeon-Captains to be Surgeon-Majors: Mackintosh Alexander Thomas Collie and William Henry Quicke. Her Majesty has also approved of the retirement from the service of the undermentioned officers:—*Madras Medical Establishment:* Surgeon-Colonel A. Porter, M.D.; Brigade-Surgeon-Lieutenant-Colonel Arthur Luke Hackett; Brigade-Surgeon-Lieutenant-Colonel Patrick Richard Martin, M.D.; and Surgeon-Major Donald Elcum. *Bombay Medical Establishment:* Surgeon-Lieutenant-Colonel George Edward Elton Burroughs. Surgeon-Captain W. H. B. Robinson, 34th Bengal Infantry, is appointed to Medical Charge of the British Agent's Escort, Gilgit. Surgeon-Captain W. C. Sprague is appointed to officiate in Medical Charge, 13th Bombay Infantry, at Aden, during the absence of Surgeon-Lieutenant-Colonel S. B. Haliday, or until further orders. Surgeon-Major W. H. Neilson (Madras), on return from garrison duty, is reappointed to officiate as Agency Surgeon at Alwar until further orders. Surgeon-Lieutenant-Colonel Henry Hyde (Madras) retires from the service subject to Her Majesty's approval.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant William George Creswell, M.D., has been promoted to Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 8th Lancashire: Surgeon-Lieutenant W. McClelland, M.B., resigns his commission. *Rifle:* 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Henry Ashton Rudyard, Gent., to be Surgeon-Lieutenant. 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: Surgeon-Major P. E. Hill to be Surgeon-Lieutenant-Colonel. 1st Tower Hamlets: Alfred Croudson Tunstall, M.D., to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADES.

Forth Brigade: Surgeon-Lieutenant-Colonel P. H. Watson, the Queen's Rifle Volunteer Brigade Royal Scots (Lothian Regiment), to be Brigade-Surgeon-Lieutenant-Colonel. *North Midland Brigade:* Surgeon-Lieutenant-Colonel T. L. Gentles, 1st Volunteer Battalion the Derbyshire Regiment, to be Brigade-Surgeon-Lieutenant-Colonel.

PASTEUR FILTERS FOR THE ARMY OF OCCUPATION IN EGYPT AND INDIA.

About a year and a half ago, a correspondent in Egypt writes, an experiment was made of furnishing some of the English troops in Alexandria with Pasteur-Chamberland filters, and now, after much correspondence, it is confidently hoped that the War Office will allow the exclusive use of these filters in both hospitals and barracks in Cairo and Alexandria. The medical officers advise, the General approves, but the difficulty is to arouse the supine energies of the financial officials in London. At present the barracks are provided with nothing but native earthenware filters, and the patients in hospital are exposed to the dangers of old-fashioned charcoal jars. Soldiers will always continue to drink from unclean supplies while out of barracks, but at present the Government, in

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deploring the existence of endemic enteric fever, has no right to cavil at the causes abroad so long as the purest available water is not supplied to the troops when they are in barracks. English soldiers in Egypt require special protection against typhoid fever partly because their racial peculiarities cause them to suffer from diseases from which the population of Egypt seems almost exempt, and partly because for some unknown reason, the deferred age of young soldiers for service in India has not yet been applied to Egypt, and, therefore, the regiments newly arriving in the country are exactly at the time of life when they are most liable to enteric fever. It is well known that the French and German armies have reported on the decrease of typhoid fever after the introduction of such filters as the Pasteur-Chamberland, and, moreover, they have been for some years adopted in the Egyptian hospitals of Cairo and Alexandria. Drunkenness is another of the blots of the English army, and it is very gratifying to know that a measure introduced a year ago has so far been a great success. A lighter and cheaper beer (5*d*. per quart instead of 7*d*.), and much more suitable to the needs of a hot climate, has been furnished by an English brewery, and, after some natural hesitation on the part of the men, it has now become very popular with all ranks. Though actually more beer is consumed in the canteens than formerly, drunkenness and the necessary punishments have considerably diminished. It is, however, open to question whether the authorities are wise in choosing the hour immediately before the midday meal as the one during which the canteen shall be thrown open. The old soldier pretends that he cannot dine until he and his friends have gulped down a gallon of beer, but with the present short service system the State should think twice before it returns to society an individual who has been encouraged to cultivate drinking habits on an empty stomach.

The *Times of India* says: "The Commissioners of Darjeeling have arranged to introduce the Pasteur system filters into their water mains, and though so many thousands and tens of thousands of these filters are in use, it is curious that the largest single installation and the first application of the system to a town supply should be carried out in a small municipality high up in the Eastern Himalayas."

THE FRENCH AND MADAGASCAR.

As might have been confidently anticipated, for it is usual in campaigns of this nature for the casualties from disease and sickness to be excessive in comparison with those received in action, the French expeditionary force in Madagascar has suffered greatly from fever. It has been determined to send a number of invalids to France *viâ* the Red Sea and Suez Canal to Marseilles instead of to the Isle de Réunion as previously proposed. The French press is much dissatisfied with this arrangement, and dwells upon the risk and discomfort which the sick and fever stricken will have to encounter at this season in the Red Sea. No doubt this is a grave consideration, but it is a choice of evils, and we are not at all sure that the French Government are not acting prudently in the course they propose to adopt. A soldier seriously affected or enervated by malarious disease does not recover and become fit for field service for a long time; he needs a complete change of climate and he longs, as a rule, to get home, and not to go to any sanatoria abroad. Of course, where a number of sick are concerned they require to be very carefully inspected before embarking on shipboard in order to guard against those being sent who are unfit to undertake a voyage to Marseilles, on the one hand, and those who do not require it for the recovery of their health, on the other. The transports and troopships for the conveyance of the invalids require to be large, roomy, and well ventilated, and every care should be taken against their being overcrowded—a matter about which the French are not by any means too careful. The organisation of the French Medical Service is very good, and it is well equipped and supplied with the necessary *matériel* for hospital and field service.

THE CHITRAL HONOURS AND REWARDS.

We confess that we are not at all surprised at the expressions of opinion which have been made in the press and military circles at the meagre rewards that have been bestowed on many of those who played a very prominent part in the brilliant siege and relief of Chitral. Colonel Kelly, for example, merited much more than he has obtained. A Companionship of the Bath is, it seems to us, an inadequate reward for the splendid services he performed. It should have been a Knight Commandership, and there are several precedents for the bestowal of this titular distinction upon officers who were not already in possession of the Companionship. Captain Townshend's services in military command of the garrison of Chitral also cannot be said to have been generously rewarded, and we think the same may be said of Surgeon-Major Sir George Robertson, considering the nature of the services he rendered and his grave responsibilities. We are glad to learn from an announcement in the *Pioneer Mail* of the 26th ultimo, that a long list is shortly to be published of native officers and sepoys on whom the order of merit has been conferred for the defence and relief of Chitral, and that the Government of India have been wisely generous in the bestowal of this reward which carries enhanced pay with it. All who took part in this campaign, whether Europeans or natives, did well, and deserve well of the country they served.

THE REBELLION IN CUBA.

In addition to the hard fighting which the Spanish expeditionary forces have had in Cuba, which rendered the despatch of strong reinforcements essentially necessary, the Spanish soldiers have recently suffered much from an outbreak of yellow fever. According to the official telegrams 2900 had been attacked with that disease, with 104 deaths, the remainder recovering. From these numbers it would seem that a great many of the cases were either of a mild character or were not really yellow fever, but other and less fatal forms of fever. Marshal Martinez Campos' force on its way to Bayamo was apparently surprised and attacked by a very large body of insurgents. The Spanish troops are stated to have fought with great valour and to have effected their retreat under cover of several charges made by a body of men under the command of General Santo Cildes, who was killed in one of these charges. Marshal Campos, who has the reputation of being a very able and experienced commander, is stated to have conducted a brilliant retreat with great skill and intrepidity. It seems clear that the rebellion in Cuba is a serious business, which will cost the Spanish Government a good deal of expenditure in men and money to effectually overcome.

CALCUTTA.

The sanitary state of Calcutta does not seem to be at all satisfactory, if we may judge from a recent report by the health officer of that city. The *Times of India* of the 28th ult., in calling attention to the subject, says that the condition of Bombay is a matter of only too frequent comment; but Bombay would seem to be Hygeia itself compared with Calcutta. One of the great evils of the latter city is overcrowding and want of attention to the formation of proper streets and buildings. This is said to be becoming worse every year. The difficulty of cleansing the city and of making any sanitary progress is an increasing one under such circumstances. Dr. Simpson has been representing these and other matters for several years, but it does not appear that he has been successful in getting the municipal authorities to take any practical action. The state of the public health of Calcutta has not been such of late years as to justify the city authorities in their course of inaction—quite the contrary. One of these days there will be some outbreak of epidemic disease on a large scale, and they will then be compelled to do something. What is the good of having an experienced and energetic health officer and of paying him a salary for giving sound advice if there is no intention of following it?

THE MILITIA MEDICAL STAFF CORPS.

The Militia Medical Staff Corps is now under training on the Redan Hill, Aldershot, under the command of Surgeon-Major Collingridge. The three companies—Hampshire, Middlesex, and Surrey—have their full establishment of officers. Two new companies are to be shortly formed which will require four officers. As the pay and allowances amount to about 22*s*. per diem there are likely to be numerous candidates for the commission. Application should therefore be made at once to the commanding officer.

The Maidstone Company of the Volunteer Medical Staff Corps will arrive at Netley on Saturday, Aug. 3rd, for the usual training.

DISTRICT PRINCIPAL MEDICAL OFFICERS IN INDIA.

It has been ruled that a District Principal Medical Officer will move to the hills when the general officer commanding

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does so, provided that neither the State nor the clerks are put to any extra expense thereby.

NAVAL MEDICAL DEPARTMENT.

An examination of candidates for ten commissions in the Medical Department of the Royal Navy will be held in the Examination Hall, Victoria Embankment, on Monday, Nov. 4th, 1895, and following days.

The extra pension of £100 per annum due to the Bombay Establishment of the Indian Medical Service for 1895–96 has been allotted to Brigade-Surgeon-Lieutenant-Colonel Colin Wm. MacRury, on his retirement from the service.

Correspondence.

"Audi alteram partem."

"THE CARDIO-VASCULAR CHANGES OF RENAL DISEASE."

To the Editors of THE LANCET.

SIRS,—Before proceeding to comment upon some parts of Dr. Dickinson's interesting and instructive lecture on the above subject I beg to thank him for the generous appreciation of my own work, which he has expressed in the following sentence: "It has been well known since the observation of Sir G. Johnson—which represents a great truth, however it is to be interpreted—that with the chronic granular kidney the arterioles, even to the smallest, become hypertrophied."

I gratefully acknowledge the fact that Dr. Dickinson was one of the first amongst eminent pathologists to publicly express his opinion that what I described as hypertrophy of the walls of the arterioles was really such. That the thickening of the walls is not, as various writers have suggested, a result of "lardaceous degeneration," of a so-called "hyalin-fibroid change," or of any form of "arteritis." There being now a general agreement as to the anatomical facts the question of their interpretation alone remains for discussion. In giving a brief history of former controversies Dr. Dickinson makes the following statement: "Johnson, in upholding the muscular thickening, denied the fibrous, the appearance of which he holds to be delusive and the result of reagents." Now I admit that in my early publications on this subject I directed attention mainly to hypertrophy of the muscular layer of the arterioles; but for a long time past I have recognised the fact that in arterioles thickened by hypertrophy there is an over-growth of all the normal tissues. So in the hypertrophied heart there is an increase not only of muscular fibre, but of all the tissues of which the heart's walls are composed. If Dr. Dickinson will do me the favour to refer to my "Medical Lectures and Essays," published in 1887, he will find that at page 699 I have borrowed his own illustrations to show in an artery from the pia mater in a case of granular kidney "the muscular coat and the adventitia hypertrophied." Then it is not quite correct to say that I ever attributed the *fibrous* appearance to the result of reagents. My contention was that the *hyaline* appearance of the tunica adventitia in the arteries of the pia mater is the result of the glycerine in which they were preserved; and that this is the true explanation of the appearance was proved by the fact that after the reading and discussion of the paper by Sir Wm. Gull and Dr. Sutton at the Royal Medical and Chirurgical Society they both recognised in a specimen which I showed them the hyaline condition which they had described as pathological, the specimen in question being arterioles from the pia mater of a sheep, and the adventitia having been rendered hyaline by acidulated glycerine.

With regard to the seat and nature of the obstruction in the terminal vessels which gives rise to the cardiac hypertrophy, Dr. Dickinson thinks it unlikely that the heart and the arterioles should antagonise each other, yet surely the doctrine of all modern physiologists is that while the heart, assisted by the large elastic arteries, propels the blood onwards, the muscular walled arterioles, by their contraction and relaxation, regulate the blood supply to the capillaries. This apparent antagonism results in harmonious coöperation; so, to compare very great forces with very small ones, the position and movements of the planets are regulated by the marvellous coöperation and equipoise of the opposing centripetal and centrifugal forces. Dr. Dickinson is still inclined to the opinion that the capillaries are, in part at least, the seat and cause of the impeded circulation in renal disease, and he considers that this view receives support from the fact that not only are the walls of the arterioles thickened, but also those of the large arteries, from the aorta downwards. He has carefully measured the actual thickness of the walls and the circumference of numerous arteries from the subjects of granular kidney, comparing them with the corresponding normal arteries, and has tabulated the results. The amount of thickening, though constant, is very small as compared with the very much greater thickness of the arterioles. For instance, the thickness of the normal renal artery, as compared with the artery of a granular kidney, is in the proportion of eighteen to twenty-five. Now, compare this with the arterioles of a granular kidney, which may commonly be seen to be three or four times thicker than the corresponding normal vessels. Dr. Dickinson admits that if the arterial hypertrophy were limited to the smaller vessels the stopcock action might be the cause of the hypertrophy, and surely, by parity of reasoning, the enormous excess of hypertrophy of the arterioles affords conclusive evidence of the long-continued over action of these vital stopcocks. At the present day it will scarcely be contended that the great hypertrophy of the arterial walls is caused by an imaginary impediment in the thin-walled capillaries which they supply. That, indeed, was the explanation which I suggested forty-five years ago, in a paper which was published in the thirty-third volume of the Royal Medical and Chirurgical Society's Transactions. The excuse for my erroneous physiology is that the paper in question was written about two years before the publication of the earliest of M. Claude Bernard's epoch-making experiments on the vaso-motor nervous system.

The thickening and dilatation of the larger arteries which have long been recognised as clinical facts, and which have now for the first time been measured, are just such conditions as might have been expected to result from the strain to which they are subjected between the hypertrophied left ventricle behind and the hypertrophied arterioles in front. If the walls of arteries which are exposed to such high pressure did not become strengthened by hypertrophy, the inevitable result would be a much more frequent occurrence of disastrous dilatation and rupture than is actually found to happen.

The theory of capillary obstruction, apart from inflammation, which is not here in question, was plausible enough in the days of Dr. Alison and Dr. John Reid, but since the discovery of the structure and function of the arterioles and of the vaso-motor nervous system the hypothesis in question, unsupported as it is by facts, has been shown to be superfluous and untenable. The function of the arterioles and of the capillaries respectively is as different as is the structure of their walls. This is stated with characteristic clearness in the following extract from Professor Huxley's "Elementary Physiology": "While the small arteries lose the function which the capillaries possess of directly irrigating the tissues by transudation, they gain that of regulating the supply of fluid to the irrigators or capillaries themselves. The constriction or dilatation of the arteries which supply a set of capillaries comes to the same result as lowering or raising the sluice-gates of a system of irrigation canals." It will be seen that Professor Huxley's comparison with the action of "sluice-gates" and mine with that of "stopcocks" express an identity of view as to the regulating function of the arterioles, this view of their function being, as I believe, that of all modern physiologists.—I am, Sirs, yours faithfully,

Savile-row, July 22nd, 1895. GEORGE JOHNSON.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—To be able to claim membership of the medical profession is to me the highest honour. In my estimation the profession stands second to none, for I know that beyond any other it is composed of men leading lives of true self-sacrifice and devotion to duty. It is with these feelings and with a full sense of the responsibility of taking such a position that I venture confidently to impugn some of the main statements in the leading article in your issue of July 20th. Dealing with the question of the abuse of specialism, you inquire whether quackery occurs among any section of specialists. You ask, "Are needless operations performed

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for fees? Are methods of treatment urged upon patients for commercial rather than pathological reasons?" Your answer is that "practically neither abuse exists."

Not a month, hardly a week, passes that I do not learn the authentic details of cases of quackery by a class of practitioners, mostly specialists; and I venture to affirm without fear of contradiction that there is not to be found a single consultant, specialist, or general practitioner of any experience who cannot from personal knowledge vouch for the fact that there exists in London a considerable number of men, mostly specialists, who show by their methods that their object is not to obtain fair remuneration for honest work, that their aim before all things is not to do the best for the patient, but that their paramount consideration is the making of money, regardless of the injury inflicted upon the victims who place themselves with confidence in their hands. That quackery outside the profession—practice by unqualified pretenders—does no harm from any point of view to the legitimate practitioner is, I believe, capable of proof. It is quackery within which does harm. Of those who fall into the hands of qualified quacks a large number never recognise that they have been victimised, but many do; and these and their friends are too often led to look with suspicion on the whole body of medical men, if they do not regard them as, without exception, on a level with the individuals by whom they have been misused, and whom they had been led to believe were eminent representatives of the profession.

I am, Sirs, your obedient servant,

Cavendish-square, July 20th, 1895. HENRY SEWILL.

THE PROFESSION AND MEDICAL AID SOCIETIES.

To the Editors of THE LANCET.

SIRS,—We are directed to inform you that a meeting of the medical profession in Eastbourne, called by the invitation of the local medical society, has been recently held for the purpose of considering proposals for the formation of a Provident Medical Association, in order to combat the growing evil of commercial "medical aid" societies in this town. At the meeting it was resolved that an association should be started upon the following lines: (1) All duly qualified resident medical men, not practising as homœopaths, to be eligible for the acting staff, subject to the approval of the committee; (2) the committee to be exclusively a professional one, consisting of the staff and a certain number of members appointed by the Eastbourne Medical Society; (3) a wage-limit or other check to abuse to be adopted; and (4) the profits, after payment of working expenses, to be divided amongst the acting staff proportionately to the number of members upon their respective lists.

The following resolutions were also adopted:—1. That every medical man in Eastbourne be invited to sign a statement agreeing neither to accept any appointment himself in any "medical aid" or similar society, nor to have any professional intercourse whatsoever with any medical practitioner holding any appointment in, or associating himself in any way with, any of the so-called "medical aid societies," or with any similar company so long as the methods adopted by these societies include (*a*) canvassing for members in the interest of individual practitioners; (*b*) the virtual "sweating" of their medical officers by the inadequate remuneration for the work done. 2. That, considering the necessity for permanently maintaining united action on the part of the profession towards these medical aid societies, this meeting approves the plan of requesting the committee of the Eastbourne Provident Medical Association to depute one of its members to call upon every new medical practitioner settling in Eastbourne, with the object of warning him against the methods of the medical aid societies and of courteously inviting his signature to the above agreement. 3. That the British Medical Association be requested to approach the Deans of the various medical schools in the United Kingdom, and urge them to point out to their senior and recently qualified students—(*a*) the very objectionable character of these medical aid societies; (*b*) that the Royal College of Surgeons of England and the Royal College of Physicians of Ireland have both expressed in clear terms their disapproval of their diplomates associating themselves with these societies; (*c*) that the committee appointed by the General Medical Council to inquire into the working of these societies in relation to the medical profession unanimously condemned their methods; and (*d*) that by accepting appointments in these societies medical practitioners will cut themselves off from their professional brethren.

It was further agreed to send copies of these resolutions to the medical journals in the hope of warning inexperienced junior practitioners who might otherwise accept posts under medical aid societies in Eastbourne. The following practitioners signed the agreement embodied in the first resolution:—

Adams, James,	Holst, Otto,
Barnes, A. R.,	Jackson, G. H.,
Browne, D. Matthews,	Jones, J. Talfourd,
Cameron, Chas. H. H.,	MacQueen, Thos.,
Colgate, Henry,	Marsdin, Fredk.,
Daly, Wm. J.,	Pollock, William,
D'Esterre, J. N.,	Roberts, Astley,
Downes, E.,	Roberts, Charles,
Elvy, Frank,	Rook, A. Edw.,
Ewart, J. H.,	Sherwood, Arthur P.,
Farnell, H. D.,	Sieveking, A. R.,
Frazer, Kenneth,	Skinner, George P.,
Habgood, Henry,	Smith, Wm. Muir,
Harding, C. O'Brien,	Taylor, A. Wheeler,
Harper, A.,	White, Rich. Watts,
Hayman, Charles N.,	Whitney, Neville S.,
Hinds, H. A.,	Willett, Edmund.
Holman, Henry J.,	

We are, Sirs, yours faithfully,

J. H. EWART,
President Eastbourne Medical Society.
A. HARPER,
Hon. Sec., *pro tem.*, Eastbourne Provident Medical Association.

Eastbourne, July 22nd, 1895.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE PORTRAIT OF SIR JOSEPH LISTER.

To the Editors of THE LANCET.

SIRS,—The Fellows and Members of the Royal College of Surgeons of England have just received a circular headed "Sir Joseph Lister (College of Surgeons) Portrait Fund," inviting subscriptions, and stating that "Mr. W. W. Ouless, R.A., has, at the request of the committee, undertaken to paint the portrait." This committee appears to be practically self-elected, and I would ask if such a committee, however eminent individually, should have proceeded so far without first having a mandate from the general body of subscribers. Everyone must feel that the artist does not live to whom it would not be an honour to paint the portrait of Lister, which is to hang beside Reynolds's John Hunter, and I would suggest that this honour ought to be given to a painter carefully selected after due inquiry by a committee chosen at a meeting of the general body of subscribers, and conferring with the authorities of the College, whose right and duty it is to have a voice in the matter.

I remain, Sirs, your obedient servant,

Grosvenor-street, W., July 23rd, 1895. C. B. KEETLEY.

"THE DUTIES OF MEDICAL SOCIETIES."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an article in THE LANCET of July 20th commenting, under the above title, upon a case of prolapse of the uterus which I treated by extirpation. Perhaps you will allow me to give a few details of the case. The patient was a single woman thirty years of age. She gave birth to a child five years before coming under my care. The confinement was a troublesome one and was followed by protrusion of the uterus. When I first saw her she was in a deplorable condition. The uterus, much enlarged, was lying between her thighs, and there was complete and extensive prolapse of both bladder and rectum. The perinæum was destroyed and the vulval orifice in consequence very large. A fair trial was made with pessaries without the slightest benefit. The tissues were too much thinned and stretched to make perineorrhaphy at all a hopeful procedure, and I came to the conclusion that extirpation was the only operation likely to be followed by success. The patient soon got well and the result has given her the greatest satisfaction and comfort, and she is now able to earn her own living. I trust the exceptional character of the case may justify the treatment adopted.

I am, Sirs, yours faithfully,

Weymouth, July 23rd, 1895. MACPHERSON LAWRIE.

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INFANTRY SWORD EXERCISE AND THE RECENT HANDBOOK FROM THE WAR OFFICE.

To the Editors of THE LANCET.

SIRS,—This handbook of instructions in the use of the sword has just been issued by the War Office. As the document is official and imposes on the British soldier certain methods of attack and defence, it is not out of place to inquire into the soundness of the principles involved in the teaching, both from physiological and practical points of view. The system here ordered for adoption is that of the Italian school, as modified by Cavaliere Masiello of Florence. The Italian system has been weighed in the balances of experience and found wanting; it is now almost universally superseded by the French school. We fail, therefore, to understand why our authorities should have revived a faulty and more or less exploded method. The position of the body and limbs now recommended (we should say ordered) are essentially faulty, entailing, as they do, unnecessary outlay of muscular power, and leading by their unnatural conditions to rapid nerve-exhaustion. The "guard" itself, with the feet widely separated, "with both shoulders and sword parallel to the directing line," and the attacking arm prone and fully extended, involves an attitude quickly inducing fatigue and unsteadiness, and this without any adequate compensation. The brachial and deltoid muscles get easily tired, the more so as the elbow-joint is fixed as completely as if it were ankylosed, and the suggestion in the handbook that it should "serve as a pivot" is an anatomical impossibility. From such a position it is evident that rapid recovery after the lunge is most difficult, and thus the fencer is exposed to great risk if engaged with an active opponent skilled in the French method. We write as representing the feelings and judgment of many members of the medical profession who are interested in fencing as an amusement and exercise, as well as a discipline for the officers and soldiers of the British Army. That a method so faulty and unsound should be now presented to the British soldier for his instruction and guidance appears to us a measure distinctly retrograde and dangerous.—We are, Sirs, yours faithfully,

I. D. CHEPMELL, M.D.,
G. H. SAVAGE, M.D., F.R.C.P.

July 23rd, 1895.

VOLUNTEER MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say that through the courtesy of the Council of the British Institute of Public Health, arrangements have been made this year, as in previous years, for the officers of the Volunteer Medical Staff to dine together on the occasion of their annual banquet, on Wednesday, July 31st, at 7 P.M., in the King's Hall of the Holborn Restaurant. A large number of distinguished officers and guests have been invited by the Council, and it is hoped H.R.H. the Duke of Cambridge will also be present; and as this is probably the last public occasion at which His Royal Highness will appear before his retiral, it is believed that a large number of Volunteer medical officers would like to attend. Tickets may be obtained of the Secretary, Mr. C. A. James, at the address given below.

I am, Sirs, yours faithfully,
W. GUYER HUNTER, K.C.M.G., M.D., &c.,
Chairman of Council of the Volunteer Medical Association.
20, Hanover-square, W., July 22nd, 1895.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Poor-law Relief in Manchester.

MR. GUILMETTE, the superintendent of the relief department of the board of guardians, has issued his annual report for the year ending March 23rd last. In some respects it is encouraging, especially if we bear in mind the long-continued depression of trade from which this district has suffered. During the half-year ending September, 1870, the total number of in-door poor relieved was 7388, and in the corresponding half-year of 1894 they numbered 7437, an increase of 85 persons, or 1 per cent. During the same half-years respectively the total of the out-door poor of the township numbered 13,992 and 2474, a decrease of 82 per cent. On Jan. 1st, 1871, 60 per 1000 of the inhabitants of the township were in receipt of relief, while on Jan. 1st, 1895, the proportion had fallen to 31 per 1000, a decrease of nearly 50 per cent. On Jan. 1st last the number of in-door poor was 3667, equalling the population of a large village or small town, and the duty devolving on the guardians for the efficient oversight of this community, its provisioning, the treatment of its sick, the education and starting in life of its young, and the employment in suitable occupations of its adults, must be considered a work of some magnitude and importance. Of this large number there were not 50 men at the very outside who could be called "able-bodied" "in the sense of being possessed of that muscularity which would fit them to successfully compete for work with the average out-door labourer," and many even of these, from having led roving, unsettled lives or from drinking habits, "would be unlikely to find a regular place of work congenial." The term "able-bodied" is one of wide application and includes many cases which the non-official mind would certainly place in another category. "The 'able-bodied' also include 928 persons suffering from temporary sickness, and who are laid up in bed under the care of the medical officers. They further include persons who, being neither properly 'sick' nor 'infirm,' and able to do a little light jobbing about, are nevertheless in reality shut out from engaging in most of the active occupations of life—those who suffer from occasional fits, are partly blind, minus an arm or leg, of weak intellect, or are the victims of congenital or acquired physical or mental defects." There are also in the workhouse 269 lunatics, imbeciles, and idiots (exclusive of 325 in asylums), and 1142 classified as "infirm"—these include the sick and bedridden, the paralysed, the very feeble and helpless, &c. There are also 740 children under the care of the guardians, of whom the majority are being trained and educated at the Swinton Separate Schools. Last year there was an enormous influx of vagrants, no fewer than 52,319 having been admitted into the tramp wards. These numbers so tax the accommodation that the labour test cannot be strictly applied, nor the usual period of detention enforced. This soon becomes known, "with the result that whilst the numbers steadily go up the power to apply deterrent treatment steadily goes down." The report goes on to show how difficult it is to give help to the deserving or destitute without some accompanying evil, for it says: "There is little doubt that a number of those who used the tramp wards last winter were attracted to the district by the advertisement of free meals and the extensive distribution of private charity during the great frost." The increase in the number of tramps is a serious matter. Five years ago there were only 14,182. They come not only from the lower classes but from the social failures of those above them, who from faults and failings of character and conduct have drifted down among the homeless and destitute. Mr. Guilmette sees great difficulties in any attempt at classifying the deserving and the worthless. "There are great dangers of errors of discrimination; there is the enmity, falsehood, or ignorance of one informant and the favourable prejudice and partiality of another; the absence of any independent testimony in many cases, the obvious contradiction which a man's appearance and demeanour not infrequently give to his own account of himself and that of his friends,—all these present almost insurmountable obstacles in the way of carrying out a thorough system of classification of character amongst the aged poor in such a township as that of Manchester."

Salford Sewage.

Salford has had much trouble over her sewage, and seldom is a good word said for her, so it is not to be wondered at that various comments have been made as to her policy of buying a steamer in order to carry the sewage sludge out to sea. Theoretically it should go back to the land, but it is a costly matter and by no means easy to get it there. The one good deed she does ought to be mentioned. The steamer takes out 600 tons of liquid sewage three or four times a week and discharges this into the sea, to the bewilderment and injury no doubt of the fish that happen to be caught by this deluge of filth. On the return trip, however, the ballast-tanks are filled with sea water, which is discharged into the canal at Modewheel. Three or four hundred tons of sea water three or four times a week will not make much change in the condition of the

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canal, but every little helps, and it is said to be "a refreshing sight to see the stream of clear sea water pouring into the murky canal from the sides of the steamer." The *Manchester City News* seems to think that the Local Government Board should not insist on filtration being applied to the Manchester and Salford sewage, "seeing that the effluent is turned into a navigable canal," and that it should only require it to be innocuous. It says that the cost of treatment will be trebled by the filtration process, and asks whether a local body should be compelled to produce an effluent many degrees purer than the stream into which it is turned. If this principle were acted on there would be little hope for the purification of our rivers. An experiment in filtration is being made at Salford on a small scale by two methods. One is the Riddel process, by which the effluent, first produced by precipitation, is forced by steam and hydraulic power through beds of sand some 3 ft. deep arranged at the bottom of an iron boiler, which has the appearance of an ordinary steam boiler. To treat the 10,000,000 gallons of Salford sewage twelve boilers 30 ft. long and 8ft. deep would be required, and "to cope with the additional volume brought down by a heavy rain would require probably as many more always to be in readiness." The result is said to be excellent, but the question of cost is the difficulty. The other process, devised by Mr. Corbett, the borough engineer, consists of open-air beds or tanks with a layer of sand and gravel, through which the effluent slowly filters. The effluent is "surprisingly clear"; but here again the serious matter is the cost. It would require many acres to treat the ordinary 10,000,000 gallons a day, and as many more acres to deal with a flood. It is said that a very ordinary downpour of rain will raise the quantity to 14,000,000 or 16,000,000 gallons. In the case of Manchester these figures would have to be trebled or quadrupled if she adopted either of these processes.

Mr. Maclaren's Batting Feat.

For the last week or two the stress and turmoil of electioneering struggles have occupied the attention of the Manchester people, to the exclusion of pretty nearly everything else; but Mr. A. C. Maclaren's marvellous innings against Somersetshire has aroused the enthusiasm of the many thousands of our local lovers of cricket. His 424 runs, made in 470 minutes, won the match with 79 to spare, so that the 377 contributed by the other members of the Lancashire team—making the total up to 801—were not required. The quickness and correctness of eye, the instantaneous response of the muscles to the constantly recurring messages flashed to the brain, and the endless repetition of the run "between the wickets," tell a story of muscular and nervous endurance of much physiological interest. Mr. Maclaren was captain of the Harrow team in 1890, and though only twenty-three has captained the Lancashire eleven for the last two years. His scholastic duties—he is now qualifying for a mastership at Harrow—have prevented him playing for his county since the first few matches, but as he will be free to the end of the season he may now, perhaps, play more frequently. I may be permitted to add that he is a nephew by marriage of our distinguished *confrère*, Dr. Leech.

Adult Deaf and Dumb Institute.

The claims of the above charity are not often brought before the public, and it has depended on a small band of yearly subscribers. And yet it does a large amount of good work, for there are in Manchester and the neighbourhood nearly 1000 deaf mutes, to whom its numerous benefits are always open. It occurred to the Lady Mayoress, who takes a warm interest in its welfare, that its funds might be increased by the pleasurable means of a garden party at the Botanical Gardens. The idea culminated in most successful gatherings on Friday and Saturday of the week before last. Large numbers were present on both days, and the pecuniary benefit to the charity will no doubt be considerable, though the actual figures cannot as yet be given. On the Saturday afternoon a large party of the deaf and dumb were entertained at tea by the Lady Mayoress, who afterwards spoke to them, the secretary, Dr. Buxton, acting as interpreter. "The quick apprehension of everything, expressed by a demonstration of smiles and quaint gestures, was extremely touching." It was computed that nearly 12,000 people were present.

Home for Crippled Children.

This institution is a branch of the Boys and Girls Refuges, and, as its name implies, makes those among the waifs who start life under physical difficulties its special care. At present there are between thirty and forty crippled or incurable boys and girls in the home at Cheetham-hill. Many of them are able to pass their time in making articles for the annual sale of work which takes place on their *fête* day, which was held the other week. The Lady Mayoress, who constantly manifests her sympathy with philanthropic work, opened the sale, and there was a large attendance.

High Schools for Girls.

Professor Clifford Allbutt has just paid Manchester a visit, and on Friday last gave an interesting and instructive address in the Free Trade Hall to the pupils of the High Schools for Girls at the distribution of prizes and certificates gained during the year.

July 23rd, 1895.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Retirement of Mr. Macdonald Brown from Surgeons' Hall.

IT will be a surprise to many of Mr. Macdonald Brown's old pupils to learn that he has retired from his position as Lecturer on Anatomy in the Edinburgh School of Medicine, and proposes to devote himself to practice. This change has come as a surprise to those connected with the extra-mural school, as he has been a successful lecturer for a number of years. He is succeeded at Surgeons' Hall by Mr. J. Ryland Whitaker, M.B.Lond., F.R.C.P. Edin., who goes from Minto House, where he had succeeded Dr. Symington. The probabilities are that the teaching of anatomy to men in the extra-mural school will now be confined to Surgeons' Hall and the New School.

The Edinburgh Dental School.

The presentation of prizes in connexion with this school took place last week. The Dean referred to the continued success of the school, and stated that there were thirty-seven students on the working roll. Professor Chiene addressed the students on the career of Robert Nasmyth, the father of Scottish dentistry, because he had made anatomy the basis of his work, and, further, because he was the man who brought to Edinburgh the great John Goodsir.

Close of the Summer Session in Edinburgh.

The summer session, both in the University and extra-mural schools of Edinburgh, was brought to a close last week without any noteworthy incident. The first professional examination at the University is at present going on, and no fewer than thirty female students, it is understood, have entered for it. Most of these have either already qualified in medicine or are senior students of medicine who have had the courage to go back over their old work, prompted by the laudable ambition of obtaining the University degree. One female student has presented herself for the second professional examination, having passed the first in April.

Health of Edinburgh.

During the month of June the total number of deaths were 354, giving a death-rate of 15·52 per 1000, compared with 14·36 for June last year. The average death-rate for the last five years was 16·06.

Health of Aberdeen.

During the week ending July 20th 55 cases of zymotic disease were reported to the sanitary office. This is an increase of 16 on the preceding week. Of whooping-cough there were 41 cases, measles 2, erysipelas 3, and choleraic diarrhœa 1.

Extension of Buildings, University of Aberdeen.

An official statement laid before the executive committee shows that the subscriptions towards this scheme up to April 10th—including £40,000 of grant from Government—amounted to £92,398 odd. The liabilities amounted to £108,124, the cost of sites—namely, £50,011—having unavoidably been heavy. The fine stained glass windows in the Graduation Hall and the clock and finials are to be provided by Mr. Charles Mitchell, LL.D., of Newcastle-upon-Tyne, while the estimated cost of the works already undertaken, and for which the executive committee is responsible, is £78,261. The committee has resolved to appeal to the new Government for a further grant of £20,000, and also to private friends for further contributions, so as to allow the modified scheme to be completed. An effort is to be made to have the front buildings finished with fine-axed stones, which would add greatly to the effect, as the white granite which

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is being used looks beautiful when so treated. The gable towards Broad-street of the north wing, and that towards East North-street of the Graduation Hall, will contain large windows and be among the most striking architectural features of the new buildings. The Mitchell Tower, from its great height and its graceful outlines, is regarded with admiration by all visitors from a distance, and it surpasses all other granite structures even in the "Granite City" itself.

The Member of Parliament for West Aberdeenshire.

One of the few members of the medical profession returned to the new Parliament is Dr. Robert Farquharson of Finzean, Aberdeenshire, who has on this occasion increased his majority to 220. Dr. Farquharson has represented West Aberdeenshire since April, 1880. Had it not been for his attitude on the Church of Scotland question, and his recent action in connexion with the proposal to raise the age limit of boy labour for night work in paper mills, it is believed Dr. Farquharson's majority would have been considerably higher.

July 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Case of Successful Innominate Ligature.

MR. COPPINGER'S patient, whose innominate artery was successfully ligatured in January, 1893,[1] for the cure of subclavian aneurysm, is now being exhibited in London. The operation was performed at the Mater Misericordiæ Hospital. The man was shown six weeks afterwards at a meeting of the Royal Academy of Medicine in Dublin as a case of successful ligature of the innominate artery, and six months later at Newcastle-on-Tyne as an instance of cure of subclavian aneurysm by simultaneous ligature of the innominate and common carotid arteries. The patient, a man aged fifty-nine, is now (two years and a half after the operation) in good health, and is the only living example as yet exhibited in Europe of cure of subclavian aneurysm by innominate ligature.

Mater Misericordiæ Hospital.

A woman aged twenty-five was recently admitted to this hospital complaining of an abdominal tumour about the size of an infant's head, hard and freely movable. It had existed for two years, and there was no history that the patient had ever suffered from intestinal obstruction. On opening the abdomen Mr. More Madden discovered two enormous enteroliths occupying the cæcum and commencement of the ascending colon. They were successfully removed by incision and the formation of an intestinal fistula.

City of Dublin Hospital: Sessional Examinations.

The gold medal presented by Mr. Wheeler for the best answering in medicine has been won by Mr. William Henry Croly.

The Recent Inquiry on the Belfast Workhouse.

At a meeting of the Belfast Board of Guardians, held on July 16th, a letter was read from the Local Government Board in reference to the inquiry held by their inspector, Mr. Agnew, as to the death of a man on April 25th in the lunatic department of the workhouse. After giving a *résumé* of the evidence[2] the Local Government Board say they are of opinion that the case was one for treatment in the medical wards of the infirmary, as the organic diseases were of a more urgent nature than any epileptic affection, and this is proved by the fact that the patient died from congestion of the lungs three days after admission without any epileptic fit. The Board do not think that in the face of the protest made by the wife of the deceased man the resident medical officers were justified in sending the patient to the epileptic ward of the lunatic department without a previous consultation with the visiting medical staff, and the board are of opinion that in all doubtful cases of mental disease there should be a consultation with the visiting medical officers. The case evidently presented difficulties of diagnosis which could only have been elucidated by careful and detailed examination, and it was due to the patient that such an examination should have been made before sending him to the lunatic department. The board having been informed by their inspector that the epileptic ward is in the lunatic department of the workhouse, and that epileptics, whether sane or insane, occupy the same ward, and that they have the same recreation grounds as the lunatics and idiots, think such an arrangement most objectionable and advise its being discontinued, and that provision should be made in the infirmary for epileptic patients. Further, they recommend that provision should be made for the examination of all patients on admission by setting apart a room for the purpose. The board also think it would be desirable that where a patient is admitted on a medical certificate the resident and visiting medical officers should be handed the certificate for their information and consideration. The guardians appointed a small committee to consider this report.

The Pasteur Institute in Paris.

It does seem a most extraordinary circumstance that no attempt is being made to deal in this country with the treatment of hydrophobia from a preventive point of view. The muzzling of dogs is not by any means enforced, and people bitten by mad dogs are obliged to go to Paris to be treated. At the last meeting of the Belfast Board of Guardians (and similar cases are being constantly reported all over Ireland) the father of a boy aged seven years, who had been bitten by a dog which was said to be mad, was granted a sum of £25 to enable him to take the lad to the Pasteur Institute in Paris. The whole question of the prevention and the treatment of hydrophobia is most discreditable to medical science in the United Kingdom.

Ballysillan Water-Supply.

A deputation from this district having appeared before the Belfast board of guardians and stated that their water-supply was very bad, being drawn from a source out of which cattle and horses drank, in which dogs swam, and children bathed, asked the assistance of the board in helping them to get pure water. While the matter was referred to a committee to consider and report at a later date, it was pointed out that a new special scheme would be costly owing to litigation, it would involve great taxation, and it might not give a continuous supply. The feeling of the board was apparently that a solution of the question would be best found in the proposed extension of the borough of Belfast so as to take in the Ballysillan district, when the residents would get the water supplied by the Water Commissioners, whose new Monson scheme, when completed, would give a never-failing supply.

Curious Nuisance at Bangor, co. Down.

At a special meeting of the Bangor Town Commissioners a deputation appeared and presented a memorial on behalf of residents praying the Commissioners to exercise the powers vested in them under the Public Health Act, and have two sets of hobby horses at present located on the Shore-road removed, as, being contiguous to private residences, they, by the noises caused and the heterogeneous crowds congregated, constituted a nuisance. Dr. Bolton, J.P., as a medical practitioner and as a medical officer of health for the district, made an important statement to the effect that while he thought that in themselves the hobby horses afforded a pleasant, exhilarating, and unobjectionable form of exercise and recreation, he gave it as his opinion that on the present locations the two systems of hobby horses were objectionable and positive nuisances because of their close proximity to dwelling-houses. To people with irritable nerves or shattered nervous systems (and people in such conditions often came to Bangor as a health resort), or to children threatened with some brain disease, or to older people attacked by some feverish illness accompanied with racking headache—to all these the near sounds arising from the steam bands, with the noise of the crowds around, Dr. Bolton thought were injurious and even dangerous. After a prolonged and stormy discussion it was decided by the casting vote of the chairman that the Hon. Somerset Ward be at once approached, and that strong representation be made for the removal of the hobby horses.

Death of Mr. Robert F. Sinclair, M.B., C.M. Edin.

Intelligence has just reached Belfast of the death from pleurisy, after four days' illness, at Brewarrina, New South Wales, on June 2nd, of Dr. R. F. Sinclair. Dr. Sinclair graduated in Edinburgh University in 1881 and for some time practised in Belfast, where he was greatly respected by his medical brethren and by his patients. About six years ago

[1] See Transactions of the Royal Academy of Medicine in Ireland, 1893.

[2] See THE LANCET, June 29th, 1895.

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he left Belfast to join other members of his family who had gone to New South Wales, and there he has since practised. Dr. Sinclair's early death is very much regretted by a numerous circle of sincere friends in Belfast.

High Death-rate in Belfast.

At a meeting of the Public Health Committee, held on July 18th, the medical superintendent officer of health (Dr. Whitaker) reported an unusually high death rate—30·7 per 1000, as compared with 17·4 in the corresponding week of 1894. The infant mortality under one year was great, and there were thirty-two deaths from diarrhœa, whilst in the other fifteen urban districts of Ireland the number registered as having occurred from this cause was fifteen.

Resignation of Dr. McNeary of Garvagh.

I am sorry to say that Dr. McNeary has, owing to partial paralysis, found it necessary to resign his appointment as medical officer of the Garvagh (county Derry) dispensary district, a post which he has held for a lengthened period. Indeed, he has been in the service of the Coleraine guardians since he was appointed medical officer of Articlare in 1852. The Garvagh dispensary committee, at their meeting on July 20th, expressed the deepest sympathy with Dr. McNeary in his illness, and recommended the guardians to grant him ample superannuation. This will be settled on Aug. 24th. On Aug. 16th a meeting will be held to appoint his successor.

Sudden Death of one of the Medical Men Imported by the Cork Clubs.

Dr. Joseph A. O'Sullivan died very suddenly last Thursday evening. He was out attending to his duties the previous day, and, as far as the outside public have learned, heart disease, induced by rheumatism, was the immediate cause of death. Last winter he could have been seen in various parts of the city walking in inclement weather, paying visits to his club patients, and no doubt the fatigue he then endured and the wettings to which he was subjected seriously aggravated the rheumatism from which he had previously suffered. He was educated at the Cork Queen's College, being the only one of the four imported medical men who was a native of the city, and was a favourite with his fellow students. He developed a taste for ophthalmic surgery and became a pupil at St. Mark's Hospital, Dublin. He graduated at the Royal University, and afterwards proceeded to London, where he was about to buy a practice, but before the negotiations were quite completed he returned to Cork for a short holiday. The fight with the clubs had then just commenced, and Dr. O'Sullivan's relatives, anxious to have him at home, urged him strongly to accept the club terms, which he did. Readers of THE LANCET will recollect that snowballs were thrown at him by some students of the College, and that the affair was afterwards the subject of an investigation at the police-court. The students, as clearly appeared by the evidence, had only paid him the same unpleasant attention that had been meted out to many other citizens, but he, knowing he occupied an invidious position, believed the attack to be more or less preconcerted and he struck one of the snowballers with a stick. Legal proceedings followed. The clubs were anxious to make capital out of what no doubt was a most objectionable form of sport, but it is fair to Dr. O'Sullivan's memory and my very pleasant duty to be able to say that he had no desire to play the part of prosecutor of young men, some of whom had been at one time his fellow-students. In Dr. O'Sullivan the profession has lost a hard-working and able young man, whom circumstances and mistaken judgment placed in most regrettable opposition to the bulk of the profession in his native place, but to whom our recollection will recur not as the over-worked servant of the clubs, but as the popular, socially disposed, and able fellow-student.

July 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Gonorrhœal Salpingitis.

AT the last meeting of the Société Anatomique M. Raymond exhibited a specimen of the above-mentioned disease. The specimen offered all the characteristics to which the speaker had already called attention in his thesis for the M.D. Paris—non-purulence of the ovary and purulence of the tubes. In the specimen shown the fimbriated extremity of the left Fallopian tube was completely closed, whilst the right tube communicated through the same extremity with the pus-laden pouch formed in the peritoneum. This pus and that of the corresponding tube, as well as that of the left tube, contained gonococci. Under the microscope the pus presented all the characters special to its gonorrhœal origin (in the acute stage)—viz., numerous leucocytes without epithelial cells,—in fact, the pus revealed the same characters as that collected from the blennorrhagic urethra. In cases, however, of salpingo-ovaritis due to the streptococcus, the pus contains only a few leucocyte associated with numerous desquamated epithelial cells. In streptococcic salpingitis abscesses of the ovary are frequent, as are also spreading peritoneal lesions.

An Insalubrious Children's Hospital.

Without counting the Hospice des Enfants-Assistés, we may say that Paris is endowed with two great children's hospitals: viz, the Hôpital des Enfants-Malades, in the rue de Sèvres, side by side with the Hôpital Necker—a general hospital—and the Hôpital Trousseau, situated in the rue de Charenton, not far from the Hôpital Saint-Antoine. The Hôpital Trousseau contains 472 beds, and its position in the midst of a dense working-class population keeps its wards and out patient rooms constantly filled. But its alleged unfitness for the purpose of ministering to the requirements of suffering childhood may be judged of by the following strictures passed on it by a municipal councillor, M. Baudin, at a recent meeting of the body to which he belongs: "Quant à l'hôpital Trousseau, je mettrai toute mon énergie à en obtenir la disparition; je vois tous les jours combien il fonctionne mal. C'est un véritable foyer d'infection, et les enfants y sont hospitalisés dans les conditions les plus déplorables, je dirai même les plus homicides. Quand on a demandé aux médecins des hôpitaux si des améliorations pouvaient être obtenues en conservant une partie des bâtiments actuels, tous ont déclaré que l'hôpital Trousseau devait être rasé"

La Guerre à l'Alcoolisme.

The frightful progress made by alcoholic abuse in France is only too apparent to the wideawake observer, and the authorities are beginning to be alive to the warning uttered by the Academy of Medicine during a recent discussion on the subject. Knowing well that early impressions are the most durable, the Ministry of Public Instruction appointed a Commission to report on the most efficacious means calculated to preserve *la jeunesse française* from falling into bad alcoholic habits. The Commission recommends the issuing of a Ministerial circular addressed to schoolmasters, wherein attention is called to the immense importance of the subject, and inviting them to do their utmost to influence their charges against such a noxious habit. It is suggested that a temperance manual, written by recognised authorities, be supplied to schoolmasters in order to serve as guides to them in the preparation of their lectures on the subject. In superior and normal colleges four or five annual lectures on alcoholism will be delivered by medical men. This excellent campaign will be pursued in girls' as well as in boys' schools.

Death of Professor Baillon.

The sudden death, on the 18th inst., is announced of Professor Baillon, who has since the year 1867 filled the chair of Botany and Natural History at the Faculty of Medicine. The deceased was aged sixty-seven years. He was a most accomplished botanist, and a recognised authority. Like many another eminent man, he was, however, as an examiner held in great dread by students, and many are the blank looks I have seen on the faces of aspirants at the *premier doctorat* at the prospect of having to face Professor Baillon. The late Professor Robin, the histologist, shared the same reputation. But it must, in fairness to these eminent teachers, be recollected that young students are frequently unjust in their appreciation of the qualities of examiners, who discharge their duties conscientiously if somewhat rigidly.

French Mineral Waters.

The Minister of Public Works informs us that there are at present being worked 1044 springs in France yielding mineral waters. Alkaline springs head the list, there being 358. Then come sulphur springs (318), saline (219), and chalybeate (149). The richest department in mineral springs is the Puy-de-Dôme, that district containing ninety-six springs in full working order. There are only twenty-three departments which are not endowed with springs. These different watering-places were visited last year by an aggregate of 600 000 persons.

July 23rd.

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BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Cholera Virus and its Antitoxin.

IN the last number of the *Deutsche Medicinische Wochenschrift* Dr. Ransom together with Professor Behring published a remarkable communication on the cholera virus and its antitoxin. He states that injections of bouillon cultures of cholera bacilli have a typical influence on the temperature of guinea-pigs. A quantity of cholera bacilli, sufficient to kill the animal within twelve hours, makes the temperature first rise for about three hours and then fall till death. If the quantity of bacilli is not large enough to be fatal the temperature, after having fallen for some hours, suddenly rises again. In the most severe cases, where the animal dies within two, four, or six hours, the temperature falls immediately from the moment of the injection till death. From these facts Dr. Ransom concludes that a large amount of dissolved virus must be contained in the culture fluid. He even succeeded in finding the virus in a culture fluid from which he had previously removed the bacilli themselves, and injections of this fluid killed guinea-pigs much more quickly than when the bacilli were still in it. It was thereby proved that the virus was really present in a state of solution in the bouillon culture. Injections of the dissolved virus produce the same symptoms as injections containing bacilli; the animal grows faint, its fur becomes rough, its eyes lose their natural brightness, the skin becomes cold, general trembling ensues, and very soon the temperature falls. From the fluid Dr. Ransom has obtained also a solid substance which produced the same pathological symptoms as the diluted virus. This substance is of extreme virulence; 0·07 of a cubic centimetre kills a guinea-pig within twelve hours, and 0·1 even in fifteen minutes, but when given by the stomach it is innocuous. Dr. Ransom then immunised guinea-pigs, goats, and wethers by the well-known methods of Professor Behring. He states that there is an antitoxic substance in the blood of immunised goats. He made a 4 per cent. solution of the solid virus with the serum of immunised goats, injected this into guinea-pigs, and found that the animals survived even if 0·25 gramme of the solid virus were injected. The antitoxin is efficacious against both the fluid virus and the cultures of cholera bacilli. The blood of goats which have not been rendered immune has no effect at all. If simultaneous injections are made of virulent bacilli into the peritoneal cavity and antitoxin under the skin the animals survive; the same is the case when the serum is previously injected.

The Antitoxin Treatment of Diphtheria.

At the last meeting of the Society for Internal Medicine, before the commencement of the summer holidays, Professor Eulenburg gave a short account of the collective investigation on the antitoxin treatment of diphtheria. There were 10,240 cases reported from hospitals and from practitioners in all parts of the empire. Of 5790 patients treated with the serum 552 (= 9·5 per cent.) died; whilst of 4450 cases treated by other methods 652 (= 14·7 per cent.) died. In regard to age it was stated that patients under two years had a mortality of 21·7 per cent. when treated with antitoxin, and of 39·7 per cent. when treated without it; from two to ten years of age the corresponding mortalities were 8·8 per cent. and 15·2 per cent. respectively. These figures only confirm what has long been known to the majority of medical men; but general astonishment has been caused by the communications of Professor Eulenburg on the results in the case of patients above ten years of age. The death-rate of the antitoxin cases in this category even exceeded a little that of the other patients, the figures being 4·1 per cent. for antitoxin and 3·8 per cent. for the other methods. When antitoxin was used on the first or second day of the illness the mortality was only 4·2 per cent., but when its employment was delayed beyond this the mortality rose to 16·8 per cent. The investigation was closed on April 1st, but will be resumed.

The Health Resorts of the Crimea and the Caucasus.

After Professor Eulenburg's remarks Professor Leyden read a paper on the Health Resorts of the Crimea and the Caucasus. He visited these regions both on the occasion of the last illness of the late Emperor of Russia and subsequently when he was summoned to attend the Crown Prince at his summer residence at Abbas Tuman. Odessa was the first place to which he directed the attention of the audience, as being both a great commercial town and also a resort of bathers. The Black Sea contains very little salt, but near Odessa there is a kind of lagoon, where the water is calm and the proportion of salt is rather higher. Ample facilities for taking mud-baths are provided there. From Odessa Professor Leyden went to the Crimea. The northern coast of this peninsula is very plain, but the southern coast is one of the finest in the world, and by reason of its climate must be regarded as a first-rate health resort. High mountains protect this coast from the northern winds, so that the climate is very like that of the Italian Riviera, although of course the vegetation there is not so exuberant as that by the Mediterranean Sea. The mean temperature lies between that of the Riviera and the Italian lakes. The months of September and October are the most suitable for patients, especially for those who are phthisical; the spring is rather wet, and in winter there are many foggy days. In summer all parts of the south coast are used for bathing. The most fashionable place is Yalta, where about 7000 visitors assemble yearly. The country here offers ample opportunity for pleasant trips to the mountains. Near Yalta is the castle of Livadia, the favourite summer residence of the late Emperor. In speaking of the Caucasus Professor Leyden first mentioned Abbas Tuman, where the Crown Prince usually stays during the summer. It is situated about 1300 metres above the sea-level in a narrow valley enclosed by high mountains, so that the duration of sunshine there is comparatively limited, being only four hours at the period of the shortest day. The best time for phthisical patients is June and July; the autumn and winter are very rainy, but there is hardly any fog all the year round. In Abbas Tuman there are also hot springs which are used in three different degrees of warmth for the well-known Russian baths. The water is also employed for inhalations and douches. The accommodation for visitors is good, but the place is not so attractive as Berjoin, which is situated some miles from Abbas Tuman. Professor Leyden also visited the town of Tiflis, the capital of the Caucasian provinces; its hot springs are not used by any patients. This town is remarkable for the great variety of its inhabitants—Armenians, Tartars, Russians, Georgians, and other nationalities the names of which one scarcely ever hears. Not less than forty languages are spoken there. Tiflis, Professor Leyden remarked, must be an excellent place for women desiring to marry, as the number of men is four times that of the women. In Eryvan, a town of about 50,000 inhabitants, there were but two medical men—one military, the other civilian. It seems that the population must be extremely healthy, as the only civilian practitioner of the place enjoys also the dignity of mayor. At the end of his address Professor Leyden pointed out that the Caucasus possesses an enormous number of natural springs of every kind—sulphurous, ferruginous, thermal, and others—which of course might be of great therapeutic value. But as there is, some places excepted, hardly any accommodation for patients, and as travelling is in these regions rather laborious, it is not possible to make use of them. Professor Leyden, who spoke not only as a medical man but also as a traveller, was listened to with close attention, and the society then adjourned till the month of October.

July 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Pellagra.

WHAT yellow fever is to the shores of the Caribbean, what the *plica Polonica* is to the banks of the Vistula, what cholera is to the delta of the Ganges, pellagra is to Upper Italy watered by the Po. True, it occurs in other quarters of the peninsula, but it appears in progressively diminishing force as one passes from the Alta Italia to the central and southern provinces, while in Upper Italy itself it is much less common in Piedmont than in Lombardy, and much less in Lombardy than in the Venetian territory. From the synoptical table compiled by the Direzione Generale della Statistica of 1886 I find that of the number of conscripts affected by pellagra the district of Padua contributed 13,834; of Treviso, 13,330; of Udine, 7844; of Brescia, 5266; that the district of Florence supplied 316; of Lucca, 170; of Pisa, 64; and of Rome, 29;

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while the contribution of the Neapolitan and Sicilian districts was *nil*. In keeping with the above statistics the Venetian territory furnished 55,881 pellagrosi, Lombardy 36,630, and Piedmont 1328. In the years 1879 and 1881 the Direzione Generale dell' Agricoltura summed up the pellagrosi throughout the kingdom as at 97,855 in the former year and 104,067 in the latter. So that the endemic, instead of diminishing, seems to advance *pari passu* with the population—a result which may be explained by the still prevailing uncertainty as to its etiology and the consequent failure of prophylactic legislation. On the other hand, the curative, or I should rather say palliative, treatment now practised on the pellagrosi marks a decided improvement, lowering the mortality from 3390 in 1881 to 1698 in 1884—a fact still further confirmed by the hospital returns, according to which, of the 6025 treated during 1883 in the civil hospitals 923 died, while of 6944 treated in 1884 the deaths were only 780. A less satisfactory result appears in the development of madness due to pellagra—the *phrenosis pellagrosa* of Italian classification—the 1348 subjects to this form of mania in 1877 having steadily risen till in 1883 they numbered 1746. I have said that hygiene has not made up its mind as to the etiology of pellagra, though there is a steadily growing consensus of opinion that the consumption of unsound *gran turco* (maize) is the most powerful factor in its genesis. Misery, involving insufficient alimentation derived from a too unvaried diet, still, however, finds acceptance as its principal cause, and that, too, among sanitarians who come most in contact with the peasantry among whom it is endemic. But the only satisfactory way of solving the difficulty—that of tracing it historically to its first appearance at the close of the sixteenth century and determining the conditions under which it arose and continued, intensively as well as extensively, to develope—has not yet been attempted with the required learning, literary as well as hygienic; pending which, Italian State Medicine concentrates itself on minimising the circumstances favourable to its inception, while encouraging the palliative treatment above referred to. This, as conducted in the so-called Pellagrosarii (special hospitals for the pellagrosi), has its most typical, as well as successful, exemplar in the Lombard town of Inzago, where the Asilo di Pellagrosi, or Pellagrosario (already described in THE LANCET), has recently issued its annual report. From this most interesting document, entitled "Relazione sull' Andamento dell' Istituto dal 1° Ottobre, 1894, al 28° Marzo, 1895," a document which does great credit to its compiler, Dr. Giuseppe Fritz, director of the institution in question, I learn that within the twelvemonth 331 peasants labouring under the disease were admitted; that all of them, their ages ranging from twelve to twenty-eight, were children of pellagrose parents; that they entered in a prostrate condition, a prey to convulsions and hallucinations, often tending to suicide; while suffering from the epidermic lesions, the erythematous outbreaks, the fetid perspirations, the hypertrophy of the nails, the many signs of deep-seated trophic disturbance characteristic of the disease, and that, under treatment, all of them, with two exceptions, were so far rehabilitated physically and mentally as to return to the industrial life they had had to quit. Side by side and hand in hand with the dietetic and therapeutic regimen went steady occupation at various handicrafts, the females doing needlework, shoemaking, and straw-plaiting, and the males being employed in carpentry and outdoor labour—some of them being initiated in scientific agriculture and elementary hygiene. In fact, lectures to the number of 120 were given in these subjects and were fairly well appreciated by not a few of the auditors—sufficiently mastered by some of the exceptionally intelligent. Dr. Fritz demonstrates the value of steady, progressive, continuous work as an adjunct to medical treatment, correcting as it does the brain rust, the paresis of the cerebral energies which idleness even in the healthy always tends to induce. These poor males and females, none of them middle-aged, many of them mere boys and girls, return to peasant life not only relieved of their malady and physically rehabilitated, but intellectually and morally equipped with resources over and above their special agricultural *métier*—a comfort to themselves, a support to their parents, and an example to their neighbours. Milan, I understand, contributes handsomely to the institutions of which Dr. Fritz's at Inzago is a typical specimen, and the return it has had for its philanthropic liberality ought to encourage not only it but its sister towns to throw increased energy into the beneficent work.

Obituary.

JOHN PETER LYONS, L.F.P.S.GLASG., L.M., L.R.C.P. AND S.EDIN.

ASSISTANT COLONIAL SURGEON, HEALTH OFFICER, AND DISTRICT COMMISSIONER, GOLD COAST COLONY.

THE recent wave of unhealthiness on the Gold Coast has numbered among its victims no less than three medical men, who have succumbed within a period of six months from the pernicious effects of the climate while in the discharge of their duties. The deceased officer who is the subject of this notice was the son of Daniell Lyons, surgeon, of Clare Castle, co. Clare, and, after obtaining his diplomas in 1890, acted as resident assistant to Dr. Counsellor of Whalley, by whom he was held in the highest esteem and regard. In the early part of 1893 he left Dr. Counsellor to take up an appointment as an assistant colonial surgeon in the service of the Gold Coast Colony. Here he served at Accra, Ada, Kwitta, and Cape Coast, at which last station he fell ill of the fatal form of fever then prevalent, was invalided to the Canaries on May 10th, but died at sea the following day and was buried at Axim. Mr. Lyons held the dormant commission of a district commissioner of the Gold Coast Colony and acted as health officer of the several districts in which he served. In social life he endeared himself to all by his unostentatious, warm-hearted, good nature, and in his professional career both at home and abroad he won the confidence and esteem of his patients by his cheerful disposition, kindly manner, and firm resolution. In his despatch to the Secretary of State for the Colonies the Governor of the colony states in reference to the deceased officer: "He was one of the most skilful and popular officers we had, and by his death a vacancy that will be difficult to fill has been caused in the department. During the late serious epidemic of sickness at Cape Coast he was for nearly all the time the only medical officer there, and the severe physical and mental strain to which he was subjected no doubt had reduced his resisting power so much that when he himself was attacked he fell an easy victim to the deadly fever."

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:—

Surgery.—J. S. Challice, London Hospital; H. H. Thomas, Charing-cross Hospital; A. E. Lovitt, London Hospital; C. A. E. Coulthard, St. George's Hospital; M. White, St. Thomas's Hospital; H. G. Jones, St. Mary's Hospital; H. C. Watt, Liverpool; H. England, Sheffield; F. J. Gaine, Cambridge and St. Mary's Hospital; H. C. T. Dalton, Charing Cross Hospital; J. Cryer, Manchester; and C. W. Moorshead, Guy's Hospital.

Medicine, Forensic Medicine, and Midwifery.—W. B. Maurice, St. Mary's Hospital; F. W. Gale, St. Bartholomew's Hospital; W. S. Dibbs, Leeds Hospital; C. M. Beadnell, Guy's Hospital; Ethel M. Gough, London School of Medicine for Women; and H. C. Watt, Liverpool.

Medicine and Forensic Medicine.—C. C. Preston, Manchester, and P. S. Kesteven, St. Bartholomew's Hospital.

Medicine and Midwifery.—H. W. Ramsay, St. Mary's Hospital.

Medicine.—F. E. H. Keogh, St. Mary's Hospital; R. D. Cox, St. Mary's Hospital; and T. H. P. Peers, Charing Cross Hospital.

Forensic Medicine and Midwifery.—A. P. Eldred, St. Mary's Hospital; A. W. Silver, Charing-cross Hospital; and H. England, Sheffield.

Forensic Medicine.—G. S. Taylor, Manchester; A. E. De Vall, Birmingham; and J. M. A. Lamb, London Hospital.

Midwifery.—G. A. Child, St. Thomas's Hospital.

To Messrs. Challice, Thomas, Lovitt, Maurice, Gale, Dibbs, Beadnell, Watt, Kesteven, Keogh, Cox, and Peers was granted the diploma of the society entitling them to practise Medicine, Surgery, and Midwifery.

UNIVERSITY OF GLASGOW.—The following have passed the Final Professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

A.—Candidates who took Pathology in Final Professional Examination:—John Carson Abbott, Thomas Armstrong, Francis James Barker, M.A., Thomas Baxter, Alexander Blair, Henry Albert Böedeker, Thompson Campbell, Vivian Ernest Chang, Henry Davies, William Donaldson, Richard John Edwards, Samuel English, James Findlay, Robert Mackechnie Fraser, M.A., Walter Graham, William Hay, B.D., John Affleck Hope, Albert Barnes Hughes, George Jubb, William James Kerr, William Duncan Miller, Duncan M'Donald, William Jones Mackinnon, Moses Neil MacLay, Farquhar Macrae, Edward James Primrose, M.A., John Rankin, and James Sandilands.

B.—Candidates who passed Pathology in third professional examination:—James Adam, William Alexander, William Allan, Arthur

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Roland Anderson, John Anderson, John James Stevenson Anderson, John Lindsay Anderson, William Stephen Baird, Robert Brownlee Barr, Thomas Bell, Henry Broom, William Burns, Samuel Capie, William Clow, M.A., B.Sc., Frederick Burdett Cormick, Samuel Donaldson Cowan, M.A., John Cumming, John Divine, John Hannay Douglas, Matthew Dunning, Joshua Ferguson, M.A., William David Findlay, Albert Alfred Finkelstein, James Liddell Forrest, James Forster, James Reid Foulds, Andrew Fleming Galloway, Thomas Cleator Garrett, John Gillan, M.A., James Drummond Graham, John Alexander Graham, William Grove, Arthur Holt, Robert Howie, Gavin Dalzell Hunter, James Jack, John William Jackson, David Kerr, David Connor Kirkhope, John Kirkwood, William Henry Lang, B.Sc., William Lawson, David Lewis, John Dunlop Louttit, Robert King Miller, John Miller Woodburn Morrison, George Mowat, Adam Cubie Muir, James Andrew Dixon Mulholland, Donald Munro, James M'Cash, Daniel M'Coll, William Milligan M'Cormick, Lewis MacLachlan, Hugh M'Laren, William Macleod, George M'Pherson, M.A., Archibald Russell Oliver, Henry Alexander Pattullo, John Broadfoot Rae, John Neil Robertson, William Scobie, B.D., James Smith, Thomas Orr Spiers, James Sproull, Alexander Stevenson, Hugh Stevenson, Alexander Stewart, Alexander Hamilton Stewart, James Stewart, James Stirling, Hugh Wright Thomson, Joseph Milton Thornley, Charles Kirk Toland, Ernest Alexander Walker, M.A., Henry Allan Watson, M.A., Malcolm Watson, Frederick Wolverson, Archibald Young, B.Sc., and John Young (Glasgow). Women candidates—Emmeline Marie Stuart.

EXHIBITION OF OLD CHINA.—An exhibition of old china, glass, pottery, antique relics, and curios of every description will be held at the Royal Aquarium in September and October next, and the directors appeal for contributions to the loan collection.

PRESENTATION.—Mr. George H. Heald, L.R.C.P. Edin., M.R.C.S. Eng., divisional police surgeon at Leeds, has been the recipient of a purse of gold subscribed by members of the City Police Force, in appreciation of his efficient instruction on first aid to the classes in connexion with the St. John Ambulance Association.

ON the occasion of the address on Art in Relation to Anatomy, to be given during the meeting of the British Medical Association, by Professor W. Anderson, in the Examination Hall on Wednesday next, the subject will be illustrated by a collection of anatomical works, with engravings, from the fifteenth century to the present day, with lantern reproductions of selected examples of ancient statuary and anatomical cuts.

INSTITUTE OF CHEMISTRY. — The following gentlemen passed the examinations for membership held on July 2nd to July 5th, 1895:—Alexander Frankenbacher Fuerst (Fellowship), Ernest Robert Andrews, Charles Kepler Barnes, Augustus Charles Bodey, James Girdwood Bowie, Horace Edgar Bowles, John Buchanan, James Kerry Burbridge, Cecil Henry Desch, Frederick Robertson Dodd, Thomas Guthrie, Charles Alexander Hill, Henry Reginald Hirst, Herbert King, Loxley Meggitt, Howard Charles Ridding, John Blair Warden, Frederick Malcolm Wharton, George Henry Woollatt, and Walter Robins, B.Sc. Lond. (Associateship). The examiners were Professor Dunstan, F.R.S., and Mr. Otto Hehner.

SAD DEATH OF THE MATRON OF THE ROYAL INFIRMARY, NEWCASTLE-UPON TYNE.—Miss Ross was found in a dying condition in her bedroom on Monday morning last. She said she had swallowed a solution of bichloride of mercury in the operating theatre at 3 A.M., and soon after making this statement died, at about 9.30 A.M. An inquiry was held by the coroner on Tuesday, when the following verdict was returned: That death arose from poison taken by Miss Ross, her mind at the time being deranged. Miss Ross had been matron for some four years, and previously had filled two subordinate posts in the nursing department of the Royal Infirmary. Altogether her connexion with the infirmary extended over a period of some twelve years. She was universally respected, had the full confidence of the staff and the affection of the nurses and patients. No one could have been more devoted to her duty. No one had the welfare of the institution more at heart than she had. The post of matron to a large hospital must always be a trying and anxious one, and there is good reason for believing that Miss Ross felt the strain, and that a recent occurrence in connexion with the rearrangement of nurses was a source of trouble and unhappiness to her. How far this little cloud—for really it was nothing more—contributed to her lamentable death can only be a matter of conjecture, but that she took it very much to heart is very well known. The body was removed to and buried at Embleton, a short service having previously been conducted in the infirmary chapel by the chaplain.

ROYAL BRITISH NURSES ASSOCIATION. — The annual meeting of this association was held on Wednesday last under the presidency of Sir James Crichton-Browne. The report for the year showed continuous satisfactory progress. The presence of Princess Christian was made the subject of a vote of thanks, proposed by Sir Spencer Wells and seconded by Dr. Buzzard. Her Royal Highness, who was received with acclamation, proposed a vote of thanks to the chairman.

BANK HOLIDAY RAILWAY ARRANGEMENTS.—For holiday-makers visiting Holland and the Amsterdam Exhibition the Great Eastern Railway Company will issue cheap return tickets on Friday and Saturday, Aug. 2nd and 3rd, *vid* Harwich and the Hook of Holland. Special facilities are also offered to passengers visiting Germany by the same route, particularly for those travelling direct from the northern and midland counties, whence they can start in the afternoon, or from London in the evening, reaching the chief Dutch cities early next morning, Cologne in the afternoon, and Berlin in the evening, by through carriages, this being the cheapest route to Germany. Short Belgian tours, including Brussels (for Waterloo), the Ardennes, and the picturesque Flemish cities have been arranged *vid* the Harwich-Antwerp route. Passengers leaving on Friday or Saturday, Aug. 2nd or 3rd, reach the Ardennes next afternoon, and can return on Monday in time to reach London early on Tuesday morning. The General Steam Navigation Company's steamers will leave Harwich for Hamburg on July 31st and Aug. 3rd, returning Aug. 4th and 6th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

HODGSON, JOHN, M.B. Lond., M.R.C.S., has been reappointed Assistant Surgeon to the Oldham Infirmary.

HORROCKS, HERBERT, M.D. Lond., has been appointed Resident Medical Officer at the Hospital for Consumption and Diseases of the Chest, Brompton, S.W., vice Ballance, resigned.

MACLENNAN, FELIX PRYOR, M.B., C.M. Aberd., has been appointed Medical Officer for the Parish of Assynt and the Quoad Sacra Parish of Stoer, N.B.

MCLEAN, CHAS. J. R., M.D. Edin., D.P.H., has been reappointed Medical Officer of Health to the Yeadon Urban District Council.

RUSSELL, J. L., M.B., C.M. Edin., has been appointed Medical Officer for the Cornholme Sanitary District of the Todmorden Union.

THOMSON, FRED. H., M.B., C.M. Aberd., D.P.H. Lond., has been appointed, pro tem., Medical Superintendent of the Gore Farm Hospital.

WOOD, T. JASON, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Honorary Assistant Medical Officer to the Bradford Infirmary and Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £60, with board and washing.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL, 62, Chandos-street, W.C.—Lectureship on Physiology. A minimum of £300 a year is guaranteed for the teaching of physiology, together with a grant for working expenses.

DURHAM COUNTY ASYLUM.—Pathologist and Junior Medical Officer. Salary £100 per annum, with board and lodging. Applications to the Superintendent, Durham County Asylum, Winterton, Ferryhill.

INFIRMARY OF THE CITY OF LONDON UNION.—Assistant Medical Officer at the Infirmary of the Union, situate in the Bow-road. Single, or widower without children. Salary £160 per annum, with furnished apartments at the infirmary, rations, and washing. Applications to the Clerk to the Guardians, 61, Bartholomew-close.

LINCOLN COUNTY ASYLUM, Lincoln.—Assistant House Surgeon for six months. An honorarium of £10, subject to the approval of the weekly Board, and board, residence, and washing provided.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at several of their Fever and Small-pox Hospitals, unmarried. Salary and emoluments assigned to the offices are £160 per annum, rising yearly by £20 to £200 per annum, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, offices, Norfolk House, Norfolk-street, Strand, W.C.

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MORPETH DISPENSARY.—House Surgeon, unmarried. Salary £120 per annum, with furnished house, coals, and gas. Applications to Mr. N. J. Wright, Morpeth, Northumberland.

PARISH OF CAMBERWELL, London.—Medical Officer for the Infirmary at Havil-street, Camberwell, and the Workhouse. Salary £350 per annum, increasing £25 annually to a maximum of £400, with unfurnished house, water, gas, and coals. Applications to the Clerk to the Guardians, 29, Peckham-road, S.E.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon. Board, residence, and washing provided.

ROYAL EAR HOSPITAL, Frith-street, Soho-square, London.—Assistant Surgeon.

ST. BARTHOLOMEW'S HOSPITAL, London.—Physician and an Assistant Physician.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

STOKE NEWINGTON, CLAPTON, WEST HACKNEY, AND DALSTON DISPENSARY, 108, High-street, Stoke Newington, N. — Resident Assistant House Surgeon. Salary £50 per annum, with board and lodging.

SURREY DISPENSARY, Southwark, S.E.—Resident Medical Officer. Salary £120 per annum, with furnished apartments, coal, gas, and attendance. Applications to the Secretary, 53, Borough High-street, Southwark.

Births, Marriages, and Deaths.

BIRTHS.

FISHER.—On July 22nd, at Sheil-road, Liverpool, the wife of Alex Fisher, M.B. Edin., of a daughter.

JACKSON.—On July 18th, at Kirk House, Hedon, the wife of John Lowthian Jackson, M.B. Edin., of a daughter.

MCKENZIE.—On June 26th, at Berea, Durban, Natal, the wife of Archibald McKenzie, M.D. Edin., of twin daughters.

ROCHE.—On July 11th, at the Barracks, Newport, Mon., the wife of Surgeon-Major E. A. Roche, A.M. Staff, of a son.

SCHOLEFIELD.—On July 17th, at Eastcomb-villas, Blackheath, the wife of R. E. Scholefield, M.B. Oxon., of a daughter.

TRAVERS-SMITH.—On July 21st, at Trevose, Beckenham-road, the wife of V. E. Travers-Smith, M.D. Dubl., of a daughter.

MARRIAGES.

ANDREWES—HAMER.—On July 25th, at Holloway Congregational Church, Dr. Frederick William Andrewes, of 35, Welbeck-street, W., son of Charles James Andrewes, J.P., of Reading, to Phyllis Mary, daughter of John Hamer, J.P., of 69, Dartmouth Park-hill, N.W.

HICKMAN—THOMPSON.—On July 16th, at St. Martin's Church, Brampton, Cumberland, Henry Richard Belcher Hickman, M.A., M.B. Oxon., only son of William Hickman, F.R.C.S., of Harley-street, Cavendish-square, to Margaret Kate, only surviving daughter of the late James H. Thompson, of Warren Bank, Brampton.

PRANGLEY—DOMMETT.—On July 18th, at St. Paul's Church, Upper Norwood, by the Rev. W. H. Graham, assisted by the Rev. C. W. Prangley (cousin of the bridegroom), Henry John Prangley, L.R.C.P. Lond., M.R.C.S. Eng., of Tudor House, Anerley, only son of the late John Peard Prangley, of Heytesbury, Wiltshire, to Clara Elizabeth, youngest daughter of Charles William Dommett, of Moorfield, Anerley. No cards. At home Sept. 9th, 10th, 11th, and 12th, 3 to 6 P.M.

SKINNER—FREEMAN.—On July 17th, at the Church of St. Mary Abbotts, Kensington, Ernest William Skinner, M.D. Edin., of Bank House, Rye, Sussex, to Isobel Katharine, eldest daughter of George Mallows Freeman, of Phillimore-gardens, Kensington.

SMITH—FISHER.—On July 23rd, at Christ Church, Brondesbury, Ernest Newlyn Smith, M.D. Lond., M.R.C.S., of Forth Lodge, Willesden-green, to Charlotte, eldest daughter of Henry Fisher, of Carrick, Willesden-lane.

STRAIN—SAVORY.—On July 18th, at Palgrave, Suffolk, William London Strain, M.B. Glasg., of São Paulo, Brazil, to Dorothy Maud, second daughter of the Rev. Ernest Lloyd Savory, Rector of the parish.

THOMSON—FRERE.—On July 23rd, at Holy Trinity Church, Marylebone, Herbert Campbell Thomson, M.B. Lond., eldest son of Dr. D. Thomson, of Luton, to Constance Emily Temple Frere, fourth daughter of the late Robert Temple Frere, of Harley-street.

USHER—MEYLER.—On July 6th, at Laurel Lodge, Dundrum, county Dublin, Isaac William Usher, Surgeon, Tudor House, Dundrum, to Rosie, youngest daughter of the late Captain Meyler, Dundrum House.

DEATHS.

GOODFELLOW.—On July 19th, at Paignton, Devonshire, Stephen Jennings Goodfellow, M.D., F.R.C.P., in his 86th year.

JACOBSON.—On July 17th, at Sleaford, Thomas Edmund Jacobson, M.R.C.S., L.R.C.P., L.S.A., aged 65 years.

NOAD.—On July 20th, suddenly, George William Noad, M.D. St. And., of Upper Tollington-park, N., in his 67th year.

OWEN.—On July 20th, at 16, Scarsdale-villas, Kensington, in his 84th year, William Buy Owen, L.R.C.S. Edin., L.S.A., formerly of Finchingfield, Essex, and of Cleveland-square, Hyde Park, W.

STEWART.—On July 21st, at Russell-square, W.C., John Macpherson Stewart, Medical Student at University College Hospital, and younger son of the late John Stewart, H.M. Indian Navy, aged 25 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the half-year ending June, which was given in the number of the 29th ult., completed the first volume of the year 1895. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half year's numbers are also ready. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

THE LANCET AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

"LORD BYRON'S LAMENESS."

To the Editors of THE LANCET.

SIRS,—In answer to the inquiry of "M.B., C.M." in THE LANCET of July 20th I beg to say that a communication from the pen of the late Dr. Chalmers, accompanied by a pair of woodcuts of casts of Lord Byron's foot, appeared in THE LANCET about twelve years ago. I have not the exact date, but it can be easily found by looking through a file of THE LANCET from 1880 to 1885. I remember getting the wood blocks made for Dr. Chalmers during the time I was his assistant, between those years. I am, Sirs, yours truly,

Vincent-square, S.W., July 22nd, 1895. LAUNCELOT ARCHER.

*** The letter with woodcuts of which Mr. Archer has kindly reminded us will be found in THE LANCET for 1883, vol. i., p. 975. Another communication about Hunter is in the same volume, p. 1023.—ED. L.

Aspirant will find a list of the principal appointments held by medical men at p. 20 and following pages of the Medical Directory for 1896. Vacancies are almost always advertised both in the medical and local lay press, and a special column under the heading "Vacancies," giving a summary of all such advertisements appearing in our columns, is published in THE LANCET week by week.

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AN ADVERTISEMENT OF A HOSPITAL.

THE *Times* of July 23rd, 1895, contains the following advertisement:—

ANYBODY in LONDON having spare time on Monday, 22nd, or Tuesday, 23rd July, is INVITED to VISIT the POPLAR HOSPITAL for ACCIDENTS between 2 and 7 o'clock.

Newly built. Newly fitted. No debt.
No horrors. No infection.

Best Way.—Drive or bicycle, 45 minutes from West-end.
Another Way.—Blackwall Omnibus from Piccadilly-circus, 75 minutes.
Another Way.—Train to Aldgate, thence by yellow tram.

We do not think this a very fitting advertisement, inasmuch as it contains remarks that might tend to keep charitable visitors away from other hospitals. Moreover, it is not dignified, and savours too much of the method of advertisement of "Richardson's Show" or a Cheap Jack. Enterprise should ever be tempered by taste.

Trouville.—Without judging of the merits of the difference between our correspondent and his principal, we should not advise him to take any legal steps to demand more than a month's notice. On the face of the documents (letters) this was the kind of arrangement to which he seemed to consent and, in the absence of any other form of contract, by which he would be bound.

F.M.—We think the junior should receive his share of the receipts and moneys owing at the branch prior to the dissolution. He would act wrongly if he persisted in staying. The details should be amicably arranged.

"ALLEGED TOUTING BY A PUBLIC VACCINATOR."

To the Editors of THE LANCET.

SIRS,—In reply to your comments in THE LANCET of July 20th I write to make an important correction. You say that my letter of July 1st "places a different complexion upon the matter." Do you mean a complexion different from that given by Mr. Eccles? In that case I reply that it certainly does. Or do you mean a complexion different from that given in the letters from Dr. Slane and myself, already in your hands before I wrote that letter of July 1st? In that case I reply that it certainly does not. Throughout all the correspondence we have given only one complexion to the matter. The different complexion which you now see, but never before saw brought out in any of the letters submitted to you, has been given by your importing of the words "with regard to defaulters," which with very little trouble you will soon satisfy yourself have not been used by me. Nowhere in any letter have I gone so far as to speak of the patients referred to by Mr. Eccles as defaulters. In view of this correction your plea in extenuation of your severe censure of Dr. Slane, "that it was not previously brought to your notice," and "that it was not brought out in any of the previous letters submitted to you," "that his visit had been made only in consequence of representations made to him by the vaccination officer with regard to defaulters," is not relevant to the evidence before you. What was really brought out in those letters, in addition to the emphatic denial of the charge of touting, and reiterated previously to July 1st, for the information of Mr. Eccles and yourself, was the fact that Dr. Slane was instructed by the authority to call upon all the cases referred to by Mr. Eccles and his witnesses, and was furnished with a list of the names for the purpose. See Dr. Slane's letters of May 26th and June 18th. My last letter, commenting *seriatim* on your remarks in your issue of June 29th, repeats this information. It does not seek to rebut the charge of Mr. Eccles on the ground that the patients of Mr. Eccles were defaulters. It deals with the evidence placed in your hands with my letter of June 19th, and asks you to answer two straight questions, which in effect are, first, to justify Dr. Slane in an ample, generous manner in respect of the disgraceful charge which you have unjustly allowed to be made against him in your journal; and, secondly, to say whether, in view of the correspondence before you, you still adhere to your statement that Mr. Eccles "was perfectly justified in making his complaint." You aided Mr. Eccles in affixing an obnoxious name to a professional neighbour while he was yet ignorant of having given any cause of offence. With questionable haste and more than questionable morality you supplied Mr. Eccles with a weapon of retaliation outside the profession before you yet knew if the charge could be substantiated. Of this your client made premature use, and, in my opinion, vindictive use. And you justified him. Your comments throughout have been directed to Dr. Slane. Have you nothing to say to the part Mr. Eccles has taken in this matter? Since May 18th you have kept one party, the innocent one, in your pillory. Would it not be an act of justice to give the other now his turn according to his deserts—not vindictively, but for his better instruction in the first elements of applied morals? In your comments of the 20th inst. you are silent on the course Mr. Eccles has pursued in making his unfounded charge. Why do you show such tender reserve in his case while you have not spared hard blows to his neighbour, whom he has unjustly accused?

I am, Sirs, yours truly,
Driffield, July 22nd, 1895. J. LUMSDEN BELL.

*** We have again read the copies of the letters placed in our hands by Dr. J. Lumsden Bell. Dr. Slane's letter of May 26th contains nowhere the information that he "was instructed by the authority to call upon all the cases referred to by Mr. Eccles and his witnesses." Dr. Slane's letter of June 18th contains the words, "To your long details of your study of the Vaccination Acts I added the information you seemed to be ignorant of—that I had orders from the authority to call upon all whose names were supplied to me as living over two miles from my house." Unfortunately, Dr. Slane did not add, and we did not see, that these were "all the cases referred to by Mr. Eccles." Dr. J. Lumsden Bell's letter of June 19th contains the words, "He (Dr. Slane) had always confined himself strictly to the lines of his instructions." His letter of July 1st, being more explicit, "placed a different complexion upon the matter" by controverting Mr. Eccles and adding to Dr. Slane's communications a clearness that they had not previously possessed for us, though we seem not to have entirely understood him this time. We cannot admit that it was Dr. Slane's duty to visit every child born. He ought only to visit those beyond the statutory age reported to be in default; and surely this expression of opinion is relevant. We cannot see in our comments the animus that Dr. J. Lumsden Bell sees in them, though we deeply regret that we should have reflected in an unjustifiable manner upon Dr. Slane. We reported not on facts, but on alleged facts. We read carefully the correspondence submitted to us, and our comments were in accordance with our comprehension of it. When we believed ourselves to have been misinformed, we at once said so, and withdrew the offending epithet.—ED. L.

Mr. Stanley E. Ward.—Our correspondent would probably find the information he seeks in Hunter's Imperial Gazetteer. He might write to the Director-General of the Army Medical Department, 18, Victoria-street, Westminster, or to the India Office, and inquire whether there is any recent official publication bearing upon the subject.

HOUSE SURGEONS AND CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—I had just completed my term of office as house-surgeon at Guy's Hospital on June 30th. On July 1st I was summoned to give evidence relating to a case that had died three days previously. The case, which I need not go into, raised a very important question, in consequence of which the evidence was of a detailed and lengthy character. The coroner adjourned the case for a week. In the meanwhile I had to refuse a remunerative locum tenency in the North of England, and had to take another instead in the suburbs. I had to pay my travelling expenses to London, and to spend nearly two hours in the court. The coroner asked me my opinion as an expert about evidence given by another medical man. Is he justified in putting any but questions as to facts? When I claimed my fee as being no longer an officer of the hospital, he regretted that the law of the London County Council did not allow it. Do you not think that it is time that means should be taken to remedy such an injustice, which is only too liable to recur?

I am, Sirs, yours faithfully,
July 12th, 1895. EX H.S.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—There have been several letters of late in THE LANCET re the using of medical titles other than those to which the users are legally entitled. I think that to the general public the matter is of slight importance, it being very far from the case that the holders of the higher qualifications are the most successful practitioners, but from a strictly professional point of view it is a mean action to describe oneself on a brass plate by any other title than one's qualification warrants — yet how commonly it is done. In this neighbourhood we have an L.S.A. who puts "Dr. ——" on one plate and "Mr. ——, physician and surgeon," on another; an M.R.C.S., L.S.A., who calls himself "Dr."; and another M.R.C.S., L.R.C.P., who has "Dr. ——, physician, surgeon, and accoucheur." None of them do large practices.

I am, Sirs, yours truly,
July 23rd, 1895. M.R.C.S.

*** We have received many letters on this subject, a selection of which we shall print later.—ED. L.

MR. LUKE FILDES' "THE DOCTOR."

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me whether it is possible to obtain an engraving or other good representation of Mr. Luke Fildes' picture of "The Doctor," which was exhibited at the Royal Academy a few years since? I should like to know where it can be obtained and the price.

I am, Sirs, yours truly,
July 22nd, 1895. J. W., M.D.

*** The publishers are Messrs. Thomas Agnew and Sons, Art Publishers, 39B, Old Bond-street, W.—ED. L.

THE POST OF SURGEON ON THE CABLE TELEGRAPH SHIPS.

To the Editors of THE LANCET.

SIRS,—I shall take it as a very great favour if any of your readers will kindly give me some information concerning the post of surgeon on board one of the cable telegraph ships, the pay received, length of voyage, &c.

I am, Sirs, yours faithfully,
July 24th, 1895. H. A. B.

PRACTICE IN ALGIERS.

To the Editors of THE LANCET.

SIRS,—Will you or some of your readers kindly tell me whether it is necessary to have a French diploma to practise in Algiers?

I am, Sirs, yours truly,
Sea View, I.W., July 24th, 1895. A. B. C.

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ELECTROLYSIS.

W. J. R.—The apparatus necessary comprises a constant-current battery, sufficient to give a current of four to five milliampères through the resistance of the body—i.e., about 3500 ohms,—the usual leads, a fine electrolysis needle with a make and break key in the handle, a pair of epilation forceps, and a pad for the indifferent electrode. Our correspondent will find every information in "Medical Electricity," by H. Lewis Jones, M.D. (London: H. K. Lewis).

Louis.—The queries are too vague to answer. The most suitable country must depend upon our correspondent's health, temperament, amount of capital, number of friends, and many other circumstances that will occur to him. If he will put to us some specific question and will give us full information we will afford him all the assistance in our power.

"THE CLIMATE OF THAYETMYO."

To the Editors of THE LANCET.

SIRS,—I have a friend on a visit here temporarily, on leave of absence from his duties in Rangoon, Burma, after two years' residence there. He tells me that he spent two nights in Thayetmyo a short time ago on his way to Mandalay, in Upper Burma. Thayetmyo is a fairly healthy up-country district, with good cold weather in November, December, and January. It is a jungle district, but there are hills (as you may see marked on the maps) 1686 feet above sea level within a short distance, but not available for residence. Thayetmyo is easily accessible from Rangoon, one day's journey—fifty miles by rail to Prome and twenty by good river steamer. Steamers run two or three times a week. It is a large native town, containing but a few Europeans—probably only twenty or thirty. The Indian hill stations are within four or five days' distance of Rangoon.

My friend is about to marry and take his wife to Rangoon, where he expects to remain a few years longer. There are so few English ladies out there—i.e., at Thayetmyo—that it is difficult to form an idea as to their health or that of children. He is not in the profession.

I hope this brief account of Thayetmyo will be of some use to "M.D." I am, Sirs, yours faithfully,

July 23rd, 1895. R. A.

*** Yule's "Mission to the Court of Ava" gives a variety of information about the climate &c. of the district between Rangoon and Ava.—ED. L.

CUM *v.* SINE CURRICULO DENTAL DIPLOMAS.

To the Editors of THE LANCET.

SIRS,—It will remove a considerable amount of doubt in the minds of many dental surgeons if you will be good enough to express an opinion upon the following.

A somewhat unusual case having been brought under A.'s notice, he requested that he might have a consultation, explaining at the time that he would be glad to meet any properly qualified practitioner. The name suggested was that of a dentist holding a *sine curriculo* licence, and A. declined the consultation, another name being substituted, which gave mutual satisfaction. A. holds that no surgeon or medical man would entertain for a moment the idea of meeting a diplomate or licentiate holding his licence under such circumstances (were that possible), and considers that dental surgeons should regard the matter from a similar standpoint. Is A. right? Yours faithfully,

July 15th, 1895. PERPLEXED.

*** Providing that the dentist holding the *sine curriculo* licence carried on his practice in a professional manner, we do not think that A. should have declined the consultation.—ED. L.

THE FIRST NUMBER OF "THE LANCET."

To the Editors of THE LANCET.

SIRS,—I have just noticed the advertisement in your issue of the 6th inst., offering £1 for a copy of the first number of THE LANCET, which must be complete *with its cover*. It would be interesting historically to know whether the advertiser has embarked, in his search for this *rara avis*, on a wild-goose chase, or whether Mr. Clarke is wrong in stating in his Autobiographical Recollections that the number in question had no cover. I am, Sirs, yours truly,

Paris, July 23rd, 1895. HISTORICAL.

AN IMPOSTOR.

To the Editors of THE LANCET.

SIRS,—Allow me to warn your readers against an American who professes to be a nephew of Professor Sayre of New York, and endeavours to borrow money as a temporary loan. Yours obediently,

July 23rd, 1895. CHIRURGUS.

*** A man called at our offices on Monday last, and tried to borrow a small sum to enable him to cable to his uncle in America. Doubtless this is the gentleman to whom our correspondent refers.—ED. L.

"WANTED, ADVICE ON HEALTH RESORTS."

To the Editors of THE LANCET.

SIRS,—Having had patients abroad for rheumatism and also nephritis, I should advise to your correspondent, "O. H.," Las Palmas, Grand Canary, as a good winter resort—equable climate, good hotels, and cheerful society and amusements. It is cheaper than Egypt, and the Santa Catalina Hotel has an agency in London. One patient who was at Corfu last winter does not recommend it. Yours truly,

July 19th, 1895. M.D.

A QUESTION OF PROPER PROCEDURE.

To the Editors of THE LANCET.

SIRS,—Can you give me some advice on the following point? A. is called to attend a lady as her regular adviser. The case is serious, and a consultant's opinion is sought. This from its gravity alarms the friends, who ask for a second general practitioner to watch the case in company with A. On the advice of A., B. is called, who happens to live nearer to the patient than A. For this and perhaps from fancied preference on the part of the patient, B. is frequently called to visit the patient alone for fancied and occasional dangers. He is also asked to prescribe, and a preference is shown for some of his prescriptions over those of A. How is B. to act? Is he to decline to visit and prescribe, or to prescribe only in A.'s absence? Yours faithfully,

July 22nd, 1895. P.

*** B.'s position is a very undesirable and difficult one. He can only do his best. Obviously he must take every opportunity of showing deference to A., by requiring his sanction wherever practicable to changes of treatment, and in every other way. On the other hand, A. must consider B.'s difficulties, and make allowance for them.—ED. L.

"PRACTICE IN NEW ZEALAND."

To the Editors of THE LANCET.

SIRS,—If your correspondent, "M.B. & C.M." who desires information concerning medical practice in New Zealand, will privately send me his address, I will be happy to supply him with some facts on which he may confidently rely.—I am, Sirs, yours faithfully,

ALFRED WRIGHT, L.R.C.P. ED., &c.

22, Steyne, Worthing, July 23rd, 1895.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 25th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 19	29·62	W.	62	59	123	72	59	0·42	Cloudy
" 20	29·57	S.W.	59	57	95	66	58	0·11	Raining
" 21	29·63	S.W.	62	60	108	65	57	0·33	Raining
" 22	29·64	N.W.	62	58	117	71	55	0·90	Cloudy
" 23	29·86	S.W.	61	57	116	73	54	0·03	Cloudy
" 24	29·67	S.W.	65	63	107	73	56	0·45	Cloudy
" 25	29·91	S.W.	66	64	95	70	64	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—SOCIETY OF MEDICAL PHONOGRAPHERS (20, Hanover-square).—4 P.M. First General Meeting. Inaugural Address by the President (Dr. Gowers). The meeting will be open to all members of the medical profession.

During the week marked copies of the following newspapers have been received:—*Birmingham Post, Waterford Chronicle, Goole Times, Grimsby News, Walsall Advertiser, Scotsman, Blackburn Standard, Fife Free Press, Man of Ross, Freeman's Journal, Manchester Guardian, Sheffield Independent, Bristol Times, Express and Star, Birmingham Mail, Times of India, Brighton Guardian, Newark Herald, Bucks Herald, South American Journal, Dorset and Somerset Standard, Kerry Weekly Reporter, Shrewsbury Chronicle, Medical Press, Citizen, Courrier de la Presse, Guy's Hospital Gazette, Singapore Free Press, Bath Gazette, Oswestry Advertiser, New York Herald, Bombay Gazette, Nairnshire Telegraph, Liverpool Courier, Hereford Times, Daily Graphic, Scarborough Post, Southampton Echo, Cromer Post, Lowestoft Standard, Eastern Morning News, Brisbane Telegraph, &c., &c.*

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The Latest Therapy of some Animal Substances.

"TABLOIDS" OF THYMUS GLAND.

THYMUS GLAND "Tabloids" represent five grains of the fresh gland substance, and consist chiefly of nuclein and nucleo-albumin. Careful study of the subject has shown that in the human species the Thymus Gland reaches its greatest development under normal conditions about the third year of infantile life, when it begins to atrophy. But in that peculiar pathological condition now known as Paltauf's "Status Thymicus" this organ persists, and its presence may be verified by percussions on the manubrium sternum. It is asserted that the existence of the Thymus Gland in early childhood is compatible with perfect health, but that its persistence into a more mature period—considering the position it occupies between the sternum and the windpipe—renders the patient more liable to asphyxia, from which liability it is inferred, rightly or wrongly, that the Thymus cells are concerned with healthy respiration, by which is meant normal blood oxygenation, and that the ingestion of Thymus substance tends to strengthen the respiratory centres. The renewed interest taken in this gland, and the difficulty which those who wished to give it a trial have experienced in obtaining it, induced us to make arrangements to obtain regular and fresh supplies and to offer it to the medical profession in the "Tabloid" form. It has been suggested that Thymus Gland "Tabloids" may be highly serviceable in many nervous complaints, functional or organic, accompanied by hypertrophy, atrophy, or other interference with the functional activity of the muscular and lymphatic systems—*i.e.*, in pseudo-hypertrophic paralysis, in Basedow's disease with Anæmia, and in all cachectic states in which there may be marked enlargement of the Lymphatic Glands. Possibly Thymus Gland "Tabloids" in association with Medulla (Bone) "Tabloids" would be extremely useful in the treatment of pernicious or simple Anæmia and Leucocythemia. From the fact that before now, physicians, in dieting phthisical and other delicate patients, especially those in greatly emaciated conditions, have frequently found that the Thymus substance rapidly increases the number of leucocytes in the blood, it is fair to assume that these "Tabloids" may be of immense service in the treatment of strumous, scrofulous, and neurotic patients, in cases of rickets, and in the so-called "wasting diseases" of children. "Tabloids" of Thymus Gland supplied to the Medical Profession in bottles of 100 at 2s. each.

Characteristics of the Gland.

The best form of administration.

Therapeutic use and value.

"TABLOIDS" OF THYROID GLAND.

"Tabloids" are far preferable, we are assured, to liquid extracts—especially to such as are intended for use hypodermically, to which method patients usually show a natural repugnance. In a pamphlet dealing with the use of Thyroid Gland "Tabloids," we state, on the authority of a well-known observer, that even so small a dose as the eighth part of a "Tabloid" ($=\frac{1}{11}$ part of an average gland) has been known to produce the most profound reaction. Those who have had the largest experience with the Thyroid Gland as a remedy, whether it be in Myxœdema, Goitre, Exophthalmic Goitre, Cretinism (sporadic or endemic), Psoriasis, Eczema, Lupus, Ichthyosis, or other affections, strongly maintain the necessity of starting with a very small dose—quarter to half a "Tabloid"—at the initial stage in order to test fully the susceptibility of the patient to this treatment, and thus to avoid the profound systemic disturbance likely to occur when too large doses are given. It is also urged as being politic, since the treatment is usually a prolonged one, to administer concurrently a suitable tonic to counteract the debilitating effect likely to be produced. And once the treatment has been commenced there cannot be any doubt that for its systematic continuance and graduation of dose either progressively or decreasingly, and general convenience for self-administration by the patient with the least possible supervision from the medical adviser, "Tabloids" are superior to any liquid form. It is a well known fact that liquid preparations of this and similar structures, putting aside the difficulty of determining definitely their real constitution chemically, are from their very character only too prone to decompose, and the results which might accrue on the administration of resulting ptomaines it would be hazardous to guess. The Thyroid Gland "Tabloids," on the contrary, keep exceedingly well and have stood the test of time and temperature in many parts of the world to their increased reputation; they contain all the active principle or principles to be found in the gland; they are always to be relied upon for uniform activity, because the percentage of active principle must be well averaged, on account of the very large number of glands (brought to a homogeneous mass) dealt with in one operation at our laboratories. "Tabloids" of Thyroid Gland supplied to the Medical Profession in bottles of 100 at 2s. each.

Wide sphere of usefulness.

Liquid preparations unsatisfactory.

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"Tabloids" of Didymin (Orchitic Substance), already largely prescribed in cases of epilepsy and in various types of hysteria and neurasthenia depending upon functional failures or derangement, have lately acquired a new interest on account of recent records in the medical journals of the successful treatment of various nervous diseases. The cases quoted by an eminent practitioner in the BRITISH MEDICAL JOURNAL of June 8th, 1895, have apparently aroused considerable interest, judging from the many enquiries we have received. Those medical men who have had disappointing results with liquid extracts of Orchitic Substance will do well to renew treatment, if cases are still available, with the same remedy in the form of "Tabloids." The superiority of "Tabloids" over so-called liquid extracts will, we think, be again shown as markedly in the administration of Didymin Substance as it was in the case of Thyroid "Tabloid" medication. Didymin "Tabloids" are supplied to the Medical Profession in bottles of 100 at 1s. 6d. each.

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Presidential Address,

Delivered at the Sixty-third Annual Meeting of the British Medical Association, at London, on July 30th, 1895,

BY SIR J. RUSSELL REYNOLDS, BART., M.D.LOND., F.R.C.P., F.R.S.,

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION, CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, AND PHYSICIAN IN ORDINARY IN HER MAJESTY'S HOUSEHOLD.

ON THE ORGANISED PROGRESS OF MEDICINE.

GENTLEMEN,—Twenty-two years ago the British Medical Association held its annual meeting in London, and last year the members of the Metropolitan Counties Branch thought there were then abundant reasons why the Association should be invited to assemble here again, and the whole meeting of the Society convened in Bristol cordially accepted the invitation.

The Association was presided over in 1873 by the late Sir William Fergusson, the most distinguished surgeon of that day; there must be hundreds here who remember him well: his grand physique, his skilful and, indeed, artistic performances; the absolute ease with which he bore himself under the most trying circumstances of unavoidable accidents and yet not unforeseen, of events which no human knowledge could forecast, and of difficulties which needed all his resources of hand and courage to encounter. Yet, gentlemen, I venture to say that if, like a well-known but not quite historic character, Sir William Fergusson could have fallen asleep about that time, and have not waked up again until now, and were capable of appearing amongst us again, absolutely unconscious of the kind of progress made in surgery during those two-and-twenty years, and of the steps by which such progress was carried to its successful ends, even that dauntless surgeon might pause to perform an operation which either of his dressers of twenty years ago might be announced to do to-day, and would do without fear or dread. "Experience is by industry achieved and perfected by the swift course of time." Such industry has been unsparing, I may also say relentless, not in consideration of the patient, but of the worker. It has come from all sources of scientific investigation that could be focussed in the operating theatre, and it has done more than the surgeon of my student days—and Robert Liston was daring enough—could have foreseen even in his most optimistic dreams.

The Address in Medicine was delivered in 1873 by the late Edmund Alexander Parkes, and all of us who remember him, and all who have become acquainted with his writings, know how vast was his range of information, how keen his foresight, and how subtle and yet how true his faculty as a critic; but still, if Parkes could, even after only the few years since his untimely death, revisit Netley, or his still older haunt, University College, even he would be entirely bewildered and amazed if he found his house physician feeding a patient on sweetbreads, or injecting thyroid extract for the cure of myxœdema. In physiology, in pathology, and in medicine advances, equally important to each, have been made during the past two-and-twenty years. It is not my intention to occupy your time with any details on these matters; but let me recall for a moment your attention to the vast strides that have been made in the elucidation of both structure and function—such, for example, as in the researches upon the thyroid, the adrenal bodies, the spleen, and the liver; the advance of bacteriology; the function of the axis-cylinder of nerves; and the magnificent prospect before us of a new field of therapeutics in the serum treatment of disease. Physiologists, pathologists, and therapeutists have "seen visions" and in the past have "dreamed dreams"—as we may be dreaming now—but the facts, now well before us, have certainly astonished even the expectant, have surpassed their imaginations, and opened before them, not one only, but many doors into regions crowded to the full with yet more fruitful information, waiting only to be arranged and utilised.

So much of the work that has led to this present state of science has been accomplished in the metropolis that, although we know what has been done and is still being done in the provinces, we thought it well to ask you to meet us here, tell us of your own work, and join with us in a mutual endeavour to gather more and more by combined work and earnest, honest rivalry for truth than we could do by disunited efforts. What my object in this address is mainly concerned with is to draw your attention to that which seems to me to be the most striking fact of modern physiological, pathological, and therapeutical research—namely, the power of "living" things for both good and evil—namely, in the conservation of health and in the prevention or cure of disease. The mineral and inorganic world has helped us much, but now our help and hope come mainly from organised products and still living agencies.

During the last twenty years there has been established, to the great advantage of our profession, the "Conjoint Examination" by the Royal Colleges of Physicians and Surgeons. This, while not interfering with the autonomy of either College, has raised the plane of education required of all who are candidates for entrance into the profession, and has so brought into combined action the Colleges themselves, that they have added, each to the other, authority and dignity in the recommendations they have made from time to time with regard to matters of education, Parliamentary proceedings, State medicine, and scientific research. But the building on the Thames Embankment, which will be well seen during the next few days, is very much more than an Examination Hall: it is the centre of a very hive of industrious work. You will see there the most recondite and obscure processes of Nature under the most elaborate scrutiny and faithful record. The delicate phenomena and suggestions of "living" and "chemic" functions are under minute survey, analysis, and detail. The points where they touch, the mode in which facts of either may be rendered in terms of the other; their bearings upon the life of animals and men, both as individuals and as parts of a community; the diagnosis of the most obscure diseases, and the tentative and more than tentative endeavours to counteract poisons, which can be separated but not destroyed, over-ruled but not abolished,—these, and much more, you will see under the skilful and careful guidance of the able director of the laboratory, who, with his many coadjutors, will gladly welcome all those who are interested in such minute research. This is one of the products of the last twenty years, but it does not stand alone; the Brown Institute, the Society for the Promotion of Knowledge by Research, the laboratory of University College and of the other large schools, are all doing similar work, and constitute the most promising features of the present day with regard to advance in the science and art of medicine. In all our schools you will, I am sure, find very great improvement in the mode and scope of teaching; and this especially in it being less didactic and more practical. Much of the old-fashioned, often dreary "lecture" of an hour's duration has passed away, and in its place is a "demonstration," an "object lesson," a conversation, or examination. These are more useful and therefore more attractive to the students, and at the same time more trying, but none the less efficiently rendered by the teachers. Again, in clinical teaching you will observe much more and closer personal relationships, not only between the physician and student, but between the student and the patient. The latter is not a mere "dummy" in a bed, exhibited as a specimen of this disease or that, but a "human being" to be spoken to and to help you—I mean the student—to find out whether or no the card at the head of his bed, on which the diagnosis of his malady is supposed to be written, is correct or as full as it might be.

Then there is another point which has struck me much during the past ten years, and especially so whenever demonstrations are being given, either at the bedside or in the laboratory, namely, the far greater interest and earnestness which characterise the student of to-day as compared with his predecessor. Much of this is, I think, due to the indulgence of a larger hope. Hidden as still are the great mysteries of life, there yet are definite facts to be grasped by the mind, to be seen and handled, not only imagined or asserted; and the place of these facts in the economy of Nature, their bearing upon others, and their relation to work yet to follow, give a precision and confidence to study that is, comparatively speaking, of modern growth. There was plenty of assertion and show of knowledge in the past; but even the teachers did not believe the half of what they taught, or comprehended the half of their sage pronouncings. Nature has, as it were, taken man more into her confidence, and daily reveals so much, even while concealing more, that the

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learner stands firmly on the ground he has gained, instead of trembling on a quagmire, the length and breadth and depth of which he could not see and did not care much to imagine or investigate. He felt sure of little then but of his own and his teacher's ignorance, but now he grasps much that is ascertained truth and such as can be seen, shown, measured, and recorded with perfect accuracy. Our metropolitan museums in Bloomsbury, South Kensington, and Lincoln's-inn-fields will afford to all museum lovers an ample reward for careful examination. Two of them were splendid examples twenty years ago of what could be done to make "collections of material" instinct with information and object-lessons of physiological and anatomical lore; but the marvellous accumulations that have reached us during the period I have mentioned are, I think, only exceeded in marvel by the industry, high thought, and consummate skill with which these materials have been arranged, and made to tell, in their own way, the story of their being and of their place in the great Cosmos of which they form a part. The journal of the Association informs us that the work of this meeting will be carried on by fifteen sections, fully equipped with their respective officers, and each presenting subjects for discussion to be brought forward and threshed out by able hands. But let me remind you that these sections, or at least many of them, have had now, for varying numbers of years, their counterparts in the metropolitan and provincial branches and societies, where discussions are taking place all the year round, records of which are constantly published in magazines, proceedings, and other appropriate journals. In this manner the increase of medical literature has become enormous, and as a rule its value is very high. Of course, it would be too much to suppose that, coming from so many sources and from such differently constituted minds, its merit should always be equal or of the highest order. It cannot be expected of all who write and all who speak that one should say, as was well said of one of our late distinguished members, "he spoke because he had something to say, not because he wanted to say something." In the business of these societies it is the bringing together of recent facts or ideas and the friction of mind with mind that is so useful in separating the real and substantial from the imaginary or accidental; and in this work all our large towns and even country districts are assisting; and the marvel is that when we meet, even as we do now here in the metropolis, there should be such a tremendous store of material to be brought before us for discussion or reception. For example, in the Section of Medicine alone there are three subjects for discussion, and on these fifty members have already expressed their wish to speak; there are, moreover, thirty papers promised, and it is to be expected that few of these will pass without any variety of opinion on their merits being entertained and expressed. It is not to be imagined that all that is advanced will be either new or true, but of this we may be sure—that nothing will be brought forward without duly careful consideration, and apart from the belief that it is worthy of the time and the attention which those who are present will be asked to bestow. I am induced to make these remarks by the fact that the number of members of the Association is now three times as great as it was when we last met in London, and it is one of the most important events of the last twenty years that such an organisation should have grown into being, and should have such a vast influence for good over the whole civilised world.

There are some points in our present state of scientific precision in which, to my mind, it would appear we have made but little advance. We know much more about diseases, their origin, their anatomy, pathology, inter-relations, modes of ending, and their treatment; but with regard to nosology and nomenclature there is little of which we have to be proud. Groups of symptoms have been described by different observers as marking some tolerably distinct departures from recognised types of malady, and, for want of any nosological position being assigned to them, they are called after their first describers' names, and so we have not only Bright's disease, Addison's disease, and Graves' disease, but a host of others, often indeterminate in character, going by the name of Friedreich, Raynaud, Hodgkin, and others, until there is a fair prospect of every distinguished pathologist or clinical investigator being handed down to posterity as a disease the name of which conveys no semblance of a meaning as to its nature. Still further, and more to be deplored, there are smaller groups of symptoms which are not honoured by receiving the names of their describers as separate diseases, but the names of the observers are tied on to the symptoms; and so Cheyne-Stokes' breathing, Corrigen's pulse, von Graefe's sign, somebody else's phenomenon, and a multitude of other like phrases are used, to the great confusion of the student, and not only so, but to his real and permanent injury. For what is easier to say than that there is "Cheyne-Stokes' breathing" except to feel a sense of rest in having made use of that learned phrase, and so practically to shut the door to further inquiry as to what it means and how it comes about, what its diagnostic or prognostic value may be, and how it bears on therapeutics? When quite a boy I was watching the dying bed of my maternal grandfather, aged eighty-four, who had been afflicted with right hemiplegia and aphasia a few days previously. Of all medical terms I was absolutely ignorant, but that variety of breathing struck me much—as it was likely to do—and after observing several long pauses I exclaimed to the nurse, when he had not breathed for over a hundred seconds, "Surely he is gone now!" To my surprise the practised old observer replied, as she looked up from her knitting, "Oh, lor', no, sir; they never goes that way!" So far as my own experience teaches me she was right; but I have not yet met with a satisfactory and thoroughly scientific explanation of Cheyne-Stokes' breathing nor of its prognostic value. Of course, to give the proper name to a disease is to place it where it should be nosologically, "at home" and understood; but medicine is not a science yet sufficiently "ordinated" for this thing to be done, and so we grope about and "gather dust and chaff" with little chance or hope of turning them to value; and instead of making this the matter of most serious investigation and finding the true relation between the new "group of symptoms" and those others which form the central facts, the backbone and whole skeleton of pathology, we lay hold of the first piece of red tape ready to our hand, tie up the group of symptoms in a bundle, and label it Brown, Jones, or Robinson's disease.

A suggestion was made not long ago by one of our most able and energetic thinkers that some apparently new diseases might perhaps with advantage be named provisionally after the patients who exhibited them. This certainly had the merit of originality, as it struck me at the time I heard it; but in looking at my case-books I found that already I had several times adopted it, in so far as to say, "Case X Y Z resembling in particular features that of A B C," or some other very familiar patient. But nothing could be worse for scientific medicine than any such retrograde proceeding. If there be any danger of nomenclature resolving itself into a catalogue of the names of distinguished pathologists, as has been suggested, it would be a still more terrible disaster if a differentiation should be carried still further on this dual system of nomenclature, and that the student should have to be examined in his knowledge of the "George Brown variety of Robinson's disease" or the "Max Schott's deviation from von Hopner's sign." At the very time that there is this increasing use of loose phraseology there is also—as is common enough in other departments of life—a marked tendency in the opposite direction, and that is to connote as diseases certain groups of symptoms by some short or long and often not very appropriate word or words, such as acromegaly, hypertrophic pulmonary osteo-arthropathy, appendicitis, pseudo-hypertrophic muscular paralysis, and others. There is abundant precedent for this; some are time-honoured and old enough to be allowed to live, such as pertussis, epilepsy, apoplexy, chorea, gout, and rheumatism, which have the merits of brevity and of meaning; but there have crept into ordinary conversation nowadays a number of expressions which aid us little or, as I think, not at all; and such words as gastrojejunostomy and as laparotomy do little more than lay us open to the satires of the playwrights of the last century in foreign countries and its predecessors in our own.

But whatever may be our failures—and they are small compared with our enormous successes—there is nothing that has happened during the past twenty years to be compared in importance, as I have already said, with the new revelations that have been made of the potency and pre-potency of life—the power of life in life—in health, in disease, and in its treatment. I allude, of course, to the interpretation of much of the functions of certain organs, the existence of which had been known for many years, but the utility of which had been absolutely unknown—for example, the pituitary body, the thyroid gland, the suprarenal capsules, and others.

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The knowledge of the functions of the liver and the spleen has been gradually increasing for a long time, and only by slow degrees have the metabolic properties of these organs taken the place of the older ideas of secretion of bile and balance of weight. It has been, on the other hand, although the outcome of serious investigation, but also somewhat by a fortuitous concourse of thoughts and events, that the most astounding revelations of modern physiology have been made. What we have come to know amounts to this in general terms—that the absence of certain organs, of the functions of which until quite recently we knew nothing definite, leads to grave and diverse diseases of the body, whether this absence be brought about by surgical operation or by disease more or less individual or specific in its character, and that, such being the case, the supply of the material of that organ as food, or some part of it, as an extract, to be introduced into the blood, removes the symptoms, acts with great promptitude, and, I might say, almost with some violence of disturbance of the whole economy. Not only so, but these extracts seem to possess a power reaching far beyond that which was first found to be their almost anticipated result—that is, in so modifying the action of the heart and the intravascular pressure, in a manner and to a degree entirely unlooked for, and requiring much further investigation, in order to unravel the true nature of the functions of those organs in health, and the value they may have, by their products, on the processes and treatment of disease. As yet we are only on the threshold of still greater discoveries in regard to life, but we see, through the portal, ranges of facts which are trustworthy guides as well as sign-posts, and which will, we believe, lead us to a larger knowledge of those recondite processes of life in its most essential and characteristic features—namely, of the nutrition of all organs, of the way in which this is brought about, and of the inter-dependence of all tissues, so that, perhaps, in a far higher sense than we have ever realised before the truth may be revealed that "when one member suffers all the others suffer with it," and the reason of this may be explained. A very obvious consideration which should "give us pause" in self-congratulation is this, that as in past days the functions of different parts of organs—the kidneys, for example—were more or less clearly separated by physiologists, no longer with us now, so we have seen recently that only certain portions of other organs have the physiological effects just discovered, and thus that there may be in what we have regarded as much simpler organic components, even in quite simple tissues, some unconsidered element of function, some *sine quâ non* of healthy life, some missing link in the phenomena of life, so that it behoves us to keep the mental eyes wide open to clear away all films of prejudice or hasty complacency, to expect the unexpected, and so, without looking for it, to find our reward. Not less important than the matter I have just referred to is the recent development in "microbiology" and "all that therein is." The "germ theory" of the disease is not new. When it commenced and who has the credit of its begetting I do not know. Probably, like ancient and modern heroes, it had many parents and as many homesteads. It is quite clear that our own great Harvey entertained it, as may be seen by the following: "Let physicians cease to wonder [he says] at the manner in which epidemic, contagious, and pestilential diseases scatter their seeds and are propagated to a distance through the air or by some 'fomes' producing diseases like themselves in bodies of a different nature, and in a hidden fashion silently multiplying themselves by a kind of generation until they become so fatal, and, with the permission of the Deity, spread destruction far and wide among man and beast, since they will find far greater wonders than these taking place daily in the generation of animals." Years later it was a hobby ridden by many, but without much convincing proof. But even so late as 1866 we find that advanced pathologist, Dr. Edmund Alexander Parkes, saying, with regard to the etiology of influenza: "We find ourselves in the presence of the so-called fungoid theory of influenza," and, after discussing this matter at length: "It seems impossible at present to come to any conclusion as to the nature of the cause."

The most important fact with regard to recent microbiological research is the gradually increasing appreciation of the fact that these lower forms of life exert, not necessarily mischievous, but indeed benignant influences on the human body, and that although the mode of their operation is not fully explained they take part in healthy processes, assisting normal functions—nay, indeed, it would seem sometimes producing them and warding off the malign effects of other influences to which we are habitually exposed. These bodies, to which we are indebted for this aid, operate partly by their chemic action and partly by what we must call a vital process, and by their cultivation outside the human body and their modification by passing through other organisms can be made to exert a malign or a beneficial agency on man. It seems even in the range of possibility that at some time not very distant some other than "the ancient mariner" may apply to them the far-reaching words of Coleridge and exclaim:—

> "O happy living things! no tongue
> Their beauty might declare;
>
> Sure my kind saint took pity on me,
> And I blessed them unaware."

The third great revelation of the last twenty years is the wonderful protective and curative power of these living products. This, in a very wide sense, is not new. Of all the most powerful agents of destruction the most violent have been derived from "living" things; they are to be found in the animal and vegetable worlds, not in the mineral. In their most terrible malignity—such as in snake-bite, glanders, or hydrophobia—these need no human skill for their development; they are prepared in the laboratory of Nature, and, alas, are only too ready to our hand. Next to these come the poisons of stinging things, and after them the more slowly operating and less deadly animal infections; some with indeed beneficial influence, as "vaccinia"; others with local effects on the skin, but not often great disturbance of the general health. The vegetable kingdom can produce potent poisons, such as belladonna berries, aconite root and leaves, poppy juice, and the ignatian bean; but in order to render these more deadly the hand of man has to come in and prepare nicotine, strychnine, morphine, and the like, just as it may produce, from the mineral or quasi-mineral world, such potent agents as hydrocyanic acid, concentrated acids, and other dealers of destruction. The interest in these facts lies in the modern mode for their utilisattion. The great potency of living products has led to very fanciful notions in therapeutics; and there have been those who, to cure diseases of organs, have given portions of the same but healthy organs of animals or of man or other animals. Again, the idea has been pronounced that even excreta were useful drugs, and that the diseased organs of man might effect a cure of those supposed to be afflicted in like manner. Curious as some of these details are, they are of real interest to us only as they lead up, through inoculation for small-pox, to our own Edward Jenner's discovery of vaccination, and then, through the researches of Pasteur and Brown-Séquard, to our present state and plane of knowledge. It would seem now that there is scarcely any limit to what may be expected in the cure or prevention of disease; and the most striking of all phenomena is, to my mind, the probability of rendering an animal immune by the introduction into its organism of a healthy constituent of the body of another. This, if fully confirmed, will be the greatest veritable triumph of therapeutic and preventive medicine, instituted and guided by extended inquiry into comparative anatomy, physiology, and pathology. As in the human race or species there exist, as is well known, what may be termed "idiosynerasies"—by which is simply meant that as a matter of fact some people, and some people's families, escape epidemic diseases, whereas they are especially prone to take others to which they may be exposed—so in the great economy of nature certain groups of animals have been shown to exhibit no capacity for "taking," or for even being "inoculated" with the poisons to which others are exposed, and from which they suffer, and that severely. It would seem, therefore, that use may be made of these animals more or less naturally immune from certain maladies, and that their immunity may be partially conferred on man. Quite recently a communication of the greatest importance has been made on the rendering of animals immune against the venom of the cobra and other snakes, and on the antidotal properties of blood serum of immunised animals. This subject has occupied attention during the last six years, and we must all look forward with expectancy and hope to the possible and probable diminution of a great national and imperial calamity.

The outcome of all that I have been saying is this: that the scattered fragments of knowledge and "guesses at truth" of many years have been gathered into a focus during the past twenty-five years; that the vegetable life, extracting

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from the mineral world the materials it needs for growth and production of powerful agencies for good in the form of food and medicines, and for evil in the form of poisons, has given itself up to the growth of animal life, with its much more complex organs, and for the cure of ills once thought beyond the reach of human aid; but that, thanks to man's scientific ardour and industry, it has again shown itself to be our servant, our helper, and our protector. These are not dreams of the study, they are facts of the laboratory and of daily life; and in using that word "life" again I must endeavour to emphasise still more forcibly upon you my urgent belief that it is to living agencies and their employment that we must look for help in the care of infancy, the conduct of education—moral, mental, and physical—the training up of character as well as of limbs. That it is the guidance of living functions, in the choice of living occupations, be they either of hard work or of amusement; it is to these we must appeal if we would see the *mens sana in corpore sano;* and then it will be to these that we may confidently look for help when the inroads of age or of disease are at hand often to cure us of our trouble; or, if not, to give us rest and peace. It would be absurd in me, now and here, to attempt to say in what this potency of life exists. It is enough for us to recognise its existence, rejoice in its marvellous energy, and anticipate still more from our investigations of its modes of action; but I cannot help feeling that, however far we go in our research into the arcana of nature, one of our ablest neurologists, who has gone very far, is right when he says: "Search while you may, with eyes, however aided and however earnest, that which we call 'life' eludes our search and resists our efforts. We must be content with what knowledge we can gain, secure or insecure, and while using it as best we may, should realise in all humility how much there is we cannot know, and yet we cannot doubt."

There are three aspects of life to which I wish to make further reference, because it seems to me very important that this Association should at some of its annual meetings direct special attention to their consideration. And first a few words on "professional" life. As physicians and surgeons, however numerous, we do not constitute a "body" of men unless we have some one prevailing spirit common to us all. The profession may include its thousands and tens of thousands, but it is a crowd, a multitude, or shall I say a "mob," unless there is in it an *esprit de corps;* and, thanks to our great seats of learning, our universities and colleges, we have developed this uniting spirit now for many years. But our own special colleges of physicians and surgeons, our medical societies, and especially this vast Association, have done more within the last fifty years to give real, unifying life to its individual members than was possible, or even expected to be possible, by our forefathers. There are sixty branch associations in direct communication with our colossal trunk, spreading themselves not only over the United Kingdom, but to the remotest parts of our dominions; and these are all equipped with efficient officers, holding meetings all over the world, discussing the really important topics of the day, and adding their contributions to the sum of knowledge through the pages of our quite remarkable journal. Now this is very encouraging and very hopeful, but it entails, as it is bound to do, great responsibilities. That so large a body of men should be banded together under one common name means that they have some common purpose, and some common plan of coöperation to attain it. What that purpose is we know—namely, to render our profession of the highest service, not only to the individual, but to the State, by taking our share and giving our advice in the making of our laws, so far as they affect us, as members of our profession; by the regulation of our charities, the guidance and control of labour, the care of the pauper and the pauper child, the lunatic and the quasi-lunatic, or the habitual drunkard; by the care of our poorer brethren; by the advance of scientific researches, and especially of those that require combined efforts and combined funds for their prosecution; by the promotion of useful and stable literature; and by the elevation of all that constitutes the education of the man of science, the physician, the surgeon, or the guardian of the public health. These noble purposes cannot be achieved, nor have any of them been carried to any useful extent, without self-sacrifice, as well as the sacrifice of time, without a consideration of the views of others as well as an assertion of one's own; without respectful regard to the feelings and positions of our colleagues, as well as a due estimation of those which we may occupy; without patience as well as work; and an all-pervading sense of hope in the midst of trying times and in the darkest hours. One thing, in addition, we should all most strenuously try to do, and that is to avoid waste of time. We may use it or sacrifice it freely, but we cannot afford to throw away one moment, whether it be on personal ends, forlorn hopes, foregone conclusions, or threshed-out heaps of seedless faggots. It is in this spirit, I am sure, that we begin our vast meeting in the metropolis, and if we but continue along the lines of conduct our Association dictates, and if in the control of the affairs of our daily life we always bear in mind our belonging to a noble profession, and to a great Association of fellow-workers for its benefit and for the benefit of mankind at large, we may hope to see that—useful as it may be now—at some future assembly of our fellows it will not be found necessary to constitute a special section for the discussion of those questions which fall under the category of ethics.

Outside our professional life, but closely mixed with our daily work, is the "social" constitution, or, as some would call it, the "environment" in which we have "to live and move and have our being." Certainly it has changed much within the last twenty years, and it would be impossible for me to dissect it now and say in what ways we have advanced and in what others we have either retrograded or gone far, far out of the beaten track. The changes on all hands are pressing, importunate, and, I might say, overbearing. They are not seen in the assemblies of such reverend bodies as the Royal Society, the Colleges of Physicians or Surgeons, or in the higher courts of our universities, but may be met with in the courts of law, the park, the theatre, the concert room, the school, the public assembly, the drawing-room, and, last, and worst of all, in the home. It would seem as if "reverence, that angel of the world," had from some regions taken flight, and that in her place were idols, or mocking shadows, or gorgeously appareled lay figures. This absence of reverence shows itself everywhere, but perhaps it is possible to classify even such a negative quality and put its leading features under three great categories: (*a*) reverence for all that constitutes the religious element in life; (*b*) for that which is the groundwork of "social" propriety, and I may say even of decency, as our predecessors would have thought; and (*c*) for the constituted order of relative dignity in "family" life. Thus, much that now passes for wit, humour, cleverness, or fine and advanced thought may be easily resolved into offences either against the religious sense of others—that is, trespasses in the direction of profanity—or against the long recognised standards of propriety, in topics of conversation, in literature and art; or sins in many directions against the widest meaning of the old commandment, "Honour thy father and thy mother." If all shades of profanity, impropriety, or rudeness were eliminated from what now passes current in books, in plays, and in conversation, we should, I think, often find little or no humour left, but only a vapid attempt at seeming cleverness, or at best some silly pun. Even the epigrammatic style of writing and talking at which there is so much attempt, especially in the conversations detailed in the modern novel, has generally lost all real point and excellence, and in most instances has degenerated into clumsy efforts to be smart and unintelligible or to gild the refined gold of the setting of that priceless gem of humour when natural and spontaneous, the true "Irish bull." The sparkle of the humour is lost, there is a semblance of a paradox, and wrapped up in this an obvious and often intentional untruth. If this were rare we could let it alone, least of all could we think it worthy of notice in the meeting of this Association; but it is not rare—our literature is positively flooded with this senseless and misguiding nonsense, even science is sometimes dragged into its degrading service, and the profession of medicine has not escaped its touch. If we ask ourselves, "What is the meaning of this and whence its origin?" I do not think we shall have very far to travel. Of late years there has been imported into our country a phrase which, in my humble opinion, is abominable in itself and in its power for evil. I will not quote it; but let me ask you if you do not think that this idea of the approximation of the "end of the nineteenth century," with the nonsense that has passed into its literature, has not had much to do with it? It may be that the notion has arisen in some minds that when its "crack of doom" has come, and they wake into a new epoch, follies will be left behind, no more records will have to be made or broken, wild oats will be trampled under foot, and no more will be sown; that there will be an end to the

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frivolous talk of the last decade, that a "new earth" will be here for us to tread, and that if there be any idea of a heaven lurking in such minds, there will be a "new heaven" also. It has seemed to me that something like these notions have passed current in many circles, and have been held to excuse what would otherwise be not only inexcusable but intolerable.

Now, gentlemen, it is against all this absolutely unscientific and unphilosophical verbiage that, I think, we, as members of the profession of medicine, should utter our strongest protest. Nature does not progress by leaps; the terms, limits, and boundaries of time are convenient arrangements we have made for ourselves; to pass them may make or destroy some legal powers or exemptions from responsibility; but they have, in themselves, nothing whatever to do with the essentials of our individual and domestic life. When the last stroke of the bell has knelled in the midnight of London the last hour of 1899, do we really think that either here or there or anywhere it will carry with it any substantial meaning or any wholesome lesson? I cannot for a moment believe it will. Old and young people will die in the awakening as in the dying year; babes will be born in the one century and in the next; there will be bridal feasts and funeral marches; wisdom and folly; sickening accidents and more sickening crimes; there will be "new women" and "new men"; but there will also be "old women"—and those of both sexes—and "old men" to tell us of the far better days when they were young and everyone was wise. As physicians and surgeons we can, I think, do much to counteract this, as it seems to me, growing tendency of the present day. In the nursery, in the schoolroom, and yet a little later we would give advice, and that of useful sort. Little girls and little boys may strip themselves as high as may be, and paddle on the sands of the salt sea shore with relative impunity, for they rarely venture into water over ankle-deep; but when a few more years have passed, and, exposed as society now sanctions, they roam on another shore of that "Ocean of Time whose waves are years, treacherous in calm and terrible in storm," they may be overtaken by the tide they have courted, and to them "Life be never the same again." There is still the one great and greatest relationship of life to which I will address myself, but only for a brief period—I mean the conduct of our profession to the "religious" element in our nature. Here we have nothing whatever to do with creeds, be they hoary with age or flushed with the bloom of youth; all that I mean is that we, members of the medical profession, have to deal with those to whom these creeds mean much, and are, with what they entail to many, the be-all and end-all of existence. I am not thinking for a moment of the few substitutes proposed for religious faith, but referring only to that which relates those who entertain it to the Higher Power, the source of Revelation and of good and hope, far other than is to be found in themselves or in Humanity, be it in the Future or the Past. I am sure that in giving the help we hope and ought to give to suffering and sorrowing man we shall do nothing worthy of the name unless we realise, and that to the full, the importance of this factor in our lives and theirs; and so guide its operation as to help it to chasten, subdue, control and comfort those to whom it is the minister that they feel to be sent from God to help them in their passage through this region of passing shadows to that of realities which are abiding things.

Acting in this spirit in our professional life, and in our relation to the social and religious lives of our friends and patients, we may, I think, take courage, and, entertaining a larger hope from holding a larger view of life, adopt the words of the Laureate of the first half of this century and exclaim:

> "Look forth, my soul!
> (Nor in this vision be thou slow to trust)
> The living waters, less and less by guilt
> Stained and polluted, brighten as they roll,
> Till they have reached the eternal city, built
> For the perfected spirits of the just!"

PRESENTATION.—Dr. Francis Wm. Clark of Lowestoft has been presented with a testimonial from the St. Margaret Lodge of Ancient Free and Accepted Masons, No. 1482, Grand Lodge of England, on the occasion of his leaving Lowestoft for Hong Kong, which consisted of an artistically illuminated address, expressing the cordial appreciation, by the Worshipful Master, Past Masters, Officers, and Brethren, of Dr. Clark's valuable services during his membership of the Lodge.

Address in Medicine.

Delivered at the Annual Meeting of the British Medical Association at London, July 31st, 1895,

BY SIR WILLIAM BROADBENT, BART., M.D., F.R.C.P. LOND.,

PHYSICIAN TO AND LECTURER ON CLINICAL MEDICINE AT ST. MARY'S HOSPITAL, AND PHYSICIAN IN ORDINARY TO H.R.H. THE PRINCE OF WALES.

THE GROWTH OF THE ART AND SCIENCE OF MEDICINE.

MR. PRESIDENT AND GENTLEMEN,—The heavy responsibility of delivering the Address in Medicine on the occasion of the visit of the British Medical Association to London has been placed upon me by the Council of the Association. The opportunity of addressing so many colleagues as are assembled here rarely happens to a medical man. The honour attending it is very great, and nothing short of his best thought and endeavour ought to satisfy his sense of what is due to the occasion. It was under the influence of this feeling that I entered upon the difficult task of deciding what I should bring before you to-day, and it seemed to me that it was better that I should resist the temptation to take up some special subject or a topic of local or temporary interest, and once more go back to the past and see what lessons it has for us at the present day. I propose, therefore, to consider the growth of the art and science of medicine. I place the words art and science in this order advisedly, for the art of healing is one of the primary needs of social organisation, however rudimentary, and preceded by many ages the development of anything which could be called a science of medicine. So far, moreover, the art of healing has always been in advance of science, firmer in its basis and more secure in its principles, and even when medicine as a science has realised our highest aspirations the end and aim will be art—that is, skill in the recognition and treatment of disease. At the same time, it is true that until science began to throw light on its path the art of healing struggled blindly on its way, and its advances were intermittent and slow, with long intervals in which there were stagnation and retrogression. All true progress in medicine has consisted in the application of the results of scientific investigation to the facts of observation.[1]

At whatever period of the world's history and at whatever stage of civilisation we may contemplate the physician engaged in combating disease, there will be recognisable three distinct factors in his work—his power of identifying disease, the remedies at his command, and the ideas by which he is guided in the employment of these remedies. The first rough and imperfect identification of the more conspicuous forms of disease was scarcely worthy of the name of diagnosis. Anatomy, which is essential to the localisation of morbid conditions, was scarcely known; no shadow of comprehension of physiological or pathological processes entered into the conception—it was simply the attaching of a name to an assemblage of symptoms, the course of which, however,

[1] In my first sketch of this address I was tempted to use that comfort-word evolution, but I found this term appropriated on every side, and employed to connote such a variety of modes of progress that my poor effort would have been lost in the crowd. Besides, a very little reflection showed me that no such process as "progress from the general to the special," which is what is really implied by the term evolution, can be traced in the history of medicine, but that, as Mr. Balfour says: "Assuming, as we do, that knowledge exists, we can hardly do otherwise than make the further assumption that it has grown, and must yet further grow. In what manner, then, has that growth been accomplished? What are the external signs of its successive stages, the marks of its gradual evolution? One at least must strike all who have surveyed, even with a careless eye, the course of human speculation: I mean the recurring processes by which the explanations or explanatory formulæ, in terms of which mankind endeavours to comprehend the universe, are formed, are shattered, and then in new shape are formed again. It is not, as we sometimes represent it, by the steady addition of tree to tree that the fabric of knowledge uprises from its foundations. It is not by mere accumulation of material, nor even by a plant-like development, that our beliefs grow less inadequate to the truths which they strive to represent. Rather are we like one who is perpetually engaged in altering some ancient dwelling in order to satisfy newborn needs. The ground plan of it is being perpetually modified. We build here, we pull down there. One part is kept in repair, another part is suffered to decay; and even those portions of the structure which may in themselves appear to be quite unchanged stand in such new relations to the rest and are put to such different uses that they would scarce be recognised by their original design."

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was watched with great sagacity. How remedies were first discovered and how the properties and uses of so many of them as were handed down from remote antiquity were known is matter for amazement. Animals are credited with instincts which direct them to the consumption of certain herbs or mineral substances when their health is deranged; the instincts of the primitive man also must have applied to remedies as well as to food, and experience of their effects must have been accumulated and transmitted, embodied frequently in legend or superstition, as part of tribal knowledge. Of the infancy of medicine properly speaking we know nothing. Individual acts of healing are related in the Old Testament, and the treatment of wounds is described by Homer; the Chinese from remote antiquity had a system of medicine, and medicine has a place in the Vedas; but in the works of Hippocrates, the earliest medical literature which has come down to us, we are at once introduced to the theory and practice of the art of healing at a considerably advanced stage of development. Already there were rival schools of thought and treatment, and disease was discussed with extraordinary acumen from opposite points of view both as regarded its nature and phenomena. Bleeding was in everyday use, not by any means as a routine fashion, but with judgment; cupping also was practised. The virtues of opium were known, and purgatives of various kinds, chiefly irritating and violent, and emetics were familiar remedies; enemata and suppositories and pessaries were employed, and fomentations and poultices in great variety were applied. Hippocrates, whose writings embody all our knowledge of ancient medicine, was born about 460 B.C. He was a contemporary of Socrates, Euripides, and Aristophanes, and was a worthy representative of medicine at that brilliant period of Greek literature and intellect called the age of Pericles. It is true that his knowledge of anatomy was rudimentary, and that his physiological ideas were totally wrong, but he has left of himself the picture of a sagacious observer and wise physician. He was the inheritor of the knowledge and traditions of the school of Cos, and another source of information by which he had profited was the training establishments of athletes, where the influence of diet, gymnastics, and baths on health and vigour was carefully watched. His attitude of mind was towards the study of disease as such, rather than the differentiation of distinct diseases. Refinement in this latter direction had obviously been carried much too far by the school of Cnidos, which he criticised and opposed, where symptoms were looked upon as separate morbid entities. His distinguishing merit, however, was that he was guided by observation and not by theory. Hippocrates could not, any more than his contemporaries or successors, or than we ourselves, escape the dominion of theory; but his theories were generalisations from observed facts, and not deductions from preconceived ideas or so-called first principles. The doctrine with which his name is associated, that of the coction of humours and of critical days, for example, is essentially a generalisation from the natural history of certain simple diseases. In coryza or bronchial catarrh there is a watery acrid running from the nose, or scanty viscid expectoration with obvious constitutional disturbance. A change in the character of the secretion is attended with a remission in the symptoms, and after the discharge of more or less muco-purulent matter there is a return to normal conditions. Something of a like kind is observed in the urine in fever and in the stools in diarrhœa. For the accomplishment of these changes a certain time is required, which, when ascertained in each class of disease by careful observation, gives the critical day. The facts were essentially facts of the natural history of disease. The theory evolved as an explanation of the course of events, and applied in the elucidation of disease of which the processes were not patent on the surface, was that some one of the four humours, the due balance of which constituted health, had obtained predominance and set up disturbance, general or local; this was contracted, elaborated by the animal heat, increased for the purpose, and qualified by admixture of other humours, and so brought into a condition in which it could be expelled and got rid of. Hippocrates, from this subordination of theory to observation, from his careful study of the causation of disease, not less than from the lofty sentiments and clear judgments contained in his writings, remains, and must ever remain, the model physician.

During the 500 years which separated Galen from Hippocrates the centre of gravity of the civilised world had shifted. Greece, shattered by conflict between its different States, had succumbed to Macedonia. Alexander had conquered Asia and then died. On the ruins of his empire Rome had gradually risen and when Galen lived had extended her rule over Greece, Asia Minor, Egypt, and the southern littoral of the Mediterranean as well as over Gaul, Spain, and Britain. There had been time, however, for the development of a high degree of intellectual activity and literary culture under the Ptolemies in Egypt, and Alexandria had become a great centre of learning. Here marked advances were made in anatomy, and dissection was practised on human bodies as well as on animals. Herophilus between 305 and 280 B.C. left his name to the confluence of the sinuses of the dura mater; Erasistratus, a contemporary, recognised in a crude way the motor and sensory functions of the nerves; Chrysermes, 240 B.C., writes on the pulse, as does also Heraclides, 230 B.C. Medical writings date from Alexandria as late as 170 A.D., but the school had long lost its authority, and Rome henceforth attracts the highest medical talent. The physicians who first made a name in Rome are Greeks—Asclepiades, the friend of Cicero, and Galen himself. Celsus, however, who comes between the two, writes in Latin. Galen, who was born at Pergamos A.D. 130, as is known to all of you, dominated medical thought for 1500 years, and if it was inevitable that authority should exercise such undisputed sway for so long a period it was perhaps fortunate that it derived from Galen. He was in spirit a follower of Hippocrates and the basis of his ideas on disease and its treatment was observation. His keen and active intellect and fertile imagination, it is true, led him to theorise on every conceivable subject; but the impression left as to his character by reading his numerous works is that of an acute observer, of remarkable ingenuity and profound judgment and excellent common sense. He dissected diligently and thoroughly, but mainly monkeys rather than the human subject. Taking this into consideration, his writings on anatomy were wonderfully complete and exact. They held sway till the time of Vesalius. He finds the most ingenious reasons, often far-fetched and preposterous, for the form, consistence, and relations of all the various organs. In respect of anatomy his knowledge was incomparably superior to that of Hippocrates. He experimented on the spinal cord and on the nerves, and knew that they subserved motion and sensation—knew even that there were motor and sensory nerves distributed to the muscles and skin respectively, discovered the part taken by the recurrent laryngeal nerve in phonation, and, although his physiology is chiefly represented by fanciful teleological explanations of the uses of the different parts and organs, he made noteworthy additions to the knowledge of functions. Apparently Galen was the first to establish the fact that the kidneys secreted the urine, and that it was conveyed by the ureters to the bladder. At any rate this was disputed in his time, the objection being that the urine could not be forced back through the ureters, and could not, therefore, have entered by these canals. The bladder was supposed to attract the urine. He demonstrated it by tying the ureters; and in the course of his experiment he almost stumbles on the discovery of the circulation, for he maintains that blood is carried by the renal arteries to the kidneys in order that its watery part may be filtered off. The traditional ideas of the origin of the veins and of the flux and reflux of the blood in them, however, blinded him to this and other evidence, and he believed that the arteries contained air, though he maintained that they also contained blood. A frequent reproach brought against Galen is that he spoke of the interventricular septum as perforated, so as to allow the passage of air between the two ventricles, against the evidence of his senses; but an excuse can be found for him in the fact that invisible communications had always been supposed to exist between the trachea and the arteries by which air passed from one to the other. He can only have meant similar invisible perforations, the orifices of which he would think he saw in the depressions which the walls of the ventricles present. To convey even the faintest idea of the additions which Galen made to medical knowledge would require more than all the time at my disposal for this address. He wrote more than a hundred treatises on various subjects, including six on the pulse, and, while giving extravagant descriptions and making fanciful comparisons, he pointed out distinctions and characters which have been verified by the sphygmograph. His treatise on local affections is remarkably true to nature, and no more impressive lesson on the value of observation, even when unaided by science and experiment, can be afforded than by realising how fresh and vivid and modern his descriptions of diseases

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and symptoms sound. His diagnosis, for example, between hæmatemesis and hæmoptysis and other forms and causes of blood-spitting leaves little to be desired. I cannot deny myself the pleasure of quoting a passage which illustrates his robust common sense. He is distinguishing between the different causes of ischuria:—"Suppose the patient to be a child who has previously presented symptoms of stone, watery urine charged with sandy deposits, the child continually squeezing the penis, which is flaccid or unaccountably erect; then sudden stoppage of urine takes place. It may be reasonably concluded that the stone is lodged in the neck of the bladder. Place the child on his back, the hips a good deal raised above the rest of the body; then shake him in different ways so as to make the stone fall out of the canal. After these proceedings tell the child to try and pass his urine. If the attempt is successful and the urine flows you will be satisfied that you possess the exact diagnosis of the cause, and that at the same time you have found the proper treatment. Should the retention persist you will shake him again still more forcibly; if after this it still persist, then with the catheter you will push the stone from the neck of the bladder to reopen a passage for the urine." It might be my surgical colleague, Mr. Jonathan Hutchinson, who was speaking.

The doctrine specially associated with the name of Galen is the humoral pathology accepted by him from Hippocrates and developed. The humours are phlegm, blood, yellow bile, and black bile; and all diseases arise either from a change in the quality of these humours, or from a predominance of one or other of them, or a flux of some particular humour to a given part. But, like Hippocrates, Galen is first of all an observer, and his theories, faulty as they may be, are generalisations from observations and not deductions from *à priori* assumptions as to the nature of things. Both Hippocrates and Galen rejected the doctrine of the sect of empirics, who declared that experience alone, without reasoning as to the nature of relations of observed phenomena, and without reference to causation or to the influence of climate, season, age, sex, character of constitution, or mode of life, was the only safe guide in the treatment of disease. Hippocrates still more emphatically rejected the pseudo-philosophical deduction of rules of treatment from the abstract qualities, hot and cold, dry and moist, acrid and sweet; and Galen in his turn rebutted the methodic doctrine of Asclepiades and Themison which he found prevailing in Rome, according to which all diseases were referred to constriction and relaxation and treatment consisted in relaxing and astringing.

[Sir William Broadbent referred to various Roman physicians living during the Western Empire. He mentioned the early Italian universities, together with the Arabian and Byzantine medical schools. He then passed in review the Middle Ages and the sixteenth century and continued:]

If we take Sydenham, who wrote between 1666 and 1680, and Boerhaave (1668–1738), the best and most representative physicians of their respective times, we find that while they have fully realised the fact of the circulation of the blood it had exercised remarkably little influence on the theoretical views which they entertained with regard to disease or on their practice. Sydenham may be called the English Hippocrates. He was the last and the best of the pure Hippocratic school, unless, indeed, we include Trousseau. He was above all a careful clinical observer. If time had permitted it would have been interesting to compare his knowledge of disease, the remedies he employed, and the theories he entertained as to the causation, nature, and treatment of disease with those of Hippocrates and Galen, on the one hand, and with those of the present day on the other. With regard to remedies the great acquisition of Sydenham's time was bark, which had been brought over from America by Jesuit missionaries about the middle of the seventeenth century. After accepting it cautiously, he employed it freely but judiciously, laying down rules which have been found useful ever since. Mercury was of course in common use, and antimony was an acquisition of which he thought highly. Epidemics he attributed to influences emanating from the earth, and he considered that different years and the various seasons impressed different characters upon the prevalent diseases, in which, in fact, he followed Hippocrates. Other diseases were due to vitiation of the blood; Nature was engaged in the expulsion of the peccant substances. It was the business of the physician to coöperate with Nature, and his art consisted in recognising the indications presented by the symptoms and the direction in which he must act in order to aid in restoring the normal equilibrium. "As for the physician," he says, "all his philosophy consists in following the history of diseases and in knowing how to employ the remedies which experience has shown to be the most efficacious for their cure, and at the same time he ought to follow a method which is founded, not on chimerical speculations, but on a common and natural way of reasoning." Again: "They deceive themselves grossly who imagine that the principal defect of medicine is that it lacks powerful and efficacious remedies which chemistry alone can furnish. On the contrary, what is most wanting to medicine is not to know the means of fulfilling such and such an indication, but to know precisely what the indication is which has to be met. The smallest apothecary's apprentice will tell me in five minutes the drugs I must employ to vomit or purge, to sweat or cool a patient; instead of which to learn with equal certainty when and in what case I ought to employ such and such a remedy in different diseases requires one to be extremely well versed in the practice of medicine." Boerhaave, whose principal works date from the first years of the eighteenth century, was also a great physician, and exercises, by his writings and through his enthusiastic follower and commentator, Van Swieten, a powerful and lasting influence on medical thought in his day. He evidently had great experience and was successful in practice. He had the great merit, too, of teaching at the bedside. He seems to have thought that with the discovery of the circulation and the advance in botany, chemistry, physics, mechanics, and clinical experience, medicine had in his day attained to certainty and almost perfection, but his theories were drawn largely from the assumptions and imaginations of the iatro-mechanical school.

Nothing could more confirm us in our respect for the genius of Hippocrates and the good sense of Galen than to attempt to follow the fanciful extravagancies which from time to time partially displaced their humoral pathology and have been known as the iatro-chemical and iatro-mathematical or mechanical theories. Every discovery in alchemy, as early attempts at chemistry were called, and every new development of mathematical or mechanical science, was in turn seized upon as affording the clue to the causation and treatment of disease. Even the circulation of the blood and the early knowledge of structural anatomy were turned to perverse theoretical use. Just as for the methodics in the time of Galen every disease was referred to constriction or relaxation of parts, and the remedy sought in relaxants or astringents, so at one time all diseases were ascribed to acidity or alkalinity of the humours or to fermentations; or again to obstruction of pores or minute vessels and inspissation of liquids. The contraction of muscles was due to a sudden swelling of their substance set up by the nervous juice or spirits conveyed by the nerves. Respiration was for the purpose of giving a due comminution to the blood by the movements of the lungs. Fever was explained by an acrid nervous juice, which excited the heart to more frequent and forcible action. Later still the physiological discoveries of Haller, the establishment of the principle of irritability as a property of living tissues, and the employment of the term stimulus led to another general theory of disease—the doctrine that fever and inflammation were the result of over-stimulation, which was attended by a return to extravagant and indiscriminate bleeding. From this there was the Brownonian reaction to the contra-stimulant doctrine, with equally indiscriminate, if not equally mischievous, administration of stimulants. Even the revelations of morbid anatomy and pathology were at first made the basis of a general doctrine relating to disease—the organicism of Broussais; everything was referred to gastro-intestinal inflammation, and again venesection was the universal remedy. From this time the character of the work which I have set before myself changes. Up to the present we have only been able to register accretions of knowledge and follow interpretations more or less close to the truth which were advanced in the absence of science. We have now reached a point at which we were entitled to say that ultimately science is to be our guide. Therapeutics will be scientific in proportion as the operation of remedies is referred to physiological laws. Physiology, in turn, is scientific in proportion as vital actions and processes are referred to physical and chemical laws. What remains for us to do is to follow the rapidly converging lines by which this consummation is being approached. Taking up our parable again at Harvey's great discovery, we find that it remained comparatively barren until it was supplemented by Lavoisier's explanation of the process of respiration, and, indeed, almost until a further impulse was given to thought and experiment by a diagnosis of diseases of the

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heart by means of physical signs. Then an important step was made in the elucidation of the mechanism of the circulation by the discovery of the vasomotor nerves, and the demonstration of the contraction and dilatation of the arterioles in obedience to stimulation of these nerves, by Claude Bernard. Almost concurrently the regulatory apparatus of the heart's action through the vagus and sympathetic was identified by the brothers Weber. These discoveries were followed out in detail by a multitude of experimenters, and the adjustment of the supply of blood to local demands for the purposes of nutrition, secretion, muscular action, and the response of the heart to the general requirements of the system, to excitement, emotion, exercise, are now thoroughly understood. It is only comparatively recently that the blood-pressure in the arteries and veins, and in different parts of the arterial and venous system, first measured tentatively by Stephen Hales, has been experimentally investigated by the graphic method by Ludwig and his school and made available for clinical work through the sphygmograph by Marey and his followers.

The relative share of the heart and vessels in the production of variations in the blood-pressure was thus made clear, and then for the first time the complex and multitudinous indications afforded by the pulse could be understood. At the same time that the lacteals and lymphatics were discovered the structure of the glands was investigated by Glisson and Wharton, and the study of minute anatomy of the tissues generally was initiated by Malpighi, Ruysch, and Leeuvenhoeck, who demonstrated the capillaries by injection and recognised the corpuscular elements of the blood by means of the first rude form of microscope. The invention of the microscope opened another avenue to knowledge, and every improvement in this instrument and in the preparation of structures for examination has been followed by a further penetration into the secrets of organisation and a better comprehension of function. Staining, for example, has not only facilitated the identification of different structures in their minutest ramifications and most intricate combinations, but has made it possible to distinguish between active protoplasm, in whatever form it may be found, and the material formed by it, and has revealed essential differences between cells otherwise apparently alike in all respects. Schwann and Schlerden laid the foundation of histological science by the discovery of cells as the structural unit, and when the knowledge of minute anatomy had reached a certain point the results were systemised by Bichat, who by his general anatomy prepared the way for the cellular pathology of Virchow. Side by side with advancing knowledge of structure has come increasing comprehension of function. Physiology from first to last is based on experiment. It was by experiment that Galen proved that the kidneys secreted and the bladder retained the urine, and learnt the motor and sensory functions of nerves, and that Bell, again, nearly 1700 years later, discovered that the posterior nerve roots were sensory and the anterior roots motor. It was, of course, by experiment that the circulation of the blood was established. The advances made by Haller (1708-77), again, in the elucidation of vital action were based on experiment. It was not, however, till the example was set by Majendi that experiment was systematically employed in the investigation of all the functions. He was followed by Claud Bernard, to whom we owe our knowledge of the vasomotor apparatus and its influence on secretion and nutrition, and with whose name is associated the glycogenic function of the liver, which has been rudely questioned if not overthrown by Pavy; by Ludwig, who elucidated the dynamics of the circulation; by Marshall Hall and Brown-Séquard, who led the way in the experimental investigation of the functions of the various parts of the nervous system which has now reached such a wonderful stage of development. [Sir W. Broadbent here referred to investigations upon respiration, coupling with physiologists the names of Priestley and Lavoisier. He proceeded:]

So far we have been chiefly concerned in following the growth of knowledge relating to healthy structures and normal functions. Facts relating to the effects produced by disease on the different organs could be collected, and the symptoms attending the progress of disease and revealing its nature could be recorded, independently of any comprehension of the processes by which morbid changes were effected. Such accumulation of facts and such observation of symptoms were indeed necessary before study and experimental investigation of morbid processes could be undertaken.

[Sir William Broadbent went on to mention Morgagni, Virchow, Paget, Cohnheim, the use of the microscope and stethoscope, Jenner and vaccination, and the use of the clinical thermometer. He proceeded:]

Another physiological discovery of far-reaching importance to which clinical observation has led up has been the definite determination of the fact that the ductless glands, and probably other glands, supply to the blood some material which plays an important part in the nutrition of the tissues, stimulating or modifying the cell activities. Few histories are more interesting than that of the successive steps by which extract of the thyroid gland was ascertained to cure myxœdema, beginning with the observation that cretinism was associated with goitre, and that the essential feature of this affection—myxœdema—could be induced by extirpation of the thyroid. Upon this, experiment showed that the cause was not the accumulation in the blood of some substance which ought to have been withdrawn from it by the gland, but the absence of some material which the gland supplied. Older than this, and even more important, was the discovery of the part played by micro-organisms in certain diseases. Here, again, clinical observation and reasoning had anticipated Pasteur. The communication of disease from person to person, the incubation period which intervened between the exposure to contagion and the development of symptoms, the successive stages which these symptoms followed and the reproduction in the individual of the poison, had given rise to the zymotic theory, according to which the history and course of these diseases were comparable to fermentation following the addition of yeast to a saccharine solution. Experimental demonstration, however, is now demanded, and the place of theory in medicine is only to suggest and to guide investigation. It was not, therefore, until Pasteur—by the successive steps of his work on the various fermentations on pébrine, the city-borne disease, and on malignant pustule and splenic fever—had demonstrated the powers of micro-organisms, and Lister, by that infinite capacity for taking pains—which, when combined with true insight, constitutes genius—had made the totally unexpected and unforeseen extension of the germ theory to surgical affections; until Koch, again, in 1882, had identified and made visible the corpus delicti of phthisis in the tubercle bacillus that the microbic origin of these diseases was fully admitted and the sweeping character of this new department of knowledge was recognised. We may even claim for clinical observation that vaccination was a standing illustration of the attenuation of a virus, and that it anticipated and pointed the way to the processes by which Pasteur has attained such sensational results in hydrophobia, and by which we hope and believe that other diseases, such as scarlet fever and the fevers generally, will be robbed of their terrors. The bounds of the zymotic theory, properly speaking, have, however, been overpassed, and, indeed, swept away, and diseases such as tuberculosis are found to be caused by micro-organisms which appeared to have no analogy with those originally grouped under the name; but science has pushed the analogy between disease and fermentation still further. Just as alcohol is the potent product of the torula, so it has been ascertained that the products of bacteria are the agents which give rise to the constitutional disturbance of disease, and these products have been separated and identified. Not only so, but just as alcohol, when it has reached a certain proportion, arrests further multiplication of the torula, so do the products of bacteria bring their action to an end, and advantage is taken of this in the antitoxin treatment of diphtheria, which has recently evoked the admiration and challenged the gratitude of mankind. We have still to ask, What is the bearing of all these advances of knowledge on therapeutics, which, after all, is the object of our lives? Until the last few years it has not been easy to answer this question by instances of any very extensive applications of physiology to the treatment of disease, and morbid anatomy was at one time a stumbling-block in the way of therapeutic effort. The pathologist, pointing to an excavated lung or cirrhosed liver, would ask the physician what he could expect to do with drugs against such conditions. But that stage has passed away, and I will not mock your intelligence by other illustrations beyond those just given of therapeutic applications of physiological and pathological knowledge or by arguing that all knowledge of normal processes aids in the comprehension of morbid processes, and that we are in a better position to combat disease when we thoroughly understand its causation and initiation, and follow mentally its development, course, and tendencies. Given the faculty of

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observation, the insight which penetrates the meaning of the phenomena, the analytical and synthetical powers by which a diagnosis is constructed, the ready adaptation of means to a well-defined end, and the firmness of character required to deal with the frailties of human nature, and the best physiologist will make the best pathologist and the best pathologist the best physician.

[Sir William Broadbent here passed to the consideration of therapeutics and continued:]

The basis of therapeutics is diagnosis, the grasp of the actual condition underlying the symptoms or phenomena, and the greater our command of powerful remedies and the more precise our knowledge of their effects and of the mode in which these effects are produced, the more important does accuracy in diagnosis become. A diagnosis, to be real, implies not only the recognition of the disease which may be present and an accurate appreciation of the morbid changes which may have taken place in various organs, it embraces a knowledge of the nature and intensity of the pathological processes which have been and are in operation, and of the causes which set them going, and also of the results to which they tend. A further element, moreover, enters into the consideration: an estimate, by the aspect of the patient, by the pulse and temperature, and by other subjective and objective indications, of the impression made on the system, and of the resistance which it is capable of to the lethal tendencies of the disease. Year by year we see improvement in this respect; not only that hospital physicians and teachers endeavour to carry diagnosis to a greater pitch of accuracy and a higher point of refinement than ever before, but that the entire body of medical men are trained by improved education and systematic clinical teaching to appreciate and to practise careful diagnosis in their daily work. Diagnosis, we may say, has reached an extraordinary degree of advancement. There are, no doubt, still new fields to conquer, but in the recognition of diseases, local and general, there is not much which seriously concerns the human race which remains to be done. The same degree of knowledge, however, does not extend to morbid processes. Our comprehension of the significance and essential character of inflammation is by no means complete and satisfactory. The part which fever plays and the place which it holds among the phenomena of disease is far from being fully understood. It cannot have been intended by Nature for the destruction of the subject, and we can see distinctly that in some cases it forms a part of the defensive operations; possibly, indeed, its general tendency is defensive, by promoting the production of phagocytes, or possibly a certain elevation of the temperature may be fatal to maleficent organisms which have taken possession of the blood or tissues. We are not certain, indeed, whether in pyrexia the heat-producing oxidation in the structures receives its stimulus from, or takes place at the bidding of, the nervous centres, or, on the other hand, is due to enfeeblement of the restraint which they normally exercise over it, or whether it defies control by the thermotaxic nervous centres.

But here I must stop. I have said enough to show that the much-despised therapeutics, like clinical observation, suggests and stimulates scientific investigation, and I must now take up the last point; the views which guide the medical man at the present day in the employment of remedies. Of course our individual guide is mainly personal experience and observation of their effects. But the human mind is so constituted that it demands reasons, and even our experience finds expression in theory. There is, however, no theory which is supposed to apply to pathological processes and therapeutics in general, like the humoral doctrine of Hippocrates and Galen, the various intro-chemical and mechanical theories, the animism of Stahl, the stimulant, contra-stimulant, or organicist ways of accounting for everything—no theory of universal application. Yes! Homœopathy still, like a belated ghost, haunts the dawn of scientific medicine, and men are still found who wear its doctrines as a cloak for ignorance, or flaunt them as an attraction for the more foolish and credulous of the old ladies of both sexes. But, while our minds are not dominated by any *a priori* conception of a vital principle governing all vital operations, we must not flatter ourselves that we cannot be carried away by fashions in treatment. In our own day, under the influence of Todd, alcohol was largely accepted as the universal panacea, and for nearly a generation mercury was almost banished from the materia medica on theoretical grounds. The last twenty or thirty years have afforded us increased opportunities for the study of syphilitic diseases of the nervous system and of hereditary syphilis because of the abandonment of mercury in the treatment of the primary disease. And if we have no comprehensive theory of disease or treatment we have our small working hypotheses. To one man gout explains everything, and the more hazy or inadequate his idea of what gout is the more satisfactory the explanation. Gout, moreover, is accepted by the public as accounting for everything. The permutations and combinations of which uric acid is capable, and its ingenuity in giving rise to the most varied forms of disease, are truly wonderful. To another man the clue to treatment is acidity or bile or disease of the liver. Names have still a great influence, and the lesson which Galen constantly enforced, that we must treat not the disease but the patient, is as necessary in our day as in his. It does not follow that because we call a pain rheumatic the remedy is salicylate of soda. At one time the action of quinine was supposed to be explained by calling it an antiperiodic, and any tendency to periodicity in the recurrence of symptoms of whatever kind, or at whatever intervals, was considered to be an indication for its exhibition. It is inevitable that our imagination should be impressed by the revelation of the wonderful part which micro-organisms have been found to play in the genesis of disease, and that our thoughts should turn towards antisepsis in our treatment. So far the greatest success has been in dealing with microbes outside the system, as in antiseptic surgery and preventive medicine, and further triumphs are to be hoped for in this direction, as, for example, in the prevention of tuberculosis. We have as yet little evidence of the power of antiseptics to follow and destroy the microbes when they have once got possession of the system. Quinine, however, kills the malarial plasmodium, and we have now the antitoxic serum. Apparently, too, one virus may be antagonistic to another, and an attack of small-pox has often seemed to cure phthisis. We must continue our efforts to apply antiseptic principles, but it is most important that we should not allow ourselves either to imagine that we have obtained effects which have not been realised or to attribute results to antisepsis which may have come from other causes. It is not yet clear that any considerable impression has been made on the mortality from phthisis by guaiacol or creasote; and was not sulphuretted hydrogen injected into the rectum to deliver us from this scourge? It was inevitable, again, that we should be greatly struck by the remarkable power of lowering the temperature possessed by the antipyretic class of drugs. We seem to have within our reach the means of dealing with our most formidable enemy, and it is a great triumph to be able to point out to friends the effect of our remedy on the temperature chart, especially when it has been accompanied by relief of headache and other symptoms. Here it is very important that we should maintain an attitude of cool observation, and not conclude that in bringing down the temperature we have necessarily exerted a favourable influence on the course of the disease. We may have been bringing down also the patient, and it is not so certain that Nature does not know her business when she sets up febrile reaction. I feel myself justified in re-echoing the warning given by Dr. Douglas Powell on this point. But it is time that I should bring this long and disconnected address to a close, and in thanking you for the patient attention with which you have listened to it I congratulate you and myself that we live at a time when the art of medicine has made such progress, when science in its application to medicine has brought such marvellous and such beneficent aid to therapeutics, and when our beloved profession stands so high in the estimation of the world.

YARROW HOME, BROADSTAIRS.—A seaside convalescent home for children, named after the founder, Mr. A. F. Yarrow, was opened on Tuesday last at Broadstairs. A numerous company travelled by special train from Victoria, and on arrival at Broadstairs, after a short service, the home was formally declared open by Mrs. Yarrow. Some two years ago the generous founder of the institution was looking about for the best direction in which to devote a large sum of money for the benefit of children, and became impressed with the fact that while the wants of the very poor are already fairly met by existing agencies, there are many people of very limited means and at the same time highly respectable—too sensitive to seek help from any charitable agency or to let their wants be known outside their own circle—who in times of adversity suffer much. Hence the erection of this new seaside home for the reception of children—fifty girls and fifty boys—of deserving parents.

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Address in Surgery,

Delivered at the Annual Meeting of the British Medical Association at London, August 1st, 1895,

BY JONATHAN HUTCHINSON, F.R.C.S. ENG., F.R.S.,

CONSULTING SURGEON TO THE LONDON HOSPITAL, AND LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

ON MODERN ADVANCES IN SURGERY.

MR. PRESIDENT AND GENTLEMEN,—My first words must of necessity be an attempt to express the deep regret which you and I alike feel at the sad event which has been the cause of my coming before you. We had all looked forward with high anticipation to the pleasure of listening to an address on surgery from Arthur Durham. The hand of death has snatched him from us and put a stern veto on our hopes. It is not too much to say that the whole profession deplores Mr. Durham's too early death as a heavy loss to surgical science, whilst to many of us it brings also the sorrow for a much-loved friend. In the year 1750 there was published in London by one of Mr. Durham's many distinguished predecessors "A Critical Inquiry into the Present State of Surgery." Samuel Sharp was not only surgeon to Guy's Hospital, he was a Fellow of the Royal Society and a man of acute and original mind. He wrote good English, he saw for himself, and he travelled, not merely for self-gratification, but in search of professional knowledge. His work was to some extent the result of a visit to Paris, and he displays familiarity with the practice of all the Continental surgeons of his day. His "Critical Inquiry" was received with such favour that it was translated into French, German, and Spanish. I may, therefore, fairly take this book as representing the opinions of the day, and as affording to us fair criteria as to the topics which most interested the surgical world in the middle of the last century. Mr. Sharp thought well of his times and his compeers. In his preface he writes: "Perhaps there never was a period of time in which any art was more cultivated than surgery has been for these last thirty years." This, we may remember, was written when Pott was in his prime and Hunter a young man. It may perhaps not be without instruction for us if I glance for a few minutes at the topics which mainly claim attention. To begin with, he dismissed luxations and fractures with the remark that all eminent surgeons were agreed as to the method of treating them. With an almost similar remark he put aside "tumours, wounds, abscesses, and ulcers," asserting that their treatment is "fundamentally the same in every country of Europe." His optimistic belief that finality had been attained in these large departments is to be regretted, for it much restricted the scope of his interesting "Inquiry." His thirteen short chapters concern hernia, lithotomy, amputations, concussion of the brain, tumours of the gall-bladder, extirpation of the tonsils, hydrocele, and a few others. A small 8vo of less than 300 pages, and in large type, suffices for what he has to say. Let me repeat that what he does say he says well; but how little there is of it, and how restricted are his topics. What a contrast is presented with the almost limitless multiplicity of the subjects which in the present day claim the attention of its successors? Mr. Sharp's chapter on the extirpation of the tonsils contains a strong recommendation of the procedure of this simple measure. He remarks: "There is not an operation in surgery that in my opinion ought to give an operator so much encouragement. It is neither dreadful in the doing nor melancholy in the event." From this remark we may infer much as to his general experience of the major operations of his day. He wrote before the days of laparotomy for intestinal obstruction, and it is possible his thoughts probably went no further than excisions of tumours, amputations, and cutting for stone. Somewhat more than half a century later another important work appeared on the same lines, but far more thorough in character than that of Mr. Sharp. M. Roux, the distinguished surgeon of La Charité, spent a month in London engaged in the diligent investigation of English surgery. On his return to Paris he published the results of his observations. He had seen Laurence, Brodie, and Bell operate; of the two former he speaks as young men. With Cooper, then in his prime, he had held controversy as to the possibility of bony union in fractures of the neck of the femur, and had promised to send him a specimen which should remove all doubt. Between the dates of Sharp's "Critical Inquiry" and Roux's "Relation d'un Voyage" the whole of John Hunter's career had passed. The "Father of Scientific Surgery" had now been twenty years in his grave, and the great work of his life, that triumph of genius and industry, his museum, was already well housed under the guardianship of the College of Surgeons. Roux visited the museum, and he notes over and over again the extraordinary love which English surgeons had for anatomical preparations.

I do not purpose now to occupy your time by any analysis of this work, but I put it forward as a very valuable recapitulation of the surgical knowledge of the day as regards its two most important schools, Paris and London. As my design is to make some comparison between the present and the past, I shall find occasion hereafter to recur to M. Roux's statements in reference to various special subjects. Some of his more general impressions it may, however, be suitable to briefly mention. He held that England and France were really the only rivals in the art of surgery. Germany, Italy, and Holland had each, he admitted, produced their names, but they had been isolated and not of the first rank. It did not occur to him to even mention Austria. Russia was but just emerging from barbarism, and the United States, not yet more than twenty years independent, had given no indications of that successful activity which has been since displayed. He found the London hospitals behindhand as regards the classification of their patients, only one of them (the London Hospital) having as yet attempted to separate medical from surgical cases. London operators he thought skilful, but terribly slow. One of the best he had seen take twenty minutes in the doing of a circular amputation which any Paris surgeon would have finished in a quarter of the time. He thought the attention given to the management of fractures in England much inferior to that in Paris. He much regretted to observe that not only in London, but in some other large cities, special institutions had appeared for the treatment of diseases of the eye. These he thought to be good neither for the profession nor for the patients. Whilst I cannot agree with him in this, I venture heartily to applaud the sagacity with which he detected a weak point in the management of the Royal College of Surgeons ("un vice essentiel de cette institution"). He was amazed that an institution for the advancement of surgery should devote to comparative anatomy most of its lectures and the best part of its museum space. These subjects ought, he held, to find their place in a museum of natural history. Would that he could see it now. The best part of the new wing, erected at vast cost, is now nothing more than a reading-room or study for anatomical students, and its walls are occupied by a collection of skulls and skeletons which has no connexion whatever with our art. In place of a museum of clinical surgery we have a Golgotha of anthropology. This allusion to the present into which I have been betrayed reminds me that I must here leave M. Roux and his book and hasten to another and modern epoch.

In the year in which our honoured veteran, Sir Spencer Wells, then untitled, was the zealous editor of the *Medical Times and Gazette*, I had the honour to be his junior coadjutor. He determined to endeavour to bring to light the real facts as regards the results of operative surgery, and a plan was devised for the systematic publication in a classified form of all operations performed in English hospitals. The scheme was wholly Mr. Wells's, but I was entrusted to carry it out. For nearly three years brief records of all hospital operations, collected, as far as we could attain it, with scrupulous regard to accuracy, were regularly published. I hope I shall be pardoned for adverting to a topic which is to some small extent personal, but I believe that those reports were not without their influence in the development of surgical knowledge, and that they present a more accurate picture of hospitals a quarter of a century ago than can easily be found elsewhere. As such I ask permission to use them, together with the two books which I have mentioned as supplying material for contrast with the present. These reports were commenced in 1855 and came to an end in 1858. The task of collecting the materials was of the utmost use to my own surgical training. I was every day in the operating theatre of one or more hospitals, and in constant confidential communication with the hospital surgeons of the day. The statements published were in most instances revised by those whom they concerned, and the utmost care was taken to assure accuracy. It will be easily understood that in

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many instances I was cognisant of details which it was not permissible to put in print. In this way I was enabled to form strong and clear opinions on various points in practice, some of which have been borne out by subsequent experience, and others not. Amongst others I well remember that there was a time when Mr. Wells, as well as myself, regarded the operation of ovariotomy as not much removed from manslaughter. We knew of fourteen cases in succession at different institutions, every one of which had ended in the death of the patient. There was a rumour about the same time that a well-known coroner had threatened Mr. Baker Brown that he would hold an inquest in the next case in which he did the operation. Another operation in reference to which I formed a strong prejudice was that of lithotrity. Although at this date Sir Benjamin Brodie had in private practice obtained satisfactory results, and had devoted much attention to the improvement of instruments, yet I could see nothing at the hospitals that was encouraging. A not inconsiderable number of the patients did actually die after it, and of the others it appeared to be the fact that scarcely any were really cured. They were perennial patients, and the same unfortunate man would appear over and over again to be subjected to a repetition of the same tortures. There was no single operation respecting which it was so difficult to secure trustworthy reports, and in many instances the cases which I was obliged to record as "cured" were, I strongly suspected, not really freed from stone. It was, of course, long before the days of litholapaxy, when it was the custom to break a stone into fragments and leave them to find their way out as best they could. The impression which I formed of this operation was such that I determined never to do it, and when, later, I was elected surgeon to the Metropolitan Free Hospital and a good share of stone cases fell to my lot, I invariably performed lithotomy. This rule was continued during my surgeoncy to the London Hospital, and in contrasting my success with that of some of my colleagues, who frequently used the lithotrite, I found nothing to regret. When, however, Bigelow taught us how to complete the operation at one sitting and to remove all fragments, I saw, almost with regret, that lithotomy must henceforth give place. My hands, however, needed practice in the new operation, and I found to my chagrin that I could not do it so quickly and neatly as those could who made it a special pursuit. One patient unfortunately died, and I felt very sorry that I had not cut him. I determined that I would not do litholapaxy *propriâ manu* again, but that I would watch its results in the hands of a specialist friend. From that date onwards I have always on discovering the presence of a stone of a size not demanding lithotomy transferred the patient to my friend. The result has been not a single death, and, what is almost of equal importance, not a single case needing a second operation. All the cases have been adult, if not aged, men, and my list has included two near relatives, two ex-hospital colleagues, two other medical friends, and many strangers. In every instance the recovery has been *cito et jucunde* and the relief permanent. During the same period I have done lithotomy in a few exceptional cases, but they have been only a very few, and in other respects there has been no selection. Lithotrity as practised in our hospitals forty years ago was for the most part a miserable failure; litholapaxy in the present day is, in the hands of our specialists, a joyful triumph. I assure you that I regard the results of my practice in this department ever since I ceased to operate with my own hands with the utmost satisfaction and pride.

If, however, the triumph of lithotrity has been pronounced, that of ovariotomy may yet be held to surpass it. This is in part because at one time it seemed yet more hopeless. It needs some courage to attempt, even in the briefest manner, to sketch the history of this victory, so many are the points in dispute and doubt, and so much of personal feeling is involved. Let me say, then, in beginning what none but a churl will dispute, that to the operative skill, the patient attention to detail, the indomitable determination to go on from good to better, which through a long series of years were displayed by him whom we now honour as Sir Spencer Wells, the credit is mainly due. Yet Mr. Wells was by no means the first in the field, even in what we may consider the modern revival; Mr. Wells and myself did our first operations within two months of each other—he in February, 1858, I in May of the same year. But Mr. Baker Brown had been doing it for several years before, and he was present at both Mr. Wells's first operation and my own. From this date ovariotomy took a new start. Successes were obtained, the cases were brought before our societies, and surgeons began to be hopeful. For many subsequent years it appeared as if the principle of keeping the end of the pedicle outside the abdomen was the main improvement. This plan I had practised and advocated from the first, and I had devised for its better accomplishment a clamp, which came into general use and held its ground for a decennium. Mr. Wells had in the first instance dropped the pedicle into the abdomen, bringing its ends out at the wound, and he considered the latter point an advantage, as keeping open a track for the escape of matter. His first case and mine alike recovered, but his after much "fetid discharge" from the abdomen, and mine with primary closure of the wound. He subsequently used my clamp, and in a letter published many years afterwards very generously acknowledged his indebtedness to it. Mr. Baker Brown also very promptly adopted the clamp. Such having been the circumstances, I may, perhaps, be pardoned if I confess that there was a time when I allowed myself some gratification in the thought that I had myself taken some share in furthering the success of this important and life-saving operation. I bore with such equanimity as I could the discovery that I could not compete with my friend in the ratio of successes obtained, and acting on the rule of conduct that I would never keep a patient in my own hands if I believed that someone else could do what was needed with greater prospect of success, I gave up doing ovariotomies both in public and private, and used to transfer my patients from the London Hospital to the Samaritan Hospital. As to the explanation of my comparative want of success I always felt in some doubt. That I could not keep my experience of the operation on a level with that of Mr. Wells was certain, for he had a special hospital and I only a general one. That lack of the skill which comes only from constant practice was not the only explanation, if indeed the chief, seemed proven by the fact that I had lost some of the very easiest cases which had made no demands on special skill. I was driven to the conclusion that, as surgeon to a large general hospital, and in attendance upon all sorts of cases, and erysipelas amongst the rest, I could not keep myself from risks of contagion so completely as was accomplished by the precautions which were at that time enforced at the Samaritan Hospital. Another disappointment, however, awaited me. The time came when the clamp was discarded, and with it the principle which I had cherished of extra-peritoneal treatment of the pedicle. Operators fell back on the old practice, which had apparently been a great failure, of cutting off the ligatures short and dropping the pedicle into the abdomen. This plan had been tried in a few cases during the reign of the clamp by Dr. Taylor Smith, and with much success. Mr. Wells was induced to resort to it, but soon returned to the clamp. Finally, however, it has gained the day. No one now practises any other method, and the clamp has even been disparaged as unsurgical. It is one of the many difficult problems which changes in surgical practice offer for our investigation to explain why a method of practice which seemed so fatal formerly should be so successful now. In part it may have been that we did not try it fairly, and that the assumption that the tied end of the pedicle must necessarily slough and infect the peritoneum prevented us from giving the method an adequate trial. It may have been that we did not in former times attend sufficiently to the various details included in the expression "toilet of the peritoneum," and it is quite certain that we were at the time ignorant of the use of antiseptics. Probably the truth is that the latter have made safe what was dangerous formerly, and thus it possibly remains to be the fact that the clamp and the extra-peritoneal method which it emphasised did really win the day for ovariotomy at a time when no other tactics would have succeeded.

I must hasten to other and yet wider topics. M. Roux, as I have told you, saw with much disapprobation the beginnings of specialism in London. He found new hospitals for diseases of the eye, which he thought likely to prove injurious to the interests both of the profession and the public. Many years after the date of his visit to our metropolis I had myself opportunities of witnessing the results of this prejudice in the wards of M. Roux's own hospital. I then saw cases of extraction of cataract treated in the open ward and by the hand of the general surgeon. I saw eye after eye lost by suppuration. The same might, I admit, have been witnessed in some of our London hospitals, but not so frequently or at so late a date. Common-sense won

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the day somewhat sooner amongst us. The victory of specialism in diseases of the eye is now acknowledged by all, even by many who still echo M. Roux's sentiments in reference to many other departments of our art. Can we, however, refuse to recognise the lesson which the modern practice of such operations as lithotrity and ovariotomy teach us? Are there not also many other procedures which stand on precisely the same footing? Would anyone allow an inexperienced surgeon to extract a gall-stone when the services of one who had done many such operations were at hand, or entrust the removal of laryngeal growths to any surgeon, however skilled, who was not specially trained as regards that operation? If we could get the gross statistics of ovariotomy and lithotrity for the whole kingdom, I much fear that the ratio of success would be found to fall lamentably short of that habitually secured by our best specialists. I designedly speak of specialists rather than of special hospitals, for it is quite possible that the latter may, when the staff is large in proportion to the number of beds, cease to afford the advantages as regards individual experience which they are designed to do. Good specialists are, besides, sometimes developed quite independently of special institutions. The late Mr. Gutteridge of Birmingham is reported to have made a proposal that he should be appointed lithotomist to the United Kingdom for the reason—almost sublime in its simplicity—that he could do the operation better than anyone else. He had never had any hospital appointment, yet I have been told by those who knew him well that his allegation was no mere empty boast. The remarkable results in litholapaxy in children obtained by Dr. Kegan in India, those of Sir Henry Thompson in lithotrity in adults, those of more than one in brain surgery, and those of Mr. Mayo Robson in operations on the gall-bladder, are all of them, I think, good examples of what we call personal specialism. Of these personal specialists it may further be alleged that not only do they develop remarkable skill themselves, but they almost invariably succeed as teachers. Most of those whom I have named have in this direction had a wide influence, and there was a time when surgeons flocked from all parts of Europe to learn from Mr. Spencer Wells how to do ovariotomy with success. A man who thoroughly understands his subject in its details can treat it with an efficiency and ease which are wholly unattainable by others. To encourage specialism in many branches of operative surgery is, then, I cannot but think, in consonance with common sense and common humanity.

If any enterprising journal of the present day should undertake the publication of operation statistics on the plan which I have described, as devised by Mr. Spencer Wells thirty years ago, we should have before us materials for a most interesting comparison with the past. In the first place, I do not doubt that we should be astonished at the enormous increase in the number of operations. Formerly one operation day a week was thought sufficient for most hospitals; then it increased to two, and now I suppose there are few institutions in which every day is not so regarded. Nor is this only in hospital practices. Operations in private practice have probably increased in still greater ratio. I well remember the institution of the first nursing home in London, and a very modest one it was. Before that we had to take our patients into hotels or private lodgings. Now, in addition to such luxurious establishments as Fitzroy House, we have homes and hotels for the sick without number. There are West-end streets in which every other house is so occupied. The patients are, I believe, though by no means exclusively, yet in great majority, surgical cases. These institutions are, without exception, managed, if not to perfection, at any rate with a degree of excellence above what was dreamed of half a century ago. If I praise the nursing homes, what shall I say of the nurses? Not a home is opened but it becomes provided at once by a troop of beings who, fair, intelligent, gentle, and indefatigable, would seem to have been created for the special work. What this class of young women did before nursing was invented is a constant puzzle to me. Its difficulty is equalled only by the question as to what becomes of them, for I never saw one who was even approaching middle age.

If I am asked as to what are the special operations which have increased, the reply must be that they are most various, and that on the whole they are such as conduce most definitely to mitigate sufferings and to prolong life. Permit me to take one as an example. It shall be one in which the development of sound doctrine as to pathogenesis rather than augmented surgical daring has gained the triumph. No one ought now to die of cancer of the tongue; nothing except neglect of the early stage can bring about such a result. It is the doctrine of the local origin of cancer and of a precancerous stage which has placed us in this position. In former days no operations were with the rarest exceptions performed for this disease; and if they were, it was in the late stage, when, to use the forcible expression which I have quoted from Mr. Sharp, the procedure was both "dreadful in the doing and unfortunate in the event." Cancer of the tongue was, in fact, hardly ever diagnosed until it was too late to operate. One of our most popular surgical manuals taught that enlargement of the lymphatic glands in the latter afforded one of the best means of distinguishing between syphilitic and cancerous disease. We should now regard it as evidence of almost culpable delay, and as implying that the case had advanced too far for surgical aid. That distinguished surgeon, Mr. Syme, was a pioneer in this branch of operative surgery as in many others. I well remember to have formed once one of a crowded audience in the theatre of the Edinburgh Royal Infirmary assembled to witness one of the first of these operations. The symphysis of the jaw was sawn through and its halves dragged. The operation was most dexterously done; it was most complete, but at the same time it was most formidable. The patient died a few days afterwards, and he was, I believe, the third in succession that the operator had lost. He, as a conscientious man, determined never to attempt it again. There are surgeons now living—more than one—who can boast of operations for cancer of the tongue by the score, if not by the hundred, and with no appreciable mortality. They are not, however, cases such as those which alone Mr. Syme attempted; a majority of them are cases in which the operation is in itself a mere trifle—the excision, it may be, of only a very small part of the organ. Year by year the number of cases in this category increases, and that of those in advanced stages diminishes. What hinders that all cases of cancer of the tongue should be submitted to operation in the earliest stage? Nothing excepting defective diagnostic capacity on the part of members of our own profession. The fault is but rarely on the part of the patient. I never yet met with a patient to whom it was kindly yet confidently told, "You have got cancer," who did not gladly and without delay assent to the operation.

In another department of surgery our work has also enormously increased, partly in connexion with improved methods and partly from sounder principles of diagnosis. In the case of the tongue is improved diagnosis only in that of the female breast it is that in large part, but in still larger the modern methods of dressing which now enable us to promise to the patient a painless operation and a speedy convalescence. There never was anything formidable in the performance of an excision of the breast, but I well remember the time when the prospect of a febrile illness with troublesome suppuration and a succession of dressings only less distressing to the patient than the operation itself, acted as a very powerful motive to the surgeon for delays, which were very dangerous. No case was ever operated upon until the diagnosis was as clear as daylight, and until in but too many instances disease was far advanced. The class of symptoms by which our textbooks taught us as students to recognise cancer of the breast were for the most part, as in the case of the tongue, those present only in the late stage. Those which we now teach to our students are wholly different. What would be thought of the surgeon in the present day who should inculcate reliance upon the retraction of the nipple, the saddle-leather condition of the overlaying skin, or the unhealthy condition of the ulcer? We now trust solely to the trained finger to recognise the character of the induration, and we lay down an inexorable precept that if there be any reasonable doubt the breast should be removed. Our patients, as a rule, accede without much reluctance to our recommendations, for they know from general report that the modern operation is a mere trifle. The result of this change of practice is that the statistics of cancer of the breast must be rewritten. Those collected so laboriously three or four decades ago are no longer in the least applicable to our present results. Permanent recoveries after removal of the breast for scirrhus, as after those of part of the tongue for epithelioma, are now common in the practice of all operators. So much has been said or implied in the discussion of the last two topics that the present becomes a suitable place to introduce a few remarks upon the all-important topic of the educational training of the surgeon of to-day. The great examining bodies which exercise such a large influence over the destinies of our profession in presiding at

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its admission portals have recently decreed that the education of the student shall be extended over five years. For myself I may say that, although in committees and council-rooms I have always consistently given my vote in favour of this addition of a year, I have never been a warm advocate of the measure. It has always appeared to partake too much of the faith that if you only keep a horse long enough at the water you can make him drink. The additional year must make medical education more expensive and may possibly hinder some of precisely the class which we wish to attract.

The Baillie Lectures
ON
DROPSY.

Delivered at St. George's Hospital on June 19th and 26th and July 3rd, 1895.

BY W. HOWSHIP DICKINSON, M.D., F.R.C.P. LOND.,

HON. FELLOW OF CAIUS COLLEGE, CAMBRIDGE; CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

LECTURE III.

Delivered on July 3rd, 1895.

GENTLEMEN,—The next form of the dropsy of pressure is cardiac; the immediate cause of this is capillary stagnation due to venous obstruction. The right side of the heart is the first place where the returning blood is liable to meet with hindrance, and theoretically the right side should have more to do with dropsy than the left; but practically the left side with its greater liability to disease takes precedence of it in this respect. Whether we find mitral constriction or mitral regurgitation, the result is much the same in obstruction to the pulmonary circulation; this stands in the way of exit from the right ventricle, and the over-loaded right side stands in the way of exit from the systemic veins. The nearer the obstruction is to the venous exit the more readily dropsy supervenes. If the mitral valve be between the two and holds good it does a great deal, as perhaps it was intended to, to keep the venous return free and dropsy absent. We see this in aortic regurgitation. The left ventricle gets over-filled and over-stretched during diastole by the blood which is rushing back into it through the aortic opening at the very same time that blood is pouring in, in due course, through the mitral. It might be thought that this crowding of the cavity would make a block the effects of which would reach the veins, but it does not appear to be so. So long as the mitral valve is capable of doing its duty dropsy is absent. I have my eye upon a case now which has been under my observation for the last thirty years. There is extreme aortic regurgitation with an enormous left ventricle. There is no dropsy, and never has been. If the mitral valve should give way and a mitral murmur present itself, then we shall have dropsy, and probably not before. Among the relations of the diseased heart to dropsy there is one which I think has been too much lost sight of—it is this: hypertrophy of the left ventricle is antagonistic to dropsical effusion. This is most markedly seen, as I shall presently show, in renal disease, but is to be recognised in other circumstances. The method is obvious. The ventricle has a double action; it not only drives the blood into the arteries by its contraction, but by its expansion it pulls the blood out of the veins. As it opens it draws upon the left auricle and indirectly upon the right side of the heart, lungs, and systemic veins. The suction power of the ventricle must be increased with the thickness of the wall, just as a ball syringe expands with the more force the thicker it is. I must not dwell further upon cardiac dropsy; as necessarily ensues from its mechanical origin it is earliest found where the veins are at the greatest disadvantage—namely, the lower extremities. If œdema begins with puffiness of the face we may be sure it is not cardiac. Nothing tends more to the increase of this kind of dropsy, and, indeed, of renal dropsy also, than water in the pleuræ, which compresses the pulmonary vessels and adds to the obstruction already existing. I have often had the chest tapped in such circumstances with obvious and immediate advantage in this respect. While upon tapping let me say this: puncture the abdomen whenever you see reason for it; it relieves dyspnœa and the lower extremities, is generally harmless and often beneficial; but beware how you meddle with the legs. So readily is cellular inflammation set up in these cases, and so apt is it to prove fatal, that acupuncture carries as much danger as a capital operation, and should never be lightly undertaken. I have sometimes heard it proposed to tap the legs on the ground that the abdomen would be thus relieved. I believe this to be a mistake.

I may here touch, however briefly, upon the general treatment of cardiac dropsy. Before all things it is necessary that the horizontal posture should be enforced unless there are special circumstances, by way of dyspnœa or angina, which forbid it. The defective heart may be able to conduct the circulation on the level, but not vertically. The good of this simple measure is great. In the next place we must do two things simultaneously—relieve the vessels and reinforce the heart. Relieve the vessels by mercurials and hydragogues, and spur the heart with cardiac tonics. Do not waste your time, or rather your patient's, by tinkering with mere diuretics. Diuretics are futile unless they have, like digitalis and squills, an especial cardiac action. Of all the remedies for cardiac dropsy none approaches in value the time-honoured pill of Baillie, fitly commemorated in a Baillie Lecture. This consists of blue pill, squills, and digitalis; the digitalis helps the heart and the mercury unloads the vessels. The effects of this remedy are often marvellous; I have seen, not once only, but many a time and oft, general and extreme cardiac dropsy entirely removed by its means. There is nothing I like better to treat than cardiac dropsy, for I feel that I can see my way and generally do good. You may if you please make use of calomel or the green iodide of mercury instead of blue pill; the essential thing is to give together mercury and digitalis. With children, to whom pills are a difficulty, I have often given with the same results the same thing in a liquid form; liquor hydrargyri perchloridi, infusion of digitalis, and tincture of squills. Be it remembered that cardiac dropsy is generally connected with mitral disease, the valvular lesion with which digitalis is especially useful.

The next division of the subject comprises dropsies dependent on, or at least connected with, changes in the blood; among them is renal dropsy and that of chlorosis. It may be said in general terms that renal dropsy and cardiac dropsy have this essential difference: cardiac dropsy is due to diminished absorption, and renal dropsy to increased exudation. Renal dropsy is more complicated than that of heart disease; conditions of altered blood are involved with questions of altered mechanism; there are several factors to be considered and some discrepancies to be reconciled. In the first place there is a general inverse ratio between the amount of dropsy and of urine; the less urine the more dropsy. But this does not always hold good. In obstructive suppression, say, from renal calculus, though urine may be totally absent for many days, even for a fortnight, there is usually no trace of dropsy of any kind. With nephritis, where dropsy is so usual a concomitant, it sometimes happens that this result is absent where we should most expect it. There is a very acute and fatal form of the disease which I have seen after scarlet fever in which dropsy may be totally, or almost totally, absent, notwithstanding that the urine may be scanty almost to suppression. Death is quickly brought about by uræmia, but dropsy is conspicuous by its absence. Such cases are sufficient to show that the ordinary rule that the dropsy increases as the urine diminishes and *vice versâ* is not invariable, but that other conditions beside the exit of water by the kidneys have to be taken into account. In a paper to which I have already referred, and to which I may appeal for particulars, I gave a number of sphygmographic observations bearing on the relations of blood-pressure and renal dropsy. The conclusions are briefly these: renal dropsy arises together with a certain increase of arterial pressure which appears to be essential to the process; the increase of pressure with early dropsy is not so great as obtains later, but nevertheless is distinct; when under the depressing effect of the disease the force of the circulation is diminished instead of being increased then dropsy is absent: we see this in obstructive suppression which is attended with a failing pulse, death

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by syncope, and a heart uncontracted after death. I regret that I have no sphygmographic evidence bearing upon this, but the failure of pulse and heart are sufficiently apparent. It would seem that a certain force is required for the accomplishment of the transudation which constitutes renal dropsy, failing which this does not occur, however other circumstances may invite it. Vomiting and diarrhœa may take its place.

The dropsy of kidney disease is evidently connected with the retention of renal excreta, which exert some special action upon the capillaries which at once increases transudation and hinders the circulation. This is not inflammation, but may remotely resemble it, or we may regard it as akin to secretion and as tending to relieve the blood of its morbid elements. The attendant hindrance I have dwelt upon in the first lecture, together with its effect upon the arterial system. The association of dropsy with this difficulty points significantly to its position in the capillaries rather than the arterioles. It is improbable that the transudation, which is necessarily of capillary origin, would be thus promptly poured out were there any considerable constriction of the arterioles to cut off the blood from the ultimate vessels. Among the circumstances which conduce to early renal dropsy is the state of the respiratory organs, which is commonly found with this condition. In a large proportion of cases there is broncho-pneumonia or some allied condition, which must assist the process by hindering the return of venous blood.

Three stages are to be recognised in the natural course of renal dropsy: its *accession*, its *removal*, and its *reappearance*. This division, of course, applies only to cases which become chronic and go on to the latest issues of the disease. Numbers happily get well shortly after the outset; for such there are no subsequent stages; others are debarred from them by early death. Taking the instances where the kidneys are irrecoverable and yet allow of a protracted existence, what happens is this: the heart and arteries slowly become hypertrophied, the arterial tension increases, the pulse hardens, the urine becomes superabundant, and the dropsy lessens and then disappears. With the access of the disease we have the tension increased to a certain degree and with this dropsy; with a further increase of tension and concomitant changes in the heart and arteries the dropsy goes. This result of the *vis medicatrix naturæ* is often placed to the credit of the last drug or the last medical attendant. How is it brought about? Probably in two ways; the increased blood-pressure is a diuretic of no mean efficacy, and the increased expansile power of the hypertrophied left ventricle draws upon the veins and pumps out the waterlogged vessel. But this is not the finish. The last scene of all that ends this strange eventful history is heart-failure and a return of dropsy which is now more cardiac than renal. The beneficial part of the process can be conducted only so long as the mitral valve remains efficient. A time comes, if the patient lives long enough, when the heart stretches under the strain and the mitral orifice becomes too wide to be closed by the mitral flaps. Then comes regurgitation, a mitral murmur, a return of dropsy, which often invades the thoracic cavities, often pulmonary apoplexy, and all the circumstances of mitral disease. Pulmonary apoplexy and hæmoptysis may ensue simply from renal disease without any affection of the heart excepting what renal disease entails. I have given examples of this in the paper that I have more than once referred to.

The treatment of renal dropsy is by no means unsatisfactory, since we often have with us a strong-siding champion—Time. We must not be guided solely by *a priori* reasoning or theoretical considerations, but largely by experience. We have to trim and adjust and pursue a system of compromise. We have anæmia on one hand and uræmia on the other, and must steer between Scylla and Charybdis. We have to depurate, to dehydrate, but not to anæmiate. We must evacuate, but not exhaust. "Spare diet and spring water clear" may purify the blood, but are not remedies for anæmia. Watery purgatives, compound jalap powder, sulphate of magnesia, and under extreme circumstances elaterium, may be given periodically and alternately with hot-air baths. Sudorifics in the shape of drugs are useless as remedies for dropsy, but I have known this, when obstinate and extensive, to be entirely removed under the influence of hot air, which I have been in the habit of applying only below the knees: the effect is general and sufficient without being excessive. Of the medicines of the diuretic class the only one of special use is digitalis, and this is so valuable that I have laid down a rule for myself from which I seldom depart—if there be dropsy in the course of renal disease give digitalis. This is not merely a diuretic, but probably has an action on the cardio-vascular system which is beneficial under the circumstances. A very low diet does not do; I give fish generally, and have often exchanged it for a little meat with obvious advantage. The treatment of renal disease is often overdone in the way of taking too much out of the patient and not putting enough in. For the more chronic cases iron is generally beneficial; the perchloride may be conveniently associated with digitalis, and enough sulphate of soda or of magnesia to obviate any constipating effect. I may add a word about tapping which is much what I have said in reference to cardiac dropsy. Tap the pleuræ or the peritoneum with confidence, but leave the legs alone. Relieving the abdomen is often the best way of relieving the lower extremities, for it takes the pressure off the vena cava. With regard to the pleuræ, by removing fluid from them we achieve two ends: not only do we ease the breathing, but by taking pressure off the pulmonary vessels we facilitate the return of venous blood, and thus promote the absorption of dropsy fluid in every part of the body.

Allied to the dropsy of renal disease is that of chlorosis; both are essentially dependent on the failure of a natural excretion and its retention in the blood. I have no time to dwell upon this, but may briefly say that one way in which the toxic agent acts, as does that of kidney disease, is by increasing the arterial tension. It took me by surprise when I found by applying the sphygmograph in this variety of dropsy that with these pallid and feeble creatures given to fainting, as full of murmurs as an Æolian harp—"most musical, most melancholy"—the force of the pulse was increased instead of diminished. It has long been known that these subjects of green sickness were the better for being purged, and for some time suspected that a toxic retention was concerned in the production of the symptoms. In general estimation this toxic element is of uterine origin, and I daresay it may largely be so, but I have often heard Sir Andrew Clark maintain that it was alvine, and thus explain the benefit derived from cathartics. My object is chiefly to show that together with œdema in chlorosis we have increased arterial tension where we should least expect it, and recognise a similar attitude of dropsy and vessel to that which pertains to renal disease. All this helps to explain what we have already learned from experience, that whatever else we do in chlorotic anæmia our endeavours must be to rid the blood of its morbid superfluities, and stimulate the eliminative function of the uterus. Thus we find other warrant than that of experience for conjoining aloes with the necessary iron, and only find in new inquiry fresh reasons for the time-honoured practice.

A MODIFICATION OF THE OPERATION OF ENTEROPLASTY FOR SIMPLE STRICTURE OF THE INTESTINE.

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,

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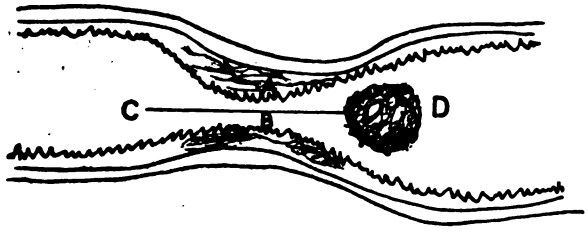
THE method of overcoming stricture of the pylorus by longitudinal section and transverse suture of the incision, originally performed by Heineke and afterwards followed up by Mikulicz, was first applied to a case of simple stricture of the intestine by Mr. H. Allingham.[1] The modification of the operation by the use of the bone bobbin will, I think, be found to present the following advantages: (1) rapidity of execution, since only two continuous sutures are required—one to unite the mucous margin, the other the serous; (2) an immediately patent and efficient channel, preventing tension above the newly joined gut; and (3) protection to the line of sutures until the lymph has become partly organised. The following case is of interest, not only from

[1] THE LANCET, June 23rd, 1894.

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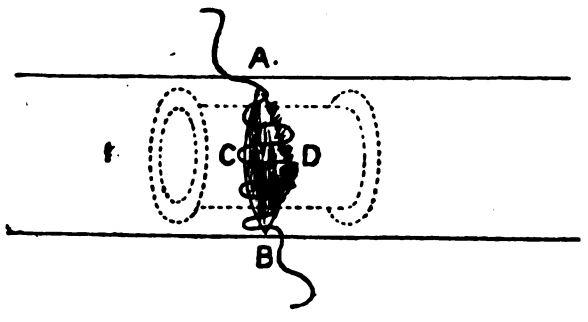
the operative point of view, but from the history of antecedent ulceration of bowel with perforation and recovery.

A thin, delicate girl aged sixteen was sent to me by her medical man, Dr. J. Russell of Batley, on account of a fæcal fistula in the right cæcal region, through which pus and liquid fæces had been passing for some months, during which time she had been gradually losing weight and strength. She gave the history of having had an illness eighteen months previously, when a swelling with tenderness developed in the right side of the abdomen. She had diarrhœa and was feverish, and was told that there was inflammation of the bowels. After some weeks an abscess developed over the cæcum and was opened, a quantity of foul pus being let out. A week after the abscess had been opened fæcal matter began to be discharged from the wound, and this had continued since, though the bowels had been occasionally moved through the anus. On admission to hospital the patient was extremely thin, her bones showing visibly under the skin. There was a fæcal fistula midway between the umbilicus and the right anterior superior spine of the ilium, and the skin around the opening was excoriated, red, and inflamed by the irritation of liquid fæcal discharge and pus. The abdomen was quite flat, and no tumour could be felt. Charcoal administered by the mouth appeared at the fistula in thirteen hours. On July 10th, after laying open the rather extensive sinuses leading from the fistula, scraping them freely with a Volkmann's spoon and as far as possible asepticising them by means of a 1 in 1000 perchloride solution, the abdomen was opened by an incision of three inches, the fistula being the centre of the incision. Adhesions were separated by the fingers and the affected gut brought outside the wound, the peritoneal cavity being protected by sponge packing. The fistula was in the ileum, and while the fingers would easily pass upwards nothing larger than a No. 12 catheter would pass through a stricture fully an inch in length just below the fistula. After passing a director through the stricture, which was evidently cicatricial, it was divided in the direction of the length of the bowel. A decalcified bone bobbin was then inserted and the cut edges were brought together transversely over it, as shown in the diagrams. A continuous catgut suture was



First stage, showing incision from fistula D through to C.

used to unite the mucous margins, and a silk suture the serous surfaces, thus restoring the continuity of the intestinal channel. After carefully cleansing the surrounding structures, the peritoneum, aponeurosis, and skin were apposed



Second stage, showing sides of incision A B drawn apart and ends C D.

in the usual manner. The patient suffered very little from shock, and the bowels were moved naturally on the second day. The deeper parts of the wound healed by first intention; the superficial by granulation. The patient's general condition began to improve at once, and she has never had any bowel trouble since. When seen six months later, she looked a picture of health, had gained her usual colour and flesh, and expressed herself as quite well.

Remarks.—Simple stricture of the bowel is sufficiently rare to make it worth while reporting a single instance; but this case is also of interest from an operative point of view—not simply from the success of the modification of the operation by the use of the bone bobbin, but also because it shows that a plastic peritoneal operation may be undertaken with some prospect of success, though the way into the abdomen be through a foul abscess, if, as in the present case, the walls of the abscess and the surrounding parts be purified before the abdominal cavity is opened.

Leeds.

TWO CASES OF SEPTICÆMIA DUE TO MIDDLE-EAR DISEASE; OPERATION; RECOVERY.

BY W. GIFFORD NASH, F.R.C.S. ENG.

CASE 1. *Septic pleuro-pneumonia following a blow on the head in a boy suffering from otorrhœa.*—A boy aged twelve, who had had otorrhœa for five years, was boxed on the ear on June 16th, 1892. This was immediately followed by headache and seven hours later by vomiting. Next morning headache, photophobia, fever, and delirium were present. Twenty-four hours after the blow I found him lying curled up in bed, objecting to light and interference, delirious, very flushed, and with a temperature of 103° F. and pulse 180. Half an hour later my partner, Mr. Kinsey, gave him chloroform, and I shaved the scalp and forcibly syringed out the right ear, removing a small granulation polypus. Three leeches were applied behind the ear and an icebag to the head. On June 18th he was still feverish, but there was no delirium. He was seen in consultation by Mr. Henry Morris, and with his sanction I trephined and gouged out the mastoid antrum. The dura mater covering the roof of the antrum was also exposed and found to be healthy. No pus was found. On the 20th there were frontal headache and pain in the right shoulder, as also a dry hacking cough suggestive of pleurisy. On the 21st the cough and pain continued. The temperature was 103·4°, the pulse 120, and the respiration 48. On the 22nd the temperature was 104·6°, the pulse 144, and the respiration 60. Pleuritic friction was heard over the left lower lobe and right upper and middle lobes, with numerous scattered patches of tubular breathing; there was also sweating. It was evident that septic pleuro-pneumonia was present. I proposed to explore the lateral sinus, and, if I found it thrombosed, to tie the internal jugular vein. The trephine was applied to the mastoid process over the lateral sinus. This did not pulsate, but looked healthy. A hypodermic syringeful of blood was drawn off, showing that the sinus was not thrombosed. When the needle was withdrawn blood spurted from the puncture. The wound was closed and nothing further done. From June 22nd until the end of July the case was desperate. There were repeated fresh patches of pneumonia with elevation of temperature to 103° or 104°; the pulse varied up to 144, and the respiration up to 72. At one time tubular breathing and friction were heard over the whole of the right lung and lower lobe of the left. The expectoration was fetid, and there were profuse sweating and extreme emaciation. From this desperate condition he gradually recovered. The treatment consisted of milk, eggs and brandy, with quinine and digitalis. During August there were slight occasional rises of temperature. On Aug. 31st he got up, and on Oct. 1st he was allowed out of doors. He then looked as well as he did before the illness. There was no discharge from the right ear, and he could hear a watch tick at 12 in. The right side of the chest was much contracted. In August, 1894, he was in perfect health; the chest showed no sign of contraction; there was no deficiency of expansion or diminution of breath sounds, and no discharge from the ear.

Remarks.—I do not claim that the surgical measures adopted had anything to do with the recovery of this patient, but I believe it would have been culpable to have neglected them when it is considered how fatal these cases are when treated by medical means. There can be very little

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doubt that the attack of pleuro-pneumonia of both lungs was set up by the blow on the head, as severe cerebral symptoms set in immediately after it was inflicted. It would appear as if the blow had dislodged some septic thrombus from the middle ear and produced thrombosis of some vein or veins entering the lateral sinus, from which septic emboli were carried to the lungs. The source of the sepsis I believe to have been sewer gas, as the house was proved to be very insanitary. Within nine months there occurred in the house one case of pelvic cellulitis, one of diphtheritic sore-throat, two other sore-throats, two cases of acute otitis media, and two of acute rheumatism. All these, I believe, may be caused by sewer gas. The symptoms of acute rheumatism and septicæmia bear such a close resemblance to one another that I need not do more than refer to them. An interesting feature of the case was the absence of rigors, which are usually considered to be diagnostic of septic thrombosis of the lateral sinus. The question arises, Would it have been better to have ligatured the internal jugular vein? I think it would, even in the absence of proof of thrombosis, for it would probably have cut short the illness and diminished the risk to life arising from the extensive inflammation of the lungs.

CASE 2. *Subdural abscess and septic thrombosis of the lateral sinus; drainage of abscess and sinus; ligature of internal jugular vein; recovery.*—A boy aged fifteen had suffered intermittently for two years from left otorrhœa, which had been treated with antiseptic lotions and powders. A granulation polypus had been removed from a perforation in the upper part of the membrana tympani during the previous summer. On March 20th, 1894, he was supposed to have caught cold, and on the 23rd he began to suffer from earache and headache. On the 29th his temperature was 102° F. There was no loss of appetite, and no sickness or shivering. I first saw him on April 1st and found him in bed, flushed and drowsy; he objected to light and was very deaf. His temperature was 103·6°, the pulse 90, and the respiration 24. The left side of his face was puffy. The discharge from the ear was most offensive. There was slight tenderness over the mastoid antrum and cells, and marked tenderness over the large vessels in the neck. There were no physical signs of any lung or heart affection, and no cough or pain in the chest. There was commencing optic neuritis. After consultation with Mr. Kinsey I operated. First a small trephine was applied just above and behind the meatus, and the middle fossa of the base of the skull was opened. The dura mater was found to be healthy. Next, the mastoid antrum was opened. The bone behind this was very soft, and whilst gouging it a most offensive smell arose. An abscess was opened lying between the bone and the lateral sinus, and about two drachms of foul-smelling pus were evacuated. The wall of the lateral sinus was thickened, discoloured, and sloughing. A free escape was provided for the matter. In the absence of rigors it was not considered necessary to tie the internal jugular vein. Next morning the temperature was 100·4° and the pulse 80. About noon he had a rigor and the temperature rose to 104°. At 3 P.M. I tied and divided the internal jugular vein at about the level of the cricoid cartilage. At that point the common facial vein joined it. There was a free current in the facial vein, but none in the jugular, above their junction. The ligatures were applied above their junction. The ear wound was then reopened and the wall of the lateral sinus cut away, exposing a firm, dark blood-clot filling the sinus. The same evening I was laid up with influenza, so that for the greater part of the further treatment and notes I am indebted to Mr. Kinsey. After this, symptoms supervened which gave rise to considerable anxiety as to whether or not a cerebral abscess was forming. The boy became very emaciated. On the 11th the stitches were removed from the wound in the neck, which had healed by first intention. On that day he began to complain of frontal headache, was very restless, and vomited. He also became drowsy, in consequence of which, on the 15th, the mastoid wound was reopened and enlarged. All granulations were scraped away and about two drachms of pus let out from the occipital portion of the lateral sinus. A probe was passed as far as the torcular Herophili and caused slight bleeding. A drainage-tube was inserted in the sinus and the middle ear thoroughly scraped out. On the 17th he had a rigor, which was followed by a swelling on the left side of the neck, which spread upwards over the face and downwards below the clavicle. On the 19th an incision was made in the swelling in the neck, and some foul-smelling pus evacuated. After this all went well, and by May 16th all the wounds were healed.

Remarks.—This case exemplifies an interesting sequence of events—viz., chronic otorrhœa, suppuration in the mastoid antrum, subdural abscess, and thrombosis of the lateral sinus. The course of events, modified by treatment, was as follows: (1) The subdural abscess and mastoid antrum were cleared out and drained, but already the septic inflammation had involved the lateral sinus; (2) absorption of septic material from the thrombus necessitated ligature and division of the internal jugular vein to cut off the source of infection from the general circulation—the lateral sinus was opened to permit of the escape of the breaking-down clot; (3) it was necessary to reopen and enlarge the mastoid wound to allow pus to escape from the lateral sinus; and (4) the subcutaneous abscess in the neck was opened. The cause of this abscess seems to have been one of two. Either it was cellulitis due to septic material carried by the lymphatics from the wound behind the ear, or it was due to the breaking down of the clot in the jugular vein, between the base of the skull and the ligature.

Obliteration of the left internal jugular vein, by clot or ligature gives rise to less disturbance of the cerebral circulation than obliteration of the right vein, as the superior longitudinal sinus usually enters the right lateral sinus, which is then much the largest. The abnormally low entrance of the common facial vein into the jugular was also of interest, as through it the blood coming from the brain through the angular vein was able to reach the jugular below the ligature. The question arises, Should I have ligatured the lateral sinus outside the torcular Herophili, as is advised by Mr. Arbuthnot Lane? I think it would have been wise to have done so, and certainly better surgery. Suppuration must have occurred as far as the torcular Herophili, and one sees no reason why it should not have gone on extending further. In fact, it probably would have done so had not a drainage-tube been introduced into the sinus. The risk incurred by ligaturing the sinus must be small compared with that from the extension of the septic thrombus.

Bedford.

A CASE OF

TUBERCLE OF THE LEFT OPTIC THALAMUS EXHIBITING INTENTION-TREMOR, AND ATTACKS OF TETANOID RIGIDITY; NECROPSY; REMARKS.

BY ARNOLD J. EDWARDS, M.D. VICT.,
RESIDENT MEDICAL OFFICER TO THE CHORLTON-UPON-MEDLOCK DISPENSARY, MANCHESTER.

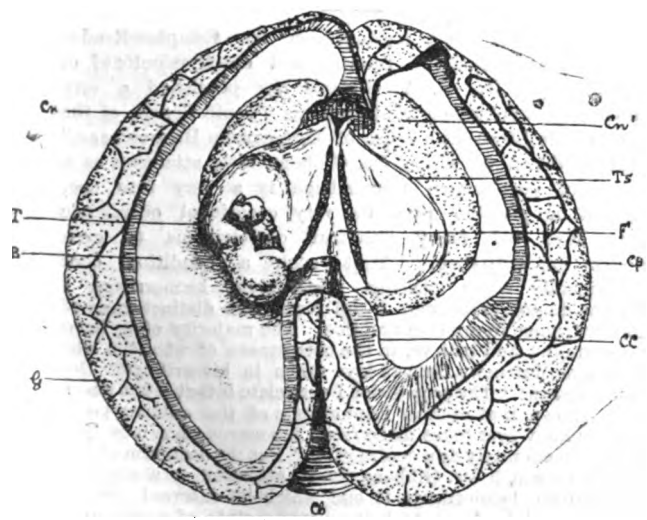
A BOY aged six years was admitted as a home patient at the Chorlton-upon-Medlock Dispensary under my care on Dec. 17th, 1894. The patient was apparently quite well until seven weeks before admission, when the mother noticed that he dragged his right leg on walking. Two or three days after this it was observed, when he was taking his food, that he held the spoon in his left hand, and upon his mother insisting that he made use of the right hand for that purpose this latter hand began to tremble. At first the trembling was slight, but it gradually got more and more marked. For the last three weeks he had complained of severe frontal headache, and there had been vomiting for the last four days. Lately, also, he had not seemed to see things well. The father died two years ago of apoplexy. The mother gave a history of four miscarriages out of eight pregnancies, and had had a sore-throat for six months at a time. The mother's father died of phthisis. On admission an exceedingly well-marked, coarse, jerky tremor was seen in the right arm on movement. This disappeared entirely when the arm was at rest. The movements came largely from the shoulder. There was no nystagmus or syllabic speech. The right arm and leg were distinctly weaker than those of the left. There was no facial paralysis. There was well-marked and persistent ankle-clonus on the right side, but ankle-clonus was not obtained on the left. Both wrist-jerks were present and about equal upon the two sides. The epigastric, abdominal, cremasteric, and plantar reflexes were all obtained, but showed no difference on either side. There

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was marked rigidity noticed on passive movement of the right knee-joint. The patient had difficulty in standing unsupported, but closing the eyes did not increase it, nor was there any sign of reeling in one or other direction. With assistance he was able to walk, and the gait was distinctly ataxic. Sensation was universally normal. The bladder and rectal functions were normal. There were no signs of congenital syphilis, and the lungs appeared quite healthy. On December 19th the vomiting had quite ceased under bismuth, but treatment had in no way influenced the headache. On the 22nd there was well-marked optic neuritis of the left eye. There appeared also to be inflammation of the right nerve, but of this I could not be quite certain, as conjunctivitis with a slightly cloudy cornea was present on that side, and the concomitant blepharospasm also rendered ophthalmoscopic examination exceedingly difficult. The other cranial nerves appeared to be normal. Towards the close of the somewhat prolonged ophthalmoscopic examination the patient was suddenly seized with an attack of tetanoid rigidity. He became unconscious, the head was bent back, the spine arched, and the whole body became extremely rigid; the teeth were clenched and both eyes were turned to the right. The face preserved its natural colour. This condition was kept up for about three minutes, and then the muscles gradually relaxed and there was a return to complete consciousness. This tonic condition was not succeeded by any clonic contractions. The mother now told me that he had three similar attacks during the preceding night. I put the patient on large doses of iodide of potassium, combined with mercurial inunctions. On the 23rd he had three attacks of tetanoid rigidity between the hours of six and eight in the morning, the last one being the severest experienced. He fell asleep, worn out, after each attack. When awake he was constantly moaning and complaining of his head. On the 24th he had five attacks of tetanoid rigidity early in the morning. They followed rapidly upon one another. The intention-tremor was not quite so marked as when first seen, and the grasp of the right hand was weaker. On the 25th he had no control either over the bladder or the rectum. He died at 11 P.M.

Necropsy.—This was held on Dec. 26th, sixteen hours

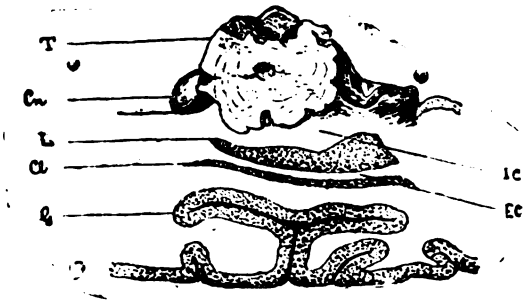
FIG. 1.



Both lateral ventricles were partially opened out, and displayed: T, a tuberculous growth in the left optic thalamus; B, body of left lateral ventricle; Cn, left caudate nucleus; Cn', right caudate nucleus; F, fornix; Cp, choroid plexuses; Ts, tænia semicircularis; CC, corpus callosum; G, cortical grey matter; and Cb, cerebellum. (Diagram one-third natural size.)

after death. Post-mortem rigidity was very marked. There was extensive dorsal hypostasis. I could obtain permission to examine the brain only. The skull-cap was normal. The membranes were congested, but did not show any signs of inflammation. A distinct firm tumour could be felt in the left side of the brain. On opening the left lateral ventricle in the usual way a very considerable quantity of clear serous fluid gushed out. There was no excess of fluid in the right lateral ventricle. The tumour was about the size of a large walnut, and was found to be situated in the left optic thalamus. (See Fig. 1.) A vertico-transverse section through the tumour and left cerebral hemisphere showed that the growth was pressing on the left internal capsule. (See Fig. 2.) The floor of the fourth ventricle presented no signs of pressure, and sections through the medulla and the upper cervical region of the cord appeared normal. Microscopical

FIG. 2.



Vertico-transverse section through the growth and left cerebral hemisphere. T, tumour; IC, internal capsule; EC, external capsule; L, lenticular nucleus; Cl, claustrum; Cn, caudate nucleus; G, cortical grey matter. (Natural size.)

examination of the growth showed it to be undoubtedly tuberculous.

Remarks.—The occurrence of attacks of tetanoid rigidity and the presence of well-marked intention-tremor in the right arm are the principal features of interest in the above case. General tetanic rigidity, constant or paroxysmal, has been met with in several examples of tumour of the pons and of the cerebellum, but, after a careful review of the literature of the subject, I have been unable to find a single instance of tumour of the optic thalamus in which attacks of tetanoid rigidity were noted. The rigidity in this case is exceedingly difficult of explanation; in tumours of the pons or cerebellum it is possibly due to pressure upon the medulla. The localised intention-tremor is of interest as bearing upon the pathology of the intention-tremor seen in disseminated sclerosis. Cases such as the above, where we have a definite and localised lesion in the brain, together with trembling on movement confined to a limb, are especially valuable in helping us to arrive at a true conception of the causation of intention-tremor. The tumour here was pressing on the motor paths in the internal capsule, and it seems to me very probable that the tumour would act in a precisely similar manner to a sclerotic patch in the internal capsule. The nerve fibres would be unequally implicated; the functions of a few would be destroyed, the conducting power of a considerable number would be impaired, while others might escape entirely. The stimuli proceeding from the cortex to certain muscles would, owing to the diminished conducting power of the supplying nerve-fibres, be too few, and as a consequence tremor would result; again, unless the amount of contraction of each of the antagonistic or regulating muscles—which are brought into play in all coördinated movements—is exactly graduated, the balance would be disturbed and incoördination as well as tremor would follow. The implication of the nerve fibres to certain muscles, with escape of the nerve fibres to antagonistic muscles, would bring about this incoördination. Further, it is noteworthy that the tremor in the above case was very slight at the commencement, then gradually got more and more pronounced, until finally, in the later stages of the disease, it again became less marked. It will be observed, also, that as the tremor diminished the paralysis increased. These facts would appear to indicate that the tumour was rapidly increasing in size and destroying in its progress more and more nerve tubules.

Manchester.

SUPERANNUATION ALLOWANCE.—Mr. Edward L. Webb, M.R.C.P. Edin., M.R.C.S. Eng., late Medical Officer of the second district, St. George's, Hanover-square, has been granted a superannuation allowance of £76 per annum.

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A CASE SHOWING THE VALUE OF THE LEFT SUPRA-CLAVICULAR ADENOPATHY AS A REVEALING SYMPTOM OF INTRA-ABDOMINAL CANCER; WITH REMARKS.

BY W. ROGER WILLIAMS, F.R.C.S.

SEVERAL cases have now been recorded by Continental observers demonstrating the frequency of the association of enlargement of the left supra-clavicular lymph glands with intra-abdominal malignant disease, to which Troisier[1] first directed attention in 1888. As the subject has escaped notice in this country, notwithstanding its great importance in diagnosis, I think the following case will be of interest.

A married woman aged fifty-six, the mother of six children, having for some months suffered from gradually progressive anæmia and loss of strength, together with failure of appetite, constipation, nausea, and dyspeptic symptoms, in August, 1894, began also to experience pain in the epigastric region, for which she consulted a medical man in September. I first saw her in the following October, when she was markedly anæmic and sallow. The ingestion of solid food caused epigastric pain and after a time nausea and vomiting. She complained of a swelling in the epigastric region, but upon examination no intra-abdominal tumour could be detected. The stomach was not dilated, and there were no signs of obstruction. The liver and spleen seemed normal. There was no history of hæmatemesis or coffee-ground vomit. At this time she was very subject to alternate flushing and pallor of the cheeks and extremities, the fingers often becoming quite dead, as in Raynaud's disease. She was also subject to palpitation of the heart and to occasional syncopal attacks. The urine contained neither sugar nor albumen. Under the influence of rest in the recumbent position, with none but peptonised fluid foods, together with medicines containing belladonna and carbolic acid, the pain subsided, and there was temporary improvement. It soon became obvious, however, that the weakness was increasing; and subsequently nausea, vomiting, and thirst became prominent symptoms. In January, 1895, I saw her again, when she was weaker, paler, and more sallow than on the previous occasion. I was unable to detect any intra-abdominal tumour. The case presented many of the features of pernicious anæmia. She was treated with "bone marrow" and Fowler's solution. This treatment soon had to be given up on account of the pain and vomiting it excited. In April an intra-abdominal tumour was discovered. I saw her again in May, when the emaciation, pallor, and weakness were very great. The vaso-motor symptoms had quite disappeared. Nausea, vomiting, and epigastric pain after food still continued, but there was no hæmatemesis. On abdominal palpation a circumscribed mobile intra-abdominal tumour, about the size of a small turnip, could be felt rather to the right of the median line, midway between the umbilicus and xiphoid. It was dull over its anterior surface. There appeared to be no dilatation of the stomach; the dimensions of the liver and spleen were normal; there was no umbilical retraction. The left supra-clavicular lymph glands, as well as those at the upper part of the axilla, were enlarged and hard; these by interfering with the venous circulation had caused the œdema of the head and forearm. This condition was of rather less than a week's duration. It was evidently due to dissemination of the disease in the glands through the medium of the thoracic duct. The recognition of this symptom completely negatived any exploratory operation. Death ensued about five weeks later, and there was no necropsy. The patient was partially unconscious, with muttering delirium, for some days before the end. The rapid formation of the tumour, its mobility, the considerable size attained, the absence of hæmatemesis, gastric obstruction, hepatic and splenic enlargement, and finally the dissemination by the lymphatics, all seem to indicate a tumour of omental origin—probably a malignant endothelioma.

Remarks.—I will conclude with a brief *résumé* of what is known of the left supra-clavicular adenopathy. The first indication of the affection generally is the enlargement and induration of a single lymph gland, situated behind the posterior border of the lower part of the left sterno-cleido-mastoid muscle. Subsequently adjacent glands become similarly affected; and in the event of life being prolonged they ultimately manifest all the symptoms of malignant disease. This occurs without any of the intervening structures, prevertebral glands, lungs, &c., being invaded. All the different varieties of intra-abdominal malignant disease may cause this affection; but it has hitherto been observed with especial frequency in association with cancer of the uterus. It seems probable that this curious pathological condition is due to reflux of lymph, charged with cancer cells, from the thoracic duct into which the cancer cells find their way from infected lumbar glands. I need hardly insist on the great importance of this manifestation in the diagnosis of obscure intra-abdominal disease and as a contra-indication to operation. The glandular enlargement generally first makes its appearance at a late stage of the abdominal disease; it has, however, been known to have appeared nearly two years before death. Several instances of its occurrence have lately been reported secondary to malignant disease of the testicle.[2] Vidal has met with a case secondary to cancer of the stomach.[3] Spinelli has tabulated thirty-four examples of this condition,[4] and he points out that the glandular enlargement may be accompanied by painful sensations in the region of the neck, shoulder, and arm. Care must be taken not to confuse this adenopathy with the "pseudo-lipome sus-claviculaire" of Verneuil, of which I have given an account elsewhere,[5] the latter affection is simply an overgrowth of the fibro-fatty tissue of the supra-clavicular fossa, both sides being affected; and it is usually met with in well-nourished middle-aged women otherwise in good health.

Preston.

[1] Bulletins et Mémoires de la Société Médicale des Hôpitaux, Jan. 13th, 1888; also Archives Générales de Médecine, February and March, 1889.

[2] Troisier: Archives Générales de Médecine, August, 1893. Poncet: Mercredi Médical, Jan. 3rd, 1894.

[3] Bulletins et Mémoires de la Société Médicale des Hôpitaux, December, 1893.

[4] Rivista di Clinica e Terapia, No. 8, 1893, p. 397.

[5] Transactions of the Pathological Society of London, 1890, p. 302.

NOTE ON A RARE FORM OF POST-PARTUM HÆMORRHAGE.

BY SURGEON-CAPTAIN A. W. D. LEAHY, M.D. DURH., F.R.C.S. ENG.,
INDIAN MEDICAL SERVICE.

IN the form of a reprint from the Comptes-Rendus du Congrès Périodique International de Gynécologie et d'Obstétrique Dr. R. A. Gibbons has published a very interesting brochure on what he terms "Tonic Spasm of the body of the Uterus as a cause of Post-partum Hæmorrhage." The condition to which Dr. Gibbons calls attention as a cause of post-partum hæmorrhage is a very rare one, and it is possible that its very occasional occurrence may have led many practical obstetricians to even doubt its existence. That such a condition does occasionally occur causing post-partum hæmorrhage I for one do not doubt, and I can recall two distinct cases of its occurrence in my own practice. The majority of us have been taught, and believe, in the correctness of what the late Professor Matthews Duncan lays down in his writings. Dr. Duncan says: "The proposition I enunciate is that it has never been shown that uterine hæmorrhage of the ordinary post-partum kind ever takes place from the uterus when it is in a state of moderately firm contraction." But the condition of the uterus to which Dr. Gibbons directs attention as a cause of post-partum hæmorrhage is one which its external appearances would lead one to believe was a state of moderately firm contraction, but which internal examination shows to be one of tonic spasm of its walls. The two cases to which I have referred as having occurred in my practice presented themselves at an interval of fourteen years. The first I met with during my period of residence as obstetrical officer to the Charing-cross Hospital, London. The second occurred to me here in Calcutta three years ago. They were curiously alike, and as they may prove of some interest to my professional brethren I append short notes of each.

CASE 1.—A woman aged twenty-seven, married seven

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years, multipara, was attended by me in January, 1878. The patient was a small, anæmic, nervous woman, and informed me she had suffered from severe flooding after each of her three previous labours. This note was made at the time of her taking out her ticket from hospital. Her father was an epileptic, but she herself had never had a fit. She was an only child. Her labour commenced on the 13th at 6 P.M.; the os was fully dilated at 10 P.M., and the second stage was over at 2 A.M. There was nothing abnormal in her labour, but, bearing in mind her previous experiences, a considerable amount of care was given to the third stage, and after expulsion of the placenta the uterus was grasped and kneaded. It contracted well, was fairly hard, but continued large, and felt somewhat irregular. Then to my astonishment hæmorrhage set in. The bleeding was profuse and in gushes. The patient quickly became collapsed, her pulse failed, her skin became moist and clammy, and she fainted. During the hæmorrhage I followed the usual course of treatment, introduction of the hand into the uterus, clearing out its contained blood, the injection of hot and of iced water, and the placing of ice within the uterus, but these remedies failed. The bleeding continued in spite of the uterus being grasped both externally and internally, and I noted that its walls were hard. The patient I believed to be on the verge of death, and as she fainted I felt the walls of the uterus first relax and then rapidly and regularly contract, forcing my hand from within its cavity into the vagina. The contraction was sustained and the woman recovered, but was weak for weeks afterwards.

CASE 2.—A woman aged thirty-two, married four years, multipara, was confined on Aug. 9th, 1892. After each of her two previous labours she had nearly died of post-partum hæmorrhage. She was a fair, delicate-looking woman of an extremely nervous disposition, and looked forward with great dread to the ending of her present pregnancy. She was attended by Dr. Harvey in her first labour and by Mr. Joubert in her second. In this case, again, the labour was in every way perfectly normal. The first stage was of average duration; the second somewhat rapid. After the end of the second stage a large dose of ergot was administered and the placenta expressed by Credé's method fifteen minutes after the birth of the child. While my hand was on the abdomen grasping the uterus I felt it become softer, enlarge, and then harden again. The organ was irregular in shape, and hæmorrhage at once declared itself. The routine course of treatment was pursued. Hot and iced water was used internally. Ergotinine was injected hypodermically. The interior of the uterus was irrigated with ferric chloride and water. The uterus was grasped between the hands, one within its cavity and the other upon the abdomen, but the hæmorrhage continued. The patient was pulseless, with sighing respiration, complained of noises in her ears, blindness, and rapidly became unconscious. As her consciousness left her I felt the walls of the uterus soften, and this softening was followed by equable and firm contraction which drove my hand down into the vagina. The contraction persisted, but the hæmorrhage ceased. The patient recovered, but for weeks she was extremely feeble and suffered much from fever.

This, shortly, is an account of the only two cases I have met with which appear to me to accurately fit the condition described by Dr. Gibbons—viz., "persistent tonic spasm of the walls of the body of the uterus causing post-partum hæmorrhage." Such cases appear, as a rule, to present the following points in common: (1) the patients are usually neurotics; (2) successive labours in the same patient are always attended by post-partum hæmorrhage; (3) the cases are of rare occurrence; and (4) the hæmorrhage resists ordinary attempts to control it, and its cessation is brought about by syncope with consequent relaxation of the spasm affecting the uterine wall and subsequent contraction. Perhaps, after all, in these cases the etiology is not of such importance as the treatment, and it does not matter very much whether we include them under the heading of "contraction without completeness of retraction" or ascribe them to apolarity or tetany of the body of the uterus. Still, if the view set forth by Dr. Gibbons is correct, if these cases are due to a real spasm affecting the body of the uterus, then, I think, we must admit the value of his view as indicating a line of treatment to be adopted in such cases. In his brochure Dr. Gibbons logically follows out his view of the etiology of these cases by recommending the administration of an anæsthetic as the best form of treatment, and if a third case occurs to me in my own practice I shall certainly use chloroform. The clinical and striking point about these cases of post-partum hæmorrhage is that the body of the uterus can be felt above the pubes perfectly hard, but not regularly contracted, and at the same time the existence of an actual cavity within the body of the uterus from which the bleeding occurs is plainly evident. This short note has no pretensions to originality, and my only justification for having written it is that it may be of some use to my professional brethren in calling attention to a rare form of post-partum hæmorrhage, and indicating a possibly successful method of treating it.

Calcutta.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF UNILATERAL TUMOUR OF THE PONS; DEATH; NECROPSY.

(Under the care of Dr. DE HAVILLAND HALL.)

THIS interesting contribution to the literature of the lesions of this region is a very complete one, and is, therefore, of much value. Dr. Starr has written on this subject, describing a case which was under his care, and giving an abstract of twenty-six others which he had collected from various sources. He considers it possible to arrive at a very exact diagnosis of lesions in this region and summarises his conclusions as follows:—"1. If in any case anæsthesia of one side of the face occurs (not due to neuritis of the trigeminus or the cortical lesion) the lesion lies in the medulla or pons, in the outer third of the formatio reticularis. Its position in this part is to be determined by the other symptoms present; for if it is situated high up (cephalad) in the pons it will be on the side opposite to the anæsthesia, and if it is situated lower down (caudad), in the pons or in the medulla, it will be on the same side as the anæsthesia. 2. If in any case anæsthesia of the limbs occurs (not due to cerebral lesion) the lesion lies in the medulla or pons, in the inner two-thirds of the formatio reticularis, and upon the side opposite to the anæsthesia, or in the spinal cord. 3. If one side of the face and the limbs of the opposite side are anæsthetic, the lesion affects the entire lateral extent of the formatio reticularis and lies in the medulla or in the pons, below the point of union of the ascending and descending roots of the fifth nerve. 4. If the face and limbs of the same side are anæsthetic, the lesion lies in the brain at a point higher than the junction of the ascending and descending roots of the fifth nerve in the pons. Its position is then to be determined by other symptoms. It may involve the entire formatio reticularis in the upper pons, or crus cerebri; it may be situated in the posterior part of the internal capsule; it may lie in the centrum ovale, destroying the radiation of sensory fibres from the internal capsule; or it may be in the sensory area of the cortex in which all of these tracts terminate."[1] For the account of this case we are indebted to the medical registrar, Dr. J. Porter Parkinson.

A labourer aged forty-five was admitted to the Westminster Hospital on April 9th, 1895, complaining of headache and paralysis of his face. He was a single man, coming of a long-lived and healthy family. He had small-pox in 1875 and contracted syphilis in 1877, having a chancre on the penis followed by sore-throat and secondary rash, neither of which were very severe, and both disappeared rapidly under treatment, since which time he had been well. There was some history of excess of beer, but not of spirits. His illness commenced in November, 1893, with some pain over the left malar bone, which lasted three months, and nothing fresh

[1] Sajous' Annual of the Universal Medical Sciences, 1894, vol. ii., A 40, Medical Record, New York, 1893.

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was noticed till April, 1894, when he had violent attacks of headache on the vertex and left side of the head, coming on almost daily and obliging him to cease work; this lasted till the end of May, when he resumed work, but noticed that his mouth was drawn to the right. In August, 1894, he was again seized with a burning pain in the left side of the face, but managed to work till Sept. 1st, 1894, when his left eye became inflamed; he was then treated for a month at the Ophthalmic Hospital, Moorfields, and finally had the eye removed. Early in January, 1895, he had attacks of vomiting coming on about half an hour after food, which recurred for three months and were accompanied by severe headaches, while about this time he noticed soreness of the left side of the mouth, cheek, and tongue. For the last year his speech had been rather defective. At this time the patient was a man of muddy complexion, with grey hair, and arcus senilis; he was rather anæmic and wasted; there were a few pigmented scars on the legs, but none elsewhere. His arteries were tortuous and fibroid; the pulse was normal and regular. He had severe burning headache above the left zygoma, then there was great tenderness to pressure. His mind was clear, though torpid, and he had no giddiness. His speech was thick and blurred, though distinguishable. The left eye had been removed, but the right had no paralysis, and its pupil reacted to light and accommodation; the fundus was normal. There was slight nystagmus on looking to the right. There was paralysis of all the muscles supplied by the left facial nerve, except for slight movements of the eyelids and forehead when the opposite side moved. The whole region supplied by the left trigeminal nerve was completely anæsthetic, and there was also paralysis and wasting of the left temporal and masseter muscles and apparantly also of the external pterygoid, for when the mouth opened the chin deviated to the left. The skin of the face was rather glossy on the left side, but there was no loss of hair or other trophic change. There was no loss of hearing, smell, or taste on either side. The left vocal cord lay in the cadaveric position, and did not move on articulation; the uvula was drawn to the right, and the arch of the soft palate relaxed on the left, with diminished palatal reflex. There was no paralysis or wasting of the tongue, which was protruded straight forward, but he complained of great soreness on its left side and toothache on the same side. The movements were good in the head and neck. The grasp was slightly less on the right side, and there were increased tendon reflexes in both arms, but no sensory or motor changes. The gait was rather weak and stiff; there was no weakness of the legs, but the knee-jerks were abnormally active, and ankle-clonus could be obtained. There was no affection of the bladder or rectum. There was nothing abnormal in the chest or abdomen, except that the liver was slightly enlarged. The urine was of sp. gr. 1008 and neutral. It contained no albumen or sugar. There was a slight deficit of urates. The patient was given a mixture containing mercury and iodide of potassium, but his headache and malaise continued till April 25th, when he began to have difficulty in swallowing; this improved in a few days, but returned, till finally an attempt to swallow produced choking fits and rejection of the liquid food, so that a catheter had to be used for feeding. On May 7th there was some loss of sensibility to heat and cold in the right arm and leg, and a week later he began to lose power in this side. The choking fits returned independently of food, and he occasionally coughed up a mucoid expectoration. There were detected signs of bronchitis and broncho-pneumonia at the base of the right lung, and the temperature, which previously had been normal, rose to 101·6° F., to drop next day to normal. These fits of choking increased in frequency and exhausted the patient, who was already very weak from the slight amount of nourishment he was able to swallow, till he died on May 17th, about six weeks after his admission. At the necropsy, made by Dr. Hebb, the dura mater was found to be non-adherent to the brain, except over the left lobe of the cerebellum, and for about an inch in the middle of the third left temporo-sphenoidal convolution, where it was firmly attached, and the subjacent cortex was atrophied. The inner wall of the straight sinus was thickened and felt like a solid cord, though the lumen was still patent. In the left cerebellar peduncle, stretching as far as the middle line of the pons, was an elongated gumma measuring 1½ in. by ½ in., firm, gray, and glistening, with central fibro-caseation. The pons was larger than natural and felt boggy. The arteries at the base were normal. The left Gasserian ganglion was atrophied, so that it was about half as large as the right, but there was no thickening around it; the root and divisions of the trigeminal were all thin and atrophied. The left half of the medulla was much atrophied and about three-quarters the size of the right, and there was some wasting of the facial and vagus nerves. There were no changes to be seen in the fresh cord. There was very marked wasting of the intrinsic muscles of the larynx on the left side; also there was well-marked syphilitic aortitis. The lower lobes of both lungs were pneumonic and friable, except the lower part of the right lung, where there was a mass of pigmented fibrous tissue, the superjacent pleura being thickened, white, and opaque—evidently the remains of a syphilitic lesion. The rest of the organs were apparently normal.

Remarks by Dr. J. PORTER PARKINSON.—The diagnosis of this case did not present much difficulty; the paralysis—complete of the trigeminal nerve and partial of the facial nerve—indicated a lesion in the position or neighbourhood of the nucleus of the trigeminal nerve, and when the rightsided hemiplegia became marked this was certain. The evidence of previous syphilis pointed to the lesion being due to a syphilitic lesion, while the absence of involvement of other cranial nerves, such as the auditory nerve, made one suspect the lesion to be in the brain substance. The gradual onset of bulbar symptoms was evidently due to extension of the lesion downwards. The case from the first symptom lasted thirteen months, and it is interesting to note that it began by pain referred to the extremity of the malar twig of the trigeminal nerve. The gumma appeared to press equally on the reticular formation and the pyramidal bundle of the pons, and the loss of sensibility to heat and cold on the right side may have been due to pressure on the former. It would be useless to try to make any deductions from an isolated case but unilateral tumours in this situation are sufficiently infrequent to make it worth while placing each one on record.

WEST HERTS INFIRMARY.

CASE OF PERFORATING GASTRIC ULCER; LAPAROTOMY; DEATH; NECROPSY.

(Under the care of Dr. RUSSELL STEELE.)

THIS case is one of the kind to which special attention has been frequently drawn in the columns of THE LANCET by reason of the great importance of such cases as an addition to our somewhat imperfect knowledge of the subject. The complication which apparently proved fatal, that of the escape of stomach contents through a second ulcer in the posterior wall, is one which need not be in any way regarded as weighing against operation; it is very rare to meet with more than one ulcer. Then, again, it has been calculated that of ulcers on the posterior wall only 2 per cent. perforate, as opposed to 85 per cent. of those situated on the anterior wall. The type of patient appears to have been typical of that recognised as characteristic of the sufferer from gastric ulcer. The promptitude of diagnosis and management of the case were all that could be desired, and we can only regret that the unusual, almost unknown, complication prevented the attainment of the hoped-for success. For the notes of this case we are indebted to Dr. William Martin, house surgeon.

A female patient, unmarried, aged twenty-one years, was admitted to the West Herts Infirmary, Hemel Hempstead, at 9 P.M. on Nov. 17th, 1894, suffering from great shock. She was too ill to go very closely into the history, but the following points were elicited. For about six months she had been troubled with dyspepsia, which had been much worse for about two months. She had severe pain in the "stomach and back" on taking food. The pain, which came on soon after taking anything, was relieved by vomiting. For some time she had vomited after every meal when any attempt was made to take solid food. The pain, although aggravated by ingestion of food, was often felt very severely, quite independent of this, especially in the back. She had never to her knowledge vomited blood or passed any by the bowel. Menstruation began at nineteen years of age, was regular for a short time, but had been absent for six months. On Nov. 17th she was about her ordinary work as a housemaid during the day. She had dinner at 2 P.M., consisting of salt beef and potatoes, but took very little. She had nothing else by the mouth after this. At 5.30 P.M. she was in her room doing her hair, when, as she was stretching her

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arms up, she suddenly felt intense, agonising pain in the abdomen, and was just able to throw herself on her bed, where she was found soon afterwards almost insensible, and Dr. Russell Steele was sent for. He found her at 6 P.M. lying "curled up" on her side in bed, with all the signs of great shock. She had vomited several times before his arrival, and did so again while he was with her. The vomited matter, all of which was inspected, showed no trace of blood and seemed to consist only of partially digested food and mucus. The presence of a perforating gastric ulcer was suspected. A hypodermic injection of morphine was given, and when the patient had rallied somewhat she was carefully removed to the infirmary, a distance of about 500 yards, and admitted at 9 P.M. On admission, although still greatly collapsed, the patient was beginning to rally. She lay quite still upon her back with the thighs flexed and without complaining of much pain. The abdominal wall was tense from contraction of the muscles, but there was no obvious distension. The movements were very slight, the respiration being almost entirely thoracic. On palpation there was some general tenderness, but distinct pain on pressure was complained of below and to the left of the umbilicus. There was no marked tenderness in the epigastric and left hypochondriac regions. The percussion note was dull at the lower part of the abdomen, but tympanitic in the lumbar regions and elsewhere. The liver dulness was normal. An indistinct sense of fluctuation was made out below the umbilicus. A catheter was passed into the bladder, and a few ounces of quite healthy urine were drawn off. Nothing abnormal was found on rectal or vaginal examination. An exploratory operation was strongly advised, but the relatives would not consent without having a night to think the matter over. The patient's general condition improved somewhat up to 12 midnight, after which she gradually grew worse. Nutrient and stimulating enemata were administered during the night. There was no vomiting after admission, and no passage of motion or flatus by the bowel. At 11 A.M. Mr. F. C. Fisher saw the case in consultation with Dr. Steele. At this time the abdomen was slightly distended, tenderness was more general, a distinct fluctuation wave could be made out, and there was dulness on percussion in the lumbar region on each side. The patient was still in fair condition; the temperature was 99° F. and the pulse 125. The consent of the friends was obtained, and at 12·30 P.M., nineteen hours from the onset of symptoms, she was put under ether by Dr. Hubbard, and Dr. Steele, assisted by Mr. Fisher, opened the abdomen. A median incision was made below the umbilicus midway between it and the pubes. On dividing the peritoneum a considerable quantity of turbid fluid with large flakes of lymph gushed out, and the patient became much collapsed. One pint of normal saline solution was injected into the right median cephalic vein with speedy and obvious benefit. A rapid and careful examination of the vermiform appendix and cæcum as well as the pelvic viscera revealed nothing wrong. The wound was then temporarily closed with a sponge and a median incision made between the ensiform cartilage and the umbilicus. The stomach presented in the wound. At first nothing wrong could be made out, but, on passing the hand over to the left under the costal margin the examining fingers caught in a large rent in the anterior wall. It was impossible to bring the perforation to the wound, so an incision was made at right angles, extending to the left costal margin across the fibres of the rectus muscle. By this means a fair exposure was obtained. The stomach was not washed out, and the edges of the ulcer were not pared. The perforation, which was about the size of a florin, was carefully closed with fine silk sutures after Lembert's method, some difficulty being experienced in introducing those on the extreme left. A second row of sutures was introduced with a hold further back in order to take tension off the main line of suture. A glass drainage-tube was then put into the pelvis through the lower wound to facilitate the flow of fluid, and the whole cavity of the abdomen was carefully and systematically flushed, beginning at the site of the sutured ulcer. The solution used was boiled water containing a drachm of sodium chloride to the pint and at a temperature of 108°, the irrigation being continued until it returned clear. The wounds were then closed, an indiarubber drainage-tube being passed down to the region of the perforation through the outer end of the rectangular incision, and the Keith's tube left in the lower wound. The ordinary dressings were applied. The operation had occupied nearly an hour and a half. At its completion the patient was greatly collapsed. One pint and a half of normal saline fluid was passed into the left median cephalic vein, with distinct but temporary improvement. All the usual remedies for shock were assiduously employed, with the result that the patient completely regained consciousness. She was able to recognise and talk to her friends. During this time she complained of much pain in the back. She, however, gradually sank, and, in spite of all that could be done, died at 5.30 P.M.—three hours and a half from the completion of the operation, and twenty-four hours after the perforation. A partial post-mortem examination was made twenty-four hours after death. There were the usual signs of acute diffuse peritonitis. On dividing the great omentum at its attachment to the lower border of the stomach a quantity of fluid, which seemed to consist of inflammatory exudation and partially-digested food, was found. At first it was not clear where this could come from; but on carefully raising the stomach a second ulcer, about the size of a sixpenny-piece, was found, which had perforated owing to the adhesions which had bound it to the pancreas having given way for the greater part of the circumference of the ulcer. As seen, the stomach wall was still adherent to the pancreas for a short distance along the upper margin of the perforation. The stomach and pancreas were carefully removed. On testing the sutured ulcer it was found to be perfectly watertight. The ulcers were almost exactly opposite to each other, the posterior being a little to the right of the anterior. Both were situated almost vertically below the cardiac orifice and about midway between the lesser and greater curvatures of the stomach.

Remarks by Dr. STEELE.—Although unsuccessful, this case appeared to me to be of particular interest and worthy of publication for the following reasons: 1. Although such extensive ulceration was discovered, the patient had never been so seriously ill as to consult a medical man, and, according to her statements and those of her friends, there had never been hæmatemesis or melæna at any time. 2. The ill-defined nature of the physical signs on admission, the fact of the chief signs on examination pointing to some lesion in the lower part of the abdomen led me, in spite of the history of gastric trouble, to explore this region first. 3. A great point of interest and importance was the presence of another ulcer on the posterior wall of the stomach. I think it probable that the adhesion between it and the pancreas may have been broken down during the necessary manipulations for suturing the ulcer on the anterior wall. It was a matter for regret that permission to operate could not be obtained at an earlier period, although the presence of an undiscovered perforation on the posterior wall of the stomach would have caused a fatal result in any case. In conclusion, I wish to tender my grateful thanks to my colleague, Mr. Fisher, and to Dr. William Martin, my house surgeon, for their valuable assistance, as also to my partner, Dr. Hubbard, who kindly administered the anæsthetic.

Reviews and Notices of Books.

A System of Surgery. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to the London Hospital. Vol. I. With two coloured plates and 463 illustrations. Cassell and Company, Limited, London, Paris, and Melbourne. 1895.

[FIRST NOTICE.]

THE appearance of a new text-book of surgery is, or should be, an important event in medical literature, and the volume before us is a notable addition to the standard works on surgery. The whole work will appear in two volumes, of which only the first has at present been published. This is a handsome large octavo volume of over 1100 pages of text, well printed, copiously illustrated, and presenting an attractive appearance. The publishers are to be heartily congratulated on the way in which their share of the work has been done.

"A System of Surgery" is the work of twenty-five writers, with two exceptions surgeons, who have been well selected from among the acknowledged representatives of the present phase of surgical teaching. The twenty-three surgical authors

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are general surgeons engaged in the practice and teaching of surgery, and so-called "specialists" are conspicuous by their absence. "The object of this work is to present concisely and with authority an account of the science of surgery as it exists at the present day," and readers of its pages will find in it the best expression of the best teaching of our British medical schools. The coöperation of many writers in producing a single work on surgery is now a well-recognised procedure and seems to be gaining in popularity. It has obvious advantages, and if the writers are well selected and the editor is judicious the merits of the plan far outweigh the disadvantages which result from difference of style and point of view, and from a certain amount of overlapping which cannot possibly be prevented. Having carefully studied the volume before us, we are bound to speak in high praise of it. Mr. Treves shows himself to be an admirable editor, who has wisely allotted the articles among his staff of authors, and in every case the writers show not only a considerable knowledge of the subjects on which they write, but also a particular interest in them. The merit of the different articles varies, of course, but as a whole they attain a very high level of success, and a general uniformity of scope and method of treatment quite equal to those found in any text-book by a single author.

The work is prefaced by an admirable chapter on Surgical Bacteriology from the pen of Dr. Sims Woodhead, written with an easy mastery of the subject and full of practical utility. That a work on surgery should open in this way is a signal proof of the great change that has been wrought in current opinion and teaching by the discovery of pathogenic micro-organisms. The chapters on Inflammation and its Consequences, on Gangrene, and on Wounds and Contusions, by Mr. Watson Cheyne, are an admirable exposition of the latest knowledge and best practice in this department of surgery. It is hardly too much to say that these are the most important chapters in any work on the science of surgery. By far the most important part of surgical pathology is that concerning inflammation and its results, and a knowledge of the healing of wounds, and of the conditions favouring, retarding, and preventing it, underlies all surgical therapeutics. Nowhere will the student find these subjects handled more lucidly and more scientifically than in Mr. Watson Cheyne's articles, and these chapters, together with Dr. Sims Woodhead's, form an altogether admirable introduction to the work. Mr. Lockwood writes on Erysipelas, Pyæmia, Tetanus, and Burns, and his chapter on Tetanus in particular is well up to date. Surgeon-Major Duncan deals with Military Surgery in an article which is concise and clear and shows a very thorough mastery of his subject.

Mr. Makins contributes the chapters on Surgical Diseases due to Microbic Infection and Parasites and on Rickets. Syphilis and Gonorrhœa are discussed by Mr. Jonathan Hutchinson, jun., who also writes on Diseases of the Skin, and in the choice of his subjects as well as in his treatment of them he exhibits the influence of heredity. Mr. J. H. Morgan's brief article on Injuries and Diseases of Lymphatics and Mr. Bowlby's on Injuries and Diseases of Nerves are among the best in the volume.

Mr. J. H. Morgan's is a very carefully written and concise article on Diseases of the Lymphatics and discusses briefly Tuberculous Adenitis, which is dealt with at greater length by Mr. Treves in his article on Tubercle. Some may be inclined to object to this double discussion of a single affection, but it has its advantages when the articles are written by different authors, for the reader has the opportunity of seeing the subject from two points of view. Mr. Bowlby's article on Injuries and Diseases of Nerves is a very admirable one, in which the student will find subjects which are apt to be regarded as difficult and abstruse, dealt with in a clear and concise fashion. This branch of surgery has become of great importance within recent years, not only on account of the introduction of nerve suture and operations for neuralgia, but from the great part that the nervous system is now known to play in diseases of the joints, &c. All these matters are admirably dealt with by Mr. Bowlby. The large and important subject of Tumours is dealt with by Mr. Bland Sutton, whose monograph on that subject and many contributions to our knowledge of certain forms of tumours, especially dermoids and cysts, give him an undeniable claim to be heard. The classification of tumours is simple and comprehensive, and will be highly appreciated by students. This chapter is illustrated by many excellent woodcuts—the subject lends itself to such treatment. The same surgeon deals also with the Diseases of the Jaws, a subject to which he has devoted much attention.

JOURNALS AND REVIEWS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. New Series, No. 148. Vol. XXXVII., Part 4. June, 1895. London: J. and A. Churchill.—The contents of this part are: 1. The Anatomy of Alcyonium Digitatum, by Sydney J. Hickson, M.A., D.Sc., Beyer Professor of Zoology in Owens College, Manchester. Notwithstanding the circumstance that many distinguished naturalists have examined and written upon the structure of the colonies of this animal known as "dead men's fingers," Professor Hickson has been able to discover various new features, which he has described at length and has illustrated by many excellent drawings. He finds that the polypes forming the colonies contract and expand synchronously with tide intervals, or twice in twenty-four hours. The process of sexual reproduction occurs on our southern coasts during the months of December and January, and the colonies are invariably dicœcious. The ova are shot out of the mouth singly at considerable intervals, and the gonads are as long as nine months in reaching maturity. Professor Hickson has satisfied himself that the ectoderm is not ciliated. For the details of the histology of the animal we must refer to the original. A note is appended to Professor Hickson's paper by W. Langdon Brown, B.A., on the Chemical Constitution of the Mesoglœa of Alcyonium Digitatum. It appears to be of the nature of mucin, and at all events does not contain gelatine or nucleo-albumen. The principal article in the part is a Study of Metamerism, by T. H. Morgan, Ph.D., Associate-Professor of Biology, Bryn Mawr College, U.S.A., with four plates. In this article Dr. Morgan takes up the subject of irregularities in the serial repetition of the rings of annelids, which, he points out, possess considerable importance in the interpretation of the general problem of metamerism. He gives the typical forms of modification, the variation in the position of the reproductive organs, the abnormalities in front of or including the fifteenth metamere, the study of embryos, the abnormalities at the posterior end, the modifications of internal structures, the modifications in antennæ of arthropods, the abnormal metamerism of locusts, a study of colour-bands in echinoderms, and regeneration in earthworms. The article is one of considerable research and much interest. The last memoir in this part of the journal is by Edwin S. Goodrich, F.L.S., assistant to the Linacre Professor of Comparative Anatomy, Oxford, and deals with the cælom, genital ducts, and nephridia in Planarians, rotifera, entoprocta, mollusca, and the higher animals. Many illustrations accompany the paper.

The Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S., and J. N. LANGLEY, F.R.S. Vol. XVIII., No. 3. London: C. J. Clay and Sons. July, 1895.—This part contains six articles: 1. On the Escape of the Heart from Vagus Inhibition, with four figures in the text; by Theodore Hough. 2. The Relation of the Action of Carbonic Oxide

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to Oxygen Tension, with two figures in the text; by John Haldane. 3. On the Exchange of Blood Gases in Brain and Muscle during States of Rest and Activity; by Leonard Hill and D. N. Nabarro. 4. The Physiological Effects of Extracts of the Suprarenal Capsules, with twenty-six figures in the text; by George Oliver and E. A. Schäfer. 5. On the Physiological Action of Extracts of Pituitary Body and certain other Glandular Organs; by George Oliver and E. A. Schäfer. 6. Note on Regeneration of Præganglionic Fibres of the Sympathetic; by J. N. Langley. The number also includes the Proceedings of the Physiological Society.

Analytical Records
FROM
THE LANCET LABORATORY.

"VITALIA" MEAT JUICE.

(THE VITALIA COMPANY, WALTHAM-BUILDINGS, 1, HOLBORN-CIRCUS, E.C.)

WE have not examined a more powerful meat "expression" than that which significantly enough is called "Vitalia." It is free from objectionable preservatives, keeps perfectly fresh for a reasonably long time, and has a pleasant, agreeable flavour characteristic of the freshly expressed juice of uncooked meat. It turns quite solid on heating, a fact due to its richness in coagulable albumen, which amounts to no less than 21 per cent., while the uncoagulable matters amount to 12·50 per cent., leaving a difference of 66·50 per cent. which may be regarded as water. The mineral matter was equal to 6·52 per cent. and contained phosphates and iron proportional to the excellent quantity of meat principles present. These results make evident its potent properties as a restorative, stimulant, and nutrient.

OBESITY BISCUITS.

(CALLARD AND CO., 65, REGENT-STREET, S.W.)

The elements of our common diet contributing most to the formation of fat have been carefully excluded from these biscuits, which have therefore been prepared without starch, sugar, or butter. Our analysis is in perfect accordance with this statement, since we found ether extracted no butter fat and boiling water practically no starch or sugar. In spite of this depletion the biscuits are of unquestionable food value, as we also found that they contained slightly over 3 per cent. of nitrogen, which adopting the factor 6·25 would represent a fourth part of their weight as consisting of the so-called albuminoids. It only remains to add that their palatability is remarkable considering the entire absence of the substances already alluded to.

(1) SYRUP CINCHONÆ HYDROBROM; (2) SYRUP CINCHONÆ ET FERRI HYDROBROM.

(FLETCHER, FLETCHER, AND CO., HOLLOWAY, N.)

These preparations deserve praise because each is a successful and elegant pharmaceutical combination of well-known valuable therapeutic agents. The first is a perfectly bright, clear, reddish-brown liquid and quite permanent in composition, though it contains the whole of the important principles, together with the aromatic constituents of selected cinchona bark, associated, moreover, with bromine. Its administration affords all the advantages in regard to the tonic properties of the bark, and the success of the combination is such, it is said, as to obviate the disagreeable effects (headache and gastric disturbance) which not infrequently follow the administration of ordinary tinctures. The syrup cinchonæ et ferri hydrobrom is equally satisfactory. It is, as might be expected, slightly darker than the former compound, but just as perfectly clear and bright. These improvements, which Messrs. Fletcher have most satisfactorily effected, are of real importance, as by ensuring greater certainty of action they are calculated to give increased confidence in the use of one of the most valuable tonic combinations which the Pharmacopœia affords. It should be added that the advantages of these standard and reliable preparations of cinchona are secured also in the agreeable form of an excellent wine which is called "Vibrona."

CONDAL WATER.

(CONDAL WATER CO., LIMITED, LAMBETH-HILL, E.C.)

We have recently confirmed in our laboratory the published analysis of this natural aperient mineral water. It is bottled at the Rubinat spring in Spain, and is highly mineralised with sulphates, with the important distinguishing feature, however, that it contains a proportion of sodium sulphate largely in excess of the corresponding magnesium salt. Thus the sulphate of soda amounts to 45 grammes per litre, and the magnesium sulphate to a little over 3 grammes per litre. On this account probably the taste of the water is only slightly bitter and is soft and saline. Since the sodium salt as regarded at present has certain advantages over magnesium sulphate in that it has less tendency to produce irritation in the intestinal tract, Condal Water may be given with confidence, and especially, it would appear, in certain idiosyncratic cases.

OPHIR WINE.

(P. B. BURGOYNE AND CO., 6, DOWGATE-HILL, CANNON-STREET, E.C.)

The vineyard on Mount Ophir whence this wine derives its name is situated at a considerable elevation in Rutherglen, in Victoria Colony, Australia. The soil is rich in ironstone, from which it is concluded that the wine produced there becomes of a ferruginous character. Our analysis of it was as follows: Alcohol, by weight, 13·85 per cent.; by volume, 17·08 per cent.; proof spirit, 29·92 per cent.; extractives, 3·29 per cent.; sugar, 0·28 per cent.; total acidity, reckoned as tartaric acid, 0·48 per cent. It is a rich, fruity, and robust red wine, containing, as claimed, a definite quantity of iron in solution, the actual amount of which, according to our analysis, was equal to one-seventh of a grain per pint, or, broadly, one grain per gallon. Considering the composition and character of grape constituents, the iron is undoubtedly present in an organic form and favourable for absorption and appropriation in the system. The wine probably serves, therefore, as an effective and agreeable tonic, referable partly to the important quantity of iron contained in it and partly to its richness in fruity elements. Whilst it is practically free from any acidity it contains also only a trifling quantity of sugary constituents. Its flavour is peculiar, but full and round. It does not obviously belong to the class of light table wines, but merits a foremost place amongst those vigorous wines of the Burgundy type, which may be taken in moderate quantity with advantage by those requiring improvement of tone and vigour.

NEW TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, E.C.)

Some useful additions have recently been made to the large number of medicaments now embracing most of the preparations of the Pharmacopœia which are procurable in the form of tabloids. "Gregory's Powder" tabloids contain a proportion of sodium bicarbonate in the place of magnesium carbonate, the use of the sodium salt being supposed to give a more beneficial result than ordinary compound rhubarb powder. Tabloids of ipecacuanha wine (five minims) afford a convenient means of administering ipecacuanha wine as an expectorant, a single tabloid slowly dissolved on the tongue producing the well-known effect of the wine. The portability in particular of this preparation is an obvious advantage. The composition of nasal tabloids is based upon a formula suggested by Dr. Carl Seiler for the preparation of a solution which is used with good results as a douche for the nostrils or as a gargle in nasal or pharyngeal catarrh. It is an alkaline and powerfully antiseptic compound, containing

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the bicarbonates, borates, benzoates, and salicylates of soda, with eucalyptus, thymol, menthol, and oil of gaultheria. The solution, as may be gathered, possesses a very agreeable aromatic smell, and it is said to be effective also as a mouth wash in fungoid formations or for mercurial stomatitis.

EUCALYPTUS SANITAS SOAP.

(THE SANITAS COMPANY, LIMITED, LETCHFORD'S-BUILDINGS, THREE COLT-LANE, BETHNAL GREEN, E.)

On analysing this soap we found that the ingredients are well adjusted in accordance with the delicate requirements of a toilet soap; it contains no free alkali or other ingredients injurious to the skin. Little else in favour of the preparation considered merely as a soap need be added. In the present case, however, the soap is pleasantly medicated with "sanitas" and eucalyptus, both of which possess hygienic properties. It is, further, an economical soap, since we found that it contains only a minimum of moisture.

(1) FINE CUT, AND (2) MEDIUM OATMEAL.

(W. DUKE, "ANGUS" OATMEAL AND BARLEY MILLS, KIRRIEMUIR.)

Samples of both coarsely and finely ground oatmeal were submitted to us, which are described as being prepared by the "newest and most approved milling machinery." However this may be, both products possess a fine, rich flavour characteristic of a superior product, while the process to which the grains have been submitted undoubtedly improves the digestive qualities and flavour of the meal, making it generally more suitable for dietetic requirements.

CHAMPAGNE VITALITÉ: VIN DIGESTIF.

(AYALA: HENRI LAURANCE ET CIE. LONDON: MAXTON AND CO., 35, WALBROOK, E.C.)

An evidently choice and dry wine containing an addition of pepsin which we found to exhibit distinct digestive action upon egg-albumen. Thus its digestive action was readily ascertained by slightly acidulating the diluted champagne with hydrochloric acid, and observing the effect of this liquid, at blood heat, upon thin slices of hard-boiled white of egg. The action was at first slow, but subsequently (in a few hours) the white of egg was quite dissolved. The composition of the wine, according to our analysis, was as follows: Alcohol, by weight, 11·08 per cent.; by volume, 13·71 per cent.; proof spirit, 24·03 per cent.; extractives, 2·70 per cent.; mineral matter, 0·30 per cent.; sugar, 1·50 per cent.; total acidity, reckoned as tartaric acid, 1·07 per cent. Apart, therefore, from presenting the generous qualities of a superior champagne, this wine doubtless affords also the additional and important advantage of serving as a mild digestive.

THE A.H. DISINFECTANT (LIQUOR CRESOLI SAPONATUS).

(A. HELBING, 25, BOUVERIE-STREET, FLEET-STREET, E.C.)

Liquor cresoli saponatus is a powerful antiseptic compound consisting of a soapy solution of creosol, which in crude coal tar is associated with carbolic acid, but from which it is easily separated by distillation. This preparation offers distinct advantages, since while it is undoubtedly a strong bactericide it is practically non-poisonous, and the presence of a noteworthy proportion of soap renders it bland, non-corrosive, and non-irritant.

CONFECTIONS MADE IN SILVER PANS.

(G. PEARSON, NEWCASTLE-CHAMBERS, NOTTINGHAM.)

In the preparation of any substance destined for human consumption we are always glad to record the fact of measures being taken to ensure the utmost possible purity of the product, especially in regard to the possibility of contamination with metallic or other injurious substances. Such is the case with some specimens of butter-scotch and almond rock of the above manufacturer which we have recently received and which are made in silver pans. In view of these admirable precautions it could only be expected that the best and purest ingredients would be employed in their preparation. The excellent flavour of the sweetmeats referred to afforded confirmatory evidence on this point.

LACTOPEPTINE TABLETS.

(J. M. RICHARDS, 46, HOLBORN-VIADUCT, E.C.)

The composition of "Lactopeptine" tablets is based upon the following formula of lactopeptine powder: Sugar of milk, 40 oz.; pepsin, 8 oz.; pancreatine, 6 oz.; diastase, 4 drachms; lactic acid, 5 fluid drachms; and hydrochloric acid, 5 fluid drachms. We have proved its digestive powers by observing its proteolytic action upon egg albumen. Each tablet contains 5 grains of lactopeptine, the uses and value of which are obvious from the formula.

PURITAS DRY SOAP.

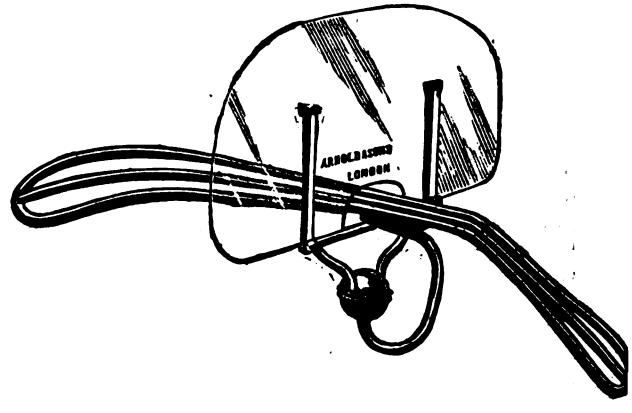
(THE DIANA MANUFACTURING SYNDICATE, LIMITED, 15, BLOSSOM-STREET, BISHOPSGATE, E.)

Whilst admitting that this soap is probably of service for drastic cleansing operations, we do not understand why it should possess any claim to special disinfecting properties. It is a dry powder, having a slight aromatic smell and containing free alkali in the shape of carbonate of soda.

New Inventions.

A SHIELD FOR PROTECTING THE FACE DURING APPLICATIONS TO THE THROAT IN DIPHTHERIA.

I VENTURE to bring to the notice of the profession an appliance which I have designed for the protection of the face during examination of, and application of remedies to, the throat in cases of diphtheria &c. Having myself contracted diphtheria on two occasions from contact with matter coughed out whilst examining in the usual way, and knowing that such accidents are not uncommon, it occurred to me to interpose a shield of some transparent material, and I found that mica or talc answered the purpose exceedingly well, and I am now able in cases of this description to make a careful



Tongue depressor with shield.

examination in comfort. The metal tongue depressor is well curved and has a detachable carrier; the face shield is of mica, the carrier being connected with a ball and socket joint, and sliding backwards and forwards on a bar or under-surface of the depressor, so that the shield is freely movable and can be used for adults or children. By removing the carrier the depressor can be used in the ordinary way. Being of mica the shield is very light, transparent, and easily kept clean. To prevent clouding in cold weather it may be warmed before use. When artificial illumination through the shield is required I use a candle, lamp, or Mackenzie's laryngoscopic mirror. Messrs. Arnold and Sons, of West Smithfield, are the makers.

ALEX. W. W. DOWDING, M.D., M.S. Durh.
Wanstead, Essex.

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THE LANCET.

LONDON: SATURDAY, AUGUST 3, 1895.

IT was a happy thought of the President of the British Medical Association, Sir J. RUSSELL REYNOLDS, to place in the very front of his interesting address the corresponding address delivered twenty-two years ago by the ever to be lamented Dr. PARKES, and to contrast the state of medicine in 1873 with its state in 1895. All who remember that admirable man know how he loved every branch of medicine, and with what insight he saw into the very depths of the subject as it presented itself then. And no one will peruse the address which he delivered to the Association when it last met in London without being charmed with its spirit, astounded by the range of its knowledge, and impressed with the prospects of medicine. Yet there was one passage at least which justifies Sir J. RUSSELL REYNOLDS's reflection as to the bewilderment and perplexity which his departed friend would experience were he now to "revisit Netley, or his still older haunt, University College, and see his house surgeon feeding a patient on 'sweetbreads' or injecting thyroid extract for the cure of myxœdema." After alluding to the two great discoveries which at the beginning of his studies had hardly yet made their full impression on medical practice—viz., RICHARD BRIGHT'S recognition of albuminuria and LAENNEC'S application of the ear to discover the normal and abnormal action of the heart and lungs—Dr. PARKES said: "These two discoveries stand high above all that has followed, nor is it likely that equal advances will be made in this century." It would not be fair to bind a generous and hopeful mind like Dr. PARKES's to a piece of prophecy which even such minds do well to avoid. But it cannot be doubted that if he had lived to hear his friend's address of 1895, recounting the advances of medicine in the last third of the nineteenth century, he would have admitted that in promise, if not in actual and immediate interest, the discoveries and advances of the later period are in no way unworthy of comparison with those which he so justly magnified in the first third. Sir J. RUSSELL REYNOLDS'S account of recent advances which give a character to the epoch in detail will be read with attention by our readers. But in one sentence he seizes upon the really interesting feature common to them all. The sentence is this: "What my object in this address is mainly concerned with is to draw your attention to that which seems to me to be the most striking fact of modern physiological, pathological, and therapeutical research—viz., the power of 'living' things for both good and evil in the conservation of health and in the prevention or cure of disease." Sir J. RUSSELL REYNOLDS in this one sentence hits off the great advance of medicine. In the time of Dr. PARKES no doubt the foundation of all biological, or rather bacteriological, work had been laid in the discovery of the bacillus anthracis (1849) by POLLENDER. But its fruitfulness had not yet been gauged, and a long interval was to elapse between the foundation and the superstructure. Not to mention others, how rich has been the fruit of that seed which has led to the discovery of the actinomycosis (1877), of the bacillus lepræ (1879), the parasite of ague (1880), the bacillus of tubercle (1882), of glanders (1882), of diphtheria (1884), and of tetanus (1884). With such revelations of the relation of "living" things to the great groups of disease which make up so much of the misery of the world, and of means whereby they can be controlled or destroyed, he President might well say that "our failures in the last twenty years are small in comparison with our successes, and that nothing that has happened in this time is to be compared in importance with the new revelations that have been made of the potency and the prepotency of life—the power of life in life—in health, in disease, and in its treatment." There is one broad distinction which seems to differentiate the significance of the discoveries which figured so largely in the mind of Dr. PARKES from those which strike us so much since. They had reference rather to processes of degeneration slow in their progress, and possibly produced rather by non-living substances; these have reference for the most part to gravely acute diseases which act quickly and often end fatally, and which await, with one or two exceptions, that greater discovery still, the discovery of a medicine, organic or inorganic in its nature, which shall destroy them before they have destroyed the body in which they commit their ravages. This, indeed, is the great achievement for which men wait and which is needed to complete the fame of medicine. There are already indications of this great consummation. We only want a germicide for other bacilli which will act on them as quinine acts on LAVERAN'S bodies, or an antitoxin which will act on specific poisons as PASTEUR'S virus does on those threatened with rabies, or as vaccinia does on those exposed to small-pox. This is all, and medicine will enter on a new sphere of usefulness and of glory. But though this is all, it is much. Its realisation may well take the remaining years of the century. Meantime, the public is in danger of expecting too eagerly and confidently this consummation, and not the least duty of the profession to the public in its present mood is to moderate its eagerness by being severely critical and almost sceptical in its own mood. We see with pleasure that this is its attitude towards one antitoxin at the present moment of surpassing interest. The President of the British Medical Association was not less discerning in his allusion to the advantage accruing to medicine of late years from deeper knowledge of the functions of organs some of which had been thought altogether useless and superfluous, and of the interdependence of tissues and organs on each other of which the therapeutics of myxœdema supply the most striking illustration.

We must bring our notice of this address to a close. It will command respect from the fundamental thought which runs through it all—the respect for life as for something as mysterious in its virtues as it is in its nature. A physician never appears to greater advantage than when he thus recognises the "living" principle as that with which he has to reckon in disease, either for its causation or its cure. It was fitting that at the close of

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such an address Sir J. RUSSELL REYNOLDS should indulge in a more general view of life under the head of professional life and social environment. He must be strangely out of place who can be in the profession and not realise its obligations to the State and to society as well as to his medical brethren; and equally must he be unworthy of his profession who can look without concern on the absence of reverence in society and in much of our current literature for all that constitutes the religious element of life, for that which is the groundwork of "social" propriety, and for the constituted order of relative dignity in family life. In this time of "new women" and newer men there are, perhaps, a few medical men who think themselves well employed in giving sanction to such innovations; but they have no countenance from that distinguished member of our profession who is at the present moment the President of the Royal College of Physicians and of the British Medical Association.

FEW themes are more interesting than that which Sir W. BROADBENT selected for his address to the members of the British Medical Association, whilst to have successfully presented a clear and vivid picture of the history of medicine within the time allotted to the delivery of such an address is a matter upon which both orator and audience may be congratulated. The sketch thus given was bold in outline, yet comprehensive and for its purpose sufficient. Nothing that can be deemed essential was omitted, so that as the speaker unfolded the roll it was not difficult to trace with him the stages of thought and practice which have in turn marked the progress of the medical art. The distinction which was made in the opening of the address between the art of healing and its science is one which as knowledge grows will come to be less sharply defined, for it is year by year more apparent that the whole rationale of medicine and of therapeutics is based on scientific foundations. It is doubtless true that so far the art has been in advance of the science; but it is also true, as indeed is apparent from the tenor of this address itself, that scientific medicine, which is still in its infancy, is destined to become conterminous with the practical art. That this is the correct interpretation of the position assumed by Sir W. BROADBENT himself is shown by his significant aphorism that, given certain attributes of acumen and character, "the best physiologist will make the best pathologist, and the best pathologist the best physician." Admitting this, it is surely a wholesome and useful thing to dwell at times upon the past, when physiology and pathology were unknown, and to note with mingled feelings of admiration and humility the position attained by our forerunners in medicine.

The truly remarkable powers of observation and insight possessed by such fathers of medicine as HIPPOCRATES and GALEN, which were illustrated with terseness and force in this address, and the memorable works which have happily been handed down from them, were of such an order that it is not surprising that they guided the practice and theory of medicine for centuries. The dominating influence of Hippocratic doctrine—of which the essence was humoralism—was apparent even to the days of SYDENHAM, whom we claim, and not unjustly, as our pioneer in exact clinical observation. With the name of SYDENHAM Sir W. BROADBENT associated those of BOERHAVE and his pupil VAN SWIETEN, who undoubtedly possessed a wide influence upon medical learning. These three men have left behind them writings which open up a new era in the medical art, for they may be said to have been amongst the first to break through old traditions and to have the courage and independence to seek in bedside observation for an interpretation of the nature of disease. It is singular that from this time for more than a century medical thought should have been swayed in more than one direction by fanciful hypotheses and systems, the effect of which was not to advance medicine, but to hold it in thraldom quite as stringent and narrow as in mediæval times—and this notwithstanding the advancing knowledge of the structure and functions of the body that dates from the epoch of HARVEY. However, these perturbations in doctrine were but the precursors of the more stable and reasonable interpretation of natural phenomena which came to light at the close of the eighteenth century.

In the marvellous advances made in every department of science during the present century medicine has taken a large part. Many a cherished doctrine has been swept aside, and new conceptions of disease and its environment have been framed, so that within living memory the pathological aspect has been wholly changed. In whatever direction we look, whether it be in physiology or in pathology or in therapeutics, we see not merely a revolution of opinion and thought, but almost an entire recasting of our attitude in the investigation of the problems of normal and discovered function. Science has entered into possession of the kingdom where imagination and fancy were once enthroned, but she has many a campaign yet to make and many a battle to win before the victory is wholly gained.

It is needless to particularise here the special lines of the advance of science upon the Hippocratic strongholds—they are patent to all; and if any illustration were needed it would be found in the subjects discussed at congresses such as this which, as we write, is proceeding in the metropolis. For whilst we reverence the past and the master minds that first showed us the paths by which we now travel, we press forward through further conquest of ignorance and superstition towards the goal that every faithful follower of medicine has had in view—the attainment of truth and the dispersion of error for the benefit of suffering humanity.

THE present is not the first occasion upon which Mr. HUTCHINSON has been requisitioned to deliver a vicarious address in Surgery at the annual meeting of the British Medical Association. The address this year had originally been entrusted to Mr. ARTHUR DURHAM, and in feeling and felicitous terms Mr. HUTCHINSON alluded to the early death which had robbed him of a much-loved friend, surgical science of one of its most talented and genial cultivators, and the Association of the pleasure of listening to a surgical oration from a very able speaker. From Mr. DURHAM Mr. HUTCHINSON glanced back to one of Mr. DURHAM'S many distinguished

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predecessors, SAMUEL SHARP, who published in 1750 "A Critical Inquiry into the Present State of Surgery," and SHARP'S summary suggested a surgical comparison between the present and the past, between the time when PERCIVAL POTT was in his prime and JOHN HUNTER a young man, and the year of grace A.D. 1895. "SHARP'S thirteen chapters concern hernia, lithotomy, amputations, concussion of the brain, tumours of the gall-bladder, extirpation of the tonsils, hydrocele, and a few others. What a contrast is presented with the almost limitless multiplicity of the subjects which in the present day claim the attention of his successors!" And SHARP'S general experience of the major operations which were then performed, mainly consisting of excision of tumours, amputations, and cutting for stone, may be gathered from his praise of extirpation of the tonsils as an operation "neither dreadful in the doing nor melancholy in the event." Looking forward another half century, when the life of HUNTER, the father of scientific surgery, had passed, Mr. HUTCHINSON paused over M. ROUX, the distinguished surgeon of La Charité, who published the result of his observation during a month spent in London in the diligent investigation of English surgery. ROUX, who had seen LAWRENCE, BRODIE, and BELL operate, considered the London operators skilful but terribly slow, one of the best taking twenty minutes over a circular amputation which any Paris surgeon would have finished in five. Much inferior in England, too, was the attention given to the management of fractures to that in Paris. Incidentally Mr. HUTCHINSON praises ROUX for his sagacity in pointing out the weak points in the management of the Royal College of Surgeons, an institution for the advancement of surgery—viz., the devotion of the best part of the museum space to comparative anatomy. Collections of skulls and skeletons—"a Golgotha anthropology"—and the formation of a vast anatomical reading-room for students make this fault more conspicuous now than ever. Mr. HUTCHINSON sighs very naturally for a museum of clinical surgery. On the other hand, ROUX'S condemnation of the special institutions hen appearing for the treatment of eye diseases was itself condemned by the results of the ophthalmic practice in ROUX'S own general hospital, which Mr. HUTCHINSON witnessed many years after the date of ROUX'S visit. "I then saw," he says, "cases of extraction of cataract treated in the open ward and by the hand of the general surgeon, and I saw eye after eye lost by suppuration."

Perhaps the most interesting part of Mr. HUTCHINSON'S interesting and suggestive address is the chapter from his own personal professional history, which commenced when he became junior coadjutor to SPENCER WELLS, the then editor of the *Medical Times and Gazette*, and, in pursuance of a scheme initiated by Mr. WELLS, visited the various London hospitals for the purpose of recording the results of their operative surgery. The formation of Mr. HUTCHINSON'S opinions on various operations and his stores of clinical surgical knowledge had their foundations laid at that time. Every day he was in the operating theatre of one or more hospitals, and in constant confidential communication with the hospital surgeons of the day, and he became cognisant of details which it was not permissible to put into print. Of two operations Mr. HUTCHINSON'S early impressions were extremely unfavourable. At a time when fourteen cases of ovariotomy in succession at different institutions terminated fatally, and Mr. BAKER BROWN was threatened by the coroner with an inquest on the next case dying after the operation, it was no wonder that both Mr. WELLS and Mr. HUTCHINSON regarded the procedure as not much removed from manslaughter, and yet both in their several degrees and separate spheres became pioneers of an operation which is generally regarded as almost the greatest of modern surgical achievements. Similarly, with regard to lithotrity, the hospital practice witnessed by Mr. HUTCHINSON showed a not inconsiderable mortality after the operation, prolonged and often frequently repeated suffering, and the stone after all not entirely eliminated. It is not surprising that Mr. HUTCHINSON, himself a skilful lithotomist, should have exhibited a marked preference during his whole hospital career for lithotomy, and that he has only been converted to lithotrity with regret by witnessing the remarkable success which attends in skilled hands the more recently introduced practice of lithotrity in the shape of the litholapaxy of BIGELOW. Everyone must sympathise with Mr. HUTCHINSON in his disappointment concerning the fate of the clamp which he had improved, and which held its ground for a decennium in the treatment of the ovarian pedicle. At the time of its introduction the clamp so modified was regarded as a great advance and improvement, and the extra-peritoneal method of disposing of the pedicle triumphed over the now almost universally adopted intra-peritoneal plan. Mr. HUTCHINSON, like many other inventors and original workers, hoped that he had placed a permanent stone in the edifice of surgical progress. Yet he has lived to find the clamp discarded and occasionally jeered at as the greatest obstacle to the improvement of the operation and the diminution in its mortality, which existed during the time that it was in vogue. But such denunciations are altogether unjust, and Mr. HUTCHINSON may take comfort from the fact that, as Dr. SKENE KEITH informs us, "Dr. KEITH'S mortality with his first clamp cases was under 15 per cent., showing that it was not this method of treatment which was the cause of the heavy mortality of twenty-five years ago." The scrupulous cleanliness of the present day, the careful toilet of the peritoneum, the more favourable environment of the patient, and improvements in after treatment are the main causes of the better results, and if the clamp is now inferior to the intra-peritoneal method of treating the pedicle, and has been put aside save in exceptional cases, it was at least an improvement once, and it has but met with a fate which has befallen many another once indispensable accessory, such as the carbolic spray producers, now a drug in the surgical market, but a few years ago playing cheerfully in every surgical ward.

Mr. HUTCHINSON is a strong advocate of specialism in surgical practice, not only in eye diseases, but in stone cases, ovarian cases, laryngeal growths, brain surgery, and surgical diseases of the gall-bladder, and his principles were enforced by his later practice at the hospital of sending his ovarian cases away from the London Hospital to the Samaritan Hospital, a course not always approved by his colleagues, and his present practice of placing all his stone cases

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under one skilled lithrotrist. In concentration and in nursing homes, with their bright and fair, intelligent and gentle and indefatigable troops of nurses, who never seem to wax even middle aged, he has unbounded confidence. Confidence unbounded he also has in extension of certain operations, such as excision of the tongue for cancer, and henceforth, if the operation be done quite early, no one need die of cancer of the tongue. We trust that it may prove so to be; but can we prevent patients who have lost their tongue in whole or in part from dying of the subsequent glandular affection, however long it may be delayed? If the clamp has given way the doctrine of the local origin of cancer and a precancerous stage will triumph; for "permanent recoveries after removal of the breast for cancer, as after those of part of the tongue for epithelioma, are now common in the practice of all operators." If this assertion is not, as we think, of far too sweeping a character we shall be glad to have it substantiated. In conclusion, Mr. HUTCHINSON referred to surgical education and the five years' curriculum, and he gave another of those autobiographical incidents which give so much charm to his address. Never a warm advocate of the five years' curriculum, and entertaining strong objections to it on the ground of expense and hindrance to many in their career, he has consistently given his vote in committees and the Council chamber in favour of an additional year. Knowing how liberal are Mr. HUTCHINSON'S views, and how strong a reformer he is, we have often wondered how it is that with his great position and opportunities the cause of reform did not make greater progress while he was a member of the Council.

Annotations.

"Ne quid nimis."

PRESENTATION TO SIR JOSEPH LISTER.

ON Tuesday, in the theatre of King's College Hospital, Sir Joseph Lister was presented with a three-quarter length portrait of himself, painted by Mr. Lorimer, A.R.S.A., and an illuminated and illustrated album containing the names of the subscribers. Dr. W. S. Playfair, who presided, said that the testimonial to be presented on that occasion was not to be considered in any way as a recognition of Sir Joseph Lister's great scientific attainments, or even of the proud position which he has achieved for himself as one of the greatest benefactors of humanity who has ever lived. At some distant time, Dr. Playfair averred, those things will be fittingly acknowledged by a national memorial, and he would venture to prophesy that that memorial would not be a national one only, but an international one, for what Sir Joseph Lister had done had conferred benefits upon all the nations of the earth equally. What they did that day was to offer to him from his old friends, colleagues, and pupils a small personal recognition of the affection and esteem which they entertained for him. It was a fitting thing that they had been so fortunate as to secure the coöperation of Sir John Erichsen, who had the privilege of being the teacher of Sir Joseph Lister. The Chairman then called on Sir John Erichsen to make the presentation, who said that in no part of applied science has there been so great progress during the past twenty or thirty years as in that of surgery: so marked and so rapid has been the change that it almost amounts to a revolution. In the art of surgery a new era has come up, old methods have been swept away and distinctly new ones have been introduced, so that it is almost impossible to compare the surgery of the end of the century with that which existed in the later sixties or early seventies. This marked change is due mainly, if not entirely, to the introduction of antiseptic surgery and its appreciation by the profession generally not only in Britain, but throughout the civilised world; indeed, he was ashamed to say that it was more readily accepted and more universally believed in abroad than it was in this country and even in this metropolis. Sir John Erichsen then referred to the brilliant results of the system developed by Sir Joseph Lister, and remarked that he did not think it too much to say that it had raised surgery almost to the rank of an exact science, for the antiseptic method was the result of patient and laborious research begun as early as 1858 in a paper read before the Royal Society on the early stages of inflammation. In 1867 a paper appeared in THE LANCET[1] on the prevention of septic infection in wounds, which was the first of many interesting papers dealing with the gradual evolution of this system. Sir John Erichsen concluded an interesting speech by presenting the testimonial to Sir Joseph Lister, who, in acknowledging the gifts, said that such a gathering of his former colleagues and students brought vividly to his mind the stages of his past professional life. He then sketched his career since he was house surgeon with Erichsen in London and afterwards with Syme in Edinburgh, and described his early experiments in Glasgow, where the antiseptic system had its inception, thanks to the labours of Pasteur, who showed that fermentative changes were caused not by the oxygen of the air, but by micro-organisms. In Edinburgh and London he continued his researches and improved and simplified his methods. In conclusion he feelingly acknowledged his profound gratitude for the memorial. Among the enthusiastic company were Sir George Humphry, Sir George Johnson, Sir Thomas Grainger Stewart, Sir George Stokes, Sir William Priestley, Professor Macewen of Glasgow, Professor Chiene of Edinburgh, Professor William Stirling, Professors Rose and Watson Cheyne of King's College Hospital, Dr. Silk, Dr. Heron, Dr. Wallace, and Dr. Finlayson.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE Council of the Hospital Sunday Fund met on Monday last to receive the report of the Distribution Committee and to sanction the awards. The occasion was interesting for several reasons. In the first place the sum received exceeds that of any previous year. About £44,000 have already been received and £2000 more at least are expected. There is still time for benevolent persons to come to the rescue and make the collection £50,000. Meantime it must be admitted that the clergy of all denominations have put forth noble efforts to make the contribution worthy of the followers of Him who came to "heal the sick" and in every way to minister to the poor. It is a healthy sign that the Distribution Committee does not give blindly and unquestioningly to the various institutions. Rather does it tend to become more careful, not to say critical, in respect of the institutions which it benefits. In the present year no less than 25 institutions were questioned with regard to their administration. Of the 184 institutions enumerated in the appendix of the report, 154 have received awards on a full basis, and 25 on a reduced basis. Five have received none. Nothing serves more to confirm the confidence of the public in the Council of the Hospital Sunday Fund than when it signifies its disapproval of gross faults or defects of administration by reducing or altogether withholding grants. Mr. Burdett gave particulars of a visit to the Queen's Jubilee Hospital, showing it to be an ordinary house, overcrowded with patients and entirely ill-adapted

[1] THE LANCET, March 16th, 1867, et seq.

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for hospital purposes. The account, with others, amply justified the Council in withholding the award which it had given in some previous years, and out of which an argument in defence of the hospital had been raised. Dr. Glover raised the important question of the Out-patient Department, observing that he considered it the least defensible part of the hospital system, and one which was of doubtful value to the poor, while it brought discredit on the whole administration. He showed that, according to the statistics of the Fund, 1,053,332 patients were treated in this department, but that there was the greatest vagueness as to what these figures meant—whether they were mere visits or actual patients, with no information as to how often the same patient was counted by more than one hospital. The cost of this system, reckoning 3*s.* 4*d.* per head as the average of out-patients, in accordance with the statistics actually before them, was something over £170,000, the saving of which, or part of which, would go far to relieve the finances of the hospitals. Dr. Glover gave notice that he would, at the next meeting of the Council, move for an inquiry into this subject by a subcommittee.

MIRROR WRITING.

IN the *Quarterly Medical Journal* for Yorkshire and the adjoining counties Dr. Crochley Clapham gives an account of a case in which this abnormality was well marked. The patient was a female with right hemiplegia who had taught herself to write with her left hand. At first she wrote wirrorwise—i.e., from right to left; then having gone to school she commenced to write in the usual way, and sometimes forgetting she would write one line mirrorwise and the next in the usual way—the style in which archaic Greek manuscripts were written. Many people practise mirror writing at the present day for the purpose of writing on post-cards, for the writing is illegible, like the books in "Looking-glass House," unless held up to a mirror. It will be found comparatively easy to do if the left hand is used, and still easier if both hands are used simultaneously, and many markedly left-handed persons do it naturally.

THE CONTROL OF INFECTION ON THE FRANCO-BELGIAN FRONTIER

WE learn from the *Moniteur Belge* of July 4th that a very useful system of intercommunication has been arrived at between the French and Belgian Governments as to the notification by each one to the other of the existence of cases of infectious diseases in their respective frontier departments, whether these diseases occur in man or in the lower animals. The French departments concerned are those of the Nord, Aisne, Ardennes, and Meuse, the corresponding Belgian ones being those of West Flanders, Hainaut, Namur, and Luxembourg. The human diseases that have been brought within the terms of this international agreement are Asiatic cholera, typhus fever, typhoid fever, small-pox, scarlet fever, diphtheria, measles, dysentery, contagious ophthalmia, puerperal fever, and "generally all epidemic and communicable diseases." As regards a number of these diseases, it is only intended that information should be forwarded when the occurrence amounts to a definite outbreak or epidemic; and in the case of others, such as dysentery, for example, it is further provided that it is only grave occurrences which are to be notified. But the matter is different with regard to small-pox and cholera, for even a first attack of these two diseases is to be internationally notified. On the part of France this is an entirely new departure; for it was the influence of the French delegates that rendered valueless the system of international notification of cholera proposed at the Dresden Conference, that delegation having induced a majority of the Government delegates to vote in committee with them to the effect that notification was to be limited to the occurrence of a *foyer*, a word that hardly admits of being translated into English, and which no member of the Conference was able satisfactorily to define. The matter has, however, now been somewhat modified as regards a single country, and the terms of the agreement seem to give an indication as to the reasons which made France object to notify anything short of a *foyer* in 1893, for it is explained that any notification given under the new arrangement is not to be followed by the application of the measures of prevention prescribed in the annexe of the Dresden Convention which relates to notification. And, further, the notification is to be deemed on both sides as confidential. We are, however, glad to see even this partial and secret advance in the direction of the unreserved publicity which we maintain in this country. We would not boast of this publicity, for we must confess that it has been invaluable to us in a commercial sense. If foreign countries had suspected us of concealing cholera under the plea that a *foyer* was not fully developed, as has been done elsewhere, we should have been subjected to many restrictions in foreign ports which we are now increasingly able to avoid. The animal diseases which come under a similar reciprocal system between France and Belgium include rinderpest, contagious pleuro-pneumonia, aphthous stomatitis, glanders, farcy, sheep-rot, and scab. As regards these, however, there is no injunction as to secrecy.

FROM PARACELSUS TO PIMLICO.

THE following advertisement appears in a contemporary. We omit names.

"Mr. ——, Pimlico, London, manufactures the very best crystals and the most reliable hollow 'spheres' for mirror vision. The latter are neatly mounted, and both are sent in cases in which they can be carefully kept and protected. As crystal gazing has become so common among those who study the occult sciences, it is well for us to know where we can get the very best balls for our purpose."

It was Thackeray, we think, who remarked upon the wondrous conjunction of the "Hour and the Man"—how when anything is wanted someone is sure to supply it; but that was in romance. There is but little romance in Pimlico. We noticed some of the "very best balls" in the window—some were silvered spheres, such as are hung upon a Christmas tree; some solid spheres, like the common paper-weight; and some globular flasks turned upside down. These last were to be filled with water. Modern occultism is but a poor thing; and how can anyone expect to see visions in a factory-made ball of glass bought out of a shop Compare these with the real magic crystal:—

"The lady unbound her jewelled zone
And drew from her robe the Beryl Stone;
Shaped it was to a shadowy sphere,
World of our world, the sun's compeer,
That bears and buries the toiling year.

"With shuddering light 'twas stirred and strewn,
Like the cloud-nest of the wading moon;
Freaked it was as the bubbles ball,
Rainbow-hued through a misty pall,
Like the middle light of the waterfall.

"Shadows dwelt in its teeming girth
Of the known and unknown things of earth,
The cloud above and the wave around,
The central fire at the sphere's heart bound,
Like doomsday prisoned underground."

With this mirror one might well expect to see anything, but nineteenth-century magic is a weak and feeble following of its ancient ancestors. No doubt we shall soon see quotations for other mystical properties—e.g., "Powder of sympathy, finest selected, per ounce 5*s.* 6*d.* A reduction made to professional prize-fighters and electioneerers. A large selection of rings, keys, Bibles, sieves, birds, cocks always on hand. Arrangements have been made with the authorities of the slaughter-houses at Islington and Deptford for amateur haruspices to practise enteromancy, and strict cleanliness will

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be observed." The commercial side of modern occultism will give the death-blow to a silly fad, and crystal gazing, fortune telling, and other dabblings with the unseen will pass into the limbo where are stored many another broken toy and plaything of unbalanced intellects.

TELEPHONES AND THUNDERSTORMS.

WE have more than once commented upon the possible danger to persons using the telephone during a thunderstorm. This has been demonstrated most recently at Westoe, in the county of Durham. The *Newcastle Daily Leader* of July 29th states that a gentleman "was using the County Hotel instrument to speak to Newcastle when he received a shock which caused him intense pain and rendered one of his arms powerless." The necessity that every apparatus of the kind be fitted with some arrangement for carrying a strong current to earth without passing through the instrument is, of course, recognised, but are the protecting devices ordinarily used the most efficient for the purpose? We have doubts.

MEDICINE AND THE BRITISH SCHOOL AT ATHENS.

THOUGH the exigencies of scientific and clinical education have reduced to a minimum those medical men who are also Greek scholars, the fact does not imply that the literature, the art, and the history—in a word, the civilisation—of ancient Hellas have in equal proportion lost interest for the profession. On the contrary, we believe that the light thrown by linguistic and archæological discovery on Greek institutions and *chefs-d'œuvre* finds more intelligent and more diffused appreciation among the votaries of medicine nowadays than in previous generations when Greek as a dead language was more frequently a professional accomplishment. It would even seem as if the time saved from grammatical and critical study of the language were now devoted to a more thorough acquisition of the ideas it embodies and the facts it conveys, as if release from the service of commentary and lexicon were appropriately utilised by a closer, kindlier familiarity with the spirit, the genius, to which these scholastic implements were supposed to be the master-key. Grote on the history, Mure on the literature, Otfried Müller on the art of ancient Greece, supplemented by the skilfully arranged treasure-trove of archæology in museums, put the contemporary layman in a better position to understand Hellenic thought and culture than the mere scholar, however "sound," could have worked out for himself a generation previously. The most civilised of modern nations—headed by Germany and France, have long had at Athens, for example, institutions endowed and administered with direct bearing on archæological discovery. America has followed liberally in the same track, and since 1886 Great Britain has also had a similar school. At the great meeting held recently in St. James's Palace, at the invitation and under the presidency of the Prince of Wales, a statement was made as to the condition of that school by no means flattering to the national pride. Of the four Governments, French, German, American, and British, the last is the least liberal in its subsidies of archæological investigation on Hellenic soil, and an earnest appeal had to be made, not only by the Prince of Wales, but by the Duke of Sparta, the Archbishop of Canterbury, Professor Jebb, Sir Frederick Leighton, and Mr. Egerton, our Minister at the Greek Court, for means to bring up the British school to something like equality with its three friendly rivals. In that appeal we fervently join, not only from sympathy with a branch of profoundly interesting research, but from a just sense of what the school referred to has already done, and may still more be expected to do, for the history of medicine. If we dip into any of the later works on this latter subject we shall at once recognise the extent of their obligation to institutions like that now pleading for enhanced resources at Athens. It is safe to say that the interval that divides such histories of the healing art as that of Freind at the beginning of last century and that of Haeser towards the end of this is the interval between the archæology of Queen Anne's and the Victorian reign. Not only in our knowledge of the *armamentarium chirurgicum* of antiquity, but in that of the social life and standing of the practitioners, are we indebted for a clearness and distinctness that the able historians of medicine—the Freinds, the Schultzes, the Sprengels of an earlier day—had no glimmering of. Inscriptions (the science of epigraphy, as it is called) have told us the fees earned by the physician, whether in private life or at the court of imperial Rome—nay, the fortunes amassed, the property bequeathed, by such ἀρχιατροί as Xenophon, who was attached to the body service of the Emperor Claudius. Nor is it only in the knowledge to be gained of the practice and the emoluments, the character and the status, of our illustrious predecessors in the healing art that such institutions as the British School at Athens have laid the profession under obligation. The doctrine, the precept, of the great medical authorities from the Coan school downwards, from Hippocrates to Galen, await much light yet to be thrown upon them by the scholars, British and others, now attached to the institution at Athens. One of the most fertile sources of improved texts of the ancient authors is the papyri to be found in Egypt and the manuscripts lying still unexplored in the Ægean isles as well as the Levant. From these we may one day receive such a revised text of Hippocrates as may throw light on passages that have defied the acumen of Adams and of Littré, of Ermerins and of Fuchs, as we may also obtain such an edition of Galen as will vindicate his mighty name from the apparent contradictions and ineptitudes that disfigure all recensions of his works hitherto known. Services such as these are fully within the scope of the British School at Athens, and if what that school has done for other departments of Hellenic civilisation may be received as earnest of what it yet will do for rational medicine, of which Greece was the motherland, it has fully established a claim on the support of the profession which we should be sorry to think will not one day be liberally met.

DEATH UNDER CHLOROFORM.

THE recent death of a young child under chloroform was the occasion of introducing an important question as to the consent of the parents. The infant son of a labourer suffered from convulsions and difficulty of micturition, and on July 6th, being then twelve days old, it was brought by a nurse to Dr. C. E. Duff, to whom we are indebted for notes of the case. Finding that the prepuce hardly permitted the passage of a probe he recommended circumcision, which was accordingly performed on July 8th at a district nursing home. Chloroform was administered; the child took it well, and was afterwards sent home. On July 15th some hæmorrhage occurred from the suture on the dorsum having cut its way out and allowed the skin of the penis to come forward on the glans and form extensive adhesions. Dr. Duff told the mother to bring the child next day to the district home in order that this might be put right. She accordingly did so, and held the child on her knee during the operation. Chloroform was again administered, and the child took it as well as on the previous occasion. The adhesions were broken down with a probe, the skin was stitched to the corona and the bandaging was finished, when it was observed that the child (who had been coming to nicely) had ceased breathing. The pulse was still beating and the galvanic battery, artificial respiration, &c., were resorted to, but the patient did not

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revive. The child, though fully under chloroform, was never deeply under it, the total amount given being about two drachms on a towel in a hot room. The father afterwards informed Dr. Duff that another child of his aged eight months had already died in hospital under chloroform administered for the performance of a minor operation. There was no further confirmation of this statement, but if it be true it would seem to show that undue susceptibility to chloroform may, like other idiosyncrasies, run in families. The fact of this previous death was concealed by the parents, who feared that if it were known the operation would not be performed. An inquest was held, very much against the wishes of the parents, but it was exceptionally necessary, as they asserted that the operation had been performed without their consent. This statement, however, was contradicted by the nurse who attended the mother in her confinement, and whose evidence was to the effect that the mother had on five successive days urged her to have something done for the infant's relief. The mother further declared that she heard nothing about the use of chloroform on the first occasion until the child was brought home, and that she did not know that it was administered at the second operation. The coroner, however, pointed out that she must have seen the administration, and Dr. Duff stated that neither was any complaint made by the mother as to the chloroform nor was he informed before the operation that a member of the same family had already died under chloroform. If this had been brought to his knowledge an anæsthetic would not have been given on the present occasion. At the post-mortem examination the body was found to be emaciated, but no organic lesions were discovered. The verdict of the jury was, "Death under chloroform properly administered in the course of a necessary operation."

AUTUMN MANŒUVRES AND SUNSTROKE.

OUR Rome correspondent writes:—"The soldier on the march is peculiarly a 'candidate' for sunstroke, never more so than during those autumn manœuvres now in progress or in preparation throughout Europe. Roused up in the early morning, often after insufficient rest, he has to fall into line and keep pace, in serried column with his comrades, for miles at a stretch, till within an hour or two of noon. His knapsack is no light one; his tightly fitting uniform is doubly tight around the neck; he marches shoulder to shoulder between his brother-privates, getting and giving out body heat, on shadeless, dusty high-roads, under a progressively scorching sun. First his inner clothing gets saturated with perspiration and clings uncomfortably to the skin, an unbearable heat besets his chest, the respiration becomes shallower, and his tongue cleaves to his palate. If the day is one of those warm, steamy ones, familiar as 'a scirocco-day' in Italy, his state is still more distressing, till presently his resisting power gives out; he drags his limbs after him in stolid apathy for a hundred yards or so, and then collapses, in unconsciousness—the victim to sunstroke. The respiratory and cardiac movements are either very weak or scarcely perceptible; sometimes he lies with closed eyelids, snoring stertorously; but the gravest symptom of all is the characteristic irresponsiveness to all external stimuli, especially when accompanied by convulsively compressed lips which make opening of the mouth impossible. Remedial measures can generally save him, even in this condition; but too often they are impotent to avert the fatal issue which mostly supervenes amid violent and general convulsions. Dr. Vollmann's admirable study, 'Ueber den Hitzschlag,' follows up a detailed description of the phenomena summarised above by a minute physiological analysis of their etiology, into which it is beside my present purpose to enter. More opportune is it to signalise the steps he proposes, precautionary and therapeutic, for the prevention and cure of such cases, occurring as they do with monotonous frequency during the Continental autumn manœuvres. Of the former, those which have made most impression in Italy are: (1) the avoidance of unremitting muscular activity in the heat, which, for the soldier, means more frequent halting-places under the shadow, preferably of trees, which themselves are 'refrigerators'; (2) a looser clothing, particularly round the neck, to admit of freer cutaneous transpiration; (3) a less close marching order; and (4) an unfailing supply of cooling beverages. It is at this last point that his Italian critics are less disposed to follow him. Not that they do not share his opinion that 'die weitverbreitete Scheu vor den Gefahren des "kalten Trunkes" ist unbegründet' (the widespread fear of 'cold drink' is unfounded), for the stomachic and intestinal mischief set up by the sudden ingestion of ice-cold liquids is avoidable by their being imbibed gradually or served out in such quantities as will minimise their bulk. But they hesitate to encourage a practice already all too prevalent among Italians, civilian as well as combatant, in the dog days, that of engorging the circulation with liquid from the excessive consumption of 'bibite' and 'bevande' of all kinds so numerous and so easily procurable in Italy. Serous apoplexy, the proximate cause of sunstroke, is directly promoted by this vascular distension — a fact which explains the frequency with which the lesion overtakes the soldier, not on the march, but in quarters and when in bed at night. On the other hand, Dr. Vollmann's warning against alcohol in every form and however freely diluted finds more acceptance among his southern than among his northern readers, while his clear and precise rules for the treatment of the sun-stricken pending the arrival of the medical officer, command universal approval. 'Pending the arrival of the medical officer,' I say, for Dr. Vollmann is completely and admittedly in the right when he insists 'dass nur der sachkundige Arzt im Stande ist im speciellen Fall abzuwägen welche Massregeln gerade geboten sind und wie deren Anwendung zu erfolgen hat' (only the professionally trained physician is qualified to deliberate, in special cases, what measures are directly indicated and how their application is to proceed). His suggestions and prescriptions come with marked opportuneness now that the Italian manœuvres are in progress."

WILHELM MEYER MEMORIAL.

THE following letter, signed by Dr. Semon, as Chairman of the Committee, by the Presidents of the Royal Colleges of Physicians of London and Surgeons of England, and other well-known members of the profession, has been addressed to the general press. We have pleasure in publishing it, as many of our readers will doubtless also desire to take part in the movement.

"With your permission we wish to enlist the interest of your readers in a movement of a somewhat unusual character. Twenty-seven years ago Dr. Hans Wilhelm Meyer of Copenhagen recognised that an enlargement of the glands situated between the nose and the throat, to which he gave the name of 'adenoid vegetation,' was the most fertile cause of deafness and imperfect nasal respiration in children. This discovery represents one of the most important practical advances of modern medicine. Already many thousands of persons through the timely removal of the enlarged glands have been saved from lifelong deafness or from the lasting consequences of obstructed respiration, and it may be safely said that to no one of our contemporaries are we more deeply indebted for the development of a healthy mind in a healthy body of the rising generation than to Hans Wilhelm Meyer. On the recent death of this eminent man it was felt that his unusual merits deserved unusual recognition, and

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the proposal to erect a statue to him at Copenhagen has met with a most sympathetic reception, not only by his fellow countrymen, but also by the medical profession of other countries. H.R.H. the Princess of Wales has most graciously consented to give her patronage to the scheme, and has expressed her sincere gratification at the idea that so eminent a fellow countryman of Her Royal Highness's should be thus honoured. The municipality of Copenhagen have promised to grant a suitable site for the statue, and at this moment in almost every country committees are being formed for the furtherance of this object. Whilst as a rule the medical profession, when they wish to honour their great living or dead, confine their appeals to the ranks of the profession itself, in the present instance it is thought that an opportunity should be given to the numberless parents of children, whose sound development and the preservation of whose hearing has been rendered possible by Dr. Meyer's discovery, to show their gratitude by contributing towards a memorial in appreciation of his great services. We therefore, through the medium of your columns, venture to invite subscriptions, which may be sent to our honorary treasurer, Mr. A. E. Cumberbatch, F.R.C.S., 80, Portland-place, London, W., and will be duly acknowledged in the journals."

Mr. E. Cresswell Baber, M.B., 97, Western-road, Brighton, and Mr. Ch. A. Ballance, F.R.C.S., 106, Harley-street, W., are the honorary secretaries.

MEDICAL MEMBERS OF PARLIAMENT.

THE General Election, which is now practically concluded, has not resulted in the inclusion of any large number of our professional brethren in the legislative ranks. The following are the names of those practitioners who have been successful in their appeal to the constituencies:—D. Ambrose, M.D.Q.U.I. (Louth, S.); R. Ambrose, L.R.C.P. and S. Edin. (Mayo, W.); G. B. Clark, F.R.C.S. Edin. (Caithness-shire); John Dillon, L.R.C.S.I. (Mayo, E.); R. Farquharson, M.D. Edin., F.R.C.P. Lond. (Aberdeenshire, W.); Sir B. W. Foster, M.D. Erlang., F.R.C.P. Lond. (Derbyshire, Ilkeston); J. F. Fox (whose qualifications we are unable to particularise), (King's County, Tullamore); J. E. Kenny, L.R.C.P. and S. Edin. (Dublin, College-green); M. A. MacDonell, M.D., Q.U.I. (Queen's County, Leix); and C. K. Tanner, M.D., Q.U.I. (Cork, Mid.). All of these gentlemen held seats in the previous Parliament. It may also be noted that Mr. Finlay, the eminent Queen's Counsel, who was elected for Inverness Burgh, was at one time a medical practitioner and is an M.D. Edin. Sir W. Cameron Gull (Barnstable division of Devonshire), also a barrister, is the son of the late Sir William Gull, M.D.

THE ASSOCIATION OF BRUSSELS MEDICAL GRADUATES.

THIS association held its annual meeting on Monday last at the Café Royal. The hon. secretary, Dr. Major Greenwood, and the treasurer, Dr. Younger, were able to report the association to be in a very satisfactory state. The membership exceeds 100 names, and includes many eminent and successful practitioners both in the metropolis and in the provinces. The president for the year is Dr. J. W. Warburton of Liverpool. The existence of the association is a vivid illustration of the fact that in this country there is a grievance to medical practitioners in the unreasonable difficulty of obtaining a degree in medicine at home, and that when they go abroad to receive one on honourable terms it cannot be registered. By Section 16 of the Act of 1886 registered practitioners in possession of such degrees prior to the passing of the Act were allowed to add such as an additional title in the Medical Register. But this does not, of course, help those who have obtained degrees since the passing of the Act. This limitation is difficult to understand or to defend, and is one on the removal of which the association is much bent. Among the guests of the meeting were Sir Walter Foster, Dr. Glover, Mr. Langton, and others.

THE BATTLE OF THE CLUBS AT BRUSSELS.

THE Brussels medical practitioners have been able to present a practically similar solid front to the clubs to that shown by their brethren in Cork and other British towns where attempts have been made to prevent well-to-do persons from obtaining professional services on ridiculously inadequate terms. Though more than 400 practitioners in the Belgian capital agreed not to accept the club appointments under existing conditions, six qualified men have at last been found willing to brave the public opinion of the profession for the sake of these miserable appointments. Whether the clubs will be happy now that they have secured six out of the twenty surgeons they require remains to be seen. In order to excuse themselves somewhat these gentlemen have not thought it beneath their dignity to write to the daily papers explaining that their acceptance of the appointments is merely due to "motives of humanity."

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

THE School Board may well say with the character in the Greek play, "Woe adds woe to woe." At the meeting held on July 23rd Mr. Athelstan Riley asked Mr. Sharpe, the chairman of the School Accommodation and Attendance Committee, "Whether, since the letters received (1) from Captain Blount, R.N., secretary of the Victoria Hospital for Children (stating that, until the resolution passed by the Board on May 30th, 1895, is rescinded, the staff will decline to give certificates to children attending the hospital though they may think it desirable that the child should be excused from attending school), and (2) from the secretary of the Paddington Green Children's Hospital, dated July 10th, 1895, in the same sense, the following letter has been received from the secretary of the North West London Hospital:—

"17th July, 1895.

"GENTLEMEN,—I beg leave to inform you that the medical and surgical staff of this hospital have decided that, should the resolution passed by your board on May 30th, 1895, a copy of which I enclose, be carried into effect, they will in future decline to give any certificate of unfitness to attend school for children under treatment here."

To which Mr. Sharpe again replied, "Yes." We warned the Board as long ago as June 8th what would be the result of their impertinent interference between medical men and their patients, and until the resolution of May 30th be rescinded the Board may expect other hospitals to follow the lead of the three which have already written. The School Board seem to think that because they have the ratepayers' pockets to pick they can set up an "imperium in imperio" and do exactly what they please without being called to account. It is not long ago that a proposal was made that the Board should have their own special magistrates, who, we imagine, could be trusted never to give a decision adverse to that august body. The ordinary London magistrate, we suppose, was not to be trusted any more than the ordinary London medical man. However, in this matter of certificates the Board have gone too far, and they will have to climb down.

WE deeply regret to announce the death of Sir John Tomes, F.R.S., F.R.C.S., and L.D.S., which occurred on July 29th at Caterham. He was perhaps the first of scientific dental surgeons, and his papers on Dental Anatomy are most valuable contributions to a better understanding of the diseases affecting the teeth. We shall publish an extended obituary notice next week.

UNDER date Zurich, July 29th, "A Holiday Contributor" writes: "The Zurich Cremation Society has just held its

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annual meeting, and, according to the secretary's report, its members amount to 1087, and the funds at its disposal to 10,200 fr. In the course of 1894 the corpses cremated were in number forty. The price for each cremation is now fixed at 65 fr. for persons deceased in Zurich—being a reduction of 30 fr. on the price charged for the non-resident deceased, that is, for the migratory or tourist population.

THE annual Congress of the British Institute of Public Health will be held at Hull from the 8th to the 13th inst. The hon. president of the Congress is the Most Hon. the Marquis of Ripon, K.G. The president is Mr. Alderman Richardson, Mayor of Hull, and the president of the institute is Professor W. R. Smith. The subjects of papers and discussion include every matter of importance in the way of public health, and in addition an inviting social programme has been arranged.

DR. FRANCIS WARNER has been appointed a honorary member of the Society of Hygiene at Budapest.

METROPOLITAN HOSPITAL SUNDAY FUND.

A COUNCIL MEETING of this Fund was held on Monday, July 29th, at the London Mansion House, to receive the report of the Committee of Distribution for the year 1895 and to approve of the several awards recommended by that committee. Sir Sydney Waterlow occupied the chair, and among those present were Cardinal Vaughan, Archdeacon Sinclair, Sir Savile Crossley, Canon Fleming, Canon M'Cormick, Mr. Henry C. Burdett, the Rev. J. F. Kitto, Captain Cundy, Dr. Glover, Mr. Wakley, Rev. W. H. Barlow, Mr. W. R. Tidd, Mr. F. C. Carr-Gomm, Mr. Alfred Willett, the Rev. A. A. Harland, and others.

In moving the adoption of the report the CHAIRMAN said the work of the committee had been very heavy this year as the accounts of a large number of hospitals had been questioned. Some of the complaints had been cleared up to the committee's satisfaction, some only partially, and in a large number of cases they had been obliged to put the word *nil* against the application. Awards had been recommended to 179 institutions, being an increase of 74 since 1873. This accounted to some extent for the increased work of the committee, but he thought it only just to his colleagues to say how very thoroughly the accounts had been investigated. The total amount for distribution was £44,410, but he hoped that before the accounts were closed the sum would reach the amount the Council were asking for—namely, £50,000. There certainly was never a time when the Fund more needed support because the number of empty beds to be utilised if funds were forthcoming would be of the greatest benefit to the sick poor. As usual 5 per cent. of the total collected would be set apart for the purchase of surgical appliances. This year they had had occasion to question the administration of no less than twenty-five institutions, each of which had been given the opportunity of sending a deputation in conference. Twelve deputations were interviewed, and in the other cases the matter was settled by correspondence. Three institutions not having published their accounts on the uniform system agreed upon were ineligible. One convalescent home, where the charge for maintenance of patients was deemed excessive, has only a small award recommended; and in one case where a dispensary, having its accounts largely involved in mission work, was recommended only so far as the medical work of the mission was concerned, and upon the understanding that in future the financial statements should show the dispensary and the mission work separate. This was not because the committee desired to find fault with mission work, but it was felt that the Fund was not raised for that purpose. He hoped and believed that the discussions with the managers this year would lead to a considerable improvement in the administration of these institutions.

Archdeacon SINCLAIR, who seconded the motion, said he was glad to see signs of growth in the Fund. At St. Paul's a great effort had been made and he was happy to say the donations had been almost doubled. This was due to previous careful work among the congregation and nobody knew this better than Canon Fleming. If all ministers would prepare the ground beforehand and not trust to their sermons alone on Hospital Sunday, much larger collections would result. He thanked THE LANCET and the *Hospital* for the interesting, vivid and effective manner in which the facts were put before ministers. It needed only a very little re-arrangement on the part of the clergy to enable them to prepare their sermons.

Mr. BURDETT, in supporting the motion, congratulated the committee upon the work they had done. He referred to the practice adopted by the Dublin Hospital Sunday Fund, which gave no grants until the institutions concerned had first been inspected by representatives of the Fund. Acting upon this he thought it might be useful if he paid a visit to the Queen's Jubilee Hospital, which had been refused a grant by this Fund, and he was bound to tell the Council that it was not a hospital at all. It was an overcrowded tenement house where sick people are wrongly taken in for medical treatment. So overcrowded was it that it was a marvel to him that it was allowed to exist, seeing that there was a local medical officer and also a very able medical officer for London.

Dr. GLOVER heartily concurred in all that had been said, and rejoiced in the increased sum which had accrued to the Fund. Referring to the statistics prepared by the Council, he drew attention to the enormous sums spent by hospitals upon their out-patients. He gave notice that at the next meeting of the Council he would move for the appointment of a subcommittee to investigate the statistics of the out-patient departments. He contended that if the number of these patients could be greatly reduced there would be a great saving of expenditure which would considerably relieve the hospitals, and greatly add to the public confidence in hospital administration.

Sir SYDNEY WATERLOW quite agreed with the appointment of a subcommittee for this purpose, but pointed out that the Committee of Distribution already had a return showing how many new patients there were attending in each case, and the statistics were based on the number of new patients rather than on the number of attendances.

The motion was unanimously carried.

Canon FLEMING moved "That the cordial thanks of the Council be and are hereby given to Sir Sydney H. Waterlow, Bart. (chairman), and to the other members of the Committee of Distribution for the considerable care and attention bestowed in the preparation of the awards they have recommended, and for the very efficient report of their proceedings." Sir Sydney Waterlow had been connected with the committee for nearly a quarter of a century, and they could not help feeling that he was really the father of the Fund.

Mr. CARR-GOMM seconded the motion, which was heartily carried.

In thanking the Council the CHAIRMAN remarked that they had just received notice of a legacy of £200 from Miss Mary Evans.

Mr. BURDETT, proposed: "That the thanks of the Council be and are hereby given to the editors of newspapers who have pleaded the needs of hospitals and advocated the cause of this Fund, with a view to increasing this years' collection." It has been our custom, he said, to propose this resolution at this meeting every year, but never had it been so well deserved as in the present year, for the editors of the entire press had united to endeavour to raise the Fund to at least £50,000. He pointed out the concession made by Mr. Walter of the *Times*, who, in the cause of charity, admitted for the first time in its history diagrams into the advertisement columns facing the leaders. Although the Fund up to the present had not reached £50,000, the accounts did not close until October, and a very little effort should bring in the required balance. What was wanted was a wider distribution of givers and a larger number of individual gifts. The resolution was a general one, and of course some editors, from the character of their newspapers, had done more than others; still, it was felt that the whole press had helped the Fund, and it was only by their united efforts that the greatest good could be done. But those who were on the Council of the Hospital Sunday Fund could never forget that the first step in the upward growth of the Fund came from the Editor of THE LANCET. It was the late Dr.

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Wakley who first stirred up the Council to a special effort and brought them out of the twenties into the forties, and now they were near into the fifties. His brother every year spent a large sum of money, a great deal of time, and gave to the Fund much personal interest; the latter he thought of more importance than money. Mr. Wakley was untiring—and he (Mr. Burdett) thought it only just that he should say so—in trying to get new ideas for the benefit of the Fund.

Cardinal VAUGHAN, who seconded the resolution, said that no one who took interest in the work, and whose duty it was to put the claims of the Fund before their congregations, could be otherwise than deeply indebted to THE LANCET for the attractive way in which the whole question was brought before its readers. THE LANCET rendered an important public service to a great charity in which the whole city was interested, and it was only right and just that its labour should be recognised in an ample and thorough manner. While he thanked the whole of the press, he thought a special meed of praise should be given to those medical papers which had done so much to promote the interests of the Fund.

Sir SYDNEY WATERLOW said he could not put this resolution before thanking all editors, but especially Mr. Wakley who had spared every year, and particularly this year, neither time, trouble, nor expense in doing everything which he thought would benefit the Fund. He desired also to personally thank Mr. Burdett for the special way in which he had caused the movement to be known in the West-end. The resolution was then carried *nemine contradicente*.

The Rev. J. F. KITTO proposed "That the cordial thanks of the Council are now given to the Right Honourable Sir Joseph Renals, Bart., Lord Mayor, who, as President and Treasurer, has devoted his valuable time to promote the growth of the Fund." This motion being carried, the usual courtesies to the chairman terminated the proceedings.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on July 29th, the President, Mr. CHRISTOPHER HEATH, being in the chair.

The Secretary laid before the Council the certificate of the auditors, Messrs. Cooper Bros. and Co., certifying to the accuracy of the accounts of the College for the past year 1894-95, and a balance-sheet dated June 24th, 1895. The statement of receipts and expenditure and the balance-sheet were approved and adopted, and were ordered to be published in the College Calendar.

A report, dated July 15th, from the Committee of Management was approved and adopted. It was as follows:—

1. That the following institution be added to the list of places of instruction in chemistry, physics, and practical chemistry—viz., the Grammar School, Bedford. 2. That the following institution, already recognised as a place of study in chemistry, physics, and practical chemistry be also recognised for biology—viz., Dulwich College. 3. That on the application of the Dean of St. Mary's Hospital Medical School, the course of clinical demonstrations in lunacy given by Dr. T. B. Hyslop at Bethlem Hospital be recognised so long as he shall hold the lectureship in psychological medicine at St. Mary's Hospital Medical School. 4. That on the application of the Dean of University College, Bristol, the Fever Hospitals of the Bristol Public Health Department be recognised as fulfilling the requirements of the regulations for attendance on fever cases. 5. That the Great Northern Central Hospital be recognised as a place of study during the fifth year of the curriculum.

A second report, dated July 25th, was read from the committee on the proposed arrangements for the Third and Fourth Examinations. The report was approved and adopted. It was as follows:—

In pursuance of the resolution adopted by the Council on June 13th, 1895, the committee have again taken into consideration the following recommendations contained in their report of June 7th, 1895—viz.: 1. That a separate examination in ophthalmic surgery be not instituted. 2. That Paragraph 11, Subsection II. of Section I. of the Regulations for the Five Years Curriculum be altered by the addition of the words herein printed in italics—viz: 11. Of having attended clinical instruction in ophthalmic surgery *and discharged the duties of dresser* at an ophthalmic hospital recognised for the purpose by the Examining Board in England, or in the special ophthalmic department of a recognised general hospital during not less than three months (candidates may fulfil this requirement any time after passing the second examination).

The committee have also, in pursuance of the instructions of the Council, consulted the medical schools upon the question of examination in and teaching of ophthalmic surgery. The committee, having again considered the matters referred to them, do not think it desirable that any addition should at the present time be made to the regulations respecting the examination and teaching of ophthalmic surgery. The committee therefore again recommend to the Council that a separate examination in ophthalmic surgery be not instituted, and do now recommend that no alteration should be made in Paragraph 11, Subsection II. of Section I. of the Regulations for the Five Years Curriculum but that it should remain as printed above without the addition of the words in italics.

The committee, in pursuance of the permission accorded to them by the Council, have obtained a report from the Court of Examiners on the details of the arrangements proposed by the Committee of Management for the Third and Fourth Examinations. The committee, however, are unable to report upon these details, as they think it desirable that the whole question of the examinations under the five years curriculum should be reconsidered. The committee therefore recommend to the Council that they should be authorised to consider and report upon the general scheme of examinations, as well as upon the details, and that they should further be authorised to consult the medical schools, if they should think it desirable.

It was moved and adopted that the Royal College of Physicians of London be informed that the Council had not adopted the recommendation of the Committee of Management contained in their report of March 18th, 1895, respecting the institution of a separate examination in ophthalmic medicine and surgery; and a copy of the report presented at this meeting was directed to be sent to the Royal College of Physicians.

The President stated that the Deputation Committee had received a deputation of Members on July 26th, and would submit a report thereon to the Council at a future meeting.

It was resolved that the annual meeting of Fellows and Members should be held at the College on Thursday, Nov. 7th next, at 3 o'clock P.M.

A letter was read, dated July 22nd, from Mr. H. Percy Dunn, reporting the following resolution, adopted by the Committee of the Association of Fellows—viz.:—"That the attention of the President and Council of the Royal College of Surgeons, England, be drawn to the fact that the half-yearly meeting of the Fellows on the 4th instant was closed without any discussion being possible in respect to the business on the agenda, and that, in the opinion of the Committee of the Association of Fellows, such a mode of conducting these meetings would be destructive of the privileges conceded by the Council to the Fellows, and would render their meetings nugatory."

It was resolved that Mr. Percy Dunn should be informed in reply "That the Council wished to point out that the meeting of Fellows was held and conducted in strict accordance with the regulations appertaining to the meeting; that as there were no notices of motion on the agenda paper no discussion could properly take place, the regulations of the meeting requiring previous notice of twenty-one days."

The Secretary reported the presentation to the College by Mr. Jabez Hogg, M.R.C.S., of sixteen daguerreotypes of physicians, surgeons, and others, mostly taken by himself in "the early forties"; nine volumes of scientific pamphlets, and a portrait in oil of a surgeon (name unknown), date 1677. The best thanks of the Council were accorded to Mr. Jabez Hogg for his present.

A letter, dated July 26th, was read from Dr. Liveing reporting the proceedings of the Royal College of Physicians of London in relation to matters common to the two Colleges, and stating that the petition from the London School of Medicine for Women had not been referred to a committee for report, but that its consideration had been postponed to a special meeting of the College to be held towards the close of October or in the early part of November next.

It was moved and carried that the resolution of the Council at the last meeting, referring the petition of the London School of Medicine for Women to the Committee of Management, be rescinded. It was resolved that the further consideration of the petition of the London School of Medicine for Women be postponed to the ordinary meeting of the Council in November.

Mr. Smith moved, "That the question of the admission of women to the examinations for the Diploma of Member be submitted to the meeting of Fellows and Members on the 7th November." The motion was carried.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6356 births and 4572 deaths were registered during the week ending July 27th. The annual rate of mortality in these towns,

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which had risen in the six preceding weeks from 15·4 to 21·9 per 1000, further increased last week to 22·5. In London the rate was equal to 23·0 per 1000, while it averaged 22·1 in the thirty-two provincial towns. The lowest rates in these towns were 11·8 in Brighton, 13·6 in Huddersfield, 13·7 in Bristol, 14·5 in Croydon, and 15·2 in Gateshead; the highest rates were 28·6 in Birkenhead, 29·5 in Salford, 30·0 in Liverpool, 30·1 in West Ham, and 31·5 in Preston. The 4572 deaths included 1255 which were referred to the principal zymotic diseases, against 877 and 1137 in the two preceding weeks; of these, 903 resulted from diarrhœa, 156 from measles, 77 from diphtheria, 53 from whooping-cough, 39 from scarlet fever, 22 from "fever" (principally enteric), and 3 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Brighton, Bristol, Huddersfield, and Newcastle-upon-Tyne, and the highest rates in West Ham, Leicester, Liverpool, Preston, and Sheffield. The greatest mortality from measles occurred in Plymouth, West Ham, Blackburn, Manchester, and Liverpool; from scarlet fever in Salford; from whooping-cough in Cardiff; from "fever" in Burnley; and from diarrhœa in Bradford, Norwich, Leicester, Sheffield, and Preston. The 77 deaths from diphtheria included 48 in London, 4 in West Ham, and 4 in Wolverhampton. Two fatal cases of small-pox were registered in Oldham and 1 in London, but not one in any other of the thirty-three large towns. There were 193 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 27th, against numbers increasing from 19 to 89 at the end of the six preceding weeks; 114 new cases were admitted during the week, against 17, 36, and 23 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2347, against 2044, 2241, and 2267 on the three preceding Saturdays; 249 new cases were admitted during the week, against 311, 342, and 220 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 187 and 193 in the two preceding weeks, declined again last week to 185, but were 8 above the corrected average. The causes of 50, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3 and 18·2 per 1000 in the two preceding weeks, was 18·3 during the week ending July 27th, and was 4·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·3 in Perth and 15·2 in Aberdeen, to 23·2 in Paisley and 25·1 in Greenock. The 527 deaths in these towns included 64 which were referred to diarrhœa, 11 to measles, 7 to whooping-cough, 4 to diphtheria, 3 to scarlet fever, 3 to "fever," and not one to small-pox. In all, 92 deaths resulted from these principal zymotic diseases, against 121 and 91 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·2 per 1000, which was 3·0 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 72 and 61 in the two preceding weeks, rose again to 64 last week, of which 34 occurred in Glasgow, 8 in Greenock, 6 in Dundee, and 6 in Paisley. The deaths referred to measles, which had declined from 18 to 8 in the three preceding weeks, increased to 11 last week, and included 3 in Glasgow and 3 in Edinburgh. The 7 fatal cases of whooping-cough showed a further decline from the numbers recorded in recent weeks, and included 4 in Glasgow. Of the 4 deaths from diphtheria 2 occurred in Edinburgh, 1 in Leith, and 1 in Glasgow. The fatal cases of scarlet-fever, which had been 6 in each of the two preceding weeks, declined to 3 last week, of which 2 occurred in Glasgow and 1 in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 80 and 57 in the two preceding weeks, were 59 last week, and exceeded by 10 the number in the corresponding period of last year. The cause of 45, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·0 and 25·1 per 1000 in the two preceding weeks, declined again to 23·9 during the week ending July 27th. During the past four weeks of the current quarter the death-rate in the city has averaged 23·5 per 1000, the rate during the same period being 21·4 in London and 16·4 in Edinburgh. The 160 deaths registered in Dublin during the week under notice showed a decline of 8 from the number in the preceding week, and included 28 which were referred to the principal zymotic diseases, against numbers increasing from 9 to 21 in the four preceding weeks; of these, 24 resulted from diarrhœa, 3 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, scarlet fever, or diphtheria. These 28 deaths were equal to an annual rate of 4·2 per 1000, the zymotic death-rate during the same period being 6·9 in London and 2·3 in Edinburgh. The fatal cases of diarrhœa, which had steadily increased from 3 to 16 in the five preceding weeks, further rose to 24 last week. The 3 deaths referred to whooping-cough corresponded with the number in the preceding week. The 160 deaths in Dublin last week included 51 of infants under one year of age, and 33 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon those recorded in recent weeks, while those of elderly persons showed a slight decline. Seven inquest cases and 7 deaths from violence were registered; and 43, or more than a fourth, of the deaths occurred in public institutions. The causes of 12, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

INDIA AND THE INDIAN MEDICAL SERVICES.

SURGEON-MAJOR C. MONKS is appointed to act as Civil Surgeon, Karachi, during the absence of Brigade-Surgeon-Lieutenant-Colonel G. Bainbridge, M.D., on privilege leave. Surgeon-Lieutenant-Colonel S. B. Haliday, in medical charge, 13th Bombay Infantry, at Aden, having been recommended for twelve months' leave to England on medical certificate, has proceeded home in the *Dilwara*.

ARMY MEDICAL SCHOOL AT NETLEY.

The prizes to the successful candidates at the recent examinations for the British and Indian Medical Services were distributed at the Army Medical School, Netley, on Wednesday last. Sir Joseph Fayrer, K.C.S.I., presided.

It has been decided that medical officers, whether they belong to the military medical service or are civil practitioners, who have served eighteen years on the staff of volunteer corps and have rendered substantial service to their corps, may be considered eligible for the Volunteer Officers Decoration.

The following rules, says the *Pioneer Mail*, have been laid down for the grant of pay to a Brigade-Surgeon-Lieutenant-Colonel of the Indian Medical Service during the period he is attached to the office of a Principal Medical Officer for the purpose of acquiring a knowledge of military medical administration:—(1) In cases where it is practicable to attach the officer to the office of a Principal Medical Officer without his relinquishing his civil duties, his full civil pay will be continued to him; (2) in cases where the officer has been obliged to relinquish his civil duties he will be allowed the grade pay of his rank, together with half the difference between that grade pay and the substantive pay of his civil appointment, the whole to be a charge against the military estimates.

THE RETIREMENT OF THE DUKE OF CAMBRIDGE.

It is understood that H.R.H. the Duke of Cambridge, who has left London for Homburg, will on his return vacate his present appointment as military head of the army. There has naturally been a good deal of interest and speculation excited as to the Duke's successor. It seems to be generally agreed that in point of military rank, service, and reputation Lord Wolseley has the strongest claims for the appointment. The Duke of Connaught is undoubtedly very popular and has the reputation of being an excellent officer, in addition to the fact that the present Government would probably desire to see a Royal Commander-in-chief,

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and it is therefore confidently predicted in some quarters that he is to be the next occupant of that post. But it cannot be contended that in experience, tried ability, and services in the field he has the reputation of Lord Wolseley, Lord Roberts, or Sir Redvers Buller, nor, as it seems to us, would it be in the Duke of Connaught's interest, considering his present age, to be promoted to a post which he would only occupy for a fixed period before retirement. It may, we think, be regarded as certain that nothing has as yet been definitely decided on. The question is one of national and military interest and does not specially concern the medical profession, but the appointment of a Commander-in-chief is likely to affect in many ways the Army Medical Staff in common with other branches of the service.

THE FRENCH IN MADAGASCAR.

It appears that the French troops, especially those in connexion with the river service, have suffered much from dysentery and rheumatic ailments, in addition to climatic fever. There are a large number of young soldiers in the French force, and these are said to have been affected disproportionately as compared with the older and more matured troops. A number of sick soldiers have been sent to the hospital establishments at Réunion. It is understood that those invalided to France were, speaking generally, much improved in health on their arrival at Marseilles; but several soldiers died on the voyage. Some complaints have been made of the arrangements for the disembarkation of troops and stores on their arrival in Madagascar from France, and a good deal of difficulty has been experienced in regard to the commissariat and food supplies for the force. The French hospital service has had its hands full of work. It must be remembered that expeditions of this nature are necessarily attended with great difficulties, and that a good deal of sickness may be confidently expected to ensue, more especially at the beginning of the campaign; at least that has been the experience of this country. The Ashanti expedition was probably one of the best-thought-out and arranged expeditions that England has undertaken.

THE CHITRAL FORCE.

Nothing has yet been definitely settled as to the policy to be pursued in regard to the late Chitral expedition—whether we are to retain our present position in that country or not. It is understood that the more prominent military authorities in England are on the whole decidedly opposed to our remaining, and there are grave political reasons against our doing so, except for very strong strategical considerations, on account of the increased expenditure and the depressed state of Indian finances at the present time. Be this as it may, however, the climate of some of the hill stations held by the Relief Force is said to be excellent during the summer months, and, notwithstanding the sickness that prevails at some stations, the health of the force as a whole is good. The *Pioneer Mail* of July 10th states that the percentage of sick, including those in the base hospitals in the Punjab, is under 7 per cent.

FILTERS FOR BRITISH TROOPS IN INDIA.

We are very glad to learn that a reference has been made to the principal medical officer of Her Majesty's Forces in India as to the desirability of adopting the Pasteur filter for British troops. This should, in our opinion, certainly be done, especially in stations where enteric fever has prevailed. The filter in ordinary use in barrack rooms in India is rather a source of danger than a safeguard against water-borne disease. We have, as our readers are aware, for a long time advocated the introduction of another form of filter for barrack and hospital use in India, and the experience obtained of late years in the French Army shows conclusively what can be done in this direction in improving the health of the troops.

SURGEON-COLONEL CUFFE, C.B.

The death of this officer, which was announced in some of the English and Irish papers, is, we are glad to say, incorrect. Surgeon-Colonel Cuffe, who is Principal Medical Officer of the Allahabad District, according to an Anglo-Indian contemporary of the 10th ult., was at Pachmarhi and in excellent health.

The Leeds Company of the Volunteer Medical Staff Corps will arrive at Netley to-day, Saturday, August 3rd, for their annual training at the Royal Victoria Hospital.

Eleven invalids arrived at Netley from Mauritius on July 31st.

Correspondence.

"Audi alteram partem."

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE PORTRAIT OF SIR JOSEPH LISTER.

To the Editors of THE LANCET.

SIRS,—I am sorry that Mr. C. B. Keetley, in a letter to THE LANCET of July 27th, objects to the plan we have adopted for obtaining a good portrait of Sir Joseph Lister, to be presented to the Royal College of Surgeons of England. A mandate from so large a body as the Fellows and Members of the College, to whom we have appealed, could only have been obtained after considerable delay, expense, and publicity. It seemed, therefore, best to form a committee in which each of the metropolitan medical schools should be represented, and from this committee we purposely excluded members of the Council, as they would be ultimately the recipients and custodians of the portrait. We should also have asked representatives from the provincial schools of medicine had we not thought that such a step would have caused delay. The choice of an artist was made by the committee after consulting the wishes of Sir Joseph Lister. I may also add that our project has the approval and support of the President and most of the members of the Council of the Royal College of Surgeons. I deeply regret that from various reasons we failed to place upon our first list of subscribers the names of many eminent surgeons, who have since welcomed and supported our project with the utmost cordiality; and I trust that any imperfections which may be found in the inception of the work will not prevent the Members and Fellows of our College from doing their best to show by this memorial their appreciation of the unrivalled claims of Sir Joseph Lister to the gratitude of British surgeons.—I am, Sirs, yours obediently,

N. DAVIES-COLLEY,
Treasurer of the Lister (College of Surgeons) Portrait Fund.

July 31st, 1895.

To the Editors of THE LANCET.

SIRS,—Although an ardent and enthusiastic admirer of Sir Joseph Lister, might I be permitted to express the opinion that the time has not yet arrived when anything like a general appeal should be made to commemorate the enormous benefits which his genius has conferred upon mankind in general and the surgical art in particular. If the College wish to add to their collection of portraits they should surely do so out of their corporate funds, or the individual members of the Council should provide the necessary money. An additional objection to the appeal which has just been issued is, that it follows so closely upon the footsteps of one made to Sir Joseph Lister's former colleagues and pupils that practically the latter cannot be expected to subscribe, so that the resulting list of contributors will not by any manner of means represent the full measure of the veneration and esteem with which Sir Joseph Lister is regarded by the profession at large.

I am, Sirs, yours obediently,
"LISTERITE."

London, July 27th, 1895.

"THE CARDIO-VASCULAR CHANGES OF RENAL DISEASE."

To the Editors of THE LANCET.

SIRS,—Sir George Johnson's letter in your last issue chiefly traverses old ground, upon which I need not follow him, as I have so recently ventured upon it. The main purpose of my lecture was to put forward the observations on the large arteries which I had supposed to possess more of novelty than Sir George Johnson allows to them. They may be worth little or nothing, but even a small fact may be of use. I am far from supposing that we have got to the end of a difficult and complicated question, the complete solution of which must be the work of the future. In the meanwhile we want more facts, especially with reference to the state of the capillaries as seen with the microscope. It will be my endeavour to do something in this direction, should I not be fortunately anticipated by some younger and more active observer.

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Before laying down my pen let me congratulate Sir George Johnson on his recognition in process of time of the fibrous thickening as well as the muscular. He may say with an earlier philosopher, "Whatever I said last Wednesday I do not say so now." This is wholly to his credit, but let it also be placed to the credit of the departed pathologists to whom we owe our knowledge of the arterial fibrosis, which, though not the whole matter, is a part of it which is now no longer a matter of dispute.—I am, Sirs, yours truly,

W. HOWSHIP DICKINSON.

"THE ASSOCIATION OF WORKERS IN ASYLUMS FOR THE INSANE."

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of July 27th, under the above heading, that a meeting has been held at which Sir B. W. Richardson delivered an address. He is reported to have said that "education and training raised the status and increased the usefulness of nurses, and this experience will no doubt be repeated when the same conditions are applied to attendants on the insane." I cannot allow such a statement as this to pass unchallenged. For many years past the attendants and nurses on the insane have been carefully educated and trained. After a period of two years, during which the attendants and nurses have to attend a dozen lectures and the same number of clinical demonstrations in the wards of a hospital for the insane, they are examined, and, if successful, are granted a certificate of proficiency in nursing the insane. The superintendent of the hospital trains his attendants and nurses, but he has nothing to do with their examination. The written portion is conducted by examiners appointed by the Medico-Psychological Association of Great Britain and Ireland, and the clinical and *viva voce* part by an examiner who is generally the superintendent of a neighbouring asylum. The severity of the examination is shown by the fact that at every examination a number of candidates are plucked. The result of the education, training, and examination has been to increase the usefulness of the nurses and attendants, who now take a more intelligent interest in the cases under their care; while, as regards their status, it is quite on a par with hospital trained nurses. Indeed, some of the latter are anxious to obtain the certificate, and a scheme is on foot for admitting them to the examination after a definite period of training. Altogether more than 1000 nurses and attendants possess the certificate which is granted by the Medico-Psychological Association of Great Britain and Ireland.

I am, Sirs, yours faithfully,

FLETCHER BEACH,
Honorary General Secretary, Medico-Psychological Association of Great Britain and Ireland.

Welbeck-street, W., July 30th, 1895.

THE HOSPITAL FOR DISEASES OF THE THROAT, GOLDEN-SQUARE.

To the Editors of THE LANCET.

SIRS,—We shall be obliged if you will kindly allow us to state in your columns that we have now entirely severed our connexion with the Throat Hospital in Golden-square.

We are, Sirs, yours faithfully,

SUTHERLAND,
Lately President of the Throat Hospital, Golden-square, London.

R. COURTENAY WELCH,
Lately a member, and for nearly twelve years chairman of the Committee of Management of the Throat Hospital.

GREVILLE MACDONALD,
Lately Dean of the Medical School, and for eight years physician to the Throat Hospital.

Stafford House, St. James's, July 31st, 1895.

THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK.

To the Editors of THE LANCET.

SIRS,—An annotation in THE LANCET of July 27th attributes death in electric shock to "stoppage of the heart." It is useful to inquire how and why this stoppage occurs. Dr. A. M. Bleile (Ohio) has lately investigated the physiological events which in his opinion lead up to it.[1] Experimenting upon dogs with strong currents of stated strength he finds, on examining the heart immediately after death, that "the left side is completely relaxed and the right side intensely gorged with blood, as are also the large veins in the immediate vicinity of the heart. ..... Incisions into the animal are not followed by bleeding, and the arteries are contracted down to a very small calibre." It was suggested, therefore, "that the current acted upon the arteries through the nervous centre which controls their diameter." To test this view dilatation of the arteries and fall of blood-pressure was effected by bringing the animal under the influence of nitrite of amyl. Under these circumstances a current of 0·24 ampères at 52 volts for three seconds (ordinarily a fatal dose) did not produce death. The conclusion arrived at is "that death in electric shock is really due to the fact that the current produces a contraction of the arteries through an influence on the nervous system, and that this constriction of the arteries throws in such a mechanical impediment to the flow of the blood as the heart is unable to overcome, and that where drugs are given to counteract this effect much larger doses of electricity than the ordinary can be borne." The experimental data on which this opinion is based are given in such detail that the experiments can be repeated and results verified. The paper is a useful contribution to the physiology of death by electric shock. It may be incidentally mentioned, however, that the absolute amount of mechanical energy used, as measured in "joules," does not necessarily bear any direct relationship to the physiological effects of an electric current. In other words, a weak current for a long time is a very different thing from a strong current for a short time, although in each instance the "joules" may be the same.

I am, Sirs, yours faithfully,

Brighton, July 30th 1895. W. S. HEDLEY.

THERAPEUTICS OF THE GOLD SALTS.

To the Editors of THE LANCET.

SIRS,—Some few weeks ago, after applying to various wholesale chemists without any result, I enquired through your columns if solutions of the tribromide of gold combined with oxybromides of arsenic, &c., were manufactured, or could be manufactured, in England, being anxious to give them a therapeutical trial. I am glad to say that these preparations now have, at my suggestion, been placed on the English market by Messrs. Arthur and Co. of Berners-street, who have taken considerable trouble over the manufacture of these not easily made solutions. I believe, with an eminent American authority, that these solutions present the tri- and the oxy-bromides in the best possible form of administration, and they have in my hands already proved serviceable in cases of neurasthenia, nervous fibrillary twitchings, &c. I hope English practitioners will give these solutions a practical trial in the various neuroses, &c.

I am, Sirs, yours truly,

Hastings. J. STENSON HOOKER.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes: the Judge's Charge.—Important Medico-legal Case.

MR. JUSTICE CAVE commenced the business of the Assizes on July 26th by charging the grand jury. With reference to the case in which Owen Green and Mary Ann Roxburgh were charged with manslaughter his lordship said: "According to the evidence the female prisoner struck the deceased man with the neck of a bottle after it had been broken upon the eye, destroying the sight of the eye and cutting the eyebrow. Under the circumstances it was deemed necessary by the medical men to perform an operation upon the man, sewing up the eyelid, and so on. For that purpose it was thought necessary to give him an anæsthetic. He seemed to be a proper subject for the administration of an

[1] A paper read before the American Institute of Electrical Engineers, Niagara Falls, N.Y., June 27th.

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anæsthetic, but during the course of the operation he appeared to be in a fainting condition and ultimately died. He died under the anæsthetic in a way which the medical men were unable to account for. No doubt in a case where a person knocked another down and rendered an operation necessary, and during that operation the person died—not from the direct result of the blow itself, but from other causes which were hard to explain—he had no doubt in such a case it might be contended with much probability that the person who struck the blow was liable for the consequence. But it was hardly desirable in a case like that, unless there was grave necessity, to let the case rest upon a principle of that kind. If the grand jury thought there was a *primâ facie* case against the woman he would have a bill sent up charging her with wounding with intent to do grievous bodily harm, which would leave the cause of death an open question."

High Rate of Infant Mortality.

At the last meeting of the Health Committee Dr. Hope reported an increase in the mortality, and stated that it was almost entirely owing to deaths of very young children, no less than 60 per cent. of the total being under five years of age. The earlier the period of life the higher the mortality had been. This lamentable loss of infant life was largely, if not entirely, owing to injudicious feeding. So far as inquiries could ascertain the fact, there was no structural sanitary defect in any of the houses where the deaths had taken place. In a considerable number there was evidence of domestic neglect and dirt, and in a great bulk there was evidence of improper feeding. Those matters were exceedingly difficult for a sanitary authority to deal with, inasmuch as they depended upon the amount of care and intelligence exercised by the mothers. In accordance with a suggestion from the committee he had caused a memorandum to be very freely distributed showing what could be done to prevent this mortality among children, and it was hoped some attention would be given to it. Of course, there were cases in which the evidence of neglect and improper feeding were entirely absent. This high rate of infant mortality was not peculiar to Liverpool by any means; every great city had its proportion of it. In other respects the health of the city was gratifying. Other forms of zymotic disease were markedly below the average. The one solitary case of small-pox in the city was imported from America. The number of patients in the hospital was low.

July 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Proposed New City Hospital for Edinburgh.

AS was mentioned in THE LANCET a site had been provisionally selected by the Lord Provost and others at Craiglockhart as suitable for the proposed new city hospital. The site was inspected by the medical officer of health, and Dr. Claud Muirhead, the consulting physician to the City Hospital, and adversely reported upon. This report came up before the last meeting of the town council and led to some discussion; but the Lord Provost, with great wisdom, decided to abandon all thought of fixing upon the site thought of. He avowedly did this because of the medical report, although he was evidently disposed to think the medical experts were too decided in their disapproval, yet, as he said, it would not do to go forward in the face of such an adverse opinion.

Water of Leith Sewerage Commission.

The annual inspection of the works for the purification of the water of Leith was made last week. The various works in connexion with it were inspected, and much satisfaction was expressed with the result. The essential feature has been the construction of a great drain by means of which substances which were formerly discharged into the stream are now carried away. There are of course reservoirs and settling tanks in connexion with the scheme, the whole having cost somewhere about a quarter of a million of money. So thoroughly has the work been done that the stream promises to be a good trouting stream in the not far distant future.

The Professional Examinations in Edinburgh.

It may be of interest to note that the success of the lady students at the First Professional Examination has created considerable interest. The lady who appeared for the second professional examination has also passed.

July 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Battle of the Clubs at Cork.

THE death of Dr. O'Sullivan, induced as it was by overwork, has caused consternation amongst the Cork clubs. Last week one of the lodges of Oddfellows held a meeting to consider the situation, and about thirty members attended. A proposition was made that the terms of the Cork profession be accepted. The paid secretary of the lodge strenuously opposed the proposal. A poll was taken, and it was found that there were four for and seven against the resolution. The remainder, forming the great bulk of the meeting, were so unsettled in their opinions that they actually declined to vote. This looks very like the beginning of the end. There is no doubt that every day the legitimate members of the clubs are coming to realise that they are standing in their own light by supporting the unreasonable demands of the merchants, the bankers, and the builders to be treated on the same terms as the clerks, the artisans, and the labourers. Many of the well-to-do club members have not hesitated during the present contest to call in the assistance of the local practitioners and pay them the ordinary private fees, but unfortunately the poorer members are not in a position to do so, and several of them naturally wish for a larger field to select from when appointing a club officer. Some of the more ardent spirits will no doubt endeavour to have the appointments held by Dr. O'Sullivan distributed amongst the three remaining imported medical men; but it remains to be seen, if such should occur, whether the latter will be physically capable of discharging the increased duties. Indeed, it is freely rumoured in professional circles—and I have reason to believe it is quite true—that club practice in Cork is at present so harassing and exacting that the health of one of the three club officers is already so seriously damaged that the unfortunate young man has been obliged to decide on leaving Cork within the next month. A deputation from the Cork profession has proceeded to London for the purpose of representing to the meeting of the British Medical Association the exact state of affairs in Cork, and to impress on the profession at large the importance of a combined effort to strenuously oppose the ever-growing abuses connected with club practice. I have already said, and I repeat it, that to secure success the Cork men need only persist in working as energetically as they have done, and continue to preserve the splendid discipline they have already exhibited

Sir W. Thornley Stoker.

A committee of medical men has been arranged for the purpose of entertaining Sir W. Thornley Stoker, President of the Royal College of Surgeons, at dinner, in congratulation upon his receiving the honour of knighthood; but as the present period of the year is not suitable for such functions it has been agreed to defer any practical outcome until the end of October.

Meath Hospital and County Dublin Infirmary.

Mr. R. Glasgow Patteson, M.D., F.R.C.S., has been appointed surgeon to the above hospital, in the room of the late Sir George H. Porter, Bart.

The Epileptic Wards of the Belfast Union Infirmary.

In THE LANCET of July 27th I gave an outline of the suggestions made by the inspector of the Local Government Board arising out of an inquiry held in Belfast as to the death of a man in the lunatic department of the union infirmary. A committee of the Belfast Board of Guardians, appointed to consider the inspector's report, advise that copies of the paragraphs in it relating to the diagnosis of disease, and to the desirability of consulting the visiting medical officers before sending a patient to the epileptic wards of the lunatic department, be sent to the resident medical officers, and that they be informed that the Board is of opinion that such consultation is necessary. They also recommend that some epileptics be separated from the other inmates of the lunatic department, and that separate recreation grounds be provided for them. Further, they are of

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opinion that a committee should be appointed to consider how this could best be carried out, and to report what arrangements could be made for providing a separate room for the examination of patients on admission. They recommend that apartments be provided for accommodation of patients suspected of lunacy, in which they may be kept under observation until the nature of the case becomes apparent. They also recommend that when a patient is admitted on a medical certificate the resident or visiting medical officer should be handed such certificate.

Carnlough Water and Sewerage Scheme.

At a special meeting of the Larne Board of Guardians, held on July 24th, plans were submitted by the engineer in reference to the water and sewerage scheme, which were approved of; and it was decided to forward them for inspection and approval to the Local Government Board. Carnlough is one of the most desirable summer health resorts in Ulster, and new water and sewerage schemes will be a very important improvement.

Death of Brigade-Surgeon Coates, M.D.

Great regret is felt in Belfast by the news just received of the death of a distinguished Ulster man on July 10th at Calcutta—Brigade-Surgeon John M. Coates, M.D. He was born at Portaferry, county Down, in 1832, he entered Queen's College, Belfast, as a scholar in 1851, and in 1855 graduated M.D. in the late Queen's University of Ireland. The following year he entered the Indian Medical Service by competition, and was sent at once to Bengal and passed through the Mutiny of 1857. After going through the usual term of active regimental service he was appointed Sanitary Commissioner of Bengal, and afterwards he became President and Professor of Medicine in the Calcutta Medical College, an onerous and responsible post which he occupied for several years. In 1890, having had two extensions of service in the two positions he occupied, he retired with the rank of Brigade-Surgeon. He was a most distinguished student of the Belfast Medical School, and acquired an extremely high reputation on the eastern side of India. As a consulting physician his services were in great request and his opinion was very highly valued. Indeed, he enjoyed a very enviable Indian reputation both as a physician and as a professor in the Calcutta medical school, and he was personally a great favourite both with Anglo-Indians as well as with the natives. Some time ago he was urgently telegraphed for to go to India to attend a Rajah who had the utmost confidence in his skill. He went out at once to Calcutta, and it was while there that he contracted cholera from which he died. Brigade-Surgeon Coates was married to the daughter of a well-known and respected Belfast merchant, who survives him. A son is in medical practice in London, and some of his daughters are married in India. Brigade-Surgeon Coates was a man who by sheer ability and force of character rose to a very high position in India. Indeed, at one time he was offered the appointment of Surgeon-General of Bengal, which, however, he declined. By his death Queen's College, Belfast, loses one of her most distinguished alumni.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The International Congress of Otology.

SCIENCE has her "autumn manœuvres"—for such undoubtedly are the coming *réunions* of *savants*, medical and other, for the review of their work during the last twelvemonth or more, and for the exposition and discussion of innovations in the perennial warfare against ignorance, disease, and death. The present year is exceptionally prolific in these assemblages—not the least interesting among them being that which will meet in Florence on Sept. 23rd, when an international congress will be held at which the leading aural surgeons of Europe and America will assist at a "march past" of otological medicine. The last congress of the kind, it will be remembered, took place in 1888 at Brussels, at the close of which it was unanimously agreed that its successor—the fourth in the series—was to be held in the Tuscan capital. Dr. Vittorio Grazzi, Professor of Aural and Laryngeal Medicine in the University of Pisa, is to preside, and among those already announced to take part in the proceedings are Dr. Adam Politzer (who holds the chair of Otology in the Vienna School), Dr. Gellé of Paris, Dr. J. Barr of Glasgow, Dr. Gradenigo of Turin, and a number of well-known aural surgeons in both hemispheres.

"La Clinica Moderna."

Professional, equally with political, journalism was long at a low ebb in Italy, reflecting all too faithfully the outcome of those obscurantist forces which dominated the peninsula. Now the national "risorgimento" includes the academic, the scientific, the literary, as well as the political and social life of the people, and conspicuous among its products is the improved character of its medical journalism. The "Policlinico," due to the inspiration of Baccelli, has now a worthy compeer in the "Alta Italia," published at Milan by the enterprising house of Bicchi. Its name betokens its object—"La Clinica Moderna"—and its staff, seventy in number, is drawn from the clinical teachers and *privat-docents* of all the Italian schools. Full reports of university lectures on the practical side of medicine are given from time to time—the subjects being medical, surgical, obstetric, dermatological, ophthalmic, and psychiatric, according as they emerge into special prominence under special circumstances. The tenth *fascicolo* is now before me, and its features are original and attractive enough to explain the announcement that has just reached me that the Munich school are projecting a journal similar in character and on similar lines.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Medical Insurance.

THE Austrian Medical Chambers are at present considering the details of an insurance scheme, according to which every medical man will be expected to take measures entitling him to an annuity of £40, commencing on the attainment of his sixtieth year. From this obligation those medical men will be exempted who hold appointments giving them a claim to a pension amounting to the above sum, as well as those who are above forty years of age or are already insured. A fund is also to be founded for the benefit of the widows and orphans of medical men; the widows' pensions are to be £40 a year, and the orphans' pensions £4 a year for each child.

The Antitoxin Treatment of Diphtheria.

Among the recent contributions of Austrian physicians to the literature of the above subject is a noteworthy lecture by Dr. Jakubowski, professor of pædiatrics in Cracow, who gave details of 75 cases and declared himself a firm believer in serotherapy. Monti has treated 25 cases, among which 1 died, but Gnandinger, on the other hand, has reported on 27 cases, with a death-rate of 40 per cent., and he accordingly does not prefer this to other methods of treatment. Jakubowski employed all the various kinds of serum, differing from one another both in chemical composition and in the proportion of active antitoxin present. Roux's serum and Aronsohn's serum come up to that of Behring II. For the purpose of better preservation Roux adds camphor, Behring 0·5 per cent. of carbolic acid, Aronsohn 0·4 per cent. of cresol, and Bujwid (in Cracow and Warsaw) chloroform. Among the 75 patients of Jakubowski, 38 were treated with Behring's serum, 14 with Bujwid's, 20 with Roux's, and 3 with Aronsohn's. The injections were made on the thigh, and the punctures were covered with iodoform gauze and sticking-plaster. As the originator of the serum treatment considered it to be efficacious only in the case of diphtheria caused by Löffler's bacilli, bacteriological examinations were made and the results recorded. In primary diphtheria with greyish coating on the tonsils and the palatine arches Löffler's bacilli are certain to be found, but when the coating is yellow, staphylococci and streptococci are the prevailing forms, and the most efficiently conducted serum treatment is without success. In 17 per cent. of the cases Jakubowski observed urticaria and erythema. The former appeared three or four days after the injection and disappeared after three days; erythema showed itself on the trunk in the form of reddish spots, and was accompanied by fever and weakness of the heart. Three patients complained of pains in the joints. All these symptoms are to be regarded as consequences of some unknown toxines contained in the serum, and the physician, therefore, in the case of slight diphtheria, has to decide whether he will incur the risk either of

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producing complications or, on the other hand, of deferring the use of antitoxin till a time when it is ineffectual. There are two methods of investigation which prove the efficacy of serotherapy—statistical returns and the comparison of the course of the disease before and during treatment. Widerhofer arranged the following scale: (1) slight diphtheria with good prognosis; (2) serious cases with doubtful prognosis; (3) very grave cases; and (4) necessarily fatal prognosis. He has, however, had under his care sixteen cases of the fourth form and ten among them have recovered. On the other hand, Monti distinguished: (1) slight cases with fibrinous coating; (2) grave cases with parenchymatous infiltration; and (3) gangrenous diphtheria. Jakubowski divides the cases into those where the morbid process is limited to the pharyngeal mucous membrane and those where diphtheria is complicated with croup. The course of slight diphtheria is modified by antitoxin; the false membranes are loosened and the progress of the diphtheritic infiltration is stopped. Paralysis and cardiac debility were not influenced by the remedy. In the case of croup and obstruction of the larynx antitoxin by itself is not sufficient, but intubation and tracheotomy are to be performed. Serotherapy relieves the difficulty of breathing; the patients expectorate a serous purulent sputum, and auscultation shows moist crepitant râles, whereas dyspnœa, cyanosis, and dry crepitant râles have hitherto been the rule. The average mortality has fallen from 50 to 32 per cent. Although Jakubowski has not obtained such good results as some other physicians, he nevertheless recommends the antitoxin treatment as being by far the most efficacious of all the methods proposed against diphtheria. Neudörfer has published in the *Wiener Medicinische Wochenschrift* his views on the pathogenesis and treatment of diphtheria. He asserts that even the gravest cases which have been given over by experienced physicians not uncommonly recover without any remedy, because nature limits the consumption of oxygen and thereby enables life to be maintained on a reduced supply. Without going so far as to agree with Caron, who exclaimed: "Hors la trachéotomie point de salut pour les croupalisés," Neudörfer nevertheless attributes to this operation a great importance, for by it the inspiration and consequent absorption of oxygen are increased in comparison with breathing through the nose. In his opinion tracheotomy may be performed even after respiration has ceased, provided that the heart still pulsates even feebly.

BEQUESTS AND DONATIONS TO HOSPITALS.—The committee of the current year's collections of the Liverpool Hospital Sunday and Saturday Funds has distributed among the Liverpool charities the following sums: Royal Infirmary, £2438; Royal Southern Hospital, £1696; Northern Hospital, £1484; Liverpool Dispensaries, £742; Infirmary for Children, £636; Stanley Hospital, £530; Eye and Ear Infirmary, £477; Consumption Hospital, £318; Convalescent Institution, £212; Hospital for Women, £212; St. Paul's Eye and Ear Hospital, £212; Cancer Hospital, £106; Home for Incurables, £106; Dental Hospital, £26 10*s.*; St. George's Hospital for Skin Diseases, £26 10*s.*—Mr. John Todd, late of Swanland Hall, in the East Riding of Yorkshire, has bequeathed £300 to the Hull Royal Infirmary, and £100 to the Hull and Sculcoates Dispensary.—The late Mrs. Church Dixon, of Govan-hill, Glasgow, has bequeathed £500 each to the Grosvenor Hospital for Women, London, and to the Belgrave Hospital for Children, Gloucester-street, London.—The late Mrs. Fraser, widow of the late Bishop of Manchester, has bequeathed £2000 to the Manchester Cancer Hospital, and £1000 each to the Manchester infirmary and the Radcliffe Infirmary, Oxford. The distribution of this year's collection for the Birmingham Hospital Saturday Fund to the medical charities is as follows:—General Hospital, £3050; Queen's Hospital, £2025; General Dispensary, £1150; Children's Hospital, £750; Eye Hospital, £500; Birmingham and Midland Counties Sanatorium, £225; Women's Hospital, £400; Lying-in Charity, £125; Orthopædic Hospital, £250; Ear and Throat Hospital, £100; Dental Hospital, £50; Skin and Lock Hospital, £225; Jaffray Suburban Hospital, £550; and Moseley Hall Convalescent Home, £100.—The late Mr. Edmund White of Bath has bequeathed £100 to the Royal United Hospital, Bath, and £500 to the Sanatorium, Weston-super-Mare.—The executors of the late Mr. Benjamin Waters, through their solicitors, have handed to the treasurer of the Royal Infirmary, Newcastle, £9595 2*s.* 9*d.*, being the amount the institution is entitled to under his will after deducting legacy duty.

THE

BRITISH MEDICAL ASSOCIATION.

MEETING IN LONDON.

THE sixty-third annual meeting of the British Medical Association commenced its work in London on Tuesday last, under the distinguished presidency of Sir John Russell Reynolds, the President of the Royal College of Physicians of London.

A dinner given by the President, then President-elect, of the Association on Monday evening may be said to have gracefully ushered in the proceedings of the Association, though the entertainment was in no sense official. About 100 guests sat down to dinner with Sir J. Russell Reynolds at the Buckingham Palace Hotel, and the company comprised a remarkable number of distinguished men in the profession, besides the President's personal friends, medical and lay. The speeches, which were quite informal and commendably brief, were made by the host, and by Dr. Ward Cousins, and Sir Richard Quain, whilst Dr. Frederick Roberts was responsible for the musical reception of the toast of Sir J. Russell Reynolds' health.

A large number of members of the Association assembled at St. Paul's Cathedral at half-past eleven on Tuesday morning, to listen to a special sermon which was preached by his Grace the Archbishop of Canterbury. Upon the somewhat transcendental text, "And he showed me a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the Lamb," his Grace founded an eloquent comparison between the work of the physician of the body and that of the physician of the soul, and, pointing out the similarity between the workings of accurate science and moral law, concluded by emphasising the necessity for reverence in the presence of the stupendous secrets of Nature. This reverence, combined with true sympathy, formed, he considered, the true Religio Medici.

At the first general meeting, which was held in Exeter Hall in the afternoon, Sir J. Russell Reynolds was inducted into the chair by the retiring president, Dr. E. Long Fox of Bristol. This meeting was considered to be the largest annual general meeting ever held, upwards of 1,000 members having been present. Some of the business before the meeting was of a decidedly contentious character, and considerable heat was engendered in its discussion.

The motion down in the name of Mr. Lawson Tait, protesting against the Midwives Registration Bill, was worded as follows:—

"That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing. We protest against the Midwives' Registration Bill because it proposes to establish a class of midwifery practitioners who would be very incompletely trained in midwifery, and entirely uninstructed in medicine, surgery, and pharmacy—a matter of supreme importance in midwifery practice. We therefore instruct the council and the Parliamentary Bills Committee to use every means to oppose any Bill which proposes to give to persons registered under it power to conduct, on their sole and independent responsibility, any midwifery practice without the guarantee of a complete curriculum and qualification. That this association recommends a sum not exceeding £1000 be expended for the purpose of opposing any such Bill."

It was carried by a large majority, whose attitude left no doubt as to the sincerity of their votes.

On Tuesday evening there was a reception given by the metropolitan members of the Association at the Imperial Institute. Sir William and Lady Priestley, supported by the reception committee, consisting of Dr. and Mrs. W. Miller Ord, Dr. Church, Dr. Holman, Mr. Andrew Clark, Mr. W. J.

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Walsham, Mr. Rickman J. Godlee, Dr. Sansom, and Dr. Bridgwater, received the company in the vestibule.

The programme was embellished with a portrait of Sir Charles Hastings, the founder of the British Medical Association. Arrangements were made for the reception of 5500 guests, and the Great Hall of the Imperial Institute was full, many having to stand, when shortly after nine the President, accompanied by some of the members of the Council. took up his position on the platform to deliver his address. The acoustic properties of the hall did not permit of the voice of the lecturer being heard all over the auditorium, and towards the latter part of his brilliant address a band started to play in the gardens, which prevented many from hearing his concluding remarks. But all those whose position in the hall—coupled with the fact that Sir J. Russell Reynolds' voice, though very clear, was not very loud—precluded them from hearing the address, are strongly recommended to peruse it in our columns, where it is printed in full (p. 245). After the delivery of the Presidential Address the company adjourned to the gardens of the Institute, which were brilliantly illuminated, but overcrowded to inconvenience. Herr Eduard Strauss conducted his orchestra, which performed a charming selection of music. The band of the West London Rifles was also in attendance.

On Tuesday afternoon the Baroness Burdett-Coutts and Mr. Ashmead-Bartlett-Burdett-Coutts extended the ever-ready and profuse hospitality of Holly Lodge, Highgate, to the members of the Association. The beautiful grounds of the best-known villa in Greater London were looking their best, and the members, who were entertained simultaneously with the members of the International Geographical Congress, spent a thoroughly pleasant afternoon. The Baroness Burdett-Coutts, supported by her husband, received her guests personally.

It is perhaps fitting that the oldest hospital except one in the British Islands should offer hospitality outside the usual official kind to the members of the British Medical Association, and the luncheon party given by the staff of St. Bartholomew's Hospital on Wednesday, July 31st, was a brilliant example of what such a function should be. About three hundred guests were there, the place of meeting being the great hall of the hospital, its walls hung with portraits of former physicians and surgeons. The portrait of the patron saint is at one end and at the other that of Henry VIII., the two recalling a remark of Burke, aptly quoted in Dr. Norman Moore's little brochure on the history of the hospital, "that there were temples dedicated in India to Brahma and Vishnu, the good and guardian deities, and to Rudor, the evil spirit, whose unwearied enmity and malign influence they deprecated." All the members of the staff, with the notable exception of Sir James Paget, who was unavoidably absent, were there, and among the distinguished guests were most of the prominent metropolitan and provincial medical men. Among the foreign guests were Professor Stokvis, Dr. Apostoli, Dr. Ottolinghi, Professor Mosso, Professor Pozzi, Professor Lazarewitch, and Dr. Fraenckel. The Presidents of the various Sections of the Association were present, and last, but not least, Surgeon-Captain Whitchurch, V.C. Speeches and toasts were, as became the occasion, few. Mr. Thomas Smith, an admirable chairman, proposed first the health of the Queen and then that of the visitors, especially Surgeon-Captain Whitchurch. Professor Stokvis, speaking excellent English, replied on behalf of the foreign visitors, and elicited much applause by saying that the history of St. Bartholomew's was the history of medical science. Dr. Clifford Allbutt spoke on behalf of the Association. Mr. Christopher Heath replied for the surgeons, and Surgeon-Captain Whitchurch, in a few modest and well-chosen words, spoke for himself. He was afterwards chaired round the square by a cheering crowd of students. After lunch the visitors inspected the various departments of the hospital, special interest being shown in the instruments and fittings of the electrical department, demonstrated by Dr. Lewis Jones. Altogether it was a very pleasant and successful gathering, and the staff of the hospital have every reason to congratulate themselves.

The address with which Dr. Wilks opened the proceedings of the section of Pathology and Bacteriology on Wednesday was characteristic of its author in the width of view and robust common sense that were its features. It is calculated, too, to do good service by recalling us for a time from the more recondite problems which face the pathological investigator to the root principles of morbid action and the destiny of morbid processes. For the whole tenor of his instructive remarks was to the effect that the destructive changes wrought by diseased action in tissues and organs proceed hand-in-hand with reparative and regenerative processes, whereby nature arrests morbid activities and tends to preserve vitality threatened by disease. Dr. Wilks did well to prove in so convincing a manner that the study of morbid anatomy itself is by no means exhausted, and we look forward to the practical development of his thesis in the observations of pathologists upon the conservative powers of the organism attacked by structural lesions.

Sir William Priestley's presidential address in the Obstetrical and Gynæcological Section of the British Medical meeting on Wednesday deserves to be carefully perused, as it contains the results of a long experience, and gives some warnings not by any means untimely considering the surgical ardour which characterises so much of the gynæcology of the present day. Sir William Priestley reviewed the many fashions which had prevailed during his professional career, from the time when nearly every pelvic symptom was imputed to so-called ulceration of the cervix before a careful study of the pathology of the condition was made, and when the very heroic measures were persistently employed for its cure. He referred to some of the more recent procedures, such as the stitching of the cervix, advocated especially by many American gynæcologists in nearly every woman who had borne a child, and to the fashion, fortunately moderating, in this country at least, of excision of the ovaries and tubes for merely symptomatic conditions. He deprecated the building up of a reputation by the publication merely of a long list of statistics of cases selected for operation which might not always be indicative of real progress, but rather of the reduction of practical surgery to a mere handicraft, and not a noble art founded on a true scientific basis.

Mrs. T. Seymour Tuke gave a garden-party which was numerously attended by the members and their friends on Wednesday afternoon at Chiswick House, Chiswick.

On Wednesday afternoon the members of the Association were invited to be present at a promenade concert held at the gardens of the Royal Botanic Society in the inner circle of Regent's Park. To those who attended it must have seemed wonderful that such a beautiful spot should be almost entirely unknown to Londoners, but without doubt the exclusiveness of the society has enabled it to preserve for its precincts an air of privacy which greatly enhances their loveliness. On the same evening, fortunately in perfect weather, the Royal Botanic Society gave a special evening *fête* to the members of the Association, the grounds being illuminated for the purpose. An exhibition was held of

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medicinal plants in a marquee, and selections of music were performed at intervals during the evening.

There have been complaints in several quarters of the lack of hospitality shown by the City to the Association, but we hope that it is now clearly understood by London guests that the Corporation have not been wanting in courtesy. Congresses in London are numerous, and distinctions would be invidious. We, as medical men, might rightly hold that a medical congress should stand on a separate footing; but we cannot be surprised that the City has not seen the situation in the same light. Moreover, public entertainment of large bodies of men is expensive, and the commonest cry against the City of London is that it is lavish. While on the subject of hospitality we cannot refrain from calling the attention of the authorities of the British Medical Association to a small omission in their arrangements. They have omitted to give complimentary tickets to the scientific professors of Kings College, whose rooms they are occupying. Professors of Physics, Chemistry, Engineering, Arts of Construction, &c., might have been glad of an opportunity of hearing some of the technical papers, although they obviously could not belong to a medical association. We hope that, ere this, the oversight has been remedied.

A Masonic smoking concert was held on Thursday night at the Portman Rooms, Baker-street, the invitations being given by the Æsculapius Lodge and Chapter (No. 2410) to provincial and foreign medical brethren.

We desire to congratulate Dr. Tirard and his coadjutors on the admirable manner in which the Museum of Exhibits has been organised and the great freedom from objectionable elements that is noticeable in the catalogue. To those who know what such catalogues are apt to be, the fact that this one is free from puffery, either direct or indirect, will convey our impression that the editing has been drastic and fitting.

The business at the second general meeting was very interesting to the profession at large by reason of two motions of instruction to their Council passed by the Association. The first, the bearing of which upon the Bill for the Registration of Midwives will be immediately recognised, instructed the Council to approach the General Medical Council with a view to making the final examination of our students in midwifery more practical by greatly increasing the number of confinements to be attended. The second instructed them to take steps to have a Bill introduced into Parliament to increase the number of direct representatives upon the General Medical Council.

On Thursday afternoon there was an excellent choice of entertainment—a garden party given by Dr. Langdon Down at Normansfield, Hampton Wick; a garden party at the Hospital for Sick Children, Great Ormond-street, where Mr. J. H. Morgan was the efficient host; a garden party at St. Thomas's Hospital; and a smoking conversazione at Mr. Hutchinson's Clinical Museum, 1, Park-crescent, Regent's-Park. All were well attended and thoroughly enjoyable. The annual dinner of the Association was held in the Queen's Hall, Langham-place, on the same evening.

THE GENERAL MEETINGS.

THE FIRST GENERAL MEETING.

THE first general meeting was held in Exeter Hall, where a large number of members assembled, on Tuesday, July 30th.

The Secretary having read the minutes of the last meeting, Dr. LONG FOX, the retiring President, thanked the members of the Association for the high honour they had done him in permitting him to occupy the chair during the past year, and expressed to them and to the Council his high appreciation of the great kindness they had personally shown him. In conducting Sir J. Russell Reynolds, President of the Royal College of Physicians (the President-elect), to the chair, Dr. LONG FOX said the name and life-work of Sir J. Russell Reynolds were well known not only to the medical profession, but throughout the whole world, and he need not say how delighted they all felt in having him for their President.

Sir J. RUSSELL REYNOLDS, on taking the chair, said he could find no words in which to express his thanks to Dr. Long Fox for the kind manner in which he had introduced him to the meeting. The honour which had been conferred upon him was a great one, and he was delighted to accept it.

Sir WILLIAM HINGSTON proposed a vote of thanks to Dr. Long Fox, which concluded with the words, "that he be and is hereby elected a Vice-president for life." This was seconded by Mr. J. HUGHES HEMMING and carried with acclamation.

Dr. LONG FOX gracefully returned thanks.

Dr. WARD COUSINS (President of the Council) moved the adoption of the report for the year ending December, 1894. He referred to the great progress which the Association had made, and reviewed the work done during the year, dwelling in particular upon the necessity for amendment in regard to the Medical Acts, the need for reform in the matter of dealing with inebriates, and the examination of school children. Adverting to the losses which the Association had sustained by death, he paid a graceful tribute to the memory of Mr. Arthur Durham and Dr. Withers Moore.

Dr. DOUGLAS called attention to the usual delay in presenting the report.

Dr. WARD COUSINS assured Dr. Douglas that the matter should be taken into consideration in the future.

Matters relating to the conduct of the Journal were then discussed by Mr. COLIN CAMPBELL, Dr. RENTOUL (who thought the Association should financially help Mr. R. B. Anderson, who was fighting a battle for the profession), Mr. GARRETT HORDER, Surgeon-Major INCE, and Mr. GANT. The motion, which had been seconded by Mr. BUTLIN, was then carried and the report duly adopted.

The interim report of the committee appointed to consider complaints of general practitioners was then discussed, when the following rider was proposed by Mr. LAWSON TAIT: "That we, the members of the British Medical Association, whilst anxious to improve the training and supervision and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing."

Mr. COLIN CAMPBELL seconded.

Surgeon-Major INCE had the following resolution on the paper, but on the general request of the meeting it was withdrawn: "That in the interests of the mothers of the United Kingdom the regulation of midwives, after suitable training and examination, is a subject deserving the early and careful consideration of the Legislature, and in that consideration it is equally desirable that the legitimate rights and privileges of duly qualified medical practitioners should not be overlooked."

After a few words from Mr. VICTOR HORSLEY, Dr. MURDOCH CAMERON proposed: "That legislation on the subject of the registration and training of midwives should receive the support of the British Medical Association." Dr. HAYWARD, Sir WALTER FOSTER, Dr. CULLINGWORTH, Mr. WHEELHOUSE, Dr. WOODCOCK, and Dr. SCHARLIEB spoke, and the amendment was then put to the vote and lost. Mr. LAWSON Tait's rider was then carried by a large majority.

Dr. WELSFORD proposed, Dr. J. F. BULLAR seconded, and Mr. GEORGE BROWN supported the following resolution, which was carried: "That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and that the funds of the Association be used for this purpose."

Dr. BEDFORD FENWICK moved: "That, in the opinion of this meeting, it is expedient that an Act of Parliament should as soon as possible be passed providing for the registration and education of medical, surgical, and obstetric nurses; and the Council of this Association are therefore

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requested to consider this matter and to take such measures as may seem to them advisable to obtain such legislation." This was seconded by Dr. JOHN BROWN and carried. The meeting then adjourned.

SECOND GENERAL MEETING.

The second general meeting was held at Exeter Hall, on Wednesday afternoon, when Sir WILLIAM BROADBENT delivered the address in Medicine, which we print in full in our present issue. Upon its conclusion, Dr. PAVY said that he felt it a pleasurable privilege to be called upon to propose a vote of thanks to Sir William Broadbent for his address. All would admit that the deliverer of the address had been most wise and most happy in the subject he had selected, and they had listened to a learned address which could only come from a mind of a high order. The address was worthy of the man who had delivered it.

Dr. CUMING seconded the motion, which was carried unanimously.

Sir WILLIAM BROADBENT briefly returned thanks.

The business standing over from the previous day was then considered.

Mr. VICTOR HORSLEY moved the adoption of the Parliamentary Bills Committee report.

Dr. WOODCOCK seconded the motion.

A motion by Dr. LOVELL DRAGE, seconded by Dr. R. R. RENTOUL, that the Council should be instructed to petition the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner, was carried. The motion also included instruction to the Council to take immediate steps to have Section 20 of the Metropolitan Poor Act, 1869, repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery, while pupil midwives are now admitted; and also to petition the committees, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the British Lying-in, and the Clapham Maternities to withdraw their rule which excludes male medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

A rider to the report was proposed by Dr. R. R. RENTOUL, supported by Sir WILLIAM FOSTER and Mr. WHEELHOUSE, which set out the reason why the Association should instruct its Council to take immediate steps to have a bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council."

This also was carried, and after the reports of various committees had been passed the meeting adjourned.

THIRD GENERAL MEETING.

The third general meeting was held on Thursday in Exeter Hall, at 3 P.M., when Mr. Hutchinson delivered the Address in Surgery, which we publish in full. The Stewart Prize, awarded to Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, F.R.S., was received for him by Mr. Francis Fowke, the General Secretary of the Association.

THE SECTIONS.

The work in all the Sections commenced on Wednesday, July 31st, with the various Presidential Addresses. Most of the Sections were well attended, and the subjects set down for discussion elicited some fairly general and practical debating.

MEDICINE.

Dr. PAVY, the President of the Section, having briefly introduced the subject, called upon Dr. Sidney Martin to open a discussion on

Diphtheria and its Treatment by Antitoxin.

Dr. SIDNEY MARTIN said:—There have been numerous remedies which have been used in the treatment of diphtheria, some of which—local applications—have for their object bacteri idic action on the membrane or a loosening action by which the membrane is made to separate more easily. Others, again, have been vaunted for their general action—that is, for their effect in counteracting the general symptoms of the disease. In no instance, however, in which a drug has been so extolled is there evidence that there has been an effect on the general symptoms of the disease, either in relieving the bodily depression, in reducing fever, or in relieving or preventing the occurrence of broncho-pneumonia or paralysis and the extension of the disease to other parts. When, therefore, a remedy is introduced, the recommendation of which is based on well-established scientific experiments, its application in the treatment of the disease, and especially its effect on the symptoms of the disease, require close examination, not only at the bedside, but in the laboratory. The recommendation of antitoxin in the treatment of diphtheria is based on the results of a study of the pathology of the disease, and it is necessary that this should be clearly understood before the value of the remedy can be in any way gauged. Diphtheria may be defined as the membranous inflammation of a mucous membrane, usually of the respiratory passages, due to the invasion of the bacillus diphtheriæ, which does not enter the body, but forms poisons in the membrane which produce general symptoms of fever, &c., as well as a palsy due chiefly to a nerve degeneration. One point I should like to insist upon in this definition—namely, that the presence of nerve degeneration is *the* pathological test of diphtheria. There are other membranous inflammations of the throat due to micro-organisms, but diphtheria is the only one which leads to nerve degeneration. Similarly the pathological test of the bacillus is not that it produces death, but that it produces nerve degeneration. The pathological test of the poisons found either in the bodies of patients dead of diphtheria, or formed by the bacillus diphtheriæ outside the body, is not that they produce death (because many poisons have a similar effect) but that they produce nerve degeneration. It is not meant by this that there are no other poisons which produce nerve degeneration, because such are known; but when it is a question of the bacillus diphtheriæ it is nerve degeneration which is the final and most accurate test of its presence. It must be evident that the chemical poisons which are found in diphtheria are of great importance in the present connexion, inasmuch as it is these poisons which the antitoxin has to counteract. Patients the subject of diphtheria die, some from mechanical obstruction by the membrane, some from broncho-pneumonia, but the majority die from the effects of the poison in combination with one of the two first. Such are the deaths which occur from syncope, suppression of urine, "asthenia," and from paralysis. The chemical poisons which are found in patients who have diphtheria belong to two classes—one is found in the membrane, the other is found in the tissues (especially blood and spleen); and the action of these two classes of poison, although similar in some respects, present important points of difference The chemical poison which is found in the membrane may be extracted by treating the fresh membrane with sterile salt solution, diluting and concentrating at a low temperature, dialysing to get rid of the extra amount of salt, and precipitating with alcohol. The alcohol precipitate, after drying, may be dissolved in water. If a small quantity of this precipitate, which is almost imponderable, be injected into the vein of a healthy rabbit the animal will, after a time, show paralysis, which gradually increases in severity; it will waste; it may have diarrhœa, and it will die after a longer or shorter period. At the post-mortem examination extensive degeneration of the nerves is found, associated with fatty degeneration of the skeletal muscles, and—what is of extreme importance—fatty degeneration of the heart. Subcutaneously injected the poison produces a necrosis of the tissue. The characteristics of this poison, therefore, are that it acts in a single dose, and that it reproduces the symptoms and the pathological changes found in diphtheria. It is, so to speak, the chemical representative of the living, infective agent in the membrane, which is the bacillus diphtheriæ. No analysis is possible of this chemical substance in the membrane; but the profound effect which it produces on the body by a single infinitesimal dose would suggest that it belongs to the class of bodies known as ferments.

The poisons which are found in the tissues of patients dead of diphtheria—especially in the blood and the spleen—differ from this poison in the membrane. They are of two kinds, one of which belongs to the class of digested proteids—viz.,

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albumoses similar in chemical reactions to the albumoses formed in digestion in the stomach and intestines—and the other body found is a non-proteid substance—namely, an organic acid. It may be said of this last substance that, although it produces some nerve degeneration, it does not produce the progressive paralysis or the profound effect on nutrition which is characteristic of the other poisons of diphtheria. The albumoses, on the other hand, have a very characteristic action. Injected intravenously into rabbits they produce in one or two hours a rise of body temperature, which, on the repetition of the dose, frequently lasts several days. They are, in fact, the fever producers in diphtheria. Although it is possible to kill an animal in a few hours by a single dose of the albumose intravenously injected, an event which does not follow the injection of the ferment of diphtheria, yet the characteristic action of the albumoses is only brought out by the injection into the vein of two or three small doses on successive days. When this is done, besides the fever produced the animal shows at the end of a week or ten days slight paralysis, which gradually increases, and which is not infrequently accompanied by severe attacks of dyspnœa, in one of which the animal may expire. Large doses of the albumoses produce great wasting of the body as well as diarrhœa. In the post-mortem examination of animals that have died there are found extensive nerve degeneration and fatty degeneration of the heart, and, after large doses, the fluidity of the blood which is characteristic of death from many different kinds of albumoses. These albumoses differ, therefore, from the poison present in the membrane, not only from the fact that their injection produces an immediate rise of temperature and their repeated injection a continuous fever, but from the fact that they act in producing palsy only in multiple doses. Injected subcutaneously they do not produce a necrosis, but œdema, the extent of which depends on the largeness of the dose given. In some experiments with the albumoses there is no paralysis observable during life, but after the animal is killed, in from four to ten weeks, the nerves are found degenerated in one or other part of the body, showing that the poison had some effect, although the degeneration was not sufficiently extensive to produce symptoms during life. The fatty degeneration of the heart which is a feature of poisoning by albumoses is an effect which is produced by the injection of albumoses formed by other micro-organisms; for example, the bacillus anthracis and some forms of septic cocci; and since these micro-organisms do not produce a toxic ferment, like the bacillus diphtheriæ, it is probable that the fatty degeneration of the heart is ascribable to the action of the albumoses and not to any direct action of the ferment. Both these classes of poisons—that which is found in the membrane and that which is found in the tissues of patients dead of diphtheria—can be formed artificially outside the body by growing the bacillus diphtheriæ in suitable media. The ferment which is present in the membrane—or toxine, as it is sometimes called—is now made by growing the bacillus diphtheriæ in slightly alkaline meat broth containing 2 per cent. of peptone and 0·75 per cent. of salt. When such a solution is inoculated with a pure culture of the bacillus and grown in an incubator while a current of air passes over the surface of the liquid, as in Roux's method, after a month the liquid is found to contain this poison in large quantity. The bacilli are removed by infiltration through a porcelain filter, and the filtrate, which is still alkaline and yellowish or yellowish-brown in colour, contains the greater part of the peptone which was added as well as the poisonous body. This liquid may be obtained of a very high degree of virulence, so that one-fifth of a cubic centimetre, or even one-tenth, injected subcutaneously into a guinea-pig weighing 500 grammes will produce death in thirty-six to forty-eight hours; and this effect of the poison has been taken as a test of its activity. In his earlier experiments Roux separated this poison by carrying it down in the liquid by means of calcium phosphate, and thus obtained a substance which reproduced the symptoms of diphtheria in infinitesimal [illegible] doses. Injected intravenously into rabbits, this toxine, as will be shown presently, not only reproduces the symptoms, but the nerve degeneration, which is the pathological characteristic of diphtheria.

If, instead of growing the bacillus diphtheriæ in broth containing peptone, it is grown in alkaline broth containing 0·75 per cent. of salt, but instead of peptone about 1 per cent. of alkali albumin, the products of the growth of the bacillus are not the same as in the first instance. Alkali albumin is a proteid which is digestible; that is, pepsin or pancreatin in suitable media will tranform it into albumoses and peptone. The bacillus diphtheriæ does the same. It transforms the alkali albumin into albumoses which have the specific action previously described, and forms a small quantity of an organic acid. These albumoses, for example, when injected in repeated small doses into rabbits produce fever, wasting, and sometimes diarrhœa, but chiefly a progressive paralysis, which is associated with extensive nerve degeneration and also fatty degeneration of the heart. For these reasons, therefore, the bacillus diphtheriæ is the cause of diphtheria. It is found in the membrane; it can be separated from the membrane; and when grown in suitable media outside the body it forms poisons which have the same physiological action as those present in the membrane and in the tissues of patients dead of diphtheria, the specific test relied on being the dependence of the palsy on the nerve degeneration. It is these poisons, therefore, which the antitoxin has to counteract. The pathological process in diphtheria must be considered in the following manner. When the membrane is formed the bacilli growing in it, especially near the surface, secrete a ferment which, when absorbed into the body, produce, by acting on the proteids of the body, digestive products, the chief of which belong to the albumose class. It is not that the body is poisoned by a single large dose and then the action stopped (although this may occur in certain cases), but it is that numerous small doses are in the course of the disease absorbed into the system, and are gradually producing their effects.

We will now proceed to discuss the effect of the diphtheritic antitoxin in counteracting the effects of these poisons. The preliminary experiments in this direction have been performed solely on rabbits, the poison alone being injected into one animal and the poison with a certain amount of antitoxin being injected into another, both animals being kept under similar conditions. The effect on the temperature and weight of the animal was observed, as well as the onset of any paralytic symptoms, and a post-mortem examination was made soon after death (or if the animal did not die some weeks after the inoculation) and the heart examined for fatty degeneration and the nerves for the characteristic degeneration. When the antitoxic serum itself is injected in large doses into the venous circulation of an animal it produces no rise of body temperature and no loss of weight. It is, as far as could be judged, a perfectly innocuous substance in the rabbit. The effect of injecting doses of the toxine in one animal and a dose of toxine mixed with a certain proportion of antitoxin in another is seen in the following experiment. The toxine was prepared by Roux's method, and was formed by the bacillus diphtheriæ growing in 2 per cent. of peptone broth for one month. The virulence of the solution may be gauged by the fact that one-tenth of a cubic centimetre, subcutaneously injected, killed a guinea-pig weighing 500 grammes in less than three days. In this experiment each of two healthy rabbits received 0·5 cc. into the vein of the ear, but in one 0·3 cc. of antitoxin was added. During the first day following the injection there was practically no effect on the body temperature, but towards the end of the second day the temperature began to fall rather rapidly, and continued low on the third day, after which it was not taken. Paralysis supervened on the fifth day, and became general, and death ensued on the six day. In the animal which received the antitoxin as well as the toxine there was no effect on the body temperature, which did not fall or rise. No symptoms were observed, and the animal was killed in forty-one days, being fat and well-nourished. In the animal that received the toxine alone the weight began to fall soon after the injection, and on the second and third days there was a rapid fall—nearly 250 grammes being lost during this time; and the weight continued to fall until death ensued, on the sixth day. In the animal, however, that received the antitoxin and toxine there was a slight rise in the weight, which continued until the animal was killed. To all appearances, therefore, the antitoxin in this experiment completely counteracted all the effects of the toxine or the diphtheritic ferment. The absence of any effect on temperature, the absence of paralysis and the gain in body weight show this. The post-mortem examination of the animal that died from the toxine showed well-marked fatty degeneration of the heart-muscles and characteristic nerve degeneration, one of the branches going to the vastus internus. In the antitoxin animal there was no fatty degeneration of the heart, but some of the branches of the nerves to the

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vastus internus muscle showed the characteristic degeneration. The dose of antitoxin given to this animal, therefore, did not counteract all the effects of the toxine since some nerve degeneration was produced. The immunity strength of the specimen used (British Institute of Preventive Medicine) was great; and the amount injected was more than sufficient to counteract the effects of the toxine according to the calculations in vogue. A few other experiments were performed on the effect of the antitoxin in preventing the symptoms which have been described as produced by the injection of the diphtheritic albumoses into the blood. In one experiment two rabbits were chosen, and into each was injected on two occasions 7 centigrammes of albumose. In one animal 0·5 c.c. of antitoxin was injected with the albumose. After the first injection the temperature rose, then sank rapidly, recovering however the following morning. A second injection at this time produced high fever, succeeded by a fall on the same day, after which the temperature on the third and fourth days was practically normal. The animal that received albumose as well as antitoxin showed after the first dose no rise of temperature, but a well-marked fall, with recovery on the second day. A second dose now given showed a rise of temperature, succeeded by a fall, after which, on the third and fourth days, the temperature was normal. The body weight shows in both animals a gradual increase up to the eighteenth day and later, as in all healthy rabbits which are taken from the stock, placed in cages, and receive an abundance of food. The antitoxin in this case, therefore, although it diminished, did not prevent the effects on the temperature which normally result from the injection of albumoses into the venous system. In another experiment a much larger dose of albumose was given—namely, 0·125 grammes, on two successive days, followed by 0·072 grammes on the third day. In one animal antitoxin was given with the albumose, 1·4 c.c. being given altogether. The effect on the temperature when the albumose alone was given was a slight rise after the first dose, no rise after the second, but a well-marked rise after the third, lasting over the following day. In the antitoxin animal, following the first dose was a fall of temperature; following the second dose practically no effect; following the third dose a rise of temperature of the same character as that in the first animal, but rather less in degree. The effect on the body weight is well marked; the animal that received the albumose alone showed a nearly stationary weight for seventeen days, a slight increase being observable, but very slight. The animal that received the antitoxin as well as the albumose, however, showed after the first week a rapid rise of body weight, contrasting strongly with the first animal. The animal that received the albumose alone showed on the fourth day slight weakness in the hind legs; on the sixth day this was more pronounced and gradually increased till the seventeenth day, when it presented an appearance in marked contrast to the antitoxin animal. The latter was lively, and walked about the room like an ordinary rabbit; the former, when taken out of its cage, lay quite quiet, the legs half extended; it walked but little, and then with only feeble attempts. Both animals were killed on the twenty-third day. In the albumose animal there was well-marked fatty degeneration of the heart and degeneration of the nerves examined (phrenic and anterior crural), while in the animal that received antitoxin as well there was no fatty degeneration of the heart, and the degeneration of the nerves was insignificant in extent. These experiments are only the commencement of an inquiry into the subject, but they are in themselves quite definite, and tend to show that the antitoxic serum is capable of counteracting to a great extent the poisons which are found in the tissues of patients dead of diphtheria.

Discussion on Diphtheria.

The PRESIDENT, in calling for discussion upon the subject, announced that as the time at the disposal of the section was limited it would be better that those speaking should give what they had in crystallised form in their brains rather than long prepared papers.

Dr. GOODALL opened the discussion with an expression of the opinion that the most severe cases of diphtheria were those in which there was a persistence of the false membrane, rapid pulse continuing for a lengthened period, albuminuria, especially at the end of the first week, pyrexia, drowsiness, and vomiting, especially if frequent. Cases in which anuria was a feature were also hopeless, as were also those in which hæmorrhages into the skin, retro-peritoneal structures and heart muscle occurred. From Jan. 1st to June 30th he had under his care 241 cases of diphtheria in which the clinical and bacteriological diagnosis coincided. Of these, he had treated 105 with antitoxin and 136 without it with a difference of 11 per cent. in favour of those treated with antitoxin. At all ages this was the same, except over ten years, when the mortality seemed to be somewhat greater than when antitoxin was not used. Amongst his tracheotomy cases he had a recovery list of 64 per cent. As regards albuminuria he could not say that the use of antitoxin lessened the incidence of this disease, but certainly anuria was more frequent in those cases in which antitoxin was not used. As regards paralysis he found that it was met with far more frequently in severe than in mild cases; but, so far as his experience went, the cases were quite as frequent when antitoxin was used (17·1 per cent.) as when it was not (14·7 per cent), though here the difference might be because the number of recoveries was greater, as the paralysis was found to occur especially in the post-membranous stage of severe cases. He found that other forms of treatment were not of much value as adjuvants, but he was convinced that he was more successful in cases of pure diphtheria than when complicated with scarlet fever, whilst complicated with measles it was extremely fatal, as also with bronchitis and broncho-pneumonia. Taking it altogether, he was convinced that the antitoxin treatment was the best at the disposal of the medical man to save his patients, and as he wished to save his patients he should certainly continue to use it.

Dr. JOHNSTON considered that the following features characterised the more severe cases of diphtheria—albuminuria during an early stage of the disease, persistent patches of exudation, symptoms pointing to the probability of cardiac failure supervening, slight enlargement and pain of the cervical glands, and the general asthenic condition now so well recognised. Paralysis of the uvula, he thought, could scarcely be classed along with paralysis in other muscles as a sign of the severity of the disease; but he thought that a rapid pulse, becoming gradually slow and irregular, a diminution in the quantity of urine, accompanied by an increase in the amount of albumen therein, and vomiting were all exceedingly grave symptoms. As regards the diagnosis he was not yet thoroughly satisfied that bacteriological diagnosis was in all cases to be relied upon, and from his experience he had concluded that it was improbable that only one organism was the cause of the disease, although at the same time he admitted that the Klebs-Löffler bacillus might be present without any distinct sign of diphtheria. So far as he was concerned the results obtained by the use of antitoxic serum were somewhat disappointing. In Glasgow, at the Belvedere Hospital, they had a previous mortality over five years—highest 41·4 per cent., lowest 28·63 per cent. In Manchester his highest mortality had been 44 per cent. and his lowest 15 per cent. Since the commencement of the antitoxic serum treatment in Glasgow with material obtained from the British Institute of Preventive Medicine he had used it at first only in severe cases, and all of the cases died; but in 105 cases treated with antitoxin the mortality was 15·2 per cent. These were not the hopeless cases, but none of the mild ones were included as their stock of serum was small; the moribund and the mildest cases were not treated, and amongst these there was a mortality of 17·5 per cent.

Professor VON RANKE of Munich said that he wished to give the results of nine months' work in his diphtheria wards, during which period he had had 197 cases. Separating those complicated with scarlet fever and measles he had left 163 of pure diphtheria, and a death-rate amongst these—which were, he might say, severe and most grave cases, as only these were sent into hospital by medical men—of 17·7 per cent. Most of these cases were submitted to bacteriological examination, and in 93·8 per cent. Löffler's bacilli were found, in 12 cases in pure cultivation. As regards the cases in which croup was developed, of which 58·3 per cent. had croup on admission, he found that in 61 intubation was used, and amongst these there was a death-rate of only 32·7 per cent. In most cases the tube could be removed at the end of twenty-four hours, and in only three was it necessary for four days. In these cases he thought it advisable to perform tracheotomy. In every case he removed the tube each morning in order to determine whether it was safe to leave it out or not. Amongst his cases he had 68 in which the pharynx only was affected, with a mortality of 2·9 per cent., both cases being due to heart failure. He had 19 cases of septic

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diphtheria, in only one of which death supervened. Of 2 cases in which the larynx was affected both died. It must be borne in mind that the septic and mixed diphtheria cases were not the same. Of those cases treated on the first day there was a mortality of 5·2 per cent., of those on the sixth day 40 per cent., and of those on the seventh day 46·6 per cent. As regards age, he had 5 cases under twelve months, all of which died; under two years the mortality was 37·5 per cent.; whilst of those over seven years of age only 7·7 per cent. died. Comparing this with the mortality in Munich for the previous eight years he found that the mortality had ranged from 42·2 per cent. in 1887 to 57 per cent. in 1894. So that in his clinic the fall was enormous. He considered, however, that the change of the clinical course of the disease offered even greater encouragement than statistics. He now found that the disease had lost its progressive course, and that cases of laryngeal stenosis should be intubated within the first twenty-four hours, and if not done then it was never found to be necessary, whereas under the old system he had often found it necessary to intubate or operate even four or five days after the patient was admitted.

[Our report of this debate will be continued next week.]

SURGERY.

Address of the President of the Section.

Sir WILLIAM MACCORMAC, Consulting Surgeon and Emeritus Lecturer on Clinical Surgery, St. Thomas's Hospital, delivered an address on Some Points of Interest in connexion with the Surgery of War. He said:—As the chief duty of a general is to bring his men into the fighting line as physically fit as possible, and to be as little hampered as may be by sick and wounded, it is hardly possible to over-estimate the value of a carefully prepared military medical organisation, or to lay too great stress on the responsibilities which devolve upon the medical officers in the field. The chief surgeon of the army should not only possess the willing support of his executive staff, but he should be, and generally is, the right hand man of the general commanding, enjoying his full confidence and active sympathy, else the disasters which have occurred before may occur again. This unfortunately is not his position in our army, for in spite of strenuous opposition from the Medical Department he is placed on the staff of the officer commanding the lines of communication, and not, as in most other armies, on the staff of the commander-in-chief. The modern rifle has introduced changes which have excited universal attention. This weapon sends a small hard projectile with enormously increased velocity to a much greater distance and with greater precision than was previously possible. Our troops used the Lee-Metford rifle in the recent Waziristan expedition and later in Chitral. The volleys were almost smokeless and noiseless, and wrought great havoc in the enemy's ranks. Examples of gunshot injuries from this source have not yet come to hand. Except cases of accident and suicide there are as yet but few specimens obtainable of the effects of the modern bullet on living persons; but we have a large experimental record from various countries of the effects produced both on the human cadaver and on animals. The experimental results are not exactly similar to those obtained in actual warfare, as the effect of a bullet striking a dead body is necessarily different to that it would have on a living person.

[Sir William MacCormac here detailed the dimension, weight, velocity, and range of modern rifle bullets. He continued:]

Vascular tissues, cavities like the skull filled with semi-fluid matter, and organs like the liver or spleen, are liable to suffer most from the so-called explosive influence. By this term is not meant the injury caused by the forbidden explosive bullet which the terrible appearance of the wound so strongly suggests, that in war time allegations are constantly made that these prohibited missiles are employed. The entrance wound may present nothing peculiar, but the soft parts within are pulpified, and the destruction of tissue extends for a considerable distance around the bullet track. The exit wound is large and lacerated, as if the soft parts had been burst outwards. When the bone is struck it is extensively comminuted, pulverised, and driven in all directions into the tissues. The wound beyond the bone is conical, the apex at the bone and the base at the surface. When an empty leaden box or tin, or an empty skull, is traversed by a bullet, the openings of entrance and exit will closely correspond to the size of the projectile; but if a closed or partially closed vessel of this kind be filled with wet sawdust, water, jelly, or damp clay, and a similar projectile is fired at it from the same distance, it bursts and the contents escape. William Busch was the first to suggest that these effects were the result of the sudden increase of hydraulic pressure in the parts struck. This explanation is not strictly accurate. The pressure is not truly hydraulic, as it is not exerted equally in all directions, but chiefly in the direction of the flight of the projectile, and it occurs in almost equal degree in both closed and entirely open leaden vessels filled with fluid or jelly. The cubic capacity of a closed vessel is in many instances increased nearly by a third, and in the open vessel the increase is one-fourth or one-fifth. The increase in volume is as much as 300 times the bulk of the projectile. The bullet also appears to have already traversed the vessel before this hydraulic influence has had time to take effect, for in many instances the displaced leaden tags at the exit wound can be restored to their original position, and the completely circular opening by which the bullet emerged reproduced. Water has, in fact, an astonishing power of resisting the progress of a bullet which, although capable of travelling perhaps 4000 yards through the air, will be arrested altogether after traversing three or four yards of water. Within the short time at my disposal it is impossible to discuss this difficult subject, but the explanation of the extraordinary development of explosive effect seems to depend on the rapid arrest of the flight of the bullet on piercing fluid matter, and its motion being transferred to the parts immediately surrounding it, and these again transmitting it to parts further removed, somewhat as wave circles are produced by a stone dropped into the smooth water of a pond. Bruns's experiments may be taken as a type of those made with reduced charges. He found intense explosive effects up to 400 yards. These attained their maximum in the skull, the bone being fractured in all directions, and upon semi-fluid organs, like the liver, spleen, a full stomach, or intestine, terrible damage was inflicted. In the elastic lung tissue, however, or upon empty viscera no effects of this kind followed. When the bone was implicated the track as far as the bone was usually no larger than the ball, but the tissues beyond were always extensively damaged and the exit wound was very large. At a distance of 400 to 800 yards explosive effects were only witnessed in the skull. Soft parts were traversed by a narrow channel no larger than the bullet itself, and with but little damage to surrounding tissues. The joint ends of the long bones presented keyhole openings, accompanied by much less extensive fissuring than was formerly the case. When the shaft was implicated the comminution was not extensive, the fragments were large, not detached from one another, and the exit wound small. At a range of 800 to 1200 yards explosive effects were only occasionally produced in the skull, and in a much diminished degree. In soft parts a narrow channel was made with little surrounding damage. In the spongy bones perforations occurred with but little fissuring, and in the compact tissue of the shaft there was comparatively little comminution. Finding that the experiments of Reger, Beck, and Bruns in Germany, and those of Delorme, Chavasse, Chauvel, and Nimier in France, and the conclusions derived from them materially differed, the Prussian Kriegs-Ministerium undertook a series of experiments, conducted so as to exclude sources of error as far as possible, and thus obtain for military surgeons trustworthy information as to the character of the injuries which the new weapon would produce in time of war. In the first place, full charges of powder were employed, and as the range varies from 25 to 2000 yards wounds of every description were obtained. These are represented by 1000 preparations preserved in the Friedrich Wilhelm Institute in Berlin, and the more important are given as full-size illustrations in an atlas of plates issued by the War Ministry. The bodies fired at were covered with shirting to estimate the frequency with which portions of clothing are carried in, and to give the tissues the normal amount of fluidity Wickersheimer's solution was injected, the tension of the bloodvessels being approximately maintained by injecting animal blood serum into the arteries immediately before the experiment. Up to 1200 yards single shots were discharged, and beyond this volley firing was resorted to. The bullets were collected in bags of sawdust, and in the case of each separate shot the bullet was examined in relation to the

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wound it had produced; after volley firing this, of course, could not be done. The 900 experiments made by the German War Office do not justify Bruns's classification of gunshot injuries into groups according to range. As the range increases there is a gradual diminution in the velocity and energy of the projectile, and a corresponding diminution was observed in the extent of the injury. The bullet in nearly every case was found to go straight through the part struck, and the old-fashioned contour shot was never met with. The human body is traversed with ease at 2000 yards, and the skull, thorax, and abdomen will suffer alike. At less than half this distance the old bullet has lost most of its momentum, and becomes flattened out or impacted when it strikes a bone without penetrating deeply. In wounds of the abdomen the liver showed the largest amount of damage, and in some cases of suicide large portions of it were reduced to pulp. Up to 1200 yards the entrance wound was usually large and stellate; and the exit track funnel-shaped, with lateral rents extending from it. In the spleen and kidneys similar injuries were produced. In the intestine each bullet produced on an average three openings, and in some cases as many as eight, and the extent of the damage seemed to bear no defined relation to the length of range. It was more extensive when the intestine was full. Fearful destruction of skull is produced by a small 5 mm. (0·2 inch) bullet at 50 yards range. The vault is completely shattered, the base extensively split open, and the brain destroyed. The 8 mm. bullet produces similar results, but as a rule the fragments hold together. At 100 yards the entire vault is shattered, fissures extend from both entrance and exit wounds, and a gaping line of fracture was constantly found extending between them. The fissuring around the wounds of exit and entrance shows two different types, one circular the other radiating, and the base is also traversed by fissures. Up to 1600 yards the fissures gradually diminish or disappear, with the exception of the one connecting the entrance and exit wounds, and sometimes a clean perforation occurs, which becomes frequent at 2000 yards. Gunshot fractures of the long bones are very frequent and possess great interest. They vary according to which bone or part of the bone is struck. The effect upon the spongy extremities and upon the compact tissue is very different. From 100 to 200 yards the shaft of the femur is broken up into small pieces for an extent of from three to five inches, and the humerus from two to six inches. At the entrance wound in the bone the fragments remain in part attached to the soft parts, but at the wound of exit they are completely separated. The adjacent muscles are filled with bone *débris* and detached fragments of bone, the muscles and tendons are torn, and the exit wound in the soft parts is large and ragged. In the spongy bones and spongy extremities of the long bones the crushing and fissuring at short range are also great, but the fissures are often concealed by untorn periosteum, and there is less damage to the soft parts at the wound of exit. At a range of 600 yards there are occasionally keyhole shots with radiating fissures in the spongy tissue, and at 800 yards the keyhole channels become frequent, but even up to 1600 yards the compact tissue is extensively fractured. At 1200 yards the fragments of bone as a rule are no longer driven into the soft parts beyond; but this happens occasionally even up to 2000 yards.

The conclusion to be drawn from the German experiments is that the damage to the shaft of a long bone is very extensive for all ranges up to 2000 yards, the main difference being that at short ranges of 200 or 300 yards—for example, the fragments are more numerous, smaller, and more stripped of periosteum, while the converse obtains at longer ranges. The great velocity, comparatively small size, and hardness of the modern projectile render it much less liable to lodge in the body. It nearly always traverses the part struck and is seldom arrested in the tissues, thus avoiding a source of much after trouble and suffering. The disastrous searching for lodged bullets and repeated attempts to extract them, which formed so considerable a part of the older military surgery, will now be largely done away with. Most surgeons of experience have arrived at the conclusion that the wounded often incur greater risks from the protracted search made for the foreign body than any the bullet itself would cause if left alone, a remark which does not apply to the necessity for removing particles of clothing which may be carried in, which are, of course, septic. The new projectile does not contuse an artery or push it aside. There is no evidence that an artery is ever deflected and thus escapes injury, and, except at short range, the bullet never wholly divides one of considerable size. Cases where a large artery is wounded generally die before help arrives, and it is interesting to know that in the late war in China the Japanese surgeons had such perfect arrangements that in two cases—one a wound of the brachial, the other of the femoral artery—the vessels were tied and the patients saved in the fighting line itself.

Perhaps the most important matter to consider is how far the injuries inflicted by the new projectile will be more amenable to successful treatment. In a memorable paper communicated to the first Congress of German Surgeons Volkmann pointed out that the subcutaneous character of gunshot injuries of bones and joints made them less dangerous than compound fractures with more extensive damage to the soft structures produced by other causes. Subsequent experience has helped to confirm this view. Pirogoff has told us how astonished he was at the easy manner the wounds produced by the small Circassian copper bullet healed during the Russian war in the Caucasus. Not only flesh wounds, but often penetrating injuries of the chest and of the joints were readily recovered from with scarcely any suppuration. During the recent war in Chili it is reported by Dr. Stitt that flesh wounds which had not been probed and thus infected readily healed under a scab, that the favourable character of lung wounds was especially noticeable. The bones were less comminuted, and united in about half the time formerly required. Dr. Rivero of Valparaiso has made similar observations. He noticed especially the smallness of the apertures caused by the Mannlicher rifle bullet, and that the injuries generally were less dangerous to life. I have received a very favourable account of the character of the wounds caused by the Lee-Metford bullet from Surgeon-Lieutenant H. Burden, who was present at three actions during the Chitral expedition. He reports that, so far as he has seen or heard from others, the wounds through the soft tissues at both short and long ranges were clean and incised, with very little or no bruising, and that they quickly healed. Through the bones clean punched-out holes were made with little splintering, and he said in no case was there any explosive action. The damage caused by the large bore bullets of the enemy was much more severe. Another interesting report from Chitral has been received in a private letter from Surgeon-Lieutenant C. H. Evans, I.M.S. The seriously wounded and dead, he writes, were all carried off the field, but later on many of the Swatis, with uncomplicated wounds of the soft parts, came in to be dressed and were treated by Surgeon-Lieutenant Evans, who reports that these cases healed rapidly and well, notwithstanding the use of dressings very far from aseptic applied by the men themselves. In reply to questions, these patients informed Surgeon-Lieutenant Evans that the reason why none of the more serious cases had come for treatment was that "all the men who had suffered fracture of long bones were dead"; these people knew what they were talking about, because the cases referred to were those of their own relatives and comrades. During the French war I have often seen Chassepot bullet wounds heal without suppuration. Longmore never saw a gunshot wound heal in this way, and indeed considered suppuration to be inevitable. In the Russo-Turkish war von Bergmann treated severe gunshot injuries of the knee not only with success as regards preservation of the limb, but also in respect of restoration of function, and this even when the bones were extensively implicated. Of fifteen cases only one died. In eight there was no suppuration, although in three of these the projectile had lodged. Reyher had twenty-eight similar cases without a death. Two instances are reported by the Prussian Surgeon-General of gunshot through the knee at a distance of only 100 yards treated by occlusion which recovered with a movable joint. When the new projectile traverses the lung the track is uniformly cylindrical, smaller than the bullet, and smooth-walled, with little contusion of the surrounding tissue, and splinters from injured ribs are but seldom driven in. Severe damage was only found where the bullet had struck transversely, had carried in fragments of rib, or wounded a large vessel or bronchus. In many cases no serious symptoms were produced, and a diagnosis was only arrived at by the position of the wounds of entrance and exit. In others there was cutaneous emphysema, hæmoptysis, difficult respiration, and pneumo- or hæmo-thorax. Death in every instance was due to injury to the great vessels or bronchi at the root of the lung, and, excluding cases of suicide, the mortality in the cases recorded was only 12·5 per cent. The wounds healed in most cases without trouble in three

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weeks' time on an average. Only once did empyema occur showing the generally aseptic nature of the wound, and the subcutaneous character of the small openings produced by the bullet. The treatment, therefore, will be mainly directed to sealing the wounds of entrance and exit, and operative interference will be rarely required except for serious hæmorrhage. Unfortunately, gunshot wounds involving the brain and the abdominal cavity remain as fatal as before. In the war of 1870–71 about 10 per cent. of the total number of gunshot wounds were of the head, but only about half of these were perforating. In future wars every bullet which touches the skull, even up to 2000 yards and more, will probably fracture it extensively, and at 3000 yards the bullet may perforate and lodge. These cases, almost without exception, die either immediately from the injury to brain tissue and shock or by hæmorrhage and subsequent inflammation. Very few indeed suggest operative interference or any hope of a favourable issue, but to these the ordinary rules of practice would apply. In 1870–71 a large proportion of the wounds of the abdomen did not perforate the cavity, but in future this will not be the case, as even at the longest ranges the new projectile will traverse the abdomen and wound its contents. No probing should be attempted, and Senn's inflation method is likely to do harm by forcing fæces through the wounds in the intestine into the abdominal cavity. Hitherto cases of this kind have ended fatally, and in the next war it is to be anticipated that the mortality will also be very great. As a rule those injured in this way do not die immediately unless a trunk vessel be divided, but will be carried to the dressing stations and shortly succumb to hæmorrhage or infective peritonitis, the result of fæcal extravasation, or of matter carried in by the bullet. Nothing is of avail in these cases but very early laparotomy, for when peritonitis has set in operation will come too late. It has been suggested that the field hospitals should possess an outfit for the operative treatment of gunshot injuries of the abdomen, and that wounds of the viscera should be dealt with by suture, aseptic tamponade, or, in some instances, by partial or complete removal of the injured organ. But I fear that anyone who has seen the trouble and confusion of battle, the sudden and overwhelming amount of work and strain thrown upon everyone concerned, and the impossibility of adequately meeting the great emergency will regard proposals such as these as scarcely practicable. I think we are justified in believing, although there is high authority for a contrary opinion, that the next great war will be more destructive to human life than any of its predecessors. But very many cases will remain less severe in character, more capable of successful treatment, and less likely to entail future disablement, while improved sanitation and antiseptic methods will enormously increase the proportion of recoveries. It is the unceasing effort of modern surgery to provide antiseptic protection in an effective form in time of war; and I may be permitted to recall that the medical organisation during our last war in Egypt was so complete in this respect that not a single case of infective wound disease occurred during the whole campaign.

Rhinoplasty in India.

At the opening of this Section Brigade-Surgeon-Lieutenant-Colonel KEEGAN read a paper on Rhinoplasty in India. He commenced by remarking that in England rhinoplasty was required chiefly for cases in which the nose had been destroyed by lupus or syphilis; but in India the loss of tissue was most frequently the result of injury. The chief points in the operation were as follows: A flap was raised from above down, composed of the tissues over the nasal bones; this flap was turned downwards so that the skin lined the future nasal cavity. A second flap was turned down from the forehead to cover the nasal bones and the first flap. The paper was illustrated by a lantern demonstration of photographs of patients before and after rhinoplasty. The results shown were very excellent.

The Diagnosis and Treatment of Fractures of the Upper Third of the Femur.

Sir WILLIAM STOKES opened a discussion on the Diagnosis and Treatment of Fractures of the Upper Third of the Femur by a paper illustrated by lantern demonstrations. He said that the difficulties met with in connexion with fractures in the upper third of the femur were very great, and many variations occurred in the signs present; there was usually shortening, but in some cases no alteration in length of the limb could be found, and occasionally it was said that there might be even slight lengthening; eversion was generally present, but sometimes inversion. Again, the shortening may occur immediately after the injury, or it may gradually develop. In some there is exuberant formation of bone, in others no attempt at development of new bone seems to be made. It was usually said that fractures of the cervix femoris did not occur in the young, but a photograph was shown of a specimen of fracture of the neck of the femur with the trochanteric epiphysis still ununited. A further element of difficulty was to be found in the fact that the more severe fracture was often due to the slighter injury. There are several anatomical details of importance in connexion with these fractures; the chief one is the presence on the neck of the femur of a fibrosynovial envelope, the so-called "cervical ligament" or retinacula, and on the integrity of this the final result chiefly depends. The cervical ligament is most marked anteriorly, where strong fibrous bands are present. When the cervical ligament is torn the blood-supply of the point of fracture is materially interfered with and non-union is exceedingly likely to result. After injury to the hip complete interstitial absorption of the cervix femoris often occurs, and this may result with or without fracture. Senile atrophy predisposes to this absorption. When the absorption occurs without fracture it is to be ascribed to a chronic osteoporosis set up by the contusion. The senile change referred to is not accompanied by any alteration in the angle formed by the neck of the femur; it was shown long ago by Sir George Humphry that though in the child the angle of the neck of the femur is greater than in the adult, yet when once adult life is reached no further change in the angle occurs. Certainly in some cases a diminished angle is found, yet these are probably cases of absorption resulting from contusion. The alteration in the angle of the jaw is in no way parallel resulting as it does from muscular action, not counteracted by the teeth meeting those in the upper jaw. The fractures under consideration may be divided first of all into those of the cervix of the femur and those of the base of the cervix. The fractures of the cervix are those formerly called intracapsular, and may be divided into those with penetration of the head by the cervix and those in which this does not occur, and further division of these groups according to degree of penetration and extent of laceration of the cervical ligament results in the formation of five classes of fracture of the cervix femoris. Of fractures of the base of the neck of the femur two main classes exist—those in which impaction occurs and those in which there is no impaction. The lesser divisions depend on the degree of impaction and its position. In one of these with partial impaction above there is great increase in the obtuseness of the angle formed by the neck, and this is the condition in which lengthening may occur. The eversion which accompanies a fracture of the cervix or of its base is the result of rotation of the shaft on the neck. The inversion which is occasionally present was attributed by R. W. Smith to the altered action of the adductors, which have become internal rotators owing to the forward position of the lower fragment but this explanation is unsatisfactory, and the inversion is probably caused by the limb having been in a position of inversion at the time the accident occurred. The differential diagnosis is from luxation, fracture of the brim or fundus of the acetabulum and from contusion. The chief points in the diagnosis were then given. As to treatment there was some difference of opinion; fixation had been condemned as the fragments were said to be drawn asunder; the danger of keeping aged patients for a long time in bed had also to be considered. Senn in 1883 made a large number of experiments on cats and dogs, and he found that after fracture of the neck of the femur simple fixation by plaster-of-Paris in no case resulted in bony union, but that pegging with bone or metal nails always gave rise to union by bone; he advised lateral pressure on the great trochanter, and he considered it important not to break down an impaction. Southam recently broke down an impacted fracture of the base of the cervix of the femur in a patient aged twenty-seven and put it up with extension; the result was perfect; but probably this treatment is only applicable in those rare cases where these fractures occur in young patients. It was important to bear in mind that in four out of the five classes of fracture of the cervix bony union can occur—that is to say, if penetration be present or the cervical ligament be intact. Rest, fixation, and some extension are the three important points in treatment. The extension must on no account be too great. He had not employed lateral pressure, and it did not seem to be necessary. Bryant's splint was a suitable one for most cases, but the

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modification introduced by himself was of much value for old people, as it allowed the patient to sit up in bed. Lastly, one should remember that the farther the fracture was from the base of the neck the less chance there was of boney union.

Sir GEORGE HUMPHRY considered the treatment the most important part of the subject. Fractures in any part of the body will unite at any time of life if the parts are only kept in contact. The angle formed by the neck certainly does not alter in old age, but thinning of the cancelli does occur, and this is probably due to the devouring tendencies of the cells with which the cancelli are surrounded. The cancelli are necessary to enable the upper part of the femur to withstand the shocks to which it is subjected; and from this fact resulted the rarity of fracture in this situation in the young and its frequency in the old; yet the bone-forming power of the cells thrown out is not lost, and so bony union is common. At the base of the neck of the femur bony union is the rule, and it is rare to find specimens of fractures in this situation showing non-union; often much bony material is thrown out, and firm bony union may result even after great comminution. Fractures inside the joint occur, as might be expected, where the bone is narrowest—that is, close to the head. In this case bony union is liable to fail. This is not due to any want of bone-forming power on the part of the patient, for a fracture elsewhere unites readily; it is not due to any lack of blood-supply, as every part of a bone is adequately supplied with blood. There are two causes to which the non-union may be attributed: (1) the fact that there can be no overlapping, as the head is embraced by the acetabulum, and there is generally a diminution of the amount of bony surfaces in contact; and (2) the new bone-forming cells which are exuded at the seat of fracture are not detained there, but escape into the joints. He showed a drawing of a femur in which a fracture of the neck had occurred a year before death; the patient was eighty years old, and bony union had occurred. The retinacula (the fibrosynovial ligament) are stronger in front than elsewhere, but it is also more adherent there; hence it is much more commonly torn in front. The absorption of the neck, which so often follows fracture, may take place very rapidly, and this chiefly, if not exclusively, takes place between the fracture and the great trochanter (a specimen illustrating this was exhibited); the absorption is due to the rubbing of the trochanteric part on the inner fragment.

Mr. BRYANT said that he thought the classification of fractures about the neck of the femur into eleven divisions, however useful from a pathological or museum point of view, was of but little value clinically. The distinction between intra-capsular and extra-capsular fractures was not of much importance for treatment. The presence or absence of impaction was probably the chief point to determine. He thought that most fractures of the upper end of the femur were impacted, and that it was of great importance to try to keep them impacted. He agreed that the inversion occasionally met with was due to the position at the time of the fracture; in these cases the anterior part of the neck is driven into the trochanter. As to treatment, immobility, quiet, and not much extension are the essentials. In forty-two consecutive cases of his of fracture of the neck and base of the neck of the femur, with an average age of seventy, all went out with good and useful limbs. One great danger is to attempt to make the diagnosis very certain by excessive manipulation of the part in a useless wish to obtain crepitus. As to impacted fractures, undoubtedly the general rule should be not to loosen the impaction, but exceptions do occur. He mentioned that he had a case now under treatment, a lady of thirty years old, who had an impacted fracture of the upper end of the femur and inversion of the foot; he loosened the impaction under an anæsthetic by rotating outwards, and put it up in a double splint. Now, three weeks later, there is no shortening, and much callus has formed at the base of the neck of the femur.

Professor BENNETT (Dublin) preferred to classify these fractures according as to whether they were produced by direct or indirect force. Of 136 specimens of these injuries, forty-six were intra-capsular and seventy-two were extra-capsular—figures very different from those given by Malgaigne. In attempting to cause dorsal dislocation of the head of the femur in two cases an intra-capsular fracture had resulted; the bodies were of persons between seventy and eighty. In all the impacted intra-capsular fractures (six in number) bony union had occurred. Rest and contact of the fragments will ensure osseous union. All the extra-capsular fractures were impacted, and were due to violence applied over the great trochanter, or to falls on the feet or knees.

Mr. GREIG SMITH (Bristol) said that pathological classifications did not form good clinical foundations. The best classification is into those due to indirect violence and those caused by blows over the great trochanter. The former variety of injury gives rise to a fracture of the neck anywhere, but usually near the head; the latter causes fracture of the neck anywhere, but especially near the trochanter. He considered that the obliquity of the fracture was important, and that in an indirect fracture more of the posterior than of the anterior surface is chipped off. The want of union in fractures due to indirect violence is caused by the absence of a nidus for the development of the new bone.

Mr. MAYO ROBSON said that elaborate classifications could only be taken from the post-mortem rooms, and were useless clinically. The best classification was into impacted and non-impacted. As to treatment, apposition is of chief importance, and the fracture should be disturbed as little as possible. In the case of old people, they should be put to bed, and treated with a long splint, with weight and pulley; if recumbency be well borne the treatment may be continued, but if badly borne a Thomas's hip splint and a starched bandage should be put on, and the patient allowed to get about. As to impacted fractures in young people, he thought that Mr. Southam's case could hardly be the first in which the impaction had been loosened intentionally.

Professor SINCLAIR (Belfast) said that bony union occurred much more frequently than people thought. The chief point of value is the history of the injury. When an intra-capsular fracture is due to an external rotary movement the periosteum is not so likely to be torn, and bony union is likely to occur. Many of the specimens he had examined had had no treatment, and yet osseous union had taken place. He did not consider that any splint was needed for impacted cases.

Sir WILLIAM HINGSTON (Montreal) said that the results obtained in this country seemed much better than those they could obtain on the other side of the Atlantic, as there non-union in fractures of the neck was the rule, and that it was very rare to get union without any shortening.

Mr. T. J. GANT thought shortening was always present.

Dr. S. H. WEEKS (Portland, Maine, U.S.A.) considered the diagnosis of great importance, and in this direction the pain, worse on movement, was of great value. The age of the patient and the history of the injury must also be taken into consideration.

Mr. C. B. KEETLEY said he thought that fractures of the upper third of the femur should be treated like any other fracture. In one case under his care he operated on a woman who had had fracture of the neck of the femur a year previously, and removed the head, which had become ankylosed to the ilium; the result was favourable. For some very oblique fractures of the femur with much shortening he advocated the use of the pins which he had devised.

Sir WILLIAM STOKES, in reply, said that he thought the tearing of the cervical ligament greatly interfered with the blood supply of the upper fragment, and was the chief cause of the want of bony union. The classification he had put forward seemed to him to be of value as influencing prognosis.

Movable Kidney.

Dr. KENDAL FRANKS gave a lantern demonstration on Movable Kidney, and explained the retention of the kidney in its normal position as the result of the pressure of the neighbouring viscera. This was well shown from specimens of kidneys hardened in the body by means of injections of Muller's fluid; these kidneys displayed well-marked depressions caused by the liver, bowel, and other organs. The symptoms (gastric crises) accompanying movable kidney could be easily explained by the mechanical effects of traction on the duodenum or colon.

OBSTETRIC MEDICINE AND GYNÆCOLOGY.

Address by the President of the Section.

Sir WILLIAM PRIESTLEY, Consulting Physician to King's College Hospital, late Professor of Midwifery in King's College, took for the principal subject of his address Over-operating in Gynæcology. He said:—

In opening the Section of Obstetric Medicine and

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Gynæcology it may be appropriate that I should say a few words as to the present position of this important department of medical science and art. Thanks to many workers, the progress has been so great as almost to merit the appellation of the word "marvellous," and I know no instance within recent days where the triumph of preventive medicine has been so signally marked as in the application of the antiseptic system to midwifery. Puerperal fever has been practically annihilated in lying-in hospitals. Before the introduction of antiseptics, according to the figures of Le Fort, the deaths were then more than 34 per 1000; they have been reduced since the careful employment of antiseptics to fewer than 5 per 1000. Progress of a like kind has, however, not taken place in private practice. The researches of Dr. Boxall have made it clear that there is a large preventable mortality among puerperal patients attended at their own homes, and if this continues women delivered in lying-in hospitals may be actually safer than those confined in their own homes. In view of this state of things it has been determined to have a discussion in this Section on the precautions to be observed in private midwifery practice, and I am sure you will agree with me that its initiation could not be placed in better hands than Dr. Herman's. We can with great satisfaction look upon other advances in our art. One of the most notable is the improvement in the structure of forceps, more particularly the axis-traction forceps of M. Tarnier. The invention of this instrument marked a new era in obstetric practice. It affords greater security to the mother and child, and lessens the necessity for operations which imperil maternal or infantile lives—perhaps both. Modifications of instruments used for craniotomy and other like operations have made them, when actually necessary, easier in performance and safer for the mother, while the general adoption of antiseptics has greatly widened the field for such proceedings as Cæsarian section, Porro's operation, and symphysiotomy in cases of extreme deformity. But it is in the department of so-called gynæcology that in later days the greatest activity is to be noted. I can recollect a time when tapping was regarded as the only legitimate operation for ovarian tumours, and as this was only palliative and available exclusively for cysts containing fluid, the life of the woman, after the disease was established, was computed as worth at most but a five years' purchase from an actuarial point of view. In those days a great surgeon expressed the opinion that he who attempted the entire removal of an ovarian tumour ought to be indicted for manslaughter. Now, thanks to the introduction of anæsthetics and the careful observance of aseptic or antiseptic precautions, ovariotomy is not only sanctioned by the most conservative of minds, but it has had a success in many hands which evokes unqualified admiration. Enthusiasm may, however, readily be carried too far. I have witnessed the wax and wane of many enthusiasms which have had their day, and have had a share in bringing something like discredit on a department of practice which, rightly exercised, is productive of great good, but exercised unwisely is capable of producing infinite harm. Looking back on forty years of gynæcological practice I can recollect what has been termed a craze for inflammation and ulceration of the os and cervix uteri. During its prevalence it was said of some devotees that every woman of a household was apt to be regarded as suffering from these affections, and locally treated accordingly. Shortly afterwards came a brief and not very creditable period when "clitoridectomy" was strongly advocated as a remedy for numerous ills. This, fortunately, had a very limited currency, and was speedily abandoned. Then followed a time in which displacement of the uterus held the field, and every back-ache, every pelvic discomfort, every general neurosis was attributed to mechanical causes, and must needs be treated by uterine pessaries. Again, we had an epoch when oöphorectomy or castration of women was not only recommended and largely practised as a means of restraining hæmorrhage in bleeding fibroids, but also as a remedy for certain forms of neurosis even when the ovaries were healthy or not seriously diseased. Ere long it was discovered that removing the ovaries for neuroses, even if safely accomplished so far as life was concerned, besides unsexing the woman, was frequently followed by more severe nervous penalties than those for which it had been used as a remedy; that, in fact, it often entailed a loss of mental equilibrium, and sometimes ended in insanity. Close upon this, again, came an ardour for stitching up rents in the cervix uteri following childbirth—rents which were described as producing many hitherto unknown evils, and frequently conducing to the establishment of malignant disease. One votary of this practice boasted of having detected and operated on in a short period no fewer than 300 or 400 cases which he had found in examining 900 women. Surely here was a marked illustration of the *nimia diligentia*. No such experience, so far as I know, has been chronicled by any other writer. Lastly, we have had what has been described as an epidemic of operations for excision of the uterine appendages; and even now, although this operation has but recently come into vogue, I see there is a reaction against its too frequent performance and a demand in its place for more conservative methods which shall leave these parts of the generative system a chance of still performing their important functions.

[Sir William Priestley here urged that the anxiety of a patient to have an operation performed should not be allowed to outweigh the counsels of prudence against it, and he strongly condemned the employment of serious measures for the treatment of uterine fibroids unattended by active symptoms. He continued:]

One of the untoward results of spurious attempts at progress is that the announcement of some new proceeding or operation issued before its value is proved is apt to be taken up as the last new thing in science by many imitators, who, unwilling to be left behind, at once adopt it and use it perhaps in most inappropriate cases. Thus I have known the uterine appendages removed for matting together of parts by pelvic cellulitis and peritonitis after delivery because the patient was too impatient to wait for the slow recovery which would have taken place in due course. In like manner I have heard of the ovaries being removed for chronic metrorrhagia after abortion. Curetting, useful though it be in suitable cases, because it is new in fashion, has been proposed to cure a somewhat copious loss of blood due to the approach of the climacteric, which after a time disappeared spontaneously. The same treatment has within my experience been recommended for sterility in a young wife recently married, and who had no symptoms beyond her impatience to have children. Something operative must be done, and in lack of indication for anything else this was proposed in all good faith.

And now in conclusion I desire to say a few words on a subject concerning which I may not be in unison with many of the members of the Section, probably not even with some of its officers, but I am sure they will forgive me when I take the entire responsibility upon myself. The subject I allude to is the tendency in the present day of the obstetric physician to invade the domain of the surgeon in reference to what may be called external operations. In this country at least the departure is comparatively a new one. It may be that I have been brought up in a different and more exclusive school, and that the advance of age makes me unwilling to extend the boundaries of the work formerly allotted to the physician-accoucheur in hospital and private practice; but I must confess I have my doubts whether we are right in throwing aside the old restriction, and whether we shall enhance our position in the profession by doing so. I take it as quite certain that the College of Physicians, which has gradually been putting aside its prejudices and electing some physicians practising midwifery to its highest offices, is likely—covertly at first, and later perhaps more openly—to look askance at the claims for the Fellowship of those of its members whose chief work is avowedly surgical. The obvious suggestion to such members will be, Why not seek the Fellowship of the Royal College of Surgeons? And so a divorce may be gradually brought about between midwifery and the Royal College of Physicians. Whether it is judicious for the obstetric physician to extend his work into the domain of external surgery time alone can show. It is true the introduction of antiseptics has done much to minimise the dangers occurring in former days, but still the question we shall have to answer—and answer explicitly—is, Are our antiseptic methods a sufficient safeguard against the possible contamination of lying-in patients by one who undertakes extensive surgical work in addition to obstetric practice? I have been reading a recent contribution on ovariotomy by a careful surgeon, Mr. Malcolm, and I learn from him that notwithstanding all aseptic or antiseptic precautions, one of the chief dangers to the patient is still septic infection, and it was this chiefly which carried off his fatal cases. If this be so, careful as he may be, the medical attendant who goes to a midwifery case, after operating on an inflamed or suppurating ovarian tumour, or its subsequent dressing, or after removing a pyosalpinx, with its some-

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times fœtid and infective contents, incurs a grave responsibility. Puerperal patients are much more susceptible of septic infection than the ordinary run of surgical patients. For the accoucheur deliberately to undertake a large amount of surgical work, with all its complications, is surely still further to add to his responsibilities, and perhaps imperil the safety of his obstetric patients. With careful antiseptic precautions there may be a relative safety; but who can say there is absolute safety, more particularly if a busy man has to go hurriedly to a midwifery case after operating on tumours inflamed and suppurating, or after dressing wounds in an unhealthy condition? I sometimes wonder what can be the reason why obstetric physicians wish to become surgeons. The field of work in obstetric medicine is equally interesting, and a mere facility in operating brings no abiding reputation unless conjoined with prudence and with the pursuit of science, which is as open to the physician as to the surgeon. Without this conjunction surgery becomes a mere handicraft. No one would pretend that the work done by Sir James Paget in the operating theatre was likely to enhance his reputation as much as his researches in pathology, or that the operative work of Sir Joseph Lister distinguished him in anything like the amount that his discoveries in antiseptics have done. The truth is that a mere skilful pair of hands, unless dominated by intellectual capacity and a high sense of responsibility, may become potential of more harm than good. But it may be asked what solution can be offered for the difficulty suggested. The answer would be, by appointing a gynæcological surgeon in every general hospital, who shall work in conjunction with the obstetric physician; and in all special hospitals for women have some physicians who do not operate, and who would advise with the surgeons. There is no lack of competent gynæcological surgeons now in this country, and in Paris, which I visited recently, I found a line of demarcation between obstetric medicine and operative gynæcology tacitly assumed. Each man, therefore, should take his choice, but not wish to be both physician and surgeon. I again ask you to pardon me if I have broached a subject in which I may not be in accord with many present. Some may think my views antiquated, but they must admit that they are at least in consonance with tradition, and I venture to think they deserve some consideration, since they are not out of harmony with our present knowledge and the advances of modern science.

The Aseptic and Antiseptic Precautions to be observed in Private Midwifery Practice.

A discussion upon this subject was introduced by Dr. HERMAN, Obstetric Physician to the London Hospital. In his speech Dr. Herman submitted three questions for consideration: 1. What is puerperal fever? This is a fever, he said, caused by the inoculation of septic organisms, which are not the same as saprophytes, but are descended from those which usually are associated with putrefactive changes. Those micro-organisms require a special soil for their development, and the generative passages during and subsequent to delivery offer a suitable field for their growth. Complete sterilisation or the destruction of all micro-organisms is what ought to be aimed at, but it is not practicable in midwifery practice. The second question is therefore naturally put: 2. How can puerperal fever be prevented? We have seen that sterilisation cannot be effected, and try to keep septic germs from the patient. This is to be achieved by asepsis or perfect cleanliness, and by antisepsis or the employment of germicides, and the one that is considered to be the most efficient by the opener of the discussion is corrosive sublimate, it being most portable and, upon the whole, the most trustworthy. The external antiseptic precautions consist of the purification of the attendants' hands by washing with soap and water, the use of the nail-brush, and soaking in an antiseptic solution, the boiling of all instruments used, scrupulous cleanliness in the dress of nurse and medical attendant, and the use of clean absorbent material such as antiseptic cotton-wool instead of napkins and sponges. The internal precautions are the restriction of vaginal examinations to the fewest possible, the washing of the genitals, the use of an antiseptic lubricant and vaginal antiseptic douches during and after delivery and throughout the puerperium. The use of the vaginal douche may do harm, and experience has shown that women whose labours are normal do as well without vaginal douches as with them; but in abnormal cases, as in lacerations or in cases in which intra-uterine investigation is required, not only vaginal but intra-uterine douches are necessary. The third question was, What are the differences regarding the prevention of puerperal fever between hospital and private practice? In answering this Dr. Herman said that in private practice there is less danger, and that antiseptic vaginal douches before delivery and during the puerperium may be dispensed with except in cases in which the discharges are unhealthy or in which extensive lacerations exist. As a general rule the antiseptic douche immediately after labour was advocated and should be given by the medical attendant. In private the nurse, it was averred, received less guidance, for the rules of a hospital are not always before her. To make up for this some obstetric physicians give their nurses a printed paper of directions to be followed during attendance on a given case, and this practice Dr. Herman recommended for general adoption. It was also stated that in private cases the nurse is under less discipline, but in all cases the medical attendant ought to insist on the complete obedience of the nurse to his directions.

Dr. STUART (Brooklyn) endorsed Dr. Herman's methods of aseptic and antiseptic procedure, and asserted that the essentials of antiseptics ought to be known both by medical attendant and nurse.

Professor LUSK (New York) advocates, in order to have as complete asepsis as possible, removal of all the hair from the external genitals. In regard to the employment of the douche afterwards, he considered that it was not only unnecessary but extremely harmful, as it washed away the natural secretions which prevent the germ from developing.

Dr. SMYLY (Dublin) asserted that it is not always necessary to make a vaginal examination, but by external palpation the diagnosis of presentation could be made out, and one of the first considerations was: what are the indications for a vaginal examination, as it is a procedure not free from risk?

The discussion was continued by Dr. SWAYNE, Professors PLAYFAIR (London), BYERS (Belfast), MURDOCH CAMERON (Glasgow), and Dr. MORE MADDEN (Dublin).

Electro-therapy as a Means of Diagnosis in Gynæcology.

A paper on this subject was submitted by Dr. G. APOSTOLI of Paris. It was shown that the faradaic current applied to the uterine cavity relieves ovarian pain of neurotic origin, but it is of little use in ovarian pain, the result of inflammatory lesion of the peri-uterine tissue or of the appendages, and is therefore useful in the differential diagnosis of pain. The constant galvanic current may be used in like manner and in inflammatory conditions of the appendages curable without radical operation the patient will bear the application better and better with a corresponding improvement of the prominent symptoms.

Dr. MORE MADDEN (Dublin) read a paper on Gonorrhœal Infection in some of its Gynæcological Aspects.

Dr. JAMES MURPHY (Sunderland) read a paper on the Surgical Treatment of so-called Puerperal Fever, which created a lively discussion.

PUBLIC MEDICINE.

The business of this section commenced on Wednesday morning by the delivery of an address on Public Health Legislation and the Needs of India.

Address by the President of the Section.

[Mr. ERNEST HART in his opening remarks reminded his hearers that what they said and did at this meeting would, according to its intrinsic merit, be likely permanently to affect public opinion and ultimately the municipal and legislative proceedings of the empire. He expressed the opinion that the metropolis of the world was the most healthy of cities, and he was proud to say that the science, art, and practice of public health administration "is almost wholly British; the other nations of the world have ..... accepted our demonstrations and followed our practice, but for the most part all of them still lag in the rear of British sanitary legislation and administrative practice." After referring to the Public Health Act of 1875, which brought into play principles laid down by Ramsey of Cheltenham, to whom was due the first great conception of the existing scheme of sanitary law, the speaker drew attention to some mistakes in the administration of the Public Health Bill, to which the names of Mr. Stansfeld, Mr. Sclater-Booth, and Mr. Dodson were attached, and pointed out that Mr. Ritchie's County Councils Bill, although it had done something to repair the mistakes of Mr. Stansfeld, had omitted to appoint medical officers to

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make the work of the county councils effective. He continued:]

The few words which I have the duty to address to you as utterances from this chair must necessarily be limited to one or two selected subjects from the wide range over which our programme will extend. You will not be surprised if I deal especially with the subject which has so largely occupied my attention for the last thirty years—that of the relation of preventable disease to our water supplies—and if, coming as I do fresh from a study of the health conditions of India, I lay some stress upon the sanitary needs of that great empire, and some of the means of dealing with the most pressing of those requirements. It is now exactly thirty years since I succeeded in demonstrating, to the satisfaction of all authorised sanitarians, that the cause of the great epidemic of cholera of 1866 in the East-end of London was the temporary breaking down of a single pump in the works of the East London Water Company and the temporary disuse of one filter bed. This led to the distribution throughout the East-end of London of water from the River Lee, which had been for a few days polluted by the discharge from the sewers of the house of a family suffering from relaxing cholera, brought from Egypt to this country. That one strange concurrence of pollution and inadequate filtering, produced within a few weeks and within a limited area 16,000 cases of cholera and 6000 deaths.

I ventured to predict during 1892 that however often cholera should be landed in this country it could never become epidemic owing to the improvements in our water-supply, but that it must be limited to sporadic outbreaks in towns, ports, and rural districts into which it might be imported and where the water-supply is impure or inadequately protected. I by no means claim the exclusive credit of having preached and proved the doctrine that cholera is a purely water-borne disease, due to the tainting of our water-supplies with sewage; that doctrine was first laid down by Snow, of whom I was the convinced apostle. It was illustrated by Simon with all his wealth of quaint eloquence, but even until a late date it was doubted and denied by some of the most eminent authorities, and the official utterances of the Royal College of Physicians at no distant date were to the effect that it was not probable that in the case of cholera the influence of water will ever be shown to consist in its serving as a vehicle for the poison generated in the bodies of those who had suffered from the disease. The theory that cholera is wholly, essentially, and universally a water-borne disease is now becoming commonplace in Europe at least, although it is still ignorantly resisted in India, to the great peril and sacrifice of hundreds of thousands of lives of our fellow subjects. But even in England our water-supplies are still in too many places scandalously and dangerously tainted, and the result is shown in that prevalence of typhoid fever which is, as I contend, not less surely and inevitably traceable to a polluted water-supply than is cholera itself. Indian sanitation is not a scientific but an official system. There does not exist there any independent medical opinion. The oldest men in the service are the highest in official position. Their ignorance is the standard by which their juniors are bound, their prejudices become a despotism and their follies a tyranny. It was for a long series of years as much as a man's promotion was worth to dare to avow the opinion that cholera was a water-borne disease, and that it was carried from place to place along the lines of human communication. The idea that it was spread and diffused by great concourses of people becoming infected by the sewage-tainted water of religious festivals was treated as not only a folly, but an offence. The two things may be concurrent, said an eminent official, but it is a wild absurdity to treat them as cause and effect. This gentleman still holds high office at an advanced age, and it was he who was sent from the India Office to represent this country at the recent Conference on Cholera in Paris

[The speaker then referred to the army medical regulations for the management of cholera, which he characterised as a discreditable and dangerous document, and spoke of the discouragement of sanitary studies by the Government of India and the overloading of inconsistent duties. In conclusion he said:]

Two things struck me in India—the remarkable ability, the enormous power of work, and the excessive overwork of the Indian medical officers, the terrible servitude which enforces on them the attempt to perform a vast mass of duties which cannot be performed, and the lamentable results of the domination of really able young officers by effete, ignorant, and worn-out superiors who have risen by mere seniority to positions which scientifically and administratively they are quite incapable of fulfilling, by reason of their age and of the antiquated state of their information, if even many of them had ever possessed at any time the qualities or the inclination necessary for such posts. Worst of all, perhaps, is the elevation to the very highest offices, by mere lapse of time and military rules of promotion, of men who are most capable of fulfilling routine duties, but are wholly unfitted to be trusted with the administration of the health and lives of the vast population depending on us in India. What is urgently needed is a Royal Commission, or strong Departmental Committee, to inquire into this whole matter, and to institute a radical change. For at present India is decimated by wholly preventable diseases; the health of our troops is ruined by the same causes. With us lies the reproach of nursing and fostering cholera in what is called its endemic home—a purely ignorant and silly phrase. Until some great change is made in the whole system and of the administration the great sanitary needs of India will never be met. You will pardon me for occupying you with the subject which may seem to be in part foreign to our immediate work, but which is of vast moment to the health of a great population in our Indian dominions.

The Regulation of the Slaughter of Animals for Human Food and the Inspection of Animals before and during Slaughter.

Dr. T. M. LEGGE, in opening the discussion on the Regulation of the Slaughter of Animals for Human Food and the Inspection of Animals before and during Slaughter, said that in his opinion a person who had qualified both in medicine and veterinary science would have been the one most suited to have done so. His only claim to undertake the task was that he had devoted some attention, in the principal capitals of Northern Europe, to the methods adopted for the inspection of meat. Great Britain was in the matter of meat inspection twenty years at least behind Germany, France, Belgium, and Denmark. The explanation was to be found in the fact that veterinary science was at a higher level abroad than in this country, partly because the veterinary colleges there were State supported, and partly because more opportunity was given to veterinary surgeons in the practice of their profession by the numerous appointments given to them as experts on meat. Then, again, public abattoirs having existed for a considerable period of time abroad the need of a scientific control of the animals slaughtered in them had been more felt. The first point he would lay stress on was the necessity for compulsory powers to close private slaughter-houses and to the erection in their stead, in all towns of more than 5000 inhabitants, of public abattoirs. An occupation such as the slaughtering of animals, that was in many of its details revolting, and which might lead if proper care were not taken to grave nuisance, ought to be concentrated as much as possible. The advantages to be gained from centralising this and all the various processes incidental to it—such as gut scraping, fat melting, the extraction of the albumen from blood, &c.—far outweighed in his mind the objections urged on the other side by the butchers. The credit of having introduced public slaughter-houses in France must be attributed to Napoleon I. In Prussia the law of 1868, supplemented by that of 1881, gave the powers to local authorities to compel the butchers to close their private slaughter-houses and slaughter only in the public abattoirs, and making it at the same time a punishable offence to introduce into the city from outside fresh meat without first submitting it to an expert for examination.

After describing very briefly the abattoirs abroad with which he was most familiar (as Paris, Brussels, Berlin, and Copenhagen) Dr. Legge proceeded to the second main point—namely, the necessity for appointing professional meat inspectors, preferably from the ranks of veterinary surgeons, to replace the untrained persons at present charged with the work. He would prefer to leave to the veterinary inspector-in-chief the final decision as to what meat should be condemned or not, rather than to the medical officer of health and a justice. Abroad, as soon as the principle of meat inspection was recognised there never was the least doubt that the persons best qualified to undertake the work were veterinary surgeons, and, speaking generally, in all large towns in France, Germany, and Belgium such persons were the only experts legally recognised on the

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subject. Reference was made to the sub-inspectors in Belgium and to the examinations they were obliged to pass. An outline was given of the routine method of inspection adopted at the abattoirs abroad and at the stations where the carcases of animals slaughtered outside the town were examined. He then called attention to the unsatisfactory state of the law in Great Britain under which the condemnation of diseased meat was made, and dwelt on the law dealing with the subject in Germany and France. In Germany the Imperial law of 1879 on "the Trade in Food Stuffs" recognised only two kinds of bad meat—(1) that which was injurious to health (*gesundheitsschädlich*); and (2) bad or spurious (*verdorben*). The local regulations, however, that were adopted in such towns as had suppressed private slaughter-houses went much further and chiefly determined the action of the veterinary inspector. Under them the second division of bad (*verdorben*) meat became further divided into—(*a*) meat that was bad in the ordinary sense of the word, and to be treated therefore as equivalent to injurious to health; and (*b*) meat that was bad, but not so bad that it might not be utilised as food, provided its condition was marked as being either "of diminished value" (*minderwertig*) or "defective in quality" (*mangelhaft*). The regulations with regard to tuberculous meat had been considerably modified in Germany by a Ministerial decree issued in 1892, which allowed greater latitude in the consumption of such food. The most important points in it were: 1. The meat of tuberculous cattle must, as a rule, be regarded as dangerous to health (and therefore be condemned) when the muscular tissue contains tubercles or when the animal is wasted, even though no tubercles are found in the muscles. 2. The flesh of tuberculous animals must not be regarded as injurious to health when the tubercles are found—(*a*) exclusively in one organ, or (*b*) when two or more organs being affected, they lie in the same cavity, and are not connected with one another by lymph channels or by bloodvessels belonging to the systemic circulation. Such meat is to be regarded as of first quality and to be sold without any restrictions. The importance of the regulation is seen when it is recognised that section 2 includes about 95 per cent. of all tuberculous animals. Stress was laid on the way in which tuberculous meat was rendered absolutely sterile by steam cooking in the Rohsbeck steam ovens at Berlin. The absence of reference in the reports of medical officers of health to the diseases on account of which meat was seized was mentioned, and attention drawn to the admirable statistics on this subject in the report of the Berlin abattoir. In conclusion, he referred to the report of the Royal Commission appointed to inquire into the effect of food derived from tuberculous animals. It was a matter for great regret, he thought, that the terms of that inquiry did not permit of any report being made as to the administrative procedure available for reducing the amount of tuberculous material in the food supplied by animals to man. Seeing what was being done in Denmark, chiefly through Professor Bang's efforts, in employing tuberculin as a means of diagnosing tuberculosis in cattle, he believed that the matter could not be left where it was, and he hoped that another Royal Commission would be appointed to inquire not only into the preventive measures to be taken against tuberculosis, but the terms of which would be such as to include the whole question of meat inspection.

Dr. H. R. SYDNEY MARSDEN, speaking on the same subject, said that the consideration of the subject naturally divided itself under three heads, namely—(1) treatment of cattle before slaughter, lairage accommodation, &c.; (2) method of slaughter and dressing of animals; and (3) treatment and inspection of the carcase after dressing. Animals should be brought to the slaughter-house as quietly as possible. Proper lairage accommodation should be provided, in the form of enclosed sheds, with good top light and ventilation (side ventilation was too cold in the winter months). The surface of the floor should be flagged and channeled, with a good fall from the head to the rear, so as to keep the standing always dry, and all drains should be outside the building. There should be a plentiful supply of water. The animals should be poleaxed and pithed without delay, stuck immediately after pithing, and the body well bled. All carcases and offal should hang in a properly ventilated, light, clean, and cool cooling-house for twelve hours after slaughter. Most diseases showed themselves at once, and it was important that the meat inspector should see the diseased parts before anything had been done to them to alter their appearance. But there were cases in which the disease was more noticeable after the carcase and offal had cooled; it was therefore important that they should be inspected both before and after cooling. The following diseases showed themselves at once: tubercle, pleuro-pneumonia, peritonitis, anthrax, cystic disease of the kidney, abscesses, Texan fever, swine fever, and puerperal fever; but the disease showed itself more distinctly after cooling as regards colour, smell (or both), &c., in the following cases: Texan, swine, and puerperal fevers, jaundice, most diseases of the kidney, and inflammations generally. A word should be said about the freezing of carcases. No carcase should be put into the refrigerator until properly cooled, the freezing process should then be gradual and not too great, otherwise the carcase sweated again on exposure.

Dr. JOHN F. J. SYKES (medical officer of health for St. Pancras) said that diseased meat must be prevented from being distributed for food. This applied equally to home-killed dead meat and to imported dead meat. The best time to judge of the health of food animals was at the time of slaughtering, when they could be examined during life as well as after death, but above all when the internal organs could be examined together with the carcase and at the same time. In order to facilitate the inspection of home-killed meat the aggregation of slaughter-houses was desirable. In spite of precautions it would be possible to foist upon the market meat of animals dying of disease. In order to prevent this and to take away the inducement to profit by the sale of diseased meat it would be necessary to institute—(1) the systematic inspection of milch cows at periodical intervals by veterinary inspectors; (2) the purchase at public expense of diseased animals and meat before exposure for sale at a price that would materially relieve the owner from bearing the whole loss—in other words, paying compensation; or (3) failing the adoption of this course the compulsory examination and marking of all meat and the prohibition to sell meat without the recognised token or mark.

Surgeon-Major POOLE, M.D. (Norwood) supported Dr. Legg's paper. He entirely objected to private slaughter-houses.

Dr. HILL (Birmingham) advocated the abolition of private slaughter-houses, which were centres of filth and disease, contaminated the sewers, and also enabled the dishonest butcher to hide away carcases which ought not to go into the market.

Dr. SLADE KING, Surgeon-Major PRINGLE, and others followed.

Dr. SYKES submitted a resolution which had for its object the marking of foreign meat; but after some discussion, on the motion of Dr. NEWSHOLME (Brighton), the following was passed as a substitute: "That, in the opinion of this Section, and in view of the fact that the Royal Commission on the Effect of Tuberculous Food on Human Health by the terms of their appointment were restricted to tuberculosis, it is desirable that a Royal Commission be appointed to consider the whole question of meat-supply and inspection. That a copy of this resolution be sent to all the Ministers of State."

The late Visitation of Cholera in Hungary.

Dr. EUGENE FARKAS, District Superintendent of Public Health, Budapest, read a paper on this subject. He said that the cholera epidemic which reached Europe in 1892 had been three times imported into Hungary, in each of the years 1892, 1893, and 1894. In 1892 the Government early in the summer made strenuous efforts to prevent the importation of cholera. Travellers and their baggage were submitted to medical inspection and restrictions were made touching the importation of goods from infected countries, which caused much injury to commerce and trade. In spite of these measures the cholera arrived in Budapest towards the end of September, and there was also a considerable extension in Hungary which followed mostly the course of the rivers. The experience of the cholera in 1892 proved that the restrictions which nearly annihilated commerce were useless. The Hungarian Government abandoned a great part of them in November, 1892. There was also a marked change in public opinion as to the usefulness of general sanitary measures which were formerly neglected. A great many sanitary improvements were carried out, and in this the panic due to the cholera in 1892 had a very great share. So that the epidemic of the year 1893, although imported early in the summer, did not attain great dimensions. In 1894 the cholera was again imported into Hungary, this time to the county of Máramaros. The epidemic lasted here 207 days,

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but with the exception of this county could not establish a footing in Hungary. Any success could not be expected except by means of general sanitation, as was pointed out by Sir John Simon thirty years ago.

Dr. DUKA congratulated Hungary in having appointed Dr. Farkas, who was acquainted with the ideas of English medical officers of health, to the position of District Superintendent of Public Health of Budapest.

Sewer Ventilation.

Mr. J. PARRY LAWS then introduced a discussion on Sewer Ventilation in a speech in which he showed that the results of modern research have not only enlarged our knowledge of the causation and propagation of infectious diseases, but they have also in many instances shown that the exciting cause of the diseases—namely, the specific micro-organisms—pass out of the body with the bowel discharges, and so gain access to our underground sewers. These facts have imparted to the subject of sewer ventilation a significance and importance unknown in earlier times. To find a thoroughly satisfactory solution to the question, Is sewer air harmless or otherwise? and, If harmless, its modé of action? is of great moment to hygiene, for our attitude with regard to this all-important question must of course be profoundly influenced by the conclusions at which we ultimately arrive. The injurious effects which have been, and still are, attributed to sewer air may arise from three separate and distinct causes:—1. From poisonous inorganic gases, such as sulphuretted hydrogen, and concomitant diminution of the percentage of oxygen in the sewer air. 2. From the organised constituents (the micro-organisms) of sewer air. 3. From the presence of some volatile and highly-poisonous organic compound or compounds, possibly of an alkaloidal nature. Although the hypothesis which regarded sewer air as capable of disseminating the morbific germs of disease is proved beyond reasonable doubt to be an erroneous one, we must not therefore forget the immense benefits and the saving of life that modern sanitation, mainly influenced by this hypothesis, has brought about. Whatever the ultimate verdict be, whether sewer air is harmless or otherwise, it will always be the imperative duty of those charged with the care of the public health to ensure rapid and efficient removal of all sewage and refuse matter, and above all to guard against defective drainage and probable pollution of water supplies. The more light that is thrown upon the dissemination of those diseases which have been erroneously associated with sewer air, the more evident does it become that a polluted water supply, and, as an incidental result, a polluted milk supply, are among our most insidious foes.

Mr. NEECH (medical officer of health for Atherton) related some experiments made on sewers of ordinary size to test the movement of air in sewers. In the experiments on one sewer it was found that when the flow of sewage was very small air moved upwards, while when the flow was larger it moved downwards. In another experiment it was found that the velocity with which the smoke introduced into the sewer moved increased directly with fall of the sewer and the velocity of a body of water passing down the sewer. The question, Mr. Neech continued, might be asked, Ought sewers to be ventilated? A sewer with good even and self-cleansing gradients with perfect air- and water-tight joints and connexions, with house drains efficiently disconnected therefrom, and constructed in a district where there was no possibility of subsidence, probably needed no ventilation other than a few 4 in. pipes at suitable points carried high up into the air to let off any undue accumulation of gases, and equalise internal and external pressure. The conditions connected with many of the older sewers were different. Often they had gradients and were not self-cleansing. They had defective joints and connexions which allowed sewer air to pass into the subsoil, especially when of a gravelly nature; not being able to escape through the surface of paved streets, it tended to be drawn into the basements of houses. There were many drains connected with old sewers the existence of which was unknown, and many others the course of which was uncertain. The joints of such drains were very defective; they often ran near and even beneath houses, and occasionally the sink waste water pipes of some of the older houses were found connected directly thereto. Such a sewer should be ventilated.

Were it possible to extract sewer air with heat and burn it, that doubtless would be the most effectual means of dealing with it from a sanitary point of view, but this appeared not to have been found practicable for general application. A sewer in which the air constantly moved upwards should have the valves inserted at that side of the manhole at which the sewage left it. Then the air moving upwards would escape through the ventilators in preference to the manhole. Valves were useless where the movement of sewer air was variable, but in these cases the air could be filtered as it passes out of the sewer at the street level.

The discussion was continued by Dr. Davies (Plumstead), Dr. Oldright (Canada), Dr. Haughton (Norwood), Dr. Bond (Gloucester), Dr. Groves (Carisbrooke), and Dr. Hill (Birmingham), who thought that sanitarians should direct their attention more to the construction of the sewers. If plenty of oxygen were admitted it did not much matter whether they were ventilated above or upon the ground.

Underground Bakeries.

A joint paper by Dr. F. J. WALDO and Dr. DAVID WALSH was then read dealing with the subject of Underground Industries, with special reference to the Baking Trade in London. The tendency, they said, of civilised communities to flock towards particular centres of population has led to a vastly enhanced value for town lands. Hence the builder, wishing to make the most of his site, not only soars into the sky, but also burrows into the earth. By the London Building Act of 1894 Government laid down certain regulations as to the height of houses outside the City proper. The Legislature, however, has not dealt with underground rooms, except when they are used for dwelling purposes. The main object of this paper is to inquire whether underground rooms can be converted into wholesome workshops. The attention of the writers has been drawn to the subject by an investigation of underground bakeries. Most of these places are nothing more or less than cellars and quite unfitted for workmen. In London, and no doubt in many of the large towns throughout the United Kingdom, many cellars and basement rooms are quite as improperly used as workshops. Until a rigid system of house-to-house visitation is the rule it seems likely that ninety-nine out of every 100 underground workshops will escape any control altogether. After careful consideration the writers have come to the conclusion that an ordinary cellar can be converted into a wholesome workshop. It is true that such a task would involve a good deal of structural alteration and a considerable outlay of money. Among essential points of construction are a height of 8 ft. and minimum of 500 cubic feet for each workman, with a special allowance for gas-jets. Walls must be smooth and kept dry by damp-proof courses and by freedom from contact with outside soil. The window space must equal at least one-eighth of the floor area. Ventilation and light, as well as drainage and lavatory accommodation, must be such as to satisfy advanced modern requirements. The floor must have at least 9 in. of concrete, and any drains passing beneath it must be laid at least a foot deep and cased in a bed of concrete. Water should come from the rising main. In order to make a wholesome basement workshop the writers regard a front outside area as absolutely essential. Further, they would make a second area compulsory, either at the back or the side of the building. The main practical difficulty in satisfying these requirements would no doubt be the making of an area in houses which rise flush from the pavement. In order to meet this objection the writers have devised the scheme of the "borrowed area." The front of the shop is to be carried back some 5 ft. or 6 ft. and an area sunk in the space thus "borrowed," as it were, from the overhanging main building, which is supported by a cross girder. The outside area is thus gained at the expense of a part of the shop and of the basement. The size of the shop is thereby lessened, but by way of makeweight the basement beneath is converted into a light and habitable room.

Dry Methods of Dealing with Urine.

Dr. G. V. POORE, Professor of Medical Jurisprudence and Clinical Medicine, University College, London, then read a paper the object of which was to show how different was the behaviour of urine when mixed with absorbent material to that which it manifested when it was mixed with water or left unmixed with anything. Dr. Poore's experiments went to show that when mixed with absorbent material and exposed to the air it never became offensive, notwithstanding that a good deal of ammonia was developed. He showed a conical flannel bag, 2 feet 6 inches long and 1 foot in diameter at the base, which was filled with about

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six pounds of dry deal sawdust on May 29th, 1894, and which had stood in his room at University College ever since. Between May 29th and July 26th, 1894, over 39 pounds weight of urine was added to the sawdust. Very little urine was added between July 26th, 1894, and May 1st, 1895; but between May 1st and July 30th, 1895, about 45 pounds weight of urine was added. Notwithstanding that the flannel bag had become so rotten that it would scarcely hold together, the mixture of sawdust and urine was not in the least offensive and had never made its presence in the room felt by any unpleasant smell. Of the 84 pounds of urine added, only 6 pounds had been returned as filtrate, while about 68 pounds had been evaporated or retained. The filtrate had been dark brown, thick, and of high specific gravity, but had never been offensive nor had it shown after lying about for months any tendency to putrefy or become offensive. The sawdust, the urine added, and the filtrate had been analysed by Dr. Kenwood. The results of filtration through other materials, such as earth, cinder and ashes, old stucco, peat-moss litter, and crumpled paper were also given. The results as regards the absence of offensive smell were identical with the above in the case of earth, stucco, and peat-moss litter. When fresh earth, fresh stucco, and fresh ashes were used the filtrate was almost colourless and odourless, but the power of ashes to give this result was short-lived, and after the ashes and cinders had become soddened the filtrate became strongly ammoniacal and offensive. The filtrate from peat was dark-coloured but clear (not thick like that from sawdust), and never offensive. The crumpled paper at first gave a very offensive filtrate, but when it got fairly soaked and really absorbent all offence ceased. The paper became in the process of drying riddled with a fungoid growth (saccharomyces and penicillium), and gradually dried up to a material scarcely, if at all, to be distinguished by the eye or nose from ordinary garden earth. The explanation of the above facts was, in Dr. Poore's opinion, doubtful. It was probable that in the case of deal sawdust and peat the antiseptics contained in these bodies might have had some effect. In the case of the other bodies it was probable that microbial action might have produced the result. As far as he was able to judge from limited experience, sawdust that had been thus soaked with urine became a valuable manure. In contrast with the above a sample of urine which had stood in a glass beaker lightly covered with paper since January, 1895, was exhibited, and was shown to be intolerably offensive.

The Section then adjourned.

PSYCHOLOGY.

This Section met in one of the rooms on the second floor of the Examination Hall, Victoria Embankment, and was presided over by Dr. MICKLE, whose work in connexion with the association of insanity with morbid cardiac conditions, as well as his treatise on general paralysis of the insane, are well known to all who are interested in psychology and the morbid associations of insanity.

Address by the President of the Section.

The Section was opened with an address by the PRESIDENT. After extending a cordial welcome to the members of the Section, he gave a brief account of some recent laborious but highly interesting work on which he has been engaged with reference to abnormalities occurring in the form and arrangement of brain convolutions. It was first pointed out that the figures in many of our text-books are really taken from patients who, from the fact that they had died in infirmaries or State-aided institutions of some kind, might, at least in the majority of instances, be placed in the category of "incapables." He then proceeded to point out various points in which he had found the brains of the insane to be peculiar. These peculiarities, which chiefly consisted in differences in the size and form of the convolutions, were found to be more frequent on the right side than on the left, and the variations were described as occurring in various cortical regions. Care was to be taken in drawing inferences from data confessedly not complete, but on the whole it seemed to be clearly indicated that neglecting cases of insanity in which the tendency to degeneration may be present certain changes in the form and arrangement of the convolutions of the brain in the insane may be found to occur, possibly with some degree of significance in relation to the kind of mental change present.

The Treatment of Melancholia.

A discussion on the Treatment of Melancholia was opened with an exhaustive paper by Dr. HENRY RAYNER, lecturer on psychology at St. Thomas's Hospital. After enumerating the various modes of treatment, an opinion was expressed that open air treatment, with exercise short of actual fatigue, was desirable. Various points of interest were touched upon, and especially in regard to treatment by hypnotics; the author expressed his opinion of their perniciousness, given in a routine way. Considerable stress was also laid upon the desirableness of measures for prophylaxis being taken, especially in those who might inherit some tendency towards mental depression. Regularity in all different ways, especially as regards food, was insisted upon, and also the importance of muscular, even more than of mental, training.

The PRESIDENT conveyed the thanks of the meeting to Dr. Rayner and briefly alluded to a few points raised in the paper.

Dr. BLANDFORD, in criticising the paper which had been read, remarked on the great difficulty of laying down any rule as to the treatment of this disease on account of the different degrees in which it may affect different patients or even the same patient at different times. He expressed a strong opinion against the haphazard way in which patients suffering from melancholia are sent for sea voyages, more especially by those who have never been a sea voyage themselves, and pointed out the almost tempting allurements to suicide which such a voyage would offer. He expressed dissent from Dr. Rayner's view as to hypnotics, regarding them not only as useful but even essential in some cases.

Professor BENEDIKT directed attention especially to cases of melancholia occurring in the female. He also regarded the danger of the acquisition of drug habits as a real one in such cases. He attached importance to electro-therapy in this condition, and to the administration of very minute doses of cocain.

Dr. WEATHERLY laid much stress upon the necessity of having attendants for such cases, capable of gaining and keeping the confidence of the patient. He also uttered a warning against going beyond the "fatigue point" of a patient in the endeavour to give sufficient exercise, and alluded to the frequent presence of some peripheral source of irritation—e.g., hæmorrhoids, and such like—in many cases of melancholia.

Dr. NORMAN KERR alluded to the frequency with which alcoholic indulgence was found in the subjects of melancholia; but he attached much importance to finding the proper food for the individual, and mentioned the case of an old gentleman of eighty-five, without any alcoholic habit, who was always cured of his recurrent attacks of melancholia by the administration of peptonised milk.

Dr. CLOUSTON, after complimenting Dr. Rayner on his excellent paper, alluded to the cause of melancholia as probably a defect in the katabolic processes of the cell, leading to an undue instability in the mental sensory cell. In illustration he instanced a case of a patient frequently but instantly rescued from melancholia by the administration at once of one-eighth of a grain of morphia.

Dr. BATTY TUKE expressed his belief in the efficacy of rest in bed in these cases, and was of opinion that the morbid state of the nerve-cell was not necessarily primary, but might be secondary to a disordered vascular condition.

Dr. NICOLSON also thought that a refusal to allow the circulation some part in the causation of this disease would be a mistake. He referred to the extremely salutary influence which the convalescent patients in the hospital at Broadmoor had upon patients sent there suffering from melancholia.

Dr. DUNBAR in her remarks dwelt particularly on the difficulty that meets the practitioner in dealing with cases in the early stage on account of the ignorance of ordinary physiological laws present in the general public.

Dr. RAYNER replied to the various points raised.

Mental Symptoms in Exophthalmic Goitre.

Dr. MAUDE next read a paper on Mental Symptoms in relation to Exophthalmic Goitre, pointing out that while actual insanity with this disease was rare, a certain degree of mental change—motor restlessness, insomnia, occasionally illusions, with incapacity for mental application, and loss of memory—was almost always present. His deductions were made from observations on twenty cases.

Dr. E. S. REYNOLDS read a very interesting paper on the Mental Symptoms of Bodily Diseases, detailing the various mental states found in association with diseases of the brain, spinal cord and viscera, as well as in those produced by the presence of organic or inorganic poisons.

Mr. HENRY HEAD also read a paper on Mental Symptoms

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in relation to Bodily Disease in the Sane. From his observations it appeared that visceral disease was associated with cutaneous tenderness and frequently with tenderness in different scalp areas; and there seemed to exist some more or less constant association between the area of scalp affected and the accompanying mental change.

A short discussion then took place on these three papers, in which their great interest and importance were alluded to. Dr. CLOUSTON, Dr. YELLOWLEES, and others took part in the discussion.

PHYSIOLOGY.

Address by the President of the Section.

Dr. DAVID FERRIER, Professor of Neuropathology in King's College, and Physician to King's College Hospital, delivered an address on the Relations of Physiology and Medicine. He commenced by mentioning that he held the position of a physician rather than that of a physiological specialist, and continued:—

In former days few, if any, would have been found prosecuting the study of physiology who were not also engaged in the actual practice of medicine or surgery. Things, however, have greatly changed. Owing mainly to the division of labour, which the progress of knowledge has rendered a necessity, physiology has become increasingly technical, and tended to separate itself more and more from medicine in its practical aspects. Hence there has grown up, more perhaps in other countries than in our own, a generation of physiologists who have little interest or sympathy with the practitioners of medicine; while we have still, and always have had, a class of practitioners who, though acknowledging physiology to be one of the institutes of medicine, say farewell to its problems and methods when once they have passed their examinations and engaged in the practical work of their profession. In both extremes there lies great danger to the best interests of the science of physiology and the science and practice of medicine. The practice of medicine offers not infrequently rare conjunctions of symptoms, and valuable opportunities of research, too often wasted, which a little physiological training on the part of the practitioner might often have turned to good account; and the necessities of practical medicine have been the most fertile source of inspiration of physiological experiment. Much of what might otherwise have remained as vague surmise or, at most, plausible hypothesis has been raised to the level of verified fact by well conceived and often simple physiological experiment. The experimental method is, as it were, the keystone of the arch; indispensable, indeed, to the security of the structure the foundations of which have been laid in clinical observation. In many—perhaps I ought to say most—departments of physiology the experimental method is the most powerful weapon of inductive elimination, but there are problems in the investigation of which the clinical method is indispensable. For instance, almost the whole of our knowledge of the so-called trophic influence of the anterior cornua on the muscles, has been arrived at by clinical observation on the symptoms of anterior poliomyelitis and progressive muscular atrophy in man; and on similar observations has been largely founded our knowledge of the segmental grouping of muscles in the spinal cord, which has only been rendered more precise by experimental research. On clinical research primarily, and to a large extent solely, rests much of what we know respecting the paths of degeneration in the nerve centres inaccessible to the experimentalist, but often within the reach of the morbid processes of disease. The physiology of the ductless glands—namely, the thyroid, the suprarenal capsule, and the pituitary body—rests, for the most part, on clinical research, by which was first established the probable relation between abnormal conditions of these glands and the dystrophies of myxœdema or cachexia strumipriva, Addison's disease, and acromegaly respectively. Of recent work done in this country, I know of nothing more worthy of mention, or which serves better to illustrate the mutually complementary relations of experimental physiology and clinical medicine to each other than the researches of Head on the one hand, and those of Gaskell and Sherrington on the other, in reference to the segmentary relations of the visceral and somatic nerves of the head and body. [Professor Ferrier concluded with a sketch of the results of these two observers, making especial reference to Head's determination of the zones of the head and neck, which are the seat of somatic reference of irritation of the thoracic and abdominal viscera innervated by the vago-glosso-pharyngeal splanchnic nerve.]

Dr. W. H. RIVERS exhibited a Reaction Time Apparatus, by means of which touch and mental associative reflexes could be measured.

Professor DE BURGH BIRCH then entered into considerable detail in describing the Equipment of an Experimental Laboratory, and exhibited apparatus ingeniously modified in some respects from those in general use.

The Results of Section of the Trigeminal Nerve.

Dr. ALDREN TURNER then read an interesting paper on the Results of Section of the Trigeminal Nerve and the consequent Degenerations. The conclusion of practical importance at which he had arrived was that there was no evidence of the Gasserian ganglion having a trophic influence upon the eye, and that, therefore, notwithstanding occasional accidents, its removal need cause no anxiety so far as the nutrition of the eye was concerned. Clinical experience supported this view.

Dr. MOTT and Dr. SHERRINGTON, who joined in the discussion, agreed with Dr. Turner, and the former had found that on animals whose spinal cords were experimentally destroyed ulcerations occurred upon the hind legs but not on the forelegs. This fact he attributed to the less protected condition of the legs and their greater liability on this account to microbic infection.

The Results of Lesions of the Tuberculum Rolandi.

Dr. ALDREN TURNER then further discussed the Results of Lesions of the Tuberculum Rolandi, and illustrated his remarks with lantern slides of sections of the cord at various levels. His results tended to prove that tactile and pain sensations were transmitted by different routes; he aided his contention by reference to a clinical case, and showed a series of slides exhibiting the results of total and partial removal of the cerebellum. Dr. Ferrier and he had found a zone of degeneration in the antrolateral part of the cord after removal of the cerebellum and also a comma-shaped tract of degeneration after removal of one side of that organ.

Dr. ALEXANDER BRUCE of Edinburgh discussed the paper, and remarked that the tracts indicated were demonstrable in the cord of the fœtus.

The Function of the Spleen.

Dr. WILLIAM HUNTER then read a paper on Experiments relating to the Functions of the Spleen. He had used toluïn diamide as a destructive agent in doses of three strengths, and found that in the case of animals in which the spleen was not removed there was evidence of blood destruction in the spleen, splenic vein, and portal vein, while the general venous system was practically unaffected; while in animals in which the spleen had been removed there was little or no evidence of blood destruction in the veins above mentioned, but some evidence of this change in the mesentric veins, the lymphoid structures related to the latter evidently assuming the *rôle* of the spleen.

The paper led to some discussion, in the course of which Dr. Hunter was asked for an explanation of the phenomena he had described, but beyond suggesting that it was probably the result of splenic cellular activity declined to speak more definitely. He considered the action of the destructive agent was indirect.

Dr. MELLUS showed a large series of descending degenerative changes in the brain and spinal cord after removal of a portion of the cerebral cortex at the inferior genu of the fissure of Rolando.

Dr. EDRIDGE GREEN read a paper on The Perception of Luminosity at different parts of the Retina, and endeavoured to prove that the effect of light in the retina was not confined to the spot on which it falls.

A short discussion ensued.

Dr. MARINESCO, who spoke in French, then related his views on Tertiary Atrophy and Regeneration of the Central Nervous System. He advanced a theory of reflex mechanism in explanation of such lesions, and illustrated his remarks by interesting sections of the spinal cord, which exhibited an unilateral and comparative atrophy of all the elements in the affected half.

Dr. SHERRINGTON discussed the paper.

The Section then adjourned.

ANATOMY AND PHYSIOLOGY.

This section was presided over by Mr. HENRY MORRIS Surgeon to the Middlesex Hospital, who, after a few well

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chosen words, called upon Mr. William Anderson to open a discussion upon:—

Art in its Relation to Anatomy.

Professor ANDERSON commenced by saying that anatomy owed a heavy debt to art, although he might also say that art owed an almost equal one to anatomy. But before anatomy was studied as a science the great masters of Greek sculpture, without any aid from dissection, produced works which were masterpieces of artistic beauty and anatomical correctness, although while sculpture had advanced to such a pitch medicine and surgery were still in a purely empirical stage. Illustrations of some of the great Pheidian statues were thrown upon the screen. The lecturer passed on to consider the decline of classical learning and art, and after mentioning the mediæval treatises on anatomy, which were illustrated in a way from dissections of the lower animals, came to times when anatomists employed the great artists to illustrate their works. Leonardo da Vinci executed a series of anatomical drawings for his own improvement. The work of Berengarius was touched upon, and then came the immortal work of Vesalius, illustrated by a pupil of Titian. Professor Anderson then mentioned the anatomical works of the seventeenth century in the illustrations to which anatomical correctness was subordinated to the debased art of the day. The figures were represented in various affected attitudes standing on pedestals in pseudo-Italian landscapes, holding aside their skin or muscles to show the internal organs. After this, the bathos of both anatomy and art, came the works of Cheselden and William Hunter, the latter of whom wrote the classic work on the anatomy of the gravid uterus. Professor Anderson then briefly referred to the modern methods of anatomical illustration, such as chromo-lithography and "process work."—Mr. HENRY MORRIS then moved a vote of thanks to the lecturer, which was unanimously carried. A large collection of ancient and modern illustrated works on anatomy were on view, the most striking of which was the great treatise of William Cowper, with copper plates by Gerard de Luirens.

PATHOLOGY.

Address by the President of the Section.

Dr. WILKS, Consulting Physician to Guy's Hospital, in a paper on Reparation, said:—

The most evident and most momentous fact in Nature is the incessant change ever going on in the world; in fact, throughout the universe as far as the power of the telescope and spectroscope can reach motion and action never cease. This endless activity in the organic world implies continual growth and decay, or, in other words, life and death. As the earth in its revolutions produces the seasons, so we witness living objects growing up under the influence of the sun's rays, and again decaying as the warmth departs. The higher animals take a few revolutions round the centre of heat, during which time they first grow and then decay; and one of these is man. The variable time in which he endures is determined in great measure by his surroundings, for many of those which are detrimental to him and shorten his days are quite obvious to us; and to study still further his environments and discover their influences for good or evil is one of the most important provinces of the physician. Now just as the body grows and decays as a whole during a term of years, so we may see the two processes of production and destruction going on in its several parts when subjected to any special stimulus, such as an injury or other morbid influence. It is to this subject I wish to draw your attention, for although my own mind has often been directed to it, I think in all that I have written and taught I have failed to lay sufficient weight on the distinction between them. When speaking of any unnatural condition or any adventitious substance found in the body, I have, like many others, employed the term "morbid," and been content with the expression, whereas a little further consideration would have shown that only a portion of what is found would rightly answer to the term, a part only being strictly pathological, whilst the other is a result of a true physiological process; in fact, the simple words disease or morbid imply too much of destruction without a recognition of a corresponding reparation. With regard to injuries, the reparative and conservative conditions are generally clear, witnessed in scars, or where a spine of bone is made to support the fractured shaft of a limb which is united at an angle. In many forms of internal disease, also, we all recognise the reparative process, and have no difficulty in distinguishing the physiological from the truly pathological; for example, in valvular disease of the heart—where we at once perceive how the hypertrophied cavities, are the manifestation of physiological and conservative processes, and in the same manner hypertrophy of the muscular fibre of the uterus, of the intestine, or of the bladder, indicate obstruction in the passages of these organs. There are, however, more complex states where the pathological and physiological changes have gone on side by side and thus make it more difficult to assign to each their due proportion. It may be that the constructive and destructive forces are more intimately associated than we have hitherto conceived, and that a mutual relation may exist between them of an electrical or chemical nature. This was suggested in the remarkable observations and experiments of the Golding-Birds, father and son, who showed that if one electrode be placed on an ulcer the latter will rapidly heal whilst a sore is being produced at the other positive pole. In an ordinary ulcer the two processes are seen going on before the eye, for although the old definition implied a simple destructive process merely, yet we can clearly perceive during the process of granulation and in the secretion that new material is being formed. Mr. Golding-Bird has well said that in an ulcer we see a constructive inflammation, and that there is not merely a loss of tissue, but there is embryonic life going on again—a recommencement of evolution, a redevelopment of growth from elementary cells, the embryonic elements being always present and roused to action by the inflammatory process, so that the two conditions of growth and decay are mutually dependent. This local process is the same which is going on throughout the whole body, where the nourishment is obtained from outside materials, or, as Herbert Spencer puts it, "We grow by reconstructing the elements previously dispersed in animals and plants." It is the same process, indeed, which is going on throughout the world. Naturalists tell us, for example, of the formation and decay of coral reefs; whilst these are constantly growing and being renewed on the surface they are wasting beneath, so that the lower parts consist of nothing but the detritus of the older reefs which have broken up. Growth and decay are thus constantly proceeding, and Nature, with her myriad voices, proclaims the great truth that life is ever ceasing and ever being renewed. In the human being the same processes are perpetually going on, not only in health, but in states so-called diseased, as in the above-mentioned example of ulcer. Yet this double process is continually overlooked, no doubt from the difficulty we have in being able to separate the reparative from the true morbid action. In most instances this is owing to the fact of the reparative material not being equal in organisation and similar in structure to the original tissue. The complex parenchymatous structures are not renewed after injury, like the simpler ones of bone or areolar tissue, although occasionally we meet with a true growth of nerve fibre or adenoid structure. What we generally mean, therefore, by repair is not reparation by a growth resembling the original structure, but by a growth of lower organisable material. Still, the attempt at repair, in whatever way it may be accomplished, is continually visible, and the object of these remarks is to point out not only where we have been remiss in failing sufficiently to recognise the true interpretation to be put upon many of the new changes we meet with in the tissues, but have been content to style them all in a very cursory manner morbid. This distinction has an important clinical side as regards prognosis and treatment, besides being one of pathological interest.

I will endeavour to illustrate my meaning by one or two examples, and will take first the case of phthisis. During a long experience in practice I have seen nothing so common as an error in the prognosis of this disease. And why? Because the constructive changes have been confounded with the destructive ones; in fact, the very signs which the beginner regards as the strongest proofs of disease are those which indicate the probability of cure. He learns the signs of a cavity in the lung, and then, recognising its existence in a particular case, he immediately condemns his patient, feeling instinctively that nothing could be more terrible than the existence of a large hole in a vital organ. And yet a moment's consideration would show him that the dull tympanitic note, the absence of vibration in the chest walls, their sinking in, the pectoriloquy, &c., all point to a hard-walled cavity due to a reconstructive action following the destructive process. The formation of this fibrous tissue has

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shut off the part destroyed from that of the healthy lung, a reparation and cure have been going on and produced those marked physical signs which he has regarded as indicative of disease. No wonder, therefore, that a mistake in prognosis has been made, and that after condemning a patient who has manifested such physical signs the medical man has been surprised to find him still living years afterwards. I have, indeed, not only seen the mistake made by young and inexperienced men, but by older members of the profession; they have often confessed their surprise on seeing phthisical patients still alive whom they had condemned years before. This case of phthisis is perhaps the commonest example, where the constructive and destructive processes have not been sufficiently distinguished; but we will now take another case, where the changes are more complex, and where a greater difficulty exists in distinguishing those which may be regarded as destructive and those which are reparative. I refer to cirrhosis of the liver. This organ may be observed during life to be first enlarged and then become nodulated and shrunken; amongst other signs of the disease which the text-books describe is an enlargement of the veins on the surface of the abdomen. These were thought at one time to be due to some pressure on the vena cava, but this is really not the case, and the appearance is now shown to be due to an enlargement of the epigastric vein in connexion with the opening up of the old umbilical vein, which often becomes as large as a goose quill. Through this the portal blood flows and finds a free passage into the vena cava and systemic circulation. Injections may be easily made to pass from one system into the other. The patient in this way is relieved from an engorgement of the portal system and from the consequent dropsy. This enlargement of the veins, therefore, which is simply described as a sign of cirrhosis, should also be spoken of as a sign of a reparative character. And probably this is not all, for when the cirrhotic organ is examined carefully and microscopically we find that, although the nodules are composed mainly of atrophied hepatic tissue, there has also been an attempt to replace it by a new formation of cells and vessels. New bloodvessels may be seen and apparently new ducts, as well as cell growth. Now, although these new elements are not perfect enough to take on the function of the liver, there can be little doubt that they do relieve the circulation in a disabled organ. That new hepatic structure may grow under the strain of necessity is seen in those cases where portions of the liver have been destroyed by injury or disease in the same way that one kidney will double its size when its fellow from any cause has become atrophied, illustrating the doctrine of Aristotle that function precedes organisation.

[Dr. Wilks then gave examples where the morbid and reparative processes are mingled, so that it is very difficult to allocate the condition to its right category, and concluded by saying that, as a teacher of pathological anatomy, he had not paid sufficient regard to the distinction between the constructive and destructive processes; that whilst there have been decay and degeneration there have been also growth and regeneration. He held that to study these for the sake of discovering the several influences exerted in the production of each would be of great practical import, tending to show that pathology is governed by the same laws as those which exist in every other department of Nature, and, therefore, may safely take its place among the other sciences.]

The Malaria Parasite.

Dr. PATRICK MANSON then followed with a paper on Some Facts in the Life History of the Malaria Parasite. He commenced by describing the usual forms of the parasite met with in the blood of patients suffering from malaria, and by showing how these varied in their appearances according to the time, during or after the attack, or when they were obtained; he then went on to show how the flagellate forms were not developed in the body, but only outside the circulation; how in their earliest stages they were merely masses of pigmented granular protoplasm, which could be observed to thrust out the characteristic flagellæ, and these eventually separated themselves off from the cell and played an important part in the development of the organism outside the body. He regarded the intra-corpuscular elements as destined to carry on the life of the parasite within the body, whereas the flagellate forms were met with only outside the body. The point as to how the flagellate forms escaped from the circulation next occupied his attention, and he proceeded to quote from the researches of Surgeon-Major Ross to show that probably the mosquito was an intermediate host of the parasite. This observer has found that the parasites are able to resist destruction in the stomach of this insect, and passing thence into the blood occur much more frequently in the flagellate form than in blood drawn from the finger of a patient with malaria; its development in the intermediate host is also evidenced by the fact that the crescent forms all become spheres. He cited an instance of a man who by accident had swallowed the contents of a bottle containing a store of malarious mosquitoes, and who, although he had never had fever nor been exposed to the chance of getting it, yet in eleven days developed malarial disease. He explained the communication of the disease from the insect to man by supposing that the parasites on the death of the mosquito are added to water or soil, and by that means are carried into the human body.

In the discussion which took place Dr. THIN drew attention to the fact that in Sierra Leone malarial fever is very common, but mosquitoes are rare. He agreed with Dr. Manson in that, supposing these insects to be an intermediate host, drinking water probably formed the means of communication to man. He believed that the flagellæ played some part in the life history of the organism, and were not, as Marchiafava thought, due to the convulsive movements of the protoplasm in its death struggles.

In reply to questions from other members Dr. MANSON stated that the parasite must have some third form not yet discovered in which it can remain latent in the body for a long time, until the conditions favourable for its development occur, at which time the patient develops an attack of fever.

Exophthalmic Goitre.

A case of Exophthalmic Goitre was recited in detail by Dr. A. FOXWELL in which marked changes in the brain were found. These were: 1. Chronic inflammation and sclerosis of the pia covering part of the vermiform process and of that covering the fourth ventricle and also of the middle commissure of the third ventricle. 2. Acute softening of the surface of both thalami. 3. Excessive vascularity of the surface of the brain of the internal capsule, of the cerebellum and of the medulla—in the middle of the medulla, at any rate—leading to occasional hæmorrhages. 4. Sclerotic changes involving portions of the tegmen, pyramids, and the nuclei of the fasciculus gracilis and cuneatus, and of the tenth pair of nerves.

Papers were contributed by Dr. G. R. MURRAY on Some Results of Thyroidectomy in Rabbits, by Mr. J. H. TARGETT on Syringomyelia and Joint Disease, and by Dr. ROBERTSON on Arachnoid Hæmorrhage.

The Fungi of Cancer.

In the discussion on Cancer Mr. D'ARCY POWER, Mr. SHATTOCK, and others criticised adversely Dr. Braithwaite's paper, in which he claimed to have demonstrated fungi in malignant disease. They thought that the appearances which he described were due to changes in fat cells and elastic tissue produced by the methods used in the preparation of the specimens, and that the so-called spores were in reality crystalline substances deposited in colloid media.

The following papers were also read before the meeting of the Section terminated:—On the Chemistry of Carcinoma and Sarcoma, by Dr. HEWLETT; On the Insidious Marrow Infection of Breast Carcinoma, by Dr. H. SNOW; the Occurrence of Cancer in Chalk Valleys, by Mr. T. W. BLAKE; On the Condition of the Larynx in a case of Typhoid Fever, by Dr. A. R. PARSONS.

OPHTHALMOLOGY.

Address by the President of the Section.

Mr. HENRY POWER, in his introductory remarks, said:—After the warm expressions of welcome that have been addressed by the President to the members of the Congress generally, little remains for me to add, except that the Ophthalmologists of London in a more special manner greet with a friendly grasp of the hand all those who are practising this important department of medicine in other cities and towns of Great Britain, or who have come to visit us from other countries. I am sure I am expressing the sentiments of the Metropolitan members of this Congress when I say that we feel ourselves to be highly honoured by their presence on this occasion, and that we trust they

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will not only derive profit from the numerous papers on interesting subjects that have been promised to us, but that they will receive some pleasure from the various objects of interest this great city and its vicinity can exhibit. Half a century ago no such friendly salutation could have been offered, because ophthalmology though full of vitality had not yet reached the stage of separate existence, but was still merged in general surgery, few or none practising it with exclusiveness. Within that period, however, great changes have occurred. Affections formerly lightly passed over or altogether disregarded have been found to require for their explanation and elucidation prolonged and careful inquiry, and new means and methods of research have been added to our previous stock. The ophthalmoscope invented by Helmholtz, the distinguished physicist and physiologist, whose loss we have had so recently to deplore, opened up a vast field of study, and the revelations of the changes presented by the intra-ocular structures obtained by its employment are by no means exhausted. The investigation of errors of refraction and their correction in the path pursued by Donders and his school and still further developed by Landolt and others; the study of muscular anomalies and defects so energetically worked out by our American coadjutors; the recognition of the immense practical importance of good colour-vision in all forms of land and sea conveyance regulated by a system of signals; the labours of a host of clinical observers both at home and abroad in devising and perfecting methods of treatment both operative and medicinal; the gradual recognition of the fact that many constitutional diseases—such as albuminuria, diabetes, leukæmia, and febrile affections—generally powerfully influence vision, are all circumstances that have contributed to enlarge the horizon and to develop the resources of the ophthalmologist to an extraordinary degree. This, again, has led to the founding of several special hospitals devoted entirely to the treatment of diseases of the eye, and also to the establishment of departments with the same object in view in connexion with each and all of our general hospitals. To discharge the duties connected with these institutions professors have been appointed who have required the services of assistants and house surgeons and these in turn have been able to instruct a large number of intelligent and diligent students, and thus to diffuse throughout the kingdom a sound knowledge of the nature and treatment of eye diseases; so that, whereas only a decade or two ago the unfortunate victim of iritis or keratitis, squint, cataract, or glaucoma, residing in the country, was either compelled to go to London, Edinburgh, Dublin, Manchester, Birmingham, or one of the great centres of population, at the present time there are few towns of very modest size that do not possess an ophthalmic surgeon capable of diagnosing and treating any of the ordinary forms of ophthalmic disease.

The foundation of the Ophthalmological Society of Great Britain has proved of the greatest utility by enabling remarkable cases to be seen by all who are interested in the subject by supplying a field where papers can be read in which new views can be advocated or old ones subjected to wholesome criticism, and in which an *esprit de corps* can be fostered and a fellow feeling established amongst men who have no petty jealousies but who seek success only by honourable rivalry. Our branch of work is by common consent the most fortunate of all in the opportunity it affords of applying methods founded on pure science to the diagnosis and treatment of disease; and so long as our ranks are recruited by those who have gone through the ordinary curriculum of medicine and surgery now required by the examining bodies, and so long as it is recognised by the profession generally that an accurate knowledge of it will often supply the key to many constitutional affections we need have no fear that it will separate itself from them to become a barren branch. But this does not the less relieve us from the necessity of constantly keeping in view the scientific side of its study. Perhaps from the recognition of my own defects, I am strongly of opinion that all those who enter the ophthalmic department of the profession should have gone through a sound mathematical training. At the present moment this is certainly not a *sine quâ non* for a candidate to any post at an ophthalmic hospital, but I am sure that if it were made so it would be of great advantage to the rising generation of British ophthalmologists, that the practical work would be better done, and that under any circumstance it would prove useful mental training.

Though the organ with which we are engaged is but small it is yet a theatre large enough to permit many pathological processes to be followed out which owing to the diversity of tissues present can be defined with more precision than elsewhere, where theories of the nature of disease can be tested, and where different modes of treatment can be strictly compared and their relative value estimated. Immense strides have been made in the diagnosis of ophthalmic disease during the last fifty years. In 1842–43 Dr. Hocken tabulating the statistics of six eye infirmaries,[1] states that out of 30,971 cases of ophthalmic disease, 16,383, or more than half, were cases of conjunctivitis. A very different distribution would obtain now-a-days. No doubt much remains to be done; there are many gaps and imperfections in our knowledge; let us hope that some of these may be filled up and removed in the labours to which we will now address ourselves.

Acromegaly with Ocular Complications.

Mr. ARTHUR BENSON read a paper on the Ocular Complications of Acromegaly, about which, he said, little was definitely known. He quoted the case of a farmer aged thirty-eight, a big man of 12 st., who developed with the signs of acromegaly central scotoma and loss of colour vision in the temporal halves of the retina. The man smoked a good deal, and great improvement followed giving up tobacco and taking iodide of potassium. Later there was almost complete loss of vision, which returned in seven weeks under thyroid extract given in the fresh state, but there remained a defect in the upper temporal quadrant of the retina on each side. Dr. Benson referred to the enlargement of the pituitary gland and its pressure on the chiasma as the cause of visual defect.

Dr. MEYER said that in most of the cases the outer half of the field of vision was lost owing to pressure on the posterior part of the chiasma, but the modifications of vision were very various. He thought the improvement scarcely corresponded with acromegalous atrophy.

Mr. LITTLE (Manchester) quoted a case in a young woman in which contraction of the field took place outwards and upwards; there was atrophy of the optic nerve in the left eye.

Professor PANAS (Paris) mentioned a case in a woman of thirty-five in whom acromegaly was associated with temporal anopsia and epileptic fits. Treatment had no effect.

Mr. SWANZY instanced the case of the Irish giant, Cornelius McGrant (1720), whose skeleton was preserved at Trinity College, an examination of which showed it to be affected with acromegaly. The sella Turcica would contain a walnut. The posterior clinoid processes and the commissoral groove were obliterated, and sight must have been limited to the outer portion of the left retina.

Professor FUCHS said the central scotoma might have been due to the acromegaly, and quoted an instance of tumour of the optic nerve causing central scotoma in the absence of alcohol or tobacco. Subsidence of œdema would account for improvement taking place.

Mr. HILL GRIFFITH and Mr. SNELL also spoke.

Certain Rare Cases of Recurrent Ophthalmia.

Professor FUCHS read a paper on this subject, of which he had seen twenty-three cases. Coarse injection of the conjunctiva of the globe and episcleral vessels occurred, accompanied by pain on movement and photophobia. There was also in some cases removal of the near point, or spasm of accommodation, with temporary myopia. The conditions recurred at intervals of a week or fortnight, and affected both eyes alternately. Uric acid and oxalates were in excess in the urine. The disease appeared to be associated with gout, rheumatism, or malaria. Salicin and quinine delayed the attacks, which recurred when the drug was left off and seemed to be precipitated by catarrh. He quoted several cases at length.

Dr. BERRY referred to the cases under the term episclerites fugax. The vessels only were affected. There was no glandular change. The disease corresponded closely to Von Graefe's subconjunctivitis, and sometimes went on to iridocyclitis or sclerotitis. It was best treated with salicin or hydropathically.

Mr. E. MORGAN JONES said that after other remedies had proved unsatisfactory he had performed peritomy with good results.

Dr. JOHN GRIFFITHS and Mr. HERN mentioned cases of an allied nature which were accompanied by a vesicular eruption at the margin of the cornea.

[1] THE LANCET, Aug. 19th, 1843.

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Mr. GEO. WALKER had secured immediate relief in these cases by radiating incisions through the conjunctiva across the affected area.

Mr. PRIESTLEY SMITH thought the condition was difficult to define. There was a strong superficial resemblance between the episcleritis urticarial conditions—hay fever and herpes eruption. He regarded the malady as depending on constitutional state, like gout or rheumatism, and considered the elimination of the waste products as of the first importance, and this was much assisted by taking hot water freely the first thing in the morning and at other times.

Mr. CRITCHETT agreed that this was identical with Von Graefe's subconjunctivitis. He thought the best treatment was to give salicylates and quinine, with hot water internally and systematic bathing—both water and hot air.

Professor FUCHS, in reply, said the condition in question must be clearly distinguished from vesicular eruptions—catarrh or injury of the cornea. In the acute stage he had used Vichy water with some benefit, but the problem was to prevent recurrence.

Chlorine Water in Threatening Suppuration of the Vitreous.

Dr. BERRY described this treatment and cited some striking cases which had been so treated, in accordance with the results of Chassaud's experiments. It was the safest and least irritating antiseptic and produced immediate effect. Four drops of a 4 per cent. solution were introduced with a hypodermic syringe into the centre of the vitreous—through the sclerotic between the insertions of the external and superior recti. It was specially useful in suppuration, traumatism, and sympathetic ophthalmia.

Dr. ARGYLL-ROBERTSON said he had seen some of the cases described, and had been favourably impressed with the method. The chlorine produced no ill effect, and it was worthy of more extended employment.

Mr. NETTLESHIP thought in cases of traumatism the chlorine water might better be injected along the track of the injury.

Dr. BERRY, in reply, said the wound was commonly in a position inadmissible for operation, and further, as the currents in the eye were directed forward, it was better to inject the fluid from the back.

Dr. BULL (Paris) read a paper on Optometry by the Subjective Method. He said it involved many sources of error, but one especially consisted in the disturbing effect of *astigmia* (*sic*) while determining the degree of myopia. All astigmia, he said, should be made myopic, the vision then being tested for distance.

Dr. ANGUS MCGILLIVRAY cited a curious family history of astigmatism, which, occurring in a male parent, slipped the next generation and appeared in the males of the third and fourth generations, being transmitted by the females like hæmophilia or pseudo-hypertrophic paralysis. He also quoted instances of family nystagmus.

Dr. KOSTOR described the construction and use of an instrument for measuring the tension of the globe.

Mr. LEE described a case of Pemphigus of the Cornea, with total destruction of vision.

Mr. BELL referred to a similar case.

M. GAYET illustrated the use of photographs in different positions of the eye to compare the parallelism of the optic axes before and after operation for squint.

Mr. JOHN GRIFFITH read a paper on the Pathological Distinctions between Sarcoma of the Choroid and Glioma of the Retina.

DISEASES OF CHILDREN.

The proceedings in this Section were opened by a few remarks by the President, Mr. J. H. Morgan, relating to the history of the Section since its establishment in 1883.

Congenital Syphilitic Manifestations in Bones and Joints.

The first discussion, on Congenital Syphilitic Manifestations in Bones and Joints, was then introduced by the President, who summed up in an admirably clear and judicious paper the present state of our knowledge with regard to this important group of cases. After touching on the chief historical points in connection with the subject, Mr. Morgan described the various pathological processes which underlie the different manifestations. He pointed out that in infants the changes are found chiefly at the growing end of the bones, especially at the distal ends, and are more frequently met with in the humerus and tibia than in other bones. There is an endosteal inflammation, which not infrequently goes on to suppuration. Clinically there is general thickening of the bone, especially towards its distal extremity; occasionally there is deformity from displacement of the entire epiphysis, and frequently there is "pseudo-paralysis," the limb being flaccid and never moved by the patient if he can avoid it. With all this there is seldom much pain unless suppuration has occurred. When this occurs the synovial cavity of the joint is apt to become involved through spread of the inflammatory process. In older children, after the second dentition, frequently at the same time as keratitis, we have a different manifestation of the disease. Nodes are developed on long bones, and necrosis often follows, and there is a tendency to general hypertrophy and induration. It is in these cases that necrosis of the palate and bones of the nose is due. There is very little nocturnal pain in these cases, but they are not nearly so amenable to iodide of potassium as are similar conditions in adults. These cases of osteitis not infrequently lead to alterations in the shape of the bones, curving, lengthening, or in some cases shortening from interference with epiphyseal growth. Dealing with the changes in the cranial bones and with the relations of congenital syphilis to rickets, Mr. Morgan strongly repudiated Parrot's doctrine that rickets was merely a stage of congenital syphilis. He held, however, that rickets was mainly due to improper feeding, and that hereditary syphilis was frequently a predisposing cause of the condition. With regard to "bosses" on the cranium, he held that the majority were due to hereditary syphilis, but he evidently considered it still an open question whether bossing of the skull and craniotabes were due to direct syphilitic processes or whether it was only "by impairing nutrition and acting as a debilitating factor that it is prominent among many others as a cause of rachitic changes." With reference to syphilitic manifestations in joints he pointed out that many were due to extension of the epiphyseal inflammation, and that in others there was chronic effusion into several joints, usually symmetrically, concomitant with interstitial keratitis, as Mr. Clutton has described. These cases are very chronic, and there is no pain.

In the interesting discussion which followed, in which Dr. Barlow, Mr. Eve, Mr. D'Arcy Power, Mr. H. B. Robinson, and Mr. H. Stansfield Collier took part, there was a general agreement with the President's account of the conditions present. With reference to the vexed question of the significance of craniotabes and cranial bossing Dr. Barlow stated that he had been obliged by his observations to entirely give up the opinion he strongly held and taught—that these lesions were necessarily indications of syphilis. Although admittedly these signs are most frequently met with in cases of congenital syphilis associated with rickets, they also occurred in children in whom the possibility of hereditary syphilis could be excluded; and, further, that they appeared in the crania of young animals suffering from rickets. He regarded congenital syphilis as a powerful predisposing cause of rickets by modifying the nutritional processes; but, like the President, he scouted the idea that ordinary rachitis was a syphilitic process.

The Nervous Sequelæ of Infectious Disease.

Dr. HENRY HANDFORD then introduced a discussion upon the Nervous Sequelæ of Infectious Disease. He said:—

The occurrence of paralysis during convalescence from the continued fevers was known to Cullen and many of the older writers, but it was not until the time of Landry and Gubler that the doctrine of post-febrile paralysis assumed a definite form. For the sake of clearness it seems useful to divide the sequelæ into those affecting—(1) the brain and its membranes; (2) the spinal cord and its membranes; (3) the nerves; and to consider in regard to each division, first, the changes which may occur after all or most infectious diseases, and, secondly, the special qualities of the changes resulting from particular diseases, that is, first, generically and then specifically.

1. It would indeed be strange in a complex machine like the organ of mind, the orderly working of which is so readily disturbed during the pyrexia of fever, especially in childhood, if it did not sometimes, as a result of that disturbance, become permanently deranged. And so we find; but such cases are rare, except when the brain is by inheritance weak and unstable. I recollect one case of mania with delusions

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arising during convalescence from enteric fever. Idiocy and imbecility are occasionally met with from arrested development in the very young, and melancholia, dementia, and a few cases of mania in older life. Scarlet fever and enteric fever are the most frequent antecedents. Epilepsy has resulted from attacks of most of the specific fevers, especially scarlet fever, measles, and typhoid fever in that order of frequency. More cases of epilepsy are said to be consecutive to scarlet fever (apart from the influence of nephritis) than to all the other acute diseases put together. Optic neuritis may follow scarlet fever, and a condition of speechlessness—not a true aphasia—is not uncommon after typhoid fever. Meningitis may arise in the course of any of the acute specific diseases, more especially small-pox, measles, and scarlet fever; but its presence is much more frequently suspected without sufficient cause than overlooked. When present it is often probably septicæmic in character. 2. Both myelitis and spinal meningitis are occasionally produced by attacks of infectious disease. Sometimes it appears to be of septicæmic origin, but in many cases the specific poison of the fever seems to be the exciting cause. Acute myelitis especially follows small-pox, measles, and scarlet fever. It may arise in the course of the fever, during convalescence, or a month or more after the disease is over. Numerous cases of anterior polio-myelitis have been described after acute infectious diseases, but no doubt in some of them the muscular wasting has been primary and in others due to peripheral neuritis. Nevertheless, a residuum remains where the wasting has in reality been caused by an affection of the nerve cells. Numerous cases of Erb's juvenile form of progressive muscular atrophy have been described arising after measles, and last year I had under my own care a case of the same disease in a boy aged eleven arising after an attack of enteric fever, and much aggravated by a subsequent attack of scarlet fever. The exact influence of the infectious diseases in determining the onset of muscular atrophy is difficult to define. The usual occurrence of the disease in several members of the same family shows that a congenital tendency must be called into activity by the virus, but the numerous instances where the disease has followed immediately upon one of the acute specific fevers also show that the influence of the fever poison cannot be altogether neglected. In some cases the weakness due to an attack of typhoid fever seems to persist in the legs, and is accompanied by neuralgic pains and various defects of sensation. It is supposed that the symptoms may be due to disseminated myelitis of slight intensity. The muscular tremor, which is occasionally so conspicuous during the course of typhoid fever, may continue during convalescence, and it has been known to persist and to be followed by symptoms of disseminated sclerosis. 3. Peripheral neuritis follows especially diphtheria, influenza, typhoid fever, measles, and small-pox. In 1888 I published three cases after typhoid fever: in each case there occurred extensive anæsthesia in the distribution of the ulnar nerve (preceded in two of them by pain and tenderness), wasting of the small muscles of the hand sufficiently extensive to be easily demonstrated by photography, reaction of degeneration, paralysis of motion, together with local fall of temperature and nutritional changes in the skin. In one of the three, and in several other cases also, I observed a remarkable tenderness of the toes sufficient to require them to be protected from the pressure of the bedclothes by a cradle. In one case the arms also were tender. In others there has been remarkable hypersensibility of the skin both to touch and more especially to cold. In most of these cases, perhaps in all, neuritis was the cause of the symptoms. There are still several extremely difficult though important problems awaiting solution. Among them are—the nature of the poison, which, circulating in the blood or lymph, acts immediately upon the nervous tissue and causes paralysis; whether there is one virus or whether there are many; whether the resulting lesion is inflammatory or (mainly) degenerative; and whether there are specific differences in the sequels of each infectious disease. Although there is scarcely any acute infectious disease a severe attack of which may not be followed by a lesion or disorder of some portion of the nervous system, yet with such various antecedents there is a very strong general resemblance between the sequels. The chief reason of this resemblance, no doubt, consists in the fact that the manifestations of the nervous disease depend almost entirely upon the organ and tissue affected, and very little upon the virus producing the lesion. I doubt if it is possible to distinguish by the symptoms a neuritis following enteric fever from one following small-pox or measles. But just as in the toxic neuritis due to lead, arsenic, or alcohol there is evidence of selection—and some nerves are much more frequently attacked than others—and as in diphtheria the toxine very rarely indeed attacks the spinal cord, while it affects the nerves in 25 per cent. of all cases, showing special affinity for the nerves of the palate, so in the nervous disorders which follow the other acute infectious diseases there is likewise evidence of selection. After some diseases the brain is most frequently affected, after others the spinal cord, and after yet others the peripheral nerves; but why do not the nervous sequels which depend on the toxic effect of the fever poison follow every severe attack? The organisms which produce the toxine produce also the antitoxin; and the affection of the nervous system may depend on the proportion of one to the other, or it may be necessary for various adventitious circumstances to coexist. And, lastly, does the same toxine attack the various portions of the nervous system—brain, cord, or nerves—indifferently?

OTOLOGY.

Address by the President of the Section.

Sir WILLIAM DALBY, Consulting Aural Surgeon to St. George's Hospital, said:—In consequence of the meeting of the International Otological Congress, to be held at Florence in September, we shall not have the assistance of many Continental visitors who otherwise would have come to this meeting; but, on the other hand, Scotland, Ireland, and the provinces will, I believe, be represented more completely than is usual at our annual gatherings. The programme is before us, and besides papers of considerable interest we shall have the privilege of hearing from Professor Macewen, whose brilliant achievements in cranial surgery are so familiar to us, his views on the grave questions involved in operative measures which become necessary when the process of inflammation has proceeded from the middle ear to the cavity of the cranium. In regard to the treatment of the various forms of "nerve deafness," I wish to say that the words in which this discussion have been described were not chosen without due deliberation. The term "nervous deafness" is intended to include not only disease of the nervous apparatus, but loss of hearing due, as we know it to be, to causes which affect the whole nervous system generally; also loss of hearing due to shock or to emotional and mental influences. Lastly, those conditions which, beginning as they do within the tympanic cavity, and at first simply interfering with the conduction of sound, finally are found to involve the perceptive as well as the conducting media, and to be the starting point apparently of subjective nervous phenomena. In short, the title of the discussion has been made purposely vague in order that when the subject of treatment is discussed it should be incumbent on the speaker to be exceedingly definite as to the precise nature of the cases for which the treatment is proposed, for in debating or writing upon so difficult a question nothing is so obstructive to real progress as dealing with generalities. What we desire is to thoroughly thrash out the subject, so that we arrive at the approximate value of various methods of treatment which seem to require a more complete accuracy as to the conditions which they are supposed to combat. We know that we are often unable to point to a definite organic change within the nervous apparatus, but at least we wish to be able to point to the *modus operandi* of the remedy upon the function of the special sense. This anxiety for a more firm basis on which to place various remedies applies especially to the use of pilocarpin and electricity. At one time great hopes were entertained in the profession as to the value of pilocarpin, and yet when the subject was discussed at a recent meeting of this Association at Newcastle it found very little support, even from those who had given it a fair trial. Again, it cannot fail to have been observed how in many nervous disorders great temporary benefit has followed the use of electricity, but the permanent effects have very frequently not been maintained. We hope at this meeting to hear something definite as to the real value of both these agents, and to receive some helpful suggestions as to the conditions, if any, where they may be expected to prove useful. It is noteworthy that in our list of papers we have none upon a subject that must incessantly agitate the minds of aural surgeons. I refer to the operative proceedings upon

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the tympanic membrane and cavity of the tympanum for the relief of chronic change; for, notwithstanding all the disappointments in this direction, the fact remains that some of us (and I include myself in this number), after years of careful observation, are still in a position to make a selection of cases in which we are reasonably confident that if we could make a permanent and large opening in the tympanic membrane the hearing would be restored to a most useful extent. It is, I believe, in this complete knowledge that the impulse is to be found for all the operations that have from time to time been proposed. It is to an incomplete knowledge in the selection of cases that the great proportion of failures have occurred. Impressed as I am with the brilliant future of surgery in all its departments, I cannot but believe that some day or other (it may be at a distant date) one of us is destined to solve this much-debated problem.

PHARMACOLOGY AND THERAPEUTICS.

Address by the President of the Section.

Sir WM. ROBERTS, late Professor of Medicine in Victoria University, read the following address on Anarcotine, a neglected Alkaloid of Opium. He said:—During my travels in India last year, as a member of the Royal Commission on Opium, I heard a good deal about anarcotine and its employment in years gone by as a febrifuge in the treatment of the malarial fevers which are so prevalent in that country. By far the most abundant alkaloids of opium are morphine and anarcotine, and while morphine represents the anodyne and hypnotic qualities of the drug, anarcotine represents, as I shall presently show, its antimalarial qualities. There are considerable differences in the proportion of morphine and anarcotine in the several varieties of commercial opium. These differences are especially pronounced in the case of Smyrna opium, which is used in this country for medicinal purposes, and Bengal opium, which is popularly used in India. These differences are set forth in round numbers in the subjoined table:—

—	Smyrna Opium.	Bengal Opium.
Morphine	8 per cent.	4 per cent.
Anarcotine	2 per cent.	6 per cent.

It will be observed that Bengal opium is comparatively poor in morphine but very rich in anarcotine. Smyrna opium, on the other hand, is very rich in morphine and very poor in anarcotine. Anarcotine was brought into prominent notice in India about fifty years ago. At that time quinine became very scarce and dear. The supplies of bark from South America were failing, and it had not yet been proved that the quinine-bearing cinchonas could be cultivated with success on the uplands of India. There was thus a serious prospect of a dearth of quinine in India, and the Indian medical authorities had to cast about for some cheaper and more abundant substitute. Now, opium had long been held in high repute among the natives of India as a remedy and protective against malarial fevers, and habitual opium-eaters were said to enjoy a remarkable immunity from malarial infection. Attention was therefore directed to anarcotine, which is the most abundant alkaloid of Bengal opium, and trials were made of its curative power in malarial fevers. Sir William O'Shaughnessy, in 1838, brought the subject before the Calcutta Medical Society. He gave an account of thirty-two cases of intermittent and remittent fevers treated with anarcotine. Of these, thirty-one were cured. He also mentioned 100 other cases which had been treated by his pupils and colleagues with equal success. These results, and others of a like character, induced the Indian authorities to institute further experiments, and, these proving favourable, they caused anarcotine to be prepared in quantity at the laboratories of Ghazipur and Patna, and distributed to the medical depôts throughout British India. Two important communications on the antiperiodic powers of anarcotine lie buried in the medical archives of India and deserve resuscitation. They are based on a large experience, and they prove incontestably that anarcotine is scarcely inferior, and in some classes of cases is superior, to quinine as an antiperiodic. The first, from Dr. Palmer, is contained in a letter to the Director-General of the Indian Medical Department, and is reprinted in the "Proceedings of the Opium Commission," vol. v., p. 78.[1] In 1857-59 Dr. Palmer treated at Ghazipur 546 cases of malarial fever with anarcotine, in doses ranging from 1 to 3 grains. Of these, 541 were cured and only 5 died. In addition to these 546 officially reported cases, he treated with anarcotine a large number of other cases of malarial fever, amounting in all to little short of 1000 cases. Summing up his general experience, he states that in 70 per cent. the fever was arrested at the second paroxysm after the medicine was administered; in 20 per cent. the arrest was equally sure, but was not quite so quick; and in 10 per cent. the medicine did not appear to have any curative effect. He further remarks that there are cases where anarcotine is decidedly more efficacious than quinine—namely, where there is an intolerance of quinine, and where quinine has been given without any effect for a long time. The second communication is a "Report on Anarcotine," by Dr. Garden, which is printed in the seventh volume of the "Indian Annals of Medical Science." Dr. Garden succeeded Dr. Palmer in civil charge of the Ghazipur Station in 1859; and at that time a severe outbreak of intermittent fever, of quotidian and tertian type, had to be dealt with. Taking advantage of the opportunity he subjected anarcotine to an extensive trial. He treated altogether 684 cases, and gives details of 194. Of these 194 cases, 187 were rapidly cured by anarcotine. It only failed in 7 cases, or 3·6 per cent. It, moreover, cured some cases where quinine had failed. The doses he employed ranged from 1½ to 3 grains. He expresses his general conclusions in the following words: "That it [anarcotine] is equal in value to quinine I do not pretend to say, but that it has a claim to the next place in the ranks of antiperiodics is, I think, an undoubted fact." Anarcotine continued in large demand in India for several years, and was regularly supplied from the Government factories at the rate of about a hundredweight per annum. It is to be observed that Dr. Palmer and Dr. Garden perceived a distinction between quinine and anarcotine, and recognised that there were cases of malarial fever which resisted quinine but yielded to anarcotine. Both observers also noted that in a certain percentage of the cases anarcotine proved wholly ineffective. These discrepancies are probably to be explained by the facts brought to light in recent researches on the infective organisms of paludal fevers. It has been shown that these organisms are of more than one kind, and that each kind corresponds to a particular type of malarial fever. There seems to be valid evidence that in anarcotine we possess a second antiperiodic of great power, analogous to, but not identical with, quinine; and the point I wish to press upon those who have opportunities of studying malarial fevers, especially upon investigators in India, is the desirability of subjecting anarcotine to a fresh examination, with a view of ascertaining its value, as compared with quinine, in the different types of malarial infection, and in cases where quinine has proved ineffective. I should mention that anarcotine was originally named "narcotine" by its discoverer, Derosne, and this is the name by which it is still generally known. This designation is, however, wholly inappropriate and misleading. The extensive trials made with this substance in India show that in a pure state it is quite devoid of narcotic properties. For this reason Dr. Palmer renamed it anarcotine. Dr. Garden adopted this suggestion, and I think it desirable to follow his example. I show you here two fine samples of anarcotine. One was manufactured in London by Hopkin and Williams, of 16, Cross-street, Hatton-garden; the other was procured by Dr. Vaughan Harley from India, where considerable unused stores of anarcotine still exist in medical depôts.

LARYNGOLOGY AND RHINOLOGY.

Address by the President of the Section.

Dr. FELIX SEMON, Physician for Diseases of the Throat, St. Thomas's Hospital and National Hospital for the Paralysed and Epileptic, took for the subject of his address "The Post-Graduate Teaching of Laryngology." He said:—Before we enter upon the important general discussion of to-day's proceedings I should like to engage your attention for a few minutes with the question of the post-graduate teaching in laryngology and rhinology in this metropolis. It cannot be denied that post-graduate instruction, such as given at the present time in these two branches, is inadequate

[1] Copies of the Proceedings and Report of the Opium Commission have been deposited in the libraries of the British Medical Association, the Royal College of Physicians of London, and the Royal Medical and Chirurgical Society.

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to both the opportunities and the requirements of London. The present arrangements are excellent in many respects, so far as they go, but I contend that they do not go far enough, and from conversations I have had with the President and Secretary of the London post-graduate course itself I have come to the conclusion that this opinion is shared by some of the officers of that institution. Clinical lectures on selected chapters of rhino-laryngology, accompanied or followed by the demonstration of a few cases, are all very well, but nobody will learn from such clinical lectures alone to properly diagnose and treat throat and nose cases when they later come under his own observation. For this purpose a much more methodical instruction is necessary.

Another point of considerable importance is the fact that the post-graduate course as at present constituted consists in a combination of a few hospitals in which every special branch is represented by one hospital only, whereas experience has shown that those who wish to take part in the post-graduate instruction appreciate nothing more than the option of an extensive selection amongst various teachers.

Finally, successful competition with foreign post-graduate courses is rendered almost impossible by the fact that the laryngological and rhinological clinics in almost all the general and special hospitals, as well as in the post-graduate course, clash with one another, in that the days and hours of attendance and of lectures are the same in all these different institutions, so that those who would like to condense into a short span of time such post-graduate instruction as they require find no opportunity to utilise their time in a really satisfactory manner.

[Dr. Semon here dwelt on the necessity for efficient and harmonious organisation. He proceeded:]

What we require is something not competing with, but supplementing, the existing institutions, an organisation which aims at providing practical instruction within a comparatively short time not only for the Continental, American, and Colonial visitor, who at present passes by our shores and prefers to put up with the inconvenience of receiving such instruction in another than his mother-tongue, but, above all, for the wants of the British practitioner who, after a short acquaintance with practical work, finds gaps in his knowledge which he considers desirable to fill up, provided this can be done without too great a loss of time. It would be very difficult, I believe, or indeed impossible, to effect such an organisation if it were limited to one special branch alone; but it should be possible to create it if teachers of all the branches in which special post-graduate instruction is required—such as ophthalmology, otology, laryngology and rhinology, dermatology, bacteriology, &c.—joined hands to found it. My own ideal in this respect would be an institution conducted very much, though not slavishly, upon the lines of the Viennese post-graduate instruction, occupying a large house situated as centrally as possible, and provided with a sufficient number of rooms to allow of quite a number of classes in different subjects being held simultaneously. The courses in the different branches ought to begin and to end simultaneously, and to be limited to six weeks, or at the utmost to two months. Every special branch ought to be taught not by one teacher, but by quite a large number of them, it being made a condition whilst the plan is on its trial that the teachers in each branch should agree to hold their classes at such times as not to clash with one another. So far as our own branch is concerned, its foremost aim ought to be to give practical instruction in the use of the laryngoscope and rhinoscope, in diagnosis of throat and nose diseases, and in the technique of those applications which every practitioner ought to be able to effect himself. Clinical lectures, &c., ought only to come in as a supplement, but not as the mainstay of the course. No monster classes ought to be held if really practical instruction is to be given. It will be hardly possible for a single teacher to really instruct more than twelve pupils at one and the same time. As to the appointment of teachers, no question of seniority or of fame, or of an official position at one of the general or special hospitals, ought to give a monopoly in this respect, but everybody should be welcome who could satisfy the board of directors that he is a fit and proper person for teaching the branch in which he proposes to give instruction. The material would, of course, have to be provided by every teacher from his own hospital or other sources, a number of specially selected cases being brought for each day's work. I do not see why it should be impossible to realise in London what has worked with such splendid results in Vienna; and I recommend to all who are interested in post-graduate instruction my plan for further thought and improvement.

DERMATOLOGY.

The President, Dr. RADCLIFFE CROCKER, opened the proceedings with a few remarks apropos of the great variety which dermatology offered to the student of pathology.

On the Pathology and Treatment of Pruritus.

Professor MCCALL ANDERSON (Glasgow) opened this discussion, reading a short and practical paper dealing, in the first instance, with the anatomical features of the skin and their relation to the feeling of itching, then with the usual conditions in which itching is prominent, and finally with the treatment of this very troublesome symptom.

He was of opinion that the portions of the nervous apparatus of the skin specially concerned with the sensation of itching are as follows: (1) the free nerve terminations in the epidermis; (2) the small groups of cells taking the form of a cup and connected with nerve filaments situated in the deeper layers of the epidermis or upper layers of the true skin; and (3) each hair, in virtue of the fine medullated nerve fibres which form a network in the outer coat of the hair and terminate in its sheath, is more or less of a tactile organ, and it is probable that irritation of the hair may cause pruritus. It is very difficult to say, however, why pruritus is such a prominent feature of some diseases of the skin and generally absent in others, such as the strumous affections; how it is absent in the earlier and present in the later manifestations of syphilis—points to which he specially directed the attention of the section. He then spoke of some of the more prominent causes: that which occurs in old age and which he attributes to the circulation of impure blood; that which occurs in connexion with some cases of jaundice; that which comes on in gouty persons and in connexion with functional derangement of internal organs, especially the digestive organs; that which occurs in diabetics; that which occurs in connexion with cold weather (pruritus hiemalis); and finally that which is dependent upon mental and not upon physical causes. From what he said it may be gathered that, without denying the influence of reflex irritation in the production of pruritus, he was of opinion that most cases are dependent upon direct irritation of the nerve terminations in the epidermis. Before entering upon treatment he emphasised the importance of being quite sure of the diagnosis, eliminating all other disorders, such as urticaria, phthiriasis and scabies, in which the itching is but a symptom. Having done so we must make a careful examination of the patient in the light of its etiological factors, and endeavour to correct any derangement which is found to exist. If the itching still persists, then the disease must be treated empirically. After referring to the subordinate importance of most local applications, and to the use of tincture of gelsemium and cannabis indica (Duhring) and carbolic acid (Hebra) internally, he expressed his preference for the employment of electricity, atropia subcutaneously, or the coal tar derivatives, such as antipyrin and phenacetin, in gradually increasing doses. If there is any suspicion of nervous or nutritive debility, nerve tonics, such as phosphorus, arsenic, or strychnia, alone or in combination, may be tried, the last two preferably by subcutaneous injection.

Dr. H. G. BROOKE (Manchester) first remarked on the term "pruritus," distinguishing this symptom from the term "prurigo," used in reference to conditions in which the secondary lesions from scratching are prominent. He preferred to use both the terms in such a generalised meaning as is now universally accepted when the word "lichen" is mentioned. The symptom of itching was then considered from the physiological aspect and its anatomical substratum located in the epidermis, both Dr. Brooke and Professor Anderson mentioning the significant fact that a wound itched while the epithelium was growing over its surface, not while it was in the stage of granulation. The opinion of Bronson, who considers itching to be a perversion of the sense of touch, was quoted, and served as a basis for an analogy between the altered sensation of touch, which we recognise as itching, and the physiologically-developed sensation of touch subserving the sexual emotion. The paroxysms of pruritus that occur in certain diseases requiring violent scratching to produce relief were compared to the sexual orgasm, and the analogy adduced by collateral evidence of complex nerve

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states underlying both of these modified touch conditions. The importance of some method of classification of the various causes of pruritus was emphasised, and the reason of the difficulty of making such a scheme accurate was mentioned; for in many cases, as has been so often observed, it is impossible to say whether the itching is the primary condition, or, on the other hand, follows a skin lesion which may have been slight or have even passed unnoticed. The following arrangement of causes was advanced as being approximately accurate:—1. Internal. In this category is placed the purely *nervous pruritus*—the primary pruritus of French authors. The tendency of the French school to deal much in "nerves" was alluded to, and the symptoms of "lichenification," so frequently described as a result by French authors, was looked on as some indication that their many cases of purely nervous pruritus may be due in some instances to a primary skin lesion. That pruritus may occur, however, without lichenification was not denied—e.g., in cases "Pruritus sine Prurigo" of some authors—a condition occurring in the old, though also occasionally among the young. Other causes of certain localised varieties of pruritus were mentioned on the occurrence of seborrhœa as a cause especially mentioned—e.g., in genito anal pruritus. The occurrence of the purely nervous itching was then described more in detail, and the speaker considered it to be a "diathesis of itching," demanding external manifestation, and accompanied not infrequently by internal metastases such as hay fever. Other forms of nervous itching, the expression of organic nerve disease, alienated mental states due to reflex causes, &c., were also placed in this division. The influence of various poisons in the blood—e.g., in gout, jaundice, diabetes, rachitis, foods, and drugs, was considered as occupying a place in this part of the scheme. 2. External: This division was more readily dealt with, many of the causes—e.g., local skin diseases and parasitic skin diseases—being visible and more readily dealt with. But Dr. Brooke drew attention to the fact that the local cause might be very insignificant, although its effects by means of reflex nerve irritation were manifested over a wide area, frequently in a very severe degree. The pruritus due to changes in temperature was dealt with in this place, and much interesting evidence adduced to show that changes in blood-pressure were frequently the cause of irritation of the skin in many apparently dissimilar conditions. The importance of the relief of the symptom of pruritus was emphasised, and it was to be recollected that its treatment could be properly undertaken only when the underlying causes were taken into account.

After a few remarks by Dr. EDDOWES showing the relations of symmetrical parts of the body by reflex nervous mechanism,

Dr. MYRTLE (Harrogate) spoke of the difficulty of treatment. Remedies beneficial to one patient were noxious to others with apparently similar affections. The coal-tar preparations and chloral were remedies that in his experience were the most generally useful. Although in certain cases of obstinate pruritus the application of potassa fusa, in solution of 15 gr. to 60 gr. to the ounce, over the affected areas produced great relief.

Dr. WALDO (Bristol) mentioned that in certain cases the application of blisters over the spine, in situations corresponding to the affected areas of the skin, frequently availed much in treatment, while in the peculiar variety of pruritus associated with osteo-arthritis the exhibition of sodium salicylate was to be recommended.

Dr. STOPFORD TAYLOR (Liverpool) felt that in the majority of cases internal medication was of no avail, while much benefit could be obtained by carefully adapted exercise, diet, and general hygienic precautions. The present epidemic of cycling had brought to his notice many cases of pruritus ani among those no longer in the first blush of youth, and he advised the precaution of wearing proper clothing, while the use of spirituous lotions gave much relief. The use of potassa fusa, he thought, could be necessary only in very severe cases.

Mrs. GARRETT ANDERSON remarked on the nervous pruritus so frequently observed in women, and in men who led lives approaching in their conditions those of the women under consideration. She thought that the cause was to be found in the insufficient, improper, and monotonous diet indulged in by these persons, while often at the same time they were engaged in mentally exhausting and sedentary occupations. In the treatment of these cases she advised that the diet suitable to the individual should be found and double the quantity usually consumed ordered to be taken. A rest of an hour before dinner proved most beneficial, while the substitution of silk instead of woollen or linen underclothing should be advised when possible.

Dr. BARENDT (Liverpool) advised careful consideration of the details of all local treatment in pruritus to secure, as far as possible, the accurate carrying out of any plan adopted. In his experience the application of a 2 per cent. solution of carbolic acid in olive oil for five minutes at a time has produced strikingly good results. In certain other cases blisters over the spine had been of service.

Professor MCCALL ANDERSON then summed up, and concluded a very interesting and instructive discussion.

Pityriasis Rubra.

Dr. JOHN LIDDELL (Harrogate) read a paper on two cases of Pityriasis Rubra Pilaris (Devergie), illustrated by photographs, coloured drawings, and microscopic specimens. One of them was that of a girl about fifteen years of age, who had considerably improved under resorcin ointment. A careful study of the histology of the skin had been made, and Dr. Liddell came to the conclusion that the essential change in the disease was an exaggerated keratinisation of the root-sheath which gave rise to the cup-shaped elevations so characteristic of the disease. There was also an increased formation of hairs which was due to a nipping off of portions of the rete connected with a follicle, which itself gave rise to a fresh hair follicle. There was atrophy of the sebaceous and sweat glands. Masses of cells which Dr Liddell described as "parasitic" were also found in the corneous layer.

Dr. ALLAN JAMIESON (Edinburgh) and the PRESIDENT took part in the discussion, the latter remarking that it was a curious fact that the disease, which was undoubtedly a somewhat rare one, had been extremely rare since the death of Dr. Tilbury Fox, only six cases having come under his notice since that time. It was important not to confuse this disease with lichen planus and lichen acuminatus, although both flat and conical papules occurred in this disorder.

A discussion on the Pathology and Treatment of Pruritus was introduced by Professor MCCALL ANDERSON (Glasgow) and Dr. H. A. G. BROOKE (Manchester).

Dr. PYE-SMITH read a paper on the Affection of the Skin occurring in the course of Bright's Disease. Willan had long ago observed a disease, which he called erythema laeve, to be associated with dropsy. Four kinds of skin disorder had come under Dr. Pye-Smith's notice with this relationship: 1. A bright red diffused rash, of general distribution, but generally sparing the hands and feet. 2. Another kind of erythema, having a different distribution and more or less localised. In these the skin was dry and harsh. 3. A moist dermatitis resembling eczema. 4. A diffuse desquamative dermatitis, resembling the exfoliative dermatitis of Wilson, but still more like the pityriasis rubra of Hebra. These occurred chiefly in connexion with tubal nephritis, and were unknown in lardaceous disease of the kidney. They all had the common characters of being superficial and bearing no traces; were acute or subacute in their course and did not tend to recur; they were never pustular in character, though boils were apt to arise independently: they were occasionally, though rarely, purpuric; and, lastly, were usually unattended by itching and other subjective symptoms. The prognosis was not in his experience modified by the occurrence of skin complications, though they generally arose in the incurable stage of renal disease. He did not regard them as of uræmic origin, but associated rather with the neuro-retinitis and serous complications so common in renal disease. They generally arose in patients beyond middle age, and yielded readily to external remedies.

The PRESIDENT remarked that his experience led him to regard these complications as of uræmic origin, as greatly adding to the gravity of the case and as having a markedly lethal tendency.

Dr. SAVILL, referring to the desquamative complications of renal disease, said that his subsequent experience of the epidemic skin disease had led him to believe that renal disease constituted a marked predisposing cause to contract this disorder. Out of five or six cases which he had seen of these diseases concurrently not one had recovered, although the patients were in other respects favourable subjects for the skin disorder. He therefore regarded it as a most serious complication.

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Dr. PYE-SMITH, in reply, gave reasons for not regarding these complications as of uræmic origin. The exfoliative variety was rare in his experience, but he thought it might very likely be related to the epidemic skin disease described by Dr. Savill.

Dr. PATRICK MANSON gave a demonstration on the Guinea-worm. After a brief description of the anatomy of dracunculus medinensis or guinea-worm, Dr. Manson pointed out that the views formerly held with regard to the way in which this parasite obtained access to the human body were erroneous. He showed that the guinea-worm parted with her embryos before she quitted the human host, and that the process could be provoked by simply pouring a little cold water on the limb in the neighbourhood of the guinea-worm ulcer. The water seemed to act as a stimulant to the worm, which could thus be induced to contract and expel the young through her mouth, the uterus being prolapsed for an inch or two. In this way Dr. Manson obtained a large supply of embryo guinea-worms and repeated Fedschenko's experiments with cyclops quadricornis, confirming the results of the Russian naturalist and somewhat extending them, and showing that the English cyclops was an efficient intermediate host of this parasite. The young guinea-worms on escaping from the uterus of the parent swim about in the water until they encounter a cyclops. They then attack the crustacean, boring their way between the ventral plates until they get into the body cavity. Here they move about quite freely, as many as ten or twenty lying together in the body cavity, and not apparently inconveniencing the cyclops. The embryo now casts its transversely striated integument along with the swimming tail, the latter giving place to a short conical stump. Later a second moulting takes place, eventuating in a tripartite tail, increase of size, and a somewhat more elaborate alimentary canal. The parasite enclosed in the cyclops is then transferred, probably in drinking water, to the human stomach. From the stomach, after digestion of the cyclops, the guinea-worm is supposed to work its way into the connective tissues of its host, and in the course of time to attain sexual maturity. Dr. Manson deprecates interference with the guinea-worm until she has emptied her uterus of embryos. He pointed out that she then tends to come out spontaneously. He also thinks that the new treatment by injection of perchloride of mercury solution in the neighbourhood of the guinea-worm sore may be useful in killing the worm and procuring her aseptic absorption. Four microscopic preparations were exhibited and also some lantern slides, showing the embryo guinea-worm in its free state, in the body cavity of cyclops, and at the conclusion of metamorphosis, seventy days after the parasite entered its intermediate host.

Dr. JOHN GALLOWAY gave a demonstration of lantern slides illustrative of the Pathology of the Skin Affections, chiefly vesicular and bulbous eruptions which arise in syringomyelia, based on two cases which he had observed. One of these cases had been attended in the early stage with the usual perversions of pain and heat sensations, and later developed trophic affections of the skin. The other had developed great deformity of the hands consequent on trophic changes in the phalanges and nails. Dr. Galloway attributed these and the skin changes to local causes.

After a few remarks from the PRESIDENT and Dr. SAVILL,

Dr. A. J. HARRISON narrated two interesting cases of Verruca Necrogenica, which had not, however, so far as could be discovered, had any origin in a post mortem examination or handling of dead carcases, such as is usual in these cases.

ETHICS.

Address by the President of the Section.

Dr. W. F. CLEVELAND, Consulting Physician to the Kilburn Dispensary, read an address, in which, after claiming that ethics cannot be neglected as a subject because they do not form a science, and quoting the views of many of the best known ancient and modern philosophers on the conduct of life, he came more particularly to medical ethics by saying:—In that branch of ethics with which we are more particularly concerned there can be little doubt that the *lex non scripta* has ever been highly efficient for the guidance of those members of the profession who could be styled in the true sense of the word gentlemen. But what has been euphemistically called "the difficulties of general practice"—a term which crystallised into plain language means too often "the struggle for existence"—has altered the general aspect of medical ethics. Keen competition arising from various causes, among which may be mentioned the overcrowded state of the profession, advanced general sanitation, which lessens the demand for our services, and the tendency among the educated to prescribe for themselves, and among the poorer classes to seek advice gratuitously or in the cheapest market, has for years been engendering a greater or less amount of moral laxity among our brethren, and so it has come to pass that a medico-ethical code has been framed with the view of correcting the errors of those who, through ignorance or carelessness or ambition, might be drawn from the path of rectitude and professional honour. Such a code or collection of rules and laws was first drawn up by Dr. Percival in 1807, and this has, with but slight alterations, formed the basis of the subsequent code of the American Medical Association, as well as that of the well-known and excellent work of Mr. Styrap. Now it would only be uttering a truism to contend that the ethics of our profession can be made to turn on any other pivot than that which is embraced in the great moral precept, "Whatsoever ye would that men should do unto you, even so do unto them." It may, I presume, be taken for granted that the civilisation and social development of the nineteenth century have created a platform for practical or applied ethics, and that a code, founded on the observations and experience of those who, by their position in the profession, are worthy of our respect, is not only necessary but likely to be appreciated. But it goes without the saying that for a medico-ethical code to work or bear fruit it is not only essential that we should acquaint ourselves with its rules and directions, but that we should show a ready allegiance to them while they remain in force: for, I take it, as reasonably might we expect a number of artisans or agricultural labourers, who had never seen a compass or studied a chart, to navigate a ship from London to New Zealand, as the members of our profession, in the present complex relations of society, to pursue their course with ethical precision without the aid of the written as well as the unwritten law. As in physical science Nature must be constantly interrogated or made the subject of experiment, so, in order to keep a medico-ethical code up to date, or make it suitable for ethics viewed as a progressive science, we must interrogate history and society, especially that portion of the latter occupied by our profession, and we must note with an open mind the experience of others as well as our own. By such means we may hope to deduce conclusions from which laws for guidance may be ultimately obtained. Under the term "medical ethics" is comprised such a large number of interesting questions that the attempt to discuss all of them on this occasion could not fail to be disappointing. In our programme we have selected some of the more prominent ones, in the hope that they may engage your best consideration, and that a friendly and dispassionate consensus of opinion regarding them may be arrived at, which shall have its proper weight and influence on the mind of our large Association and of the profession generally.

In conclusion, gentlemen, I would remark that we are living in a practical age—an age in which few projects are undertaken that have no *cui bono* in them. Now, what is the *cui bono* of this our Ethical Section? Shall I be too sanguine if I say we hope, through its means, to assist in raising the general status of the profession? In my opinion we shall do so if we can only make it our resolve to uphold, as far as possible, the reputation not only of our friends, but also of our legitimate or qualified competitors, when it is attacked, rather than by significant silence or innuendo to depress them to a level below ourselves. Depend upon it nothing sinks the profession in the estimation of the public more than their observance of the fact that too often we are a body pretending to a regard for honour and etiquette amongst ourselves, while our conduct proves that we are far from being at unity within ourselves. Again, may we not hope, as an outcome of this conference, to stimulate the cultivation of more friendly feelings towards each other, and thereby conduce to that equanimity and satisfaction which every right-minded person enjoys who is on good terms with his neighbour? And, lastly, may we not discover a *cui bono* in the very publicity that is given to ethics by the holding of this Section? Is not our meeting together on this occasion evidence of the conviction that a medico-ethical code to which we can agree is essential for our guidance in the fulfilment of those rights and duties which we owe to each other, ourselves, and the public?

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Intra-Professional Etiquette.

Mr. T. GARRETT HORDER (Cardiff) then introduced for debate the subject of Intra-professional Etiquette. After expressing his great satisfaction at the formation of a section of Ethics he pointed out that the loyal and faithful observance of the rules of intra-professional etiquette had an importance which could scarcely he over-rated. It was absolutely necessary that medical men should show mutual consideration and sympathy, else they could hardly expect to escape unfair treatment on the part of the public. Moreover, if patients were made acquainted with the general rules which govern our professional life they would be more likely to avoid courses which tend to place medical men in unpleasant positions. The subject might be conveniently classified under three headings: (1) The etiquette of private practice; (2) that of club appointments; and (3) that of consultation. In the first place, there is no question as to the right of patients to change their medical attendants. In cases of incurable disease there is a natural anxiety on the part of sufferers to try every means which promises relief; they go from one practitioner to another, and it is from such patients that quacks extract large sums, for these gentlemen are troubled by no doubts or misgivings—their remedies are infallible and their charges are liberal. Before accepting a patient who has already been under the charge of a brother practitioner, we should make sure that the previous attendant has been informed of the intended change, and it is a good plan ourselves to communicate with him directly. When consulted by patients who are also members of a club, we should do nothing to embitter the relations between a club medical officer and his patients. Club practice is difficult to carry on, and becomes much more so when it is known that other medical men are willing to accept the office. With respect to the etiquette of consultations, it must be remembered that the relations between the public and specialists have undergone a great change. Formerly the consultant communicated the result of his examination to the family practitioner, but patients now consult specialists without making their intention known to their ordinary attendant. As a general rule, however, the consultant should enter into communication with the family practitioner. For meeting the cases in which the consultant has contrived altogether to supplant the previous attendant it is most desirable that a court of appeal should be instituted by which ethical questions might be examined and decided.

Mr. LEE (Cork) said that some time ago the medical officers of all the medical clubs in Cork resigned their appointments in consequence of abuses whereby wealthy persons were permitted to become members of clubs and obtain medical attendance for seven-and-sixpence a year. The appointments are now held by four imported medical men, whom the profession in Cork do not meet in consultation, and some anxiety is felt by the latter as to their proper course in the event of their attendance being requested on account of dangerous illness (such as post-partum hæmorrhages) among the patients of the club practitioners.

Dr. PEARSE said that the same question had arisen at Portsmouth, where there is an enormous medical club connected with the Dockyard. He thought that no such consultations should be held.

Mr. H. HEMMING urged that in any course that might be adopted due care should be taken that the lives of patients were not endangered.

Drs. HARRIS, WOODS, and MCNEE also took part in the discussion.

Advertising.

Dr. G. W. POTTER read a paper on Advertising. Having defined professional advertising as the public or private praising of a man in his professional capacity by himself or his agents for fame or gain, he observed that it is a vice from which the most highly placed members of the profession are by no means free, and that it is unreasonable to expect the man who takes 2*s.* fees to be ethically precise while the 2-guinea consultant advertises boldly and unashamed. No method of advertising is worked more energetically than the compilation of books. Can it be seriously maintained that the large number of medical works issued from the press are *bonâ fide* intended for the information and instruction of medical men? Some time ago a practitioner persuaded one of his patients to purchase a book which he had written. The price was a guinea, the book was highly technical, and no injustice is done to the author by assuming that his object was to advertise himself and his merits to the patient and the patient's friends. Another device was the leaving of cards at private residences, and a third was in connexion with newspaper paragraphs relative to the illness of prominent individuals. Some of these announcements were unobjectionable from the friends' point of view, but in too many instances the qualifications and the residence of the medical attendant were given with a fulness which left no doubt as to the ulterior motive. Another class of advertisers are the men who give certificates to vendors of foods and other commercial articles. These certificates are duly published in newspapers with many cunning additions. One gentleman in his widely advertised testimonial to the excellence of a certain food inserted the statement that it had been used by many of his influenza patients, of whom he had attended seven hundred without losing one. Another form of medical advertising which is very common and on the increase is the writing of books with catchy titles, which make a great show (of course with the author's name) in the publishers' lists given in the lay press. Needy practitioners in poor neighbourhoods seek to draw attention to themselves by methods of which the better class of tradesmen would be ashamed. There is a special demerit in professional advertising which must be plainly recognised both in order that no injustice may be done to our profession and in order that the public may be enlightened on the subject. The state of the case so far as it concerns the public is that the professional advertiser can by no means guarantee the results of treatment which are at least suggested in his advertisements. A commercial advertiser undertakes to deliver a certain article, and does so, whereas a medical man can only guarantee services—results he cannot guarantee. From the professional point of view, the advertiser takes an unfair advantage of his professional brother who does not advertise.

Unqualified Assistants.

Mr. GEORGE BROWN read a paper on Unqualified Assistants. He commenced by remarking that when he first entered the profession thirty years ago the employment of unqualified assistants was an ordinary proceeding, and that he himself while still a student had been assistant to a medical man. In various ways he came to see the disadvantages of the system, and in 1874 THE LANCET[1] published a letter written by him, the outcome of which was the formation of the Medical Defence Union, with Dr. (now Sir) Benjamin Ward Richardson as president. He (Mr. Brown) was for many years secretary of this association, and had ample opportunities of witnessing the results of unqualified practice. In some cases it was carried on with considerable success, the practitioners having been originally assistants to medical men under whom they had acquired much proficiency in the details of practical work. The system, however, abounded with opportunities for abuse, mainly in connexion with the working of branch practices not under the immediate control of the qualified principal, and there appeared to be no means of effectually dealing with the evil. It used to be said that the General Medical Council was concerned only with medical education and registration and not with such questions as this; but since 1886 the Council has taken notice of very gross cases of the employment of unqualified men, and several practitioners have been removed from the Register under the clause of the Medical Act which refers to infamous conduct in a professional respect. The employment of unqualified assistants is inadvisable both on personal and professional and public grounds. Examples of personal injury due to this cause are to be found in the cases where the purchaser of a practice fails to secure his predecessor's patients because the unqualified assistant, having lost his situation through the transfer, persuades them to put themselves under the care of some other practitioner, even one who may have been brought into the district by the assistant himself. Unqualified assistants who have been discharged have also been known to levy blackmail on their late employer on the ground of irregularity in certificates which the assistants themselves have partly filled up. In the second place, it is hardly necessary to remark that through the competition of unqualified assistants young medical men find it difficult to obtain employment, and are driven to such unprofessional courses as the distribution of handbills, and the formation of dispensaries. But the evil is greatest on public grounds. Many cases of permanent loss

[1] THE LANCET, Nov. 14th, 1874.

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of health, or even loss of life, are attributable to unqualified practice. An enormous responsibility rests upon principals who render such things possible, and it is our obvious duty to discourage in every possible way the employment of unqualified assistants.

Mr. BRINDLEY JAMES continued the subject, expressing a somewhat more favourable view of the unqualified practitioners, and Drs. GREENWOOD, JOHN BROWN, and BRIDGWATER took part in the subsequent discussion.

THE CLINICO-PATHOLOGICAL MUSEUM OF THE BRITISH MEDICAL ASSOCIATION.

[FIRST NOTICE.]

Situated as it is at the very top of the Examination Hall, and with scarcely any announcement in the official publications of the Association, there are probably few who have done justice to the magnificent collection clinical and pathological material, gathered with so much pains into this temporary museum. We propose, therefore, to notice with some detail, first, the exhibits of morbid anatomy; secondly, the bacteriological exhibits; and, lastly, the patients who were shown each day.

Some idea may be gathered of the wealth of pathological material collected when it is mentioned that nearly all the museums of the Metropolis were visited and placed under contribution; and great credit is due to Messrs. Edgar Willet and J. H. Targett, who were charged with this enterprize. A descriptive catalogue, numbering 84 pages, adds greatly to the value of the collection.

The first Section, dealing with the results of operations on the urinary passages, illustrates the value of collecting a number of specimens from different sources. Nos. 1 to 24 are kidneys removed by operation, mostly with successful issue, for various forms of disease, amongst which may be mentioned cystic sarcoma, adenoma, hydro- and pyonephrosis, due chiefly to calculi, tuberculous disease (the case, a girl of seventeen, making a perfect recovery). It is interesting to note in passing that these specimens confirm the well-known fact that malignant disease (both sarcoma and carcinoma) is liable to involve the kidney in early life as well as beyond middle life, the major portion of the patients ranging from twelve months (sarcoma) to nineteen years, the others being from forty years upwards. Next comes a series of three very perfect specimens from different museums illustrating hydronephrosis of the kidney and dilated ureters consequent on calculus impacted in the bladder, stricture of the urethra, and congenital phimosis (a youth who died at seventeen).

The next series illustrates the results of operations on the alimentary canal, in which direction surgery has made such notable advances during the past year or two. Eleven specimens illustrate the results of gastro-jejunostomy, chiefly for malignant stricture, the patients surviving for periods varying from three days to eight months. In three of these Senn's bone-plates were used. In the case which survived three days the plates were still present, but in those who lived five and eight days they had entirely disappeared. Several cases of pylorectomy and resection of other portions of the alimentary canal for gangrene, injury, and disease are exhibited—a study of which is very instructive as to the different sutures and methods employed. Some lived for four months and longer periods, one of them (resection of cæcum for carcinoma) dying of double pneumonia nine months afterwards. One is a relatively successful suturing of the stomach after perforation of a simple ulcer. In another case of pylorectomy the patient only died two years later from influenza. One of the many dangers is revealed in another specimen, which was successful in the first instance, but the Murphy's button in passing down the intestine caused ulceration and perforation of the intestine ten inches below the resection, resulting in death twenty-eight days after the operation.

Specimens 82 to 91 illustrate the results of operations on the vermiform appendix, and the various foreign bodies and concretions around them which give rise to inflammation in and around this structure. Most of these cases made good recoveries. A large number of gall-stones and specimens of the various injuries to which they give rise form part of the collection. Many of these were large enough to result in intestinal obstruction, some were removed by cholecystotomy. Some were found post-mortem in the right pleura after death, whither they had passed by ulceration and caused empyæma. One large gall-stone, measuring four inches and a half in circumference, was successfully removed by enterostomy. These large gall-stones, more commonly than is generally supposed, give rise to intestinal obstruction, and a collection is shown which were passed per anum.

The next series is a remarkable collection of foreign bodies which had passed through, or been impacted in, the intestines, such as a dessert spoon, a button hook, several tooth plates, an egg cup, and a porcelain jar measuring two inches in diameter. The latter had been inserted by the patient into the rectum to allay anal itching. Its removal was only effected after abdominal section and other procedures, which set up a fatal peritonitis.

Various new growths and other lesions of the larynx are well represented, and include the left ala of the thyroid cartilage removed for carcinoma from a well-known legal gentleman, who survived the operation seven years.

Diseases of the joints are not numerously represented, but the specimens are of great interest, for they illustrate syphilitic lesions. They present the very characteristic appearance of deep crescentic erosions of the cartilaginous surfaces, with sharp edges, having a worm-eaten appearance. Altogether six specimens of this rare and interesting condition have been collected from the Royal College of Surgeons, St. Bartholomew's and St. Thomas's Hospitals, and the private collection of Mr. Davies-Colley.

Specimens 191 to 245 form a very perfect series of intracranial tumours of great interest in view of the attention now paid to this department of surgery. All of these repay careful study, but we have only space to notice a globular fibroma measuring nearly two inches in diameter, occupying the motor centres of arm and leg in the right hemisphere of a patient who died of double pneumonia. There were absolutely no symptoms referable to brain disease during life, a fact which only receives partial explanation from the slow-growing nature of this tumour. Six specimens illustrate simple cysts of the cerebellum, the origin of which disease is still a matter of dispute. Tumours of the spinal cord are also well illustrated, with the exception of syringo-myelus, of which there is only one specimen.

An excellent series of injuries to the epiphyses is to be found in numbers 264 to 282, and a very complete set of specimens illustrating various fractures of and injuries to the neck of the femur has been lent by Sir William Stokes which, unfortunately, arrived too late for mention in the catalogue.

Illustrations of all the lesions known to arise from actinomycosis, both in man and animals, have been collected from all available sources, and next to them come thirteen bottles of Madura hands and feet, a disease closely allied to, if not identical with, actinomycosis—another example of the care and scientific knowledge with which these specimens have been selected and arranged. Then, in natural order, come a series showing the various tuberculous, anæsthetic, and trophic lesions of leprosy, and another foreign disease, Ainhum, endemic to the west coast of Africa, which produces constrictions and loss of fingers and toes, resembling leprosy in all respects, except that the parasite differs notably in its form and life-history. Some perfect specimens of bilharzia hæmatobia conclude the Foreign Section.

Nos. 335 to 364 illustrate hydatid disease of almost every viscus in the body—liver, brain, lung, heart, peritoneum, spleen, kidney, spine, long bones, &c.—and show the various stages through which these diseases pass and the accidents to which they may give rise. Rare tuberculous affections, chiefly ulceration, of the stomach, peritoneum, pleura, tongue, and other organs are also exhibited. Nos. 379 to 407 form a series of congenital affections of the heart, not only patent foramen ovale, which is most common, but all other known conditions.

Specimens of acromegaly and the constant concurrent conditions of enlarged pituitary body follow next, and then a series of the senile symmetrical thinning of the calvarium, together with a specimen of the same condition in the ourang-outang, which is one of the reasons for refuting the supposition that this change arises as a consequence of syphilis or the carrying of weights on the head.

Specimens of the bones in Barlow's disease (scurvy rickets), hermaphrodism, gynæcology, the injuries to infants during parturition, and a large series of calculi removed by Mr. Henry Morris, and lent by the Middlesex Hospital, complete a pathological collection of which, for the purpose of

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interest to the practitioner as distinct from a purely educational series, London may well be proud.

We propose to notice next week the bacteriological and clinical portions of the museum.

THE MUSEUM.

The exhibits of the twenty-eighth annual museum were shown for the most part on the first-floor of the examination-hall—for the most part since, owing evidently to the great number of applications for space, some were assigned a place in the rooms of King's College, while the curious and unique collection of medical, surgical, and pharmaceutical antiquities exhibited by Messrs. Oppenheimer were set apart in the Victoria rooms of the adjoining Savoy Hotel. This collection, which attracted so much attention, has been made by Dr. Luigi Sambon of Rome, who, under the instruction of the Italian Government, has commenced a work on the History of Medicine for presentation at the next meeting of the International Medical Congress. The collection is chiefly composed of surgical instruments, which date from the first to the fifteenth century, and terra-cotta votive offerings of ancient Italy. Of more modern times, but of equal interest to the visitors, was the case exhibited by Messrs. Burroughs, Wellcome and Co., containing the famous Jenner relics. Amongst them were a portrait and miniature of the discoverer of vaccination, a small medicine cabinet, hair from the tail of the first cow that furnished virus for vaccine inoculation, lancet cases, vaccine points, and the chair in which Jenner breathed his last. Further on was to be seen the case of instruments which belonged to and was carried through Africa by Dr. Livingstone, and other medical relics connected with this great explorer. A still more recent relic shown by this firm was the famous Stanley chest, which contained the medicines employed in the Emin Relief Expedition. Except for some illustrations of ancient surgical instruments and methods shown amongst a few others by Messrs. Southall Brothers and Barclay (of Birmingham), there were no other exhibits possessing any particular historical interest; we pass, therefore, to the display of those things which may be taken to illustrate the rapidly increasing requirements of modern medicine, towards the advance of which mechanical skill and the enormous progress which pharmacy of late years has made, contribute not a little. For this purpose we may classify the exhibits under the following heads: (1) Drugs and their various administrative forms; (2) Medical and Surgical Appliances; (3) Special Foods and Food Adjuncts; (4) Sanitary Appliances; (5) Mineral Waters, Beverages, &c.; (6) Miscellaneous; and (7) Literature.

I.—DRUGS.

Notable progress has been made in the preparation of the organic remedies of animal origin, and it is to be observed with considerable satisfaction how fully alive the bulk of manufacturing chemists are to the importance of organic extracts being of a standard and thoroughly reliable order. Messrs. Burroughs, Wellcome and Co. (of Show-hill, E.C.), for instance, have been remarkably successful in providing a permanent substitute for the aqueous alcoholic and glycerine extracts. Thus tabloids representing the whole substance of the organ from which they are prepared, so insuring the presence of the active principle, are now made embodying the extracts of thyroid gland, thymus gland, supra-renal substances, ovarian substance, didymin (orchitic substance), cerebrinin, pituitary body, kidney substance, spleen substance, uterine wall substance, bone medulla, and pineal gland. A dry variety of anti-diphtheritic serum, in the form of brilliant non-deliquescent scales, is also supplied. Messrs. Allen and Hanburys (of Plough-court, Lombard-street, E.C.) make also reliable preparations of animal extracts, notably thyroidin in the form of powder to be administered as cachet, or tablet, or as a liquid in their elixir. Typical of these are the grey matter of the brain, bone marrow extract, thymus gland extract, and so on, while this firm have also in hand the disposal of the antitoxins prepared by the British Institute of Preventive Medicine. With the stamp of approval of experimental investigation upon them are the similar preparations of Messrs. Willows, Francis, and Butler (of 100, High Holborn), who have given special attention to this important line of manufacture, extractum corticis cerebri, supra-renal preparations, pituitary body, thyroid extract, pancreatic extract, orchitic extract, being amongst the new therapeutic agencies of this class which they prepare. Evidence again of the necessity which large druggists have found of adding a bacteriological laboratory to their equipments is afforded in the anti-diphtheritic serum of Messrs. Parke, Davis and Co. (of North Audley-street, W.), the strength of which is determined by Behring's method, while every precaution known to science is taken to insure its sterility. Pure sterilised culture media are also supplied by this firm. Desiccated thyroids—one gland equals twelve grains—prepared from fresh healthy glands, carefully dried and freed from grease, are supplied, too, by Messrs. Armour and Co. (of Chicago), the excellence of whose laboratory products is well-known. The extract is procurable in the convenient form of tablets of five grains, each being equivalent to one-third of an entire healthy gland. The ingenious palatinoids of Messrs. Oppenheimer and Co. (of Worship-street, E.) afford again not only an excellent means of administering the organic extracts, but also of preserving them from change. Thus enclosed in the tiny, watch-glass, air-tight jujube are to be found thyroid, thymus, supra-renal, red bone medulla, and pituitary body substances. Organic extracts were also amongst the very long list of preparations shown by Messrs. Ferris and Co. (of Bristol). Every possible care is taken to make them reliable since each gland is minutely examined before being used, and all diseased lobes are rejected while every appliance used during the process is kept jealously sterilised.

Coming to those drugs which, in contrast to the remedies just described, are of chemical and botanical origin, we may first notice the various and multifarious administrative forms in which they are now fashioned and with a distinctive form of which so many firms are identified. Messrs. Burroughs, Wellcome & Co., for example, have placed at the practitioners' disposal almost every known remedy in the form of tabloid. Amongst the recently added we may mention the Blaud's pill tabloid, aural tabloids, nasal tabloids, tea tabloids, photographic tabloids, soloids (tabloids of mercuric chloride convenient for preparing an antiseptic mercurial solution of the strength recommended by the Local Government Board Memorandum of 1892). Under the name of tabellæ Messrs. Allen and Hanburys possess a list well-nigh replete with the remedies of the Pharmacopœia. Amongst those which call for special mention are those containing bitter medicines, coated with sugar, as cascara, quinine, &c. Other tabellæ are made, which, consisting of sparingly soluble substances, like bismuth, sulphonal, &c., are so prepared as to readily disintegrate on coming in contact with moisture. Hypodermas or tabellæ, which dissolve instantly without the aid of either heat or trituration, are admirably adapted for the ready and rapid preparation of a solution for hypodermic purposes. Convenience and ease of administration of drugs in loose powdered form are again exemplified in the palatinoid of Messrs. Oppenheimer, while there are obvious advantages in the ingenious bipalatinoid, in which two drugs may be kept apart until they are administered, when the ingredients react, producing the new and freshly obtained medicament, as for instance, carbonate of iron from carbonate of soda and sulphate of iron (Blaud's formula), arseniate of iron from arseniate of soda, and sulphate of iron and so on. Novelties of administrative form are illustrated again in the admirable gelatine lamels of Messrs. Savory and Moore (of New Bond-street) which consist of small gelatine sheets ruled in squares and impregnated with the required medicament, each square containing a definite quantity. Thus the quinine sulphate lamel contains one grain of the drug in each square. Worthy of special mention also are the elegant preparations of the same firm—gelatine ophthalmic discs. First prepared by Messrs. Savory and Moore, these convenient and absolutely clean means of applying drugs for ophthalmic purposes have come into extensive use. They consist of delicate films of soft gelatine impregnated with a perfectly definite weight of the medicament. Accuracy of dosage, constancy and reliability of composition, are the advantages secured by the method of Messrs. Duncan, Flockhart & Co. (of Edinburgh), which is illustrated in their capsules, cachets, and permanently plastic pills. The Blaud capsules, for example, never harden, and contain 92 per cent. of iron in the ferrous condition. The Morstadt cachet shown by Messrs. Thomas Christy and Co. (of Lime-street, E.C.) is another well-known means of exhibiting medicaments, and consists of sunk discs of rice paper. A very large and excellent variety of preparations in capsules, tablets, sugar-coated pink granules, ophthalmic and hypodermic tablets, tablet triturates were amongst the

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brilliant show of Messrs. Parke, Davis and Co. The "triturates" containing the finest materials, are claimed to be permanent, soluble, and therapeutically efficient. No less than eighty varieties of medicinal capsules of soluble gelatine occur in the well-stocked list of Messrs. Ferris and Co. (of Bristol), who also prepare soluble pearl- and gelatine-coated pills, as well as tablets of compressed drugs. Messrs. Cooper and Co. (of Gloucester-road, South Kensington) have recently introduced a novel and important departure in cachets. Thus delicately coloured cachets are prepared, or white cachets upon which is printed a neat inscription indicating the nature and quantity of the contents. The printing is executed either upon the ordinary white cachets or upon those of which the paste is previously tinted the desired colour. The colours employed are perfectly harmless, and comprise pale or dark rose, carmine, garnet, sky blue, pale salmon, &c. The process is elegant and the product the perfection of cachets. The pills and pastils, and especially the latter, afford additional evidence of the elegance and superiority of the specialities and administrative forms of drugs shown by this firm. A large variety of capsules of desirable flexibility and solubility, including Blaud's pill, salol, guaiacol, cascara, and other drugs, were amongst the improved pharmaceutical preparations of Messrs. C. J. Hewlett and Son (of Charlotte-street, E.C.). Capsules of creolin for internal use were exhibited by Jeyes' Sanitary Compounds Company (of Cannon-street, E.C.). Every kind of convenient administrative means of exhibiting drugs were comprised in the productions of Messrs. Robertson and Co. (of Edinburgh) amongst those calling for special notice being the excellent flexible gelatine ferruginous capsule, the elegant "gelatine perles" of apiol, calcic sulphide, &c., capsules for export, glyco-gelatine pastils of various combinations, and compressed drugs. Specialities of the same class occurred also in the exhibit of admirably designed, soluble, transparent, capsuled, pearl-coated, and sugar-coated pills and granules of Messrs. Mackey, Mackey and Co. (of Grange-road, Bermondsey, S.E.). Several of the excellent pharmaceutical preparations of Mr. W. Martindale (of New Cavendish-street, W.) consisted of pastils, pilules, and granules, capsules, gelatinous medicated chocolate, and other forms calculated to afford ease and convenience of administration, while with the same aims in view were the cachets, compressed pellets, tincture pellets, pearl-coated pills and pilules, oval gelatine pills, and the flexible and soluble gelatine capsules comprising the excellent specimens of pharmaceutical elegance and skill of Messrs. Wyleys & Co. (of Coventry and Birmingham). Lastly the tablets, parvules, and granules of Messrs. F. Newbery and Sons (of King Edward-street, E.C.) including preparations of ingluvin, the digestive substance of the gizzard of the chicken, which has the remarkable property of arresting certain kinds of vomiting (notably that of pregnancy), demand attention.

We may next review the new remedies and the various improvements connected with the preparation of drugs which came before our notice. Several were to be observed claiming special features, or some novelty or improvement in regard to such important points as therapeutic activity, certainty of action, and so forth. In this connexion the step recently taken by Messrs. Duncan, Flockhart & Co. of supplying chloroform containing about 1 per cent. of alcohol is one of the first importance, since, as they state, while this addition has no effect in diminishing its anæsthetic power, it renders the chloroform practically non-decomposable under any circumstances. The specific gravity of the new product becomes thus reduced to 1,490, a fact which should be borne in mind when chloroform is ordered from the firm. Amongst the new and recent remedies supplied by Messrs. Allen & Hanburys are acidum boricum, which in doses of 10 to 15 grains is said to be of use in typhoid fever, and may be given with antifebrin, quinine, naphthalin, or salol; acidum lacticum is of benefit in diarrhœa, half a tumblerful of a 2 per cent. solution to be taken twice daily; agathin, a salicyl-methyl-phenylhydrazine in the form of pale greenish laminæ free from taste and smell, which possesses marked antineuralgic properties, for which it is administered in half-grain doses; analgen for neuralgia is tasteless and as much as forty-five grains may be given in the twenty-four hours; benzene, pure or mixed with lard, offers a successful means of treating scabies, especially, it is said, when complicated with eczema; byno-cascara, a palatable and active preparation of cascara sagrada combined with malt extract, which by its diastatic action on starch foods tends to act as a laxative; cactus grandiflora, useful in functional disorders of the heart, especially in the distressing palpitation arising from reflex irritation in dyspepsia and in "tobacco heart"; chloralose, a compound of chloral and glucose, is serviceable in insomnia due to overwork or over-excitement, but is not of much use where sleeplessness is due to pain; it is conveniently given in cachets.

(To be continued.)

Medical News.

UNIVERSITY OF GLASGOW.—The following candidates had the degrees named below conferred on them on July 25th:—

DOCTORS OF MEDICINE (M.D.).

I. WITH HONOURS.

Monro, Thomas Kirkpatrick, M.A., M.B., C.M., Scotland.

II. WITH COMMENDATION.

Banks, Chas., M.B., C.M., Scotland.
Bell, Andrew Lees, M.B., C.M., Scotland.
Campbell, Finlay Stewart, M.B., C.M., Scotland.
Charles, John, M.B., C.M., Scotland.
M'Gregor, John, M.B., C.M., Scotland.

III. ORDINARY DEGREE.

Gardiner, P., M.B., C.M., Scotland.
Hay, Archibald Gilchrist, M.A., M.B., C.M., Scotland.
Macklin, Thomas Thornton, M.B., Scotland.
Macphail, James Merry, M.A., M.B., C.M., England.
Robb, James Jenkins, M.B., C.M., Scotland.
Smith, James, M.B., C.M., Scotland.
Wilson, James Allan, M.B., C.M., Scotland.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY (M.B., C.M.).

I. HONOURS.

*Ferguson, Joshua, M.A., Scotland.
Pattullo, Henry Alexander, Scotland.
Walker, Ernest Alex., M.A., Scotland.

* Mr. Ferguson gains the Brunton Memorial Prize of £10, awarded to the most distinguished graduate in medicine of the year.

II. HIGH COMMENDATION.

Scobie, William, B.D., Scotland.
Stewart, Alexander Hamilton, Scotland.
Watson, Henry Allan, M.A., Scotland.
Howie, Robert, Scotland.
Lang, William Henry, B.Sc., England.
Young, Archibald, B.Sc., Scotland.

III. COMMENDATION.

Barr, Robert Brownlee, Scotland.
Stevenson, Alexander, Scotland.
Cowan, Samuel Donaldson, M.A., Scotland.
Lawson, William, Scotland.
Macrae, Farquhar, Scotland.
Fraser, Robert Mackechnie, M.A., Scotland.
Stuart, Emmeline Marie, Scotland.
Miller, Robert King, Scotland.
Watson, Malcolm, Scotland.
Anderson, John Lindsay, Scotland.
Muir, Adam Cubie, Scotland.
Bell, Thomas, Scotland.
Cormick, Frederick Burdett, Scotland.
Mowat, George, Scotland.
Miller, William Duncan, Scotland.
Alexander, William, Scotland.
M'Cash, James, Scotland.

IV. ORDINARY DEGREES.

Abbott, John Carson, U.S., America.
Adam, James, Scotland.
Allan, William, Scotland.
Anderson, Arthur Roland, Newfoundland.
Anderson, John, Scotland.
Anderson, John James Stevenson, Ireland.
Armstrong, Thomas, Scotland.
Baird, William Stephen, New Zealand.
Barker, Francis James, M.A., Scotland.
Blair, Alexander, Scotland.
Bödeker, Henry Albert, Burmah.
Burns, William, Scotland.
Campbell, Thompson, Scotland.
Chang, Vivian Ernest, China.
Clow, William, M.A., B.Sc., Scotland.
Cumming, John, Scotland.
Davies, Henry, Wales.
Divine, John, Scotland.
Donaldson, William, Scotland.
Dunning, Matthew, Scotland.
Edwards, Richard John, Wales.
English, Samuel, Ireland.
Findlay, James, Scotland.
Findlay, William David, Scotland.
Finkelstein, Albert Alfred, Russia.
Forrest, James Liddell, Scotland.
Forster, James, England.
Foulds, James Reid, Scotland.
Galloway, Andrew Fleming, Scotland.
Garrett, Thomas Cleator, Isle of Man.
Gillan, John, M.A., Scotland.
Graham, Walter, Scotland.
Grove, William, Scotland.
Hay, William, B.D., Scotland.
Holt, Arthur, England.
Hughes, Albert Barnes, England.
Jack, James, Scotland.
Jackson, John William, Scotland.
Jubb, George, Scotland.
Kerr, David, England.
Kerr, William James, Scotland.
Kirkhope, David Connor, Scotland.
Kirkwood, John, Scotland.
Lewis, David, Wales.
Louttit, John Dunlop, Scotland.
Mulholland, James Andrew Dixon, Ireland.
Munro, Donald, Scotland.
M'Coll, Daniel, Scotland.
M'Cormick, William Milligan, Scotland.
M'Donald, Duncan, Scotland.
Mackinnon, William Jones, Scotland.
MacLachlan, Lewis, Scotland.
M'Laren, Hugh, Scotland.
MacLay, Moses Neil, Scotland.
Macleod, William, Scotland.
M'Pherson, George, M.A., Scotland.
Oliver, Archibald Russell, Scotland.
Primrose, Edward James, M.A., Scotland.
Rae, John Broadfoot, Scotland.
Rankin, John, Ireland.
Robertson, John Neil, Scotland.
Sandilands, James, Scotland.
Smith, James, Scotland.
Sproull, James, Scotland.
Stevenson, Hugh, Scotland.
Stewart, Alexander, Scotland.
Stewart, James, Scotland.
Stirling, James, Scotland.
Thomson, Hugh Wright, Scotland.
Toland, Charles Kirk, Ireland.
Wolverson, Frederick, England.

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VICTORIA UNIVERSITY.—The following candidates passed in the Final Examination of the Faculty of Medicine in July last:—

Part I.: G. Ashton, Owens; W. S. Badger, University; F. J. Batten, R. Bleasdale, H. M. Brown, A. H. Burgess. J. B. Clarke, H. Coates, and C. Coventry, Owens; H. M. Crake, University; P. H. Fearnsides, Yorkshire; H. Hamer, E. Hutton, W. F. Jackson, K. H. Jones, and A. T. Lakin, Owens; J. G. Martin, University; E. Monks, N. Neild, W. H. S. Nickerson, A. E. Normington, and J. S. Ross, Owens; S. T. Rowling, Yorkshire; E. A. Smith, University; L. Tong, Owens; A. A. Wood, University; and J. Wood, H. B. Woodcock, and H. C. Woodhouse, Owens.

Part II.: A. V. Davies, U. L. Desai, A. Greenwood, R. S. Hardman, and F. B. G. Holmes, Owens; C. E. Ligertwood, Yorkshire; J. P. Lowe, A. McDougall, J. T. Marsden, T. H. Miller, F. C. Moore, and J. H. Renshaw, Owens; J. V. Shaw and R. H. Trotter, Yorkshire; and B. V. Watkins, Owens.

The following were awarded Honours:—Class I. C. E. Ligertwood, Yorkshire; and F. C. Moore, Owens. Class II. R. S. Hardman, F. B. G. Holmes, T. H. Miller, and J. H. Renshaw, Owens; J. V. Shaw and R. H. Trotter, Yorkshire; and B. V. Watkins, Owens.

The Diploma in Sanitary Science was awarded to M. Parkinson and F. W. Sydenham.

BRITISH INSTITUTE OF PUBLIC HEALTH.—The annual dinner of the British Institute of Public Health was held on Wednesday, the 31st ult., at the Holborn Restaurant. Professor W. R. Smith was in the chair, and the company included Lord Playfair, the Japanese Minister, Sir Douglas Galton, Archdeacon Sinclair, and Sir George Kekewich.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The summer general meeting of the above association was held at King's College on Wednesday July 31. The chair was occupied by Dr. H. H. Phillips, Conn. (President). The attendance was a very large one, including Sir Thomas Crawford, K.C.B. (Chairman of Council), Dr. William Thomson, Vice President of the Royal College of Surgeons, Ireland, Surgeon-Major Ulick J. Bourke, Dr. Abraham, Dr. A. H. Benson (Dublin), Dr. J. Davison (Bournemouth), Dr. R. Fegan, (Blackheath), Dr. E. D. Mapother, Mr. R. O'Callaghan, Dr. S. A. K. Strahan, Mr. G. Stoker, Dr. W. H. White, and the Honorary Provincial Secretary (Mr. J. Stewart, F.R.C.P. Edin.), besides several visitors. The Hon. Provincial Secretary having given a *résumé* of the past action of the Council in reference to disabilities of Irish diplomates in connexion with honorary appointments in English public hospitals, Dr. Thomson moved, Dr. Abraham seconded, and it was carried unanimously, that a further effort be made on the first opportunity to reduce the number of English public hospitals in which honorary appointments on the staff are restricted to those holding English diplomas. Dr. Arthur H. Benson moved, Mr. Robert O'Callaghan seconded, and it was carried unanimously, that a special fund (to be called the "Hospital Appointments Fund") be raised forthwith to cover expenses connected with the abolition of hospital monopolies. To this fund a sum of nearly £50 was subscribed by those present at the meeting, which was thereupon adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BOWKETT, W. D., M.R.C.S. Eng., has been appointed Surgeon to the Winton Hospital, Queensland, vice Wellford.

BURNS, THOMAS, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Superintendent of the Lunatic Asylum at Porirua, near Wellington, New Zealand.

CLARIDGE, H. A. H., M.B., B.S. Durh., has been appointed Medical Officer for the Norton Canes Sanitary District of the Cannock Union.

COLYER, ARTHUR R., M.R.C.S., L.R.C.P., L.D.S., has been appointed Assistant Dental Surgeon to the Dental Hospital of London.

CROOM, J. H., M.D., C.M., F.R.C.P., F.R.C.S. Edin., has been appointed Physician to the Edinburgh Royal Maternity and Simpson Hospital.

DATE, W. H., M.R.C.S., has been appointed Medical Officer of Health for the Culmstock Rural Sanitary District, vice Randolph.

DOUGHTY, WM., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health for the Chillington Sanitary District of the Kingsbridge Union.

DYER, BERNARD, has been appointed Analyst for the County of Rutland, vice Emmerson, deceased.

EATON, JOSEPH, L.R.C.P. Irel., L.R.C.S., L.M., has been appointed Government Medical Officer and Vaccinator for the district of Hylston, New South Wales.

FENTON, JAS. L., M.B., C.M. Edin., has been appointed Health Officer for the Omeo Shire, Victoria, Australia.

FOOKS, E. E., M.B. Univ. New Zeal., has been appointed Medical Superintendent of the Lunatic Asylum at Wellington, New Zealand.

FOX, WALTER, M.B., C.M. Glasg., has been appointed Government Medical Officer and Vaccinator for the district of Narandera, New South Wales.

GARDE, H. C., L.K.Q.C.P. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed City Health Officer, Queensland.

HEARDER, FREDERIC P., M.B., C.M. Edin., has been appointed Second Assistant Medical Officer to the West Riding Asylum, Wakefield, vice Mr. Craig, resigned.

HEATHCOTE, H. C., M.B., Ch.B. Vict. (Owens College), has been appointed Medical Officer and Public Vaccinator for the Tiverton Sanitary District.

HOETS, A. K., M.R.C.S. Eng., has been appointed Government Medical Officer and Vaccinator for the district of Burrowa, New South Wales.

HOGG, C. A., M.B., M.S. Edin., has been appointed House Surgeon to the Launceston Hospital, Tasmania.

HOLMES, L. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Port of Launceston, Tasmania.

HINDER, H. V. C., M.B., Ch.M. Syd., has been appointed Honorary Assistant Surgeon at the Prince Alfred Hospital, Sydney, New South Wales.

HUNTER, DAVID, has been appointed Fourth Assistant Medical Officer to the West Riding Asylum, Wakefield, vice F. O. Simpson, promoted.

JAMES, D. P., M.R.C.S. Eng., F.R.C.S., L.R.C.P. Lond., has been appointed Health Officer for the Port of Wellington, New Zealand.

JERMYN, FRED. D., M.B., Ch.B. Melb., has been appointed a Public Vaccinator in South Australia.

KEITH, ARTHUR, M.D. Aberd., M.S., F.R.C.S. Eng., has been appointed Senior Demonstrator of Anatomy at the London Hospital Medical School.

LYLE, H. WILLOUGHBY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Lecturer in Animal Biology and Demonstrator of Physiology at King's College, London, vice Brodie, resigned.

MACBIRNIE, STUART, M.B., Ch.M. Glasg., has been appointed Medical Officer to the Coal Creek Miners at Korumburra, Victoria, Australia.

MACKAY, J. S., M.D. St. And., D.P.H. Edin., has been appointed Medical Officer for Kirkcaldy.

MACHATTIE, T. A., M.B., Ch.M. Edin., has been appointed by the Railway Commissioners Local Railway Medical Officer for the Bathurst District, New South Wales.

MACKINTOSH, ARTHUR, M.B., C.M. Edin., has been appointed House Surgeon to the Northern Infirmary, Inverness, vice Williamson, resigned.

NEALE, A. J., M.D., Ch.M. Edin., has been appointed a Public Vaccinator for the District of Palmerston, North, New Zealand.

PALMER, M. H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Newbury Union.

PATTESON, R. GLASGOW, M.B., B.Ch. Dub., F.R.C.S. Irel., has been appointed Surgeon to the Meath Hospital and County Dublin Infirmary, vice Sir G. H. Porter, Bart., deceased.

REILLY, F. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Billinge Urban Sanitary District, vice Molyneux, deceased.

ROBERTS, F. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Llandrindod Wells Urban Sanitary District.

ROWLANDS, GEO. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Government Medical Officer and Vaccinator for the District of Narromine, New South Wales.

TAYLOR, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Methley Urban Sanitary District, vice Wigan.

SIMPSON, FRANCIS O., L.R.C.P., M.R.C.S., has been appointed Pathologist and Third Assistant Medical Officer to the West Riding Asylum, Wakefield, vice W. le Andriezen, resigned.

ROOCROFT, W. MITCHELL, M.R.C.S., L.R.C.P., has been appointed Consulting Surgeon to the Lancashire and Cheshire Nurses' Permanent Relief Society, vice Bamish, deceased.

VOELCKER, ARTHUR F., M.R.C.P., M.D. Lond., M.R.C.S., has been appointed Assistant Physician to the Middlesex Hospital.

WAKELAM, E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Springhead Urban Sanitary District, vice Andrew, resigned.

WATSON, A. H. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Port Broughton, South Australia.

WEEKES, F. H., M.R.C.S., has been appointed Fifth Honorary Medical Officer of the York Dispensary.

WILKINS, JOHN, F.R.C.S. Edin., M.R.C.S. Eng., has been appointed a Surgeon to the Permanent Militia at Auckland, New Zealand.

WILLS, C., M.R.C.S., has been appointed Medical Officer by the District Council for Blyth and Cuckney.

WILSON, THOMAS, M.D. Lond., B.S., F.R.C.S., has been appointed Honorary Medical Officer of the Birmingham Lying-in Charity.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHARING-CROSS HOSPITAL MEDICAL SCHOOL, 62, Chandos-street, W.C.—Lectureship on Physiology. A minimum of £300 a year is guaranteed for the teaching of physiology, in addition to a grant for working expenses.

CONVALESCENT FEVER HOSPITAL, Gore Farm, Darenth, Kent.—Dispenser. Salary, £5 a month, with board, lodging, and washing. Applications to the Medical Superintendent at the hospital.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon, for one year. Salary, £70 per annum, with board, lodging, and washing.

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DURHAM COUNTY ASYLUM.—Pathologist and Junior Medical Officer. Salary £100 per annum, with board and lodging. Applications to the Superintendent, Durham County Asylum, Winterton, Ferryhill.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

INFIRMARY OF THE CITY OF LONDON UNION.—Assistant Medical Officer at the Infirmary of the Union, situate in the Bow-road. Single, or widower without children. Salary £160 per annum, with furnished apartments at the infirmary, rations, and washing. Applications to the Clerk to the Guardians, 61, Bartholomew-close.

LINCOLN COUNTY HOSPITAL, Lincoln.—Assistant House Surgeon for six months. An honorarium of £10, subject to the approval of the weekly Board, and board, residence, and washing provided.

PARISH COUNCIL OF NORTHMAVINE, Shetland.—Medical Officer. Salary £40. Applications to the Clerk, Parish Council, Northmavine.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

STOKE NEWINGTON, CLAPTON, WEST HACKNEY, AND DALSTON DISPENSARY, 106, High-street, Stoke Newington, N.—Resident Assistant House Surgeon. Salary £50 per annum, with board and lodging.

Births, Marriages, and Deaths.

BIRTHS.

ALCOCK.—On July 21st, the wife of Richard Alcock, M.D., Burlington-crescent, Goole, of a daughter.

ANDREWS.—On July 25th, at R.N. Hospital, Haslar, the wife of Surgeon O. W. Andrews, Royal Navy, of St. Briavel's, Glos., of a daughter.

BLUCKE.—On July 24th, at Rowberry, Donhead, St. Andrew, the wife of Fredk. H. S. Blucke, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

FLINT.—On July 30th, at Westgate-on-Sea, the wife of Arthur Flint, M.D. Brux., L.R.C.P. Lond., M.R.C.S., J.P., of a daughter.

HEATH.—On July 28th, at Cavendish-place, Cavendish-square, W., the wife of Charles Heath, F.R.C.S., of a son; who survived his birth only a few hours.

HEYWOOD.—On July 24th, at Lower Bank, Darwen, the wife of T. W. Heywood, L.K.Q.C.P. Irel., M.R.C.S., of a son.

JONES.—On July 22nd, at Stokesley, Yorks., R.S.O., the wife of Arthur Jones, M.R.C.S. Eng., L.R.C.P., of a son.

MACEVOY.—On July 24th, at 41, Buckley-road, Brondesbury, London, N.W., the wife of H. J. Macevoy, M.D., B.Sc. Lond., of a daughter.

MAPLESON.—On July 28th, at Nottingham-place, W., the wife of Horsley Mapleson, M.R.C.S. Eng., of a son.

MOORE.—On July 9th, at Story-hill, St. Andrew, Jamaica, the wife of York Moore, L.R.C.P. Edin., M.R.C.S., of a son.

RUSSELL.—On July 23rd, at Queen Anne-street, W., the wife of John Ronaldson Russell, M.R.C.S., L.R.C.P., of Quebec House, Westerham, Kent, of a daughter (prematurely).

MARRIAGES.

ANGEL-MONEY—DOWDELL.—On June 12th, at St. John's, Darlinghurst, Sydney, N.S.W., Angel-Money, M.D. Lond., F.R.C.P. Lond., of Hunter-street, Sydney, to Amy Mona, daughter of the late Charles Dowdell, Esq., of Hawthorn, Victoria.

HAKE—BALDWIN.—On July 25th, at St. Mary the Virgin, Prittlewell, James Hake, M.R.C.S. Eng., L.R.C.P. Lond., to Rose, second daughter of James William Baldwin, of West Cliff, Southend.

MARCH—MANNING.—On July 27th, at Laverstock Church, near Salisbury, Joseph Ogdin March, M.R.C.S., L.R.C.P. of St. John's House, Lechlade, Gloucestershire, to Grace Ellen, eldest daughter of Henry John Manning, of Laverstock, near Salisbury.

PRESTON—BARRY.—On July 25th, at St. John's Church, Ryde, I.W., Lionel Litchfield Preston, M.B. and B.S. Durh., fourth son of Alfred Preston, of Elsworthy-road, London, N.W., to Evelyn, only surviving daughter of Major R. Edwyn Barry, late 29th Regiment, of Lindenhurst, St. John's-park, Ryde, I.W.

SPEECHLY—BARRETT.—On Tuesday, July 30th, in the Parish Church, Neston, Cheshire, by the Rev. A. W. Humphreys, assisted by Canon Turner, the vicar, Harry Martindale Speechly, M.R.C.S. Eng., L.R.C.P. Lond., of Parkgate, Cheshire, eldest son of the Right Rev. Bishop Speechly, to Mary Barrett, B.A. Viet. Univ., eldest daughter of the late Rev. W. F. Barrett, formerly headmaster of Mostyn House School and senior curate of Neston.

DEATHS.

BOTT.—On July 28th, Camilla, beloved wife of W. Gibson Bott, J.P., L.R.C.P., &c., at 414, Clapham-road, S.W., aged 43 years.

BRUMWELL.—On July 26th, at 136, Duke-street, Southport, James Teasdale Brumwell, M.R.C.S. Eng., L.S.A., aged 78 years.

JAMIESON.—On July 26th, at Shanghai, China, R. A. Jamieson, M.D. Irel., M.R.C.P. Lond., M.R.C.S., aged 53 years.

LEWINS.—On July 22nd, at Nottingham-place, W., Staff-Surgeon-Major Robert Lewins, M.D. Heidelberg.

LEY.—On June 10th, 1895, at the Universities' Mission, Central Africa, in his 37th year, Herbert Ley, M.R.C.S. Eng., eldest son of the late William Ley, of Westbourne-terrace, London, W.

MARSHALL.—On July 25th, at his residence, Liverpool-street, Dover, John Marshall, L.R.C.P. Lond., M.R.C.S., J.P., aged 64 years.

NEALE.—On July 21st, three weeks before the completion of her 103rd year, Caroline Elizabeth Neale, mother of Richard Neale, M.D. Lond.

PARKER.—On July 30th, on his 60th birthday, Robert Parker, M.R.C.S., Malpas.

TOMES.—On July 29th, at Upwood Gorse, Caterham, Sir John Tomes, F.R.S., F.R.C.S., aged 80 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

RISK OF OPERATING WITHOUT CONSENT.

AN action involving a claim for £2000 has been tried in Belgium which is of considerable interest to surgeons. It appears that a lady who suffered from uterine hæmorrhage was recommended by a consultant who was called in by her family attendant to allow the uterus to be curetted, to which she and her husband consented. When the operation was begun it was discovered that there was cancer of the uterus, and the operator and the family practitioner decided then and there to remove the whole organ, the result being that the patient died from hæmorrhage. As neither the patient nor the husband was consulted about the hysterectomy it was held by the court to be unjustifiable. The damages were, however, reduced to £200.

Divining Rod.—We have been unable to find any recent article referring to the supposed efficacy of the hazel switch in our columns.

W. S. S.—The letter was duly received.

"THE LOSS OF SIGHT, HEARING, AND SPEECH."

To the Editors of THE LANCET.

SIRS,—The following particulars relating to an answer given in THE LANCET, April 6th, 1895, reaches you perhaps too late to be of any use to Mr. T. R. L. Edwards.

I remember in 1872, in visiting the Hospital for the Blind at Lausanne, that they showed me a girl fourteen years old who was born deaf, and who at a very early age had lost her eyesight in consequence of an attack of small-pox. Notwithstanding this she could learn to articulate sufficiently distinctly many words, with the patient exertions of speaking of the teacher while the child was holding her hands applied to the larynx of the speaker. They also told me of other instances of the deaf and blind being taught to speak, and particularly of the case of one patient, deaf and blind from birth, who had at that time left the institute, and had succeeded in becoming a very able turner—so able as to have executed by himself a fine shelf, which was shown to me. I do not remember the name of the then old director of the institution, but the oculist at that time was Dr. Marc Dufour, a pupil of Horner.

I am, Sirs, very truly yours,

Pisa, July 15th, 1895. DR. P. SONSINO.

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"ALLEGED TOUTING BY A PUBLIC VACCINATOR."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 27th Dr. J. Lumsden Bell accuses me of having been vindictive with regard to his assistant, Dr. Slane, and desires you to take Dr. Slane out of the pillory in which, he states, I have been the unfair means of placing him, and to put me there in Dr. Slane's stead. I ask you, in fairness to myself, to permit me to explain my position once more. I distinctly deny any vindictive feeling in this matter. I have suffered annoyance by the acts of Dr. Slane, and have been indignant at his obtruding himself upon my patients in such a manner that many have complained to me of his visits.

Following Dr. Bell's example, I will ask you one "straight question" for my guidance in the future. Am I justified in having complained of Dr. Slane visiting my patients—patients who are not in any sense of the word defaulters (*vide* Dr. Bell's letter in THE LANCET of July 27th); and shall I be justified in looking upon any future act of this sort as one of touting? The whole matter is in that question. Dr. Bell, referring to your comments on my letter found in THE LANCET of May 18th, wrote to me the following statement: "The conduct denounced by yourself and the Editors of THE LANCET is equally abhorrent to Dr. Slane and myself." I take it that by this Dr. Bell and Dr. Slane are willing to stand or fall by your verdict. Certainly that is my determination. Either Dr. Slane, as public vaccinator, has the right of *entrée* to another medical man's patients, or he has not. If you decide that he has, then I will willingly occupy the pillory which Dr. J. Lumsden Bell, by casting aside the *nom-de-plume* over which I wrote my letters to you and placing in its stead the full names of all concerned, has prepared. I am, Sirs, yours faithfully,

Nafferton, Yorks, July 30th, 1895. CHARLES H. ECCLES.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Will you allow me one word in reply to "R. B. F."? I think he forgets the effect of custom. To talk of "Solicitor A.," or to address a dentist as "Dentist," would be startling because novel. But to speak of a physician as "Dr. B." and to address him as "Doctor" is justified by very old-established custom. I do not see that the substitution of a synonym proves anything more than that the claim of the diplomate to the title rests upon the courtesy accorded to him as a member of the medical profession. My error concerning the claim of the L.S.A. put aside, no other claim than that of courtesy has been advanced. To take a rather similar case. Would "R. B. F." address the commander of an ocean liner as "Master of a trading vessel" because, though a captain in the ordinary interpretation of the word, he does not hold the Queen's commission? If the title "Dr." were strictly restricted to those who alone can legally claim it—namely, holders of a Doctor's degree—the position would be logical and defensible. And however much we might protest against the inequality of these degrees, and the unfairness of refusing to the great majority of the profession all opportunity of obtaining them, we should not be able to question the justice of the restriction itself. But if the title is to be given by courtesy to certain men who do not hold the M.D. degree, why is it not to be given by courtesy to all medical men, or at least, in accordance with old-established custom, to all physicians? The distinction implies a slur upon the diplomate which is not justified by the comparative value of his qualifications. I am, Sirs, yours faithfully,

July 23rd, 1895. NOT L.S.A.

To the Editors of THE LANCET.

SIRS,—The above subject is so simple that I am not a little surprised to find members of our profession raising a discussion about it. The whole thing lies in a nutshell, which a layman, "R. B. F.," in THE LANCET of July 20th, has efficiently cracked and settled once for all. With your permission, however, I should like to make a few additional observations. The title of Doctor is the only prefix title in the medical profession (to which the possessor of a Doctorate alone has a right), and is the highest academical honour which a University can bestow upon its graduates, and in doing so acts as the mouth-piece of the Crown. This title is, therefore, in kind if not in degree, equal to any other prefix title, and neither the University which granted it nor the General Medical Council can deprive its possessor of it. A special Act of Parliament alone can do so. Under certain circumstances they can remove his name from the Medical Register, but can do nothing more. As Universities alone are empowered to confer this title it is evident that no merely licensing bodies can do so. Any one, therefore, not possessed of a Doctorate and assuming its prefix title makes himself not a little ridiculous.

I am, Sirs, yours truly,

July 24th, 1895. M.D. EDIN.

To the Editors of THE LANCET.

SIRS,—Allow me to get the opinion of the profession through your valuable columns anent the following scheme:—Let the universities remove the stumbling-block of "residence" in the case of a Licentiate of five years' standing, so that thereby he may compete for the M.B. and subsequently the M.D. I need hardly say that it is a great hardship on a Licentiate to wait until he is forty years old and fifteen years qualified before proceeding for the M.D.

I do not think that it is right for some members of the profession to limit the title of "Dr." to M.D.'s, because the very title itself has become to mean a "medical man." I am, Sirs, yours truly,

July 22nd, 1895. A LICENTIATE.

THE BABY FASTENER.

THIS is a patented appliance for preventing infants up to three years of age from coming out of their cots or cribs. It consists of a very stout band of webbing, thirty inches long and five inches wide, which is placed on the undersheet, and secured by its attached tapes beneath either the mattress or the bed itself. Two linen flaps stitched to this band are buttoned over the child's body just below the armpits. They leave room enough for the child to turn itself round inside them, and when the child is to be taken out of the cot only three buttons require to be unfastened. With a view to cleanliness the baby fastener is made so as to be easily washed, all the materials being unshrinkable. The manufacturers are Messrs. John J. Wilson and Co., Kendal, Westmorland. They also make a modification of the same article for the use of adults suffering from delirium tremens.

Mr. Horsley Mapleson.—The name mentioned in the advertisement sent by our correspondent does not appear on the Medical Register, so that the General Council of Medical Education and Registration have no control over the advertiser.

Subscriber.—(1) We cannot answer as to the *legality* of the step without seeing the bond between our correspondent and the body in question. (2) It is usual to intimate that details will be given on demand.

L.R.C.P. Lond., M.R.C.S. Eng.—The choice between the prefix and the suffix is a matter of taste. Either is right.

"AN ADVERTISEMENT OF A HOSPITAL."

To the Editors of THE LANCET.

"ANYBODY in LONDON having spare time on Monday, 22nd, or Tuesday, 23rd July, is INVITED to VISIT the POPLAR HOSPITAL for ACCIDENTS between 2 and 7 o'clock.

Newly built. Newly fitted. No debt.
No horrors. No infection.
Best Way.—Drive or bicycle, 45 minutes from West-end.
Another Way.—Blackwall Omnibus from Piccadilly-circus, 75 minutes.
Another Way.—Train to Aldgate, thence by yellow tram."

SIRS,—I note that in your issue of July 27th you write that the above advertisement, for which I am solely responsible, is unfitting, undignified, savours too much of a "Cheap Jack," and is wanting in taste. Somewhat severe this—even for THE LANCET. You will, I am sure, forgive me if I do not dispute with you the question of good or bad taste. That must always be a matter of opinion. The reason I am "drawn" to make reply to your scolding—which is an idiotic thing to do—is because you write, "We do not think the above advertisement a very fitting one, inasmuch as it contains remarks that might tend to keep charitable visitors away from other hospitals." I confess this annoys me, because it implies that I had the intention of hurting other hospitals to the advantage of my own. Nothing was, or can possibly be, further from my intention. I fear, Sirs, your profession, entailing as it does the constant diagnosing for disease, has led you unconsciously to be too ready to imagine and discover evil where none exists. My advertisement was not addressed to "charitable" visitors. They visit hospitals now. It was addressed to the careless and curious, and my harmless sentences—as I thought them till you laid bare their wickedness and malignity—were in answer to the constant excuses I have made to me when I beg people to visit the hospital. "*Newly built*," "*newly fitted*," were the attractions I had to offer my visitors to induce them to take an hour's journey in a Blackwall 'bus or a yellow tram. "*No debt*" was to assure them that they would not be badgered to pay for those attractions. I wanted not to get their money—then—but to spread an interest in the hospital's welfare. "*No horrors*" was inserted to dispel an idea which in my less dignified and less isolated position in life I meet with constantly—that in an accident hospital rivers of blood flow about on the floor all day. And, lastly, "*No infection*" was added to induce fond mothers to bring their children, and so instil early into them some kindly thought for the suffering poor.

Come off your stilts, please, Mr. LANCET, and do a little more for our hospitals than merely reporting hospital practice and seeking and suggesting evil motives where none exist.

I am, Sirs, yours faithfully,

July 28th, 1895. SYDNEY HOLLAND.

*** We agree with the Hon. Sydney Holland that to argue about questions of taste is futile. Of the goodness of his motives or of his anxiety to promote the welfare of the institution of which he is chairman we have no shadow of doubt, but we cannot pretend to like the advertisement.—ED. L.

HONOURS TO THE PROFESSION: AN UNSOLICITED TESTIMONIAL.

To the Editors of THE LANCET.

SIRS,—While walking in a not very fashionable part of this neighbourhood the other day I noticed a young lady aged six or seven suddenly stop, clutch her companion, aged four or five, point at me and say, "That's the man what done my father better." After twenty-five years' service as a parish medical officer, surely, Sirs, I may feel that my labours have not been altogether in vain.

I am, Sirs, your obedient servant,

Crouch End, July 28th, 1895. F. ORTON, M.D.

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"THE POST OF SURGEON ON THE CABLE TELEGRAPH SHIPS."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "H.A.B." I beg to give the following particulars concerning these posts with the Silvertown Company's ships (the Indiarubber, Guttapercha, and Telegraph Co.).

The pay is £13 per mensem, 1*s.* a day wine allowance, full amount of cost of uniform, and as a rule a bonus of at least one month's pay at the end of the voyage. Aboard their largest ship, the *Silvertown*, will be found the most perfect surgery afloat. Drugs are ordered by the surgeon for the voyage at his discretion, and a complete set of surgical instruments and appliances provided. The surgeon, moreover, takes in this company's service his rightful position; he is a senior officer, and his words, on matters appertaining to his own work, are law. On the ships of the Telegraph Construction and Maintenance Company the pay is £12 per mensem, 1*s.* 6*d.* per day wine allowance, but no uniform allowance and no bonus. The surgeon here will not find himself in quite so good a position as in the service of the first-mentioned company; still, the appointment is a comfortable one. On *cable-laying* expeditions the length of voyage varies, of course, with the amount of cable to be laid, the distance abroad to be steamed to the starting point, and the difficulties of laying. No average time can be mentioned, each voyage having its own peculiarities. On cable-repairing ships, of which the Eastern Telegraph Company have several, and the Central and South American Cable Company two, the pay is about £15 per month, and the length of service three years.

Both the first-mentioned companies also repair cables, sending out special ships for the work. The pay on these expeditions is as mentioned under the several companies; the length of the voyage is always uncertain owing to the difficulties experienced in the work. The life is an exceedingly pleasant one, the object of the expedition is most interesting, and the ships are invariably comfortable to live in. As to professional work the men are a picked lot physically; the surgeon must be prepared, however, at any moment during the actual laying of the cable to perform serious operative work (single-handed as a rule), for should an accident occur, which happily is rare, it means a terrible one. Finally, if the surgeon has not yet "crossed the line," he must look forward to being introduced to Father Neptune and the ceremonies and penalties exacted from one who is not yet a "true son of Neptune." I shall be glad to see your correspondent personally, if he should wish it, and give him further information. Crouch, in "On a Surf-bound Coast" and in "Glimpses of Fever-land" (Allen and Co.), gives much chatty information on the subject of cable-laying.

I am, Sirs, yours faithfully,
H. ATHILL CRUTTWELL,
July 29th, 1895. Late Senior Surgeon, T.S. *Silvertown*.

Mr. F. Hone Moore.—It is impossible for us to say what the General Medical Council would do under the circumstances. There are probably some legal points involved quite outside medical ethics, with which points the Council might have no power to deal.

Enquirens. — The proceeding is certainly not illegal. If the word "medical" has been used in any way suggestive of the possession of medical qualifications, the General Medical Council might be informed.

C. M.—A communication involving such a grave charge must (and we are sure our correspondent will agree with us) be supported by names, dates, and the fullest details, *for our information only*.

"LORD BYRON'S LAMENESS."

To the Editors of THE LANCET.

SIRS,—In answer to the query of "M.B., C.M." in THE LANCET of July 20th I quote the following statement of Edward John Trelawney, in his "Records of Shelley and Byron":—

"To confirm or remove my doubts as to the exact cause of his [Byron's] lameness, I uncovered the Pilgrim's feet, and was answered—it was caused by the contraction of the back sinews, which the doctors call 'tendo Achillis,' that prevented his heels resting on the ground and compelled him to walk on the forepart of his feet; except this defect his feet were perfect. ..... It was generally thought his halting gait originated in some defect of the right foot or ankle; the right foot was most distorted, and it had been made worse in his boyhood by vain efforts to set it right. He told me that for several years he wore steel splints, which so wrenched the sinews and tendons of his leg that they increased his lameness; the foot was twisted inwards, only the edge touched the ground, and that leg was shorter than the other. His shoes were peculiar—very high-heeled, with soles uncommonly thick on the inside and pared thin on the outside; the toes were stuffed with cotton-wool, and his trousers were very large below the knee and strapped down so as to cover his feet. The peculiarity of his gait was now accounted for; he entered a room with a sort of run, then planted his best leg well forward, throwing back his body to keep his balance."

Byron, therefore, seems to have suffered from double talipes equinovarus, the deformity being greatest in the right foot. He was manifestly at fault in attributing his deformity to some act of over-delicacy on the part of his mother at her accouchement, as he says in one of his letters. Byron took no interest in medical knowledge, and appears to have disliked medical men as a class. I am, Sirs, faithfully yours,

Surbiton, July 22nd, 1895. R. H. REYNOLDS.

AN ECONOMICAL SOLICITOR.

To the Editors of THE LANCET.

SIRS,—I gave evidence in a sessions case recently. The solicitor for the prosecution sent me my fee of £1 1*s.*, less banker's commission and postage, 4*d.* I want to know whether he can legally do so, as I write and ask for the 4*d.*, and he declines to send it.

I am, Sirs, yours faithfully,
July 30th, 1895. C. G.

J. H. D.—A medical man's claim to attend a patient who sustains an accident does not lapse because he happens to be out of the way at the time. Any medical man knowing of his former relations to the patient should consider them and offer to hand the case over. If the patient or his parents insist on the practitioner called in continuing his attendance, he is scarcely at liberty to decline to do so. But all his influence should be exerted to restore the patient to his original attendant. There was in this case a want of firmness and promptness in the parent. We see no intention on the part of the practitioner called in (B) to act unprofessionally; but when he learnt that A was the family medical attendant he would have done well to offer to hand the case over before operation.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, Aug. 1st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 26	29·88	S.W.	67	64	114	77	64	...	Overcast
,, 27	29·69	S.W.	64	63	110	73	63	...	Cloudy
,, 28	29·65	N.E.	58	57	71	61	54	0·74	Raining
,, 29	29·87	N.W.	61	58	100	70	56	0·15	Cloudy
,, 30	30·01	N.W.	60	55	100	68	57	...	Hazy
,, 31	30·00	E.	61	57	108	71	58	...	Cloudy
Aug. 1	30·02	E.	59	55	90	68	54	...	Bright

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:— *Wellington Journal, Sussex Daily News, Free Russia, Brighton Argus, Western Daily Mercury, Sun, Manchester Guardian, Kidderminster Shuttle, Bombay Gazette, Walsall Observer, Liverpool Mercury, Sheffield Telegraph, Birmingham Post, Glasgow Evening News, East Anglian Daily Times, Newcastle Chronicle, Oldham Standard, Halifax Guardian, Times of India, Cheshire City News, Liverpool Courier, Pioneer Mail, Builder, Irish Times, Derby Express, Architect, North Wales Chronicle, City Press, Hackney Mercury, Morning Leader, Scotsman, Yorkshire Post, Bristol Mercury, Citizen, Courrier de la Presse, Leeds Mercury, Sanitary Record, Optician, Liverpool Daily Post, Detroit Tribune, Reading Mercury, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Chronicle, Dairyman, Surrey Advertiser, Toronto Signal, Evening Bulletin, Philadelphia Mining Journal, Cape Times, Local Government Journal, Watford Chronicle, Kelso Mail, Peterhead Sentinel, Worcester Daily Times, Australian Medical Journal, Australasian Medical Gazette, General Advertiser (Dublin), Walton News, Western Mail, Banffshire Journal, Southport Visiter, Portsmouth Mail, &c., &c.*

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Communications, Letters &c. have been received from—

A.—Mr. L. Archer, Lond.; Mr. C. M. Atkinson, Saltburn; A. Z., Lond.; Assistant, Lond.

B.—Dr. T. H. Barnes, Lond.; Mr. S. H. Byam, Lond.; Mr. T. B. Browne, Lond.; Mr. F. Braham, Brighton; Mr. H. Black, Gateshead; Mrs. K. Behnke, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Bailey and Son, Lond.; Messrs. W. and G. Baird, Belfast; Messrs. Bell and Bradfute, Edinburgh; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; British Castor Co., Lond.

C.—Dr. W. S. Colman, Lond.; Dr. Claus, Gand; Dr. R. Caton, Liverpool; Mr. J. Carter, Lond.; Mr. W. F. A. Clowes, Coggeshall; Miss M. A. Chreiman, Lond.; Commercial Church Agency, Lond.; Cortland Wagon Co., Lond; County Hospital, Lincoln, Secretary of; Cumberland Infirmary, Carlisle, Secretary of.

D.—Dr. T. Dutton, Lond.; Dr. J. Dundon, Pope's Quay, Cork; Dr. P. R. Dodwell, Lond.; Dr. C. Duff, Lond.; Dr. W. Dale, Truro; Mr. G. W. P. Dennys, Delhi; Messrs. Domeier and Co., Lond.; Dental Hospital of London, Secretary of.

E.—Messrs. Eason and Son, Dublin; East Suffolk Hospital, Ipswich, Secretary of.

F.—Brig.-Surg.-Lieut.-Col. E. Fairland, Netley; Fiat Justitia.

G.—Dr. L. G. Glover, Lond.; Messrs. Greeff and Co., Lond.; General Apothecaries' Co., Lond., Secretary of; Great Eastern Railway, Continental Traffic Manager of, Lond.; G. L.; General Practitioner.

H.—Dr. G. Herschell, Lond.; Dr. W. H. Hamer, Lond.; Mr. J. Heywood, Manchester; Mr. S. Holland, Welwyn; Mr. E. G. Highton, Lond.; Mrs. Hall, Southtown; Messrs. Hopkinson and Co., Nottingham; Hortens, Lond.

I.—Inst. of Anatomy, Bucharest, Director of.

J.—Mr. A. James, Bath; Dr. W. A. Jamieson, Lond.

K.—Messrs. Keith and Co., Edinburgh.

L.—Dr. R. F. C. Leith, Edin.; Mr. F. Lysett, Holt; Mr. B. Lord, Manchester; Mr. D. Lawson, Blackford; Mr. D. Lawson, Newport, Fife; Mr. J. Lawrence-Hamilton, Brighton; Liquor Carnis Co., Aston Clinton; L. G., Lond.; L.R.C.P. Lond., M.R.C.S. Eng.

M.—Dr. J. M. Moir, Inverness; Dr. J. Moore, Lond.; Dr. J. F. Macbeth, Chicago; Mr. J. Menzies, Worksop; Mr. D. C. McArthur, Witheridge; Mr. J. F. Milner, Godalming; Messrs. Macmillan and Co., Lond.; Metropolitan Hospital Sunday Fund, Secretary of; M.D. Beta, Lond.; Medicus, Lond.

N.—Dr. R. Neale, Lond.

O.—Mr. E. Owen, Lond.

P.—Dr. Pinder, Lond.; Messrs. F. J. Putz and Co., Lond.; Messrs. Parke, Davis, and Co., Lond.; Pepsin, Lond.; Practitioner, Hilliard, co. Tipperary.

R.—Mr. G. K. Richards, Lond.; Mr. R. H. Reynolds, Surbiton; Messrs. J. Robinson and Co., Norwich.

S.—Dr. J. O. Symes, Lond.; Mr. H. W. Scriven, Lond.; Mr. C. H. Southall, Leeds; Mr. J. Stewart, Clifton; Mr. C. F. Sutton, Holmes Chapel; Mrs. M. Swaby, Saltburn; Messrs. S. Smith and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. A. F. Sharp and Co., Glasgow; Messrs. Smith, Elder, and Co., Lond.; Messrs. Southall Bros. and Barclay, Birmingham; *Swimming*, Editor of, Lond.; S. H., Lond.

T.—Mr. J. Thin, Edinburgh; Rev. R. J. Thorp, Barnsley; Typhus.

U.—University College, Dundee, Dean of; University College, Cardiff, Secretary of.

V.—Mr. G. Vickers, Lond.; Messrs. Valpy, Chaplin and Peckham, Lond.; V., Birkenhead.

W.—Dr. A. Wallace, Lond.; Dr. W. Woodward, Worcester; Mr. H. E. Walker, Corwen; Mr. V. Wood, Lond.; Mr. C. Webb, Lond.; Mr. G. B. Woodrooffe, Port Elizabeth, South Africa; Mr. F. Wilson, Lond.; Messrs. W. Wood and Co., New York; Messrs. Wilcox and Co., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. E. Ash, Stoke-on-Trent; Mr. R. W. Aitken, Helmsley; A. G. B., Lond.; A. H. B., Lond.; A. K., Lond.; Assistant, Lond.

B.—Dr. F. Bagshawe, St. Leonards-on-Sea; Dr. W. H. Bishop, Wylam; Mr. D. R. Boyd, Glasgow; Mr. D. M. Barrow, Peterborough; Mr. A. Boulton, Sutton-on-Sea; Mrs. Bennett, Lond.; Miss Bramwell, North Shields; Messrs. W. and G. Baird, Belfast; Blackburn Infirmary, Secretary of; Beta, Lond.

C.—Dr. Creswell, Suez; Dr. E. T. Chamberlain, Leagrave; Dr. J. D. Chepmell, Lond.; Dr. H. Collins, Tow Law; Dr. D. E. Cantillon, Little Island; Dr. A. Crawford, Stornoway, N.B.; Mr. J. D. Cockburn, Lond.; Messrs. R. Cook and Co., Lond.; Messrs. Carnrick and Co., Lond.; County Asylum, Rainhill, Secretary of; Cymru Fydd, Lond.; Cato, Lond.; C. K., Lond.; Camera, Lond.; Candid, Lond.; Change, Lond.; Cœlebs, Lond.

D.—Dr. J. Dundon, Cork; Dr. A. Dott, Manchester; Dr. Dewar, Lochgelly; Dr. W. T. Davies, Carmarthen; Mr. J. H. Dow, Bolton; Mr. R. Davis, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh; Derby County Asylum, Mickleover, Clerk of; District Surgeon, Rajahmundry, India; D. P. H., Lond.; Dispensary, Lond.; Darwin, Lond.

E.—Dr. A. E. Evans, Lond.; Eryri, Lond.; Expectans, Lond.

F.—Fario, Reading.

G.—Mr. E. J. Gibbs, Banbury; Glamorgan Infirmary, Secretary of; Great Eastern Railway Co., Secretary of; Great Yarmouth Hospital, Accountant of.

H.—Dr. F. J. Harper, Cairo; Dr. P. J. Hatton, Eden Bridge; Mr. G. Herbert, Reading; Mr. W. A. Hardiker, Brymbo; Mr. J. T. Hislop, Ripley; Mrs. Hall, Great Yarmouth; Messrs. Hooper and Co., Lond.; H., Lond.; H. A. B., Lond.

J.—Mr. H. J. Jackson, Torquay; J., Lond.; J. P., Lond.; J. H., Lond.; J. E. T., Bishop Auckland.

K.—Dr. Kingdom, Colyton; Messrs. H. S. King and Co., Lond.; Kent and Canterbury Hospital, Secretary of.

L.—L. G., Lond.; Littleford, Lond.

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N.—Dr. R. Neale, Lond.; Mr. E. J. Nugent, Lond.

O.—Miss M. Oliver, Indore; O. E. L., Lond.

P.—Dr. Pantin, Douglas; Mr. R. D. Patterson, Caledon; Messrs. Potter and Sacker, Lond.

R.—Mr. C. Ricker, St. Petersburg; Messrs. W. A. Ross and Sons, Belfast; Messrs. J. Bobbins and Co., Lond.; Royal South Hants Infirmary, Southampton, Secretary of; Royal Victoria Hospital, Bournemouth, Secretary of; Radcliffe Infirmary, Oxford, Secretary of; Rusticus, Lond.; Radix, Lond.

S.—Dr. H. Snow, Lond.; Dr. H. G. Stacey, Leeds; Mr. R. A. Scott, Pickering; Mr. H. M. Speechley, Parkgate; Mr. Smith, Burnley; Herr B. Seeber, Firenze, Italy; Messrs. Swan, Sonnenschein, and Co., Lond.; St. Andrew's Hospital, Northampton, Secretary of; Stapes, Lond.; Scalpel, Huddersfield.

T.—Dr. J. Taylor, Oldham; Mr. J. Thin, Edinburgh; T. O. M., Lond.

U.—Dr. A. S. Underhill, Tipton.

V.—Veritas, Lond.; Vero, Lond.

W.—Mr. H. Walker, Lond.; Mr. T. Wilson, Edgworthstown; Mr. B. Wheeler, Manchester; Mr. H. Walker, Sketty; Messrs. Warrick Bros., Lond.; Wolverhampton and Staffs. General Hospital, Secretary of; Wonford House Hospital, near Exeter, Secretary of; West Riding, Leeds; Wheeler, Birmingham.

X.—X. Y., Lond.

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	Every additional Line	0 0 6
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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials &c. sent to the Office in reply to advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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Valedictory Address,

Delivered at the termination of the Seventieth Session of the Army Medical School, Netley,

BY SURGEON-GENERAL SIR JOSEPH FAYRER, K.C.S.I., M.D., F.R.S., Q.H.P.,

HONORARY PHYSICIAN TO THE PRINCE OF WALES; LATE PRESIDENT OF THE MEDICAL BOARD, INDIA OFFICE.

IT is rather more than twenty years since my official relations with the Army Medical School at Netley began, and this is not the first time I have had the honour of addressing the surgeons on probation on an occasion similar to that for which we are now assembled, for I find that on April 1st, 1875, I addressed them at the opening of the school, and on Feb. 3rd, 1879, I had the privilege of presiding at the distribution of prizes. During the intervening period of twenty years I have had the opportunity of watching the progress of the school, have done so with great interest, and have noted with much satisfaction the gradually increasing good influence it has exerted on the medical department and through them the medical services generally. It is a subject for congratulation that the school continues to prosper, despite the vicissitudes and changes it has undergone; its very existence even has been menaced, but happily it has survived these dangers and has so well maintained its prestige and asserted its utility that we may hope that (the need for its existence being so well established) any future changes will be only such as tend to the expansion of the teaching of those subjects especially relating to the duties of the military medical officer which were originally contemplated when it was founded, and which can nowhere be so well taught as they are here. Deeply interested in the service in which my life has been passed, and knowing by experience how valuable is the character of the education and training imparted here, I have always wished to see the teaching of this school extended over a longer period of time and its sphere of utility enlarged, and have hoped that in process of time its benefits might be made available for other medical men destined for a public career in the sanitary and civil medical services of the country, including the colonial, as well as for the officers of the Army and Indian Medical Department. I am much impressed with the belief that such a modification in the present system would be of great benefit alike to the Service and the individual medical officers, for, however perfect may be the scheme of education in the great civil medical schools and universities, however highly specialised may be the teaching of certain subjects in any one of them, that combination of special subjects peculiarly needed in the public medical services, especially in the Army and India together with instruction in military and administrative questions—to say nothing of the advantages of *esprit de corps* acquired by association in a great school before entering the actual service—can never be imparted or acquired as thoroughly elsewhere as it can here. In my humble opinion, the time now allotted for residence at Netley, considering the varied and special nature of the curriculum, is hardly sufficient, and I do not hesitate, therefore, to say that I trust the period of study for probationers may ultimately be extended. Officers having this longer training and special education would be even better qualified than they are at present to meet all emergencies and to carry out the scientific investigations so imperatively demanded in these days, when great problems of etiology as well as of preventive medicine are exciting so much interest and are straining to the utmost the resources of practical scientific research for their elucidation. In this respect this great school is peculiarly well endowed and admirably equipped for the means of such teaching, and the teachers are alike forthcoming; more time only is required to do full justice to both. And here I would, through you, urge on your successors the supreme importance of diligent use of the period of probation here. The time is so short, the subjects are so important, that without close and unremitting work and attention the necessary standard may not be attained and disastrous failure result. This in my experience of Netley is rare, but it *does* occasionally happen, and I would urge you to impress on your friends and successors the importance of bearing it in mind.

When I last addressed the young officers (1879) who had just gained their commissions, I expressed my hope and belief that better prospects were foreshadowed and might be anticipated for the Medical Services. Times had been, and indeed still were, unfavourable, a feeling of disquietude and unrest prevailed, and there was a sense of general dissatisfaction with the existing condition of things. That there was reason for this I think cannot be doubted, nor can I say it is altogether extinct now; but I ventured then to suggest that possibly the difficulties did not all arise from outside, and that to a certain extent, perhaps, the obstacles might be found within the Service itself, and that, if it were so, it behoved the medical officers to see to it that such internal causes should be removed. I reminded the young officers that the social and educational influences of a great institution like Netley are calculated to foster and develop (amongst other things) that *esprit de corps* which so greatly conduces to real stability in any department of the public services. I pointed out also that the position of the military and Indian medical officer offers such advantages as ought to command a supply of the *élite* of our Universities and medical schools. All this I repeat to-day; and I am glad to think that as time advances there has been, on the whole, a favourable change. Many men of high culture are competing for the appointments, but indications are even now not wanting of a doubting confidence, for I am told that the competition is less keen than it has been; still, the general tone and feeling in regard to the Services have improved. Unfavourable conditions have been mitigated if not removed; the importance of the medical officer's work is more appreciated and his true place in the great military organisation better understood, and, as a consequence, more authority is attached to his opinion and more weight to the importance of his duties, which are concerned with not merely sickness and wounds, but the well-being and sanitary condition of those under his care. Until a few years ago the military status of the medical officer was insufficiently defined. It is true he held what was called "relative" or "comparative" rank, but this, however, served but imperfectly to endue him with that authority which is essential to his position as an important and indispensable officer of the Army. It had long been felt that his status required more exact definition, but there were always certain obstacles to this which stood in the way. It was argued, I believe, that however necessary the medical officer might be—and that he is so was not disputed or denied, at all events by reasonable persons—yet that substantive military rank could not appropriately be conferred upon him. This view, it would seem, could only have arisen from a misconception of the true nature of a commission. The idea that the title of Lieutenant, Captain, Major, or Colonel could only be held by that particular branch of the Service whose duty it is to direct the combative energies of the soldier was surely a mistaken one, for it is in the power of the Sovereign to confer such distinction on anyone, and it is conferred on officers of the military service who have no immediate connexion with mere combatant action, as is amply demonstrated by the fact that the officers who control the Commissariat, the Army Service Corps, nay, even the band master, now can and do, hold substantive commissions in one or other of those ranks. If it be considered necessary and possible that these officers should be so commissioned, it is difficult to understand why the same advantages should have been withheld from the medical officers, who, being so closely connected with all that concerns the health, discipline, the well-being and effective condition generally of the Army, need such warrant for their authority as much as do those of any other department. The concessions that have been made doubtless conduce to the interests of the Service by placing the medical officer in a more assured position and by defining more clearly the substantive rank and authority which he holds, though I must confess one has difficulty in appreciating the advantage of such a cumbrous title as that of "Brigade-Surgeon-Lieutenant-Colonel." Time, however, will probably modify such complex designations. Invidious distinctions implied in the terms "combatant" and "non-combatant" can have but little real significance in these days, when the records of almost every action fought or position defended show how equally risks are shared by the medical and the other officers, whilst the number of Victoria Crosses worn by them is a curious comment on the use of the term "non-combatant" (with its present meaning) as applied to the medical officer. But let me repeat what I said on a former occasion, which is that your military rank gives you no title, nor does it call upon you in ordinary cases to assume

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the place or duties of the combatant officer, and I hope I need not even hint at the impropriety and bad taste of assuming any position to which your own, as members of a learned profession, should make you indifferent, for, whatever your military rank may be, you are first of all medical men. Still, withal, you are soldiers, and it may happen, as it often has done, that you have in an emergency to take the place of your combatant brethren. Should it fall to your lot to do so you will be prepared to show that you are as ready for this as for any other duty. Two brilliant examples are even now before you in the cases of Surgeon-Major Robertson, who as a political officer contributed to the defence of Chitral, and of Surgeon-Captain Whitchurch, who risked his own life and fought his way through the enemy, carrying and protecting his mortally wounded comrade. Both these officers have recently received recognition of their services. If you confine yourselves, therefore, to your own distinct sphere of duty, which is ample and sufficient, the benefit of your influence will be appreciated; if you overstep it you will be in a false position; your efforts for good will be minimised and your counsels neglected if not ignored. Remember also that though your status in the Service is now—as it should be—assured by your military rank, so much of your influence for good depends upon personal character that you should endeavour to maintain that at the highest standard.

Gentlemen, let me now congratulate you upon the successful termination of your career at Netley, and upon having achieved the great object of your ambition—your commissions in the Service; and especially I would congratulate those of you who have obtained prizes bearing the names of Sidney Herbert, Edmund Parkes, Ronald Martin, and De Chaumont—names that will be honoured and respected wherever they are mentioned and medical science is appreciated. They have conferred lustre on the Service generally and upon this school in particular. They deserve well of their country, and they may rightly be held up to you and other young men as models for imitation. Let these prizes be an inducement to you to endeavour to follow in the steps—long and laborious they may have been—which led to their great distinction, and which will lead you too, perhaps, if you follow in them, to a similar pre-eminence. These prizes should also be an incentive to you to endeavour to maintain and increase the prestige which they now reflect upon you, whilst at the same time they should serve to remind you of the efforts by which that success was obtained and the obligation imposed upon you of continuing to merit it. To those of you—and it is of necessity the majority—who have not been equally successful I would say that you have won one great prize in securing your commission; there are still others to be won in the career before you, and many advantages to be gained, if you will only work perseveringly and seize the opportunities when they present themselves. Both India and the army offer many paths to eminence—India especially does so—and to one or other of these goals you will surely attain, if having determined to do so at the outset you earnestly persevere. It has been said that the public services offer little inducement to exertion; that they present, after all, but a somewhat dull level of monotonous equality; and that talent, energy, zeal, and special devotion to one or other of the branches of science are but of litttle avail and lead to nothing. This is not the case—least of all is it so in India, where many and varied appointments are attainable and await the earnest worker. They are, at least, filled at the present moment by medical officers, and though in this respect, perhaps, India is not so fertile as it may have been in past times, it still offers opportunities of professional and scientific advancement which are excelled by those of no Service in the world. I am afraid I may not hold out to you such prospects of honours and distinctions as fall to the lot of some other departments of the public service, but even in this respect there are signs of improvement, and it is possible that in the future such recognitions as are accorded to military, political, and civil officers of long and distinguished service may fall to your lot likewise. But, after all, when you adopted the profession of medicine as a career you did not contemplate such rewards as the chief object of your ambition. It was rather, I take it, the exercise of a noble profession, the advance of knowledge, the welfare of your fellow-creatures, and the satisfaction of feeling that you aim at the almost god-like power of relieving suffering, saving life, and promoting the sanitary, moral, and material welfare of your fellow subjects that influenced you, and to this you may in a measure certainly attain. Great wealth you will perhaps not acquire, but a competency you may certainly rely on—sufficient, at any rate to relieve you from those carking cares and pecuniary anxieties which so often retard the pursuit of knowledge and the progress of the individual. In most cases you may rightly look forward to being able to provide for your families and, under favourable circumstances, even to acquire a certain amount of wealth. You will, at all events, be able to lead useful and honoured lives, whilst you will acquire "troops of friends," and it may well be that from among you shall arise another Parkes, Falconer, Waring, Hooker, Longmore, Maclean, Aitkin, De Chaumont, or David Smith, or perhaps even a worthy successor to the great biologist and philosopher who has so recently gone to his rest—for Huxley and the men I have mentioned, to whom might be added many others, at least began their lives and laid the foundations of future eminence in one or other of the medical services.

On the last occasion upon which I had the privilege of presiding at a meeting of this kind I had but recently become officially connected with this school as a member of the Senate. The duties were most congenial to me, for I had always taken much interest in the education and training of medical officers. The anticipations that I then formed in reference to the objects and results of this great school have been fully justified; and I now, having ceased to occupy that official position, look back with great pleasure upon the years that have passed in connexion with it, and the regret that I feel on the closing of my official connexion with the school is tempered by the knowledge that my successor, Surgeon-Colonel Hooper, will strive to guard and promote your interests with all the zeal, earnestness, and ability which characterised him in India, and have led him to the position he now occupies. I have watched with keen interest the career of your predecessors on these benches, and have been gratified to learn how thoroughly many of them have done credit to the teaching they have received here; whilst I deeply regret that this almost general rule has not been without exception. The severance of my official relation with the school in no way diminishes the interest I take in it; and I look forward with pleasure to the privilege of being present on such occasions as these, and of still watching its progress and the influence that it will, I hope, continue to exert in elevating the Medical Department and maintaining it in the position it should take amongst the other great public services of this country.

It only remains for me now to impress briefly upon you the importance of the duties that you will be called upon to perform. To those of you who are destined for the military service of this country will be entrusted the care of the health of our soldiers at home and abroad. Upon you it will devolve to advise the authorities upon all sanitary questions and whatever concerns the physical well-being of the army under your care. In the event of war—and who can say how long we may remain at peace?—the treatment of the sick and wounded will be your special care. To you, also, it will fall to investigate the laws that govern the origin and diffusion of epidemic and other forms of disease, and all that concerns the soldier's health. Already, through the influence of your predecessors, the death-rate of our soldiers in India has been reduced within the last fifty years from something like sixty to thirteen per mille, and no doubt this mortality is susceptible of further diminution, whilst side by side with the reduced death-rate will continue an amelioration of the conditions of life generally. Nor will your duties be limited to those of a purely military medical character, for there are some special spheres of action and appointments open to those who may aspire to them. To those of you who are destined for the Indian Medical Service similar but even wider prospects are open, for there your duties will be of a still more varied character. Problems concerning disease, the laws regulating the rise and spread of cholera, fever, and other epidemics—their pathology, etiology, and therapeutics—still need and claim further investigation and research. Or, apart from medicine and hygiene, the whole range of natural science, involving zoology, botany, meteorology, and ethnology, afford matter for investigation and fields for research which are yet comparatively unexplored. Your education and scientific training fit you to take up and deal with these subjects, and I would suggest to you the advantage of doing so—i.e., of having some other occupation than that which is concerned with medicine alone. You have thus before you, to whatever Service you belong, the prospect of an interesting, useful, and profitable career. The measure of your success will be that of your own exertions. If you exercise the ordinary precautions

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for preserving health you may have every reason to hope that you will pass through it successfully—and, I trust, satisfactorily—and may return to this country in health and vigour and with large experience with the prospect of doing useful work at home—it may be in this great school. I will not detain you longer than to say that in bidding you farewell I wish you every prosperity and success, and trust that your highest aspirations may be realised.

Address in Physiology

ON

INTERNAL SECRETIONS.

Delivered at the Annual Meeting of the British Medical Association at London, Aug. 2nd, 1895,[1]

By EDWARD A. SCHÄFER, F.R.S.,

JODRELL PROFESSOR OF PHYSIOLOGY IN UNIVERSITY COLLEGE, LONDON.

MR. PRESIDENT AND GENTLEMEN,—My definite subject—the subject of internal secretions is one of far-reaching interest, although its full importance has only lately come to be recognised. A secreting organ is one which separates certain materials from the blood and pours them out again, sometimes after effecting change of some sort in them, usually upon external surfaces, or at least upon surfaces which are connected with the exterior. These are the secretions which are most commonly known under that name. On the other hand, some secreted materials are not poured out upon an external surface at all, but are returned to the blood. These may be termed internal secretions, and they may be and are of no less importance than the better known and more fully studied ordinary or external secretions. The name of gland is one which is usually applied to a secreting organ; and to those which have been believed to furnish only internal secretions the name "ductless glands" has been applied. It is not, however, the ductless glands alone which possess the property of furnishing internal secretions, for it is clear, according to our definition, that this will apply to any organ of the body. Every part of the body does, in fact, take up materials from the blood, and does transform these into other materials. Having thus transformed them they are ultimately returned into the circulating fluid, and in that sense every tissue and organ of the body furnishes an internal secretion. Moreover, certain important glands which are provided with ducts possess not only the faculty of yielding an external secretion, but have equally important, if not even more important, functions in connexion with internal secretion. Thus both the liver and the pancreas are as essential to life, by virtue of the internal secretions which they furnish to the blood, as they are by their better known external secretions. The evidence of this is complete. The entire removal of either of these organs causes death, and this is due to the removal of the influence which they exert on the metabolism of the body by the loss of their internal secretions, not necessarily to the loss of their external secretions; for in the case of the liver it is well known that the bile may be diverted by a fistulous opening without any serious interference with the vital functions, and the same is the case for pancreatic juice. The kidney is another instance. It might, indeed, at first appear that a similar statement will not apply so well here; but it has been shown by the researches of Dr. Rose Bradford that the kidney is not a real exception to the rule laid down, for enough of the kidney substance may be left to carry on the excretory products of the body, and yet the removal of the remainder of the organ may cause such disorganisation of the nitrogenous metabolism of the body as to lead speedily to wasting and death.

The same result is not obtained with all glands. The salivary glands may be entirely removed without any marked symptom supervening. And this is also well known to be the case with the mammary glands. On the other hand, removal of the generative glands leads to marked alterations in the development of other parts of the body. In the last-mentioned case the changes are without doubt produced through the nervous system, and are not connected with the internal secretion of the glands; and with respect to the salivary and mammary glands we may assume that, although they yield an internal secretion of some sort to the blood, it is of the same nature as that yielded by other organs, and that such other organs may act vicariously for those removed. This is, however, inapplicable to the liver, the kidney, or the pancreas; removal of which or restriction of their internal secretions is inevitably followed by a fatal result.

I do not propose to dwell further upon the internal secretions of the liver and kidney, and for contrary reasons—namely, that in the one case the subject has become too large for the limits of a short address; and in the other because the subject is one with regard to which we have at present too little information. But before leaving the liver I would point out that it affords an excellent illustration of the fact that internal secretions may, like ordinary or external secretions, either serve some useful purposes in the body, or may be formed only to be got rid of (excretions). The formation of glycogen and sugar is an example of a useful internal secretion—that of urea—of what would be termed in the ordinary sense an excretion, although it is not actually got rid of by the liver, but is produced by that organ only to be got rid of by the kidney. The internal secretion of the pancreas may detain us somewhat longer. Among the racemose secreting glands the pancreas offers a peculiarity of structure which in the first instance it may be well to note. For we meet here, besides the secreting alveoli and ducts, a peculiar epithelium-like tissue which occurs in isolated patches throughout the organ and which is characterised by its extreme vascularity. These islands of epitheloid tissue are quite characteristic of pancreas. We know of no other externally secreting gland which contains them.

Now it was formerly believed that the sole function of the pancreas was to yield pancreatic juice, and this, it must be confessed, is in itself a sufficiently important function, seeing that this fluid contains ferments which act on all the principal organic constituents of the food. Before 1889 it had indeed been remarked that cases of glycosuria occurring in the human subject were frequently associated with disease of some kind of the pancreas. Frerichs found that 20 per cent. of the total number of cases of diabetes which came under his notice were accompanied by obvious changes in the pancreas. This observation led to experimental inquiry. Claude Bernard had long previously attempted to entirely remove the pancreas, but all his attempts were unsuccessful, in so far that the animals speedily succumbed. In 1889, however, the operation was successfully performed by Von Mering and Minkowski. They found that all cases in which the entire pancreas was removed the operation was followed within the space of a very few hours by the appearance of sugar in the urine, and this to a great extent—as much as 5 to 10 per cent. being found even in fasting animals. Accompanying the condition of glycosuria there is also produced polyuria; and these conditions occur even under a purely flesh diet, and are accompanied, as might be supposed, by a rapid wasting, and followed within the space of fifteen days or less by death. This result is not due to the loss of the pancreatic secretion, for, as we have already seen, the pancreatic juice may be diverted by a fistula, and the animal may remain in perfect health. Nor is it due to the loss of the secreting structure; for it has been found possible to destroy the secreting structure of the organ without the supervention of diabetes. This was done successfully by Schiff in 1872. Schiff's method, which was a repetition of experiments by Bernhard, was the injection of paraffin into the duct of Wirsung. In Bernhard's original experiments all the dogs operated on speedily died; but this was probably due to accidental causes, and not to the actual destruction of the pancreatic tissue; for in Schiff's experiments the dogs survived and remained in perfect health. The fact that removal of the pancreas is followed by glycosuria was not at that time known, and the appearance of sugar in the urine was not therefore looked for by Schiff. But there can be no doubt of the absence of any severe form of diabetes, because the animals underwent no wasting.

Quite recently the experiment has been repeated by Thiroloix, who found that, although the gland was reduced by the process of atrophy supervening on the injection to a mere rudiment, symptoms of diabetes do not occur as when the whole gland is removed. It is now well known that if a

[1] Professor Schäfer intended to illustrate his address by lantern slides, but the hall being unsuitable for this he gave his audience a good idea of his meaning by tracing the curves with his finger.

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portion of the pancreas be left, about a quarter or rather more, no glycosuria appears. In the great majority of cases the animals remain healthy; so that it is clear that a portion only of the gland can prevent the diabetic symptoms. Nor need the portion of gland which is left remain in its ordinary situation. It or a portion of the gland from another animal may, in fact, be grafted either elsewhere into the peritoneal cavity or under the skin. Provided the grafting be successful, and the portion of the gland employed of sufficient size, removal of the pancreas is now no longer followed by the usual symptoms. The animal may remain, in fact, in perfect health. But, if at any subsequent time the grafted portion of pancreas is removed, diabetes supervenes, and the animal dies within a short time, as after a primary removal. Now it has been shown by Thiroloix that the grafting of a portion of pancreas, the secreting part of which had been destroyed by injection of paraffin along the ducts, is also efficacious in preventing the advent of diabetes after removal of the pancreas. We must therefore assume that the material, whatever it may be, which is furnished by the pancreas to the blood, and which prevents excessive formation of sugar in the blood and in the urine, must be formed by some other constituents of the gland than the secreting cells; for there is every reason to believe that these cells are eventually completely destroyed after the ducts have been blocked in the manner described.

[Professor Schäfer here considered the various theories which have been put forward as to the functions of the pancreas as an internally secreting organ, and went on to say:]

The only fact that appears certain in connexion with the manner in which the pancreas prevents excessive production of sugar within the body is that this effect must be produced by the formation of some material, secreted internally by the gland and probably by the interstitial vascular islets, and that this internally secreted material profoundly modifies the carbohydrate metabolism of the tissues.

The next internal secretion which I propose to consider is that of the thyroid gland. The process of study is in one sense simpler in this case, since there is no external secretion. That the thyroid gland is a secreting gland no one who studies its structure and its mode of development can well doubt; except that it is unprovided in the adult state with a duct it has all the features of structure of secreting glands. It is formed of alveoli which are lined by epithelial cells, and these cells have been observed to exhibit changes after treatment with pilocarpin in no way dissimilar to those changes which have been noticed under like circumstances in the cells of true secreting glands. Further, we can observe the secreted material within the vesicles of the thyroid in the form of the substance known as "colloid."

[Professor Schäfer then gave a *résumé* of the physiological investigations on the thyroid gland and an account of the symptoms which follow thyroidectomy. He continued:]

Various theories have been advanced to account for the effects of removal of the gland. H. Munk holds, or until lately held, that the effects of removal are entirely due to interference with adjoining nervous structures in the neck. But this, as in the similar theory propounded to account for the effects of extirpation of the pancreas, is absolutely negatived by the results of thyroid grafting. Besides this theory, which must, it seems to me, at once be dismissed, there are two others which may be regarded as disputing the ground between them. Of these the one may be called the theory of "autotoxication" and the other that of "internal secretion." The autotoxication theory assumes that there is a certain toxic substance which is constantly tending to accumulate in the blood, and which it is the duty of the thyroid gland to render innocuous and to remove. According to this, the function of the thyroid would be primarily excretory. This view is supposed to be supported by the statement that in animals which are dying after removal of the thyroid the blood is toxic for other animals, and especially for those which have already had the thyroid removed, although only a short time previously, and before the symptoms of thyroidectomy have had time to develop. It is not stated what the probable nature of this substance is, or by what tissues it may be formed. The "internal secretion" theory would explain the phenomena of extirpation as due to the absence of a secretion which is formed within the thyroid, and which is passed into the blood, possibly through the medium of the lymphatics: a secretion which is necessary for certain of the metabolic processes within the body, and especially for those connected with the nutrition of the central nervous system and of the connective tissues. For, in the first place, beneficial and not toxic effects follow the exhibition of thyroid juice both in cases of thyroidectomy in animals and in myxœdema and other affections in man; and, secondly, if we investigate the physiological effects of extract of thyroid gland, whether prepared with water or glycerine, and whether previously boiled or not, we find that it produces a distinct action upon the bloodvessels, so that the blood pressure markedly falls although the beats of the heart remain at about the same rate and of the same strength. This lowering of the blood pressure without influencing the action of the heart can only be produced in one way—namely, by increasing the calibre of the arteries. Before this effect upon the blood pressure was discovered it had been shown by Dr. George Oliver that the exhibition of thyroid juice or other preparations of thyroid in the human subject has a tendency to increase the calibre of the radial artery. It would seem, therefore, that the juice of the thyroid and extracts which are obtained from the gland have a distinct physiological effect upon the vascular system. In connexion with this it is of interest to recall the observations of Lorrain Smith upon the effects of thyroidectomy in altering the gaseous exchanges—that is to say, the oxidations within the bodies of animals. Lorrain Smith found that in animals which have been deprived of the thyroid body the reaction to changes of temperature was abnormally rapid. When normal animals are exposed to a cold atmosphere the production of carbonic acid becomes increased consistently with the increased oxidation which we know to occur, but this increase of production of carbonic acid does not take place immediately, but only comes on after a certain period of time, the temperature of the body being in the meantime maintained normal by those physical changes which occur in the circulation, and which allow the quantity of blood brought to the skin, and the amount of heat thereby lost from the general surface of the body, to be varied. Now it is precisely these vaso-motor changes which appear to be lacking after removal of the thyroid; for the production of carbonic acid becomes almost immediately increased by exposing the thyroidectomied animals to a low temperature. That the thyroid gland yields an internal secretion which effects a useful purpose within the body appears to result conclusively from these facts, and the effects which follow thyroidectomy are probably due to the loss of that secretion. Whether the gland also possesses the function of destroying toxic products of metabolism which would otherwise tend to accumulate in the blood is a point which requires the production of more conclusive evidence before it can be regarded as established.

[Professor Schäfer next considered the pituitary body, quoting experiments which went to show that this gland supplied an internal secretion which caused contraction of the heart's arteries. He proceeded:]

Lastly, I propose to ask you to consider the internal secretion of the supra-renal bodies. The immense importance of these glands in nutrition was indicated by Addison, who, in 1855, pointed out that the symptoms of the disease now known by his name are associated with pathological alterations of the supra-renal capsules.

[Here Professor Schäfer referred to the symptoms of Addison's disease, as well as to the experiments of Brown-Séquard and other observers. He then continued:]

Experiments upon normal animals with extracts of supra-renal have been performed by a number of observers, but by all in a very incomplete manner. For the most part they have been satisfied to subcutaneously inject extracts made with water and other menstrua, and to observe the symptoms, if any, which result. As a matter of fact, in some animals which are so treated there are no obvious symptoms. The guinea-pig will stand a large subcutaneous dose of supra-renal extract without showing any symptoms at all, or with, perhaps, only a slight acceleration and increase of the force of the pulse. The same appears to be the case with the cat and with the dog, unless a very large dose be injected. Rabbits, on the other hand, are extremely susceptible to the influence of supra-renal extracts. If a large dose be given the animal may succumb within half an hour. If, on the other hand, the dose be only moderate in quantity, it may not show any symptoms at all for some hours, and then it may suddenly succumb. This primary absence of symptoms has been especially noted by Foà and Pellacani, who state that in many of the dogs which they experimented upon in this way there were no symptoms at all apparent on the day on which the injection was given, but that the next

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morning the animal was usually found dead. The cause of death, it may be added, in this case is not by any means clear. Foà and Pellacani have supposed that it may be due to paralysis of the respiratory centre, but the slight effect which intravenous injection of supra-renal extract produces upon this centre does not lend support to this conjecture.

We may next proceed to consider the physiological effects of intravenous injection of supra-renal extract. The facts which I am about to put before you are new; they are the result of experiments by Oliver and myself, which have been carried on in my laboratory during the last two years.[2] They show conclusively that the medulla of the supra-renal capsule contains a dialysable organic principle, soluble in water, and not destroyed by boiling for a short time, which produces a powerful physiological action upon the muscular system in general, but especially upon the skeletal muscles, the muscular walls of the bloodvessels, and the muscular wall of the heart. A certain amount of action is also manifested upon some of the nerve centres in the bulb, especially the cardio-inhibitory centre, and to a small extent upon the respiratory centre.

The effect upon the skeletal muscles is well shown in the frog, but can also be seen in mammals. The contraction of a muscle in response to a single excitation of its nerve is as ready as in the normal animal; but it is greatly prolonged, so that the result is comparable to that produced by a small dose of veratria, which, as is well known, has the effect of enormously increasing the contraction resulting from a single stimulation of the muscle or its nerve. It is in no way comparable to a curare effect, for the muscles remain as excitable through their nerves as before. It is therefore an effect entirely different from the so-called autotoxication paralysis which is stated to result after removal of the supra-renal capsules in animals, and the material which is extracted by water, therefore, from the supra-renal capsules is certainly not the same material that is said to accumulate in the blood after the removal of those organs. The action upon the circulatory system may be divided into the action upon the heart and the action upon the arterial system. Upon the heart the effect differs according as the vagi are cut or uncut. When the vagi are uncut, and the heart is therefore still in connexion with the cardio-inhibitory centre in the medulla oblongata, the action of supra-renal extract is to slow, and even to entirely stop, the contraction of the auricle. Under the circumstances the ventricle continues beating with an independent slow rhythm. The result is to cause the pulse to be very slow. On the other hand, when the vagi are cut or their cardiac ends paralysed by atropine the effect upon the heart is precisely the reverse. The strength and frequency of the auricular contractions are markedly increased, and those of the ventricle are correspondingly augmented. This naturally has the effect of sending a vastly greater amount of blood into the arteries, which by itself would alone produce a great rise in the arterial pressure. The direct action upon the arteries is, however, quite as marked as that upon the heart. If the blood pressure be taken in a dog in the usual way by connecting a mercurial manometer with the femoral artery, and if a minute dose of supra-renal extract be now injected into a vein, it is found that even with the vagi uncut and the heart therefore slowed by the action of the extract the blood pressure rises considerably. But with the vagi cut or paralysed by atropine the rise can only be characterised as enormous. The contraction of the arteries is further exemplified by the fact that if an organ, such as a limb, or the kidney, or the spleen, be enclosed within a plethysmograph the instrument indicates an enormous diminution in volume of the organ, which can only be accounted for by a contraction of its arterioles.[3] This contraction is produced by the direct action of the drug upon the muscular tissue of the smaller arteries and not indirectly through the vaso-motor centre, for it obtains in the mammal equally well with the spinal cord cut or the bulb destroyed, or even in the case of the arm after the brachial plexus has been severed. In the frog it is produced also with the brain and spinal cord completely destroyed and salt solution containing supra-renal extract allowed to flow through the arteries.

Under these circumstances the flow of fluid, which without the supra-renal extract may have been comparatively rapid, becomes almost completely stopped, and this can only be due to the direct action of the extractive substance upon the muscular tissue of the smaller arteries. The enormous rise of blood pressure which is got after the vagi have been cut is shown in the tracings. The pressure may rise to four or five times its original height; I know, in fact, of no other agent which will produce such an enormous increase of pressure except direct stimulation of the vaso-motor centre. It is not the case, however, that this centre is stimulated by the drug, as has been erroneously supposed by Cybulsky, for, as we have seen, the action is essentially a peripheral one. The effect passes off in the course of a few minutes. After a dose, no matter whether small or large, has been injected into a vein and has produced the results which we have seen the bloodvessels slowly resume their ordinary calibre, the augmentation and increased frequency of the heart's beats become gradually lessened and the blood pressure recovers its normal condition. Whilst the pressure is raised under the action of the supra-renal, there is apparently no possibility of inhibiting the arterial contraction; even the strongest stimulation of the depressor nerve, which under ordinary circumstances produces through the vaso-motor centre a marked dilatation of the arterioles, is without result during the activity of this extract. The question naturally arises, How is it that the effect so soon disappears? In what manner is the active principle eliminated? It is not eliminated by the kidneys, for the effect passes off just as quickly, even although the renal arteries are clamped. It is not eliminated by the supra-renals themselves, for the same fact holds good for the supra-renals. It passes off almost equally quickly if the aorta and vena cava are tied in the upper part of the abdomen, so that there is no circulation of blood whatever in the abdominal organs. It is not oxidised or otherwise destroyed by the blood, for it retains its full potency even after it has been twenty-four hours in contact with that fluid. The most probable explanation of the disappearance of the effect seems to be that the active principle becomes packed away and eventually rendered innocuous in certain organs. That the muscles take most part in this storage is probable from the fact that the physiological effects upon the skeletal muscles are manifested for a long time after the effects upon the heart and arteries have disappeared. One of the most interesting and important facts regarding the material which is yielded by the supra-renals is the minuteness of the dose which is necessary to produce these results. As little as 0·0055 g. (5½ milligrammes) of dried supra-renal is sufficient to obtain a maximal effect upon the heart and arteries in a dog weighing 10 kilogrammes. For each kilogramme of a body weight, therefore, all that is necessary to produce a maximal effect is 0·00055 g. (little more than half a milligramme).

Now we have shown that the active principle is contained only in the medulla of the gland, not in the cortex, and the medulla in all probability does not form more than one-fourth of the capsule by weight. Of the dried medulla certainly not than nine-tenths is composed of proteid and other material which is not dialysable, and which otherwise does not conform to the chemical properties which have been ascertained to belong to the active substance; so that, if we take all these facts into consideration, we find that, in order to produce the maximal effect, a dose of not more than fourteenth-millionths of a gramme per kilogramme of body weight is all that is necessary. Now it is certainly true to say that one-fourteenth of this dose will produce some effect, although not perhaps a very large one. We thus arrive at the fact that this material given in the proportion of not more than one-millionth part of a gramme per kilogramme of body weight, which would be equivalent to $\frac{1}{15000}$ gr. (less than $\frac{1}{100}$ gr.) for adult man, is still sufficient to produce very distinct physiological results.

It may well be that the supra-renal capsule is continually passing into the blood this active material, which, although present in minute quantities, may be supposed to produce an effect which is beneficial for the performance of the functions of muscular tissue, and especially the muscular tissue of the vascular system. It has, in fact, been stated by Cybulsky that the blood of the supra-renal vein contains a sufficient amount of the active principle of supra-renal extract to produce marked physiological effects. I have made three very careful experiments in an endeavour to confirm this statement, but I have not been able to find that the blood of the supra-renal vein does actually contain a sufficient amount of this material to produce, even in doses of as much as 10 c.cm., any more result than venous blood generally. But, whether

[2] The chemical work in connexion with these experiments has been carried out by Mr. B. Moore.

[3] In man the effect of taking supra-renal extract by the mouth is to produce a general diminution in calibre of the arteries as measured by the arteriometer.—Oliver.

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we are able to show it experimentally or not, there is, I suppose, very little doubt of the fact that the materials formed pass somehow or other into blood; and, when we compare these results of supra-renal injection with the converse effects obtained from the removal of supra-renals and from disease of supra-renals, we can come to no other conclusion than that we have before us a well-marked instance of an internal secretion. The general results to which we are led from a consideration of these facts, and others to which I have had no time so much as to allude, point strongly in favour of a theory of internal secretions, and it is obvious that such internal secretions may be of no less importance than the better recognised functions of the external secreting glands. These internal secretions have to be definitely reckoned with by the physician, while at the same time the therapeutist will be able to avail himself of the active principles which they contain, and in certain cases to use extracts of internally secreting glands in place of the hitherto more commonly employed vegetable medicaments. That the subject has a vast future there can be no doubt, for, in spite of the advances which have been made in elucidating it during the last few years, a great number of points still remain obscure. Nevertheless, the way which the physiologist has attempted to show may be followed by the practitioner, and the result of these physiological experiments may now be utilised for the diagnosis and treatment of disease.

ON THE PREVENTION OF PHTHISIS.

BY JAMES NIVEN, M.B. CANTAB.,
MEDICAL OFFICER OF HEALTH TO THE CITY OF MANCHESTER.

IN the issue of *Public Health* for December, 1894, is a paper read by Dr. Henry Armstrong before the North-Western Branch of Medical Officers of Health on the above subject, in which he does me the honour to quote my name in connexion with preventive measures. He does not, however, agree with the summary of measures which he ascribes to me as being those on which I should rely. This summary reads thus: (1) notification (compulsory) as in fevers; (2) isolation (with legal procedure for breach of law, as in fevers) &c.; (3) disinfection; and (4) diseased meat (destruction of). Now in the issue for April, 1893, of the same publication I have clearly set out the lines of preventive action on which I should go, and these I will repeat as a basis of comment; but before doing so I should like to say that, no doubt unconsciously, Dr. Armstrong has quite misunderstood my position. I have never proposed isolation with legal procedure for breach of law as in fevers, nor have I thought of such a proceeding. On the contrary, I am under the impression that an isolation hospital would be regarded as a boon by many families one of whose inmates was phthisical, and that there would be no need of compulsion, which I quite agree with Dr. Armstrong in regarding as impracticable. Then, again, I consider the destruction of tuberculous meat as by no means so important as many other precautions, although, of course, not a thing to be neglected. In the paper in question I do not think that I have even mentioned diseased meat. That subject was raised by Dr. Armstrong himself at the same meeting of the Society of Medical Officers of Health at which I gave the paper alluded to, and I there mentioned that the North-Western Branch of the Society had passed a resolution that the carcase of an animal should be condemned if any tuberculosis was found in it; but of the proposals which I put forward it formed no part. Then, again, disinfection of rooms should be carried out, if possible; but this, again, is not part of the main front of my position. In fact, the proposals put forward to be condemned are, in part, not my proposals at all, and, where they are, they are not in their proper position of importance. Further, at the meeting in question I was present as a representative of the North-Western Branch to make proposals in regard to the infective element in tuberculosis. The various adjuvants in the establishment of infection, such as bad housing and bad personal habits, were necessarily, from want of time, put aside for the time being. In the causation of phthisis two factors are concerned—the conveyance of infection and those conditions of the system which favour the lodgment and growth of the tuberculous infection. The second factor plays a much more important *rôle* in the origin of phthisis than it does in many other diseases. It is, however, a *rôle* much more difficult to survey and discern than the more immediate part played by the transference of infective material, and it is also a *rôle* much more difficult to prevent. So far as it is preventable with special reference to tuberculosis, it would be prevented in the course of the measures adopted to intercept the conveyance of the tuberculous infection. For purposes of simplicity of treatment and clearness it is made incidental to the study of the direct transmission of tuberculous infection.

The main positions which it is necessary to bear in mind in planning out measures of prevention against the spread of tuberculosis are these:—1. Without the importation of the tubercle bacillus or its spores into the system tuberculosis cannot arise. 2. Phthisical people, especially in the later stages of the disease, discharge enormous quantities of tubercle bacilli and spores in their sputum. These are probably innocuous till dried. When dried and dispersed as dust this sputum is capable of lighting up tuberculosis. Schill and Fischer's investigations showed the prolonged vitality of tuberculous spores in sputum, and Cornet's researches established that the dust taken from a room in which a phthisical person was being treated was liable to convey the disease to guinea-pigs when taken from places which the sputum could not have directly reached. He found, also, that where the sputum had been carefully destroyed, such dust was not capable of reproducing the disease in guinea pigs. Moreover, the dust of streets, even where phthisical persons were known to spit, did not produce the disease in guinea-pigs. 3. Cornet's research on the mortality of Catholic nurses in Germany showed that intimate exposure to tubuculous dust of healthy individuals was followed by an enormous mortality, the period between exposure to this influence and death being between two and three years. Two years previously, in my report on the health of Oldham for 1891, I had given an account of a number of instances in which people who had died from phthisis had been intimately exposed to infection at a varying period before death, and arrived at the conclusion that the average latent period between exposure to infection and death was probably between two and three years. Again, in the report for 1890 I gave an account (which was reproduced in *The Practitioner*) of a series of 100 deaths from tuberculosis into which I had instituted an etiological inquiry. In more than half of these cases intimate exposure to infection was ascertained at a period which could be regarded as the starting point of the infection, and these comprised practically all the cases in which there was not some condition of health strongly predisposing to successful invasion by a comparatively small amount of infectious material. Dr. Heron, in his work on the Communicability of Consumption, gives a very interesting series of cases, collected by Professor Koch, of exposure to infection followed by tuberculosis. Perhaps the most striking of these clinical experiences are those in which exposure of a wound to tuberculous material has been followed by local tuberculosis, subsequently extending to the lungs. 4. Other tuberculous discharges besides sputum contain the infective matter, and are in like manner, though to a less degree, dangerous. 5. The infective matters from phthisical patients are capable of destruction by chemical agents and are easily destroyed by steam. In the shape of pure cultivations, and therefore as dust, they are readily destroyed by direct sunlight. This is a fact of cardinal importance. 6. Tuberculosis is widely distributed amongst the mammalia and is especially destructive to milch cows. In particular it has been shown experimentally that the milk of tuberculous cows is capable of lighting up the disease in guinea-pigs, especially if the udders are affected by the disease. There is, moreover, good reason on other grounds for believing that the milk from tuberculous cows is responsible for much of the tuberculous disease of children. So far as tuberculous meat is concerned, the grounds for believing it to be a source of abdominal tuberculosis are mainly experimental. 7. Phthisis is not rare amongst country people, and it is unfortunately only too common amongst milch cows. It was suggested to me by my friend Dr. Robertson of Oldham that the cycle was completed, so far as pulmonary phthisis is concerned, by the cows swallowing the tuberculous matter discharged from the lungs, which subsequently was voided by the cows undestroyed. Anyone acquainted with the condition of cowsheds in this country will at once perceive how very likely it is that phthisis is handed on in

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this manner. The absence of light and ventilation, the frequent presence of tuberculous cows in the sheds, and the dusty condition of many of them, give to this suggestion a capital importance.

The proposals which I put before the society were based on these and kindred considerations. They were:

1. The memorandum of the North-Western Branch of the Society of Officers of Health or some equivalent form should be placed by sanitary authorities in the hands of all medical men, and as far as possible in the hands of all phthisical patients—"It would be well, also, to issue a brief handbill to every house, at all events in towns, giving simple directions as to the most important precautions. This was done in Oldham in 1887, 1888, and 1892." Last year a handbill, of which the following is a copy, was sent to every house in the city of Manchester:—

PRECAUTIONS AGAINST THE COMMUNICATION OF CONSUMPTION.

1. Consumption is an infectious disease likely to be communicated more particularly in damp, badly ventilated, and badly lighted houses and workshops.
2. It is usually communicated by the matters coughed up by consumptive people, which get dried and dispersed as dust, thus reaching the lungs of those susceptible to the disease.
3. Such matters should, therefore, never be allowed to get dry. For that reason they should not be spat on the floors of a house, but either into pieces of rag or paper, which should be at once burned, or into a hand-vessel containing water. This vessel should be emptied into the drains outside the house once a day, and then scalded and recharged with water.
4. Everyone affected with a chronic cough should take the same precautions as a consumptive person.
5. The same precautions should be observed in a workshop as at home.
6. Consumptive people should not spit into a pocket handkerchief, as both the handkerchief and their clothes are thus made infectious.
7. No one should spit on the ground inside any building or in a public conveyance.
8. The bowel discharges of consumptive people should be disinfected by being passed into a 15 per cent. solution of carbolic acid or simply into water, and the vessel, when emptied, should be at once scalded. Soiled clothing should be at once removed, disinfected, and afterwards boiled.
9. When it is settled that anyone is consumptive the house should be thoroughly disinfected, and the patient should be thenceforward confined to certain parts of the house. On a request made in writing to the Health Office disinfection will be carried out by the department free of charge.
10. The rooms occupied by a consumptive person should be kept well ventilated and well lighted. This will greatly aid in destroying the infection.
11. No one is more liable to inhale the dust from matters coughed up than the consumptive himself. The removal of infectious matter is, therefore, calculated to promote his recovery. Moreover, if these precautions are strictly carried out he need not be a source of danger to anyone.
12. It is the duty of the attendant to see that the above precautions in regard to the phlegm and discharges are observed, and also to see that every obstacle to sufficient lighting and ventilation is removed.
13. In case of death the house will be disinfected by the sanitary authority, if this is desired. A new tenant should not enter a house previously occupied by a consumptive person until such house has been thoroughly disinfected.
14. Amongst the agencies which act powerfully in causing consumption are damp dwellings and workshops, overcrowding, defective ventilation, occupations which involve the inhaling of irritating dust, and alcoholic excess. These should be avoided.
15. The milk from consumptive cows is very dangerous, especially to children. All milk should be boiled before use. As many animals suffer from consumption all meat should be thoroughly cooked.

JAMES NIVEN, Medical Officer of Health.
Public Health Office, Town-hall, Manchester, May 28th, 1894.

An admirable handbill has also been distributed by Mr. Vacher, medical officer of health to the county of Chester. The memorandum of the North-Western Branch was drafted by Mr. Paget, medical officer of health for Salford, in 1892, following on papers given by Dr. Ransome and myself to the branch in that year. It is admirably drawn and very well adapted for its object, which was rather to convey full information to phthisical families, and to serve as a basis for the medical attendant to give instructions upon, but is, I think, too detailed for a handbill to be generally distributed. To this general education of the public I attach the very utmost importance. If the public mind is not diligently and adequately prepared by the diffusion of information on the subject it is too much to expect that public bodies will be roused to take the necessary action, or that the general public will support them, or the officers whose duty it may be to carry out their instructions. Moreover, without any further proceeding whatever an immense impetus is thus given to the carrying out of precautionary measures. I have been assured that in Oldham it had become a very common practice to carry out preventive measures.

2. Tuberculosis should be made a notifiable disease—notifiable under the same Acts and under similar conditions to such diseases as scarlet fever. The inclusion of tuberculosis amongst notifiable diseases could be effected under Clause 7 of the Infectious Diseases Notification Act, 1889. What, then, are the reasons for proposing such a step? In the first place, whatever the concomitant conditions, tuberculosis is an infectious disease, the modes of propagation of which we know with great definiteness. It is especially in the later stages of the disease that the largest amounts of infectious material are being discharged from the system, and notification would, therefore, be valuable at any period of the disease. It is, moreover, especially in the later stages when phthisical patients require nursing and constant attention, and when through weakness their personal habits are liable to become most negligent that those in contact with them are exposed to the greatest amount of risk. I would propose at first to exclude from notification cases of closed glandular, bone, and joint affections, and only to deal with such cases as from the presence of discharges, whether from the lungs, mouth, skin, or bowels, are manifestly liable to convey the disease. I do not agree with Dr. Armstrong that the expense of such notification would be enormous, and I have given figures[1] to show that such would not be the case. If these data are regarded as unreliable, or if more satisfactory figures can be produced, it would be well to have them. One objection to notification it would be necessary to deal with—viz., the difficulty entailed by phthisical patients changing their medical attendant, as they frequently do. It is, in my opinion, indispensable, whether notification is to be—at first—compulsory or voluntary, that the usual fee of 2*s.* 6*d.* a case should be paid. To prevent, therefore, undue expense each patient reported would be furnished with a card bearing the date of notification of his case, which he would be required to produce on application for disinfectants, &c. Medical men would be requested to ascertain whether their patients had been previously notified, and not to notify a case a second time except on change of address. Even if such a precaution was not carried out I do not see that the expense would be such as to be a bar to notification. What are the objects to be gained by notification? In the first place the precautionary measures to be taken by the phthisical individual or his attendant would be prescribed and carried out. In the second place the conditions of the house favouring the spread of the disease would be ascertained and as far as possible removed. The conditions of work of other inmates of the household favouring the disease would be ascertained and as far as possible guarded against. Disinfection of the rooms occupied by the patient would be effected. The dangers of exposure of members of the family suffering from any condition of lowered vitality would be pointed out.

The circumstances attending the commencement of the disease would be investigated, and doubtless in this way considerable light would be thrown on its food relations. But, above all, the insanitary conditions which have been shown to bear such an intimate relation to phthisis, and which play a far more important part in the production of that malady than in any other infectious disease, would be investigated and removed precisely at the time when they were most dangerous both to the patient and to the other members of the family. On Oct. 24th and Nov. 7th, 1893, the subject was discussed by the Medical Society of Oldham. It was found that considerable hesitation existed with reference to the notification of tuberculosis, and that more particularly apprehensions were entertained that the sanitary officials would interfere between the medical attendant and his patients. No objections, however, were offered to a paper of instructions as to personal precautions being handed in by the sanitary inspector on which the medical attendant could enlarge. After full debate the members of the society agreed in recommending the voluntary notification of phthisis. It may be as well to recall the general position arrived at on that occasion, since it is, so far as I know, the only expression of opinion formulated by a body of general practitioners. The following notice of the meeting was given in THE LANCET of Nov. 18th, 1893:—

"OLDHAM MEDICAL SOCIETY.—On Oct. 24th a discussion on the subject of Notification of Phthisis was opened by Mr. Fawsitt, President of the Society, at a very full meeting. Several members took part in the discussion, and at the close of the meeting the subject was adjourned to another meeting, which was held on Nov. 7th. A number of speakers having expressed their views on the question, it was understood that

[1] Public Health, April, 1893.

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the objects of notification would be: 1. The sanitary authority would disinfect the room occupied by the tuberculous patient, as might be required. 2. Inasmuch as the transmission of tuberculosis is in a large proportion of cases determined by the presence of insanitary conditions, such as damp, overcrowding, deficiency of light, and so forth, an opportunity would be afforded to the authority of removing such conditions and so saving other members of the household. 3. Further evidence would be collected bearing on the modes and conditions of transmission of the disease. 4. The personal hygiene of the patient would in no way come under the care of the sanitary authority; it was hoped, however, that the medical attendant would confer with the medical officer of health, when convenient, as to the precise means by which tuberculous discharges might be most usefully destroyed. At the same time the sanitary department would in no way interfere with the treatment of the patient, and all instructions in dealing with discharges from the patient would come from the medical attendant. 5. Only such cases would be reported as were taking place from the lungs, cases with tuberculous diarrhœa, and cases with copious discharge from tuberculous bones and tuberculous ulcers. These and other matters having been fully discussed, the following resolution was carried unanimously: 'That the society, having had its attention drawn to the infection of tuberculous diseases and to the great mortality and injury to the population arising therefrom, is of opinion that these diseases should be the subject of voluntary notification to the sanitary authority.' It was understood that a copy of the resolution would be sent to the sanitary committee of Oldham as well as to the medical journals."

Providing the fee of 2*s.* 6*d.* can be paid for each case reported, I do not object to voluntary notification being first tried, as it will give time practically to ascertain and deal with the difficulties of administration. At the same time it seems to me quite clear that, the connexion between insanitary conditions and the communication of phthisis being so close as it is, this alone would be a sufficient argument for compulsory notification, putting aside the other powerful reasons for it. Nor do I doubt that voluntary notification would speedily result in compulsory notification.

3. My third proposition was that Isolation Hospitals should be provided by sanitary authorities, jointly or separately, at the expense of the rates, for the isolation of cases of tuberculosis likely to cause infection. As it is, workhouse hospitals do at present provide a considerable amount of isolation for the very poor. But there are a vast number of artizan families which would decline to avail themselves of that refuge, and where the patient is a danger and a burden. I feel quite sure from the conversations I have had in the course of my inquiries that the provision of good hospital isolation would be hailed as a blessing by these poor struggling people, and it would be the means of removing infection from the home. Not only so, but those treated in the hospital for a time would be thoroughly indoctrinated with the measures of precaution taken, which would become part of their daily habit. They would therefore, on their return, be centres for the diffusion of knowledge on the subject. It is in the later stages of the disease that infection is most likely to occur and that the disease is most burdensome. This is precisely the stage which is not dealt with in convalescent homes, and which should be dealt with in the interests of public health. This proposal is, however, not necessary to the success of the first two.

4. Tuberculosis in cattle should be brought under the Contagious Diseases (Animals) Acts, and special veterinary inspectors should be appointed by sanitary authorities, singly or jointly, to carry out the objects of the Acts in relation to tuberculosis and other diseases, and to attend to the general sanitary arrangements of the cowsheds. I may be allowed to quote the continuation: "The officer to be appointed should be a young veterinary surgeon, well versed in the diagnosis of disease. He should receive a sufficient salary and travelling expenses. His duties should be something like the following. Once a month he should inspect the farm-buildings and note any conditions found on these or on the farms likely to act injuriously on the health of the cattle or on the quality of the milk He should examine the cattle and ascertain whether they were suffering from any disease. If he saw reason to suspect tuberculosis he should take measures to have the suspected animal isolated, and see that necessary measures of disinfection were carried out. The sale of milk from this animal would be stopped. If his diagnosis was clear and unhesitating the cow should be killed. Compensation should be given, the amount paid to have regard to the condition of the animal. In advanced tuberculosis it would be trifling—in an early stage of the disease such as would not entail any loss to the farmer. It would thus be to the farmer's interest to have such cases reported as soon as possible. Notification would be compulsory on the farmer. Constant practice in diagnosis would soon enable a good veterinary surgeon to have an almost instinctive knowledge of what he was dealing with, unless in very obscure cases. It is so in human diseases. The veterinary surgeon would also deal with the sanitary requirements of the cowsheds. Ordinary insanitary conditions about farms would be attended to by the inspector. I throw out these details merely by way of showing that the veterinary inspector would have enough to do. Having made his investigations, the veterinary inspector would report to the medical officer of health of the district, so that he might be able to coöperate with the veterinary inspector in getting the necessary preventive measures carried out."

I have already mentioned how in all probability tuberculosis is directly communicated in cowsheds from tuberculous cows. But, apart altogether from tuberculosis, the condition of our cowsheds and their relation to the public health through the milk supply demand investigation and rearrangement. It would be of great advantage if the regulations applicable to cowsheds were made uniform, so that any local action taken to improve their condition should not have the effect of transferring the milk-supply to another district perhaps as badly off in the matter of cowsheds as that in which the action was taken.

Oldham.

PERFORATION OF UTERUS BY SOUND OR CURETTE.

BY LAWSON TAIT, F.R.C.S. ENG.,

CONSULTING SURGEON TO THE HOSPITALS FOR WOMEN AT BIRMINGHAM, NOTTINGHAM, AND SOUTHAMPTON.

THE article by my friend, Dr. Auvard, in the *Archives de Tocologie et de Gynécologie*, noted in THE LANCET of Sept. 22nd, 1894, has been lying for months on my desk waiting the leisure the holiday season has given me that I might draw further attention to an interesting occurrence, long ago familiar, but apparently forgotten. When Simpson made the uterine sound practicable, he put it in the hands of every one, and its routine use did a great deal of mischief. Now it is relegated to its proper position, and used only in a very limited area of special practice. We do not, therefore, see now the cases of perforation of the uterus by the sound which were so familiar to Simpson's pupils and followers. In the columns of THE LANCET[1] I recorded my own first experience of it, stating at the same time the fact that it was well known to Simpson, whom I had often seen demonstrate it. Next month[2] Mr. Walter Whitehead recorded a case as having happened to Foltz and Petrequin, and narrated by the former before the Lyons Medical Society, where a female catheter, used for the purpose of inducing premature labour, passed through the fundus and was extracted through the umbilicus eighteen weeks after without any bad symptoms. Mr. Whitehead also mentions a fatal case in the experience of a friend. It would be a valuable contribution to the literature of the subject to have an account of this case, as it is the only disaster of the kind I have ever heard of amongst a number of perforations which I have seen and heard of, so great that I should be afraid even to attempt to guess at the total. It must be strictly borne in mind that all the cases of which I speak occurred in the non-pregnant uterus.

Dupuy collected seventeen cases,[3] in none of which did any subsequent evil effects arise. Commenting on this paper Dr. W. S. Playfair said that it was probable that in many of these cases the sound passed through the Fallopian tubes. This point used to be one of periodic discussion between the late Dr. Matthews Duncan and myself, and I can accept the view shared by him and Dr. Playfair still less now than in the time of those discussions. It is fashionable now to talk of passing sounds and catheters through the Fallopian tubes (and ureters). I have tried on the cadaver, but (though fairly nimble with my fingers) I have never succeeded, and I have never seen anyone else succeed, though I am far from saying that such passage is an impossibility. Again, I have seen as many pathological

[1] THE LANCET, April 29th, 1871.
[2] THE LANCET, May 13th, 1871.
[3] Progrès Médical, 1877.

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tubes as I suppose any other living person, but I never saw a tube in which abnormal patency was a feature. I certainly never saw a normal Fallopian tube—I mean one not distinctly pathological—through which an ordinary uterine sound could be passed. But I have seen several uteri through which sounds could easily have been passed by reason of the thinning of the wall at the outward curve of a chronic flexion, or by the atrophy of the wall at the insertion of a small nodule of myoma. I have also seen two uteri through which the sound or curette actually had been passed, one at the time of an ovariotomy,[4] and the other recently in a uterus I removed by vaginal hysterectomy. I have also recorded three cases of what appeared to be cases of permanent metro-peritoneal fistula.[5] One of these cases possesses the fistula still, as I know the patient is alive, and I passed a sound at the old spot about three years ago. In making these observations we never sterilised the sounds, and now it amazes me, if peritonitis is caused by micro-organisms, why we never produced it.

The last case of instrumental perforation of the uterus with which I have met is one of great interest, for the patient had had her appendages removed for myoma some five years before by Mr. Knowsley Thornton with a brilliantly successful result—that is, all the symptoms and troubles due to the myoma disappeared, and she went through a brief and satisfactory climacteric. When I examined her I could find no trace of myoma. The patient had an idea, at the time of this operation that the uterus itself ought to have been removed, but of this I was finally able to dispossess her, for it seemed to be an ideal case for removal of the appendages, and the result all that could be wished. I mention this circumstance because she was placed under my care by a well-known Midland practitioner, whose name I do not give because with it the name of the patient might just as well be published. The reason of her coming to me was that for about eight months she had been troubled by an increasing purulent and very acrid discharge pouring out of the uterus. This discharge was extremely offensive, accompanied by pain and interrupted occasionally by hæmorrhages. It made her extremely miserable, and brought back to her mind somewhat bitterly her original desire to have the uterus removed and Mr. Thornton's refusal to comply with it. The remedy I suggested was, of course, the curette, though not without fear that the disease might be endometric ulcerative epithelioma (a very rare condition), and in consequence this might prove insufficient. Just as I had nearly completed the operation the curette went through the anterior wall of the uterus and I could feel its point easily through the abdominal wall. As usual, the accident did no harm; the patient recovered easily and for nine months remained quite well. She came back, however, later with all her symptoms renewed, indeed intensified, and begged me to remove the uterus. I was not much in favour of this proceeding, as I was by this time quite certain that the correct diagnosis was that of epithelioma, and I am not at all favourable to operations for cancer of any kind—I am quite sure that vaginal hysterectomy for *réal* cancer of the uterus will soon go out of fashion. I removed the uterus in this case, however, under the belief that if such a thing were justifiable at all in cancer it was in the rare endometric ulcerative epithelioma which is very like the epithelioma of the lip.

The operation was very difficult, on account of old adhesions, but it was through in about twenty minutes, and then I found a few nodules of myoma at the fundus of a perfectly senile uterus. They were not larger than marbles, and must have been the mere survivals of Mr. Thornton's tumour, as they were wholly unrecognisable before the excision of the uterus. On slitting up the organ I found no trace of epithelioma, but a merely rough and hypertrophied endometrium, quite tough and very vascular. At the base of one of the nodules on the anterior wall, where it was of almost paper thickness, was an unclosed rent, about half an inch across, which had been made by my curette, and the edges of which, but not its lower end, had healed. Here at last was the absolute proof of a permanent metro-peritoneal fistula, through which I have no doubt much of the discharge must have made its way, after its re-establishment, but there was no disturbance from the microbes.

Birmingham.

[4] Diseases of the Ovary, 4th edition, p. 201. 1883. Cornish Bros.
[5] THE LANCET, May 18th and Oct. 19th, 1872.

CASE OF FŒTAL ENDOCARDITIS ASSOCIATED WITH AN ARREST OF DEVELOPMENT OF THE INTER-VENTRICULAR SEPTUM.[1]

BY T. C. RAILTON, M.D. LOND.,
PHYSICIAN TO THE MANCHESTER CLINICAL HOSPITAL.

A CHILD aged four years was admitted into the Manchester Clinical Hospital on Jan. 24th, 1895, suffering from broncho-pneumonia. His previous history was to the effect that he had always been a delicate child, did not walk until he was eighteen months old, and subsequently was unable to play about like other children, being easily exhausted and out of breath. He had frequently complained of pain in the region of the heart, but had not suffered from articular rheumatism or shown any blueness in the lips or fingers. Three weeks before his admission he caught cold and had gradually got worse, and when admitted he had well-marked symptoms of broncho-pneumonia, his respiration being 60, pulse 140, and temperature 101° F. The deep cardiac dulness extended upwards as high as the second rib, on the right side nearly to the nipple line, and the apex beat was in the sixth interspace outside the left nipple line. There was no murmur audible. The patient became steadily worse, the temperature continued to rise, at one time reaching as high as 106·2°, and he died twenty-seven days after admission. Four days previous to his death a systolic murmur was audible over the right ventricle for the first time.

At the post-mortem examination both lower lobes were found consolidated, sinking in water, while islets of broncho-pneumonia were scattered over the rest of the lungs. The pericardium contained about two drachms of clear fluid. The heart was very large, mainly upon the right side. The thickness of the wall of the right ventricle was eight millimetres, of the auricle one millimetre. The corresponding measurements of the left side were nine millimetres and one millimetre respectively. The tricuspid valve was the seat of large verrucose vegetations covered with a deposit of fibrin. Close to the tricuspid orifice were a few other vegetations on the auricular edge and one recent irregular ulcer. The remaining orifices and valves were normal, and the ductus arteriosus and foramen ovale were closed. There was a deficiency of the septum of the ventricles about the undefended space large enough to admit a quill. This opening was larger at the side of the left ventricle than on the right side, where it ended between the insertion of two cusps of the tricuspid valve nearer to the right auricle than to the ventricle. The edges of this orifice were quite smooth. It was evident that the lesion of the tricuspid valve had started during fœtal life, and it seemed almost equally clear that the endocarditis had also continued its evolution subsequently to birth. A similar case has been reported by Dr. F. Robinson.[2] A child eighteen months old had suffered from palpitation and dyspnœa since birth. He was not cyanosed. There was a loud sawing murmur accompanying the heart's action. At the necropsy the right ventricle was found to be large enough to contain a hen's egg, and the tricuspid valve was thickened at its free border to such an extent as to prevent its perfect closure. There was also a circular orifice almost as large as the little finger in the septum of the ventricles communicating between the two cavities. The foramen ovale was closed and there were no remains of the ductus arteriosus.

Although the valvular disease of my own case was due to endocarditis, the opening in the septum can hardly be ascribed to the same cause. The edges were smooth and bore no trace of inflammation, and, in fact, the opening exactly resembled those cases of defective development in which there is no evidence of endocarditis in any part of the heart. The question naturally arises as to the possible connexion, if any, between the arrest of development and the endocarditis in this and Dr. Robinson's case. I am inclined to believe that in my own case the defect in the septum may have been the

[1] Communication made to the Pathological Society of Manchester, April 10th, 1895.
[2] THE LANCET, July 22nd, 1848.

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cause of the endocarditis. It is evident from the formation of the opening in the septum that the stream of blood would pour during systole from the left side to the right, and it is conceivable that the impact upon the tricuspid valve may thus have given rise to the endocarditis. It would be difficult to ascribe the arrest of development in the septum to the endocarditis and subsequent incompetence of the tricuspid valve, as that theory would entail our dating back the endocarditis to a period anterior to the third month of fœtal life; and moreover, had increased pressure within the right ventricle prevented the completion of the septum, one would naturally look for the opening to be larger upon the right side than upon the left.

Manchester.

SOME REMARKS ON TYPHOID FEVER MADE AT A CLINICAL DEMONSTRATION IN THE WARDS OF THE ROYAL BERKSHIRE HOSPITAL, READING.[1]

BY FRANCIS HAWKINS, M.B. EDIN.,
PHYSICIAN TO THE HOSPITAL.

THE patient was a man twenty-seven years of age who had been a scavenger. When admitted to hospital on June 11th he said that he had had slight diarrhœa on the first day of the month, but continued at his work until the fifth, when he had a shivering fit, and owing to the diarrhœa increasing took to bed. When I saw the case on the eleventh day, shortly after his admission, the house physician took from my dictation the following notes: "The patient complains of frontal headache and diarrhœa. He lies on his back. The face is markedly flushed and his pupils are dilated; his tongue is beefy red, moist towards the edges, but dry at the centre. The abdomen is tumid, tympanitic over all regions, but markedly so over the colon. Two circular pink spots, slightly raised from the surface and disappearing on pressure, are seen in the left umbilical region. The spleen is enlarged upwards, the lower border not being felt; the liver is not enlarged; the heart is normal. There are a few sibilant râles at the base of both lungs. There is no albumen in the specimen of urine examined; the temperature is 102° F." Since admission there have been several successive crops of spots. The temperature has, with one exception, not been above 102°. The bowels, however, have been frequently and profusely active. In addition to this, on the sixteenth day at 4.30 A.M. about one pint of blood, dark in colour and somewhat clotty, was passed, and a similar quantity again at 7.30 A.M. There was no sign whatever of collapse (the temperature, however, which had previously risen a few degrees, fell from 102·6 to 99·2). I wish to refer in this place parenthetically to the occurrence of typhoid fever at various periods of life. While it is most common during the second and third decades, yet it is very prevalent during the first, but it is not by any means common before the second year of life. I have myself never met with a case in a patient under two years and a half old, but Meigs and Pepper record a case as young as one year and six months. In the cases from which my own investigations have been made not one was under two years. Henoch in 256 cases also found none under two years. This fever may in exceptional instances be met with at an advanced age. One case recorded within my knowledge occurred between the ages of seventy and eighty—the exact age was seventy-six. The most advanced age of which I find an account was a case mentioned by Griesinger as having been observed by Hammernyk when the patient was ninety years of age.

[Dr. Hawkins here quoted statistics showing that typhoid fever is most prevalent during the months of August, September, October, November, December, and least prevalent during April, May, June, and July. He proceeded:]

The eruption in this case appeared first on the day of admission. I have it from the previous medical attendant that none was to be seen on the day before admission, but on the day of admission—the eleventh day of illness—two spots were seen. The typical typhoid eruption is not present in every case; it is, however, more frequently present than absent. As regards adults, it is more frequently present in the male than in the female, being seldom absent in the male. In children it is less frequently present than in the adult. In male children it is almost as frequently absent as present, but in females it is more frequently present than absent.

The date of the appearance of the eruption is worthy of notice. In this case it appeared on the eleventh day. Murchison tells us that the spots appear between the seventh and twelfth days inclusive. In an investigation made by him it was so in 39 out of 46 cases; in 4 only were the spots seen before the sixth day, and that was on the fifth; and in 3 cases the spots were not seen till the fourteenth, and in one case not till the twentieth day. Murchison, however, made no distinction between the date of appearance of the eruption in children and in adults, and as this line of inquiry seems to be of interest and importance I will give some of the results of my investigation. I find that the eruption may appear earlier in children than in adults; thus in the former (of 78 cases) the eruption appeared on the third day in 1 case and on the fourth day in 3 cases. In the latter (adults) in 69 cases the eruption did not appear in one single instance before the fifth day. In 2 cases which I have lately seen the eruption did not appear till the eighteenth day.

The situation of the eruption is almost universally on the abdomen. Among 56 cases where its distribution was particularly noted, in one case only was the eruption absent from the abdomen, and in that instance it was on the chest and back. It is, however, to be remembered that while the eruption is so constantly present on the abdomen it may appear in other parts as well. Thus it may be on the back, chest, between the thighs, on the knees, shoulders, elbows, forearm, neck, and face. It may be very profuse or very scanty. Shortly before leaving London I saw in consultation a case in which the eruption was so general and so widely distributed that the practitioner in attendance thought it of an influenza type. There are other conditions of the skin which must be mentioned, for in addition to sweating and the presence of sudamina there may be erythema, eczema (which is perhaps the least common of any one case out of 240 presenting this condition), urticaria, herpes facialis, and labialis. Abscesses also appear as alveolar, parotid, or on the hips. It must, however, be mentioned that with the exception of erythema the majority of the above-mentioned are met with as sequelæ. And this reminds me of one case I saw while resident physician in the Royal Infirmary at Edinburgh, in which, during convalescence, an abscess formed at the ankle joint, and the os calcis was found to be so much necrosed that the foot was amputated. Previously to the fever no sign of any such condition was present. Boils also may appear: in the experience of some they are of frequent occurrence. The eruption of measles, as also the rash of scarlet fever, may arise during the course of the disease. Desquamation of the skin apart from this cause may also be met with. It was noticed in 11 out of 240 cases, the earliest appearance being on the twentieth day and the latest the thirty-eighth. "Purpura may occur," Fagge says, "in typhoid cases with hæmorrhage from the bowels"; but in 61 cases of hæmorrhage from the bowels (representing a ten years' experience at the Middlesex Hospital) purpura did not occur in one single case. Purpura rheumatica claims two instances. One, a man aged twenty-two years, who had previously suffered from rheumatic fever and hæmoptysis, and in whom a cardiac bruit was present, had on his admission both legs from the knees downward studded with minute petechiæ, and on both ankles and on the dorsum of each foot large hæmorrhagic plaques. For some time the case was regarded as one of peliosis rheumatica. On the sixteenth day typical typhoid spots appeared, and on the twenty-second and twenty-fifth days crops of spots appeared "which became petechial." The other case was a man fifty-two years of age who had petechiæ over the ankles. Both cases recovered. I call special attention to the expression "became petechial," because Murchison says: "When petechiæ occur they are not developed in the centre of the ventricular spots, but are independent." The above case was not seen by myself; it is recorded in the published reports of the Middlesex Hospital, and was noted by such a competent observer as Dr. J. J. Pringle, who was registrar at the time.

[1] I must publicly tender my thanks to the staff of the Middlesex Hospital for their kindness in having placed at my disposal the notes on cases of typhoid fever for the past ten years, whence all my facts not otherwise stated have been drawn.

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[Dr. Hawkins here referred further to the comparative rarity of purpura in typhoid fever. He continued:]

I now come to the condition of the bowels and the frequency of the stools. This is one of the difficulties with which we have most to contend. The notes of the case mentioned the presence of tympanitis over the regions of the colon, indicating distension of that part of the bowel. Now in several other cases in which I have detected this condition, which is nearly always associated with profuse diarrhœa, extensive ulceration of the colon has been found at the necropsy. Diarrhœa is the rule in typhoid fever, constipation the exception; but it must also be remembered that there may be diarrhœa for a few days—say, the first five or six—followed for one or two weeks by the most obstinate constipation, demanding enemata for its relief. This latter condition is much more common than constipation throughout. The bowels may be moved from twice to twelve or more times in the twenty-four hours. In addition to frequency of the stools we have here had to contend with hæmorrhage from the bowels, and this symptom demands more than passing attention. Graves was the first to teach that hæmorrhage from the bowels in typhoid fever might be a favourable symptom rather than an unfavourable—he regarded it "as a wise provision of nature which might usher in a favourable crisis, but as an occasional result it was of great danger." Trousseau for some time held that it was a formidable symptom and increased the danger, but after reading Graves' lectures he changed his opinion and stated "that as a symptom intestinal hæmorrhage did not possess the dangerous character imputed to it, but that it was usually of a favourable augury." Sir William Jenner writes: "Hæmorrhage from the bowels is a very grave symptom, but it is by no means necessarily fatal." And Sir William Broadbent, writing in Quain's Dictionary of Medicine, tells us that, while intestinal hæmorrhage is a symptom which causes anxiety, it is by no means necessarily fatal. Murchison regarded it as a very formidable symptom, but Habershon wrote: "It is in my experience rarely fatal." Some time ago I made an investigation relative to this important symptom with the object of finding some basis for forecasting the issue of cases associated with it. A glance at this tabular statement will show that up to the age of twenty more cases recover than die, and that between twenty and twenty-five nearly as many cases die as recover, but that between twenty-five and thirty more recover than die. After the age of thirty more die than recover. We have, therefore, so far as age is concerned, some data for making a prognosis, for, speaking broadly, one may say that up to the age of twenty the symptom is less indicative of danger than it is after that age. In non-fatal cases hæmorrhage usually occurs but once—that is to say, only at one period is blood seen in the stools, and it may vary from a few streaks to one pint. A single hæmorrhage occurred in seventeen out of twenty-eight non-fatal cases. Hæmorrhages in fatal cases are more frequently recurring. Of twenty-four fatal cases there were but three instances of a "single occurrence"; but when these recurrent hæmorrhages are fatal we have no data to guide us, for in both fatal and non-fatal cases the recurrences may be equal in number and frequency. Hæmorrhage associated with perforation is always fatal, and is more frequently recurrent. When a hæmorrhage of the single type has occurred comparatively early in the course of the fever, and for a while the patient seems to have passed the danger point, hæmorrhage of the recurrent type may occur later, from which the patient dies. With regard to the time of the occurrence of the hæmorrhage there is practically no difference. I must lay stress upon this, for many persons think that hæmorrhage early in the course of the fever is not fatal. So far as my own observations go, data of this kind are not reliable, neither does the quantity of the blood passed help much in guiding our judgment, for in non-fatal as well as in fatal cases the quantity may be large or small, and we must further remember that, while the quantity passed by the bowel may be small, a large quantity may remain in the intestine.

Tabular Statement of Ages at which Hæmorrhage from the Bowels occurred in Typhoid Fever, showing the Ages of Non-fatal and Fatal Cases.

Years of age.	Total number of cases.	Non-fatal cases.	Fatal cases.
At and under 5 years of age ...	0	0	0
„ 10 „ ...	1	1	0
„ 15 „ ...	8	7	1
„ 20 „ ...	11	8	3
„ 25 „ ...	15	8	7
„ 30 „ ...	9	7	2
„ 35 „ ...	9	3	6
„ 40 „ ...	2	0	2
„ 45 „ ...	3	1	2
„ 50 „ ...	2	0	2
„ 55 „ ...	1	1	0
„ 60 „ ...	0	0	0
Total	61	36	25
		61	

I must be brief as to treatment. The patient was at first put on a purely milk diet, but shortly afterwards he vomited curdled milk, and in the stools there was also undigested milk. This form of diet was therefore stopped, broths being given, and during the time of the hæmorrhage raw meat juice. Milk, if a patient can digest it, is by far the best diet, yet it should not be unduly pushed when, as in this case, there is evidence that it does not agree. In fact, it may do harm not only by causing sickness, but also by increasing the diarrhœa. For checking activity of the bowels I prescribed bismuth and compound powder of ipecacuanha. However, I am bound to admit it has not answered my expectations. Starch and opium enemata were then ordered, but as this did not check the activity of the bowels I ordered opium by the mouth in addition; by this combination I succeeded in diminishing the frequency of the stools. During the attack of hæmorrhage, in addition to slightly increasing the dose of opium an icebag was placed over the abdomen, and more especially over the right iliac region, suspended from a cradle so as to touch the abdomen lightly and to be removed at intervals. The hæmorrhage eventually ceased. In some instances the cold pack is of great use, but in this case the temperature had never been higher than 102° and therefore in my opinion did not require any special treatment. Stimulants were not administered at first, but a few days after admission the pulse became not only irregular, but also intermittent, and brandy was therefore given. So soon as the desired result was obtained it was stopped, but latterly it has been given regularly because there are indications of cardiac failure.

Reading.

A CASE OF TETANUS TREATED WITH TETANO-ANTITOXIN, AND A REVIEW OF THIRTY-EIGHT OTHERS.

BY F. HERBERT MARSON, M.D. DURH., F.R.C.S. ENG.,
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I HAVE to thank Mr. Weston, senior surgeon to the institution, for permission to publish the following case.

On Nov. 10th, 1894, a man aged twenty-eight was admitted to the Staffordshire General Infirmary with a compound fracture of the first phalanx of the left thumb, and complaining of slight stiffness of the masseter muscles. The injury to the thumb, which was slight, had been received ten days previously and had been medically treated from the first. The stiffness of the jaws had only commenced on the morning of his admission. The patient was a strong, healthy man. His pulse and temperature were normal. There was slight stiffness of the jaws. The wound, which was small, did not look healthy. He was put on five grains of quinine every four hours and a quarter of a grain of extract of physostigmine hypodermically every six hours. On the 13th his condition remained practically the same; the pulse was normal and the temperature never exceeded 99·4° F. He could open his mouth about half an inch. As the wound still looked unhealthy the thumb was removed. On the 14th, on account of the cardiac

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depression that the physostigmine was supposed to be causing, chloral and bromide of potassium were substituted. On the 15th physostigmine was recommenced. During the last three days the condition had remained unchanged, with the exception that there had been very slight twitchings of the muscles of the left arm and the side occasionally, and the stiffness had extended to the muscles of the neck. On the 16th the physostigmine was stopped. The pulse was normal and the temperature had been subnormal from the 13th up to this date. At 11 A.M. there was a slight spasm, which was principally confined to the diaphragm and the muscles of the larynx, and only slightly affected the muscles of the legs and back; at 12.30 thirty-four grains of tetano-antitoxin were injected, to the strength of one grain to eleven minims of water; this was injected at two points in each extremity without an anæsthetic, the needle and syringe having been previously sterilised. At 8.30 P.M. the temperature was 101·6° and the pulse 132. The patient seemed better; the cervical muscles were less hard, and he could open his mouth wider and put his tongue out slightly. Antitoxin (thirty-four grains) was re-injected. From the 16th until the termination of the case the pulse, which had previously been normal, rose, and oscillated between 116 and 152. On the 17th the temperature was 98·4° and the pulse 120. There was a rather severe paroxysm of convulsions threatening asphyxia by spasm of the glottis. At 8 P.M. there had been no recurrence of the spasms. The patient was more cheerful, the muscles of the neck were softer, and he could open his mouth better. Antitoxin (twenty-eight grains) was injected. On the 18th, as the spasms were much better and the muscles softer, it was decided to reduce the dose of antitoxin. Injections of the latter (eight grains) were given at noon and at 8.30 P.M. On the 19th the temperature was 98·2° and the pulse 120. There had only been two slight spasms during the last twenty-four hours. He was much better in himself and expressed a strong desire for a pipe. Antitoxin injections (eight grains) were given at noon and at 8.30 P.M. On the 20th the patient felt better and looked bright. Antitoxin (eight grains) was injected at 8 A.M. The temperature rose to 103°; there were no spasms. On the 21st, as the spasms had ceased and the muscles of mastication were more relaxed, the antitoxin was discontinued and five grains of quinine three times daily were ordered. The temperature in the evening was 103°. On the 22nd the temperature was still 103° in the evening; the patient was rather restless, but quieted down on being given bromide of potassium. On the 23rd the temperature was still 103°. The patient did not know anybody, tossed about, and was delirious. There were symptoms of commencing endocarditis. On the 24th he was better; there was no delirium, but the temperature was still 103°. He was now in a typhoid condition. On the 25th the temperature was 104·2° and the pulse 128. He was sinking. On the 26th the temperature was persistently high. The heart was very weak and the pulse running. He was ordered tincture of digitalis and carbonate of ammonia. At 11 P.M. there were gasping respirations. He died on the 27th.

Remarks.—No necropsy was allowed. During the whole time he took his nourishment well, which consisted of a liberal allowance of milk, eggs, meat essence, and brandy in addition to tonic drug treatment. All the injections were given without an anæsthetic for the following reason. On giving the anæsthetic (ether) for the removal of the thumb the patient after a few inhalations became blue and ceased to breathe; prompt measures for resuscitation were employed, and he subsequently recommenced breathing. The probable explanation is that the tongue lolled back over the larynx, as the heart continued to beat although the breathing had ceased; the rigidity of the jaws prevented the mouth being opened. I mention this circumstance, as the injections are recommended to be given under an anæsthetic, and it is a condition that is not unlikely to happen again, and, may be, with a less favourable result. As many recorders of such cases note, it is impossible to draw reliable deductions from an isolated case, and I would make the same observation regarding this one. As the cases in which this new treatment has been tried are relatively few, I think it equally important that the unsuccessful as well as the successful ones should be reported. Taking this case alone, I should be inclined to draw many unfavourable deductions. It was undoubtedly a case of a very mild type. There appears to be no doubt that the antitoxin injections did have a marked beneficial effect on the rigidity and general condition; this appeared a few hours after the first injection, and, so far as the spasms and rigidity were concerned, the benefit was permanent. There is one point I wish to draw particular attention to—viz., that in the opinion of the surgical staff the man died from septicæmia. The thumb was removed soon after his admission; although not healing by first intention, it took on a healthier tone, and never at any time subsequent was the appearance such as would account for the septicæmic condition. Every possible antiseptic precaution was taken; the hypodermic needles, &c., were carefully sterilised by boiling, and for a considerable time the hand was kept in a carbolic bath. The inference naturally arises, Did the septicæmia, if such he died from, have any connexion with the antitoxin injections? Upon this point it is impossible to speak positively; not a single recorder hints at such a source of death after injection. Against this supposition it is only right to mention that, with the exception of a slight temporary elevation after the first injection, the temperature remained normal for five days, during which time two injections were given daily. In spite of the unfavourable termination, and bearing in mind that it is only a single case, that a condition arose that has not been noted by any other observer, that it is possible it may have had no connexion with the antitoxin, and that apparently brilliant results have arisen in the practice of independent and unbiased observers, I should be very loth to condemn the treatment for one unfavourable termination.

I may say I have collected all the procurable published and unpublished cases of tetanus treated by antitoxin up to the present time, numbering thirty-eight, which show the following results. But I would point out that, in reviewing the mortality statistics in this disease, there appears to be some considerable difference of opinion, this arising in a great measure from some writers describing the disease as occurring both as an acute and chronic affection, whilst others seldom or never recognise it as occurring in a chronic state. The following analysis gives the number of recoveries and deaths of the cases treated with antitoxin:—

—	Recoveries.	Deaths.
Total number of cases collected, 38, including cases that are only mentioned as having been treated, no further particulars being given	25	13
Number of cases treated of which particulars are given, 22	17	5
Number of cases treated, of which particulars are given and which were regarded by their recorders as "severe," 9	5	4
Ditto, "not severe," 13	12	1

I think the average mortality of tetanus in chronic cases may be regarded as 50 per cent., and in acute or severe cases as 90 per cent. I have arranged in the four following groups all the recorded cases of treatment of tetanus by immunised serum. Of the 38 cases collected, only 22 were fully reported; they fall under their respective heads as follows: (1) Cases in which the symptoms commenced to abate immediately after injection and then steadily disappeared, 9; (2) those which remained *in statu quo* for a short time after injection and then gradually improved, 6; (3) those in which no further muscles became involved in spasms after commencement of treatment, though occasionally an aggravation of certain other symptoms (as trismus and difficulty in swallowing) occurred, 2; and (4) those ending fatally notwithstanding treatment, 5. Space does not permit of a detailed notice of the cases, but in spite of the unfavourable result of the case treated in the Staffordshire General Infirmary I have come to the following conclusion. In my mind there is no doubt that the antitoxic serum has a favourable effect in certain cases of tetanus, and those not always of the mildest form. This serum may be justly called a remedy for the disease of such importance that up to the present time no other method of treatment can bear comparison with it. I am of opinion that the antitoxin serum is destined considerably to decrease the mortality in tetanic cases, and I do not doubt—although there is probably much to be learned and many details have to be modified or altered—that the hopes raised by it will be fulfilled.

Eastgate, Stafford.

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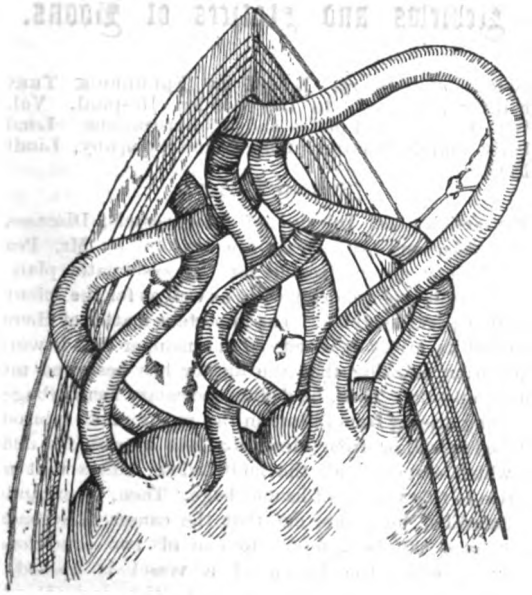
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A RARE CONDITION OF THE OMENTUM.

BY J. GREIG SMITH, M.B., C.M. ABERD., F.R.S. EDIN.,
SURGEON TO THE BRISTOL ROYAL INFIRMARY.

AT an operation for the removal of a solid pelvic tumour performed on May 5th of this year a condition of the omentum was found which I have endeavoured to show in the accompanying sketch, life-size. On completion of the parietal incision, which was carried above the umbilicus, there protruded coils of vessels which exactly, in colour and size, resembled fat, well-developed earth-worms. They were hard, tense, and glistening, and looked so like worms that for a moment I was nonplussed, nor could my experienced assistant, Mr. Swain, or Dr. Michell Clarke, under whose care the patient was, suggest what they were. Prolongation of the incision upwards and a more close examination at once showed that they were the vessels of



the omentum. Here and there small tags of areolar tissue containing a little fat could be found on the vessels; but the whole omentum was transformed into a network of large vessels without any fat. A good many of the vessels were closely adherent to the tumour, these were tied in a bunch and divided. The rest of the omentum was left intact. The whole surface of the tumour was very vascular, and could not be handled without causing free bleeding. In spite of rapid delivery and the free use of large pressure forceps a great quantity of blood was lost before any tissue was divided. The bladder was embedded in the tumour, and its adhesions were more vascular than I have ever seen. The patient, a lady aged forty, had suffered severe pains for several years during the growth of the tumour, and was very thin. She made an excellent recovery. The exact nature of the growth has not been made out, probably it will turn out to be a myoma with sarcomatous elements.

Bristol.

FRACTURE OF THE CORONOID PROCESS.

BY R. S. CHARSLEY, L.R.C.P. LOND., M.R.C.S. ENG.

A GIRL aged twenty was thrown out of a dog-cart through the wheel coming in contact with a large stone at the corner of a street. I saw her an hour after the accident. She told me she had stretched out her arm to save herself and had fallen with all her weight on her hand. I found the right hand bruised and cut by the stones. The right elbow was very painful and I was for some time puzzled to account for the pain, all the bony prominences being uninjured and in place, the radius rotating freely, and the movements of the elbow joint being perfect, although accompanied by much pain. Pain was also produced by pressure on the head of the radius. I found, however, that when I grasped the lower end of the humerus in one hand and the fore-arm in the other, the latter being brought to a right angle with the former, a very slight amount of backward pressure produced a backward dislocation of the joint, the olecranon projecting considerably behind the humerus, and that when the pressure was reversed the joint slipped back into its place with the greatest ease. This proceeding I repeated once or twice, the dislocation being produced and reduced without the least difficulty. I placed a small roll of wool in the bend of the joint and secured it with a bandage round the joint and then put the arm in plaster of Paris with the elbow flexed till the bandage became fairly tight. In three weeks I commenced passive movement and obtained in the end a completely satisfactory result. I cannot account for these symptoms except by supposing that the coronoid process had become separated from the ulna by the fall on the outstretched hand. The great rarity of the accident makes the case worth recording.

Slough.

A CASE OF RAYNAUD'S DISEASE.

BY BRIGADE-SURGEON-LIEUTENANT-COLONEL E. J. FAIRLAND,
ASSISTANT PROFESSOR OF MILITARY MEDICINE, ARMY MEDICAL SCHOOL, NETLEY.

A MAN aged twenty-five was admitted to the Royal Victoria Hospital, Netley, on Jan. 19th, 1895. He was invalided from Hong-Kong for malarial cachexia. He had served in China for three years, enjoying fairly good health except for frequent attacks of ague, accompanied by coldness and numbness of his extremities. On the voyage home a bluish discolouration of the lobe of the left ear was noticed, and his hands and feet became benumbed and very painful. On admission he was in a very cachetic state; the hands and feet were in a condition of extreme venous engorgement, œdematous, and of a purplish colour. This cyanosis implicated especially the toes and forepart of the right foot, the index and middle fingers of the left hand. The point of the nose, the lobe of the left ear, the left thumb and left great toe also became cyanosed; and at times the right ear was similarly affected. The discolouration of the ears and nose was of a recurrent character, frequently disappearing altogether. Anæsthesia existed in the affected parts, and for some distance above them. At first, however, intense pain was felt in the regions above the cyanosed parts. Gradually the œdema subsided, the livid marbling of the surface disappeared, and early in February half of the right foot, the plantar surface of the left great toe, and the index and middle fingers of the left hand became mummified, shrivelled, and black. A line of demarcation formed above the gangrened portion of the right foot, accompanied by a fœtid discharge; but Nature made no effort elsewhere to throw off the diseased parts. Throughout the attack the pulse remained small and feeble; the temperature ranged between 97° and 101°F. The spleen was enlarged and tender. The other organs were normal. The urine was non-albuminous. On April 13th Surgeon-Colonel W. F. Stevenson removed the right foot (Syme's amputation) and the diseased fingers. The patient made an excellent recovery. Exposure at sea was the direct cause of the attack. Ague is a recognised factor in its etiology, and the patient's constitutional tendency to a stasis of the peripheral circulation was increased by his cachectic condition, which produced the lowered tissue vitality essential to the disease. Raynaud's three stages of local syncope, local asphyxia, and symmetrical gangrene were well marked; the case was characteristic in its etiology, progress, and result. The treatment was based on the symptoms—opium to relieve pain, and quinine and generous diet to remove the cachexia. The case was under the care of Surgeon-Lieutenant-Colonel H. H. Stokes, A.M.S.

Netley.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

OTORRHŒA; LATERAL SINUS THROMBOSIS; OPERATION; RECOVERY.

(Under the care of Mr. BERNARD PITTS.)

THIS is another instance of successful operation for septic thrombosis of the lateral sinus due to disease of the middle ear. As time goes on the great importance of the symptoms of this condition will be recognised, and we may hope that the patient will be sent up for operation at an earlier date rather than when his state is almost desperate. It is a subject for surprise as well as congratulation that this patient recovered. The symptoms of septic thrombosis of the lateral sinus are generally well known, but vary to some extent in different cases. The occurrence of pain over the mastoid process, vomiting, rigors, high and irregular temperatures, and the history of a chronic discharge from the ear should always make the medical attendant suspect the presence of a septic thrombosis of the sinus. In this case there appears to have been no swelling or tenderness along the course of the internal jugular vein in the neck, a symptom rightly regarded as a very important one, and we note the presence of internal strabismus. This was probably of old standing and not due to any meningeal inflammation of recent origin. We think, however, that a statement with regard to this would have been advisable as great difficulty is sometimes experienced in diagnosing an obscure case of thrombosis from one of tuberculous meningitis, and the presence of a recent strabismus is regarded as a strong argument in favour of the latter. The formation of deep abscess in the neck after operation takes place usually in one of two ways, either as the result of the escape of the pus of a suppurating thrombus through the wall of the portion of vein between the ligature in the neck and the lateral sinus or by the spread of pus along the surface of the internal jugular vein in those cases where it had previously formed in the sulcus lateralis. For the notes of this case we are indebted to Mr. Gerald Baldwin, surgical registrar.

A boy aged nine was admitted into the Hospital for Sick Children, Great Ormond-street, on March 23rd of this year. There was a history of twelve months' offensive discharge from the right ear. He had been treated for eight weeks at a special hospital and the discharge had ceased; but on March 14th he complained of intense ear-ache and frontal pain. On the 22nd the discharge from his ear began again after the application of poultices over the mastoid bone. On the morning of the 23rd he became delirious. When admitted he was very ill, with the temperature 103° F., the pulse 140, and the respiration 40. He complained of frontal headache, with pain and tenderness behind the right ear. Over the right mastoid process fluctuation was felt. Internal strabismus was noted in the left eye, and the ophthalmoscope showed blurring of the left optic disc with enlargement and tortuosity of the retinal vessels. The right disc was normal. Mr. Pitts saw the case in the afternoon and decided on immediate operation. An incision behind the right ear set free a small quantity of pus. The mastoid antrum was opened with a gouge and was scraped out together with the tympanum. Finally, the lateral sinus was freely exposed. After this had been done some very offensive pus oozed out from behind the sinus. Puncture of the sinus with a tenotomy knife revealed the presence of purulent clot in its interior. This was removed after incision. The immediate effect of the operation was a fall of temperature to 99°, but next morning the glass registered 104°. On the 25th Mr. Pitts tied the internal jugular vein at the level of the cricoid cartilage, the vessel being collapsed and empty. Even after this progress towards recovery was very slow and broken by rigors on four occasions, with high temperatures reaching at one time 106°. Two large and deep-seated abscesses formed in the neck, one around the internal jugular vein, the result of septic phlebitis, and the other below the right mastoid process, due to direct infection. These required incisions and drainage. The general treatment adopted was mainly dietetic and stimulant, the boy being encouraged to eat what he most fancied. All the wounds healed satisfactorily, though slowly, and he was allowed out of bed on May 17th, and sent to the convalescent home on June 3rd. He was then perfectly well, though naturally weak after so severe an illness. There was a slight discharge from the right ear and from the mastoid wound. The temperature had remained normal for four weeks. Both eyes were normal.

Remarks by Mr. BALDWIN.—The successful result of this case shows how hopeful we may be of success in lateral thrombosis provided the treatment be sufficiently thorough. At one time the patient's chance of recovery appeared to be very slight, but by energetic surgical treatment, with stimulation and good nursing, his life was saved. The condition of the patient when admitted, together with the rigors and remittent temperature persisting after operation, appear to show that even before admission he had absorbed a considerable quantity of the septic products into the general system, and his recovery is therefore all the more satisfactory.

Reviews and Notices of Books.

A System of Surgery. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to the London Hospital. Vol. I. With two coloured plates and 463 illustrations. London, Paris, and Melbourne: Cassell and Company, Limited. 1895.

[SECOND NOTICE.]

THE articles on Injuries of Bloodvessels, Diseases of Bloodvessels, and Aneurysms are written by Mr. Pearce Gould. They are noticeable for the systematic plan on which the subjects are dealt with, as well as for the scientific spirit that pervades them. The important matter of Hæmorrhage and its arrest is discussed in a manner that is worthy of attention, showing that the author has bestowed much thought upon it. Thus, he defines secondary hæmorrhage as "bleeding arising from failure in the repair of an injured or ligatured vessel, or from ulceration into a vessel," a definition which embraces all the multifarious causes that may give rise to this variety of hæmorrhage. Then, by expanding this definition, he points out that the causes of secondary hæmorrhage can be referred to one of two conditions—viz., "(*a*) when the lumen of a vessel is opened up by ulceration of its walls (septic arteritis), and (*b*) when the pressure of the blood within it ruptures a healing artery before a strong resisting cicatrix has been formed." It is interesting to observe how either one or other of these conditions, or occasionally a combination of them, contributes to an accident which is far less common than it used to be. Amongst the several topics treated under the head of Diseases of Bloodvessels especial mention may be made of the section dealing with atheroma, phlebitis, and varicose veins. In the surgical treatment of the last-named preference is unhesitatingly given to *excision*, which in most cases is absolutely curative, no fresh development of varicose veins arising, a fact held to prove that varix does not depend alone upon over-distension. In those cases in which new varices do appear after operation, an explanation is to be found in the nature of the particular case, showing that the pathological tendency is still operative. The article on Aneurysm is well-planned and exact. We observe that Mr. Pearce Gould is careful to limit the phrase "cure" in relation to aneurysm to the condition of "organisation" of the clot, which can only be obtained by obliteration of the artery. The diagnosis of aneurysm, and in particular the question of treatment, are discussed with a fulness of detail which renders the article

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one of great practical value. Descriptions are given of traumatic aneurysm and arterio-venous aneurysm, the article closing with an adequate account of the special features exhibited by aneurysms of particular arteries.

The volume closes with four chapters on Injuries and Diseases of Bones and Joints. That on Injuries of Bones is written by Mr. Stanley Boyd, who deals with his important subject in considerable detail. An accurate and practical acquaintance with the subject of fractures is of vital importance to all practitioners. These accidents are very common, and their treatment has to be undertaken by all except a very few physicians. They are also very varied in their nature, and the successful management of all the complications that may arise in connexion with them often taxes the resources of the most experienced surgeons; and yet they are accidents which the public generally regard as simple, even commonplace, and they are very prone to think that a result short of perfect restoration of the injured part must reflect discredit upon the practitioner in charge. The important thing is to have a clear grasp of the facts of the pathological anatomy of fractures, and to understand the mode of repair of these injuries. Mr. Boyd discusses the varieties of fracture, their symptoms, complications, and mode of union most fully, and our chief criticism of his article is that if anything he has been too diffuse and too elaborate and full for what is after all a student's text-book. The illustrations to this chapter are both numerous and excellent—a real assistance to the reader.

Mr. Clutton follows with a chapter on Diseases of Bones. This is a fascinating subject, and dear to every surgical pathologist. Mr. Clutton deals with it in a style that is in strong contrast to Mr. Stanley Boyd's—very concise and in places even too brief. The views enunciated are, of course, those current to-day, but Mr. Clutton is not pedantic and still writes of pus spreading along a bone under the periosteum, although the reader must clearly understand that the results described are due to the presence of infective organisms, and that to their spread is due the spread of the disease. Mr. Marmaduke Sheild writes on Injuries of Joints, especially Dislocations, and he has succeeded in describing tersely and clearly injuries which have too often been imperfectly pictured. The chapter is a thoroughly practical one and the illustrations are really useful, especially those showing in exact detail the special manipulations required for the reduction of dislocations. A good account of congenital dislocation of the hip-joint is given, and the various operations which have recently been devised for this deformity are described.

The chapter on Diseases of Joints is by Mr. A. E. Barker, who has devoted great attention to this important subject, and who, therefore, writes upon it with authority. Much excellent work in both the pathology and treatment of diseases of joints has been accomplished during the last few years, and the main results obtained will be found duly recorded by Mr. Barker. The injection of iodoform emulsion into tuberculous synovial membrane is recommended, but no mention is made of the similar use of other germicides such as chloride of zinc. Syphilitic diseases of joints are described; but we find no account of the deep worm-eaten erosions of articular surfaces occasionally met with in tertiary syphilis, and of which such admirable specimens were exhibited last week in the Pathological Museum of the British Medical Association. Following the description of diseases of joints in general is an account of the diseases of the individual joints. This part of the article is admirably done, and is a capital *résumé* of our present knowledge and current practice.

To this first volume of his System of Surgery the editor contributes only brief articles on such subjects as the influence of constitutional conditions upon injuries, tuberculosis, hæmophilia, and hysteria in its surgical relations; his more important contributions will be found in the second volume. The remaining article is on Anæsthetics, and is written by Dr. F. W. Hewitt, whose experience in this subject and ability in writing upon it are well known. We have already spoken of the work as being well printed and abundantly illustrated. A large number of the illustrations are original, and most of them have been executed by Mr. Berjeau. On the whole these illustrations are excellent, but some of them are coarse and ugly, and distinctly inferior. The illustrations in the chapters on Fractures and Dislocations will be particularly appreciated by students.

In conclusion, we must heartily congratulate all those who have been associated in the publication of this volume on the great measure of success they have attained. It is a thoroughly reliable text-book, accurate, fully abreast of current knowledge, and quite equal to any of its rivals. We anticipate that if the second volume equals this one in merit the work will meet with great and deserved success.

Hygiene and Public Health. By LOUIS C. PARKES, M.D. Fourth Edition. "Practical Series." London: H. K. Lewis. 1895.

SINCE 1889 three editions of this work have been exhausted, and a fourth is now being issued to the public. The author draws attention to the circumstance that the new edition has been revised, and to a slight extent enlarged where necessary in order to keep abreast of advancing knowledge. The book now contains 520 pages, is well illustrated, and sufficiently indexed. As in former editions, the best chapter is the one devoted to the Disposal of Refuse, than which we believe no clearer or better description is given in any text-book. The chapter on Food, Beverages, and Condiments is also an excellent one. The pages on The Contagia, although fairly practical, are not brought sufficiently up to date. Neither in the chapter on the Contagia nor in that on Communicable Diseases is any reference made to the recent researches relative to the finding of the typhoid bacillus in the urine and in the eruption, nor to its probably infrequent and accidental appearance in the alimentary canal. The author evidently still regards typhoid fever as an intoxication process. When he refers to the bacillus of typhoid fever "as almost constantly present in the alimentary canal," he is of course confusing what is now believed to be the true typhoid bacillus with the bacillus coli communis, the latter being a normal inhabitant of the intestine, although he afterwards gives some of the chemical tests which differentiate the two bacilli. Recent researches show that when the bacillus coli communis and the typhoid bacillus are grown together in the same medium the former kills the latter, and this fact, no doubt applies equally to the life-period of these bacilli in the intestine. We are glad to see that the new edition is not over-burdened with figures, and for this reason it will no doubt be very acceptable to the busy practitioner.

MAGAZINES FOR AUGUST.

The Practitioner.—The journal edited by Mr. Malcolm Morris is one of the most interesting of the monthly medical magazines. The original communications include a very clearly written lecture on Hare-lip by Mr. Christopher Heath, illustrated with photographs of three degrees of the malformation. The lecture is full of thoroughly useful and practical hints. Dr. Goodhart refers in an apologetic manner to a complication of influenza—viz., Thrombosis; Mr. Rose writes on Enterectomy by Maunsell's method, and the editor on a Method of Staining the Fungi of Ringworm. Dr. Caley in Comparative

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Studies considers Perityphlitis, and there is a sound article upon Disinfection. The Medico-Literary Causerie deals with Fees, Ancient and Modern; the balance is much in favour of the ancient scale, for to quote an example, which the writer omits, Demokedes, a Greek physician in slavery at Susa, cured Darius, who had sustained a bad sprain. For this the King gave him as many chains in gold as had previously loaded him in iron. He also introduced him into his harem, when each Sultana gave him a dish full of golden staters, and the stater was worth about £1 1s. "Fancy that now," to quote Hedda Gabler's weak husband. Reviews of the medical science, abstracts from foreign journals, and therapeutic notes make up a good number.

Chapman's Magazine.—The *pièce de résistance* this month is Miss Mary Wilkins's prize detective story. It is a new line for the talented authoress of "A New England Nun," and in some ways she has succeeded very well. Her character-drawing is excellent, and the tale has all the elements of a popular detective story—plenty of mystery and the skilled amateur detective; but the medico-legal element is marvellously incorrect. Mr. Fairbanks is murdered by a lady dressed in overalls. She stabs him over the heart with a pair of shears "a little after midnight." She, or rather the overalls, get covered with blood, and she slips into a cupboard in the daughter's room, when, feeling herself wet with blood, she catches hold of a dress hanging in the cupboard and wipes the stains with it. She also very imprudently leaves bloody hand-marks upon doors and shelves, and bloody footsteps on the floor, so the hæmorrhage was evidently profuse. The daughter gets up at five o'clock and finds her blood-stained dress in the cupboard *with the stains still wet*. Now, punctured wounds of the heart do not bleed freely externally, especially when the recipient of the wound is lying down, as in this case. Also the night is mentioned as being very hot, so the blood stains on the dress in the cupboard would have had ample time to dry between 12.30 and 5 A.M. These errors mar a really good story. Mr. Eden Philpotts's Demon Conger is good, and the asphyxia convulsions are well done.

The Humanitarian.—The first article in this periodical is Mr. Grant Allen's amusing denial of the charge of "culture." To call a man cultured is almost as bad as calling him "aimiable." Dr. Forbes Winslow writes in the manner of Lombroso about the madness of genius, and Mr. J. Rice Byrne returns to his thesis that corporal punishment in schools is an accursed thing. He is evidently referring to schools under the Education Department, but even in them we think that an occasional flogging is most wholesome. Eton boys, Uppingham boys, Harrow boys, Winchester boys, and Westminster boys are all "swished," why should not other schoolboys be so too when it is called for, as it often is?

New Inventions.

A NEW UREAMETER.

A NEW ureameter which I have designed possesses the following points of advantage. It is extremely portable and simple, but it nevertheless estimates the amount of urea in urine with accuracy; moreover, only a small amount of sodium hypobromite solution is required for each estimation. The accompanying sketches will show the shape of the instrument. It is held in the position shown in Fig. 1, and about half filled with hypobromite solution. A cubic centimetre of urine is put into the little test-tube, which is then gently placed in the larger open end of the ureameter, and this is corked up. By turning over the whole thing in the direction of the hands of a clock to the position shown in Fig. 2 the urine is mixed with the hypobromite solution, and the whole of the nitrogen given off is registered by the level of the

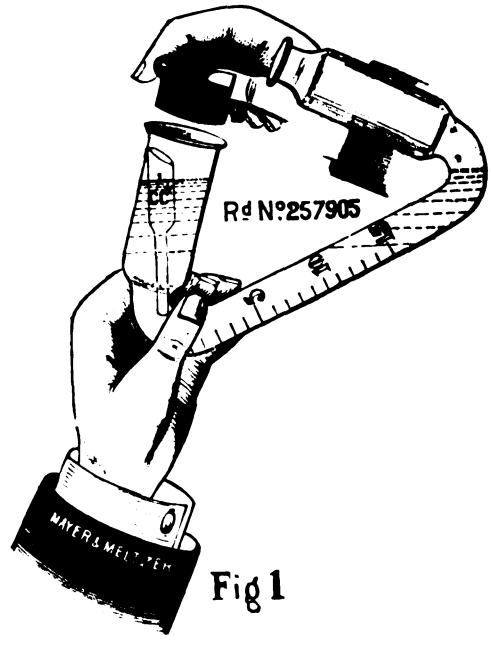


Fig 1

liquid in the graduated tube. After reading the indication, by turning round the instrument still further in the same direction as before, all the hypobromite solution which has not been in contact with the urine may be emptied back into



Fig 2

the stock bottle. It is evident that with this ureameter none of the nitrogen escapes into the open air, and the amount of hypobromite solution used is very small. Messrs. Mayer and Meltzer are the makers.

C. J. MATHEW.
King's College, London.

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THE LANCET.

LONDON: SATURDAY, AUGUST 10, 1895.

THE British Medical Association has reached its grand climacteric. It has held its sixty-third annual meeting, and the most prejudiced critic must allow that there have been few associations which could show more splendid achievements. The meeting itself was an achievement. Its numbers, its hospitalities, the quality of the addresses delivered by the President and the leaders of the Sections, the work of the Sections, the presence of distinguished foreigners, the wide recognition of it as an event by the general press, are features of the meeting which may fill all its promoters with just pride. Add to this the numbers of the Association itself, and we may dare to believe that the members of the Executive, those who feel the responsibilities of leadership, were never more satisfied with the Association than they are to-day. We ventured lately to say that the Association had been more successful in the discussion of questions affecting the science and art of medicine than of those which affect the interests of general practitioners. We are not vain enough to think that this friendly criticism is the sole explanation of the development of interest in these questions which characterised the proceedings of the recent meeting. But the interest shown was truly enormous. On the first day of the meeting and on the last the discussion of such topics formed a feature which must strike the most casual observer. Indeed, this solicitude for the general practitioner came with such a rush as almost to give the impression that if there were not some want of sympathy between the Council and the advanced reformers there was at least a difference of pace which made walking together rather difficult. On the midwives question the Council had come to a resolution which all responsible persons who have reflected on the matter seriously have reached long since. Dr. WARD COUSINS said that the Council had given days and nights to the consideration of this subject—not too much for the mature of the interests involved—and the first conclusion that they had come to was that "the present state of things was intolerable, and that a change was absolutely necessary." He then indicated the lines on which the Council had requested the Parliamentary Bills Committee to frame a measure for the registration of medical, surgical, and midwifery nurses. The Council recommended the substitution of the word midwifery nurse for that of midwife, and while recognising that every case of midwifery could not be attended by qualified practitioners, insisted that every registered nurse should be in touch with a qualified practitioner. This was essentially the proposal of Mr. LAWSON TAIT in the following resolution, which was carried by a large majority.

"That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing."

It may be a matter of question whether Parliament will accept the absolute obliteration of the word midwife; but it is satisfactory that the Association has come to accept the views of the General Medical Council, and of its own council, in respect of the training, supervision, and registration of women—by whatever name they are to be known—who will stop a gap in ordinary labours among the very poor, which registered medical men cannot stop, and, as Dr. SCHARLIEB gave distinct notice, registered medical women are not prepared to stop. This resolution is an end to all controversy on the main question. But we cannot leave the subject without expressing our wonder that in arguing it Mr. LAWSON TAIT should have thought it necessary to castigate the Council of the Association for requesting the Parliamentary Committee to formulate the very views, which he expounded and which are now universally accepted. Sir WALTER FOSTER said that when the Bill came out of the committee all definition and limitation of function (of midwifery nurses) was gone. This must refer to the Committee of the House of Lords. But it is not, we think, an accurate statement. As we read the Bill the limitation of function to cases of natural labour remains in the fourth clause and is assumed all through. On another subject Sir WALTER FOSTER gave the impression that he considered the Council one of the most prejudiced bodies that he has encountered. We are no blind admirers of the General Medical Council, neither shall a disposition to do it general justice prevent us from expressing our satisfaction with Dr. LOVELL DRAGE'S resolution dealing with the monstrously inadequate recommendations of the General Medical Council as to the training of medical students in midwifery, requiring that they shall have been present at only nine confinements and have personally conducted "only three." Dr. DRAGE'S resolution, which was carried, also instructed the Council to seek the repeal of the section of the Metropolitan Poor-law Act which prevents workhouse infirmaries being used for clinical instruction of medical students.

Another lively subject came before the general meeting on the first day—the assumption by the British Medical Association of the functions now discharged, and very ably discharged by the Medical Defence and Protection Societies. The chief interest of the discussion was in the illustration afforded by it of a sharp difference of opinion between the Council and the members of the Association on the subject. Dr. WARD COUSINS and his colleagues intimated that the Council were advised that the Association could not accept such functions under the present memorandum, which, like the law of the Medes and Persians, does not seem to admit of alteration. We share the impatience of the members with a mere memorandum. On the other hand, we feel with the Chairman that for sixty-three years the memorandum has served very well, and that there is much to be said for making the work of medical defence the sole work of a special

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society. It is a mistake to think that one body can do everything. Even the County Council and the British Medical Association may well consent to recognise a limitation of their powers. And the latter body may certainly be content to see other societies doing special work for the good of the profession.

We have not time to deal separately with all the questions opened in the resolutions—eight or ten in number—which were passed on the closing day of the meeting, without adequate discussion and we fear before somewhat small audiences. The Council has its work set out for the ensuing year. It has been requested by several formal resolutions to take steps for the suppression of advertising in all forms; to prevent members of the British Medical Association accepting posts in medical aid and kindred societies; to open a fund for indemnifying those who fight the battles of the profession against combined friendly and benefit societies; to communicate with universities and corporations requesting them to discourage members accepting medical aid and other appointments derogatory to the profession; to approach Government with a view to the constitution of an authority to control irregular practice, "with a preference for the British Medical Association" as that authority; to direct the attention of professors and teachers of medicine to the deplorable want of *esprit de corps* and the need for inculcating this virtue. Besides these, resolutions were passed suggesting an alteration of the constitution of the General Medical Council, condemning the employment of unqualified assistants; averring that those who violated the rules of professional ethics should not be met in professional intercourse, and that members of the British Medical Association should not hold office in any but really public hospitals, or gratuitously attend the inmates of pay wards in such hospitals. It is impossible not to agree with the spirit of these resolutions and the desire to bring the influence of the Association to bear strongly in carrying them into effect. But this is very different from carrying them by the dozen and leaving the *modus operandi* for twelve months in the hands of the Council.

The grand climacteric is an achievement and is full of honours; but it has its own risks and its own lessons of caution. The very size of the Association makes it unwieldy and difficult of control by its council. This is shown when a dozen orders of the first magnitude, involving applications to Parliament, to the General Medical Council, and to all the medical authorities, are hurled upon the council at the last moment of a festive and busy meeting. The council has had a warning that if it does not move a little faster it may have to be superseded by another set of councillors. Some means must be formed to steady the method of procedure by abstract resolution and to coördinate the action of the branches of the council, or else disappointment, not to say disaster and discord, will result.

THE equivocal position of the ductless glands in the animal economy, and the interesting nature of the facts that have recently been ascertained in regard to them, gave a special interest to Professor SCHÄFER'S address in Physiology. The functions of the spleen, thyroid, thymus, and supra-renal capsules have long been shrouded in obscurity, and many points in their life-history still remain to be elucidated. The similarity of the structure of these bodies to that of glands, but unprovided with ducts, their large volume, and the evident activity of the processes that take place in their interior, as indicated by their large vascular and nervous supply, which militates against the supposition that they are useless or that they are mere degenerate remains of once more important organs; and, on the other hand, the possibility of removing the whole or the greater part of their substance without apparent injury to the health of the animal—all these and many other facts combine to render them a physiological puzzle. For many years past, however, the conviction has been growing in the minds of physiologists that their true function consisted in the separation of certain materials from the blood, acting in the same fashion as the salivary glands or pancreas, but that these secretions, instead of being discharged from the surface of the body, as is the sweat, or into the alimentary canal, are reabsorbed into the blood, and fulfil certain definite purposes in the economy. Hence the term applied to them by Professor SCHÄFER of internal secretions. In one sense every part of the body, be it nerve or muscle, bone or fat, modifies the blood in a similar manner by abstracting from the blood the materials of its own nutrition and restoring to that fluid the products of its disintegration. In the cases of the liver and pancreas the internal secretion is more important than the external, since the secretion of the former of these glands at least may be permanently diverted by a fistula without interference with the vital functions, whilst removal of the whole gland is invariably fatal. As our knowledge of the liver and its functions has extended we begin to see the reason of this. The liver visibly secretes bile which may be abstracted before entering the alimentary canal without harm, but it also forms urea and glycogen, and it is the accumulation and decomposition of these products that cause death when the whole gland is removed. Analogous experiments on the pancreas enable similar deductions to be drawn. The pancreatic juice can be diverted by a fistula from the intestine, and the major part of the gland can be cut away without harm, but if the whole be removed death results from diabetes. The internal secretion of the gland is more important than the secretion it discharges by its ducts. After discussing the relations of the thymus and thyroid bodies Professor SCHÄFER dwelt at length on the supra-renal capsules, on which he, with the assistance of Dr. OLIVER and Mr. MOORE, has been working for some years. He sums up his results, which show conclusively that the medullary portion of the adrenals contains a dialysable organic principle, soluble in water and not destroyed by boiling for a short time, which produces a powerful physiological action upon both striated and unstriated muscular tissue, especially affecting the skeletal muscles and the muscles of the blood-vascular system, causing these contractions to be greatly prolonged, and in this respect resembling the action of veratria. It also has some exciting influence on the cardio-inhibitory centres in the medulla oblongata, causing the heart to slow down

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but after section of the vagi it exercises an opposite effect, increasing the force and frequency of the heart's action, and thus leading to a great rise in the blood-pressure, which is enormously increased by its power of inducing contraction of the muscular tissue of the arterioles. These results, which are quite original, reflect great credit on Professor SCHÄFER and will, we trust, incite him to further inquiry.

THE facilities for higher education have now been open to women for a time sufficiently long to permit us in some measure to estimate the results of the modern movement from which so much has been hoped. In the *Nineteenth Century* for July Mrs. J. E. H. GORDON takes up the subject, and presents much interesting and valuable information. Her method is to take the statistics of Newnham, Girton, and other centres of higher female education, and to trace, so far as practicable, the after-careers of the women who have been trained in these institutions. The object of the writer is "to gain some practical knowledge as to what a university training leads to for women and how far it is worth while for girls to spend some years and some money in acquiring a solid knowledge of the higher branches of learning, such as mathematics, classics, moral science, &c., and whether this course of training does really ultimately make women's lives freer and happier, and if the honours they gain at college enable them to earn their own living by newer and more interesting means than by the old-fashioned methods of teaching, companionship, and needlework." The results of the inquiry are highly interesting, and will probably come as a surprise to most readers. The total number of students who left Newnham College from October, 1871, to June, 1893, was 720. Leaving out those who have died and the foreigners who have returned to their own countries, it would appear that 374 are at present engaged in teaching as a profession, 47 have married, including 9 or 10 of the lecturers and teachers, 230 are living at home, 5 are engaged in medical work, 2 are missionaries, 1 is a market-gardener, 1 is a book-keeper, 2 or 3 are working at charity organisation, and the remainder are for the most part engaged in secretarial work. The number of students who had passed through Girton up to June, 1893, and obtained degree certificates was 335. Of these 123 were engaged in teaching, 45 were married, 2 were missionaries, 6 were in Government employment, 4 were engaged in medical work, and 6 had died. It is to be presumed that the remainder were living at home. The statistics available from the women's colleges at Oxford give similar results. Of the 173 students who left Somerville College between the years 1879 and 1892, 73 are engaged in teaching, 29 are married, and two or three others are engaged in legal or literary work. The larger proportion of the ex-students of Lady Margaret's Hall are engaged in teaching. Holloway College (Egham), Alexandra College (Dublin), and Victoria College (Belfast) show practically the same sort of results. Summing up the statistics, Mrs. GORDON finds that the after-careers of 1486 ex-students of the various institutions have been ascertained. Of these, 680 are engaged in teaching, 208 have married, 11 are medical practitioners or preparing to practise, and medical missionaries, 2 are nurses, 8 or 9 are in Government employment, 1 is a bookbinder, 1 is a market-gardner, and 1 is a lawyer. A curious fact that comes out strongly in the statistics is that marriages are much more frequent among women who take ordinary pass degrees than among those who take honours. Thus, about 1 in 10 of those who take honours at Girton marries, while about 2 in every 5 who take an ordinary degree marry.

"In former days," says Mrs. GORDON, "marriage, teaching, and philanthropy were the principal professions that were open to women. The careful study of the reports published by the women's universities will, I think, incline parents to question if a university training has yet succeeded in opening the doors of any other profession. A few exceptionally gifted women have entered the medical profession, and a few have become workers in other fields, such as bookbinding, market-gardening, &c., but with these very few exceptions nearly all ex-students are engaged in teaching or are preparing to teach, and therefore it would seem that unless a girl has some special capabilities of mind and brain which, combined with a power of organisation, will place her at the head of the teaching profession after her training at the university is completed, she cannot at present hope that the years and the money devoted to her higher education will do very much for her in enabling her to enter upon a money-earning career in the future." As regards the percentage of marriages among university-trained women, different views will be held according to the prepossessions of the individual. The percentage is very low, and the facts are susceptible of various interpretations. It may be that a university education indisposes women to matrimony, or makes them fastidious in their choice, or provides them with a means of livelihood which makes marriage no longer a necessity; or—may it be hinted?—a taste for higher education may not be generally associated with the qualities which win the admiration and affection of men. It is certainly a striking and significant fact that if a woman takes a university career she is much more likely to become a schoolmistress than a wife. Whether this result is one to be deplored or not must be left an open question, but at all events the fact is very important.

The statistics thus elicited do not necessarily involve any disparagement of female higher education. They do, however, lead us to question whether it is either practicable or desirable that such education should become a usual thing among women. Exceptional women there will always be, with uncommon intellect and energy, who prefer an independent career to the quasi-dependence of matrimony. It is extremely important that such women should have the most ample opportunities for developing themselves, and that they should be allowed to exert upon the world whatever influence their intellect and character can justly claim. The world will be richer for such women, and there will be fewer stunted and dissatisfied lives. But the broad fact remains that such cases must remain entirely exceptional, and that the domestic career is the natural destination of the immense majority of women. Nothing can alter the course of nature, and no fine talk about woman's rights or wrongs can obliterate natural distinctions. That most fatuous of cries, "no sex in mind," can only prevail

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with those who wilfully blind themselves to the teaching of history and the plain facts of daily life. Men and women are complementary the one to the other, and neither can profitably usurp the sphere of the other. The world's harmony and happiness depend upon their being not competitors and rivals, but allies and helpmates. We confess we are surprised to find how few university-trained women have adopted medicine as a career. That there is a place for women in the medical profession we willingly acknowledge, but we doubt if that place can ever be a large one. The heavy toils, constant responsibilities, and incessant anxieties of medical life are very exacting to even picked men. They must necessarily be much more exacting to women.

Annotations.

"Ne quid nimis."

THE DIFFUSION OF SMALL-POX.

THE metropolis has during the month of July experienced a by no means pleasant change in the behaviour of small-pox as compared with its quiescent state during the month of June, when the cases remaining in hospital never exceeded 34 at the close of any one week, whereas the disease made vast strides towards epidemicity in the four weeks of last month. The number of patients still under treatment at the end of the several weeks has progressively increased since the middle of June, when it was only 19, with prospects at that time of gradual extinction. At the end of June it had risen to 34, and in the next following four weeks to 42, 71, 89, and on July 27th to 199; though even here it has not stopped in its upward tendency, as on Aug. 3rd the patients in hospital were as many as 237 in number. The deaths, which in June were only 2, did not rise beyond 5 last month, and of these 3 were registered in the opening week. Of the 5, there were 3 in vaccinated persons aged over sixty years and 2 in persons concerning whose state as to vaccination no information is forthcoming. In the six weeks since the middle of June the admissions to hospitals of the Metropolitan Asylums Board and to the Highgate Small-pox Hospital have been in successive weekly periods 8, 25, 17, 36, 23, and in the fourth week of July 114 cases. Last week the admissions were two-thirds of the occurrences, and numbered 60. The deaths of July have been put down as belonging—3 to Camberwell, and 1 each to St. Pancras and Strand Poor-law districts. Cases have in the last fortnight of July been brought to hospital from twenty-six of the thirty-four Poor-law areas of the metropolis, though most of the cases came from Whitechapel, St. Saviour's, and Mile-end Old Town. As regards the last-named district, Mr. Taylor, the medical officer, states that during recent years the inactivity of the vaccination authority has resulted in many thousands of young people escaping vaccination, only to grow up to swell the ranks of small-pox victims sooner or later. Meanwhile the sanitary bodies of London are generally taking energetic steps for preventing as far as possible the spread of infection, though in some instances such carelessness on the part of the sufferers has been heard of as will go far to frustrate the designs of the health authorities. The occurrence of multiple cases in connexion with shelters has led the Whitechapel Board of Works to pass a unanimous resolution asking the Local Government Board to take steps to bring all shelters under the Common Lodging House Acts and requesting all the other sanitary bodies in London to support their application. Meanwhile the Local Government Board have issued two circular letters in respect of small-pox prevalence, the one to all boards of guardians throughout the country embodying their letter of 1893 and counselling guardians and their officers how they are to proceed in the event of small-pox being introduced to the workhouse and casual wards, and enjoining precautionary measures as to vaccination, revaccination, isolation, and the like; the other letter is to sanitary bodies in London, calling upon them to issue instructions to their health officers to immediately visit each case of small-pox notified, and to take at once all needed steps as to isolation, vaccination, disinfection, and so forth. The letter lays stress on the importance of adequate measures, especially on account of the growth of small-pox in London at a period of the year when the disease is usually at its lowest ebb. Around London small-pox has not displayed any marked disposition to spread, and in the provinces generally it has been but little heard of. Oldham was, perhaps, the most heavily hit place in England, a good many cases having occurred there during last month, and 6 deaths having been registered in the period, 4 of them in one week. The only other large town having fatal small-pox was Liverpool, where a single death was registered in the first week of July. But quite recently the disease has assumed somewhat serious proportions at the village of Thornhill, near Dewsbury, where 3 deaths have already taken place, 1 of them on Aug. 2nd. Some of the patients have been removed to the Batley Infectious Hospital. In Dublin small-pox continues to linger in a menacing manner, seeing that during the four weeks of last month the cases under treatment at the close of each week never varied by more than a unit. The admissions were successively 11, 6, 15, and 9, and against these 41 cases there were 45 discharges and 4 deaths. Of the 4 deaths, 3 were unvaccinated individuals aged under one year, over twenty, and over forty years respectively, and 1 in a person concerning whose vaccination no information is given. There were 35 acute cases in hospital at the end of the first week of July, and 36 three weeks later, the convalescents having fallen in the same period from 12 to 8 in number.

THE SURGERY OF WAR.

OUR readers, and especially our military medical readers, have no doubt perused the excellent address of Sir William MacCormac, President of the Surgical Section of the British Medical Association, at the late meeting. Sir William MacCormac, who has had considerable personal experience of military surgery, and has always evinced a keen interest in this branch of his profession, took for his subject, "Some Points of Interest in Connexion with the Surgery of War." The modern rifle, with its small, hard projectile travelling with enormously increased velocity to a much greater distance and with a precision that were not formerly attainable, has revolutionised modern warfare and introduced changes that have naturally excited great interest. The Lee-Metford rifle in action is at the present moment the subject of investigation in India, it being alleged that the "stopping-power" of its bullet was found, in the experience of the Chitral Relief Force, to have been limited. It is asserted that the long, thin, light projectile of the Lee-Metford rifle leaving the muzzle with very high initial velocity will, under certain circumstances and at short ranges, pass clean through bones and tissues without any splintering or smashing effect, and with so little resulting shock to the wounded as not at once to cripple them, and put an immediate stop to their attacking power. Between the results of experiments on dead animals and inanimate objects and the effects obtained on the living in actual warfare there are differences that can be explained and can be readily

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imagined. Be all this as it may, and we are not yet sufficiently acquainted with the facts of the Chitral Expedition as to the effect of the projectile on large and long bones of dense structure as compared with thin flat bones, for example, to warrant the formulation of any definite rule, Sir William MacCormac's address is of much interest at the present moment, because it takes up in a scientific spirit and passes in review the results of all the observations that have been made and describes our present knowledge in regard to arms of precision and the surgery of modern warfare. It would be interesting to ascertain the results of the experience of the Japanese in the late Chino-Japanese War on several questions. From a military point of view the stopping-power of the Lee-Metford rifle is an important consideration for the British Army, engaged, as it often is, in warfare with savage or semi-civilised people, whose fighting tactics consist of impetuous charges and sudden onslaughts. As regards the effects of the consistence of the substance through which a projectile passes—whether dense solid fluid or semi-fluid or an admixture of these—much is already known, but much still remains to be accurately determined and on these and various other points Sir William MacCormac has a good deal to say that is both pertinent and practical. The principles of antiseptic surgery have taught us a great deal and revolutionised our ideas of the treatment of gunshot wounds and injuries, as any one may discern who will refer to Guthrie's Commentaries based upon the observations and experience of the Duke of Wellington's time. Not the least part of our knowledge consists, perhaps, in having learnt what not to do as well as what to do in modern warfare. Sir William MacCormac thinks we are justified in believing—although there is high authority for a contrary opinion—that the next great war will be more destructive to human life than any of its predecessors. But very many cases will remain less severe in character, more capable of successful treatment, and less likely to entail future disablement, while improved sanitation and antiseptic methods will enormously increase the proportion of recoveries. It is the unceasing effort of modern surgery to provide antiseptic protection in an effective form in time of war; and in this connexion he recalls the fact that the late medical organisation during our war in Egypt was so complete that not a single case of infective wound disease occurred during the whole campaign.

FAITH-HEALING OR SUICIDE?

AN inquest was recently held upon the body of a girl aged seventeen, who died in Brixton of acute tuberculosis and peritonitis from a perforating gastric ulcer, having been very ill since last Easter. She had no medical advice because, according to the evidence of the woman in whose house she had stayed, "she trusted in the Lord to heal her without medical aid." It is useless to point out to people of this cast of mind the falsity of their theological reasoning, but we do think that the Legislature, which takes care to prevent people jumping off the Monument or going on to ice too thin to bear their weight, might step in and prevent Peculiar People and faith-healers from murdering their children by neglect. We should be the last to deny the power of faith, but, as a recognised authority says, "faith without works is dead," and it is a canon of theology that the Almighty works by means, and those means humanity is bound to use. The *New Science Review* for July contains an article entitled "Has Mental Healing any Scientific Basis?" We do not quite understand this question, but we gather from the article that help need not always come from without, but there is a broad field for "auto-suggestion and systematic concentration with happy results." The way and means to become properly auto-suggestive is as follows. You say mentally to yourself—even mechanically at first—until the habit is formed, "I [the real ego] am well. I am strong. I am pure. I am perfect. I am one with the Divine Spirit of Wholeness." The next step is, "To ensure progress special times and seasons should be set apart for focalized thought and affirmation. ..... At times when the objective world, with all its cares and anxieties, may conveniently be barred out, the full glare of the consciousness is turned upon the Divine ideal within, which thereby gradually becomes graphic and ruling." It is evidently quite easy to become a mental healer, but we seem to remember that this process is not new. There was once a sect in the Eastern Church called the Ὀμφαλοψύχοι, who by steadily gazing at their navels were at length rewarded with a sight of the light (created or uncreated) which shone at the Transfiguration. This method, we suppose, is what Mr. Henry Wood, the writer of the article in question, calls "keeping company with his inner ideal." However, he does not seem to have much faith in the process he recommends, for he concludes: "As related to illnesses, prevention is the end to be sought, so that in time cures may be unnecessary." If anyone by "keeping company with his inner ideal" can cure a gastric ulcer he would be a most valuable addition to our present therapeutic agents.

DEATH REGISTRATION IN THE STRAITS SETTLEMENTS.

DR. DUMBLETON, in a paper recently read before the Straits Medical Association, forcibly called attention to the defects of the present registration system in the Straits Settlements. This system was established by a local Registration Ordinance issued in 1866. Registration under this system is effected through the agency of the police, the householder being responsible for reporting the death at the nearest police station, and for recording the name, age, nationality, and cause of death, with the names of the parents of the deceased person. One of the most serious defects of the system as a basis for trustworthy mortality statistics is the method of recording the cause of death. Diagnosis is largely left in the hands of the police, and to qualify them for this duty a list of about thirty names of diseases and symptoms of diseases, in English, Malay, and Tamil, is hung up in each police station. Among the natives there is probably very little regular medical attendance, but it is stated that when the deceased person has been attended by a medical practitioner a medical certificate is not necessarily asked for, and the cause of death stated in such certificate is by no means necessarily entered in the register, from which monthly returns are copied locally and furnished to the Registrar-General of the Colony. It is not surprising to learn from Dr. Dumbleton's paper that the result of this system, or absence of system, is, as regards causes of death, eminently unsatisfactory. The deaths of most of the adults in the colony are stated to be due to fever and of nearly all the children to convulsions. Under these circumstances it is practically impossible to form any sound opinion as to whether any real progress is being made in the direction of improving the health of the colony. The figures furnished to the Registrar-General from the various local districts are summarised monthly and published in the Government Gazette. It is pointed out that these official returns under this defective system are full of inaccuracies, and that the proportions of births and deaths to the population in a quarter are given instead of the annual rate in the quarter. The deaths recorded in the colony appear to be nearly twice as numerous as the births and were in 1892 equal to 32 per 1000 of the estimated population. It is clear, however, that the registration of births, as is the case in most native populations, is very defective. Of the 5197 deaths recorded in 1892, 1523 were

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referred to fever, 861 to convulsions, 410 to old age, and 223 to beri-beri. Dr. Dumbleton calls special attention to the high rate of mortality of infants under one year of age, which he states to be equivalent to 338 per 1000 in Singapore against 264 in Bombay and 273 in Calcutta. It should, however, be borne in mind that where the registration of births is so manifestly defective as is the case in Singapore the proportion of deaths under one year of age to births very considerably overstates the true rate of infant mortality. It is not without interest to learn that small-pox in Singapore, though endemic, does not assume a virulent type or materially increase the mortality; that the colony is wonderfully free from cholera and enteric fever; that measles and whooping-cough are rare and mild disorders; and that scarlet fever and diphtheria are in the opinion of most local practitioners at present unknown. Under these favourable circumstances the high death-rate from all causes in Singapore is the more remarkable, more especially as the age and sex constitution of the population is distinctly conducive to a low death-rate. Without trustworthy returns of the causes of death the high death-rate cannot be referred to its true causes, and no such trustworthy returns are possible without the coöperation of the medical practitioners. Bearing in mind how intimately the improvement of the public health in the Straits Settlements is bound up with an improved system of death registration, we trust that Dr. Dumbleton's paper will promote this very desirable reform.

SURGICAL AID TO THE INJURED IN PARIS.

FOR some time past Dr. Marcel Baudouin, the very able and energetic secretary of *Le Progrès Médical*, has been inundating, as he himself puts it, the professional press with articles, all bearing one and the same title—"Instantaneous Surgical Assistance"—and at length there is some reason to believe that the indefatigable efforts of the enthusiastic journalist are about to bear fruit, the director of public help at the Prefecture of Police, M. Auguste Voisin, having recently communicated to the Council of Hygiene and Salubrity of the Seine a project of reorganisation for the relief posts in the city of Paris. It is true the new development thus somewhat ambitiously designated is rather puny, involving merely the provision of two more rooms in the vicinity of the police-stations, but a beginning is always a beginning, no matter how small and feeble it may be, and great ends have ere now been the result of futile commencements. M. Baudouin's comments, as might be expected, are formulated in satiric vein. After quoting the proverb that it takes innumerable taps to fix a nail firmly, he recommends all people with projects similar to that of M. Voisin to beware lest they place them too near the nail, which, by dint of incessant hammering, he hopes eventually to succeed in driving home. When wielding his hammer he has not hitherto been in the habit of crying "*Gare!*"—and such embryonic schemes might very easily get crushed, as though they were so many egg-shells. M. Voisin's project is not a complicated affair, as anyone can see at a glance, and, therefore, its author will in all probability achieve his desires and obtain what he asks for. The injured, it is true, will not be much better cared for than they are at present, but what of that? The authorities will be able to pose as having given the subject their deepest consideration; there will be some modification of existing ashlar work, and a vast amount of paper will be defaced. At any rate, enough will have been done to hoodwink an easy-going public. It is folly to provide a more or less properly fitted dressing-room at a police-station unless there is a competent practitioner in whose charge it can be placed, and whose services would be instantly available at any time during the twenty-four hours. Failing this the place would soon be converted into a centre of infection; ere long the only surgical appliance to be found there would be the sponge common to the entire station, as Professor Terrier felicitously phrased it; and whenever a serious accident occurred recourse would still have to be made to the nearest apothecary as at present. Finally, M. Baudouin complains that such enormous sums should be devoted to the protection of property from fire while so little is granted for the preservation of human life, although the latter, too, possesses a money value and is insurable. A miserable pittance of 45,000 francs has been inscribed in the city Budget for next year in order to provide new ambulances. Ambulances without a properly organised and instantly available *personnel!*—a putting of the cart before the horse which could only emanate from an impractical bureaucrat.

SALVATION ARMY SHELTERS AND SMALL-POX.

AT the meeting of the Vestry of St. George's, Southwark, held on July 30th, Dr. Waldo again made a statement concerning the shelter of the Salvation Army in Blackfriars-road. Nine cases had been notified from there and eight had occurred by direct infection in St. George's Workhouse. Cases had also occurred in Dantzic-street, probably infected from the same source, though this had not actually been proved. Dr. Waldo described how he had visited the shelter and had seen a man covered with the eruption of small-pox. This man was removed to the hospital, but another man who was sitting next to him, and who presumably was infected, escaped into the house, where the "captain" of the shelter refused to let Dr. Waldo search for him, while he himself professed his inability to find him. Therefore the man had to be left—a veritable focus of disease. The cubic feet of space for each individual was but 90 ft., the common lodging-house minimum being fixed by law at 341 ft., while the floor space was but 6 ft., the lodging-house floor space being 31 ft. The law, it appears, at present has no power to close such establishments; they come neither under the Common Lodging-house Act nor the Public Health (London) Act. "The law," said Mr. Bumble upon a memorable occasion, "is a hass," and it certainly seems to be so in this case. Powers should at once be sought by the sanitary authorities to enable them to do away with a standing danger to the health of the community.

THE FIFTH INTERNATIONAL CONGRESS FOR COMBATING THE ABUSE OF ALCOHOL.

ON the 20th, the 21st, and 22nd of this month will be held the Fifth International Congress for Combating the Abuse of Alcoholic Liquors. Its seat will be Bâle, as Brussels was that of the first congress, Zürich of the second, Christiania of the third, and the Hague of the fourth. Its programme includes forty-five papers of diverse lengths, in which the injurious effects of alcoholic indulgence will be treated from every point of view, with practical bearing on their prevention. Physiology, political economy, education and history will, through accredited representatives, have each something to say on the many-sided question which, be it remarked, will be dealt with, not so much by extremists who see nothing but evil in alcohol, as by those who can separate the use of it from the abuse. Nine papers will be devoted to the physiological and psychiatric aspects of alcoholism, and among these the most important are expected to be those of Dr. Legrain, a leading French authority on the subject; of Dr. Hans Buchner, Professor of Hygiene in Munich University, a chair which he holds in succession to Emeritus Professor Max von Pettenkofer; and of Dr. Fürer of Heidelburg, Assistant to Professor Kraepelin in the Chair of Psychiatry. Another interesting page in the discussion of

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alcoholism is that of its introduction to savage races and the deplorable effects it has produced among them—a page which will be specially entrusted to medico-missionary explorers, English as well as German. The question of State interference, of legalised asylums for dipsomaniacs, and of the various means adopted by diverse nationalities of dealing with the sale of strong drink will also be handled, under the express condition, however, that all political or religious partisanship be wholly excluded. Bâle, it would seem, has an interest of her own in the subject of alcoholism. According to an official "Bericht über den Civilstand, die Todesursachen, und die ansteckenden Krankheiten im Jahre 1893," in that twelvemonth out of seventy-four men between the ages of forty and fifty, eighteen, that is, every fourth man, died of drink; of those between fifty and sixty every fifth man so died; altogether fifty-four victims to alcohol, or every eighth man. Popular attention is always the better for being drawn to such striking figures. In Switzerland especially such congresses—notably that held in Zürich in 1887—have been fraught with good results. A more energetic action in curbing the evil has flowed from them, and the great "Trinker-Asyl" at Ellikon dates its origin from that memorable meeting. Already the Bâle Congress numbers more than 200 "adhesions," and most liberal arrangements have been organised for their lodgment and entertainment. Programmes may be had on application to Mr. G. W. Bronner, 39, Dornacherstrasse, Bâle; while all further information will be freely supplied by the secretary to the Congress, Mr. Hermann Blocher, 26, Weiherweg, or by the president (Professor C. C. Burckhart), 4, Münsterplatz.

IS THERE A PARASITE OF MALARIA?

THE *Times* of the 6th inst. contained a telegram from Hyderabad to the effect that Surgeon-Lieutenant-Colonel Lawrie, assisted by Dr. Martyn Jordan, had demonstrated that the malarial hæmatozoa have no existence in fact, and that the not inconsiderable or inexpert body of microscopists, whose researches have become as familiar as household words, have one and all been deceived by the appearances assumed by leucocytal nuclei under the action of staining reagents. It is really too bad of Surgeon-Lieutenant-Colonel Lawrie to thus shatter at one blow all the fascinating history which the labours of Laveran and Golgi, of Marchiafava, of Manson, and of Thin, not to mention numerous American observers, have opened up to view; and with all respect for our distinguished *confrère* in the Deccan we, in common, we opine, with most pathologists, must decline to admit his interpretation of the characters of the blood in malaria. We would recommend him to carefully peruse the paper which Dr. Thin contributed to our columns a few weeks ago, and to follow the instructions there laid down in the study of the microscopy of the blood before he finally adopts an attitude of such total scepticism. It would, however, be hardly fair to criticise him on the strength of a telegraphic despatch, and no doubt we shall in due course be enabled to study the grounds which have led him to this conclusion. It will require a very convincing series of facts to upset the remarkable observations made in all quarters of the globe which have corroborated and expanded the truth of Laveran's important discovery.

SACRILEGE IN IRELAND.

A CASE was disposed of at the recent Cork Assizes, which is happily sufficiently rare to be of interest. At about six miles from Cork, in the village of Inniscurra, is also the graveyard of the district, on some high ground overhanging the Lee, and in this churchyard is the family vault of Sir George Colthurst, the owner of Blarney Castle. Some two months ago a soldier walking along the road, wandered into the burying-ground, saw the door of the vault open, and noticed that a sacrilege had been committed. He immediately gave information to the police who started to inspect the vault. Coffins had been dragged off the benches and forcibly broken open, while various bones, &c., were scattered about the floor. A leaden coffin had been cut through and the body pulled half out; while the skeleton of a lady was propped high up upon a trestle, and the gloves which had been upon her hands were torn off. This led the police to suspect the stealing of a ring. Eventually the crime was traced to some soldiers of the 10th Hussars. Two of them were returned for trial and sentenced to six months' imprisonment. The judge was of opinion that the crime was unpremeditated, and we earnestly hope it was but a silly freak, for in no country more than in Ireland is reverence for the dead more strictly inculcated and observed, and nothing could be more calculated to keep alive hatred between English and Irish than outrages of this kind, especially when committed by English soldiers, who, to do them justice, are not as a body prone to acts of this class, though sometimes drunken and thoughtless.

THERAPEUTICS OF HIGH FREQUENCY CURRENTS.

THE paper read by Dr. Apostoli on this subject at the meeting of the British Medical Association is an important one, and represents the direct practical application of the physiological facts brought out by D'Arsonval's experiments with animals. The current of high frequency and high potential is caused to traverse a large helix inside which the patient is placed, and the effect is to set up induction currents of a similar kind inside the patient's body. These travel in closed circuits through the tissues and produce nutritive changes, which can be recognised by their effect in increasing the elimination of carbon dioxide and of urea. The actual figures are promised at an early date. The results are good in diseases characterised by failure or impairment of nutrition, and accordingly Dr. Apostoli reports successes in anæmia and debility, gout, rheumatism, neurasthenia, and hysteria. In diabetes also there have been some favourable cases. The principle of the localised application of electricity for the relief of disease, so ably insisted upon by Duchenne, has delayed the recognition of the important general effects to be obtained from electrical treatment. At present there is a distinct movement in favour of general electrification as a therapeutic means, and the results appear to be almost identical in character, whether the method employed be by the alternate current electric bath, advocated by Gautier and Laret, or the high potential induction method of D'Arsonval and Apostoli, or the electrostatic methods favoured by Vigouroux and Morton of New York, who use the Wimshurst or some similar machine as the source of the electricity applied.

COTTON-BORNE SMALL-POX.

IN his annual report for 1894 Dr. Philip Boobbyer, the medical officer of health of Nottingham, furnishes a highly interesting and instructive account of an outbreak of small-pox which occurred in his district, and the spread of which he was able conclusively to trace to infected cotton. His notice was first called to the outbreak on Jan. 15th, when "a suspicious case" was notified as existing in a closed yard situated in the centre of the old town near the lace market, and on proceeding to the spot Dr. Boobbyer, by means of a vigorous house-to-house visitation, brought to light in or near this yard no less than eight cases of small-pox in the course of half an hour. The majority of the cases were recent in origin; but two—a husband and wife—dated back some three and five weeks respectively. In many houses in this infected

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area was discovered a large quantity of cotton material which had been sent out by two wholesale firms for certain treatment, and wherever this cotton had been in contact with infection Dr. Boobbyer insisted on its disinfection. From subsequent inquiries it was elicited that the husband and wife above referred to had worked at the cotton goods at their own homes throughout their illnesses, and that on Jan. 3rd and 6th they had sent a large amount of cotton to one of the warehouses and at a later date to the others; and Dr. Boobbyer also ascertained that the wife in question was even at the time of his investigation secreting cotton with a view to its transmission to the warehouses, in spite of the fact that she was fully aware of the mischief this material had already wrought. The cotton sent on Jan. 3rd and 6th was all made up, it appears, in one room, and from this room no less than fifteen girls and one youth were absent owing to illness, while three of the remaining eleven showed symptoms of small-pox. On visiting the absentees at their homes they were discovered to be suffering from the same disease. The onset of the attacks occurred between Jan. 14th and 25th, dates which would point to Jan. 3rd and 6th as the time of infection. In the second warehouse into which cotton from the infected family had been received at dates later than Jan. 6th no cases occurred—a fact which, as Dr. Boobbyer observes, tends to the conclusion that at this period the infectivity of the patient had ceased. Thirty other cases occurred in Nottingham as a result of this outbreak, but proper preventive measures were adopted and no fresh cases occurred. The history of this outbreak shows, amongst other things, the danger to which the public may be unwittingly exposed, and therefore the necessity for making use of the protection afforded by vaccination and revaccination; and it is also a good instance of the results of vigorous action on the part of a medical officer of health. Had Dr. Boobbyer not discovered the unnotified cases it is difficult to predict what the extent of the mischief might have been. Instances such as these should, too, bring home to the public the impossibility of properly controlling small-pox without the aid of vaccination and revaccination. If every case of small-pox were recognised and isolated at the very moment it occurred—a purely utopian supposition—much more might be done, save for the nurses and attendants, in the matter of control than is possible now. With, however, the existence of unrecognised cases this disease, a class which experience teaches us includes not only modified but unmodified cases, attempts to properly control the disease without vaccination and revaccination must, as a rule, prove abortive. There are, nevertheless, still some persons claiming authority in this matter who go so far as to assert that if the Medical Department of the Local Government Board were as energetic in the matter of indigenous small-pox control as they are with regard to exotic cholera the former disease would be "stamped out" from this country in six months. All are entitled to express their opinion, and we shall, we trust, be forgiven if we venture to say that statements of the kind referred to show a want of intimacy with the natural history of both diseases as they manifest themselves to those who are brought face to face with their control as medical officers of health. Indigenous diseases such as small-pox or scarlet fever are not "stamped out" in these days—at any rate, by means of notification and isolation. By these methods they may be, and doubtless are, very materially repressed; but, so far as they are concerned, the stamping-out process can only be effected, if at all, by modifying either the human environment or the disease organism.

UNIVERSITY STATISTICS IN SWITZERLAND

THE seven Swiss seats of learning—not including the Polytechnicum at Zürich—during the half year (Winter-semester) 1894–95 had in all 3119 students and 694 zuhörer (auditors), among whom 362 were female students and 238 female auditors. The total number of "Studierenden" amounted, therefore, to 3813, of whom 600 were females. In the study of theology were engaged 449 persons (290 Protestants and 159 Catholics), among them 1 lady (from Geneva); in that of law, 610 (of whom 7 were ladies); in that of medicine, 1081 (of whom 221 were ladies); and in that of philosophy, 1673 (ladies, 171). Of the 3119 students proper, 1847 were Swiss (ladies, 38) and 1272 foreigners (ladies, 324). Germany supplied most of the latter, viz., 394 (ladies 49); Russia, 366 (ladies 212); Bulgaria, 146 (ladies 7), &c. Geneva was the most frequented school, with 815 (ladies 184); Zürich, 808 (ladies 196); Bern, 712 (ladies 125); Bâle, 527 (ladies 11), Lausanne, 516 (ladies 62); Freiburg, 305; Neuenburg, 130 (ladies 22). Theological students were most numerous at Freiburg, 152, and at Bâle, 83. Law chiefly frequented Bern, 150, and Lausanne, 125. Medicine was most largely represented at Zürich, 331, and Geneva, 274. Philosophy numbered 376 at Geneva, Zürich coming next with 308. Compared with the half-year (Winter semester) 1893-94 the students have increased in number by 114.

SIR HENRY PITMAN.

MUCH regret was felt among the numerous friends of Sir Henry Pitman when it became known that he was suffering from the effects of an accident sustained on July 29th. We understand that in crossing a narrow road he passed behind a little cart and the pony suddenly backed, causing Sir Henry Pitman to fall on his hip, which was much bruised. Naturally he was also much shaken, but most fortunately no bones were broken, and his friend and neighbour, Mr. Collyer of Enfield, was able to give a favourable report on the following day. We heartily congratulate Sir Henry Pitman on his escape from more serious injuries, and sympathise with Lady Pitman in her anxiety.

THE TRADE IN DRUGS AND THE MEDICAL PROFESSION.

A ZEAL for modesty of expression does not usually distinguish the processes of commercial ambition. On the contrary, quite another kind of enthusiasm is its inspiring genius, and it is commonly found that simplicity of statement and truth itself are so dressed and altered by self-assertion that their very character is lost within a maze of embellishments. If this property of advertisement were generally recognised and allowed for, if even it were limited in its use to matters of secondary moment, we might contentedly wait for the verdict of experience upon its protestations. But we are still unprotected by any such desirable safeguards. It matters little apparently whether a marketable substance is in itself dangerous or the reverse. There are two allowed judges in such matters, and in many cases two only, the seller and the buyer, the former not disinterested, the latter or both imperfectly instructed. To no branch of business do these remarks apply more forcibly than to the trade in drugs. It is common to find that a variety of dangerous substances are commended in circular notices by non-professional salesmen with a freedom and self-confidence not enjoyed by many clinical authorities. What would be even more amusing if the subject were not one of serious practical importance is the complacency with which the medical profession itself is instructed in these broadsheets as to points of diagnosis and treatment. Not only is the yet remedy commended in its thousand applications, but the general course of medical procedure in relation to various diseases or symptoms is laid down in no uncertain terms. It is obvious that a method so presumptuous in its half-

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knowledge cannot command the attention of rightly discriminating practitioners. A simpler and a less pretentious attitude would be much more certain of a fair hearing. The duty of Governments in this relation ought not to be overlooked, and in this country it is apt to be regarded somewhat carelessly. The nostrum is viewed in its entirety as a saleable article, and then—*caveat emptor*. This is hardly enough. If the sale and advertisement of such articles are permitted it is, at least, advisable that their composition should be frankly stated. Abroad they order this, among other things, better than in our own free country.

DANGEROUS PERFORMANCES.

IN our issue of June 27th we commented upon the unnecessary danger attending trapeze performances owing to the height at which the apparatus is suspended. On Aug. 1st the father of two children aged twelve and fourteen applied through a solicitor for a licence for the children to perform. It was stated that recently the younger child had fallen. Mr. Sheil refused the application on the ground of the children being too young. This, it appears to us, is not the most cogent reason for objecting to these performances. Training in physical exercises must be begun in youth, but, to repeat our recent argument, these gymnastic exercises should be compulsorily gone through at a reasonable height above the ground. Another lamentable waste of life occurred at a fête held at Peterborough. The "attractions" included a balloon ascent and a double parachute descent by a man and a woman. As the balloon went up the parachute of the woman caught on a telephone wire and fell. When the balloon had risen about sixty feet the woman jumped out and, falling on her head, was killed. The man descended safely. Now this sort of exhibition ought not to be allowed. The making of money out of a morbid propensity on the part of people for enjoying the sight of other people risking their lives should be made a punishable offence. At the inquest the jury returned a verdict of "Accidental death," and we are glad to see added as a rider: "That since no useful purpose is served by these senseless exhibitions, at which the lives of performers are risked, they should be made illegal."

DIPHTHERIA IN LONDON.

DIPHTHERIA continued to show an increase in amount in London during the eight weeks of June and July, the increase having been steadily maintained during that period, though the registered fatal cases in the time have shown some fluctuation, wavering between 33 as a minimum and 53 as a maximum weekly number. But the increase of amount of diphtheria has not had a corresponding increase of per case mortality, this rate having rather shown a slight disposition to decline. On the other hand the number of patients remaining in hospital has progressively increased since the last week of April, when it was 432, to 508 at the close of May, to 633 at the end of June, and to 681 on July 27th. Again, the admissions to hospital can hardly be taken much account of, as they are of necessity not only a varying quantity, but they have been but a small percentage of notified cases, only some 40 per cent., for example, of the patients heard of in London in the four weeks of last month. The unbroken sequence of increase of amount of diphtheria in June gave an average weekly number of 200 cases, but in the succeeding four weeks this average increased by nearly 40 per cent., though the average weekly per case mortality of the earlier month, namely, 19·1, gave place to the lower rate of 17·3. Looking to the records of the eight weeks to the middle of July, and dividing the period into two of four weeks each, we find that the notifications of the earlier period were in London as a whole 718, and that they gave place to 1,047 in the second half, whilst in the whole time there were in Mile End 78 notifications, 82 in Bethnal Green, 83 in St. Pancras, 110 in Greenwich, 134 in Camberwell, 136 in Poplar, and 168 in Lambeth sanitary areas. In the matter of registered deaths the weekly average in June was 38, but in July 47, the weeks of the latter month giving 23, 20, 10 and 14 above the corrected average, or as a whole 47 against the corrected average of 31 deaths. Distributing the deaths in the first four weeks of July among such sanitary areas as had large numbers, the Registrar-General states that in one week there were 4 each in Newington, Hammersmith, and St. Pancras, and 6 in Fulham; in a fortnight, 8 each in Poplar and Bethnal Green, 9 in Mile End, and 12 in Greenwich; in three weeks 12 in Lambeth; and in the four weeks 22 in Camberwell sanitary area. Looking to this state of things in London at the present time, it will be interesting to watch the records of the next few weeks with a view of seeing what effect, if any, the closure of schools will have on the amount and character of diphtheria, whether, in fact, the same effect will be witnessed as Mr. Shirley Murphy has so graphically shown to have been in operation in 1893. In the four weeks treated of last month, out of the total 90 deaths registered, there were 180 in young persons aged between one and twenty years, or 95 per cent. of the whole. During the same period there were 70 deaths from diphtheria registered in Greater London, and of these 32 belonged to the West Ham district, which has now for some time past suffered excessively from the disease.

A JENNER CENTENARY IN RUSSIA.

THE custom of keeping anniversaries of remarkable events is one much honoured in the observance in Russia. Sometimes the period since the event happened is measured by centuries, as when in 1888 the ninth centenary of the Christianising of the Russian race was kept with due solemnity, or, as happened a fortnight ago, when the first centenary of the union of Courland with Russia was made the occasion of several days' festivities. More often (never a day, indeed, passes without) it is the jubilee, or semi-jubilee, or the twentieth, or tenth, or even on one occasion (carrying the practice *ad absurdum*) the fifth anniversary of some official's entry into the public service. A centenary to be observed next year is one of universal interest. On May 2nd (14th), 1896, according to an announcement of the Russian National Health Society, one hundred years will have passed since Jenner made his "first scientific experiment in vaccination." To commemorate the event the society proposes: (1) to offer four prizes for the best works upon vaccination; (2) to collect and publish materials for a history of the practice of vaccination in Russia, and also a short history of the same in Western Europe; (3) to publish a Russian translation of Jenner's works, with his biography and portrait; (4) to organise an exhibition of objects connected with vaccination; and (5) to hold a commemorative meeting on the day of the centenary. Further details will be published later. The task of editing the history of vaccination has been undertaken by Dr. Vladimir Hubert, who is a recognised authority upon the subject.

KILLED BY LIGHTNING STROKE.

DEATH from lightning is, contrary to popular opinion, so rare in this country that special interest attaches to any example of it. The most recently recorded one has, in addition, an element of pathos from the fact that the victim—a medical man—met his death while hurrying to do what he could to relieve a little child suffering from severe burns. Mr. Reese, the medical man in question, lived

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at Ystradgynlais in the Swansea valley, and his way to the patient led over a high mountain called Drym. When at the summit he apparently entered the focus of a severe storm, and the discharge took place through his body and that of his horse, killing them both instantaneously. It is generally easy to be wise after the event, but a mountain top is always a dangerous place in a storm, for the protrusion of the mass of the mountain above the rest of the earth surface attracts any cloud, more especially one charged with electricity, and anyone crossing this area, like a "point" on a conductor, is extremely likely to determine the direction of the discharge through himself. If Mr. Reese could only have waited on the lower slopes he would have been comparatively safe, but this course his anxiety to reach his patient—who, we may mention, died before he could have arrived—prevented. As it happened, his body would offer a good conductor to the current. He was probably wet, and, being on a horse, had a good earth connexion by means of the horse's four iron shoes so that any discharge between the earth and the cloud would be very likely to traverse his body. Mr. Reese's great popularity in the county where his work lay, combined with the tragically dramatic nature of his death while obeying the call of duty, render his fate a particularly and sadly impressive one, and we desire to express our sincere sympathies with his immediate friends and neighbours in their loss.

CHOLERA.

WE are glad to notice that the views which are held in this country and have so long been advocated in THE LANCET as to the futility of a rigid system of quarantine to keep out cholera are making progress in other countries. Dr. Eugene Farkas, District Superintendent of Public Health, Budapest, in the paper he read at the meeting of the British Medical Association regarding the late visitation of cholera in Hungary, said that the Government made strenuous but unsuccessful efforts in the summer of 1892 to prevent the importation of cholera into that country. The rigid measures adopted caused very grave injury to commerce and trade, but the disease, in spite of these efforts, arrived at Budapest in September of that year, and subsequently made considerable extension in Hungary, mainly in the course of the rivers. The Hungarian Government in November, 1892, abandoned the greater portion of their restrictive measures. A marked change has taken place, too, in public opinion in Hungary regarding the importance of general sanitary measures and in favour of the English methods of dealing with epidemic cholera.

Apropos of the serious outbreak of cholera among the Japanese troops early in June last, followed by its appearance in Corea in July, the occurrence has given rise to the publication of an article in the last number of the Transactions of the Imperial German Board of Health on the spread of cholera as a sequel of war. The paper in question traces the history of the disease, in connexion with the part played by war in its spread, from 1830 to 1866, as shown by the facts collected by Herr A. Hirsch. The disease prevailed extensively in the Japanese Army towards the end of the late Chino-Japanese War, and at one time caused serious alarm to the authorities in Japan.

We have heard relatively little of cholera during the present year in Europe and India. As commonly happens, a period of great epidemic prevalence is followed by one of freedom from cholera, and India during last year, and up to the present during the present year, has been singularly free of the disease. As far as Europe is concerned there have been cases in some of the Government districts of Russia; and it is reported from Galicia that Asiatic cholera has broken out in the towns of Visnovice and Vyzogrod in Russian Podolia, near the Austrian frontier. According to a correspondent of the *Standard*, the disease has much increased of late in the vilayets of Asia Minor. Between May 23rd and July 24th there were eleven hundred and thirty-four attacks and six hundred and seventy-seven deaths officially reported.

News has come to hand of some cases of "cholera" in the vicinity of Paris, but there is at present no authentic information as to its nature.

THE HOLIDAY SEASON AND RAILWAY FACILITIES.

THOSE who have been compelled by circumstances, or who on account of the unsettled state of the weather, have decided to postpone their annual holiday will still find an ample store of trips and tours among the announcements of the various railway companies. Last year we briefly detailed some of these tours, and for the convenience of our readers furnish a similar article this year. Before doing so, however, we should like to draw attention to some of the almost indispensable handbooks issued by the more enterprising of the companies. The Midland Railway is lavish in the literature which it provides for the public. For three pence a Pocket Guide to the Midland Railway of England can be obtained, and besides containing general information of use to the tourist, makes a pleasant companion while actually travelling in the company's carriages. Various objects of interest *en route* are pointed out and the book is well illustrated.

"Where to Stay" is another useful book issued by this company, and contains a list of some of the best hotels in the United Kingdom and abroad, arranged alphabetically. "Summer Tours in Scotland" contains some good views of Scottish scenery, and is an admirable guide for Scottish tourists. The list of furnished lodgings adjacent to stations on and in connexion with the Midland Railway Company will prove of service to travellers on this line. The London and North-Western Railway Company also publish a list of lodgings, and their "Tours in Ireland" give to the tourist just the information he is likely to want. "Summer Tours in Scotland and England" is a similar book issued by the same company.

The London and North-Western Railway.—Every Saturday during August and September a cheap train will leave Euston at 8.15 A.M. for Rhyl, Abergele, Colwyn Bay, Llandudno, Conway, Bangor, Aberystwyth, Barmouth and Llanberis (for Snowdon), and Llangammarch Wells, returning on the following Monday, Monday week, Saturday week or Monday fortnight. The fare to Carnarvon, Harlech, Portmadoc and Llanberis is 22*s.* and to Rhyl 18*s.*, with proportionate charges for the intermediate towns. The tours in the English Lake District are very comprehensive and cheap tourist tickets are issued to many of the principal English towns through which the company's lines run. Till the end of October tourist tickets, first and third class, are issued between Scotland and England and there are charming circular tours in Scotland, including Oban, Fort William, Caledonian Canal, Inverness, Aberdeen, Perth, and the Highlands till Dec. 31st. The company's guide book gives details of seven tours covering the most interesting parts of Scotland.

Fares for the Round—

From	For tours Nos. 1, 2, 3.		For tours Nos. 4, 5, 6.		For tour No. 7.	
	1st Class.	3rd Class.	1st Class.	3rd Class.	1st Class.	3rd Class.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
London { Euston and Kensington	174 8	77 0	170 3	75 0	169 9	77 0
London { Broad Street, Victoria	175 4	77 0	170 11	75 0	169 9	77 0
Birmingham (New Street and Monument Lane)	148 8	75 8	144 3	72 11	143 9	72 0
Liverpool (Lime Street and Edge Hill)	122 4	60 2	115 0	57 5	114 6	56 6
Manchester (Exchange and Ordsall Lane)	127 4	65 2	121 9	63 5	121 3	62 6

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Special arrangements have been made this year for visitors to Ireland. We give below a selection of six circular tours in the north of Ireland:—

No. 1.—*Vid* Fleetwood to Belfast, thence to Portrush, Londonderry, Enniskillen, Dundalk, Drogheda, and Dublin, returning from Dublin (North Wall), or Kingstown, according to the ticket held, *vid* Holyhead and Chester.

No. 2.—*Vid* Chester and Holyhead to Dublin (North Wall) or Kingstown, according to the ticket held, thence to Drogheda, Dundalk, Enniskillen, Londonderry, and Portrush, returning from Belfast *vid* Fleetwood.

No. 3.—*Vid* Chester and Holyhead to Dublin (North Wall) or Kingstown, according to the ticket held, thence to Drogheda, Dundalk, Enniskillen, Londonderry, Portrush, Belfast, Portadown, Newry, and Greenore, returning *vid* Holyhead and Chester.

No. 4.—*Vid* Chester and Holyhead to Greenore, thence to Newry, Portadown, Belfast, Portrush, Londonderry, Enniskillen, Dundalk, Drogheda, and Dublin, returning from Dublin (North Wall) or Kingstown, according to ticket held, *vid* Holyhead and Chester.

No. 5.—*Vid* Fleetwood to Belfast, thence to Portrush, Londonderry, Enniskillen, Dundalk, and Greenore, returning from Greenore *vid* Holyhead and Chester.

No. 6.—*Vid* Chester and Holyhead to Greenore, thence to Dundalk, Enniskillen, Londonderry, Portrush, and Belfast, returning from Belfast *vid* Fleetwood.

Passengers by either of these tours may break the journey at Belfast, Portrush, Londonderry, Strabane (whence the tourist will be enabled to visit the wild and picturesque scenery of Donegal), Enniskillen (for the Lakes Erne, Ballyshannon, Bundoran), Dundalk, Greenore (for the Mourne Mountains), Drogheda, Dublin, Holyhead, and at any station on the main line between Holyhead and Holywell (inclusive), as also at Flint, Chester, and Crewe; also at Fleetwood, Blackpool, and Preston, if included in the line of route.

Lough Erne.—A pleasure steamer sails each weekday until Sept. 24th, 1895 (weather permitting), from Enniskillen, at 10 A.M. to Belleek, (24 miles), returning from Belleek at 3.15 P.M. for Enniskillen, traversing the whole of the beautiful Lower Lake. Passengers holding North of Ireland circular tour tickets will, on presenting them at the Enniskillen booking-office, be supplied with tickets for the steamer free of charge.

Donegal Highlands.—Excursion tickets are issued at Londonderry (L. and L. S. R.) to Buncrana, Rathmullan, and Letterkenny, for the fine scenery of the Donegal Highlands.

The following table shows the fares from some of the principal towns:—

From—	North of Ireland, Nos. 1, 2, 3, 4, 5, and 6.				
	Vid Dublin (North Wall), Fleetwood, or Greenore.			*Vid* Kingstown.	
	1st Class and Cabin.	2nd Class and Cabin.	3rd Class and Steerage.	1st Class and Saloon.	2nd Class and 2nd Cabin.
Birmingham ...	82 0	65 0	48 0	86 0	68 0
Liverpool	62 0	51 0	40 0	65 0	53 0
London	111 0	84 0	57 0	117 0	88 6
Manchester ...	66 0	53 0	40 0	69 6	55 6

The Midland Railway.—The excursions arranged by this Company from the various stations on their lines embrace Yorkshire, the Lake District, the East Coast, Lancashire Coast, Bath, Bournemouth, and the West of England, Scotland, Ireland, Wales, and the Continent. The circular tour of the Lake District is an admirable one, and tickets are issued from the under-mentioned stations, enabling passengers to make a tour of the most interesting portion of the Lake District, travelling by the following route: *Viâ* Wennington, Carnforth, Grange, Windermere (Lake Side), by steamer up Windermere Lake to Ambleside, thence by Taylor's well-appointed coaches to Keswick through Grasmere, returning by rail throughout *viâ* Penrith, Appleby (passengers finding their own way from one station to the other), and Settle; or the tour may be made in the reverse direction. From London: first class, 86*s.*; third class, 47*s.* Birmingham: first class, 60*s.*; third class, 31*s.* Leeds: first class, 37*s.*; third class, 20*s.* From other stations on the company's lines the fares are proportionately cheap. The journey may be broken at Grange and Cark-in-Cartmel, at Lake Side, Bowness, The Ferry, and Low Wood on Windermere Lake; Ambleside, Keswick, Troutbeck (for Patterdale and Ullswater), Penrith, and Appleby. The tickets are issued subject to the running of the coaches, and will only be available for the coach journey as long as the coaches continue to run. The fares include coachman's fees. For particulars of the coaches running between Ambleside and Keswick, see note above referring to bookings to Keswick direct. On Thursday, Aug. 22nd, cheap excursions will be run to Dublin, Cork, Fermoy, Killarney, Limerick, Castle Connell, Killaloe, Listowel, Mallow, Parsonstown, Thurles, Athenry, Ballina, Galway, Sligo, Westport, Ballinasloe, Dromod, and Roscommon, by the Midland Company's route through the Peak of Derbyshire to the Midland Central Station, Liverpool, and thence by the City of Dublin Steam Packet Company's first-class steamer sailing (weather, &c., permitting) from the Clarence Dock at 11.30 P.M., and on Wednesday, Aug. 14th, *viâ* Morecambe, sailing at 6.0 P.M. The fares from London to Dublin by this excursion are first class and saloon, 42*s.* 6*d.* and third class and deck, 21*s.* 6*d.* On Sept. 6th there is a cheap excursion to Belfast, Londonderry, Portrush, Giant's Causeway, Armagh, Bundoran, Enniskillen, Warrenpoint, Ardglass, Downpatrick, and Newcastle, Co. Down. From London the fares range from 53*s.* 6*d.* first class and cabin, and 28*s.* third class and deck to 68*s.* 1st class and cabin, and 35*s.* third class and deck. Equally cheap excursions will be run to Scotland and to the North of England on Aug 16th. Week-end excursions to Malvern start from St. Pancras Station every Friday and Saturday, returning on the following Sunday, Monday, or Tuesday after date of issue. The first class fare is 25*s.* 9*d.* and the third class 13*s.* Special facilities are made by this company for intending visitors to Southend-on-Sea and half-day trips to St. Albans and Harpenden run every Saturday at two o'clock or a little after at the return fare of 2*s.*

South-Eastern Railway.—The following circular tours have been arranged by this company *viâ* Ostend. Circular tours in Belgium:—

No. 1. London to Brussels and the Banks of the Boucq.—Itinerary: London, Brussels, Namur, Dinant, Yvoir, Namur, Brussels, and return to London, First Class, £3 16*s.* 8*d.*; Second Class, £2 16*s.* 4*d.*

No. 2. London to Brussels and the Banks of the Meuse.—Itinerary: London, Brussels, Namur, Dinant, Eprave (for Grottos of Rochefort and Han). Brussels, and return to London, First Class, £3 18*s.* 9*d.*; Second Class, £2 17*s.* 9*d.*

No. 3. London to Brussels and the Banks of the Embleve.—Itinerary: London, Brussels, Liege, Chandfontaine, Spa, Trois-Ponts, Stoumont, Rivage, Liege, Huy, Namur, Dinant, Namur, Brussels, and return to London, First Class, £4 7*s.* 11*d.*; Second Class, £3 4*s.* 4*d.* The tickets for these tours from Brussels are available to return within thirty days from the date of stamping at the Brussels Station, and are issued in conjunction with return tickets from London to Brussels, which are available to return within one month from the date of issue. The fare *viâ* Calais is £1 more in each instance.

London to Paris, the Centre of France and the Pyrenees (available for forty-five days).—1st Itinerary: Folkestone or Dover, Boulogne or Calais, Paris, Bordeaux, Archacon, Mont de Marsan, Tarbes, Bagneres-de-Bigorre, Montrejean, Bagneres-de-Luchon, Pierrefitte, Pau, Bayonne, Bordeaux, and Paris to London, or the route may be reversed beyond Paris.—2nd Itinerary: Folkestone or Dover, Boulogne or Calais, Paris, Toulouse, Bagneres-de-Luchon, Bagneres-de-Bigorre, Pierrefitte, Tarbes, Mont de-Marsan, Archacon, Bordeaux and Paris to London, or the route may be reversed beyond Paris.—3rd Itinerary: Folkestone or Dover, Boulogne or Calais, Paris, Bordeaux, Archacon, Dax, Bayonne, Pau, Pierrefitte, Bagneres-de-Bigorre, Bagneres-de-Luchon, Toulouse, and Paris to London, or the route may be reversed beyond Paris. First Class, £11 7*s.* 3*d.*; Second Class, £8 9*s.* 8*d.* These tickets can be extended for three periods of fifteen days each on payment of 10 per cent. on the original fare for each extension.

London to Paris and the Banks of the Loire.—1st Itinerary: Folkestone or Dover, Boulogne or Calais, Paris, Angers (*viâ* Blois or Vendome or *viâ* Chartres, without stoppages on the Western Line), Guerande, Le Croisic, Saint Nazaire, Nantes, Angers, Saumur, Langeais, Loches, Chenonceaux, Tours, Amboise, Blois, Orleans, and Paris to London, or the route may be reversed beyond Paris. Available for forty-five days between London and Paris, and thirty days for the tour beyond Paris: First class, £8 3*s.* 9*d.*; Second Class, £6 0*s.* 4*d.*—2nd Itinerary: Folkestone or Dover, Boulogne or Calais, Paris, Langeais, Tours, Loches, Chenonceaux, Amboise, Blois, Orleans, and Paris to London, or the route may be reversed beyond Paris. Available for forty-five days between London and Paris, and fifteen days for the tour beyond Paris: First Class, £6 18*s.*; Second Class, £5 2*s.* 10*d.*

(To be continued.)

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6663 births and 4207 deaths were registered during the week ending Aug. 3rd. The annual rate of mortality in these towns, which had increased in the seven preceding weeks from 15·4 to 22·5 per 1000, declined again last week to 20·7. In London the rate was equal to 21·4 per 1000, while it averaged 20·2 in the thirty-two provincial towns. The lowest rates in these towns were 10·0 in Halifax, 10·5 in Huddersfield, 11·8 in Brighton, 13·1 in Birkenhead, and 13·5 in Derby; the highest rates were 23·8 in Bolton and in Manchester, 24·0 in West Ham, 25·3 in Salford, 26·8 in Norwich, 28·0 in Wolverhampton, and 30·0 in Liverpool. The 4207 deaths in these towns included 1181 which were referred to the principal zymotic diseases, against 1137 and 1255 in the two preceding weeks; of these, 854 resulted from diarrhœa, 115 from measles, 76 from diphtheria, 53 from whooping-cough, 47 from scarlet fever, 33 from

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"fever" (principally enteric), and 3 from small-pox. Among the large towns the lowest zymotic death-rates occurred in Halifax, Gateshead, Swansea, and Huddersfield, and the highest in Salford, Norwich, Liverpool, West Ham, and Leicester. The greatest mortality from measles occurred in Manchester, Blackburn, and West Ham; from scarlet fever in Huddersfield; from whooping-cough in Blackburn; and from diarrhœa in West Ham, Birmingham, Nottingham, Liverpool, Sheffield, Salford, Norwich, and Leicester. The mortality from fever showed no marked excess in any of the thirty-three large towns. The 76 deaths from diphtheria included 57 in London, 3 in Cardiff, 3 in West Ham, and 2 each in Bristol and Birmingham. Two fatal cases of small-pox were registered in Oldham, and 1 in London, but not one in any other of the thirty-three towns. There were 237 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 3rd inst., against 71, 89, and 199 at the end of the three preceding weeks; 60 new cases were admitted during the week, against 36, 23, and 115 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2423, against 2241, 2267, and 2347 on the three preceding Saturdays; 247 new cases were admitted during the week, against 352, 220, and 249 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 193 and 185 in the two preceding weeks, further declined to 171 last week, and were 13 below the corrected average. The causes of 54, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Portsmouth, Cardiff, Norwich, Nottingham, and Salford, and in thirteen other smaller towns; the largest proportions of uncertified deaths were recorded in Birmingham, Sheffield, Bradford, Preston, and Leicester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·2 and 18·3 per 1000 in the two preceding weeks, declined to 18·0 during the week ending Aug. 3rd, and was 2·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Edinburgh and 17·1 in Glasgow, to 21·4 in Dundee and 28·3 in Paisley. The 520 deaths in these towns included 55 which were referred to diarrhœa, 12 to whooping-cough, 7 to measles, 5 to "fever," 3 to scarlet fever, 2 to diphtheria, and not one to small-pox. In all, 84 deaths resulted from these principal zymotic diseases, against 91 and 92 in the two preceding weeks. These 84 deaths were equal to an annual rate of 2·9 per 1000, which was 2·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 48, 57, 72, 61 and 64 in the preceding five weeks, declined to 55 last week, and included 28 in Glasgow, 7 in Dundee, and 6 each in Paisley and in Greenock. The deaths from whooping-cough, which had declined from 18 to 7 in the three preceding weeks, rose again to 12 last week, and of these 5 occurred in Glasgow, 4 in Dundee, and 3 in Aberdeen. The fatal cases of measles, which had been 14, 8, and 11 in the three previous weeks, fell again to 7 last week. The 5 deaths from "fever" showed an increase of 2 over those in the preceding two weeks, and included 2 in Aberdeen, and 2 in Leith. The fatal cases of scarlet-fever, which had been 6, 6 and 3 in the three preceding weeks, were again 3 last week; and the deaths from diphtheria, which had been 1, 1, and 4 in the three preceding weeks, fell again to 2 last week. The deaths referred to diseases of the respiratory organs in these towns, which had been 57 and 59 in the two preceding weeks, further rose to 77 last week, and were 23 more than the number in the corresponding week of last year. The causes of all the deaths registered last week were duly certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·1 and 23·9 per 1000 in the two preceding weeks, rose again to 25·7 during the week ending Aug. 3rd. During the past five weeks of the current quarter the death-rate in the city has averaged 23·9 per 1000, the rate during the same period being 21·4 in London and 15·9 in Edinburgh. The 172 deaths registered in Dublin during the week under notice showed an increase of 12 over the number in the preceding week, and included 25 which were referred to the principal zymotic diseases, against 21 and 28 in the two preceding weeks; of these, 17 resulted from diarrhœa, 3 from small-pox, 2 from scarlet fever, 2 from whooping-cough, 1 from "fever," and not one from measles or diphtheria. These 25 deaths were equal to an annual rate of 3·7 per 1000, the zymotic death-rate during the same period being 6·6 in London and 1·1 in Edinburgh. The fatal cases of diarrhœa, which had increased from 10 to 24 in the three preceding weeks, fell again to 17 last week. The 2 deaths from whooping-cough showed a decrease of 1 from the number in the two previous weeks. Two deaths from scarlet fever were registered last week, but not any during the three preceding weeks. The 172 deaths in Dublin last week included 40 of infants under one year of age, and 31 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the two previous weeks. Eight inquest cases and 8 deaths from violence were registered; and 59, or more than a third, of the deaths occurred in public institutions. The causes of 11, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-COLONEL TAYLOR having returned from special service with the Japanese Army has been appointed Principal Medical Officer of the South-Eastern District, and has assumed Charge at Dover. Brigade-Surgeon-Lieutenant-Colonel Hughes has taken over the Medical Charge of the Western District. Surgeon-Captain Boles has been appointed to Shoeburyness. Surgeon-Captain Holt has arrived in England on completion of a tour of service at the Cape. Surgeon-Major Barratt has arrived from India on sick leave and Surgeon-Captain Jennings from Egypt. Surgeon-Captains Rowan and Shine have re-embarked for Malta.

ARMY MEDICAL STAFF.

Surgeon-Captain John Francis S. Fowler, M.B., resigns his commission. The following Surgeon-Lieutenants to be Surgeon-Captains:—Harry A. Hinge; James G. McNaught, M.D.; Hubert A. Bray; Thomas McDermott, M.B.; Edward W. Slayter, M.B.; Hugh S. Thurston; Lancelot P. More, M.B.; Charles O'C. Hodgens; Arthur F. Tyrrell; Theophilus P. Jones, M.B.; George S. Walker, M.B.; William J. Smyth, M.D.; William D. Erskine, M.B.; Albert G. Thompson, M.B.; Alexander G. Chambers; George A. Moore, M.B.; Richard C. Lewis; Reginald F. E. Austin; Henry W. H. O'Reilly, M.B.; Nicholas Marder; Edgar H. Condon, M.B.; Gerald S. Mansfield, M.B.; Frederick G. Faichnie; and Harold W. K. Read. Surgeon-Major-General John B. Cole Reade, C.B., retired pay, late Army Medical Staff, to be Honorary Surgeon to the Queen, vice Deputy-Surgeon-General J. A. Bostock, C.B., half-pay, deceased.

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Fleet-Surgeon J. K. Conway, M.D. to the Royal Marine Depôt, Walmer. Staff-Surgeons: J. E. Penn to the *Philomel;* H. E. Marsh to the *Cormorant* for Gibraltar Hospital; and J. C. Dow to the *Northampton*. Surgeons: J. F. Barter to the *Pembroke*, additional; and H. S. Archdall to the *Excellent*, additional; and F. Fedarb to the *Victory*, additional.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant John C. Wright having vacated his Volunteer Medical appointment, ceases to be an Officer of the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 2nd Sussex: Surgeon-Captain H. Colgate, M.D., to be Surgeon-Major. The Tynemouth (Western Division, Royal Artillery): Lieutenant E. W. Bourne to be Captain. 16th Middlesex (London Irish): Edmond William St. Vincent Ryan, Gent., to be Surgeon-Lieutenant. *Rifle:* 1st Volunteer Battalion the Northumberland Fusiliers: Surgeon-Lieutenant D. Stewart to be Surgeon-Captain. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Major C. C. Greig to be Surgeon-Lieutenant-Colonel. 1st Volunteer Battalion the King's (Shropshire Light

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Infantry): George Arthur Tailer, Gent., to be Surgeon-Lieutenant.

PRACTICE IN THE OPEN FIELD IN SWITZERLAND.

On Sunday, the 28th ult., the Militärsanitätsverein of Zürich and the Samaritervereine of Aussersihl, Birmensdorf, and Wiedikon went through a series of evolutions on a considerable scale by way of practice in the event of war. Their field of operations was the rather difficult ground lying between the villages of Uitikon, Birmensdorf, and Urdorf, and the scorching sun that prevailed throughout the day put their service to a severe trial. By 7 A.M. 100 male and female members of all sections were on the ground, those of the Damensektionen (lady sections) being in great force. Under the command of First Lieutenant Dr. Kruker-Wegmann the *personnel* was distributed into three main bodies, each of which had its special head, The various subordinate posts were then filled up and the day's practice commenced. The principal Verbandsplatz (rendezvous for surgical treatment) was the Löwen estate, near Uitikon; another rendezvous of the kind was in a field a quarter of an hour's march distant, and the third Verbandsplatz was considered as the line of battle, in the vicinity of Urdorf, not far from the banks of the Reppisch. Those two latter Plätze were entrusted to the sanitary instructors, Dr. Erne and Dr. Jäger, and three surgeons, Dr. Eberle, Dr. Bryner, and Dr. Schmid, were on duty with the respective main bodies. Each of these latter took up its assigned position and went through the necessary preliminaries for the picking up, the transport, and the tendence of the wounded. Their stations were distinguished by flags, straw mats were in readiness, the "Lagerplätze" for the wounded were marked off in accordance with the severity of the wounds, all implements were *en évidence*, "Trägerketten" (chains of carriers) were formed, and then the first relays of wounded were brought in from the front. These were partly conveyed on litters, partly assisted on foot by attendants belonging to the Samaritervereine, according to the nature of their wounds, and were at once subjected to first treatment. This was performed on the Trappenverbandplatz, and shortly thereafter, by means of wagons, they were transported to the Hauptverbandplatz. So far everything went forward with precision and effect. At the Hauptverbandplatz the wagons as they came up were relieved of their wounded inmates and transferred to the Lagerstellen, where the required surgical and medical aid was performed with admirable punctuality and care.

ARMY MEDICAL SCHOOL AT NETLEY.

The seventieth or summer session of the Army Medical School, Netley, was brought to a termination on July 31st, when Brigade-Surgeon-Lieutenant-Colonel Notter announced the results of the examination, and Surgeon-General Sir Joseph Fayrer, K.C.S.I., presented the prizes to the successful surgeons on probation in the presence or a distinguished company. The following are the lists of those who were successful and who are recommended for commissions:—

BRITISH MEDICAL SERVICE.

	Combined Marks.		Combined Marks.
*L. F. Smith	5251	J. V. Forrest	3943
R. J. Blackham	4807	H. W. Grattan	3879
S. H. Fairrie	4361	F. H. Gunter	3541
G. T. K. Maurice	4245	J. H. Campbell	3461
R. Fawssett	4117	J. Grech	3443

* Gained the 2nd Montefiore Prize and the de Chaumont prize in Hygiene.

INDIAN MEDICAL SERVICE.

	Combined Marks.		Combined Marks.
*J. Stephenson	5921	R. F. Standage	4274
F. N. Windsor	5127	A. A. Gibbs	4066
†W. B. Turnbull	5068	F. L. Blenkinsop	3937
‡R. E. Waters	4847	A. Moore	3924
A. Leventon	4600	H. A. F. Knapton	3848
P. F. Chapman	4481	E. M. Illington	3829
A. Hooton	4467	T. E. Watson	3631
A. F. W. King	4421	C. G. Webster	3538

* Gained the Herbert Prize of £20, the Parkes' Memorial Medal, the Martin Memorial Medal, and the Prize in Pathology.
† Gained the 1st Montefiore Prize of 20 guineas and Bronze Medal.
‡ Gained the Maclean Prize for Clinical and Ward Work.

After distributing the prizes Sir Joseph Fayrer delivered an admirable address to the young officers, the text of which will be found on page 319 of our present issue. The proceedings were brought to a close by Surgeon-Major-General Giraud, Principal Medical Officer, Netley, who briefly thanked Sir Joseph Fayrer for his address. The company was subsequently entertained at luncheon in the Army Medical Staff mess.

THE FRENCH EXPEDITION IN MADAGASCAR.

As regards the health of the French force in Madagascar it is, as we have said, only to be expected that there will be a good deal of inefficiency from sickness. The troops are mostly young men and the climate hot and malarious, added to which the difficulties of transport and commissariat are considerable. Official news from the seat of operations is scarce. The French War Office and Admiralty have not escaped much adverse criticism, and there seems to have been a good deal of delay in getting the troops out of the unhealthy lowlands; but General Duchesne is, by all accounts, a man of military ability and energy. The success of the expedition will mainly turn on the troops being able to reach Antananarivo before the rains, which set in in October, for the amount of sickness will be seriously increased among troops on the march during the rainy season. The French have not had much experience of late of field service of this nature, and there is necessarily much to be learned which can only be ascertained from the results of local knowledge and experience. The French medical service is believed to be well organised and equipped, but a great strain on all departments is only to be expected, and every effort will now have to be made to feed the troops and avoid their exposure as much as possible during the rains. As far as is known at present the sick-rate amounts to about one-tenth of the force; the death-rate is low.

DEATH IN THE SERVICES.

We regret to have to announce the death of Surgeon-Major R. Lewins, M.D. (Retired List), A.M.S., on the 22nd ult. He joined the Army as assistant-surgeon in 1842, became surgeon in 1854, surgeon-major in 1866, and was placed on the Retired List in 1868. He served with the 63rd Regiment in the Crimea, including the battles of Alma, Balaclava, Inkerman, and siege of Sebastopol (medal with four clasps and Turkish medal); and with the expedition to the North of China in 1860 in charge of the hospital ship *Mauritius*, and he was also present at the capture of the Taku forts (medal).

Correspondence.

"Audi alteram partem."

OVER-OPERATING IN GYNÆCOLOGY.

To the Editors of THE LANCET.

SIRS,—As many of those who, like myself, listened with pleasure to the address with which Sir William Priestley opened the section of Obstetric Medicine and Gynæcology must have longed to (but of course could not then) discuss the burning questions dealt with in the address, I trust you will kindly find room in the columns of THE LANCET for some remarks thereon. In the first place let me ask, Is there, as Sir W. Priestley avers, over-operating in gynæcology? Is it not rather the fact that the surgery of diseases of the female pelvic organs has participated in the immense advance which has been made in recent years in the surgical treatment of disease in all other parts of the human frame? I feel sure the surgeons and obstetric physicians of this country will repudiate the words of Verneuil (which Sir W. Priestley quotes), in which he describes those who remove the ovaries or resect a slice of the œsophagus or stomach as indulging in a "sanguinary debauch!"

Sir W. Priestley states that a demand for less operating comes from across the Atlantic, and it is right that this should be so, as in America lacerations of the cervix uteri (no matter how slight) have so frequently been sewn up and the uterine appendages removed for neuroses that discredit has been brought on these operations; but I altogether refuse to believe that in this country such indiscriminate and unnecessary operating is ever indulged in. Sir W. Priestley speaks "of the tendency in the present day of the obstetric physician to invade the domain of the surgeon in reference to what may be called external operations" (I presume he means operating on the uterus and its appendages per abdomen), and he goes on to say "the College of Physicians will look

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askance at the claims for the Fellowship of those of its members whose chief work is avowedly surgical"—that is to say, that an obstetric physician may operate as much as he likes from below: remove fibroids, cure fistula, extirpate the uterus and ovaries per vaginam as hitherto, but once let his knife wander above the level of the mons veneris, even though he feels convinced he can save his patient more surely than by operating per vaginam, he puts himself outside the pale—the Fellowship of the College is not for such as he. This statement, Sirs, is such a serious one that in the interests of many present—and of all future—obstetric physicians, it surely calls for some definite ruling on the part of the authorities of the College. Of all the obstetric physicians and assistant obstetric physicians in London and the provinces there are, I believe, only five who do not perform abdominal section; of the five one was a very successful ovariotomist until the claims of an extensive midwifery practice caused him to cease doing these operations; two are prevented by the rules of the hospital to which they have become attached from continuing to perform abdominal sections; and the remaining two have, I believe, never so operated.

Sir W. Priestley suggests that those obstetric physicians who perform abdominal section should take the Fellowship of the College of Surgeons; but as one who possesses this valuable diploma I would respectfully point out to the president and council of the Royal College of Physicians that if they refuse the Fellowship to obstetric physicians who operate on the female pelvic organs per abdomen, and give it, as has been done for many years, to those who operate per vaginam, a grave injustice will be inflicted on many gentlemen who, on becoming obstetric physicians, looked forward to being made Fellows of their College in due course, provided they had done nothing derogatory to the dignity of the profession. By all means, if it is thought desirable, let it be a law that *in future* obstetric physicians who perform abdominal section shall not be eligible to become Fellows of the Royal College of Physicians, but in common justice let such law not be retrospective. Sir W. Priestley asks: "Are our antiseptic methods a sufficient safeguard against the possible contamination of lying-in patients by one who undertakes extensive surgical work in addition to obstetric practice?" I answer emphatically "Yes; and a man who has operated on a pyosalpinx or a suppurating ovarian tumour can, in a quarter of an hour, make it perfectly safe for him to attend a lying-in woman." Let me ask Sir W. Priestley this question, "Which is more likely to keep himself aseptic, the obstetric physician who performs abdominal section, and who from the very fact of doing these operations is imbued with the profound importance of keeping himself and all his paraphernalia aseptic, or he who does not so operate, but who may at any moment have to attend a midwifery case soon after examining a patient suffering from a stinking vaginal discharge?" The solution of the difficulty as to the obstetric physician operating Sir W. Priestley finds in "appointing a gynæcological surgeon to every hospital, who shall work in conjunction with the obstetric physician." If by this he means that every disease of the female peculiar to her sex (caruncles, polypi, vaginal cysts, uterine cancer, &c.) may be diagnosed by the physician, but must be handed over to the surgeon for operation, then I say that no obstetric physician of repute will hold office under such conditions; but if he means that the obstetric physician may (as at the Samaritan Hospital) do whatsoever operation he likes per vaginam, but must pass on all cases requiring abdominal section to the surgeon, then I say that in my humble opinion it is a case of "straining at a gnat and swallowing a camel." For my part I agree with what Dr. Herbert Spencer of University College Hospital said in a paper which he read before the Medical Society, that it would be a wise and gracious act on the part of the surgeons in every hospital to hand over to their obstetric colleagues all the cases of disease of the female generative organs requiring abdominal section; this has, I believe, been done for some years at King's College Hospital without friction between Dr. Playfair and his surgical colleagues. In conclusion, let me repeat now what I said in the discussion on Dr. Spencer's paper: "As the art of obstetrics is in great part surgical, those who practise that art should be called obstetric surgeons, that the qualification for holding such a post at a hospital should be the F.R.C.S. and not the F.R.C.P., and that the existing anomaly was the fault not of the College of Physicians, but of the College of Surgeons, which in years gone by refused to shelter under its wing the obstetrician." Apologising for the length of this letter, I am, Sirs, yours faithfully,

Harley-street, Aug. 3rd, 1895. WILLIAM DUNCAN.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—The growth of knowledge has rendered "specialism" necessary. There was a time when the surgeon could compass all knowledge, not only of medicine and surgery, but also of hairdressing. Now only a Crichton could master the facts of the various divisions of medicine and surgery, including ophthalmology, gynæcology, dermatology, laryngology, otology, bacteriology, and the dozens of other "ologies" pertaining to medical science. I agree, however, with the leading article in THE LANCET of July 20th when it says that practical experience of general medicine is advisable and necessary before a special branch can be adequately dealt with. Unfortunately, it is becoming common for young men to study a subject with special industry before qualification with a view to the beginning of practice at once in that subject only. To start on a professional career in this manner is likely to result in practice of a one-sided and narrow character. These infant specialists have no doubt studied the various branches of medicine in which they are examined for their diplomas. But even this moderate knowledge of general medicine will be below that of the average newly qualified man on account of the undue attention given to their selected special subject. Starting practice, then, with even less than the average stock of general knowledge, and looking at everything with the coloured glasses of their speciality, how defective must be their apprehension and treatment of disease. On the other hand, he who has devoted some years of his life to general practice will see the inter-connexion of the general and special diseases, and of the latter with each other, without which knowledge no special branch can be satisfactorily practised. Nothing else can supply this training and insight, and the want of it gives a bias and narrowness that is the cause of most of the abuse of specialism in those that take it up from their medical birth. Otherwise it is liable to abuse as much, and no more, than the practise of general medicine. It would be well if no one started in special practice without having had ten years' experience in general work. I am, Sirs, yours truly,

July 31st, 1895. A SPECIALIST.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Action against a Surgeon.

AT the present Warwickshire Assizes an action was brought by Charles Stevenson against Dr. Eagar of Stourbridge to recover damages for alleged negligence. The plaintiff had an accident which resulted in a dislocated shoulder, which it was alleged had not been properly attended to. There was skilled professional evidence on both sides as usual. It was admitted that the plaintiff was subject to epileptic attacks, and the defence asserted that any subsequent injury found arose from this cause. The verdict was given for the defendant, Dr. Eagar, who may be congratulated upon having cleared himself from the imputations made upon his character and his skill.

Bank Holiday.

The exodus of a large number of inhabitants of the large towns at this season of the year is growing to an enormous degree. In this town the present time has broken record in the enormous number who have availed themselves of cheap excursions for short periods. And yet the advantages must be mixed with some alloy of risk to health. Packed in close railway carriages, deprived of natural rest by night travelling, and subject to all the inconveniences and dangers of inclement weather, it may well be remarked that these English people take their pleasure sadly. The consequences follow these disturbed conditions of ordinary life in disorders of nutrition and exposure to wet and cold. If the demand for excitement and change continues at the same rate of progress some alteration must be made in the usual railway arrangements, or some measures taken to make the holidays less universal. Appointing different seasons to various localities

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as bank holidays would obviate much of the disorganisation which now exists.

The Hospital Saturday Fund.

Already the administrators of this fund have begun to make arrangements and anticipate the wants of the coming year 1896. A steady increase of the amount asked for year by year has taken place, and now a penny a week from the workmen of numberless establishments is sought for. In view of all the advantages offered by the Hospital Saturday Fund—admission to the convalescent homes, nurses in case of sickness at home, and surgical appliances and instruments—this cannot be considered too much to ask for. Nor does this refer to the contributions of women or boys employed at the various workshops and manufactories. The amount of £13,500 is put down as the requirements of the succeeding year, and active efforts will be made to obtain it.

Aug. 6th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Ancoats Hospital.

THE annual meeting was held on Wednesday last, Sir W. H. Houldsworth, M.P., occupying the chair. Founded in 1828, and containing something over 100 beds, it has done much good work in a poor neighbourhood. But the report, as is too often the case, speaks of increasing work with an increasing adverse balance at the bank. The total receipts for the year were £4174 19*s.* 2*d.* The expenditure was £5347 1*s.* 11*d.*, leaving a deficit of £1172 2*s.* 9*d.* During the past two years the adverse balance had increased by £262 16*s.* 4*d.* The medical report showed increasing demands on the out-patient department. Sir W. Houldsworth mentioned that a legacy of £600 had been left to the hospital by the widow of the late Bishop Fraser. He said he believed more hospital accommodation would have to be provided in Manchester, and "he was convinced that the future solution of the question would not be the extension of any one hospital, but it would be the establishment of local hospitals in various parts of the city close to the people who required them." This opens such questions as the increased cost of administration, with a falling-off in funds, and the provision of skilled physicians and surgeons, and the further question of their position and status. Are they to be what is called "pure" physicians and "pure" surgeons, and, if so, are they to live on their professional incomes, or will the staffs be formed from the neighbouring general practitioners?

Manchester Grammar School.

This ancient school had its speech-day on the 31st ult. in the Free Trade Hall. Mr. King, the high master, presided. He said that Sir Frank Lockwood, the chief name on their list of honours for this year, had promised to attend and give an address, but was unable to do so. There was a long list of old pupils who had achieved distinction, and the honour list showed that the school had this year obtained eight open and three close scholarships at Oxford and Cambridge. "The honours won by former scholars of the school afforded fresh evidence, if evidence were needed, that from an industrial centre like Manchester they could send some to tread the paths of literature and scholarship. E. T. Whittaker had won the Sheepshanks Astronomical Exhibition at Cambridge, and had also been bracketed second in the mathematical tripos. This was the third time in the last five years that the Second Wrangler had been an old Mancunian ..... No fewer than ten scholarships at Owens College had been won by grammar-school boys." In addition to these, five science, six commercial, and three art scholarships and exhibitions offered by the Lancashire County Council and the Manchester Corporation had been won by grammar-school boys.

Manchester Museum, Owens College.

Some short time since the Museum Committee memorialised the Corporation for aid in its maintenance, there being an annual deficit of £1200. The Museum was visited on May 2nd by the Free Libraries Committee, and they were much impressed with its admirable arrangement and great value as an educational agent. The committee considers this claim reasonable, but as the Museum is open to, and used by, many who are neither residents nor ratepayers of Manchester, it thinks it may be expedient for the Museum authorities to invite the co-öperation of other neighbouring corporations and county and district councils. The committee recommend a grant of £400 a year to be made out of the public libraries rate, on condition that £800 a year be obtained from the Lancashire and Cheshire County Councils and from local district councils. The report of the committee is to be considered at the City Council to-morrow, where it is to be hoped the memorial will be favourably considered.

Child Paupers and Potato-pie.

This subject still affords matter for discussion among the Salford guardians, one of whom at their last meeting reported a diminution in the thickness of the crust from 3 in. to 4 in. to three-quarters of an inch, "which was a great improvement." Though fit for children aged from nine to fifteen, he agreed with the medical officer that it was unfit for those aged from three to five. The chairman thought paste three-quarters of an inch thick was not fit for young children, with which opinion most of us would agree. It was not stated that they were to have some other delicacy instead of it. The medical officer is said to be dissatisfied still with the pastry, which he may well be, if it is to be the food of children aged from three to five.

Aug. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh University Graduation Ceremonial.

THE graduation ceremonial in medicine at Edinburgh took place last week. The degree of Doctor of Laws was conferred upon two medical men. One of these was Dr. Thomas Edmonstone Charles of Rome; the other Dr. S. Weir-Mitchell of Philadelphia. Both these gentlemen were presented in appropriate speeches to the Vice-Chancellor by Sir Ludovic Grant, who pointed out that they might serve as a bright example and encouragement to those who were receiving degrees that day at the termination of a successful student career. Thereafter a large number of Doctors of Medicine and Bachelors of Medicine were introduced and officially capped. Professor Greenfield delivered the address to the graduates, congratulating them upon their achievements and urging upon them to do their utmost to promote the renown and success of the University and to increase its material prosperity. He alluded to the fact that in spite of the noble buildings the part devoted to pathology had not been completed and was devoid of the accommodation and appliances essential to the most important part of pathological research. From this the lecturer turned to matters affecting the graduates themselves, and concluded by an eloquent exposition of the proper relations that should exist between a medical man and his patients.

New Hospital Site for Edinburgh.

The Leith Corporation have had a request from the Edinburgh authorities for ground on which it is proposed to erect a temporary hospital in room of the hospital which is to be removed from the Queen's Park. Some technical difficulty regarding the ownership of the land having arisen the Leith authorities have decided to delay consideration of it.

The School of Medicine of the Edinburgh Royal Colleges.

As was mentioned in THE LANCET some weeks ago a scheme was on foot to more closely affiliate the extra-mural medical school in Edinburgh to the Royal Colleges. This, it is understood, has now passed its final stage and been accepted by the colleges. The governing body is to consist of fifteen members, five of whom are elected by the Royal College of Physicians, the Royal College of Surgeons, and the Association of Lecturers respectively. It is to exercise supervising and disciplinary functions. The school is to be called the Medical School of the Royal Colleges.

Aug. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Brutal Outrage in Belfast.

A BRUTAL case, such as rarely occurs in Ireland, has occasioned a good deal of comment in Belfast. It seems that on Saturday, July 20th, a woman was found lying in a field on the Shore-road; she was thought to be the worse for

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drink and was taken to the police-office where she was kept for eleven hours in the cells and was then seen by one of the police surgeons who sent her on an outside car to the Union infirmary. She was at this time very weak and almost senseless, and died on the evening of the day she was removed to the infirmary. It was found after death that she had received several wounds of the vagina, inflicted apparently by some instrument, and this had occasioned external bleeding and extensive subperitoneal hæmorrhage, so that she died from shock and hæmorrhage the result of brutal violence. The coroner at the inquest having commented on the case, the jury returned a verdict that she had died from shock and hæmorrhage the result of injuries to the genital organs forcibly caused by some persons or person unknown, and they strongly recommended to the responsible authorities (1) that a female attendant should be placed in the police cells; (2) that a proper room should be provided for prisoners in a sick or weak condition; (3) that the cells should be properly constructed; (4) that means should be provided for conveying sick prisoners to the hospital other than by an outside car; also that the police did everything possible for the deceased woman while under their charge; and that the coroner be requested to bring the foregoing recommendations under the notice of the Police authorities. No person has, up to the present, been arrested as the perpetrator of this abominable crime.

High Death-rate in Belfast.

At a meeting of the Belfast City Corporation, held on Aug. 1st, the report presented by the medical officer of health showed that the health of the city of Belfast was in a most unsatisfactory state, the death-rate for the four weeks ending July 20th being 28·2, while in the corresponding week of last year it was only 20·7. The deaths from all causes are very much in excess of what they should be at this season of the year. The deaths from zymotic diseases are 50 per cent. more, and those from chest affections 30 per cent. more than in the corresponding period of last year. The deaths from typhoid fever and diarrhœa and the infantile mortality have all increased. Various reasons may be assigned for the present very high death-rate (greater than Dublin city, Cork, Limerick, or Londonderry), such as the late wet and changeable weather; but it is quite evident that there must be some serious defective sanitary conditions in the city of Belfast to account for such an abnormally high death-rate. How is it that the death-rate of London keeps so low, and as years go past is actually getting lower? The present high death-rate of Belfast demands the most serious attention.

Improvements at the Belfast Royal Hospital.

At a special meeting of the Corporation of the Belfast Royal Hospital, held on Aug. 5th, it was decided to make some very necessary improvements, which will cost probably about £1500. It is contemplated first, to add to the present sanitary block so as to provide space for additional baths. These would add greatly to the comfort of the patients as, at present, their only baths are situated on the ground floor. The next improvement was the enlargement and rearrangement of the present theatre, and the addition to it of an adjoining room. For some time the staff have felt themselves very much hampered, particularly during the time students are attending, by the small size of the operating theatre. In addition to its proposed extension it is to be thoroughly refurnished with every appliance which can render it aseptic and in accordance with those rigid requirements now demanded by modern surgery. Instead of the present isolation wards it is proposed to erect a long range of one-storied buildings, with a large ward for males and one for females, the kitchen, sculleries, and pantries being in the centre, and at one end a mortuary, post-mortem room, and other required conveniences.

The Belfast Dispensary Committee.

At the monthly meeting of this committee, held on Aug. 5th, Mr. Isaac Dundee was unanimously appointed medical officer of Carnmoney dispensary district in place of Mr. J. Dundee (resigned).

Queen's College, Belfast.

The following is the list of prizemen at the close of the summer session:—Botany: senior, W. A. Price; junior, John Adams, William M. Hunter, and Marriott R. Rowan, B.A., Practical Chemistry: Isabel Addey Tate and William R. Beatty (equal), Arthur B. M'Master, and Galbraith H. Grills. Medical Jurisprudence: William J. Cousins. Systematic Pathology: David Fleck. Practical Pharmacy: James E. Whyte.

The Battle of the Clubs at Cork.

One of the local newspapers that had persistently supported the clubs in opposition to the demands of the Cork profession published a very ominous leading article last Thursday. It stated that as a vacancy for a medical officer had occurred owing to the death of Dr. O'Sullivan, the opportunity ought to be availed of by the clubs to see whether they could not come to terms with the profession, and a hope was expressed that the doctors would fairly meet the advances of the clubs. An admission was also made that the refusal of the Cork doctors to meet the imported medical men in consultation had proved very inconvenient in club circles. I can only say that all along the Cork profession simply demanded that persons requiring medical services who were in a position to pay should pay according to their means, and any proposal from the clubs based on that principle will receive every consideration.

Accusations against Union Infirmaries.

A shocking state of affairs was revealed at the last meeting of the Nenagh guardians. One of the guardians (Mr. O'Brien) stated, "I knew a respectable man to die at 9 o'clock at night on the infirmary floor and remain there till morning. That was not the only case of the kind. Another man fell down stairs and broke his neck. It is horrible to think of the treatment to which the infirmary patients have been subjected." The medical officer (Dr. Minnitt) endorsed that statement by saying patients "have been repeatedly picked up off the floors dead or dying." He added that he reported the fact, but no attention had been paid to his report. Those statements seemed to come by surprise on the guardians, and more than one stated that they had not previously been made aware of such a sad condition of affairs. As a result of the discussion it was decided to appoint paid nurses.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italy and the British Medical Association.

FOR the moment Italian medicine finds its centre of gravity on the banks of the Thames, so full are her journals, professional and lay, of the cordial reception vouchsafed her representatives there, and more particularly of the impression created by Dr. Maragliano's paper, "Sulla Cura della Tubercolosi Col Siero Anti-tubercolare." From his chair of Clinical Medicine in the University of Genoa, and still more from his post of "*privat-docent* in General Pathology and Therapeutics with official bearing on Maladies of the Organs of Respiration," Dr. Maragliano has for some time set forth his views on the serotherapy of tuberculosis to an ever-widening circle of adherents both within and beyond the Genoese school. He has even had to appeal to the lay press to be relieved of the incessant requests for supplies of his serum on the part of votaries eager to put it in practice in the localities they belong to. But not till the 1st inst., when his paper was read at the Association meeting, has he developed his positions so broadly, so deeply, and with so determinate a bearing on cure. To his compatriots these positions are now for the first time accessible in the form finally conceived and set forth by their author, and while, in summarised fashion, they have been read with avidity in the lay journals enterprising enough to have them specially "wired" from London, they are to-day being mastered throughout the length and breadth of medical Italy, as given in the advanced proofs with which the *Riforma Medica* of Naples and some of the non-professional organs have been privileged. Italians I have always found extremely gratified by British appreciation, and when from the marked respect with which Professor Maragliano's paper was received they proceed to take note of the hearty "fratellanza" with which their compatriots, Dr. Angelo Mosso of Turin, or Dr. Salvatore Otolenglis of Siena (for instance), were welcomed, they recall the not less friendly reception accorded at past Association meetings to their lamented Pacchiotti and their happily still active Professor Celli of Rome, and are grateful for England's generous requital of the hospitality shown her sons at Padua and Bologna in years when Italy led the van of medicine in theory and practice.

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Italian Hospitals.

One impression Italians never fail to bring back from such visits to the British Isles, and that is the vast superiority of the hospitals, say, in London or in Edinburgh or in Dublin (leaving those of the provinces apart) to anything they have at home or have witnessed even in Germany or France. On this subject Dr. Celli, Professor of Hygiene and *privat-docent* in sanitary police in the University of Rome, was particularly emphatic, after his intervention at the great International Congress of Hygiene and Demography held in London in 1891. THE LANCET gave prominence to his impressions at the time, but it was in Italy that they brought forth their appropriate fruit, and are still continuing beneficially to fructify. It is not too much to say that not a little of the hospital reform quietly and steadily being carried out in Italy is due to the lessons inculcated by Dr. Celli and his fellow visitors on their countrymen—reform at present revolutionising such great institutions as the Santa Maria Nuova at Florence and leading to the extended and improved accommodation, introduced, for instance, into the Ospedale Maggiore of Milan. In the former of these the abuses and defects, born of mediæval tradition, had come to be a public scandal, and are now being removed on a scale and with an energy sufficient to justify future notice in THE LANCET. Meanwhile I may in this connexion refer to the new Ospedale Umberto I., now advancing to completion at Monza, near the Royal residence, as an example of what kingly munificence, aiding modern medical science and architectural art, can accomplish. Covering an area of 44,000 square metres, and consisting of nine pavilions, it will include every appurtenance and appointment demanded by the most varied and refined methods, clinical and scientific, known to medicine and its practitioners.

Aug. 5th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Fire at Brest-Litofsk.

This summer has been one of the hottest of recent years in Russia. Hot weather is, however, not always an unmixed blessing in this country. One of the worst evils it entails is is the prevalence of fires in the forests and the destruction of villages and towns. An unusually large number of fires have occurred already this year. Several towns of considerable size have been almost entirely destroyed. The largest was the town of Brest-Litofsk on the borders of Poland, which contained 40,000 inhabitants, and which was burnt to the ground some eight weeks ago. Details of the disaster still occasionally appear in the press, and from these it appears that two hospitals, the Municipal and the Jewish, were destroyed by the flames; from the former all the patients were fortunately able to escape, but thirty-two of the patients in the Jewish Hospital were more or less severely burnt, some fatally.

Forthcoming Exhibition at Nijni Novgorod.

The exhibition to be held in Nijni Novgorod next year is, if one may believe report, to be on a very extensive scale. A great rush of visitors is anticipated and a large number of temporary hotels are being run up round the exhibition grounds to accommodate them. The authorities are therefore to be congratulated on having appointed a Special Commission to look after the sanitary arrangements of the exhibition and all connected with it. In addition to the local authorities who become members of the Commission the Government have appointed Professor Anrep as their representative. Professor Anrep is already well known in Nijni, as he was sent there by the Government in 1892 to take the necessary measures to meet the cholera epidemic, which was then rapidly spreading up the Volga.

Foreign Deputations in St. Petersburg.

A series of foreign missions or deputations have this summer visited St. Petersburg. The object of all has been the same, to offer congratulations to the Emperor Nicholas on his marriage and accession to the throne, and to pay a tribute of respect and sorrow at the grave of the late Emperor. The first to arrive was the Armenian mission, a purely ecclesiastical group, with the Catholicos Mekertich I. at its head. The Bulgarian deputation had also an ecclesiastic for its leading member—the Metropolitan Clement—but the rest of the members, seven in number, were laymen, and among them, senior to the others as regards actual years, was Dr. Mollog, a physician. The most picturesque deputation has been that from Abyssinia with Prince Damto at its head. There is no medical member of this deputation, as might have been expected; but among the followers of Colonel Leontief, whose (so-called) scientific expedition to Abyssinia has returned with the deputation, is the Archimandrite Ephraim, under which name is hidden the identity of a former medical practitioner, who was known to the world as Dr. Tsviétaief. He graduated Doctor of Medicine in the University of Moscow in 1859, and for many years practised his profession in Romanof-Borisogliebsk until some seven or eight years ago, when he joined the "black clergy"—i.e., became a monk.

The Cholera in Volhynia.

Volhynia continues to be the only Government in which cholera is present. The latest returns are as follows: between June 11th and 17th, 34 cases and 15 deaths; between June 18th and 24th, 59 cases and 10 deaths. The dates are according to the Old Style.

St. Petersburg, July 14th (26th).

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

A Higher Grade of Educational Qualifications of Medical Students.

THE State Board of Medical Examiners of New York are deeply impressed with the inadequate knowledge of many of the candidates for licences who come before them. This board of examiners can endorse as sufficient to practise the licenses that have been issued by other State boards of medical examiners, provided their standards are not lower than those of the State of New York; and the sifting of standards has so shown up the altogether too low measure of acquirement that the board has adopted a resolution declaring that the interests of the public would be greatly benefited by requiring a higher grade of preliminary study before entering upon that of medicine at all. They recommend that the standard be so advanced that no student should enter a degree-granting medical school after 1897 who had not completed a full high-school course or its equivalent. The board finds that the standard is much lower in medicine than in any other profession; and it is a happy sign of the times that the public is waking up to the need of thorough training of the men to whom the care of the health of the people is to be entrusted.

The Estate of Dr. Oliver Wendell Holmes.

Dr. Oliver Wendell Holmes, the poet-physician, after really enjoying most of the truly desirable things in life, left an estate which is valued at $112,000. Much of it was the fruit of his gifted pen.

Exclusion of American Medical Inspectors.

It is reported that the Continental Powers will probably no longer allow the United States to place medical inspectors at their principal seaports to prevent the embarkation of emigrants infected with cholera bound to American ports. Such action of European Governments will prove a serious exposure of the United States to an invasion of cholera in the event of the appearance of that pestilence in Europe. The delegates from the United States Government to the International Sanitary Conference of Paris last year endeavoured to secure an international agreement on this subject. The conference, however, while admitting the importance of such an agreement, regarded it as not coming within the special objects of that conference, and advised that it be made the subject of another conference called for that purpose. Before the Paris Conference closed the United States delegates took the preliminary steps towards the calling of such convention.

Regulations of Attendance at Public Schools after Exposure to Infection.

The Pennsylvania board of health has just issued a set of instructions as to the time when teachers and pupils who have been exposed to the infective diseases may safely be admitted again to schools providing they continue in good health and have taken proper methods for disinfection. For

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diphtheria after twelve days; small-pox, eighteen; measles, eighteen; chicken-pox, eighteen; mumps, twenty-four; and whooping-cough, twenty-one. Adults may be admitted at once if they disinfect their clothes and persons.

Density of Population in New York.

The recent census shows that in the last twenty-five years the population of the city has increased from 900,000 to 1,900,000. One million people, in large part formed of the poor and ignorant emigrants from Europe, have been added to our population. A certain acre near Essex and Stanton-streets having 622 people on it is the most crowded of any city in the world; but this maximum is nearly maintained for a whole square mile, including parts of wards, numbered 7, 10, 13, 11, 14, and 17. In this square mile there are gathered together 370,000 people, mostly aliens, whilst the enumeration of children under five years of age is 53,000. From the census returns giving the number of children of school age—that is, from five to fourteen years included—the estimated number in this square mile is 63,000. 50,000 should be in the primary schools, but there are in this whole square mile but 27,000 sittings in the primary schools, so that there are some 20,000 children more than can be received in the schools of this district.

July 30th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Election of the Staff of the Melbourne Hospital.

ON Aug. 15th the subscribers to the Melbourne Hospital will elect the honorary staff to hold office for the next four years, and the coming election is the great topic of the hour in Melbourne, exciting more interest than a Parliamentary contest. Cards and circulars from the competing candidates are scattered broadcast, and, go where you may, you are sure to be buttonholed and asked to vote and use your influence for some candidate or other, or asked your opinion as to so-and-so's chances of success. Most of the candidates have large election committees, who make it their business to see that every voter (of whom there are between 4000 and 5000) is interviewed on behalf of their candidate. All kinds of influences are brought to bear to secure votes. Nationality, religious creed, social position, everything but a man's professional qualification or fitness for the position or past services is a reason for giving him a vote. The whole business is a scandal which it seems hopeless to reform. The present and previous staff have supported measures to alter the system of election, but nothing is done, and every election is worse than the preceding.

The Macleay Bequest to the Sydney University.

The late Sir William Macleay left a sum of £12,000 to the Sydney University to found a chair in Bacteriology. The bequest was subject to certain conditions, one of which was that every student before being admitted to a science or medical degree must have attended a six months' course of bacteriology. The Senate of the University accepted the bequest, but difficulty arose as to the interpretation of a "science degree" and of "a course of bacteriology," and a friendly suit in equity was instituted, and Mr. Justice Owen construed "a science degree" to mean a degree in biological science, and "the course of bacteriology" to be an amount of lectures or teaching in bacteriology extending over such academic term as might from time to time be prescribed by the Senate. That body now finds that to carry out the bequest as thus construed entails the establishment of a laboratory and museum, and a large outlay which the University at present is unable to meet. A committee was appointed to investigate the question, and has reported that the Senate should sanction the return of the bequest to the executors of Sir W. Macleay's will. The money will then revert to the Linnæan Society to maintain a bacteriologist who will carry on bacteriological investigations and also take pupils.

The Maintenance of the Sick Poor in Sydney.

The report of the Medical Adviser to the Government, Professor Anderson Stuart, on the maintenance of the sick poor during 1894 has been presented to Parliament. The total number of applicants for relief at the King-street Hospital Admission Depôt was 8162, or 303 more than in 1894. Of these, 1677 received orders for the Coast Hospital, 668 for the Sydney Hospital, 693 for the Prince Alfred Hospital, 244 for the Moorcliff Ophthalmic Hospital, and 65 for the Carrington Convalescent Hospital; whilst 2308 were recommended for admission to the asylums for the infirm and destitute, 1976 received orders for outdoor treatment, 132 for trusses, and 399 were refused relief, not being fit subjects for aid from votes granted by Parliament. In addition to the patients dealt with personally at the Hospital Admission Depôt, 972 were admitted under Government orders to the Coast and Metropolitan Hospitals, and paid for in the latter institutions at the usual maintenance rate. These include patients found by the police and taken direct to the hospital, urgent cases of fever and other diseases reported at the Medical Adviser's office by registered medical practitioners and transfers from Government institutions and country hospitals for special treatment. The total number of applications for hospital treatment during the year was, therefore, 9134. The total cost of the patients in four of the hospitals was £13,171 9*s.* 4*d.*, apportioned as follows:—Prince Alfred Hospital, £4991 13*s.*; Sydney Hospital, £4095 12*s.* 10*d.*; Moorcliff Ophthalmic Hospital, £3045 10*s.* 6*d.*; and Carrington Convalescent Hospital, £1038 13*s.* Professor Anderson Stuart again calls attention to the necessity for a hospital for phthisical patients, especially for those in the incurable stages of the disease. He also refers to the want of an organisation for providing for the sick poor at their homes, as well as to the necessity of legislation to prevent the influx of persons who from the time of their arrival here become a charge on the State.

July 6th.

Obituary.

SIR JOHN TOMES, F.R.C.S. ENG., F.R.S., L.D.S.

WITH great regret we announce the death, in his eighty-first year, of Sir John Tomes, which took place at Caterham on Monday, July 29th. To his literary and political exertions dental surgery mainly owes its present position; indeed, he may fittingly be described as the Bismarck of his profession. He was the son of John Tomes of Weston-on-Avon, the Tomes family having settled near there and been in possession of a small property at Marston Sicca since the reign of Richard II. It was at Marston Sicca that Mrs. Lane, a kinswoman of the John Tomes of that time, assisted Charles II. to escape after the battle of Worcester by giving him shelter. Owing, however, to the entail being cut off, Sir John Tomes' father, though the eldest son, did not inherit the property, and it was always a source of great regret to Sir John Tomes that the old house had passed out of the direct line to an uncle of his. His father was a man of marked ability and artistic talent as well as a great reader, especially of metaphysical works, and was not until late in life in a position to do more than educate his sons, so that Sir John Tomes was wholly dependent upon his own exertions after his student days. He was the first member of his family to take to medicine, the study of which he began by being apprenticed to a general practitioner. In the year 1836 he came to London and entered at the Middlesex Hospital and King's College, and was a fellow student of Sir William Bowman. In 1839 and 1840 he acted as house surgeon to the Middlesex Hospital, and during this period he invented forceps adapted to the necks of the different teeth. It was, perhaps, this that determined his subsequent devotion to dental surgery. In 1842 he was appointed dental surgeon to King's College, but this post he subsequently resigned, and was appointed to a similar one at Middlesex Hospital. In 1845 he invented a machine for copying in ivory irregular curved surfaces, and was awarded the gold medal of the Society of Arts. This machine was intended to be applied to carve bone to correspond to a cast of the mouth. When, in 1846, Dr. Morton, a dentist in Boston, Mass., applied ether as an anæsthetic Sir John Tomes immediately took up the question, and administered sulphuric ether, and sometimes chloric ether, in the out-patient department for dental operations. In his diary on Jan. 14th, 1847, the following note occurs: "Gave ether to Arnott's case of lithotomy. Eight minutes and insensibility came; the operation was then commenced and lasted twelve minutes." And on Feb. 23rd: "Gave

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ether to eight patients for operation with great success—Earl of Cadogan (a governor of the hospital) and many others present."

About 1845 to 1847 he delivered a series of lectures on Dental Physiology and Surgery, and these on being published at once brought him into note. In 1859 "A System of Dental Surgery" was produced, and it may truly be said that with the appearance of this volume dental surgery was placed on a scientific basis. He was one of the leading spirits of the educational movement which finally resulted in the establishment of a board of examiners in dental surgery by the Royal College of Surgeons of England and the granting of a diploma in dental surgery, and with Mr. T. Bell and Mr. A. Rogers he formed the dental portion of the first examining board. The curriculum established by the College mainly through his suggestions has worked so well that but few material alterations have been found necessary up to the present time, although the modes of examination have been considerably amplified. Sir John Tomes was amongst the founders of the Odontological Society, and twice occupied the office of President. He was an active supporter of the Dental Hospital of London from the first, and, in addition to occupying a position on its staff as dental surgeon, he filled the office of lecturer in dental physiology and surgery. But valuable as his political work thus had been, it was to a great measure overshadowed by the important part he played in 1878, when, with Mr. J. Smith Turner, he was mainly instrumental in obtaining the Dentist Act, and so placing the dental profession on a sound social footing. The essential clauses of the Act were prepared under his guidance, and mainly by his influence was opposition overcome until it became law. In the formation of the British Dental Association he took an active part, and occupied the presidential chair at the first annual meeting, which was held in London during the year 1881. As a scientific anatomist Sir John Tomes earned great distinction, and by his researches dental anatomy was largely enriched. By the discovery of the protoplasmic nature of the dentinal fibril the commencement of the proper understanding of the nature of denture commenced, and this must always rank as his greatest contribution to dental science. With the late Mr. C. de Morgan he carried on researches into the minute anatomy of bone, and these were published in a paper contributed to the Transactions of the Royal Society. His contributions to the study of comparative anatomy were many, including amongst others the following: "On the Structure of the Teeth, the Vascularity of those Organs, and their Relations to Bone"; "Structure of the Dental Tissues of the Order Rodentia"; and "On Dental Tissues of Marsupialia." How great a loss the dental profession has sustained it would be difficult to say, and although he had retired from active practice for some years, nevertheless, in all subjects his opinions were eagerly sought for by those in whose hands the future of dental progress mainly lies. Only last year Sir John Tomes celebrated his golden wedding, and the occasion was commemorated by the members of his profession founding a prize bearing his name, which has been placed under the custodianship of the Royal College of Surgeons of England.

JOHN THOMAS REESE, L.F.P.S. GLASG.

WE regret to announce the death of Mr. John Thomas Reese, surgeon, of Ystradgynlais, in the Swansea Valley, which occurred on Sunday, July 21st. Mr. Reese was on his way, which lay across a mountain, to see a patient, when he was struck by lightning and with his horse instantly killed. Mr. Reese had practised in the neighbourhood for eighteen years and was universally popular. He was buried in the presence of some 3000 friends on Wednesday, July 24th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. S. Moos, Professor of Otology in Heidelberg.—Dr. Kiener, Professor of Pathological Anatomy in Montpellier.—Dr. Baillon, Professor of Medical Natural History in the Paris Faculty of Medicine.—Dr. Albert Nagel, Professor of Ophthalmology in Tübingen, quite unexpectedly, in his sixty-third year. He was born in Dantzig, and was one of the first pupils of Albrecht von Graefe.—Professor Moos, the Otologist at Heidelberg, at the age of sixty-four.

THE BRITISH MEDICAL ASSOCIATION.

MEETING IN LONDON.

AT the end of the general meeting on Thursday last Sir J. Russell Reynolds desired the members to stay for the consideration of the proposed memorial to the late Professor Huxley, and introduced Professor Michael Foster, Secretary of the Royal Society, who stated that steps were being taken to raise a memorial to Professor Huxley on as broad a basis as possible, but that, owing to the lateness of the season, it had been thought desirable to defer active steps until after the autumn recess. No attempt had been made to determine in any way the nature of the memorial, which must depend upon the amount received, but a provisional committee had been formed, and he trusted that the medical profession of which Professor Huxley was a member, which he loved and which whenever he could he helped, would desire to join in this effort to perpetuate the memory of so great a man. Sir John Lubbock had consented to act as treasurer to the committee and subscriptions might be sent to him, and Professor G. B. Howes, of the Royal College of Science, South Kensington, as one of the secretaries to the committee, would be happy to receive names and answer inquiries. Dr. Ward Cousins, the President of the Council, said he felt sure that the whole of the profession would respond warmly to the effort to produce an adequate memorial.

The annual dinner of the Association, which was held at Queen's Hall, Langham-place, on Aug. 1st, was a decided success. Covers were laid for 700 guests, not only the floor of the hall but the grand tier also being crowded with tables prettily decorated with roses and evergreens. While the guests were assembling the string band of the Royal Engineers played a selection of music. Sir J. Russell Reynolds presided, and among some seventy-five invited guests were the Lord Chancellor, Lord Herschell, the Lord Chief Justice, Mr. Christopher Heath (President of the Royal College of Surgeons), Professor Stokvis (Amsterdam), Dr. W. W. Keen (New York), Sir Wm. Flower, Professor Bowditch (Boston), Professor Mosso (Turin), and Dr. Fraenkel (Berlin). The speeches were almost as brief as the grace, *Benedictus Benedicat*. "The Queen" and "The Royal Family" having been honoured, the President proposed "Our Guests," and Lord Halsbury, in responding, by a *lapsus linguæ* created some merriment in which he heartily joined, although it was against himself. "I am yoked," said the Lord Chancellor, "with four other 'distinguished' guests." Professor Stokvis followed with a happily conceived speech, full of thanks to the Association and praises of the medical profession in England. Dr. Keen convulsed the assembly by describing a case of heredity in which the succeeding generations of a man who had undergone an operation where Murphy's button had been used produced a child "with a long row of buttons ....." The conclusion of the sentence was lost in the burst of laughter which followed. Mr. Christopher Heath also spoke. "The British Medical Association," coupled with the name of Dr. Ward Cousins, was proposed by Sir George Young; and "Our President," proposed by Sir William Priestley, and responded to by Sir J. Russell Reynolds, brought a pleasant evening to a close.

The Masonic Smoking Concert, given on Thursday, Aug. 1st, in the Portman Rooms, Baker-street, in honour of the Medical Freemasons who attended the meeting of the Association, proved to be a very happy thought on the part of the hosts, the Æsculapius Lodge and Chapter, No. 2410,

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and was a distinct success. The programme contained the names of forty-four well-known artists from the theatres and music-halls, most of whom put in an appearance. It is impossible to repay their kindness in entertaining medical Masons by mentioning all their names, but it may be noted that Mr. Arthur Roberts met with quite an enthusiastic reception, Mr. Lionel Brough told tales—some with a "medical" flavour—in his own dry humorous way, Miss K. Seymour and Mr. F. Wheeler gave the admirable Japanese dance from *The Shop Girl*, and Mr. Charles Godfrey an impersonation, and eulogistic song recording the achievements, of Mr. W. G. Grace in the cricket field. The programme was not exhausted until past one o'clock, when the proceedings terminated with a hearty vote of thanks on the part of the visitors to the members of the Æsculapius Lodge and Chapter for their hospitality and entertainment.

On Friday evening, the 2nd inst., the Council of the Royal College of Surgeons of England gave a very successful conversazione at the College in honour of the meeting of the British Medical Association in London. A very large number of guests attended, and the presence of ladies added greatly to the brilliancy of the scene. The visitors were received in the Museum by the President, Mr. Christopher Heath, and the Vice-Presidents. There were many very interesting exhibits. In the council-room was shown the diary of a Resurrectionist for a little more than a year in 1811 and 1812, giving details of the bodies raised; also the books of the Corporation of Surgeons, containing, in December, 1758, an entry showing the name of Oliver Goldsmith examined for certificate as "hospital mate" and found "not qualified"; a number of daguerreotypes, taken in the early forties and presented recently to the College by Mr. Jabez Hogg; the portraits include several eminent physicians and surgeons. In the library committee-room were shown the Hunterian relics belonging to the College, including an escritoire, a study table, and several instruments belonging to Hunter. In the same room was exhibited a series of drawings made by W. H. Clift of the heads of murderers brought to the College after execution for dissection; among them was a drawing of Bishop, who was concerned with Hare in killing an Italian boy for the purpose of selling the body for dissection. The London Welsh Glee Singers gave performances in the theatre at intervals, and in a part of the museum the string band of the Royal Engineers played a selection of music.

On the same evening the Royal College of Physicians of London were at home to the members of the Association in their quaintly stately home in Pall-mall. The architectural beauty of the building, the perfectly proportioned rooms, the interesting and, in some cases, splendid pictures and the unique reliques, ever make of the College an admirable place of reunion, and the numerous guests of the President and Fellows appreciated the hospitality to the full. The floral decorations were particularly brilliant.

An interesting discussion took place in the Obstetric Section on the Early Diagnosis of Malignant Disease of the Uterus and the Treatment by Partial or Total Excision. With reference to the first point, we think the duty of the profession is twofold—first, to insist on a thorough examination in any suspicious case, especially when the patient is near the menopause; and, secondly, to educate women (as Dr. Scharlieb so well pointed out) not to neglect to report to their medical attendants the existence of any abnormal discharges, specially when these occur at the climacteric period. The general feeling of the speakers who took part in the discussion was against placing great reliance on microscopic examination as an aid to diagnosis, though it is only fair to state that it is a question whether in England such a thorough pathological examination is carried out as is done in Professor Martin's clinique at Berlin. Of the early clinical signs of malignancy probably hæmorrhage occurring after an examination, as well as the peculiar sensations conveyed to the educated finger, are of the greatest value; but the symptom mentioned by Professor Japp Sinclair of Manchester is also worthy of attention. He says in a doubtful case if on using a sharp spoon the parts, owing to their friability, break down, leaving a cavity, cancer is indicated. In a non-malignant case the curette causes no excavation. As to the treatment, there can be no question that the opinion of the great majority of the speakers was strongly in favour of total removal of the uterus when the disease was limited to it. In England, perhaps owing to our natural conservatism, and, as some of the speakers pointed out, from the fact that in the early history of the operation the mortality was high, some surgeons still advocate the partial excision; but with a greatly improved technique and a very much lowered mortality the method of total removal has received universal recognition in all parts of the United Kingdom. We must not forget, however, the very important fact that after any method the disease may reappear. Professor Pozzi's statement is (from his very great experience) of the utmost value. He said he had never seen a case lasting longer than three years after operation without recurrence. In this connexion, however, we may refer to six cases published in our columns by Dr. Lewers, in which, after supra-vaginal amputation of the cervix, the patients remained well after periods varying from two to eight years. The specimens were shown at the Obstetrical Society of London.

The subject set down for discussion in the Section of Pharmacology and Therapeutics on Thursday, Aug. 1st, was really rather too lengthy to be dealt with adequately in the time allotted to the various speakers. We refer to the requirements of the profession with reference to the revision of the British Pharmacopœia. Dr. Leech, who opened the discussion, attempted to keep it within clear limits, and confined his remarks to the nature and extent of the list of medicines, the mode of preparation of compounds, the weights and measures to be employed, and the amount and extent of accessory information to be given, indicating also tests for purity. Dr. Donald MacAlister followed on the same lines, and thought the size of the Pharmacopœia might be reduced by the "avoidance of the superfluous." From this point, however, many of the speakers found the time limit irksome, and although there was a general agreement that simplification was desirable and that it was quite consistent with accuracy, there was obviously a tendency to review the Pharmacopœia in detail rather than to indicate broad lines of improvement. Dr. Tirard, however, brought matters back into the proper channel by the narration of his experiences as secretary to the Therapeutic Committee of the Association; while Dr. MacAlister was responsible for the important statement that the Pharmacopœia Committee of the General Medical Council had already decided upon the introduction of the metric system of weights and measures alongside of the English system.

The organisers of the various entertainments and excursions deserve great praise for the admirable manner in which these functions were carried out, and no one with the excellent little local guide before him or her, as the case might be, could fail to find both instruction and amusement in the ample programme provided. During the week there were several excursions to places of interest more or less near to the metropolis; but by

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far the best series was reserved for Saturday when members could spare a whole day to pleasure. A party of some 200, including ladies, visited Epping Forest and Claybury, where they inspected the London County Asylum. By the invitation of Mr. Hutchinson, President of the Royal Medical and Chirurgical Society, many members visited his country seat near Haslemere and partook of lunch with him in the new Museum. The Oxford, Reading, Maidenhead, Windsor Castle, and Hampton Court excursions were chosen by other parties, and the Hastings and Eastbourne trips were well attended. The medical practitioners of the first-named town invited 150 of the members of the Association to visit them, and the various local excursions in which the Hastings medical practitioners acted as guides were much appreciated.

In spite of the unpropitious state of the weather on Saturday last those members of the Association who took advantage of the hospitality offered by the Eastbourne Medical Society had every reason to congratulate themselves upon their choice of this excursion among the many to choose from. At the town hall a most sumptuous lunch was provided and the party were cordially received by the Mayor, Councillor Skinner, and the President of the Eastbourne Medical Society, Mr. J. H. Ewart, who presided, at the luncheon. The health of the Association was enthusiastically honoured, and responded to by Mr. R. O'Callaghan and Dr. More Madden. The party were then taken for a drive of about twenty-five miles, including a visit to Beachy Head, Birling Gap, and Wannock Glen, where a fruit tea was enjoyed by the party after their long drive.

We understand that the Mayor of Eastbourne has given a pressing invitation to the members of the British Medical Association to hold their next annual meeting in his borough, and has requested Mr. O'Callaghan to lay the matter before the Council.

The debate on the subject of the increase of direct representatives at the second general meeting was concluded more moderately than at one time appeared likely to be the case. In the end a resolution by Dr. Rentoul was passed instructing the Council to demand that the registered medical practitioners of England shall be empowered to elect five more direct representatives, the practitioners of Scotland one, and those of Ireland one more than at present. Dr. Hugh Woods diagnoses senility and decay in the present General Medical Council, and looks confidently to the time when it will elect all the members. There is such a thing as being too acute in diagnosis, from which error false prognosis is apt to arise. If there is any chance of increase in the direct representation—and we think such increase is decidedly called for, and might perhaps be balanced by grouping the smaller bodies that are more favoured with individual representation—it will be hindered rather than helped by all extreme views.

We hope to complete our reports of the proceedings in Sections next week, but the many interesting discussions have required at our hands more detailed treatment than on previous occasions. The meeting of the British Medical Association of 1895 has been a scientific success, for if no startling theory has been promulgated, or at any rate, made good, the orderly and useful debates upon practical topics were conducted on the lines that lead to progress while consolidating present knowledge.

We desire to record our sense of the invariable courtesy extended to us by the officials of the Association, and to our representatives by the honorary secretaries of the various sections.

THE GENERAL MEETINGS.

THE CONCLUDING GENERAL MEETING.

THE final general meeting was held at Exeter Hall on Friday afternoon, Aug. 2nd, when Professor SCHÄFER, Jodrell Professor of Physiology in University College, London, delivered the address in Physiology, which we print in full in this issue.

Sir J. RUSSELL REYNOLDS, in introducing Professor Schäfer, referred to him as his friend, his old pupil, and his colleague. At one time, said the President, he was the great friend and almost the physiological godchild of his old master, Professor Sharpey, the greatest of all teachers that have been honoured in England. For many years before he died Professor Schäfer assisted him at University College. At the meeting of the Association in 1873 Professor Sharpey delivered the address in Physiology, "and a remarkable address, too, it was," concluded Sir J. Russell Reynolds. After the delivery of the address,

Professor BOWDITCH of Boston proposed a vote of thanks to Professor Schäfer. This was seconded by Dr. LAUDER BRUNTON and heartily accorded.

Votes of thanks to Her Majesty the Queen and other members of the Royal Family for the interest and practical sympathy they had shown in the proceedings of the meeting of the Association; to Mr. Andrew Clark, Dr. Isambard Owen, Mr. H. T. Butlin, and others who had been active in organising the meeting; and to Sir J. Russell Reynolds for his able conduct in the chair, brought the formal proceedings of the sixty-third meeting of the British Medical Association to a close.

MEDICINE.

WEDNESDAY, JULY 31ST.

Discussion on Diphtheria.

Mr. LENNOX BROWNE, referring to Dr. Martin's experiments on animals, criticised those dealing with the increase in weight, or, at any rate, stated that they did not fully agree with those made by other observers. As regards nephritis, he had found that it had occurred in 9 out of 27 deaths in the 100 cases that he had followed—that is, in all of those cases in which permission to make a post-mortem examination had been obtained. He wished it to be noted that Dr. Goodall said that antitoxin does not protect against diphtheria, and thought it must be borne in mind that the injection of antitoxin simultaneously with the poison could scarcely be followed by the same results as when the poison had had some start. He differed from those observers who held that serum was most useful in cases of pure diphtheria, as he had found that the serum was really most useful in mixed cases. He wished to show that there were fallacies in Dr. Goodall's statistics of cases examined during the twelve months and to point out that only 110 of these had been bacteriologically examined, whilst no note was made as to the conditions in 109. A mortality of 21·9 did not afford much evidence that this remedy was of much value, whilst it should also be observed that small doses only of the antitoxin were given in the early cases, and that consequently these could scarcely be reckoned amongst those treated with antitoxin. Finally, he maintained that all the results which had been obtained by the antitoxin treatment might be obtained in the hands of those who carried on most perfectly what might be spoken of as the classical treatment; in fact, the only statistics that were worth anything were those in which the antitoxin treatment could be compared with the best classical treatment. As regards the statistics published in the *British Medical Journal* he would point out that in about two-thirds of the cases mentioned there had been no bacteriological examination, and it appeared to him evident that the whole of the improvement in the case mortality might be attributed to the improved hygienic conditions under which the patients were placed.

Professor BAGINSKY (Berlin) said that as one of those earliest in the field in using antitoxin—which had been prepared by his assistant, Dr. Aronson—he had been able to observe a large number of patients most carefully. He had a record in all of 710 cases. Amongst the 525 cases treated up to March he had had a mortality of 15·6 per cent., against a mortality for the preceding four years of 41 per cent., or for the year 1893 of 58 per cent. Coming to the age mortality, he found that up to two-years of age the mortality was 63·36 per cent. without serum treatment, and 25·28

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with serum treatment; between two and four, 52·85 without, and 17·12 with serum treatment; between four and six, 37·90 without, and 17·24 with serum; between six and eight, 27·41 without, and 11·39 with serum; between eight and ten, 19·35 without, and 5·00 with serum; between ten and twelve, 15·07 without, and 10·00 with serum; between twelve and 14, 13·00 without, and 13·00 with serum treatment. In his last 185 cases, since March, his case mortality had come down to 8 per cent., a sufficiently striking figure to compare with any statistics. He would like to point out to Mr. Lennox Browne that in his experience the whole character of the disease had changed under the antitoxin treatment. The patients look and eat better, and their whole appearance is markedly better than it was before. Disease of the heart is, of course, not done away with, whilst there were undoubtedly cases of mixed infection and septic cases which were extremely difficult to treat. As regards nephritis, he was at one with those who had observed it in a large percentage of cases before antitoxin was ever thought of, but he was convinced that the course of the disease under antitoxin treatment was less prolonged and of a much milder type than had previously been the case. He agreed with Professor Von Ranke that laryngeal stenosis is not of such frequent occurrence in cases that had been injected with antitoxin, and that it never occurs in the later stages of the disease as was formerly the case. One of the points that he wished to insist on was that the quantity of serum might in many cases be increased with advantage. Of those cases in which there had been laryngeal stenosis he had been able to obtain a recovery of 60 per cent., whilst previously to the use of this remedy the percentage of recoveries under otherwise similar conditions was only 21 per cent. Mr. Lennox Browne spoke of enthusiasm carrying them away; could that now be said to be the case?

Dr. SIMS WOODHEAD asked if it was to be a reproach against those who were working at the antitoxin treatment that they were enthusiastic. It was, he maintained, an enthusiasm that—in view of the number of experimental and clinical facts that had been brought before them that morning—was thoroughly justified. Dr. Martin's experiments, detailed and accurate as they were, and dealing with special points which could not but be of interest to those who were actively engaged in combating the disease, corroborated the interesting and valuable statistics that had been so clearly placed before them by Professors von Ranke and Baginsky, whilst he held in his hand a series of statistics recently published which he took the liberty of placing before them, as they afforded an additional link in the chain of evidence which was rapidly being forged in support of the antitoxic treatment of diphtheria. It was not always desirable to quote statistics which were not one's own, but those of M. Richet in the "Revue Scientifique" for July 20th were exceedingly striking, and he should take the liberty of summarising them. The actual number of deaths from diphtheria in Paris during periods of fourteen days were given for the first six months of a series of seven years—1884, 1887, 1890–1894. In this it was found that the lowest mortality during any one fortnight was 30, whilst the highest was 145. Coming now to the first six months of the year 1895, during which the antitoxic serum treatment was becoming generalised in Paris, it was found that the number of deaths in any one fortnight was 27, whilst the lowest was only 4. He thought that these figures by themselves were sufficiently striking, but when taken in conjunction with the statistics they had heard that morning and with the experiments that had been detailed, he thought that they afforded a basis of fact which would justify a considerable scientific enthusiasm. He had recently on several occasions said really all that he had to say on this question, and he did not propose at this late stage of the discussion to intervene between them and those who had a number of interesting facts to contribute, but he could not refrain from remarking that the experimental facts had been more than confirmed by clinical experience, and although he had not any clinical material which he could place before them, he wished to state that as one of those engaged in experimental work he was convinced that as physicians became less afraid of using full doses of antitoxin, better and better results would be obtained; he was exceedingly glad to hear, from the experience of Dr. Martin and of Professors von Ranke and Baginsky, that such also was their experience.

Dr. HERMANN BIGGS (New York) stated that since Jan. 1st any attending physician who applied for antitoxin at the office of the Health Department of New York, was supplied with it free of charge, and it was used along with an inspecting physician sent by the Board. He had not the data from which to give the case mortality for New York previously to the antitoxic treatment, but on comparing the reported cases he found that since this treatment had been introduced the case mortality had fallen at least 40 per cent. for the city as a whole. Dr. Goodall had expressed a doubt as to the immunising power of serum, but he had by him a number of statistics which he thought would throw some light on this subject. In one asylum in which diphtheria had been very frequently met with the whole of the children were immunised with 200 units each of Behring's serum, excepting in the case of very young children, who received only from 120 to 150 units each. There was an immediate cessation of the outbreak, and not one case appeared until the nineteenth day, when one patient had a mild attack. Then other cases occurred on the 30th and 31st, and during the following week 5 other cases appeared. The immunisation process was repeated, and from that date to July 15th only three cases occurred. That the infective material was still present was evident from the fact that three cases brought in and not immunised all took diphtheria, whilst in certain cases virulent Löffler bacilli were demonstrated as being present in the throats. In another institution there were 46 cases of diphtheria during fifteen or twenty days before the immunisation process was carried out, after which not one single child took the disease, but one of the nurses and the resident physician, who had not been immunised, were both attacked, whilst in the throats of 11 of the cases that had been immunised and which were examined for diphtheria bacilli, a positive result was obtained in six, but in none of these cases was there any outbreak of the disease. From this and other experiments he argued that the period of protection really extended over about thirty days. In none of the cases infected had there been any unfavourable symptoms beyond urticaria and slight morbilliform rashes which usually made their appearance about the ninth day after injection, whilst at the time of injection there was frequently a slight rise of temperature, so insignificant, however, as to call for little attention.

Dr. CAMPBELL HALL said that he came from a district in which diphtheria was endemic, and he must say that he had certainly not been disappointed by the antitoxic serum, but had been surprised and delighted by the results that he had been able to obtain. He found that after injection the membrane never spread and gradually but surely disappeared. So successful, indeed, had he been that he decided never to treat a case of diphtheria except with antitoxin, if that substance was at all procurable.

Dr. PAVY said that although this subject was of vast interest and great importance the time allotted to its discussion had already been exceeded, and they must now go on to the next subject on the programme.

The Treatment of Diabetes Mellitus by Uranium Nitrate.

Dr. SAMUEL WEST, Assistant Physician to St. Bartholomew's Hospital, read a paper on this subject. A short account was first given of the physiological action of uranium, of which, however, little is known except that in poisonous doses it acts as an irritant poison and ultimately produces albuminuria and also glycosuria. Diabetes having been selected as the disease in which to try the effect of the drug it was administered to a number of out-patients, and they all agreed in stating that their thirst was relieved, the quantity of urine reduced, and their general health improved. Then systematic investigations were made upon patients under close observation. Two cases have been under observation for over a year, and very frequent determinations of the urine made. The results have been set out in the form of tables or curves, upon which are indicated the times at which the drug was administered. The patients were all placed upon a fixed diet and under constant conditions, so that the only variation in their condition should be the administration or withholding of the drug. The first case was that of a young man aged 22. He was admitted into the hospital and placed upon the ordinary diet for three weeks or so before the drug was administered. This produced some improvement, and the percentage of sugar and the quantity of urine fell from an average of seven pints to five, the percentage of sugar also falling from about eight to between six and seven. On the administration of the uranium in small doses, gradually increased, the effect was first shown upon the quantity of urine, which was diminished considerably, falling from an average of five to

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an average of three pints. The percentage of sugar also fell from about 5 to about 3. The drug was administered for about two months without intermission, being gradually increased up to fifteen grains three times a day. At the end of that time the percentage was about 1. The drug was then stopped for a time and the percentage of sugar rose again to about what it had been before—that is, between 5 and 6 per cent. Uranium was then re-administered and increased gradually. As soon as about seven or eight grains were being taken three times daily the percentage suddenly fell to about three, and with its continued administration it was finally reduced to under 1, indeed, under ½ per cent., where it remained for nearly four months, the patient having all this time gained health and weight, being nearly one stone heavier than when the treatment was first commenced. The drug was then given up again, and about Christmas time the patient did not seem so well, possibly in connexion with the festivities. The percentage was then found to be between 6 and 7, and shortly after this it actually reached 10 per cent. for one or two days. Uranium was administered again, and after about a month the percentage rapidly fell, and at last was again under ½ per cent. The quantity of uranium was reduced, the patient taking about five grains daily, and when he left the hospital a little later the percentage was between 2 and 3, but he was very well and much heavier than when he was admitted. He was not seen again till the autumn, after an absence of about four months, during which time he had taken no medicine. The percentage was then found to be again between 6 and 7, and uranium was once more administered. He was only seen from time to time, but within a month the percentage had fallen to 4. At Christmas time it rose again, and the uranium was given in fifteen-grain doses. A month later the percentage had fallen to a little over 1, and that was the condition when the patient was last seen. The second case, that of a woman of about forty-five years of age, was a private patient who had been under treatment for some time before uranium was administered. She was then passing about 1800 c.c. of urine and between 2 and 3 per cent. of sugar. Uranium was given and very soon the reduction in the quantity of urine was marked, the amount falling to about 1000 c.c. Later the percentage of sugar also fell to 1, and then under 1, and after the administration of the uranium for about two months the sugar entirely disappeared from the urine and remained absent, with one or two exceptions on odd days, for more than four months. At that time, though the uranium was continued and the diet also remained the same, the percentage rose again to 2. The patient was a good deal worried by changing houses and other causes, to which, as well as to irregularities of diet, the relapse was doubtless due. Uranium was continued, the amount of sugar fell again, but did not entirely disappear. In February the patient was seized with a very severe attack of influenza and was exceedingly ill. The uranium was stopped for the time, and, as I afterwards learnt, was not subsequently resumed. The influenza caused a great relapse in the diabetes, the amount of urine increasing largely and the percentage of sugar rising over 3. As the patient recovered from the influenza the percentage fell, the amount of urine, however, still remaining large. When seen six months after the influenza the patient looked feeble and ill, though very much better than she had been; the percentage of sugar was between 2 and 3, and the quantity of urine about 1600 to 1800 c.c. daily—that is to say, she was about in the condition in which she was when first seen by me. It is proposed to administer uranium again by-and-by. The third case is that of a patient who was in the hospital, treated in the usual way for diabetes and with various drugs, but chiefly with codeia. She had reached a condition of equilibrium and was passing about 7 per cent. of sugar, an amount which had been fairly constant for many weeks. She was then placed upon uranium nitrate, at first five grains and later ten grains three times a day. The small dose produced no effect, the large dose showed its effect rapidly in the reduction of the amount of urine, on the average from six pints to four; and when the drug was still further increased to fifteen and twenty grains the percentage also fell, and on leaving the hospital it was only 4. The administration of uranium, therefore, seems to produce striking results in diabetes. It causes first a reduction in the amount of urine and subsequently a great fall in the percentage of sugar. As the patients were under constant conditions in respect of diet and general regime it is fair to refer all these results to the action of the uranium, for the administration of the uranium caused the quantity of the urine and the percentage of sugar to fall. On withholding the uranium both increased; on giving it again both once more fell, until in the one case the sugar entirely disappeared from the urine, and in the other almost entirely. Although uranium does not cure diabetes it seems to have a power of controlling the secretion of sugar greater than is possessed by any other drug Dr. West was acquainted with. It is suggested that its action may be due to its power of checking amylolytic digestion and that it may be most useful as an adjuvant in those cases of diabetes in which diet largely influences the amount of sugar, so as in such a case to lead even to the complete disappearance of sugar from the urine.

THURSDAY, AUG. 1ST.

Acute Lobar or Croupous Pneumonia: its Etiology, Pathology, and Treatment.

A discussion on this subject was introduced by Dr. R. DOUGLAS POWELL. Great interest, he said, was manifested in this important subject, and the large lecture theatre of the Conjoint Examination Hall was full to overflowing when Dr. Powell rose to introduce the discussion. He commenced by regretting that he could not record any practical abatement of the mortality from pneumonia, nothwithstanding improved public health with regard to most other diseases, and especially those of the zymotic class, including tuberculosis; and, moreover, that one-third of those attacked were in the zenith of vigour and work. He pointed out that the prevalence of pneumonia, whilst having no direct relationship to severity of climate as dependent upon latitude, was nevertheless directly influenced by seasonal lowness and by changeableness of temperature in temperate climates. Individual imprudence was a factor which could not be statistically estimated, yet which told importantly in places where climatic changes were considerable, and in localities where the vicissitudes of social life, and where manufacturing and office industries involved frequent exposure to sudden changes of temperature. Probably one-third of the cases of pneumonia were attributable to chills thus contracted through hygienic imprudence, especially amongst those past middle life; and the fatalistic and inadequate view that the reception of a microbe was alone sufficient to cause pneumonia encouraged such imprudence. When the temperature ranged above 104°F., however, it approached hyperpyrexia and became an important source of nervous exhaustion and cardiac failure. The ice cradle, cold pack, cold bath, and cold sluicing were valuable, aided by quinine or salicine. The pathology of chill, with regard to the exact temperature, vaso-motory, and other phenomena which attended it, and their relationship to the variability and multiplication of various microbic organisms, would form an admirable subject for experimental inquiry. The normal compensatory powers of the human organism with regard to temperature might be surprised and defeated by sudden exposure under conditions of temporary depression or debility. Pneumonia tended to complicate fevers rather in their apyrexial stages, and it was at the lower ranges of human temperature that microbic cultivation was most vigorous. There were other conditions besides chill predisposing to pneumonia, such as depressed vitality, privation, the uræmic state, rheumatic conditions, diabetes, &c.; but he (Dr. Powell) would pass to that which was the most important factor for discussion in its etiology—viz., how far was the reception and cultivation of a specific organism essential? Friedlander's, Fraenkel's, and Klein's microbes were all candidates for the honour of disseminating pneumonia amongst us, Fraenkel's pneumococcus being most in favour. Undoubtedly pneumonia was a specific general (and therefore a microbic) disease, but the pneumococcus of Fraenkel presented some difficulties which had to be cleared up before it could be finally accepted as *the* germ of pneumonia. Besides its prevalence (80 per cent.) in pneumonia it was held to account for a large proportion of many other diseases—purulent meningitis, ulcerative endocarditis, otitis media, &c. — diseases which had little pathological resemblance to pneumonia and with which pneumonia was not commonly associated. In secondary inoculations septicæmia was the most common result, and was too loosely accepted as valid evidence of specific virulence. In the cases of pneumonia published by Osler of Montreal ulcerative endocarditis occurred as a frequent complication. Dr. Powell could not understand this, as he had never seen the disease a direct sequel of pneumonia. The presence of the coccus in healthy

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secretions was a fact which, however, did not militate against its possible virulence under conditions favourable to its aggressive cultivation. Pneumonia resembled such diseases as tuberculosis, erysipelas, acute rheumatic tonsillitis, and influenza, which, although possessing a specific organism, required for their efficient etiology certain additional conditions of impaired vitality, local or general, to enable the organism to become aggressive, and it was by ascertaining and avoiding these conditions that much would be done to prevent and combat the disease. Instances might be adduced in which pneumonia had appeared to spread by direct infection. Such cases were rare, however, and if the more important causes which lead to spread through a household (e.g., sewer-gas emanations, epidemic influences, and influenza) were allowed for, but few cases were left to be accounted for by contagion. Dr. Powell hoped the question of infection would be fully discussed. He had heard of striking instances of infection, but had no personal knowledge of it. Pythogenic differed from croupous pneumonia in the smallness of the areas of lung involved and their more scattered distribution and greater liability to metastatic change in the fluctuating temperature and frequent termination by lysis. The microbic organism was the same, but was associated with another microbic poison of a septic kind. As the pneumonia advanced leucocytosis occurred. White cells increased to a great extent in the pyrexial condition. When the temperature fell the percentage of white cells diminished, but became more abundant if any fresh rise of temperature took place. Dr. Powell defended the present routine treatment of pneumonia as sufficient and useful for ordinary cases—namely, attention to the conditions of the skin and excreta, a strict dietary, and absolute rest, which relieved the burden imposed on the right side of the heart. But there were certain symptoms of danger in more severe cases which required a more active and farseeing treatment, and chief amongst these was hyperpyrexia. The pyrexia of pneumonia was brief, normal to the disease, and unfavourable to microbic activity, and, therefore, its treatment by antipyretics was harmful. The development of the germ was checked by a high temperature. In most of the favourable cases—i.e., in normal pneumonia—this generally rose to 104°, and at this temperature the growth of the germ was checked. It was not advisable immediately to reduce the temperature below 102° on this account. In Dr. Powell's opinion the reduction of temperature by drugs that are not distinctly inimical to micro-organisms was distinctly harmful; and if the temperature was brought as low as 99°, an overdose of the drug had been given and the patient would suffer. These drugs were far better than antimony and aconite, both of which produced profound cardiac depression. In the pneumonia of drunkards tincture of iron in large doses could with profit be added to the medicine. Pain, which might be due to two causes—distension of the lung or pleurisy—required special treatment. The pain of distension might be met by ice compresses, but was better treated by leeches and hot poultices; that of pleurisy by a blister with superposition of hot poultices in quick succession. The cause of the pain having been thus attacked it might be soothed by a moderate dose of morphia. Ice compresses both profit and suffer by their too enthusiastic advocacy. Children and young adults were, he thought, the most suitable subjects for this treatment. Active delirium or sleeplessness suggested—(1) cumulative doses of food and stimulants, followed by (2) a sufficient doses of morphia and strophine, with (3) oxygen inhalation in case of cyanosis and sweating. Dr. Powell recommended in grave cases a more timely use of oxygen. It was a powerful heart tonic, and he considered its use was often postponed until too late. It also had a marked effect in diminishing restlessness, and when the patient is sleeping if a little were from time to time administered it often enabled him to remain asleep. Cardiac failure was brought about by impaired pneumogastric innervation, by impaired nutrition of heart muscle by defective blood, and by over-distension of right cavities and depletion of left cavities. Strychnine or caffein, sometimes with digitalis, subcutaneously, maintained nerve power; oxygen in occasional doses nutrified heart muscle; and venesection or leeching, with depletion of portal system, in combination with the other remedies, relieved the congested right heart in threatening cases. Against the danger of excessive extension of exudation he believed the timely substitution about the fifth day of acid remedies or tonics, sometimes including iron and digitalis, were the best remedies. He doubted the value of ice applications in this regard. He could not as yet find much reliable experience to sanction the antitoxic treatment of pneumonia, and until our knowledge was more precise with regard to the microbe of pneumonia and its toxine, and until further researches on the lines which were already at work had been completed and compared, antitoxic treatment, fraught with its own dangers, would be premature in the human subject.

Dr. WASHBOURN considered acute lobar pneumonia to be a specific disease. In broncho-pneumonia the inflammation spreads by the bronchial tubes. In lobar pneumonia it spreads directly through the alveoli. He admitted that a few cases occurred without the specific germ being present, but pointed out that in throat inflammations many different germs produced inflammation. In post-mortem examinations he had never failed to discover the germ if he examined portions of lung that had recently been attacked. It was easier to detect the germ in lung tissue than in sputum. If the products from the germ cultivations were injected into animals they often died from septicæmia. He considered the crisis due to the formation of a substance improperly called an antitoxin.

Dr. AULD (Glasgow) agreed that pneumonia was a specific disease.

Dr. DRESCHFELD (Manchester) confined his remarks to influenza pneumonia, which he considered highly infectious. He thought the sputum should always be disinfected.

Dr. J. E. POLLOCK considered the question from a clinical point of view. He admitted that in almost all cases a germ was present; but was it always the cause? He quoted the case of a clergyman whom he had recently seen in consultation in the country. The gentleman was in perfect health and drove out in an easterly wind. On returning home he was immediately seized with a chill. The next day on examination consolidation was present, and in a few days he was dead. Was it to be assumed, Dr. Pollock asked, that in such a short time the development of micro-organism could be the cause of such rapid changes of structure. It was impossible, he said, to take laboratory knowledge alone. All theoretical knowledge must be brought down to clinical experience.

Dr. CLIFFORD ALLBUTT enlarged on the great advantages that could often be obtained from oxygen inhalation.

Dr. GIBSON to some extent opposed the views expressed by Dr. Pollock. He pointed out that in India cholera had existed for 200 years, and clinical observation did not even suggest its cause, but the bacteriologist showed it to be due to the presence of a micro-organism.

Dr. COGHILL spoke from personal experience of the benefit to be derived from aconite. He said that in his own case it gave very great relief to the most distressing symptoms.

Dr. D. B. LEES spoke at some length on the benefit to be derived from ice, but he considered the treatment must be pushed to its full extent. The greatest benefit was to be obtained in children and young adults.

Dr. POPE considered that the pneumonia complicating typhoid fever was particularly infectious.

Dr. SHINGLETON SMITH (Clifton) raised the question of the treatment by large doses of digitalis. He particularly commented on the statistics of Dr. Petresco of Bucharest, who had published 1300 cases with a mortality of only 2 per cent. These had been treated by four to eight grammes daily of powdered digitalis; he could not doubt, but could hardly understand these results. When compared with the results of English hospital treatment, which showed a mortality of 20 to 25 per cent., they were very striking. He merely regretted that Dr. Petresco, who had been present at the commencement of the discussion, was not there to explain.

Dr. SQUIRE objected strongly to the word croupous and advocated the term lobar pneumonia.

Dr. DOUGLAS POWELL, in reply, regretted that Dr. Washbourn had not more time to explain his views on the antitoxin treatment of the disease. He thought that Dr. Foxwell and Dr. Clifford Allbutt had rather mistaken his views as to the advantages of oxygen. He did not doubt its efficacy and advocated its earlier use as a cardiac stimulant. He agreed with Dr. Lees as to the use of ice in young patients; certainly in children he would rather use ice than a blister.

SURGERY.

THURSDAY, AUG. 1ST.

The Pathology and Clinical History of some Rare Forms of Bony Ankylosis.

Mr. HOWARD MARSH read a paper on this subject. Two

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propositions used to be laid down about bony ankylosis, he said; the first was that it was the only way in which a joint could recover after suppuration, and the second was that it was always due to suppuration. Neither of these statements can now be upheld. Suppuration is not necessarily followed by bony ankylosis, as, for instance, in pyæmia and in some forms of tuberculous disease; in fact, we may say that bony ankylosis is a rare ending to suppuration in a joint. Also, bony ankylosis may occur without suppuration. It is usually said that there are three ways in which tuberculous disease of a joint may end—viz., perfect recovery, fibrous ankylosis, or bony ankylosis; to these must be added a fourth, in which tuberculous disease occurs in a joint, and the inflammation is not active, the signs are but slightly marked, and yet the condition ends in ankylosis. Several cases were cited, and in one of these, in which the elbow was affected, excision was performed, the excised portion of bone being shown. A similar process can probably also occur in the vertebral column. Charcot's disease also may possibly end in ankylosis apart from any suppuration. Charcot himself has described a case in which ankylosis occurred in a tabetic foot. Three specimens were shown from the Cambridge Museum with ankylosis of some of the bones of the foot; there was no history accompanying them, but as the joint surfaces were unaltered and the ankylosis was due to ossification of ligaments, they were probably not cases of suppuration, but very possibly they were tabetic. Further evidence that ankylosis might be nervous in origin was found in a case where bony union occurred in an inter-phalangeal joint after injury of the median nerve in the forearm. Other instances of ankylosis without suppuration were to be found in gout, as shown by a specimen of the bones of a hand, in gonorrhœal rheumatism, and also in lateral curvature of the spine; this latter is decidedly common. A case of multiple bony ankylosis was described; it occurred after an attack of what was apparently rheumatic fever; all the joints of the lower limb became stiff, and at the patient's death it was found that the union was bony. In the spinal column in osteo-arthritis bony ankylosis is common, but it is to be noted that the fixation is really due to ossification of the ligaments surrounding the joints, without any interference with the joint surfaces themselves. Ankylosis may be reparative, as in pyæmia or tubercle, or it may be degenerative, as in tabes. As to treatment, four propositions may be laid down: 1. When bony ankylosis is likely put the joint in good position. 2. We possess no means of preventing it. 3. Passive movements, far from retarding bony union, seem even to favour it. 4. After it has occurred excision or osteotomy may be useful.

Mr. TARGETT said that the specimens showed well the difference between true bony ankylosis of a joint and ankylosis caused by ossification of the ligaments surrounding the joint (this latter being comparable to myositis ossificans). The most rapid forms of bony ankylosis were the result of pyæmia.

Mr. BOWLBY mentioned that in the case already referred to of injury to the median nerve most of the joints in the hand were ankylosed. He thought that joint changes were by no means rare in nervous diseases, and considered it probable that in the future it would be shown that osteo-arthritis was due to some nervous lesion.

Mr. BLAND SUTTON mentioned that it was not rare to find an ankylosed occipital and atlas, yet the cause was undetermined. Mr. Arbuthnot Lane had attributed them to pressure on the head, and so thought they occurred in costermongers. A similar condition he had found in the museum of the Veterinary College at Paris in the bones of oxen, and in this case it was probably due to their drawing loads by means of yokes fastened to their horns. Ankylosis by ossification of the ligaments of the spine was common in horses.

Mr. T. S. ELLIS (Gloucester) said that three names—hallux valgus, hallux rigidus, and hallux dolorosus—were applied to one and the same condition—viz., ossification of the metatarso-phalangeal joint of the great toe. If the great toe goes outwards above the other toes there is very much less pain than if it goes outwards below the other toes.

Mr. MARSH, in reply, said that the fact that many cases of ankylosis of the spine occurred in old people was no proof that they were not tuberculous; he had seen a case of angular curvature at the age of sixty-nine.

A Hitherto Undescribed Locality in the Male Urinary Bladder where a Stone may elude Contact with the Sound.

Mr. BUCKSTON BROWNE read a paper on the above subject. He said there were three well-known forms of vesicle pouch where a urinary calculus might lie and escape detection by any instrument introduced by the urethra; the first was the ordinary sacculus, the second a post-trigonal pouch, and the third a post-prostatic pouch. He had recently met with a fourth form, viz., a pouch situated between the enlarged lateral lobe of the prostate and the bladder wall. In his case the stone lay in such a pouch on the right side. Supra-pubic cystotomy was the only satisfactory method of dealing with such a case. Sometimes by dilating the bladder, and keeping an elastic ligature round the penis, it may be reached by the urethra.

Mr. MAYO ROBSON (Leeds) mentioned that he had had a case where a stone had lodged in a pouch between an enlarged prostate and the anterior wall of the bladder. Also in a case of supra-pubic prostatectomy he had found three calculi in a post-prostatic pouch.

Necrosis of Femur.

Mr. NEWMAN (Stamford) showed a specimen of necrosis of the left femur removed by amputation through the thigh in a patient who had been under his care for many years. Symmetrical necrosis had occurred of the popliteal surface of both femora, and portions of necrosed bone were removed. Recovery occurred, but after intervals of health other operations had to be performed, and ultimately amputation of the left thigh had to be done. Recovery followed. The specimen showed how very thin was the shell of bone which had supported the patient's weight for so many years.

The Surgical Treatment of Cysts, Tumours, and Carcinoma of the Thyroid Gland and Accessory Thyroids.

Mr. H. TRENTHAM BUTLIN opened a discussion on the Surgical Treatment of Cysts, Tumours and Carcinoma of the Thyroid Gland and Accessory Thyroids. He commenced by saying that of tumours of accessory thyroids he knew nothing; he had seen cases where tumours had occurred apparently separately from the thyroid gland, but on operation they had always been found to be connected with the gland. Of another portion of the subject also he could say nothing from personal experience, and that was with regard to the surgical treatment of malignant disease of the thyroid gland; he had never seen a case in which removal was possible; at a very early stage infiltration of the surrounding structures occurred, and this is equally true of carcinoma and of sarcoma. Malignant disease of the thyroid gland may occur at an early age; he had seen it as early as fifteen years in a boy. It is of course quite possible that malignant disease of the thyroid gland may be met with at a stage early enough for successful operation, but it must be very rare. As to cysts and adenomata, much progress has been made within the last few years, and now we know that most cases of partial enlargement of the thyroid gland are not true enlargements of the gland itself, but are due to the presence of separate cysts or adenomata in the substance of the gland, from which they are easily separable, as they are fully encapsuled. The operation performed now is very much simpler than formerly, as it is recognised that it is a separate tumour, and that therefore no part of the true substance of the thyroid gland need be removed. All that was needed was a simple incision down to the capsule, which was opened and the tumour shelled out; any bleeding vessels were tied, and a drainage-tube was introduced for the first few hours. The operation was best described by the name "enucleation." There are few complications of importance which may occur during the operation. One of these is hæmorrhage. In the out-patient room he saw a woman aged forty who had a cyst of the thyroid gland; he punctured it and fluid came out, at first clear, but rapidly containing more and more blood; a large quantity of blood was thus lost, and as the hæmorrhage showed no signs of ceasing a pad was put on; this completely checked the bleeding, but a few days later the patient returned and said that whenever the dressing was shifted bleeding occurred. She was admitted into the hospital and the cyst laid open; the hæmorrhage was now profuse, and the sac had to be plugged from the bottom. The patient completely recovered. Hæmorrhagic cysts are characterised by containing soft, vascular, intra-cystic growths. The chief objection to the operation of enucleation is the scar. It is always unsightly and may be very conspicuous, and so in young people it was desirable to avoid it if possible. The alternative operation is injection. The directions laid down by Sir Morell Mackenzie when he introduced this method of treatment should be carefully followed. He has used the method with success in many cases, and the

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scar left is almost indistinguishable. Failure may occur, or even death may follow (probably from thrombosis and embolism); paralysis of the vocal cords or diffuse suppuration; but all these results are probably due to the selection of unsuitable cases. Nothing can be more satisfactory than the injection of a cyst, and nothing can be worse than injection of the parenchyma of the gland. The cases to select for injection were cysts of moderate size with no intra-cystic growths, and occurring in young patients in good health. If the cyst is old and thick-walled it is not suitable for injection. A small amount of intra-cystic growth is probably no real hindrance to injection. The cannula on being introduced shows, by the escape of fluid, that a cyst has been punctured and not thyroid substance, so the injection of gland tissue need never occur. After failure by injection excision may be done.

Dr. W. W. KEEN (Philadelphia) said that the question of anæsthesia was important. He had recently had the opportunity of seeing a number of cases operated on in Continental Europe, and there he found that anæsthetics were hardly used at all for this operation; occasionally an anæsthetic was employed while the skin incision was being made, but then given up. Kocher said that the hæmorrhage was so very much less as the respiration was much less embarassed. Another surgeon when about to tie the thyroid artery talked to the patient to make him speak, in order to be sure that the recurrent laryngeal nerve was not being injured by the ligature. He had noticed also that the skin incision was transverse with slight convexity downwards; by this the scar is very much less noticeable. Another method of rendering the scar invisible was that introduced by Halstead of Johns Hopkins University—namely, subcutaneous suture by silver wire, which is made to pass from one face to the other of the wound without perforating the epithelium at all; another point in favour of this method was that septic micro-organisms in the skin are not disturbed. Hæmorrhage during the operation was often troublesome, and he had noticed how very careful Swiss surgeons were to arrest the whole of the hæmorrhage, even if not proceeding from a visible vessel. In cases of extirpation all the veins and arteries are systematically tied.

Mr. CHARTERS SYMONDS said that he had had forty-four cases of removal of portions of the thyroid gland without any harmful result; of these, twenty-nine were for adenomata and cysts. As to carcinoma, on one occasion severe dyspnœa had occurred, and in order to perform tracheotomy he had had to cut right through the new growth in order to reach the trachea. Practically no hæmorrhage occurred, and it was easy to open the trachea with the finger. For the enucleation of cysts he prefers a median vertical incision, as giving a better view of the whole of the tumour. Hæmorrhagic cysts contain intra-cystic growth. If the cyst when exposed is white or bluish no hæmorrhage will occur, but if it be purple hæmorrhage is very likely to result. Sometimes the wall is very thin and cannot be dissected out. In these cases, if the whole tumour be brought outside the wound the hæmorrhage ceases. With regard to anæsthetics, ether was used in two of his cases, and there was much hæmorrhage. Substernal cysts are very troublesome. He agreed with Mr. Butlin as to the value of injection in suitable cases, but acknowledged that it was by no means easy to determine which cases were suitable. The length of scar may sometimes be diminished by emptying the cyst before enucleating it; by this means a large cyst may be removed through an incision not much more than an inch long.

Mr. MAYO ROBSON (Leeds) thought that malignant disease of the thyroid gland must be very rarely suitable for operation. In one case of dyspnœa due to malignant disease of the gland he had employed intubation with success. In some cases of cyst the cystic formation seemed to be diffuse, so that it was impossible to remove the cysts individually, and it was necessary to remove half a lobe. With regard to anæsthetics, ether is bad, and he prefers in many cases to use no anæsthetic except for the skin incision. Tracheotomy may be needed during the operation for marked cyanosis.

Mr. JAMES BERRY remarked that though he had seen twenty cases of malignant disease of the thyroid gland he had never seen one which could be operated on. In the majority of cases of cysts and adenomata no operation is required and he considers that some very definite reason for operation should be present before any surgical treatment is undertaken; the symptom of most importance is dyspnœa. Of 36 cases in which he had operated, 31 were operated on for dyspnœa, 1 for dysphagia, 1 for an old suppurating sinus, and only 3 for deformity. Two classes of operations may be required, extirpation and enucleation. Enucleation is only advisable for a single well-defined tumour on one side only; but if many adenomata or cysts are present extirpation must be performed. The more nearly globular a tumour is, and the smoother its surface, the more likely it can be removed by enucleation. The most serious tumours are those situated low down behind the sternum. A cast was shown of a case where urgent dyspnœa was present, from pressure on the trachea of a thyroid tumour beneath the sternum, yet practically no swelling was visible in the neck.

Mr. C. B. KEETLEY said that he considered that early malignant disease was suitable for operation, as it was encapsuled for some time, but the difficulty was its early diagnosis. He had operated on three cases of enlarged thyroid without an anæsthetic, except for the first incision, and the operation was very well borne. He did not consider that drainage was required in any case.

Mr. A. E. BARKER had had two cases of malignant disease of the thyroid gland, in which he had operated. One was on account of a very large tumour which needed a skin incision of fourteen inches. Glands were involved, being traced down to as far as the apex of the pleura, and were removed; two years later another diseased gland was removed, and now—six years later—the patient was quite well. In the second case the whole of one scalenus anticus was affected with the growth and was removed with the tumour; the patient completely recovered, and no recurrence occurred.

Mr. JORDAN LLOYD (Birmingham) had met with two cases where enucleation was impossible, the tumours consisting of cysts and solid matter. He had also had two cases of very severe hæmorrhage. He did not consider the scar objection to be of much importance.

Mr. THELWALL THOMAS (Liverpool) had met with two cases of tumours occurring in accessory thyroid glands. With regard to the scar, he thought more attention should be paid to what have been called the "lines of cleavage" of the skin; an incision made along such a line always resulted in a smaller scar than one made across a line of cleavage; this, he considered, accounted for the increasing width of vertical scars in the neck.

Mr. R. C. CHICKEN (Nottingham) said that for cysts he never used any other method than enucleation. Isthmoidectomy he considered of value for cases of serious unilateral enlargements of the thyroid gland.

Mr. CATHCART thought that there were gradations in malignancy, and that this fact accounted for the different results of operation in malignant disease of the thyroid gland.

Mr. BUTLIN, in reply, said that a great objection to the transverse incision was the appearance of the scar, which was very suggestive of cut-throat. In an ordinary case the amount of blood lost during an enucleation was very small. He did not approve of puncturing a cyst before removing it, even to save some scar, as the operation of enucleation was much more difficult.

OBSTETRIC MEDICINE AND GYNÆCOLOGY.

THURSDAY, AUG. 1ST.

The Early Diagnosis of Malignant Disease of the Uterus, and the Treatment by Partial or Total Excision.

Mr. J. KNOWSLEY THORNTON, Consulting Surgeon to the Samaritan Free Hospital, opened a discussion upon this subject. The speaker stated that he considered it to be his duty to give his own practical experience and the views founded upon it, and not to attempt a *résumé* of the work of others, but merely to give a lead to the expression of their experience, he appealed strongly to the general practitioners to take more note of the trivial departures from healthy normal menstruation, and insisted on a demand for early internal examination. He pointed out that it is in their hands and not in those of the consultants that advance in early diagnosis lies, and he appealed to them when they are only suspicious to lose no time in getting their suspicions confirmed or dispelled by consultation with someone of greater special experience than themselves. In answer to the question, What is cancer? he briefly described some of its most reliable symptoms and discussed the propriety of removing small

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portions for microscopical examination. He then classified the various forms of malignant disease which attack the uterus, and passed on to the method of treatment suitable for each variety. He advocated supra-vaginal amputation of the cervix for adenoma and epithelial cancer of the vaginal portion, and pointed out that to remove the uterine body is useless in most of these cases. He then described the operations of supra-vaginal amputation of the cervix and vaginal extirpation or hysterectomy. He discussed Williams's view that a fresh outbreak after years is not a recurrence but a new appearance of disease in a patient liable to develop it, and pointed out the importance of this theory on the extent of operation advisable. He concluded with a brief discussion of the points that should guide in the selection of cases as suitable for one or other of these operations, deprecating operation in hopeless cases, and insisting that the sound rule of surgery, only to operate for malignant disease when it can be efficiently and entirely removed, should be rigidly applied.

Professor MARTIN (Berlin) did not think that symptoms alone (such as pain, altered secretion, or even bleeding at the climacteric) could settle the diagnosis in a doubtful case. In Germany microscopic examination alone was relied on, but it required extreme experience and education in the microscopic anatomy of the uterus to say what was really malignant. If the diagnosis was not plain he would let the case alone. He had been struck on a visit to Italy last year by the fact that when the uterus was removed even in the most suitable cases there had been recurrence, so that in that country the question of operating at all in cancer was at present *sub judice*. He objected to the supra-vaginal operation, because in his hands all the cases so done had recurred. Further, adenoma of the cervix was rare, while nearly all cancer cases were epithelial. In cancer of the breast the surgeon removed not a part, but the whole of that organ; the same practice should apply to the uterus. If the disease had also appeared in the vagina he would remove it if possible and then the diseased uterus; but if the lateral ligaments were involved he would do no radical operation. As to the complete vaginal hysterectomy, the results in Germany of the immediate operation were assured. The mortality was only from 4 to 10 per cent. He recommended the use of the hot cautery to destroy any slough before doing the radical operation. They had recently in Germany had cases in which they had performed the abdominal operation and removed affected glands as high as the bifurcation of the aorta.

Dr. POZZI (Paris) said if cancer was diagnosed either in the breast or uterus the proper line of procedure was to remove the whole organ. The reason why the total extirpation of the uterus was not done formerly so much was because the early results were bad. Now the *technique* was improved, the results were better, and the same line of surgical treatment should be applied both to the uterus and to the breast. The supra-vaginal operation was, in his opinion, a difficult one, it was a long one and tiresome to the operator, and was often attended with hæmorrhage. If done before the menopause it might be attended with atresia of the cervix and distension of the tubes. He had seen three cases of hæmaturia and hæmato-salpinx follow the supra-vaginal amputation, in each of which he had to perform an abdominal operation for their removal. The great point was to operate early. The method might vary; and, for himself, he was using forceps now more than formerly. With forceps he had often performed the operation in less than ten minutes. His advice was to operate when the disease was limited exactly to the uterus or upper part of the vagina. If the disease had extended to the lateral ligaments he would not do the radical operation. He would formulate his rules for operating in this way: when the uterus was mobile—in other words, when it could be easily pulled down—the operation was an easy one for the surgeon and a good one for the patient. On the other hand, if the organ could not be pulled down it was both a difficult and a bad operation. In cases in which the total extirpation could not be done he would curette and cauterise with the old hot iron of Baker Brown, not the Paquelin (which acted too superficially). This plan prolonged life and could be repeated if required. He believed, no matter what operation was done, there was recurrence in three, four, or five years. He never saw a case lasting longer than three years without recurrence, but in the interval the patient had health and comfort. In a word his views were: operate by total extirpation in the early cases, and in the advanced curette and burn.

Dr. LUSK (New York) was bound to say his experience was that when the disease was in the cervix, even after total extirpation, it recurred rapidly. He was inclined to go back to the high partial operation. In the advanced cases he liked the plan of scraping out the disease and then packing the cavity with chloride of zinc solution (four to six drachms to the ounce). After the slough came away there was a clean granulating cavity, even in cases usually rejected.

Dr. SCHARLIEB emphasised the great importance of impressing on women the mistake of neglecting suspicious symptoms—as, for example, hæmorrhage occurring at the menopause. Women must be taught not to regard this as a normal phenomenon, as they too often did. Further, they as medical practitioners must all pay far more attention to early diagnosis, and students should be better educated practically in this direction in the methods of examination.

Professor MURDOCH CAMERON (Glasgow) said his experience was that many women thought they had cancer who really, on examination, were found not to have this disease, while those who came with malignant disease were, in the vast majority of cases, too late for operation.

Professor JAPP SINCLAIR (Manchester) said the diagnosis was more difficult in cases before than after the menopause. In lacerations of the cervix certain changes sometimes took place, and in such circumstances the diagnosis was very difficult. He mentioned a test he had found very useful in the diagnosis of cancer. If the operator used a sharp spoon in the early stage of epithelioma of the cervix he could scrape away the tissue, as it was friable, and a cavity was left. In a non-malignant case—say, hypertrophy—an excavation will not be caused; there may be bleeding, but no friable tissue will come away. The supra-vaginal operation was not justifiable before the menopause, as it did not cut off the blood supply and did not bring about quiescence in the pelvis. The total operation was simpler than the supra-vaginal amputation. He had himself a run of thirty cases with no death, and indeed with no anxiety. He preferred the ligature, as he thought less blood was lost in this way. He sutured the peritoneal flaps and put an indiarubber drainage-tube at one side. He thought the drawback of not suturing the peritoneum was that pressure caused sloughing, and there had been cases of vesico-vaginal fistulæ and obstruction of the bowels.

Dr. PLAYFAIR said Mr. Thornton had advised the most reaching surgical method when the disease could be diagnosed. In his (Dr. Playfair's) opinion the partial operation was not the most reaching plan. He regarded the partial method as an unsurgical operation. He said if in a case of cancer of the breast the surgeon removed the whole organ, why in malignant disease of the uterus should the gynæcologist be told to do a partial excision of that organ? It was strange that England was the only place where the partial method of operation is still performed by some. He thought this was due to the fact that in former times total vaginal hysterectomy was attended with a high mortality, but now that the death-rate had fallen to 5 per cent. this argument could no longer apply. While microscopic examination was of value when the disease was advanced, he was suspicious of its utility in the early stage.

Mr. J. W. TAYLOR (Birmingham) thought more time must be devoted to the pathology of the uterus before they could rely on microscopic examination. He had two cases which the microscopists said were malignant, but the subsequent history was against this view. He thought a good rule to follow was to regard any case with suspicion in which examination caused bleeding. Total vaginal extirpation he regarded as the best operation.

Dr. CAMPBELL (Belfast) also advocated the total removal of the organ in uterine cancer.

Mr. BOWREMAN JESSETT could not regard the microscope as reliable. The supra-vaginal amputation was not always an easy operation, it was sometimes attended with bleeding. He had 4 per cent. mortality, which was half that of total excision. He used ligatures.

Dr. W. DUNCAN pointed out the importance before operating of making a rectal examination to see whether the utero-sacral ligaments were infiltrated or not, as they might be when bimanual examination conveyed the sensation that the uterus was quite mobile. No operation should be done if these ligaments were infiltrated. At the Obstetrical Society some years ago (1885) he had advocated in a paper the partial operation, but he had since then, owing to the

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improved technique, changed his views, and he now advised total extirpation, which had been shown to have a mortality of from 4 to 10 per cent. He thought ligatures safer than forceps.

Dr. SMYLY said those who had attended Professor Martin's Clinique in Berlin knew that the microscopic examination was done in a most thorough way at the same time and conjointly by his assistant, who had a special training and knowledge of the microscopic pathology of the uterus. He (Dr. Smyly) advocated the total operation, which he performed. The question of special importance now was whether cancer was inoculable or not. He thought, acting on the theory that it might be inoculable, the wise course was to use the cautery before removing the uterus. In this way the cut tissues were protected from contact with the cancer structures.

Dr. DONALD (Manchester) spoke of the value of the test mentioned by Dr. Japp Sinclair, and advocated total extirpation of the uterus in cancer. He used chromic gut, which he cut short.

Dr. H. R. SPENCER agreed with Mr. Thornton that the supra-vaginal operation was the better one. It was without danger in skilled hands, and they must remember that when recurrence took place in such cases it was in the broad ligaments. He thought the operator should be his own pathologist.

Dr. A. J. SMITH (Dublin) said in his opinion an objection to the partial operation was that in cases in which total excision had been done, the disease being supposed to be limited to the cervix, when the uterus was examined after removal in some of the cases malignant disease was found in its body. To his mind, the great difficulty was in the diagnosis of adenoma and hyperplastic endometritis from cancer, especially if there was a diffuse uniform intra-uterine swelling. He thought the use of the microscope of great value in the diagnosis. If after dilatation of the uterus he found a circumscribed outgrowth he removed a portion and had it carefully examined by a microscopist, and if he pronounced it malignant he removed the organ. The cases in which the growth in the interior of the uterus was diffuse required very careful watching. He advocated total excision, and he used the cautery, as he believed in local inoculation.

Dr. AMAND ROUTH spoke of the value in diagnosis of the impression conveyed to the finger. At the Samaritan Hospital they had only about seven or eight cases in the year that they could operate on radically.

Dr. MORE MADDEN, Dr. HAYES, and Dr. HEYWOOD SMITH also spoke in the discussion.

Mr. KNOWSLEY THORNTON, in his reply, said the discussion had confirmed him in his opinion of relying less on the microscope and more on the clinical diagnosis. As to the question of partial and total extirpation, they must remember that the disease spreads from the cervix into the broad ligaments and not into the body of the uterus. He denied the analogy between the heart and the uterus. His own personal experience (and in this discussion it was that which he gave) was that in supra-vaginal amputation he had no deaths, and in the after-life history he got the best results. As to the question of removing the tubes, in two cases of cancer of the body of the uterus which he had removed he left the tubes and the patients are still well. He would not, as a rule, remove the ovaries. As to the technique of the supra-vaginal amputation, he thought the special point was the securing of the uterine arteries, after which the risks and difficulties were much less. As to the after-life history he was suspicious that sooner or later patients too often died with a recurrence of the disease in some part of the body. His objection to forceps was the risk of sepsis from sloughing of tissue grasped in their blades, and in their removal there was the risk of breaking up tissue, which decomposed and gave rise to septic absorption.

PUBLIC MEDICINE.

THURSDAY, AUG. 1ST.

Hospital Isolation, House Quarantine, and Disinfection.

A discussion on this subject was opened by Dr. PHILIP BOOBBYER, medical officer of health of Nottingham. What is chiefly required, he thought, at the present time is more uniformity of action and aim on the part of public authorities with respect to all matters affecting the isolation and disinfection of the infectious, sick, and convalescent. Large and expensive hospitals are now provided, or in course of being provided, in most inhabited districts, but all that relates to their administration is in many cases practically left to the discretion of two or three persons, who have nothing more reliable to guide them than their own often original and independent notions of what they should do. Single hospitals have in some instances been built to meet the requirements of very wide surrounding areas. It will often be a matter of difficulty, as Dr. Thorne and others have pointed out, to secure the removal of patients from their distant homes to the central hospital; but this difficulty will be increased to an insuperable degree if—as we hear in many quarters to be the case—a charge is to be made for admission. There is still much to be said in favour of local hospitals for the more isolated inhabited spots in large districts—say, for such as are over twelve miles from the central hospital. These small hospitals should be permanent structures, but could be closed when not in use, and opened at short notice when required, with the nucleus of a staff drafted from the centre, where a permanent establishment should be maintained. There can be no doubt that a reliable and authoritative memorandum advising authorities upon all points in connexion with isolation and disinfection is much needed. Plenty of excellent data exist, but they require to be codified in order to render them accessible and intelligible to those who have little opportunity of finding and digesting them in their present scattered and fragmentary condition. More uniformity is required in the lists of diseases for which isolation is professedly practised in various parts of the country. The time has probably come when public authorities might, with advantage, be advised respecting the nature and degree of benefit to be expected as a result of isolation, disinfection, and other kindred precautions in the case of particular diseases. A revision is certainly necessary of much that has hitherto been taught respecting the criteria for estimating the continuance or decline of infection, and the actual seat, or at any rate the principal seat or seats, of infection, in all stages of certain diseases, as, for example, small-pox and scarlet fever. Small-pox was on one occasion found by Dr. Boobbyer and some friends of his to have been conveyed by an erupting patient who a few days later in the scabbing stage appeared by strong negative evidence to have been incapable of communicating the disease. Scarlet fever, again, is often apparently propagated by a person whose skin is perfectly clear and normal, but whose naso-pharynx continues affected. The same disease also frequently fails to spread from an actively desquamating patient (though surrounded by susceptible persons) if the mucous surfaces have only been slightly invaded. The points of danger must be determined before personal disinfection can be effectively practised.

Dr. H. J. SPOTTISWOODE CAMERON (Huddersfield) said he hoped Dr. Boobbyer was not going to propose to hand medical men over to some central authority who would be empowered to dictate to them. With regard to the prevention of infection he laid stress on the necessity of making the isolation of the patient complete by removing all infected articles. Quite recently a return scarlet fever case occurred in Leeds. After the return of the isolated patient it was found that a doll which the first patient had played with at the commencement of her illness had been carefully put away till her return. It was given her when she came back, and her little brother who helped her to play with it developed scarlet fever himself. It was not necessary to insist upon the completion of desquamation before the patient returned, but catarrhal conditions of the pharynx, nose, &c., were occasionally overlooked, and mischief resulted. The necessity of isolating enteric fever in hospital was not very generally recognised by the profession. Even professional nurses had been known to treat discharges from such patients very inadequately. A little strong carbolic acid poured over a motion and washed away from it by the flush of the watercloset had been regarded as disinfection. The drains of a town ought never to become infected by typhoid fever. This could only be effected by keeping such imperfectly sterilised motions out of them. Few towns had adequate provision for the isolation of diphtheria; some general hospitals admitted such cases. If the stir which was being made as to the infectiousness of this disease was at all justifiable, surely authorities ought to provide for the isolation and treatment of this terrible disease. It should be remembered that cases were taken into hospital first to treat them, and secondly to protect the public. It was not right to remove patients from their homes under a magistrate's

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order unless they could be provided with ample air space and other comforts.

Dr. BARWISE (Derby), speaking with reference to the advantage of a large central isolation hospital, said that it would be much cheaper to administer and build than a number of small ones. He could not agree with the suggestion that a five-mile radius should be the extent of an isolation area. It should be at least eight miles, and patients had been safely moved for twelve miles.

Brigade-Surgeon-Lieutenant PRINGLE expressed the opinion that small-pox hospitals were one of the greatest pests of civilisation. If it was necessary to compulsorily segregate every man, woman, and child it was the duty of medical men to see that they had every possible comfort, and that was the only way that confidence on the part of the public could be promoted.

Dr. RICHARDS (Birmingham) continued the discussion.

Dr. FRASER (Chelmsford) described a new apparatus for disinfecting blankets by steam.

Dr. CAVERHILL (Edinburgh) described the use of portable hospitals in Perthshire.

Dr. GOODALL dwelt upon the necessity of cleanliness on the part of nurses and ward servants and the adequate provision of space in the wards.

Mr. GROVES (Bournemouth) referred to the difficulty of getting district councils to expend money in erecting proper hospitals. He advocated the system of one central hospital, and did not see how the case of a patient comfortably placed in an ambulance could be prejudiced when taken six or ten miles any more than if he were taken one.

Mr. HUGH SMITH (Farningham) thought a patient could be removed for from ten to twelve miles without detriment to his case.

Dr. OGILVIE GRANT (Inverness) said he had known a patient to be carried twenty or thirty-five miles without harm.

Dr. BOND (Gloucester) concluded the discussion, and in his reply Dr. BOOBBYER said he was very far from recommending the erection of a central hospital for every individual locality; but in some cases—a colliery district, for instance—considering the facilities there were for the spread of epidemic disease, it would be almost impossible to remove ten to thirty patients a distance of twenty miles. What was required at the present time was instruction, and a great deal of the divergence on important matters of treatment and administrative work was due to lack of information ready to hand. The matter of house disinfection was one in which considerable instruction was desirable at the present time.

The Diagnostic Value of the Diphtheria Bacillus.

Dr. KLEIN, Lecturer on Physiology at St. Bartholomew's Hospital, then read a paper on the above subject. He commenced by laying down the proposition that in the majority of doubtful cases it is possible to decide whether the case is one of diphtheria if in the secretion or membranous exudation of the affected mucous membrane the bacillus diphtheriæ or the Klebs-Löffler bacillus is demonstrable, and that this bacteriological diagnosis is in most instances verified by subsequent events. Those who have had experience, he said, in examining the false membrane of true diphtheria cases, that is, of cases which from a clinical and epidemiological point are at once recognised as such, agree that in some of these cases the superficial layers of the necrosed mucous membrane—that is, of the false membrane—contain large numbers, occasionally in almost pure culture, of one and the same species of bacilli, aggregated in larger and smaller masses, separate, but more often grouped together. These are the Klebs-Löffler bacilli. A second group comprises cases which in clinical and epidemiological respects are undoubted diphtheria, which can be traced to an antecedent case of diphtheria, and in which the membrane or muco-purulent secretions contain a very variable number of the diphtheria bacilli; but they contain at the same time a very large number of other microbes which on cultivation prove to be chiefly cocci, staphylococcus aureus and albus, small streptococci, and chains of larger cocci. In these cases the number of diphtheria bacilli may be sufficiently large to be identified by their shape and grouping and to be easily recovered by culture, or they may be so limited as to be only identified by culture; but even then the chances of identification are not great if the bacilli are practically swamped by cocci—notably, streptococci; in these cases only after careful and extensive searching can the colonies of diphtheria bacilli be discovered, and I am under the impression that it is such cases which have given rise to the opinion occasionally expressed that in some diphtheria cases no diphtheria bacilli have been found. The third group of cases are those in which no obvious antecedent connexion can be established and in which the clinical history does not enable one to make a diagnosis. It is obvious that it is precisely in these cases that correct diagnosis is of the utmost importance. Now, if from the secretion of the fauces (in cases of faucial inflammation, follicular tonsillitis) or from the nose (in cases of rhinitis) diphtheria bacilli can be isolated, then the case must be pronounced to be one of diphtheria. In some such instances, and in conformity with other observers, I have found the diphtheria bacilli at an early stage, and the diagnosis was confirmed by subsequent events—namely, other cases of true membranous diphtheria followed in the same household, and the first individual developed afterwards symptoms of paralysis. Owing to the scarcity of bacilli in some such cases the diagnosis becomes sometimes extremely difficult. These cases are obviously of importance both to medical officers of health, as also to those who ask help from the bacteriologist In such cases occasionally, only by cultivation, and then only by very extensive searching, can colonies of diphtheria bacilli be discovered. In those cases in which, owing to the presence of a great number of other bacteria, chiefly cocci, the ordinary methods of tube cultivation are likely to fail in yielding evidence of the presence of the diphtheria bacilli, the following methods of culture seem better adapted for demonstrating the diphtheria bacilli. If on the examination of stained cover-glass specimens of the membrane or other secretion no definite evidence can be obtained of bacilli morphologically resembling the diphtheria bacilli, and if there are present large numbers of cocci and other microbes, agar plates are made in the following manner. Sterile bouillon agar in a tube is melted over the flame, and then poured out into an ordinary sterile plate dish; after the agar has set a piece of the membrane or secretion is rubbed, by the aid of a platinum loop, gently over the solidified agar surface in the whole extent of the plate dish, and the plate is incubated at 37° C., lid downwards. Next day the surface is found covered and bestrewn, as it were, with minute colonies—in many parts they are so numerous as to lie very close together; now all these colonies are on the surface, none in the depth, because the sowing has been performed on the surface of the agar already set. In an ordinary agar plate—that is, when the melted agar is inoculated, shaken, and poured out into a plate and allowed to set—a good many colonies, of course, come up in the depth and only a fraction on the surface, and it is these latter only which can be subjected to further microscopic and cultural examination; those in the depth are practically lost for such examination. Cultivations on the surface of agar or serum contained in tubes offer likewise great difficulties if very numerous colonies are present, because if amongst a crowd of colonies only a limited number of diphtheria colonies are present these obviously are easily overlooked.

Now these difficulties are overcome by the above surface agar plates, for in these almost every colony can be subjected to microscopic examination. Provided the sowing has been done by lightly rubbing the material over the surface of the agar in the plate all colonies are easily taken off by pressing against the surface of the agar a cover glass, that is, making impression preparations on a series of cover glasses from the agar surface, if necessary from the whole surface; the cover glass impressions are dried and stained; each is found covered with great numbers of dots, each dot being a colony. Subjecting the dots on the cover glasses to an examination with a power of 150 to 300, those that are made up of cocci can be easily distinguished from those made up of bacilli, and each one made up of bacilli can with high powers be readily identified as a colony of diphtheria bacilli by the shape and arrangement. Such plates, after having been used for impression specimens as above, are of no further use; but I think anyone with a little experience could recognise, when examining the agar surface with a magnifying power of 100 to 150, whether a colony is composed of diphtheria bacilli, and if so could under a simple microscope make sub-culture from such a colony. Lastly, there are cases of sore throat and membranous exudations in which even on most careful search no diphtheria bacilli can be recognised by culture. The purulent and membranous exudation in these cases is in morphological respects somewhat different from the true diphtheritic false membrane, inasmuch as it is composed of leucocytes

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only; it does not contain the reticulated fibrinous matrix constituting the true diphtheritic false membrane; besides, in the former, when examined in the fresh state by means of films, the microbes, though sometimes comparatively limited in number, consist chiefly of cocci, and cultivations do not yield diphtheria bacilli. The cocci chiefly present in these cases are staphylococcus aureus and albus, and particularly streptococci. Such cases are recognised now as cases of pseudo-diphtheria or cocco-diphtheria, though in clinical respects they are not distinguishable from mild cases of diphtheria; as regards their sequelæ they are not difficult to distinguish from true membranous diphtheria, and, as stated before, they do not contain the true diphtheria bacilli. The culture test is also of importance in respect of the disappearance of the diphtheria bacilli from the previously diphtheritically affected mucous membrane or with regard to the presence or absence of these bacilli in the throats of persons that have been attending on, or have come in contact with, diphtheria cases; for if on diligent search by cultivation the bacilli cannot be demonstrated, it may be assumed that they are not present, though one should not be satisfied with a single examination. On the whole, then, the microscopic examination and culture test alone will be found to supply a valuable help in diagnosis, and where necessary it may be effectually controlled by animal experiment.

Dr. HERMANN BIGGS, Pathologist and Director of the Pathological Laboratory, Health Department, New York, discussed the same subject under three heads: (1) he recommended the examination of the throats of healthy persons who had been in contact with diphtheria, or who were inmates of institutions in which diphtheria prevailed, these examinations to be made with relation to prophylaxis, both with a view to the isolation of those in whose throats the diphtheria bacilli were found and to the immunisation with diphtheria antitoxin; (2) he recommended also examinations in cases of throat inflammations for diagnosis; and (3) examinations should also be made at short intervals during convalescence from diphtheria to determine the time of disappearance of the diphtheria bacilli from the throat. In connexion with this discussion he described briefly the methods employed by the New York City Health Department in making these examinations and the technique of the laboratory work. The paper was founded on experience gained from the examination of about 25,000 cultures by the New York City Health Department.

Dr. GOODALL (Eastern Fever Hospital), referring to Dr. Klein's paper, thought it unwise to use the term "pseudo-diphtheria" in cases where a bacteriological examination did not show the diphtheritic bacillus, as it would only give rise to confusion. He wished to ask Dr. Klein whether he had come to any conclusion as to the value of the short variety of diphtheritic bacillus. In regard to the value of a single cultivation, there were a number of cases in which no bacillus could be discovered. This, he thought, might in some way be caused by the method of making this cultivation, whether a swab was used or a platinum wire.

Dr. UNDERHILL wished to know what was the position as regarded notification where there was a total absence of clinical evidence, but where a bacteriological investigation showed the bacillus to be present.

Dr. KLEIN said when the bacilli are present it was perfectly justifiable to diagnose the case as one of diphtheria independently of their length. The virulence did not bear any relation to their length as far as his experience went. Roughly speaking, there were two varieties—one formed small transparent colonies and the other large opaque colonies. Each of these varieties were easily transmitted into the other, but as far as our present knowledge went it was impossible to say whether there were really two distinct varieties. There was no doubt that the use of the swab did make a difference, but he always used the platinum wire. Of course, if a physician sent the swab the best use had to be made of it, but he preferred a piece of membrane or a simple scraping from the tonsils, mucous, &c.

Dr. HERMANN BIGGS here introduced the subject of the value of antitoxin. After quoting some American statistics he concluded: "By the use of antitoxin it has been possible to completely stamp out diphtheria in four great institutions for children in which it was prevailing in epidemic form. In no instance has there been, so far as can be determined, any serious results from the administration of the remedy for this purpose. The duration of immunity is apparently no more than thirty days in many cases."

Dr. GOODALL thought, on the whole, there was no evidence to show that antitoxin had an immunisating power extending over a few days at least.

Dr. NEWSHOLME read a paper on the Extension of the Notification Act, in which he advocated the extension of the schedule of notifiable diseases.

PSYCHOLOGY.

THURSDAY, AUGUST 1ST.

Insanity in Relation to Criminal Responsibility.

The discussion on Insanity in Relation to Criminal Responsibility was introduced by Dr. MAUDSLEY in a paper of great interest, and characterised by breadth of view and vigour of expression. He alluded at the commencement to the repeated attacks that had been made on the law as it at present stands, and especially on the legal criterion of responsibility, which, he said, rested on an unscientific basis, and had been condemned from time to time by eminent judges. Few men, he said, having practical knowledge of insanity would assent to the proposition that an insane person is fully responsible for what he does when he knows the nature of his act, and that it is a wrong act. The sufferer may be tormented with an impulse to do what he knows and loathes as wrong, an impulse so strong that in former times it seemed only explicable as a positive possession by the devil. Yet their theory would have enacted from the man possessed by the devil and dispossessed by himself that he should possess himself all the same and master the devil in him, or else be punished for the devil's doings. We still act in the same irrational way, only substituting disease for devil. The test, he believed, is founded in wrong observation and bad psychology, observation of sane feeling as a measure of insane, and the assumption that reason is the motive force of human action. Reason cannot always control the desire when it knows its good or bad quality, and can appreciate the right or wrong of it. Sir James Stephen would have us say that if a man cannot control himself he does not properly know the nature of his act. Such a test could cut in different directions; it might prevent a madman from being punished for a crime which not he, but his madness, had done, or it might get him hanged for being mad. The test is too metaphysical, even if it were true. Its effect is to bias the judgment of the jury by a prejudgment of facts, and it is a procedure of doubtful legality, inasmuch as it enables the judge to lay down a particular test of disabling mental disease. For are not all the symptoms of mental disease and all the tests of its existence, and of its degree of existence in a particular case, properly facts for the jury? If so, then the imposition of a special test is an interference with the province of the jury and prejudicial to a fair trial. The court could, however, give help to the jury, if it were so minded, by taking means to inform the jury concerning the nature of the particular form of mental disorder in question and the extent of its damaging effect on the mind; or by providing impartial and competent scientific evidence, or by appointing an assessor to appraise the value of conflicting scientific evidence, as is done in a question of navigation. In short, these charges against the present system are: (1) that the court has no more right in law to set up a special test of responsibility in a case of mental disease than to set up a particular chemical test in a case of poisoning; (2) to do this is to give important evidence to the jury without permitting the evidence to be cross-examined or contradicted; (3) the evidence so given is bad, for the test is wrong in fact and based on unsound psychology; (4) it can be made decently workable only by construing it in an unnatural sense and ordaining that words which say one thing clearly shall mean another thing obscurely; and (5) the court makes no provision to secure impartial scientific evidence, but requires or allows the parties in the case to ransack the medical highways and byways in order to obtain contradictory evidence with which to confound a jury ignorant of its meaning. What actually happens now is a condemnation of the present system, for after a person about whose mental state there is some doubt is condemned to death, then competent medical knowledge is summoned to give the impartial help which should have been given at the trial—to undo privately what has been done publicly; and in certain cases medical examination is made into the mental state of an accused person, and he is

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sent to an asylum and robbed of his right to be tried by a jury. From the legal standpoint the present system is open to criticism. Lawyers think medical men are too ready to discover insanity, and from the conflicting evidence which is brought in a given case—much of it worthless, and which would be rejected by an assessor—they are apt to think that there is no such thing as exact medical science or exact medical honesty. The habit also of discussing responsibility in relation to insanity in the abstract justifies legal criticism, for insanity is no definite and constant entity. Dr. Maudsley then went on to protest against the lamentable extravagances of the latest school of criminology, which "may make the vulgar stare, but make the judicious grieve." A criminal nature which is degenerate is one thing, but to say that all criminals are degenerate and bear the stigmata of degeneracy is another, and a false, thing. Crime should not necessarily be degeneracy. A murderer might be a nobler animal than a Pecksniffian saint, and a murderer on a sufficiently large scale is considered by some a hero. External circumstances must be taken into account in relation to criminals; and in regard to degeneracy, much has lately been done to rob it of definite meaning by stretching it to cover all sorts and degrees of deviation from an ideal standard of thinking and feeling; deviations that are no more serious marks of degeneration than long legs or short legs, long noses or short noses. Words and theories, he thought, should be swept away, facts only regarded, to end the conflict between law and medicine. As witnesses medical men have nothing to do with the right or wrong of the law, although as citizens they may criticise it. The legal test of responsibility has been criticised and condemned for years, but it is not abandoned. It has been condemned by the best, magnified only by the worst judges. The late Sir James Stephen had interpreted it in such a way as to include practically all that medical men ask for. If it really includes (1) knowledge of the nature of the act, (2) knowledge that it is wrong; and (3) control of conduct; it is a pity that all judges do not understand it properly, and that he himself did not take steps to have it tested. Perhaps, although direct and thorough in thought about some things, still in legal matters he loved the good old way of the English mind—to keep the old names when the meaning had been taken out of them, or a new and perhaps opposite meaning put into them, to accept the gradual dissolution of the substance of a belief so long as the label of it was left intact.

Dr. NICOLSON uttered a warning against any alteration in the present law without due consideration.

Dr. URQUHART thought it would be best to have a case referred to the Court for Crown Cases Reserved.

Dr. MERCIER denied that any actual injustice had been done under the present system.

Dr. WEATHERLY said that if justice is done it is only done in the condemned cell, and after the injustice has been inflicted. All judges should have full medical evidence, and it should be remembered that there are many cases, not capital, in which the plea of lunacy should be urged.

Dr. NORMAN KERR remarked on the law as affecting cases of alcoholic insanity.

Dr. SAVAGE alluded to the dangers of the new school of criminology, and stated that all the facts in reference to insanity should be brought out at the trial, and not, after sentence has been passed, on reference to the Home Secretary. It should also be brought out whether the crime is related to the insanity. Although a man was insane enough to believe that the moon was made of green cheese it would be no excuse for his murdering his grandmother.

Dr. CLOUSTON held that actual injustice was committed in condemning a man to death for a crime committed when he was insane, and referred to the more reasonable methods prevalent in Scotland. He protested against the depreciation of criminology as a science. No doubt various absurdities were perpetrated in the name of criminology, but he held that as a science it was capable of much development and usefulness.

Dr. SHUTTLEWORTH referred to the difficulties arising in the case of crime committed by persons of defective development.

Professor BENEDIKT referred to the place alcoholism and sexual perversion occupies in reference to crime.

Dr. YELLOWLEES expressed the opinion that insanity is a matter of degree and that there is such a thing as partial insanity, which should be recognised.

Dr. USHER referred to the mode of procedure in Australia.

Dr. OSCAR WOODS and Dr. DOUGLAS also spoke as to the unsatisfactory character of the law as at present administered.

Dr. RAYNER suggested that a question should be addressed to the Home Secretary in Parliament in reference to each case as it occurred.

Dr. MAUDSLEY briefly replied to the effect that injustice is undoubtedly done by a parade of justice, and urged the abandonment of the right and wrong test.

The Operative Treatment of Idiocy.

Dr. SHUTTLEWORTH read a paper on this subject, in which he expressed a strong opinion against operative measures being undertaken in cases of microcephaly. The premature synapsis he regarded not as a cause of the brain defect, but as an associated defect or perversion of development. In certain cases of local epilepsy and in some cases of hydrocephalus operation might be indicated, and it might also be justifiable in certain cases of congenital syphilitic brain disease.

Dr. FLETCHER BEACH expressed agreement with Dr. Shuttleworth's view that craniectomy is useless for the relief of microcephalic idiocy. He thought, however, it might be useful in some traumatic cases and in cases of hydrocephalus and hypertrophy of the brain.

Dr. TELFORD SMITH referred in a few words to one of the cases related by Dr. Shuttleworth. In this case no less than five operations on the skull had been performed by Professor Horsley. The patient was now less restless and more obedient, but an undoubted idiot, and what improvement was manifested was not more than would be expected as a result solely of the educational treatment that has been employed.

Dr. SHUTTLEWORTH briefly replied.

Insanity of Conduct.

Dr. SAVAGE next read a paper on Insanity of Conduct. He pointed out that there is often more disorder of the conduct than of the speech or writing in the insane. An act may be a symptom of insanity apart from any apparent intellectual defect, but the law takes little cognizance of this. Greater latitude should be given in certificates for the history of insane actions. Moral insanity has a real existence and is a division of the insanity of conduct. Insanity of conduct is seen in some so-called hysterical cases, and the case of a girl was quoted whose insane conduct consisted in the writing of numerous anonymous letters to friends and acquaintances, and also to herself, presumably to divert suspicion, while all the time she was following an apparently normal and correct course of life. It is also seen in poets, inventors, and in many geniuses as a stage of other mental disorder, as mania or melancholia, in degenerative or senile states, and as a result of chronic insanity. It may also occur with some form of so-called monomania, such as kleptomania. On the other hand, there are certain persons whose conduct is perfect, and yet who are defective intellectually, as in the case of a young man of good family, whose outward appearance and conduct were irreproachable, yet who was totally unable to learn to read or write.

Dr. CHARLES MERCIER, who was associated with Dr. SAVAGE in this paper, gave an account of the case of a man who had had a brilliant university career, who afterwards attained a distinguished eminence in his profession, filling several appointments with ability and success, and giving evidence of the possession of exceptional intellectual attainments. At length something happened which compelled him to retire from his profession, and he now eschewed entirely the society of his equals in social standing and lived in a solitude relieved only by the companionship of the family of an old servant, and broken by occasional outbreaks of debauchery and the grossest sexual perversions and excesses. It was impossible to certify him, but after one of his debauches he was in a condition to be certified, and was admitted on an urgency order. The magistrate, however, refused to make a judicial reception order, the signs of insanity due to drink having meantime disappeared. Subsequently he became the subject of an inquisition in lunacy and there being no real opposition on the part of the patient, whose only alternative was a conviction at the Old Bailey, the Master in Lunacy found him insane. His insanity was shown in his conduct, also in the matter of letter writing. This was successively and unnecessarily voluminous; he filled sheets with descriptions of the most obscene and revolting character, and even after he was the prey of blackmailers he allowed letters to come into their hands which increased and strengthened their hold

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upon him, and he placed himself entirely under the care and direction of a young lad. Besides being manifested in such cases, the insanity of conduct, Dr. Mercier said, is also shown in such cases as those of imperative ideas described in a paper of the late Dr. Hack Tuke, and in conclusion the following propositions were stated for debate: 1. That there are cases in which insanity is evinced by conduct and cannot be established from mental disorder alone. 2. That there are cases in which disorder of mind exists without insanity. 3. That therefore insanity is not essentially a disorder of the mind, nor ought insanity and unsoundness of mind to be used as convertible terms. 4. That our conception of insanity is not complete until it is understood to include as a necessary and integral element disorder of conduct.

Dr. BEDFORD PIERCE questioned whether Dr. Mercier's use of the word "mind" was not too limited.

Mr. CONOLLY NORMAN also said he would prefer to substitute the term "intellect" or "intellectual powers," and he referred to a case in which perpetually repeated acts of bigamy constituted the main evidence of mental aberration.

Dr. HICKS and Mr. HAYES NEWINGTON also spoke, and Dr. SAVAGE and Dr. MERCIER replied.

PHYSIOLOGY.

THURSDAY, AUG. 1ST.

The Physiological Section met in the Laboratory of King's College, under the presidency of Dr. FERRIER.

In opening the discussion on

The Mechanics of the Cardiac Cycle.

Professor J. BERRY HAYCRAFT—whose observations were made in conjunction with Dr. PATERSON—considered that it would be more convenient to limit the discussion to certain definite points. Those selected were: (1) the change in the shape of the heart during diastole and systole; (2) change of position of the heart in the chest; and (3) to inquire whether the papillary muscles acted synchronously with the ventricle. Professor Haycraft pointed out that the inference from the forward movements of the lever, that the diameter of the heart was increased antero-posteriorly during systole, could be shown to be untenable, because a result of the lever sinking into the heart during diastole was to push it out during systole in all directions, which would lead to the absurd conclusion that the systolic heart was increased in all diameters. On the other hand, observation of the frog's heart on measured spaces showed the diastolic heart to be larger than the systolic heart, and a pin in the anterior wall of the heart might be observed during systole to move inwards. Frozen sections were exhibited of the thorax of a dog which showed the relative diminution and expansion of the systolic and diastolic heart. In this connexion the interesting fact transpired that in death by strophanthin, digitalin, barium chloride, and heat the heart died in diastole, contrary to what we know to be the case in the frog. Death in systole was obtained in the dog by the intravenous (jugular) injection of a small quantity of corrosive sublimate. Measurements were given of the systolic and diastolic heart, which showed the former to be smaller in all directions. As regards the position of the acting heart in the chest, it was maintained that gravitation was a potent factor, the heart sinking in obedience to gravitation in any position and springing up from it during systole. This was demonstrated with the limelight shadow of the frog's heart held by forceps. Measurements of the position of the heart at the base, middle, and apex were given. Contrary to those who maintained that the papillary muscles act *after* the ventricle, Professor Haycraft showed that when the attachment to the valve is divided and precautions taken to obviate error the action of the papillary muscles and of the ventricular wall is synchronous. Dr. Paterson and he had found, however, that if these observations were not quickly made that in the dying heart the papillary muscles tended to contract after the ventricle.

Professor FOSTER said that the form of the heart varied, according as it was noted at the beginning, middle, or end of the contracted period. As muscular fibre does not change in bulk during contraction he believed that change in the form of the organ was due to the escape of blood. He asked Professor Haycraft how he explained the fact that when the lever was not pressing on the heart it was thrown up during systole.

Dr. GIBSON of Edinburgh showed tracings from the Conus Arteriosus of a Heart exposed by fissure of the sternum. Auscultation and ocular observation were carried out at the same time in this case. In this case there was antero-posterior increase before expulsion, during expulsion a slight pause, and a double set of vibrations during the second sound. One ventricle ceased its contraction a little before the other, hence the mechanism of reduplication of the second sound. He agreed with Professor Haycraft as to change of position of the heart being due to the position of the animal.

Dr. SPENCER concluded from his observation of two cases in which the heart was sufficiently exposed that there was a considerable twisting movement when the heart acted. He questioned whether the artificial production of systole by corrosive sublimate was not in excess of normal systole, and therefore fallacious.

Dr. PATERSON referred to Hesse and Krehl's opinion as to the importance of the papillary muscles in controlling the valve segments, and argued that this function would be impossible without their action being synchronous with that of the ventricle. He admitted that some twisting movement was observable when the heart acted.

A Member urged that it was evidence of antero-posterior increase during systole that the apex beat was more observable when the patient was placed in the knee-elbow position.

Professor HAYCRAFT, in replying, pointed out that the heart was heavier than the lungs and tended to displace the latter. During diastole in the above position it would fall forward and flatten out, becoming tense in systole, but not necessarily of increased antero-posterior diameter. In reference to Professor Foster's remarks, he said that there might during the first period of systole be a very slight increase, but he was not in a position to give an opinion on the point. During the greater part of systole he believed the antero-posterior diameter of the heart to be diminished. Tracings taken of the frog's heart without the lever pressing upon it showed that the diastolic curve was greater than when the lever touched the heart, but that the systolic rise became a fall.

Trophic Lesions following Section of Sensory Nerves.

ERRATUM.—We regret that in the report of the discussion that followed Dr. Turner's paper upon the Results of Section of the Trigeminal Nerve Dr. Mott is said to have referred to experiments upon the effects of *destruction of the spinal cord*, &c. This is not so. Dr. Mott referred to an important paper which Dr. Sherrington and he had read before the Royal Society, entitled "Experiments upon the Influence of Sensory Nerves upon Movements and Nutrition of the Limbs," published in Vol. LVII. of the Proceedings, a brief abstract of which we subjoin. Section of posterior roots in sufficient number to render a limb *apæsthete*—that is, the "whole series" in the brachial region from the fourth cervical to the third or fourth dorsal inclusive; in the lumbar from the second to the tenth post-thoracic were divided in monkeys, produced a remarkable effect upon voluntary movement of the limb thus deprived of its afferent channels to the spinal cord. "From the time of performance of the section onwards, as long as the animal may be kept, the movements of the hand and foot are practically abolished; the movement of grasping, which is so frequent and useful to the monkey both with the hand and foot, never occurs at all in our experience. On the other hand, the movements at the elbow and knee, and especially the movements at the shoulder and hip, are much less impaired." "The movements which are represented most literally in the limb area of the cortex are extremely severely impaired, and in some instances are entirely abolished." Yet on stimulation of the cortex centri all the movements of that limb are obtained as readily as in the other sensitive limb, thus proving that the pyramidal system has not been injured in the cord. The loss of movement is therefore not due to this cause; whether it is the loss of tonus of the muscles or the absence of all guiding sensations necessary for the initiation and continuance of movement is not determined, but the writers are of opinion from their experiments that the loss of sensibility in the skin and deep structures is of more import than the loss of afferent impressions from the muscles. Dr. Bastian has contributed an important communication upon the subject of this paper to the same volume of Proceedings, in which he differs from the *inferences* of Dr. Mott and Dr. Sherrington, although he accepts the facts. It was also found that if one root to the apex of the limb be left and all the rest

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divided—e.g., the eighth cervical distributed to the whole extent of the hand—a certain degree of impairment of movement occurs which gradually becomes less; but the impairment often requires careful observation to notice it. Effect on nutrition: Section of the posterior roots in the lower limb was followed after a time by an ulcer on the outer malleolus; section of posterior roots in the upper limb never led to such a change. These facts show, in the opinion of the writers, that the apparent trophic change in the lower limb may more justly be attributed to the liability to pressure and microbic infection. No change in the hand was ever noticed which in the least indicated trophic disturbance. "Wounds accidentally inflicted by the animal itself or its companions on the apæsthete part healed readily when dressed." Other facts of interest are noticed in connexion with the onset of rigor mortis, length of time the motor nerves can be excited after death of the animal, and resulting degeneration.

ANATOMY AND PHYSIOLOGY.

THURSDAY, AUG. 1ST.

Development and Structure of the Placenta.

The discussion upon this subject was opened by Professor ALFRED H. YOUNG, of Owens College, Manchester, who said:

One of the most important features in the development of the placenta is the part played by the fœtal tissues, the fœtal epiblast in particular; and this is the more noticeable as it is opposed to the views hitherto almost universally held. It is true that in the early stages the uterine mucosa increases in thickness, its glands become enlarged and more tortuous, the interglandular substance proliferates, and foldings of its surface may produce crypts. The glands and newly-formed crypts, so well marked in the carnivora, play but a secondary part in the further stages; they merely dilate, and their epithelial lining degenerates and disappears, serving apparently as pabulum for the fœtal tissues. The secondary importance of the glands of the mucosa is emphasised by their fate in the placental areas in rodentia, insectivora, and cheiroptera, in which they undergo little or no increase, and in the later stages are entirely occluded (from the fœtal tissues) by cell elements apparently derived from connective tissue or by endothelial cells. The most important maternal structures are the capillaries; these proliferate and dilate and form a more or less well-marked superficial layer immediately subjacent to the surface of the ovum. The fœtal part of the placenta, on the other hand, is energetic and aggressive. Its epiblast proliferates and becomes greatly thickened and apparently destroys and absorbs the maternal epithelium, though Strahl and Lusebrinck assert that the maternal epithelium persists, though in a changed form, and continues to intervene between the epiblastic cells of the chorion and the deeper maternal tissues.

[Professor Young next referred to the invasion of the uterine mucosa by the epiblast, pointing out how in rodents the epiblastic cells replace the walls of the maternal capillaries. He continued:]

To summarise: the structures which intervene in the placenta between the fœtal and maternal blood streams are not the same in different groups of mammals. Confining our attention to the two groups which have been most thoroughly investigated we see that in the carnivora the fœtal blood is separated from the maternal by three layers: (1) the endothelium of the maternal vessels; (2) a layer of fœtal epiblast, which generally contains two rows of nuclei and is not divided into cell areas, but is of the nature of a plasmodium; and (3) the endothelium of the fœtal vessels. In rodents, however, according to Duval's observations, there may be only a single intervening layer separating the two blood streams, and that is the endothelium of the fœtal vessels. We thus arrive at the following conclusions concerning placental development and structure: 1. Fœtal tissues play a most important part in placental development; they invade, destroy, and devour maternal substance. 2. The maternal tissues pass through three phases; they exhibit a remarkable activity before the fixation of the ovum. This is succeeded by what may be looked upon as an irritative proliferation due to the invasion of fœtal epiblast, and finally they disappear in great part coincidently with the epiblastic advance. 3. The relationship between the fœtal and maternal blood streams may be much more intimate than has usually been believed; and in any case the intervening structures are chiefly fœtal. 4. The uterine glands and crypts play a comparatively unimportant part in the placental area; they are not penetrated to any great extent by fœtal villi, but their epithelium degenerates and disappears, and is utilised as fœtal pabulum, except at their terminal extremities, where it remains almost unchanged to serve for the regeneration of the surface after parturition. These general facts, which have been established by observations on lower mammals, enable us to form a fairly definite conclusion regarding the layer of epithelium which forms one of the intervening strata between the two blood streams in the human placenta, and there can no longer be any doubt of its fœtal origin; it is certainly fœtal epiblast.

[Professor Young then proceeded to consider the formation of the allantois, and continued:]

In the meanwhile it is evident that there are many points relating to the development and structure of the placenta which may well be discussed both by the embryologist and the histologist, and beyond this also by the pathologist and the gynæcologist, who will find in the developmental history of the placenta the keynote to many obscure problems of uterine and placental disease. One cannot, e.g., fail to observe the remarkable similarity between the early stages of placental formation and those seen in the development of malignant epithelial tumours. In both there is epithelial proliferation followed by epithelial invasion and accompanied by irritative phenomena in surrounding tissues. During placental formation the maternal tissues are invaded by fœtal epiblastic cells much in the same way that the subepithelial stratum of skin or mucous membrane is encroached upon by proliferating epithelium in cancer formation, and it would not seem impossible that normal placental epithelial changes might, under certain circumstances, lead to true carcinoma. There can be little doubt that the fœtal epiblast grows at the expense of the maternal tissues, and there seems no reason why any portions left behind on the separation of the placenta should not continue to grow and, invading still further the uterine mucosa, assume all the characteristics of a definite tumour growth. I ventured to draw attention to this point in a paper read before the North of England Gynæcological Society some three or four years ago, and I then referred to the most interesting case recorded by Dr. H. Meyer of an epitheliomatous growth which followed the removal of a hydatiform mole. The epitheliomatous character of the new growth was clear, and the resemblance of the invading columnar processes to chorionic villi, as previously pointed out by Professor Klebs, was apparently fully recognised; but nevertheless Dr. Meyer suggests that the epithelial element was probably of maternal origin and that into it chorionic villi had protruded. This, however, does not seem a probable sequence of events, whilst the changes which are known to take place in the development of the placenta give strong support to the view that the epithelial element was in all probability fœtal. This, again, is emphasised by a similar case described by Fränkel as "carcinoma developing from the chorionic villi." This case was one of malignant disease of the corpus uteri following the removal of a vesicular mole. "The growth had a papillary form, invaded the deeper tissues, and gave rise to metastases. Microscopically it was shown to have originated from the remnants of chorionic villi left after removal of the mole, since the structure of the uterine glands was still recognisable, and its histological appearance was quite different from that of cancer of the corporeal endometrium." That uterine tumours may originate from placental relics is fully recognised by Hartmann and Toupet in their valuable memoir on the "Later Evils Following Retention of Placental Relics." Dr. Eden, in a preliminary communication on the development and normal structure of the placenta, states that the large decidual cells are really epiblastic cells, and if this is so the sarcomatous character of the tumour becomes more than doubtful. Clearly the study of abnormal conditions occurring in connexion with placental formation should be based upon accurate observations on the development and structure of the normal placenta. With a fuller knowledge of the structure of the placenta and of the exact relationship of the fœtal and maternal blood streams we shall understand better the important question of the transmission of disease between mother and fœtus. In short, a wide field for experimental observations will be open, and it is by such observations alone that we can hope to obtain satisfactory results.

Mr. ROBINSON, Mr. LOCKWOOD, and others, including

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the PRESIDENT took part in the discussion, and Professor YOUNG showed a very complete series of embryonic sections under the microscope.

Mr. MANNERS SMITH read a paper on the Anatomy of three Symmelian Monsters, illustrated by sketches of the examples in question.

Mr. PARSONS and Mr. ROBINSON discussed the subject, and the latter inclined to the theory that arrested development is the essential cause of the deformity rather than a tendency of parts to fuse which Mr. Manners Smith supported.

A paper by Dr. GRIFFITHS was read on the Anatomy of the Genito-urinary Apparatus of the Pig and Boar, and showed that castration exerts an all-important influence on the growth and development of the accessory sexual glands, and that the full development of striped muscle around the urethra is dependent on the full development of the testes.

FRIDAY, AUG. 2ND.

The Topographical Anatomy of the Abdomen.

A discussion on this subject was opened by Professor THOMSON of Oxford University. After referring to work done by Mr. W. Anderson and Professor Cunningham on this subject, Professor Thomson reviewed the present systems and criticised the generally accepted one as put forth in Quain's Anatomy, in which the nomenclature of the regions does not correspond to the regions proper. In hopes of forming a new system the following fixed points were taken: (1) the centre of the articulation between the lower end of the sternum and the ensiform cartilage; (2) the anterior superior iliac spines; (3) the most dependent part of the tenth costal arch; and (4) the symphisis pubis. Of these the costal arch is the most unsatisfactory on account of its variability; but for want of a better substitute Professor Thomson determined to adopt it. By joining the given point on the sternum with the point corresponding to the anterior-superior spine of the ilium a triangle is formed the base of which corresponds to a line joining the two spinous processes, and called the inter-spinous line. A transverse line is also drawn through the most dependent part of the tenth costal arch and called the subcostal line. The importance of the middle line was also pointed out, which, although continually employed in clinical work, has not before been made use of in this country for anatomical delineation. Further explanation was also given for applying this system to mapping out the regions from the back, and some German systems were criticised, especially with regard to curved lines, which Professor Thomson thought should never be used.

In the discussion which followed Mr. MAKINS remarked on the utility of the outer border of the rectus muscle as a surgical guide. Mr. LOCKWOOD thought that all artificial lines should as far as possible be done away with, and use made only of natural lines and points. Mr. W. ANDERSON thought the drawback to any new plan was the difficulty in getting it universally adopted. Professor THANE, Dr. WILBERFORCE SMITH, and Dr. BLACK also joined in the discussion, after which Professor THOMSON replied.

Synostosis of the Pre- and Meso-sternum.

Twelve examples of this condition were quoted by Dr. KEITH, four of which were in negroes or negroid people. It is much more frequent in anthropoids than in man, and the variation may be called one of anthropoid character, and its occasional occurrence among men, gorillas, or chimpanzees may be variously interpreted. It may be regarded as indicating only a developmental aberration brought about by unknown circumstances, or it may be supposed that the ancestors of man, the gorilla, and chimpanzee were, like the gibbon, adapted for brachiation as a chief means for progression. Dr. Keith did not, however, think that the occurrence of such a variation as this in the various genera of the anthropoidea necessarily indicated community of descent.

Mr. GRAVES STOKER showed an interesting specimen of a floating liver.

Mr. HIGGINS gave a demonstration on the mechanism of the knee-joint, and illustrated by specimens the various points of contact in different positions of the joints.

Mr. STANLEY KENT showed by means of lantern-slides the anatomy and histology of the genital organs of an hermaphrodite dog, in which both sets of organs were very fully developed.

PATHOLOGY.

THURSDAY, AUG. 1ST.

Peripheral Neuritis.

The debate on this subject was introduced by Dr. SEYMOUR J. SHARKEY, physician to St. Thomas's Hospital. He said: Peripheral neuritis has only engaged the attention of our profession in recent years. The symptoms produced by the disease have long been known, and Graves even suggested in a very pointed manner that they had their origin in disease of the peripheral nerves; but it was only in 1864 that definite proof was given by Dumésnil that such a pathological condition was the cause of the symptoms in the disease now named peripheral neuritis. As might be expected when a new field like this was opened up, a very large number of conditions previously not understood were attributed to this cause, and it can scarcely be doubted that the list of diseases at present referred to inflammation of the peripheral nerves will have to be curtailed. The subject, indeed, is still in its infancy, and many conditions which are supposed to be due to peripheral neuritis have not yet been proved to be so. Any member, therefore, of this Association who can afford fresh proofs of the existence of neuritis in disease will make a welcome addition to our pathological knowledge. It would be well to consider, too, whether we have not been trying to draw too sharp a line between the peripheral and the central nervous system; whether we have not been too anxious to limit the pathology of many of these diseases to the nerves, while the various agents which produce them cause alteration in the centres as well. Such poisons as alcohol and lead, the poisons of acute specific diseases such as influenza, and many others too, are certainly productive of widespread central changes, at the same time that they specially affect the peripheral parts of the nervous system. One of the most important points for discussion is, in my opinion, the legitimate use of the term "peripheral neuritis." What anatomical changes do we consider as proof of inflammation? Are we justified in speaking of a change in nerves as inflammatory in the absence of those vascular phenomena which are usually looked upon as proof of inflammation? In reading the reports of cases of peripheral neuritis it will constantly be noticed that the pathological condition found post mortem was segmentation and breaking up of the medullary sheath and nothing more. This is called "parenchymatous neuritis." In other cases nothing at all is found to prove what the nature of the case was, but it is argued from the presence of some of the symptoms that occur in undoubted neuritis that the disease is neuritis. Would it be more correct to speak of peripheral nerve intoxication where the post-mortem find is negative, as in rapidly fatal cases of Landry's disease, for example; of peripheral nerve degeneration where the only change is breaking up of the white sheath of Schwann; and of peripheral neuritis when the vascular phenomena of inflammation are present as well? The granular degeneration of muscles, whether fatty or albuminous, and that of many cells in the body, such as those of the liver, is not the result of inflammation only. Why, then, should breaking up of the medullary sheath into droplets be called neuritis? It may or may not be true (and this is a question with regard to which we might hope to elicit some fresh information) that we cannot separate clinically the cases where the medullary sheath is broken up from those in which an inflammation of the fibrous sheath of the nerve is evident as well. Still, it may be possible to do so some day. If this distinction between nerve degeneration and nerve inflammation were made, many cases now termed neuritis would receive a more reasonable explanation as cases of degeneration—such cases, for instance, as are now sometimes classed as "dyscrasic peripheral neuritis" being found in cases of anæmia, cancer, senile conditions, &c. While we are considering the propriety of separating cases of nerve degeneration from cases of nerve inflammation a very important question suggests itself. Have the changes which the peripheral nerves undergo after death been carefully investigated? Are they not principally changes in the medullary sheath, and changes resembling those attributed now to parenchymatous neuritis? One reads of cases where parenchymatous neuritis has been observed post mortem, though there was no clinical evidence of disease of nerves during life. In such cases the suspicion naturally arises in the reader's mind that post-mortem changes may have been mistaken for pathological conditions. Any pathologists who can contribute definite information as to the changes which occur

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after death in the peripheral nerves, and particularly as to the rapidity with which they occur, will have made a very important contribution to this discussion. It is a somewhat remarkable thing that in multiple neuritis the terminal portions of the nerves are nearly always first affected. Why is this? May it be partly because they are so delicate in structure, partly because in their peripheral ramifications they cover a much larger area than they do when collected into bundles, and so are more exposed to the poison circulating in the capillaries; partly, perhaps, because they are furthest removed from the nerve cells on the energy radiating from which their health certainly depends? Another very interesting point is the special affinity which certain poisons seem to have for certain nerves. It is true that in cases of intense or prolonged poisoning the effects on the nervous system may be very widespread. Yet it is none the less true that in alcoholic neuritis the extensor muscles of the limbs, and especially of the legs, almost invariably first fall a prey to the poison; in lead, the extensors of the fingers and wrists; in diphtheria, the muscles of the throat and internal muscles of the eye. Still more remarkable is it that the selective power of these toxic agents may exert itself on the motor filaments or on the sensory almost exclusively. In lead-poisoning, for instance, sensory alterations are hardly complained of at all, and the same is often true of diphtheria, whereas in cases of alcoholic neuritis a stage of the most acute sensory disturbance may long precede the advent of paralysis. Indeed, there is some ground for supposing that even the trophic and vasomotor nerves may be specially picked out in some cases. The pathology of Raynaud's disease is not yet satisfactorily established; but there are certainly grounds for supposing that the remarkable vascular and trophic changes which characterise this affection are the result of disease specially affecting the vascular and trophic nerve filaments or the centres from which they radiate. Can anyone throw light upon the meaning of these interesting phenomena? The electrical reactions of nerves and muscle are frequently altered in the diseases under consideration, but it cannot be said that we yet know as much as we might about the value of the so-called reaction of degeneration. The alterations which occur are very variable, sometimes being but slight, sometimes profound. In the latter case they indicate, no doubt, a very marked disorganisation of nerve and muscle. But what do the slighter changes indicate, or even their absence, as regards the pathological changes in the nerves? Can they be utilised for the purpose of distinguishing between nerve intoxication, nerve degeneration, and nerve inflammation? The discovery of neuritis as a definite pathological condition has led to the removal of many paralytic affections from the category of spinal cord diseases. We now place them under the heading "peripheral neuritis." For the diagnosis of these affections we have relied largely on the simultaneous involvement of motor and sensory functions, as proving that a disease which produces paralysis and atrophy of muscle cannot be due to an affection of the anterior cornua of the cord only. But now that it has been shown that these atrophic paralyses can result from disease of the peripheral nerves when the motor filaments are specially picked out the question must be asked: Have we any means at present at our disposal which enables us to distinguish between anterior cornual disease and peripheral nerve disease? Again, cases of paraplegia due to an extensive affection of the spinal cord, in which, nevertheless, there is no alteration in sensation, are not uncommon, and similar affections of the spinal cord and its surroundings may result in paraplegia with pain and sensory disturbances. How can we distinguish such diseases of the spinal cord from peripheral neuritis? We have generally relied upon the presence of an affection of the sphincters in the former and its absence in the latter. This, however, is not a safe criterion. I have myself lately had a case of painful paraplegia under my care in which the sphincters were involved, and in which nothing was discovered at the post-mortem examination. On microscopic investigation of the nerves proceeding from the pelvis an intense neuritis was found. We have, therefore, to consider how we can advance the diagnosis of these conditions in order to put it on a level with our present knowledge of the pathological changes which lie at the root of them. Another question which needs discussion is that of the cause of the peripheral neuritis and muscular atrophy which occur in association with joint disease. This has not yet received a satisfactory explanation. Is it due to some reflex effect on the cells in the nerve centres which preside over the nutrition of these muscles; or is it a secondary local effect of the inflammation of joint; or do both the neuro-muscular and joint changes own a common cause? The significance of the absence of the knee-jerk, which occurs in many cases of diabetes, together with the occasional presence of other symptoms suggestive of alteration in the peripheral nerves, is worthy of further consideration. Are these phenomena due to nerve intoxication produced by some poison manufactured in the body by disease? Are they the result of simple degeneration of nerves and breaking up of the medullary sheath, or do they owe their origin to genuine peripheral neuritis? Again, can anyone produce further evidence of the cause of Raynaud's disease? The fact that tetany has also been attributed by some to peripheral neuritis suggests another question, Does peripheral neuritis give rise to spasmodic affections? As a rule it certainly does not, but the cramps, muscular twitchings, tremors, &c., of the earlier stages of alcoholic neuritis suggest that spasm may possibly sometimes result from peripheral changes in the nerves. I would ask, however, whether a prolonged tonic spasm is not more likely to be caused by changes in nerve centres than by changes in nerves? We might hope to have this question answered by pathological anatomy, but it is far from improbable that a nerve intoxication may be the cause of tetany and may leave no alterations in the neuro-muscular apparatus which are capable of demonstration by our modern methods of examination. Up to the present time most of the observations and investigations which have been carried out for the elucidation of the subject of peripheral neuritis have dealt with disease of the cerebro-spinal nerves. The vagus is not infrequently diseased and gives rise to marked and even fatal cardiac disturbance. A few observations have shown that the terminal distributions of nerves in the substance of the heart are liable to alterations which probably play an important part in some cases of serious cardiac disease. But if it has been shown that few, if any, of the cerebro-spinal nerves are exempt from pathological alterations resulting in sensory and motor disturbance, is it not probable that the sympathetic nerves may be equally vulnerable? May not many of the so-called functional disturbances of the viscera, with their neuralgias and disorders of secretion and metabolism, owe their existence to temporary nerve intoxication, to nerve degeneration, or to nerve inflammation? Here is a wide field, indeed, for investigation, and communications on this point would be welcomed by all pathologists and physicians. In the short space of time which has been allotted to me for the introduction of this debate I have called attention to a few points upon which I, at any rate, would like to hear the views of others. But the disease "neuritis" suggests a far larger number of questions of interest than have been touched upon, and questions, too, which may appear of greater importance to those who have a special knowledge of this subject. No one can desire that the contributions made by members to this discussion should be limited to the few points raised by the person who introduces it. All additions to our knowledge, all criticisms of current theories, to whatever points they may be directed, will, I feel sure, be warmly appreciated by those who have honoured this Section by their presence.

Dr. W. M. ORD drew attention to the concurrence of gastric ulcer with anæmia. He had observed many cases of anæmia in which there were signs of organic lesion in the heart of the nature of endocarditis or pericarditis, but in which there was no antecedent history of chorea, acute rheumatism, or fever, and that these were associated with clinical symptoms pointing to gastric ulcer. For some time he had only had clinical evidence of these phenomena, but he now knew of two such cases in which necropsies had been performed and which revealed a gastric ulcer in the stomach with vegetations on the cardiac valves. He thought that possibly the ulcer produced disturbance of the nutrition of the heart in some reflex manner, or possibly both were due to some common cause, which latter perhaps was the more likely of the two suppositions; he hinted that this might be explained by a disturbance in the nutrition of these parts by some nerve lesion. He was also of opinion that the circular form of gastric ulcer was *per se* suggestive of a possible neuritic origin analogous with the bullæ found on the skin in certain nerve lesions.

Dr. RUSSELL WELLS, in continuing the discussion, read a short paper on the Changes met with in Nerves due to Post-mortem Degeneration. The paper detailed the results of researches conducted by him in conjunction with Dr. W. H.

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Wilson. After recalling the observations of other investigators on the microscopical appearances met with in the peripheral nerves in neuritis, he drew attention to the fact that in patients dying from various lesions in other organs quite apart from the nerves—such as pneumonia, morbus cordis, and acute fevers—the appearances of the medullary portion, as seen under the microscope, varied according to the time after death at which the preparation was made and to the length of the period during which it was kept in preservative fluids. The earliest changes which he found were breaking up of the medullary sheath and variations in the readiness with which the nerve fibres stained with reagents: the latter, he thought, was due to loss of the medulla in places, and this again to be caused by post-mortem chemical changes: the axis cylinders did not take part in these changes. The loss of the medulla leads to the nerve simulating the appearances of ordinary connective tissue. Specimens of this kind are indistinguishable under the microscope from nerves taken from cases of neuritis. He added that he had not seen as a post-mortem change rupture of the axis cylinder which writers on neuritis describe as occurring in that affection. However, he was of opinion that the changes met with in neuritis were not always due to post-mortem decomposition, because in the case of animals in which neuritis had been produced artificially the nerves would doubtless be examined immediately they were killed, and yet the nerves showed alterations in structure.

Dr. MOTT thought that peripheral neuritis was of interest in view of the theory of Marie that it is due to modifications in the ganglion cell with which the nerve is in anatomical continuity. That in diphtheria changes occur in the cells of the anterior horn as well as in the nerves, and that the paralysis was in some instances permanent and associated with wasting, was in favour of this view. He was of opinion that the reason why alterations in structure occurred in the end plates of motor nerves in peripheral neuritis was their remoteness from the seat of nutrition in the ganglion cell. Incidentally, he mentioned his inability to find degeneration in the end plates in two cases of diphtheria in which he had made observations for that purpose. Fibrous tissue met with around the nervous tissue in various cases of nerve degeneration he believed to be secondary to that degeneration. For his part he thought that in diphtheritic and other forms of peripheral neuritis the poison acted primarily on the nerve cell.

Dr. ORMEROD thought that, besides peripheral neuritis being due to primary disease of the nerve fibres on the one hand, or of the nerve cells on the other, there was probably a *tertium quid* in which both cells and nerve fibres were simultaneously affected. He suggested that, as Dr. Jackson had shown that the smaller nerve cells were more likely to be affected than the larger by poison, similarly the smaller terminal fibres were more readily affected than the larger trunks.

Sir T. GRAINGER STEWART made some remarks concerning the history of peripheral neuritis, and then went on to say that he thought that an affection of peripheral nerves was the only explanation of the combination of the motor, sensory, and nutritive changes met with in this disease. He thought the following clinical points were worthy of note—(1) that so marked a lesion could be entirely recovered from; (2) that an affection of peripheral nerves formed a ready explanation of the passing paralyses met with in the early stages of locomotor ataxy; (3) the capriciousness of neuritis in the selection of nerves; and (4) the not uncommon deaths in this disease due to the involvement of vital nerves. He mentioned the superiority of hypodermic injections of strychnia, as soon as the first acute stage was passed over, to its internal administration.

Dr. HAMILTON, Professor of Pathology in the University of Aberdeen, questioned the correctness of the nomenclature in peripheral neuritis, and added that as a result of his experiments in the artificial production of inflammation in nerve tissue he believed the appearances were entirely due to degenerative changes, and not to inflammatory processes at all.

Dr. SAUNDBY (Birmingham) disagreed with Dr. Hamilton's view that in many cases the changes were in reality due to inflammation of the nerves. He drew attention to the tenderness which occurs over the nerve trunks in certain forms of neuritis, as well as to the swelling of them which accompanies it.

Dr. GOODHART and others joined in the discussion, and Dr. SHARKEY briefly replied to the various speakers.

Vaccinia and Variola.

A discussion on this important subject was opened by Dr. S. MONCKTON COPEMAN, Medical Inspector of the Local Government Board and Lecturer on Public Health at Westminster Hospital. Dr. COPEMAN said: Before referring to the most recent work on the pathology of variola in detail it may be well to briefly recapitulate the subject matter of the paper which I had the honour of bringing before the notice of this section at the meeting of the Association held last year at Bristol. I there stated that the main dispute with reference to the pathology of vaccinia has always centred round the term variola vaccina, "small-pox of the cow," given to the disease in the first instance by Jenner. Consequently, the important question remains as before, whether vaccinia is or is not one with small-pox. In my former paper I stated that the problem has been attacked from two separate points of view—(1) experimental work having for its object the production (if that be possible) in the bovine animal by inoculating it with small-pox lymph of a disease indistinguishable both in its immediate local and in its subsequent general effects from true vaccinia; and (2) microscopic pathology and bacteriology, including, I may add, the testing of bacteria derived from lymph also on the bovine animal.

[Dr. Copeman then referred to the work which had been done with regard to the production of vaccinia by "variolating" bovine animals. He continued:]

As far as I am aware the most recent experiments of this nature which have been carried out are those of Dr. Klein and myself, the results of which have been published in full in the reports of the medical officer to the Local Government Board and in the *Journals of Pathology* and *Bacteriology* respectively. I do not, therefore, propose on the present occasion to refer to those experiments in detail, but I may perhaps add that in my own experiments at any rate no question of possible contamination with vaccinia can possibly arise, seeing that all my work was conducted at the Brown Institution; that as a special precaution new scalpels were used, which were invariably first sterilised in a flame; that before and after use the table was thoroughly washed with carbolic acid and water, and during the intervals of use kept exposed to the open air. As the result of all the work which has been done in this direction there can, I think, at the present time be no reasonable doubt as to the possibility of inoculating the calf with variolous matter, with the result of producing thereby, after one or more removes, a malady which is certainly no longer small-pox as ordinarily understood, seeing that it has now completely lost, when transferred to the human being, its original property of infectiousness. [Dr. Copeman here cited the results of various experiments upon monkeys.] Turning next to the micro-pathology and bacteriology of variolous, and more especially of vaccine lymph, I was able to bring forward certain evidence bearing on the important subject of the storage and preservation of vaccine lymph, as also on the relationship of variola and vaccinia so far as microscopic and bacterioscopic examination of lymph can help us. These two subjects I desire particularly to consider on the present occasion. It is a matter of common knowledge that vaccine lymph, whether stored in the liquid state or freshly obtained from a normal vesicle, usually is found when examined bacterioscopically to contain micro-organisms of various kinds, which have been shown by Crookshank, myself, and by other observers to be for the most part mere saprophytes.

[Dr. Copeman mentioned the use of glycerine in destroying these saprophytes and the streptococcus of erysipelas. He continued:]

With reference to possible transmission of syphilis and tuberculosis by calf lymph I need say nothing, seeing that it is universally admitted that the first of these two diseases is not transmissible to the calf, and that the bacillus of tuberculosis has never been discovered in vaccine lymph, bovine or human. In consequence no doubt of the apparent impossibility which existed until recently of isolating any bacterium from vaccine lymph which could be regarded as specific to vaccinia, several observers have sought to prove that organisms of a somewhat higher order than bacteria might be concerned in the production of this malady and also of variola. In this connexion it may be mentioned that bodies believed to be of the nature of psorosperms or sporozoa have been described as existing in the vaccine vesicle by Guarnieri and Pfeiffer on the Continent and by Dr. Armand Ruffer

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and Mr. Jackson Clarke in this country. But as to this I was taken to task last year by Dr. Ruffer for mentioning the organisms described by Guarnieri and himself in the same category with those the occurrence of which had been put on record by Pfeiffer and Mr. Jackson Clarke. As, however, the last-named gentleman is to bring forward a paper giving the result of his researches, I do not propose to deal further with this subject on the present occasion, except to put on record the joint opinion of Dr. Klein and myself to the effect that, whatever may be the exact nature of these so-called sporozoa, they have not yet been proved to have any causal relationship with the diseases in question. On the other hand, as I stated last year, Dr. Klein and I have concurrently—though quite independently—shown that in specially stained specimens of vaccine lymph, taken at a period antecedent to full maturity of the vesicles, minute bacilli can be demonstrated, often in considerable numbers and in practically pure culture. These bacilli cannot be found, or only with difficulty, in mature lymph, for the reason probably that they have by then given place to spores. For some time it appeared impossible to obtain further evidence as to the *rôle* of these bacilli, as they altogether refused to grow on any of the ordinary culture media and under either aerobic or anaerobic conditions, though this very fact obviously tends to show that they are not of a merely saprophytic nature; during the past year, however, certain experiments which I have devised appear to prove that it is possible to obtain a growth of these bacilli in a particular culture medium, and even to carry on such growth in secondary cultivation. As it seemed to me, the desideratum for the purpose of inducing growth of the supposititious micro-organisms was a medium which had not been artificially sterilised, which *a priori* should afford the necessary pabulum, and which at the same time, whether it was to be considered aerobic or anaerobic, was secure in its circumstances against contamination. Hence the choice appeared to lie between the intra-peritoneal fluids of one or another living animal and the hen's egg, which has already been made use of as an alternative culture medium. As regards intra-peritoneal fluid I foresaw difficulty in that it is apt to contain leucocytes, which might easily vitiate experiment; and accordingly I adopted the hen's egg as a matter of first instance. I had no experience to guide me as to the best method of carrying out the inoculation of the egg, or of the period of incubation best suited for the object I had in view, and my attempts for a time, therefore, met with but small success. My inoculations were carried out by first cleansing the surface of the egg with corrosive sublimate solution and afterwards with alcohol, and then breaking a small hole in the shell by means of a sterilised needle and forceps. Through the opening thus made I mixed the yolk and albumen of the egg by means of a platinum needle, and then carried out the inoculation by means of a glass capillary pipette which had recently been drawn out in the blow-pipe flame. For the purpose of such inoculations I employed variolous crusts obtained from the small-pox ships of the Metropolitan Asylums Board. These crusts were rubbed up in a small glass mortar with a minimal quantity of sterilised normal saline solution. Of the resulting creamy emulsion a drop or two was then taken up into the glass pipettes and the inoculation carried out. Finally, the small hole in the egg was closed up either by means of a small pledget of sterilised cotton-wool soaked in collodion or with melted sealing-wax. The eggs inoculated in this manner were then placed on beds of cotton-wool and kept in the incubator at a temperature of 37° C. Here they were left for varying periods of time, a month being the period which was eventually found to be that which was most desirable. On opening an egg thus treated I found that in its interior was contained a creamy material which in great part had replaced the ordinary egg contents. This material examined as cover-glass specimens appeared to be a pure culture of one organism only—viz., a bacillus which morphologically was not to be distinguished from the bacillus which I have previously described as to be found in early vaccine lymph. My next step was to attempt to grow it in subculture and to make observation also of the effect of its direct transference by cutaneous inoculation into the calf. As regards attempts at subculture in all the media most usually employed for such a purpose, including gelatine, sugar gelatine, agar, glycerine agar, sugar agar, and serum, these were unsuccessful, as subculture of the bacilli contained in vaccine lymph had always failed when the ordinary culture media were adopted; but with the calf it was different.

On March 28th, 1895, Calf A was inoculated by eighteen incisions (fifteen on the abdomen and three on the scrotum) with a small quantity of the creamy emulsion contained in Egg No. 5, which had been incubated for one month after inoculation with small-pox crusts, as already described. On the 30th scrapings were taken from the vesicular points which had appeared in the line of two of the abdominal incisions, and also from one of the incisions on the scrotum, which had become slightly raised and red. With material thus obtained Calf B was on the same day inoculated by six linear incisions on a specially shaved area on the abdomen. Three incisions were inoculated with scrapings taken from vesicular points, and the other three with scrapings from the incision on the scrotum of Calf A. Three days later, on April 2nd, all six insertions appeared to be taking, though eventually one died away. On the 4th the calf was photographed, and on the same day a child was vaccinated from it by Dr. Cory. This child I have since seen. It has five good marks, and the mother told me that the vaccination "did splendidly" and that she had had no trouble with the child.

On March 28th, 1895, Calf C was inoculated on the right thigh in twenty-four insertions with emulsion from Egg No. 5, which had been kept in a pipette since the first calf of the series was done. By April 2nd three small vesicular points had appeared in the line of as many of the incisions. With scrapings from these I vaccinated myself, and Dr. Cory vaccinated a child aged three months. The process in my own case had aborted by the fourth day, but the child "took" quite normally and had when inspected on the eighth day five good vesicles with very little areola. On April 2nd also Calf D was inoculated from the small vesicles on Calf C in ten incisions on a special area of the abdomen. These all showed on the fifth day vesicles not to be distinguished from those of like age arising from the use of current lymph on the same animal. On May 7th, 1895, Calf E was inoculated on a special shaved portion of the abdomen in twelve incisions from the contents of Egg No. 5, taken into a pipette on the previous day. On the 14th six small vesicles, which had appeared in as many of the lines of incision, were clamped and scraped, and the material thus obtained was employed on the same date for the inoculation of Calf F in twelve insertions. On the 18th six of these insertions had taken well. On the 21st eleven of the twelve incisions showed a wide crust surrounded by a vesicular ring. The width of the crust was apparently due to the calf having been able to lick the places, as its collar had been removed by mistake on May 18th. Two of the more markedly vesicular of these "places" were clamped and scraped, and with the material thus obtained Calf G was inoculated by twenty insertions on a special area of the abdomen. By the 28th all the twenty insertions made had "taken," and no appreciable difference could be made out between the vesicles which had arisen on the site of these incisions and on those which at the same date had been inoculated with current lymph. This calf was twice photographed by Mr. Kent. From Calf G, Calf H was inoculated on the 25th; and, further, this strain of variola-vaccine derived in the first instance from the egg culture was carried on through two additional removes in the calf, after which it was not further cultivated. On May 28th, 1895, lymph taken from vesicles at the third remove from the egg culture were in my absence employed by Dr. Cory for the vaccination of a large number of children at the Animal Vaccine Establishment, owing to the fact that for some reason or other the current strain of lymph had failed to give good results in the two calves which had been vaccinated according to the usual routine. All these children showed excellent marks when inspected a week later, and several of them were photographed by Mr. Kent. Interesting, and indeed satisfactory, as are these experiments from my point of view, I do not claim for them demonstration of the practicability of growing and multiplying outside the animal body, in artificial media, the particulate cause of small-pox, or of converting the latter by my processes into the essential cause of vaccinia. And for this reason: these experiments of mine on the bovine animal had to be conducted, at any rate in this preliminary stage, at Lamb's Conduit-street, and the subjects of them had to be calves that on each occasion of experiment by me were at the same time vaccinated in some part of their bodies with the calf lymph current at this station. It is true that every precaution was taken in the

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way of sterilising instruments and cleansing operation-tables, in selecting a given, clearly defined area on each animal for insertion of my lymph, and for keeping the incisions made by me protected as far as possible against later accidental mediate inoculation with lymph from some part of the same or other calf into which animal vaccine-establishment material had been inserted. Nevertheless, it is possible that, in spite of all precautions, accidental inoculation of my incisions with animal vaccine-establishment lymph may have occurred; and, further, I am not able to deny that simultaneous inoculation of the calves with my egg culture and with ordinary vaccine lymph may have in some occult way influenced the manifestation witnessed on the areas wherein my egg lymph was inserted. So, of course, these experiments have to be repeated, and are, indeed, in course of repetition. They involve repetition of the process from its very beginning—i.e., direct inoculation of the hen's egg with crusts of variola with calf lymph or with human lymph; tests by subculture in ordinary media and in the egg of any pure growth of microbe thus obtained, and inoculation of the calf elsewhere than at Lambs Conduit-street, both with the primary egg cultures and with any successful sub-cultures in the egg or in other media. Should then later experiments confirm the results obtained in the preliminary experiments that I have described, it is possible that we may eventually be enabled to elaborate a method of specific treatment of individuals actually suffering attack by small-pox, somewhat comparable to that discovered by Behring in reference to diphtheria. Should this forecast be justified in the event some such method would form a fitting complement to the process of preventive vaccination which now for well-nigh a century has stood the test of time and experience.

Dr. HAUGHTON made some remarks concerning the *rôle* which insanitary conditions play in the production of variola, and expressed his belief that similar phenomena to those of vaccinia might probably be produced by the inoculation of matter from the white swelling of a knee-joint or any other scrofulous disease.

Dr. DENHAM (Dublin) had noticed in his experiments that the vaccine from a calf approaching puberty was not nearly so efficacious as that taken from a younger calf. He agreed that the mixing of lymph with glycerine and storing for some time led to the total destruction in it of saprophytic organisms.

Mr. RENNER, Dr. DRYSDALE, and Dr. STANLEY KENT also joined in the discussion.

Dr. COPEMAN, in reply, stated that vaccine points are bad, and that if used at all they should be made of celluloid, which can be sterilised, rather than ivory, which cannot be so satisfactorily sterilised owing to the interstices in it. In answer to a question, he stated that he did not believe that the psorosperms produced in the rabbit's cornea after inoculation had anything to do with the production of small-pox, and denied that they had ever been found in vaccine lymph itself.

OPHTHALMOLOGY.

THURSDAY, AUG. 1ST.

Pseudo-Malignant Tumours of the Orbit.

Professor PANAS of Paris read a paper on this subject. He referred to a number of observations on exorbitis with tumour supposed to be malignant, but which subsided under medical treatment or an intercurrent attack of erysipelas, and which were subsequently put down as syphilitic, referring in support of this statement to a large number of Continental writers, whereas he held that a number of neoplasms thought to be lymphomas, sarcomas, or syphilomas ought to be attributed to the dyscrasia produced by some toxines. In illustration he quoted the case of a man aged thirty-five years, who presented double exophthalmos simulating in all respects sarcoma, which was completely cured by the use of arseniate of soda. The patient was free from syphilis, and the condition had been aggravated by iodide of potassium. The condition, in Professor Panas' opinion, was due to microbic infection of the cellular tissue extending from ozæna affecting the nasal fossa, the swelling being most marked on the inner side of each orbit. In another case, that of a young woman, also free from syphilis, exophthalmos of the left eye was associated with polypi of the left nostril, supposed at first to be sarcomatous. Many other cases were cited, nearly half being bilateral, and all of which subsided under treatment by arsenic or other drugs after being regarded as malignant. Experiments upon dogs by Professor Delbet were afterwards related, in which lymphadenoma was transferred to them, a specific bacillus being separated and introduced and being afterwards found in the glandular enlargements of the animals. Another set of cases was also noted in which the lacrymal glands were the primary seat, the condition being usually associated with specific febrile or venereal disease. In conclusion, Professor Panas recommended that in all such cases search should be made for the source of infection, and treatment by drugs resorted to before surgical interference was tried.

On the Diagnosis of Orbital Tumours.

Dr. H. R. SWANZY (Dublin) opened a discussion on this subject. He said there were three main questions. 1. Was a tumour of the orbit present? 2. Was it confined to the orbit? 3. Of what nature was the new growth? It was in the early stages that most difficulty arose, and the earliest sign was commonly proptosis, mostly in a somewhat oblique direction, except in tumours developing in the apex of the orbit. The development, too, was gradual and mostly unilateral. Further evidence might be obtained by palpation, which, besides confirming the presence of a tumour, might elicit information as to position and attachment. Disturbance of vision—another important sign—occurred mostly in rapidly developing tumours, in those directly affecting the optic nerve, or in the later stages of other forms. Pain or loss of motion was present with less frequency. Many cases of orbital tumour were instances of the invasion of that cavity by growths originating in the neighbouring bony sinuses, either frontal or lacrymal; the commonest were mucocele or osteomata, and the displacement of the globe was commonly downward and outward. An examination of the neighbouring fossæ, especially the nose and pharynx, was essential, as was also careful examination for cerebral symptoms and the condition of the fields of vision. Fixation and pain occurring early were to be regarded as signs of malignancy. Pulsation and bruit or thrill indicated vascular developments, and congenital tumours were mostly encephaloceles or dermoids, though the latter seldom became prominent until puberty. The consistence and site of the growth were also important elements in diagnosis, but in the great majority of cases no certain opinion could be arrived at until an operation was undertaken.

Mr. HENRY POWER referred to a case in which proptosis had disappeared on the removal of a necrosed inferior turbinated bone.

Professor FUCHS quoted a case of rhino-scleroma of both orbits which were invaded at their apex from the nasal cavities, and in which immobility of the eye occurred when the proptosis was still slight.

Dr. ARGYLL ROBERTSON corroborated the views held by Professor Panas as to the subsidence of what appeared to be organic tumour of the orbit. He recalled several such cases and narrated one in a young man in which the temporal and malar regions and brain appeared to be involved, but which completely recovered under large doses of iodide of potassium.

Mr. NETTLESHIP mentioned a case of Unilateral Stationary Proptosis with swelling in the corresponding temporal fossa and cheek in a woman between thirty and forty years of age, in whom the condition had existed for five years.

Mr. SPENCER WATSON related a case in which double proptosis and cardiac symptoms had subsided after removal of inferior turbinal and nasal growths.

Mr. ADAMS FROST referred to a case he had shown to the Ophthalmological Society which was regarded as sarcoma, and in which he had removed the large lacrymal gland on one side, finding what appeared to be a small, round-celled sarcoma. The other tumour had subsequently disappeared under iodide of potassium.

Dr. HILL GRIFFITH mentioned a case of Orbital Sarcoma in which there was an unusual amount of inflammatory action, the growth extending all round the cornea.

The Radical Operative Treatment of Trichiasis.

Dr. KENNETH SCOTT described the process as follows. An incision is firmly made on the conjunctival surface of the lid parallel to and 2 mm. from the ciliary margin dividing the tarsus completely. The eyelid is replaced in position and its divided margin grasped in forceps and forcibly everted by

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carrying the handle up till it touches the brow. One needle carrying eighteen inches of silver wire is passed vertically down from the brow through the skin surface of the centre of the lid into the substance of the upper part of the tarsus, emerging at its divided edge; it then enters the original anterior surface of the lower separate portion of the tarsus, to be finally brought out on the free margin of the lid, midway between the lashes and conjunctival edge. Two other sutures are similarly introduced, one towards each end of the eyelid. The opposing ends of these three sutures, which should be left long, are now separately twisted together, not so tightly as to cause constriction, but sufficiently so to maintain the lid in its everted position. The remainder of the suture is now passed along in the tissue of the eyebrow from one extremity to the centre, at which points the corresponding twisted strands of wire are attached to it; the needle is reintroduced at the centre of the eyebrow, close to its point of emergence, and is brought out at its opposite end, where the third remaining twisted suture is secured to it. When the lower lid is the site of operation the cheek is used as a fixation point instead of the eyebrow. The operation occupies about three minutes.

A Note on the Surgical Treatment of Dislocation of the Crystalline Lens into the Anterior Chamber.

Dr. GEORGE MACKAY asked the experience of his colleagues as to what proportion of cases received permanent benefit from reduction of the dislocation, and in inviting discussion on the best method of operating for the removal of the lens in its capsule, gave his own experience in favour of the employment of a needle to fix and remove the lens from the path of the knife while making the corneal section and to prevent its falling back into the vitreous while a vectis or scoop was being passed behind it.

Mr. PRIESTLEY SMITH said that in cases of partial dislocation with high tension it was well to slacken the eye by a scleral puncture, and only to remove the lens after the tension was reduced.

Brigade-Surgeon-Lieutenant-Colonel DRAKE-BROCKMAN, Mr. GEORGE WALKER, and Dr. EMRYS JONES narrated cases of congenital or traumatic dislocation in which discission or removal of the lens had been effected.

Latent Hypermetropia in the Visual Examinations of Candidates for the Public Services.

Mr. BEAUMONT in this paper pleaded for more definite regulations with regard to the question of latent hypermetropia in the visual examination of candidates for the public services. In the Royal Navy especially he stated that, although the rule was that emmetropes alone were admissible, yet no means were adopted for the detection of hypermetropia. As a consequence it happened that hypermetropic candidates, although warned of ineligibility, often passed with flying colours, and the surgeon giving an adverse opinion was discredited.

Dr. RISIEN RUSSELL gave a limelight demonstration of experiments on the visual centres. Excitation of the frontal eye area caused movement of both eyes to the opposite side, and destruction brought about subsequent deviation to the same side. On section of the appropriate recti, excitation of particular spots elicited each separate movement of the eyes. Further experiments under absinthe showed that the cortical centre only initiated impulse, the motor force being supplied by lower centres. Ablation of one hemisphere of the cerebellum caused paresis of limbs on the same and deviation of the eyes to the opposite side.

Mr. ADAMS FROST gave an interesting limelight demonstration of various aspects of the fundus in health and disease.

Dr. MACNAUGHTON JONES read a paper on the Importance of Detection of Errors of Refraction in Neurasthenic Women, giving numerous instances of relief after correction.

FRIDAY, AUG. 2ND.

Operation in Chronic Glaucoma.

The debate on this subject was opened by Mr. Nettleship. Many cases, he said, were dependent on mental worry or grief were of a purely temporary kind, and were relieved by change of occupation, lapse of time, and general or local remedies, such as eserine. Sclero-puncture, though very effectual in acute, was practically useless in chronic glaucoma. Endeavour should be made to discriminate between different forms of chronic glaucoma, for they were not all alike. One variety associated with disorder of the menstrual functions was not relieved by iridectomy.

Mr. CRITCHETT expressed regret that the treatment of chronic glaucoma was not only a twice, but a thrice told tale. He felt that in this disease it was essential to remember the well-known text, "That thou doest do quickly," and he instanced a case of chronic glaucoma recently under his care in which the disease had existed nine months in the left eye before it affected the right, and though iridectomy was performed in both eyes the tension returned in the left. He laid great stress on the advantage of a cystoid cicatrix, saying that any ophthalmologist who could invent a certain method of securing this condition would have deserved well of his country; and he quoted a case of double chronic glaucoma at St. Mary's Hospital where he had operated on both eyes. The tension had returned in one eye, but had not done so in the other, which was protected by a cystoid cicatrix.

Mr. PRIESTLEY SMITH said that in his view the criterion of glaucoma was the presence of excess of pressure-producing symptoms. A minority only of cases exhibited cupping of the disc and narrowing of the field. The diagnosis was rendered more difficult by the existence of cases in which tension varied from time to time or in which it was insufficient to be detected by the finger. He recommended the use of the tonometer in these. He advised operation whenever there was vision worth saving, even to the bare perception of light, if the health of the patient permitted. He should be warned that the result was not certain, but that operation offered the only chance of saving what remained. The immediate danger to be feared from the operation was injury or displacement of the lens or deep-seated hæmorrhage. This risk was diminished by puncture of the sclerotic, so as to slacken the eye and so gain time, while such conditions as sleeplessness, constipation, and worry which predisposed to hæmorrhage might be relieved. Ultimate success depended on the formation of a permanent fistula so as to maintain drainage, but was also assisted by attendance to the general health so as to obviate further degenerative changes in the optic nerve.

Dr. SWANZY emphasised the advisability of early operation. There was immediate danger of deterioration of sight, but this could be better borne in the early than in the late stages; indeed, when sight was reduced to the fixing point he would refuse to operate for fear of this last remnant failing in consequence. On the other hand, there was difficulty in getting patients with only slight loss of vision in the early stage to submit to operation.

Mr. LITTLE advocated operation in the premonitory stage. When relief was not secured it was often because the incision was too near the cornea.

Mr. ADAMS FROST said it was remarkable that more astigmatism resulted from an iridectomy in glaucoma than in cataract extraction. He avoided operation as much as possible, giving cocaine and eserine every night, and performing iridectomy only when this failed.

Mr. JULER concurred with what Mr. Nettleship had said.

Mr. LEE also spoke.

Mr. MACKINLAY considered it most important to operate early and to make the incision as far back as possible. He preferred a Graefe's knife. The late Sir William Bowman pointed out the fact that an operation often backened the vision as he called it, and it was well to point this out to patients beforehand, impressing the fact that without it they would drift into blindness.

Mr. RICHARD WILLIAMS agreed with what Mr. Nettleship had said, except as to his preference for iridectomy. He had had an excellent result from sclerotomy, the operation being also free from danger.

Mr. TREACHER COLLINS explained the formation of a cystoid cicatrix by the protrusion of a knuckle of iris between the edges of the scleral wound. This was thinned and forced outward by the tension of the eye till it allowed of free filtration. In such cases a boggy condition of the conjunctival tissue around the scar was noticed.

Mr. MCHARDY approved of performing sclerotomy in the coloboma of an iridectomy when further interference was called for. He quoted Bowman in support of the opinion that postponement led to disaster. After operation he did not permit the eye to be used for six months. The incision, commenced in the usual position, should be carried far back at the apex, so as to pass rather behind the sclero-corneal junction. He thought a cystic cicatrix was associated with pricking the iris on inserting the knife. A favourable result was assisted by low diet after the

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operation and an avoidance of constant padding of the eye, skilled support by the hand being substituted for the bandage at intervals.

Professor FUCHS said he had performed sclerotomy only in cases which presented increase of tension after an iridectomy. He had given up operation in cases of chronic glaucoma when there was no increase of tension to be stated; these might, however, be regarded as instances of atrophy of the disc with cupping and not as chronic glaucoma.

Dr. MEYER made a similar reservation to Professor Fuchs with regard to cases presenting only cupping of the disc. He would advise operation in chronic glaucoma under any conditions of vision short of complete extinction, preferring iridectomy to sclerotomy.

Dr. GAZET considered sclerotomy as an operation performed rather for the satisfaction of the surgeon than the interest of the patient. He preferred iridectomy, or in those cases where this was inadmissible puncture of the sclerotic near the equator of the eye.

Professor FUCHS read a paper on Erythropsia—transitory red vision—following protracted exposure of the eyes to strong light. The instances he quoted followed a walk in the snow on which the sun was shining. The phenomenon was more easily produced in some individuals than others, possibly owing to the amount of pigment present in the fundus. The fixation point was not affected, but the depth of colour increased towards the periphery of the field.

Brigade-Surgeon-Lieutenant-Colonel DRAKE-BROCKMAN said a similar condition was common after exposure to sun glare on the plains in India, especially in the subjects of cataract extraction.

Mr. BICKERTON read a paper on the Utter Neglect of the Eyesight Question in Board of Trade Official Inquiries into Shipping Disasters.

In connexion with this the following resolution was proposed by Dr. FARQUHARSON and seconded by Mr. MCHARDY: "That effect should be given by the Board of Trade to the recommendations contained in the report of the Committee of the Royal Society on Colour Vision." This was carried unanimously.

Dr. EDRIDGE GREEN described Systems of Tests for Colour Blindness, stating that many colour-blind people were able to pass a satisfactory test with Holmgren's wools.

DISEASES OF CHILDREN.

The Treatment of Hernia in Children.

Mr. RUSHTON PARKER, Professor of Surgery in University College, Liverpool, and Surgeon to the Royal Infirmary, Liverpool, introduced a discussion upon this subject. The treatment of hernia in children must obviously be either by truss or by operation. He said it is assumed that when a hernia can be kept up with a truss there is no need for further surgical interference. This maxim, generally applicable to the adult, has been thought to be specially adapted to children, in whom the permanent disappearance of hernia after the use of a truss is said to be attainable in a large proportion of cases. Mr. Parker said he would not attempt either to deny or to affirm this, as he has been chiefly consulted on behalf of children, in cases where operation was already regarded as expedient and desired by the medical attendant and friends if acceded to by him. Of the separate motive for operation in each case he had no systematic record, and was therefore unable to say in what proportion of his cases a truss might have been attempted without success, or in how many the operation was asked for to save the trouble, time, and possible failure involved in the use of a truss. The only operation applicable to all herniæ alike, strangulated or not, reducible or not, is herniotomy, with special treatment of the sac; and it was to the operative treatment of hernia in children that his paper was mainly devoted. Mr. Parker's cases had been forty in number, all inguinal, some double, and all in males except one, occurring in thirty-three persons, whose ages varied from four weeks to twelve years—2 were of twelve years, 8 from five to ten, 16 from one to four, and 7 under a year; 2 were of nine months, 1 each of seven, six, and four months, 1 of seven weeks, and 1 of four weeks. The chances of fatality must not be overlooked, and in his forty cases he had met with 3 deaths—2 from peritonitis after ten days, and so traceable to the wound; and 1 from bronchitis within twenty-four hours, an intercurrent accident. The risks of failure appeared to be now not very appreciable, but two of his earlier cases, large herniæ unfitted for a truss, recurred some months after operation. Excluding the 2 failures, 3 deaths, and 1 lost sight of, the relatives of the remaining 27 patients have been recently communicated with, and replies received from 25 announcing that in not a single case had hernia reappeared so far. Two patients had died of other disease, being free from hernia two years after operation, while 23 were reported free from all sign of hernia in June, 1895. The longest interval since operation is eleven years, but in 5 cases it is under a year, with graduated intervals between the limits. The variety of operation preferred by Mr. Parker is Macewen's, described with illustrations in the *British Medical Journal* of Dec. 10th, 1887. The material used for the deep attachment of the sac to the abdominal wall, and for the pillars of the ring when they are dealt with, is the green catgut supplied to surgeons, while that for the skin wound is usually the more readily absorbed yellow catgut. Ligature of the sac with yellow catgut was done in the two cases that failed, and also with green catgut in a few of the successful cases, but has been seldom relied on by Mr. Parker in late years. The conclusions arrived at are: (1) the operation of herniotomy, with special treatment of the sac, is adapted for the radical cure of hernia, strangulated or not, in suitably selected cases at any age; (2) the results of operation during early childhood, and even in infancy, show that at these periods of life the success obtained is probably the greatest of all, while the slight danger is not increased; and (3) there is room for choice in the details, but Mr. Parker preferred Macewen's treatment of the sac in femoral and inguinal herniotomy.

The paper was discussed by Mr. LOCKWOOD, Mr. LANGTON, Mr. MACEWEN, Dr. WARD COUSINS, Mr. MACREADY, Mr. SOUTHAM, Mr. H. P. SYMONDS, Mr. R. H. LUCY, Mr. DAMER HARRISSON, and Mr. WATERHOUSE. There was a general concensus of opinion that Macewen's operation was in the end most satisfactory, and each speaker had his own favourite method for getting over the difficulties of the operation in young children. There was also general agreement that the efficient treatment of hernia in young children by trusses among hospital out-patients was practically impossible.

FRIDAY, AUG. 2ND.

Dosage for Children.

Mr. KINGSTON BARTON opened a discussion on the Doses Suitable for Children at the Several Ages. He reviewed about forty of the preparations most employed, and discussed the dose which he found most efficacious for various purpose. He urged the desirability of inserting in the British Pharmacopœia some guide as to the doses most suitable for children, such as appears in the official Pharmacopœia for Switzerland. He did not think that the dose could be calculated from the body weight, as he considered that children required larger proportional doses than adults, and required them to be given more frequently.

Dr. D. J. LEECH considered that with the exception of stimulants, depressants, and narcotics children took drugs with less disturbance than adults. Dr. FOXWELL, Dr. DAWSON WILLIAMS, and Dr. TIBARD also referred to the remarkable tolerance of young children for some powerful drugs such as mercury, belladonna, and arsenic.

Among the papers which were read in this Section was one by Dr. ARCHIBALD GARROD and Dr. MORLEY FLETCHER on the Maternal Factors in the Causation of Rickets. They showed that in many cases improper feeding was insufficient to account for the occurrence of rickets, but that circumstances affecting the health of the mother before the birth of the child or subsequently, impairing the quality of the breast milk, must be kept in mind. Dr. JOHN THOMSON read a paper on Congenital Hypertrophy of the Pylorus and Stomach Wall; and Dr. COURLEY of Paris contributed a paper on the Non-Pathogenic Streptococci and Staphylococci of the Throat of Children.

PHARMACOLOGY.

WEDNESDAY, JULY 31ST.

Serum Therapeutics.

Dr. KLEIN opened a discussion on Serum-therapeutics by referring to the work of Behring, Kitasato, and Roux, and to the overwhelmingly favourable results of the antitoxin treatment of diphtheria which had been published. He, however, would only deal with the scientific aspects of the question. Experimentally, the effects and value of the antitoxin serum

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were so striking and could be so easily tested that it would be strange if a similar beneficial effect were not manifested when it was used upon the human subject. Immunity was of different kinds; there was natural immunity when the individual was insusceptible to a particular infective disease, acquired immunity when a first attack of a disease protected against subsequent attacks, and artificial immunity when the insusceptibility was the result of certain treatment. Natural immunity was altogether different from acquired immunity, the former being probably dependent upon some peculiarity of cells or tissues, which he would not enter into; the latter to the presence of chemical substances in the blood, which were termed anti-bodies. The methods of producing immunity to diphtheria and the production of antitoxin by injection of gradually increasing doses of the toxins or of the toxins *plus* living bacilli were then briefly described. The antitoxins had a very great power of neutralising the toxins, but much larger doses had to be employed if living bacilli were present in addition. Hence the antitoxic substance and the substance immunising against the living bacilli seemed to be distinct, and, in fact, it could be shown experimentally that they were not formed simultaneously or to the same degree. The antitoxic substance was perhaps a ferment, and in the future two classes of animals might be kept, one class immunised against the toxins, and furnishing antitoxin for the treatment of diphtheria, another class immunised against the living bacilli, and furnishing a serum which might be used for preventive inoculation. Experimentally, the value of antitoxin was as firmly established as that of any known drug.

Dr. WASHBOURN said that serum therapeutics marked an epoch in medical treatment comparable to the introduction of antiseptics into surgical practice. Whereas by the introduction of antiseptics the field of surgery had been vastly extended, medicine, except for the improvements in diagnosis, had remained almost stationary. The progress of bacterial therapeutics had been slow, and when tuberculin was found to be a failure, for a time a death blow seemed to have been given to this branch of treatment. The disfavour with which the antitoxin treatment had been received by some was due partly to preconceived ideas, based on the failure of the tuberculin treatment. The cases of tuberculin and antitoxin, however, rested upon a very different foundation, for the latter had been thoroughly tested experimentally before being published. With regard to tetanus antitoxin, as pointed out by Dr. Kanthack, the results seemed to be somewhat disappointing, but there was the disadvantage that only a comparatively few cases had been treated, and no observer had had a series of cases. There were two methods by which the value of diphtheria antitoxin could be gauged—the clinical and the statistical; and a large number of cases and series of cases were now available for criticism. As regards the statistical method, it was most important that the age of the patients should be mentioned, for whereas for children under five years the mortality was 49·09 per cent., for persons over fifteen years the mortality was only 4·6 per cent. The varying severity of different epidemics was a factor which could not be neglected, but by taking a large number of cases in many series this fallacy could be eliminated. The position of the membrane, whether faucial only or involving the larynx, was another important factor. Many of the published records of isolated or small series of cases were of little value, especially if the ages were not stated. Over 3000 cases treated with antitoxin were now available for analysis, and statistics showed a diminished mortality, in some instances one-half that which existed in pre-antitoxin days. This was the case in Paris, where at the same time at the Trousseau Hospital under the old treatment the mortality remained up to the average, and also in Berlin, where there was a great diminution of mortality when the antitoxin was used, a rise when the supply of the remedy failed, followed at once by a decline on the resumption of the use of the remedy. Statistics, therefore, definitely proved the advantage of the antitoxin treatment. Clinically the following features were observed under the antitoxin treatment. The exudation clears off more rapidly, and so in many cases dispenses with the necessity for tracheotomy. The temperature, which, however, is not of great importance in diphtheria, when high is lowered, the pulse becomes slower and more regular, although no direct action is observable on the heart. No deleterious effects, such as nephritis and anuria, could be ascribed to the remedy. As regards the occurrence of post-diphtheritic paralysis more extended observations were required. Where the antitoxin failed it was frequently due to invasion of the membrane by septic bacteria, streptococci, and the like, whereby a septicæmic condition might be produced. Slight complications, such as rashes, pyrexia, and joint pains, sometimes attended the use of the remedy, but these were of a transient character and only retarded recovery somewhat. The rashes were of an erythematous or urticarial nature, and the joint pains proceeded usually from the structures around the joint, although actual effusion might occur. Dr. Washbourn emphasised the importance of antiseptic precautions for the injecting and the necessity for regulating the dose according to the age of the patient and the severity of the disease. As regards the prophylactic use of the serum, the protection did not last long, and it would only be exceptionally indicated. In conclusion, the possibilities of serum therapeutics were touched upon as applied to bacterial diseases such as erysipelas, pneumonia, puerperal fever, and the like.

Professor CHARTERIS (Glasgow) spoke of the cases of diphtheria he had seen treated with antitoxin. There could be no doubt about its efficacy; the membrane ceased to spread, the pulse became fuller and stronger, and the whole aspect of the patient improved. With regard to the ill-effects attributed to the use of antitoxin, he had made experiments on animals with the preparations supplied by Aronson, Behring, Burroughs and Wellcome, and the British Institute of Preventive Medicine, and in no case was any deleterious action observed.

Dr. R. T. HEWLETT said that he wished to say a few words with regard to tetanus antitoxin. After a brief description of its mode of preparation the speaker referred to the mortality from tetanus, and from a consideration of the statistics concluded that this was about 75 per cent. for all cases. He had collected details of sixty-one cases of tetanus treated with antitoxin with twenty-two deaths, giving a mortality of but 36 per cent. This, however, was probably too favourable, and it would seem that the acute cases were little benefited, but in the chronic ones the tetanus antitoxin distinctly increased the chances of cure. A recent report from one of the West Indian islands was encouraging, for the Acting Surgeon-General reported that the treatment of tetanus by antitoxin had been so satisfactory that he recommended that a further supply of the remedy be obtained at once. The speaker concluded that it was our duty to employ the antitoxin in all cases of tetanus, and emphasised the importance of early treatment. The use of tetanus antitoxin as an immunising agent was most promising, especially in certain tropical countries where tetanus was of frequent occurrence.

Dr. TIRARD had treated with antitoxin sixteen cases of diphtheria at the Evelina Hospital with only two deaths, a considerable reduction compared with the previous rate of mortality, and one of these was due to hæmorrhage from the tonsillar artery. The effects of the treatment were very striking from the first—the membrane "went," there was marked improvement in the general condition, the pulse increased in force and diminished in rapidity, and the temperature fell or, at any rate, did not rise. All the cases had been carefully watched, and no paralytic symptoms had occurred. Altogether the results of the treatment were most encouraging, but it must still be regarded as being on its trial.

Dr. GAYTON was not favourably impressed with the antitoxin treatment of diphtheria. He believed that cases which would have died under the old treatment died under the new, while paralysis became more frequent and the liability to nephritis was increased by antitoxin. It was true that there was a slightly lessened mortality (about 5 per cent.) under the use of antitoxin, but this was to be attributed to an alteration in the character of the cases. The rashes &c. attending the use of antitoxin were not of such slight importance as had been stated. Finally, for those experienced in the clinical diagnosis of diphtheria the bacteriological diagnosis was unnecessary and often misleading.

Dr. CAIGER had treated 230 cases of diphtheria with antitoxin. Cardiac failure had been reduced, but paralytic sequelæ were more frequent. This was to be attributed to the fact that a larger proportion of severe cases recovered than formerly. The duration of the membrane, which before the use of antitoxin was 4·6 days, was reduced to 2·6 days. In the nasal form the acrid discharge was soon checked and the patients rendered more comfortable. In laryngeal cases the benefits were most marked; both the membrane and swelling soon disappeared, and the number of cases requiring tracheotomy was reduced from 70 per cent. to 43 per cent.

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The mortality was lessened, and even in the fatal cases life was prolonged to 7·2 days, whereas it was previously only 4·3 days. After commenting on the character of the rashes, Dr. Caiger referred to the dose of antitoxin, and said he had given much larger amounts than were recommended, starting with 50 c.c. and administering 160-180 c.c. during the first three days, and he considered the results were much better.

Professor FRASER (Edinburgh) commented on the method usually employed to test antitoxin, and considered that the small amount of antitoxin required to neutralise the minimum fatal dose of toxin, when administered previously or simultaneously, was calculated to give an exaggerated idea of its potency. He advocated the standardising of antitoxin by injecting it at some given time after the dose of toxine.

Mr. BOKENHAM referred to the large bulk of fluid which had to be injected and to the convenience of a more concentrated form of the antitoxin. When dried, the scales would dissolve in a volume of water only one-third that of the original serum. He had also succeeded in precipitating the albuminous matters in the serum more or less perfectly, thereby obtaining a concentrated product.

Dr. KLEIN, in reply, alluded to the use of dried serum, and believed that in this form the antitoxin was less likely to produce the rashes and other complications which had been mentioned. With regard to Dr. Gayton's communication he should have liked to have had more information respecting the dose administered.

Dr. WASHBOURN agreed with Professor Fraser as to the testing of antitoxin. Referring to Dr. Gayton's cases, he said their number was too small to attach great importance to them, and as it was the mortality had been reduced 5 per cent. He should have liked more information as to the dose and method of administration. He could not agree that the bacteriological diagnosis of diphtheria was of little value.

Production of Immunity to Snake-bites.

Professor FRASER (Edinburgh) then read a paper on the Production of Immunity to Snake-bites, and described the method employed. Antivenene could be produced by internal administration of the venom as well as by subcutaneous injection; the latter, however, was the better. The blood of venomous snakes was strongly antitoxic and protected not only against their own venom, but also against that of other species. The antidotal action of antivenene seemed to be rather of the nature of a chemical reaction than of a physiological antidote. With regard to the administration of antivenene, several successive doses seemed to be more effectual than one large one. Antivenene should be injected at the seat of the bite, before the ligature, if applied round the limb, had been removed and before excision; 20 c.c. sufficed for the initial dose.

Professor STOKVIS (Amsterdam) asked whether Professor Fraser had administered antivenene by epidermal application. He believed that in the West Indies the snake-catchers rub themselves with the skin of a recently killed snake before pursuing their occupation, and were supposed to be thus rendered immune.

Professor FRASER, in reply, stated that he had not tried epidermal application of antivenene, but as immunity could be produced by absorption through the epithelial lining of the stomach it was quite possible that inunction would act similarly. It was a point worthy of trial.

THURSDAY, AUG. 1ST.

Discussion on Revision of the British Pharmacopœia.

The greater part of the sitting was devoted to a consideration of the revision of the British Pharmacopœia, Dr. T. LAUDER BRUNTON presiding.

Professor LEECH (Manchester), in opening the discussion, said that he was a member of the General Medical Council, and was hoping to learn the views of practitioners on the question of revision. He suggested that the discussion might be confined to the following considerations: (1) the nature and extent of the list of remedies; (2) the preparation of compounds so far as concerned their medical use; (3) weights and measures; and (4) the amount of accessory information to be given. Much information had been gained from the memorandum of the Therapeutic Committee of the Association, and it appeared that fifty-four drugs and preparations were never used by over 5000 practitioners out of the 5609 who had sent replies. At the same time every drug was used by someone, and it was important to ascertain how this came about before deciding on omissions. As regards examinations, it was absurd to expect students to acquire a knowledge of drugs which would never be used by them. The Pharmacopœia must keep pace with the times, and the question arose as to whether the new preparations, such as tabloids, granules, &c., should be included. Should the details of the making of poultices find a place? With regard to the tests, it would be well to specify what the impurities were which the tests were intended to detect. The British Pharmacopœia was the only one in which the metric system of weights and measures was not adopted, and it would probably be found expedient to include them side by side with the English ones. As regards dosage, simplification was very desirable, and of the powerful remedies the maximum and minimum doses might be specified with advantage. Finally, it was only necessary to describe the drugs generally employed, and all doubtful matter should be excluded.

Dr. DONALD MACALISTER (Cambridge) said that the essential formulæ of the Pharmacopœia should be so arranged as to be easily remembered, and so that the superfluous should be best avoided. Uniformity should be aimed at. Thus as regards the tinctures, although it might not be feasible to make them of such strengths that the dose should be uniform, it would be possible to have two or three classes, so that all the tinctures in a class should have the same dose. As the active constituents in roots, leaves, &c., varied considerably under different conditions it would be desirable to add directions for standardising the extracts and tinctures. Two strengths of the same preparation—as the liquor ammoniæ acetatis and the liquor ammoniæ acetatis fortior—were confusing and might lead to dangerous errors. The metric system should be introduced, and a concise table of solubilities would be most useful. As regards enemata, formulæ for some simple enemata might be retained, but the amount of the active constituent to be introduced should be left to the prescriber.

Professor BRADBURY (Cambridge) considered that the Pharmacopœia contained much useless matter—for instance, the mode of preparation of chloroform, ammonia, &c. Purely pharmacological methods only should be retained, as the preparation of infusions and tinctures. Many improvements might be made in the various menstrua and in the bases for the unguenta. Uniformity of dose was a subject of the greatest importance. In the present Pharmacopœia some of the doses were too large, as those of tincture of aconite and dilute hydrocyanic acid; the latter might preferably be prepared as a 1 per cent. solution instead of a 2 per cent. In other cases the doses were too small, as the liquid extracts of ergot and male fern and the subnitrate and carbonate of bismuth, of which the dose might be up to one drachm. It would also be very valuable to give the maximum amount which could be administered with safety in the twenty-four hours, especially when the drug tended to be cumulative. The metric system should be introduced for the purpose of preparation, for prescribing its use might be optional, while the Centigrade scale should replace the Fahrenheit.

Mr. MAHOMED thought that the number of preparations of several drugs might be reduced with advantage. He strongly urged the desirability of uniformity in dosage wherever this was practicable.

Dr. T. JONES considered that medicated bougies and pessaries might be introduced with advantage, and that the present selection of suppositories was not a good one, while the doses of drugs to be administered by the rectum needed careful revision.

Dr. TIRARD spoke of the numerous suggestions he had received as secretary of the Therapeutic Committee of the Association in the course of an investigation of the relative frequency of employment of certain drugs. Many of the suggestions were valuable and had already fallen from previous speakers. He thought too much had been made of the Pharmacopœia belonging wholly to medical men or wholly to chemists; it was a standard of purity for the use of both. Mr. NEVILLE WOOD, Dr. MAYBURY, Dr. FRASER, and Dr. STOCKMAN also took part in the discussion, the last suggesting that the Therapeutic Committee might begin working not for the next Pharmacopœia but for the one "after next." Much of the ground covered by the various speakers closely followed the various criticisms of the Pharmacopœia which have appeared in these columns and in other journals.

Professor CHARTERIS (Glasgow) said that the doses and the tests for impurities in the present Pharmacopœia were in many cases incorrect. The introduction of the metric system of weights and measures was also desirable.

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The discussion was continued by Dr. CARTER, Professor FRASER, Professor RALPH STOCKMAN, and others, and Professor LEECH briefly replied.

In the short time that remained at the end of the discussion, papers, among others, were read by Dr. SURVEYOR and Dr. VAUGHAN HARLEY on the Action of β-Naphthol and Bismuth Subnitrate as Intestinal Antiseptics, and by Dr. C. D. F. PHILLIPS on the Pharmacological Action of Berberine.

ETHICS.

THURSDAY, AUG. 1ST.

Clubs, Medical Aid Societies, and Contract Practice.

On Thursday morning a debate on this subject was opened by Mr. DOYNE. He spoke as to the inability of the General Medical Council to interfere, and the necessity of establishing between the profession and the public an arrangement dealing with the commercial aspect of the case. He thought the British Medical Association could, and ought to, take the lead, and might, if it chose, settle the difficulty. The commercial sense of the country would not ignore that there was a rightful claim for at least a minimum rate of remuneration. This minimum he thought might be fixed at 2*d*. per week per individual and 2*d*. extra for each visit at home. Medical charities that could not pay that rate should be reorganised on a better basis, and the Poor-law might also be called upon to pay this contract minimum rate. In a word, he demanded for the medical profession a living wage.

Dr. FREDERICK PEARSE likewise protested against the "sweating" of the profession. He said that most societies made their members pay 2*s*. to 4*s*. per member per annum, and he calculated that there was on an average one week's illness per member, necessitating three consultations, and each should be paid at the rate of 2*s*. 6*d*. Thus, 7*s*. 6*d*. per annum per member was something like a fair rate for contract work. Many friendly societies now wanted to give benefits to children under three years old. This caused a great increase of work. Further, there were female lodges, and women were accepted on the same terms as healthy males, though they required much more attention. Undoubtedly the growth of clubs and aid associations injured medical practice all over the country. The tendency of the age was to develop in all directions the spirit of association, and the grievance would become universal if energetic measures were not taken. In Portsmouth, fortunately, the medical profession had united. They felt they must combine, or they would become the slaves of other combinations. Dr. Pearse distributed among the Section a written formula of the pledge taken by the members of the Portsmouth Medical Union. It was worded as follows:—"We, the undersigned medical practitioners, practising in Portsmouth and the neighbourhood, hereby pledge one another that we will not take the office of medical officer to any friendly society vacated by the discharge or resignation of any medical practitioner in the district on account of his refusal to accept any additional burden or new conditions of his duties as medical officer."

Dr. W. R. RICH spoke energetically against those who gave gratuitous services to so-called charitable institutions, and qualified them as "traitors" to their profession. Voluntary hospitals were also often "a public scandal." The out-patient department was managed in a shameful manner. He knew of a dispensary where as many as a thousand bottles of medicine had been given out in a day. This was not serious medical treatment, and by crowding so many sick together the dispensary in question had been rightly qualified as a centre for the spread of disease. Yet this institution prides itself in being a model among such organisations. The profession must combine. It must check this system, which, by creating monopolies, engendered tyranny. The commercial evolution of to-day was disintegrating the medical profession. Medical men were flooding the market, and monopolists profited by this glut to convert medical men into wage slaves. A medical man was also employed as a lever to ensure the success of some general insurance business. He was a tool in the hands of a society. If he refused to lend himself to this he was called bad names, and described as a man who had no feeling for the suffering of the poor. However, at Coventry they had succeeded in getting six medical men to resign their positions on these societies. If the societies imported a foreigner, this was better than to have reputable men doing disreputable work. One difficulty was the fact that medical men were not, as a rule, good business men. They had founded, however, at Coventry a Public Medical Service Society, and eleven of the local practitioners had joined this movement. Their Society had for purpose to keep medical service under the control of medical men. They had now about 6000 members subscribing to their society, but no one was allowed to subscribe who earned more than £2 a week. They had further succeeded in checking the odious system of underselling by which medical men waged war against each other, and they now contemplated attacking the hospitals, which too often were merely places for "the evacuation of medical refuse," a remark which was greeted with laughter and cheers. The Section was equally pleased when Dr. Rice described the efforts of the medical profession as a whole to deal with the question before them that day as "nebulous, amorphous, anæmic, and uncertain."

Dr. HEMMING complained of the absence from the Section of young men; this was the more unfortunate as they were the most concerned in the question. He spoke of the antiquity of sick benefit funds, mentioning one society which was founded in 1750 and which had been recently killed by the reforming parson of the parish. But what was club practice about fifty years ago? The "very name stank," and clubmen were treated shamefully. He urged that it was first necessary to treat such patients well. By that means the profession would gain the public confidence and sympathy, and then their claims would meet with a more ready acceptance. Men who paid from 4*s*. to 7*s*. annually conceived that they had a right to be properly attended; and he thought that in the present day the medicine and care given were fairly good. He did not find it difficult to do contract work; indeed, it was easier than private practice among the same class of patients. Workmen were quite determined to manage their own affairs; it was only necessary to educate them ethically as well as they had been educated politically. He thought that where operations had to be performed an extra rate should be paid; and he believed that most working class organisations would make an extra allowance if the proposal were put to them straight as a question from man to man, of fair play between the working practitioner and the working artisan. On the other hand he was bitterly opposed to what were known as medical aid associations. In Devonshire they had begun to float such associations, but the medical men had written to one another and had managed to get rid of them.

Mr. GOSS, who followed, declared that club practice appeared better the further one got away from it. Elderly practitioners who no longer needed such work could best afford to talk about duty to the poor. Some good remedies had been suggested by the various speakers. Of course, organisation was the first of necessities; then mutual local pledges such as that taken by the practitioners at Portsmouth were likely to be very effective. He thought that as the State benefited by large families the State should aid such instead of leaving them to the charity of medical men. The latter, if they accepted contract work, should do it well, acquire a reputation for good work, and then claim a higher scale of remuneration.

Dr. ELLISTON, as surgeon to a country hospital, stated that they did their best to eliminate patients who could pay. Sick benefits were really a mathematical question. He believed they were unanimous in saying that private clubs and medical aid societies should be abolished. (Loud applause.) A county medical club, to which he belonged, excluded men who earned more than £1 a week or servants with more than £8 a year. The fee was 5*s*. for a man, 5*s*. for his wife, and a shilling each for children, up to the maximum of 15*s*. Of this, 1*s*. was deducted for managing expenses; and, as he had no trouble in collecting the money, he found this worked well.

Dr. NEWMAN maintained that each member should pay annually one week's earnings, which would be from 14*s*. to £1 in rural districts; and the labourers he had questioned on the subject had all agreed that this was a fair estimate. He urged that medical men in the service of medical aid societies should be requested to resign their membership of the British Medical Association.

Surgeon-Captain J. J. A. RAYE, who had been challenged as working for some of the accused benefit societies, protested that it was not fair to confound friendly societies with medical aid associations. He belonged to the Foresters and other similar benefit societies. They gave him a dispenser, all the drugs he required, a house to live in, and a fair

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salary. He recognised that there was a grievance with regard to the admission of outside members, and against this he had always protested, notably at the dinners given by the Foresters and the Oddfellows. He had always preached the exclusion of those who were able to pay a medical man's bill, but he had no power to enforce such a rule; and on one occasion, when he was about to resign, he had ascertained that forty-two applications had been made by persons who, though holding the M.D. and the M.R.C.S. qualifications, were eager to get his post. He quite agreed to the establishment of a wage limit if it could be shown how this could be done. In answer to questions Surgeon-Captain Raye said that he did not receive the whole of the money that was paid by the members, but the society paid for his cabs, his house, his assistant, and his drugs. The secretary of the society was the only other paid official. Profits were set aside to meet years of epidemic. He had to attend to some 4000 persons. Some interruptions here occurred. One member present suggested that at a penny per week this would mean £800 a year, and asked whether as much as this was paid; while others protested that 4000 persons were more than any one man could attend. But Surgeon-Captain Raye held the meeting down to the question whether, if he resigned, they could guarantee that no one else would take his position, and this, perhaps, at even a smaller salary.

Mr. PHILIP LEE (Cork) then spoke, and related how his branch of the British Medical Association had been in the thick of the fight. They had to thank the Association for its help and sympathy. Their local branch had drawn up rules fixing the wage limit at £4 a week, which doubtless was too high. The Cork clubs had 4000 members and thirteen medical officers. If they calculated four in the family, this made a population of 16,000, and that was a very large proportion of the inhabitants of the town. Though these clubs represented every shade of religious and political opinion, and were constantly at war with each other, they united to fight the medical men, and the newspapers backed the clubs, denouncing the medical men as money-grubbers. It was galling to find that the clubs and the imported medical men were laughing at the British Medical Association as incapable of doing anything. They had subscribed among themselves £400 to fight the matter, and outside subscriptions had also been received. They were not fighting for money, but for principle, and they looked to the British Medical Association for assistance. No imported medical men should be admitted into the Association, and the members of the Association should refuse to enter into consultation with them.

Mr. GEORGE BROWN urged that the profession should form itself into union.

A Member urged that there should be a rent limit as well as a wage limit.

After some more remarks from Mr. DOYNE the debate concluded with the understanding that a resolution on the subject would be put at an ulterior meeting of the Section.

FRIDAY, AUG. 2ND.

The Section met again at King's College under the presidency of Dr. CLEVELAND; there were no set subjects for discussion, but certain resolutions were proposed.

The first resolution, proposed by the Chairman and seconded by Mr. GEORGE BROWN, was carried unanimously:—

"That the employment of unqualified assistants in visiting patients is injurious to the interests of the public as well as to those of the profession."

The second resolution was proposed by Mr. PHILIP LEE and seconded by Dr. MAJOR GREENWOOD:—

"That, in the opinion of this Section, any practitioner who wilfully violates generally received rules of professional ethics be not met in any professional intercourse whatever, save in a case of very urgent danger to an individual patient."

This was also carried unanimously.

The third resolution was proposed by Dr. G. W. POTTER and seconded by Dr. MAJOR GREENWOOD:—

"That advertising in any shape is highly derogatory to the profession, and that the Council be requested to use every effort to suppress it."

A good deal of discussion arose upon this as to who should be the deciding body to adjudicate upon the question of what does or does not constitute advertising, but eventually the resolution was agreed to.

The fourth resolution was the outcome of the discussion held on Thursday, Aug. 1st, about medical aid societies. It was moved by Dr. MAJOR GREENWOOD and seconded by Dr. J. BROWN (Bacup):—

"That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid and kindred societies, and that, in the opinion of the Section, no practitioner who accepts office in any society of this kind ought to be eligible for membership of the Association; that medical aid societies be defined to be 'any lay association which endeavours to obtain pecuniary profit for its members solely out of the labour of salaried medical officers.'"

Dr. T. F. PEARSE moved and Mr. PHILIP LEE seconded:—

"That the Council be requested to open a fund to indemnify medical men in their contests against the action of friendly societies."

Dr. HENRY and Mr. BROADBENT (Manchester) moved a resolution to the effect:—

"That the Council be requested to communicate with the Universities and the medical corporations with a view to discouraging graduates from taking office under medical aid associations."

Mr. BOUSFIELD moved in a very clearly and well-put speech, and Mr. BROADBENT (Manchester) seconded, the following resolution:—

"That this meeting is unanimously of opinion that a suitable authority should have powers of control over irregular practices of the same kind as those exercised by the Incorporated Law Society and the Inns of Court, and urges the Council to approach the Government with a preference for this Association as the controlling body."

A very long resolution, proposed by Dr. MCNEE and seconded by Dr. K. SIBLEY, proposed that teachers and professors in medical schools should impress upon students and pupils the importance of *esprit de corps* and coöperation both as regards their own interests and those of their future patients.

Mr. NELSON HARDY and Dr. HUGH WOODS moved a resolution:—

"That members of the Association should not hold office in any hospital which is not really a public institution, and that members of the medical staff of hospitals having pay wards should not attend the inmates of such wards gratuitously."

The meeting terminated with a vote of thanks to the President.

CLINICO-PATHOLOGICAL MUSEUM.

[SECOND NOTICE.]

Last week we described the morbid anatomical specimens exhibited in this important collection, and it remains now to notice the bacteriological exhibits, the pictures, and the patients shown.

Compared with the bacteriological exhibition of last year at Bristol the present one is numerically inferior, but in point of originality this one takes the lead. Take, for instance, the Ringworm exhibit of Dr. Colcott Fox. Dr. Leslie Roberts read an interesting paper in the Dermatological Section on the Parasites of Ringworm, but the study of this subject has for the most part been delegated to foreign writers, especially French. It is, therefore, with much pleasure, for the honour of Great Britain, that we notice the admirable exhibit of photographs and cultures shown by Dr. Colcott Fox. This gentleman and Dr. Blaxall have examined 200 cases of ringworm and cultivated the many different organisms found in this disease, with a view to differentiate the various species. The inquiry is intricate owing to the difficulty of obtaining pure cultures, but the organisms which produce ringworm may be classified into: (1) Microsporon audouini, the common rebellious small-spored fungus found by them in 70 per cent. of the cases (as compared with 60 per cent. by French writers); and (2) tricophyton megalosporon, a large-spored fungus derived mostly from animal contagion. Of this there are a large number of different species, capable, however, of being grouped into two principal divisions—(*a*) endothrix (infiltrating the hair shaft), and (*b*) ectothrix (chiefly outside the hair, but sometimes making its way into the interior). Beautiful photo-micrographs and cultures on the various media were exhibited of these different species.

Dr. MONCKTON COPEMAN and Mr. KENT exhibited the results of their investigations into the bacteriology of vaccinia and variola. A beautifully stained microscopic specimen, labeled vaccinia, of a bacillus resembling tubercle and many other bacilli in appearance was shown, but we were informed by the exhibitor that when it is inoculated into calves it showed, after one or two removes, results indistinguishable from vaccinia as seen in that animal. When transferred to children from the calf the result is equally typical. The organism is small and stains with great difficulty, and it will not grow on ordinary culture media. The

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difference or identity of this with the bacillus variolæ is still under investigation.

Dr. SIMS WOODHEAD exhibited a series of Diphtheria Cultures, showing a day's work at the laboratory of the Conjoint Board on behalf of the Metropolitan Asylums Board. Forty-one cases were examined on July 29th, and from thirty-six of these cultures of the coccus diphtheriæ were obtained on blood serum. Some of these were convalescent cases, which in pre-microbic days would have been regarded as free from infectiveness, but which, nevertheless, gave cultures showing that they were still infectious. The large number of 5143 cases have been so examined up to date. An excellent series of bacteria fixed with formic aldehyde for museum purposes are also exhibited.

Dr. MACFADYEN and Dr. HEWLETT, from the British Institute of Preventive Medicine, displayed: (1) A very complete series of cultures of chromogenic organisms, which are chiefly derived from water; (2) numerous examples of cultures of non-pathogenic saprophytic or putrefactive organisms, useful for differential purposes; (3) a set of cultures of pathogenic organisms, such as cholera, pyogenic microbes, tetanus, glanders, erysipelas, symptomatic anthrax, and actinomyces; (4) a series of thermophylic bacteria (a subject to which Dr. Macfadyen has devoted much attention)—i.e., microbes growing at a temperature of 140° to 150° F., which destroys protoplasm; these are chiefly saprophytic organisms derived from water, soil, hay, &c.; and (5) some excellent photo-micrographs of gonococcus, the bacillus of tetanus, &c., by Mr. Barnard.

Mr. JOSEPH LUNT, from the water laboratory of the same institute, exhibited a series of water-borne organisms, amongst which may specially be noted a differential series of bacillus coli communis and the typhoid fever bacillus. These organisms are extremely alike in their physical properties though so different in their lethal powers. Both grow alike in form and colour, and both produce acid from sugar-agar; but the former produces gas at the bottom of a sugar-agar tube. Cultures of typhoid fever are also shown from bacteria after living in sterilised water for seventy-six days.

Dr. KLEIN showed a fine collection of bacteriological lantern slides, chiefly useful for educational purposes; and Dr. VINCENT HARRIS a series of bacteria infecting the alimentary tract. Among the apparatus shown was the Berkefeld filtration apparatus for deriving enzymes from bacterial fluids; various accessories for photo-micrographic work; and a new instrument for the cultivation of anaerobes (Professor D. J. Hamilton).

Turning next to the pictures, which were arranged around the museum, the most complete series is a collection of thirty-seven platinotype reproductions and five coloured sketches, illustrating the various stages of the epidemic skin disease described by Dr. Savill in 1891. They show well the successive stages of this protean and interesting disorder, how that it begins with a papular or papulo-erythematous rash and passes on in the course of four or more days to extensive shedding of the cuticle. The serious and sometimes fatal nature of the malady was well depicted, but the picture of a child who had a very mild and transitory attack was also shown. Photographs of cultures and of the microbes isolated by Savill and Russell in this disease were also shown, and some excellent photo-micrographs illustrating the histology and the peculiar and pathognomonic nuclear change discovered by Echeverria also find a place. This series is lent by the Royal College of Surgeons, and forms as complete a set of pictures illustrating one disease as could well be grouped together.

The great labour involved in arranging this museum in so short a time doubtless explains why the remaining pictures were not more definitely arranged and labeled. Mr. HUTCHINSON, from his rich store of illustrations, exhibited pictures of detached epiphyses and their results (a series tallying well with the preparations we referred to last week); tuberculosis of the skin resulting from inoculation of the phthisical sputum of one lad into the arm of another whom he was tattooing; lupus and other skin affections; and diseases of the bones. Pictures of many rare and interesting conditions adorned the tables, among which may be mentioned acute dermatitis, probably the result of chloralamide; Raynaud's disease, congenital syphilis, xeroderma pigmentosa, mycosis fungoides, various drug eruptions, and the various forms of lupus. Among the coloured sketches was one labeled "An unusual form of the lichen of childhood," sketched from a patient under the care of Mr. Morrant Baker, and bearing the date of 1882. The picture bears a very striking resemblance to the papulo-pustular (acneïform) eruption upon which Dr. Colcott Fox read a paper in the Dermatological Section, and which has also been described by Crocker under the name acne scrofulosorum, and Jamieson under the name of acne varioliforme.

Dr. THOMAS H. MORTON exhibited a series of lantern slides illustrating vaccinia, variola, and other morbid conditions.

In order to complete the provision for a veritable clinico-pathological exhibition it was arranged that patients should attend at 9.30 each morning for demonstration. We can only briefly notice these, though many were of considerable interest.

Mr. HUTCHINSON exhibited—(1) a classical case of universal molluscum fibrosum, photographs of which at different stages of this slow growing disease were displayed in the Museum; (2) a case of papular eruption described as prurigo-keloid, though after inspecting the hard, glossy, lichenoid papules it seemed to some to be a pity to use the word "keloid" in this connexion; (3) urticaria pigmentosa; (4) a rare form of lupus vulgaris; (5) symmetrical paralysis of the seventh pair of nerves, probably resulting from syphilitic otitis media; (6) unilateral hydrocystoma and unilateral sweating on the right side of the face following neuralgia of the fifth nerve on the same side; (7) acrocephalus (finger-tip sloughing) which occurred suddenly in connexion with a severe illness (drawings from three other patients suffering from the same condition were placed in the Museum; the curious feature of all the cases was their being unattended by Raynaud's phenomena, and only one (an elderly person) had any discoverable arterial disease); and (8) a case of recovery from leprosy.

Mr. EDGAR WILLETT exhibited—(1) a case of varicose aneurysm of the vessels of the right arm; and (2) a case of osteitis deformans in a woman aged forty-nine, affecting only the left tibia. The illness had only lasted two years. A specimen of a case affecting one bone (the radius) was placed in the Museum.

Mr. ALFRED WILLETT exhibited a case of ligature of the innominate, subclavian, and carotid arteries for subclavian aneurysm on the right side. The operation had been done in January, 1893.

Dr. PHINEAS ABRAHAM exhibited—(1) a case of lupus verrucosus of twelve years' growth affecting the left hand, the right hand having been affected five months ago; (2) a bromide eruption resembling a pustular syphilide, which started at the site of a bite only ten months before, although the patient had taken bromide for seven years; (3) a case of pemphigus which bore a strong resemblance to dermatitis herpetiformis (Dühring); (4) a case of pityriasis rubra pilaris (Devergie) in a little girl aged seven, lasting four months, and showing now the pale brown thickening of the skin distributed like gloves on the hands and feet; and (5) a remarkable pigmented nævus of the foot, supervening on varicose veins. The same patient exhibited leucoderma on the body and alopecia of the scalp.

Dr. F. R. WALTERS exhibited an interesting case of universal hypertrophic osteo-arthropathy of pulmonary origin in a man aged thirty-four. The hands were considerably enlarged, partly from osseous hypertrophy and partly from hypertrophy of the other tissues, and the edges and ends of a great number of the bones of the skeleton were lipped. The patient was the subject of pulmonary fibrosis, bronchitis, and emphysema, and a similar connexion between pulmonary disease and osteo-arthropathy had been traced in other cases. A paper on the affection was read by the exhibitor in the Pathological Section.

Space does not permit us to describe, or even to enumerate, all the wealth of material comprised in this storehouse of clinical and pathological objects, which, owing to its position and want of announcement, was well-nigh delegated to oblivion, but which, in our opinion, was one of the most interesting and instructive departments of the meeting of the British Medical Association, partly because the kind of knowledge was objective and not speculative, and partly because by careful selection and collection it brought into view all certain knowledge of recent date and much other interesting matter.

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THE MUSEUM.

I.—DRUGS (*continued from p. 313*).

To the list of new and recent remedies described in the concluding paragraph of the article under the above heading in our last issue we may add: cocainæ phenas, which, acting as a local anæsthetic, has also the advantage of being antiseptic; duboisine sulphas, obtained from Duboisia Hopwoodii, like hyoscine, has been used as a sedative and hypnotic in mental disorders; formanilid, with the same uses as antipyrine, but less dangerous; ichthyol, as a suppository in prostatitis; magnesium sulphite, in tablet form, for the treatment of diphtheria; methyl chloride in cylinders for the purpose of spraying parts affected with neuralgia; methylene blue, used in diphtheria and as an injection in cancerous growths, and administered also with benefit, it is said, in malaria; oxychinaseptol, useful as a deodoriser in foul sores and discharges; salacetol, the salicylic acid of which is set free in the intestine, is employed in choleraic diarrhœa with castor oil; salipyrin, salophen, serviceable in painful nervous disorders, acting like and related to antipyrin; trional, already employed in post-epileptic delirium, and useful also in the night sweats of phthisis; and tropococain, a local anæsthetic for the eye. Messrs. Allen and Hanbury (Plough-court, E.C.) also supply a novelty in the shape of ozonising tubes for administering ozonised air as inhalation, or for ozonising the air of rooms or hospital wards. The results of trials with cases of pulmonary tuberculosis and anæmia claim some attention. A remarkable increase in the percentage of the oxyhæmoglobin appears to result upon this treatment. It is impossible to enumerate the lengthy list of "recent additions" brought to the notice of the visitors by Messrs. Burroughs, Wellcome, and Co. (Snow-hill, E.C.) on their admirably designed exhibit. Suffice it to mention some which comparatively recently have found favour in the list of remedies now largely prescribed. Emol-Keleet, for example, an interesting preparation which we have already noticed, is a remarkably fine mineral powder containing a high proportion of steatite, and has been found of excellent service as a dusting powder for inflamed and weeping surfaces. It is also well adapted as a diluent for antiseptics and as a tooth powder. The useful styptic, hazeline, is prepared in the convenient forms of "cream," "snow," and suppository. Amongst synthetic remedies were agathin, an effective anti-neuralgic and anti-rheumatic; alumnol (naphthol-sulphonate of aluminium), a new antiseptic possessing the important characteristic of precipitating albumen and gelatine, which, however, are soluble in excess; diaphtherin (oxychinaseptol), whilst powerfully antiseptic, is without the caustic and corrosive action of phenol or the toxic properties of oxychinoline; dermatol, an excellent and odourless substitute for iodoform; uretin, another substitute for iodoform, which is said not to cause eczematous action; phenolsalyl, a powerful antiseptic mixture, composed of benzoic, salicylic, and carbolic acids; and, lastly, Knoll's diuretin, as its name implies, a diuretic consisting of a compound of sodium theo-bromine with sodium salicylate. An excellent solvent and vehicle for eucalyptus, pinol, menthol, camphor, thymol, and salol, amongst other interesting products of this firm, is paroleine, a colourless fluid and tasteless oil obtained by the careful fractional distillation of petroleum.

"Standardised preparations" constitute some of the features on the stall of Messrs. Southall Bros. and Barclay (Birmingham). Thus the belladonna preparations, containing definite proportions of alkaloids, represent an important development in pharmacy, while convenience and advantages secured by the employment of their concentrated tinctures, which can be diluted with the official menstruum with the greatest ease to the required strength, are patent. Amongst these tinctures are aconite, arnica, belladonna, conium, gelsemium, and orange. A useful collection of materia medica specimens, herbaria, &c., of service to medical teachers, students, and others, comprised not the least interesting section of this firm's exhibit, which also included in regard to new remedies granular effervescing preparations of lysidine and the same new uric acid solvent (described as a crystalline but very hygroscopic base obtained from ethylene-diamine) contained in aerated distilled water. "Ergole" is one of the new pharmaceutical achievements of Messrs. Oppenheimer (Worship-street, E.C.), which is described as containing all the principles of ergot. It is to be used subcutaneously or per os, and is claimed to be free from irritation or from any tendency to excite nausea or gastric irritation. In the same category may be included other standard concentrated liquors of this firm, which possess the advantages of being miscible with water, highly concentrated, and admitting readily of the low melting soft and supple constituent parts of pure dilution to any required strength. There should be mentioned also Messrs. Oppenheimer's malt preparations, which, by their palatability and general excellence, have taken high rank, to which they are entitled, amongst dietetic aids. Adeps lanæ was one of the most important of the preparations arranged by Messrs. Thos. Christy and Co. (Lime-street, E.C.). It is a pure wool-fat, containing largely wool-fat. It absorbs nearly 300 per cent. of water if desired, and being free from free fatty acids does not become rancid. The interesting derivative of quinoline known as analgen, and used largely now as an analgesic and anti-neuralgic, was also shown here, as was likewise that peculiar decomposition product, ortho-æthoxy-ana-amido-quinoline, which at times occurring in the urine gives it a bloody appearance. That the colour is due, however, to a quinoline derivative, and not to what appears at first sight as an alarming symptom, has been satisfactorily demonstrated. Various extracts, kola preparations, tinctures, and trochisci, and many of Stearn's novel preparations, including wine of cod-liver oil, hæmoferrum pilloids, for which Messrs. Christy and Co. are London agents, were also placed for inspection at this stall. The preparations containing pumiline—the essential oil distilled from the needles of the snow-grown pine of the Alps—which Messrs. Stern exhibit are of well-known value in throat and lung affections, while a liniment and ointment containing the same oil is claimed to be useful for the relief of muscular rheumatism or in the treatment of sprains &c. "Zalone lozenges" contain, in addition, a small amount of thymol. Liquor calcis iodinatæ is described by Messrs. Willows, Francis, and Butler (100, High Holborn) as a compound of lime and iodine which is preferable for use to the preparations containing free iodine where an irritant effect is to be avoided. It is much more satisfactory than tincture of iodine, it is stated, for injection into the enlarged thyroid gland in goitre and into strumous glands or joints, and serves favourably as an application to swollen glands or joints. Ferratin, described as the ferruginous element of blood and a chemical combination of iron and an albumen derivative identical with that found naturally in food; lactophenin, a new antipyretic-like phenacetin, but possessing the advantage of a pronounced sedative effect; and liquor sedans (hydrastis, viburnum, piscidia), which has been successfully used in hyperæmia of the female reproductive system, are amongst the recently acquired and important pharmaceutical and medicinal preparations of Messrs. Parke, Davis, and Co. (North Audley-street).

Specimens of ferratin were also to be found in the really elegant and imposing collection of Messrs. Ferris and Co. of Bristol, and with them several comparatively new and important remedies, such as acidum cetraricum, a bitter principle from liverwort, and suggested as a substitute for quinine; airol, a gallate of bismuth, with iodine also in its composition, useful, it is said, for burns and chronic ulcers; apocodeine, not an emetic as originally supposed, acting beneficially as an expectorant, especially for children, being besides a hypnotic, and producing sleep, it is stated, without the excitement of morphia; argentamine, an aqueous solution of phosphate of silver; and ethylene-diamine, a microbicide, which does not precipitate with albumen or chlorides and is useful in glandular abscesses and as an injection in gonorrhœa; auri et arsenici bromidum, prepared as a comparatively new therapeutic agent in the treatment of epilepsy, hysteria, Bright's disease, having also been employed in the treatment of sclerosis, tuberculosis, &c.; bromalin (bromethyl formine), containing 32 per cent. bromine), offered as a safe substitute for the inorganic bromides; carpaine, an alkaloid from carica papaya, the physiological action of which is similar to digitalis, but can be injected without producing, it is said, local irritation; hæmol and hæmogallol, prepared from blood, and used in anæmia and blood impoverishment; hæmol mercuro-iodate, described as a new remedy for syphilis, containing 12 per cent. of mercury and 20 per cent. of iodine, in combination with "hæmol"; biniodide of mercury solution, excellent in parasitic diseases; myrrholipe, an oleaginous solution of myrrh, which has been employed beneficially in laryngeal troubles of tuberculous origin;

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naphtholate of sodium (microcidine), a compound of β-napthol and caustic soda, a powerful antiseptic, but feebly toxic; and, lastly, a petroleum emulsion of hypophosphites presenting many advantages. Subjects of our own analysis some time ago were the exhibits of Messrs. Salomon and Co. (Rainham, Essex)—viz., "purest chloroform" and "purest ether." We now learn that the purity of these products, as shown in our analyses, has since been confirmed by the excellent results of their employment in anæsthetic practice. In another place we have already pointed out the important and ingenious improvement which Messrs. Cooper and Co. (Gloucester-road, South Kensington) have effected in cachets; their sinapine tissue or mustard paper is an equally important advance. It is said not to blister the skin and is certainly clean and very neat, while its action is certain. The preparation known as liquor quininæ salicylatis of these pharmacists is also worthy of mention, since it is an elegant combination of quinine and salicylic acid, which has given excellent results in the treatment of chronic and atonic forms of gout and rheumatism. It has also been employed in migraine and trigeminal neuralgia, especially of dental origin, and as an antipyretic as well as tonic in influenza. A new use proposed for the tincture of adonis vernalis, prepared by Messrs. C. J. Hewlett and Son (Charlotte-street, E.C.), is to relieve obesity, while amongst new preparations made by this firm are alphol, which is decomposed by the pancreatic juice into salicylic acid and naphthol and gives relief in acute rheumatism, and cornutine, according to Kobert the active principle of ergot, which administered per os is said to be a safe method of exciting uterine contractions during parturition. In their list of improved pharmaceutical preparations this firm also include mist. hæmatoxyli co. conc. aromat, a successful combination, it is stated, for diarrhœa and dysentery.

Jeyes' Sanitary Compounds Co. (Cannon-street, E.C.) undertake the agency of some new remedies. Thus lysidine, the new solvent of uric acid, was discovered by the late Professor Hofmann in the products of distillation of ethylene-diamine. It possesses, it is said, five times the solvent power of piperazine and sixty times the solvent power of carbonate of lithium. Carnferine is described as an organic iron compound prepared from extract of meat, and contains 30 per cent. of iron. Three new iodine compounds—viz., nosophen, antinosine, and eudoxine—are said to be useful in certain diseases in effecting external and internal antisepsis. Migrainine (antipyrine, caffeine citrate) is considered to combine the physiological properties of both antipyrine and caffeine, and is accordingly employed with great benefit, it is stated, in migraine, headache, and kindred disorders. Lastly, symphorol is now comparatively well known as a diuretic producing increase of urinary secretion without secondary symptoms. Perhaps the most striking novelty of Messrs. Mackey, Mackey, and Co.'s (Grange-road, S.E.) exhibits were the "gelata," a name given to a series of elegant preparations having a clear and jelly-like consistence, intended for use as antiseptics and rubefacients in the treatment of skin diseases. The base is of a non-fatty character, is soluble in water, and easily absorbed and removed. The list includes boracic acid, carbolic acid, salicylic acid, camphor, chloroform, eucalyptus with or without carbolic acid, eucalyptus with coal tar or thymol, menthol, tar, and thymol. To this list we would suggest that biniodide of mercury dissolved in potassic iodide would be a useful addition, as a valuable application in certain diseases of the skin. The same firm's mistura bismuthi composita is well known as one of the best preparations of bismuth. The new preparations of cerium used as a specific for vomiting in pregnancy and other conditions, and as a nervine tonic, are also specially worthy of mention.

There were some excellent organic preparations on the stall of Messrs. Burgoyne, Burbidges, and Co. (Coleman-street, E.C.). Messrs. Arthur and Co. (Berners-street, W.) exhibited a good list of "new medicinal preparations made in accordance with suggestions and prescriptions of eminent members of the medical profession." Amongst these were a neutral, non-saccharine, non-astringent, and sterilised preparation of lime and iron, properties which indicate its value for children or patients with enfeebled digestive powers; a preparation of calcic chloride similarly devoid of objectionable properties; and the elegant gold compounds liq. auri brom. arsenatis, liq. auri brom. arsen. mercuratis, and liq. argenti arsenatis. The attractive exhibit of Mr. William Martindale, the excellence of whose pharmaceutical preparations are well known, bore striking evidence of the pace which the author of the "Extra-Pharmacopœia" might be expected to keep in accordance with modern developments. The gold preparations, a specially absorbent turf moss, the synthetic remedies, and nitroglycerine tablets, first introduced by this pharmacist in 1878, are worthy of mention. Improved Blaud's pills, called "iron jelloids," in which oxidation is prevented, were a noticeable feature of the exhibit of Messrs. Warwick Bros. (Old Swan-lane, S.E.), as was also "lactopeptine," a digestive powder containing lactic acid, hydrochloric acid, ptyalin, pepsin, and pancreatine, and prepared by Mr. J. M. Richards (Holborn-viaduct). Messrs. Read and Carnrick's new and interesting preparation, known as "peptenzyme," presenting, it is stated, in functional physiological activity all the digestive agents of the animal economy (stomach, pancreas, spleen, salivary and Brunner's glands, Lieberkuhn's follicles, and free nuclein), was exhibited amongst the products supplied by the Peptenzyme Company (Alfred-place-west, S.W.). The glands are extracted mechanically and without the use of acids and chemicals.

Besides the now well-known remedies exalgine (analgesic), diuretin-Knoll (diuretic), and papain (vegetable pepsin), Mr. Kühn (St. Mary-at-Hill, E.C.) showed tubes of ethyl chloride, now used largely to produce local anæsthesia and is also of value for the ready treatment of neuralgic pain. By simply unscrewing a cap a fine jet of the volatile liquid is expelled by the pressure of its own vapour within, and intense cold is produced by its evaporation upon the skin. For more extended operations a combination of ethyl and methyl chloride is very effective. Sublimated papers impregnated with definite quantities of mercuric chloride, since they are handy and useful for extemporising a powerful disinfectant fluid, should not be omitted from our notice. Messrs. Kuttnow and Co.'s (Holborn-viaduct) improved Carlsbad powder is now recognised as a valuable addition to natural aperient medicines, while the anti-asthmatic powder, made by the same firm, has since our last notice of it received abundant testimony of its effectiveness, as well as its harmlessness, in the treatment, as an inhalation, of asthma and bronchitis. It is a fragrant herb compound, but contains no lobelia or datura tatula, and may be smoked and the smoke conveniently inhaled in the form of cigarettes. In addition to the more or less new remedies—such, for example, as airol (iodoform substitute), gallobromol (a bromine preparation useful in blennorrhagia), thiol (a sulphuretted hydrocarbon oil suggested as a substitute for ichthyol), and thioform (another iodoform substitute), Messrs. Greeff & Co. (Eastcheap, E.C.) showed specimens of antivenomous serum taken from an ass or horse immunised against snake venom. Ten cubic centimetres for children and twenty cubic centimetres for adults are said to be sufficient as a prevention against the action of venom. It is supplied in phials, and its manufacture is supervised by Dr. Calmette, Directeur de l'Institut Pasteur de Lille (Nord). Mitchell's cold-drawn castor oil (the British Castor Oil Co., Victoria-street, S.W.) has already called forth our approbation, since it is as tasteless as castor oil can be, possessing a fine nutty flavour and increased therapeutic efficiency. Angiers petroleum emulsion with hypophosphites, again, has been critically examined in our laboratory, as the result of which we were able to report it as a specially refined oil of a purity consistent with its therapeutic requirements and containing the hypophosphites intact. Lastly, it is almost superfluous to add that the list of Messrs. Wyleys (Coventry) comprehended all the recent pharmacological advances, but amongst some of the several specialities shown we may mention the nasal bougies suggested by Dr. Richardson Rice for the treatment of hay fever, composed of cocaine, and those containing boracic acid or tannic acid for employment in ozæna and nasal polypi respectively; and the preparations of chekan used recently with good results in the treatment of phthisis. The pharmaceutical specialities, preparations, &c., and a series of medicaments were a feature of the exhibit of Messrs. Evans, Lescher, and Webb (Bartholomew-close, E.C.), while modern requisites were in evidence in the exhibit of Messrs. Francis Newbery and Sons (King Edward-street, E.C.). To these may be added the preparations of Messrs. Lorimer and Co. (Britannia-row, Islington, N.), comprising lacmagnesia, dermoplastin or eczema cream (boric acid, zinc, and bismuth), syr. hypophosph. co., ol. iodi, and ext. hamamelis dist.

(To be continued.)

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Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Ashdowne, Wallace Charles George, L.R.C.P. Lond., St. Mary's Hospital.
Atkins, George Ernest, L.R.C.P. Lond., Firth College, Sheffield, and Queen's and General Hospitals, Birmingham.
Beadnell, Charles Marsh, L.R.C.P. Lond., Guy's Hospital.
Beddard, Arthur Philip, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Bekenn, George Henry Ernest, L.R.C.P. Lond., Mason College and Queen's and General Hospitals, Birmingham.
Belcher, James Arthur, L.R.C.P. Lond., University College Hospital.
Beven, Octavius, L.R.C.P. Lond., Durham University and Guy's Hospital.
Bill, John Francis, L.R.C.P. Lond., St. Bartholomew's Hospital.
Blachford, Jem, L.S.A. Lond., London Hospital.
Blake, Victor John, L.R.C.P. Lond., University College Hospital.
Breton, Moyle, L.R.C.P. Lond., St. George's Hospital.
Bridger, Sydney, L.R.C.P. Lond., University College Hospital.
Burnett, Leslie Burton, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Burns, William Thomas, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Byford, William Francis, L.R.C.P. Lond., Guy's Hospital.
Byrne, Peter Kevin, L.R.C.P. Lond., University College Hospital.
Caley, William Birch, L.S.A. Lond., University College and Royal Infirmary, Liverpool.
Carson, Herbert William, L.R.C.P. Lond., St. Bartholomew's Hospital.
Carter, Felix Bolton, L.R.C.P. Lond., University College, Hospital.
Cave, Francis William, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Chapple, Robert Llewellyn, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and St. Mary's Hospital.
Chater, John Samuel, L.R.C.P. Lond., St. Bartholomew's Hospital.
Chilcott, Edward Smith, L.R.C.P. Lond., St. Mary's Hospital.
Coleman, Ernest, L.R.C.P. Lond., Guy's Hospital.
Coleman, James Jordan, L.R.C.P. Lond., Guy's Hospital.
Cook, John Howard, L.R.C.P. Lond., University College Hospital.
Cooper, Thomas George Duncan, L.R.C.P. Lond., Queen's College and South Infirmary, Cork.
Crace-Calvert, George Alfred, L.R.C.P. Lond., St. Bartholomew's Hospital.
Cran, Robert David, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Cribb, Harry Gifford, L.R.C.P. Lond., Middlesex Hospital.
Davies, John Edgar Philip, L.R.C.P. Lond., St. Mary's Hospital.
Daw, William Henry, L.R.C.P. Lond., London Hospital.
Dawes, John Alphonsus, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and Westminster Hospital.
Dawney, Archibald Hugh Payan, L.R.C.P. Lond., University College and St. Thomas's Hospital.
Deas, Frank, L.R.C.P. Lond., University College Hospital.
Denne, Francis Vincent, L.R.C.P. Lond., Westminster Hospital.
Dimsey, Alfred, L.R.C.P. Lond., University College Hospital.
Duffield, Ernest Alphonse, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and Guy's Hospital.
Eedle, Edward John, L.R.C.P. Lond., Charing-cross Hospital.
Ellis, Robert Mackay, L.R.C.P. Lond., St. George's Hospital.
Erhardt, Conrad Charles James, L.R.C.P. Lond., King's College Hospital.
Evans, Arthur Henry, L.R.C.P. Lond., Westminster Hospital.
Falkener, Lyon, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Fryer, Ernest Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Gabell, Douglas Phillimore, L.R.C.P. Lond., Charing-cross Hospital.
Gale, Frederick William, L.R.C.P. Lond., St. Bartholomomew's Hospital.
Gerrish, Daniel Smith, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Gill, Sutton Dudley, L.R.C.P. Lond., Mason College, Queen's, and General Hospitals, Birmingham.
Gillett, Henry Tregellis, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
Grant-Wilson, Charles Westbrooke, L.R.C.P. Lond., St. Thomas's Hospital.
Griffiths, John Alban Kendall, L.R.C.P. Lond., University College, London.
Guest, Herbert Merrick, L.R.C.P. Lond., Cambridge University and Mason College, Queen's and General Hospitals, Birmingham.
Haines, Edward, L.R.C.P. Lond., St. Thomas's Hospital.
Hall, John Noakes, L.R.C.P. Lond., St. Mary's Hospital.
Hall, Joseph Percy, L.R.C.P. Lond., Owen's College and Royal Infirmary, Manchester.
Harman, Nathaniel Bishop, L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
Harnett, Charles John, L.R.C.P. Lond., Guy's Hospital.
Hawthorn, Frank, L.R.C.P. Lond., Durham University, Newcastle-upon-Tyne.
Herbert, William, L.R.C.P. Lond., St. Thomas's Hospital.
Hope, John Lamplugh Allen, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hounsfield, Sydney Coupland, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hutchinson, Frederick Arundel Stewart, L.R.C.P. Lond., Cambridge University and London Hospital.
Irving, William, L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
Johnson, John Robert, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Johnson, Robert Macfie, L.R.C.P. Lond., University College Hospital.
Jones, Arthur Thomas, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Jones, David Lewis, L.R.C.P. Lond., St. Bartholomew's Hospital.
Jones, Edward Thomas, L.R.C.P. Lond., University College Hospital.
Jones, George Kimball, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool, and London Hospital.
Jones, Murray Parry, L.R.C.P. Lond., Guy's Hospital.
Kenrick, William Hamilton, L.R.C.P. Lond., London Hospital.
Knocker, William Douglas, L.R.C.P. Lond., St. Thomas's Hospital.
Lamplough, Charles, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham, and St. Bartholomew's Hospital.
Lanphier, Charles William, L.R.C.P. Lond., Charing-cross Hospital.
Lansdown, Gilbert Harry, L.R.C.P. Lond., King's College Hospital.
Mann, Fairman Rackham, L.R.C.P. Lond., Middlesex Hospital.
Mann, Frederick William Slingsby, L.R.C.P. Lond., University of Durham and Mason College, Queen's, and General Hospitals, Birmingham.
Maxwell, Ernest James, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Moreton, Reginald, L.R.C.P. Lond., St. Thomas's Hospital.
Morley, Frank, L.R.C.P. Lond., St. George's Hospital.
Morris, Charles Edward, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Mortimer, William Graddon, L.R.C.P. Lond., London Hospital.
Mulligan, Frederick William, L.R.C.P. Lond., Trinity College, Toronto, and University College Hospital.
Myler, John William, L.R.C.P. Lond., Middlesex Hospital.
Newbald, Clement Arthur, L.R.C.P. Lond., St. Bartholomew's Hospital.
Newton, Robert Earle, L.R.C.P. Lond., University of Glasgow.
Nicholson, John, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
O'Hea, James Patrick, L.R.C.P. Lond., St. George's and St. Bartholomew's Hospitals.
Pentreath, Leonard Norbourne, L.R.C.P. Lond., St. Thomas's Hospital.
Philipps, Arthur Edward, L.R.C.P. Lond., Guy's Hospital.
Phillips, Francis Addison, L.R.C.P. Lond., St. George's Hospital.
Phillips, Henry Arthur, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Power, John Hugh, L.R.C.P. Lond., London Hospital.
Reynalds, George Frederick, L.R.C.P. Lond., St. Bartholomew's Hospital.
Riley, Francis, L.R.C.P. Lond., Westminster Hospital.
Robinson, Edwin William, L.R.C.P. Lond., Westminster Hospital.
Rodocanachi, Ambrose John, L.R.C.P. Lond., University College Hospital.
Rowland, Walter John, L.R.C.P. Lond., Durham University and Guy's Hospital.
Ryan, William Bonner, L.R.C.P. Lond., Charing-cross Hospital.
Sanders, Alfred William, L.R.C.P. Lond., St. Mary's Hospital.
Sayers, Matthew James Hazlitt, L.R.C.P. Lond., St. Thomas's Hospital.
Scot-Skirving, Archibald Adam, L.R.C.P. Lond., University of Edinburgh.
Scott, Herbert Ainslie, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Shaw, Harold Batty, L.R.C.P. Lond., University College Hospital.
Shepherd, Ernest, L.R.C.P. Lond., St. Mary's Hospital.
Sheppard, Arthur Murray, L.R.C.P. Lond., Sydney University and St. Bartholomew's Hospital.
Shorland, Ernest Trevor, L.R.C.P. Lond., Guy's Hospital.
Smallwood, Robert Percy, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Smith, Albert John, L.R.C.P. Lond., Westminster Hospital.
Southey, Herbert Watson, L.R.C.P. Lond., St. Bartholomew's Hospital.
Spain, Charles Milner, L.R.C.P. Lond., University College Hospital.
Spillane, James Charles, L.R.C.P. Lond., London Hospital.
Squire, Maurice Frederick, L.R.C.P. Lond., St. Mary's Hospital.
Steward, Francis James, L.R.C.P. Lond., Guy's Hospital.
Stoner, Harold Boniface, L.R.C.P. Lond., Guy's Hospital.
Talbot, Alfred George, L.R.C.P. Lond., Edinburgh University and Middlesex Hospital.
Tench, Sidney Edward, L.R.C.P. Lond., Middlesex Hospital.
Thomas, Evan, L.R.C.P. Lond., University College Hospital.
Thomas, Nevill Everard, L.R.C.P. Lond., Middlesex Hospital.
Thornely, William, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Tonks, Arthur Edwin, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Towne, Hugh Rose Forster, L.R.C.P. Lond., Westminster Hospital.
Turner, Alan Charles, L.R.C.P. Lond., Middlesex Hospital.
Turner, Thomas William, L.R.C.P. Lond., London Hospital.
Wallis, Sidney Seymour, L.R.C.P. Lond., Guy's Hospital.
Wasson, Charles Robert, L.R.C.P. Lond., St. George's Hospital.
Wheatley, Rupert, L.R.C.P. Lond., Middlesex Hospital.
White, Sidney Hugh, L.R.C.P. Lond., University College Hospital.
Wilkinson, Arthur Norris, L.R.C.P. Lond., Westminster Hospital.
Williams, Charles Wellingham, L.R.C.P. Lond., St. Bartholomew's Hospital.
Wilson, Francis Kenneth, L.R.C.P. Lond., Westminster Hospital.
Wise, Harry Mortimer, L.R.C.P. Lond., Guy's Hospital.
Woolley, Fred Duke, L.R.C.P. Lond., Owen's College and General Infirmary, Manchester.
Woolley, Jasper Maxwell, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.

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EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen having passed the necessary examinations, have been admitted by the two Colleges Diplomates in Public Health :—

Allen, Sydney Glenn (Surgeon-Captain, Army), M.R.C.S. Eng., L.R.C.P. Ed., St. Mary's Hospital.
Childs, Christopher, B.A., M.D. Oxon., L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital, Oxford and Bonn Universities.
Chown, Francis, M.B. Lond., L.S.A. Lond., St. Mary's Hospital.
Fremlin, Heaver Stuart, L.R.C.P. Lond., M.R.C.S. Eng., Westminster Hospital.
Gepp, Maurice, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., St. Bartholomew's Hospital.
Hopwood, Edgar Oswald, M.A. M.D. Oxon, University College, Owens College, and Royal Infirmary, Manchester.
Kerr, Daniel Oliver, M.B., C.M. Edin., Edinburgh University.
Larkam, Edward Thomas, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Lindow, Albert, M.R.C.S. Eng., L.S.A. Lond., King's College Hospital.
Norris, William Perrin, M.B. Melb., Melbourne University.
Pryn, William Wenmouth (Surgeon, Royal Navy), M.R.C.S. Eng., L.S.A. Lond., Guy's Hospital.
Shrubsall, William Wyatt, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., Edinburgh and King's College Hospital.
Vallance, Hugh, M.R.C.S. Eng., London and Guy's Hospitals.
Wigmore, Arthur William, L.R.C.P. Lond., St. Mary's Hospital.
Williams, Arnold Winkelried, M.B. and C.M. Edin., Edinburgh University and London, King's College, and St. Thomas's Hospitals.

Eleven gentlemen were referred for six months.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the examiners in Glasgow the following candidates passed the respective examinations, those marked with an asterisk (*) passing "with distinction" :—

First Examination (Five Years' Course).—*Richard Staward, Northfield; Alexander F. Jack, Glasgow; Richard J. Duff, Larne; Lionel R. Popham, Bantry; Alfred L. Johnston, Belper; *William Battersby, Glasgow; Alexander Macgregor, Glasgow; Anne Mercer Watson, Edinburgh; Thomas D. Bird, Woodford; George D. Bateman, Cork; Robert Stewart, Hamilton; George F. Stoney, Tipperary; William Jordan, Cork; Duncan M. Macgregor, Oban; Robert T. Edwards, Nantile; David S. Russell, Glasgow; Harry J. White, Dublin; Daniel J. O'Connor, Millstreet; Patrick Coffey, Ballinahinch; Wm. A. Benson, Stanley, Durham; William J. Verling, Staffordshire; David B. Greer, Antrim; Ernest Hill, Cork; George W. Hibbert, Bradford; Robert W. Jubb, Lowestoft; Thomas R. Hunter, Sheffield; James Moran, Limerick; John T. K. Thomson, Glasgow; James Dunlop, Glasgow; and C. F. Van Dijk, Cape Colony.

First Examination (Four Years' Course).—Paul J. F. O'Sullivan, Cork; Frederick P. G. Laslett, Milford Haven; Alexander L. Brown, Tranent; Lawson S. Shennan, Houghton-le-Spring; Charles H. Harris, Staffordshire; James H. Stuart, County Antrim; William Rankin, Kilsyth; and John James Scanlan, Cork.

Second Examination (Five Years' Course).—Evelyn S. Milestone, Whitby; *Harold Chaffer, Todmorden; *Hedda Alström, Sweden; Claudia A. P. Rowse, London; Samuel V. Robinson, Ulverston; E. F. Lionel de Jersey, Guernsey; William W. Dickie, Glasgow; Ivan A. Jackson, and Burton-on-Trent.

Second Examination (Four Years' Course).—Alex. G. Hays, West Bromwich; Rowland E. Moriarty, Tralee; Percival Bayley, Northampton; Douglas M. Burnside, Belfast; Hugh Joseph Fern, Glasgow; Rose Turner, Essex; Edwin J. Ling, Scarborough; John A. Burns, Newry; John Crowley, Cork; George H. Williams, Scarborough; Edmond Walsh, Limerick; Thomas Heaps, Preston; John Danagher, Co. Limerick; Michael Sheehy, Co. Cork; Stanley H. Oulten, Liverpool; William B. Thomas, Glasgow; and Cyrus Retallack, Australia.

Third Examination (Five Years' Course).—Hugh Macpherson, Oban; Alexander Ross, Glasgow; and Duncan M'Gregor, Aberfoyle.

Final Examination.—John Graham, Workington; George C. Murray, Birnam; Lily M. Yardley, London; May Hannah Harris, London; Alfred Greenwood, Woodley, Stockport; Ella C. Rawlinson, Aylsham; Richard S. Martin, Great Lever, Bolton; William L. Brown, Glasgow; Edmund Barker, Glasgow; Charlotte Adams, Gilford, County Down; Thomas Thompson, Ballymoney; William James Stitt, Newry; Forbes H. Wolfe, Glasgow; David Walker, Glasgow; Alfred H. Peters, Wallsend; Frederick S. Flint, London; Arthur A. Bradburne, Salop; John W. Cuthbertson, Roath, Cardiff; Bhudhardas B. Vora, India; John M. Tighe, Dublin; Richard O. Mather, Wigan; George Bryce, Coatbridge; Matthew A. Macfarlane, Ontario, Canada; Janet M'Intyre Kay, Edinburgh; Augustus K. A. Cæsar, Cheshire; William W. Ridley, Gateshead-on-Tyne; Frederick E. Richardson, Edinburgh; and Martha Maud Stewart, Newry.

SUPERANNUATION ALLOWANCE.—Mr. Herbert Chabot, M.R.C.S., late resident medical officer of the Camberwell Infirmary, has been granted a superannuation allowance of £200 per annum.

PRESENTATIONS.—Dr. John Meredith of Wellington, Somerset, has been presented with a tastefully designed épergne by the members of the local classes in connexion with the St. John Ambulance Association.—On the occasion of the Mayor of the Borough of Reading publicly distributing at the Town Hall on the 1st inst. the certificates of the St. John Ambulance Association, for efficiency in rendering first aid to the successful members of the Borough Ambulance Classes, he presented, on behalf of the classes, Dr. George H. R. Holden with a handsome silver inkstand for his appreciated instruction on "first aid."—The pupils attending the ambulance classes in connexion with Bolton Infirmary have presented Dr. Johnston (teacher of the female class) and Dr. Mothersole (teacher of the male class), honorary surgeons to the infirmary, with a handsome surgical bag and a fully-equipped secretaire respectively. The presentations were made by the ex-Mayor, Alderman Nicholson, J.P.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle :* Dr. F. Egger has been recognised as *privat-docent* in Medicine. Dr. F. Miescher, Professor of Physiology, being obliged to retire on account of the state of his health, Dr. R. Metzner of Freiberg (Baden) has been appointed to the chair.—*Breslau :* Dr. Buchwald has been granted the title of Professor.—*Geneva :* Dr. H. Audeoud has been recognised as *privat-docent* in Pediatrics, Dr. Bétrix as *privat-docent* in Gynæcology, and Dr. E. Goetz as *privat-docent* in Surgery.—*Gratz :* Dr. Karl Nicoladoni of Innsbrück has been appointed Principal Surgeon in the Surgical Clinic.—*Munich :* Dr. Hahn has been recognised as *privat-docent* in Hygiene.—*Pisa :* Dr. Terni has been recognised as *privat-docent* in Hygiene.—*Tübingen :* Dr. Froriep has been appointed Professor of Anatomy, in succession to Dr. von Henke, who has resigned.—*Zürich :* Dr. H. Von Wyss has been appointed Extraordinary Professor of Forensic Medicine and Toxicology.

SHEFFIELD ROYAL HOSPITAL.—The annual meeting of the Governors of the Sheffield Royal Hospital was held on the premises on July 31st, the Rev. H. H. Wright presiding. The secretary read the sixty-third annual report, which mentioned that the first portion of the new hospital had been opened, and that the financial position of the institution had greatly improved. The appeal sent out by the president (the Duke of Norfolk) since the last annual meeting had resulted in a sum of over £30,000 being either promised or received for the new building fund. Their Royal Highnesses the Duke and Duchess of York had graciously opened the new wing and laid the foundation-stone of future additions, and Her Majesty the Queen had been pleased to command that the institution should in future be known as the Sheffield Royal Hospital. During the year just ended there had been an increase of 333 in the patients, and an increase of £329 in the annual subscriptions, but the total income fell short of the expenditure by £395, and a large sum still had to be raised in order to cover the cost of building. The Duke of Norfolk was re-elected president, and Sir Frederick Mappin, M.P., and Sir Henry Stephenson vice-presidents.

THE POLICE SURGEONS' ASSOCIATION.—The annual meeting was held at King's College on July 30th, Mr. T. Bond being in the chair. A report from the council was read by Mr. Hopkins (hon. sec.), referring principally to the deputation to the Home Secretary in the early part of the year and its results. A vote of thanks to Mr. Asquith for his courtesy in receiving the deputation and for carrying out some of its recommendations before leaving the Home Office was unanimously adopted. The following officers and council were elected for the ensuing year :—President: Sir H. D. Littlejohn, M.D. Vice-Presidents: T. Holmes, F.R.C.S., and T. Bond, F.R.C.S. Treasurer: H. Nelson Hardy, F.R.C.S. Edin. Hon. Secs.: F. W. Lowndes, M.R.C.S. (Liverpool), and H. C. Hopkins, M.R.C.S. (Bath). Council: J. R. Baumgartner, M.R.C.S. (Newcastle), J. Paul Bush, M.R.C.S. (Bristol), G. Harrison, M.R.C.S. (Chester), W. O. Heslop, F.R.C.S. Edin. (Manchester), E. K. Houchin, L.R.C.P. (London), H. W. Roberts, M.R.C.S. (London), D. McDonnell, M.D. (Belfast), W. G. Lowe, M.D. (Burton-on-Trent), L. Maybury, M.D. (Southsea), W. M. Roocroft, L.R.C.P. (Wigan), C. Templeman, M.D. (Dundee), and S. Wolferstan, L.R.C.P. (Plymouth).

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BEQUESTS AND DONATIONS TO HOSPITALS.—The Worshipful Grocers' Company has contributed £100 each to the Metropolitan Convalescent Institution (office: Sackville-street, W.) and the Queen Charlotte's Lying-in Hospital, Marylebone.—The Mercers' Livery Company has voted £52 10*s.* to the Queen Charlotte's Lying-in Hospital, Marylebone.—The late Mr. A. Montefiore Sebag-Montefiore of London has bequeathed £100 to the London Hospital, £50 each to St. Mary's Hospital and the Jews' Hospital and Orphan Asylum, and £25 to the Jewish Convalescent Home.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Paris.

Œuvres de Léon le Fort. Tome I. Par le Dr. Félix-Lejars. 1895. pp. 931.

Contribution à l'Étude de l'Atrophie Musculaire Progressive, Type Duchenne-Aran. Par Dr. J. B. Charcot. 1895. pp. 159.

Assistance, Traitement, et Éducation des Enfants Idiots et Dégénérés. Par Bourneville. IV. 1895.

AMERICAN MEDICAL ASSOCIATION PRESS, Chicago.

Original Investigations on the Natural History (Symptoms and Pathology) of Yellow Fever. 1854–1894. By Joseph Jones, M.D., LL.D. Reprint, 1894. Pp. 311.

BAILLIÈRE, J. B., ET FILS, Paris.

Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome premier. Illustrated. 1895. pp. 823.

CASSELL & COMPANY, London.

The Practitioner: a Journal of Practical Medicine. Edited by Malcolm Morris. Jan.–June. 1895. pp. 592.

HIRSCHWALD, AUGUST, Berlin.

Diagnostik der Krankheiten der Bauchorgane. Von Dr. Hans Leo. 1895. pp. 513.

Encyklopädie der Therapie. Von Oscar Liebreich. 1. Band. 1. Abtheilung. 1895.

LEA BROTHERS & Co., Philadelphia.

System of Surgery. Edited by F. S. Dennis. M.D., assisted by John S. Billings, M.D. Vol. II. Illustrated. 1895. pp. 926.

LEWIS, H. K., Gower-street, London.

Medical Electricity: A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M.A., M.D. Being the second edition on "Medical Electricity." By W. E. Steavenson, M.D., and H. L. Jones, M.D. Illustrated. 1895. pp. 474. Price 10*s.* 6*d.*

LONGMANS, GREEN, & Co., London.

Quain's Elements of Anatomy. Edited by E. A. Schäfer, F.R.S., and Geo. D. Thane. In Three Vols. Vol. III. Part 2: The Nerves. Illustrated. Tenth Edition. 1895. Price 9*s.*

Gunshot Injuries: their History, Characteristic Features, Complications, and General Treatment. By Surgeon-General Sir T. Longmore. Second Edition. 1895. Illustrated. Price 31*s.* 6*d.*

MACMILLAN & Co., London.

The Climates and Baths of Great Britain. Being the Report of a Committee of the Royal Medical and Chirurgical Society of London. Vol. I. 1895. pp. 640. Price 21*s.* net.

The Practice of Massage: its Physiological Effects and Therapeutic Uses. By A. Symons Eccles, M.B. Aberd. 1895. pp. 377. Price 7*s.* 6*d.* net.

A Text-book of the Principles of Physics. By A. Daniell, LL.B., D.Sc., F.R.S.E. Third edition, seventh thousand. 1895. pp. 782. Price 21*s.*

PENTLAND, YOUNG J., Edinburgh.

Edinburgh Hospital Reports. Edited by G. A. Gibson, M.D., D.Sc., and others. Illustrated. Vol. III. 1895. pp. 700.

Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus XI. Price 21*s.* net.

SAMPSON LOW, MARSTON, & Co., Fetter-lane, Fleet-street, London.

The Guide to South Africa. Edited by A. S. Brown and G. Gordon Brown for the Castle Mail Packets Company, London. 1895. With coloured maps. pp. 354. Price 2*s.* 6*d.*

SMITH, ROBERT, & Co., State Printers, Lansing, U.S.

Twenty-seventh Annual Report relating to the Registry and Return of Births, Marriages, and Deaths in Michigan for the year 1893. By the Secretary of State of the State of Michigan. 1895. pp. 274.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.

Traitement de l'Avortement. Par Dr. Moïse Misrach. 1895. pp. 272.

TOWER PUBLISHING COMPANY Limcries, London.

A Torquay Marriage. By G. R Vicars and Edith Vicars. Second Edition. pp. 331. 1895.

WRIGHT, JOHN, & Co., Bristol.

Herbal Simples: Approved for Modern Uses of Cure. By W. T. Fernie, M.D. 1895. pp. 432. Price 5*s.*

Transactions of the Obstetrical Society of London; Vol. XXXVII., for the year 1895, Part 2, for March, April, and May (published by the Society, 20, Hanover-square, London, W.); price 5*s.*—The Johns Hopkins Hospital Reports: Report in Gynæcology, III.; vol. iv., Nos. 7 and 8 (The Johns Hopkins Press, Baltimore; 1895).—Educational Handwork: adapted for Teachers and Pupils in Rural Districts; by Dr. Woldemar Götze (O. Newmann & Co., Newman-street, London, W.); price 1*s.*—Magazines for August: Boy's Own Paper; Girl's Own Paper; Leisure Hour; Sunday at Home; Pall Mall Magazine; The Picture Magazine; English Illustrated Magazine; Hearth and Home; Our Bubble: a Coloured Magazine for Boys and Girls; London; Home; The Strand.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ATKINSON, J. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Northern Sanitary District of the Lancaster Union.

BEVEN, OCTAVIUS, M.R.C.S. Eng., and L.R.C.P. Lond., has been appointed House Surgeon to the Children's Hospital, Nottingham.

BOOTH, R. L., M.B., C.M. Edin., has been appointed Assistant Medical Officer by the Camberwell Guardians.

BROWN, GEO. A., M.R.C.S., has been appointed Medical Officer for the Workhouse, and Tredegar Sanitary District of the Bedwellty Union.

BRAND, A. T., M.D. and C.M., has been appointed a Certifying Factory Surgeon for the District of Driffield, East Yorks, vice P. Burgess, deceased.

BULLOCH, WILLIAM, M.D. Aberd., has been appointed Assistant Bacteriologist in the Antitoxin department of the British Institute of Preventive Medicine.

BURRELL, L., M.D. St. And., M.R.C.S., has been appointed House Surgeon to the Suffolk General Hospital, vice Master, resigned.

CAMPBELL, H. JOHNSTONE, London, has been appointed Hon. Physician to the Bradford Infirmary vice Grabham, resigned,

CARDALE, HENRY J., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Royal Albert Hospital, Devonport, vice T. Olver, resigned.

CHEETHAM, FRANCIS, L.R.C.P., L.M. Edin., has been appointed Public Vaccinator for Beulah, Victoria, Australia, vice Dickens, resigned.

DAKEYNE, J. B., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer for the Leek Rural Sanitary District of the Leek Union.

FLETCHER, T. J., M.B., C.M. Edin., M.R.C.S., has been appointed Medical Officer for the Castle Donington Sanitary District of the Shardlow Union.

GROVE, W. R., M.D. St. And., M.R.C.S., has been appointed Medical Officer for the Workhouse of the St. Ives Union.

HOLMES, F., M.R.C.S., has been appointed Vaccination Officer for the Wortley Union.

JAMESON, JAS. S., M.D. Dubl., B.S., has been appointed Medical Officer for the Ardleigh and Great Bromley and Wise Sanitary District.

KINGDON, WILFRED R., M.B. Durh., has been appointed House Surgeon to the Stoke Newington Dispensary, London, N.

LEYS, JOHN, M.B., C.M. Aberd., has been reappointed Medical Officer for the Norton Sanitary District of the Leek Union.

MARMION, H., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Poplar Union.

MCCOULL, STANLEY, M.B., B.S. Durh., has been appointed Medical Officer for the Tenth Sanitary District of the Hexham Union.

MCGEE, WM., L.K.Q.C.P., L.M., L.R.C.S. Irel., has been appointed Public Vaccinator for Korumburra, Victoria, Australia, vice Mackenzie.

MORTON, S. ERNEST, M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Sheffield General Infirmary, vice Kerr, resigned.

NEECH, JAS. THOS., L.R.C.P. Edin., D.S.Sc. Vict., has been appointed Physician to, and Medical Superintendent of, the Fever Hospital of the Leigh Joint Hospital Board.

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ORTON, JOHN, M.R.C.S., has been reappointed Medical Officer of Health for the Foleshill Rural Sanitary District.

REYNOLDS, J. J., L.R.C.P. Lond., has been appointed Medical Officer for the Cheriton Fitzpaine Sanitary District of the Crediton Union.

PARSON, WILLIAM, M.R.C.S., has been reappointed Medical Officer for the Godalming Sanitary District of the Guildford Union.

SMYTH, JOSHUA C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Wells Rural Sanitary District, vice Livett, resigned.

TAYLOR, A. E., M.B., C.M. Edin., L.R.C.P., L.R.C.S., L.F.P.S. Glasg., has been appointed Medical Officer for the Gillingham Sanitary District of the Hartismere Union.

THOMAS, PHILIP M., M.D. Cleveland, L.S.A., has been appointed Medical Officer for the Conwil-Elvet Sanitary District of the Carmarthen Union, vice Edwards, resigned.

TRATMAN, WALLINGTON W., L.S.A., has been appointed Medical Officer for the newly-formed Bushbury District of the Cannock Union.

WHICHELLS, EDMUND, B.A., M.B., B.C. Cantab., has been appointed Assistant House Surgeon to the Infirmary, Huddersfield, vice Coates, resigned.

WILLIAMS, D. L., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Crowland Sanitary District of the Peterborough Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF BOOTLE HOSPITAL FOR INFECTIOUS DISEASES.—Medical Superintendent, unmarried. Salary £100 per annum, with board, washing, and apartments at the hospital. Applications to the Town Clerk.

CONVALESCENT FEVER HOSPITAL, Gore Farm, Darenth, Kent.—Dispenser. Salary, £5 a month, with board, lodging, and washing. Applications to the Medical Superintendent at the hospital.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon, for one year. Salary, £70 per annum, with board, lodging, and washing.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

GLAMORGAN COUNTY ASYLUM, near Brigend.—Junior Assistant Medical Officer. Salary £130, rising £10 a year to £150, if approved, with with board (no beer or wine), lodging, and washing.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Honorary Assistant Physician.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant for one year. Salary £120 for first year, and £150 afterwards.

NEWCASTLE-UPON-TYNE UNION.—Resident Assistant Medical Officer at the workhouse, unmarried. Salary £100 per annum, with furnished apartments, rations, and washing. Applications to the Clerk to the Guardians, Union Offices, Newcastle-upon-Tyne.

PARISH COUNCIL OF NORTHMAVINE, Shetland.—Medical Officer. Salary £40. Applications to the Clerk, Parish Council, Northmavine.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser for the Infirmary in Brook-street, Kennington. Salary £125 a year, with board, furnished apartments, and washing. Applications to the Clerk, Guardians' Boardroom and Offices, Brook-street, Kennington-road, S.E.

SALISBURY INFIRMARY.—House Surgeon. unmarried. Salary £100 per annum, with board, lodging, and washing.

SCHOOL BOARD FOR LONDON.—Medical Officer for the Training Ship *Shaftesbury*, which lies off Grays, Essex. Commencing salary £100 a year, which may be increased by annual increments of £10 to £150 a year. Applications to the Clerk to the Managers, School Board Offices, Victoria Embankment, W.C.

TEIGNMOUTH INFIRMARY, DISPENSARY, AND CONVALESCENT HOME.—House Surgeon (to act also as Secretary), to Visit and Dispense. Salary £80, with board, rooms, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ARMSTEAD.—On July 30th, at Chepstow-villas, W., the wife of Hugh Wells Armstead, M.D., of a daughter.

BARKER.—On Aug. 1st, at Harley-street, Cavendish-square, W., the wife of Arthur E. Barker, F.R.C.S., of a son.

BEALE.—On Aug. 4th, at Grosvenor-street, W., the wife of Peyton T. B. Beale, F.R.C.S., of a son.

CADMAN.—On Aug. 1st, at Devonshire-street, Portland-place, the wife of A. W. Cadman, F.R.C.S., of a daughter.

CAMERON.—On Aug. 3rd, the wife of W. Sinclair Cameron, Gray's Inn-road, of a son.

CLARKE.—On Aug. 4th, at Horsmans-place, Dartford, the wife of Thoma Furze Clarke, M.R.C.S. Eng., &c., of a daughter.

DAVIES.—On July 31st, at Camberwell-green, the wife of Frederick Henry Davies, M.B. Edin., of a daughter. prematurely.

GOODALL.—On July 31st, at Homerton, the wife of E. W. Goodall, M.D., of a son.

HARPER.—On Aug. 4th, at Rosary-gardens, South Kensington, the wife of James Harper, M.D., of a daughter.

JACOBSEN.—On Aug. 3rd, at St. David's-street, Presteign, Radnorshire, the wife of G. Oscar Jacobsen, M.R.C.S., L.R.C.P., of a daughter.

KIDD.—On July 31st, at Enniskillen, the wife of L. Kidd, M.D. Irel., of a daughter.

KROHN.—On Aug. 6th. the wife of Ronald E. S. Krohn, M.D., of Queen's-crescent, Haverstock-hill, of a son.

LEWIS.—On July 30th, at Hamilton-terrace, N.W., the wife of E. J. Lewis, M.B., F.R.C.S., of a daughter.

MURPHY.—On Aug. 4th, at the Barons, Twickenham, the wife of Dr. H. Howard Murphy, of a daughter.

PARSONS.—On July 30th, at 3, College Villas, Finchley, N., the wife of J. Herbert Parsons, M.B., B.Sc., M.R.C.S., L.R.C.P., of a son.

PENROSE.—On Aug. 6th, at Wimbledon, the wife of F. G. Penrose, M.D., F.R.C.P., of 4, Harley-street, of a daughter.

ROGERS.—On Aug. 5th. at York-place, Clifton, Bristol, the wife of Bertram Mitford H. Rogers, M.D., of a daughter.

STRUTHERS.—On Aug. 2nd, at Edric-road, New Cross, the wife of the late James Struthers, M.D. Aberd., of a son.

THOMPSTONE.—On July 31st, at Marsh-parade, Newcastle-under-Lyme, the wife of Sydney W. Thompstone, F.R.C.S. Edin., District Medical Officer, H.M.'s Niger Coast Protectorate, West Africa, of a son.

WARREN.—On Aug. 2nd, at Hameville, Headcorn, Kent, the wife of P. Somerville Warren, L.R.C.P., L.R.C.S. Edin., of a daughter.

WHITTINGDALE.—On Aug. 2nd, at Brecon House, Sherborne, Dorset, the wife of J. F. L. Whittingdale, B.A., M.B. Cantab., of a daughter.

MARRIAGES.

FERGUSON—SMITH.—On Aug. 1st, at St. Paul's, Addlestone, Ralph Saunderson Ferguson, M.B. Edin., eldest son of Frank Ferguson of Gateshead, to Francis Madeleine, only surviving daughter of the late Edwin Smith, formerly of the War Office.

MAC VICKER—CHURCHILL.—On July 31st, at the Parish Church, Wembdon, Somerset, Charles George Mac Vicker, B.A., M.B. Irel., of Isleham, Cambs., to Marian, eldest daughter of the Rev. E. B. C. Churchill, Vicar of Ashmansworth, Hants.

MILTON—MOSELEY.—On Aug. 6th, at the Parish Church, Richmond, Surrey, by the Revd. R. Moseley, M.A., Chaplain to the Forces, brother of the bride, assisted by the Rev. E. Bellamy, B.A., Francis Ralph Septimus, M.R.C.S., L.R.C.P., seventh son of the late Sir John Milton, K.C.B., to Constance, youngest daughter of J. S. Moseley of Richmond, Surrey, formerly of Hatherton, Staffordshire. No cards.

STEPHENSON—PECK.—On July 31st, at the Parish Church, Wigan, by the Rev. John Stephenson, M.A., Vicar of Boston, and the Rev. Gerard Finch, M.A., Honorary Fellow of Queen's College, Cambs., Sydney Stephenson, M.B. (of Welbeck-street, W.), only son of Appleby Stephenson, M.D. (of Nottingham), to Jane Finch, daughter of the late J. H. Peck, Esq., J.P., of Southport and of Mrs. Peck, Gidlow Lodge, Wigan.

DEATHS.

ELWIN.—On Aug. 5th, at the Medical Superintendent's House, Infirmary, East Dulwich, Ruth Elwin, only child of Herbert Elwin and Edith Harris, aged 1 year 9 months.

FALLON.—On July 7th, at 77, Northcote-road, Wandsworth-common, S.W., Robert Tucker Fallon, L.R.C.S. and L.R.C.P. Edin., L.F.P.S. Glasg., of intestinal obstruction, aged 43 years.

GREENLY.—On Aug. 4th, at his residence, Brondesbury-villas, Kilburn, N.W., Charles Hickes Greenly, M.R.C.S., aged 91.

NUTT.—On Aug. 2nd, at Brooklyn House. Sherborne, Dorset, the Rev Horace Young Nutt, B.A. Oxon, late Assistant Master at Liverpool College, son of Horace Nutt, M.R.C.S. Sherborne, and grandson of the late Rev. William Young Nutt, Rector of Cold Overton, Leicestershire.

REESE.—On July 21st, at Ystradgynlais, John Thomas Reese, L.F.P.S. Glas., struck by lightning when out visiting a patient. Aged 51 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

A NEW APPOINTMENT AT THE MIDDLESEX HOSPITAL.

WE notice in the columns of a lay contemporary an announcement of a new appointment at the Middlesex Hospital. Our contemporary then proceeds to give sundry personal details which, though highly creditable to the gentleman to whom they refer, should not, in our opinion, be inserted except in a professional journal. At the same time we feel certain that the paragraph in question was inserted without the knowledge or leave of the subject of it. Truly no profession suffers so much as ours from the mistaken kindness of would-be friends.

Anceps.—The condition being a *symptom*, there are numberless reliable works bearing upon it, for its history is the history of the parent disease. There is very little to be said about the condition on a separate entity, and most of the books treating of it in this manner are to be distinctly distrusted.

"THE FIRST NUMBER OF 'THE LANCET.'"

To the Editors of THE LANCET.

SIRS,—The letter of "Historical" in your issue of the 27th ult. raises a very interesting point, and one which I have taken not a little trouble to correctly ascertain for myself. I have not had the advantage of reading what Mr. Clarke, in his "Autobiographical Recollections," has to say on the subject; but doubtless his statement that the first number of THE LANCET was issued without a cover is entitled to be received with the greatest respect, looking to his lengthy official connexion with THE LANCET. I have a copy dated July 25th, 1829, which has a white cover, and I have been *told* (on what I consider good authority) that a cover was issued with the first number. Of course, it is a very difficult point to be settled at this distance of time; but if any of your readers could throw any light on the point it would be most interesting.

I might also add that very few copies of the original first number are now in existence. Even the British Museum is deficient in this respect. The original first number consisted of thirty-six pages. Pages 1 and 2 were occupied by the Preface; pages 3, 4, 5, 6, 7, 8, and 9 by Sir Astley Cooper's Surgical Lecture; pages 10, 11, 12, and 13 by articles on Politics, Enlightened Liverymen, Dr. Collyer, and the Drama; pages 14 to 28 by Medical and Surgical Intelligence; page 29 by Medical Extracts; pages 30 to 32 by Compositions of Quack Medicines and Table Talk; pages 33, 34, and 35, by an article on Southey the Laureate; and page 36 by Notices to Correspondents.

Many persons are under the impression that they possess complete copies of the original issues of THE LANCET; but my experience is that very few indeed have the originals of the first two volumes.

I am, Sirs, yours faithfully,

Aug. 6th, 1895. ANTIQUARY.

SMALL-POX IN THE STRAND.

THE following startling story appeared in an evening paper last week. "On Wednesday afternoon," writes a correspondent to the *Globe*, "I was walking along the Strand with a friend, who is a medical practitioner, when, seeing a man coming towards us, he remarked, 'That is a case of small-pox.' We stopped the man, who was rather shabbily dressed, and, after some conversation, ascertained that he had only been released from gaol that morning. The medical man examined him, and found that he was suffering from the disease, the case being a typical one. The man was shocked to learn this, and after some consideration it was decided that my friend should remain in charge of the patient while I went for a constable to see what could be done. On seeing an officer and relating the facts to him, he remarked, 'I cannot act, Sir, unless you are willing to give the man in charge.' The sufferer was quite agreeable, and although the doctor had an important engagement at the time he thought it better, in the interests of the public, not to fulfil it rather than to allow the man to remain in the streets. We, therefore, accompanied him to Bow-street. We told an inspector our business, but he refused to have anything to do with the case, saying, 'We do not want any small-pox here; you must take the man to Charing-cross Hospital.' I argued a little with him, but it was no use. The man was taken to the hospital by order of the inspector, but was not admitted. He was then sent to the Strand Union, where he was examined by a medical officer, who confirmed the view that he was suffering from small-pox. My friend received a police telegram the same night stating that the patient had been conveyed to an infirmary, and would be removed later to the small-pox hospital." It is, of course, well-known to all medical men in London that the Police do not know the working of the machinery which exists for dealing with such cases. The recommendation of the Bow-street inspector, unless it was founded upon disbelief of the diagnosis, reveals this patently.

Typhus.—British Medical Benevolent Fund (Mr. Edward East, Secretary, 16, Upper Berkeley-street, Portman-square); Royal Medical Benevolent College, Epsom (Mr. J. B. Lamb, Secretary, 37, Soho-square, W.); Society for the Relief of Widows and Orphans of Medical Men (Mr. J. B. Blackett, Secretary, 20, Hanover-square, W.); THE LANCET Relief Fund (Mr. E. Davies, Secretary, THE LANCET Office, 423, Strand, W.C.).

C. C. B. T.—Our correspondent has done all that lies in his power. The editor of the paper in question will probably make some explanation or correction where necessary.

A FUTURE COLLEAGUE!

To the Editors of THE LANCET.

SIRS,—May I ask your advice on the following case:—A. B. was some ten years ago convicted of forging the Matriculation certificate of a University, and was imprisoned for eight months. Since then he has kept a druggist's and chemist's shop, and has managed to pass all the examinations necessary for a medical diploma except the final. A petition has been sent to the local medical society signed by some registered medical men residing near A. B.'s shop, stating that he is about to undergo examination for the diploma of a certain licensing body; that he is not a fit person to become a member of an honourable profession; and that he has been carrying on an extensive unqualified practice for some time (of which no proof is offered except the fact that A. B. was censured severely by the coroner on one occasion for having attended a child which subsequently died without having been seen by a registered medical practitioner). The petitioners also pray the society to take steps to prevent A. B. getting his qualification. We are anxious to avoid making any false step that might lead the society into difficulties, and we would be greatly obliged if you will tell us what course could be safely taken, either by the society or by one or more of the petitioners.

I remain, Sirs, yours truly,

July 28th, 1895. HON. SECRETARY.

*** If the allegations against "A. B." can be proved to complete demonstration, it is clear that he is an undesirable person for an honourable profession; but the local medical society cannot prevent him from becoming qualified if he can pass the examinations. Nor can the General Medical Council do anything before he is a registered practitioner, as he is not within their jurisdiction. It would seem to us that at present nothing can be done. The facts might be laid by individuals to whom they are known, and certainly *not* by the society, before the body which is believed to be going to license "A. B.," and that body might consider him a wrongful person to admit to the examination; but that would be a very extreme step to take.—ED. L.

PRACTICE IN SOUTH AMERICA AND IN ALGERIA.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly tell me where I can find detailed information as to the conditions under which English medical men can practise in the Republics of South America and in the French colony of Algeria? I am, Sirs, faithfully yours,

Aug. 1st, 1895. S.

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SERO-THERAPY IN DIPHTHERIA.

N. N.—For those who are in doubt as to the efficacy of this treatment Dr. Roux' *ipsissima verba* are these:—"Le sérum peut occasionner des éruptions passagères: il ne tue pas. Agissez même dans le doute. S'il s'agit d'un vrai cas d'angine diphthérique, le résultat sera presque toujours la guérison. S'il s'agit d'une angine simple, la santé n'en sera jamais compromise."

B.A., M.D.—We have recommended a form of long-term temporary assurance under which the premium would be considerably less than for a whole-term policy, but uniform while the policy continued in existence. More advantageous terms may be obtained when the premiums vary from year to year in accordance with the calculated risks, but, having in our mind more than one prospectus that has been brought to our knowledge, we can only impress on our correspondent the necessity of understanding the form clearly before assuring. In our issues of April 23rd, 1892, and Sept. 10th, 1892, we have published short notes upon the different companies, but for our correspondent's purpose any first-class company would surely serve.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—It is highly amusing to one living across the sea to read the remarks in THE LANCET about titles. One would imagine some of these correspondents had very little practice—they spend so much time in discussing the title of "Dr." Your correspondent "Verax" has written a very personal letter, "Dubitator" evidently being a brother practitioner of whom he is jealous. He says: "As if anybody thought of comparing the M.D. of Aberdeen with that obtained at the University of London," &c. As an old Aberdeen man let me tell "Verax" that, so far as practical knowledge of the profession is concerned and ability to treat disease, the M.D. (Aberdeen) is quite as good as the M.D. (Lond.). The M.D. (Lond.) gets a more scientific education, but does not make a better practitioner. The late head of the profession in London, Sir Andrew Clark, the late Sir James Clark, and the late Sir John Forbes were graduates of the Northern University which "Verax" affects to despise. "Verax" displays great ignorance in saying that the M.D. could be got by "simply purchasing a return ticket, availing themselves of a northern train," and I refer him to the Students' Number of THE LANCET for the past twenty years, and I hope he will have sufficient manliness to acknowledge his errors and apologise. In my time Aberdeen possessed some surgeons of undoubted talent, Messrs Pirrie and Keith being the leaders. These two surgeons were very kind to students, often taking them to private operations. The first time I saw Dr. Pirrie "cut for stone" was in a house in Crown-street, Aberdeen, where an Australian student and myself assisted him. Knowing, therefore, a great deal about the Aberdeen school, I felt I could not allow an individual who evidently "did not know what he was talking about" to traduce my old *alma mater*. I have no idea of the identity of "Verax," but if a patient I should be sorry to place myself under the care of a medical man who would make such uncalled-for statements. Practising as I have been for many years in a Greater Britain, where all legally qualified men are styled "Doctors," and justly so, it seems to me childish to have such unseemly squabbles over a name. I have always believed that every man who has passed a satisfactory examination should be called "Doctor."

I am, Sirs, yours truly,

July 10th, 1895. M.D.

J. E. T.—There is only one institution where the sons of medical men receive educational advantages over and above other boys; but our correspondent's son is too old to make it worth while applying there. The curriculum of any good local grammar school should, with application on the student's part, make the passing of the examinations mentioned a certainty; and there are many schools in England where the tuition fees are very low—so many, in fact, that it is unnecessary to single out one or two by name. Other circumstances might be allowed to dictate choice of residence.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—During the absence of a neighbour I attended at the delivery (only) of one of his patients. The lady now calls upon me requesting my attendance at her second confinement. After explaining that I cannot because I attended for her regular medical man, she tells me she will not have him again, and presses me to undertake the case. What should one do under such circumstances?

I am, Sirs, yours truly,

Aug. 8th, 1895. ETHICS.

*** These questions cannot be decided quite offhand, and often there are circumstances which prevent any direct answer being possible. If "Ethics" is clear that he has in no way unfairly supplanted his neighbour, there can be no reason why he should not take the case. We mean that there would be nothing dishonourable in doing so, though we can quite understand that it would be highly repugnant to him, as it would be, we are glad to believe, to most of the profession. Would it not be possible for him to see his neighbour and talk the matter over amicably? For sensible men the attitude of the patient would be seen to mean nothing offensive.—ED. L.

THE PROBLEMS OF CHILD-SAVING IN NEW YORK CITY.

THE Secretary of the Children's Aid Society in New York reports that the Society has twenty-one day schools and twelve night schools, with a daily average attendance of 6200 children. These schools are given by private munificence, and are supported partly from the public funds and the balance by donations from charitable people, and cost the Society 130,000 dollars during the year to maintain. The children are taught such manual work as they are fitted for—such as cooking, household work, sewing, paper folding, drawing, modelling, and wood working. Only those children are allowed to attend who are so poor, ragged, and neglected that they cannot go to the public schools, or where there is no room for them in the public schools. This work has been in operation for forty years. More than 100,000 children have been started aright in life from the schools of the Society. The "placing out" system, with its corps of trained, experienced and careful agents, finds good homes in the country for these homeless ones. Forty thousand young and middle-aged men and women are now living honest, prosperous lives in Western and Southern States, who would otherwise have remained to drift about New York.

Mr. H. Cuthbert.—The donation to the Townshend Fund has been received and forwarded.

"SANITAS" IN EMPYEMA.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if any of your readers can give me some information with regard to the use of "Sanitas" for washing out old empyema cavities. I am, Sirs, yours faithfully,

Newcastle-upon-Tyne, Aug. 4th, 1895. HENRY S. BAUMGARTNER.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 8th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 2	29·71	S.W.	60	59	111	73	58	...	Raining
,, 3	29·57	S.W.	60	57	107	64	56	0·10	Cloudy
,, 4	29·39	N.W.	64	56	120	71	54	0·42	Cloudy
,, 5	29·50	W.	61	56	109	68	51	0·14	Bright
,, 6	29·43	N.W.	61	57	105	69	57	0·03	Overcast
,, 7	29·76	N.W.	61	57	110	70	53	0·22	Cloudy
,, 8	29·85	W.	60	56	113	73	53	0·07	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynecological), 2.30 P.M.

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Kettering Guardian, Blackburn Daily Telegraph, Financial News, Birmingham Gazette, Yorkshire Herald, Derby Daily Telegraph, Hereford Times, Manchester Guardian, Rochdale Observer, Leicester Post, Express and Star (Wolverhampton), City Press, Liverpool Mercury, Dublin Evening Telegraph, Leamington Spa Courier, Newcastle Leader, Dundee Courier, Western Press, Pioneer Mail, Builder, Times of India, Brighton Gazette, Bolton Evening News, Sunderland Daily Echo, The Journal (Carmarthen), Sunday World (Dublin), Leigh Burghs Pilot, Cork Constitution, Provincial Medical Journal, The County Gentleman United Service Gazette, School Board Chronicle, Speaker, Weekly Mail (Cardiff), Birmingham Daily Gazette, Social Gazette, Citizen, Kentish Press, &c., &c.*

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Communications, Letters &c. have been received from—

A.—Dr. J. W. Allan, Glasgow; Anderson's College Medical School, Dean of; Assistancy, Lond.

B.—Dr. W. A. Buée, Slough; Mons. N. E. Blount, Paris; Mr. T. B. Browne, Lond.; Messrs. Burgoyne and Co., Lond.; Messrs. Bowater and Sons, Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Benger and Rumpff, Lond.; Birmingham General Hospital, House Governor of; British Medical Temperance Association, Lond.; *Birmingham Daily Post*, Publisher of; British Institute of Public Health, Hon. Secretary of; British Medical Association, Lond.; Borough of Leicester, Town Clerk of.

C.—Prof. M. Charteris, Glasgow; Dr. G. Carré, Lond.; Dr. W. J. Collins, Lond.; Dr. I. Cadell, Edinburgh; Dr. D. J. Collins, Cork; Mr. H. Cuthbert, Aston-on-Clun; Mr. A. C. Champati, Patna City, India; Miss Cannings, Lond.; Cortland Wagon Co., Lond.

D.—Dr. W. Duncan, Lond.; Dr. G. Dickson, Edinburgh; Dr. M. Dewar, Edinburgh; Dr. W. H. Douglas, Stourbridge; Darlington Hospital and Dispensary, Secretary of.

E.—Dr. W. Easby, Peterborough; Mr. E. C. Evans, Southsea.

F.—Dr. A. H. Frere, Wickham Market; Mr. W. Falla, Jersey; Mr. N. Hay Forbes, Tunbridge Wells; Mr. T. W. Fowler, Coventry; F.R.C.S.

G.—Dr. H. S. Grant, Navarre, Ohio, U.S.A.; Dr. H. L. Gill, Berlin; Mr. J. Gibson, Newcastle-on-Tyne; Messrs. Gills, Cuxson, and Co., Wednesbury; Great Eastern Railway Co., Manager of; Glamorgan County Asylum, Bridgend, Superintendent of.

H.—Dr. Herman, Lond.; Dr. W. D. Halliburton, Lond.; Dr. M. M. Hagopian, Arapkin, Turkey; Dr. C. Holman, Lond.; Surg.-Capt. M. P. Holt, Lond.; Mr. O. L. Holst, Eastbourne; Mr. J. Heywood, Manchester; Mr. N. Hardy, Lond.

I.—Institut de Anatomie, Buarresci.

J.—Sir Geo. Johnson, Lond.; Mr. W. Jago, Brighton; Mr. T. Jones, Manchester.

K.—Dr. G. C. Kingsbury, Blackpool; Mr. J. L. King, Topoka, Kansas, U.S.A.; Mr. A. Kidd, Croydon.

L.—Dr. L. Leith, Edinburgh; Messrs. Lee and Nightingale, Liverpool; Liquor Carnis Co., Aston Clinton.

M.—Dr. H. Macnaughton-Jones, Lond.; Dr. H. R. McCullough, Ontario; Mr. J. J. Merriman, Worthing; Dr. J. Murphy, Lond.; Messrs. Macmillan and Co., Lond.; Messrs. Maxton and Co., Lond.; Messrs. T. L. May and Co., Lond.; Manchester Hospital for Consumption, Secretary of; Middlesex Hospital, Superintendent of; Maltine Manufacturing Co., Lond.; M.A., London.

N.—Mr. H. Nutt, Sherborne; National Society for the Employment of Epileptics, Lond.

O.—Mr. R. Owen, Lond.; Mr. J. O'Brien, Swanlinbar; Messrs. Oppenheimer, Son, and Co., Lond.

P.—Dr. Purcell, Lond.; Mr. G. Pearson, Nottingham; Mr. N. Porritt, Huddersfield; Messrs. Palpy and Co., Lond.; Plumbers, the Worshipful Company of, Lond.; Pennsylvania Medical Society, Secretary of.

R.—Dr. R. D. Rudolf, Sarun, India; Dr. W. Richardson Rice, Coventry; Mr. L. Roberts, Llandudno; Mr. R. Redpath, Newcastle-on-Tyne; Mr. H. M. Riley, Leicester; Messrs. E. Roe and Co., Salisbury; Royal Institution of Great Britain, Lond., Secretary of; Ramus, Lond.; Registration £5 5s.; R. S. O., Lond.

S.—Dr. E. J. Smyth, Birmingham; Dr. R. Sturgis-White, Lincoln; Dr. H. D. Stepanian, Rodosto, Turkey; Mr. A. Stenhouse, Glasgow; Mr. J. M. Sloan, Lond.; Messrs. W. H. Smith and Son, Lond.; Messrs. Shield and Kyd, Dundee; Messrs. J. T. Syer and Co., Lond.; Messrs. S. Smith and Co., Bow; Messrs. G. and G. Stern, Lond.; Messrs. G. Street and Co., Lond.; Messrs. Street Bros., Lond.; Sanitary Institute, Lond., Secretary of; Sanitas Co., Lond.; *Science Siftings*, Lond., Editor of; Servant, an Old, Glastonbury; S., Lond.

T.—Dr. H. E. Taylor, Aylesford; Dr. W. B. Tate, Nottingham; Mr. L. Tait, Birmingham; Mr. R. Turnbull, Lond.; Mr. J. Thin, Edinburgh; Mr. R. Tilbury, Andover.

U.—University College, Dundee, Secretary of.

V.—Universal Sanitary Disinfecting Co., Lond.

W.—Dr. A. J. Wall, Lond.; Dr. F. J. Waldo, Lond.; Mr. C. E. Watson, Twyford; Mr. G. B. White, Enniskillen; Mr. R. M. West, Leicester; Mr. J. W. White, Kingsbridge; Messrs. W. Wood and Co., New York.

X.—X., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. A. R. Alexander, Oakley, Fifeshire; Messrs. Armour and Co, Lond.; Apollinaris Co., Secretary of; A. M. B., Lond.; Austral, Lond.; Alpha, Lond.

B.—Dr. T. S. Brodie, Houston; Mr. G. S. Buck, Eaton Socon; Mr. W. Bridgeford, Hastings; Mr. G. de V. Belson, Bampton; Mr. R. M. Bourne, Richmond; Mons. M. Berthier, Paris; Mr. H. C. Bevan, Blaina; Messrs. Barclay and Sons, Lond.; Birmingham General Hospital, Secretary of; Bury Dispensary Hospital, Secretary of.

C.—Dr. Cressy, Croydon; Mr. J. Carter, Lond.; Mr. W. B. Caley, Sheffield; Mr. J. N. Cregeen, Liverpool; Mr. W. S. Cameron, Lond.; Rev. W. Cleveland, Selby; C. R. B. A., Edinburgh.

D.—Mr. A. H. Dawes, Lond.; Mr. O. J. Davies, Lydbrook; Mr. A. E. Downey, Rathdrum; Devonian, Lond.; Delta, Lond.

E.—Dr. J. B. Emmerson, Biggleswade; Mrs. E. Evans, Lond.; Messrs. Eason and Son, Dublin; Eplis, Lond.; E. D. G. S., Lond.

F.—Faris, Reading.

G.—Dr. G. C. Garratt, Enstone; Dr. E. G. Gilbert, Tunbridge Wells; Mr. F. W. Gale, Weymouth; Mr. A. Greenwood, Woodley; General Apothecaries' Co., Lond.

H.—Dr. Hughes, Lond.; Dr. H. E. Harris, Lond.; Dr. Hutchinson, Kingston; Dr. P. H. Hensley, Jersey; Brig.-Surg.-Lieut.-Col. Harrison, Lond.; Mr. H. R. Hancock, Loughborough; Mr. H. Hutchinson, Kingston; Mr. T. S. Hope, Northleach; Mr. W. A. Hardiker, Wrexham; Mr. J. L. Hamilton, Brighton; Messrs. Haddon and Co., Lond.; H. S., Newcastle-on-Tyne.

I.—Messrs. Ingram and Royle' Lond.

J.—Mr. E. C. Johnston, Cheltenham; Mr. H. T. Jackson, Londonderry; James, Lond.; J. H., Lond.

K.—Mr. V. R. Kirloskar, Jamkhandi, India; K., Lond.

L.—Dr. Laidlaw, Baldock; Dr. T. Laird, Heywood; Mr. R. M. Lenard, Lond.; Mr. G. Lane, Stromness, Orkney; Locum, Lond.; Locum, Aberystwith; Dr. L., Liverpool.

M.—Dr. R. McLang, Carlisle; Mr. T. Milton, Richmond; Mr. J. Menzies, Worksop; Mr. D. F. Morgan, Foynes; Macclesfield General Infirmary, Secretary of; M. D., London; Medicine, Barrow-in-Furness; Medicus, Leytonstone; M.B., London.

N.—Mr. E. J. Nugent, Lond.; Newcastle-on-Tyne Dispensary, Secretary of; North Staffordshire Infirmary, Stoke-on-Trent, Secretary of; Nemo, Lond.

O.—Ocnus, Lond.

P.—Dr. H. A. Perkins, Tunbridge Wells; Dr. F. G. Penrose, Lond.; Mr. J. W. Pinder, Lond.; Pepsin, Lond.

R.—Dr. L. Roberts, Llandudno; Mr. C. D. Roe, Lond.; Mr. H. R. Reynolds, Lond.; Miss M. Reese, Swansea Valley; Ramus, Lond.; R. S. O., Lond.

S.—Dr. J. Smith, Mauchline, N.B.; Mr. F. Searle, Shoreham; Mr. A. Snowdon, Yarmouth; Mr. C. F. Sutton, Holmes Chapel; Springfield House Asylum, Bedford; Scalpel, Lond.; Surgeon, Bridlington Quay.

T.—Dr. A. Thomas, Blakeney; Dr. G. M. R. Thorp, Demerara; Mr. J. Thin, Edinburgh; Messrs. Twyfords, Hanley; Teignmouth Infirmary, House Surgeon of; Tibia, Lond.

U.—University of Glasgow, Dean of.

V.—Victoria, Medical Society of, Hon. Treasurer of; Vigo, Lond.; Verax, Lond.

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ABSTRACT OF

An Address

TO

GRADUATES IN MEDICINE IN THE UNIVERSITY OF EDINBURGH.

Delivered on August 1st, 1895,

BY W. S. GREENFIELD, M.D. LOND., F.R.C.P LOND. AND EDIN.,

PROFESSOR OF PATHOLOGY AND CLINICAL MEDICINE IN THE UNIVERSITY.

GENTLEMEN,—It is my pleasant duty and privilege to convey to you the congratulations of my colleagues and of the University on the attainment of your degrees and upon the varied honours and distinctions bestowed to-day. To those of you who have attained the degree of M.D. we offer our sincere congratulations, not only in that you have elected to reach the fullest medical standard of our University, but that so many of you have contributed Theses of high value to medical science. It is no small thing to be graduates of this University, to share the inheritance of so many noble traditions, and to belong to the school of so many eminent men of the past and present. You are no mere licentiates of a medical corporation, but members of a University which in the past has been, as we trust it will continue to be in the future, distinguished in all branches of learning. During long years the combined influence and mutual interaction of the various Faculties have moulded and elevated the teaching of the whole. Many of you have directly profited by the teaching of professors in other Faculties than that of medicine, but even those who have not done so must have felt their influence. Remarkable as is this University in the long combination of distinction in medicine with that in divinity, law, philosophy, and science, it is hardly less unique in its relations to the citizens of this noble and beautiful city. For long years, in place of antagonism between town and gown, the University has been amongst the chief glories and most dearly cherished objects of solicitude of the inhabitants. The fathers of the city, its eminent citizens, its wealthy men, have vied with one another to foster and develop it. Apart from higher interests, the results of their munificence and care are seen to-day in the noble buildings, both of the University and the Royal Infirmary, in which you have received your training. You owe, then, a debt to this city as well as to the University, which should be an incentive to each one of you to see to it that by your life and influence you do nothing to tarnish the fair fame of either. Nay, I would go further, and say that by all means in your power you should aim to promote the renown and success of the University, and to increase its material prosperity.

You have chosen a profession higher, perhaps, than any other, hardly excepting Divinity. It is full of noble traditions and memories, of possibilities of good to your fellow men, and of self-culture in all the highest qualities of man. You are rightly proud of your choice, and you will do well to retain your high ideal of your position and duty. All the more will you find this essential, since you will meet with many temptations to a lower standard in your own life. Still more will you find that your view is not shared by the majority of those around you. If you imagine that the public entertain a like view of the position and objects of your profession, you will soon be undeceived. In theory they may, and here and there some noble souls may recognise it, but for the most part your views and aims will be misunderstood. If, for example, you try to introduce sanitary improvements, you will probably be charged with a desire for notoriety, with ignorance of the common facts of life, and, above all, with a desire to raise the rates. Obloquy and suspicion will often be your meed, instead of gratitude and regard. Your monetary compensation, if any, will be grudged, and possibly be cut down below that of a common scavenger. The picture in Charles Kingsley's "Two Years Ago" is true to the life to this day. I speak from intimate knowledge in many instances. "A meddlesome conceited fellow," they will say, "fresh from college, full of new-fangled ideas." "As if we did not know what water we should drink, what air we should breathe; what we should do with our sewage, how we should feed and clothe our children," and so on. "Our fathers lived to a good old age without any of your new notions. What did for them will do for us." In such matters and a multitude of others you will find that the public, in spite of modern education and enlightenment, will oppose or thwart you. Even the diffusion of knowledge, the abundance of popular medical literature (so called), the ready access to medical works, due partly to their wide advertisement, will often act prejudicially to your treatment of patients, especially amongst the better educated classes. Indeed, it is often with them that the dangerous "little knowledge" is a serious barrier to successful treatment. To face such difficulties will often tax all your endurance and courage. Only by patience, tact, and forbearance can you succeed, whether in dealing with individual cases or with matters of wider interest. But, beyond this, there is one prevalent opinion which will come in to mar your influence. Money is, for the vast number of men, the first object in life; this, and not character or ability, is the standard of success. Do not be surprised if you are believed to have this as your first object. If it is really so I pity you. Not only may you fail utterly in your object, but you will be led into ways which must bring you loss of character. I mean real, not reputed character, and which may mar your success in the alleviation and cure of disease. It will lead to much bitterness and sorrow, to misunderstandings and quarrels with your medical brethren, to a lowering of the dignity of your profession.

[Professor Greenfield here emphatically cautioned his audience against making pecuniary success their main object in life. He urged on them the advantages of literary culture, and continued:]

In the practice of your profession you will necessarily be exposed to many temptations and meet with many difficulties. Time forbids any full reference to these, but there are one or two on which I would, before we part, say a few words of counsel. Every medical man is in a relation of peculiar confidence to his patients and their friends. There are some facts which he must know, both as to patient and family, which are sacred confidences. There are others with regard to which he must exercise a wise reticence, even to the patient himself or to his nearest friends. And no task is more difficult sometimes than to know when to speak and when to be silent. But beyond this there is one rule, too often forgotten, that a practitioner should never talk about his patients or their diseases to others. There are some obvious exceptions—where you may silence false rumours, for instance. But, as a rule, it is only at the request, or with the sanction, of the patient or his friends that you should speak at all. I cannot too strongly urge you to cultivate this rule of silence. Once break through it and you will find it hard to stop, but let it be known that it is your rule, and you will retain the confidence of your patients and the credit of your profession. You will often be tempted to speak so long as morbid curiosity and gossip, those two most inherent and devilish of common vices, exist; the guise of sympathy, the bad example of some prominent men, the prying eyes of the world, to whom no details of inner life are sacred nowadays, will tempt you; and you will be blamed if you will not divulge in private life what all the world considers itself entitled to know about public men. If you knew what one could tell of the mischief wrought by gossip, and especially by gossip founded on the sayings of men who should know the facts, you would shrink from all possible chance of doing such harm. Let your sense of honour guard your lips, and even keep the doors of thy mouth from the wife of thy bosom. When pressed for information it is a good rule to say, "It might do no harm for you to be told, but I am the last person to give you any information." I will not insult you by supposing that you will talk about your patients, with the idea that it will benefit your practice, by saying, for instance, that Lord So and So is under your care. It is not my business to teach you the arts of quackery. There are plenty of teachers. Not less difficult is it to know how to convey truth to your patients and their friends. Medical men are often blamed for concealing the truth from patients, even when asked directly. Much of this popular error arises from the fact that the presentation of truth is amongst the most difficult of acquirements.

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The most perfect portrait is not that which presents every detail so that it can be studied with a microscope, but that which conveys the living likeness to the casual beholder. How few artists, how few writers, can succeed in this. It is no sophistry, but practical truth, that you must endeavour to convey the right impression as seen from the standpoint of your hearer. And in doing so you must keep in view the practical object for which you are consulted. To tell a man that he has heart disease may torture him with fears of sudden death, may lead him to give up his work and to live a life of misery and apprehension, when you know that he may live a long life and do active work, if due precautions are taken. It is your duty, and must be your anxious study, so to convey the truth that it may enter his mind in a way which shall give him hope and courage, and lead him to take such precautions and live such a life as will conduce to both health and happiness; otherwise, as one has often seen, he may, after long years of misery, discover that you in your eager desire to be truthful, and, perhaps, from over-confidence in your diagnostic powers, have done him more injury than his disease. How many cases of this kind one could relate did time permit. But I pass on to mention another closely related point. Bear always in mind that not only cannot the subjective and objective coincide, but that, from many points of view, a patient must always be regarded as aberrant. His mental condition cannot be yours. You see matters in that dry light of truth which Aristotle commends. The patient's fears, anxieties, wrong ideas, and speculations cannot be yours. He watches your every phase of expression; a puzzled or anxious look on your face may convey to him a sentence of death. Medical men, when ill, are the worst patients in this respect. One look may efface all that you can say. Hence no endowment is better in a doctor than a calm, cheerful, sympathetic manner, especially if combined with clearness, decision, and thoroughness in directions and candour in speech. "A merry heart doeth good like medicine," and is often a better sedative than all your drugs. Be anxious if you must, but let it be as a stimulus to more careful investigation, more watchful care in yourself. Beyond this, remember that sickness makes a man not himself. The higher his intelligence, the greater his activity, the wider his responsibilities, the more intolerable is sickness. It is not the physical but the mental pain which is hardest to bear, the risks of suffering to others, the apprehension of imagined or real woes. More than this, the mental and moral condition, like the pathological processes of disease, often revert to the type of early life. A child's ailments are often revealed by peevishness, a baby cries from hunger or pain oftener than from innate depravity. And a good, wise, and high-souled man, or a loving, patient, considerate woman may suffer tortures from the most trivial causes in sickness—e.g., a picture hung askew, or a spot on the wall. "We, then, that are strong ought to bear the infirmities of the weak." A medical man must exercise the fullest patience, consideration, sympathy, and control of temper. I have known instances where, forgetting this, perhaps himself wearied and overwrought in mind and body, a medical man has spoken harshly, or even has left a patient in advanced stages of disease, because of some imaginary slight. If you would avoid life-long remorse, apart from the discredit of such things to yourself and your profession, I beseech you to remember that "Better is he that ruleth his spirit than he that taketh a city," or distinguishes himself in diagnosis. In your relations to your medical brethren you may also meet with difficulties. One should perhaps pass these in silence, or speak with bated breath, in the presence of the public. But the fact that there are sometimes dissensions amongst medical men is but too well known, and the public judgment is warped by knowledge of the exceptions, and ignorance of the rule of brotherly feeling and action. That we are not only no better, but rather worse, than other men in this respect is a common belief. It is no answer to say that amongst those whose profession is higher, and whose creed is one of universal charity, the *odium theologicum* is a common and flagrant fact. Whatever may be our theory, however stringent our codes of medical ethics, it is unquestionable that ill-feelings and misunderstandings do too often mar our charactor, and will, I suppose, so long as we are human. Amongst the most frequent causes are those which relate to the distribution of patients, or rather clients. Medical practitioners, especially early in life, are charged with seeking to get the patients of others. The general idea that people are divided into the clients of Dr. A. and Dr. B.: that if Dr. A. is asked to see, and does see, anyone in a family which Dr. B. usually attends, he is a supplanter, to be scorned and avoided by Dr. B., and that Dr. B. may justly refuse to see anyone in that family again, even in an emergency, are rules sometimes supposed to govern practice. I do not say whether this is right or no, I record the fact. And there are too many thorny questions, too many intricate problems, which arise in connexion with such matters for me to attempt to deal with them. But this I will say, that I know of no rule of law, common or statutory, which empowers a medical man to claim an exclusive right to attend any man or his family, and that the public in general does not understand the high ground of privilege which is sometimes claimed. Believe me, gentlemen, the only real, sure, and lasting bond of union between medical man and patient is that of mutual confidence and respect. The exhibition of jealousy and distrust of the character and motives of one's fellow-practitioner is more likely to lead to loss of confidence than to its increase. Readiness to consult with others when desired is not likely to lose a patient. A man will not readily part with the services of one who has been in his confidence and has helped him or his family in times of trouble. Exclusiveness, suspicion, jealousy, evil report of one's neighbours, will only destroy confidence where it might otherwise be retained, and a patient may long to be released from a bondage which he did not seek. In such cases some people will go long distances to consult others, concealing or denying the fact that they have been under treatment, and often they do this to their own detriment, as well as to that of their medical man. I have often been astonished that patients have not enjoyed the advantage of consultation with medical men in their own neighbourhood, who could far better advise with their own medical attendant, and have found the explanation in the fact of mutual distrust and the idea that such a step would be resented. I have dwelt upon this point because I judge it to be one of the most urgent practical importance. But pray do not misunderstand me. It is one of the most stringent and primary rules that no medical man should under any guise, directly or indirectly, interfere with the conduct of a case which is under the care of another, unless consulted by him. Moreover, you will remember that I say this to guide your own conduct, not to influence your opinion of the conduct of others. There are salutary rules, established by long experience and concurred in by the wisest and best of our profession, which should regulate your conduct to your fellows, even if you cannot as yet see their justice or wisdom. Need I add that to comment upon the treatment or diagnosis of others, a habit we are all prone to, is not only a crime but a blunder. No man can judge of a case which he has not seen, and reports or rumours should never be trusted or be the ground of comment. Leave such criticisms to those who cannot know how deep is the anxiety, how great the difficulty, of the actual diagnosis and treatment of disease. You may think that in what I have said I have given a counsel of perfection unattainable by mortal man. But if you do not aim high now, you probably never will. And finally, gentlemen, let me commend to you the quality of *thoroughness*. Far more mistakes are made in diagnosis, and consequently in treatment, by want of thoroughness, than from ignorance. It has been our effort to ensure that as you have received a complete scientific training, so you should be thorough and methodical in all your clinical work. You cannot be too rigorous with yourselves in this. Cultivate the habit of thorough investigation in your earlier years, and you will gain a power of perception which will stay with you in the busier years of practice. There is genius in medicine as in other spheres, but the highest genius is in the power of careful and thorough attention. It is thus that the great men in all science have gained their renown. Every patient is a new and complex problem—not a mere "case"—with his own heritage of tendencies, his own habits, his temperament, his past life. Study all these with care, and you will develop powers which will make your success as medical men. It is not always the brilliant students who become successful and distinguished, but those who with good ability, assiduous care, and perseverance train what powers they have. Let those who have been depressed and daunted by their failures at examinations remember that the race is not always to the swift or the battle to the strong. Their difficulty in grasping facts or unravelling problems may have been due only to slow development, and they may discover new powers and attain high qualities by steady and persevering work.

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ON THE RECOGNITION OF PERIPHERAL NEURITIS AND SOME POINTS IN ITS TREATMENT.[1]

BY JAMES CAGNEY, M.A., M.D. IREL., M.R.C.P.,
IN CHARGE OF ELECTRO-THERAPEUTICS, ST. MARY'S HOSPITAL; PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS; ASSISTANT PHYSICIAN, NORTH-WEST LONDON HOSPITAL.

THIS paper does not pretend in any way to be a systematic treatise on the disease to which it refers. The subject has been dealt with so ably in many text-books and monographs that ample instruction upon all points awaits the investigation of the curious, and is doubtless already in the possession of my hearers. None the less I would urge that to every man who with certain opportunities thinks and works at one subject over a length of time there are likely to come ideas, not necessarily new or different from those of others who have laboured in the same field, but ideas at least with an emphasis originating in his mind and determined by his experience; and such ideas, when they possess him strongly, it is often useful to impart. Now, if it were granted—and I fear the admission is hardly justified—that most medical men were as well able to distinguish with certainty the presence and the extent of a peripheral nervous lesion as they are, say, to recognise a typical case of nephritis, it might still be said with truth that, whereas everyone has his mind open and directed to the possible presence of the latter in any given case, but little thought or apprehension is usually devoted to the former. Comparing the two conditions, it will certainly be conceded that there prevails a want of familiarity with the nervous disease. It is one of the ideas which experience has emphasised for me that a recognisable lesion of peripheral nerves is a very common thing—far more common than is often believed. It crops up everywhere, sometimes overlaid and hidden in a mass of more obtrusive symptoms; sometimes—as after typhoid fever, acute rheumatism, or influenza—the remnant of a disease more directly threatening life; sometimes a tedious complication to a surgical injury, often existing alone as a formidable and eventually fatal disorder. In all of these circumstances it may be, and often is, overlooked from a want of familiarity with the conception of it. It is with a sense of this fact that I have chosen to treat of the recognition rather than of the diagnosis of peripheral neuritis. I shall have to refer to the question of diagnosis as I proceed; but my purpose chiefly is to enjoin a vigilance, a preparedness of mind, by which the condition may be sought in all likely circumstances; to indicate some of these circumstances as experience has impressed them upon me; and finally, to make some remarks bearing upon treatment generally and in particular cases.

One of the commonest and most looked-for of the causes of neuritis is alcoholic excess. Yet in this the condition may be overlooked among the many disorders which, springing from the same source, are often present with it.

CASE 1.—I was asked to see a female patient reported to be in a state of coma and in danger of immediate death. There was a history of intemperance, but the patient had been for months an invalid and under supervision. Consequently alcoholic poisoning was not suspected. The liver was cirrhotic, and there were ascites, diarrhœa, and enormous hæmorrhoids. She was insensible when I saw her, but the lightest touch on the inflamed hæmorrhoids elicited an expression of pain. The breathing and the heart's action were good, and the imminence of death was not apparent to me. The comatose state, maintained during the day, gave place at night to periods of violent delirium, and both mental states were of a character which suggested alcoholism. I observed, also, that there was complete foot-drop, the knee-jerks were absent, and pressure upon the extensor surface of the forearm occasioned the expression of pain. The patient was receiving a few ounces of brandy to maintain her strength; I advised the withholding of alcohol entirely, and she made a partial recovery, but died a week later from pneumonia. An experience of this kind teaches one the necessity in such a case of looking closely at each of the symptoms, even when they are grouped together in a seemingly obvious and familiar whole. The possible bearing upon treatment of the inference then drawn needs little comment, especially when, as here, the administration of alcohol may be a large part of that treatment. Akin to this subject is one point upon which I am tempted to dwell. Outside and beyond the fact that patients are not always candid, and are accustomed diligently to conceal their moral infirmities from the physician whose help they have sought, there is a further difficulty of judgment based upon our own conception of what may suffice to produce a toxic state. It is true that in my own experience, where I have thought that I have eventually learned all the facts, it has generally appeared in cases of alcoholic neuritis that the imbibition of quantities of alcohol sufficient to satisfy the most exacting inquirer has been an antecedent. Nevertheless, I have my mind open to the belief that in certain persons a relatively small quantity will produce nerve symptoms which an inveterate dram-drinker will fail to develop.

CASE 2.—A young man aged twenty-two was brought to me by a colleague on account of a weak heart and a sluggish liver, which he was reputed to have. The liver was enlarged a finger's-breadth downwards, and the abdominal wall in this part was tender. The patient was flabby and anæmic, with a lack-lustre eye, and slow in his movements. He was the subject of habitual constipation. Physical examination of the heart revealed only a hæmic murmur. I had satisfied myself on these points when the patient observed incidentally that he had for some days been troubled with muscular rheumatism and with tingling and numbness in the extremities. There was tenderness of the muscles in the arm and leg and a degree of anæsthesia in the hands and feet. The knee-jerks were present. Notwithstanding this fact, and that the patient denied alcoholic excess, I gave the opinion that he was in an early stage of neuritis. He admitted a moderate indulgence in sherry between meals, and I further made allowance for a probable suppression or attenuation of the truth, but thought it likely that with a portal system blocked, a feeble circulation, a weak glandular organisation and defect of the emunctories, even moderate indulgence might have produced a toxic state. Within a week I was called to this patient. He was then unable to leave his bed; the knee-jerks were absent, to return slowly after four months, and in the meantime he passed through an extremely severe attack of alcoholic pseudo-tabes. I am greatly indebted to the good fortune which enabled me to observe this case from its earliest beginning. It is probably a unique experience. The ultimate result of my inquiries showed that in this case there was no need to assume a special susceptibility, and it may have been so with the female who was the subject of the first case cited here. I think not, however. I attribute great efficacy to what I may call the summation of causes in the production of toxic neuritis. This summation may be the summation of a single cause from a defective elimination of the poison, such as one may assume to exist where the hepatic function is impaired by an impediment to the circulation or by disease of any sort. Indeed, the usual association of liver trouble with habitual drinking itself suggests this, and the same association might seem to imply that there was generally at work the double factor of susceptibility to nerve poisoning, and of accumulated poison from defect of elimination. Amongst men, however, it is by no means those whose livers bear the heaviest traces of drinking who are most apt to succumb to neuritis, and in women, who are the commonest sufferers, neuritis usually precedes gross changes in the liver. Among women it is perhaps the anæmic and ill-nourished who offer the least resistance, and amongst men it is decidedly those of feeble circulation and what is often described as an inherited liver. I believe that in some of these even small habits of tippling may be thoroughly effective. It is difficult to apportion the factors in causation, but we are all led by our own views in judging a cause, and may sometimes question the effect without due regard to other evidence. According to present knowledge the most important element is always, of course, individual susceptibility, and occasionally a light may be thrown upon this indirectly. There is what is called a family of neuroses, and there is a class of allied states which seem to entail a special proneness to defect of nervous vitality. I can recall a remarkable instance in which the

[1] A paper read before the West London Medico-Chirurgical Society on May 3rd.

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allied neuroses had committed a terrible onslaught on a single family.

CASE 3.—On March 4th, 1891, a young man aged twenty-four came to me at the Hospital for Epilepsy and Paralysis. He was obviously in great extremities of poverty. He had still about him an air of gentility and a kind of refinement, which in another class we sometimes ascribe to good breeding. There was some uncertainty, too, about his name. When young he had been in hospital for vertigo and again for something the matter with his eyes. For the latter he had been given cod-liver oil and quinine. His complaint when I saw him was wasting, weakness and painful cramps, occasional giddiness, but in particular a remarkable hyperidrosis, which rendered him unfit to follow his occupation. A few questions made it plain that the family history was full of neurotic incident, and the young man's father sent me in writing the following remarkable statement. One grandfather died from apoplexy; one grandmother from asthma, the other grandmother from phthisis; the father himself had spinal paralysis; the mother was then an inmate of a woman's hospital, and had been subject to hysteria major; one brother had hip disease, and another lupus; one sister was phthisical; one brother died from fits; a sister died from phthisis; a young brother was delicate; one sister was hysterical; and, lastly, one brother was reputed to be healthy. This brother I had a curiosity to see, and at my request he attended. I was little surprised to find that he inherited his full share of affliction. He exhibited exophthalmic goître in a pronounced degree and subsequently came under my care. One of a family such as this is readily the subject of any form of nervous collapse. I could cite from my notes many instances of such summation of susceptibility. I choose one in which for epilepsy and paralysis the evidence, though weighty, is more scattered.

CASE 4. A man aged forty-two attended at the Hospital for Epilepsy and Paralysis in October, 1894. He had imbibed great quantities of spirits as was, he said, the custom in his trade. He had never had syphilis. He had been ill off and on for four years, and this he attributed to influenza. His actual condition dated back six or seven weeks, consisting in weakness and wasting of the legs, cramp in the calves, foot drop, and absence of knee-jerks. I believed it to be a case of alcoholic paralysis. The patient had had writer's cramp for twelve years. The dynamometer registered 50 with the right hand and 70 with the left. He had had four children, who died at from two to four years of age two from phthisis, one from diphtheria, the cause of death of the fourth not being known. The writer's cramp, the early deaths from phthisis and diphtheria probably neuritis indicate a soil in which the seed of destruction would quickly grow. More interesting, perhaps, as a variety of summation of cause are the instances in which two or more toxic agents are known to co-operate. The influenza poison and gout are both well-known toxic agents.

CASE 5. A man aged forty-eight lately consulted me. He had never had gout, but on both sides his family abounded in the diathesis. His father and mother had fallen victims to it. Two years previously he had had an attack of influenza, and when sufficiently recovered to get up he staggered in walking. There were now exaggerated knee-jerks and ankle-clonus, and it was probable that this was the remnant of a myelitis. There had been foot-drop on one side, atrophy, and tenderness, and there was still a slight degree of reaction of degeneration to attest a peripheral lesion. The coexistence of lead poisoning with gout is too common to need notice. Indeed, I think that the gouty toxine can be found to be active alone or with other agents in a great number of cases of neuritis amongst men. Its efficacy by itself is beyond dispute, though very often overlooked.

CASE 6.—A man aged fifty-four was seen by me in August, 1887. He had formerly been subject to acute attacks of gout. For some years he had escaped these, in consequence, as he believed, of taking an Italian nostrum in the shape of pilules, which are well known to be therapeutically inert. He was an obstinate man, and it is a question whether his immunity was a result of suggestion. When I saw him his arteries showed extremely high tension, the optic discs were anæmic, and he was in a state little short of melancholia. The left foot dropped; the electrical reactions showed degeneration in the peroneal nerve, and the knee-jerk on that side was absent. This lasted for a considerable time; delusional insanity developed, and recovery ensued after the lapse of two years. There may be noticed here a fact well worthy of attention—the concurrent affection in a characteristic manner of the central and peripheral nerve elements. We are too prone to parcel out our conceptions of disease and to pigeon-hole them each in its small compartment. Nature works otherwise, and if we would study her processes we must follow her methods in this. The physiologists, in a commendable appreciation of mathematical forms, used to speak of the nerve cell as the "neurological unit." There is a tendency nowadays to larger views; and the so-called unit is the neuron. This is a nerve cell with all its processes—the aborescent processes as well as the nerve fibre all the parts which together with the cell are mutually interdependent. The extension of terms is decidedly a step in the right direction; but, after all, the neuron is but an anatomical unit. In pathology it is unsafe and inexpedient to confine one's attention within even this limit, for we cannot know the extent of functional interdependence. It is probable that a collapsing nervous system yields at points along its whole length. It may be too much to say that every poison which causes peripheral degeneration produces also a characteristic effect upon the higher levels of the nervous system, but an association of this kind is common and is well worthy of close study. The psychical type will often throw a useful light upon a case of peripheral paralysis. It will sometimes afford the key to difficult diagnosis, and suggest a line of treatment. The troubled sleep and stupor alternating with a timid, yet violent delirium which bespeaks alcohol may under some circumstances be misinterpreted. If, however, as it often happens, this is accompanied by peripheral paralysis, the nature of the poison is clearly evident. The first case quoted here is an instance in point. So with case 6, only that the series of events was more complicated. The vascular changes from retention of uric acid might be deemed sufficient to produce the symptoms by anæmia, but so limited a paralysis is not known to occur from anæmia. Again, the pallor and attenuated arteries of the ocular fundus, bespeaking malnutrition of the brain, might well bring about psychical disturbance; but such disturbance in anæmia is apt to be placid, to decline into torpor. There was here what may more justly be regarded as an exaggeration of the irritability and discontent of the gouty paroxysm. I am led by these remarks to refer to the question of hysteria complicating organic nervous lesions. The coincidence should always be looked for, and in some cases may be said to be almost inevitable. Such cases are principally those in which a strong neurotic propensity is known to exist.

CASE 7. I was asked to see a woman in good circumstances and of a markedly neurotic family, who for some months had been bedridden with paralysis and exaggerated tremors of the lower limbs. The disease had been taken to be disseminated sclerosis. The arrangement of zones, and patches of anæsthesia and hyperalgesia, led me to believe that the paralysis was what is called "functional." There was, however, a contracted pupil and wasting of the thenar muscles on one side, and these gave a reaction of degeneration. The distribution of pain also on that side of the trunk suggested a local irritation; and a careful examination showed mobility and displacement of the first dorsal vertebra—a condition very competent to cause these symptoms. To my mind it became at once probable that the more equivocal symptoms—paraplegia, tremors, &c.—were functional rather than due to a separate systemic lesion of the spinal cord. The subjects of lead poisoning are peculiarly apt to be also hysterical, and it is most necessary to distinguish between the organic and the functional in such paralysis as may be present.

CASE 8.—A lad aged seventeen was lately under my treatment at St. Mary's Hospital. He was unable to walk from paresis of the legs had incomplete wrist-drop—a paralysis of the whole of one upper extremity and of the muscles of the chest-wall on that side. He was much emaciated. Errors of sensation were in the direction of hyperæsthesia. The patient was very emotional. There was also marked buccal anæsthesia and clavus. The use of electrical tests showed that a small part of the extensors of the forearm was alone directly implicated. The lad had been exposed to poisoning by lead, and to this the organic paralysis of the extensors was attributed; the rest was put down to hysteria. He became too ill to attend, and some time later I encountered his body by chance on the post-mortem room table. He had died from tuberculous disease of the intestines.

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In this connexion—the association of functional with organic nervous disease—one is reminded more forcibly than at other times that the term "functional" is only provisional, and that the condition which we call "functional" must properly be regarded as one in which an organic change, lesion or defect, though certainly present, escapes our present means of investigation. We cannot imagine disease without a definite material cause. Now, if this be so, organic disease itself must differ in respect to the evidence upon which its character is supposed to be based—must differ in respect to the certainty with which we know that two different instances have the same causation and are one and the same thing. Now of all diseases of the nervous system the degeneration of the peripheral nerves, which we call "peripheral neuritis," is the most definite, certain, and recognisable entity. Take, for instance, a cerebral tumour or a patch of sclerosis in the spinal cord. Such a thing is known partly as an induction from certain physiological facts, partly because certain symptoms have been found in a number of instances to have been present during life where these conditions were found post mortem, and the certainty that they will be again found in a given instance depends upon the precision of the symptoms. Take another instance of another class—Bright's disease. The vascular and retinal changes, the dropsy and malnutrition so constantly present, are very distinctive. But how greatly the certainty of a diagnosis is increased by the discovery of albumen in the urine! And it is a notable thing that, whereas we can refer the other symptoms with sufficient plausibility to the changes defined in every case where a necropsy is made, we have not even a respectable theory, though we have many speculations on the subject of albuminuria. The cause of the second sound of the heart is a matter of dispute, yet its modifications afford the surest evidence and measure of disease, and we call them "physical signs." Albuminuria, too, may be called a physical sign, and its value as evidence depends upon the constancy with which it occurs in nephritis. Reverting to organic nervous disease we have symptoms or reputed symptoms in all; in peripheral neuritis alone we have a physical sign of absolute and unerring accuracy, a sign obtainable at will, which bespeaks degenerative changes in the nerve fibre as plainly as if the fibre had been stained and mounted and submitted to examination under the microscope. Hence, if I am right in my contention that the disease is common, formidable, and infinitely more amenable to treatment than is Bright's disease, it is surely incumbent upon medical men to be provided with the means of a certain diagnosis. It would be a matter of shame—thanks to examining boards, an impossibility—for any practitioner to be ignorant of the ordinary tests for albumin; how many are there who are versed in the electrical tests for degenerating nerve and muscle? I am not going to speak of the symptoms of peripheral neuritis—many and unequivocal as they are—but a word upon its physical sign, the reaction of degeneration, cannot be avoided.

The "reaction of degeneration" is the term used to describe the behaviour under electrical stimulation of a muscle or considerable group of muscle fibres when the motor nerve of the latter is undergoing destruction or repair. Under such circumstances this reaction is never wanting. Moreover, the pathological character of the condition to which it testifies is always essentially the same, and admits of no kind of ambiguity. The condition may originate at the central cell or at the terminal organ, or it may constitute a lesion in the course of the nerve fibre; but wherever it begins there will be from that point downwards a definite morbid change in the neuro-muscular elements, a change which has been exhaustively studied and which is very well understood. To be able to recognise this change at any moment during life is clearly a matter of great importance, and this can be done by the intelligent use of an electrical current. There are many kinds of current, and there are differences in the physiological effects of each. We are concerned here with two only—the two which are of most general use in medicine. These are the constant or galvanic and the induced or faradaic current. The physiological effects of these two currents differ remarkably. It may be said that they have only one such effect in common—namely, that stimulation of a healthy nerve or muscle by either will cause a contraction in the muscle, and since this effect is produced only in health it is, from a practical point of view, of secondary importance. When used as a test to ascertain the condition of the nerve by watching the effect of the current upon the muscle, these two forms of electricity must be carefully distinguished, must be thought of as two different things. This will appear presently. Now as to the manner in which a current can be made to stimulate a nerve. It is impossible in the living body to imitate the physiological method of stimulating the excised muscle-nerve preparations upon which the facts of electrotonus have been worked out. The depth of the nerve beneath the skin, the diffusion of the current, the uncertainty of its path amongst the tissues, prevent the application of a current having a known direction in the nerve. Nor is this needed. What is imperatively required is that we shall be able to bring the nerve or muscle being examined under the influence of the current, and that in the case of the constant current we shall be quite certain of submitting the nerve to the separate action of the positive or the negative pole as we wish it. This is necessary because the effects to be observed are polar effects and differ characteristically with the pole used. It is always requisite that both poles be attached to the body, so as to bring the latter within the circuit. To give precision to the pole used locally this is carried by a small electrode, while the other, the indifferent electrode, is a very large one and is placed at a point anatomically as far as possible from the part under investigation. In most cases the indifferent electrode is placed on the episternal or epigastric region. When this is done the path of the current may be represented by a cone, and in proportion to the length and sectional area at the base of this cone—in proportion also to its nearness to the apex—will be the certainty that the nerve or muscle is submitted to the unmixed influence of the pole used locally, of the electrode which represents the apex of the cone. So much it is necessary to say for the sake of clearness, and, it being premised that we can apply a faradaic or a constant current and obtain the effect of either pole at will, the rest may be stated shortly. I will add that the question of polarity does not arise in the case of a faradaic current, for the poles are not distinguishable. I will take this current first and dispose of it. In health, if a faradaic current be applied to any part of a motor nerve or muscle, a tetanic contraction results. In disease, degeneration—and the so-called "inflammation of nerves" is merely a degeneration—a faradaic current wherever applied will fail to give a contraction. Thus the entire absence of faradaic contraction in a muscle is a certain sign that there is a lesion somewhere in the neuro-muscular tract—that is, somewhere not higher than the group of cells in the anterior columns of the spinal cord. Let it be noted well, however, that the presence even of a powerful contraction under faradaism does not exclude such a lesion. In many cases, and in peripheral neuritis especially, there may be, side by side and intimately mingled in the same muscle, healthy fibres with others undergoing change; the contraction of the first will then mask the inactivity of the latter, and in such a case a negative test can prove nothing. Again, the absence of a faradaic contraction may mean, besides degeneration, the entire destruction and absence of nerve or muscle substance, and for this reason, also, it is indispensable to have a test which will distinguish the two conditions. The test which would best meet these ambiguities would be one in which there would be no contraction only when the nerve or muscles were destroyed, while the contraction in health and in degeneration would offer a recognisable specific difference. Such a test is afforded by the constant current. Given a healthy nerve and muscle, the stimulation of either with either pole of the current causes a quick, lightning-like contraction whenever the current is made or broken, and this contraction occurs with a weaker current when the negative pole is used than when the positive is used. Let it be noted now what happens if the nerve or muscle has been injured and is undergoing degeneration or repair. In the first place, one cannot stimulate the nerve at all. Its faculty for transmitting the stimulus is gone. To obtain any result the electrode must be placed directly over the muscle. When this is done and the current made, the positive, not the negative, pole is found to be the more efficient stimulus. Further—and this is by far the most significant difference—the contraction is no longer quick and lightning-like, but, slow, long-drawn, and exhibiting a remarkable vermicular progress. If in a muscle there are both healthy and impaired fibres, the difference between the two contractions is invariably evident to the practised eye, and the presence of the slow vermicular movement, even in a few fibres, is absolutely diagnostic.

From these remarks it is clear that to predicate a reaction

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of degeneration from the behaviour of a muscle to the faradaic current alone is a delusion and a fallacy; yet I have repeatedly seen the inference drawn by accomplished and skilful physicians. The fact must justify so long an exposition of what should be a familiar topic. Obviously all this applies only to motor nerves, and, equally obviously, sensory nerves are liable to the morbid change under consideration. I have elsewhere urged that a great number of cases of sensory neuritis are undoubtedly treated and spoken of as "neuralgia," and I have insisted upon the expediency of making a clear distinction between the two. Since, however, most peripheral nerves, if not entirely motor, are mixed nerves, and since the most limited display of the reaction of degeneration is conclusive, the test is almost invariably applicable.

CASE 9.—I was asked to see a young woman who more than a year previously had had influenza, and since then had suffered severe pain in one shoulder. She had been given a host of the usual remedies for neuralgia without effect, and the constant pain had been telling severely upon her general health. Examination revealed tenderness radiating backwards and forwards from the point of emergence of the sensory branches of the circumflex nerve upon the surface of the deltoid, and scattered fibres of that muscle were found to exhibit the reaction of degeneration. A neuritis of the circumflex was thus made evident, and local treatment, including the application of the positive pole of a constant current, effected a cure in a few weeks. A case of this kind, in which the nutrition of a large and superficial muscle is implicated, is one in which, with the proper means, an error of diagnosis is impossible. Without such means—that is, without the careful application of electrical tests—I think that anything like a certain and positive conclusion is unobtainable. In the case of the deltoid particularly, and of any muscle so situated in regard to a large joint, the presence of paralysis, atrophy, and muscular tenderness would not decide the matter, for these conditions are found constantly attending even slight lesions of the joint. The case seems to illustrate very well the importance of what I have called the "physical sign." It suggests, however, another reflection. I think it is a matter of the gravest doubt whether neuralgia—that is, a central affection declaring itself by local pain—can ever be restricted to the distribution of a single nerve. The trigeminal nerve may be an exception, and so posssibly are other cranial nerves whose ganglionic origin is distinct; but I would hesitate to speak of a circumflex neuralgia. The predominance of pain in the area of sensory nerves, while there is no obvious improvement of motor function, should not be construed as neuralgia but a diligent search should be made with electrical tests in the region of motor nerves derived from the mixed trunk. There are conditions in which neuritis of sensory nerves greatly prevails over that of motor nerves, and in which pain is more prominent than anæsthesia. Syphilis seems to be one of these, and it is this fact, probably combined with neglect or inefficiency in the use of the constant current as an aid to diagnosis, which has led some to doubt whether a syphilitic neuritis exists.

CASE 10.—A married woman nearly forty years of age was sent to me for treatment. There was a history of typhoid fever and of malarial fever, but no questions were asked on the subject of syphilis. The present illness dated from a time about four years previously, when for twelve months or so the patient used to vomit immediately on taking food, but had no nausea. About this time there was a sore within the mouth, afterwards extending to the outside of the lower lip and leaving scars. From the description of this sore and the appearance of the scars it seems to have resembled herpes. The sore was seen by several very eminent authorities, and I gathered that the idea of syphilis was not entertained. There was no syphilitic skin lesion when I first saw the patient. The remaining facts I transcribe from my notes.—Nov. 14th. Present condition: Severe headache constantly, with pain on pressure over place of emergence of supra-orbital nerve on both sides. Pain over deltoid and on pressure over trunk of circumflex nerve; pain on pressure in two spots over the dorsal spines; pain down the triceps, over the external condyle, and on pressing the radial nerve against the radius there is pain in the distribution of the nerve. All this is symmetrical, but of much greater degree on the left than on the right side. The pain is greatly intensified periodically at night, between one and two o'clock. The spleen is enlarged and tender. Electrical examination shows faradaic excitability, normal everywhere, but preponderance of the positive stimulus in the extensors in the left forearm, and a somewhat sluggish contraction there (slight R.D.). The patient has lately had cramps in the left thigh. Nov. 21st: The patient has attended daily except yesterday. The treatment has been the prolonged application of the anode over the tender points. On the first occasion the points over the circumflex nerve were alone omitted, and it was only in that part that pain continued. Headache, which had never failed for six months, completely disappeared. The first night the patient woke at the usual time—about 2 A.M.—but had no pain. This exemption continues. When a current of 10 to 15 milliampères is passed with the anode over the tender points of the supra-orbital nerves the sensation is described as pleasant and soothing. On one occasion the deltoid was rubbed vigorously in addition to electrification. That night there was severe pain in the region of the circumflex nerve, and this was afterwards gradually subdued by the anode. Ichthyol ointment is also rubbed in.—Nov. 22nd: Pain in the deltoid has ceased and given place to stiffness. Investigation of right arm shows tender points in (1) the lower part of anterior triangle of neck, (2) over emergence of circumflex in the quadrilateral space, (3) over insertion of deltoid, (4) in triceps posteriorly over the musculo-spiral groove, (5) over external condyle, (6) at the interval between the internal condyle and olecranon, and (7) beneath the belly of the supinator longus. There is intense pain on pressing the radial nerve between the tendon of the supinator longus and the bone. This pain radiates down the back of the wrist and hand. The radial nerve can readily be felt and is probably enlarged. There is severe paroxysmal pain in the left side of the thorax corresponding to three intercostal spaces. Treatment continued. Dec. 2nd: Two days ago all pain in the limbs had ceased, and there remained only occasional pain and tenderness on right side of forehead. One day's treatment was then omitted. For the first twenty-four hours there was no pain. In the next, pain recurred but its periodicity was changed; it occurred in the evening. There was pain in the left shoulder at bedtime, but a good night's rest. Patient has also been taking quinine and arsenic for some days. Dec. 12th: No treatment for four days. Patient had a chill two days after her last visit, and the same night had intolerable pain in right arm and head—less in left arm. Pain in head was relieved by camomile fomentation. Those pains better, but still persist. There is great pain on pressure over the head of the radius in front, also over a point about the middle of the posterior edge of the deltoid, over the acromion and over the olecranon. Tender points in scalp as before. All these points and the arm generally treated with anode. Dec. 13th: Pain relieved absolutely till bedtime, when there was some uneasiness in the arm, but a good night followed. In the morning some headache, more diffused, and tenderness had shifted down so as to underlie the eyebrow. The electrical reactions were taken very carefully. There is in both arms, especially the right, a marked preponderance of A.C.C., but the contractions were not obviously sluggish. Stimulation of the radial nerve with anode in any part of its course where superficial caused a tingling sensation all through its distribution, and a vigorous contraction in the extensor carpi radialis and in the forearm extensors. Treatment of painful points with anode as on yesterday and previous days. Dec. 14th: R.D. in extensors still more marked. The motor point of the extensor carpi radialis, observed yesterday, appears to be in one point in the course of the radial. This point is on the radial side posteriorly and about three inches above the styloid process of the radius. Treatment as before. Dec. 15th: Last night before bedtime excruciating pain in right arm, localised chiefly in extensors in forearm and at a point on the posterior edge of the acromion. Patient, according to advice, took seven grains of quinine in phosphoric acid. Pain was greatly relieved almost directly, but lasted some hours though much diminished. Little pain this morning. No headache last night. To-day there is a red papular rash in irregular patches, like those of herpes on the point and upper aspect of the shoulder. Colchicin and lithium bromide are now taken regularly and the limbs are kept warmly wrapped. Dec. 20th: On 16th severe attack of diarrhœa and nausea, for which no cause assigned, lasting three days. Given chlorodyne, sulphuric acid, and quinine. No pains. Dec. 21st: Much pain in right arm last night. March 2nd: Patient has been away. Pains in right arm as before. Left free from pain. Has now a sore fissuring the angle of

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the mouth on the right side and extending outwards on the inner side of the cheek. This is decidedly specific. Patient says that she considers this to be the same condition that she had before coming under my notice." All other treatment was suspended, large doses of biniodide of mercury were given, and a cure shortly took place.

I have related this case at great length for various reasons. In the first place, it sets out a great part of the local treatment which I find useful in neuritis, and I shall conveniently refer to it when dealing with treatment. Then it is shown by the final event—a specific sore—and the cure obtained by the use of biniodide of mercury to have been, at least, in part, a syphilitic condition. If the history of malaria, the periodicity of the pains, and the efficacy of quinine introduce an element of uncertainty, the instance is *pro tanto* a good one of the summation of cause of which I have spoken above. That the condition was a neuritis, not a neuralgia—as it had been, and generally would be, termed—is plain from the morbid reaction in the forearm extensors; and the comparatively inconspicuous share of motor implication bears directly upon the question as to whether syphilis does cause peripheral neuritis or not. I think the answer should be that it does very commonly, but that it tells most often and most obviously upon the sensory nerves—just as the trophic lesions of syphilis so often involve the skin alone. It would be safe I believe, in all cases to treat similar pains in a syphilitic subject as peripheral, but if certainty of diagnosis is wanted it can be had only by a very careful investigation of the muscular state of the patient. The examination may have to be repeated often and often, or the morbid change, from being so slight, will escape detection. In this case every drug that is supposed to relieve pain had been tried ineffectually; two only gave any relief—namely, quinine in large doses and mercury. The latter cured the disease when its nature was made known; the former relieved paroxysms without curing the disease. It is therefore that I suggest an added cause of the neuritis in malaria which the patient had had years before, but which had not since troubled her; that, however, the condition was essentially syphilitic I doubt not at all. The paroxysmal thoracic pain mentioned under Nov. 22nd is remarkable. I have met with it elsewhere. I quote from another case, that of a man who admitted syphilis and who infected his wife and children. Severe "pains were in the right arm and forearm, in the back below and beneath the left scapula and extending forward to the sternum in the situation of the seventh, eighth, and ninth ribs. In the latter place the pain came on in spasms of great severity, and could be induced at any time by standing up." A hyperæsthetic zone having a similar distribution occurs sometimes in hysteria, and there the condition was called "pleuralgia" by Briquet. The difficulty of determining the peripheral character of the lesion is not confined to those cases in which it affects the sensory nerves of the skin and other superficial parts almost exclusively. One meets with cases of severe muscular pain in which the cause appears to be of the same nature without anything comparable to the same wide-spread degeneration that an equal degree of pain would almost certainly imply in, say, alcoholic neuritis. Such cases are sometimes mistaken for functional cramp. The importance of recognising their true character depends upon the fact that they are infinitely more tractable than functional cramp and more dependent on treatment. They occur chiefly in girls of a nervous organisation. I have two under my care at present. In neither is there any cutaneous pain or anæsthesia. One was attributed to the exercise of polishing work.

CASE 11.—The other is the case of a young woman aged twenty, who plays the violin, and she referred her pain to this. She has suffered for four years. The pain is of a dull, aching character, situated in the muscles on the extensor surface of the right forearm and radiating to the back of the second and sometimes of the first finger. It occurs spontaneously, but follows almost any movement, and in particular that of the bow in playing. At first the movements of supination and pronation were directly painful, and at that time there could be felt in the situation of the orbicular ligament an elastic swelling and crepitus. I inferred that there was inflammation about the ligament and was not surprised to find that the sufferer had been a too enthusiastic player of the game of lawn-tennis. I could at first find no undoubted evidence of muscular degeneration. The treatment I adopted was to rub in to the forearm vigorously a preparation of iodide of sodium with soap liniment over the site of a patch previously vesicated; then to apply the positive pole in this part to promote absorption of the drug by cataphoresis, and at the same time to allay pain. The limb was then swathed in pine-wood wool, bandaged, and carried in a sling. This treatment answered well. When the pain disappeared it became necessary to counteract a slight degree of flexor contracture by more energetic galvanism and faradaisation. In rubbing the extensors firmly I noticed that when pressure was made on a certain point a short, sharp contraction affecting only the second extensor tendon took place. This directed me to a closer inspection of that part of the extensor communis, and I found that there was a galvanic, as there was a mechanical, over-excitability, and all the evidence of a degenerative reaction in that limited part of the muscle. Why pain was referred from the corresponding part of the muscle to the finger itself I am unable to explain, but medicine is full of such mysteries, and the best profit is gained in observing the facts.

I have dwelt too long upon points which, however interesting, may seem to have but little practical import. It has been my object, however, to try to direct attention to the everyday and commonplace character of an affection which is much mixed up with the incidents that are encountered in practice, and I have endeavoured to point it out by an association with other circumstances which constantly engage attention. I have omitted discussion of the symptoms which are more apparent and more familiar, and I have confined myself to that which is most decisive but least generally available for want of knowledge. It seems to me deplorable that there should be a class of specialists devoted to electro-therapeutics. It is not so in other countries, and the example of such men as the Remaks, Eulenburg, Erb, Charcot, and a great number more, who have held a knowledge of the physiologically established principles of medical electricity to be but a small part of the equipment of an educated physician, may well be followed amongst us. In time it certainly will. For the present I would urge that diseases of the peripheral nervous system, but little complicated, growing every day in importance, and constituting, as they do, or should do, a large part of the responsibility of the practitioner,—I would urge that these, at least, should be taken from the domain of any specialist whatever. If it is clear that the means of recognising them is within everyone's reach, it is no less true that they are of all diseases the most manageable and the most amenable to treatment. Still, just as it is but seldom possible to form a true estimate of their nature and extent without the use of electrical tests, so it is always impossible to treat them adequately without employing electrical methods. These are not the conditions which lend themselves to the manipulations of the charlatan, and in which the *vis medicatrix naturæ* throws its cloak over the blunders of the incompetent. Nor is there anything empirical—otherwise then all medical knowledge is empirical—in the procedure best adapted to their cure. This procedure is based upon the accepted conclusions of the most eminent physiologists; it partakes of the strength of Pflüger's laws—it must be modified by circumstances within the observation of the physician, and if he will take the trouble to inform himself concerning the agent he has to use he will be repaid by an ever-varying and absorbing interest in the problems to which he has at least a serviceable clue. In speaking of the treatment of peripheral neuritis I would desire it to be understood that there is no specific. Nothing must be neglected. The primary underlying cause will be met by any of a host of remedies, therapeutical or hygienic; diet, abstinence, the application of a suitable temperature, change of climate, of occupation, and other circumstances in the environment,—all or any of these may have to be enjoined; and if I pass them over it is only for want of time and because they are already sufficiently appreciated.

I come to speak of one remedy which bears in a manner more direct than any other upon any disease whatever upon the state of degeneration in the peripheral nerves—I mean the use of electricity. And as in dealing with electrical tests I had to point out that there was the broadest distinction between one current and another, so here it must be enforced that there is even greater difference in their application therapeutically. It is a common notion that electricity medically considered is an agent to make the muscles jump. I have already said that this, the most obvious, is the least valuable effect of the current, and that the current which produces it most forcibly—the current which tetanises, the

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interrupted current is of least account in medicine. Nevertheless, it is the best known and the most used by the haphazard practitioner who buys his instrument and obtains instruction in its use from the maker. The product "electricity," thus loosely thought of, is most often derived from the crude source of an induction apparatus. It is perhaps because a coil makes a noise when it is working and relieves the operator of the necessity of being able to check its work by its physiological effects, also because by its noise and pain and tumultuous contractions which it causes it satisfies both the operator and the subject that something is being done. It is chiefly, no doubt, because its use requires no knowledge, while that of the constant current demands a little. Whatever the reason, this confusion of ideas on the subject of electricity is as unfortunate as it is discreditable at the end of the nineteenth century. I can recall an instance of a poor woman suffering from convulsive tic who was daily subjected to the torture of a strong interrupted current, and this over a period of six months. The pain might have been—and in other hands afterwards was—allayed by the judicious application of the positive pole of a constant current, but the other applied to the periphery of sensory nerves is initially a source of pain, and in painful states an intolerable aggravation. From the point of view of treatment, as of diagnosis, the constant current is very much the more important, and this invaluable property of soothing pain is intimately concerned in the production of its beneficial effects. A good instance of its power in this way may be seen in the notes of Case 10, which I have purposely transcribed at considerable length. I am not disposed to enter into a discussion of the manner in which the positive pole of a constant current controls pain. It is sufficiently well understood, and is a deduction from the principles of electrotonus. I will content myself with quoting from Dr. Michael Foster's "Text-book of Physiology": "Besides their theoretical importance the phenomena of electrotonus have also a practical interest. ..... If the current be of adequate strength the irritability may be so much lessened that nervous impulses cannot be generated in that part of the nerve, or cannot pass along it. Hence by this means the irregular contractions of muscles known as 'cramp' may be abolished. Similarly, by bringing into a condition of an electrotonus a portion of a sensory nerve in which violent impulses are being generated, giving rise in the central nervous system to sensations of pain, the impulses are toned down or wholly abolished and the pain ceases. So, on the other hand, we may at pleasure heighten the irritability of a part by throwing it into katelectrotonus. In this way, properly applied, the constant current becomes a powerful remedial means." This statement is amply borne out by clinical experience. There are eminent authorities who discountenance the use of electric currents in what are reputed to be inflammatory conditions of the nervous system. The current, according to them, is an irritant of the inflamed nerves. Now, applying this dogma to any particular case, there are two assumptions which need to be made good. Let that particular case be peripheral neuritis. Is it an inflammatory state? It is necessary to recall the very recent date of our acquaintance with this condition and to allow for preconceived ideas derived from an unproved analogy with inflammatory states of the spinal cord. When Charcot taught that the lesion in anterior poliomyelitis was primarily one of the motor ganglion cells it seemed natural that changes quite similar in the axis cylinder process should be called inflammatory also; but Roger, Damaschino, Roth, and others have assailed Charcot's position with success, and it is now practically abandoned. The more recent works of pathologists upon peripheral neuritis make in a similar direction, and it is probable that where inflammation is a factor it is inflammation of interstitial and vascular structures, not an inflammation of the nerve substance itself. It is safer to regard the affection of the latter as a degeneration, attended with a loss or perversion of function. And, again, is there any proof that an electric current can under these or other circumstances be a nerve irritant? Absolutely none. Possibly the phenomenon of tetanic contraction under the influence of an interrupted current has led to the ill-considered supposition that a disturbance takes place in the nerve comparable to that in the muscle. Such a supposition is far from justified. The most careful experiments have failed to show that any heat is generated in a nerve when even a very strong current is carried through it, and the structure of the nerve as we know it is such as to preclude the idea of considerable molecular changes during the time it is exercising its function. In all this the nerve and the muscle present the broadest possible contrast. The contraction is a muscular, not a nerve, phenomenon. It takes place not in virtue of nerve energy, but in virtue of its transformation into muscular energy, not in the nerve, but in the muscle. Finally, in states of degeneration an interrupted current is altogether inert at the periphery—sufficient proof, surely, that it at least is not irritant. In such states it is the constant current only which has any effect. It is true that a contraction can be caused by its use in a particular way, but also a very strong current can be applied to a motor nerve, either in health or disease, without causing a contraction. The statement, as quoted above, of an eminent physiologist will serve to indicate broadly the ways in which it may be made serviceable. Its special application to clinical purposes is necessarily the subject of an elaborate technique of which the fundamental principles are the excitant action of the negative and the sedative action of the positive pole. I can testify to the efficacy of electrotherapeutics applied by this light to the treatment of neuritis, and I cannot urge too strongly my conviction that the time to resort to electrical treatment is the earliest and most acute stage of the disorder. I know that I am at variance with all but a very few upon this point; but if others will abandon the attitude of timidity and inaction for one of intelligent interference they will certainly obtain convincing results.

I have said more than once that in the disease under consideration the interrupted current has no effect on the periphery, and I have tried to make it clear that I mean no muscular effect. I believe it is quite otherwise in regard to the nerve. This current is there also without effect in the sense of any kind of reaction at the periphery, but that its effect upon nutrition at the centre is very considerable there is ample evidence. In the acutely painful condition called "sciatica" the strongest induced currents are borne without inconvenience. So in the remarkable state known as "anæsthesia dolorosa" the current so painful in health is usually tolerated freely; and in both it does good. In a sciatica which has been allowed to become chronic strong faradaisation should be the routine treatment. While upon this subject I will call to mind that a characteristic of peripheral neuritis is generally a limitation of the structural changes to the extreme ends of the nerves. I have tried to show that the morbid terminations can be influenced in almost any way by the appropriate use of galvanism, and I repeat that the comparatively healthy central parts are still subject to stimulation by either current. This fact should serve as an important guide in practice.

I will conclude these remarks by disclaiming the pretension that any one set of measures is sufficient. The greatest share of success will be attained by him who neglects nothing. I have spoken chiefly of electricity because it is the least known, the least used, perhaps in this country, the most despised of therapeutic measures, whereas in regard to disease of the peripheral nerves it also is the most useful, the most directly applicable, the most indispensable of all. Bearing in mind, however, the accessibility of the part affected, its remarkable vitality, and the readiness of its response to changes in the environment, I find no occasion to dwell upon the multiplicity of resource that is possible in its treatment.

GENERAL OBSERVATIONS ON THE CONDITION KNOWN AS THE "TYPHOID STATE," WITH REFERENCE TO EXAMPLES IN MEDICAL AND SURGICAL PRACTICE.

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"Τὸ ὄνομα μηδὲν τῷ πράγματι ποιεῖ."—XENOPHON.

I.—MEDICAL.

IN attempting to arrange a few, fragmentary notes in connexion with my subject I am reminded of a remark which that astute essayist Sterne once penned: "When a man," said he, "sits down to write a history, though it be

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but the history of Jack Hickathrift, he knows no more than his heels what lets he is to meet with in his way." Despite the lets, and irrespective of many imperfections, I shall endeavour to deal *seriatim* (1) with the meaning of the term "typhoid state" and what it exactly comprises; (2) with the circumstances under which the condition arises and its general causation; (3) with its clinical phenomena, its symptoms, and their course; and, lastly (4), with its prognosis and treatment.

1. *Definition and meaning of the term.*—The terms "typhoid state," "état typhoïde," "état adynamic," "typhoid condition," and "typhoid symptoms" so frequently mentioned in standard works on medicine and surgery and in the clinical reports of cases and patients in whom the condition supervenes during the course of some more or less serious illness, are not infrequently seen both in the wards of a general hospital and in private practice, so that any apology for reintroducing the subject need hardly be tendered (*vide* Murchison, Milner Fothergill, &c.). By the term "typhoid state" we understand a well-marked group or series of symptoms arising during the course of any disease in which "fever" (pyrexia), from whatever cause, is the essential feature of that morbid condition, and when that pyrexia is either excessive or long-continued, or both, the train of symptoms being "centralised" in the generic term "typhoid," which is in itself, without doubt, somewhat loose and indefinite, pathologically more or less inaccurate, and, lastly, not strictly logical. For in its history and etymology the word "typhoid"—derived from the Greek τῦφος (smoke or vapour) and εἶδος (resemblance of form, or likeness)—conveys the general idea that the condition is like or resembling typhoid fever, like the stupor seen in typhoid fever—and, that being so, it does not tell us anything precise regarding its true and exact nature—nothing essential about the condition itself, but merely that it is like, or has the appearance of something else, and so this lax term has imperceptibly come to convey in a somewhat vague and non-scientific manner the general idea that the condition is, comparatively speaking, identical with a condition first observed in typhus and in typhoid fevers. Briefly, the object of this paper is to endeavour to generalise the views and opinions regarding the so-called "typhoid state," and at the same time to state clearly and concisely its true pathological and clinical import in disease, and to summarise its characteristic features. In this country the late Dr. Charles Murchison and the late Dr. Milner Fothergill have contributed papers on this subject, while many interesting references are to be found in foreign literature: e.g., (1) in "De l'État typhoïde considéré dans les différentes Maladies";[1] in (2) "Typhoid Termination of Acute Inflammation";[2] and (3) in "De l'Autotyphisation par Excès de Fatigue et des Maladies Typhiques en général."[3] Relating to this subject, the following passage occurs in Finlayson's "Clinical Manual":[4] "It should be particularly remarked as necessary for the reconciliation of old and new terms, that the word 'typhoid' is not used here in the special and limited sense given to it by Louis and the French school of the present century, as a designation of enteric fever, but in that larger and more general meaning which it had from at least the time of Galen of 'typhus-like' (τῦφος εἶδος). Typhus, and most of its derivatives, including typhomania, are Hippocratic words used in a figurative sense from 'τῦφος' 'smoke,' as indicating the stupor which attends the graver kinds of fever, and, in the case of typhomania, the combination of stupor with restless delirium—exactly the functional contrast referred to above. The etymological facts are interesting, as showing how, even in the most remote period to which the literature of medicine extends, clinical phenomena which only receive their physiological interpretation from modern science, were nevertheless sometimes very exactly noted."

2. *Causation and circumstances under which the condition arises.*—The causes which induce the appearance and development of the "typhoid state" may generally be arranged under three main heads. In the first place, in both medical and surgical cases a most important and primary cause lies in the toxic and noxious influence that a high internal temperature has upon the tissue elements of the central nervous system and more especially upon those parts of the medulla in which are located the "respiratory" and "cardiac" centres, as well as the so-called "thermo-genetic" "centre." Secondly, another important etiological factor is the direct and cogent effect that this same high temperature both of blood and tissues has upon the parenchyma of the glandular organs, the liver, kidneys, and spleen, lessening elimination and blood elaboration, and acting injuriously upon the muscular fibre both of the heart and voluntary muscles. The third head in the causation of the condition in question lies in certain ill-understood chemical changes in the composition of the blood, and the effect that that chemically-altered blood has upon the bloodvessels and tissues generally of the body. This latter problem is a difficult one to solve, a "quæstio vexata," owing to the fact that our knowledge of the physiological chemistry of the blood (cf. writings of Halliburton, Hunter, Wooldridge, Crookshank, &c.), and of the action of toxic albumoses (Martin), ptomaines, and leucomaines, coupled with putrefaction products in the blood is more or less in a preliminary and transitional stage, and consequently limited, dimly lighted, and admittedly imperfect. Thus, to summarise this last factor, we have—(1) the absorption of the effete products of chemical combustion in the body; (2) the toxic effects of pathogenic, "infective," micro-organisms in the blood; and (3) the consequent alteration in the forces of the circulation, and variations in blood-pressure and nerve-stimulus.

The diseases in which the "typhoid state" most frequently occurs are for the most part as follows:—(1) typhus fever (Rouillion), and the "typhus traumatique" of Ollivier; (2) yellow fever, "bilious typhoid" (Fagge); (3) enteric fever (the term "typhoid fever" should be discontinued); (4) certain "pernicious," malarial fevers; (5) the "malignant" type of scarlet fever; (6) variola (Hilton Fagge), especially in the third week; (7) in the first stage of the plague, "after the appearance of intense pyrexia, and subsequent violent delirium";[5] (8) in cholera-typhoid, and in cholerine (Hilton Fagge); (9) in diphtheria, where the characters of an "infective" fever with febrile albuminuria and other "typhoid" symptoms are evident; (10) in "adynamic" remittent fever, and in the so-called "typho-malarial fever" of the United States; (11) in "malignant" and "intestinal" anthrax—in this condition, however, the temperature is not always high; (12) in "infectious pneumonia" of an epidemic nature, and "croupous" or "fibrinous" in type (Whitelegge)—this occurs both in fatal and in non-fatal cases which are severe and protracted; (13) in chronic starvation and general wasting (Whitelegge); (14) in phlebitis (Hodgson, Breschet, Blaudin), and in "la phlébite utérine" (phlegmasia dolens); and (15) in experimental injection of septic substances into the veins (Gaspard, Laurent, and Dupuis).

3. *Clinical phenomena, symptoms, and general course of the "typhoid state."*—Passing from a study of the etiology of this condition, to view the symptoms noted in cases under observation, the fact must be borne in mind that there are several phases of this "state" distinctly different in their nature but that in all cases there is an apparent similarity in the grouping sequence and arrangement of the symptoms. It will be convenient to classify those signs under the systems to which they naturally refer—as, for instance: (1) those symptoms directly referable to the nervous system, these being the most important and, as a rule, the most prominent; (2) those both primarily and indirectly referable to the circulatory system; and (3) those referable to the respiratory, digestive, and excretory systems. The phenomena referable to the nervous system constitute the major and more serious aspect of this condition, and in noticing them somewhat in detail it must be remembered that they are essentially characteristic evidences of a "diseased" and profoundly "depressed" condition of the higher nervous centres. Perhaps the most striking feature is the absolute depression of the nervous force and vital energy (adynamia and the diminution of the physiological activity and cell function of the brain). The patient is seen lying on his back, prostrate, listless, and quite indifferent to his surroundings. There is a low, somnolent, muttering delirium, gradually shading into a dull, comatose stupor, of heavy and "dusky" aspect, little or no real sleep (coma-vigil), associated at times with derangement of the senses, and hallucinations of sight and hearing. The power of the mental faculties is impaired—a dull and clouded intellect, a mind wandering strangely. The delirium may at one time be acute, violent, and noisy, an exacerbation from

[1] Thèses de la Faculté de Médecine de Paris; tome xiii. Paris, 1847.
[2] G. C. Monell: New York Journal of Medicine, 1846.
[3] Union Médicale: Paris, 1874.
[4] Edition of 1836, p. 30.
[5] Hilton Fagge; and vide Cantlie, Brit. Med. Jour., August, 1894

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the more frequent low, muttering, and lethargic type. Sometimes muscular (fibrillar) tremor occurs, occasionally subsultus tendinum, carphology, and general convulsions. The urine and fæces are passed involuntarily, though in some cases retention and suppression of urine have been well marked symptoms. The fæcal evacuations are usually semi-solid, of a black colour and grumous appearance, and have a highly offensive odour. The urine passed in small quantities often contains albumen, frequently lithates in excess, and a diminution in the chlorides. The chief points observable with reference to the circulation are, that the pulse is quick, soft, small, irregular, and easily compressed, occasionally dicrotous, indicating a marked degree of diminished intra-arterial tension. The heart's impulse is weakened, sometimes scarcely perceptible, and there is almost a complete absence of the first sound at the apex. No distinctive cardiac bruit is audible. Turning to the digestive system the tongue is found to be dry, of a dark-brown or almost black colour, incrustated with thick, dark, russet-brown fur, tremulous, with an abundance of sordes on the lips and teeth. Hiccough is also present, at times frequently distressing, the breath having a peculiar heavy, offensive odour. The skin is in some cases dry and hot, with a surface temperature of 102° to 104° F.; in others it is bathed with a cold, clammy sweat, the temperature then being subnormal. There is also impairment of the general tactile sensibility of the skin together with taches bleuâtres, and extreme muscular weakness. It would appear that there are at least two distinct types of the "typhoid state," the one characterised by a marked elevation of temperature—pyrexia in a high degree; the other in which a subnormal temperature obtains, an apyrexial type. Thus in the "state" we must admit three main factors for consideration: (1) the existence of pyrexia, whether of a "sthenic" or "asthenic" type, more frequently the latter; (2) the essentially important part played by the nervous system in tending to induce such a "condition"; and (3) in some cases (surgical) the possibility of auto-inoculation and septic infection,[6] together with the absorption of the waste products of decomposition. In the more dependent parts of the body ecchymoses appear—especially over parts usually exposed to pressure; there is a general lividity of the limbs, and petechiæ are scattered here and there over their surfaces. The respiration is, as a rule, hurried and shallow, sometimes becoming stertorous. The physical signs of hypostatic congestion of both pulmonary bases are well marked in many cases. It would be highly advantageous if one could have the opportunity of making a detailed post-mortem examination, with a microscopic examination of the tissues, as well as of the blood and other fluids both during life and after death.

4. *Prognosis and treatment.*—In determining the prognosis of the "typhoid condition" difficulty and responsibility beset the practitioner, and, as in other morbid conditions, an expression of opinion must be guarded and based on a sound and broad consideration and estimate of the chief symptoms. The most important prognostic indications seem to lie in: (1) the effect produced upon the higher nerve centres; (2) the condition of the heart and bloodvessels; (3) the condition of the kidneys and the result of a careful urinary analysis with special reference to the presence or absence of albumen or sugar; and (4) the condition of the lungs. In the treatment of the "typhoid state" the *cause* of that condition must be the guiding principle, and in every instance the only correct and rational method of treatment will be based on a thorough knowledge of that cause. In the light of "general principles of treatment" attention must specially be directed to the nervous phenomena and the condition of the heart and circulation generally, not omitting such good and careful nursing as will husband the patient's strength as much as possible and tide him over a critical period. The administration of such drugs as the perchloride of iron in combination with the hydrochlorate of quinine and liquor strychniæ every four hours is clearly indicated and is most likely to be attended with an improvement in the patient's condition; benefit is also derived from hypodermic injections of ether, strychnia ($\frac{1}{70}$ gr.), morphia ($\frac{1}{6}$ gr.), and nitroglycerine ($\frac{1}{100}$ gr.), when the "exhaustion" is very pronounced. In order to maintain the force of the cardiac systole, and the tone of the cardiac muscle, such tonics as digitalis, convallaria, strophanthus, spartein, and cactus grandiflorus are of the utmost service; the last-named drug I have found very useful in five- to ten-minim doses of the liquid extract combined with quinine and opium. The free but judiciously guarded use of alcohol in the form of brandy, brandy and egg-and-milk, and brandy and meat-juice, is of the utmost importance. The alcohol must be administered with other liquid food at regular intervals, and the quantity determined by the condition of the pulse and temperature. Rectal feeding must also be resorted to in order to supplement the ordinary method and to assist in supporting the patient. Local applications, such as tepid sponging with vinegar and water, the wet pack to the head and limbs, also mustard-leaves or poultices to the præcordia, and hot bottles to the sides and feet, are of considerable value. Attention to details of treatment, careful investigation into the condition of the excretory and other organs, and minutiæ of thoughtful and intelligent nursing will all materially assist in bringing about a satisfactory and successful issue.

[6] Cf. Lectures on Traumatic Infection, C. B. Lockwood, THE LANCET, March 2nd, 9th, and 23rd, 1895.

II.—SURGICAL.

In the domain of surgery, the examples of the "typhoid condition" can be for the most part roughly divided into those occurring in (1) any acute inflammatory condition associated with marked pyrexia and profound disturbance of the nervous system, and (2) those occurring in long-standing and in some of the more chronic forms of constitutional disease associated with the sudden onset of acute and consequently grave symptoms, the result in the main of either absorption of the organised chemical products of decomposition (septicæmia), or of chronic suppuration, or of a series of symptoms directly referable to the nervous system "broken down" and exhausted by prolonged suffering. I will specify somewhat in detail. Under the secondary constitutional effects of injuries or of operations and of some diseases there occurs that most important clinical feature known as "surgical" or "traumatic" fever, which implies a general disturbance of vital processes and functions as well as of the thermo-genetic equilibrium. In those cases in which this fever assumes what is termed an "asthenic" or "adynamic" type, there is afforded a typically developed example of the "typhoid state," a condition in which the terms "typhoid" and "asthenic" are almost synonymous. This form of "asthenic" pyrexia is seen in patients whose general health, constitution, and vital powers have been severely undermined by excesses of various kinds, more especially by alcoholism, by privations, and by any or all of those depressing causes in any disease acting consecutively. In this condition the temperature is not *per se* a cardinal feature, as it may be high or comparatively low, the chief points being the complete exhaustion of the nervous centres, a feeble, failing, irregular pulse, shallow respiration, extreme muscular weakness, and a dry, brown, tremulous tongue. Another instructive instance of "typhoid" symptoms setting in occurs in one or other of the various forms of septicæmia, whether this be the outcome of septic infection, septic "intoxication," or embolic pyæmia (which is septicæmia *plus* metastases). In this septicæmic condition all the leading characteristics of the "state" are found—low, muttering delirium, flickering pulse, stupor, &c. It is a well-known fact that in all "infective" or "septic" inflammatory processes the symptoms frequently and almost imperceptibly merge into an "asthenic" type, this general asthenia of motor, sensory, and psychical power thus producing a "typhoid" condition. In another group of cases, such as those of chronic catarrh of the bladder (chronic cystitis), with thick, copious, muco-purulent secretion, the patient sometimes sinks, without strength and "worn out," the closing scene being characterised by a "typhoid" condition. In such an example, in all probability, two distinct factors are at work in bringing about a fatal issue—viz., (1) the constant exhaustive drain effected by long-continued reflex irritation on the nervous system; and (2) the chemical changes occurring in the urine, in the blood, and in the exudative discharge from the vesical mucous membrane, and in the combined effect on the excretory organs, and indirectly on the general nutrition of the body. This condition is also observed in the third stage, that of pyrexia with exhaustion, in dissection or in post-mortem wounds (*piqûres anatomiques*), where the subtle and rapid absorption of the necrotic virus, and its still more alarmingly rapid multiplication and chemically toxic power within the system, have the baneful effect of establishing an intense depression and disturbance of the functions and influence of the nerve centres, ending in a destruction of

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their vital force and power. Cases of diffuse cellulitis can be recalled—the "diffuse phlegmon" of Dupuytren—where, in a previously debilitated system, severe constitutional disturbance supervenes, and a train of "typhoid" symptoms sets in. This is also the case in examples of acute spreading gangrene, a condition in some aspects allied to chronic septicæmia, in which the absorption of the chemical products of disintegration and putrefaction has from first to last a toxic and seriously injurious effect. The condition has also been noticed in wide-spread burns of the fourth and fifth degrees. Another instance of the "typhoid" phenomena occurs during an attack of "delirium tremens," the result of hard drinking, when marked signs of exhaustion of the nervous system set in with failure of functional power, and again in those cases of "nervous traumatic delirium" which not infrequently arise in patients with an "irritable" and somewhat unstable nervous system, or in those who have suffered from prolonged mental anxiety and the enervating effect of worry and over-strain. If the patient be the subject of an almost impermeable organic stricture, and if unrelieved retention exist, and if, in consequence of the rupture of the dilated portion of the urethra which is immediately behind the seat of such a stricture, extravasation of urine takes place, the united effects of such a condition, both local and general, give rise, on the one hand, to the most deleterious consequences to the tissues themselves, and, on the other, severe constitutional disturbance; "typhoid" symptoms rapidly supervene, in which muttering, quasi-insensible delirium, a small and rapid pulse, and dry, brown, and cracked tongue, form the most prominent features. Clinically allied to the foregoing condition, and in natural sequence, is the disease described under the term "acute, diffuse, interstitial, suppurative nephritis," associated with multiple scattered abscesses ("surgical kidney") in which the patient sooner or later sinks into a heavy, drowsy state, "typhoid"-like in character, and succumbs within a comparatively short time from poisoning by absorption of septic matter and waste products, a condition of uræmia, and closely resembling chronic pyæmia or septicæmia. Lastly, one observes the development of "typhoid" symptoms in cases of acute traumatic meningitis and encephalitis, complications of some injury inflicted on the skull and the structures contained within it. In these cases, with an open wound of the head, infection readily and often insidiously takes place unless more than ordinary care is exercised to prevent the establishment of a condition of sepsis. If, however, septic meningitis has taken place there is a speedy exacerbation of the general symptoms, especially the temperature, which mounts up to 104° F., concurrently with restlessness and delirium, which, if symptoms of compression coexist, passes into that drowsy, stupefied type, the breathing becoming stertorous, the pulse feeble and failing, and the patient succumbs in an exhausted condition from the dual effect of failure of the nervous system and compression. In the intra-meningeal form of intra-cranial suppuration which is occasionally associated with pyæmia "typhoid" phenomena appear towards the close of the case. In the days before attention was definitely directed to hygienic conditions in relation to surgical procedures cases not infrequently occurred where anæmic, cachectic, and debilitated patients, crowded together in a small, ill-ventilated ward, suffered from languor, headache, "continued fever," and similar symptoms indiscriminately passing into an "adynamic" or "typhoid" condition,[7] which was in part due to the poisonous effects of an excess of carbon dioxide, gases of decomposition, and organic impurities in the air of the ward, and in part to the absence of sufficient air space per bed. Another important consideration in connexion with the development of the "typhoid state" during the course of any disease lies in the fact that in overcrowding and the continued inhalation of a vitiated atmosphere there is a marked prevalence of diseases of the respiratory tract, such as phthisis, pneumonia, and bronchitis, all of which, under the above-mentioned conditions, have a tendency to assume an "adynamic" type closely allied to the "typhoid state." Of the twenty-three survivors of the Black Hole of Calcutta many suffered from a condition which is designated under the term "putrid fever," probably allied to typhus fever,[8] in which "typhoid" symptoms were well marked. An example of the supervention of such symptoms is also met with in animals in severe cases of "foot-and-mouth" disease, in which there is much fever, prostration, and thirst, these symptoms being the more pronounced in sucking animals.[9] Writing on the "typhoid condition," Tweedie states that "it is announced by the decline of the previous more acute symptoms: by the pulse becoming more rapid and soft; the tongue dry and brown, tremulous, and protruded with difficulty; by the incrustration of the teeth with sordes; by the increasing intellectual disorder, indicated by the more constant low, muttering delirium, and the greater insensibility and deafness; and by the condition of the muscular system evinced by muscular tremor and subsultus tendinum, and in some cases irregularity or intermission of the pulse; by the patient lying sunk on his back or sliding to the foot of the bed, the muscles being unable to support the body even in the horizontal posture." Milner Fothergill reviewed this subject under the following considerations:—(1) the association of high temperature with its effect on the entire muscular system—this point has also been emphasised by C. B. Radcliffe, Wunderlich, and Bennett Dowler of New Orleans; (2) the general wasting of the muscles in fever; (3) the marked sense of prostration (*debilitas febrilis*); (4) the excess of urea excreted in the urine, there being a definite relation between temperature and amount of urea (in 'typhoid fever' about 1065 grains of urea are excreted in twenty-four hours, the normal being 400 grains); and (5) the pathological condition of the muscular structures before and after death. He also considers that this condition is due to an increased metamorphosis of blood and tissues with subsequent rapid wasting of the latter ("histolysis"), and that it is a common and necessary result of fever. He insists on the importance of "muscular prostration"—the patient being often found lying on his back in the middle of the bed, having gradually slipped down—as a characteristic clinical sign, and notes that "muscular weariness" is one of the earliest symptoms. The remark of Da Costa that "no blunder is more common than to misconstrue into typhoid fever a typhoid condition of the system" is not without its weight and value in reference to diagnosis.

III.—CONCLUSION.

In concluding these incomplete remarks on the "typhoid state" I regret that I am unable at the present to furnish further details as to its pathology, and as to the temperature or the condition of the circulation as shown by sphygmographic tracings. I have not yet been able to find an adequate reply to the query, Does the "typhoid" condition occur more frequently among persons of a highly nervous temperament or of a hereditarily unstable nervous system? I have not been able to discover any examples of this condition in cases of malignant disease, whether sarcoma or carcinoma.

In asking the indulgence of the readers of THE LANCET I am reminded of Boileau's lines:—

> "Hâtez-vous lentement; et, sans perdre courage,
> Vingt fois sur le métier remettez votre ouvrage:
> Polissez-le sans cesse et le repolissez;
> Ajoutez quelquefois, et souvent effacez."

Tunbridge Wells.

[7] Whitelegge: p. 21 &c.; Plates of Air Samples, Parkes' Hygiene, sixth edition, p. 112; and Dupuytren and Pirry, Traité de Chirurgie, Paris.

[8] Cf. "Om status putridus och nervosus." Naumann. Stockholm, 1834

[9] Wilson, "Hygiene," p. 43.

ON THE

TREATMENT OF ACUTE RHEUMATIC ENDOCARDITIS.

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IN the year 1881 I commenced a definite inquiry, which I have pursued steadily for fourteen years so far as cases suited for the purpose came under my observation, on the course and treatment of the acute endocarditis of rheumatism, and I now propose briefly to state its results.

Gravity of cardiac rheumatism.—Numerous cases of acute rheumatism necessarily come under the care of every hospital physician—I have treated about 320 cases of acute and subacute rheumatism during the fourteen years in question. While speedy cure of the rheumatism itself usually follows, a proportion of these cases—perhaps 1 in 3 or 4—suffer

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cardiac complication, and the physician has the pain of seeing the patient leave the hospital bearing the seeds of a malady which is certain to cause suffering and shorten life. Perhaps the physician follows the whole career of such a case extending over some years. A vigorous man comes to him suffering from acute rheumatism, but with a sound heart; endocarditis affecting the mitral valve occurs and persists; the rheumatism subsides, the patient returns home thinking himself well, but on exertion suffers from an unaccustomed shortness of breath; bronchitis, increased difficulty of breathing, inability to follow his occupation—if it be a laborious one—and dropsy follow; dilatation of the right ventricle, and tricuspid disease may set in and death closes the scene. Many of us have seen cases like this, and have felt their extreme sadness.

Objects of the inquiry.—Feeling the importance of doing what little was in my power to further any inquiry which might mitigate the frequency of heart disease, I set myself during the last fourteen years to try to obtain information on two points—viz., (1) as to how the occurrence of endocarditis may be prevented during acute rheumatism; and (2) whether or not, when it does occur, any treatment during the incipient stage would favour recovery. When the disease is fully established of course there can be little hope of benefit. I had first to acquaint myself with the experience of former writers in our own country, in Europe, and in America. That of the earlier authors I found of less value on account of their imperfect diagnosis; and also their treatment, on account of its severity, did not commend itself to me. The opinion of more modern writers was highly conflicting. Some considered all measures having in view either prevention or cure practically useless. The weighty names of Niemeyer and of Osler were among these. It was encouraging to find Sibson and others pointing out the value of absolute and protracted rest, both as a prophylactic and as an aid in the cure of incipient endocarditis. Various writers described the occasional spontaneous disappearance of bruits in acute rheumatism. This, I think, there can be no doubt of: I have myself seen it happen twice. The general opinion was that a bruit when once established remains in the large majority of cases, and is followed by permanent heart disease. Many forms of treatment were suggested. The older writers advise bleeding and mercurial salivation, the local employment of dry and wet cupping, leeches, blisters, mustard plasters, iodine, ice-bags, poultices, the actual cautery, the internal administration of potassium or sodium iodide, digitalis, aconite, mercury, &c.

Bad results of expectant treatment.—Meantime I proceeded to observe a number of cases, merely treating the rheumatism by salicylates and keeping the patient in bed under generally favourable conditions, but doing nothing of a special kind for the endocarditis. In other cases I experimented with some of the milder among the agents I have referred to. Up to the end of December, 1885, the results obtained from merely treating the rheumatism and doing nothing for the endocarditis, also from partial blistering or the use of leeches or poultices, were not favourable; of fourteen cases one lost the bruit spontaneously, although no treatment was employed; a second lost it after repeated blistering and the use of potassium iodide; and the remaining twelve went out with a bruit which I fear has been permanent in each case, and has probably terminated in death in many instances before now. The experience of these four years disposed me to adopt some definite method. Adopting no treatment had led to unfavourable results alike during this period and during previous years.

Method of treatment selected.—Guided by the physiological facts to be stated later in this paper, it seemed to me that the use of a succession of small blisters along the course of the fourth, fifth, and sixth intercostal nerves, together with the internal use of potassium or sodium iodide not only gave as much promise as any other method, but tended but little to disturb or to weaken the patient. I had, moreover, had one successful case already, Case 12 (see Abstract), in which an aortic bruit disappeared; so I proceeded to treat almost all subsequent cases in this way, enjoining also a prolonged rest in bed.

Before detailing the results I ought to say something about (1) the general treatment of these cases of acute rheumatism; (2) about the efforts made to prevent cardiac disease; and (3) about the evidence I relied upon as indicating the presence of genuine endocarditis in the cases on the list which I subjoin.

1. *General treatment of rheumatic cases.*—The patients are kept in bed; I prohibit as far as possible all exertion or exposure. No getting out of bed is allowed, and to prevent chills a long flannel nightshirt is worn, a stock of these garments being kept on purpose for rheumatic cases in my wards. Thus the profuse perspiration incident to the disease is not likely to be checked. A light milk diet is given. Gentle cholagogues are administered and salicylates are given in such measure as the disease seems to demand. If the pain fails to yield in any joint I immediately apply small blisters followed by poultices, a method which rarely fails to give great relief, as I can testify from the experience of hundreds of patients. Hyperpyrexia or any special symptom receives appropriate treatment. The patient is kept in bed and on a light diet for a considerable time after the disappearance of pain.

2. *Efforts to prevent cardiac complication.*—There seems to be strong ground for believing that perfect quiet and rest and avoidance of chills during acute rheumatism lessens the liability to cardiac complication. Cold to the surface undoubtedly increases the inflammation of synovial membranes; rheumatic inflammation of the endocardium is similar in kind and is likely to be affected similarly. My own experience certainly is in favour of this opinion. In what proportion of cases is the heart affected? There is much divergence of opinion as to the proportion of cases in which the heart is attacked. Codet, the French writer, puts it down at 81 per cent., Picot at 78 per cent., Mansir and Shadwell's list from Guy's Hospital Reports gives over 50 per cent. The lowest average I read of is 25 per cent. During the period my list of cases covers I have had about 320 cases of febrile rheumatism, but in many of them the fever was slight and temporary. My proportion is under 20 per cent. Probably the great discrepancy in percentages is due to different conceptions of the meaning of the term "acute rheumatism." If it be restricted to the highly febrile type the high estimates (60, 70, 80 per cent.) I have quoted will probably be correct. Though, according to my own experience, endocarditis is not confined to pyrexial cases, it is certainly more frequent in them, and I think I may consider my proportion of cases of rheumatism with cardiac complication to have been comparatively small.

3. *Were my cases examples of genuine endocarditis?*—I should like to say that of course cardiac murmurs are of very different values. The bruit of anæmia, for instance, heard chiefly about the pulmonary area, and the bruit of muscular weakness which is sometimes met with in fevers and other conditions of exhaustion, are not to be mistaken for signs of endocarditis. The former occurs sometimes in acute rheumatism, but only in the later stages. The murmur at the pulmonary cartilage in Case 41 (see Abstract) was probably of this order. Also the bruit due to muscular impairment, if it occurs at all in rheumatism, happens at a late period, when the patient is enfeebled by a lengthy illness. I have always been on my guard against mistaking either of these forms of bruit for that occasioned by endocarditis. The great majority of the cases in the list are those of commencing mitral disease. The aortic valves were affected in five cases, and in seven pericarditis occurred. I make it a rule to examine the heart of every rheumatic patient daily, so as to be on the lookout for any commencing mischief.

Period at which the heart is affected.—In a few cases endocarditis seems to occur coincidently with the first rise of temperature and the joint affection. More often it happens during the first ten days; sometimes it is later when the temperature has fallen and pain gone and the patient thinks himself getting well. Sometimes it occurs during a relapse of the rheumatism, as in Case 18. The patient had been going on well for a week with normal temperature, when suddenly, on March 9th, the temperature rose and endocarditis became apparent. If a bruit has disappeared it is apt to recur during a relapse of the rheumatism, as in Cases 44 and 48. As to symptoms, there are sometimes præcordial discomfort and further rise of temperature, but generally, in my opinion, no special symptom has attracted the patient's attention when an endocarditis has first become perceptible to the physician. In pericarditis symptoms are more common. The following has been my experience of the first signs of endocarditis. Suppose a case of mitral regurgitation. The patient has been admitted with a heart the sounds of which were normal excepting as regards rapidity of beat. One notices a change in the character of the first sound—what the French writers call "assourdissement"—a loss of clearness and sharpness in the tone. The note is dull

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ABSTRACT OF FIFTY-TWO CASES OF ACUTE RHEUMATIC ENDO- AND PERI-CARDITIS, SHOWING TREATMENT AND RESULT.

(When the date of first appearance of bruit is not given it was present on admission, but believed to be recent.)

No.	Age.	Dates of Admission.	Dates of Discharge.	Physical signs of cardiac disease.	Special treatment of cardiac complications.	Cardiac physical signs on discharge.	Remarks.
1	21	Dec. 21st, 1881	Jan. 11th	Mitral bruit	None	Mitral bruit	—
2	19	Dec. 29th, ,,	Jan. 7th	,,	,,	,,	—
3	25	March 9th, 1882	May 12th	Mitral bruit on March 21st	,,	,,	—
4	33	May 22nd, ,,	May 31st	Mitral bruit	,,	,,	—
5	28	March 19th, 1883	May 1st	Aortic systolic bruit	,,	Aortic bruit	—
6	23	Dec. 27th, ,,	Jan. 17th	Aortic, diastolic, mitral, and pericarditis	Poultices	Mitral bruit	—
7	15	Dec. 29th, ,,	Jan. 11th	Mitral bruit	None	,,	—
8	23	April 17th, 1884	May 22nd	Mitral bruit on April 19th	One blister	,,	—
9	26	July 8th, ,,	July 29th	Mitral bruit	None	,,	—
10	28	Nov. 17th, ,,	Jan. 30th	Mitral bruit on Dec. 9th	Blisters, pot. iod.	,,	Rheumatism long continued.
11	21	March 9th, 1885	March 26th	Mitral bruit	One blister	,,	—
12	12	June 15th, ,,	July 13th	Aortic systolic bruit	Blisters, pot. iod.	No bruit	—
13	17	Sept. 18th, ,,	Nov. 9th	Mitral bruit, pericarditis	One blister, leeches	Mitral bruit	Adherent pericardium.
14	21	Dec. 7th, ,,	Dec. 21st	Mitral bruit	None	No bruit	—
15	16	Jan. 5th, 1886	March 14th	Pericarditis	Blisters, pot. iod.	Normal	—
16	18	Jan. 6th, ,,	Feb. 23rd	Mitral bruit on Jan. 26th	,,	No bruit	—
17	19	Jan. 22nd, ,,	Feb. 19th	,, on Jan. 25th	,,	,,	—
18	21	Feb. 23rd, ,,	April 14th	,, on March 9th	,,	,,	Relapse on March 9th.
19	16	March 3rd, ,,	March 29th	,,	,,	,,	—
20	49	March 13th, ,,	April 30th	,,	,,	,,	—
21	19	March 27th, ,,	May 10th	,,	,,	,,	—
22	18	May 10th, 1887	May 23rd	,, on May 18th	None	Mitral bruit	—
23	34	April 23rd, 1888	May 24th	Aortic systolic bruit on April 30th	Blisters, iodides	No bruit	—
24	19	May 10th, ,,	June 14th	Mitral bruit	,,	,,	—
25	17	Jan. 10th, 1889	May 6th	,,	,,	Mitral bruit	—
26	21	May 9th, ,,	May 22nd	,,	,,	Faint mitral bruit	Bruit lessened greatly under treatment.
27	66	June 7th, ,,	July 12th	,,	,,	No bruit	—
28	28	Feb. 6th, 1890	March 22nd	Mitral bruit on Feb. 11th	,,	?	Result not stated.
29	16	June 4th, ,,	July 16th	,, on June 27th	,,	No bruit	—
30	21	June 24th, ,,	August 18th	,, and pericarditis	,,	,,	Pneumonia.
31	19	Dec. 27th, ,,	Feb. 26th	,, on Jan. 1st; aortic on Jan. 21st	,,	Bruit on Feb. 12th	No later report.
32	29	Feb. 7th, 1891	March 14th	Mitral bruit on Feb. 10th	,,	No bruit	Much delirium.
33	14	May 13th, ,,	June 11th	Mitral bruit	,,	,,	—
34	18	June 13th, ,,	July 13th	Mitral bruit on June 17th	,,	,,	—
35	18	Sept. 23rd, ,,	Nov. 5th	,, on Oct. 7th	,,	?	Result not stated.
36	13	Nov. 27th, ,,	Dec. 31st	,, (loud)	,,	Faint bruit	—
37	18	Dec. 20th, ,,	,,	,,	,,	No bruit	—
38	28	Oct. 18th, 1892	Nov. 28th	,, pericarditis	,,	,,	—
39	28	Nov. 18th, ,,	Dec. 7th	,,	,,	,,	—
40	28	Jan. 18th, 1893	Feb. 10th	,, on Jan. 22nd	,,	,,	—
41	21	,, 25th, ,,	,, 19th	,, on Jan. 26th	,,	No mitral bruit	But faint bruit at third left cartilage.
42	35	March 11th, ,,	April 20th	,, on Jan. 14th pericarditis	,,	No bruit	—
43	30	May 17th, ,,	June 23rd	,, on May 23rd	,,	,,	—
44	19	July 19th, ,,	Sept. 17th	,, on July 21st	,,	Mitral bruit	Bruit disappeared [under treatment, but returned during relapse of rheumatism, Aug. 21st, and persisted.
45	42	Jan. 11th, 1894	March 3rd	,,	,,	No bruit	—
46	19	May 2nd, ,,	May 30th	,,	,,	,,	—
47	18	June 14th, ,,	Aug. 9th	,, on June 16th	,,	?	Result not stated.
48	17	July 4th, ,,	Aug. 13th	,, on July 16th	,,	1st sound slightly prolonged	Bruit disappeared under treatment, but returned during relapse on July 27th, and again disappeared.
49	15	,, ,,	July 28th	,, and pericarditis	,,	No bruit	—
50	24	July 25th, ,,	Oct. 3rd	,,	,,	Mitral bruit	—
51	22	Dec. 8th, ,,	Jan. 18th	,,	,,	No bruit	—
52	18	March 4th, 1895	May 15th	,, on March 5th	,,	,,	—

Summary.

Of 39 cases treated by repeated blistering over heart and administration of iodides (average stay in hospital, 41 days), 29 left hospital without a bruit; 7 left with a bruit; and 3 were uncertain—they probably had a bruit. Of 13 cases not treated, or treated otherwise (average stay in hospital, 25 days), 1 left hospital without a bruit, and 12 with a bruit.

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and woolly, so to speak; it becomes prolonged, and this dull, prolonged sound by degrees changes into an undoubted bruit. Many and many a time have I noted these changes, and foretold them from the time when the first dulness of tone was observed. The bruit is best heard about the apex, but is audible in the axilla; it is usually systolic, occasionally presystolic, and sometimes it is both. Frequently it is accompanied by accentuation of the second sound in the pulmonary area.

Details of treatment of incipient endocarditis.—As soon as the bruit is perceptible, or even prior to that, during the preliminary stage of "woolliness" I at once give potassium or sodium iodide in ten-grain doses thrice daily in addition to the salicylates, and apply near the apex a blister about the size of half-a-crown; as soon as the irritation of this blister is subsiding I apply a second close to it, then a third and so on, keeping the patient meantime as quiet as possible, strictly forbidding exertion, exposure, or too much nitrogenous food. I have scarcely ever known the patient to complain of the blisters, which practically occasion little or no discomfort. The heart should be examined daily. Frequently in a week or in ten days' time I have had the satisfaction of noting a gradual subsidence of the bruit; day by day it becomes less clear and distinct, until at length it is found to be only occasional, and at last to be entirely absent. Sometimes several weeks elapse before this desirable change is accomplished. I think the prolonged rest in bed has an important share in this good result. It will be noted that the thirty-nine cases which I treated on the above principle were, on the average, forty days in hospital, and were confined to bed for thirty-five or thirty-six days. When the bruit has gone, I have, when possible, kept the patient under observation for awhile. Sometimes this is not practicable, but I have often for many weeks noted the condition of the heart and found it perfectly normal. In some instances I have done this for two or more years.

Excellent results obtained.—It will be observed from my list that in the thirteen cases which were either not treated at all or imperfectly treated by blistering, poulticing, leeching, &c., with an average residence in hospital of twenty-eight days, the result was that twelve left hospital with a bruit which I fear they retained throughout life. One case, however, lost his bruit spontaneously. But of the 39 cases treated by prolonged rest, repeated blistering, and the administration of iodides, 29 left hospital with normal heart sounds, in 3 the result was doubtful, and 7 left with a bruit. I must confess that this series of twenty-nine patients in whom distinctly marked bruits had been heard, but who left the hospital with normal heart sounds, constituted a better result than I had ever ventured to hope for. It is, in fact, so good a result that I do not expect that the readers of this paper will altogether accept it. Many will believe that mistake or error has crept in somehow. To the best of my knowledge and belief, what I have stated is accurate. The cases were not examined and recorded by myself alone, but by registrars, house physicians, and clinical clerks.

Theory of the treatment.—I claim for this method that it is essentially a reasonable one on the following grounds. So-called "counter-irritation" has fallen much out of vogue in the profession, partly because the old theories on which it was formerly supported are felt to be untenable. We cannot believe that a poultice or blister draws blood from, or acts directly in any manner upon, an organ in the thorax or abdomen, but it by no means follows that the practice is bad because the former theory was unsound. Such treatment has been partially abandoned also because our predecessors carried it out to excess so as to cause pain and to enfeeble the patient. If we apply a small blister or a poultice to the skin of the thorax or abdomen I believe its effect on the organs situated at some distance beneath is solely an effect transmitted through the nervous system and reflected from the nerve centres in the spinal cord and sympathetic system. The nervous system may be summarised as a series of segments arranged in a line corresponding to the various somites of the body; each nerve segment governs to some extent the nutrition of its own somite, alike as regards epi-, meso-, and hypo-blastic structures. If a cutaneous nerve is stimulated the nerve cells in the spinal and sympathetic centres are influenced, and the impression is reflected to the visceral branches. It may be said that this is mere theory, but it is a theory which satisfactorily explains many familiar facts—e.g., it explains the fact that a slight chilling of the skin of the thorax may cause pneumonia or bronchitis, and that a splash of cold water will excite respiration in the infant or set a-going the action of the heart in a faint. I may add that I think I proved this theory in a paper read before the Physiological Society at Oxford a few years ago by demonstrating that stimulation of the surface skin altered the diameter of the arterioles in the lung and caused variation in the electrical condition (as manifested by the galvanometer) of thoracic and abdominal organs. It is quite clear that stimulation of the skin of the abdomen by heat, by chemical irritation, by faradaism, or by mechanical irritation produces instantly a variation in the electrical potential. This, however, is so extensive and complex a subject and occupied so many months of hard work in the laboratory that I cannot hope to make it clear in the space of a few lines. Turning to more familiar evidence, few persons, I think, will deny the soothing effect of a poultice in a case of bronchitis, nor, I think, can any explain that effect satisfactorily in any other manner than that I have just stated. When that form of impaired functional activity is occurring in the tissues of the heart which is called "rheumatic endocarditis," a stimulus is applied to the nerve centres, and the trophic nerves of the heart help nature to overcome the defective action. That is the theory on which this treatment by blistering is based. I believe that the assisted natural powers succeed where, if unstimulated, they would fail.

I should like to say here that after twenty-five years' experience of counter-irritation in many forms, carried out in view of the theory I have stated, I think it is one of our most valuable therapeutical expedients for the relief of pain, for lessening inflammatory action, and for the stimulation of restorative processes. A very limited irritation of cutaneous nerves will suffice; I never use large blisters—generally they are smaller than a florin; small vesications give great relief and cause practically no suffering and no loss of strength. As to the sodium or potassium iodide, it is given on account of its value in absorbing inflammatory products of low vitality. I am anxious to know what the experience of others has been in regard to the very grave disease in question, and to hear of alternative or superior plans of treatment. In conclusion, the one thing I am specially anxious about is that members of the profession who have the opportunity of observing cases of acute endocarditis should give this method a fair trial during the early stage of the malady. If they do, I think they will not be disappointed.

Liverpool.

INFECTIOUS SORE THROATS.[1]

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THE importance of obtaining early information of outbreaks of infectious disease led me some three years ago to issue a circular letter to all the school managers in my districts asking them to instruct their head master or mistress to give me the earliest possible intimation of the presence amongst the children attending school of any affection which appeared to be infectious, and I also drew attention to the fact that sore throat, especially if associated with headache or sickness, was one of the earliest symptoms of certain infectious diseases. The result of the above procedure has been that many epidemics in which the most constantly marked symptom was sore throat have been brought under my notice which could neither be referred to diphtheria nor to scarlet fever. The following are examples.

In February, 1893, I received a note from the schoolmaster of an isolated parish saying that he was afraid that diphtheria had broken out in the school. I found several children were then in school who had been absent during the previous week for three or four days. They had suffered from headache, more or less marked, a little feverishness, and sore throat. In a very few days they were sufficiently well to return to school. Examination of the tonsils simply showed that they were enlarged, pale, and somewhat flabby. I visited several of the absentees and found in most cases they had suffered from a little headache and chilliness. The tonsils were enlarged, not abnormally red, but the mucous membrane round the apertures of the follicles was distinctly infiltrated, slightly thickened, greyish, and opaque. Exactly the same

[1] Paper read at a meeting of the Home Counties Branch of the Medical Officers of Health Society, Feb. 7th, 1895.

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condition had at this time led at least two practitioners in my district to notify such cases as diphtheria. Two patients in the particular outbreak referred to suffered more severely, both bleeding freely from the nose. One had a temperature of 104° F. for two days, probably due to tonsillitis, which was followed by suppuration. The disease was evidently infectious, two and three children in one house being attacked. A few adults also suffered, and both the severe cases mentioned were of adults. I concluded that this was a form of influenza, since a few typical cases of that disease were met with, and usually in houses in which others were suffering from sore-throat. In various other parishes about this time I met with similar cases, some of which, as just remarked, were diagnosed as diphtheria. Beyond the circular patches of infiltrated mucous membrane round the apertures of the crypts of the tonsils there was nothing to indicate diphtheria. At a later date I examined such a throat bacteriologically, but obtained no diphtheria bacilli. In May a similar epidemic occurred in another parish many miles distant, but a large proportion of the patients suffered from epistaxis, and there were no typical cases of influenza in the same houses. In none of the above cases was any rash observed. In October of the same year I was asked to visit another parish in which the school attendance was suffering from absence of children on account of sore throats. I found that most of the children affected had been out in the fields picking acorns in the damp grass. The children appeared at first to have taken cold, then the throat became very sore, and the submaxillary glands at one or both sides enlarged. The tonsils resembled those just described, but in one case the mucous membrane of the pharynx was affected, and I seriously suspected diphtheria for a time. Herpes on the lips was met with in several instances. This little outbreak, if we may so call it, seemed to me to be due to "catching cold," whatever that may mean, and that the prevalence was due not to any infective quality, but merely to the fact that a considerable number of children had been occupied out of school hours in gathering acorns during a wet season. Later in the same month a medical gentleman asked my opinion upon a number of cases which had occurred in his practice in a particular circumscribed area. Some he said were undoubtedly follicular tonsillitis, others so closely resembled diphtheria that he did not know whether he ought not to notify. The onset was accompanied with headache and shivering. The throat was congested, the tonsils enlarged, and the crypts patent and sometimes plugged with muco-pus. The glands at one or both sides of the neck were enlarged. There was very little prostration, and recovery took place in from two to seven days. There was undoubted evidence of infectiousness.

In December, 1893, an outbreak of what was said to be diphtheria occurred in a parish at the border of my Chelmsford district. Two or three cases were notified as diphtheria and one child died of croup, but the medical attendant did not feel justified in notifying it as diphtheritic. From the resemblance of the cases to those previously described as due to influenza I regarded these as the same, and I had no reason afterwards to alter my opinion. There were two schools in the parish, but the outbreak was limited to the children attending one of these. Towards the end of last year my attention was again especially directed to a series of similar outbreaks. On Dec. 12th I found in one parish that forty-six children (twenty-nine families) had been or were away from school on account of "sore throat." In a typical case the child complained of feeling cold, sat over the fire, and shivered. The face was flushed and had an expression of weariness; the throat was a little sore, and there was a little headache, and sometimes pain in the limbs and generally weakness. The submaxillary glands were enlarged in a few cases, but not markedly so. The tonsils and pharynx were slightly congested. There was no infiltration. The patients usually got well again in from three to seven days. I found one or two cases fairly typical of influenza, and one case in which the pains in the limbs had been so severe that the parents called in a medical man, thinking that the lad was suffering from rheumatic fever. In another large village about the same time many children were absent from school on account of some undefined illness. The parish was an extensive one, and for some time past sporadic cases of scarlet fever and of diphtheria had been reported. The cases notified as scarlet fever were undoubtedly correctly diagnosed, but there is a doubt about the diphtheria cases. Cultures were made in three out of four notified cases, but no Löffler's bacilli were found, and in a piece of membrane from one throat which the Local Government Board asked Dr. Klein to examine for me he failed to find these bacilli. I examined a number of throats and obtained a very varied assortment of organisms, but nothing to indicate diphtheria. The children were ailing for a few days only, and a fair proportion had enlarged glands under the jaw. The swelling was so marked that many cases were regarded as mumps, but the patients I saw had no affection of the parotid gland. No cases of scarlet fever followed in any of the infected families and I do not think the affection was of that nature.

I will not quote instances in which sore throats were prevalent just prior to outbreaks of scarlet fever or diphtheria, but I may ask, Is the generally received opinion—viz., that these are mild cases of one or other disease—correct? Thrice recently I have investigated the nature of outbreaks of sore throat, associated in a minority of cases with a very slight and evanescent rash, which I very much doubted were scarlatinal in character, but which at a late stage of the epidemic merged in a few instances into well-marked cases of scarlet fever. The property of progressive infectiousness and increase in virulency is apparently common to both scarlet fever and diphtheria, but the slight cases of the former are not so industriously searched for as are those of the latter. During an epidemic of mumps, also, numerous slight and anomalous cases occur which it would be impossible to diagnose were it not known that parotitis was prevalent. The last series of cases of sore throat which I have examined was associated with an outbreak of mumps. In several infected families, whilst some members had all the typical symptoms, others had had headache, nausea, or actual vomiting, pains in the limbs, and sore throat, but no enlargement of the parotids. A medical man who attended some of these cases told the patients that they were suffering from "internal mumps." I wish in the next place to ask whether my recent experience with regard to diphtheria corresponds with that of other medical officers of health. The mortality during the past year has only been about 5 per cent. amongst the cases notified in the Chelmsford rural sanitary district, having in previous years been about 20 per cent. My last epidemic, not yet over, has included about thirty cases, all of which have terminated favourably. In the first family affected four out of five children were attacked, and one case for a time threatened to prove fatal. No diphtheria bacilli could be found in the membrane. As the cases occurred bacteriological examinations have been made, and only in one instance were any organisms resembling Löffler's found. In the case referred to, that of a lad aged eighteen, there was a well-marked membrane, but he was never confined to bed; in fact, he lived with the family (six children) as though nothing was the matter, smoked all day long, got better in about ten days, had no sequelæ, and none of the other inmates of the house have been affected or infected. I am inclined to think the bacilli, from their mode of growth, are the pseudo-variety described by Klein. I have already referred to the fact that in another parish four cases of diphtheria have been notified, and that in the three examined no diphtheria bacilli were found. Besides these several other isolated cases have occurred. A typical case is one which I recently examined at the request of a local practitioner. The patient was this practitioner's assistant. I was wired for, and found him in bed. Beyond a little malaise and sore throat he did not feel ill, nor had he had any symptoms such as usually occur premonitory to an attack of diphtheria. At first it was thought to be follicular tonsillitis, but the appearance of membrane on the uvula and tonsils indicated that it was something more than this. No bacilli were found in the culture made, but prior to observing this I had expressed my doubts as to the disease being diphtheria. The course of events in this and similar cases is as follows: One or more points in the mucous membrane of the tonsils, soft palate, or uvula become infiltrated, appearing paler than the surrounding mucous membrane. The patch becomes paler and paler until nearly white. It is but slightly, if at all, raised, and has no sharply defined margin. Before becoming white the infiltrating material may be absorbed and the part resume its normal appearance; but when it has assumed the milky-white colour it finally peels off, leaving a shallow ulcer which speedily heals. It may or may not be associated with a mild form of tonsillitis. The constitutional disturbance, as a rule, is very slight, but occasionally there are marked premonitory symptoms—headache, nausea, languor, and slight fever—but these speedily pass away and the patient feels fairly well.

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If these are not cases of true diphtheria—and I am inclined to think they are not—it is time we adopted some other name for the disease, as at present our notification returns are rendered useless by their inclusion with diphtheria. It is probably a disease having distinct specific characters, and as it is undoubtedly infectious it is almost certainly due to some micro-organism. With reference to this portion of the subject I shall have more to say hereafter. How should the medical officer of health regard such cases? Strictly speaking, he has no business to diagnose them, but to accept all notifications sent in and act upon them in the usual manner. Many cases occur, however, in which no medical man is called in, and which the medical officer of health may, with the permission of the patient and relatives, examine and diagnose. Any error in diagnosis may be of serious import. If regarded as not being diphtheria, and subsequent events prove that it is true diphtheria, an epidemic may be the result. Where there is the slightest doubt, therefore, the only safe plan is to regard them as cases of diphtheria, and insist upon all precautions being taken to prevent the disease spreading. These precautions will very rarely include the compulsory closing of an elementary school, the brief duration of the disease and its apparently trivial character not rendering such a course necessary. Besides this epidemic form of pseudo-diphtheria there are probably several other throat affections which simulate true diphtheria. Nearly two years ago a brother medical officer of health sent me a large piece of transparent membrane from a child's throat, together with a note saying that it was the most marked case of diphtheria he had ever seen. The membrane appeared to consist entirely of spherical cells, apparently a form of torula, and upon streaking some agar jelly the growth consisted entirely of such cells, which, on account of pressure, when viewed under the microscope, appeared hexa-, octo-, or polyhedral. Soon after a sporadic case occurred in my district, in which the same organism occurred, associated with bacteria, and a few months later the same patient was again notified as suffering from diphtheria, and again the torula was the most prominent feature of the growth obtained from the throat. In the same parish a case of diphtheria was notified in January, 1895, which yielded a similar organism, and quite recently a fourth case has occurred. I sent a culture tube of this through the Local Government Board to Dr. Klein, and he states that he has on one previous occasion met with the organism in a case of membranous rhinitis. He is inclined to regard it as the thrush fungus. In the last two cases the torula was more usually oval in form, whereas in the former cases the organism was spherical. Possibly they are allied but not identical species. Whether they are the cause or merely concomitants of the disease it is at present impossible to say. This is a subject upon which I am at present working.

One thing is becoming clear, that under the name of diphtheria we are including two, if not several, distinct diseases, due to the development of different organisms on or in the mucous membrane of the throat. Amongst the countless multitude of micro-organisms which occur in nature it would indeed be wonderful if one only were capable of developing upon nature's medium and in nature's incubator and of injuriously affecting its host. During sleep the back of the mouth forms the incubator *par excellence*, and many different organisms flourish there, more than one of which are probably capable of penetrating the mucous membrane and causing its infiltration and exfoliation, and the products of their metabolism, toxines, &c., becoming absorbed may be the cause of constitutional disturbances such as those described in connexion with the epidemics of "sore throat."

Chelmsford.

TWO CASES OF HYDATID DISEASE SURGICALLY TREATED.

BY W. J. COLLINS, M.D. LOND., F.R.C.S. ENG.,
SURGEON TO THE LONDON TEMPERANCE HOSPITAL; ASSISTANT SURGEON TO THE ROYAL EYE HOSPITAL, SOUTHWARK.

THE two following cases of hydatid disease which have come under my care during the last twelve months are, perhaps, worthy of record: the one on account of the rarity of the situation of the cyst—in the axilla—and the interesting diagnostic problems to which this accordingly gave rise; the other as further illustrating the success attending surgical treatment of even large and adhesionless hepatic hydatids.

CASE 1.—A young woman aged nineteen years, with a good family history and no previous ailments, first noticed a painless lump in the right axilla in August, 1893. She kept a pet dog, and also lived in a notoriously overcrowded and insanitary area. The diagnosis remained uncertain until the operation, although fatty tumour and chronic abscess had been suggested. The swelling was two inches and a half in diameter, and freely movable under healthy skin. She was admitted to the London Temperance Hospital on May 10th, and on the 21st she was placed under chloroform and an incision was made into the swelling. Clear fluid escaped and a white hydatid cyst shelled out; there was a fibrous quasi-sheath around this, composed of thickened tissues. Hooklets were found in a scraping of the cyst-wall. Healing progressed uninterruptedly, and the patient was discharged well on June 1st.

CASE 2.—A single woman aged thirty-three years noticed a swelling at the pit of the stomach in September, 1893. This was at first painless, but, increasing in size, began to be tender, and in December, 1894, she was admitted into the medical wards of the London Temperance Hospital under the care of Dr. Fletcher Little. I saw the case in consultation and diagnosed hydatid of the left lobe of the liver, and an exploring syringe verified the diagnosis by yielding hooklets in the withdrawn fluid seen under the microscope. She was accordingly transferred to my ward with a view to operation, the nature of the case and the treatment suggested having been explained to the patient, and her assent obtained. The patient's previous and family histories were good, and she appeared to be in fair health, with the exception of the abdominal tumour. Occupying the epigastrium and encroaching on the left hypochondrium was a firm, globose, slightly elastic swelling which gave a feeling of fluid, especially when bimanually palpated with one hand deeply pressed into the left ilio-costal space. The swelling was a little tender, dull on percussion, without any specific fremitus, and dumb. Its area of dulness was continuous with that of the liver. The heart was displaced a little upwards. On April 8th, 1895, Dr. L. Wilde administered chloroform, and I opened the abdomen by a median epigastric incision. The left lobe of the liver was unusually prominent and presentable and gave to the examining fingers the feeling of a bag tense with fluid. I inserted an aspirating trochar and withdrew thirty-seven ounces of opalescent fluid. Closing the enlarged opening with my finger, and later with swabs, while flat sponges were packed around the wound, I sutured the thinned and now flaccid liver lobe to the anterior abdominal wall, with little, if any, escape of hydatid fluid. The large cyst cavity was then completely emptied by suction with a glass syringe and a piece of india-rubber tubing attached to its nozzle. A large empyema drainage-tube with a flange was then inserted, and india-rubber sheeting fitted round it, over the gauze dressing, and brought out through a many-tailed bandage. The next day the patient was free from pain, the temperature was normal, and many ounces of fluid had come through the tube. Progress to recovery was uninterrupted; the highest temperature recorded was 99·4° F., on the eighth day. The fluid discharge gradually became less, portions of cyst-wall came away in abundance, and when collected there was sufficient to fill a four-ounce vessel. The fluid became more puriform; the tube, which was progressively shortened, was left out on June 13th, and the patient was discharged on July 18th, being quite well.

Albert-terrace, N.W.

A CASE OF CHRONIC GLANDERS IN A HORSE-SHOER.

BY GORDON SHARP, M.B., C.M. EDIN.

IN May, 1892, I saw a man aged twenty-three, engaged as a shoeing smith, who had worked among horses for years; the following was the history of his complaint. Three months previously to the time when I saw him he began to suffer from a disagreeable, foul-smelling, watery discharge from the left nostril. He consulted a medical man, who told him he had polypi of the nose. He gave him medicine to take and snuff to apply to the nostril. A week or two passed, and as the man did not improve

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he went to the infirmary of the town in which he then lived and was admitted. There he remained for a few weeks and had some slight operation performed on the nostril, but without benefit, and he left the hospital and placed himself under the care of a consulting physician; but not only did the nostril not get well, but the eye on the same side became affected in the same manner as the nostril. After some weeks he sought relief at one of the Manchester hospitals and remained under treatment for a short time, during which some operative treatment was performed in the shape of scraping the nostril, followed by the application of caustics. The patient's condition got worse and he came home to his father's house, where I first saw him. From what has been said it will be seen that the disease had already ran fully a three months' course from the time of its being first noticed by the man himself. On

FIG. 1.

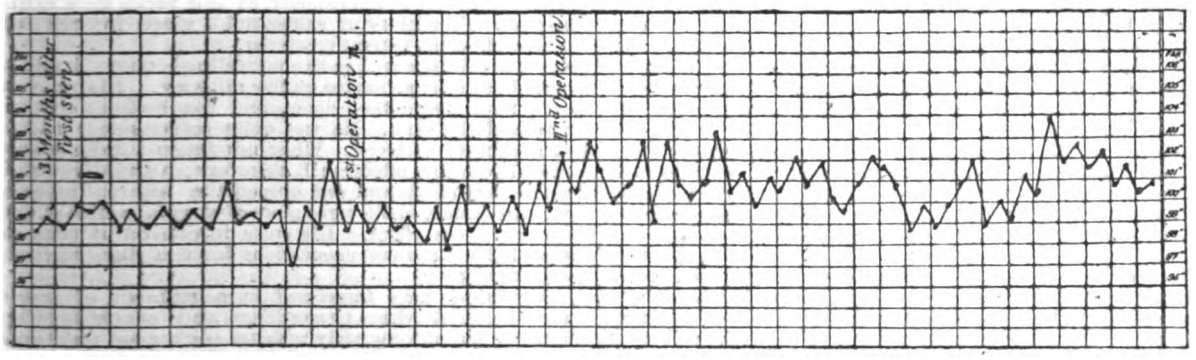


Chart showing course of temperature.

examination the patient was found to have a foul watery discharge occasionally during the day, tinged with blood and pus, discharging from the left nostril. The nostril itself was red, and in parts it showed black sloughs, which on being removed revealed an underlying ulcerated surface. The left eye was red and inflamed and discharging fluids of the same character as the nostril. Immediately below the eye the tissue of the face had sloughed away, and the bone beneath was covered with black sloughs. The treatment at this stage consisted in removing the sloughs and making the parts as sweet as possible by the frequent application of strong corrosive sublimate lotion, followed by iodoform. The diet was generous, and a simple tonic

FIG. 2.



Illustration showing ragged state of the parts. Upper jaw-bone.

mixture was prescribed. There was no reason to suspect syphilis. For about three months the condition appeared as if improving, but at the end of this time the temperature gradually rose, getting as high as 100° or 101° F. in the evening; and at the same time the tissues of the nose and cheek rapidly necrosed, and in a fortnight's time a considerable area of the upper jaw-bone was laid bare and the side of the nose had nearly gone. Inside the mouth the hard palate was covered by a black slough, and an opening at the side of the nose on the left side led into the mouth. It was now felt that some drastic operative treatment was imperative, and it was only now that consent was obtained. It was by this time fully seven months since the disease was first noticed by the patient himself. The amount of tissue of the nose and cheek which had sloughed was so great that it was absolutely necessary to remove the upper jaw-bone, and with it the adjacent small bones, such as the nasal and lacrymal, in order to close up the wound, allowing for tissue necessary to be removed on account of its being unhealthy. On removing the bones a granulating mass the size of a walnut was discovered on the inside of the cheek, and exuding a foul discharge of the character already mentioned in connexion with the nostril. The force necessary for the removal of the bony mass caused the thin, carious anterior wall of the maxillary antrum to give way, and there exuded a dark-yellow thick pus intensely foul in odour. All the diseased tissues were removed, and strong nitric acid was applied to the granulating mass. The various parts were washed with strong corrosive sublimate lotion and then dusted over with iodoform, and a presentable face was the result. The bones removed were found soft in parts, especially over the anterior wall of the antrum. Black sloughs covered other parts, while in still other parts the periosteum showed red points. The pathological condition was evidently that of an infective cario-necrosis, but not of an acute type; but when an examination of the decalcified bone is made, the exact condition will be made out. The microscopic character of the discharge will be considered when I speak of the differential diagnosis. Although the eye was red and painful there were no special indications for its removal, and it was spared at this time. Improvement was marked for a week, but by the eighth day the edges of the wounds looked red and soon gave way, and rapid sloughing took place. The eye, too, became inflamed, and in less than a fortnight after the first operation the left eye had to be removed for a general inflammation of the organ. Between the seventh and the tenth days after the first operation the temperature showed a gradual rise, with unpleasant constitutional symptoms. The removal of the eye and scraping away of the necrosed tissue were attended by no benefit either local or constitutional. The lymphatic glands in the neck and under the jaw were not much enlarged, and although there was occasionally some bronchial catarrh the lungs were not markedly affected. The temperature kept high, especially at night, but it varied. Some nights it reached 101°, 102°, or even 103°, with a morning fall of one, two, three, and once of nearly four degrees. On the whole the tendency was for the temperature to keep high, but on one or two mornings there was a fall to nearly normal. One evening it went up to 105°. The course of the temperature pointed directly to a septicæmic process. Side by side with the rise in temperature the disease increased locally. The septum of the nose entirely necrosed, the remainder of the nose sloughed away, the bones of the other side were attacked, and the patient presented a horrible appearance, and despite the assiduous application of antiseptics the odour was overpowering and the necrotic process rapid in its increase. The discharge remained of the same kind throughout the entire course of the disease

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The man lingered on for a longer period than one would have expected from the large amount of local mischief, and the constitutional effects were less potent than one would have imagined, more especially that for months the patient must have carried some of the discharge into his stomach with every meal partaken of. He finally died of exhaustion some fifteen months after the first onset of the disease. An examination of the body after death was not obtained.

The diagnosis is difficult, but can be arrived at partly—(1) by exclusion; (2) by remembering the man's employment; (3) by the character of the discharge and its microscopic examination; and (4) by the seat of the disease. Syphilis is excluded by the history, by the absence of other signs, and by the little effect that mercury had on the course of the disease. Actinomycosis was thought of, but an examination of the pus from the antral abscess showed no ray fungus. A simple infective necrosis was excluded by the chronicity and by the elective seat of the disease. Cancrum oris was thus excluded. One is narrowed down to accept chronic glanders as the true diagnosis, and in favour of this we have (1) the man's employment as a shoeing-smith; (2) the original position of attack of the disease—namely, the nose; (3) the nature of the discharge, offensive, watery, and often tinged with blood and pus; (4) the extensive necrosis of soft parts, bones, and cartilage; (5) the fatal results; and (6) the microscopic revelations. A specimen of the discharge was placed on a cover-glass, dried in the flame of a spirit lamp, and stained with alkaline methylene-blue, washed in very dilute acetic acid, then in water for a considerable time, and dried and mounted and examined under both low and high powers. No characteristic club-shaped bodies could be seen as found in actinomycosis, but organisms something of the size of the tubercle bacillus were seen in great numbers. Whether these were the bacilli mallei of glanders I am unable to say for certain, for I was at the time unable to find a detailed description of that organism; but altogether the chances are that they were so. (Since writing the foregoing I have been able to satisfy myself that they were the bacilli in question.) Glanders is a very rare disease in the human being, and especially so in Great Britain, and if we take 100,000 deaths probably hardly one is due to this affection. Thus every case which occurs is of sufficient interest to be worth publishing.

Leeds.

TRANSFUSION OF SALINE FLUID; SIX SUCCESSFUL CASES.

BY NATHAN RAW, M.D. DURH., &C.,
MEDICAL SUPERINTENDENT AND PATHOLOGIST, DUNDEE ROYAL INFIRMARY.

HAVING for some years employed transfusion of saline fluid in all cases of hæmorrhage where a fatal issue threatened, I beg to place on record some successful results in the hope of encouraging others to adopt this simple and efficacious means of saving life in these cases.

CASE 1.—A young woman aged twenty-four years, suffering from all the symptoms of gastric ulcer, went for a walk and was seized with violent hæmatemesis. She fell fainting in the street and was carried to hospital. It was estimated she had lost several pints of pure blood. On admission to the Bolton Infirmary she was quite unconscious and pulseless, conjunctival reflex was abolished, the respiration was sighing, and the extremities were cold and clammy. She was given the ordinary styptics, ergotinin, &c., but as she was rapidly sinking she was transfused with normal saline solution—one drachm of chloride of sodium to a pint of sterilised water heated to 100° F. Altogether four pints were injected into the median basilic vein, with wonderful effect. She slowly recovered and is now (four years later) quite well.

CASE 2.—The patient, a woman, was suffering from exhaustion through long-continued suppuration of the knee-joint, which was amputated. The immediate shock of the operation was sufficient to cause serious syncope, although very little blood was lost. Immediately after amputation of the thigh she showed serious symptoms of collapse and was pulseless. The median basilic vein was at once opened, four pints of the fluid were injected, and at the same time internal stimulants were given and external heat applied. In a short time she revived and made a good recovery.

CASE 3.—A robust man was admitted to the infirmary with compound depressed fracture of the occipital bone, opening into the lateral sinus. He was brought in as dead, having lost an enormous quantity of blood. I at once elevated the bone, removed a large piece (2 in. by 2½ in.), and plugged the lateral sinus with gauze. I then transfused him with four pints and a half of saline solution, with the result that he made an excellent recovery and is now at work.

CASE 4.—A man was admitted who had cut his throat. He was found by the police in a field, where he had lain all night. On admission he was unconscious and pulseless. He was at once transfused with the fluid (3½ pints) and slowly recovered.

CASE 5.—A young man aged twenty years was admitted "carried on a door." He had a large varicose ulcer which had suddenly opened into the internal saphenous vein. On admission he was unconscious and pulseless, with sighing respiration. The median basilic vein was opened, but it was difficult to introduce the cannula, as the veins were so much collapsed. Four pints of saline fluid were injected, with the result that the patient recovered.

CASE 6.—This proved to be a marvellous one. A man was knocked down by an engine on the railway. His right arm was cut off above the elbow, and he had a compound fracture of the skull. He was quite unconscious and had lost a quantity of blood. When admitted I did not expect him to live many minutes; I, therefore, hurriedly tied the main vessels of his arm and opened the internal saphenous vein. I injected, in all, eight pints of normal saline solution, with marvellous effect. His pulse improved at once, and although he remained unconscious for ten days he made a good recovery.

Remarks.—I have transfused in a number of cases of severe accident where hæmorrhage and shock have been combined, but unfortunately without such good results as in hæmorrhage only. The *modus operandi* is simple. An incision two inches long is made obliquely in the line of the vein, which is tied with a single loop of catgut at its lower end, a loose ligature being placed at the upper end of the vein. Between the ligatures the vein is opened, and a small straight glass cannula is introduced. To this are attached two yards of small rubber tubing with a small glass funnel holding four ounces. The cannula is securely tied in the vein, and then all is ready. The greatest care must previously have been taken to exclude all air from the tubing and cannula by filling them with the solution. The solution is prepared by adding one drachm of chloride of sodium to each pint of carefully sterilised water heated to 100° F. The fluid is poured in slowly and the limb raised to allow it to flow more easily. In this way several pints may readily be introduced. After sufficient has been given the vein is tied above and below, the skin sutured, and the wound dressed antiseptically. I have often left the cannula in the vein so as to allow more fluid to be injected on different occasions at short intervals. In my opinion the only danger to the patient is from the introduction of air; but with care this can always be avoided. The procedure is so simple that I can strongly recommend its use, as sometimes apparently most hopeless cases may be saved.

Dundee.

A VACCINATOR'S DEPUTY.—Some weeks ago, it will be remembered, the Local Government Board inspector, in complaints which he made against two public vaccinators of the East Preston (Sussex) Union, protested against the regular employment by such officers of deputies. Both gentlemen were communicated with and their subsequent explanations referred to the Board. One, who undertook to amend matters, is no further referred to. In the other case, however—that of Mr. Evershed of Arundel—the Local Government Board think that if he is unable or unwilling to perform habitually in person the duties which he had undertaken the guardians should terminate their contract with him and appoint some other medical practitioner as public vaccinator. It is stated that in 1892 Dr. Sweeting cautioned Mr. Evershed upon this point and another with respect to the keeping of his register. This decision having been communicated to Mr. Evershed, he has now tendered his resignation of the office. It may be worth adding that another Sussex medical officer has since resigned in one of the western unions, and gives as his reason that he can no longer himself undertake the duties of the office.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

A CASE OF CHRONIC INVERSION OF THE UTERUS CURED BY AVELING'S REPOSITOR; REMARKS.

(Under the care of Dr. G. E. HERMAN.)

WE have lately published in the columns of THE LANCET[1] the account of a case of inversion of the uterus of recent origin, where treatment by manipulation was successfully carried out and the reduction effected in a short time under an anæsthetic. In the following case the inversion was of six months' duration and required a more prolonged treatment to effect a cure; it was, in fact, one of those for which this repositor was specially made. The mode of action of this instrument is thus described in the communication made by Dr. Aveling, as referred to by Dr. Herman. Reduction takes place by the cervical method. Newnham advised this method of reinversion in 1818. He said: "It is wisest and best to endeavour to reinvert the uterus by returning first that portion of it which was last expelled from the os uteri." Pressing on the uterus causes counter-vaginal traction on the cervix, making it unroll gradually until the internal os is reached, where a little delay is caused by its being less dilatable. When this point is passed the body of the uterus soon opens and admits the cup. The last step must take place rather suddenly, for all patients say that something has "given way" and comparative comfort is the result. For the notes of the case we are indebted to Mr. W. Eardley, clinical clerk.

A patient aged twenty-three was admitted into the Victor Ward of the London Hospital on Nov. 21st, 1894. She had had one child, born in the preceding May. The labour was difficult; instruments were used, there was much bleeding afterwards, and she kept her bed for six weeks. She had never been well since, having been losing blood almost continuously. When not losing blood she had a yellow discharge. She had had no pain. On vaginal examination a rounded swelling about the size of a walnut was felt projecting through the os uteri. The patient did not manifest pain when it was touched. The sound could not be passed up beside it, and by bimanual examination it was found that the body of the uterus was not situated in its proper place above the cervix. The diagnosis of inversion of the uterus was clear. On Nov. 30th Aveling's repositor was applied, the tapes being so fastened that the elastic bands by which the upward pressure was applied were moderately tense, but not at the utmost tension they would bear. The repositor caused a good deal of pain, with at first vomiting. It was removed, the state of the uterus examined, and the repositor readjusted on Dec. 1st, 3rd, 5th, 8th, 11th, 13th, 15th, 17th, 19th, and 21st respectively, various changes being made in the size and shape of the cup used, but the tension on the elastic bands being about the same. Each time the repositor was removed it was found that the inversion was unreduced, although it was thought that the fundus uteri was pushed a little higher up. The patient had suffered a good deal from pain and nausea while wearing the repositor, and therefore she was allowed a few days' rest before proceeding further. On Jan. 18th of this year the repositor was again adjusted; but this time the tapes were so secured that the elastic bands were stretched to their utmost tension. On the 20th the uterus was still unreduced. On the 21st the patient's temperature was 102° F. and she complained of great pain. On examination the cup was found within the cervix, the fundus uteri being in its normal position. The patient was discharged cured on Jan. 29th.

Remarks by Dr. HERMAN.—Inversion of the uterus is so uncommon, and so short a time has passed since it was regarded as incurable and often treated by amputation, that cases which exemplify its curability are still worth reporting. The case above related shows an important practical point, which is that for the reduction of chronic inversion of the uterus pressure must not only be continuous but powerful. Reposition did not take place until the elastic bands had been so tightened that their utmost power was exerted. More gentle pressure, though continuous, and protracted with short intervals for three weeks, failed to cure. I regret that I did not measure the tensile strength of the bands. Dr. Aveling, in his latest account of his repositor and its use,[2] laid stress on the importance of seeing that the instrument was furnished with elastic bands of the proper kind, from which I gather that he had found that power as well as continuity of pressure was needed. The case shows also another and less important point—viz., that great tenderness of the inverted uterus is not always marked enough to be of use in distinguishing the inverted uterus from a polypus.

[1] THE LANCET, July 27th, 1895.

VICTORIA HOSPITAL, BHOPAWAR AGENCY, CENTRAL INDIA.

CASE OF NEURALGIA OF KIDNEY; NEPHROTOMY; RECOVERY.

(Under the care of Surgeon-Lieutenant-Colonel DUKE.)

NEURALGIA of the kidney, independently of the presence of calculus or gross change, is a condition which is not usually mentioned in our text-books or even in special treatises on the subject of renal disease. It has, however, been long recognised that in certain cases of painful kidney, when stone was suspected from the symptoms and nephrotomy performed, relief might follow, although no stone was found. More than this; in two cases with this history no disease was found after thorough examination of the affected kidney on a subsequent occasion. The proof afforded by these two cases is of great importance, for the difficulty experienced in feeling a stone through the kidney substance is frequently insuperable, and at the first examination of these cases the renal pelvis does not appear to have been explored. Dr. L. McLane Tiffany[1] of Baltimore cut down on a kidney the seat of intense and recurring neuralgia of several years' duration, explored it thoroughly, and, not finding any stone, split the capsule for three inches and obtained a cure. The incision was made through the capsule with the idea of relieving tension.

The patient, a fine-looking widow aged thirty-five, childless, had suffered for more than four years from attacks of agonising pain in the left loin. She could fix the spot with her thumb, this being a point a little below, and close to, the left twelfth rib. A circular scar, the result of "firing" in previous years, was visible here. In character the pain was paroxysmal, while the agony endured was most acute, the body being doubled up in severe colic, and the teeth and hands clenched. The attacks lasted from half an hour to two hours, being often followed by a good deal of exhaustion. They came on two or three times a month, and from being a strong, powerful woman she became thin and weak. In the intervals her health was good. Morphia injections, Indian hemp, chloral, and bromides gave merely temporary relief; but during the acme of an attack only chloroform anæsthesia was of any practical use. Menstruation was scanty. Vaginal examination showed neither tenderness of the ovary nor disease of the womb. The urine was normal. No gravel or blood had ever been passed. Thus stone in the kidney and ureters, as well as ovarian and uterine mischief, were excluded. Movable kidney alone remained to diagnose. The most careful examination under chloroform, however, failed to detect any movement or transposition of this organ. The diagnosis could not be determined, but the woman prayed for relief. About this time, in the *Medical Annual* for 1894, under the heading "Surgery of Kidney," I read evidence which convinced me that the patient was suffering from neuralgia of the kidney, and that nephrotomy might cure her. That journal quotes a case under the care of M. Guyon in which nephrotomy was performed, the patient having all the classical symptoms of renal calculus. No calculus was found, but the patient was relieved. Similar cases are

[2] Brit. Med. Jour., vol. i. 1886, p. 475.
[1] Sajous' Annual of the Universal Medical Sciences, 1890, vol. iii., p. 30.

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reported by Sobater, Durham, Reynaud, Tiffany, Bloch, and Hurry Fenwick. The diagnosis having been now settled, and as the patient, whose life was a burden to her, implored for relief, it was determined to operate. On July 1st, 1894, assisted by Surgeon-Major Mosse, A.M.S., the operation was carried out. Owing to the presence of fat, the last rib was made out with difficulty. An incision five inches in length was then made parallel to and three-quarters of an inch below the last rib, dividing the usual structures and exposing a layer of fat of considerable thickness. This was cut through, as well as were the deeper fascia and fibres of the external oblique, leaving a wound of considerable depth, so that the structures were not so easily defined *in statu* as they are graphically described in print. More muscular fibres, including the edge of the quadratus lumborum, required division, the latter freely with scissors. By dilating the parts the kidney was just drawn into sight, and the fat and fascia covering it were opened, when the gland, looking very livid and congested, came into view. By firm pad pressure from the front, aided by Thornton's broad forceps fixed to the fascia, the kidney was raised and drawn well into the wound. Its convex surface, along the whole length, was then incised to the depth of one-tenth to one-eighth of an inch. A crucial cut was next made to the same depth. The bleeding which followed was easily checked by sponge pressure. The wound was now freely irrigated by carbolic solution (1 in 40), which appeared to act strongly on the tissues. (This is noted, as Surgeon-Lieutenant-Colonel Duke thinks that absorption took place with subsequent irritation.) A drainage-tube having been laid along the whole length of the kidney, the deeper wound was closed by three and the upper by six (No. 13) Chinese silk sutures. Ferrocyanide gauze and cotton wool, held in position by a wide flannel bandage, completed the dressing. The operation occupied upwards of an hour. Half a grain of morphia was subsequently injected subcutaneously. The after-progress was as follows. On July 1st, at 10 P.M., there was much sickness, burning pain in the wound (tension), and also some abdominal pain. On the 2nd, at 7 A.M., the dressings were changed, as they were soaked with serum. At 10 A.M. vomiting, nausea, and abdominal pain occurred. There was still severe burning in the wound. At 5 P.M., fearing peritonitis, and acting on Mr. Lawson Tait's advice, the following draught was given: three drachms of sulphate of magnesia, one drachm of sulphate of soda, and two scruples of potassio-tartrate of soda, in two ounces of very hot water. At 10 P.M. there had been no vomiting since the administration of the saline draught. The pulse was 120 and the temperature 102° F. Fifteen grains of antipyrine, given to reduce fever, were vomited with green bile. A second dose of fifteen grains was retained. On the 3rd the bowels were moved freely once in the night. At 10 A.M. the dressings were changed. The wound was found to be quite sweet. There was very little red sanious discharge; owing to their evident tension, Surgeon-Lieutenant-Colonel Duke removed the highest and the lowest sutures. The urine was smoky, like that of carbolic acid poisoning. An effervescing draught was given with prussic acid and belladonna, and repeated at 4 P.M. At 9 P.M. the urine was coffee-coloured. The patient was in much distress. The bowels were moved four times in the day. At 10 P.M. the pulse was 116 and the temperature 102°. One-sixth of a grain of pilocarpine with ten minims of water were subcutaneously injected as a diuretic. At 10.30 P.M. fifteen grains of antipyrine were given in an effervescing draught. On the 4th, at 10 A.M., the patient was cheerful and had passed a good night. The pulse was 100. The urine was almost normal in colour. The wound was sweet, with very little discharge. Three more sutures were removed (unwisely). At 4 P.M. there were signs of menstruation. On the 5th, at 10 A.M., the wound was still sweet, and the remaining suture was taken out. The wound had united in the centre, but not at the upper and lower edges. Strapping was applied. The patient was very cheerful. The abdomen was lax and free from all pain. On the 7th the patient was doing well. On this day Surgeon-Lieutenant-Colonel Duke went on leave, and Surgeon-Captain Davoren, A.M.S., kindly took over the case. To curtail the report, it is only necessary to add that the sutures were removed too soon. In consequence the edges gaped, and the wound did not heal by granulation until July 27th, when only a small drainage-tube opening remained, all eventually closing well and strongly.

Remarks by Surgeon-Lieutenant-Colonel DUKE.—Speaking generally, the chief difficulty in either medicine or surgery is correct diagnosis; this once definitely settled, a certain line of treatment can usually be satisfactorily carried out. The case described above is one where a correct diagnosis was attended with difficulty. The patient was examined by me eleven months afterwards. The parts were firmly healed, and there was no tendency to bulging or weakness of the wall. Since the day of the operation there has been no return whatever of the original pain; and, as far as this is concerned, the patient is cured.

Reviews and Notices of Books.

Leprosy in its Clinical and Pathological Aspects. By Dr. G. ARMAUER HANSEN, Inspector-General of Leprosy in Norway, and Dr. CARL LOOFT, formerly Assistant Physician to the Lungegaards Hospital. Translated by NORMAN WALKER, M.D., F.R.C.P. Edin., Assistant Physician for Dermatology, Edinburgh Royal Infirmary. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited. 1895.

THIS work, illustrated as it is with numerous photographs and coloured plates of the microscopical appearances of the disease, strikes us as an excellent contribution to the subject of which it treats. In less than 150 pages, if we exclude the plates, the authors have succeeded in telling us all that is really known about leprosy in its clinical and pathological aspects. They speak from a large and extended experience and have taken every advantage of their opportunities to verify their observations and present the reader with a comprehensive statement of the result of their studies. The book is written in a scientific spirit and lucid style, and appears to have been very well translated by Dr. Norman Walker. The chief feature of the book is the manner in which the course of the disease is explained by the development of the special bacillus to which the disease is now—and correctly in our opinion—attributed, for the bacillus lepræ can be demonstrated in all leprous products, and we may practically conclude that leprosy is a chronic disease caused by it. Since the publication of Danielssen and Boeck's work in 1847 leprosy has been clinically recognised in two forms, the "nodular" and "anæsthetic"; but, as the authors observe, this nomenclature cannot be regarded as, scientifically speaking, accurate, for the line of demarcation between them is not always easily defined. Skin affections are present in both forms, and the nerves are affected in the nodular as well as in the other form, although not in the same striking way. Still the division corresponds to two clinical types under which a majority of the cases of leprosy can be arranged, and has, moreover, been generally accepted. The authors, recognising the importance of not unnecessarily disturbing an existing and familiar nomenclature, describe the two forms of the disease as *Lepra tuberosa* and *Lepra maculo-anæsthetica*. As the leprosy bacillus is present in both forms, and in every case of nodular leprosy sooner or later the nerves become involved, if only the patient lives long enough, it may be taken that there is an essential unity between the two forms, and the authors consequently do not recognise the name of "mixed leprosy." Chapter II. is taken up with a graphic and interesting description of nodular leprosy, easily diagnosed as a rule by its characteristic skin affection. Chapter III. describes the structure and the microscopic and bacteriological appearances of the leproma, with the aid of some admirable illustrative plates. Chapters IV. and V. treat of lepra maculo-anæsthetica and its pathological anatomy. These chapters are excellent. The diagnosis and prognosis of the disease, its etiology and treatment, with numerous tabular statements, follow. Isolated extracts taken here and there from the volume would

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only give [the reader a meagre idea] of its merits: the book requires to be read as a whole, and we advise all who are interested in the subject to do so for themselves, for it contains much valuable information about this terrible disease. The authors regard the isolation of lepers as the only reliable means by which the spread of the disease can be checked, and they furnish some important statistical evidence of what can be accomplished in this respect. The disease is dependent on a bacillus, but the inquiry hardly narrows itself down into a study of the means by which the bacillus effects its entrance into the body, though study in this direction affords room for interesting inquiry. It does not seem that the exhibition of any known bactericide cures the disease, although patients occasionally recover.

Lectures on Genito-urinary Diseases. By J. OGILVIE WILL, M.D., C.M., F.R.S.E., Consulting Surgeon to the Aberdeen Royal Infirmary and Examiner in Surgery in the University of Aberdeen. London: The Scientific Press, Limited. 1894.

THESE six lectures have the great merit of being thoroughly practical and of giving the results of mature experience in dealing with a frequently occurring class of ailments. Urethral fever, catheter fever, and the treatment of retention of urine are subjects of abiding interest to every surgeon, and it is to the consideration of them that Dr. Ogilvie Will devotes his opening chapters. He ascribes to Sir Andrew Clark the credit of drawing the attention of the profession to certain dangers of ordinary catheterism, the least serious of which is a well-marked but short attack of pyrexia following the dilatation of a stricture by means of a bougie. This attack is usually ushered in by a rigor, which supervenes most commonly in the next act of urination. The temperature may rise to 104° or 106° F.; there is profuse sweating, and next day the patient is quite well, or nearly so. This is the so-called urethral fever, and is insignificant in comparison with the symptoms which catheterism may set up in men suffering from retention due to enlarged prostate. In these cases the patient two or three days after the commencement of catheterism becomes sick and feverish, and may gradually lose strength until his sufferings terminate in death after the lapse of three or four weeks. Post mortem the bladder is found to be inflamed and sloughy, the kidneys are riddled with small abscesses, and micrococci abound everywhere. The most probable explanation of these pathological changes is, in the author's view, the introduction of putrefactive atmospheric germs into the bladder along with air admitted through the empty catheter, and the obvious preventive is never to completely empty an over-distended bladder. For retention caused by strictures too tight to admit a No. 1 English catheter the author recommends the passing of a filiform bougie, followed by a metallic catheter screwed to its end. For prostatic retention he generally employs Mercier's elbowed catheter. Silver catheters should never be fastened into the bladder, but flexible instruments may be left in position. The remaining lectures are on Gleet, Hydrocele, Varicocele, and the Treatment of Acquired Syphilis. The author regards syphilis as curable, and is in the habit of giving mercury continuously for the first six months, commencing its use during the primary stage. The work bears a somewhat too comprehensive title; it can, however, be highly recommended as a text-book on the subjects of which it treats.

Atlas of the Diseases of the Skin. By H. RADCLIFFE CROCKER, M.D., F.R.C.P., Physician to the Department of Diseases of the Skin, University College Hospital. Parts VII. to X. London and Edinburgh: Young J. Pentland.

THE four parts of this most admirable atlas which have appeared at regular bi-monthly intervals since our last notice fully maintain the high standard of excellence with which the publication commenced. With hardly an exception the drawings are strikingly natural and have been reproduced with much fidelity, whilst the accompanying text is for the most part wisely limited to a brief description of the disease depicted and the history of the case from which the drawing was made. Each part contains six plates, and as some of these bear more than one figure, it is clear that when finished the Atlas will be as complete in range as it is excellent in design. Amongst the drawings to be found in the parts before us which may be singled out for special mention are those of prurigo, impetigo contagiosa, psoriasis guttata, and pigment anomalies in Part VII.; of herpes and of psoriasis in Part VIII.; of hydroa herpetiformis, psoriasis punctata, and ichthyosis congenita in Part IX.; and of elephantiasis, seborrhœa, alopecia areata, and tinea versicolor in Part X.; but where the general standard of excellence is so good it is not easy to make any marked selection. In Part VII. there is an illustration of the severe disease, pemphigus vegetans, the text giving a detailed description of the clinical features of the case and the post-mortem examination. The illustration of Barbadoes Leg (elephantiasis tropica) in the same part is from a museum specimen of the amputated leg of a negro in Barbadoes. The characteristics of chloasma uterinum, leucoderma, and melanoderma are well shown in the drawings to be found in this part; and we may contrast with these pigmentary disorders the remarkable cases of argyria and chrysarobin erythema which are depicted in Part VIII. That of argyria is singular in the fact that the only apparent source of the silver impregnation was the use of a gargle of nitrate of silver thirty years previously. An illustration of xanthema diabeticorum serves to evoke an account of the points of distinction between this and the ordinary form of xanthema. The subjects of rodent ulcer and epithelioma are illustrated by eight figures, including one of "Paget's disease" of the scrotum. One of the plates in Part X. contains four figures of some of the more frequent "vaccination eruptions"—viz., impetigo, vaccinia-lichen, and a peculiar rash of erythematous type spreading from the vaccinal site and attributed to microbic infection. We can only reiterate our belief in the great value and utility of this work, for the production of which both author and publisher deserve much commendation.

An Australian in China. By G. E. MORRISON, M.B., C.M. Edin. London: Horace Cox. 1895.

ANY book about China will be read at the present moment with increased interest, on account of the terrible massacres of our fellow countrymen that have recently taken place. Dr. Morrison, who travelled from Shanghai along the Yang-tse-Kiang as far as Sinfu, and then turned off in a south-westerly direction to make his way to Burmah, has written a most readable and interesting book. He gives us a more favourable impression of the country than we are accustomed to hear from modern travellers, and, indeed, he seems to have met with nothing but kindness and courtesy; but, then, his mission did not clash with existing interests. His plan was not to make himself offensively ostentatious, but to let the Chinese really understand that he was their superior, and occasionally to be condescending. We are convinced from our experience of travel in the East that this is the best way of dealing with Orientals. Rudeness must be carefully avoided, but on the other hand the "distinguished stranger" attitude must be carefully preserved. Dr. Morrison shortly sums up the Opium Question thus: "The Chinese do not want our opium—it competes with their own." This, we fancy, is the whole question in a nutshell. Chinese medicine is much more complicated than that of the West,

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and the great thing to be able to do is to feel the pulse correctly. "The pulses of a Chinaman vary in a manner that no English doctor can conceive of." We commend the following to the notice of Dr. Oliver for his next edition of "Pulse Gauging": "Death is no further off if the pulse seems like a fish whose head is stopped in such a manner that he cannot move, but has a frisking tail without any regularity; the cause of this distemper lies in the kidneys." We might go on quoting the whole of Dr. Morrison's delightful book, but we will instead recommend everyone to read it. Anyone will be interested with it, and anyone who has ever "heard the East a-callin'" will be doubly charmed.

Analytical Records FROM THE LANCET LABORATORY.

DRY IMPERIAL CHAMPAGNE "SANS SUCRE."

(MOET AND CHANDON; LONDON: SIMON KINGSCOTE AND CO., CRAVEN HOUSE, NORTHUMBERLAND-AVENUE, W.C.)

IT is well known that champagne is "forbidden fruit" to many on the score of its burden of sugar—a fact which has led Messrs. Moet and Chandon to introduce a wine possessing all the esteemed characters of a choice vintage champagne, yet which may be taken as freely and as safely as claret as regards its sugary constituents. In view of the importance of this introduction in connexion with its reputed adaptation to the requirements of those to whom sugar is prohibitive or objectionable, we submitted the wine to exhaustive analysis with results which were very satisfactory in this regard. It contained alcohol, by weight 11·38 per cent., by volume 14·09 per cent.; extractives, 2·43 per cent.; total sugar, 0·65 per cent.; total acidity reckoned as tartaric acid, 0·98 per cent. One pint of the wine contains, therefore, about 60 grains of sugar, an amount which is one-tenth less than that of some wines, and at least one-third less than that contained in the generality of specimens. The presence of a small quantity of extractives is furthermore in its favour for the special requirements indicated. In short, it is a generous, exhilarating wine by no means lacking the agreeable qualities of an excellent brand of champagne, yet containing but a minimum of those constituents which may be prejudicial.

KARSWOOD CREASOTE.

(E. G. HUGHES, VICTORIA-STREET, MANCHESTER.)

Karswood creasote is described as a new distillate of "sweetwood" creasote, and is, we find, a very pleasant-smelling, aromatic, clear, colourless, oily, and volatile liquid, which has been employed with advantage in bronchitis and other respiratory affections by the simple plan of inhaling a small quantity of it placed upon a handkerchief. About one-third of it consists of a light oil, boiling at 80° to 81°C., which is the pleasing fragrant portion. The rest distils at approximately the same point as wood creasote oil. Karswood creasote is one of the pleasantest volatile antiseptics that has come under our observation, and is doubtless very suitable, as it is very agreeable, for the purposes of inhalation. It therefore deserves to be more widely known.

CABINET WHISKY.

(CHAS. BLUNDELL AND CO., 63, QUEEN VICTORIA-STREET, E.C.)

The taste as well as the results of analysis of this spirit were alike favourable in respect to its quality. It is well matured and soft to the palate. On expelling the alcohol by distillation the residual liquid developed a marked aromatic smell characteristic of the resinous constituents of wood. "Cabinet Whisky" is stored, it is said, for eight years before it is placed upon the market, which step, combined with evident skill in blending, is the chief factor in producing a pure and wholesome spirit. On analysis the following results were obtained: alcohol, by weight 39·80 per cent., by volume 47·13 per cent.; proof spirit, 82·59 per cent.; extractives (due chiefly to storage), 0·59 per cent.; mineral matter, *nil*; total acidity, reckoned as acetic acid, 0·03 per cent. Its freedom from acidity is noteworthy.

PEPTENZYME.

(NEW YORK: REED AND CARNRICK; LONDON: THE PEPTENZYME CO., 25, ALFRED-PLACE, S.W.)

Apart from containing the proteolytic ferments, this interesting preparation may claim also to belong to that important class of bodies of organic extractives, like the extract of thyroid, for example, which have come into use so prominently of late in the treatment of disease. In a description of its properties and preparation it is stated that "1000 each of the following glands are taken:—the salivary, peptic, and pancreatic, Lieberkühn's and Brunner's, and the ferment extract of 1000 spleens and livers, so that peptenzyme contains a proportional quantity of the enzyme principles of the whole series of digestive organs, and acts as the secretions of the natural organs in life, since they have not been injured during the process of isolation." To one part of this "isolated protoplasmic, active ferment and latent enzyme" in the form of powder, which is slightly benzoated, 1½ pts. of powdered sugar, 1½ pts. of milk sugar, and ¼ pt. of citric acid are added. We were able in our laboratory experiments to confirm its proteolytic activity, both in alkaline and acid media; of the results of its practical administration, however, we cannot here speak. Mr. Carnrick describes peptenzyme, the preparation of which is his own discovery, as a combination of the active ferments and *undeveloped* enzymes of all the digestive organs or glands in the same physiological condition as they exist in nature and in all stages of development. Further, the process of preparing it is a "mechanical one, whereby the digestive organs immediately on being taken from the animal are freed from fat, water, and fleshy tissues by machinery, carefully dried, powdered, and sifted, and the digestive cells preserved and mixed in the same proportion and in exactly the same state of development as they existed at the moment the animal was slaughtered." Again: "It must be borne in mind that the most important contents of the digestive organs or glands is the delicate mother-enzyme principle that has not reached an active state of development." "This consists first of the requisite protoplasmic material, selected from the blood by affinity and in various stages of development, reaching at last the mature ferment and capable of changing food into the assimilable form." The cells and protoplasm in "peptenzyme," being in a dry state, with their structure and plasmic material uninjured, are said to retain their vitality unimpaired. Peptenzyme claims to be a distinct advance on compounds which are merely peptonising. It may be procured in the form of tablet, powder, or elixir.

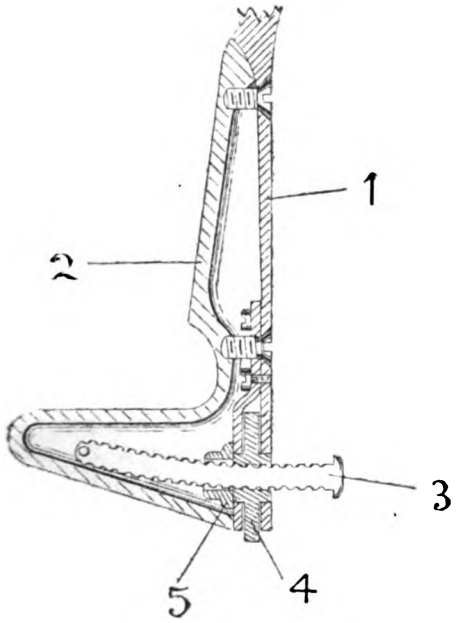
New Inventions.

A NEW ADJUSTABLE LOCK FOR OBSTETRIC FORCEPS.

THE lock consists of a flat racked bar (depicted in the figure at 3) which can be propelled from one handle (2) to the other by turning a small wheel through the centre of which the bar passes. The wheel is inserted in the handle, and the hole in its centre through which the bar passes is a screw. The bar, by the continued action of the wheel, can be made to pass to and enter an oblong opening in a similar wheel (4) inserted in the opposite handle, and by a half-turn of the wheel the head of the bar, which is also an oblong, can be there retained. When not in use the bar can be screwed into a

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hollow in the handle. The alteration Mr. E. MacWilliam Bourke makes in the forceps is merely extending the end of the handles about one inch to allow of the bar being retained, and the insertion of a small wheel in each, which projects just sufficiently to allow of its being turned by the finger and thumb. By the use of the bar compression can be



regulated and also a perfect lock obtained which can be freed by a half-turn of the wheel which is inserted in the opposite handle to that from which the bar projects. The lock can be put on any existing forceps, it does not interfere with its balance, and its cost is very slight. Mr. Bourke's idea has been carried out by Messrs. Arnold and Sons, West Smithfield, from whom the forceps may be obtained.

RIVER POLLUTION IN LANCASHIRE AND CHESHIRE.

MANY of the rivers of Lancashire and Cheshire—notably the Irwell and Mersey, with almost the whole of their tributaries, and the lower portions of the Ribble, with, more especially, the Calder falling into it at Whalley Abbey—have been the receptacles of sewage filth and manufacturing refuse for so long that the prospect of material improvement has appeared hopeless. Now, however, the outlook, though far from brilliant, is somewhat less depressing, as more energy is being displayed by the various authorities. The Ribble, one of the most beautiful of northern streams and dearly loved by anglers of all degrees, has suffered much from pollution, which has caused from time to time great destruction of fish life. The loss of the money value of the trout, salmon, and other fish is the least of the evils attending this destruction, and is a trifle compared to the interference with a pleasurable and healthful recreation, with the various trades and occupations dependent thereon, and also with the injury to the amenities of life resulting from the degradation of what should be one of the most beautiful and charming elements of scenery to the condition of a disgusting and evil-smelling sewer. But those who still cherish the hope for better things have been encouraged by the issue of a recent action by the Ribble Joint Committee against the Accrington and Church Sewerage Board for polluting two tributaries, one being the River Calder. In December, 1893, the board was ordered to adopt within eighteen months means for stopping the pollution, but nothing was done. The Ribble committee proved that for twenty-eight days from June 12th last "the defendants had made default in complying with the requirements of the order of the court." One of the "strategical proceedings" of recalcitrant authorities seems to be what is called experimenting. The analytical chemist to the Accrington board had been experimenting as to the best precipitant, at a cost in chemicals of from £50 to £300 per annum, and a member of the sewerage board was stated by a witness to have said at a meeting: "While we are experimenting we are delaying, and that is what we want." It also came out in evidence that another member had said: "I believe we have more to gain by delaying than by hurrying." The judge said there had been unjustifiable delay. "The carrying out of the Act was very unpopular, because it affected very little the persons called on to spend money in purifying the effluent—the sewage ran down the river and poisoned someone else." This being the first case "he would impose a penalty of £10 a day, making £280, with costs on the higher scale." The full penalty is £50 per day. The joint committee of the Mersey and Irwell and the Manchester corporation are in a somewhat peculiar relation. Both bodies are anxious for the purification of the Irwell above Manchester and Salford, but the committee wants more energy shown in dealing with the sewage of these cities themselves and a better effluent from them. The filthy condition of the Irwell has been patiently endured for many years, but since the completion of the Ship Canal the evil consequences of its continued pollution have been more keenly realised. From the most distant parts of the watershed it increases steadily as Manchester and Salford are approached, and the same may be said as regards the Mersey down to its junction with the Irwell. It must be admitted that Salford, notwithstanding her shortcomings, has for years past endeavoured to bring the law to bear on the various authorities above, though with little effect. Manchester has not done much to help in the matter, not so much, perhaps, from want of will as from the fact that Salford stood in the position of conservator. But however virtuous their attitude towards the delinquents above, they have both been guilty as to their own treatment of the river in its fetid and sinuous course through their midst. At the last meeting of the joint committee it was stated in a report on the sewage works at Davyhulme that nothing had been heard from the corporation since Jan. 28th as to the progress made towards their completion, and it was recommended that the corporation be requested "to furnish the joint committee before the next meeting with a definite statement as to how they intend to deal with the whole sewage of the city." There seems to have been some feeling that Manchester had been treated too leniently, and it was asked why the corporation had not been prosecuted. The answer was that there were two prosecutions pending, one in respect of Gore Brook, Gorton, and the other of Holt Town. The vice-chairman of the joint committee (who for a considerable period has been practically chairman owing to Sir J. F. Hibbert being, till the election, fully occupied with his parliamentary duties) is also chairman of the rivers committee of the city council, which has charge of the sewage of the city, so that he is the occupant of two stools on which it must be difficult to sit comfortably at once, and between which it is possible to slip. He pleaded that the corporation were bound to pay some regard to the ratepayers' pockets, that they had already spent £500,000 on this work, and that "if the land scheme of the corporation were carried out in its integrity it would mean another £100,000 on the debt of Manchester." In the end it was decided to allow two months to the corporation in which to submit their report. The case of the Gore Brook was down for hearing at the City Police-court on the 31st ult., but was adjourned for two months, as plans and estimates were being prepared for the works, "with a view of obtaining borrowing powers and the sanction of the Local Government Board in order to let the contract at once." While these proceedings show activity on the part of the authorities, it is scarcely surprising that they are not popular with some of the manufacturers, and from time to time letters appear protesting against interference with the long-established practice of fouling the streams for the benefit of neighbours lower down. Happily it is not always so, and testimony has often been borne in the committee to the generous and hearty coöperation of many of the manufacturers themselves in the efforts being made to bring back the rivers to a more cleanly and wholesome condition.

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THE LANCET.

LONDON: SATURDAY, AUGUST 17, 1895.

OUR columns have again been opened to the discussion of the several questions which arise out of the fact that the prefix of Doctor is both a correct academic appellative and a colloquial method of address. The ambiguous position of the title has bred, as was natural, many ambiguities, so that there are points and half-points without number over which differences of opinion will prevail, and consequent dispute can take place. This is well illustrated by the letters received by us, a typical selection of which have been printed, and we may say at once that we do not intend to deal seriatim with the issues therein raised. We intend to use them as a text for an exposition of our views on the question, premising that these views have been adopted by us more with an eye to courtesy and practical expediency than to cold logic, which can have little part in anything which starts with a flaring ambiguity.

Firstly, there can be no doubt that in all circumstances where medical status has a claim on professional or public attention, in all official connexions—whether exclusively medical or no, and in the social relations of strictly medical circles, only one class of practitioner has a clear and incontrovertible right to the title of Doctor—viz., the Doctors of Medicine of those universities whose doctorates are registrable degrees. It would be strictly logical counsel to advise that only the persons possessing this clear and incontrovertible right should be addressed as Doctor, but as we ourselves, in a medical journal, have decided that such a counsel is too much one of perfection in a world of necessary compromise for us to rigidly follow, we cannot consistently urge the necessity of the strict limitation upon our readers and upon the numerous correspondents who have asked us for a pronouncement. There are undoubtedly cases where the withholding of the title, while strictly correct, constitutes an ungracious act of omission. In the case, for instance, of a man who is registered by the General Medical Council as holding the diplomas of recognised licensing bodies, and who adds to these the doctorate of a university of whose status as a degree-granting institution there can be no doubt, although not registrable—in such a case we consider the frailty of addressing the practitioner as Doctor so venial that we lapse into it as a habit. It will be noticed that the error, though we hope pardonable, brings with it its own risk of punishment, for it might entail at any moment the invidious task of defining the status of a given university. This in some cases would be easy, but in some might require an amount of discrimination that could not be provided for by rules; and then the situation would have to be dealt with by every man according to his private taste. Again, to give a second very obvious example where the withholding of the title of Doctor causes the precisian so doing to assume a somewhat awkwardly exclusive attitude, there is the case of Bachelors of Medicine, whose baccalaureates are held from universities granting a duly registrable doctorate. Should these gentlemen be addressed as Doctor? We ourselves give them the title, knowing that to do so is indefensible logically, but finding that not to do so to *some* would entail serious confusion, and that, as a consequence, not to do so to *all* would have the appearance of a no less serious lack of courtesy. There have been Bachelors of Medicine who have held the highest posts at general hospitals or in the great medical corporations without proceeding to the doctorate. Such Bachelors of Medicine have been, and are still, considered eligible to apply for the staff appointments at public institutions, whose honorary physicians are so universally styled Doctors, and have been styled Doctors for so long a period, that to do otherwise would require, in our eyes, a more practical justification than an attempt, however laudable, after accuracy in terminology. We cannot admit that the question of the comparative difficulty of the examinations of certain of the universities and certain of the corporations affects the procedure. While the period between the securing of the baccalaureate and the advance to the doctorate is unlimited in length by the universities, and while strictly medical circles recognise the Bachelor of Medicine of all the degree-granting universities as a proper competitor against the Doctor of Medicine for medical appointments and awards, so long will it be a task too hard for us to abstain from illogically conferring the title of Doctor upon the Bachelor of Medicine; and we cannot attempt to separate the Bachelors of different universities into groups requiring different treatment, although the gulf placed by some—London University, for instance—between the baccalaureate and the doctorate is a sensible obstacle, while that in others forms no practical impediment.

The position of the diplomates of the several Royal colleges and corporations is so universally recognised (and also, we are pleased to say, so universally acquiesced in by themselves) that it may seem over-explanation of the obvious to refer to it; but there are one or two little points even here that, from the frequency with which they are referred to us for our opinion, would seem to require elucidation. Firstly, such diplomates are not entitled to the style of Doctor however well known to their patients they may be under that style. The diplomate must not arrogate to himself a title conferred upon him colloquially and not gained academically. The profession, knowing well that degrees do not make a man, and the public knowing it almost as well and daily learning to know it better, he will suffer nothing by his abstention; and this we are glad to remember, as undoubtedly there are degrees obtained by many university graduates whose professional attainments are in no way superior to those of the diplomates of the Conjoint Board, and whose preliminary testing has neither been so severe or so thorough as many of their fellow-students to whom circumstances have made the rightful possession of the title of Doctor almost an impossibility. Secondly, the holder of the Licence of the Society of Apothecaries of London is not entitled to be called Doctor; the fact that the Licence constitutes in itself a double qualification not being relevant to the question. Thirdly, the holder of diplomas from any

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corporation who happens to be a Doctor of some other faculty than medicine in any university—it makes no difference whether the medical doctorate of the university is recognised by the General Medical Council or not—is not entitled to be addressed as Doctor in medical circles. We cannot, while treating the subject in a general manner, take up all the special points that have been laid before our readers in the recent correspondence. Nor can we furnish a ready-made opinion to fit the many cases that will assuredly be submitted to us in the future as they have been in the past. We have only taken advantage of the fact that as many communications on this ever-green topic have lately been before our readers the subject must be in their minds, and the opportunity for explaining our procedure is therefore advantageous. We do not claim to be, or to have been, strictly logical in this procedure, but we consider that circumstances prevent the strictly logical method of limiting the use of the title from being quite fair or quite convenient.

THE complex conditions of modern working life make the absolute need of a holiday more apparent every year. In all classes of life, from Emperors down to the humblest workers, we do as much in a week as our forefathers were accustomed to do in six months, and the need for recuperation is, therefore, so much the greater, and fortunately the means for supplying this need have grown coincidently with it. The enormous increase in facilities of locomotion which is a notable characteristic of the present day enables even those of moderate means to go far afield; neither can there be any doubt that a complete change of air, scenery, and surroundings is a very powerful factor for good in the treatment of those wearied with work of whatsoever kind. The days are gone when Islington was really "merry" and had fields, when the fisherman could walk to Tottenham and find a clear Lea to exercise his craft upon. There are still left a few places within twenty miles of London which are really country, and not given up to the builder, jerry or otherwise; but the majority of holiday makers go either to the seaside or on the Continent, and it is this kind of holiday that we propose more particularly to consider now.

It may be well asked, "Do those who go for a holiday set about it in the majority of cases in the right way?" and the answer in general is "No." First of all comes the family conclave assembled to decide upon the important question of where to go, which generally ends in the selection of some place favoured by the younger male members of the family. And here we may point out that when people live together all the year round it is the greatest mistake for them to attempt to take a holiday together. The true holiday implies much more than going away from home; it means rest, change of company, being taken out of oneself—this last item is perhaps the most valuable of all. We will suppose, then, that the holiday maker has settled the matter to his or her satisfaction and has started with a friend. Let him beware of the other great mistake so constantly committed—that of trying to do too much. To rush from one town to another; to "do" the Ardennes, Cologne, the Rhine, Nuremburg, perhaps Bayreuth, Styria, and more or less of Italy in six weeks is not a holiday but a penance, and yet there are those who do this and think that thereby they are laying up a store of health for their return to work. The true holiday consists, not in doing nothing, but in having nothing to do—it is the sense of freedom, the feeling that one can go on or stop, whichever is most convenient. Trains and the catching of them, the baleful superstition that "objects of interest" must be visited and inspected, the hurrying from one hotel to another, all these mar the rest which is sought. Then, too, there is the question of climate. We are convinced that the general rule which is followed of going south for the winter—unless, indeed, Egypt or some similar place be selected—is wrong. The countries to go to in winter are those where winter is a reality, and where means are and can be taken to meet it. Russia, Norway, and Sweden are seen at their best in winter, and the beauty of a northern winter night is inconceivable to those who have not seen it, while the dry, windless, cold atmosphere braces every tissue of the body, and if the cold begins to be felt too much the houses are really warm, and warm throughout. Compare this with a shivering day on the Riviera where the art of keeping houses warm is unknown. The same argument will apply to summer. If a warm country is selected the house, the food, and the style of clothing will be found in keeping. In the variable climate with which we are favoured we can neither prepare for winters like the last nor summers like that of 1893; but at least, when we can go to a country blessed with climatic regularity let us visit it at the most favourable time.

The true holiday, then, is not such an easy matter to obtain as it seems at first sight. A congenial companion, a determination not to try to crowd too much into a short space of time, a discriminating selection in the matter of place and distance, and for most places some knowledge of their history, whether political or natural, will go far to make a holiday what it really should be—a complete rest not only for the body, but, what is perhaps more important, for the mind also; and if certain discomforts are met with—and they very generally are—we may remember the words of an old writer: "Nothing would be more tedious than to be glutted with perpetual jollities; were the body tied to one dish always, though of the most exquisite delicacy that it could make choice of, yet after a time it would complain of loathing and satiety. Discontents are sometimes the better part of our life. I know not well which is the more useful; joy I may chuse for pleasure, but adversities are the best for profit. And sometimes these do so far help me as I should without them want much of the joy I have."

THOSE who desire that due instruction in the rules of professional conduct should not be omitted in medical schools will be pleased to read the admirable address on Medical Ethics by Professor GREENFIELD, delivered to the new graduates of the Edinburgh University and published in our present issue. It will well repay perusal by all who wish to guide their conduct on principle and to uphold the reputation of the profession. He makes a point of assuring the young graduates that they are not "mere licentiates of a medical corporation," but members of a university which in the past has been, as he trusts it will be in the future,

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distinguished in all branches of learning. The distinction drawn by Professor GREENFIELD is perhaps capable of being considered somewhat invidious, and we have no intention of endeavouring to appraise the relative merits of universities and corporations. There is, however, one point in which the corporations undoubtedly show to advantage in comparison with the universities, and that is in respect of the question of medical conduct. The corporations sometimes administer discipline to their members, even to the measure of excommunication. If the members violate the regulations of a corporation in the matter of professional ethics they are rebuked, and if they do not repent they are deprived of their diplomas and removed from the roll of membership. Most of the universities have no such powers over their graduates, and some of them do not seem to wish to have them. "Once a graduate always a graduate" is their doctrine. Graduates are, according to this view, the only class to whom the punishment of degradation must not be applied Fortunately, the doctrine is breaking down, and some of the universities are, in fact, seeking the powers wherewith to rid themselves of those graduates who act unworthily of their gowns, and to place themselves in this regard on a level with the corporations. We would remind those universities which do not seem too keen to acquire such powers that if they wish the profession and the public to regard their graduates as "more than mere licentiates of corporations" they must act accordingly and be prepared, if necessary, to degrade those whom they have graduated.

We must pass hastily over Professor GREENFIELD'S interesting and just remarks on the happy relations which subsist between the town and University of Edinburgh. It was not perhaps, always so. There was a time when the town council had too much patronage in its hands, though to its honour the professors it chose were often men of the widest renown; but now nothing can be more satisfactory than the pride of the Fathers of the city in the university, and their coöperation with its authorities in maintaining its high prestige. Coming to the main points in the address, we may enumerate them broadly in the following way. Cultivate a high ideal of professional life and its objects; respect the confidences of the profession; consider how to convey truth to patients and their friends; remember that sickness makes a man not himself—"the higher his intelligence the greater his activity, the wider his responsibilities the more intolerable to him is sickness," as involving not so much physical pain as mental, and the suffering of others dependent on him; have patience under such circumstances with peevishness and cultivate calmness, cheerfulness, and sympathy in connexion with clearness, decision, and thoroughness in directions and candour in speech. Like all good moralists, Professor GREENFIELD had to fall back on the Scripture and say, "We that are strong ought to bear the infirmities of the weak," and to quote several other texts from the same indispensable source. While vindicating the perfect freedom of patients to choose their own medical man, he was emphatic in reminding his hearers that "one of the most stringent and primary rules is that no medical man should under any guise, directly or indirectly, interfere with the conduct of a case which is under the care of another unless consulted by him." He denounced all tendency to comment on the treatment and diagnosis of others, insisting that no man can judge of a case he has not seen. At the same time he discouraged all local jealousies and distrusts of professional neighbours. He remarked that he had often been astonished that patients had not enjoyed the advantage of consultation with medical men in their own neighbourhood, and found the explanation in mutual distrust. He enjoined on his hearers the duty of thoroughness in investigating cases, observing most truly that more mistakes are made by want of thoroughness than by ignorance. Finally, he ended with a word of cheer to those who had been backward in class and college distinction, reminding his hearers that it is not always the brilliant students who become distinguished in after-life.

These are thoughtful words and cover more than may appear at first glance. There is a disposition at present to correct the evils of the profession by legislation and by the disciplinary action of the medical authorities. There is need of these; but, after all, the strength of the profession and its place in public estimation will depend on faithfulness to its own traditions, to its great unwritten laws, to its highest morals. Reverence for patients, respect for their feelings as well as for their health, will make us adepts in the investigation and treatment of their cases and in the art of telling them all the truth that can do them good or is consistent with our main duty—that of prolonging their lives. It will make us honourably reticent of all family and personal facts which we come to know professionally. Reverence for professional neighbours will make us charitable in our judgments of them and quick to see in each of them a brother rather than a rival. Reverence for ourselves will make us less discouraged by the vicissitudes of practice and more incapable of all mean methods towards success.

Annotations.

"Ne quid nimis."

SMALL-POX AND THE ROYAL COMMISSION ON VACCINATION.

THE existing prevalence of small-pox in the metropolis acquires additional importance, not only because it has appeared at a time of the year when small-pox is, as a rule, least likely to become epidemic, but because at no time within the present generation has there been so much tendency to disregard the law as to vaccination. This latter condition of affairs has been brought about by the extraordinary delay in the issue of the report of the Royal Commission on Vaccination which was appointed in August, 1889. We do not doubt that the preparation of all the evidence which has been brought before the Commission, both by witnesses and by subcommissioners of their own appointing, must take a considerable time, but it is absolutely impossible that the minds of the Commissioners should not be made up as to the various points which were submitted to them when they were appointed; and we see no reason why Parliament should not request the report forthwith, leaving the question of evidence to stand over, as was done in the case of the Royal Commission on Tuberculosis. In one

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sense, Parliament may not have the authority to make such a demand to a Royal Commission, but Her Majesty's Ministers can make it; and having regard to the present position of affairs the strongest possible pressure should be put upon the Commission to hand in their report before they scatter for their holidays. Even after it has been received there will be quite sufficient delay in determining as to the administrative and other details for giving effect to any recommendations they may make as to alterations in the law or in the methods of performing vaccination. But what the public now want is an authoritative statement as to whether vaccination does or does not afford a protection against small-pox and whether the operation ought to be adopted and carried out with a view to such protection. We can conceive of no reason for delay in making such a statement; and it is the more imperative that an announcement as to this should now be made, since boards of guardians are constantly declaring that they are awaiting it before deciding whether to enforce the provisions of the Vaccination Acts or not. And in the meantime a population is growing up which is not vaccinated, and small-pox is spreading in our midst. We regard the immediate position of affairs as involving much gravity. If small-pox gets a hold on London before autumn it will be a very serious matter both for London and for the provinces; for anything like an epidemic in London has almost always been succeeded by the extension of the disease into provincial towns and districts. Whilst, therefore, we are quite ready to acknowledge the extent of the task which the Royal Commission have had to perform, we cannot refrain from pointing out, first, that they have had ample time to come to a decision on the material laid before them; and, secondly, that the present emergency is one that admits of no further delay in letting the public know what conclusions they have arrived at on the principal matters submitted to them.

SUGGESTION AND CRIME.

A RECENT murder in England elicited, on the trial of its perpetrators, a solemn admonition addressed by the Court to the purveyors of juvenile literature in which the robber and the assassin are presented in an attractive rather than deterrent light. The jury, indeed, saw a distinct nexus between the perusal of such literature and the crime of the young prisoners in the dock. Their finding has been much quoted abroad, more than one Continental journal approving of its tenour and recommending a similar admonition on the part of tribunals sitting in judgment on delinquents of tender years. In Switzerland the Société des Médecins et Pharmaciens of Berne, at a recent sitting on the prevalence of self-murder, came unanimously to the following decision: "For twenty years the average of suicides in Switzerland has been 650, a proportion exceeded only in Saxony and Denmark. It has, besides, been matter of common observation in our great cities, at longer or shorter intervals, that a certain number of suicides succeed each other *coup sur coup*—suicides in which the first case often acts by way of suggestion, inciting individuals predisposed to commit the same desperate act. It is therefore to be desired that in future the daily press should refrain from reporting cases of suicide. This resolution will be brought under the cognisance of the Swiss Press Association." One of the leading organs of the Confederation, the *Journal de Genève*, comments favourably on this resolution of its medical *confrères*, and, with perfect justice, we believe, claims credit to itself for having studiously and steadily excluded from its *chronique* all cases of suicide committed within the canton. The policy thus recommended and acted upon has its warrant not only from experience, but even *a priori* from the study of psychology. The mimetic principle in man, particularly in those developments in which evolution sees a distinct retrogression to a lower, more animal type, has its roots deep down in the organisation, mental as well as physical, arguing a pithecoid strain which only awaits certain favouring conditions to manifest itself unmistakably in character. The epidemic of suicide which has been so much remarked of late has had its counterpart in the epidemics of murder or manslaughter so apt to culminate in great social upheavals like that of the French Revolution or of the Parisian Commune in 1871. Lethal violence on both occasions was "in the air," and what Zola calls the "homme-bête" became a ready imitator of "what the rest were doing," in other words, a "mission of massacre." We have small belief that such admonitions as those of British tribunals or foreign professional associations will have much practical force on contemporary crime, favoured as it notoriously is by fanatical estimates of the worthlessness of human life almost openly avowed. But neither law nor medicine need be deterred from throwing its influence into the scale of social and mental sanity by the dread of having its "opinions" set down as merely "pious" or relegated to the limbo of the "academic."

INDIAN PILGRIMS AND CHOLERA.

A BILL was introduced by Sir Alexander Mackenzie at a meeting of the Supreme Legislative Council of India on the 11th of last month for the regulation of pilgrim ships. The Bill is in the main the outcome of the recommendations of the Paris cholera conference of last year, and the new regulations will be put in force before the next pilgrim season. The Government of India has in this matter acted out of deference to public opinion and has done its best to meet the recommendations of the conference, and we understand that it may confidently anticipate the reception of strong representations from the Mahomedan community in India as to the serious increase of the cost of pilgrimage which will be entailed by some of the provisions contained in this new Pilgrim Ships Bill. We think that the Government of India is therefore in a position to demand that something should now be done by the Ottoman authorities on their part in regard to Kameran and the proper protection of the pilgrims at that place. The *Times of India*, in a recent article on Kameran and the Pilgrim Traffic, alleges that while, on the one hand, little or no evidence can be adduced in support of the theory that cholera epidemics at Kameran and the Holy Cities have been originated by sea-borne pilgrims importing the disease from India, there is ample evidence, on the other hand, that the enforced detention of the pilgrims on that island has the most injurious effects on their health, and that Kameran is itself a cholera-infected depôt and a sort of hotbed for the development of that disease, whether we regard it as endemic at that station or as an importation from India. Our Indian contemporary gives a full topographical description of the island of Kameran, of the lazaretto with its seven quarantine camps, of the so-called sanitary arrangements, and of the disinfection and other methods of procedure pursued in connexion with the unhappy pilgrims during their enforced detention there, and declares that the whole quarantine process is a delusion and that no precautions whatever are taken as regards the pilgrims' water and food supplies. The importance of the question is as great to India as it is to Europe. Thousands of pilgrims make a long and perilous journey at a heavy cost and great sacrifice to themselves for religious considerations which are to them of an imperative kind. If they do not actually die from cholera contracted at Kameran they are liable to be sent back to India in an enfeebled state of health after an enforced and long detention, with their mission unfulfilled and their means exhausted. We quite concur with the

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Times of India in thinking that common humanity, as well as the safety of Europe, demands that England should take up this question, and that the British Government should adopt some definite line of action in regard to it. Kameran is, in its present condition at any rate, an unfit place for a quarantine station; there should be an International Board of Health in the place of the present ineffective Ottoman Board, and in justice to our Indian Mussulman subjects and in return for the efforts which the Indian Government has made to meet the wishes of the Paris conference the treatment accorded to the Hajis from India at Kameran, Jeddah, and in the Arabian desert requires to be thoroughly investigated and reformed. It is as important in its way as the question of Armenia, and it may be urged upon the Sultan on the ground of protecting and safeguarding himself and his subjects in Constantinople and Turkey from epidemic cholera, about which he is known to be keenly interested.

AN ALLEGED CASE OF POISONING BY ARSENIC AT SYDNEY.

A TRIAL that is probably unique in the history of legal procedure has just been concluded in Sydney, and the case presented not only features which have aroused the most intense public interest, but also points of medico-legal importance. The evidence given has been most voluminous, and in many points is contradictory. It would be impossible to summarise it all, but briefly the main facts appear to be these. Early in March last a man named George Dean was accused at the North Shore Police-court, Sydney, of attempting to poison his wife. He was committed for trial, and the case was heard at the Central Criminal Court by Mr. Justice Windeyer and a jury in the beginning of April. The jury took some time to consider their verdict, and the judge told them there could be no doubt about the guilt of the prisoner. The jury then returned a verdict of Guilty, with a strong recommendation to mercy. The judge pronounced sentence of death. Popular feeling was roused in favour of the prisoner, public meetings were held, and the sentence was appealed against and commuted to imprisonment for life. The agitation in favour of the prisoner continued, and a petition was presented to Parliament for the appointment of a Royal Commission to make full inquiry into the case. The Government then appointed a Royal Commission, consisting of Mr. F. E. Rogers, Q.C. (chairman), Dr. F. N. Manning, and Dr. P. Sydney Jones. From the evidence given at the trials and before the Commission it would appear that a few days after her confinement Mrs. Dean complained of restlessness and sleeplessness due to neuralgia. Her medical attendant, Mr. Newmarch, prescribed a morphine mixture. She was then attacked with vomiting, which he attributed to the medicine. This was in the first week of January. On March 4th, when he saw her again, she was suffering from vomiting and purging. Her temperature was subnormal. He attributed the attack to something she had eaten. The same evening a bottle containing some lemon syrup was brought to him in a mysterious fashion, and he was asked to get it analysed. It was then suggested that Dean was poisoning his wife. The syrup was analysed and found to contain 1¼ grains of arsenic and 1½ grains of strychnine. On the 10th Mr. Newmarch cut a fæcal stain out of Mrs. Dean's night-dress and had it analysed. It contained traces of arsenic. During and subsequently to the trial at the Criminal Court Mrs. Dean developed peripheral neuritis. No satisfactory evidence was given as to where the poison was obtained or to connect any person with its purchase, and the only evidence to connect Dean with the poisoning was that of his wife and her mother, to the effect that they had seen him mix a powder with some of the medicine, and that he prepared and gave her all her food and medicine, and that tea and groats and other articles of food given her by Dean had a bitter taste. Mr. Newmarch and the medical men who subsequently attended Mrs. Dean at the hospital had no doubt that she had suffered from arsenical poisoning, though the defence suggested that the symptoms might have been due to influenza. A great deal of medical evidence was given on this question and as to the effects of arsenic, and especially as to the effects of arsenic combined with strychnine, and statements were made that the two drugs were antidotal to each other. Dean had previously borne an exemplary character, but evidence was given to the Commission that in his youth he had been in gaol. Evidence was also given that Mrs. Seymour (Mrs. Dean's mother) had been a notoriously bad character, had kept a shop which was practically a house of ill fame, and had been the associate of criminals. The main defence was that there was no evidence to show that Dean poisoned his wife except that of his wife and mother-in-law, and that there was a conspiracy on the part of the mother and daughter to accuse Dean of the crime and so get rid of him. The Commission was not unanimous in its report. Mr. Rogers, the only legal member, upheld the decision of the jury and the opinion of Judge Windeyer that Dean's guilt was not open to question. The two medical members reported that there was doubt whether he administered the poison and recommended that he be released, and released he has been accordingly. We are not aware of any previous occasion upon which the decision of legal authorities on matters of evidence has been reversed on the recommendation of medical men.

THE ALLEGED INCREASE OF INSANITY.

IT is eminently satisfactory that the Lunacy Commissioners are beginning to recognise the importance of age incidence in the consideration of the statistics of insanity with a view to the determination of the problem whether the constant increase in the number of the insane under treatment in England and Wales really signifies an increasing prevalence of lunacy, or rather of occurring cases of insanity. In their recent annual reports it is true that the Commissioners have constantly expressed their opinion that the large increase in the number of known lunatics is mainly due to causes other than an increase in the prevalence of insanity as an active disease. They have, however, until now turned a deaf ear to the urgent appeal for statistics of the ages of the patients annually admitted to the lunatic asylums, and of the ages of the patients who die year by year in those asylums. We are glad to note in the recently issued report a first instalment of such age statistics, which, if continued for a series of years, and if amplified, will in a few years afford the means for throwing much light upon this important and interesting problem. It is pointed out that in recent years there has been a marked increase in the number and proportion of admitted cases of "mental decay resulting solely from old age." In proof of this the Commissioners show that in 1883 the admissions to asylums of persons aged upwards of sixty years were equal to 12·5 per cent. of the total admissions; in 1888 this proportion had increased to 13·2 per cent.; and in 1893 it had further increased to 14·7 per cent. These statistics are based upon information contained in the annual reports issued by county and borough asylums, and conclusively prove that the cases admitted above the age of sixty years have increased at a far more rapid rate than the admissions under that age. These cases represent, probably, to a large extent transfers from workhouses to asylums, but from whatever cause the increase arises it can scarcely be seriously asserted that this increase of cases of senile mental decay represents an increase of true insanity. These figures, moreover, throw some light

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upon the age incidence of the persons returned in England and Wales as mentally deranged at the three Censuses in 1871, 1881, and 1891. The ratio per 1000 of the English population returned as mentally deranged under the age of forty-five years was 2·24 in 1871, 2·29 in 1881, and 2·26 in 1891. Thus the ratio of insanity to population at these ages remained practically stationary during this period of twenty years. Above the age of forty-five years, however, the calculation of the ratio of insanity gives very different results; the ratio was 6·35 per 1000 in 1871, 7·40 in 1881, and 8·02 in 1891. In the absence of information as to the ages of cases admitted to asylums it was impossible to ascertain how much of this increased incidence of mental derangement upon elderly persons was due to what may correctly be called the accumulation of cases caused by improved treatment of the insane in asylums, and how much to an increase in the number of admissions of cases of senile dementia. The figures given in the Lunacy Commissioners' last report established beyond doubt the steady increase, both actual and relative, in the admission of cases of so-called insanity above the age of sixty years. The important bearing of these figures in the direction of disproving the reality of the alleged increase of insanity in this country will, it may be hoped, induce the Commissioners to give more complete statistics of the ages of the annual admissions to all asylums for the insane in future reports.

ABDOMINAL SECTION FOR PUERPERAL SEPTICÆMIA.

THE July number of the *American Journal of Obstetrics* contains an interesting communication by Dr. J. M. Baldy on Abdominal Section in Certain Cases of Puerperal Septicæmia. He distinguishes between cases in which there is suppuration and cases where there is infection of the Fallopian tube, the ovary, and possibly of the peritoneum without any formation of pus, but with exudation recognisable by physical examination. A case is given as an example of the former class in which a patient was very ill after delivery for several weeks, the uterus was subinvoluted, and to the left side of it could be felt a large, boggy mass firmly adherent, tortuous, and tender. An abdominal section was performed, and the swelling, which proved to be the left Fallopian tube and ovary distended with pus, was removed, the patient making a rapid recovery. So far there is nothing remarkable in Dr. Baldy's paper. It is well known that ovarian tumours, which may or may not be suppurating, are frequently noticed for the first time during the lying-in period owing to the size of the abdomen remaining greater than is normal after delivery, and the proper line of treatment for such tumours within a few weeks of delivery is the same as at other times. In the second group of cases, where there is no pus, though exudation can be felt and the patient is acutely ill, Dr. Baldy admits that it is clinically a most difficult matter to decide whether or not pus is present, but if the opinion be come to that there is no pus then no operation is indicated. In cases of general purulent peritonitis, from any cause whatever, Dr. Baldy does not believe that any line of treatment, operative or other, has ever saved the patient; but, inasmuch as a diagnosis of general peritonitis may sometimes be made when really the peritonitis is more or less localised, in doubtful cases Dr. Baldy advises operation. Turning then to the cases of puerperal septicæmia grouped as pelvic cellulitis, the question again arises as to whether there is or is not pus. Where there is not pus then as a general rule no abdominal section is likely to be required; where, however, there is pus, although it is admitted that the whole extent of infected and suppurating connective tissue cannot be removed, Dr. Baldy advises total hysterectomy, not only on account of the amount of diseased tissue so removed, but because the affected area is so thoroughly opened up by the operation, and placed in a favourable condition for drainage. So far the cases under consideration have been those of puerperal septicæmia where there is a definite swelling to be felt that may be due to either suppurating cellulitis, or to salpingitis and peritonitis, with accumulation of pus in the Fallopian tubes or ovaries. There is, however, a group of cases of puerperal fever where no swelling is to be felt in the pelvis and where absorption is taking place from the interior of the uterus itself. In this group, after trying intra-uterine douching, curetting, the application of pure carbolic acid, packing with iodoform gauze, and the like, without improvement soon appearing, Dr. Baldy also recommends abdominal hysterectomy, though here he thinks removal of the uterus as low as the internal os sufficient. He has collected nineteen cases of hysterectomy during the puerperal state performed by American operators. Twelve of the patients died and seven recovered. Dr. Baldy thinks sufficient success has been obtained to warrant a further and more general trial of abdominal hysterectomy in the special class of cases under consideration, though he admits the field for hysterectomy in puerperal cases is not a large one.

PRESCRIBING DRUGGISTS.

THE prescribing druggist is like the poor for whom he prescribes, always with us, but the latest instance reported exhibits some "features of interest" rather different to the usual run of these cases. A child named Clark, suffering from bronchitis after measles, was attended by the druggist, who gave it some harmless powder. As the child did not get better he told them to send for a medical man, which they did, but the child died. Mr. Perdue, the druggist in question, said he had attended the sick, the dying, and the bereaved for six years. He never got any fees, but he added: "I get my living by converting tea-leaves into anything. It would surprise anyone to see what I make out of tea-leaves." Mr. Perdue is evidently well within sight of the philosopher's stone. We only trust that tea is not among the things that he converts tea-leaves into, for in certain parts of London a large trade is, we believe, done in tea-leaves. They are rolled, dried, faced, and sold as fresh tea. However, this trade is less harmful than Mr. Perdue's by-occupation of prescribing, although, as the coroner said, "Anyone may prescribe at their own risk."

SUICIDE IN ITS MEDICAL AND ITS MORAL ASPECTS.

IT has been noted elsewhere that a tendency to suicide has recently been somewhat unusually prevalent. In THE LANCET of July 28th, 1894, we suggested that this tendency might be capable of partial explanation on physical grounds, and in a later issue (Aug. 11th) we published a letter by Dr. Alexander Haig bearing upon the same subject. The regular, though happily never frequent, connexion between solar heat and this form of crime has been repeatedly observed, and may, without undue straining of logical conditions, be accepted, at all events as far as it goes, as a working hypothesis founded on accurate observation. When we go further and seek to explain the hypothesis itself, however, we are still conscious of the insufficiency of our data. The theory by which Dr. Haig would associate mental depression with blood vascular tension due to uric acid is indeed helpful in its measure, as it is certainly ingenious. The measure of assistance towards a sufficient explanation is nevertheless in both cases very meagre. It is evident that in the case of most persons a wide desert of despondency intervenes between the state of mind which

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corresponds to a hard pulse and overladen tissues and the last fatal folly of despair. Save in the case of insane or weak-minded persons, it is hardly possible to conceive that men can be impelled to suicide by purely physical conditions, which are, after all, so common as hardly to be regarded as abnormal except by the scientifically educated mind. We would by no means overlook the necessity of treating these cases by appropriate means, but we are none the less assured that the reckless will which induces men to convert a weariness of life into a purpose of self-destruction does not depend upon mere atmosphere or mal-excretion. Where they are free to operate, the reserves of moral sense, thought, and resolution have either been previously exhausted or have not been drawn upon. A feeling of personal loss or a morbid fear of such has obliterated the sense of human relationship. The interest of dependent or associated neighbours and of relatives is forgotten. Self-love, not social duty, is the impelling force. We have not much hope that persons in this mood will be greatly influenced by changes of weather or by purely physical treatment. We would rely more upon the full and frank assertion of the duty and utility of all human beings to each other and to the Providence essentially friendly to men which called them into being. Suicide is, after all, a moral failure, an evidence of the mastery of mistrust, an act of rebellion against the authority of patience. Obviously no drug, no social reform even, can effectually cure it, unless they be aided in the first place by a frank and full recognition of man's moral relation and responsibility.

THE CASE OF SURGEON LEA, R.N.

IT will be remembered that in an annotation in THE LANCET of June 22nd last we referred to the case of Surgeon Lea, R.N., and said that, considering his hitherto unblemished reputation, and the very unsatisfactory and incomplete nature of the evidence adduced at the court-martial held on this officer at Sydney in April last, we were decidedly of opinion that the matter called for further careful investigation by the Admiralty in this country. We are glad to learn that Surgeon Lea's case is under the consideration of the Lords of the Admiralty and the legal advisers of the Crown. The circumstances were of an altogether exceptional and curious character, and as far as we could judge from the published reports of the court-martial it seemed to us that Surgeon Lea had been hardly dealt with. We consequently await the result of the decision that will be, or has already been, arrived at with much curiosity and interest. Surgeon Lea was a distinguished student of University College Hospital, and a former pupil of the present President of the Royal College of Surgeons of England. He entered the Naval Medical Service in August, 1883, taking the first place, and has consequently twelve years' service.

FOR THE SILLY SEASON.

THE sea serpent has at last been caught, or rather cast ashore and photographed, but though associated with wild legends there has never been any reasonable doubt as to his existence. But there is a wilder form of credulity which comes up every year in the shape of stories of people who "bring up" live animals, and the following instance appears in the columns of the *Star*, which must be either extremely credulous or have a painful disregard for the truth. The story comes from Silvertown—"Ex oriente semper aliquid novi." Such stories as these always come from the East-end, and the present one is to the following effect. A lady in Silvertown had suffered from spasms, diarrhœa, and sickness for some time. Two medical men and a hospital were tried in vain. She then consulted another medical man, who, with a rapidity of diagnosis which does him infinite credit, said "By Jove, it's a worm," and proceeded to administer quinine and nitric acid. After three days of this treatment, during which the patient endured much suffering, she felt something rise in her throat, and, putting her finger and thumb down her throat, pulled off the head of a newt, which was followed a few moments later by the body and tail, eight inches in all. According to the *Star*, the medical man's explanation is that it was swallowed either in water or watercress, and the process of getting rid of it was as follows: "The acid in the quinine irritated the animal, causing it to jump about and tickle the bronchial tubes. The tickling produced the vomiting, and the vomiting produced the eft." We must confess to serious doubts as to the truth of this story. A newt eight inches long is almost unknown in England, and we think it may well be classed with the story of the bees or wasps which were vomited by a harvester in Wales some short time ago, and upon which we commented in these columns. But nothing will ever induce a certain class of patient to disbelieve in the existence of living animals inside them.

THE DIFFUSION OF SMALL-POX.

THE epidemic manifestation of small-pox through which London is at the present time passing would seem to have reached its highest point for the moment. The cases newly arising in the fourth week of July were 98 in number, and though this number gave place to 90 in the succeeding seven days the attacks coming to light last week were but little over 50, the registered deaths in the successive weeks being 1, 1, and last week 3. As might have been expected, the patients for whom the Metropolitan Asylums Board found they had to provide rapidly increased, and in the four weeks ended last Saturday were respectively 23, 115, 60, and 54; whilst the cases remaining under treatment in their hospitals and at Highgate Small-pox Hospital rose from 89 to 199 in one week, and thence to 237, and last Saturday to 273. At the last meeting of the Asylums Board the fact came out that, whereas the earlier cases were in the main from shelters and the like, the later manifestations were largely from among the resident population, a sign of deep significance as tending to show that the disease had fastened on the portion of the community permanently located in London. In these circumstances Gore Farm Hospital was cleared of its scarlet fever patients and reserved wholly for convalescent small-pox cases. The application of West Ham to be allowed to make use of the Board's accommodation was heard, and regret was expressed that the means at the disposal of the Board did not admit of its being granted. But very fortunately the disease has not made any great inroads on that borough yet, the cases in recent weeks being few in number. The deaths registered in the metropolis last week as occurring from small-pox were 2 in vaccinated adults aged over twenty years and 1 in an unvaccinated person of the like age period. Two belonged to Whitechapel and 1 to Shoreditch sanitary areas. Districts contributing cases to the hospital ships last week and during the present week were, among others, Whitechapel, Mile End, Plumstead, Lambeth, Wandsworth, Paddington, St. George's Southwark, and St. George's-in-the-East, the western and northern areas being generally free from the disease. In the home county of Essex there were, in addition to the few cases at West Ham and Leyton, some attacks at Leigh, not far from Rochford. In the Midlands there is but little to chronicle, one or two places in Staffordshire and Derbyshire being slightly affected; but westward the Salop County Council have had before them the history of an outbreak of a localised character at Oswestry, traceable to a case found at a common lodging-house,

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Subsequently 5 other persons residing in the same house were found to be suffering from the disease, as was an innkeeper's wife, infected probably by the original case, the patient having conversed with her in the inn. Measures of disinfection have been taken, and persons likely to have been in danger of infection have been kept under observation. In the last week of July there were 4 cases heard of from Manchester, 3 from Openshaw and 1 from Hulme, all being removed to the Clayton Hospital; and last week 2 other cases were reported in the city. A death from the disease was last week registered at Liverpool, and 2 deaths at Oldham, where the disease is again on the increase, several cases having occurred there and in the adjacent township of Chadderton. The outbreak at Thornhill is causing more anxiety, some alarm having been created by the rapid succession of 4 deaths, and temporary hospital accommodation has been decided upon, as well as the expenditure of £3000 on a permanent structure. Much discontent has been felt at the alleged discharge from the Southport Convalescent Home of a man who was found to be suffering from small-pox. A family of six members has been moved from Stainland, near Halifax, to the Hollins Hey Hospital, and a case has been recorded at the village of Mytholmroyd. In Dublin the news for the week ended Aug. 3rd is to the effect that only 6 cases of small-pox were admitted to hospital, against 15 discharges, leaving only 25 acute cases under treatment, as compared with 36 in the preceding week. Of 3 deaths registered in the week the patients were registered as vaccinated, unvaccinated, and "doubtful as to vaccination." The former and latter were in adult life; the unvaccinated person was aged between five and twenty years.

MALINGERING AND MIRACLES.

A CASE has just been heard at the Paris Assizes which is extremely interesting to the physician, the theologian, and the criminologist. It is that of a man who for some five years or more deceived the greatest physicians in Paris, including Charcot, into believing that he had commencing locomotor ataxy. After having been cauterised and "suspended," neither of which treatments he liked, he eventually arrived at Lourdes, where he was miraculously "cured." In 1891 he robbed the Lourdes fathers of 400 francs, and returning to Paris was admitted to an asylum as suffering from persecution mania, and from this institution he stole some 2000 francs. Being arrested, it was discovered that he was a malingerer of "astounding skill," and was sentenced to four years' imprisonment and ten years' police surveillance. The whole question of modern miracles is an exceedingly difficult one. We should be the last to maintain that they cannot happen, but whether they do is, we believe, queried by Roman Catholic theologians as well as by others. This case of locomotor ataxy may be catalogued along with those which are cured by a certain patent medicine—i.e., the disease never existed; but in this age of unbelief it is a pity when anything occurs to sap the religious element in man. These kind of failures react in a very harmful way upon the hysterical paraplegics who are really ill, if only functionally, and who, if they can only be induced to believe they will be cured, are so, at Lourdes or any other place which has the requisite mystical qualities.

MEDICAL SERVICE OFFICERS AND THE MEDICAL REGISTER.

WE think that Brigade-Surgeon-Lieutenant-Colonel Temple Wright has done a good service to members of the medical departments of the army and navy by calling attention to a subject about which he recently moved a resolution at a general meeting of members of the British Medical Association. The resolution, which was unanimously passed and will be forwarded to the President of the General Medical Council, was this:—

"That this meeting desires to submit a respectful suggestion to the General Medical Council that every medical officer whose name appears in the *Navy List*, the *Army List*, and the *Indian Army List* shall be considered to be still alive and at the post opposite his name."

From the nature of their duties and their conditions of life medical officers of the respective services, unlike civilians, have no fixed place of abode, and are more or less wanderers. It must consequently happen that letters sent to their supposed addresses sometimes fail to reach them, and when this occurs they may find, to their astonishment and possible grave inconvenience, that their names have been struck off the Register under the mistaken assumption, for example, that they are dead. The appearance of their names in the army and navy lists is an official guarantee, however, of their being alive, if not actually present at their respective posts, and may be safely relied upon as correct. Sir Richard Quain had recognised the thoroughly reasonable nature of the representation, and suggested that it should be embodied in a resolution and submitted to the General Medical Council by the British Medical Association, as he very rightly considered that it would materially facilitate the conduct of official business by the Council, of which he is the President. This has accordingly now been done, and Brigade-Surgeon-Lieutenant-Colonel Temple Wright may be fairly congratulated on the practical nature of the step he has taken in the matter.

AN EXHIBITION OF DRUGS AND CHEMICAL PRODUCTS.

PHARMACEUTICAL and practical chemists in general will find interesting material for their inspection at the Drug, Chemical, and Allied Trades Exhibition which is to be held at the Royal Agricultural Hall, Islington, on Sept. 10th, 11th, 12th, and 13th. Whatever may be the pecuniary results of these displays they are undoubtedly most useful in the spreading of correct information with respect to the various articles and processes on view. The experimental chemist is incessantly placing new substances at the disposal of the prescriber, many of whose familiar present-day medicaments were altogether unknown twenty years ago, and pharmacists have not been slack in devising convenient and palatable preparations. The offices of the exhibition are at 42, Bishopsgate-without, E.C.

THE DIAGNOSIS OF SMALL-POX.

A PHYSICIAN with exceptional experience of small-pox and of the common errors of diagnosis in reference to it can do no kinder thing than to give his brethren the benefit of his observation. This is more especially true at a time when the much-dreaded disease threatens to resume activity. The abeyance of the disease for years all over the country, and especially in the metropolis, makes such a communication still more valuable. The growing efficiency of sanitary police checks the spread of small-pox more and more, and makes it possible for many students and even practitioners of medicine never to have seen a case. The effect of vaccination in modifying the disease when it does occur is such as to make an actual case often differ much from the typical case described in books. Under all these circumstances the shrewdest practitioner will be most grateful for a few points of guidance in diagnosis where it is so serious to be wrong and so important to be right. We would direct all that are so minded to a communication in THE LANCET of July 20th by Dr. H. Meredith Richards, medical superintendent of the City Hospitals, Birmingham, whose lot it has been to see not only the 3000 cases sent to the hospitals, but to

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visit on behalf of the medical officer of health every case notified as "possible small-pox." The points of diagnosis are given with admirable clearness, and not only without any of the airs of superior knowledge, but with ample recognition of the difficulties of the duty and frank admission of the care with which it is generally discharged.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

WE have received a notice from the secretaries that the date of this Congress has been altered from Feb. 17th to Feb. 3rd, 1896. Another alteration has been made in the arrangements as originally announced in our columns[1] in the formation of a subsection of the Section of Surgery to consider diseases of the eye, ear, and throat. The secretary for this Section is Mr. H. L. Ferguson, High-street, Dunedin. The names of the other secretaries of Sections will be found in our former notice.

THE HONOURS TO THE STAFF OF THE SHAHZADA.

WE note in the daily press that Lieutenant-Colonel A. C. Talbot, C.I.E., has been promoted to the Knight-Commandership of the Indian Empire, and Mr. Thomas Acquin Martin, the Agent to the Government of Afghanistan, has received the honour of knighthood, in recognition of their services during the visit of the Amir's son to England. We cannot but think that the extension of some similar honour to another member of the Shahzada's staff, who is an officer of the Indian Medical Service, would have been appreciated by the medical profession, whose labours on such occasions are too often forgotten. Dr. Leahy must have had to bear the weight of very serious responsibility during the protracted visit of the Prince, and the omission of his name from the list of honours strikes us as an unfortunate and regrettable incident.

AT a meeting of the Strand Board of Guardians held on Tuesday, 13th inst., a resolution was adopted in favour of placing the Salvation Army shelters and all similar institutions under the Common Lodging-house Act, having in view the spread of small-pox and other infectious diseases from these shelters.

SIR E. J. REED has again written to the *Times* expressing a hope that the new Government may see their way to release Dr. Cornelius Herz from the condition of arrest in which he has been for the last two and a half years. The accounts of Dr. Herz's health remain very gloomy.

SOCIETY OF MEDICAL PHONOGRAPHERS.

THE first general meeting of the members of this society was held on July 30th at 20, Hanover-square, London, when there was a very fair attendance of members and visitors, the latter including Sir Henry Howorth, M.P., F.R.S., and Sir William Broadbent. The chair was occupied by Dr. GOWERS, F.R.S., first president and founder, who was supported by Dr. Gray (Oxford), Treasurer, and Dr. Neil, Secretary.

Dr. GOWERS, in his address, stated that the object of the society was to promote the work of their profession, alike in medical science and its application in practice, by freeing it from one grave hindrance which the present has inherited from the past. Writing to-day is what it was when Caxton made it mechanical, with no attempt at improvement until the present generation. But now a method of writing is available in which simplicity of symbol corresponds to simplicity of sound, and which needs, with a greater average of legibility, only one-third of the time and less than one-third of the labour of ordinary writing. Science rests on observation, which without immediate record is of little value; not only is memory inadequate, but record at once reveals unsuspected imperfections in observation. Compared with longhand, shorthand permits in a given time twice the amount of record, while leaving twice the time for observation. The latter must be more minute and more precise to permit the fuller record, and the first effect of the use of shorthand is on the quality of work. The constant use reacts on the worker, and it is again found true that "writing maketh an exact man." In the daily work of the practitioner, which is peculiar in being a form of personal science—knowledge constantly increased by observation—record is most important. It changes vague impression into definite knowledge and increases that ability which is so important to those who suffer. For most practitioners record is practically impossible with longhand; it is possible for all with shorthand. The service of this, however small its influence may be thought, multiplied by numbers, becomes incontestably important. The chief means adopted by the society is the issue of medical literature in lithographed phonetic shorthand—a monthly periodical and other publications. But the facility of writing, and secure legibility, which phonography affords, have led to useful interchange of thought in other ways. The society, started last December, has now 165 members, of whom 25 are students and 140 practitioners. It is important that the student should be familiar with shorthand before beginning professional studies, for it helps him in every form of work. It is much to be desired that shorthand should be made an extra subject in the entrance examination. It needs but a limited and short expenditure of time, and this is soon regained. It can, however, be quickly acquired at any age. It is now taught at many schools, but its subsequent use is not sufficiently encouraged. It may seem strange that the value of this mode of simple writing—quick, easy, and secure—should first be thus recognised by members of the medical profession, but it is noteworthy that, in their hands, its use will probably have most direct influence on the welfare of others.

A letter was read from General Sir C. WILSON, speaking of the recognised value of shorthand to staff officers, and one from Dr. J. H. GLADSTONE, who has used shorthand constantly in science since 1846, and invariably employs it for recording observations and preliminary writing.

The Bishop of HEREFORD wrote: "The establishment of this Society of Medical Phonographers is an event of no small importance. It is obvious that it puts a new instrument into the hands of the observer, an instrument which must be specially valuable when you have to deal with subtle and quickly changing phenomena. I may say how important your action seems to me because of its influence as an example. It will do a great deal to popularise the study in all our higher schools, as it will help to brush away the prejudice that shorthand is chiefly useful for trade purposes and may be neglected by the profession without loss."

Sir HENRY HOWORTH, M.P., F.R.S., in responding to the President's invitation, said he was distinctly one of that class who deplored most desperately that he was not taught shorthand as a boy. In writing his books his great despair and difficulty had been the copying down *verbatim* in the ordinary longhand the material pertinent to the subject. Shorthand would have spared his eyes and saved both time and temper. He felt so strongly on the matter that he was insisting on his boys learning the art. He had travelled in dangerous and difficult countries, where he found one of the greatest difficulties was our cumbrous writing. He referred to the great use made of the art by the President in the compilation of his published works, and went on to speak of the value of the phonetic principle, which had enabled Mr. Reed, at the sittings of the Opium Commission in India last year, to accurately record and afterwards read over the evidence of two Brahmins of whose language he knew nothing and whom he had never seen before. In conclusion he referred to the President as a great evangelist in the cause, and spoke in flattering terms of the *Phonographic Quarterly Review*.

Sir WILLIAM BROADBENT said he was present to testify to his sympathy with the work of the society, and that he agreed with every word of the presidential address. He, also, had to look back with regret to the fact that he did not persevere sufficiently with shorthand to make use of it, but he recognised to the full the utility of the art for taking

[1] THE LANCET, vol. ii., 1894, p. 1115.

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notes at the bedside. In some cases circumstances prevented the immediate record in ordinary longhand, and when notes were postponed they lost in vividness and accuracy. He looked forward to the time when it would be the rule that all men who seriously worked in the cause of hospitals would make use of such a great advantage. He wished the society success and felt sure it would be extremely useful to the medical profession.

Mr. THOMSON (Dublin), an old shorthand writer, spoke highly of the value of the art in his work and thought the sphere of the society would be extended from day to day. He did not agree that there was an age beyond which shorthand could not be learned, and felt sure that if the last speaker would give a daily hour to the study for a few weeks he would write it with sufficient facility to employ it in private cases.

The PRESIDENT stated that Dr. Landon of Cincinnati, who was forty-five years of age, obtained in a fortnight sufficient power to write a letter which he (Dr. Gowers) could read as swiftly as he could speak.

THE ASSASSINATION OF M. STAMBOULOFF.

WE are enabled, through the courtesy of a medical correspondent at Sofia, to present our readers with some sketches which will enable them to realise the terrible nature of the wounds inflicted upon the late M. Stambouloff better than

FIG. 1.



from the merely printed descriptions which were published at the time. The facts of the outrage are fresh in the memory of everyone. It will be remembered that the deceased statesman was attacked by three men armed with

FIG. 2.



knives and was terribly cut about the head and hands, which he raised to protect his head. Fig. 1, the front view, shows very well an extensive slash (*a*) passing from the right temporal region across the right orbit and the root of the nose to a point on the inner side of the lower border of the left orbit, this being the wound which necessitated the removal of the eyeball. Fig. 2, depicting the wounds on the left side of the face, shows the commencement of the most extensive slash of all (*b*), though not the cruellest in its effect. Starting just above the left eyebrow, it runs back, crossing the middle line at the top of the forehead to end by crossing back again to the left side in the parietal region, as shown in Fig. 4. Fig. 3 depicts the

FIG. 3.



gashes on the right side of the face, which are seen to be much less numerous than on the left, where the temporal and parietal regions were extensively cut about. On the back of the head is a perfect maze of cuts (*b*, *h*, *n*, *m*, *l*, Fig. 4),

FIG. 4.



the horseshoe cut marked (*l*) being particularly extensive. The force with which the blows were given may be inferred from the fact that the skull was fractured in several places.

THE HOLIDAY SEASON AND RAILWAY FACILITIES.

(*Continued from p. 345.*)

AMONG the most useful books published by some of the railway companies, either gratuitously or for the modest sum of one penny, are the lists of country lodgings, farmhouses, &c. Besides those referred to in our article last week we may mention the list published by the Great Eastern Railway Company, giving details of lodgings in Essex, Hertfordshire, Cambridgeshire, Suffolk, and Norfolk. The Great Western Railway Company's list includes Guernsey and Jersey, besides the other places on their lines, and the list of the Great Northern Railway Company embraces Hertfordshire, Cambridgeshire, Huntingdonshire, Northamptonshire, Norfolk, Lincolnshire, Nottinghamshire, Derbyshire, and Yorkshire. The London and South-Western Railway Company's Programme of cheap tickets and general excursion arrangements gives a list of apartments to be let

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in North Cornwall. Of other books and pamphlets the Great Eastern Railway Company's list is very comprehensive. Visitors to the Continent will find the "Tourist Guide" (price 6*d.*) useful. Small pamphlets on Continental travel are also published. "East Coast Watering-places" gives particulars of time and fare to the watering-places touched by this line. "Summer Holidays in the Land of the Broads" (with descriptive notes and illustrations and a road map), "Holiday Notes in East Anglia," "The Rivers and Broads of Norfolk and Suffolk," and an eight-page pamphlet, "Quiet Nooks on the Norfolk Coast," form exhaustive guides to this part of England. The "Tourist Programme of the Great Northern and North-Eastern Railway Company" gives illustrated and descriptive notes of the east coast route to Scotland, and some useful information is contained in the "Tourist and Excursion Programme of the Great Northern Railway of Ireland." The North British Railway Company issue a "Handy Pocket Guide to Scotland" (price 6*d.*).

Great Eastern Railway.—Until October this company announce cheap tours by the Harwich route to Holland and Germany *viâ* the Hook of Holland, and to Belgium and Switzerland *viâ* Antwerp. For 42*s.* first class and 31*s.* second class a ticket available for a week can be obtained to Amsterdam (exhibition open till October), but they can be used outward only by the Friday or Saturday boat. The return can be made, however, on any day up to and including the following Saturday. To Cologne the first-class return fare is 67*s.* 6*d.*, and the second-class return fare 44*s.* 9*d.* Berlin and back can be done for first class 116*s.*, or second class 81*s.* All the Continental tours by this company are cheap and admirably arranged for the convenience of travellers, as are also the English tours. Of the latter the cheap circular tours by rail and saloon steamboats through the Broads of Norfolk and Suffolk *viâ* the rivers Bure and Yare deserve special mention. Various local tours in connexion with the Broads are also arranged. The various pamphlets issued gratis by the company give full information.

Great Northern Railway.—Tourists' tickets between the stations on this line in England and Scotland are issued till the end of the year at reasonable fares, and every facility is given the traveller for breaking his journey to visit the many places of interest in the country through which this line passes. The "Tourist Programme" contains a long list of tours. On Aug. 17th, 19th, 24th, 26th, and 31st trains leave London and suburban stations from 6.37 A.M. to 7.35 A.M. for Skegness at the return fare of 4*s.* 6*d.* for the day or 6*s.* for a three to four days' trip. Tickets are issued every day for the day trips, but only on Saturdays for the longer periods. Fortnightly tickets are also issued at very cheap fares. The direct express service of this company from England and Wales to Belfast and the principal stations on the Great Northern Railway of Ireland *viâ* Holyhead offers facilities for tourists to visit some of the finest scenery in that country. From the principal Irish towns circular tours are offered, in some cases at very moderate fares.

London and South-Western Railway.—Arrangements have been made with the Western Railway of France for the issue of circular tickets from London to Paris and back available for the return journey within two months. These return tickets are specially applicable to those who propose on their visit to Paris to take a tour through Normandy and Brittany. Tour 1: Waterloo, Southampton, Havre, Rouen, Paris, Versailles, Dreux, Laigle, Argentan, Vire, Pontorson (*viâ* Folligny or Mortain), Mont St. Michel, St. Malo, Jersey, Guernsey, Southampton, London; or returning from Paris *viâ* Versailles, Chartres, Nogent-le-Rotrou, Le Mans, Laval, Vitre, Rennes, St. Malo, Jersey, Guernsey, Southampton, Waterloo. These tickets are also available to go *viâ* Guernsey, Jersey, and St. Malo, &c. to Paris, and to return *viâ* Rouen, Havre, and Southampton to London. First class, 85*s.* 8*d.*; second class, 62*s.* 6*d.* Tour 2: Waterloo, Southampton, Havre, Rouen, Paris, Versailles, Dreux, Laigle, Argentan, Vire, Granville, Jersey, Guernsey, Southampton, London. These tickets are also available to go *viâ* Guernsey, Jersey, Granville, &c. to Paris, and to return *viâ* Rouen, Havre, and Southampton to London. First class, 81*s.* 4*d.*; second class, 59*s.* Passengers holding these tickets are permitted to break their journey at any intermediate station *en route* on the French railway on condition that they present their tickets on arrival to be stamped with the stamp of the station at which they stop. The tickets are available for two months; they can, however, be extended for another month on payment of 10 per cent. on the original cost of the ticket.

Special cheap return tickets are issued from Southampton to Guernsey and Jersey by steamers at 11.45 A.M. and 12 midnight, at the following fares:—Saloon, 20*s.*; fore cabin, 14*s.*, available to return on the following Monday or Tuesday only: saloon, 25*s.*; fore cabin, 17*s.* 6*d.*, available to return on the following Saturday (eighth day), Monday week (tenth day), Saturday week (fifteenth day), and Monday fortnight (seventeenth day). Every Tuesday until further notice cheap return tickets will be issued from Southampton to Guernsey and Jersey by boat at 12 midnight, at the following fares: Saloon, 25*s.*; fore cabin, 17*s.* 6*d.* They are available to return on the following Thursday (third day), Tuesday (eighth day), Thursday week (tenth day), or Tuesday week (fifteenth day).

Fast excursion trains from London to the West of England will run every Friday night during August and September. A special cheap excursion train will run from London to Exeter, Okehampton, Tavistock, Devonport, Plymouth, Barnstaple, Bideford and Ilfracombe, &c., as under:—

Stations.		Times.	Fares.
		p.m.	s. d.
London	dep.	10.15	
		a.m.	
Exeter { Queen-street	arr.	2.48	15 0
Exeter { St. David's	,,	2.58	
Crediton	,,	3.14	15 6
Yeoford	,,	3.22	
Eggesford	,,	3.52	17 0
South Molton-road	,,	3.57	
Barnstaple Junction	,,	4.24	18 0
Braunton (for Saunton Sands)	,,	4.48	19 0
Morthoe (for Woolacombe Sands)	,,	5.2	20 0
Ilfracombe	,,	5.14	
Instow	,,	4.43	19 0
Bideford	,,	4.52	
Torrington	,,	5.7	20 0
North Tawton	,,	3.40	16 6
Okehampton	,,	3.53	17 6
Lidford	,,	4.14	19 0
Tavistock	,,	4.28	
Beer Alston	,,	4.41	
St. Budeaux	,,	4.57	
Ford	,,	5.2	21 0
Devonport	,,	5.5	
Plymouth { North-road	,,	5.13	
Plymouth { Mutley	,,	5.16	
Plymouth { Friary	,,	5.28	

The tickets issued by this excursion will be available to return on the following Monday, Saturday week, Monday week, Saturday fortnight, or Monday fortnight following the date of issue.

Great Western Railway.—The pleasure resorts in Dorsetshire, Somersetshire, Devonshire, Cornwall, the Scilly and Channel Islands, Wales, south and east coasts of England, inland watering-places, and Scotland, Ireland, and Paris are all served by this company. Guernsey and Jersey can be reached from London for 38*s.*, including saloon on steamer. The boat train leaves Paddington at 9.15 P.M. daily, except on Sunday, and the passage from Weymouth to Jersey in the express twin-screw mail steamships *Ibex*, *Antelope*, *Gazelle*, and *Lynx* occupies about six hours only.

North British Railway.—The West Highland Railway, one of the extensions of this company, has made easy of access some of the best scenery in Scotland. Among the circular tours announced by this company are: 1. The Trossachs and Lochs Katrine and Lomond *viâ* Edinburgh, Forth Bridge, Dunfermline, Stirling, Aberfoyle, Trossachs, sail on Loch Katrine, coach to and sail on Loch Lomond, Dumbarton (or *viâ* Callander instead of Aberfoyle). Fares:—Edinburgh, first class, 26*s.* 4*d.*; third class, 20*s.* 4*d.*; Glasgow (*viâ* Larbert), first class, 20*s.* 4*d.*; third class, 16*s.* 4*d.* The same tour may be made from Edinburgh *viâ* Linlithgow and Stirling instead of over the Forth Bridge at same fares. 2. Bridge of Orchy, Glencoe, Ballachulish, Port William *viâ* Bridge of Orchy, Glencoe, and Ballachulish, and returning by rail. Fares:—Edinburgh, first class, 42*s.* 4*d.*; third class, 29*s.* 1*d.* Glasgow, first class, 34*s.* 10*d.*; third class, 25*s.* 1*d.* 3. Perth, Dunkeld, Kingussie, Tulloch, Fort William *viâ* Glenfarg, Kingussie, and Tulloch, returning *viâ* Ardlui. Fares:—Edinburgh, first class, 51*s.* 1*d.*; third class, 32*s.* 9*d.* Glasgow, first class, 47*s.* 2*d.*; third class, 30*s.* 6*d.* 4. Aberfoyle, Trossachs, Loch Katrine, Loch Lomond, Fort William, Oban, and Crinan Canal *viâ* Aberfoyle, Trossachs, Inversnaid, and Ardlui, returning *viâ* Oban and Crinan Canal. Fares:—Edinburgh, first class, 48*s.* 2*d.*; third class, 30*s.* 11*d.* Glasgow, first class, 41*s.* 7*d.*; third class, 26*s.* 11*d.*

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A new night express train with sleeping carriages now leaves Edinburgh (Waverley) daily (Sundays excepted) at 9.30 P.M., reaching London (King's Cross) at 6.20 A.M. Passengers for this train leave Inverness at 3 P.M., Aberdeen at 5.30 P.M., Montrose at 6.29 P.M., Arbroath at 6.53 P.M., Dundee (Tay Bridge) at 7.30 P.M., Perth at 7.55 P.M., Oban at 4.15 P.M., Glasgow at 8 P.M., and Fort William at 3.15 P.M. A train with Pullman sleeping car also leaves Edinburgh for London (St. Pancras) at 9.45 P.M. Passengers from Inverness, Aberdeen, Montrose, Arbroath, Dundee, Perth, Oban, Glasgow, and Fort William leave these places at the times shown above. This train will convey passengers for Manchester, Liverpool, Sheffield, Birmingham, Bristol, London, and for the Midland counties and West of England generally. The 10.30 P.M. train from Edinburgh (Waverley) to London (King's Cross) now leaves at 10.40 P.M. and arrives at London at 8 A.M. Passengers for this train leave Inverness at 3 P.M., Aberdeen at 6.50 P.M., Montrose at 7.45 P.M., Arbroath at 8.9 P.M., Dundee at 8.40 P.M., Perth at 7.55 P.M., Oban at 4.15 P.M., Glasgow at 9.5 P.M., and Fort William at 4.20 P.M. This train has a Pullman sleeping car attached.

London, Brighton, and South Coast Railway.—Among the many tours offered by this company that comprising the whole of the coast between Hastings and the Isle of Wight should prove an attractive one. Monthly tourist tickets from London will be issued every day till the end of October, offering facilities for visiting Hastings, St. Leonards, Eastbourne, Brighton, Worthing, Littlehampton, Bognor, Portsmouth, the Isle of Wight, and almost every intermediate coast-town and village. This tour comprises nearly 300 miles of the most charming railway and steamboat travelling in the United Kingdom. The journey may be made from London Bridge, Victoria, or Kensington, and can be taken either way, going first to Hastings and thence by the South Coast line to Portsmouth, proceeding from Portsmouth by mail steamers to Ryde, and returning from Portsmouth, terminating the trip at any stopping station of the London, Brighton, and South Coast Railway between Portsmouth and London, or reversing the route by going first to Portsmouth, and returning by Brighton, Hastings, &c. For the whole round (exclusive of pier dues at Ryde) the fares are—first class, 37*s.*; second class, 27*s.*; third class, 18*s.* Tickets are available for all trains, and can be had at London Bridge or Victoria Stations, and at the West-end offices, 28, Regent-street, Piccadilly, and 8, Grand Hotel-buildings, Trafalgar-square; also at Cook's Tourist Office, Ludgate-circus, and Gaze's Tourist Office, 142, Strand. The tourist and excursion programme gives details of various Continental tours, including a most comprehensive list of Italian tours.

London, Chatham, and Dover Railway.—This company offer some cheap excursions to the watering-places along the north and north-east coast of Kent. The week-end trips to the north of France, which run every Friday, Saturday, and Sunday, will be found convenient by those who can only spare a few days. The tickets are available for return by any boat and train up to and including the 3.45 P.M. service from Calais on the Monday following date of issue. Trains leave the London stations shortly after 8 P.M. on Fridays and Saturdays, and 9 A.M. on Saturdays and Sundays, arriving at Calais about noon and midnight respectively. Return fares 31*s.*, 26*s.*, and 20*s.* Third-class tickets are not issued for the morning service. Quick services are announced for Switzerland and Italy.

The *Cambrian Railways* issue an excellent programme of rail and coach excursions to places of interest adjacent to their lines in wild and picturesque Wales. First and third class tourist tickets, available for two calendar months, renewable up to Dec. 31st, are issued to Oct. 31st at all the principal stations in England, Scotland, and Ireland to Aberystwyth, Borth, Machynlleth, Aberdovey, Towyn, Dolgelley, Barmouth, Harlech, Portmadoc, Criccieth, Pwllheli, Rhayader, Builth Wells, and Brecon. The scenery traversed by and adjacent to the Cambrian Railways is of an exceedingly varied and beautiful description, and the coast of Cardigan Bay, to which the line affords the most convenient access, offers great advantages for sea-bathing in the long reaches of firm, safe, and sandy beach with which it abounds. The air is pure and bracing. The mountain ranges of Snowdon, Cader Idris, Plinlimmon, and the Beacons, with their rivers and lakes, are also readily accessible from the various watering-places, thus placing within the reach of visitors a delightful combination of the natural beauties of sea and land. The Upper Valleys of the Wye, the Severn, and the Usk, through which the line to Brecon runs, also possess great attractions for tourists and anglers. Arrangements are made during the summer months for the conveyance of visitors by coach to and from places of interest in the vicinity of the line at reduced charges, by which means, and also by the Festiniog, Tal-y-llyn, and Corris miniature gauge railways, whose termini are on the Cambrian system, the following amongst other places can easily be visited by daily excursions:—Snowdon, Beddgelert, Tan-y-bwlch, Maentwrog, Festiniog, Slate Quarries, Cader Idris, Mawddach Estuary, Precipice Walk and Torrent Walk, Tyn-y-groes, Pistyll-y-Caen, &c. (Dolgelley), Taly-y-llyn Lake, Corris, Llyfnant Valley, Glaspwll Cascade, Rheidol Lake, Devil's Bridge, Abersoch, Nevin, Clynnog, Nantgwillt (the site of the new Birmingham Water Works), Happy Valley, Cwmbychan Lake, Drws Ardudwy, Rhenig Valley, Dinas Mawddwy, and Bwchoerddrws Pass. About thirty rail and coach excursions daily are run from the Cambrian stations during the season. An excellent feature of the Cambrian Railways is the issuing of cheap weekly season tickets for 15*s.* third class, and 25*s.* first class, enabling the holders to travel by any trains between all the coast stations, including Machynlleth and Dolgelley.

THE FATAL ATTACK ON THE SON OF A MEDICAL MAN AT LIVERPOOL.

THE poor boy William Ireland, the son of Mr. R. J. Ireland, M.R.C.S., L.R.C.P. Irel., of Walton, Liverpool, who is alleged to have received terrible injuries at the hands of a Mr. O'Callaghan, described as a medical man and Mr. Ireland's assistant, on the night of Thursday, Aug. 8th, died early last Wednesday morning, five days after his injuries were inflicted. We need not dilate on the circumstances of the crime, and as the alleged murderer is now under remand all speculation as to his measure of guilt would be obviously unbecoming. There is no certainty about the weapon with which the abdominal wound was made or of the means by which the boy received his other injuries, though it seems probable that the gash through which the bowels protruded was made by a piece of broken glass from a dressing-mirror which was smashed, and which to all appearance would have inflicted just such a wound. The site of this gash was a little internal to and above the anterior superior iliac spine on the left side. It was a jagged, irregular wound about two inches long in its greatest diameter, which was towards the chest. The abdominal planes of muscle beneath were irregularly divided in a situation slightly superior to the skin wound, and the peritoneum divided a little superior again to the division of the muscles, so that the cavity of the abdomen was opened in a valvular manner, the tract of the opening slanting upwards through the abdominal wall. Three feet of small intestine had escaped from the wound, a result which is accounted for by the fact that some delay elapsed between the infliction of the injury and the arrival of the poor child at the Bootle Borough Hospital, whither he was taken on being found by the police to have received these serious injuries. As a result of exposure the gut was covered with fluff and dirt. The hernia was immediately cleaned by the senior house surgeon, Mr. H. B. Dickinson, and reduced into the abdomen, the wound dressed and a drainage tube inserted. During the dressing on the following day a small piece of gut which presented at the opening in the peritoneum was observed to be turning black. This was accordingly brought slightly out of the wound, and when adhesions were formed, opened and an artificial anus established in the usual way, the operation being performed by Mr. James Pearson, surgeon to the hospital. The boy, who was an exceptionally hardy little fellow of about twelve years of age, survived till the following Wednesday morning, but never really flattered his medical attendants with any hope of recovery. Although the abdominal wound was the injury that must be looked upon as the cause of death, he was also bruised all over, having one large bruise on the forehead, another one on the right cheek; the lobe of the right ear was torn up from the face, there was an irregular and jagged cut on the left side of the neck, a large bruise on the penis, and

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numerous small bruises on both arms and both legs, besides other bruises, small and large, on the body and buttocks.'

As we have said, it would be wrong for us at this stage to comment upon the case from any medico-legal point of view. The prisoner, who is under remand, has been stated in the press to be a medical man, but we have been unable to find his name in the Medical Register.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighton Urban Sanitary District.—Dr. Arthur Newsholme has arranged for his annual report for 1894 several interesting diagrams in which the excess or defect in the death-rate, &c., above the mean for the last twenty-five years is well set forth. During 1894 the illegitimate births proved to be a proportion in excess of any since the year 1883. Commenting upon the effect of a diminishing birth-rate upon the death-rate, Dr. Newsholme points out that, although for a time a diminished birth-rate tends rather to lower the death-rate, its continuance for another forty or fifty years would have the effect of increasing the proportion of persons at ages above fifty-five or so, and so of raising the general death-rate. This general effect is, he points out, anticipated in the case of Brighton by the fact that a large number of aged persons settle there. For instance, in the 1891 census it was shown that for every 1000 persons living at all ages in the respective towns there were at ages above fifty-five, 121 in Brighton, 101 in Croydon, 93 in Huddersfield, and 85 in Derby. Under five years of age, however, the figures were for Huddersfield 98, Brighton 103, Croydon 114, and Derby 119. During 1894 the recorded death-rate for Brighton was 16·4, the corrected 16·6, the death-rate of the most densely populated ward being 18·6 per 1000, as against 13·3 for the rest of the borough. In dealing with the death-rate from phthisis—which is, by the way, showing a tendency downwards—Dr. Newsholme remarks that in several cases death occurred within a few weeks of the patient's arrival in Brighton. He strongly deprecates the sending of patients to the seaside in the last stage of phthisis. In two cases of small-pox the evidence obtained pointed to some "Sunlight Soap" coupons from an infected district as having been the means of conveying the disease. Fifty-three cases of enteric fever had their origin in Brighton during 1894, and after making a careful and exhaustive inquiry into the history of the cases Dr. Newsholme came to the conclusion that no less than fifteen of them were caused by sewage-contaminated oysters, while six others, he states, were ascribable to other contaminated shell-fish eaten in an uncooked condition. He further remarks that of the remaining thirty-two cases, in seven no definite history was obtainable and in twenty-five shell-fish as a cause was excluded. From this summary Dr. Newsholme observes: "It will be seen that at least 40 per cent. of the cases of enteric fever originating in Brighton during last year were ascribable to sewage-contaminated shell-fish, a fact of the practical bearings of which it is my duty to warn the public of Brighton."

Finchley Urban Sanitary District.—Dr. H. R. Kenwood records in his current annual report for this district an interesting outbreak of throat affection which resembled diphtheria, but which apparently could not be regarded as that disease. It seems to have been an infectious follicular tonsillitis. Dr. Kenwood considers that the evidence pointed strongly to milk as having been the agent by which the disease was conveyed. On examining the cows which furnished milk to the infected area Dr. Kenwood discovered that three of them were evidently out of health; in each case the teats were slightly ulcerated, and one of the cows had a small chronic abscess in the udder. Dr. Kenwood was further able to demonstrate the very important fact that though the milk from these cows was distributed to only 17 per cent. of the total houses in the district it supplied no less than 94 per cent. of the houses infected. This certainly appears to be very strong evidence. Commenting upon the above outbreak Dr. Kenwood observes that the machinery for preventing occurrences of this kind is not all that it should be. He considers that a regular and systematic inspection of the cows in each district should be made at short intervals, and that a veterinary expert should be appointed by several sanitary authorities in combination. It is, Dr. Kenwood says, somewhat strange that although these milk-borne epidemics are frequently cropping up, there is nothing done to prevent their recurrence, and that all action is aimed at preventing the spread of an outbreak after much damage has been already affected. With Dr. Kenwood's views we have much sympathy, and we have frequently suggested in our columns similar action. A short time since, in reference to the report of the Royal Commission on Tuberculosis, we expressed a hope that it would lead to some regular inspection of milch cows and their surroundings.

Southport Urban Sanitary District.—The age and sex grouping of the population of Southport (44,928) is, Dr. Henry Vernon observes, a peculiar one, as compared with a normal English grouping in a population of the same number. Under fifteen years of age the population of Southport shows a deficit of 2643 persons, while in practically all the age groupings over fifteen Southport has an excess of persons as compared with the population of England and Wales as a whole. In every 1000 of the Southport population there are 590·710 females and 409·290 males, as compared with 515·286 females and 484·714 males in England and Wales, as evidenced by the 1891 census. Dr. Vernon estimates the local death-rate for 1894 as 14·32 per 1000, the corrections made consisting of the addition to the deaths occurring in the borough of those dying outside but belonging to the district, together with a subtraction of moribund visitors and an allowance for the gain derived from the peculiar age and sex distribution of the population. In commenting upon the calculation of a local death-rate Dr. Vernon observes: "If it tends to evolve a true biometric result to 'count in' the deaths of persons who may have left Southport ten or twenty years ago to seek the shelter of Ormskirk workhouse it cannot tend to an untrue result to 'count out' the deaths of those who have only been with us a few weeks, and who were known to have arrived stricken with mortal sickness. The inevitable conclusion seems to be that a time limit should be fixed after which deaths should be debited to the localities where they actually occur."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5616 births and 4225 deaths were registered during the week ending Aug. 10th. The annual rate of mortality in these towns, which had been 22·5 and 20·7 per 1000 in the two preceding weeks, was last week 20·8. In London the rate was equal to 19·0 per 1000, while it averaged 22·1 in the thirty-two provincial towns. The lowest rates in these towns were 13·6 in Croydon, 14·2 in Huddersfield, 14·6 in Bristol, 15·3 in Brighton, and 15·5 in Portsmouth; the highest rates were 26·8 in Salford, 27·1 in Manchester, 30·5 in Liverpool, 31·0 in Wolverhampton, and 33·8 in Preston. The 4225 deaths included 1077 which were referred to the principal zymotic diseases, against 1206 and 1178 in the two preceding weeks; of these, 736 resulted from diarrhœa, 109 from measles, 76 from diphtheria, 65 from whooping-cough, 46 from "fever" (principally enteric), 39 from scarlet fever, and 6 from small-pox. The lowest death-rates from these diseases were recorded in Plymouth, Bristol, Huddersfield, Halifax, and Newcastle-upon-Tyne; and the highest rates in Liverpool, Bolton, Preston, Wolverhampton, and Norwich. The greatest mortality from measles occurred in West Ham, Manchester, and Blackburn; from whooping-cough in Oldham; and from diarrhœa in Liverpool, Hull, Sheffield, Leicester, Bolton, Preston, Wolverhampton, and Norwich. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 76 deaths from diphtheria included 55 in London, 4 in West Ham, and 3 in Liverpool. Three fatal cases of small-pox were registered in London, 2 in Oldham, and 1 in Liverpool, but not one in any other of the thirty-three towns. There were 273 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Aug. 10th., against 89, 199, and 237 at the end of the three preceding weeks; 54 new cases were admitted during the week, against 23, 115, and 60 in the three preceding weeks. The number of scarlet

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fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2511, against 2267, 2347, and 2423 on the three preceding Saturdays; 281 new cases were admitted during the week, against 220, 249, and 247 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 185 and 171 in the two preceding weeks, further declined to 159 last week, and were 23 below the corrected average. The causes of 46, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Oldham, Bradford, Sunderland, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birkenhead, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·3 and 18·0 per 1000 in the two preceding weeks, further declined to 17·6 during the week ending Aug. 10th, and was 3·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·0 in Edinburgh and 17·1 in Leith to 19·6 in Paisley and 20·9 in Greenock. The 509 deaths in these towns included 68 which were referred to diarrhœa, 17 to whooping-cough, 8 to measles, 4 to scarlet fever, 4 to "fever," 1 to diphtheria, and not one to small-pox. In all, 102 deaths resulted from these principal zymotic diseases, against 92 and 84 in the two preceding weeks. These 102 deaths were equal to an annual rate of 3·5 per 1000, which was 1·8 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 64 and 55 in the two preceding weeks, rose again to 68 last week, of which 34 occurred in Glasgow, 8 in Edinburgh, 8 in Dundee, and 6 in Greenock. The deaths referred to whooping-cough, which had been 7 and 12 in the two preceding weeks, further rose to 17 last week, and included 5 in Glasgow and 5 in Dundee. The 8 fatal cases of measles exceeded by one the number in the preceding week, and included 5 in Glasgow. The deaths from scarlet-fever, which had been 3 in each of the two preceding weeks, were 4 last week, of which 3 occurred in Glasgow, where 2 of the 4 fatal cases of "fever" were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 59 and 77 in the two preceding weeks, declined to 67 last week, but were 11 above the number in the corresponding week of last year. The causes of 23, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 and 25·7 per 1000 in the two preceding weeks, declined again to 22·2 during the week ending Aug. 10th. During the past six weeks of the current quarter the death-rate in the city has averaged 23·6 per 1000, the rate during the same period being 20·0 in London and 15·9 in Edinburgh. The 149 deaths registered in Dublin during the week under notice showed a decline of 23 from the number in the preceding week, and included 27 which were referred to the principal zymotic diseases, against 28 and 25 in the two preceding weeks; of these, 23 resulted from diarrhœa, 3 from "fever," 1 from whooping-cough, and not one either from small-pox, measles, scarlet fever, or diphtheria. These 149 deaths were equal to an annual rate of 4·0 per 1000, the zymotic death-rate during the same period being 4·7 in London and 2·3 in Edinburgh. The fatal cases of diarrhœa, which had been 16, 24, and 17 in the three preceding weeks, rose again to 23 last week. The 3 deaths referred to different forms of "fever" exceeded those recorded in any recent week, while the mortality from whooping-cough showed a further decline. The 149 deaths in Dublin last week included 46 of infants under one year of age, and 19 of persons aged upwards of sixty years; the deaths of infants showed an increase upon the number in the preceding week, while those of elderly persons were considerably below the number recorded in any recent week. Three inquest cases and 3 deaths from violence were registered; and 29, or nearly one-fifth, of the deaths occurred in public institutions. The causes of 17, or more than 11 per cent., of the deaths in the city last week were no certified.

VITAL STATISTICS OF LONDON DURING JULY, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during July in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 11·6 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 5·7, 6·8, and 8·4 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Westminster, St. James Westminster, Stoke Newington, St. Olave Southwark, Bermondsey, Wandsworth, and Lee; while they showed the largest excess in Chelsea, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Greenwich. The prevalence of small-pox in London showed a marked increase in July, 258 cases being notified during the month, including 59 in Whitechapel, 31 in St. George Southwark, 24 in Mile End Old Town, 18 in Bethnal Green, and 15 in Camberwell sanitary areas. The Metropolitan Asylum Hospitals contained 232 small-pox patients at the end of July, against 34, 20, and 33 at the end of the three preceding months; the weekly admissions averaged 49, against 7, 5, and 10 in the three preceding months. The prevalence of scarlet fever in London showed a further marked increase upon that recorded in recent months; this disease was proportionally most prevalent in Chelsea, St. George Hanover-square, Strand, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, and Mile End Old Town sanitary areas. The Metropolitan Asylum Hospitals contained 2340 scarlet fever patients at the end of July, against 1413, 1481, and 1845 at the end of the three preceding months; the weekly admissions averaged 263, against 132, 167, and 229 in the three preceding months. The prevalence of diphtheria in London showed a further increase during July; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, Poplar, and Rotherhithe. There were 680 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of July, against 430, 508, and 633 at the end of the three preceding months; the weekly admissions averaged 103, against 69, 81, and 109 in the three preceding months. The prevalence of enteric fever in London showed a slight increase during July; this disease was proportionally most prevalent in Hackney, St. Luke, Shoreditch, Limehouse, Woolwich, and Plumstead sanitary areas. Erysipelas was proportionally most prevalent in Marylebone, Shoreditch, Bethnal Green, Limehouse, and Mile End Old Town sanitary areas. The 18 cases of puerperal fever notified during July included 3 in Islington, and 2 each in Fulham, Lambeth, Wandsworth, and Lewisham sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, Aug. 3rd, the deaths of 8851 persons belonging to London were registered, equal to an annual rate of 21·0 per 1000 of the population, against 18·3, 15·9, and 14·9 in the three preceding months. The lowest death-rates during July in the various sanitary areas were 8·9 in Hampstead, 10·5 in Lee, 11·3 in St. James Westminster, 11·5 in Stoke Newington, 12·4 in Plumstead, and 12·7 in St. George Hanover-square; the highest rates were 29·2 in Whitechapel, 29·4 in St. Saviour Southwark, 29·5 in St. Olave Southwark, 29·8 in Holborn, 31·0 in Mile End Old Town, 35·2 in Limehouse, 39·0 in St. George-in-the-East, and 47·3 in St. Luke. During the five weeks of July 2463 deaths were referred to the principal zymotic diseases in London; of these, 1576 resulted from diarrhœa, 391 from measles, 242 from diphtheria, 111 from whooping-cough, 93 from scarlet fever, 44 from different forms of "fever" (including 42 from enteric fever and 2 from ill-defined forms of continued fever), and 6 from small-pox. These 2463 deaths were equal to an annual rate of 5·8 per 1000. The lowest zymotic death-rates were recorded in St. George Hanover-square, St. James Westminster, Hampstead, City of London, Lee, and Plumstead; and the highest rates in St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—JULY, 1895.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,302,346	258	2387	1285	1	229	13	18	573	13	4877	11·6	6	391	93	242	111	—	42	2	1576	2463	5·8	8851	21·0	289
West Districts.																										
Paddington	122,756	1	63	32	—	6	—	1	11	1	115	9·8	—	5	3	5	5	—	3	—	45	66	5·6	239	20·3	287
Kensington	167,671	3	64	60	—	7	—	1	29	—	164	10·2	—	—	1	12	3	—	—	—	49	65	4·0	280	17·4	304
Hammersmith	108,429	1	54	35	—	4	—	—	6	—	100	9·6	—	—	2	7	3	—	—	—	31	43	4·1	190	18·3	260
Fulham	117,745	—	33	52	—	3	—	2	12	—	102	9·0	—	10	3	9	7	—	1	—	48	78	6·9	224	19·8	281
Chelsea	99,930	3	84	45	—	5	—	1	11	—	149	15·6	—	1	5	7	—	—	1	—	25	39	4·1	172	17·9	247
St. George Hanover-square	74,037	—	57	14	—	—	1	—	9	—	81	11·4	—	—	2	3	—	—	—	1	10	16	2·3	90	12·7	109
Westminster	54,003	3	25	8	—	1	—	—	2	—	39	7·5	—	2	1	1	—	—	1	—	14	19	3·7	100	19·3	295
St. James Westminster	23,149	1	6	4	—	—	—	—	3	—	14	6·3	—	—	1	—	—	—	—	—	3	4	1·8	25	11·3	208
North Districts.																										
Marylebone	137,392	14	48	28	—	12	—	—	33	—	135	10·2	—	1	—	5	2	—	—	—	31	39	3·0	270	20·5	234
Hampstead	77,562	1	46	14	—	5	1	1	5	—	73	9·8	—	—	—	1	2	—	—	—	5	8	1·1	66	8·9	154
St. Pancras	233,543	4	153	63	—	13	—	—	29	—	262	11·7	1	14	3	7	8	—	—	—	89	122	5·4	439	19·6	300
Islington	336,929	6	215	48	—	6	3	3	32	—	313	9·7	—	35	8	10	4	—	1	1	112	171	5·3	607	18·8	244
Stoke Newington	35,234	—	9	4	—	1	—	—	5	—	19	5·6	—	2	—	1	1	—	—	—	10	14	4·1	39	11·5	190
Hackney	215,623	5	100	34	—	20	—	—	25	—	184	8·9	—	19	6	3	4	—	4	—	84	120	5·8	385	18·6	330
Central Districts.																										
St. Giles	37,654	8	26	4	—	4	—	—	2	—	44	12·2	—	1	—	1	—	—	—	—	10	12	3·3	71	19·7	370
St. Martin-in-the-Fields	13,536	3	4	4	—	1	—	—	2	—	14	10·8	—	—	1	—	—	—	—	—	3	4	3·1	24	18·5	316
Strand	22,586	2	22	—	—	1	—	—	1	—	26	12·0	2	—	2	1	—	—	—	—	5	10	4·6	50	23·2	333
Holborn	32,188	4	5	11	—	—	—	—	8	—	28	9·1	—	5	—	1	—	—	—	—	14	20	6·5	92	29·8	337
Clerkenwell	65,036	2	26	18	—	4	—	—	8	—	58	9·3	—	9	1	2	6	—	—	—	30	48	7·7	179	28·7	415
St. Luke	40,763	2	12	12	—	5	1	—	11	—	43	11·0	—	44	2	5	2	—	1	—	36	90	23·0	185	47·3	409
City of London	33,824	4	22	8	—	—	1	—	3	—	38	11·7	—	1	—	—	—	—	—	—	3	4	1·2	49	15·1	217
East Districts.																										
Shoreditch	122,932	3	98	29	—	14	—	—	34	—	178	15·1	—	9	5	6	3	—	5	—	84	112	9·5	312	26·5	390
Bethnal Green	130,061	18	67	75	—	7	1	—	32	—	200	16·0	—	14	4	15	3	—	1	—	81	118	9·5	321	25·7	313
Whitechapel	75,820	59	72	45	—	4	—	—	12	—	192	26·4	—	16	1	7	1	—	1	—	21	47	6·5	212	29·2	308
St. George-in-the-East	45,227	6	55	36	—	—	—	—	8	—	105	24·2	—	26	1	4	2	—	—	—	22	55	12·7	169	39·0	397
Limehouse	56,885	8	70	25	—	7	—	—	13	—	123	22·6	—	27	3	5	2	—	1	—	26	64	11·7	192	35·2	351
Mile End Old Town	108,443	24	82	65	—	6	—	—	22	—	199	19·1	—	25	1	15	2	—	1	—	69	113	10·9	322	31·0	350
Poplar	171,230	5	109	82	—	15	—	—	29	—	240	14·6	—	36	6	14	4	—	3	—	70	133	8·1	442	26·9	340
South Districts.																										
St. Saviour Southwark	28,570	—	14	6	—	—	—	—	2	—	22	8·6	—	3	4	1	—	—	—	—	9	17	6·7	75	29·4	380
St. George Southwark	60,168	31	20	8	—	2	—	—	3	—	64	11·1	—	7	1	1	4	—	2	—	35	50	8·7	178	30·8	380
Newington	119,358	6	44	47	—	7	—	—	17	—	121	10·6	—	3	2	6	7	—	1	—	40	69	5·2	264	23·1	309
St. Olave Southwark	13,065	1	2	4	—	—	—	—	—	—	7	5·6	—	—	—	1	—	—	—	—	4	5	4·0	37	29·5	237
Bermondsey	83,861	1	35	14	—	2	—	1	7	—	60	7·5	—	18	2	3	1	—	—	—	33	57	7·1	186	23·1	227
Rotherhithe	40,713	1	15	24	—	2	—	—	4	—	46	11·8	—	2	—	3	—	—	—	—	10	15	3·8	70	17·9	219
Lambeth	284,883	8	144	102	1	12	4	2	37	11	321	11·8	—	21	3	17	19	—	1	—	128	189	6·9	613	22·4	286
Battersea	165,130	3	90	36	—	4	—	1	25	—	159	10·0	—	18	6	5	3	—	3	—	69	104	6·6	331	20·9	334
Wandsworth	185,956	—	66	44	—	7	—	2	14	1	134	7·5	—	2	2	6	1	—	—	—	47	58	3·3	243	13·6	192
Camberwell	252,737	15	80	99	—	9	—	1	28	—	232	9·6	3	11	2	28	6	—	3	—	84	136	5·6	475	19·6	296
Greenwich	175,183	—	119	114	—	6	—	—	21	—	260	15·5	—	1	5	19	2	—	—	—	50	77	4·6	341	29·3	297
Lewisham (excluding Penge)	82,410	1	48	12	—	4	—	2	3	—	70	8·9	—	1	1	1	3	—	1	—	21	28	3·5	108	13·7	188
Woolwich	42,768	—	34	12	—	8	—	—	6	—	60	14·6	—	1	3	3	—	—	3	—	6	16	3·9	72	17·6	176
Lee	38,832	—	14	—	—	1	—	—	6	—	21	5·6	—	1	—	—	—	—	—	—	3	4	1·1	39	10·5	130
Plumstead	61,494	1	35	8	—	14	1	—	3	—	62	10·5	—	—	—	1	2	—	4	—	7	14	2·4	73	12·4	126
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 41 cases of membranous croup.

† Including deaths from membranous croup.

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End Old Town, and St. George Southwark sanitary areas. Six fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 10; of these 6 fatal cases 3 belonged to Camberwell, 2 to Strand, and 1 to St. Pancras sanitary areas. The 391 deaths referred to measles were 99 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Bermondsey. The 93 fatal cases of scarlet fever were within 3 of the corrected average number; this disease showed the highest proportional fatality in the Strand, St. Saviour Southwark, and Woolwich sanitary areas. The 242 deaths referred to diphtheria exceeded by 91 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, St. Luke, Bethnal Green, Whitechapel. St. George-in-the-East, Limehouse, Mile End Old Town, Camberwell, and Greenwich. The 111 fatal cases of whooping-cough were less than half the corrected average number; this disease showed the highest proportional fatality in Fulham, Clerkenwell, St. George Southwark, Newington, and Lambeth sanitary areas. The 42 deaths referred to enteric fever were 9 below the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 1576 fatal cases of diarrhœa exceeded by as many as 517 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, St. George Southwark, and Lambeth. In conclusion, it may be stated that the mortality in London during July from these principal zymotic diseases was more than 31 per cent. above the average, owing principally to the excessive fatality of summer diarrhœa.

Infant mortality in London during July, measured by the proportion of deaths under one year of age to registered births, was equal to 289 per 1000, and considerably exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, Hampstead, Stoke Newington, Lee, Lewisham, Woolwich and Plumstead; and the highest rates in St. Giles, Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, St. Saviour Southwark, and St. George Southwark.

THE SERVICES.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel John Henry Hughes, M.D., to be Surgeon-Colonel, vice S. Archer, retired. Surgeon-Lieutenant-Colonel Richard Exham to be Brigade-Surgeon-Lieutenant-Colonel, vice R. N. Mally, deceased. Surgeon-Lieutenant-Colonel James Macnamara, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice J. H. Hughes, M.D. The undermentioned Surgeons on probation are gazetted as Surgeon-Lieutenants:—Lionel Fergus Smith, M.B.; Robert James Blackham; Septimus Harold Fairrie, M.B.; George Thelwall Kindersley Maurice; Rupert Fawssett; John Vincent Forrest, M.B.; Henry William Grattan; Francis Ernest Gunter; John Hay Campbell; and John Grech.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel and Temporary Surgeon-Colonel William Roe Hooper is granted the temporary rank of Surgeon-Major-General. The services of Surgeon-Captain H. B. Melville, M.B., C.M., are replaced temporarily at the disposal of the Military Department. Surgeon-Major C. Monks has delivered over charge of the office of the Superintendent of Mahabaleshvar. Surgeon-Captain T. E. Dyson, M.B., C.M., and Surgeon-Major K. S. Nariman have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Gujarat Registration District. Surgeon-Captain G. B. Russell, A.M.S., is appointed Personal Assistant to the Principal Medical Officer, Madras Command. The services of the undermentioned medical officers of the Bengal Establishment are placed permanently at the disposal of the Government of the North-West Provinces and Oudh:—Surgeon-Captain C. C. Manifold; Surgeon-Major G. M. J. Giles, M.B., F.R.C.S.; and Surgeon-Captain J. M. Crawford, M.B., C.M.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeon John D. Henwood to the *Devastation*; Surgeon S. Walter Bowden, D.S.O., to the *Urgent*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Herbert Woodley Joyce, 2nd Volunteer Battalion the Buffs (East Kent Regiment), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 2nd Glamorganshire: Surgeon-Lieutenant P. R. Griffiths, M.B., resigns his commission. *Royal Engineers:* 1st Sussex: Second-Lieutenant G. A. Skinner is appointed Surgeon-Lieutenant. *Rifle:* 1st Surrey (South London): Surgeon-Lieutenant W. A. Atkinson, M.B., to be Surgeon-Captain.

CHITRAL.

The future of Chitral appears to be pretty well settled. The policy adopted by the present Government is not to remove altogether the troops from that country, but to maintain a hold on it by retaining a native force at Chitral and by utilising the services of native levies and the aid of the Khan of Dir's troops for the protection of the country in the vicinity of that station. Surgeon-Major Sir George Robertson will shortly proceed to Chitral in connexion with a settlement of the country. A force composed of a battalion of Goorkhas and one of the Punjab Infantry, with guns, will garrison Chitral, but no British troops will remain across the frontier. This policy of compromise is stated to have been received with much satisfaction by the Government of India. The Chitral expedition has not only shown the gallantry of the troops taking part in it, especially of the native portion, but it has afforded the medical service of India an opportunity of exhibiting its bravery and devotion. In other respects also the expedition has been productive of some good. The Chitral war has shown the practical impossibility of invading India from the north-west by a large force from Central Asia. The topographical difficulties in the way of marching any large army over such mountainous tracts of country would probably prove for Russia an insurmountable task. The experience we have gained in this expedition of the Lee-Metford rifle in action has moreover led to an investigation which will probably add to our present knowledge in regard to arms of precision and the surgery of modern warfare.

THE COMPETITIVE EXAMINATIONS FOR HER MAJESTY'S MEDICAL SERVICES.

The following are the lists of successful candidates at the recent examinations:—

BRITISH MEDICAL SERVICE.

Name.	Marks.	Name.	Marks
F. S. Brereton	2685	M. L. M. Vaudin	2213
J. C. B. Stratham	2324	W. A. Ward	2167
P. J. Probyn	2265	E. G. Forrest	2053
R. M. le H. Cooper	2259	A. W. Hooper	2005
A. H. Waring	2214	E. C. Hayes	2001

INDIAN MEDICAL SERVICE.

Name.	Marks.	Name.	Marks.
W. W. Clemesha	2605	C. R. Bakhla	2279
A. W. R. Cochrane	2594	K. V. Kirkday	2260
V. E. H. Lindesay	2500	E. R. Rost	2254
R. P. Wilson	2446	C. B. Harrison	2238
N. R. J. Rainier	2441	W. J. Niblock	2227
E. L. Perry	2423	E. Le F. Payne	2223
J. A. Black	2411	N. P. O'G. Lalor	2222
J. H. Symons	2337	J. C. Robertson	2212

THE ARMY AND NAVY ESTIMATES.

The estimates having been framed by the preceding, and accepted by the present, Government, their discussion will not give much room for adverse criticism on the part of the Opposition. The question of who is to be the successor to the Duke of Cambridge must be settled, and the policy in regard to Chitral and other matters will probably be discussed. It seems to be generally assumed that Lord Wolseley will succeed the Duke of Cambridge in the newly created appointment, and his rank and reputation, his military services, and proved ability and experience point him out as the man best fitted for the post. We can only hope that his Lordship will be just and generous in his dealings with the Army Medical Services.

THE EX-MINISTER FOR INDIA.

The retirement of no one of the ex-Ministers of the late Government will probably be more regretted in India than that of Sir Henry Fowler from the post he filled at the India Office. Apart from all party considerations, Sir Henry Fowler's speeches and conduct in regard to the opium question and

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other matters showed that he had a manly, independent, and judicial way of considering and discussing Indian questions and a firm "grip" of his subjects. In saying this we are only expressing what was, we believe, the general opinion on both sides of the House, which was endorsed in India.

DEATH IN THE SERVICES.

With regret we announce the death of Brigade-Surgeon John Proudfoot Stratton, Bombay Army (retired), Political Agent, Bundelkund, in his sixty-seventh year. He took part in the Indian Mutiny Campaign, and retired in 1886.

Under the provisions of an Order in Council Surgeon George Fletcher Collins, of H.M.S. *Pembroke*, Chatham, withdraws from the Royal Navy, with a gratuity of £1000, after eight years' service.

Correspondence.

"Audi alteram partem."

"NOTE ON A RARE CONDITION OF THE OMENTUM."

To the Editors of THE LANCET.

SIRS,—The condition described in your columns of Aug. 10th by Mr. Greig Smith is one which falls exactly into place in a small group of cases, somewhere about ten in number, in my own experience. They are all exactly alike, and the state and appearance of the vessels are exactly described by Mr. Greig Smith when he says that they "resembled fat, well-developed earthworms." The group of cases I refer to constitutes one of the many outlying corners of abdominal surgery which I have been struggling to get into book shape for some years, but so far unsuccessfully. The cases are certainly those in which a pelvic tumour has become rotated and slowly strangulated—acute strangulation has an altogether different history and result. The slow strangulation results in a union to the tumour of the fringe of the omentum, the gradual increase of the vessels of the apron, and the separation of the tumour from its original stock, with a final transplantation on to the omentum. The complete history of this process is built up in a series of my own observations, and is quite substantiated by isolated observations of other surgeons published here and there. The tumours in which this transplantation occurs are chiefly ovarian, but are also occasionally myomatous. Generally their pelvic pedicle has disappeared by the time matters have reached the stage noted in Mr. Greig Smith's case. He says nothing about a pelvic pedicle (though he says the tumour was pelvic), and therefore I assume it had disappeared. If the tumour was originally a strangulated uterine myoma he will find no evidence now of a pedicle on the tumour, but in a separated ovarian tumour it would not be difficult to do so.

I am, Sirs, yours obediently,

The Crescent, Birmingham, Aug. 12th, 1895. LAWSON TAIT.

A MODERN PANACEA.

To the Editors of THE LANCET.

SIRS,—Being at my wits' end for a means of curing a case of ringworm of the scalp which had flourished under treatments many and various, I in May last began to treat it with the solution of the biniodide of mercury. The hair was removed, the crusts were washed carefully away, and the biniodide solution was applied thoroughly by myself, three times a week at first, then every day. At the end of a month the result was *nil*, or almost *nil;* any little improvement that there was might be accounted for by the extra cleanliness and care taken in keeping the hair short and the scalp free from scurf. The strength of the solution was then doubled and for another month the game went on, and that head is as it was. I am now about to apply the solution in the strength of one drachm to the ounce, this being the "strong blistering fluid" which, when diluted three times, forms the application that has worked such wonders for its discoverer. If this succeeds I shall be disposed to think that croton oil or any other "strong blistering fluid" would have done likewise, for it will be quite logical to conclude that the improvement will be due to the blistering rather than to the blister. One always instinctively views with suspicion any drug or means of treatment that has claimed for it powers that are at once extraordinary and widespread, and such, I must confess, was my attitude towards the biniodide treatment of ringworm of the scalp. For has not biniodide of mercury removed the dangers of scarlet fever during 1894? Has it not robbed influenza of its terrors, chronic diarrhœa of its inconveniences, children of their teeth grinding, and insects of their stings during the present year of grace?

I am, Sirs, yours faithfully,

Blackpool, Aug. 10th, 1895. LEONARD MOLLOY.

"CASTRATION FOR OVERGROWTH OF PROSTATE."

To the Editors of THE LANCET.

SIRS,—In your annotations (THE LANCET, p. 45, July 6th, 1895), in discussing the subject of castration for overgrowth of the prostate, you mention a paper which I recently read at the annual meeting of the American Surgical Association, and say thereof: "He had collected 111 cases of double castration by competent surgeons for enlarged prostate in extreme and exaggerated forms, which, he said, had 'resulted in cures.' All the same, he went on to show that twenty of these had died." Nothing in the paper, as read, as abstracted in the *New York Medical Record* (June 1st and 8th), from which you quote, or as published in full in "The Annals of Surgery" (July) justifies the statement that I said the 111 cases had resulted in cures. The next succeeding sentence in your annotation—"in 87·2 per cent. rapid atrophy of the prostate follows"—is sufficient evidence of the inaccuracy of the preceding paragraph, which I have quoted. I have endeavoured from the beginning not to make extravagant claims for this operation, and I shall be obliged if you will publish this correction.

I am, Sirs, yours faithfully,

Aug. 8th, 1895. J. WILLIAM WHITE.

*** We gladly insert Dr. White's letter. We said in our annotation that Dr. White showed that 20 of the 111 cases of double castration for prostatic overgrowth had died, and we were somewhat puzzled to know how this consisted with the statement in an earlier part of the report that "these cases, extreme and aggravated types, all by competent surgeons, had resulted in cures." We now see that these words are meant to apply to three cases, the histories of which were related as examples. We are sorry in any way to have misread the report of a very interesting communication.—ED. L.

OSTEO-ARTHROPATHY.

To the Editors of THE LANCET.

SIRS,—Your brief report of a case shown by me at the annual meeting of the British Medical Association at the Clinico-Pathological Museum contains a few statements which may mislead those who have not seen the case. It was a typical case of "pulmonary hypertrophic osteo-arthropathy" as differentiated by Marie from acromegaly. The hyperplasia is almost entirely bony, if we except the joints and the soft parts around the ankles. There is no lipping or alteration in the small details of the bone, the changes being massive in the affected parts. Although primarily a case of bronchitis and emphysema there is also some tuberculous consolidation.

I am, Sirs, yours truly,

Finsbury-circus, E.C., Aug. 13th, 1895. F. R. WALTERS.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—The following information may assist you in answering the questions you ask in your recent leading article on the above subject. A few years ago, before I started practice, I met a friend whom I had lost sight of for some time and found that he had just consulted a well-known specialist for nasal obstruction, which he was anxious to get rid of before being ordained. Acting upon this gentleman's advice he was about to undergo an operation, and for that

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purpose was to reside two or three weeks in a private hospital. The treatment, he told me, was to cost him considerably over £50. Knowing that he could ill afford the expense, and failing to see the necessity for such a lengthy course of treatment, or, indeed, for residence in hospital at all, I strongly advised him to disregard his appointments with the specialist and to consult a well-known general surgeon connected with a large London hospital. I afterwards learned from this surgeon that at two short sittings in his consulting-room he had done all that was required—viz., removed a nasal polypus and cauterised a hypertrophied mucous membrane. A few months later I met my friend again. He was very grateful to me, as the obstruction had been completely removed at the moderate cost of four guineas. Another very similar case occurred a few weeks ago in the practice of a brother medical man, to whom I am indebted for the particulars. Without his knowledge a patient of his had consulted a well-known specialist for nasal obstruction caused by a deflection of the septum. He had been told that for the necessary operation for its removal he must reside in a private hospital for at least a fortnight. His medical man, on being consulted, expressed his readiness to perform the operation in his consulting-room; but, finding that the patient was somewhat staggered at the marked difference with which the gravity of the operation was regarded by his two advisers, suggested that he should consult a third. Thereupon he consulted a general surgeon, whose name is well known in the profession, who operated in his consulting-room the same day, using cocaine, and sent him back to Wales the day following. The surgeon is still in ignorance that anyone else had been previously consulted. If you wish it I have no doubt I could supply you with the names and addresses of the patient's practitioner, surgeons, and specialist. As far as my experience goes, but it only extends to four years of private practice, probably the greatest abuse of the kind exists in connexion with the little operation for the removal of adenoids, which doubtless brings more grist to the special mill than any other. We all know that in the out-patient department of a London hospital the patient after this operation is generally sent home as soon as he has recovered from the anæsthetic, with instructions as to diet and to "come again next week." I am frequently hearing of patients being kept in a private hospital a week and even longer, of a nurse having been in continual attendance for the same period when the operation has been done in a private house, and of a staff of assistants having been present at the operation, and all this not necessarily in the case of wealthy patients, but of those out of consideration for whose slender purses the fee has been graciously reduced to twenty-five or thirty guineas. Now in these cases the fee is always proportionate to the fuss, and no one can possibly doubt that these methods of treatment, or at all events of after-treatment, are urged for any other than commercial reasons. As you say, we practitioners have it in our own hands to stamp out this bane of honest practice. If those who could were to make a point of attending the special departments of a large hospital they would soon find out how frequently they could dispense with the services of a specialist. Where this cannot be done we should in the end be the gainers by sinking petty jealousy and consulting each other more frequently. But above all, where it is desirable to obtain the best possible advice and the greatest skill, let us send our patients to a general surgeon or physician who in an out-patient special department has gained full experience in the so-called speciality, rather than to the man who spends all his time looking into an auditory meatus or observing three or four square inches of mucous membrane. By so doing we shall consult not only our patients' interests but also our own.

I am, Sirs, your faithfully,

July 29th, 1895. A GENERAL PRACTITIONER.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Recent Assizes: Crimes of Violence and Intemperance.

THE cases tried at the assizes which terminated on the 9th inst. furnish a very sad commentary on the efforts of humanitarians and philanthropists. The May assizes comprised a charge of murder of a most deliberate and aggravated character, being followed by the execution of the prisoner; and yet there were four charges of murder at the assizes held just two months later, none of them resulting in the capital conviction and sentence. In one case the prisoner cut his wife's throat while in a state of drunken frenzy, afterwards attempting his own life by cutting his throat. As is so often the case, the homicidal wound was instantly fatal, while the suicidal was less severe, and by skilful surgical treatment at the Northern Hospital the fatal issue was averted. In this, as in other cases of the kind, it is very probable that the prisoner was more drugged than drunk with the abominable adulterated beer sold in the lower parts of the city. It would be well if temperance advocates were to take note of this circumstance. Four men were charged with aggravated assaults on their wives, and three were sentenced to penal servitude for three years each, and the fourth to two years' imprisonment with hard labour. In one of these cases a conviction was obtained although the wife refused to say anything about the stabbing, while their son, aged twelve, who had in the first instance informed the police that he saw his father stab his mother with a clasp-knife, at the trial stated that it was a lie. Referring to the case mentioned in a former letter, in which a woman was charged with manslaughter in the case of a man who had died under the administration of chloroform, the prisoner was, at the instigation of the learned judge (Mr. Justice Cave), indicted for unlawfully wounding, and was sentenced to three years' penal servitude. A woman was sentenced to fifteen years' penal servitude for procuring abortion upon a woman who afterwards died, the judge ruling that the charge of murder could not be sustained.

Prevention of Cruelty to Children.

During the month of July the local Society for the Prevention of Cruelty to Children took up 112 new and 75 old cases, the former involving the welfare of 193, and the latter that of 101, children. Among the complaints were 3 of assault, 2 of excessive beating, 15 of ill-treatment, 155 of general neglect, 35 of begging by day, 12 of begging by night, selling after hours, exposure, sleeping-out, and dangerous surroundings. In 48 cases the parents were prosecuted and punished, in 82 cases the children were left with them subject to visitation, 169 parents were cautioned by the magistrates, and 65 by the Society. Nineteen children were committed to industrial schools.

The Holiday Season.

For many obvious reasons the August Bank Holiday is the most popular of all four. On the 5th inst. it broke all previous records in this city and neighbourhood, the crowds at the different railway stations and ferries exceeding by thousands those of any preceding year. It is very satisfactory that, notwithstanding this circumstance, there were no serious accidents reported. The holiday season here begins in July and is well advanced now, the various steamers to North Wales, the Isle of Man, Scotland, Belfast, and elsewhere being very busy. Season tickets are granted on most advantageous terms, and may be recommended as very good health prescriptions. A very pleasant day may be spent on board the steamer on the passage to and from the Menai Straits, the passenger returning to Liverpool each day. The boat starts at 10.45 A.M. daily, returning about 7 P.M. Many persons have found this a most excellent means of recruiting their health. The voyage to and from the Isle of Man occupies from four to five hours; the island as a health resort is almost unrivalled, the accommodation in hotels and lodgings being ample. Another very healthy and favourite trip is from Liverpool to Leith and back, the boat calling at intermediate ports and enabling the traveller to witness the grand scenery of the west, north, and east coasts of Scotland; the trip occupies a fortnight.

The Attack on a Lad at Walton.

The unfortunate lad William Ireland, the son of a medical man at Walton, died this morning at the Bootle Borough Hospital from the injuries received last week at the hands, it is alleged, of Mr. O'Callaghan, Mr. Ireland's assistant.

Aug. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Fire at Minto House, Edinburgh.

AT the end of last week a fire occurred in Minto House, Chamber's-street, Edinburgh, which is part of the Extra-mural School of Medicine. It has done considerable damage

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to the building, but that can be easily repaired, but some of the things destroyed cannot be replaced. The greatest sufferer has been Dr. Halliday Croom, who has lost his entire museum, the collecting of his whole professional life. He lectures on midwifery at Minto House, and much sympathy is felt for him in the loss of his teaching appliances. Dr. Haultain has also lost some of his teaching appliances, but his loss is small compared with Dr. Croom's.

The Edinburgh Royal Infirmary.

At the meeting of the managers of the Royal Infirmary yesterday the quarterly accounts showed an expenditure diminished by £755 as compared with the corresponding quarter of last year. Mr. Walcot, who submitted the statement, assured the board that while there was this diminution in outlay the comfort of the patients and the efficiency of the institution had not been lowered in any way, and that the first duty of the management was fully recognised to be the care of the patients and the maintenance of the honour of the institution in the administrative as well as in the medical and surgical departments. This reduced expenditure must be regarded as most satisfactory, but it could not be expected that it should be unaccompanied by suggestions of "cheeseparing" in different departments. All sensible people will agree that the utmost economy consistent with the high position the Royal Infirmary occupies is the object to be aimed at by the management.

The late Dr. John Howie Carslaw.

Dr. Carslaw was one of the most prominent of the younger generation of Glasgow medical men, and his early death has been a painful shock to his many friends. He received his education, literary and medical, at Glasgow University, where he graduated as M.A. in 1882, M.B. (with honours) in 1886, and M.D. (with honours) in 1893. He also studied at several German universities. His clinical knowledge was acquired mainly at the Western Infirmary, the hospital associated with the university, where he was successively house physician and house surgeon, and ultimately one of the physicians to the dispensary or out-patient department. He had, moreover, an extensive experience of infectious disease, gained at the City Fever Hospital, Belvidere, where he held a resident appointment. Dr. Carslaw was on the editorial staff of the *Glasgow Medical Journal*, and contributed to it articles principally founded on his observations at the Belvidere Hospital. In his position as assistant to the Professor of Practice of Medicine he showed himself to be an able clinical teacher, and in various ways exercised much influence for good.

Aug. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Rotunda Hospital.

AT a meeting of the governors and guardians of this hospital held on the 2nd inst. the office of consulting physician to the institution, rendered vacant by the death of the late Sir George Porter, was filled by the unanimous election of Sir Philip Crampton Smyly, Surgeon in Ordinary to Her Majesty the Queen in Ireland. A letter was read from her Excelleney the Countess Cadogan, stating that she would have much pleasure in visiting the hospital on Friday, Aug. 30th, for the purpose of declaring the new surgical wing open for the reception of patients. His Excellency the Lord Lieutenant also expressed his intention of being present on that occasion. This visit of the Viceroy and viceregal party to the Rotunda Hospital will be the first occasion on which the patronage of the new representative of the Queen in Ireland will be conferred on a charitable institution.

The Irish Pharmaceutical Society.

A number of prosecutions have recently been instituted by the Pharmaceutical Society of Ireland. Messrs. Fannin and Co. of Grafton-street, Dublin, a firm of the highest respectability, were first attacked, and pleaded guilty of having infringed the very stringent provisions of the new Act. Last week Mr. John F. Corcoran was summoned and fined, a mitigated penalty having been agreed to; and the same course was adopted in the case of Mrs. Barnes, the proprietress of a druggist's shop in Charlemont-street.

The Viceregal Household.

His Excellency the Lord Lieutenant has been pleased to make the following appointments to the Household and Staff:—Physician-in-Ordinary, Mr. Walter G. Smith, M.D.; Surgeons-in-Ordinary, Mr. Edward Hamilton, M.D., F.R.C.S. Irel., and Mr. Kendal Franks, M.D., F.R.C.S. Irel.; Surgeon to the Household, Mr. T. Nedley, M.D.; and Surgeon-Dentist-in-Ordinary, Robert H. Moore, F.R.C.S. Irel.

A Fatality after Tooth Extraction.

The death of Mr. George Horan, which followed the extraction of some teeth by a dentist, has recently caused some interest and speculation in Dublin. The operation was followed by hæmorrhage of such a character that all efforts to control it proved unavailing and the patient died on the second day. The absence of a coroner's inquest has been the subject of rather unwise comment in some of the local papers, but it would appear that all the usual measures, including intravenous saline injection, were employed by a competent surgeon, though without avail. The patient was doubtless a victim to hæmophilia, and the catastrophe unavoidable.

Another Case of Ptomaine Poisoning.

The Limerick poisoning case, in which virulent products of decomposition disseminated through a quantity of custard from a single discoloured egg proved poisonous to a large number of persons and fatal to four, has not yet been forgotten in Dublin. Many letters have been addressed to the daily papers asking for information as to the nature of what, to many of the laity, are novel and hitherto unsuspected sources of danger in connexion with ordinary foods. The term "ptomaine poisoning," is not well understood, and, indeed, became familiar to many persons here for the first time only a few years ago when our popular and well-known city analyst, Sir Charles Cameron, suffered most severely from that form of poisoning, caused, in his case, by portions of a turkey which he unwittingly ate after it had been kept too long. His case was fully reported in the *Dublin Journal of Medical Science* by his friend and medical attendant, Dr. Hawtrey Benson. The illness, which lasted in his instance for many weeks, was caused beyond doubt by a single dose of slightly or partially decomposed meat. Now, an egg contains, from the biologist's point of view, all the complex and notoriously unstable substances which constitute protoplasm and are essential to life. The toxicologist knows that from such bodies, decomposed and regrouped, all the most virulent and subtle of the so-called ptomaine poisons may have their origin. Acute poisoning by decomposed egg is not, therefore, a surprise to him. An instance of food poisoning of a less virulent and serious character has recently occurred in Dublin, and, although owing to the absence of any fatality the particulars have not been made public, the facts are worthy of mention. At a large educational establishment some eight persons partook of stewed rhubarb from a dish which had been kept for some days and the contents of which had undergone slight fermentation and decomposition. They all suffered from gastro-intestinal catarrh of a more or less severe character; in other words, they all presented the symptoms of irritant poisoning. Happily, they all recovered after some days and are now in good health. The lesson, however, from these cases should not be overlooked. It is obviously unsafe to use as food either animal or vegetable substances which in hot weather have shown even the first indications of decomposition.

Diphtheria at Castleblayney.

I regret to report an outbreak of diphtheria at Castleblayney, there being several patients at present in the fever hospital. Some time ago a very serious outbreak, chiefly affecting children, occurred in the southern part of the county of Monaghan.

Medical Fees in Dublin.

The Recorder of Dublin has, in the recent case of White *v.* Russell, expressed himself on the subject of medical fees in Dublin in a manner to which the medical men in this city decidedly object. A correspondent of the *Irish Times* of Aug. 6th makes the spirited remark that "no person in any way acquainted with the duties and responsibilities of the medical profession could think for a moment that any fee less than £1 for three visits could sufficiently remunerate a medical practitioner for the care and attention which he

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should devote to his patients, the English fees quoted being insufficient in most cases to pay for the bare car hire incurred in visiting."

Public Health and Sanitary Work in Dublin.

Sir Charles Cameron's report on the public health of Dublin during the four weeks ended June 29th shows that there were 571 deaths within the metropolitan registration area, giving a yearly ratio of 21·27 per 1000 persons living; within the municipal area, or city, there were 439 deaths, giving a yearly ratio of 23·35 per 1000 persons living. On the northern side of the city the rate was 21·95 and on the southern side 24·62 per 1000 persons living. The death-rate from the seven principal zymotic diseases was 1·5 per 1000 in the whole registration district, and 1·9 per 1000 in the city. On the northern side of the city the rate was 2·1 and on the southern side 1·7 per 1000. The total deaths attributed to zymotic diseases in the city of Dublin were 48, including 8 from small-pox, 1 from measles, 3 from scarlet fever, 8 from whooping-cough, 2 from diphtheria, and 6 from typhoid fever. The death-rate from all causes was 2·4 per 1000 below the mean rate for the corresponding period in the previous ten years. The zymotic death-rate was 0·7 per 1000 below the mean rate. Small-pox did not decrease very much during the month, 43 cases being notified, as compared with 66 in May (five weeks). One conviction was obtained under the Margarine Act and six (of milk vendors) under the Food and Drugs Act. Some of the specimens of milk analysed were of very poor quality, but not sufficiently so to warrant a certificate for adulteration.

The Water-supply at Belfast.

It was reported at the usual fortnightly meeting of the water board on Aug. 8th that, notwithstanding the recent rains, they had 254,000,000 gallons of water less than at the corresponding period of last year. This was due to the long period during which no rain fell. Another feature was the constantly increasing number of new houses which had to be supplied with water. They had passed 81 new houses on Aug. 8th, and at a previous meeting they had 123. It was suggested that the public should use the water as economically as possible. There was still, however, a 124 days' supply, which would last the city until the winter wet weather set in.

Rabies in the Downpatrick District.

At a meeting of the Downpatrick board of guardians held on Aug. 10th the question of the increase of rabies in the union was discussed, and it was decided by a majority to decline to sanction the issuing of an order for the muzzling of dogs; but it was unanimously agreed to requisition the Government to increase the dog tax. I am afraid this is simply shelving the matter for the present.

The Battle of the Clubs at Cork.

Last week Mr. Lee, honorary secretary to the Cork Medical Association, received a communication from the Mayor requesting him to meet him (the Mayor) and also the Grand Master of the Oddfellows, the President of the Bakers' Society, and the President of the Young Men's Benefit Society for the purpose of discussing the dispute between the medical profession and the clubs with a view to an amicable arrangement being arrived at, which the Mayor anxiously desires. The conference took place, and the club delegates frankly admitted that the Cork profession had substantial grievances to complain of. However, as Mr. Lee explained that he had come through courtesy to the Mayor, but that he was not authorised to enter into negotiations, the Mayor stated that he would request the medical profession to send six representatives to confer with six delegates from the clubs, and he would undertake to preside at the meeting. I have no doubt the Cork profession will be quite prepared to discuss the situation with the clubs, and though, as sensible men, they may not assume an uncompromising attitude with regard to details, they will keep clearly before them the general interests of the profession and the fundamental principles which induced them to go into the fight.

An Illustrative Case.

A case has been partially investigated at the Police-court which throws a light on the action of the Cork clubs. A Mr. Carroll sued the secretary of the Irish National Foresters for £9 12*s.* which he claimed as sixteen weeks' sick pay. According to the statement of his solicitor he became ill early in January last and complained of cough, vomiting, and sore-throat. He went to the club medical officer, Mr. McLoughlin, who attended him from January to the beginning of April and treated him for dyspepsia, but as he was not improving he consulted a non-society medical man. The latter told him he was suffering from a grave lung disease and recommended him to give up his employment. Next day he saw Mr. McLoughlin and explained that he had seen a non-society medical man. Mr. McLoughlin then told him he had congestion of the lungs and promised him a certificate of unfitness for his employment. Later Mr. McLoughlin stated that he had handed the certificate to the Wood-ward, but that the latter would not receive it because the complainant had gone to a non-society medical man. Mr. Carroll thought it time to consult a solicitor, and in reply to a letter from his solicitor the following copy of a resolution was received:—"Resolved—That in consequence of Brother David Carroll having, during his illness, refused to comply with the rules of the branch, and the instructions of the branch surgeon, and refused to be medicinally treated or prescribed for by him, we consider he has acted in violation of the rules of the society, especially as the doctor under whose care he is at present refuses to act in consultation with the medical officer of this branch. We, therefore, declare that Brother Carroll has forfeited all claims on the funds of the Branch.—Brother Sheares." Mr. Carroll gave evidence in support of his claim, and the case is still under investigation by the magistrates.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Antitoxin and its Results.

PROFESSOR RICHET publishes in the *Revue Scientifique* some figures which speak eloquently in favour of the new treatment of diphtheria. Any impartial observer who reads the appended table will acknowledge that either the disease has during this year (1895) assumed a milder type—an unwarranted assumption in my opinion—or that Dr. Roux's serum has proved a blessing.

Fortnightly Mortality for the Period including the First Six Months in each of the Following Years.

Fortnight.	1884.	1887.	1890.	1891.	1892.	1893.	1894.	1895.
1st	97	81	55	74	49	83	75	26
2nd	106	42	51	78	60	70	57	15
3rd	102	73	81	76	46	51	53	23
4th	112	90	81	89	61	58	52	23
5th	145	84	83	93	66	62	65	22
6th	145	84	92	73	74	75	74	27
7th	121	78	93	76	56	62	54	15
8th	114	81	71	85	58	60	61	17
9th	106	74	86	69	55	61	52	19
10th	94	66	74	59	56	49	49	24
11th	103	73	66	62	73	53	45	15
12th	88	54	52	43	33	52	30	9
13th	67	55	78	33	55	46	38	4

Throughout his communication Professor Richet adopts a new spelling of the word *diphtérie*, which he writes *diftérie*. This is another attempt to forward the views of an influential party whose aim it has been for some years past to reform the orthography of a great many words in the French vocabulary. It is also a sign of the times that the *Médecine Moderne* informs its readers that it has printed the word *diphtheria* for the last time, and that it will in future adopt Professor Richet's spelling. It will, however, take some time to reconcile the medical world to this innovation.

Door-plates.

Visitors to Paris cannot fail to be struck with the absence of brass plates on the doors of the residences of medical men. As a matter of fact, a door-plate is considered *infra dig.* by our conservative French brethren. The only approach to our familiar door-plate that is tolerated is one bearing the

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words "Docteur-Médecin." It would appear that the keenness of competition impels some practitioners to affix to their doors plates of greatly increased dimensions, some going to the length of adopting a sign suspended from their balconies or windows. This flagrant dereliction from professional dignity has evoked a protest from a member of the Syndicat des Médecins de la Seine, who brought the matter before his society at its last meeting.

The Continental Anglo-American Medical Society.

This useful society, which comprises almost all the British and American practitioners settled on the continent of Europe and in North Africa, held its annual meeting for the first time since its foundation (in 1889) out of Paris, the presence of so many of its members in England during the British Medical Association week having decided the choice of London as a place of reunion this year. About forty members assembled at the Savoy Hotel on Friday, Aug. 2nd, under the presidency of Sir Richard Quain, Bart., M.D., F.R.S., one of the society's most honoured honorary presidents. Five new members were admitted, these gentlemen hailing from Gibraltar, Tangier, Paris, Monte-Carlo, and Boulogne-sur-Mer. Dr. Barnard (the honorary secretary and treasurer) stated that the actual number of members amounted to ninety-six, and that every recruit at Continental health stations appeared anxious to join. A luncheon followed at the same hotel, the chair being again taken by Sir Richard Quain, whose genial toast, "Prosperity to the Society," was highly appreciated and loudly cheered. The company numbered fifty-four. Dr. Barnard (362, Rue St. Honoré, Paris) will supply any information regarding the society to any inquirers. I may mention in conclusion that it has been decided to hold the next annual meeting at the same time and place as the British Medical Association. Oxford is, I am informed, the *locus* selected.

Aug. 14th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Fatal Coincidences.

IN a recent annotation in THE LANCET on "Alpine Misadventure"[1] a remark was made on the fallacy to which the classification of death-causes is liable, when, as in the case of Baron Peccoz, who was officially reported as "killed" on the Lysjoch last August, it turned out that he really "died" from syncope antecedent by a few seconds to his so-called "fatal slip" on the verge of the crevasse. But for the syncope, in other words, he would have kept his balance and extricated himself from the position in which he found himself—a position not more perilous than what he, a trained Alpine pedestrian, was habitually courting. A not less striking coincidence, in confirmation of that remark, has been reported from Turin, not far from where, at the Camp of Lombardore, during recent military evolutions, Lieutenant Tapparone was accused of having caused the death of the soldier Morfeo. Both officer and private belonged to a cavalry regiment, and it was alleged that the former, irritated by some *gaucherie* on the part of the latter, seized him violently, shook him off his horse, and killed him by the fall. Ever eager to find those in authority abusing their power, the "advanced" lay press was dilating on the brutality of Lieutenant Tapparone, and invoking public sympathy for his victim, when at the instance of the War Minister an inquiry was held on the whole case. It was established by cogent evidence, including eye-witnesses among Morfeo's comrades, that he was in no way violently handled, that he was not "pushed," but lightly touched, and that he actually "fell" from his horse; while by those who were his intimates he was known to have been for some time seriously out of health. On post-mortem examination there was found no trace of external lesion, but a very diffused cadaveric ecchymosis. The lungs were sound; but the heart was completely empty, having ceased to pulsate during the last systole. In the abdomen there was no extravasation of blood or serum; there were, however, marked intestinal adhesions—one, particularly pronounced, of the liver to its diaphragmatic vault, the result of an inflammation which had run its course in youth. No other viscus presented any abnormal feature; the brain also was healthy, without trace of apoplectic lesion. The medical report, in accordance with the necropsy, was, therefore, "il Morfeo è morto di sincope cardiaca." The syncope was, in fact, coincident with, or, more properly, immediately prior to, the fall from the horse—the final link in a chain of antecedent malaise. Lieutenant Tapparone was congratulated (and with every reason) on his narrow escape from a charge of manslaughter—a charge in which "appearances" were strongly against him till the medical finding put the matter in its true light.

[1] THE LANCET, July 20th, 1895.

A Centenarian Surgeon.

At Pesaro, on the Adriatic, Dr. Giacomo Asiari attained his hundredth year on the 29th ult., and a brief biography of him has just been issued by a local colleague, Dr. Carlo Rigoni, with the twofold object of putting on record the career of an interesting professional man and of establishing, subject to every available check, yet another *bonâ-fide* instance of a centenarian. Dr. Asiari was born at Forlì on July 29th, 1795, at noon. He studied at Forlì, Faenza, Ravenna, and Florence, at which latter school, on June 17th, 1821, he received his diploma in medicine and surgery. In 1823 he was called to Spoleto as "chirurgo primario" in the hospital there, and distinguished himself as an able and successful operator. His next appointment was in the University of Macerata, where he filled the post of "chirurgo primario" and reader in human anatomy. This readership he succeeded in getting transformed into a regular chair of anatomy, founding, indeed, a "scuola di anatomia" which was previously non-existent in that seat of learning. In 1829 he was called to Pesaro, once more as "chirurgo primario," and there his clinical duties and the calls of an ever-increasing *clientèle* kept him actively employed for the next thirty years, during which he took rank with the leading men of the city and province, like Count Cassi, Baldassini, Paoli, Petrucci, and Perticari. He attended, among other distinguished patients, Prince Charles Buonaparte when, in company with his brother Louis (afterwards Napoleon III.), the Prince in alighting from his carriage had gravely injured his knee. In the cholera year of 1855 he rendered invaluable service to the poorer victims of the disease, for which the Pesarese town council awarded him the gold medal of merit. Finally, in June, 1861, he went on the retired list, and the town council, in recognition of his merits as a surgeon and as a citizen, gave him a life pension equal in amount to the salary he drew in office. Dr. Asiari therefore made over his "armamentarium chirurgicum" to the San Salvatore Hospital and his fine medical library to the Bibliotheca Oliveriana. Since then he has enjoyed a serene and honoured old age, his one complaint being the intercurrent neuritis to which he has been subject for seventy-eight years.

Heat and Venomous Bites.

The prolonged sultry weather has added many more to the instances recently adduced of the virulence it imparts to the bites of venomous animals. The last one medically reported is that of a poor woman of Borgotaro, in the province of Parma, who, after working in the hayfield and partaking of a hearty meal on the spot, was bitten by a viper. She was attended to without loss of time, and the surgeon freely excised the seat of the bite and its immediate surroundings; but swelling rapidly set in, the cutaneous surface as a whole became a livid colour, and in barely ten minutes the patient died in agonising convulsions. Nor is it the venomous reptilia only whose poison is intensified by the more than subtropical heat we have lately been having. In the lake country, at Valmadrera, near Como, a deaf-mute was stung by a fly supposed to have been in previous contact with an animal affected with anthrax. The local inflammation soon became general, and after a day's excruciating pain, during which the unfortunate victim moved the compassion of all by his inability to describe his sensations and explain his wants, death supervened as a welcome relief. Flies, it is well known, exert a depurating function on the air, and when this becomes charged with noxious effluvia exhaling from freshly manured fields they imbibe enough to make their stings dangerously poisonous. The hotter the weather the more virulent the sting. In Switzerland, for example, where the practice of treating the freshly upturned earth with liquid manure is general throughout the summer,

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the effluvia thence arising under exceptionally sultry days renders a walk or drive along her picturesque highways and byways a very chastened joy indeed. Not only so, but the common horse-fly in these circumstances becomes a formidably aggressive poisoner. Not so long ago at Thun a lady was stung under the lower eyelid by one of these winged tormentors, and in less than an hour such swelling and pain set in that nothing short of the best surgical interference, telegraphed for from Berne, succeeded in saving her life.

Professor Maragliano.

The interest aroused in Professor Maragliano's treatment of phthisis, as submitted to the British Medical Association, has extended to France. At the Congress of the Société de Médecine, which, under the presidency of Dr. Bouchard, opened its proceedings last week at Bordeaux, Professor Maragliano has been vouchsafed an entire sitting for the exposition and discussion of his views. Before leaving London he was, I may mention, "interviewed" by the representative of that widely diffused journal *Il Secolo*, to whom he expressed his high admiration of the sanitary institutions, the hospitals, and the whole hygienic organisations of the British capital. He was surprised at the solidarity prevailing among the British medical men, at their well-disciplined meetings, at the practical sense which guides them, not only in the field of science, but in that of professional interests. The admirable organisation of the meeting itself elicited his special commendation, its hospitality being "superiore alle speranze anche degli esigenti" (beyond the hopes even of the exacting). The scientific discussions he found impressed with the gravity proper to the practical genius of the race, and while he missed the enthusiastic outburst of his southern compatriots he remarked the "molta attenzione nel seguire le discussioni e le communicazioni scientifiche" (great attention in following the scientific discussions and communications).

Aug. 10th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Ménière's Disease.

PROFESSOR MAX GRUBER, at a recent meeting of the Vienna Otological Society, read a paper on Ménière's Disease. Ever since the attention of pathologists was directed to this disease and quinine was recommended by Charcot as a valuable remedy against it the recognition of it has been easy if vertigo, tinnitus aurium, and deafness are present. It has been proved that the vertigo results from disease of the semicircular canals. Ménière's disease may, however, according to Professor Gruber, be caused by secretory and exudative processes as well as by a hæmorrhage. Pigment originating from an extravasation may be found in the sacculus, cochlea, and semi-circular canals in the ears of persons who during life never suffered from vertigo. On the other hand, the aquæductus cochleæ, and especially the recessus Cotunnii, into which the aquæductus vestibuli discharges itself, must not be overlooked. This recessus varies greatly in size; sometimes it is hardly to be found, sometimes it is as large as a bean. The membranes of the recessus may be united by connective tissue, and then a lymph engorgement takes place, which produces an abnormal pressure and extravasation of blood, and consequently Ménière's symptoms. A too free use of alcohol may also give rise to these symptoms, because the secretion of lymph is increased in consequence of the determination of blood to the head. Professor Gruber proposed to restrict the name Ménière's disease to phenomena originating in the labyrinth and to separate it from feverish conditions such as labyrinthitis.

Asepsis and Antisepsis in Ophthalmology.

Ever since Gayet showed by his experiments that out of 178 inoculations of eyes cultures resulted in 139 cases and failed only in 39 cases, it has been recognised that an absolutely antiseptic condition of the conjunctiva is not to be obtained; the infective action, however, is limited to those micro-organisms which adhere to the surface of the epithelium. As corrosive sublimate produces opacity of the cornea, and some other remedies become decomposed or have a disagreeable odour, Dr. Grossmann in the *Therapeutische Wochenschrift* recommends cyanide of mercury. It has been employed by Chibret, and possesses the same bactericidal quality as corrosive sublimate, without irritating the tissues or coagulating albumen in such a marked degree as the latter. A solution of 1 in 5000 is sufficiently strong, but it must not be used when the capsule of the eyeball is to be opened, for if it penetrates into the anterior chamber of the eye it may injure the endothelium. Eye washes, as a rule, contain germs of micro-organisms even when prepared with distilled water. Dr. Grossmann therefore adopts Franke's proposal to make use of a solution of corrosive sublimate (1 part in 10,000) for the purpose of dissolving the salts of atropine, cocaine, and eserine; he also recommended frequent sterilisation by boiling.

The Effect of Compressed Air on the Health of Workmen.

In the issue of THE LANCET of July 6th I mentioned some cases of the so-called caisson disease produced by compressed air. The Council of Hygiene requested Professor Max Gruber to prepare a report on this subject, and he has now made the following recommendations: (1) the ventilation is to be improved with a view to diminish the carbonic acid contained in the air of the caissons; (2) a time of from seven to ten minutes is to be allowed for the entrance of the workmen; and (3) a permanent medical service is to be established, the medical officer of which shall satisfy himself as to the gradual condensation of the air. Dr. Silberstein has published an interesting article on Caisson Disease in the *Medicinische Wochenschrift*, mentioning the loss of control over the lower extremities, the urinary bladder, and the rectum as being by far the most important symptoms. He suggested the presence of nitrogen in the spinal cord, which, when the pressure becomes lowered to that of the external air, forms gaseous vesicles in the blood, and by obstructing the vessels produces the above-enumerated paralyses. Not uncommonly patients suffer also from vertigo, increased knee-jerks, and crackling in the knee-joint due to the pressure of gas liberated in the cellular tissue.

Death of Dr. Bettelheim.

By the death of Dr. Bettelheim, who passed away on July 26th, the medical profession in Vienna has lost one of its most able representatives. Born in Pressburg (Hungary) in 1844, he studied at the Vienna School of Medicine under Hyrtl, Rokitansky, Skoda, and Brüke, and after having obtained his diploma in 1866 he acted as assistant to the late Professor Oppolzer. In 1873 he was recognised as *privat-docent* in Pathology, and during the succeeding eight years edited the *Medicinisch-Chirurgische Rundschau*. Among his numerous published works I need mention only those on "Pneumonia Biliaris," "The Diagnosis of Cancer of the Stomach," and "The Use of Muriatic Acid in the Treatment of Gastric Diseases." Dr. Bettelheim felt himself slighted because he did not succed in obtaining an ordinary professorship; during the last five years he was Primarius of the Rudolfinerhaus.

Aug. 10th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Granular Ophthalmia.

AT the last meeting of the Imperial Society of Medicine Dr. Malgat of Paris delivered a very interesting lecture on Granular Ophthalmia. A good many members attended, notwithstanding the very hot and oppressive weather which prevails here just now. Dr. Malgat first of all referred to the treatment of granular ophthalmia amongst the ancient Greeks and the Egyptians, and then enumerated the various methods that have been adopted up to the present time, showing that they were all inefficacious and dangerous. He then fully described the treatment by electrolysis. After demonstrating that the proposed cures by conjunctival cicatrices formerly recommended were not without danger for the patients, he declared that among fifty cases treated by the electrolytic method he had seen fifty complete cures without any cicatrix whatever, just as if the conjunctivæ had never been diseased. The practical application of electrolysis is neither painful nor complicated; on the contrary, it is wonderfully simple and does not involve the slightest danger to the eye. The apparatus used for the purpose is in the hands of all practitioners, being simply a

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small Gaiffe's continuous current battery of seven pairs. Dr. Malgat uses negative electrolysis. In order to make sure of success it is necessary to follow the granulations everywhere, even into the cul-de-sac of the upper eyelid, and for this purpose it will often be necessary to make a small incision into the conjunctival cul-de-sac. Dr. Malgat always prefers this last method. At the conclusion of the meeting he was unanimously nominated a corresponding member of the society.

Cholera.

The epidemic has not quitted our country, but is slowly spreading in several provinces in the interior. The latest telegrams announce an outbreak of the disease in the provinces of Maamuret-ul-Aziz and Adana. At one of the villages in the former province no fewer than twenty-seven cases of cholera, with six deaths, occurred between July 20th and 22nd. Sporadic cases are reported from several villages in these two provinces.

Quarantine.

The General Board of Health decided at its meeting on July 22nd that arrivals from the littoral between Alexandria and Suedieh shall be subject to a quarantine of five days; vessels without passengers need not, however, remain in quarantine longer than twenty-four hours. The quarantine measures against arrivals from the Karamanian coast are maintained.

July 26th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

A GENTLEMAN who seems to have devoted a certain portion of his leisure while in America in the direction of medical study, made a very sturdy attempt recently to compel the Registrar-General in Wellington to have his name placed on the list of recognised medical practitioners; in fact, Mr. Justice Richmond paid a high compliment to the applicant's counsel for the exceedingly able manner in which he had argued his case. Now, as a matter of fact, we have quite enough legalised medical practitioners in New Zealand at the present time without semi-qualified persons attempting to have their names enrolled on the list; indeed, it is only too true that the number of medical men coming to reside in this colony has increased very considerably of late. I fear many are disappointed with the general results attending their emigration here, for New Zealand is amply provided for in the way of medical men even unto the humblest country village. These remarks are penned in the hope that disappointment in the future may be saved, for New Zealand is not now the Elysium that it was for the medico. When the colony was in its infancy persons holding almost any kind of qualification were recognised as medical men, but times have changed since then, as the applicant has now discovered, for his request was emphatically refused by Mr. Justice Richmond, whose judgment will, let us hope, deter others from emulating such an example.

Obituary.

STEPHEN JENNINGS GOODFELLOW, M.D., F.R.C.P. LOND.

STEPHEN JENNINGS GOODFELLOW was born in Falmouth on Oct. 21st, 1809, his mother having come over from Portugal for her confinement, and returning to that country with him in the early part of 1810, his father, a member of an ancient Northamptonshire family, being then a merchant resident at Lisbon. They returned to England before the Peace of 1815, as Dr. Goodfellow remembered the illuminations at Falmouth on that occasion. His family were not greatly in sympathy with intellectual pursuits, but even as a very young man he showed marked ability, reading such works as "Locke on the Understanding," &c., for the pleasure of the intellectual exercise. He was very anxious to go either to Oxford or Cambridge, but, his father not being alive to the advantages of a university education for him, he was unable to go and therefore most gladly availed himself of the opportunities given by the establishment of the University of London. There he passed his examination as rapidly as possible. He has often described the difficulty of the *viva voce* in those early days, students passing from one table to another to be examined in six different subjects before quitting the examination room. He was an enthusiast in his profession, devoting many hours to its study, and when attached to the London Fever Hospital he often pursued his studies far into the night, once or twice being overtaken with sleep in the post-mortem room. He was particularly neat and skilful in his preparations of microscopic objects, and many of his preparations still exist in the museums of the Royal College of Surgeons of England and the Middlesex Hospital. He married in 1846 Elizabeth, the daughter of William Nanson Eyre of Carlisle. She took great interest in his scientific work, assisting in the translation of foreign works and helping in drawing diagrams and sketches to illustrate his lectures. He had a particularly happy method of teaching, as many of the old students who studied under him must remember. Everything was presented to the mind with great clearness and in an interesting manner. Even in his practice he made his patients understand the reason of much of his treatment, and was particularly successful with nervous and hysterical patients. He had at one time a large connexion in America, and many and urgent invitations were sent to him to visit Boston and other parts; and, though he never went over, many persons came from America on purpose to consult him. When he settled in London after his marriage he was one of the founders of an observation society, to which some of the subsequently leading members of the profession belonged. The members of this society met at each other's houses at stated intervals for the discussion of interesting cases and scientific facts.

Dr. Goodfellow was educated at grammar schools in Cornwall, the last one being the endowed school at Bodmin; his early professional education was under the superintendence of a gentleman in large general practice at St. Austell; in October, 1830, he entered at St. Bartholomew's Hospital, and in 1832 became a Member of the Royal College of Surgeons and a Licentiate of the Apothecaries' Company. He did not enter into practice until 1834, but from a dislike to general practice became a candidate for, and was elected to, the posts of resident medical officer and superintendent of the London Fever Hospital. On the establishment of the University of London he obtained at the first examinations under the Charter the degree of M.B., and the following year that of M.D. In 1841, at the request of Mr. Skey, he consented to join him in the lectures on general Anatomy and Physiology at the Aldersgate School of Medicine, especially that part relating to the minute anatomy of muscle, skin, and mucous membranes, to which he had for some time given special attention. Shortly before the commencement of the winter session Mr. Skey was appointed lecturer on Anatomy and Physiology at St. Bartholomew's Hospital, and Dr. Goodfellow in consequence was urgently requested by the other lecturers to take the whole course, to which he reluctantly consented. About this time he translated for the *Microscopical Journal* Gruby's thesis on the "Morphology of Pathological Fluids," and on the death of the editor of that journal was appointed to fill his place. As a result of a consultation with the publisher, Mr. Van Voorst, and several persons who took a warm interest in the use of the microscope as an important instrument in anatomical investigation, it was deemed desirable to enlarge the objects of the journal and to give it a more special designation. In furtherance of this view it was published under the name of the *London Physiological Journal*, Dr. Goodfellow and Mr. Edwin Guckett, the lecturer on botany at the London Hospital, being the editors. Several important papers were published in successive numbers by Dr. Carpenter, the editors, and others. Among other papers was included one by Dr. Goodfellow on the minute structure of voluntary muscle, with careful drawings, confirming for the most part the views of Dr. Todd and Mr. Bowman. In 1840 he discovered, by $\frac{1}{18}$ object glass, moving bodies (animalculæ) in the blood of a patient suffering from typhoid fever, and sent a description of them with accurate measurements by the micrometer eyepiece to the *Medical Times and Gazette*. These bodies closely resembled, if they were not identical with, those now known as bacilli. In 1844 he was elected to the post of honorary physician to the Cumberland Infirmary, and, resigning his office at the Fever Hospital, took up residence at Carlisle. But in 1846, finding that the practice was never likely to come up to his expectations, and with a large and influential connexion in

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London, he gave up the appointment, and returned to London and settled in a short time in Russell-square.

In 1847 he became a Member of the College of Physicians, and, as a remarkable fact, out of the five candidates who went in for the membership three—Dr. Stewart, Dr. Frere, and Dr. Goodfellow—soon after became attached as physicians to the Middlesex Hospital, although previously quite unacquainted with each other. In this year also he was elected physician to Aldersgate Dispensary and lecturer on Medical Jurisprudence and Toxicology at the Middlesex Hospital, and in 1849 received the appointment of assistant physician to the hospital. In 1851 he was elected to the Fellowship of the Royal College of Physicians, and on July 15th, 1858, became full physician to the hospital, and on the resignation of Dr. Seth Thompson and Dr. Crawford he was appointed lecturer on medicine jointly with Dr. Stewart. On the retirement of Dr. Stewart he gave the whole course on medicine. In 1860 he removed to Savile-row. In March, 1869, he had a threatening of paralysis. He had given his usual systematic lecture from 9 to 10, and after his morning's occupation at home returned to the hospital for his regular visit, and had given several clinical demonstrations in the wards. After being some time in the post-mortem room, while examining some diseased tissue under the microscope, he was seized with giddiness and loss of power in the left leg. In a short time this went off, and he was able to accompany his resident house physician to the female ward to prescribe for the worst cases, intending to walk home and send his butler round to countermand his engagements; but, on reaching the hospital gate, he met his carriage, and on arriving at Savile-row he found the left leg again partially paralysed. This altogether disappeared on the following day. This led him to regard it as an emphatic warning and to give up the lectureship at the end of the session, and soon after the office of physician, and gradually to withdraw from practice—a step, it is needless to say, requiring very long and anxious consideration. There is every reason to believe that to this important step, although at the cost of giving up a very lucrative practice, he owed his complete recovery and the enjoyment, with a few trifling exceptions, of perfect health up to a little over two years ago, when his life was almost despaired of, owing to an attack of influenza; he had also the great grief of losing his wife by the same disease. For some time after that attack he was in a low state—physical and mental—which led him to part with his residence in the neighbourhood of Dartmouth and remove to Paignton, where he regained his health to some extent, but he never really recovered, and passed away on the 19th ult. at the age of eighty-six.

FREDERICK ALBERT HESLOP, L.R.C.P., F.R.C.S. EDIN.

MR. FREDERICK HESLOP died on the 2nd inst., after a short and painful illness, from an attack of pleuro-pneumonia contracted in the course of his professional duties, and it seems probable that had he thought more of his own safety than of the welfare of his patients he might have escaped his fatal illness, which followed a long journey in wet clothes to a poor woman's bedside. He was devotedly attended by Mr. Vinter, his assistant, and his brother, Mr. William Heslop, who had the services of Dr. Kingsbury and Dr. Graham Steell in frequent consultation; but a constitution which was undermined by much previous sickness was no match for such a disease as his last. Frederick Heslop was the son of the late Dr. Robert Heslop, whose name was so honourably associated with the early days of St. Mary's Hospital, Manchester; and his uncle, Dr. Ralph Heslop, was one of the leading practitioners in Preston. He himself gave much promise of a brilliant career. He was one of the surgeons to the Blackpool Hospital and had a seat on its board. He also filled the post of surgeon to the police force and to the fire brigade of Blackpool, and was an examiner for the St. John Ambulance Association, in whose work he took the keenest interest. He had recently been president of the Fylde Medical Society. Cut off at the early age of thirty-seven, he leaves a widow and three children. Mr. Heslop had won the esteem of his medical brethren by his many good qualities; he was a trusty friend, sincere and straight, and his short life had been long enough to gain him the respect of his townsmen and to set an example of unselfish devotion to duty. The profession is not lacking in illustrations of the dangers of its members, or their willingness to meet them, and the name of Frederick Heslop may fairly claim a place in the list of medical martyrs.

THE BRITISH MEDICAL ASSOCIATION.

MEETING IN LONDON.

THE SECTIONS.

MEDICINE.

FRIDAY, AUG. 2ND.

The Causes of Acute Rheumatism, and its Relation to other Affections.

Dr. CHEADLE, consulting physician to the Children's Hospital, Great Ormond-street, introduced the discussion on this subject in an able and exhaustive paper, with the main conclusions of which the majority of subsequent speakers agreed. He laid stress on the fact that it is a general disease, of which arthritis is but one of many symptoms. The diseases which are regarded as rheumatic were then reviewed as purpura rheumatica, subcutaneous nodules, endocarditis, and chorea. The cardiac affection of chorea was probably rheumatic, it being organic, and endocarditis being the most constant change in fatal chorea. Pericarditis and endocarditis were almost exclusively rheumatic, and so were the exudative erythemata. Rheumatism was the only general disease having an association with chorea, except scarlet fever; and scarlatinal chorea and endocarditis were almost certainly rheumatic, as was also the chorea of pregnancy. The general argument in favour of the rheumatic nature of chorea was very strong, as the alternation of the two diseases in successive members of the same family shewed. The seasonal and annual curves of prevalence of the two diseases were identical, as shown by Lewis in Philadelphia and by Newsholme in London. The association of various phenomena, such as endocarditis, chorea, erythemata, and subcutaneous nodules, formed a diagnostic feature of rheumatism. Subcutaneous nodules almost disappeared with the advent of puberty; and chorea and endocarditis similarly became less common with advancing age. If the picture of rheumatism had been drawn from its manifestations in childhood arthritis would not have been taken as its characteristic phenomenon. In addition to the direct morbid agent producing rheumatism certain other factors were important. Chill was a common factor, though not a constant one. Rheumatism appeared to prevail most in winter and spring. Dr. Newsholme's exhaustive researches, given in the Milroy Lectures this year, showed that it was most prevalent in dry seasons associated with a low subsoil water and an unusually high soil temperature. This was not incompatible with the action of chill as a factor in the disease. The influence of hereditary tendency had been underrated rather than overrated, and could not be explained by the influence of locality or personal association. Evidently some general systemic influence was at work in producing rheumatism. This was a toxæmia rather than a neurosis. The toxæmic agent was not uric acid (Haig) or lactic acid (Prout), or these together (Latham). The arguments in favour of a micro-organism invasion had been forcefully given by Dr. Newsholme. All the varied phenomena of the disease suggested an infective disease. It was objected to this view that there was no exact period of incubation, that the evidence of direct infection was rare and doubtful, that the specific organism had not been discovered, and that the disease had not been produced in man by inoculation. The organism would probably be found to be analogous to that of pneumonia, tetanus, or tubercle, rather than to those of the more infectious diseases.

Sir DYCE DUCKWORTH accepted the infective theory to a modified extent, having somewhat changed his views on this point. It did not, however, explain all the productive factors of rheumatism. Probably the exact proof of the infective theory would be shortly forthcoming. Other factors were required. A diathetic disposition is necessary, which is transmissible from parent to child. This affords a soil for the disease. It is probable that some persons never could have rheumatism. It was only predisposed persons that, under conditions of lowered vitality, became the prey to some micro-organism which germinates in the blood, developing a toxine therein.

Dr. A. GARROD remarked on the absence of foundation on which the lactic acid theory stood. The synthetic evidence of Richardson and Foster was equally dubious. There could

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be little doubt as to the infective nature of the disease; but the long continued course, and the way in which the disease crops up like malaria, were more analogous to syphilis than to an acute infectious disease. He suggested that chorea might be due to a poison produced by the rheumatic fever organism and thus be analogous to post-diphtheritic paralysis. The temperature curve of rheumatism varied with the local manifestations. There was no definite temperature curve even when salicylates were not given.

Dr. A. MANTLE referred to his paper on the Bacterial Origin of Rheumatic Fever published nine years ago. He quoted interesting instances of multiple cases in households, and of the association of the disease in the same house with scarlet fever, &c. Erythema nodosum he regarded as a distinct disease. He quoted Trousseau as thinking it was no more a variety of rheumatism than smallpox was of ecthyma. He had found cocci and bacilli in the joints and blood-serum of patients.

Dr. NEWSHOLME entered a preliminary objection against the use of the term "acute rheumatism," as this appeared to imply that chronic rheumatism was a variety of the same disease. It was a pity that the use of the word "rheumatism" for chronic troubles was continued. He maintained that clinical, pathological, and therapeutical considerations were strongly in favour of the view that rheumatic fever was a specific febrile disease. He had in the Milroy lectures collected evidence of the excessive prevalence of the disease at intervals of a few years. This evidence was based on hospital experience and death returns in this and other countries, and on the compulsory notification of all cases of rheumatic fever for thirty-three years in Scandinavia. In this country 1868, 1874–5, 1884, and 1888 were years of great epidemic prevalence. A comparison of the curve of prevalence of the disease in Christiania with that for the whole of Norway indicated a gradual spread of the disease. From ground water observations at Croydon and Brighton it was clear that the commonly asserted association of damp soil with rheumatism did not hold good. Rheumatic fever in these towns was always small in amount in years in which the ground water was high, and was usually excessive in amount in the years in which the ground water was low. Observations in London also showed that the four-foot earth temperature was exceptionally high in the years in which rheumatic fever was unusually prevalent. It remained for further observations to confirm or refute the above, but until a complete notification of all cases was obtained our knowledge of the natural history of rheumatic fever must necessarily continue imperfect.

Sir T. GRAINGER STEWART thought that the proper attitude of mind was one of suspense until the specific micro-organism of rheumatism was discovered. He attached no importance to the earlier work on the experimental pathology of rheumatism, and considered that the trend of facts was in favour of the specific febrile character of rheumatism. He supported Sir Dyce Duckworth's statement that a variety of morbid conditions were now included under the common name of rheumatism, and thought that differentiation was required as in the analogous case of diabetes. He was of opinion that rheumatism began as a local disease, and might remain so for days before infecting the whole system, giving an instance of rheumatism in the elbow-joint caused by prolonged leaning out of a carriage window, which only after several days spread to other joints. The practical rule was not to neglect local rheumatism.

Dr. H. HANDFORD was of opinion that any satisfactory explanation of the pathology of rheumatism must explain the affections closely allied to it. He instanced cases of rheumatoid arthritis beginning acutely, and only distinguishable from rheumatic fever by their refractory character. The progressive character of certain cases of endocarditis after the acute disease ends was not satisfactorily explained on a pure bacillary theory.

Dr. A. HAIG defended the view that rheumatism is due to the excessive introduction into and retention of uric acid in the system. This was unlike Dr. Latham's view, which implied the increased production of uric acid in the system. Sir A. Garrod's observation that no uric acid is found in the blood in rheumatic fever led him (Dr. Haig) to the opposite conclusion to that usually drawn from this supposed fact, as the uric acid had got into the joints. The bad effect of meat on rheumatic fever convalescents was explicable on the grounds that uric acid was thus introduced, and the salts of meat diminished the elimination of uric acid.

Dr. STEPHEN MACKENZIE agreed with Dr. Cheadle in shifting the standpoint of rheumatism from the adult to the child, and in regarding it as no mere arthritis. Referring to the point of nomenclature raised by Dr. Newsholme, he agreed that acute rheumatism was objectionable as connecting it with chronic rheumatism, and thought that objection might be taken against any other name. He pointed out that in several other microbic diseases no microbe had been found. The local commencement of symptoms emphasised by Sir T. Grainger Stewart did not necessarily imply a local origin. If Dr. Haig's view was to be accepted he could not understand the inefficacy of salicylates in gout or the infrequent concurrence of rheumatism and gout in the same person. He regarded chorea as essentially rheumatic. The non-effect of salicylates did not negative this view, as the same applied to exudative erythemata. The difference between the tissues affected might explain this.

Dr. D. B. LEES believed that erythema nodosum was a distinct disease, as much as scarlet fever or measles, having a definite eruption and duration, and, from his experience, no second attacks. The occasional loss of knee-jerk in chorea was not explicable on the neurotic or fright theory. It was probably due to a blood poison and analogous to the loss of knee-jerk in diphtheria. There was further evidence of a blood poison in the acute dilation of heart seen in pericarditis, which, in the light of Gaskell's researches, was probably not due to the pericarditis itself. He suggested the analogy of diphtheria and of tetanus, in which a local multiplication of micro-organisms occurred, and a general poisoning of the system by a toxine. If so it might be possible to attack rheumatism locally in the throat.

Surgeon-Lieutenant LONGHURST thought that constitutional considerations were in danger of being overlooked and could not accept the germ origin of rheumatism. He had observed rheumatism in India and Africa, and had not seen it in warm and dry climates, but it developed after a few days of fog and rain. Statistics were, in his opinion, misleading, because they did not take into account the waves of atmospheric influence.

Dr. CHEADLE, in replying, said that he had given large doses of lactic acid to patients, but with negative results. He could not agree that erythema nodosum was a disease distinct from rheumatism. He agreed with Dr. Newsholme's objection to the use of the phrase "acute rheumatism," but thought that a new term was desiderated. He was much interested in the evidence of slow spread of the disease in Norway, whether this meant personal infection or infection of localities. The refractory cases mentioned by Dr. Handford probably had a different pathology to rheumatism. Unlike Dr. Lees he certainly had seen the coexistence of rheumatic fever and erythema nodosum.

SURGERY.

THURSDAY, AUG. 1ST.

The Treatment of Ulcers and Alopecia by Oxygen Gas.

An interesting series of cases were exhibited on Thursday in Room No. 30 of King's College by Mr. George Stoker, illustrating the effects of the local application of oxygen. In all the cases the disease had existed for a long time and had resisted every other method of treatment. The general mode of application was by enveloping the part affected in an indiarubber bag modified in shape according to the portion of the body to be covered. This bag was supplied through an indiarubber tube from a larger bag, which latter was filled once in twenty-four hours and acted as a reservoir to supply the other by its own elasticity. When the surface of the skin was broken the oxygen was mixed with an equal quantity of air purified by passing it through a solution of permanganate of potash and chloride of calcium. When applied to an unbroken surface, as the head for alopecia, pure oxygen was used. The cases included: 1. a woman seventy-one years of age with a large callous Ulcer of the Leg. Every available method of treatment had been tried, including antiseptic dressing and rest in bed, for more than three years, but without success. Treatment by oxygen was commenced six weeks ago, and the ulcer was rapidly healing, although the patient was the subject of Bright's disease. 2. A case of thirteen Ulcers of the Leg which commenced four years ago after an attack of typhoid fever. They had varied in size from a sixpenny piece to 2½ in. by 1½ in. in diameter. After three months' treatment by oxygen they had completely healed. 3. An epileptic patient, a girl aged eighteen, who had incurred a severe burn all across the upper part of the back nine

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months ago. After the first few weeks the healing had come to a complete standstill, in spite of six months' treatment in a London hospital. Nine weeks ago the ulcerated surface measured 11 in. by 9 in. During this time it had been kept continually bathed in a mixture of equal proportions of oxygen and purified atmosphere by the knapsack apparatus, and it now measured 5½ in. by 3 in. Two cases of Alopecia, one very successful, and the other doubtfully so, were shown and are mentioned in our report of the Dermatological Section.

FRIDAY, AUG. 2ND.

The Anastomosis Button.

Dr. MURPHY (Chicago) gave a demonstration on the dead body of the method of using the button devised by him. He commenced by saying that seven points required attention in attempting to obtain union between two pieces of bowel. They are: (1) coaptation of surfaces, and the union should be between similar tissue—that is, the muscular coat should join the muscular coat, and the mucous membrane of one portion should be in contact with the mucous membrane of the other; (2) adhesions should form immediately; (3) sufficient calibre should be left at the point of union; (4) permanent organised adhesions should result; (5) the line of union must not contract to any great extent; (6) the process should be aseptic; and (7) the method employed should take the least possible time. He further pointed out that two sets of arteries supply the bowel—firstly the branches of the mesenteric arteries; and secondly, the "parallel artery," which runs along the mesenteric border of the bowel. Of these two sets the parallel artery is the more important for the life of the bowel, for the mesenteric branches may be tied for a length of bowel equal to seven inches without any sloughing resulting, while the parallel vessel cannot be tied for more than half an inch without causing sloughing. Hence it is necessary in dividing the bowel to remove less of the mesenteric border than of the convex side. In taking the running stitch round the bowel it is important to make an overstitch at the mesenteric border in order to secure the parallel artery. The method was demonstrated both for end-to-end anastomosis and for lateral anastomosis. The application of the method to resection of the rectum was also shown.

The Results of Operative Treatment of Injury or Disease of the Cervical Vertebræ.

Mr. VICTOR HORSLEY read a paper on this subject. The cases on which the paper was based were seven in number, and in each laminectomy had been done for caries or for fracture. All the patients recovered. Case No. 1 was admitted to hospital in 1888 with caries of the atlas and axis. There was complete paralysis of all four limbs, and the skin was dusky from interference with respiration. The arches of the atlas and axis were removed. Power began to return on the sixth day. The patient is now well except for some wasting of the interossei. Case No. 2.—There was caries of the fifth and sixth cervical vertebræ, weakness of the intercostal muscles and of the lower limbs. There was no sensory paralysis. Laminectomy of the affected vertebræ was performed, and the patient recovered. Case No. 3.—There was caries of the lower cervical vertebræ, with complete paralysis in the legs and right arm, and a little power in the left arm. The vesico-rectal centre was interfered with. Laminectomy of the third to seventh cervical vertebræ was performed. On the third day some return of power was noticed, but this was only ephemeral, and very little further progress was made. Three months afterwards the patient left the hospital, and a month later died. Case No. 4.—There was fracture of the cervical spine, with paralysis of all four limbs, which had lasted eight months. The paralysis began to extend. Analgesia was present, and this always points to an affection of the central grey matter of the cord. The laminæ of the fifth and sixth cervical vertebræ were removed, and the thick fibrous tissue was dissected off the dura mater. The patient steadily improved, and only wasting of the interossei remained. Case No. 5.—The patient had fallen from a cart, striking his head and right shoulder. He walked about for a week, but gradually lost power in all his limbs. When admitted to Queen's-square Hospital fracture of the sixth cervical vertebra was diagnosed. The left optic disc was swollen. Laminectomy of the fourth, fifth, and sixth cervical vertebræ removed a ridge which had been pressing on the spinal cord. Power began to appear on the twelfth day. He has since recovered completely. Case No. 6.—The patient sustained a fracture of the sixth cervical vertebra; the onset of paralysis was gradual. There was marked contracture and well-marked anæsthesia of the post-axial border of the upper limbs. The arches of the sixth and seventh cervical vertebræ were removed when a projecting ridge was felt, but on extension this disappeared. He is recovering slowly. Case No. 7.—The patient had struck the fore part of his head and after walking 200 yards rapidly became completely paralysed. After partial recovery spastic paraplegia appeared, with post-axial anæsthesia of the upper limbs. The laminæ of the sixth and seventh cervical vertebræ were removed. Permanent recovery commenced three weeks after the operation. He can now walk a mile. In many of these cases there was an ephemeral recovery followed by a return of the paralysis, this probably being due to œdema arising in the cord.

Sir W. MACCORMAC wished to know how one could distinguish between cases suitable for operation and those which would recover without operation.

Sir WM. STOKES (Dublin) asked why removal of the laminæ should relieve caries which affected the bodies of the vertebræ.

Mr. NOBLE SMITH asked at what stage of caries should an operation be performed. He remarked that a large number of cases recovered from paralysis in caries of the spine without any treatment. Mr. C. B. Keetley had operated in one case of fracture of the spine, but the patient died, and the cord was found to be completely divided. In a case of caries in which he had operated with a satisfactory result he was not inclined to attribute the result to the operation. He thought extension was of great value.

Mr. DAMER HARRISSON (Liverpool) also thought that extension was of great value.

Mr. FREER (Birmingham) considered it very difficult to decide when to operate.

Mr. MAYO ROBSON said he had operated in one case for fracture. The patient had previously been operated on by him for caries. Recovery was very partial. He thought that operative interference was very seldom needed.

Mr. HORSLEY, in reply, said that complete vaso-motor paralysis and entire loss of deep reflexes showed complete division of the cord. In an ordinary case extension should be tried for six or eight weeks. Laminectomy relieved caries because there was always a thickening over the dura mater, which was a source of pressure. In some cases the reason for operating was impending asphyxia.

Mr. C. A. MORTON (Clifton) showed a specimen in which lateral intestinal anastomosis had been performed three months before death. The cause of the operation was malignant disease of the cæcum.

Mr. MAYO ROBSON (Leeds) read a paper on a series of cases of Colectomy. In four of them he had employed the bone bobbin and in one Murphy's button. Two of the cases were operated on for malignant disease of the bowel and three for fibrous stricture. He preferred the bone bobbin to the button, and with it he used the continuous suture.

Mr. GREIG SMITH was of opinion that when a typhlotomy was performed for acute intestinal obstruction the colectomy should be made a part of the first operation by bringing the growth outside the abdomen and passing skewers underneath it. A few days later the growth could be removed without an anæsthetic.

Dr. KEEN, Mr. G. HAMILTON (Liverpool), and Mr. H. ALLINGHAM having spoken,

Mr. HARRISON CRIPPS said he preferred not to do too much at once; of four cases recently of resection of the bowel in which Murphy's button was used all died.

Professor MACEWEN (Glasgow) said he had never tried anything but stitches, and at present he still preferred to use stitches.

Mr. MAYO ROBSON, in reply, said that in acute intestinal obstruction immediate relief was the chief thing.

Complications occurring in Inguinal Colotomy.

Mr. HARRISON CRIPPS read a paper on this subject. There was often some difficulty in finding the bowel; the best method was to pass a finger along the brim of the pelvis, and, if necessary, have some water injected into the bowel at the same time. Occasionally it happened that there was no sigmoid meso-colon; in this case the bowel could not be brought up to the abdominal wall; the operator could close the wound and open the cæcum or the ascending colon; or he might stitch the

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parietal peritoneum to the bowel wall, or turn up peritoneal flaps from the bowel and attach them to the parietes. Prolapse is nowadays rare, as more bowel is drawn out. The incision should be high up—as high as the level of the umbilicus. If undue contraction occurs, a spring dilator is the best instrument to use.

Mr. W. ANDERSON read a paper on three cases of Sacless Herniæ of the Sigmoid Flexure through the Left Inguinal Canal, with an anatomical specimen. Two of the cases were oblique and one direct. The bowel was covered on the concave side by peritoneum. Attempts at radical cure were not very successful.

Mr. L. BIDWELL said that he had had a similar case in which strangulation had occurred. He attempted to form a mesentery for the sigmoid flexure, but the bowel sloughed and a fæcal fistula formed.

Mr. W. D. SPANTON read a paper on three cases of Splenectomy. One of the cases recovered. In the two fatal cases a large amount of blood was found in the abdominal cavity. He had drawn up a table of all recorded cases of the operation, and among the conclusions arrived at were these: (1) that it is never justifiable for leucocythæmia, as there is a mortality of 96 per cent.; and (2) that the mortality has been steadily diminishing, for from 1865 to 1875 the mortality was 80 per cent., during the next decade it was 51 per cent., and during the last ten years it had fallen to 19 per cent.

Mr. C. CATHCART (Edinburgh) demonstrated a simple form of Exhaust Pump for use after supra-pubic cystotomy.

PSYCHOLOGY.

FRIDAY, AUG. 2ND.

Epilepsy and its Relation to Insanity.

Dr. GOWERS in opening this discussion pointed out that the knowledge needed for the discernment of the relation between the two diseases can only be obtained from the side of insanity, although what information it is that is wanted can be only clearly perceived from the side of epilepsy. To supply it, however, associated effort is necessary. Restricting the question to insanity and idiopathic epilepsy, both maladies must be regarded as affections of the cortex of the brain, although we have no knowledge of the changes which underlie them; but if the recent progress in histology and physiology can be trusted we have not yet looked in the right place. Attention has been fixed on the nerve cells, but it is in the spongy grey matter between the cells that the affections must arise. Here we have not yet reached the recognition of normal structure, much less of pathological change. Hence our present study can be only clinical. The hereditary relationship between the two diseases has yet to be worked out from the side of insanity, and this is one of the questions most urgently needing combined effort. The frequency with which insanity can be traced in the families of the epileptic is approximately known; all facts, however, regarding inheritance are below the truth. It is interesting to note that in the series of 1450 cases analysed for the first edition of "Epilepsy" inheritance was traceable in 35 per cent., but in another series of almost the same number, recently analysed for a forthcoming edition, the percentage rises to 44·5 per cent. This is because a larger proportion of the cases were seen in private, and in them the facts of heredity can be far more certainly obtained. When these private cases are separately considered the proportion of heredity rises to 48·4 per cent., so that at least one-half the cases of epilepsy are inherited. This shows the importance of discriminating the source of information in the facts regarding insanity in each series; the inherited cases, considered separately, furnish, as would be expected, the same proportion of cases of insanity in the family. It was met with in one-third. Epilepsy existed alone in two-thirds. No information can be given regarding the character of the epilepsy in cases with insane heredity, but far more important is the information which should be forthcoming from asylums regarding the cases of insanity in which there is a family history of epilepsy. Post-epileptic mania was then considered as replacing in men the post-epileptic hysteroid convulsion of women and young males, and the question discussed whether such mental disturbance does not sometimes replace an attack. This is suggested by the peculiar and elaborate mental warnings which sometimes occur, and which show how complex may be the initial process of the fit. Another important relation is the occurrence of an attack of insanity in the course of epilepsy. Here, again, we are quite without definite information, and it can only come from asylums. It seems probable that such transient insanity is most common in patients with a complex mental aura, but the facts cannot be discerned from the side of insanity, because the attack withdraws the patients from observation and they are generally not seen again. Indeed, the chief object to be obtained by the discussion was to awaken attention to the need for a joint attempt to ascertain facts. Such an attempt could only be made by the appointment of a committee to receive information and to obtain it by definitely indicating the facts that are needed. The questions involved are of great importance both socially and medically, and warrant a deliberate effort to secure the knowledge which no one person can obtain, and which, moreover, can only be obtained in the main from the alienistic side, but only in its completeness, by the coöperation of those under whose notice each class of diseases comes.

Dr. FLETCHER BEACH expressed his concurrence in Dr. Gower's views, especially concerning the difference in the statistical data from different social classes and referred to the difficulty experienced in eliciting facts concerning heredity in the lower classes. He did not think that heredity, by itself, was sufficient to produce epilepsy or insanity. He was of opinion that this result was due to the coöperation of many factors. He thought much good could be achieved by a more frequent conference between alienists and general physicians. Much valuable information could, and he hoped would, be obtained by devising some mode of coöperation.

Dr. HYSLOP thought we were in danger of making our notion of epilepsy too wide and too vague, so as to include every condition in which there is a sudden or explosive physical or psychical action. He wished to ask what is really meant by the term "epilepsy," and observed that there is a great difference between epilepsy and what are called "epileptiform attacks." At present the former term was used much too loosely. He also remarked on the difficulty he had in understanding Dr. Hughlings Jackson's views of the nature of epilepsy, and confessed that he could hardly grasp their signification.

Dr. MERCIER referred to the epileptics in asylums, many of them cases of a class comparatively rare outside asylums—cases of *petit mal*, cases in which the fits are preceded by elaborate auræ or followed by elaborate automatic actions. The great importance of the subject was shown by the fact that 1300 epileptics were annually admitted into the asylums of England and Wales. He suggested that Dr. Gowers might assist the asylum physicians by indicating the lines upon which such an investigation as he suggested might be carried out

Professor BENEDIKT (Vienna) referred to a class of cases which are in reality epileptic, but which are not recognised as such. Their manifestation consists of a psychosis, such as a fit of passion. They are very rare, and only occur under special circumstances. He then made a few remarks about epileptics who are the subjects of sexual perversions.

Mr. CONOLLY NORMAN said that he had seen several cases of epileptic mania in women, and was surprised that Dr. Gowers had not. Excellent descriptions of the mental states in epilepsy abound in memoirs in the psychiatric journals, as the papers of Sanders in Germany and Howden in this country. He also referred to the difficulty of obtaining the histories of patients admitted to the large asylums in this country, the patients themselves being of course frequently unable to give any account of themselves.

Dr. HUGHES (St. Louis) referred to the interest and importance of this subject, and was of opinion that observation had proved the unvarying kinship between all epileptoid states. He cordially eulogised the researches of Dr. Hughlings Jackson as to their effect in elucidating the various phenomena of epilepsy, especially those occurring in the obscure forms of *petit mal*.

Dr. JAMES TAYLOR referred to the influence of drugs on epilepsy and the possible relation of variations in the mental condition to the drug administered and the dose of the drug.

Dr. NICOLSON (Broadmoor) also spoke.

Papers.

Dr. BONVILLE FOX next read a paper on a Medico-legal

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Case, illustrating the anomalies and absurdities of the law as at present administered, more especially in regard to the application of the "knowledge of right and wrong" test.

Dr. WEATHERLY, Dr. MERCIER, and others spoke.

On Morbid Doubt.

Dr. HARRY CAMPBELL read a paper on Morbid Doubt. He related several cases of such doubt arising in the mind—e.g., as to whether a certain act, such as posting a letter, had been done or not. In its extreme degree such morbid doubt became almost, if not actually, insanity.

Dr. WEATHERLY thought this was merely an exaggeration of the ordinary feeling of doubt as to whether a certain act had been done or not.

Dr. HUGHES (St. Louis) regarded its persistence as the characteristic of morbid doubt, and was not inclined to regard the instances of Dr. Weatherly as true examples of morbid doubt.

Dr. CLIFFORD ALLBUTT had seen numerous cases of the slighter forms referred to, and he was not inclined to attach much significance to them. He certainly knew instances of patients who for years had been troubled with the doubt referred to by some of the speakers—e.g., as to having locked a door &c.—and this he felt sure did not necessarily indicate even a danger of insanity.

Fractured Ribs in the Insane.

Dr. A. W. CAMPBELL read a paper on a Comparison between the Breaking Strain of the Ribs of the Sane and the Insane. He finds as a result of experiment that the breaking strain of ribs in the insane is but very slightly different from that in the sane. On the other hand, the average breaking strain of the ribs of those dying from chronic and wasting disease is lower by about 6 lb. than that of patients succumbing to some chronic but not wasting affection; while the average breaking strain in the latter case is less than that in patients dying from acute disease or accident. In general paralysis, however, the breaking strain is about 20 lb. below the normal standard. In both sane and insane there are cases in which the ribs possess an exceedingly low breaking strain. In such there are either architectural defects or the density and elasticity are diminished as a result, probably, of chemical changes due to defective assimilation.

Dr. C. H. BOND next read a paper on the Relation of Diabetes to Insanity. He remarked on the interest of this question to the general physician, the neurologist, and the alienist. It has been denied that glycosuria is of frequent occurrence in the insane. This is true if all cases are included; if only recent ones are, it is probably not. In 175 cases the urine was examined soon after admission and frequently afterwards. In twelve instances sugar was found, and of the twelve, six were melancholics; indeed, mental depression existed in all. An insane heredity was present in more than half the cases. Four chronic female cases are also described in whom diabetes developed during their residence at Banstead. Three of them died and a full account of the necropsies was given. In all the cases a marked history of previous alcoholic excess was notable. The question of the inter-relation of psoriasis, insanity, and diabetes was also alluded to.

Voluntary Boarders in Asylums.

Dr. PERCY SMITH read a paper on this subject. Admitting patients as voluntary boarders in asylums had grown largely of late. The most important restriction is that the consent of the Commissioners in Lunacy must be obtained in the case of a private asylum. The following were instanced as suitable cases for such provision: (1) recurrent cases; (2) cases of mild melancholia; (3) patients with homicidal feelings, distrustful of their own self-control; (4) cases with maniacal excitement after epilepsy; (5) early cases of general paralysis; (6) some cases of partial weak-mindedness; (7) cases of drug habit or alcoholism; (8) patients with hallucinations; (9) patients wishing to remain for convalescence; and (10) certain classes of patients, especially medical men or nurses. Patients may simulate the milder varieties of insanity to enjoy the comfort of an asylum. To obviate this, great care is necessary with histories. There is at present no arrangement for admission of voluntary boarders of the poorer classes to county asylums, and it is worth consideration whether some provision of this nature is not desirable. Dr. Percy Smith also gave an account of his own procedure in regard to applications for admission as voluntary boarders.

The Law in Relation to Single Patients.

Dr. L. A. WEATHERLY read a paper on this subject, in which he pointed out the curious discrepancies that exist between the law and the practice, especially as to the presence of two or more patients in a private house and the inadequate provision for supervision of their treatment. He suggested that the best way to provide for such cases was—(1) to educate the public to recognise that insanity is no crime, but a disease; (2) that in cases in which certification would be difficult it should be insisted upon that a report be sent to the authorities stating that A B has been placed in a certain house for care and treatment, but that the unsoundness found is not sufficient to admit of certificates being signed; and (3) that to admit a proper supervision of all these cases, district officials should be appointed to act, as it were, as subcommissioners. Such a system would then form a most useful adjunct to the system of asylums.

Dr. HAYES NEWINGTON and Dr. DOUGLAS also spoke as to the imperfections and anomalies of the present system.

The work of the Section was brought to a close with a cordial vote of thanks to the President, proposed by Dr. HAYES NEWINGTON and carried by acclamation.

PHARMACOLOGY AND THERAPEUTICS.

FRIDAY, AUG. 2ND.

The meeting was presided over by Dr. MITCHELL BRUCE, and subsequently by Dr. MCHUGH. The first part of the proceedings was occupied by papers on the therapeutic value of the waters of various spas.

Dr. FORTESCUE FOX (Strathpeffer) read a paper on the Therapeutic Uses of the Waters of Strathpeffer Spa. The waters were most useful in the treatment of conditions occurring during middle life. Caution was necessary in the use of the sulphur waters, which, if long continued, might produce anæmia. The waters were contra-indicated in all acute febrile states, in acute congestion or inflammation of the viscera, in acute rheumatism and tuberculosis, uncompensated heart disease, and albuminuria. The use of the waters seemed to be the remedial factor in spa treatment, change of air, scene, diet, and surroundings being insufficient to account for the great benefit received in so many cases of chronic disease.

Dr. S. HYDE (Buxton) read a paper on the Therapeutic Value of the Waters of Buxton. After referring to the variety of waters occurring at and around Buxton—saline, sulphur, and ferruginous—the cases suitable for the treatment were discussed. Subacute rheumatism was especially likely to be benefited. Although at first the treatment usually brings about a return of the acute symptoms, these are of short duration, and rapid progress towards recovery quickly follows, a large number of patients being completely cured. In acute gout the internal use of the waters is alone indicated, but in chronic gout the use of baths in addition is most useful. In rheumatoid arthritis the combined internal and external treatment together with massage gives satisfactory results. Massage is a valuable adjunct in many conditions, but electricity is not particularly beneficial. The treatment yields good results in many other conditions—lumbago, peripheral neuritis, and certain skin affections, particularly those dependent upon gout. The remarkable effects produced by the *natural* mineral springs was next commented upon, and it was pointed out that however closely an artificial water, prepared synthetically, resembled a natural one, the former was lacking in some peculiarly subtle properties which gave the "character" to the natural water and rendered this much more efficient in therapeutic value. The conditions of change of life and surroundings accompanying treatment at a spa were not sufficient to explain the benefits received.

Dr. A. S. MYRTLE (Harrogate) alluded at the commencement of his paper on the Therapeutic Value of the Waters of Harrogate to the fact that there was some property in natural springs which was lacking in artificial waters, however closely they resembled the natural. He considered that strict dieting was unnecessary while undergoing the treatment; patients might have anything in reason, food and drink, provided it did not disagree and was taken in moderation. He was in the habit of recommending for breakfast "any-

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thing you like, but not too much of it"; for lunch, ditto; and for dinner, ditto. The sulphur waters were the only ones used externally, the sulphuretted hydrogen contained in them being sedative in nervous conditions and in affections of the gastric and bronchial mucous membranes. The other waters were stimulant, diuretic, and tonic. In chronic cardiac diseases the waters were most useful if used with care.

Mr. W. TOMLINS (Droitwich) read a paper on the Brine Baths of Droitwich. After referring to the large amount of saline constituents which these waters contain and quoting analytical figures, the cases suitable for the treatment were discussed. In conclusion, attention was drawn to the attractiveness of the scenery and to the favourable climatic conditions of Droitwich.

Dr. PARSONS referred to the value of spa treatment in diabetes and other diseases.

Dr. CUFFE and others also took part in the discussion.

Dr. HERBERT SNOW read a paper on "Loretin," an organic iodine compound discovered by Claus of Freiburg, and possessed of antiseptic properties. Loretin is a yellow crystalline powder, but slightly soluble in water, and forming emulsions with ether, oil, and collodion. It forms neutral salts with alkalies, which are freely soluble in water. Loretin is odourless and non-poisonous, and greatly superior to iodoform in germicidal power. It is also a most efficient deodorant, almost instantly annulling the fœtor of sloughing cancerous sores. Dusted into deep wounds, it completely precludes subsequent suppuration, and no bad symptoms had been observed after its use. Applied to the skin or to a granulating sore it is perfectly unirritating.

Dr. F. R. WALTERS read a paper on the Subcutaneous Use of Guaiacol. When injected under the skin guaiacol was found to be very irritating and producing sloughing. Injected into the muscular tissue the irritating properties were less marked, and considerable doses could be administered without constitutional disturbance.

Dr. DE BACKER (Paris) read a paper on the Treatment of Tuberculosis by Living Ferments. Yeast species are made use of and are injected in the living state subcutaneously. They are said to act therapeutically by a sort of phagocytic action.

LARYNGOLOGY AND RHINOLOGY.

WEDNESDAY, JULY 31ST.

The Etiology of Mucous Polypi of the Nose.

Professor GAYE (Amsterdam) opened a discussion on this subject. He had been unable, he said, to demonstrate any causation in the majority of his cases of nasal polypi, but he had in other cases seen and proved them to be originated by fetid ozæna, rhinoliths, and empyemata of the accessory cavities, but he thought chronic catarrh, irregular septum, and habitual mouth-breathing might have a bearing on the etiology of the complaint. He finally alluded to the possibility of climatic influences, giving as an example a place in Holland where nasal polypi were said by the inhabitants to be unusually prevalent.

Dr. LUC (Paris) maintained that the causation of nasal polypi by empyemata of the antrum and other accessory cavities was far from being a frequent one. His chief criticism of Woakes' views was the entire absence of clinical proof by that authority. He considered von Zeim's work to have been very beneficial to nasal surgery. Myxomatous degeneration was the form of middle meatal response to constant irritation, and drew attention to folds of the mucosa as being an etiological factor in nasal polypi. Chronic catarrh and bone lesions were occasional causes, but many of the growths were of spontaneous origin.

A paper by Professor ZUCKERKANDL of Vienna was read on this subject. He said the majority of writers agree that the polypi and polypoid hypertrophies of the nose were not really neoplasms, but inflammatory hypertrophies due to a chronic local inflammation. He gave as proofs of this: (1) the constant presence of round-celled infiltration in the growths; (2) the presence of other inflammatory changes at the base; (3) that polypoid hypertrophies develop into polypi; (4) polypi can be caused by the presence of a rhinolith; (5) there is no sharp line between polypi and normal tissue; (6) their tendency to recur; and (7) the absence of congenital polypi. Polypoid hypertrophies of the lower turbinated bones might be called polypi, as they have equally with those of the middle meatus the same characteristics and the same causation. He severely criticised Woakes' theory of ethmoiditis, remarking that syphilis and allied conditions were the probable originators of the necrotic conditions; he had examined all available bases of polypi and polypoid hypertrophies, and never found them necrotic, but, on the contrary, especially at the edges of the ostium maxillare, a new bony outgrowth was apt to arise.

Dr. P. MCBRIDE commenced his paper by a graphic description of nasal polypi. He said most observers considered nasal polypi to be simply œdematous fibromata; he alluded to the so-called papilloma of the inferior turbinated bones which he described as similar to polypi of the upper tracts. As to the etiology he put forward the view that a small vascular loop of inflammatory products caused a projection of the mucous membrane, which hung down, and which became polypoid from the action of gravity. This would, however, only account for a part of the growths. Empyema of the antrum accounted for many of the growths; and it was by no means improbable that a faulty histological condition was sometimes present which predisposed the individual to the disease. He thought Woakes' theory was not substantiated, nor did he quite agree with Grünwald; his statement was too broad. In his own tables he found males to be the most frequent sufferers, and the ages of twenty to thirty to be the most usual time of life to find these growths

Dr. HODGKINSON was not able to add much that was new. Empyema of the accessory sinuses was not uncommon in connexion with these growths; caries of the ethmoid could not be considered as a usual accompaniment of polypi. We were, therefore, rather left to a predisposition theory.

Professor SCHMIDT (Frankfort) was inclined to attribute polypi entirely to inflammation of the mucosa and subjacent tissues by reason of some form of irritation.

Dr. SCANES SPICER quite agreed that hypertrophies of the middle and lower turbinated bone were of the same variety of tissue &c. He was not inclined to refuse Woakes' theory altogether, and he thought a great deal of the views expressed were from a faulty reading or interpretation of that author. The term "ethmoiditis" was an inclusive term including all the other tissues as well as bone, and in this disease necrosis was rare. He thought that whilst empyema of the antrum sometimes caused polypi sometimes the reverse was the order of things.

Dr. WM. HILL said the causation of these growths must be sought in irritation and inflammation of the mucous membrane. More than 50 per cent. of his own cases had been unassociated with either bone or antral disease. He drew attention to the similarity between nasal and aural polypi in regard to their being always connected with bone lesion in the nose and also that they were both lying bathed in moisture. He classified these growths into two varieties clinically: those cases in which pus was present and those in which it was absent, the latter being the more easily curable cases.

Dr. BOSWORTH (New York) had founded, on his own experience, the theory that the origin of nasal polypi was due to mucoid degeneration of the mucosa, primarily in the ethmoid cells, and as it increased in amount it was, as it were, squeezed out in the polypoid form as honey was when pressed out of the comb. The starting point of polypi is some inflammatory process.

Dr. DALY (Pittsburg) said he was quite convinced that very frequently there was dead or diseased bone underlying the seat of origin of nasal polypi, especially if they had existed for some years. The sensation imparted to the probe was quite different from that of healthy bone. He then directed the attention of the members to the great resemblance between temporary œdema with hyperplasia, as in acute catarrh, and the mucous polypi at present under discussion, and expressed his adhesion to the view that polypi arose from chronic inflammatory states. He had never seen antral disease as a precursor of polypi, but he had in several instances seen them produced by malignant neoplasms of the antrum.

Dr. JOHN NOLAN MACKENZIE (Baltimore, U.S.A.) argued in favour of the inflammatory origin of nasal polypi, not only because of its great probability, but also on account of its numerous familiar examples throughout the body. Rarefactive osteitis and caries might, and did, exist in certain cases, but that did not prove Woakes to be correct when he said "necrosis."

Mr. R. LAKE in his own researches had never found polypi &c. save œdematous hypertrophies of the mucous

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membrane. He thoroughly disagreed with Dr. Hill's view of the similarity of the aural and nasal polypi. The former started as granulation tissue, developing into soft, then hard fibrous tissue, and later degenerating into myxomata, an entirely different life history to the latter.

Dr. NEWMAN (Glasgow) referred to the chemistry of the growths. It was not a mucoid infiltration, but merely œdema, water salts, and serum albumen. He also urged the importance of œdema in the production of the growths.

Dr. WATSON WILLIAMS drew attention to the very great rarity of myxomata in the nose; so rare was the condition that it might be excluded from the present discussion. He alluded to the work of Zuckerkandl, who had found in some the periosteum inflamed and in others new bone formation beneath the origin of polypi; he had himself observed the same sort of thing with much new bone formation. He was inclined to look on Hoffmann as affording useful help by his vascular theory.

Dr. DE ROALDES (New Orleans) also spoke, showing the almost universal absence of polypi in the negro to be due to his roomy nose.

Dr. GAYE, Dr. LUC, and Dr. MCBRIDE replied.

The Representation of Abduction of the Vocal Cords in the Cerebral Cortex.

Dr. J. S. RISIEN RUSSELL read a paper upon this subject. He reviewed briefly the valuable scientific work done by Semon and Horsley, who had discovered many points of great value, but who had been unable to find the cortical abductor centres in dogs and monkeys, though they had done so in cats. But they had demonstrated the existence of a focus in the internal capsule, the most natural deduction from which was that there did exist a connexion between this and certain areas in the grey matter which would cause abduction when stimulated. The predominant energy of the adductors was nullified by the following means. The adductor fibres were divided from the abductor fibres in the recurrent laryngeal nerve and the former divided. A stimulus applied now to a point in front of Krause's adductor centre caused abduction of the cords, whilst stimulation of Krause's centre on the side with the intact nerve resulted in adduction of that cord. In some dogs it was even possible to obtain the movement of abduction without this nerve division, and then the centre was found to be in the anterior composite gyrus below the adductor centre, only separated from the other by the supra-orbital sulcus. The focus in the cat corresponds with the first one discovered in the dog, but there the cat differs from the dog—cats always react. Two other centres were alluded to, that of Semon and Horsley in the cat, to which Dr. Risien Russell supplied an analogue in the dog, and one in the anterior composite sulcus, stimulation of which arrested the vocal cords in adduction.

The PRESIDENT congratulated Dr. Risien Russell on his paper, saying that he had succeeded in doing what he (the President) and Professor Horsley had failed to prove, and he should like to hear what Dr. Risien Russell's opinion was as to the unilaterality of the cortex regarding laryngeal movements.

Dr. BRYSON DELAVAN and Dr. WATSON WILLIAMS took part in the discussion, each quoting a case bearing on the points raised.

Dr. RISIEN RUSSELL replied that he had found no unilaterality in the cortical centres for the larynx.

The Vibration of the Vocal Cords.

Dr. A. HODGKINSON read a paper with the above title, in which he described a very ingenious method which he had employed for the last five or six years to demonstrate the parts of the cords which vibrated. He had adopted the sand picture plan, but instead of sand used finely powdered indigo to blow upon the cords, and by means of various pitches had been able to produce various pictures which were fairly constant, and which tended to show the cords had a greater amplitude of vibration at the central free edge, and the lower the pitch the longer the vibrating portion.

Dr. ILLINGWORTH read a paper on the Anatomy and Physiology of the Larynx.

THURSDAY, AUG. 1ST.

On the Infectious Nature of Lacunar Tonsillitis.

This subject was introduced by Professor B. FRAENKEL, who gave first a description of the usual course and symptoms of a case of ordinary acute follicular tonsillitis, showing how it simulated an infectious fever by its onset, course, and crisis, and by its splenic enlargement. He recommended excision of hypertrophied tonsils in a state of acute exacerbation; in these the pathological anatomy of the part could be studied, and such patients do not suffer at all more than usual. Microscopic examination of those tonsils showed an increase of emigration of the leucocytes from the follicles; these passed into the lacunæ. He referred to the occurrence of tonsillitis after intra-nasal operations, and he had found the same micro-organisms in both this and the usual form of tonsillitis. Micro-organisms are found even in the substance of the follicles. He had observed undoubted cases of transmission of the disease from one patient to another, and a chill—so frequent a cause—serves only to open the door, as it were, to these microbes.

Dr. MACINTYRE (Glasgow) referred to the confusion which existed from a bacteriological point of view in the classification of tonsillitis. He then considered critically the micro-organisms found in the tonsil before, during, and subsequently to an attack of tonsillar inflammation, referring incidentally to the non-pathogenic organisms of the mouth. He next considered the toxic effects of the micro-organisms and related cases much resembling typhoid fever in which the Peyer's patches became involved, one case ending fatally, and he referred to other lesions such as synovitis.

Dr. SEMON referred to the great importance of the subject.

Mr. LENNOX BROWNE said that the galvano-cautery when used in the nose was more frequently followed by tonsillitis than other intra-nasal operations; this was because the nose ceased to act as a filter. He considered rheumatism when associated with tonsillitis to be a case of auto-infection. He had found various organisms in this disease, but no specific one. Sanitation, or rather want of it, had much to answer for.

Dr. MORITZ SCHMIDT considered careful antisepsis of the nasal cavities and plugging with antiseptic gauze diminished the risk of traumatic lacunar tonsillitis supervening.

Dr. ST. CLAIR THOMSON said he considered traumatic lacunar tonsillitis to be due to plugging of the nose by the swollen mucosa.

Dr. GLEITSMANN had feared to excise tonsils which were inflamed, dreading the large open wound in the state of the surrounding parts. He used trichloracetic acid after the cautery, and so kept the nostrils patent, but that did not stop the trouble.

Mr. L. LAWRENCE referred to the connexion between tonsillitis and rheumatic fever.

Professor FRAENKEL and Dr. MACINTYRE replied.

The Functions of the Laryngeal Ventricles and Ventricular Bands.

Dr. A. HODGKINSON read an interesting paper on this subject, in which he arrived at the following conclusions—that the dust particles were prevented from acting as mechanical irritants on the cords by the action of mucus and mucus-cells, and that, as by his observations he had concluded that mucus &c. from the larynx passed over its posterior wall, so the seat of election of tuberculous infection was due to this likewise. He also said he had himself seen blood flowing out from the ventricles, and thought that we must not conclude that all coughed-up blood &c. necessarily came from the lung, and that the cords were cleared by deglutition.

Dr. CATHCART and Dr. MORITZ SCHMIDT combated his views, urging the theory of Wylie as the correct one.

Intra-Laryngeal Injections.

Dr. BRONNER (Manchester) read a paper on some Cases of the Larynx and Bronchi treated by Intra-laryngeal Injections, in which he referred to the absorption by the bronchi of various fluids. Menthol solution (5 to 20 per cent.) is useful to allay cough and to deodorise; terebene is very efficient for profuse and offensive sputum—10 to 50 per cent. with menthol solution, or 2 per cent. ol. pimentæ, or 3 per cent. europhen; and soda or iodine in deficient secretion. Cocainisation is to be first done. With a little practice Dr. Bronner says the operator can more or less direct the stream into the bronchus selected. The first case quoted was that of a man who suffered from a tickling in the throat at night which prevented sleep; he was quite cured by this method. The next case was very similar, and was cured. The third

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was a case of atrophic laryngitis; this was nearly cured, and the distressing cough is almost gone. Other cases were bronchitis (chronic) and chronic bronchitis and asthma, both practically cured. In a case of laryngeal phthisis the distressing cough was stopped.

FRIDAY, AUG. 2ND.

The Indications for Early Radical Operation in Malignant Disease of the Larynx.

Dr. BRYSON DELAVAN (New York) and Mr. BUTLIN opened this discussion, the former taking up the more conservative position. The PRESIDENT, Dr. SEMON, Dr. J. N. MACKENZIE (Baltimore), Professor MORITZ SCHMIDT (Frankfort-on-Maine), Dr. SCANES SPICER, Dr. R. WOODS (Dublin), Dr. Lawrence, Dr. DUNDAS GRANT, Dr. HODGKINSON, and others took part in the discussion, Dr. DELAVAN and Mr. BUTLIN replying.

Thyrotomy.

Mr. P. DE SANTI read a paper on the Operation of Thyrotomy, with a short account of the cases in which it has been performed at St. Bartholomew's Hospital during the last nine years. Thyrotomy was first performed at St. Bartholomew's Hospital in 1886; since then nine thyrotomies had been performed there for malignant disease and eight thyrotomies for innocent growths and other causes. Mr. Butlin's private cases were nine for malignant disease and two for innocent growths, which altogether make twenty-eight thyrotomies. Mr. de Santi preferred chloroform to ether in this operation on account of the excessive secretion of saliva. He also laid stress upon the sponge round the Hahn's tube being aseptic. He advocated the use of a 5 per cent. solution of cocaine to the larynx after division of the cartilage, to lessen the hæmorrhage and remove reflex excitability. The sponge cannula is to be removed, and the wound dusted with iodoform and covered with gauze; the patient should be kept on his side with the head low in order to facilitate the flowing away of the discharge and lessen the risk of pneumonia. The feeding of the patient during the first two days is chiefly done by nutrient enemata; on the day following the operation the power of swallowing should be tested.

Vocal Defects among School Board Teachers, with special reference to the occurrence of Teachers' Nodes.

Dr. WILLIAM MILLIGAN (Manchester), after enumerating the various catarrhal conditions and their more usual sequelæ, proceeded to node formation. He had seen nodes in girls aged fourteen. He dwelt upon the factors which played an important part in the development of catarrhal and subsequent changes, such as the size of the class, the age of the teacher, want of exercise, and the like.

On Chorditis Tuberosa.

Dr. A. HODGKINSON (Manchester) dwelt upon the pathological anatomy more than the clinical aspect, which was more fully developed by the preceding speaker. The mechanical cause here was the friction of inflamed parts of the cord, which takes place usually at that point; the nodes appear, and the pathological picture was clearly defined.

ERRATUM.—We find that in our report of the discussion upon Chronic Glaucoma we have attributed to Mr. Nettleship, who opened the debate, the remarks made by Mr. Power. Mr. Nettleship, in his introductory words, submitted "that it was undesirable to maintain the distinction between typical chronic glaucoma and atrophy with cupping of the optic disc; that the risks of iridectomy in producing rapid deterioration of vision were less than has been supposed; that retarded progress of the disease is often, and permanent arrest not rarely, secured by iridectomy performed early; that it is often right to operate in the premonitory stage of glaucoma; and that iridectomy is nearly always to be preferred to sclerotomy for chronic glaucoma."

THE MUSEUM.

(*Continued from p. 381.*)

II.—MEDICAL AND SURGICAL APPLIANCES.

SOME of the most important exhibits which may be grouped under this head were arranged in that section of the museum held in certain of the rooms of King's College. Thus the Society of Anæsthetists had an excellent collection of the various appliances employed in connexion with the administration of anæsthetics; and Messrs. Thos. J. Syer and Co. (Wilson-street, E.C.) explained their patent combined consulting-room couch and operating-table, with its improvement for head support and throat examination, while Messrs. Down Bros. (Thomas-street, S.E.) had a space completely equipped as an aseptic operating-theatre, and their aseptic furniture for hospital wards and out-patients' rooms, and a completely fitted aseptic surgeon's consulting- and operating-room, formed an interesting group instructive of the requirements of modern advances. A special feature of the exhibit of Messrs. Allen and Hanburys (Plough-court, Lombard-street, E.C.) was the operating-table, which formed part of the appliances of a well-appointed operating-theatre. It is made entirely of enamelled iron and is provided with a series of pipes for the circulation of hot water, so that the temperature of the patient may be maintained. The surface frame is movable and easily adjusted for the Trendelenburg and other positions. Various patterns of operating-cushions, securing cleanliness in operations, were also shown, as well as several designs of consulting-room couches, while the special aseptic washhand stand for the foot movement only, so that the operator does not touch the tap with his hands, must be numbered amongst the important novelties of this section.

As mentioned elsewhere, Messrs. Allen and Hanburys had a most imposing array of surgical instruments in the examination-hall—far too numerous to be even alluded to. We must be satisfied, therefore, with referring to some of them, which, regarded as "up-to-date" appliances, may be taken as examples of the rest. Several advantages, for instance, are claimed for a new rectal speculum, designed by Mr. E. C. Ryall, and a new midwifery forceps with detachable aluminium handles presents some obvious improvements, since it is aseptic and easily sterilised, and the light handles are easily detached by means of a spring catch. Then should be included the Murdoch-Cameron midwifery forceps, adapted for use in cases of marked contraction of the pelvis, even to as much as three inches; a modification of Dr. Champetier de Ribes' bag for induction of premature labour, obviating increased tension in the uterus and the danger of displacing the child's head; Mr. J. S. Ellis's modification of Sir Spencer Wells' and Mr. Lawson Tait's clamp for the compression of uterine fibroids; improved aseptic midwifery bags with movable linings; Mr. Ryall's double probes for fistula; the now well-known anastomosis buttons (Murphy); the Allenburys' chrismaline atomiser and powder insufflator; and, lastly, the hypodermic syringes with platino-iridium needles for the administration of antitoxic serum, which this firm supply direct from the British Institute of Preventive Medicine.

It is hardly necessary to state that the exhibit of Messrs. Arnold and Son (West Smithfield) consisted of all sorts of improvements, comprising hypodermic syringes, hæmorrhoidal clamps, vaginal douches, exploring and drainage tubes, catheters, aseptic instruments and case, urethral knife, uterine stem, binaural stethoscope, ice caps (for ophthalmic application), complete midwifery sets, amputation cases, and so on—all constructed in accordance with the suggestions of medical men. On account of their importance and interest doubtless no less than four entire pages of the catalogue were devoted to the list of appliances of Messrs. Down Bros. (Thomas-street, S.E.). Among their comparatively recent specialities should be mentioned Dr. Herschell's improved binaural stethoscope, provided with a lever by means of which the joint may be clamped and fixed at any point, thus obviating the use of a spring, which may press too severely or be too slack; a chest-piece, with finger-rest (suggested by Mr. G. A. Skinner), which is a useful and convenient adjunct to the binaural stethoscope; a new midwifery bag; and the anastomosis buttons of Dr. Murphy for lateral and end-to-end approximation.

Amongst the interesting appliances of Messrs. Burroughs, Wellcome, and Co. (Snow Hill-buildings, E.C.) their "insufflator" should be specially noticed. It is a very satisfactory instrument for the application of dry powders by insufflation to the nasal and oral mucous surfaces, sores, abscesses, and so on, and can be directed and worked with one hand. It is also provided with interchangeable powder cylinders, and may have attached to it a tongue depressor, a branched delivery tube, or a vaginal tube for special purposes. The

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hypodermic and ophthalmic pocket cases of this firm, as also the patent aluminium syringe, are now so well known, and present advantages which are so manifest, as hardly to need mention. Every possible requisite employed in the treatment of disease by electricity was to be found in the striking exhibit of Mr. K. Schall (Wigmore-street) where, towering above the other appliances, was a large Wimshurst machine, which by the crack of its lightning-like sparks served as a powerful attraction in this section of the museum. There were batteries for faradaisation with acid and dry cells, batteries for galvanisation and electrolysis (continuous current), galvanometers, rheostats, electrodes, and batteries and instruments for galvano-cautery, for surgical lamps, for laryngoscopic, ophthalmoscopic, and other obvious exploratory purposes, &c. The "antrophors," exhibited by Messrs Thos. Christy and Co. (Lime-street, City, E.C.), for the treatment of urethral and prostatic diseases, consist of flexible spiral springs coated with an insoluble rubber covering to guard against irritation and to prevent decomposition of the medicament by the action of the metal spring. The soluble medicated mass covers the first insoluble coating and when inserted into the urethra gradually melts and is absorbed by the mucous membrane. Messrs. G. and G. Stern (Gray's-inn-road, W.C.) showed a novelty in the shape of breast protectors, which they call the "Neena breast shields." They are made of a light, firm, material, and afford an easy and comfortable support for the breast in health or disease. An important provision in these is also a series of small perforations by which ventilation is secured, while the material admits of cleansing, which with care need not affect the shape. Prominent amongst the surgical appliances, including antiseptic dressings, artificial limbs, aseptic instruments, and so on, of Messrs. Ferris and Co. (Bristol) was their "ever ready" caddy—a modern *sine quâ non* of the general practitioner—which is a neat and tidy storehouse for the textile materials, plasters, dressings, &c., used in surgical work. Mr. J. H. Montague (New Bond-street, W.), besides exhibiting many new and important surgical instruments and appliances, including Eric France's phimosis scissors, also showed some latest developments connected with electro-therapy. Ophthalmic instruments were well represented in the exhibit of Messrs. Curry and Paxton (Great Portland-street), who showed ophthalmoscopes, perimeters, optometers, trial glasses, glasses for astigmatism, &c., and various opto-electric appliances. Messrs. J. Hewlett and Son (Charlotte-street, E.C.), amongst their exhibits, submitted to inspection a bone forceps with serrated edge and closing screw for dividing metacarpals, phalanges, &c., made at the suggestion of Dr. T. H. Morton of Sheffield.

Antiseptic dressings, prepared according to the formulæ of Sir Joseph Lister, and including gauzes (carbolic, double cyanide, &c.), lints, wools, tows, ligatures, and sutures, formed the feature of the preparations of Messrs. Macfarlan and Co. (Moor-street, E.C.), although a specially purified chloroform for anæsthetic purposes, costing, it is stated, about half the price of chloroform made from rectified spirit, should also be mentioned. Similar preparations were shown by Messrs. Robinson and Son (Fann-street, Aldersgate-street, E.C.), whose speciality is absorbent cotton-wool placed between absorbent gauze (well known as Gamgee tissue)—the *ne plus ultra* dressing for wounds &c. The "Domen" belts, corsets, bandages, &c. of the Domen Belts Co. (Moor-lane, E.C.) are sufficiently well known to the profession on account of the excellence of their design to need no more than passing allusion. A glance at the excellent assortment of surgical instruments ingeniously fashioned to every conceivable requirement of modern surgery sufficed to confirm the reputation for finish and superior workmanship which Messrs. John Weiss and Son's (Oxford-street, W.) goods have justly earned. In regard to tape plasters, Messrs. Leslie and Co. (Walbrook, E.C.) have lately made an important addition to their list in the form of a rubber adhesive strapping which presents many advantages. The well-known excellence of this firm's other dressings is evidently maintained.

The list of the Medical Supply Association (High Holborn, W.C.) included a good assortment of various appliances—as, for example, a combined reading, eye, and throat lamp, improvements in cautery burners, nasal, ear, and eye instruments, &c., while, close by, Messrs. Fassett and Johnson (Snow-hill, E.C.) exhibited their absorbent cottons, lints, gauze, antiseptic dressings, medicated dressings, &c., all of which are well known for their standard uniform and reliable character. The ingenious air-tight aseptic container for medicated bandages is an important introduction of this firm. It consists of wood fibre package incorporated with an antiseptic and coated within with antiseptic lacquer. The joints overlap and are made not only doubly secure by an overlapping label but also air-tight by the entire surface being lacquered. It is compact, durable, and trustworthy. Lastly, the exhibit of Messrs. W. Bartleet and Sons (Gresham-street, E.C.) was chiefly set apart for "surgical needles" of every description.

III.—Special Foods and Food Adjuncts.

As will be seen, this Section comprised a really valuable collection of foods and food aids, not a single exhibit being submitted for inspection which had not in our judgment a distinct claim upon the attention of the practitioner. Let us take, for example, the sterilised preparations of milk of the Aylesbury Dairy Co. (St. Petersburg-place, W.), who now supply sterilised milk in vacuum stoppered bottles, and also humanised milk, the composition and character of which we have already favourably reported upon. This exhibit also included a laboratory, fully equipped with appliances for the examination and analysis of milk, the demonstration of which by the company's chemists was watched with great interest. "Koumiss" and Muffler's sterilised food for infants and invalids were also amongst the excellent products shown by this company. Again, Messrs. Armour (Tooley-street, S.E.) had a well-arranged list of their well-known laboratory products on view, including their standard and reliable preparations of pepsin (powder, granular, scale, and soluble powder), glycerole pepsin, pancreatic powder, and desiccated ox-gall, while as examples of powerful nutrients should be mentioned the palatable wine of beef peptone (1 oz. representing 1 oz. of prime beef), beef peptone paste and powder, concentrated extract of beef, and the not inaptly named preparation "vigoral," containing beef fibre. A satisfactory feature of these preparations is their fresh and meaty flavour.

Messrs. Allen and Hanburys showed their malted infant's food—first food for infants and mother's milk food—in the form of powder, sterilised, and of a composition exactly in accordance with physiological requirements, as we have elsewhere shown. Their well-known malt extract preparations were, it is needless to add, also on view. A great variety of foods eminently adapted for use in diabetes and obesity were submitted for inspection and taste by Messrs Callard (Regent-street, W.). These included a "Parmesan and celery cheese straw," an after-dinner biscuit of really tempting flavour; sponge and almond cakes, affording an agreeable change from the usual dry foods; walnut, hazel-nut, and pine-nut biscuits, belonging to a new series of afternoon tea biscuits; aleuronat (vegetable albumin) biscuits, in imitation of oatmeal biscuits and quite free from starch and sugar; almond meal biscuits, a plain, palatable form of every-day food; and the "Callista" biscuit, recently reported by us as of unquestionable nourishing value, despite the absence of starch, sugar, and butter. This admirable list may be concluded with the mention of the excellent ivory jelly made by this firm, which is so prepared that the phosphates are secured in a perfectly soluble form; it is, therefore, justly urged as valuable for bone-building and for children teething or with rickets. Messrs. Stern (Gray's-inn-road) have recently brought out a nourishing food under the name of "Narissa." Judging from its analysis, it is correctly described as a complete food, containing a high proportion of albumin and phosphates, a suitable amount of fat, and a minimum of starch. In practical use it is spoken of highly. Messrs. Nestlé's (Cannon-street, E.C.) concentrated milk may be confidently used for all the purposes of fresh milk, since it is sterile and contains all the fatty principles of the original milk intact.

The superiority and purity of the digestive ferments prepared by Messrs. Fairchild, Bros., and Foster (New York; London agents, Burroughs, Wellcome, and Co., Snow-hill Buildings) are well known. They have recently introduced some excellent dietetic aids called, respectively, "panopepton" (a palatable bread and beef peptone, containing the edible substance of prime lean beef and best wheat flour, thoroughly cooked, digested, sterilised, and concentrated *in vacuo*); "peptogenic powder" (for peptonising milk and preparing "humanised milk"); and pepsencia (an active digestive essence obtained by direct

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extraction from the fresh calf rennet). Experiments demonstrating the value of these preparations afforded an interesting feature of this exhibit. Under the curious title "Food Specialists and Medical Comfort Contractors" the Bovril Company (Farringdon-street, E.C.) exhibited their well-known preparations, the original product "Bovril" being now widely esteemed as a cheap, yet pleasant, and undoubtedly comforting and nourishing beverage containing the meat fibre as well as the extractives. Self-digesting "whole meal food" and "best food for infants" are titles which have long been associated with two well-known preparations of Messrs. Savory and Moore (New Bond-street, W.), besides which should be mentioned, although they are equally well known, the peptonised preparations of this firm, which are valuable alike in health and disease.

An interesting dietetic preparation is the Cerebos nutritive table salt of the Cerebos Salt Company (Upper Thames-street, E.C.), which contains, it is said, mixed phosphates in the natural proportions of wheaten bran, and even a minute proportion of calcium fluoride, a normal constituent of the enamel of the teeth. It is a clean white salt, and is considered to be of service in aiding the formation of the bones and teeth. Amongst foods well adapted for infant feeding is Horlick's malted milk, the constituents of which have been carefully modified by the action of diastase to suit the needs of infants and invalids. Its analysis presents the composition of a complete food, rich alike in albuminous and mineral substances, while milk sugar with dextrine are the only carbohydrates present. It is a distinct advantage that this preparation requires no cooking, but is simply to be dissolved in warm water, the resulting fluid closely resembling milk in appearance. Specimens were exhibited by the London agents of 39, Snow-hill, E.C. It is impossible in the space at our disposal to exhaust the list of Messrs. Brand's (Mayfair, W.) specialities for invalids, including their well-known meat essences, but we may mention the albuminous essence of beef, consisting of the juice of the finest beef and containing a portion of the albuminous, fatty, and—important to add—fibrous elements. Brand's meat-juice we have already dealt with at length in a critical and, we may add, satisfactory report emanating from our laboratory.

Similarly we have pointed out the high food value by analysis of Mosquera beef jelly and beef meal, which were amongst the food products shown by Messrs. Parke, Davis, and Co. (North Audley-street, W.)

Amongst the many excellent food preparations placed now at the disposal of medical men must be reckoned the liquid beef peptonoids of Messrs. Carnrick and Co. (Hart-street, Bloomsbury, W.C.), with or without coca; cod-liver oil milk; and a milk-wheat food (soluble food). Each and all are of a remarkably high standard of nutrient value. A satisfactory product, as we have on a previous occasion shown, is the Viking brand of unsweetened condensed milk (Norwegian Milk Condensing Co., Philpot-lane, E.C.). It contains no added sugar, no objectionable preservatives, and a proper proportion of fat, while its flavour is good. The essences, jellies, and meat juices of the Viking Food and Essence Co. (King's-road, St. Pancras) formed an attractive exhibit amongst food specialities and delicacies for invalids, a feature of these preparations being their delicate and pleasant meaty flavour. The merits of the Liquor Carnis Co's. (Farringdon-street, E.C.) preparations have been already emphasised by our own laboratory results as evidenced in their powerful meat juice and in marrol, malto-carnis, and virol. Virol-sans-Sucre—like the last, a preparation of red and yellow bone-marrow, rich in haemoglobin and organic compounds, but free from starch and sugar—is a comparatively recent and important addition to this list of highly nourishing foods, which, further, are in the highest degree palatable. The name of Van Abbot (Duke-street Mansions, Grosvenor-square) is well known in association with diabetic foods, of which an excellent collection was shown, providing the diabetic not only with food which he may eat, but which is also of an agreeable kind. Bran biscuits for constipation, hypophosphite of lime biscuits for delicate children, and obesity biscuits manufactured by the same firm are entitled to an equal meed of praise. As an illustration of the recent advances made in the preparation of condensed milk we may take the specimens shown by the Anglo-Swiss Condensed Milk Company (Mark-lane, E.C.) comprising "ideal milk," not sweetened, but preserved by sterilisation and enriched with 20 per cent. pure cream; ordinary condensed milk containing the cream of the original milk; and, finally, a very palatable preparation of condensed milk with cocoa. Lastly, the preparations and compounds (cod-liver oil, for example) of active malt essences were well represented in the exhibits of Messrs. Allen and Hanburys, Messrs. Burroughs, Wellcome, and Co., the Maltine Co. (Hart-street, Bloomsbury), the Standard Malt Extract Co. (Billiter-street, E.C.), who also exhibited a liquid extract, and the Malto-peptone Co. (Leadenhall-street), who prepare also active malt jellies, with and without cod-liver oil, the obvious advantages of which were only recently pointed out in our Analytical Records (*vide* THE LANCET, April 27th, 1895).

(To be continued.)

THE MUSEUM OF MEDICAL ANTIQUITIES.

THE interesting collection of votive offerings of ancient Italy and surgical instruments brought together by Dr. Luigi Sambon, and exhibited by Messrs. Oppenheimer, Son, and Co., Limited, in the Victoria Rooms of the Savoy Hotel, attracted considerable attention. Certainly the collection was a remarkable one, and Dr. Sambon, who has been commissioned by the Government of Italy to prepare a work on the history of medicine for the next International Medical Congress, deserves great praise for his assiduity in bringing together a series of antiquities that throw considerable light on the history of the healing art. The exhibition may be divided into two parts, one a collection of "donaria" or votive offerings for cures performed or desired, and the other a collection of surgical instruments taken from the ruins of Pompeii and Herculaneum. Some sixteenth and seventeenth century instruments were also shown, and their



rude construction when compared with some of the more ancient was not a little surprising. The donaria consisted of terra-cotta models of almost all parts of the body and tablets showing full-sized figures both individually and in groups. One fine specimen represented a mineral spring, on one side of which stands Hercules (usually associated with hot springs) with both his hands over the region of the bladder, indicating that the water is good for the kidneys &c. The tablet above, of which Dr. Sambon has kindly supplied us with a photograph, is a good type of some of the best of these donaria. It is a votive offering for disease

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found at the Temple of Maternity, Capua, and is intended to show hypertrophied breasts and abdominal tumour, or perhaps pregnancy.

Some of the smaller offerings were made of bronze, some of silver, and in rare cases of gold. These were nailed to the walls of the temples and shrines. One series of donaria connected with lactation came principally from the Temple of Maternity at Capua and the Minerva Medica in Rome.

The collection of ancient surgical instruments was very interesting. The Roman instruments are remarkable for their simplicity and beauty. In a few cases they are coated with silver, and have on them the names of the medical men to whom they belonged. They are entirely of metal and much better than those used 800 or 900 years ago. The blades of the scalpels and lancets were of iron with handles of bronze, but in most of the instruments the blades have rusted away. Those found in the bed of the Tiber, however, are still intact. The instruments are in great variety and are most ingenious in construction. As they are made of metal, it is easily conceivable how liable they were to slip in the hands of the surgeon, especially when covered with blood, and the device adopted to prevent this (where the instrument lent itself to it) was as ingenious as it was simple. A glance at the accompanying diagram will explain this better than a verbal description. The centre of the instrument was moulded into the form of a ring, and a slight pressure of the index or other finger made the grip quite firm.

Although perhaps remotely connected with the majority of the exhibits, three safety pins and a metal cup-shaped vessel perforated with a number of holes, and containing a cast very much like the half of a lemon, forcibly reminded visitors that "there is no new thing under the sun."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examinations of the Board in the subjects indicated under the Four Years Regulations:—

Part I.—Chemistry, including Chemical Physics:—

Bell, Victor Samuel Alexander, University of Cambridge and St. Bartholomew's Hospital.
Bennett, Percy Moore Septimus, Middlesex Hospital.
Bulteel, Christopher Herbert Dimond, King's College, London.
Butler, Thomas Langton, St. Mary's Hospital.
Dean, Edmund Clapperton, University College, London.
Hort, Frederick Aylmer, Middlesex Hospital.
King, Thomas Arthur, University of Cambridge and St. Thomas's Hospital.
Lewis, Lewis Evan, University College, Cardiff.
Nicholls, Ernest Albert, London Hospital.
Nicholls, William, St. Bartholomew's Hospital.
Scott, Charles Augustus, Charing-cross Hospital.
Thomas, Elijah Richard Lockwood, London Hospital.
Williams, William Wheldon, University College, London.

Part II.—Materia Medica:—

Andrew, Alfred John, St. Bartholomew's Hospital.
Bennetts, Archibald James, St. Mary's Hospital.
Brundrett, Gilbert Thomas, Owens College, Manchester.
Collingwood, Percy Hilderbrand, St. Thomas's Hospital.
Davies, William John Edwin, St. Thomas's Hospital.
Dean, Edmund Clapperton, University College, London.
Dring, Henry George Carpenter, St. Bartholomew's Hospital.
Du Heaume, Ernest Philippe, St. Bartholomew's Hospital.
Ellis, Richard Thomas, Yorkshire College, Leeds.
Gayner, John Stansfield, St. Bartholomew's Hospital.
Good, Hardman Allgood, King's College Hospital.
Grüber, Parkinson Osborne, St. Bartholomew's Hospital.
Hatfield, John Rayner, Yorkshire College, Leeds.
Hay, William Leslie, King's College, London.
Hayes, Arthur John, Middlesex Hospital.
Holman, Thomas Edward, Guy's Hospital.
Howells, John, London Hospital.
Iliffe, Caris William, Owens College, Manchester.
Jones, Alfred, London Hospital.
King, Neville Pearce, Charing-cross Hospital.
Knowlton, Alexander John, Middlesex Hospital.
Langworthy, Edward Southwood, St. George's Hospital.
Leary, George Edward, Mason College, Birmingham.
Longhurst, Ernest Thomas, St. Mary's Hospital.
Maskew, Charles Henry, Mason College, Birmingham.
Mitchell, William Grant, Guy's Hospital.
Nicholls, William, St. Bartholomew's Hospital.
Nimmo, Frank Hutton, St. Bartholomew's Hospital.
Pomeroy, Edward Hugh, Guy's Hospital.
Porteous, Herbert Llewellyn, Middlesex Hospital.
Pugh, Charles Grant, Middlesex Hospital.
Quirke, Edwin Alphonsus, Mason College, Birmingham.
Ransford, Sydenham Least Gifford, St. Mary's Hospital.
Rouillard, Jean Antoine Abel, St. Thomas's Hospital.
Scott, Charles Augustus, Charing-cross Hospital.
Smith, Arthur Lionel Hall, University College, London.
Square, Arthur Powell, Middlesex Hospital.
Stratton, Percy Haughton, Mason College, Birmingham.
Thornton, George Lestock, St. George's Hospital.
White, Alfred Skeate, Ledwich School, Dublin.
Wood, Jacob Medley, Middlesex Hospital.
Woodstock, Charles Percy, Anderson's College, Glasgow.
Woollcombe, Alfred, St. Bartholomew's Hospital.

Part III.—Elementary Anatomy and Elementary Physiology:—

Brundrett, Gilbert Thomas, Owens College, Manchester.
Bulteel, Christopher Herbert Dimond, King's College, London.
Dean, Edmund Clapperton, University College, London.
Dowling, Stanislaus Marcus, Catholic University of Ireland, Dublin.
Evans, John, St. George's Hospital.
Hawkins, Arthur, University of Cambridge and St. Bartholomew's Hospital.
Hey, Samuel, University of Cambridge and St. Bartholomew's Hospital.
King, Thomas Arthur, University of Cambridge and St. Thomas's Hospital.
Marsden, Walter, Yorkshire College, Leeds.
Mayor, Hamlet Horace, Owens College, Manchester.
Mort, James Henry, University of Cambridge.
Nicholson, Guy Berners, University of Cambridge.
Sanders, Charles Henry, St. George's Hospital.
Simpson, Fred Algernon, University of Cambridge and St. Mary's Hospital.
Walker, Georges Charles, University College, Liverpool.

Elementary Physiology only:—

McCarthy, Tom, Queen's College, Cork.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.—The annual general meeting and conference of this association were held on July 31st in the Hôtel Métropole, London, Dr. John Watson, the Vice-President, occupying the chair in the unavoidable absence of the President, Mr. Frank Iliffe. There was a large attendance of members. The secretarial report exhibited a persistent and encouraging increase in the membership, and in the subsequent discussion the opinion was expressed by those present that it should be clearly intimated to those who are still non-members that admission into the association in the near future would be attended by considerable difficulty. Several important matters were brought under discussion, but the reading of a paper by Dr. Giddings on the subject of How much should Postal Medical Officers be influenced by Heredity in examining Candidates for the Postal Service was postponed on account of the numerous engagements connected with the meeting of the British Medical Association. The following executive was elected for the ensuing year:—President: Mr. Matthew C. Halton, J.P., M.R.C.S., Ex-Mayor of Barnsley. Vice-Presidents: Mr. Frank Iliffe, M.R.C.S., Derby; and Mr. John Watson, M.D., Manchester. Honorary Secretary in Scotland: Mr. W. Dougan, M.D., Glasgow. Honorary Secretary in Ireland: Mr. H. Fitz-Gibbon, M.D., Dublin. Honorary General Secretary and Treasurer: Mr. R. Ritchie Giddings, M.B., Nottingham. Executive Committee: Mr. Edwin L. Adeney, J.P., M.D., Tunbridge Wells; Mr. J. Walton Browne, M.D., Belfast; Mr. Matthew Coates, M.D., London; Mr. W. Hugh Hughes, J.P., M.R.C.S., Ashton-under-Lyne; Mr. W. Husband, M.R.C.S., Manchester; Mr. Bertram Thornton, J.P., M.R.C.S., Margate; and Mr. S. Walker, M.R.C.S., Middlesbrough. Auditors: Mr. W. Dougan, M.D., Glasgow, and Mr. T. West Symes, M.D., Halifax. In the evening the annual banquet took place in the Whitehall Rooms and was a very great success, Mr. Frank Iliffe, the President, being in the chair.

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SUPERANNUATION ALLOWANCE.—Mr. Edward Marshall, M.R.C.S., late medical officer of the Mitcham Schools, Surrey, has been granted a superannuation allowance of £66 13*s.* 4*d.* per annum.

LITERARY INTELLIGENCE.—Messrs. Chapman and Hall have been constituted sole agents in this country, the Continent, and the Colonies for the sale of the important scientific and technological publications of Messrs. Wiley and Sons of New York.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 1895-96.—The following is the list of office-bearers elected on July 25th, 1895:—President: Mr. Geo. Stoker (London). Vice-Presidents: Dr. Ed. Law, Dr. Middlemass Hunt (Liverpool), and Dr. Wm. Milligan (Manchester). Council: Metropolitan—Dr. W. McNeil Whistler (*ex-officio*), Dr. Dundas Grant, Mr. Mayo Collier, Mr. Wyatt Wingrave, and Mr. G. C. Wilkin; Extra-Metropolitan—Dr. J. M. E. Scatliff (Brighton) and Mr. John Bark (Liverpool). Hon. Sec.: Dr. Pegler.

PRESENTATION.—Dr. A. S. Merrick, resident medical superintendent of the Belfast District Lunatic Asylum, was the recipient, on the 7th inst., of an address and a silver salver, as mementoes of his long period of service in the institution. The Rev. N. E. Smith, by request, made the presentation. He said that he had known Dr. Merrick for twenty years. No one had been more successful in the management of such an important institution. The presentation was not one on leave-taking or of departure. They trusted Dr. Merrick would long remain with them, that while as years went on the ties that now bound them together would become more closely knit.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The New Parliament.

THE new Parliament met for the first time on Monday, Aug. 12th, when there was a good attendance both of Lords and Commons. The latter elected Mr. Gully again as their Speaker, and next day Her Majesty the Queen signified approval of the election. Two days being occupied with the swearing-in of members, the Queen's Speech was not read until Thursday, Aug. 15th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAMS, J. D., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health to the Long Ashton Rural District Council.

BAILEY, THOS. R., M.D., C.M. Edin., has been appointed Medical Officer of Health to the Bilston District Council.

BARCROFT, A. E. I., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Myddle and Baschurch Sanitary District of the Ellesmere Union.

BEATTIE, R., M.D., M.Ch. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Toothill Upper Urban Sanitary District, vice Brown, resigned.

BIGGAM, JOHN, M.D., C.M. Edin., has been appointed Medical Officer of Health to the Sedgeley District Council.

BOND, N. T., M.B., C.M. Edin., has been appointed Medical Officer for the No. 4 Sanitary District of the Liskeard Union.

BOND, W. A., M.D., B.C., D.P.H. Camb., M.R.C.P. Lond., has been appointed Medical Officer of Health for the Holborn District Board.

BREDIN, J. N., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Polton Sanitary District of the Biggleswade Union.

BROWN, WILLIAM, M.D., C.M. Glasg., has been appointed Medical Officer of Health for the Stapleton District Council.

BYASS, E. S., M.B., C.M., L.R.C.S. Edin., has been appointed Medical Officer for the Slangham Sanitary District of the Cuckfield Union.

CAREY, WM., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Workhouse and the Holbrook Sanitary District of the Sawford Union.

COATES, RICHARD, L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Newport and Monmouthire Infirmary, vice S. H. Lee, resigned.

CROUCH, C. P., M.B. Lond., F.R.C.S., has been appointed Honorary Medical Officer to the Weston-super-Mare Hospital, vice Alford, deceased.

FOSTER, WM., M.B., D.P.H. Camb., M.R.C.S., has been appointed Medical Officer of Health to the Shipley District Council.

GARSTANG, T. W. H., M.R.C.S., has been appointed Medical Officer of Health to the Knutsford Urban District Council.

GILPIN, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Petworth Rural District Council.

GREGOR, A., M.B., C.M. Aberd., has been appointed Medical Officer for the Sutton-on-Trent Sanitary District of the Southwell Union.

HARAN, J. A., M.B., B.Ch. Dub., has been appointed Resident Medical Officer for Barrington's Hospital, Limerick, vice Mulcahy.

HASWELL, J. F., M.B., C.M. Edin., M.R.C.S., has been appointed Medical Officer of Heath to the Penrith Rural District Council.

HIND, ALBERT, L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health to the Southampton Town Council.

JOHNSON, F., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for Hedgerley by the Eton Rural District Council.

JOHNSTONE, J. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Upholland Sanitary District of the Wigan Union.

JONES, H. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Pembroke Rural District Council.

JONES, R. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Grangetown Sanitary District of the Cardiff Union.

MORISON, JOHN, M.D. Edin., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer of Health and Public Analyst for St. Albans City.

NEWTON, R. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medica Officer for the No. 2 Balcombe Sanitary District of the Cuckfield Union.

PARSONS, G. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Westbury and Whorwellsdown Union.

PURDY, Jas. R., M.B., M.S. Aberd., has been appointed Medical Officer of Health to the Hull County Council.

ROYDS, W. A. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the St. Mary Bowine Sanitary District of the Whitchurch (Hants) Union.

SANDFORD, F. J., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health for the Drayton and Titterby Rural Sanitary Districts.

SANDFORD, G. CALROW, M.B., has been appointed Resident Obstetric Surgeon to the Dispensary, York.

SENIOR, ARTHUR, M.B., B.S. Camb., has been appointed Medical Officer of Health to the Kingston and the Dittons Urban District Council.

STUBB, E. C., F.R.C.S., has been appointed Assistant in the Throat Department of St. Thomas's Hospital.

THOMPSON, W. H., M.D. Durh., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health to the Quarry Bank Urban District Council.

TURNER, J. A., M.B., C.M. Edin., D.P.H. Camb., has been reappointed Medical Officer of Health for Lutterworth.

WEEKS, C. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Pinchbeck Sanitary District of the Spalding Union.

WHITTINGTON, S.P., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health to the Neath Rural District Council.

WYCHE, E. M., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the Infirmary of the City of London, Bow-road, E

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CITY ASYLUM, Birmingham.—Clinical Assistant. Board and lodging provided.

CONVALESCENT FEVER HOSPITAL, Gore Farm, Darenth, Kent.—Dispenser. Salary, £5 a month, with board, lodging, and washing. Applications to the Medical Superintendent at the hospital.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer, for one year. Salary £80 per annum, with board and lodging.

GENERAL HOSPITAL, Nottingham.—House Physician, for two years. Salary £100, rising £10 a year to £120. Also Assistant House Surgeon, for six months. Board, lodging, and washing in the hospital provided.

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GLAMORGAN COUNTY ASYLUM, near Brigend.—Junior Assistant Medical Officer. Salary £130, rising £10 a year to £150, if approved, with with board (no beer or wine), lodging, and washing.

MIDHURST UNION, Sussex.—Medical Officer for the Union Workhouse, situate at Easebourne, near Midhurst. Salary £30 per annum, with extra fees for midwifery cases. Applications to the Clerk, Midhurst

NORFOLK AND NORWICH HOSPITAL.—Assistant to House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Third House Surgeon. Salary £65 per annum, with board, lodging, and laundry.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, washing, &c.

THE COUNCIL FOR THE BOSTON RURAL DISTRICT.—Medical Officer of Health for the District, for five years. Salary £110 inclusive. Applications to the Clerk of the Council, 10, New-street, Boston.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

Births, Marriages, and Deaths.

BIRTHS.

AITKEN.—At Craigard, High-road, Ilford, on Aug. 10th, the wife of James Aitken, M.D., of a son.

BOURNE.—On Aug. 7th, at Abbotsfield, Kenilworth, Warwickshire, the wife of Edmund Kemp Bourne, M.D. Ed., of a son.

CAPPER.—On Aug. 13th, at Tunbridge Wells, the wife of Percy Capper, M.B. Edin., of a son.

CUTTING.—On Aug. 11th, at Chetwynd House, Stalham, Norfolk, the wife of Ernest Buxton Cutting, M.R.C.S., L.R.C.P., of a son.

GODSON.—On Aug. 12th, at Sharsted, Westgate-on-Sea, the wife of Clement Godson, M.D. Aberd., C.M., of Grosvenor-street, London, of a son.

PARTRIDGE.—On Aug. 10th, at Albany-road, Camberwell, S.E., the wife of W. T. Partridge, M.R.C.S., L.R.C.P., of a son.

ROSS.—On July 25th, at Rio Tinto, Spain, the wife of R. Russell Ross, M.B. Edin., of a daughter.

RUSSELL.—On Aug. 9th, at Plas Ian Alltran, Holyhead, the wife of William Fox Russell, M.B. Dub., of a daughter.

WAKE.—On Aug. 10th, at Dartmouth-park hill, N.W., the wife of Chas. Hereward Wake, M.R.C.S., L.R.C.P., of a son.

WESTLAKE.—On Aug. 7th, at Victoria-street, Great Grimsby, Lincolnshire, the wife of Algernon Westlake, M.B. Edin., of a daughter.

WOOLLCOMBE.—On Aug. 6th, at the Crescent, Plymouth, the wife of Walter L. Woollcombe, F.R.C.S. Ed., of a daughter.

WOOLLETT.—On Aug. 5th, at Wymering House, Southwold, Suffolk, the wife of Sidney Winslow Woollett, M.R.C.S., of a son.

YEOMAN.—On Aug. 10th, at Clark's Hill, Prestwich, Manchester, the wife of Stanley Yeoman, M.B. Cantab., of a daughter.

MARRIAGES.

ANDERSON—TETLEY.—On Aug. 6th, at St. Chad's Church, Far Headingley, Leeds, William Anderson, F.R.C.S., of St. Thomas's Hospital, to Louisa, third daughter of the late F. W. Tetley, of Fox Hill, Westwood, Leeds.

WICKHAM—WATKINSON.—On Aug. 7th, at the parish church, Huddersfield, Charles A. Wickham, L.R.C.P., L.R.C.S. Edin., of Elmlea, Willesborough, Kent, to Marion Cassie Watkinson, eldest daughter of Thos. Bond Watkinson, Esq., of Beechwood, Huddersfield.

WRIGHT—GRAY-WILLIAMS.—On Aug. 7th, at Christ Church, Bootle, Willie Eustace Merle Wright, L.R.C.P., L.R.C.S. Ed., to Mary (Minnie) Gray-Williams.

DEATHS.

HARRIS.—On Aug. 5th, at the Medical Superintendent's House, Infirmary, East Dulwich, Ruth Elwin, only child of Herbert Elwin and Edith Harris, aged 1 year 9 months.

NEWLAND.—On Aug. 8th, at his residence, Raglan-road, Dublin, Robert Newland, M.D., in his 79th year.

ROBBS.—On Aug. 13th, at Bournemouth, William Edward Robbs, M.B. Lond., J.P., of Powis-square, W., aged 64 years.

STRATTON.—On Aug. 8th, at Nevern-square, S.W., Brigade-Surgeon John Proudfoot Stratton, M.D. Aberd., Indian Medical Service (Retired), aged 66.

WELCH.—On Aug. 7th, at Hackney-road, Charles Welch, L.R.C.P. Ed., M.R.C.S., in his 77th year.

YELDHAM.—On Aug. 10th, at St. Leonards-on-Sea, Stephen Yeldham M.D., M.R.C.S., in his 85th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

"A NEW APPOINTMENT AT THE MIDDLESEX HOSPITAL."

IN our issue of last week we commented upon certain remarks which had appeared in the lay press relative to the recent appointment at the Middlesex Hospital. At the same time we expressed our assurance that the paragraph in question had been inserted without the knowledge or leave of the subject of it. We have received confirmation of this view from the gentleman in question, who remarks in addition that the paragraph was grossly incorrect. It is hard that a medical man should have to suffer from such an annoyance, and he has our sympathy.

Mr. Lennox Browne.—We have referred the suggested correction to our reporter, who finds that it constitutes a fuller account, but not a different one from that which we have published, while it leaves untouched points to which reference was made.

"THE DANGERS OF COCAINE."

To the Editors of THE LANCET.

SIRS,—Since reading your annotation on the "Dangers of Cocaine" in THE LANCET of July 6th I have had a case which illustrates the haphazard way in which this drug is used.

I was called in by a dentist to see a patient who, I found, had the following symptoms. She was unconscious and almost pulseless, respiration rapid, pupil dilated and fixed, and there was absence of conjunctival reflex. The dentist stated that he had injected cocaine and extracted two teeth. On being asked how much cocaine he had used, he said "one tabloid," and on referring to his stock he found that each tabloid contained half a grain. He stated that he was convinced that the collapse was not caused by cocaine, as he had recently used a hypodermic injection of seven tabloids (3½ gr.) in another case. The patient slowly recovered consciousness after hypodermic injections of ether and inhalation of nitrite of amyl, but suffered during the rest of that day and the next from giddiness, headache, and general lassitude. The dentist, she stated, had advised cocaine. She suggested that he should have a medical man present, as she believed she had a weak heart. The dentist assured her that it was not at all necessary, as there was no danger associated with cocaine.

I am, Sirs, yours faithfully,

Aug. 12th, 1895. J. J. WALLACE, M.B.R.U.I.

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UNQUALIFIED PRACTICE.

To the Editors of THE LANCET.

SIRS,—After six years spent in a distant colony I have just returned to my native land expecting to find certain abuses swept away, and that owing to the disappearance of the unqualified assistant more scope for the duly registered man would be found. During the few days I have spent in England, however, my hopes have received some rude shocks; for although a system of careful "covering" is followed, yet unqualified practice seems to be carried on to as great an extent as ever it was. It is not so much the case of the hard-working general practitioner who keeps an assistant to do his dispensing and attend to trivial cases at the surgery of which I complain, as the case of the gentleman who, having been in good practice for a great many years and having the outward signs of prosperity, holding good county appointments and even high office under what should be our greatest protecting association—it is against the style of practitioners whom one might reasonably expect to set a worthy example to other members of the profession that my complaint is directed: one who lives in semi-retirement and keeps his assistant down the street to do midwifery and night work and can be trusted to call in his principal in time to sign the death certificate. In the colony in which I have been resident the unqualified assistant does not exist. Quacks abound, but they dare not pass themselves off as medical men, and it seems to me that the business of these men is honest and straightforward in comparison with that above alluded to.

Is it not a burning shame, Sirs, that men who have worked hard and spent large sums of money in passing examinations should be driven out of their own country owing to this unfair form of competition? I trust we shall see an agitation started which will not cease until the unqualified assistant entirely disappears from our midst.

I remain, Sirs, your obedient servant,

July 23rd, 1895. JUSTITIA.

*** Our correspondent details a procedure against which the General Medical Council is always ready to act. We are not ignorant that improper use is still made of unqualified assistance; we regret it, and may be depended upon always to do our best to check it. The particular methods alluded to by our correspondent would meet with the condignest punishment at the hands of the General Medical Council if its occurrence were duly authenticated before them.—ED. L.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Many medical men can doubtless sympathise with "M.D." in his amusement at the "title of 'Dr.' question," as well as in his defence of his old university. Degrees and diplomas must differ under the present cumbrous twenty-barrelled examining system; but invidious comparison can only succeed in "fouling our own nest." Though the question is amusing to "M.D.," to me it is irritating. It is not exactly a sore, but it is a chronic desquamation with a tendency to itching. Why should it not be settled once for all? This could be done (1) by a consensus of the qualifying bodies, or (2) by obtaining the highest legal opinion, or (3) by means of a friendly legal action, the expense of which could be defrayed by subscription. I have repeatedly contended in your columns that the title is one of courtesy, and the using or not a matter of personal taste guided by prevailing customs and ancient usage. In so contending I have expressed my own opinion, but have always been open to correction and willing to allow to others the same freedom of judgment on a point as yet undecided. If my suggestion should lead to a final decision future irritation may be avoided, and the medical "odium" of boasting and depreciation with regard to degrees and diplomas may at least be mitigated. I am, Sirs, your obedient servant,

Loughborough, Aug. 9th, 1895. J. B. PIKE.

To the Editors of THE LANCET.

SIRS,—I hold the diplomas of the Conjoint Board and am also a Doctor of Philosophy of —— University. Am I at liberty to style myself Dr. A—— B—— on my door-plate?

I am, Sirs, your faithfully,

A—— B——.

*** We think not. The non-medical degree is quite a creditable one, but should not be prefixed to the name on a door-plate, presumably displayed for professional purposes. We refer to this query in a leading article in our present issue (vide p. 412).—ED. L.

PROPER FACILITIES TO THE CORONER.

To the Editors of THE LANCET.

SIRS,—Is the medical man bound to answer questions asked by the coroner previously to an inquest without being summoned? Or can he legally refuse to give any information relative to the case until he is summoned to do so at the inquest?—I am, Sirs, yours faithfully,

Aug. 12th, 1895. MEDICUS.

*** A witness is not bound to answer any questions until he is summoned and is present in court; but a medical man would be very ill-advised not to give a coroner previously to the inquest every proper information within his power.—ED. L.

ALCOHOLISM *versus* PARACHUTISM.

To the Editors of THE LANCET.

SIRS,—From an annotation in THE LANCET of Aug. 10th, p. 340, I see that a Congress for combating the Abuse of Alcoholic Liquors is to be held at Bâle, where the subject is to be dealt with "not so much by extremists who see nothing but evil in alcohol, as by those who can separate the use of it from the abuse"; also that in Bâle in 1893 of the deaths of males between the ages of forty and fifty "every fourth man died of drink." On p. 343 you allude to the fatal parachute accident at Peterborough, and have no difficulty in concluding that "this sort of exhibition ought not to be allowed. The making of money out of a morbid propensity on the part of people ..... should be made a punishable offence," and you heartily approve of the rider of the jury: "That since no useful purpose is served by these senseless exhibitions ..... they should be made illegal." These two paragraphs lead me to ask, in all humility: 1. Is taking people's money for gratifying their "morbid propensity" in the direction of parachute descents any worse than taking their money for gratifying their "morbid propensity" for alcoholic excitation? 2. In relative cost and consequence is not the "morbid propensity" for alcohol a hundred thousand times worse than that for parachute descents? 3. If these are to be made illegal because they involve risks and are devoid of utility, is not the public sale of alcoholic liquors condemned by the same proposition? 4. Is a "conference" on alcoholism on the lines given by you not as much a foregone conclusion as would be a "conference" on parachute descents by those already committed to parachutism?—I am, Sirs, yours faithfully,

Aug. 12th, 1895. C. S.

*** We have a feeling that our correspondent is pledged to regard the temperance question from one point of view, so that it is not likely that he will be free to see things as we see them. But we answer his queries:—1. The gratification of one morbid propensity is as wrong as the gratification of another. But all use of alcohol is not morbid or practically purposeless; while all gaping at exhibitions whose single interest arises from their danger to another's life is both morbid and practically purposeless. 2. In our opinion, no. The relative costs or consequences are difficult of estimation when we think for a moment of the number of persons using alcohol compared with the number of parachutists. It is not very clear what our correspondent means here by "morbid propensity." Drunkenness costs a people a great deal in moral and material wealth, but that is denied by no one. 3. Certainly the public sale of alcoholic liquors is not condemned or condemnable by the comparison we are asked to institute. 4. We desire to credit those workers at the temperance question who do not see in total abstention the only solution with impartiality and quite as much ability to understand facts, foresee difficulties, or draw conclusions as is claimed for the complete teetotal party.—ED. L.

F.R.C.S.—The quack in question so far protects himself by pretending to be only an M.D. of the United States. As such the General Medical Council has no control over him or his ways. If the Public Prosecutor or the police did their duty such a fraud would not be allowed to go unpunished.

Dr. F. P. Atkinson is thanked for his communication.

THE TENURE OF THE APPOINTMENT OF A POOR-LAW MEDICAL OFFICER.

To the Editors of THE LANCET.

SIRS,—Must the appointment of a Poor-law Medical Officer, if not resident in the parish, be limited to one year? and if limitation exists, why so? I am, Sirs, yours faithfully,

Aug. 13th, 1895. INQUIRER.

*** The Medical Appointments Order, May 25th, 1857, Article 4, enacts that "if the guardians shall elect a district medical officer ..... not residing within his district ..... the guardians shall employ as a district medical officer such person not residing within his district ..... for such time only as the Poor-law board shall approve of or direct." This does not apply to London, and the reason for the provision for re-election seems to be that there must be a point where non-residence would make the officer useless, and the necessity of submitting himself from time to time for re-election would preclude this difficulty. The usual practice of a board is to sanction the employment for a period of three years only.—ED. L.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Will some of your readers kindly inform a middle-aged practitioner where he can be suitably coached or instructed theoretically and clinically during a course of some nine or twelve months for the final M.B. Examination of the London University?

I am, Sirs, yours faithfully,

Aug. 12th, 1895. CIVIS COLONIÆ.

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CONSULTATIONS IN CLUB PRACTICE.

To the Editors of THE LANCET.

SIRS,—I am attending a club patient and have attended him for nine weeks; he is getting better and has had a good deal of attendance. At the end of that time his employers, large manufacturers, write asking me if I will meet their medical man in consultation over the case. I meet him, and send in my account to them for that consultation. I have a letter from them two days after expressing their surprise at my making any charge whatever. I should be extremely obliged if you will tell me whether I am right in exacting a fee from them.

I am, Sirs, yours faithfully,

Aug. 13th, 1895. M.R.C.S.

*** Our correspondent is certainly right, on the facts as stated to us, in demanding a fee for the consultation. Such a consultation formed no part of the routine of his club practice, and was, we presume, undertaken entirely in the interests and at the instigation of the patient's employers.—ED. L.

R.—So many union appointments are held and their duties efficiently discharged by gentlemen who for one reason or another are compelled to live far from the centre of their districts that we do not think our correspondent can found any strong claim to the post occupied by a fellow practitioner on the plea of greater geographical convenience; but if real hardship has arisen to the poor, the guardians should know, and should know what to do. We cannot recommend our correspondent to take any active steps in the direction himself.

THE MEDICAL DIGEST.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 13th, 1895, p. 92, a case of persistent hiccough is reported to be cured by the use of snuff; and at p. 93 the coryza caused by iodide of potassium is reported as preventable by the simultaneous exhibition of tincture of belladonna. In both instances the remedy is so described as to suggest that it is an original idea. In the "Medical Digest," Section 962:5, the value of sternutatories in hiccough was described in 1886, as well as the value of tickling the nostrils. The use of belladonna in counteracting the ill-effects of iodide of potassium was known in 1885, as a reference to Section 253:2 of the Digest will show.

I am, Sirs, yours truly,

Boundary-road, N.W., Aug. 9th, 1895. RICHARD NEALE, M.D. Lond.

C. L. G. M.—It is usual for the graduates of the Edinburgh schools to affix "Ed." or "Edin." to their abbreviated titles. There is no official list of abbreviations, so that there is no right or wrong in the matter; but to affix "E." only is to breed confusion. In the particular instance given by our correspondent no confusion can arise, for there is no need for such an affix as "M.R.C.S.E.," the Royal College of Surgeons of Edinburgh not bestowing membership.

WANTED SUGGESTIONS FOR TREATMENT.

To the Editors of THE LANCET.

SIRS,—I want suggestions for the treatments of a case of obstinate and long-continued constipation. All sorts of drugs have been tried, also faradaism and massage. The chief symptoms are occasional, sometimes extreme, flatulence; mucoid, jelly-like material hawked up at times; sometimes heart-burn; stools generally hard and dry, generally dark in colour, sometimes too light, very rarely quite normal, when immediate amelioration of symptoms follows; very good appetite, but no proper assimilation of food; complexion sallow, habit of body spare. I shall be very much obliged if you can find a corner for this, and if any of your readers can give me the information I require.

I am, Sirs, yours faithfully,

Aug. 12th, 1895. M.D.

Nurse Alice.—Our correspondent will find in the Medical Directory the information she desires. We cannot recommend any particular place to her.

R. G. J., Capt. S., and *X. Y. Z.*—We do not prescribe, recommend treatment, or suggest the names of individual practitioners.

TALC SHIELD PROTECTOR IN DIPHTHERITIC CASES.

To the Editors of THE LANCET.

SIRS,—Dr. Dowding's ingenious contrivance of talc shield associated with tongue depressor as a protector of the operator in diphtheritic cases, figured in THE LANCET of Aug. 3rd, suggests even a more simple contrivance—namely, a circular piece of talc about three inches in diameter, pierced in the centre by a small flat button with screw or socket end, into which should be passed a stem of vulcanite or other light substance, flattened at the end, to be held in the operator's mouth during examination &c. Both nose and mouth would thus be protected, and perfect freedom in the use of instruments secured.

I am, Sirs, yours faithfully,

Brighton, Aug. 12th, 1895. J. DENNANT, L.D.S. Eng.

GERMAN UNIVERSITY DEGREES.

Medicus would have to pass his examinations in Germany, but if practice in that country is contemplated the mere M.D. of a German university would be of no more use than an English degree. The State Examination, which is severe, must be passed, and if leave is granted, as it generally is, residence at a German university is unnecessary.

A Registered Student in Medicine should consult the physicians of the hospital at which he is studying.

ERRATUM.—In the list of successful candidates for the D.P.H. Lond., published on page 383 of our last issue, the name of one of the successful candidates was not "Wm. Wyatt Shrubsall," but *W. W. Shrubshall.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 15th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.0 A.M.
Aug. 8	29·85	W.	60	56	119	73	53	0·07	Hazy
,, 9	29·71	S.W.	66	63	117	74	58	0·23	Overcast
,, 10	29·73	S.W.	65	62	108	75	60	0·04	Cloudy
,, 11	29·67	S.W.	63	60	113	71	60	0·85	Cloudy
,, 12	29·79	S.	60	58	112	71	55	...	Cloudy
,, 13	29·74	S.	59	58	87	64	56	0·11	Overcast
,, 14	29·93	W.	63	59	118	72	54	0·41	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Newcastle Chronicle, Freeman's Journal, Birmingham Gazette, Eastern Morning News, Bradford Observer, Scotsman, Heckmondwike Reporter, Blackburn Standard, Kendal Mercury, Newbury Weekly News, Birmingham Mail, Sheffield Telegraph, North British Daily Mail, Belfast Evening Telegraph, Sussex Daily News, Derby Daily Telegraph, Royal Cornwall Gazette, Dundee Weekly News, Whitchurch Herald, Chester Courier, Rochdale Observer, Western Daily Mercury, Umpire, Brighton Gazette, Times of India, Architect, Morning, Pioneer Mail, Leeds Mercury, City Press, Builder, Yorkshire Post, Sanitary Record, Bristol Mercury, Liverpool Daily Post, Norfolk Daily Standard, Public Health, Local Government Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, Mining Journal, Middlesex Standard, Hertfordshire Mercury, Surrey Advertiser, Guy's Hospital Gazette, Local Government Journal, Pool Herald, Banbury Guardian, Glasgow Herald, Ilkeston Pioneer, East Cumberland News, Maidstone Journal, Dumfries Standard, Croydon Guardian, Banffshire Journal, Kentish Press, Andover Advertiser, Bath Gazette, &c., &c.*

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REPORT OF THE ACADÉMIE DE MÉDECINE OF FRANCE.

Apollinaris

"THE QUEEN OF TABLE WATERS."

"The results of the recent investigations "in Paris and the Report of the Académie "de Médecine of France have placed "Apollinaris Water at the head of all the "waters examined for purity and freedom "from disease germs."

MISTURA CASCARÆ SAGRADÆ COMP.

Prepared from Selected Barks of RHAMNUS PURSHIANA and RHAMNUS FRANGULA, flavoured with AROMATIC SYRUP. *DOSE*— ʒ i. to ʒ iv.

To obtain the best results from the Barks of Rhamnus Purshiana and Frangula it is necessary that they should be collected, not only at the right season of the year but of the proper age, when the bark is neither too young nor too old. Much of that sent to this country consists of bark of all ages, and is consequently not always to be relied upon. In preparing our Mistura Cascaræ Comp. we use only that bark which has arrived at proper maturity, thus ensuring the best results; the menstruum employed being the most suitable for extracting the aperient properties of the bark without causing precipitation when diluted. It is agreeably flavoured with Aromatic Syrup and forms an excellent remedy for Habitual Constipation when continued in doses of ʒ i.; or as an aperient or cathartic, in doses of ʒ ii. to ʒ iv.

"The value of Cascara Sagrada is now very generally recognised. Mackey, Mackey & Co.'s Mistura Cascaræ Sagradæ is evidently prepared from the finest selected material, and we confidently commend this excellent preparation to the notice of the profession."—THE LANCET, Aug. 29th, 1891.

PREPARED ONLY BY

MACKEY, MACKEY & CO., Wholesale Druggists and Manufacturing Chemists,

Please note Change of Address—175, GRANGE ROAD, BERMONDSEY, S.E.

THYROID EXTRACT

(FOR MYXŒDEMA).

A Glycerine Extract of fresh Thyroid Glands, uniform in strength. Prepared from healthy glands, selected under veterinary supervision. A permanent preparation not liable to decomposition. Well suited for internal administration. A certain remedy for the hitherto inevitably fatal Myxœdema. Useful in Goitre, Cretinism, &c. Found very successful in the treatment of Psoriasis (see BRIT. MED. JOURNAL, Oct. 28th, 1893, page 933). Exerts a wonderful effect on the nutrition of the skin, and hence deserves wide trial in skin diseases. Promotes the growth of the hair and may prove of use in baldness of some kinds.

Price 3s., in 1-oz. stoppered bottles. *Dose*—mx. to ʒj.

THYROIDINE, containing the active principle of the Thyroid Glands of the sheep, 4 grains equal to about one-eighth of a fresh gland. Also PILLS and TABLETS, each containing a dose of Thyroidine.

In bottles, 2s. 6d. each.

WILLOWS, FRANCIS & BUTLER, Wholesale & Manufacturing Chemists & Export Druggists,

ESTABLISHED 1751.] 101, HIGH HOLBORN, LONDON.

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AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

Liquor Pancreaticus (Benger).

For the preparation of peptonised or partially digested milk and other articles of food.

Simple directions for use enclosed. In 4 oz., 8 oz., and 16 oz. Bottles.

The *British Medical Journal* of April 1st, 1882, in an article on Benger's Preparations, says:—"Time and use have justified the claims put forward for these preparations."

The *London Medical Record* of March 15th, 1882, says:—"These are undoubtedly a great advance on any previous attempt in this direction. . . . The introduction of these preparations is a distinct advance in therapeutics."

The *Medical Times and Gazette* of September 8th, 1883, says:—"Benger's Preparations have deservedly a very high reputation, and are all largely used."

Liquor Pepticus (Benger).

An exceedingly active fluid pepsine, without disagreeable taste.

DOSE.—One or two teaspoonfuls with meals. In 4 oz., 8 oz., and 16 oz. Bottles.

Benger's Peptonised Beef Jelly.

A delicious quick restorative for Invalids and the Aged. In patent glass jars, no metallic contamination possible. Retail, 2s. each.

The Lancet says:—"It is a most valuable form of concentrated food."

The *London Medical Record* says:—"Invaluable for old people; also in convalescence from acute diseases."

A Physician writes:—"I feel I cannot express my gratitude to you sufficiently, as your Beef Jelly is the only thing my niece can retain, and it has certainly kept her alive for the last week."

Benger's Peptonised Chicken Jelly.

In similar glass jars. Retail, 2s. each.

The Lancet says:—"Mr. Benger's Preparations are now so well known that all we need say of the sample before us is—that it is excellent. It has a delicate chicken flavour."

The *Medical Press* says:—"Few modern improvements in pharmacy have done so much as Benger's Preparations to assist the physician in the treatment of the sick."

Benger's Preparations may be obtained through all Retail and Wholesale Houses and Shippers, or of the Manufacturers—

F. B. BENGER & CO., LTD., Otter Works, Manchester.

TELEGRAPHIC ADDRESS—"Benger's, Manchester."

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REPORT OF THE ACADÉMIE DE MÉDECINE OF FRANCE.

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Address

ON THE

ORIGINS OF SANITATION.

Delivered in the Section of Preventive Medicine at the Congress of the British Institute of Public Health at Hull on Aug. 9th, 1895.

By J. SPOTTISWOODE CAMERON, M.D. EDIN., &c.,

MEDICAL OFFICER OF HEALTH TO THE CITY OF LEEDS; CONSULTING PHYSICIAN TO THE HUDDERSFIELD INFIRMARY, &c.

MR. PRESIDENT AND GENTLEMEN,—In looking back through the long vista of the past one is struck by the importance attached by the first great master in physic to the department of prophecy. To this day the description given by Hippocrates of the man about to die is as vivid and as truthful as when it was first written. But while the foretelling of the probable course of an illness was then, and still remains, amongst the most important powers of the practising physician, the means at his command for arresting in their earlier stages the processes which make for death have enormously increased. There came, indeed, a time, which some of us are even old enough to remember, when pathology ran the risk of being regarded as little else than morbid anatomy and the classification of disease a mere cataloguing of the phenomena immediately preceding death. Indeed, a certain hopelessness, begotten of this mistake, threatened to sap the energies of those engaged in the treatment of the sick. But the natural resilience of science enabled medicine, after a time, to look rather to the causing than to the resulting factors as the basis of classification. Nor was the threatening of fatalism, which too great an attention to induced conditions brought about, entirely without its uses. Though a damaged organ could not be replaced, the processes by which it had arrived at the incurable could be investigated, and their action in another person possibly forestalled; while the study of processes, carried still further back, led not only to a better knowledge of, and better means of dealing with, the causes of disease in the individual, but to a clearer conception of, and greater command over, those etiological factors which had favoured their selection or development.

When Sydenham had, two centuries ago, introduced a rational and hygienic element into treatment, he had also, as it were, pointed in the direction to which, when the hopelessness referred to came upon us, we might look for the prevention of disease itself. A belief therefore in the value of cleanliness, fresh air, and reasonable diet, along with a certain not altogether unhealthy scepticism as to the need in every case of drugs, was not the least important weapon in the armament of the young physician some thirty years ago, and although new drugs have ever found new votaries, and many and valuable means of treatment have been put into our hands, the absolute usefulness of all mere remedial measures is even at the present day looked upon as infinitely little compared with the shielding influence which the physician exercises in placing his patient under the most favourable circumstances for nature to effect her cure. And it is largely this belief in conquering nature by obeying her, lighted up by a certain after-glow of the hopelessness already spoken of, which has caused so much of the energy of the medical profession to be thrown into the preventive service. Nor would it be well entirely to forget that it was in that branch of medicine whose professors wield the knife, and where the results of treatment can most easily be gauged, that the study of the minute living organisms which attack diseased or exposed tissues exercised the mightiest influence in curative treatment; and that the names of Lister and of Koch have marked an epoch not alone in the surgery of wounds, but also in the general history of preventive medicine. While, therefore, the ancient physician was strong chiefly in his acquaintance with, and prophecy as to the probable results of, the processes he saw going on, the modern hygiest attempts to grapple with the remoter causes of those processes themselves, not in the individual alone, but also in the community.

When every rood of land supported its man many of the conditions we have nowadays to face and remedy may have had no existence. The air was fresh; there were no mill chimneys, no foul sewers, no offensive cesspits to make it otherwise; the water was pure: it came unsullied from high untrodden hills or well-filtered from clear springs; the food man ate was plentiful, and worked off by ample exercise; while of business worries he had none. In this Arcadian simplicity possibly he lived; myself I doubt it much. Man has ever been gregarious and ever unwilling to clear away materials for which he has no further use; he has been ever ready rather to get rid of wastes by the natural drainage channels of the country; and bacteria, though unnamed, had their existence all the same.

While, therefore, the country wight had on the whole an immense advantage over the denizen of the town, he was not free from ague on his undrained land; he was subject from time to time to outbreaks of disease from polluted water-supply; nor was he free from poisons generated in the food he had taken means to preserve. Scorbutic complaints were common enough in country districts of England, where fresh food was the exception rather than the rule; but it was after all in towns that the necessity for sanitation was first felt and earliest recognised. When big populations grew up round the graves of their ancestors and drank the water filtered through the subsoil of the churchyard; when huge unventilated factories immured for long hours men, women, and little children, away from light and air; when amongst the masses huddled together the germs of typhus fever or of small-pox ran riot men began to ask: "Were these things needful?" When cholera at length came to our shores and ravaged towns and villages a new era for preventive medicine dawned. Formerly it had been they that were sick, not they that were whole, that sought the physician. But when this Asiatic scourge swooped down upon our towns and villages, carrying away strong men in their strength, people began to repeat and emphasise the question, "Must these things be?" Much learned labour was spent in the study of the disease, but it was etiological inquiries, such as those of Dr. Snow, which pointed to the measures which would do so much, not only to prevent cholera itself, but which would lessen our liability to other and indigenous zymotic diseases. It soon came to be felt that there was a class of maladies, such as relapsing fever, typhus fever, and small-pox, which flourished best only in crowded neighbourhoods; and that there was another class, such as typhoid fever, especially apt to become prevalent where the water-supply was polluted. Nor was it long before it was also seen that such conditions as overcrowding and foul air, polluted drinking water and unwholesome food, were etiological factors in the genesis of diseases other than zymotic, and that not only might undrained fens produce ague, but that damp houses favoured rheumatisms and neuralgias, and generally deteriorated the health of their occupants and lessened their power of resistance to disease. It was noted that accumulations of spent matters about our houses were themselves a cause of illness, and that even where we freed these accumulations from certain of the fouler contaminating substances, conducting the latter by channelled passages direct from the house to the cesspool or the sewer, that these channels themselves became sources of danger. Nor was this danger greatly, if at all, lessened when the idea was suggested of placing traps, in the course of these drains to intercept effluvia generated afar off in the sewer. These traps it was soon found were themselves effluvium producers close at hand, and a system of relieving all pressure in our drains and disconnecting all house wastes from them, as well as of rapidly removing all solid accumulations, came to be regarded as essential to the well-being of a community. Then building by-laws and nuisance inspectors became essential, and every large town provided, either directly or by means of some company, for the supply of water of such purity as might be obtainable.

It had been long acknowledged that certain diseases were wont to spread from man to man, and more particularly from child to child. The ravages of scarlet fever, measles, and small-pox it was found were too little influenced by general sanitary improvements. The last, indeed, was perfectly controlable by means of vaccination. To this process, however, as the disease became less known and less feared, there grew up a not unnatural repugnance on the part of parents, who were unwilling to subject their children to the risk, however slight, of a possible blood poisoning in order to protect them from a disease which their grandfathers had

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been wont to dread. Then arose the question whether by the separation of the sick from the healthy at their homes where practicable and, where that was not so, in properly equipped hospitals, something might not be done; and it came gradually to be recognised as a duty to the community that notice of the existence of these communicable diseases should be given to the sanitary authority.

It had been found advisable for health purposes that the country should be mapped out into districts, and these placed under the care of properly constituted authorities. These authorities were charged by law with the duty of examining their districts from time to time to seek for certain things which had come to be regarded as nuisances to be dealt with in a sanitary manner. This searching for nuisances was performed in some instances in a somewhat perfunctory manner in a few it was probably not performed at all. While many authorities were anxious in every way they knew to promote the health of those under their care, there were those some of whose members regarded every suggested departure from the old order of things as a medical fad, and opposed to all projected improvements that stolid resistance which the reformer has ever had to fight. Such men when a capable inspector reported on conditions now universally acknowledged to be unhealthy would meet his suggestions with the question, "Has anyone complained?" To such an extent did these obstructionists impede the working of the new sanitary machine it was their office to promote that even more intelligent members of sanitary bodies came to regard the duty of the inspector as one simply of investigating complaints. With the small staff engaged by most authorities the inspector who did no more than this was still often sufficiently actively employed; but the Local Government Board have for many years continued annually to impress upon medical officers of health the desirability of a systematic investigation of some portions of their several districts. Meantime the growth of feeling in favour of the prevention of communicable diseases had induced the health authorities in many large towns to desire and obtain Parliamentary sanction for a system of disease notification. In these towns it was soon felt that, important as the notification of the communicable diseases was in preventing their further spread, scarcely less important was the opportunity such notification afforded of making a complete examination into the sanitary condition of the dwellings where the cases had occurred. Hitherto it had been generally on complaint made that a dwelling was examined. The introduction of a Notification Act enabled the medical officers in such towns with a good grace to press for the examination of every house in which an infectious disease was known to have occurred. Where this was done it was soon found that serious sanitary defects, entirely unknown to their occupants, had often existed in dwellings, and of which, consequently, had an infective disease not broken out nothing would have been heard. These circumstances strengthened the hands of those who were already pressing upon their authorities the desirability of systematically examining their districts. In one town of which I know something every house was examined in this systematic manner. Certain information as to the number of occupants, the number of rooms, and the means of ventilating them, the nature of the water-supply, the kind and efficiency of the drainage arrangements, and the sufficiency and situation of the sanitary conveniences, was collected, along with additional information as to any complaints made by the occupiers about nuisances in the dwelling or its immediate neighbourhood. Without claiming that the whole or even the chief part of the improvement in the health of that town was due to such examination, I would, however, remark that the death-rate, which had averaged for the five years preceding this house-to-house examination 22·3, has averaged during the last five years only 18·6—an improvement of more than 16 per cent. Had the authority insisted on the removal of all sanitary defects so discovered the improvement would probably have been even greater.

Examinations thus made, sometimes in pursuance of a systematic plan, sometimes on account of the outbreak of disease in the near neighbourhood, have again and again revealed the existence of dangers to health of the most appalling kind. To find, for instance, in a row of new houses, in one of which a case of diphtheria has appeared—houses built under modern by-laws and carefully inspected when built; houses with every waste cut off from the sewer, and all the sanitary conveniences outside the dwelling—that a strong-smelling chemical introduced into the sewer penetrated into the house itself in seven out of the ten was startling indeed. This indicates of course that there was a distinct connexion between the air of the sewer and that of the house, and shows the importance of investigating these conditions even in houses as to the sanitary condition of which no complaint has ever been made. Such instances I fear are not uncommon. They go to show that even modern building by-laws, carefully carried out by able inspectors, will not necessarily guarantee a few years later the healthiness of a house.

But what about houses constructed where the by-laws were not modern? In all our large towns there are many houses with wastes not severed from the sewers. In a recent investigation on the outskirts of a large town of some 160 contiguous houses, all more or less recently built and of which nearly two-thirds had all their wastes cut off and the remaining third not, it was found that the smell of a chemical entered the house through the drains in 19 per cent. of the former and in 60 per cent. of the latter. Such instances as these, which could doubtless be multiplied from every large town, seem to point strongly to the importance of a systematic examination of all houses, old and new, house by house, street by street, ward by ward.

It will, I know, be urged that people will object to the examination of houses where no complaint is made. On the contrary, experience shows that they welcome it. Even in the few cases where some hesitation is at first manifested all opposition is got rid of when the object and importance of the visit are properly explained. Practically, therefore, this difficulty has no real existence. It must also be remembered that cottagers are sometimes terrorised by landlords or their agents, and dare not make any complaint, even of the most flagrant nuisance. Such landlords are fortunately not very common, but I have known notice to quit follow a suspected communication with the sanitary authority. Does it not seem a little absurd that necessary sanitary improvements should have to wait till our attention is directed to the house by the notification of some case of infectious disease or the registration of some death altogether preventible? If our sanitary service is to deserve its name must we not everywhere investigate the conditions to be found to be unwholesome, before, and not after, they have led to disaster!

It is now universally admitted that the inhabitants of large towns must be provided with an adequate supply of pure water; that food offered for sale must be strictly and carefully inspected; that our ashpits and our courts the healthy must be frequently and periodically cleansed; and that. And yet must be protected from contact with the infected. ployment in in how many cases do workmen follow their em live in damp or confined workshops? How many per complaint unwholesome dwellings and we hear no word of ? Is till some infectious disease breaks out or some ot it not, I repeat, rather our duty systematically houses, all workshops, and to ascertain beforehan the conditions there present are those which destroy the health of those they are intended and protect?

ON HICCOUGH.

By JOHN O. LEONHARDT, M.D.

I HAVE been much interested of late in the articles on this subject appearing in THE LANCET and medical periodicals. Medical literature seems to be larly deficient on the subject of hiccough, which for turies has been, and still is, one of a number of harlequins. Nothing is more common, trivial, and treat than a mild attack of singultus, and yet, wh appears in its grand types, nothing is more distressing patient and harassing to the physician than this conv affection of the diaphragm.

Upon referring to my case book I find that on Sept. 1878, I was called to see a man who had hiccoughed santly for two days and nights. I found the patient large, plethoric person aged sixty; his pulse was rapi small, the skin hot and dry, and he suffered from grea lessness with busy delirium, together with coughing hiccoughing with every inspiration. It was impossi

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determine with any degree of accuracy the condition of the lungs and heart owing to the agitation of the patient and the great commotion within the chest. The patient appeared to be in a very critical condition. I prescribed an active hydragogue and half a grain of sulphate of morphia by the mouth. The cathartic acted in a short time and the patient fell asleep, but the hiccough continued. I then began to use antispasmodics and sedatives, and tried counter-irritation and everything that might be expected to quiet the spasm for about a week, but without the least effect. Death seemed inevitable. Just "for the sake of doing something" I then ordered twenty drops every half hour of a mixture containing equal parts of acetic and sulphuric acids. An unexpected and decided improvement took place, and my patient became convalescent within twenty-four hours. He had hiccoughed constantly, day and night, awake or asleep, under the influence of hypnotics or not, for eight days. He removed farther west, and recently I learned that about ten years after the attack of 1878 he died from a similar attack.

My attention having been attracted by numerous communications on this subject occurring in many medical as well as lay journals, I have looked over the literature of hiccough, or, rather, as much of it as I have in my library. Thinking that the result of my explorations may at least interest, if not benefit, some fellow practitioner, I submit a few observations that seemed to me both interesting and instructive. Citations are appended in order that those who desire to refer to any particular case may easily do so.

1.—A male negro, aged forty, was admitted to the Hospital Hôtel Dieu for chills, dyspnœa, and hiccough. He would hiccough constantly for five or six minutes and then enjoy a short period of rest. Bleeding, cupping the epigastrium, and hydrocyanic acid, used internally, were resorted to, but with no effect. After twelve days he recovered while taking laudanum and ammonia.

2.—Dupuytren cured two violent and obstinate cases by use of the actual cautery applied over the xiphoid cartilage.

3.—De Meza of Helsinfors reports a case in a male aged sixty, corpulent, phlethoric, and addicted to "bacchanalian pleasures," who, having suffered for nine days from gastric disturbance, took an emetic, and immediately a violent and unceasing hiccough ensued. Asafœtida, camphor, musk, venesection, &c., were all tried in vain. After lasting for three days the spasms ceased under a blister applied to the abdomen.

4.—Dr. Barlow reports a case in a male aged sixty-one, suffering from migratory rheumatism. When he moved his shoulders it would bring on a paroxysm of hiccough, and that even when the rheumatism had settled in his ankles.

5.—Mindiere, in the *Revue Medicale*, directs attention to the influence of malaria on the viscera and its expression in severe hiccough. In support of this a case is reported of a countryman who, recovering from an attack of ague, was seized with a violent hiccough which, in spite of opiates, blisters, and antispasmodics, persisted for nine days, when it disappeared under enemata of quinine.

6.—Case of a young lady troubled with chronic gastritis, who hiccoughed for an hour daily, which yielded only to galvanism on the forty-second day. Dr. Jones of New Orleans has found that faradaism is best in asthenic and galvanism in sthenic cases.

7.—Dr. Boyer reported three cases, in which everything was tried without good effect, where the hiccough yielded to forcible compression of the epigastrium continued for twenty-four hours at a time.

8.—M. Latour reports a case in a male aged forty-six years, very nervous and of weak constitution, who suffered severely for three hours and was cured by inhaling chloroform.

9.—Dr. Schneider of Berlin reports having cured many cases of violent and persistent hiccough by giving dilute sulphuric acid. In this treatment Dr. Duncan of Edinburgh and Dr. Jacobson of Berlin concur.

10.—Dr. Danet, in a severe case following great mental disturbance and associated with headache and vomiting, after trying a great number of antispasmodics in vain, mastered the hiccough with a pill containing three-quarters of a grain of valerianate of zinc and a small quantity of belladonna.

11.—Leon Boyer reported three cases: one a female aged eighteen suffering from suppressed menses; the second a male aged twenty-five troubled with "oppression"; and a third of which no particulars are given. After using many remedies and methods all three were cured by firm compression of the epigastrium. This treatment was suggested to him by Professor Rostan, who in turn got it from Bordeu, who long ago recommended a tight bandage around the epigastrium.

12.—The value of morphia injected hypodermically is admirably set forth by Dr. Edward T. Wilson.

13.—Dr. Constable treats of hiccough as a complication of pneumitis, and recommends the subcutaneous injection of morphia.

14.—Dr. Jauariz mentions the case of a Spanish physician who, having recovered from an attack of gastric fever, was seized with an obstinate hiccough. After sixty hours of suffering—during which he took emetics, revulsives, antispasmodics, &c.—he besought his wife to give him a drink of linseed tea. She gave him by mistake an infusion of mustard. His hiccough immediately disappeared. This modification of the treatment of Rhazes proved effective in his hands in the case of a lady afflicted in the same manner, every other treatment having been unsuccessful for twenty days.

15.—Dr. Rose relates that Widal cured a nineteen-day old case with twelve grains of quinine daily for three days, and speaks of another cure in which valerianate of zinc and belladonna were used, and still another cured with Vichy water and gentian. He recommends the use of ether spray to the neck and epigastrium.

16.—Dr. Ringer's case of hiccough in an Indian trooper, the victim of syphilis in the rupial stage, resisting all kinds of hypnotics and antispasmodics, also counter-irritation and calomel. He finally obtained a good result after thirteen days by giving large doses of potassium iodide, applying a blister over the phrenic nerve and giving iced water to drink.

17.—Dr. Fritsch reports a case of hiccough in a married female suffering from "excoriation at the portio vaginalis uteri, with a cervical catarrh," which ceased only when the genital affection was cured after a treatment lasting three months.

18.—Dr. Favier reports a case that lasted three weeks, and which abated under tourniquet pressure over the epigastrium, morphia, the actual cautery, musk, quinine, chloral, &c., being of no use.

19.—Belot found compression of the phrenic nerve on a level with the hyoid bone very effective in hiccough accompanying yellow fever.

20.—Dr. Ortille cites a case of hiccough following cerebral embolism, in which a multitude of remedies had been tried, and which yielded to half a grain of pilocarpine hypodermically. In this case the hiccough persisted during sleep and disappeared during the profuse perspiration and salivation induced by the drug.

21.—Dr. Barre reports a remarkably persistent case in a male aged forty-five, suffering intense grief. Everything imaginable was done without success. At the end of two years, and for the mere sake of doing something, an œsophageal probang was passed. This caused a syncopal attack, but cured the hiccough. Carcassonne employed the same measure.

22.—Dr. Ortille relates a case of hiccough in a female aged fifty-six which had continued for seven months. In this case a decoction of four grammes of jaborandi leaves and stalk, to be taken in two doses fifteen minutes apart, was prescribed. It cured the patient in two hours. No reason is given why the crude drug was preferred in this instance to the active principle generally employed.

23.—Dr. Warren of Danville, Kentucky, recommends to "hold the breath as long as possible; the trisplanchnic nerve is held in abeyance until the pneumogastric, which is off its guard, can get back to its post." This method is in line with Cruveilhier's, which consisted in pouring water into the patient's mouth until he was about to suffocate. It may also "explain" why forcible expiration, cold douches, sudden alarm, sneezing, straining with the glottis closed, and Carcassonne's forcible flexion of the head upon the chest for five or ten minutes at a time, are all occasionally successful.

24.—Dr. Rihl reports two cases of hiccough, one in a male aged thirty-five, following an attack of syncope; it continued for many months in spite of the use of "the web of the black spider," and ultimately wore itself out; the other in a female aged forty, who for twenty years had been afflicted with some obscure form of spinal disease. Among the remedies used in the second case may be named grindelia robusta, turpentine, chlorinated soda, Hoffman's anodyne, cypripedium, bicarbonate of soda, and oil of amber. She hiccoughed fourteen weeks out of seventeen, and no result of the case is given.

25.—Dr. Foote relates several remarkable cases in a very

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lucid and instructive manner. One, a male aged fifteen, dyspeptic, after having undergone many kinds of treatment was cured with a pill containing one grain of iodoform, one-third of a grain of cannabis indica, and five grains of extract of conium, at the end of twenty-six weeks of affliction. In another case a female aged twenty-two, after seven months of hiccoughing, was cured by electricity. A third case, that of a girl in which the hiccough was induced by severe fright, proved fatal.

26.—"R. H. P." cured a number of cases by the inhalation of tobacco smoke.

27.—At a meeting of the St. Louis Medical Society in the winter of 1882 a case of hiccough was exhibited that had been active for twelve years, and still proved refractory to all treatment.

28.—Mr. Lea mentions the case of a man who was tormented with hiccough with every irritation or the least exertion. Ten-drop doses of tincture of opium afforded most relief. The necropsy revealed cancer of the stomach.

29.—Dr. Bernstein reports an interesting case with necropsy. A male aged forty-four was admitted to the Borough Hospital, Birkenhead, for hiccough and pain in the lower part of the back and loins. He was subjected to many remedies without permanent relief. Croton oil did more good than any other drug. At the necropsy nothing appeared to explain the hiccough unless it was that a caseous deposit at the apex of each lung might have impinged on the vagus or phrenic nerves.

30.—Dr. Kingsbury narrates a case of hiccough that persisted during sleep in a male aged fifty. It followed a vertiginous attack. Purging, blisters to the abdomen, potassium bromide, acetic acid, chloroform, hydrocyanic acid, and pressure over the phrenic nerves were all tried, but to no purpose. He was cured after twelve days with chloral hydrate.

31.—Dr. Pipino of St. Louis, Mo., reported a distressing case of hiccough in a male aged seventy-three in which every ordinary remedy failed and which finally was cured by the subcutaneous injection of three centigrammes of pilocarpine.

32.—Dr. Pagenstecher, in a bad case of obstinate hiccough, having canvassed the whole range of probable medicine, found a decoction of jaborandi leaves curative on the sixth day. Noble and Stiller warmly recommend this treatment.

33.—Dr. Ruhdorfer mentions a case in a female in which sedatives, emetics, irritants, cathartics, cupping, &c. were tried for three months. A successful result followed the hypodermic injection of three centigrammes of pilocarpine in a gramme of water. The hiccough stopped as if by magic.

34.—Dr. Ramos of Brazil recommended refrigeration of the lobe of the ear, slight cold being sufficient. Even the application of cold water proved curative in hiccough regardless of its cause.

35.—Dr. Churton describes an intermittent form of hiccough in a neurotic and dyspeptic female aged twenty-five. The first attack, lasting ten days, ceased after the subcutaneous injection of morphia and inhalation of chloroform. After one week it began again and continued eleven days, when it was stopped in ten minutes with a hypodermic injection of one-fourth of a grain of pilocarpine. In two subsequent attacks pilocarpine acted admirably, but in a fourth it proved useless, but scutellaria in drachm doses proved curative. This last drug acted well in another case.

36.—Dr. Bonavia reports a case in an adult male that followed an attack of intermittent fever, and it is said that everything proved futile except drachm doses of fluid extract of ergot. Quinine does not appear to have been given a trial.

37.—Dr. Dresch of Foix, France, speaks of a method, not original with him, but very effective, in which the patient's external auditory canals are firmly closed with his fingers and he is caused to take a few sips of fluid from a cup held by another person.

38.—Dr. Luke recommends a teaspoonful of pulverised sugar given with an equal volume of vinegar at one dose.

39.—Dr. Leloir reports a case in a female aged twelve. After trying everything for a year he finally practised compression of the phrenic nerve between the two sterno-clavicular attachments of the sterno-mastoid muscles for three minutes at a time with curative effect.

40. Dr. Smart, in a case of hiccough occurring in an adult male suffering from chronic alcoholism, after trying for four or five weeks to control the spasm, used inhalations of chloroform with success.

41.—Mr. Slevin reports a case of hiccough that continued during sleep in a male aged seventy-eight who had recovered from an attack of gastric catarrh. "Every remedy of any repute" was tried. It ceased upon the inhalation of snuff, which caused sneezing. It had been constant for twelve days.

In the foregoing observations it will appear that pilocarpine, epigastric compression, morphia, and chloroform are the mainstays of several able practitioners in the treatment of this disorder. It will also be seen that hiccough in aged males is of shorter duration, as a rule, than in young females. Among the causes are found any irritation of the phrenic nerves, whether reflex, central, or peripheral. Its occurrence is common in the advanced stages of fatal diseases of all kinds: in uræmia, cholera, dysentery, gangrene, hæmorrhage, low fevers, and adynamic states generally; in apoplexy, hydrocephalus, meningitis, embolism, acute gastritis, cancer of the stomach, pericarditis, aneurysm, pneumonia, intestinal obstructions, strangulated hernia, and the passing of renal and hepatic calculi; in mediastinal pleuritis, fracture of the ribs, malaria, gouty inflammation of serous membranes near the diaphragm, spasmodic stricture of the œsophagus, affections of the larynx or pharynx, and enlargements along the sides of the thyroid or in the course of the phrenic nerves; in many diseased conditions of the liver, spleen, pancreas, ovaries, uterus, prostate, &c.; even from ingestion of irritating substances, solid or fluid, so common in those addicted to rapid eating, gourmandising, drunkenness, &c.; excessive crying or laughter is sufficient to cause hiccough in children and those of unstable nervous systems.

While the above excerpts will doubtless puzzle the "symptom doctor," the pathologist and real clinician will have no difficulty in distinguishing the real from the apparent. It certainly appears plainly that hiccough is not a disease *per se*, but rather a neurotic equivalent occurring in many different diseases. While obscure but trivial nervous conditions may coexist with a paroxysm of singultus which is usually readily amenable to simple measures often of a psychical character entirely, hiccough may be of so threatening and obstinate a nature that the resources of the ablest may be of no avail. It is in cases of the latter kind that a primary morbosity, if sought for, can, I believe, usually be found, and of which the diaphragmatic convulsions, though all-absorbing, are really but like the white crests of waves that, however conspicuous, are distinctly dependent upon the energy of sun and wind and water. Hiccough is not a disease; it belongs to a class of imposing symptoms of which neurasthenia, dropsy, jaundice, fever, &c. are examples. The physician who permits himself to be deceived by the boisterous qualities of any disease shadow, which he assails regardless of the character of the real pathological substance that casts it, lacks medical acumen and exposes his patient to much unnecessary suffering and possibly danger.

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Lincoln, Nebraska.

NOTES ON THE BACTERIOLOGICAL EXAMINATION OF THE THROAT IN SOME FEVERS.

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DURING the past twelve months a bacteriological examination of the throat has been made in all cases admitted to this hospital in which there were signs of exudation on the fauces. Cultivations have also been made from time to time from throats presenting no abnormal appearances. As a rule, the cultures were taken upon admission, but some after a stay of from two to eight weeks in the wards. A sterilised swab of cotton-wool upon a rod was passed lightly over the fauces and tubes of blood serum inoculated from this. The publication of a brief summary of the notes of the first 100 cases so examined may be of interest at the present time, in view of the increased attention paid to the bacteriology of diphtheria. All the cases were under the care of Dr. J. W. Washbourn, and it was at his suggestion that the examinations were made.

SCARLET FEVER.

Bacteriological examinations were made of exudation from the throats of 68 patients suffering from scarlet fever; 52 were made on the day of admission, 8 during the first seven days, and 8 at periods varying from the third to the eighth week. Of these cultivations 14 showed pure streptococci, 25 streptococci and cocci in groups, 2 cocci in groups, 1 cocci and the long variety of diphtheria bacillus, 9 cocci and the short variety of diphtheria bacillus, 14 cocci and other forms of bacilli, and 3 showed various forms of bacilli only. The bacillus most frequently found was a short, stout variety with a central non-staining portion. It was arranged in chains or groups, and liquefied serum in from three to six days.

Case in which the long variety of diphtheria bacillus was found.—A child aged eighteen months had a mild attack of scarlet fever. During the seventh week there was rhinorrhœa, but no membrane could be seen in the nasal cavities. A culture taken during the eighth week showed greyish, raised, and liquefying colonies, which proved microscopically to consist of cocci and diphtheria bacilli of the long and short varieties. A pure culture of the long variety proved virulent to guinea-pigs. Seventeen days later the discharge ceased and cultivations showed cocci only. The temperature did not rise above the normal; there was a slight trace of albumin in the urine. No paralysis followed, and the child made an uninterrupted recovery.

Nine Cases in which the "Short Variety of Diphtheria Bacillus" was found.

CASE 1.—Much exudation on fauces. Cultivation taken on admission showed cocci and short diphtheria bacilli, which persisted until the seventh week. The throat cleaned quickly, but fresh exudation appeared on the tenth day after admission.

CASE 2.—Culture taken on admission showed in twenty-four hours raised white colonies of cocci and the short variety of diphtheria bacillus. There was much exudation on the palate and fauces, which cleared to return again on the thirteenth day. Bacilli were present up to the sixth week. Slight nephritis was present.

CASE 3.—Exudation on fauces. Culture taken on admission showed raised white colonies in forty-eight hours, streptococci and short variety of diphtheria bacilli. The patient subsequently developed paresis and anæsthesia of the palate, albuminuria, and loss of knee-jerks. Cocci only on twenty-second day.

CASE 4.—Exudation on tonsils and palate. Culture taken on admission in eighteen hours showed liquefying and white raised colonies of large oval cocci, streptococci, and short variety of diphtheria bacilli. Six weeks later cultivation from throat showed cocci only. There was slight nephritis.

CASE 5.—Rhinorrhœa three weeks after admission. The nasal cavities were coated with white fibrinous exudation. Culture in twenty-four hours showed raised white colonies of oval cocci and short diphtheria bacilli. No paresis or albuminuria followed.

CASE 6.—Culture from fauces, which showed no sign of exudation, was taken on admission, and showed fine, raised, white colonies in twenty-four hours, cocci and short variety of diphtheria bacilli. Seventeen days later a second cultivation from the throat showed cocci only. At no period of the case was there any abnormal appearance of the fauces, and recovery from scarlet fever was uninterrupted.

CASES 7, 8, and 9.—On admission the fauces showed no exudation, nor did any throat trouble subsequently develop. Cultures taken on admission showed in twenty-four hours colonies of streptococci and of short diphtheria bacilli. In Case 8 short diphtheria bacilli were still present three weeks after the date of admission.

DIPHTHERIA.

Cultures were made from the throats of 18 persons sent to the hospital certified as suffering from diphtheria. The cultivations were taken on admission and examined after periods of incubation ranging from sixteen to forty hours. In 10 out of the 18 cases long diphtheria bacilli were found.

CASE 1.—Raised, round, white colonies were present in twenty-four hours of the long and short varieties of diphtheria bacillus. The short bacilli were demonstrated as present in the throat twelve weeks after admission. A pure culture was not virulent to guinea-pigs. The patient was treated with antitoxin. No paresis occurred.

CASE 2.—Cocci in groups and long diphtheria bacilli. Bacilli present until sixth week. No paresis. Antitoxin used.

CASE 3.—Cocci in groups and long diphtheria bacilli, which were absent on thirteenth day. Patient had tachycardia of several days' duration. No paresis of palate or other muscles.

CASE 4.—Streptococci and long diphtheria bacilli. Bacilli had disappeared by twentieth day. Complete loss of knee-jerks.

CASE 5.—Long diphtheria bacilli, which persisted up to thirty-first day. Anæsthesia and paresis of palate. Treated with antitoxin.

CASE 6.—Liquefying colonies of cocci, long variety of diphtheria bacilli. Died seven days after admission from cardiac failure. Treated with antitoxin.

CASE 7.—Long and short diphtheria bacilli. Culture on twenty-third day showed cocci only. Paresis of palate followed. Antitoxin given.

CASE 8.—Long variety of diphtheria bacillus. Streptococci and cocci in groups. Five weeks after admission cocci only. Paresis of palate. Antitoxin used.

CASE 9.—Long variety of diphtheria bacillus and streptococci. No paralysis followed attack. Antitoxin used.

CASE 10.—Long variety of diphtheria bacillus and large oval cocci. Culture taken nine days after admission showed cocci only. On sixteenth day there were fresh membrane on fauces, rise of temperature, and some albuminuria. Cultures showed long diphtheria bacilli, which were again absent from cultures taken during fourth week. No paresis. Antitoxin given on admission and repeated on sixteenth day.

Eight Cases certified as Diphtheria in which the Klebs-Löffler Bacillus was not found.

CASE 1.—Much exudation on palate and fauces. Cultures showed torulæ, streptococci, and cocci in groups. Patient developed a well-marked attack of enteric fever, and at no time was there evidence of diphtheria.

CASE 2.—Exudation on tonsils. Culture showed colonies of streptococci and of staphylococci pyogenes aurei. This proved to be a case of scarlet fever and desquamated freely.

CASE 3.—Profuse acrid nasal discharge containing streptococci and streptobacilli. In a subsequent cultivation streptococci, staphylococci pyogenes aurei, and short liquefying bacilli were present. A case of scarlet fever which desquamated. Nine weeks after admission pus from cervical abscess showed streptococci.

The remaining 5 cases were regarded as cases of tonsillitis. Cultures yielded the following results.

CASE 4.—Streptococci and cocci in groups.

CASE 5.—Streptococci. Sloughing tonsils and apex pneumonia.

CASE 6.—Streptococci, cocci in groups, and short, stout

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oblong bacilli. Culture taken on third day showed cocci only.

CASE 7.—Cocci in groups.

CASE 8.—Streptococci and large oval cocci.

In none of the eight cases mentioned above was loss of knee-jerk or any symptom of paralysis observed.

RUBEOLA.

Cultivations were taken from the throats of 14 cases of rubeola. Colonies of short, stout bacilli, sometimes in chains, which liquefied serum in forty-eight hours were found in 3 cases. Two of these had exudation upon the fauces. Similiar bacilli, together with cocci in chains and groups, were found in 4, streptococci alone in 1, and streptococci and staphylococci in 3 cases. Cultivations from the three remaining cases showed colonies of cocci, together with the "short variety of diphtheria bacillus."

CASE 1.—Forty hours culture showed large, white, raised colonies of cocci and short diphtheria bacilli. Cultivation taken three days after admission gave the same result. On the thirteenth day after admission cocci only were found. There was a patch of whitish exudation on the palate that persisted for nine days. Slight trace of albumin in urine. A pure cultivation was not virulent to guinea-pigs.

CASE 2.—Forty hours culture showed circular white colonies of cocci and short diphtheria bacilli, which were present until the thirteenth day after admission. The fauces were slightly coated with whitish exudation. Faint trace of albumin in urine.

CASE 3.—Forty hours culture showed white raised and transparent raised colonies of short diphtheria bacilli and of streptococci. The bacilli were present in a culture taken on the ninth day. There was no exudation on the fauces.

There was no evidence of diphtheria in the further history of any of these cases.

Remarks.—The necessity for a bacteriological examination in all supposed cases of diphtheria is sufficiently obvious. It is worthy of notice that in none of the eighteen cases admitted certified as suffering from diphtheria was "the short variety of diphtheria bacillus" found. Of the nine scarlet fever and three German measles cases in which this bacillus was detected only one (Case 3, scarlet fever) presented clinically the features of diphtheria. Dr. Washbourn tested pure cultures of the "short variety of diphtheria bacillus," obtained from some of the above-mentioned cases, but none were virulent to guinea-pigs.

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PNEUMONIA AFTER INFLUENZA.

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IN the outbreak of influenza which developed so suddenly over this country in February last, and which happily has now subsided, pneumonia was the complication most to be dreaded and was the immediate cause of death in a large proportion of cases. In previous epidemics pneumonia has always been a common sequela, but in the present instance the examples which have come under my observation have presented certain characteristics strikingly different from the ordinary type of the disease. This year's epidemic first broke out in this neighbourhood in an institution which comprises a resident population of close upon 150, and the cases to which the present notes refer, though not essentially different from others met with in outside practice, were brought under notice with special prominence because of the concurrence under one roof and at one time of several bearing the same characteristics and exhibiting the same departures from the ordinary standard. Very few of the 150 escaped the attentions of the disease: many were so slightly ill as to require little care; others experienced an ordinary attack of the malady, which incapacitated them for three or four days, but which left them at the end of that time practically well; while a few had to contend with it in a more pronounced form, and of this latter number five suffered from pneumonia. The hygienic arrangements of the institution are well devised, carefully looked after, and the average health of the inmates leaves nothing to be desired. Of the whole number attacked by influenza, only seventeen were acutely ill, and, except the cases now under consideration, they all recovered completely and within a comparatively short time. The matron, who was the first victim of pneumonia, died from cardiac failure on the eighth day of her illness. Her case proved fortunately to be the only fatal one, and while the leading features of her attack were the same as in all the others her chances of recovery were lessened by the previous existence of a complicated form of heart mischief. Of the other four cases one was mild and abated on the fourth day, another resolved by lysis, and the remaining two by crisis, each on the eighth day of the illness. It should perhaps be noted that the case which resolved by lysis was the son of parents who were first cousins and in whose family history there was a pronounced phthisical taint. The symptoms of all five cases were strikingly similar, and a short description of one will best serve to call attention to the unusual features of the whole series.

A lad aged fifteen, with a fair physique but with a neurotic diathesis, was seized with influenza in a sharp but ordinary form. From this he emerged like his neighbours, but on the third day from the date of recovery from his influenzal attack he complained of not feeling so well. His temperature in the morning was 100° F., but there was then nothing to suggest the advent of inflammatory mischief anywhere. In the afternoon the temperature rose rapidly to 105·4°, the pulse was 120, and the respiration 44. There had been no rigor, he had no cough, no pain, and he complained of nothing but shortness of breath and thirst. Next morning the temperature was 100·4°, the pulse 100, and the respiration 40. He still had no pain and the cough was trifling, but he had constant nausea and occasional attacks of active sickness. Later in the day his temperature gradually rose to 103·4°, and in the evening it reached 105·2°. Under the influence of quinine and cold-packs it receded, but at 10 o'clock the following morning it again reached 104·6°, the pulse being 100 and the respiration 38. There was no cough, but that morning he had twice expectorated some frothy mucus of a bright red colour; the nausea continued. He complained of wandering pains over his right side, which he mostly referred to the axillary region above the level of normal liver dulness, but physical examination failed to reveal any explanation. For the next three days his temperature did not exceed 104·4° and was readily brought down to between 100° and 102° by cold sponging. At 2 P.M. on the eighth day it registered 103·6°, and at 10 P.M. it had fallen to 99·2° from which there was no subsequent rise. During those three days his pulse varied from 80 to 100, but did not exceed 104; his respiration had never been less than 50, and frequently had numbered 65. The amount of cough was so small as hardly to deserve mention, and there was no return of the red sputum; indeed, there was no expectoration of any kind. The physical signs remained indefinite, but some comparative dulness developed over the right lower lobe, and there was bronchial breathing with slight increase of vocal fremitus in this region. After the crisis was over, on the eighth day, the physical signs rapidly vanished, without expectoration or cough or pain, and with no decided crepitatio redux, till on the eleventh or twelfth day the patient was perfectly sound and only required time and care to restore his tone and re-establish his usual vigour.

In none of those five cases did a herpes develop, except in that of the lady matron, who died, and this is significant because from time immemorial the occurrence of herpes in an ordinary case of pneumonia has been looked upon as a favourable indication. The unusual features of this short history are the absence of cough, the exceeding scantiness of expectoration, the frequency of respiration, the comparative slowness of pulse, even under the pressure of high temperatures, the entire absence in the early stages of physical signs, their very imperfect development later, and their speedy disappearance without notable crepitatio redux after the arrival of the crisis. None the less, the duration of the illness, its mode of termination, the pulse-respiratory ratio, the sudden initial high temperature, &c. are strongly characteristic of the common, everyday pneumonia. But, whatever the modifying effect of the influenza poison may have been, we are driven to ask ourselves whether it is probable, or even possible, that the local condition could be the sole cause of the grave constitutional disturbance, or whether the hyperæmia and slight hepatisation of the lung would not better fit into the theory of its being a consequential rather than an etiological incident in the history of the disease; whether, in short, such cases are not a strong argument in favour of the specificity of pneumonia. In the last edition of "Quain's Dictionary of Medicine"

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Dr. T. Henry Green tersely states: "The old view that pneumonia is a simple local inflammation accompanied by a symptomatic pyrexia would appear to be no longer tenable; and although a complete pathology of the disease must await further investigations the present position of our knowledge makes it in the highest degree probable that it is a *general infective disease* closely allied to the acute specific fevers, of which the lung inflammation is the characteristic local lesion. What is known of the etiology of the disease, the absence of any constant relation between the local inflammation and the intensity of the fever, the "typical" course of the fever, the fact that the disease is incapable of being produced by mechanical or chemical injuries of the lung; and, lastly, the discovery of peculiar micro-organisms all tend to support this view of its pathology."

Influenza is widely recognised as one of the specific diseases which, in all probability, owes its existence in great measure to microbic action. The toxines secreted by its microbes are known to possess a special affinity for the nervous system. This is evidenced by the prostration, inertia, neurasthenia, hypochondriasis, and sometimes even melancholia which abide in greater or less degree as a legacy of the most ordinary attack. Pneumonia behaves in many respects like the other acute specific fevers and has been demonstrated to possess micro-organisms which are capable, when inoculated into certain animals under favourable circumstances, of setting up, if not the true disease, at least a septicæmia of which a consolidated lung is the striking characteristic. Many of the prominent features of the everyday inflamed lung depend upon interference, from whatever cause, with the normal stability of the lung nerve-supply.

In the pneumonias, such as those above related, met with as complications of influenza we have to deal with either: (1) the ordinary disease, more or less modified by the previous systemic disturbance of the influenzal attack and occurring as an accidental sequela; or (2) an entirely different disease, bearing close analogies to the classical disorder, but owning a different cause and entirely dependent for its manifestations on the pre-existence of influenza. If the former hypothesis be the true one, and it seems the more likely, then true pneumonia is capable of modifications in its symptomatology, and, assuming that the pneumococcus is a constant concomitant of the disease, whether causative or otherwise, an explanation of these anomalies may be suggested by the possible want of perfect concurrence of action of one class of microbe with another, either in the respiratory tract, where the micro-organisms of both diseases are abundantly found, or in the blood itself; or else by the counteracting influence of the one set of resulting toxines with the other, producing, both directly and reflexly, results different from those to be expected from the unfettered action of either. If, on the other hand, the latter alternative be the right description of the condition, the new pneumonia which finds its parentage in influenza bears such a close resemblance to its better-known prototype that in all probability the pathological mechanism which causes the one is very closely allied to that which is responsible for the other. Further, if the predilection of both toxæmic secretions is the nerve centres, their disturbing effect in the neighbourhood of the fourth ventricle would go far to account for all the symptoms; not only such as are recognised as normal in an ordinary pneumonia, but also those which, however different from the common type, unmistakably proclaim that the usual course of an attack of influenza has become complicated by the occurrence of an inflamed lung.

Warwick.

APPENDICITIS AND RHEUMATISM.

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IN the numerous papers and monographs on the subject of appendicitis which have appeared within recent years one point does not seem to have attracted much notice—namely, the association of appendicitis with constitutional disease. By this I do not mean the occurrence of such lesions as ulceration of the appendix in typhoid fever or tuberculosis, but the question whether the tissues of the appendix can be so acted upon by a poison circulating in the blood as to become acutely or chronically inflamed. In this paper I shall refer to some points in the anatomy, physiology, and pathology of the appendix which seem to render such a view probable, and then discuss more particularly the association which I have found clinically to be most frequent—namely, that of appendicitis and rheumatism.

Special attention has been paid recently to the large amount of lymphoid or adenoid tissue which is present in the substance of the vermiform appendix. This has been noted by Mr. Bland Sutton, Dr. Kelynack, Dr. Hingston Fox, Mr. Mayo Robson, and Dr. R. J. A. Berry. Mr. Bland Sutton[1] speaks of the appendix as an abdominal tonsil, since lymphoid tissue is the chief structure in both appendix and tonsil, and there are marked similarities in the inflammatory and suppurative attacks to which these organs are subject. Dr. Berry[2] has made a careful investigation into the comparative histology of the appendix and cæcum, and has found that at the apex of the cæcum a mass of lymphoid tissue is usually present. He says: "In some classes the cæcum is composed almost entirely of lymphoid tissue, and in others these lymphoid elements are contained in an offshoot of the cæcum—the vermiform appendix. This differentiation of the lymphoid tissue into a special organ becomes more marked with the ascent in the vertebrate scale." As the liability of lymphoid tissue to inflammation is well known, these anatomical facts may throw some light on the pathology of appendicitis, and their bearing on this subject will be referred to later.

The vermiform appendix is usually regarded as a functionless organ (Treves, Talamon, Bland Sutton, &c.), but its richness in lymphoid tissue suggests at least one possible use—namely, the production of leucocytes or lymphocytes. In other parts of the alimentary canal the importance of adenoid tissue has now been fully recognised, and the action of the lymphocytes produced in it has been explained. Dr. Sims Woodhead says: "It has now been very generally accepted that passing to and from the patches of lymphoid tissue in the walls of the alimentary canal, into and out of the canal itself, are numerous leucocytes, amœboid cells, or lymphoid corpuscles, as they are sometimes called. Further, it has been demonstrated that these small cells have the power of taking up foreign particles and of digesting them, or of so transforming them that unless they consist of particles of pigment they disappear; amongst these foreign bodies may be numbered bacteria of various kinds."[3] It would naturally be expected, then, that these functions ascribed by Dr. Woodhead to the diffused lymphoid patches of the alimentary canal would characterise also the large amount of this tissue present in the appendix, and such a view is strongly supported by the results of a recent experimental research made by Dr. R. J. A. Berry.[4] He describes the function of the appendix as twofold: (1) leucocyte-producing, and (2) secretory; and as regards the leucocytes he considers that they are of use both in the destruction of micro-organisms and in the absorption of proteids. Dr. Armand Ruffer, in describing the action of the lymphocytes (or "microphages") of the lymphoid tissue in the alimentary canal in absorbing micro-organisms and foreign matter, states that "the patch near the rabbit's ileo-cæcal valve and the vermiform appendix are the structures in which these processes are most marked."[5] From the situation of the appendix at the first part of the large intestine it is manifest that these functions will be of great service. The cæcum is apt to become loaded with fæcal matter in which bacteria of all kinds flourish, and were there not some such protective power in the form of lymphocytes as described above decomposition would go on unchecked, and symptoms of auto-intoxication would probably be extremely common.

The pathology of appendicitis cannot be said to be clearly understood. By most writers the disease is regarded as a purely local one dependent on local causes. The presence of catarrh, or a concretion, or cystic dilatation, or a kink or twist of the appendix is held to be a sufficient explanation of the morbid phenomena. The list of those local causes is already a large one and is still being added to, and yet numerous cases remain in which no cause has been ascertained. Further, it is a question whether many of these so-called causes are not really the results of inflammation in the appendix and the surrounding structures. Talamon admits that in simple inflammatory attacks the essential

[1] THE LANCET, March 7th, 1891.
[2] Gunning Prize Thesis, Edinburgh, 1894, and Journal of Pathology and Bacteriology, vol. iii., No. 2, 1895.
[3] THE LANCET, Oct. 27th, 1894.
[4] Gunning Prize Thesis, Edinburgh, 1894.
[5] On the Phagocytes of the Alimentary Canal. Quarterly Journal of Microscopical Science, vol. xxx., 1889-90.

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lesion is a parietal one, as has been proved by the early operations of American surgeons. He says: "The appendix becomes increased in size, and appears dilated, turgescent, and erect, being about the size of the little or index finger; its walls are thickened, and its cavity is enlarged and filled with viscid or semi-purulent mucus."[6] Such a condition, however, is by no means limited to simple inflammatory attacks. Mr. Arbuthnot Lane has described a case of acute general suppurative peritonitis secondary to appendicitis for which no local cause, such as those mentioned above, was found. He says: "The appendix was as large as one's thumb and intensely livid. After it was removed it was carefully examined, and although covered with lymph it was perfectly intact and had no smell whatever. On dividing the appendix longitudinally the muscular and mucous coats were much hypertrophied, and the whole thickness of the bowel was enormously increased by the very acute inflammatory process. There was nothing found in its interior beyond a little fluid faces, and there was no evidence of constriction anywhere."[7] The primary change then would appear to be an acute inflammation of the tissues of the appendix, and even in the more serious cases with localised or generalised suppuration it is by no means rare to find no pathological changes save appendicular inflammation. The action of micro-organisms must, of course, be borne in mind; but this I believe to be a factor in the later, and not in the earlier, developments of appendicitis. It is opposed to all our knowledge of physiology to maintain that the healthy intestine, in whole or in part, is unable to protect itself against the micro-organisms which are normally present, and in considering the pathology of appendicitis in its earlier stages the first step is to explain the nature of the defect in the protective mechanism by reason of which micro-organisms have been able to penetrate the walls of the intestine.

As all writers admit that in many cases of appendicitis the theory of local causation does not seem to apply as far as any positive evidence exists, it seems only natural to inquire whether constitutional agencies may not be concerned in the production of such cases. Here again the analogy of the tonsil is a useful one. The protective function of the tonsils, and the circumstances under which this breaks down, have been described by Dr. Sims Woodhead, and his remarks may, I think, be equally well applied to the vermiform appendix. He says: "So long as the tonsils with their accessory lymphoid tissue forming this protective ring for the pharynx remain healthy, or so long as they are attacked by no extraordinary number of pathogenic micro-organisms, they are capable of resisting attack and of dealing with micro-organisms, even of what would be called a most virulent type. In this, of course, they are helped by the epithelium with which the lymphoid structure is invested, but some, at any rate, of the work appears to be performed by the wandering lymphoid cells of which I have spoken."[8] The tonsils may be regarded as the first line of defence in the alimentary tract; other protective agencies exist in the secretions of the stomach and intestines and in the scattered lymph follicles of the small and large gut, but from the anatomical and physiological considerations mentioned above it may not be amiss to regard the vermiform appendix as the second line of defence.

The failure of this defensive mechanism must next be considered. If an irritant poison, such as that of rheumatism, is circulating in the blood, it will manifest itself by local irritation and inflammation in certain susceptible tissues. Such a condition is present in the case of rheumatic tonsillitis, in which the inflammation attacks primarily the tonsils, and may extend thence to the pharynx, soft palate, and the deeper structures of the neck. Similarly in the case of appendicitis we may have a constitutional poison manifesting itself by an inflammation of the lymphoid tissue in the appendix; and an extension of this inflammation to the mucous membrane, the adjacent peritoneum, and the cæcum. Other pathological changes which are commonly met with—such as cystic dilatation, catarrh, concretions, &c.—will result from such inflammatory attacks. In course of time also these attacks will permanently injure the lymphoid tissue, limiting its production of lymphocytes and lessening its powers of resistance; and consequently the bacteria of the adjoining part of the intestine will increase in number and will eventually be able to penetrate the appendix and cause the more virulent and septic forms of appendicitis. While not denying the existence of purely local or mechanical causes of appendicitis, I believe that in certain cases the pathology is as sketched above—namely, (1) the presence of a constitutional poison, producing (2) inflammation of the lymphoid tissue in the appendix, which is thereby deprived of its normal protective functions, and is so weakened that there may follow (3) the entrance of micro-organisms and septic appendicitis or peritonitis.

The question as to whether any connexion exists between appendicitis and constitutional disease is one of considerable importance from a therapeutic standpoint. We have seen that anatomically and pathologically the appendix and the tonsil are very similar, and it is now recognised that an attack of tonsillitis is a common occurrence in subjects of the gouty or rheumatic diathesis. In such cases, moreover, the disease yields more readily if constitutional as well as local remedies are employed. As regards appendicitis, if it can be shown that a family history of gout or rheumatism is frequently present, and that other manifestations of gout or rheumatism are found to coexist or alternate with appendicular symptoms, it may fairly be claimed that there is at least presumptive evidence of a causal connexion between these affections and appendicitis. Such evidence I have tried to adduce in a series of cases published elsewhere.[9] The literature of the subject does not supply much information, as authors in describing cases of appendicitis have seldom given a detailed account of the family history or previous illnesses. Dr. Haig[10] thinks that nearly all cases of perityphlitis have a gouty origin and are caused by the deposition of uric acid in the fibrous tissue of the cæcum. This may be so, but, on the other hand, the tendency now is to ascribe the vast majority of all cases of perityphlitis to appendicular disease, a view which is constantly deriving additional support from the indisputable evidence presented at operations and necropsies. In this connexion I wish to refer to a case of "rheumatic perityphlitis" recorded by Dr. Burney Yeo.[11] The patient was a girl aged eighteen years who was admitted into hospital suffering from pains in the arms and knees and right iliac region, accompanied by sickness. The case is described at length, and Dr. Yeo's comment is as follows: "Extremely rare though the occurrence is, there can be no doubt that this was a case of rheumatic perityphlitis. The intercurrence of rheumatic arthritis of the joints of the right arm, the previous history of acute rheumatism, the endocarditic murmur, the complete and rapid disappearance of the local symptoms, and the sudden fall of temperature on the administration of sodium salicylate are facts which leave no room for doubting the rheumatic nature of this attack of local peritonitis." With this statement all who read the case will, I think, be in perfect agreement, but when Dr. Yeo remarks that "the case proves as clearly as possible that clinically we may have a true perityphlitis without any necessary involvement of the appendix" his position is open to criticism. He admits that to English, American, and German physicians rheumatic peritonitis is almost if not entirely unknown, and supports his own view by a reference to a list of fifteen cases collected by Spillman and Ganzinotty.[12] These have been analysed by Mr. Treves, who considers that "the evidence upon which the pathological assumption depends is by no means satisfactory and will not stand a critical examination."[13] Further, the whole of the clinical symptoms were identical with those which are now regarded as typical of appendicitis, and at one period Dr. Yeo, "bearing in mind the predominating tendency to regard all inflammatory attacks in this region as probably connected with some suppurative affection of the appendix, discussed the advisability of calling a surgical colleague into consultation with the view of some possible operative exploration." This tendency to associate peritonitis when localised in the right iliac fossa with appendicular disease is much strengthened, as already stated, by the early operations of American surgeons in similar cases, and as Dr. Yeo is unable to disprove this etiology I venture to regard his case as one of "rheumatic appendicitis."

[6] Appendicitis and Perityphlitis. Translated by Dr. R. J. A. Berry. 1893.

[7] Transactions of the Clinical Society, vol. xxvii., p. 104.

[8] THE LANCET, Oct. 27th, 1894.

[9] Brit. Med. Jour., vol. i. 1892, p. 857, and Edinburgh Hospital Reports, 1896, p. 109.

[10] The Practitioner, January, 1893, and Brit Med. Jour., vol. i. 1894, p. 1413.

[11] Brit. Med Jour., vol. i. 1894, p. 1289.

[12] Dictionnaire Encyclopédique des Sciences Médicales, tome xxiii., p. 310.

[13] Lettsomian Lectures on Peritonitis. Brit. Med. Jour., vol. i. 1894, p. 344.

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Amongst the predisposing causes of appendicitis age is acknowledged to be an important factor, and as the activity of lymphoid tissue is greatest during early life its liability to inflammation in young subjects is not to be wondered at. Abdominal pain in children is frequently localised in the right iliac fossa, and it is probable that repeated slight inflammatory attacks of appendicitis may impair the function of the lymphoid tissue and predispose to the more serious forms of the disease. A similar tendency is observed in connexion with the tonsils, which are frequently found to be much enlarged and indurated, and yet the preceding inflammatory attacks may have been so slight as almost or entirely to have escaped observation. Sir Dyce Duckworth [14] finds that cold is frequently the immediate cause of appendicitis. Numerous cases have been recorded in which exposure or violent exercise in apparently healthy individuals was the immediate precursor of an attack. As the appendix is an extremely well protected organ as regards external influences, it seems natural to assume that in such cases, as in rheumatism generally, the illness is determined by a general chill which manifests itself locally in a susceptible organ. Talamon has observed that heavy eaters are liable to appendicitis, and to this cause he traces the frequency of the affection in England and in America. He says that an indigestible meal is often quickly followed by an attack of acute appendicitis, and this sequence of events is explained by the induction of increased intestinal movements, which drive a fæcal mass into the appendix. In fact, according to his theory there exists an unfortunate class of individuals who possess a cæcum always ready to discharge a fæcal concretion, and an appendix always ready to receive it, but unwilling to part with it. On the other hand, it may be pointed out that a tendency to rheumatism in those who live freely is well known, and an attack of gout or rheumatism frequently follows a heavy meal owing to the absorption of the noxious products of incomplete or perverted digestion. The local manifestations in such cases will vary in different individuals, but in some they would appear to take the form of appendicitis. As regards the clinical signs and symptoms of appendicitis, it is well known that these, as in the case of tonsillitis, may at first point to constitutional disturbance and that there may be nothing to direct attention to the appendix for one or two days. Thus, malaise, headache, nausea, sickness, general aching pains, pyrexia, loss of appetite and furred tongue, constipation or diarrhœa are frequently found to precede any pain or discomfort in the right iliac region, and these are suggestive of a constitutional dyscrasia as the primary disease. Dr. Kelynack [15] has recorded the case of a medical student who was suddenly seized with an acute illness of which the only definite local sign was tonsillitis, and diphtheria was suspected. On the following day abdominal symptoms appeared, and he died three days later from gangrenous appendicitis and acute suppurative peritonitis. It seems only natural to conclude that the appendix must have been weakened by some previous attacks, and the simultaneous onset of tonsillitis points to a constitutional cause. I have already referred to the occurrence of slight attacks of appendicitis in childhood, and I believe that these are much more frequent than is generally supposed. Such attacks are not considered worthy of more than domestic treatment, and just as rheumatism is ignored under the familiar name of "growing pains," so an attack of appendicitis is regarded as merely a form of "stomach-ache." The relapsing or recurrent form of appendicitis is characterised by a series of attacks repeated at irregular intervals, and tending in some cases to a condition of chronic ill-health. The relapses are extremely difficult to explain on any theory of local mechanical causation, and it is in this class of cases more especially that Talamon's theory of fæcal concretions appears to me to fail completely. On the other hand, if a constitutional disease such as rheumatism is present, and if it manifests itself by an attack of inflammation in the appendix, we shall at once recognise a liability to the recurrence of inflammation in the same organ. Such a view both coincides with our knowledge of rheumatic disease generally and explains the frequency of recurrent attacks of appendicitis.

If the above statements as to the pathology of simple appendicitis, to which I have been referring more particularly, be accepted the treatment to be adopted will be both constitutional and local. While fully admitting the frequent occurrence, even in previously simple cases, of symptoms demanding immediate surgical interference, I differ entirely from those who hold that all cases of appendicitis ought to be regarded as surgical from the outset. Such an opinion seems to exist in America, and one of the most recent writers on the subject, Dr. G. R. Fowler,[16] says that "the less medical treatment which cases of appendicitis receive the better." In this country, however, such extreme views have not yet been generally accepted. Mr. Treves, who has shown the value of operative treatment in suitable cases of relapsing typhlitis, states that "the cases adapted for operation are comparatively few, and the simplicity of the surgical treatment has rather cast into the shade the somewhat neglected measures of the physician."[17] In an attack of acute appendicitis in a rheumatic patient the symptoms will often subside rapidly on the administration of full doses of salicylic acid or its compounds. It is also advisable to clear out the bowels by means of two or three grains of calomel, followed by a Seidlitz powder, and to keep up this action by repeated doses of some mild saline. By this means we are able to prevent the accumulation of putrefactive products in the cæcum and the consequent risk of septic absorption. Even if diarrhœa is present from the outset, as occasionally happens, it is no contra-indication to the use of mild salines, for the diarrhœa is often caused and maintained by the presence of some irritant in the intestine, and the sooner this is removed and the accompanying putrefactive changes checked the better. Opium tends to conceal the symptoms, but if the local pain be excessive a fomentation containing opium and belladonna may be applied over the right iliac region. Rest in bed, warmth, low diet, and the use of local antiphlogistics represent the other details of treatment which are generally approved of. In the relapsing or more chronic forms of rheumatic appendicitis the life of the patient must be ordered and supervised as in rheumatism generally. Special attention must be paid to the condition of the bowels, so as to prevent any accumulation. Some medicine, such as cascara sagrada, is to be taken regularly, and with this may be combined naphthalin (Watson Cheyne), or salol (Treves), or creasote as an intestinal antiseptic. The prolonged use of small doses of salicylate of soda will be found useful in preventing a repetition of the attacks.

Old Cavendish-street, W.

[14] Brit. Med. Jour., vol. i. 1892, p. 386.
[15] The Pathology of the Vermiform Appendix, 1893.
[16] A Treatise on Appendicitis, 1894.
[17] Brit. Med. Jour., vol. i. 1895, p. 517.

A FATAL CASE OF JAUNDICE WITH CEREBRAL SYMPTOMS.

BY SIDNEY H. SNELL, M.D. LOND.,
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WITH A REPORT ON

THE MICROSCOPICAL APPEARANCES OF THE LIVER.

BY THE LATE F. V. BUNCH, F.R.C.S. ENG.,
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THE patient was a woman aged twenty years. She had two months previously consulted me for amenorrhœa, which I found to be due to a three and a half months pregnancy. There was a marked phthisical family history, her mother having died from that disease, and since the patient's death her father and a sister have also succumbed to phthisis. In addition, at the apex of the patient's right lung there were signs of some old fibroid trouble. The onset of the present attack was as follows. On Nov. 18th, 1893, the patient seemed to be in her ordinary health and went to London to be married, she being then five and a half months pregnant. She remained at her mother-in-law's house till Nov. 20th, when she returned home feeling a little unwell and complaining of indigestion. This feeling continued, and on Nov. 23rd her friends observed that she became slightly jaundiced, vomited occasionally, and refused all food. I saw her first on Nov. 25th in the evening and found her very deeply jaundiced and complaining of severe pain in the right side and general depression. Her manner was a little strange, but she was perfectly sensible; her breathing was rapid (30), the pulse 70, and the temperature 99° F. On examination there was great tenderness over the hepatic area

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corresponding with the site of the pain, and marked diminution in the superficial dulness of this area was manifest on percussion. The edge of the liver could not be felt. Splenic dulness was well marked. Nothing abnormal could be detected elsewhere by physical examination, save the old patch of tubercle before alluded to at the apex of the right lung. The fœtal heart was distinctly audible. The urine was dark in colour and contained bile pigment in abundance and a trace of albumin. On evaporation to one-fourth of its bulk and the addition of nitric acid no crystals of urea nitrite were obtained, showing the loss of urea. Repeated evaporations and microscopical examinations of different samples failed at any time to detect the least trace of crystals of either leucin or tyrosin. Owing to pressure of practice, distance from town, &c., a more complete analysis of the urine was not possible. On Nov. 26th the patient was clear and sensible, although she had had some delirium during the night. An expression of intense anxiety pervaded the features; the breathing had increased in rapidity (37), the tongue was brown and dry, the temperature was 100°, and the pulse 82. Early in the morning the patient had vomited a large quantity of altered blood having the appearance of coffee grounds. The bowels had acted twice, the motions being clay coloured. She altered little during that day, but complained of headache and persistently refused nourishment. Towards night mild delirium again came on. On Nov. 27th, at 2 A.M., the patient suddenly became totally blind, retaining only the perception of strong direct light. Later in the morning the delirium passed off and the patient again became quite rational, but complained strongly of the pain over the hepatic region. At this stage her pupils were contracted to pin point-size. The superficial liver dulness, steadily lessening, had by that time entirely disappeared. On the evening of the same day delirium of a much more violent type appeared, and her temperature, taken in the axilla, was 101°, the respiration 38, and the pulse 140. During that night convulsions supervened, and the jaundice, which had improved a little, became very much deeper. On the following morning (Nov. 28th) the patient became quite comatose, with now and then an occasional convulsion. The pupils had become, with the onset of the coma, widely dilated. The patient died early on Nov. 29th, just ten days after the first feelings of malaise and only seven days after the first appearance of jaundice. There were throughout no ascites and no hæmorrhages under the skin, nor was any itchiness complained of.

With the greatest difficulty I obtained permission for a partial necropsy. On exposing the liver I found it to be much smaller than natural and to be shrunk away towards the back, this accounting for the loss of superficial dulness. It weighed, as nearly as I could guess, about thirty ounces—under two pounds certainly—and was quite firm. The gall-bladder was empty. On the surface numerous yellow patches could be seen on the red ground, and on section the organ was dark-red, mottled with yellow. The spleen was enlarged and congested. A few pieces from different parts of the liver were secured, and beyond noticing the absence of peritonitis and fluid in the abdomen &c. I had to make a hurried conclusion owing to the objections of the family. The late Mr. F. V. Bunch—whose recent lamentable death from diphtheria, contracted in the discharge of his duties as surgical registrar to University College Hospital, is to be deplored—made the following report on the microscopical appearances of the liver:—

"Pieces of liver were handed to me hardened in alcohol. The capsule was not thickened; it stripped easily, leaving a slightly granular surface. On the greater part of the cut surface the lobular arrangement of the liver substance was clearly seen; over a few scattered areas it was, however, lost. Sections were cut by the paraffin method and stained on the slides, some with Ehrlich's hæmatoxylin, others with gentian violet and eosin. The sections show much connective tissue arranged for the most part in a perilobular manner, and to a less extent in the centres of the lobules and between the columns of liver cells. Different parts show very varying amounts of connective tissue. Where the change is most advanced there are large tracts in which liver substance is only represented by a few islands of hepatic cells, many of which contain droplets of fat. Granular masses of pigment are also seen. Numerous branching ducts lined with cubical epithelium are present. Where the process is least advanced the liver lobules are large. The centres of the lobules are occupied by a loose-meshed reticulum of connective tissue in which a few liver cells undergoing fatty degeneration are enclosed; the change becomes less marked in the zone surrounding this; and in the greater part of the lobule the liver cells are quite healthy. Ducts are plentiful in the perilobular areas. The connective tissue everywhere takes the form of a loose meshwork richly supplied with oval and spindle-shaped nuclei. There is, in places, a considerable infiltration with small round cells. There are no hæmorrhages, and crystals of leucin and tyrosin are not seen. The vessels are healthy. Many examples of division are seen in the nuclei of the liver cells. The appearances of the liver differ from those described in ordinary cases of acute yellow atrophy in the formation of connective tissue; the degeneration of the liver cells is only seen where this connective tissue is formed, and there is therefore a large number of cells showing no deviation from the normal. The probable pathological process seems to have been an acute formation of fibrous tissue, the destruction of liver substance being secondary."

It will be noticed that this fatal case of jaundice with cerebral symptoms occurred in an unmarried pregnant girl; that is the class of patient attacked in so large a proportion of the cases of that rare disease, acute yellow atrophy of the liver. But although during its clinical course I had but little doubt that such was its nature, on reviewing all its aspects, and especially on studying the microscopic appearance of the diseased organ, it becomes at once evident that striking points of difference exist which mark it out from the usual run of cases of acute yellow atrophy of the liver. Thus the course was much more rapid, there was complete absence of leucin and tyrosin from the urine or from the liver sections, and there was no tendency to hæmorrhages (apart from the hæmatemesis) and no sign of abortion. The sudden onset of amaurosis I have failed to find elsewhere recorded. Again, pathologically, the liver, instead of being very flaccid, was actually firmer than natural. Microscopically, the appearances were suggestive of an acute cirrhosis rather than an acute atrophy. I knew the patient's family well, and I made very careful inquiries about her former habits, being specially incited thereto by the warning which Dr. Poore gives in his eloquent lectures on forensic medicine to always be on the *qui vive* for phosphorus poisoning in cases of acute yellow atrophy. Accordingly, at my very first visit, having managed to send all her friends out of the room, I asked the girl whether she had been taking anything to tamper with herself &c. To this question she gave a most emphatic denial and with every appearance of truthfulness. Inquiries from the friends elicited that although owing to her pregnant condition she underwent a great deal of mental worry, yet before the visit to London she became very cheerful at the prospect of being married, and, indeed, this event removed the very reason for any question of tampering. One fact was obtained which might have some bearing on the case—i.e., that the patient was in the habit of eating very large quantities (three or four pennyworth daily) of those small pink cachous used for clearing the breath of smell. I endeavoured to obtain some of these from the same source, but failed. On consulting chemists and sweet manufacturers, however, I am told that it is to the last degree improbable that these would contain phosphorus. I think it may fairly be said that the presence of phosphorus poisoning in this case is, at all events, "not proven." With regard to the question of alcoholic excitation, this in its turn may be also excluded. The patient was one of a tectotal family, belonged to a temperance society, and had never tasted alcohol in her life, according to her statement.

The case is obviously one to be recorded while waiting for further similar cases to throw a light on its exact nature. It is, of course, a matter for regret that the necropsy was so slightly and hurriedly performed; but I encountered the most strenuous opposition from the family.

Grays, Essex.

AN EXTRAORDINARY STORY OF WHOLESALE POISONING.—A story has reached us from Heath Town of wholesale poisoning by soup which in some of its particulars reminds us strongly of the Wylde Green cases which occurred during the Christmas week of last year. Nine persons, ranging in age from three to eighty-one, partook of some soup distributed in charity from the vicarage, and all afterwards showed symptoms of poisoning. In one sad case death ensued.

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THE IMMUNISATION OF HORSES FOR THE PREPARATION OF DIPHTHERIA ANTITOXIN.[1]

BY WILLIAM ROBERTSON, M.R.C.V.S.,
ASSISTANT, VETERINARY DEPARTMENT, BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

IT is my intention to describe to the best of my ability the method employed in the immunisation of horses for the preparation of diphtheria antitoxin, and also to describe the process of bleeding these animals when immune. I find that suitable horses of the heavy draught class can be purchased for prices varying from £3 10*s.* to £7. The animal is, in the first instance, placed in an isolation box, where it is tested with mallein (generally twice), then with tuberculin, and if the test is negative it is placed amongst the other horses. The seat of inoculation which I find most convenient is just in front of the shoulder; this part is easily accessible in the horse, and the operator is less liable to be kicked by the animal. Previously to inoculation the syringe &c. are boiled for fifteen minutes and the part washed with ether and then with a solution of carbolic acid (1 in 20). The syringe, with needle affixed and charged with toxine, is then held in the right hand and a fold of sterilised skin pinched up with the left, the needle inserted, and the piston pushed gently home. As a rule the horse stands quietly enough and seldom exhibits any symptoms of pain or uneasiness during the inoculation. In commencing the immunisation of an animal very small quantities of the toxine are used at first, the initial dose being generally 1 c.c. In the case of the first horse experimented on I used toxine mixed with Gram's solution of iodine, but this method was soon discontinued, as it was found that the solution of iodine acted as an irritant and caused local swelling slow of absorption. The local lesion following the first inoculation is, as a rule, well marked and appears in the form of a diffuse soft swelling slightly painful on pressure. This swelling reaches its greatest height in from six to seven hours after inoculation, generally persists for two or three days, and then disappears. Coexistent with the local lesion we generally get a rise in temperature. This rise reaches its maximum in from six to seven hours after inoculation—that is to say, at the same time at which the local swelling is greatest—and generally falls to normal in thirty-six hours. When the local lesion has disappeared and the temperature fallen to normal the dose of toxine is repeated, and if this produces very little local or general effect it is raised by degrees, thus: primary dose, 1 c.c.; then after a week has elapsed, 1 c.c. again; then 5 c.c.; then 10 c.c.; then 10 c.c. again; then a rise to 25 c.c., and so on. When the dose has reached 50 c.c. we give the horse this quantity three times a week for a fortnight, and if the animal stands this amount without any reaction the dose is raised to 100 c.c. three times a week for the same length of time, and then 200 c.c. at the same intervals. The period of time allowed to elapse between each inoculation varies with different animals, and we take as a guide the local swelling and the temperature, as the inoculations are discontinued until both have subsided.

The above is the outline of the method of immunising horses, but I have noticed a few facts in connexion with the above remarks which are of some interest, but which are of a somewhat disjointed nature. No two horses are alike in their power of resistance to the action of diphtheria toxine. I have had an animal under my charge which received 10 c.c. toxine, and the day after received 100 c.c., and this without producing any very marked effect; while in another case the initial dose of 1 c.c. produced a violent local and general reaction, and after an interval of a fortnight a second dose of 2 c.c. caused paralysis of the hind quarters and the animal had to be destroyed. The same toxine was used in both cases. Again, in some animals the local lesion in the neck disappears twice as fast as in others, using the same toxine in both cases. The rise in temperature following inoculation is also very variable. I have a record of a horse whose temperature during the whole process of immunisation never exceeded 103° F., and I have a record of another horse also immune who after every inoculation had a rise in temperature, in one case exceeding 105°. Amongst all the horses I have inoculated, even when the temperature was very high, I have never known one to refuse its food; but I have noticed that following on a large dose of toxine some animals have a fit of shivering and exhibit distinct rigors. In a very few cases—four out of many hundreds of inoculations—I have seen necrosis of the skin to follow inoculation. The skin over the swelling becomes brown and hard, and on falling off leaves a glazed red surface; this, however, soon heals under a boracic acid dressing. When the horse is considered to be sufficiently immune it is allowed to rest for a clear week from the last inoculation before being bled. The vein from which we bleed is the jugular vein found on the side of the animal's neck lying in what is termed the jugular furrow and separated from the skin by the panniculus carnosus, that sheet of muscular tissue stretching subcutaneously over the upper part of the horse's body. The part over the vein is first shaved and then washed thoroughly with ether and carbolic solution (1 in 20). The vein is then raised by pressure with the fingers, and with a scalpel a small incision about half an inch in length is made through the skin and panniculus carnosus.[2] On separating the edges of the wound with a pair of forceps the vein can be observed at the bottom of the incision. The cannula, after being connected to the Kitasato flask by a piece of quarter-inch rubber tubing, is taken in the right hand, the vessel is raised with the left and the tube inserted, care being taken that the stream of the vein is not interfered with. The blood then flows freely, and when the flask is sufficiently full it is replaced by an empty one as follows. The rubber tube is pinched by the fingers of the left hand and the full flask withdrawn and handed to an assistant to plug. The empty flask is now taken in the right hand, the long glass tube is placed in the end of the rubber piping, the constricting fingers are withdrawn, and the blood flows.

As regards the amount of blood which can be removed from an animal with impunity, that of course varies with size. The amount I generally take is ten litres, but I have removed as much as sixteen litres without any injurious effect to the horse; this is not to be wondered at, seeing that one-sixteenth part of the animal's body weight is blood. The reason why I do not as a rule draw off more than ten litres at a time is that if more is taken I find the last four or five litres over the tenth do not clot properly, and the serum which separates is of a pink colour. As soon as the blood is firmly clotted it is advisable to twist the flask in the hand, so as to separate the clot from the walls. When sufficient blood has been drawn off I press on the vein anterior to the cannula and withdraw the tube. I then sponge gently with carbolic solution (1 in 20) and fasten the edges of the wound with two catgut sutures. The wound is now dusted with iodoform and covered with a piece of sterilised wool dipped in collodion. I have never had any difficulty in stopping bleeding, and the wounds have always gone on satisfactorily. The veins are in no case obliterated or obstructed, and in one horse which has been bled fourteen times the vessel is just as pervious as in any other animal.

It is hardly necessary for me to state that all instruments &c. are boiled for half an hour previously to an operation. As regards methods of restraint in this operation, these of course depend upon the animal, but I have usually found horses stand quietly enough when being bled. I should like to say a few words about the flasks in which the blood is collected and the method of decanting the serum. The flasks are ordinary Q-like filtering flasks fitted with a rubber cork and two pieces of glass tubing, one of wide calibre to allow escape of air, the other of narrower dimensions, over the orifice of which is slipped the rubber tubing connected to the cannula. These flasks are sterilised for three hours on three separate occasions. When the flasks are full and the blood has been twisted on clotting they are placed in a cool cellar, and in twenty-four hours' time a large amount of serum will have separated. The branch tube of the flask is flamed in a spirit-lamp, the wool plug removed, and the serum poured off into sterilised

[1] A paper read before the Pathological Society of London on March 19th, 1895.

[2] At first the cannula was inserted directly into the vein through the skin, but afterwards it was found to be more satisfactory to make an incision.

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Winchesters. The branch tube is now wiped free from serum by repeated pellets of sterile wool, and it is finally replugged. As a rule, a two-litre flask of blood yields one litre of serum, but some horses' blood does not yield anything like that amount.

Sudbury.

AN UNUSUAL CASE OF MULTIPLE HERNIA WITH HYDROCELE; STRANGULATED FEMORAL HERNIA; OPERATION; RECOVERY.

BY ETHELBERT COLLINS, L.R.C.P. LOND., M.R.C.S. ENG.

THE patient, a man aged sixty-five years, had on the right side a complete inguinal hernia and a femoral hernia, and on the left side an incomplete inguinal hernia. There was also a hydrocele of the right tunica vaginalis. According to the patient's statement both inguinal herniæ appeared about ten years previously, and were caused by lifting heavy weights; he was, however, uncertain as to the duration of the femoral hernia. The hydrocele had existed about six years, having been regularly tapped twice a year. On the morning of Jan. 4th, 1895, I was summoned to this case "as one of the man's ruptures had come down, and he was unable to get it back." When I saw him (about three hours after his rupture had come down) he presented the symptoms of a case of strangulated hernia, he had vomited several times, there was distressing hiccough, and pain in the region of the hernia and at the umbilicus. On examination I found that the femoral hernia was strangulated; it was about the size of a large walnut, tense, hard, and there was no impulse on coughing. I was unable to reduce it. I again saw the case in the afternoon with my brother, Mr. J. B. Collins, and we agreed to operate. After the patient had been fully anæsthetised I again tried to reduce the hernia, but was unsuccessful. Having first tapped the hydrocele, which was rather in the way, as it contained twelve ounces of fluid, I proceeded to operate in the usual manner. The sac was excessively thick, and contained a small quantity of clear fluid and a knuckle of intestine; it was tightly gripped in the femoral ring. After making a few notches in Gimbernat's ligament the gut was easily returned. I then ligatured the sac with carbolised silk and removed it, closed the wound, and dressed it with sal alembroth gauze and wool. Carbolic acid was used during the operation, and all the antiseptic precautions it was possible to take in an ordinary cottage were observed. The patient made an uninterrupted recovery, no rise of temperature or any unfavourable symptom occurred, and he was able to leave his bed on the twelfth day after the operation with the wound perfectly sound. On Feb. 11th he was in good health and, wearing a suitable truss, was walking about as usual.

I quote this as being an unusual case of herniæ complicated with hydrocele. I cannot recall a case of double inguinal hernia and a femoral hernia in the same subject, leaving the hydrocele out of the question. Of course, it is not surprising that the femoral hernia should have become strangulated, as the man was wearing a double inguinal truss—which he had obtained from some quack—leaving the femoral hernia to take care of itself. Before I ventured to record this case I sought the opinion of my friend and former teacher, Mr. C. B. Lockwood, as to whether he considered it worth publishing. His large experience and original work on this subject, together with his concordance with my views, form my excuse for doing so. I may add that Mr. Lockwood suggested that the man had an abnormally long mesentery, which might account for his several herniæ, and certainly the shape of his abdomen would indicate that he has, it being flattened above and bulging below. I am indebted to my brother for his valuable assistance, to which I largely attribute the success of the operation.

Sawbridgeworth, Herts.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUPERNUMERARY MAMMA IN A MAN.

BY W. F. ADAMS, M.R.C.S. ENG., L.R.C.P. LOND., FORMERLY HOUSE SURGEON TO KING'S COLLEGE HOSPITAL.

WHEN I was at the Kashmir Mission Hospital last summer a Hindu pundit aged about thirty-five came to me for some gastric ailment. When about to examine his abdomen I noticed a tumour above the left hip. This proved to be a fully developed mamma, as seen in the accompanying engraving, which is from a photograph taken at the time. In consistency and appearance it was exactly



like the mamma of a virgin. The nipple was small and rather flattened, but the areola was perfect. I was unable to express any milky fluid. The man told me that it had developed at the time of puberty and never gave him any annoyance. He, therefore, did not desire its removal. His proper nipples on the chest were quite normal, and I detected no trace of other abnormalities. I believe the position, though not the commonest, is not unusual for supernumerary mammæ, but its large size and the fact of its occurring in a man seem to me to make this case worthy of record.

C.M.S., Bannu, N. India.

SINGULAR COMPLICATION OF DEATH FROM DROWNING: IMPACTION OF A PIECE OF COKE IN THE LARYNX.

BY WILLIAM EVANS, M.R.C.S., L.R.C.P. LOND.

THE following case is perhaps worthy of being recorded on account of the remarkable circumstances attending it. A boat containing six persons was capsized in the river Thames, near Wandsworth Pier, on Bank Holiday (Aug. 5th), and two of the party lost their lives. The body of one of them, a man aged about twenty-one years, was recovered on Aug. 9th, and I made a post-mortem examination on the following day. Having opened the chest, I observed that the lungs were not distended and nearly overlapping the heart, as is usual in death from drowning, neither did they pit on pressure. I removed the tongue, larynx, &c. complete with the lungs, and found a piece of coke firmly impacted in the larynx, the vocal cords grasping it a little below its centre.

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This was of irregular shape, flattened, and broadest in the middle, from which it tapered to each end. The extreme measurements were 1⅜ in. long, 1 in. wide, and ¼ in. thick. Where encircled by the vocal cords the extreme measurements were ½ in. by ⅜ in. The narrow tapering end was directed downwards. The lungs were only slightly crepitant and contained little or no frothy fluid. The other signs were those of asphyxia.

Pimlico-road, S.W.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

By D. J. COLLINS, M.B., B.Ch., B.A.O. R.U.I.,
SURGEON-LIEUTENANT, ARMY MEDICAL STAFF

A PRIVATE of the 4th Battalion Rifle Brigade, aged nineteen, was admitted to the Station Hospital, Devonport, on Feb. 25th, 1894, with syphilitic iritis. The orthodox treatment was adopted, and by March 25th all traces of the inflammation of the iris had disappeared, when a yellowish tinge was noticed in the skin and conjunctiva. He complained of severe headache, anorexia, and intolerance of light; there were no fever, no hepatic tenderness, and no enlargement of the liver. The patient had never been to India and had never previously suffered from any liver trouble. On March 27th the jaundice was more intense, there were considerable bilious vomiting, severe headache, clay-coloured motions, and bile-stained urine, the temperature was normal, and there was no hepatic tenderness. The area of liver dulness appeared to be diminished, and the possibility of acute yellow atrophy suggested itself. On March 28th cerebral symptoms became marked, with restlessness, delirium, and convulsive twitchings. The vomit presented a coffee-ground appearance; the pulse was quick and full, 120 to the minute; and the tongue was dry and brown. The liver area was markedly diminished, but pain and tenderness in the hepatic region were absent. On March 29th the patient was comatose, with stertorous breathing and dilated pupils; the liver dulness had quite disappeared, both in front and behind, the liver area being replaced by intestines. The temperature was 100·2° F., the pulse 136, and the respiration 40. The urine contained bile pigment, some blood, leucin, and tyrosin. The patient died at 11 A.M. on March 30th. A post-mortem examination was made on March 31st. The body was well nourished and the skin a deep yellow colour. The liver was much diminished in size, soft and flabby, and weighed only twenty-three ounces. The capsule was wrinkled and looked almost like a bag with fluid contents. The surface was of an orange colour, with patches of dark red and purple; the section was of a dark-yellow tint, in some parts bright red, and in others entirely yellow. The gall-bladder and bile-ducts were empty; the spleen was enlarged and the heart and kidneys had undergone fatty degeneration; the endocardium was stained with bile. Treatment was symptomatic. This case is interesting in its extremely acute course, only five days elapsing between its first onset and the death of the patient; and in that the liver, which was exhibited at the Plymouth Medical Society, was extremely small in size, even for this peculiar disease, weighing, as above stated, only twenty-three ounces.

AN UNUSUAL AND REMOTE SEQUELA OF OVARIOTOMY.

By WALTER FALLA, M.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON TO THE JERSEY GENERAL HOSPITAL.

A WOMAN aged fifty-two was admitted into the Jersey General Hospital on April 12th, 1894, suffering from a large ovarian cyst. On April 17th I performed the operation of ovariotomy. The cyst was unilocular and quite free from adhesions. The pedicle being rather broad, it was transfixed and tied in the usual way with a stout silk ligature and the abdominal wound closed with a few silk sutures, which were removed on the eighth day, the wound having quite healed. The highest temperature recorded was 101·6° F. on the fourth night, after which it was normal. On May 3rd the patient got up for the first time, sixteen days after the operation; she made an uninterrupted recovery and was discharged from the hospital quite well on May 17th, a month after the operation. She continued in perfect health until the end of December last, when she said she first felt pain on micturition, but did not have any medical advice for it. In April she noticed a little blood in the urine. These symptoms, the patient said, continued and gradually became worse until she consulted me on June 30th last. She then had all the symptoms of stone in the bladder, but would not submit to an examination. On July 19th she again consulted me as she was in great pain, and the following day I sounded the bladder and found a calculus approximately one and a half inches long and three-quarters of an inch broad. On July 26th, with the assistance of Mr. Bentlif and Mr. Sullivan, I performed the operation of lithotrity. The calculus was phosphatic and was easily crushed. On attempting to withdraw the lithotrite I found it impossible to do so without using undue force, but after some further crushing and manipulation I was able with more or less difficulty to withdraw the instrument, when between the blades I was astonished to find a thick silk ligature covered with a certain amount of phosphatic deposit, which easily accounted for the difficulty I had just experienced. The bladder was afterwards washed out in the usual way and all the fragments removed. The patient had no bad symptoms and in a few days was practically well. On examining the ligature carefully I found that it was undoubtedly that which had been used for tying the pedicle of the ovarian cyst.

Remarks.—It seems difficult to understand how a ligature used in tying the pedicle of an ovarian cyst could ultimately become the nucleus of a vesical calculus in a case in which there was no injury to the bladder during the operation and no difficulties whatever connected with it, the patient continuing in perfect health for about nine months afterwards. It is also remarkable how the ligature, which must have set up a certain amount of irritation and which eventually perforated the bladder, could do so without giving rise to any symptoms until it became lodged in that viscus.

St. Heliers, Jersey.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASE OF FRACTURE OF OS CALCIS; UNION OF FRAGMENTS IN BAD POSITIONS; RESECTION OF PORTION OF OS CALCIS; USE OF STEEL SCREW; RECOVERY; REMARKS.

(Under the care of Mr. W. ARBUTHNOT LANE.)

THIS is one of those cases which require no comment, the reasons for the performance of the operation and the operation itself being clearly given in the account. The necessity of operation for badly united fractures has not infrequently arisen in other parts of the body, but so far as we are aware this is the first time that it has been required for fracture of the os calcis. For the notes of this case we are indebted to Mr. J. T. Roberts, dresser.

A young man aged twenty-one years was admitted into Guy's Hospital under the care of Mr. Lane for injury to the left foot on Nov. 18th, 1893. The patient lost his balance while cleaning a second-floor window, and in order to try to save himself he jumped, alighting on his feet on the pavement below after falling from a height of thirty-five feet. He was immediately conveyed to the hospital, and on admission his left foot and ankle were found to be very much swollen and discoloured. When he had been anæsthetised distinct crepitus could be felt in the os calcis by fixing the posterior part of that bone with one hand and flexing and extending the foot with the other. The line of fracture, however,

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could not be felt owing to the swollen condition of the foot. As there was considerable displacement of the fragments, the foot being fixed in a position of extreme abduction, Mr. Lane wished to cut down on the os calcis and to fix the fragments in their normal position by means of steel screws, but the patient would not hear of such a procedure. Consequently the foot was fixed in as good a position as possible in the ordinary way, and gradually the swelling subsided and pain disappeared. On Dec. 12th a Croft's splint was applied, and he was discharged on the following day, supporting himself on crutches. He was readmitted under the care of Mr. Lane on Feb. 5th, 1894, for pain in the sole in front of the tubercle of the os calcis, the pain being so great that he could not stand on the foot. There was a hard swelling under the heel which on incision was found to be a mass of fibrous tissue, beneath which a bursa had developed over a prominent piece of bone. This was treated as effectually as possible. The patient was again readmitted under the care of Mr. Lane on account of pain and stiffness in the left ankle-joint, especially at the point where the external malleolus impacted on the displaced os calcis. He began to use his foot about three weeks after his previous discharge; but it became very painful and stiff after doing so. Finally he was unable to use it at all and he now begged to have the foot amputated. On admission his ankle was slightly swollen and there was some thickening of the os calcis below the external malleolus. Both flexion and extension of the ankle were limited, adduction and abduction of the foot were absent, and flexion and extension of the great toe were also limited. There was considerable flattening of the arch, and the foot occupied an abnormally abducted position owing chiefly to the outward displacement of the tuberosity of the os calcis. On Aug. 24th Mr. Lane broke down all adhesions in the joint and fixed the foot in as good a position of adduction as possible. On the 29th the patient was allowed to get up after dinner, but soon after doing so his foot began to be very painful, to such a degree that he could not use it, and it remained so for some time after he returned to bed. The breaking down of the adhesions having proved ineffectual, Mr. Lane decided to refracture the os calcis and screw the pieces together in a better position, it being evident that the pain was due to the altered mechanics of the ankle-joint owing to the union of the fragments of the os calcis in a bad position. An incision was made across the sole of the foot, and the os calcis was exposed. It was then divided by a chisel and mallet, and a small wedge-shaped piece of bone removed so as to allow the posterior portion of the os calcis to be displaced inwards. An incision was now made over the posterior surface of the os calcis and a long screw introduced, by means of which the two pieces of bone were brought into firm and accurate apposition—the distal piece of the os calcis having been slightly rotated in order to adduct the foot from its previous exaggerated abducted position. The wounds were then sewn up by deep fishing-gut and superficial horse-hair sutures, and sterilised dressings and splints were applied. On Sept. 4th the deep sutures were taken out, the wound having united by primary union. On the 11th the superficial stitches were taken out, the wounds having completely healed. On the 14th a Croft's plaster-of-Paris splint was put on the patient's foot, and on the 16th he was discharged. On Jan. 15th, 1895, the patient was again seen by Mr. Lane. He had been following his ordinary vocation for the previous month, walking about or standing on ladders &c. all day from half-past six in the morning until seven o'clock in the evening. He had felt no pain or weakness in his foot during that time. Sensation was normal all over the foot, and he could walk on tip-toe and hop about on the left leg with the greatest ease.

Remarks by Mr. ARBUTHNOT LANE.—This case illustrates very well the very great advantage that a surgeon can obtain by the use of the steel screw. As far as I know I could not have retained the fragments of the os calcis in the foot in a position of adduction without the aid of this very powerful mechanism, and one has the satisfaction of knowing that by its use one has converted a patient from a condition of absolute physical incapacity into one of perfect mechanical usefulness. Of course, it would have been much wiser to have fixed the fragments in their normal relationship at the time of the accident; but, as in many other cases, I found it impossible to make the patient understand the immense advantages which operative interference offered him over any other form of treatment.

SALOP INFIRMARY.

NOTES OF A SERIES OF CASES OF DILATATION OF THE STOMACH TREATED BY SYPHONAGE AND OTHER METHODS.[1]

(Under the care of Dr. EDWARD CURETON.)

WE bring before the readers of THE LANCET a series of cases of dilatation of the stomach which have been treated in the Salop Infirmary under the care of Dr. Cureton, the cases occurring from 1890 to 1895 inclusive. He explains that the notes refer to cases of chronic dilatation, which, as is known, is mainly due to pyloric obstruction, with or without the presence of a tumour; these cases are for the most part those of dilatation from defective tone or muscular weakness, or chronic catarrh occurring in the anæmic, or from habitual over-distension from food and drink, especially the taking largely of starchy foods, as potatoes, which generate gases, or the excessive use of aerated waters or other beverages. The patients were nearly all from the country, where a vegetable diet usually prevails to a large extent. First, with regard to the diagnosis of dilatation of the stomach, clinical evidence of this condition is afforded by the vomited matter and the time when vomiting ensues, which may be several hours after food, or again after several days have elapsed, when large quantities are usually brought up, the patient being uncomfortable and distended until vomiting occurs, when usually great relief is obtained by the emptying of the stomach; the stomach appears, however, to be only partially emptied, a residuum of sour fermenting stuff remaining behind and keeping the organ, as it were, chronically septic. Then, with regard to the vomited matters, these will usually be found to be darkish brown in colour, sour smelling, and of strongly acid reaction; a thick scum forms on the top, and a brown sediment is seen at the bottom of the vessel on standing. Most of the patients complain of acidity and of the "teeth being on edge." With regard to the physical signs, these may be well marked or again nearly all absent. The chief are a want of symmetry in the abdomen as a whole, flattening of the epigastrium, and sometimes hollowness here when distended; the "stomach note" is obtained both higher and lower down than usual, and splashing sounds can often be elicited on succussion. With regard to treatment, various drugs, as we know, have been used from time to time, but the chief object of the publication of these notes is to bring under notice the great benefit which results from the use of the stomach tube in these cases. All, or nearly all, of these cases—twelve in number—have been treated by this method. The points brought out in their treatment by drugs, diet, and syphonage are as follows: 1. As to drugs alone, they only temporarily relieve acidity and stay fermentation, but the attacks of vomiting occur again after a time. The same may be said with regard to the most careful dieting in addition to medicine; but with syphonage added to these a better result, and in some cases quite a surprising state of things, may be expected, the vomiting ceasing with the use of the tube, the pain and burning sensation and distension subsiding, and a rapid increase of flesh and strength ensuing. It will probably be found that the cases which yield the best results will be those of what may be described as "simple dilatation," such as occurred in some of these cases, the patients being country folk, hard-working men for the most part, who imbibe enormous quantities of fluid during the harvests, such as cider or "small beer," who have three meals a day, eat largely of starchy foods, drink tea freely, and also consume large quantities of potatoes, all of which tend to the generation of gases, with subsequent distension of the stomach and stretching of its walls, whereupon dilatation occurs, the food remaining in the stomach and setting up decomposition. No doubt sarcinæ might have been found in most of these cases if there had been time to look for them; they were present in the only case examined for them. Another point brought out by these cases is the relief which the tube will afford where there is malignant disease of the stomach. It has seemed to Dr. Cureton that the very fact of introducing a tube into the stomach stimulated the muscular walls to contract and diminish the size of the organ, and thus has had a more or less curative influence upon the muscular coats in cases of simple atonic dilatation. With reference to the amount

[1] Recorded before the Shropshire and Mid-Wales Branch of the British Medical Association.

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of fluid used this varied a good deal; the washing out generally took place just before dinner, and was continued until the fluid used came back clear. The patients on admission were all placed on a No. 2 diet, which is the ordinary house diet of most hospitals; then, as occasion required, more milk was given, as well as prepared food and fish and beef-tea, the chief changes in diet being recorded in the subjoined cases, one article being struck off as another was substituted for it. With regard to the drugs used in washing, these were bicarbonate of soda, one drachm to a pint; sulphocarbolate of soda, half a drachm to a pint; and sulphurous acid, one drachm to a pint. Plain boiled water was often used alone. The duration of the treatment varied a good deal; but most of the patients got better fairly soon, scarcely any patient remaining in hospital over six weeks, and vomiting was hardly known to occur in any case of simple dilatation after the proper use of the tube. Another point of importance is the rapid tolerance of the treatment, and when the patient has learnt how to pass the tube for himself—that is, to swallow it—he is able and willing to follow up the treatment for himself after leaving the hospital; and when the patients are in hospital it is possible by the daily examination of the washings to judge how they are progressing. Nothing new or original is claimed for the treatment; it is only the adoption of a well-recognised form of giving more or less permanent relief to what, under other methods of treatment, are found to be chronic and unsatisfactory cases in daily practice. The following are short notes of the cases treated at the Salop Infirmary.

CASE 1.—The patient, a woman aged thirty-one, was treated in the infirmary from Dec. 20th, 1890, to Jan. 10th, 1891 (five weeks). She was placed on diet No. 2, and on Dec. 16th on extra milk. She had been an in-patient twelve months previously with similar symptoms, and an out-patient for the twelve months prior to admission. There were constant pain (epigastric) and vomiting. The stomach was markedly dilated. Treatment: creasote (1 min.) in pills three times daily, arsenic and liq. pept., and soda and rheum. The stomach was washed out by a funnel syphon with marked benefit. The patient was unable to remain under treatment and was lost sight of.

CASE 2.—The patient, a man aged twenty-three, was in the infirmary from July 23rd to Sept. 5th, 1891 (five weeks). He was placed on diet No. 2 and on prepared food (three pints). He was also given bread-and-milk, custard, fish, and cocoa. There was a history of gastric ulcer (pain, hæmatemesis, &c.) three months prior to admission. There were pain and vomiting with considerable dilatation and marked constipation. Treatment: 1. Sulphocarbolate of sodium, subnitrate of bismuth, and decoction of aloes. The stomach was washed out with warm sulphurous acid solution. 2. Hydrochloric acid, liquor strychniæ, and liquor arsenii hyd. three times daily p.c. 3. Bicarbonate of potash, salicylate of sodium (15 gr.), decoction of cinchona, liq. pept.. arsen. hyd., and carbolic acid. He was very much relieved and went out with the tube, which he continued to use.

CASE 3.—The patient, a man aged forty-nine, was in the infirmary from Nov. 7th, 1891, to Jan. 2nd, 1892 (seven weeks). He was placed on No. 2 diet, with extra beef-tea, cocoa, and mince, followed by No. 3 diet and prepared food (one pint). There were pain and vomiting eight weeks prior to admission, with hæmatemesis; also similar symptoms three weeks prior to admission, vomiting constantly small quantities of sour matter about half an hour after food. He had also mitral regurgitation. His weight was on Nov. 23rd, 9 st. 2½ lb.; on the 26th, 9 st. 1 lb.; on Dec. 5th, 9 st. 3 lb.; on the 14th, 9 st. 4¼ lb.; and on the 21st, 9 st. 6¼ lb. The symptoms continued, but not hæmatemesis. The vomit was highly fermented. There was hepatic tenderness—? pyloric tumour. Treatment: (1) subnitrate of bismuth (15 gr.), hydrochloric acid (2 min.), and tincture of opium (5 min.); (2) carbonate of bismuth, bicarbonate of sodium, compound tincture of gentian, creasote (1 min.), acetate of morphia (¼ gr.), extract of aloes—a sufficient quantity to be taken three times daily: (3) opium pill; (4) alkaline gentian mixture; (5) liquor morphiæ (10 min.), liquor pept. (half a drachm), compound tincture of cardamom (half a drachm). The stomach was washed out as above. The patient left much relieved. Carcinoma of the pylorus was suspected.

CASE 4.—This case was that of a patient aged fifty who was readmitted and stayed in the infirmary from March 25th to June 3rd, 1893. There are no notes of any value in this case.

CASE 5.—The patient, a woman aged thirty, was at the infirmary from June 10th to July 16th, 1892. She was placed on a milk diet (two pints), beef-tea (one pint), prepared food (two pints), bread-and-butter, and fish. She had been an in-patient six times before. She had been in bed since January with gastric symptoms. There seemed to be blood in the vomit. There were many carious teeth. She was very hysterical. The stomach was dilated, and there was constipation. Treatment: (1) compound rhubarb pills, compound pills of asafœtida; (2) bromide of potassium, tincture of valerian vol. The stomach was washed out with marked relief of all symptoms, but the patient would not continue the treatment.

CASE 6.—The patient, a man aged fifty-five, was at the infirmary from Aug. 27th to Oct. 1st, 1892 (one month). He was placed on diet No. 1, and later on diet No. 2, with mince and boiled milk (four pints). There was a two months' history of vomiting and pain. A small pyloric tumour was to be felt. He vomited copiously every two or three days, the vomited matter being very acid. The vomiting ceased under treatment and only occurred once since his admission. Treatment: (1) sulphite of sodium (15 gr.), compound infusion of gentian, to be taken three times daily; (2) sulphocarbolate of sodium (15 gr.), water one ounce, for washing out the stomach; (3) liquor Fowleri (2 min.), spirit of chloroform, bicarbonate of sodium, tincture of nux vomica, infusion of gentian; (4) compound pills of pepsine. The patient was very much relieved and was discharged with the tube and solution in order to continue the treatment.

CASE 7.—The patient, a man aged thirty-eight, was at the infirmary from Sept. 17th to Oct. 8th, 1892 (three weeks). He was placed on diet No. 3. Since March he had suffered from influenza; there were vomiting and pain, with marked gastric dilatation and constipation. Treatment: (1) bicarbonate of sodium, tincture of nux vomica, rhubarb powder, compound spirit of ammonia; (2) carbolic acid (1 min.) twice daily; (3) Carlsbad Sprudelsalz (2 dr.) every morning. The stomach was washed out daily with hot water. The patient was markedly relieved and was discharged with the tube.

CASE 8.—The patient, a youth aged nineteen, was at the infirmary from July 29th to Aug. 12th, 1893 (fourteen days). He was placed on diet No. 3. There had been subacute rheumatism for five months. The heart sounds were normal. The stomach was much dilated, but there was no vomiting. Treatment: (1) salicylate of soda (10 gr.) three times daily; (2) a pill of colocynth and hyoscyamus every other morning; (3) stomachic mixture. The stomach was washed out occasionally, and the dilatation was relieved.

CASE 9.—The patient, a man aged forty-seven, was at the infirmary from Feb. 24th to March 24th, 1894 (one month). He was placed on diet No. 2, with minced chop. His weight on admission was 8 st. 13 lb., and on March 22nd 9 st. 1¼ lb. For four months there were pain and vomiting daily. He vomited "dark stuff" after food. Dilatation was marked. Treatment: (1) carbonate of bismuth, sedative solution of opium, alkaline gentian mixture; (2) wood charcoal powder (1 dr.); (3) Fowler's solution, tincture of capsicum, tincture of nux vomica. The stomach was washed out daily. The patient was discharged very much relieved. He was seen six months later, when he was still washing the stomach once a week.

CASE 10.—The patient, a man aged forty-five, was at the infirmary from July 21st to Aug. 18th, 1894. He was placed on diet No. 2, with the addition of fish, minced chop, and milk. He had been an out-patient since Aug. 12th and ailing for twelve months. There were gastric pain and vomiting. He vomited only once daily. Liver dulness was diminished. Pyloric resistance was felt (under chloroform). Treatment: (1) alkaline gentian mixture; (2) creasote pills (1 min.) four times daily. The stomach was washed out daily with bicarbonate of soda. The patient obtained great relief, and was discharged with the tube, being ordered to continue this treatment. He is supposed to have died subsequently from pyloric cancer.

CASE 11.—The patient, a man aged twenty-six, was at the infirmary from Jan. 5th to March 2nd, 1895. He was placed on diet No. 2. There was a three years' history of pain after food. Two months previously there was "black" vomit. He had lost 2 st. Treatment: (1) compound gentian mixture; (2) pill of colocynth every other night; (3) creasote pills (1 min.) p.c. The stomach was washed out with sulphocarbolate of sodium (20 gr. to the pint of water). The patient was very much relieved and was ordered to continue the syphonage.

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CASE 12.—The patient, a man aged thirty-two, was at the infirmary from March 30th to May 4th, 1895. He was placed on diet No. 2, with milk. There was a history of about six months' pain and vomiting, with wasting and anæmia. He vomited a pint or more at a time, usually in attacks lasting from two to three days and occurring about every fourteen days. Treatment: alkaline gentian mixture with nux vomica; syphonage with bicarbonate of soda. The patient obtained great relief and is continuing the treatment.

Remark by Dr. CURETON.—My thanks are due to the present house surgeon of the infirmary, Mr. Godson, and to his predecessor, Mr. MacLeod, for their kind help in collecting the notes of the above cases for my use.

Reviews and Notices of Books.

Essays in Heart and Lung Disease. By ARTHUR FOXWELL, M.A., M.D. Cantab., F.R.C.P., Physician to the Queen's Hospital, Birmingham. London: Charles Griffin and Co. 1895.

IN this volume the author has collected and revised some of the papers that he has, during the past decade, contributed to medical societies or to journals. They are obviously the outcome of much thought, and they deal with topics of high interest and importance to the clinical observer. The opening paper on Dyspnœa, for example, presents in clear and forcible language the varieties of this symptom of respiratory and cardiac disease comprising a discussion of the causation of the asthmatic paroxysm. The subject is illustrated by descriptions of cases in the experience of the author and the discussion of treatment. In the next paper, on the Expectoration in Phthisis—the term is here used to cover all forms of destructive lung disease—the subject is dealt with in each case under the three heads of (1) the nature of the expectoration; (2) the reasons for this nature; and (3) treatment. It is a useful systematic account of this common symptom. Under the head of "Catarrh" Dr. Foxwell opens up several novel and interesting questions. He is convinced of the utility of including under this head many local inflammatory affections other than those of the mucous membranes, and his arguments are worthy of all attention; but he further regards acute pneumonia and acute (primary) peritonitis as examples of "constitutional" diseases allied to the same group. He draws a striking contrast between the type of acute pneumonia in children as seen by him at Manchester and that seen at Birmingham, a kind of comparison which we do not remember to have been made before. Nor does it appear as if the difference is to be explained by regarding the one group as conforming more to the type of lobar pneumonia, and the other to that of lobular. In his essay on "catarrhus" he reviews the grounds upon which he has been brought to the conviction that these pyrexial disorders in which one or more organ or tissue of the body may be affected are in all probability due to the intervention of a microbe—perhaps the pneumococcus—and it is impossible to adopt this view without being reminded of influenza and its multifarious sequelæ. It seems only logical to take this step, and to refer all inflammatory states which are attributed to chill or to climatic and seasonal changes—to the operation of specific infection upon the predisposed organism. Indeed, if inflammation itself is only evoked by the intervention of microbes, then there is no escape from some such conclusion as that drawn by Dr. Foxwell from other data. How strange it is that teaching, which in one generation would appear to be fanciful and far-fetched, comes in the next generation to be regarded as the most rational and appropriate. It does, indeed, appear, without ignoring the admitted power of chill and exposure as leading factors in the etiology of catarrhal affections as if they should no longer be regarded the essential elements in their production. The volume includes three papers on climate, particularly of Davos, Arosa, and St. Moritz, which prove that the author made good use of his sojourn there, for he furnishes much information that is of value to those who have to advise pulmonary invalids as to their winter resort. Papers on the Condition of the Vascular System in Anæmic Debility and on Arterial High Tension are amongst the most interesting of these essays, which also deal with such subjects as Hæmoptysis, the Curability of Phthisis, and Non-tuberculous Cavities, the whole forming a volume that contains much that is reasonable and suggestive.

Edinburgh Hospital Reports. Published under the Editorial Committee of the Royal Infirmary, Royal Hospital for Sick Children, and Royal Maternity and Simpson Memorial Hospital. Edited by G. A. GIBSON, M.D., D.Sc.; C. W. CATHCART, M.A., M.B.; JOHN THOMSON, M.D.; and D. BERRY HART, M.D. Edinburgh and London: Young J. Pentland. 1895.

THIS volume is No. 3 of the series of reports consisting of, besides statistical tables drawn up by the registrar, papers and observations upon various medical and surgical subjects, the texts for which are furnished in the main by cases that have been admitted to the various institutions named on the title-page. Besides what we may call the purely professional and scientific papers there is an account of the new Craig House of the Royal Edinburgh Asylum, by Dr. T. S. Clouston; of the Deaconess Hospital, Edinburgh, by Dr. Gibson; and of the Victoria Dispensary for Consumption and Diseases of the Chest, by Dr. R. W. Philip. Altogether there are forty-two papers, but we have only space to mention a few of them. Dr. Wyllie contributes a long and interesting paper on Gastric Flatulence, dividing it into "true" and "false," according to whether the gas is produced in the stomach by fermentation or introduced from without, as in the case of patients who swallow air. In the former class of cases marsh gas and other carburetted hydrogens are sometimes formed, and Dr. Wyllie quotes an instance of a farm bailiff who happened to eructate at the moment he was lighting his pipe, when the gas caught fire, with a slight explosion. It is possible that cases like this may have been the foundation of the many stories of spontaneous combustion. The habit of air gulping, Dr. Wyllie says, is usually hysterical, though it may be a sign of obstruction somewhere in the alimentary tract. Dr. Byrom Bramwell gives details of twenty-three cases of myxœdema and five cases of sporadic cretinism treated by thyroid feeding, with most successful results. Photographs are given of the condition of patients before and after treatment. Dr. L. Bruce publishes an extended version of the papers contributed to our columns last year[1] on the value of thyroid feeding in some forms of insanity, and Dr. J. Macpherson has collected a number of instances where surgical interference was employed in cases of non-traumatic insanity. Headache, &c., were relieved, but there was not any very marked improvement in the mental condition. Dr. Gibson and Dr. Fleming have an interesting paper upon Characteristic Modes of Fatal Termination in Multiple Neuritis, and among the wealth of other papers we may mention that of Dr. Miles on Skin Grafting from the Lower Animals; Dr. W. Elder's Note on Aphasia; and Professor Annandale's Practical Hints upon the Operative Treatment of Cancer of the Lip, Face, Mouth, and Throat. Professor Chiene continues from Vol. II. his valuable Practical Observations in Surgery. Dr. Affleck writes on a Case of Beri-beri and Dr. A. Morison on the Blood Pressure in Angina Pectoris. A word of praise must be given to the printer and publisher for the excellent way in which the volume is got up.

[1] THE LANCET, Oct. 13th, 1894.

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Mentally Deficient Children; their Treatment and Training. By G. E. SHUTTLEWORTH, B.A., M.D. H. K. Lewis. London. 1895.

IN this useful and practical manual the author sets forth, as the result of the experience gained during a period of twenty-five years' residence at Earlswood Asylum and the Royal Albert Asylum, Lancaster, the salient peculiarities of the class of imbeciles and the ameliorative measures found most useful.

The pathology of the subject is only touched on to supply practical hints to the medical man when consulted in the case of a mentally feeble or deficient child. Chapter I. contains a historical retrospect referring to the work of Séguin in France, Saegert in Berlin, and Guggenbühl in Switzerland simultaneously. A comparison is made between the accommodation provided for mentally defective children in other countries, especially in the United States, and that found in this country, the total provision here being at most for 2700 cases, while in the United States 6315 children are accommodated. Comparatively poor countries, like Denmark and Norway, appear to do much more for mentally defective children than we do in this country. Chapter II. refers to those less definite cases of mental infirmity which in later years have been described under the specific designation of "feeble-minded." The result of Dr. Warner's investigation into abnormalities in school children are given, and notice is taken of the establishment under the London School Board of "schools for special instruction" of children who cannot be properly taught by ordinary methods, "occupations" forming an important part of each day's work. In Chapter III. is given the pathological classification of forms of mental deficiency, the author grouping them as congenital, non-congenital, and developmental. There are good plates giving illustrations of cranial contours, pathological conditions, and types of idiocy. Chapter IV. is concerned with etiology, diagnosis, and prognosis of the different varieties. "Idiocy," "imbecility," and "mental feebleness" are shown to be merely grades of mental defect, and the occasional association of moral weakness with the latter is pointed out. In Chapter V. treatment is considered under the headings: (*a*) General, (*b*) Medical, and (*c*) Surgical. A plate shows crétin children before and after treatment with thyroid extract. The author is opposed to craniectomy for microcephalus, though in favour of cranial operations when mental deficiency is associated with traumatism, epilepsy, and paralysis. In Chapter VI. the important subject of Educational Training is considered under the heads: (*a*) Physical, and (*b*) Mental, the dictum of Séguin, "the physiological education of the senses must precede the psychical education of the mind," being insisted on; and the author points out the special methods of instruction needed for those who cannot "properly be taught in the ordinary standards or by ordinary methods." Illustrations are given of the simple apparatus used in training the senses. Chapter VII. treats of Industrial Training and Recreation. In Chapter VIII. the author urges the importance of moral training, and gives instances of the difficulty of dealing with moral imbeciles who have, perhaps, little intellectual deficiency. In Chapter IX. Results and Conclusions are given, the author quoting Dr. Fernald to the following effect: "It is safe to say that over 50 per cent. of the adults of the higher grade who have been under training from childhood are capable, under intelligent supervision, of doing a sufficient amount of work to pay for the actual cost of their support whether in an institution or at home." The author closes the chapter by repeating his views as to the need for further provision both for idiots and the "mentally feeble."

A copious bibliography is given in the Appendix, and very useful lists of school books, appliances, and speaking exercises suitable for special instruction of mentally-deficient children. In Appendix D is given a list of training institutions in Great Britain and Ireland for this class of patients.

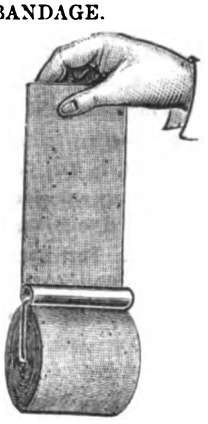
LIBRARY TABLE.

A Guide to Hindustani specially designed for the use of Officers and Men serving in India, including Colloquial Phrases in Persian and Roman Character, and a Collection of Arzis, with Transliteration in Roman-Urdu and English Translations. By G. S. A. RANKING, B.A., M.D.Cantab., Surgeon-Lieutenant-Colonel, Indian Medical Service, &c. Calcutta: Thacker, Spink, and Co.; and 87, Newgate-street, London. 1895.—The nature of this work is set forth in its title, and we may add that it is what it pretends to be—viz., a really excellent book for acquiring a knowledge of the subject such as has not hitherto been available within the compass of a single volume. This is the third edition, and its author has added much that he had, for the sake of brevity, omitted in the former editions. It gives a concise and reliable grammar of Urdu, with a capital selection of military and medical phrases, translations of manuscript exercises, and passages for translation. It seems to us to be just the sort of book required for those for whom it has been specially designed.

A Medical and Surgical Help for Shipmasters and Officers in the Merchant Navy, including First Aid to the Wounded. By WM. JOHNSON SMITH, F.R.C.S., Principal Medical Officer, Seamen's Hospital, Greenwich. London: Chas. Griffin and Co., Limited, Exeter-street, Strand. 1895.—It is not by any means an easy task to write and compile a book on this subject which shall be sufficiently comprehensive, and at the same time sufficiently clear and practical as to be really useful to those for whom it is designed: but we think Mr. Johnson Smith may be congratulated on having accomplished his purpose. We have applied to this book the test of looking through it generally and of specially referring to several portions of the volume treating of various subjects with a very satisfactory result. The work is illustrated with coloured plates and numerous engravings, and the instructions given—whether in relation to the treatment of disease and injury occurring on shipboard under circumstances where specially skilled assistance is not available, or in dealing with the prevention of disease and the feeding and nursing of individuals suffering from infectious fevers and internal affections—strike us as sound and judicious, and really helpful under the circumstances. The author, in order to make his treatise as complete and useful as possible, has availed himself of all the latest information, and also of the suggestions of the medical officer of health for the Port of London and others, and has added a chapter on cooking on shipboard for healthy men and invalids, specially prepared for the work by the instructor in nautical cookery to the Wells-street Sailors' Home.

New Inventions.

THE "NON-RUN-AWAY" BANDAGE.



HAVING experienced the inconvenience and loss of time occasioned by a bandage falling from the hand and unwinding, I have suggested to Messrs. Reynolds and Branson of Leeds a simple plan for holding the same. The illustration will explain the idea, which will, I trust, be found in practice to supply a want long felt by house surgeons and hospital dressers. Should only a part of a six-yard bandage be employed for a dressing, the remainder will be left securely rolled for future use.

ALEX. DUKE, F.R.C.P.Irel.

Cheltenham.

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THE LANCET.

LONDON: SATURDAY, AUGUST 24, 1895.

THERE are some broad principles to be remembered in considering the best way of meeting the demand for greater stringency in maintaining the ethical standards which have hitherto been supposed to govern the profession. This demand is very general, and comes very creditably from the great body of general practitioners. It is too common to speak as if errors of behaviour were confined to this section of the profession, and as if in the ranks of consulting practice there were no doubtful methods of success. We are under no such delusion. There are the same circumstances of pressure and competition and the same weaknesses of character in the one sphere of practice as in the other. Certainly, as we have said, the demand for greater stringency comes very much from the rank and file of the profession. The proceedings of the recent meeting of the British Medical Association prove this. Some great authority with strong powers to be used somewhat vigorously is demanded, that can at once protect the public against the experiments of false pretenders and unqualified practitioners and the profession from the discredit of men within its pale who lower its dignity and ignore its traditions. The long series of resolutions passed at the recent meetings has this significance.

The question is, In what body is this power of discipline to reside? and to what extent is it necessary to appeal to Parliament at all? Parliament is well known to be reluctant to undertake medical legislation, and those who have seen most of the haphazard way in which medical legislation is eventually effected will be most ready to admit that before we do appeal to Parliament we should be clear on two points—first, that the profession has done all it can do by the use of its own influence, its own immanent power, and the exercise of its present legal rights. The second point on which we should be clear is as to the exact defect in our present powers, and the form in which we should approach Parliament with a view to legislation which would supply that defect. It is not ten years since Parliament passed a great Medical Act, conceding amongst other things the principle of direct representation. It is rather early to expect a Government to reopen the subject unless a very good case is made out for so doing, not only in the interests of the profession, but in those of the public. Many of the evils from which the profession itself is now suffering—as, for example, low and unworthy methods of practice, such as demean it in the eyes of the public and are, indeed, inconsistent with the proper treatment of disease—should be met, in the first instance at least, by the action of the voluntary associations of the profession. Law should never be asked to do that which men can and ought to do for themselves. Parliament does not give privileges and protection for nothing. It is pretty sure to impose conditions which rob the concession of much of its value. Let us then do what we can for ourselves as members of a profession, liberal indeed, but yet a profession conscious of its own dignity, of its rights and its responsibilities. There are some big questions which voluntary action should settle without appeal to Parliament or even to the medical authorities. Take, for example, the questions of medical aid associations, cheap dispensaries, wholesale contempt for the sanctity of medical service. Surely medical men in local societies, as that of Cork, or in the British Medical Association, by firm and united action can make their influence felt effectively. By remonstrance, and, if need be, by excommunication, they can make the offender ashamed of himself and bring him to recognise that he has duties to his profession as well as to himself which he cannot ignore without losing caste. A very striking example of what can be done in this direction is afforded by "The Battle of the Clubs at Brussels," an account of which by our Special Commissioner will be found in our present issue. It is not to be expected that Parliament will assign penal or disciplinary duties to voluntary associations of medical men, however large or powerful. They have their own powers and their own influence, which have never yet been fully or systematically used. But there are many indications that such associations as already exist will have to use their powers for ethical and disciplinary purposes much more seriously if they are to retain the respect of their members and of the public itself, which, after all, respects the profession the more when it shows that it respects itself.

Further, in contemplating the acquisition of more stringent legal powers of discipline for the profession we must not forget that Parliament or Royal Charters have already fixed the seat of these powers in two clearly defined quarters—the medical bodies, or, as they are called in the Medical Acts, the medical authorities, and the General Medical Council. It is by no mere accident that these powers have been placed where they are. The bodies which give diplomas to candidates impose the conditions by which these diplomas are held. Amongst these conditions are character, conduct, respect for by-laws. In the sister profession of law provisions for such conditions are more stringent, yet they are not more essential than in medicine. It is proper and natural that these bodies should have any additional powers needed to give efficacy to their disciplinary functions. Above and over all these is the ethical function of the General Medical Council. But this should rarely be called into exercise—first, because it is costly and cumbrous in its action, and, secondly, because it is fit and proper that the body which has assumed the responsibility of giving qualifications to man should be the first body to remonstrate with him and, if need be, punish him if he errs from the line of professional conduct. In any amendments of the Medical Acts, therefore, the great demand of the profession should be based on the existing facts and functions of the medical bodies and the General Medical Council, and power should be given to the General Medical Council to notice errors of conduct that, short of being "infamous," may be discreditable, or disgraceful, and thus injurious to the profession and the public.

THE office of coroner is one of the most important of our English institutions, as it is one of the most ancient. Our

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views on the paramount urgency of maintaining its importance, so that all inquiry into unexplained deaths shall be carried on with the dignity, thoroughness, and formality that are fitting, are so well known that we need not repeat them; but it is, we hope, apparent to all our readers that it is because (and only because) we set such a high value upon the coroner's functions that we have been in the habit of watching jealously over the administration of "crowner's quest justice" and of allowing ourselves to comment freely upon anomalies or shortcomings that from time to time are brought under our observation.

A story has reached us this week from Bradford to which it is our duty to give prominence, for the essential point of it is—if we are correctly informed—that a member of our profession has incurred an outspoken expression of dissatisfaction from a coroner's jury for recognising the value of medical services, and refusing to prostitute them to the convenience of those interested. The story is as follows:—On the Saturday before Bank Holiday the wife of a labourer residing in Bradford went to Morecambe, and returned on the following Monday very ill. She died early on the ensuing Saturday morning after being ill all the week. On the night before she died a medical man, Mr. W. J. MARSH of Bradford, was sent for. He saw her and prescribed for her; but, whatever the chances might have been in her favour had medical attendance been summoned sooner, it was then too late for effectual treatment, and the next morning she died. Mr. MARSH was then asked by the husband for a certificate of death. This he said it was impossible for him to give, as he only saw the woman on the previous day, and he did not feel prepared to certify to the cause of death. It would have seemed to us impossible to find fault with conduct of such undeniable prudence had it not been brought to our notice that, for refusing to give this certificate, a coroner's jury has formally registered its dissatisfaction with Mr. MARSH, while the coroner has made the incident a peg whereon to hang a remark that certainly was not meant to be polite, and might bear the interpretation that greed for fees was at the bottom of the refusal. At the inquest the coroner told the jury that they would not have been troubled with the case but for the refusal of the medical man to give a certificate. The jury suggested that the medical man should be present. The coroner is then reported by the *Bradford Evening Telegraph* to have said: "I will, if you wish, send for the doctor to explain, but I shall not pay him a guinea for coming. What do you say, gentlemen? Are you satisfied with the evidence, or do you wish to see a doctor?" To this the foreman of the jury is reported to have replied, "We are satisfied with the evidence, but dissatisfied with the doctor." We cannot exactly apportion the blame of these words between the foreman and the coroner. The foreman spoke them, but they seem to be a very natural outcome of the coroner's preceding speech, and we desire to join issue with them at once by saying that we are satisfied with the medical practitioner and dissatisfied with the attitude assumed towards him by the court and the jury. The medical man in attendance upon a patient is the only person who can possibly judge whether he is justified in giving a certificate of the cause of death or no, and if medical men should be frightened into giving death certificates when they are uncertain of the cause of death we need hardly point out that one of the chief safeguards against secret murder is lost to society. That is what such treatment as Mr. MARSH has experienced may quite easily bring about. To avoid trouble and to be safe from impertinence certificates might be given without proper regard for their accuracy, and the persons who will benefit by the amiable innovation are the WILLIAM PALMERS and NEILL CREAMS of the future.

No one but a medical man can say if the cause of a particular death is apparent or not. In this case the medical man elected to say that it was not apparent. This does not mean that there was necessarily anything obscure about the case, but simply that opportunities had not been forthcoming for the medical man to discover the cause. And upon the distinct lead of the coroner the jury expressed their public dissatisfaction with the medical man for exercising rightful caution—caution which, if left unexercised, would subject the medical man to the rightful censure of law and society. The words of the coroner that he would not send for the medical man, or at any rate would not pay him a guinea for attending, amount to an insinuation, if not exactly a charge, against Mr. MARSH that he withheld the certificate so as to be summoned and receive a guinea. But on this point we will quote Mr. MARSH'S own words, addressed to the *Bradford Daily Telegraph* of Aug. 14th, after being assured that the coroner's words had been correctly reported: "I gave the relatives of the deceased a written statement of the very little I knew of the case, thinking that possibly it might help to satisfy the coroner that a formal inquest was unnecessary. Also, by way of anticipating any possible attempt at malicious misrepresentation, I will make a clean breast of the enormity that I told the relatives that if this statement should have the desired effect of saving them from the annoyance of an inquest, I should expect them to pay me for it out of the insurance money, but that, recognising their poverty, I would be satisfied with a modest 2*s*. 6*d*. in addition to the still more modest 1*s*. 6*d*. which they had already paid me. I appeal to the relatives whether they did not express their obligation to me for my kindness and moderation? These remarks are my answer to the coroner's oblique suggestion that I was hankering after a dirty guinea." We have nothing to add. There will be found in our correspondence columns this week an answer to a medical man who had inquired as to the amount of facility that it was his duty to give to a coroner without being summoned. His language is very plain, and amounts to this—No guinea, no opinion. Within certain limits we endorse that view. It is no duty of the medical man to give to the coroner the assistance that expert medical knowledge can generally supply in the search for the cause of death save in return for a fee. In addition to this, preliminary and casual conversation on such an important matter as the exact cause of a death requiring or seeming to require an inquest is unsafe. Whatever scientific facts or views the medical man may desire to make public should be made public upon oath. But this does not preclude the

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medical man from helping the coroner should he be asked as to the lines upon which the inquiry should run; and often, when the coroner is a layman, such assistance is, as we know, highly valued. But while we recommend every courtesy and liberality to the coroner, because of the high importance of his office, we cannot but see that there are certain coroners who desire to exclude medical evidence from their courts, and who attribute to the medical witness pecuniary greed on the smallest provocation. While this is so we cannot expect medical men to do other than stand on their strict rights.

THE condition of London generally, but more especially of the East-end, in respect to water-supply is a matter of urgent importance. It has been fully demonstrated that the water-supply can only be relied upon in normal seasons. We now know that the pipes will burst and the water fail to reach a great number of houses if there is an abnormal frost; and that, in the East-end at least, there is not under actual circumstances water enough for a constant supply during an exceptional drought. What we do not know is when an exceptional frost or an exceptional drought may again occur. We cannot tell how soon we may once more have to endure all the dangerous inconvenience which has been experienced during the past winter and the present summer. Under such circumstances the water-supply as at present organised stands condemned. The only debatable question is how it can best be altered and improved. So far as the East-end is concerned, the facts are so peculiar that they suggest that the present water famine was due as much to mismanagement as to the drought. We are assured that when the constant service was reduced to three hours per day the supply in East London was equal to 30 gallons per day per head. This is a good supply. It is, in any case, better than the Birmingham supply, which is equal to 25·5 gallons; while Manchester has only 24 gallons. It seems evident that great waste must have occurred somewhere, for with a supply of 30 gallons per head per day there should be no more complaint in East London than there is in Manchester, Birmingham, and many other towns. Now we are told by the East London Water Company that the average amount of water pumped in May was 51,000,000 gallons per day, which was equal to 42 gallons per head; that the supply had begun to run short from May 27th; and that in June the constant supply was cut off during several hours of the night, with the result of an economy of 10,000,000 gallons per day. This would imply that about a fifth of the consumption takes place during the night, a suggestion which does not seem credible. These figures represent, we should imagine, waste rather than consumption. Some of this waste was undoubtedly due to the carelessness of the inhabitants, who allowed their taps to run all night, but could such carelessness account for 10,000,000 gallons? This seems doubtful. Mr. BINNIE, engineer of the London County Council, attributes the waste to the leaking condition of the pipes fractured by the hard frost of last winter. In confirmation of this theory we find that, in answer to complaints as to the dirty condition of some of the water, it was urged that the water on leaving the filtering beds was perfectly clean. Then it is said that the water must have been fouled while in the pipes; but how could such an occurrence take place if the pipes did not leak? If the leakage was sufficient for the dirt to enter when the pipes were not under pressure, water must have escaped from the pipes when they were under pressure. Thus the thirty gallons per head supplied daily probably never reached their destination, but a notable proportion was lost by leakage and wasted in the subsoil.

From the public health point of view it is first necessary to solve the question of the probable leakage of the pipes. An outcry is now raised against the constant supply system. Everyone admits that sanitarians are right when they insist that constant supply is the only really safe system. On the other hand, it is maintained that what is theoretically right has been proved, by the trouble in the East-end, to be impracticable. Such an argument, we would urge, is altogether premature, for before it can be considered of any value it must be shown that the pipes did not leak. Nor should we be inclined to give up the constant supply system even if it were conclusively established that the pipes are sound. All that could be said, is that the system was badly applied. Before abandoning the constant supply system and reverting to the oft-condemned methods of house storage, to the domestic cisterns which are so easily fouled, and in which the purest water becomes tainted, we would first seek better means for preventing waste. Taps, we are told, are left open and the water allowed to run to waste. But surely, with the exercise of a little ingenuity, some means could be devised to prevent this loss of water. To begin with, all taps should be spring taps that close automatically and can only be held open by force. It is true that where there is a handle it can be held back by a string or a wedge; in that case the tap would not be left open through carelessness, but with malice prepense. As a great proportion of these taps are in backyards and courts, they are easy to inspect, and persons guilty of such malicious waste could be prosecuted. Then there is another form of tap which has no handle that can be tied, but only a small button that must be pressed against a strong spring. It must be remembered that a danger exists in the use of spring taps on a high-pressure system. If the tap is suddenly shut a shock is communicated by the column of water which may easily split the pipes. This danger, however, can be obviated by having a pipe with a reduced bore between the tap and the main—that is, in the case of a direct supply. These and many other devices must be tried, and fully tried, before the proposal to revert to intermittent supply and dangerous domestic cisterns can be entertained.

Of course, we admit that this latter and oft-condemned system is infinitely preferable to a complete stoppage of water-supply, such as that which many inhabitants of London have just experienced. It is true that the outbreak of small-pox is not to be ascribed to this cause, but in all probability the increased prevalence of diarrhœa may be attributed to some extent to the deficient water-supply. Concerning the small-pox, we consider that the growing neglect with regard to the enforcement of vaccination is more likely to supply the correct explanation of the actual state of affairs. Fortunately, Mr. CHAPLIN and the present Government are entirely independent of all the so-called faddists. The delay in the publication of the report of the Royal Commission on

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Vaccination is no excuse for neglect in the application of the Vaccination Acts. If some of the boards of guardians are remiss in the fulfilment of their duty in this respect, the present Government has power enough to so alter the law on vaccination that its application shall be entrusted to the Local Government Board. If, with the more strict enforcement of vaccination, such places as the Salvation Army shelters were brought under the Common Lodging-houses Act, the danger of a small-pox epidemic would be reduced to a minimum. These are, however, matters that stand apart from the question of water-supply, and we mention them only to show that care must be taken not to confuse two totally different issues. To return to the water famine, we repeat that many measures must be taken before any thought of abolishing the constant supply system can be entertained. First the water mains and all the pipes must be proved to be sound. Then better taps must be employed, and better surveillance exercised to prevent waste in private dwellings. Finally, the amount of water at the disposal of the water companies must—and, we understand, will—at an early date be considerably increased.

Annotations.

"Ne quid nimis."

DEATH OF DR. BRISTOWE.

IT is with much regret that we have to announce the death of Dr. John Syer Bristowe, which took place at Dixton Vicarage, Monmouth, on Tuesday, Aug. 20th. Dr. Bristowe had been for many years a prominent figure in London medical and scientific circles. He was the senior consulting physician to St. Thomas's Hospital, and had filled, among many other posts, the offices of President of the Medical Society, President of the Pathological Society, and President of the Neurological Society. He was not a voluminous writer, but his "Theory and Practice of Medicine" is a classic. He was a frequent contributor to our columns, and also wrote the articles in Reynolds' Medicine on Pyæmia and Diseases of the Intestines. He was a most admirable clinical teacher, and his memory will ever be held in high honour at St. Thomas's Hospital which he had served so faithfully for many years. The funeral takes place to-day (Saturday) at Norwood Cemetery at 1 P.M. We shall publish an extended obituary notice in an early issue.

THE OPENING ADDRESSES AT THE MEDICAL SCHOOLS.

THE time is rapidly approaching when those who contemplate entering the medical profession will have to decide, if they have not already done so, as to the school where they will receive their training. On Sept. 7th, in accordance with our usual custom, we shall publish "The Students' Number" of THE LANCET, and intending students and their parents or guardians will find full information regarding the advantages offered by the various schools as well as other matter of pressing interest to the student. Most of the metropolitan and provincial schools will open either on Oct. 1st or 2nd, while many of the Irish and Scotch schools will not commence their winter terms till some weeks later. At a large proportion of the schools the opening is characterised by an introductory address, and the names of many of the speakers will assure the quality of the addresses. At St. Thomas's Hospital Sir Edwin Arnold will address the students, and he who has so ably dealt with the work of two of the greatest physicians of the soul the world has ever seen will surely be able to stimulate his hearers to work nobly in that profession whose mission is to heal the body. At Middlesex Hospital Dr. W. Julius Mickle is to deliver the address, at St. Mary's Hospital Mr. A. P. Laurie, at Westminster Hospital Dr. Monckton Copeman, at St. George's Hospital Mr. George D. Pollock, at University College Professor J. Rose Bradford, and at Guy's Hospital Mr. George De'Ath, who will take for his subject "Our Profession, our Patients, our Public, and our Press." University College, Liverpool, and the Sheffield School of Medicine are to be congratulated on securing Mr. Hutchinson and Mr. Horsley respectively as the deliverers of the opening addresses. Professor Percy F. Frankland will take for his subject at Mason College, Birmingham, "Pasteur and his Work: the Debt of Medicine to Chemistry," and Professor F. H. Napier will address the students of St. Mungo's College, Glasgow. Professor Penberthy will deliver the introductory address at the Royal Veterinary College.

THE EXPLOITATION OF INFANCY.

THIS is a burning question in Italy. So disastrous are the results of impressing children of tender years into industrial service, that some time ago a law was passed by the Chamber of Deputies limiting the age at which boys or girls could be so employed. Severe penalties were imposed on any mill or factory owner who had engaged "hands" of either sex under twelve years. This was hailed as an immense boon to the best interests of "young Italy," but after the first enthusiasm on its enactment the law came to be quickly and systematically ignored, till the rising generation of Italians are demonstrating all too indisputably, in deteriorated physique and premature senility, that the springs of life have been drained at their source, and that persistence in this criminal breach of a wise regulation will have calamitous consequences for the future of the kingdom. Signor de Andreis, a philanthropic deputy, in a recent discourse on the subject, declared that the whole series of enactments for the protection of the child and the female against industrial employment unsuited to age or sex was in Italy so utterly set at naught that the very judges before whom a case of infringement of the law in question happened to come expressed astonishment that anyone should appeal to them for redress. The returns of the inspecting officers of the Italian army medical department speak with an eloquence all their own of the need for a stringent enforcement of the law. The augmentation of the maladies, the deformations, the stunted growth or impaired development which necessitate the rejection of the conscript has of late years become simply appalling. In the "circondario" (district) of Milan alone within the year now passing, out of 6844 youths enrolled for the levy more than 45 per cent. were found too infirm or too malformed to complete the term of military service. *Pari passu* with this physical deterioration proceeds the moral, as shown in the saddening statistics of penitentiaries, houses of correction, and prisons, all full of premature "failures or worse" in the battle of life. At the age when the budding child ought to be at school, undergoing salutary discipline, mental and bodily, he is plunged into the pernicious atmosphere of the factory or the industrial "hive," there to be initiated in all the seductions, temptations, and vices, often ending in crimes, of which these aggregations of "hands" are all too prolific. Nor is it Italy alone that suffers from this sapping of her national vitality at its source. As the International Congress for the Protection of Infancy at Bordeaux has just indicated, there is no country in Europe which has not to

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revise its *modus operandi* in the upbringing of its tender youth. But Italy's grinding poverty is an exceptional feature in her case, at once aggravating the evil and complicating the machinery for remedying it. Not a day too soon, therefore, do we hear of a steadfast attempt to be made in the next session of her Parliament to secure the observance of a salutary but shamefully violated law, and to devise other measures for the extension to the children of those conditions, hygienic and educational, without which no people can "live and thrive" or play its normal part in the world.

DEATH FROM ICE-CREAMS.

IT is well known to everyone who has worked in a hospital that there are seasonal casualties and accidents as well as seasonal diseases. Thus the boiling kettle and fire accidents occur more commonly in winter, while street accidents among children at least are of more frequent occurrence in the summer owing to the children being out more. The ice-cream season, too, claims its victims, and every year one or more deaths are registered from this cause. The cream, of course, must be held blameless, for this ingredient occurs in such small proportions that we may neglect it. It is probable that the chief offenders in the formation of poisons are the eggs, and that, as in the case recently reported from Limerick,[1] eggs which are not exactly putrid, but have undergone some change, probably owing to a micro-organism, are the cause of the alarming symptoms which sometimes arise from eating these confections. At an inquest held on Aug. 14th upon a youth aged nineteen evidence was given that he used to spend as much as 5*s.* to 7*s.* 6*d.* at a time upon ice-creams and sweets, which he devoured greedily. He died from acute gastro-enteritis. The sanitary conditions under which these ice-creams are made in many instances leave much to be desired, and we must continue to advise, as we have already done,[2] an extension of the Factory Act so that private houses in which manufactures involving public interests are carried on should be duly inspected by a public official. We should be extremely sorry to eat 7*s.* 6*d.* worth of good ice-cream, and perhaps the quantity which the unfortunate youth devoured may have had something to do with his death as well as the quality.

MOUNTAINEERING IN MIDDLE AGE.

THE holiday season, though well advanced, holds out, with a promise of late summer weather, the hope of leisure and recreation rendered all the more attractive by being deferred. Suggestions where to go and what to do are not yet exhausted. Sea and land everywhere have a welcome for the tourist who comes with no other object than to seek refreshment in the house of nature. Among other proposals we select one as being to some persons particularly fascinating, and affording at the same time an occasion for medical criticism—that, namely, which advises mountain climbing as a pastime for the middle-aged. The originator of this project, whose letter on the subject our readers may have seen, is "a superannuated climber." This description of himself is important. It is on the one hand a guarantee of his experience in the task he advises, and it affords on the other an explanation of his personal fitness to accomplish it with enjoyment and benefit. The Tatry Mountains in Austro-Hungary are described by him as being under 9000 ft. in height, bathed in air of the finest purity, peopled by hospitable inhabitants who provide excellent food and quarters, and traversed by guides whose civility and other good qualities are warmly commended. Those whom nature or the incapacity due to habit or bodily condition have not disqualified may well be content to enjoy such an athletic holiday as this. It is well, however, to bear in mind the fact that middle age in itself does not constitute a qualification. The practised climber or walker may often live safely according to his custom till threescore years or after. His brother and *alter ego* of sedentary occupation must regard the claims of stiffened joints and sinews long before that period has arrived. Not a few hearts and bloodvessels, moreover, have felt the strain of life before even fifty years of it have passed. For them the steep ascent, the rapid blood-flow, and quick breathing imply rather another and serious form of overstrain than a wholesome gymnastic competition of their organs. We touched upon this subject a few weeks ago[1] and we need not, therefore, discuss it now at greater length. The question of fitness or unfitness is, in short, a matter for individual decision, and we know of one method only by which it can be settled—namely, by medical examination.

[1] THE LANCET, July 20th, 1895.
[2] THE LANCET, June 28th, 1890.

CHILDREN'S AILMENTS AND HOUSEHOLD PREVENTIVES.

SOME ailments of children are like a simple mechanical puzzle—obscure, complicated, alarming in their symptoms, very troublesome if mismanaged, but in their cause and explanation simplicity itself. Last week a boy was taken ill from the effects, as was supposed, of a heavy dinner. Thanks to the guiding symptom of pain the true seat of his disorder was quickly discovered, and the rectum was found to be tightly packed with the broken but unmasticated fragments of nuts, a meal of which he had recently consumed on his own account. An anæsthetic and forceps relieved him of his load, the more usual means having failed to do so. A mouth full of decayed teeth showed how, in his case, mastication was well-nigh impossible. The danger of allowing so much rough and hard matter in a state quite incapable of digestion to traverse the length of the intestinal tract, or to become impacted at some point in it, is such as even an unprofessional mind can appreciate. This case, unique perhaps in actual particulars, is one of many, some of them as clear, and some obscure in character, but all capable of much mischief and misunderstanding, which bear one common accusation—indiscretion in diet. Now it is a poisonous ice-cream, now a stale fruit, now a mass of broken nuts. The inevitable question arises—Who is responsible? And its answer will usually acquit the salesman if he be a careful and fair dealer. Child and parent, therefore, must divide the blame, if any, and of the two the more intelligent will naturally have the larger share. Such cases as that above quoted should at all events impress upon parents the lesson, too little regarded, that failure to warn, and to prevent if needful by active measures, the heedless indiscretions of, their children may at any time induce, perhaps by very simple means, an illness of the greatest gravity.

A GERMAN SCHOOL OF COOKERY.

VOLTAIRE said that the English people had 100 religions (according to Whitaker's Almanack we now have about 250) and only one sauce. This, of course, was merely national jealousy; but the fact remains that English cookery is not in general good, and the knowledge of this art among the labouring classes is practically *nil*. Their *batterie de cuisine* consists of a frying-pan, in which they never "fry" but "do" things. Take the upper classes, again—in how many houses does the diner-out get an eatable curry, an omelette that does not resemble the sole of a boot, or coffee that has any right to that name? In Germany an admirable institution exists. A philanthropic millionaire left (according to the *St. James's Gazette*) a legacy to build and endow a school which is to be a model for the State schools of the country.

[1] THE LANCET, July 30th, 1895.

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It consists of two houses, one for the children of the upper classes and one for those of the labouring classes. In the cookery school they have to settle themselves what is to be cooked each day and how much they will spend.

"To aid them in their selection and choice of comestibles a list is hung up on the wall, whereon the exact amount of nourishment each food substance contains is carefully explained—for instance, how much 'good nourishment' there is in meat, flour, vegetables, groceries respectively; and on this list it is also clearly shown on good scientific principles how much of each nourishing substance every individual requires per diem. After consulting this chart and making their little list of requirements and liabilities, the girls go out into the garden and gather the herbs and vegetables, which they are taught to cultivate themselves, and then they go and buy the meat, groceries, &c., from a lady superintendent at the store-room. The girls are taught to enter all these various items of their expenditure in carefully kept account-books, and then they start their cooking operations: one makes the fire while another prepares the vegetables &c. In two hours everything must be finished and the little dinner ready. They cook it themselves."

Then they have to "wash up," and afterwards they go home. We believe the School Board teach cookery, but we doubt if their course is as thorough as the German one, and we would adjure our English millionaires to follow the example set by their foreign brother in the possession of this world's goods.

THE HEALTH OF THE POPE.

OUR Rome Correspondent writes:—"The *al fresco* life His Holiness leads in the beautiful demesne between the Vatican Palace and the Janiculan[1] has told favourably on his health, which, all things considered, was never better than to-day. For one thing, he has no threatening of those fainting fits (*deliqui*) which, in the spring months especially and during the exigencies of urgent business, were apt to overtake him. With due allowance for the *anæmia senilis*, of which he has more than the average octogenarian's share, this result is of very good omen. The Commendatore Dr. Lapponi, *archiatro* to His Holiness, in reply to an interrogatory addressed to him the other day, felt warranted in saying: 'If nothing unforeseen happens, the Holy Father's constitution is so sound that he might well attain his hundredth year.' No one is more familiar with that constitution, I may add, than Dr. Lapponi, who was Leo XIII.'s medical adviser as far back as the days when he was Cardinal Archbishop of Perugia. The moment His Eminence became supreme pontiff he would have no other body-physician than Dr. Lapponi, and certainly the measure of health he has enjoyed under a mental and even physical strain that would have tested the vitality of far younger men says much for the judgment and care with which his health is safeguarded. Besides following scrupulously Dr. Lapponi's prescriptions, Leo XIII. observes the simplest diet compatible with effective sustenance. 'Little at a time and often' is his rule, his principal meal consisting of a cup of strong soup, a slice of boiled beef with a yolk of egg, and a wineglassful of Bordeaux or well-matured Marsala. Truly a commendable example of 'plain living and high thinking.'"

STREET NUISANCES.

IN the *Times* of Aug. 20th is a letter from Mr. C. S. Loch, the secretary of the Charity Organisation Society. We commend this letter to everyone who is interested in the cause of charity. The Hospital Saturday street collection was bad enough, but of late an innumerable number of societies have started street collections, and when the craze was in full swing, as it was about two months ago, to walk down Piccadilly or the Strand was a positive penance. At every step a siren or harpy—we will not be too careful to discriminate—appealed for pence "for the little ones" or "the destitute washerwomen" or "the young Bethelites' country holiday fund." We have no doubt that the pennies of the charitable reached their due destination, but what we complain of in this method of collection is that there is no guarantee to the effect that the money is properly applied. In the Hospital Saturday Fund street collection this objection, of course, does not apply, but we fancy we are right in saying that the street collection of the Saturday Fund has fallen off by about £1900—and this result is probably owing to the disgust of street collections which the numberless imitations have inspired. Mr. Loch says we must trust to persuasion rather than legal action; but, in our opinion, if the officials responsible for the sending out these beggars—if, indeed, there are any officials—and, if not, the beggars themselves, were punished under the Vagrancy Acts, something would be done to make the streets a little less odious than they are at present. Organs, newspaper boys who yell, street-sellers of toys that whistle or squeak—all ought to be suppressed as well. The charitable beggar is, however, in some way the most offensive of the lot, and we can only rejoice that by this very multiplication he seems to be tending towards extinction.

[1] THE LANCET, July 13th, p. 128.

HOSPITAL PATIENTS IN VIENNA.

THE attendance of comparatively well-to-do persons in the out-patient rooms of the various London hospitals has long been a subject of complaint. Both general practitioners and the opponents of indiscriminate charity have lifted up their voice against the evil, the reality and magnitude of which are unquestionable, but no adequate or satisfactory method of dealing with it has yet been put into practical operation. The same question has for some years been engaging the attention of the medical profession in Vienna, and according to our correspondent in that city there is a prospect of united action being taken in the matter. The Vienna practitioners complain that not only do persons well able to afford the usual fees attend the out-patients' department of hospitals, but they become paying in-patients at charges so low as to be unremunerative to the institutions, the deficiency being supplied out of the grants provided by the State. In many cases, however, such in-patients when suffering from surgical ailments are influenced by the fact that antiseptic operations cannot be performed in ordinary lodgings. The medical men of the present day are as ready as any of their predecessors to relieve the really necessitous, but it is felt that there is a growing tendency on the part of the general public to seek low-priced medical advice, a state of things which is injurious to the true interests of all parties concerned. With a view to solve the problem, our Vienna colleagues propose that only those patients who can show proof of straitened circumstances shall be entitled either to gratuitous medical aid or to hospital treatment at reduced scales of payment. If the idea reaches the practical stage the results of the experiment will be watched with keen and general interest.

MISLEADING ABBREVIATIONS OF DEGREES AND DIPLOMAS.

IT is not proposed to discuss here in any way whether or not it is desirable that medical men should place after the letters denoting their degrees and diplomas the university or examining board from which such degrees and diplomas were obtained. This question is one which must, we fear, be determined in large part by the exigencies of time and place. What, however, we would briefly refer to is the necessity, or, at any rate, the desirability, of adopting in

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toto one course or the other. Half measures in this matter are apt to be misleading, and it is not consistent with the dignity of our profession to adopt methods which may be open to this criticism. The introduction of Diplomas in Public Health has apparently been instrumental in giving prominence to the methods of indication to which reference is here made. For instance, it is by no means uncommon at the present time to notice after a medical man's signature the letters M.D., D.P.H. Cantab., an arrangement from which the justifiable inference is, we submit, that both the degree of Doctor of Medicine and the Diploma of Public Health were procured at the University of Cambridge. In some cases, however, it would seem that the arrangement of the titles does not justify the interpretation which should obviously be placed upon them, and the M.D. degree may even be of exotic origin. It is not altogether clear why the source of a Diploma of Public Health should be specifically stated while that of a degree of Doctor of Medicine remains obscure; indeed, if the general contention be that the public should be educated in the matter of degrees, &c., it would appear to be of more importance that a medical practitioner should be selected on the merits of his M.D. than upon those of his D.P.H. We are not raising the issue of the relative merits of degrees and diplomas, but we would point out that on general ethical grounds it is desirable that if the origin of one degree or diploma is specifically indicated, that of the other should be so too.

THE HYGIENIC ASPECT OF WOOD PAVEMENT.

MR. WYNTER BLYTH embodies in his last quarterly summary of the health of St. Marylebone a report on the above subject. It is, he observes, to be regretted that the several sanitary authorities in the metropolis have not during recent years kept records of the health of those of their employés who have worked on the roadways of their districts, in order that some statistical basis might be formed from which conclusions might in time be drawn. In the absence of any such data, Mr. Blyth has endeavoured to contribute something to the knowledge of the subject by ascertaining experimentally whether the wooden blocks are saturated throughout with horse excreta, &c., or whether this pollution is superficial only. Taking as an index the amount of ammonia present in the upper, middle, and lower slices of blocks which had been laid down in Oxford-street for the last six years, and controlling his results by some of a new block of the same material, Mr. Blyth was able to demonstrate that in a block taken from the centre of the road the greatest pollution was found in the upper slice, although the block was as a whole permeated with pollution. In the case, however, of a block taken from the side of the road by far the greatest amount of pollution was found in the lowest slice, and in an amount much in excess of the block taken from the middle of the road. Mr. Blyth infers from this that the wooden blocks are by no means impervious, and that in process of time they become more or less saturated with impurity. The distribution, too, of the ammonia points, it seems, to the fact that the moisture tends to penetrate the intervals between the blocks in the middle of the roadway, and on reaching the impermeable bedding below tends to pass down to the sides of the roadway, and in this way to saturate the lowermost layer of the side blocks. Mr. Blyth, in conclusion, considers that for the purposes of health asphalt is the best form of pavement, since it, in all probability, is proof against the amount of saturation which he has demonstrated in wood. He recognises, however, the very trying noise which the contact of horses' hoofs with asphalt produces, and in summing up the effect of any one pavement upon health this feature should certainly not be disregarded. Mr. Blyth, it seems, looks forward to the disappearance of our horse traffic from our streets, and to the substitution of vehicles propelled by other motive power. It will not then, he observes, be necessary to consider the pit-pat of the horses' hoofs upon the asphalt; nor, we would add, the pollution of wood pavement by equine excreta.

DEATH CERTIFICATES AND THE RECOMMENDATIONS OF THE SELECT COMMITTEE OF THE HOUSE OF COMMONS.

IN an interesting paper read at the Medical Institution of Liverpool last March Mr. F. W. Lowndes, surgeon to the Liverpool police, discussed the very important question of what we may call irregular death certificates. In 1894 a Select Committee of the House of Commons was appointed to consider the whole question of death certification. The Committee made a number of recommendations, by far the most important of which was that the practitioner should be bound to verify the fact of death, either personally or by means of a certificate to that effect signed by two neighbours of the deceased. As the law stands at present, no verification of the fact of death is necessary, the practitioner being entitled to say, "A B died, as I am informed." This Mr. Lowndes rightly considers a very grave defect. He also lays stress upon the fact that in some cases a practitioner who has only seen the patient after death has considered that to be "attendance" and has accordingly filled up the certificate. Mr. Lowndes suggested that the word "alive" should be inserted in the form, so as to avoid the possibility of such things happening. Passing on to the uncertified deaths as inquired into by the coroner, Mr. Lowndes quoted the recommendation of the committee that the preliminary inquiries as to whether an inquest should or should not be held should no longer be left to the coroner's officer to decide, and as concerning coroners' inquests he quoted the following verdict of a coroner's jury which is worthy of the men of Gotham: "Child, three months old, found dead, but no evidence whether born alive." The recommendations of the Select Committee have not yet passed into law; but we can only echo Mr. Lowndes's wish that the Legislature will improve our system of death registration.

THE DIFFUSION OF SMALL-POX.

THE decrease in the cases of small-pox recorded in the week ended Aug. 10th—namely, a total of 54, as compared with over 100 in the week preceding—was not maintained last week, when the number rose to 81. Whilst, however, showing such a rise, the week was not one of steady increase, inasmuch as on one day alone the admissions to hospitals of the Metropolitan Asylums Board numbered 29, and on another 10; and earlier in the week one day accounted for 17 removals, three days in this way contributing 56 of the 79 admissions effected in the week. As may well be supposed, many sanitary areas sent cases, though, speaking generally, those invaded were in the eastern and southern parts of the metropolis. There was happily only one registered death in the week, this being of an individual aged over twenty years. The deceased belonged to the parish of St. Martin-in-the-Fields, and no statement was made as to vaccination. At the close of the fourth week of July there were just on 200 patients under treatment for small-pox in hospital, but last Saturday the number had swollen from 237 and 273 to 336; and the earlier days of the present week showed no falling off in the fresh patients being admitted. Round London there was some little small-pox in the West Ham vicinity, and one or two cases in other parts of the suburbs. In the provinces the chief centre of the disease seems to be in the Lancashire towns, where many cases were recorded last week. In the preceding week some eight attacks came to light at Oldham, and these were treated in the Moscow Hospital

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at Highmoor, outside the borough, where last week, as well as in the adjoining urban district of Chadderton, there were multiple cases reported, the circumstances calling for the ever ready measures of prevention which are adopted in these towns. At Wigan, too, there has been a smart outbreak, and cases which have occurred recently at Horwich and at Bradley Fold, in the absence of proper hospital accommodation, have been taken into the hospitals of adjacent councils at a weekly cost per patient of £7 7s. A single case occurred last week in the Greengate division of Salford, and 6 cases were recorded in Manchester, the patients being promptly looked to and isolated, the disease having thus made but little headway in the city. In Dublin in the week ended Aug. 10th there were 5 fresh admissions to hospital, 2 discharges, and 28 acute cases still under treatment, in addition to 4 convalescent patients at Kilmainham Hospital.

SCHOOL BOARDS AND STONE-THROWING.

A QUESTION of liability on the part of the School Board was recently discussed in the West London Police-court. In this case the plaintiff objected to the nuisance caused by children in a school playground breaking the neighbouring windows by throwing stones, and required the Board to put up a wire fence for his protection. The presiding magistrate maintained that the children alone were responsible for their misdemeanour—a somewhat barren decision, it would seem, unless someone else were in turn responsible for them. We presume that though, happily, the boy need not in regard to this dangerous peccadillo be father to the man, he is man enough in the person of his father to make amends for his offence. The parent, in short, is liable, and the School Board, which does not include stone-throwing in its syllabus of instruction, will not replace him in his parental privilege. This does not mean that the officials of the Board should sit with folded hands and take no notice of what is going on within their own premises. Stone-throwing must be promptly checked, and its prohibition strengthened by an exemplary penalty. If this be done perhaps wire fences and the like palliatives may be surrendered in favour of the radical cure. If it is not done we fail to see under what moral or legal sanction the shadowy memory of a parent's home lessons on the golden rule can suffice to transfer the Board's responsibility.

MEDICAL PRACTICE IN BORNEO.

PATIENTS within the borders of our United Kingdom have been known to complain that they were sometimes compelled to endure hard treatment at the hands of their medical attendants; but if, as has been authoritatively asserted, to derive comfort from the superior woes of others be indeed characteristic of suffering humanity, we recommend all who may deem themselves medically aggrieved to take note of the manner in which (according to the *Sarawak Gazette*) the native medical men of Borneo are wont to serve the unhappy creatures whose hard fate it is to become the victims of their tender mercies. Private Unong (of Kabong) having caught some river fish called "buntal" proceeded to cook them for his dinner, but only partook of three small ones. In a very short time he began to experience most peculiar sensations, the like of which he had never felt before. His lips and tongue grew numb and seemed as though they were swelling to an enormous size, and before long a similar kind of feeling gradually extended down his trunk and limbs until it pervaded pretty nearly the whole of his body. He contrived, however, to summon help, and when his comrades perceived his condition they promptly called in several native hakims, who lost no time in subjecting the afflicted one to a course of treatment *secundum artem Malayensem*. There is a root indigenous to Northern Borneo which is popularly supposed to be endowed with some very marvellous properties, including, amongst the rest, the power of inhibiting intoxication from alcohol. With this remarkable drug as basis a mixture called in the vernacular "akar bangun" was fabricated and administered to the luckless patient as long as he could be induced to swallow it. The gentle physicians then fastened him upon a kind of shelf over the kitchen fireplace and inaugurated a species of slow roasting with what they, no doubt, thought was music of a high order. How long this stage of the "cure" continued is not clear, but evidently the Bornean hakims were methodical people with large ideas regarding their personal dignity and constitutionally opposed to anything resembling hurry. At length a violent fit of vomiting supervened, which afforded the semi-incinerated patient great relief; and, as this was apparently the crisis aimed at, he was lifted off his shelf, whereupon he incontinently fell into a deep sleep, which lasted two days and two nights. It must not be supposed, however, that the cure was now complete—far from it. During Unong's prolonged somnolence another compound (which is described as "a most efficacious medicine") had been prepared, the chief ingredient consisting of "shavings of porcupines' teeth," and this the poor fellow was compelled to drink as a preliminary to further roasting. Eventually the private, who must have had a wonderfully strong constitution, declared that he was "fit for duty," and thus escaped from the hakims' clutches. His case is surely a notable example of a sick man's recovery in spite of his physicians.

THE "SAFE ADMINISTRATION OF CHLOROFORM VAPOUR."

MR. ALFRED WRIGHT, late medical superintendent of the Westport Hospital, New Zealand, writes that after an experience of forty years he believes chloroform can be safely given if care be given to the following points. The administrator should devote his sole attention to the chloroform. The chloroform should be administered from an inhaler which admits of accurate regulation of the quantity of vapour given. This desideratum is best met, he thinks, by employing the most recent modification of Junker's inhaler, called the "regulating chloroform inhaler," fitted with the feather respiration indicator. Mr. Wright, although he has never had a death in his practice, believes all fatalities are due to respiratory failure, and he describes the well-known symptoms of death by overdose. In cases attributed to heart failure Mr. Wright believes an error of diagnosis is in the hurry of the moment made, and the true cause of death in all cases is a chemical change in the blood which prevents its due aeration. He emphasises the dangers of "happy-go-lucky" administration of chloroform.

THE EXPLOSION AT THE MILE-END INFIRMARY.

WE are all aware that it is easy to be wise respecting causes and effects after an event; yet we may even then be wise to great advantage, and we are therefore justified in accepting whatever practical truths may be learnt from the unpleasant teachings of disaster. The recent explosion at the Mile-end Infirmary is an example of this class which is widely instructive. What mischievous consequences might have resulted under conditions less favourable to the safety of the inmates we may judge from the damage actually done. The upheaval of the garden and front corridor, the destruction of floors in two wards and of many windows, and finally an outbreak of fire which wrought considerable havoc in the basement of the building—these effects may suffice to suggest what further evils might have been. We have to consider also the fact that the infirmary contained at the time of this occurrence over 350 inmates, many of them seriously ill, and some possibly infirm in mind as well as in body. It

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was a happy circumstance that this accident occurred in the daytime. Had it happened at night the efforts of officials could not have been equally prompt and effectual, and the consequences of a possible panic would be difficult to estimate. Notwithstanding the fortunate absence of these graver features, however, it would be folly to omit the use of any and every precaution which may ensure safety in a imilar emergency in future. The importance of providing means of exit from all public buildings is now generally admitted, and it has not been overlooked in the construction of modern hospitals. In the older buildings it is possible that there may still be room for improvement in this particular. The like may be said in regard to hydrants and hose, which in the hands of a few capable men prevented the accident at Mile-end from becoming a catastrophe. As regards the cause of this occurrence, an official inquiry will doubtless enlighten and instruct public opinion. A point of evident importance, though clearly under-estimated in this case, is to be found in the fact that though the garden soil is said to have been impregnated with gas escaping in large volume from a main pipe, no means were used to prevent the use of lighted matches by persons walking in the grounds.

THE BATTLE OF THE CLUBS AT CORK.

IT was very gratifying to gather from our Cork news that there was a reasonable prospect of the questions in dispute between medical men and the clubs being discussed in an adequate manner and under conditions giving a fair prospect of success. The Mayor of Cork has most properly interested himself in the settlement of a dispute which is disastrous to all parties concerned. No use of his Worship's office could be more appropriate than this one of mediator between a liberal profession and bodies with which it wishes to deal liberally, while preserving due respect for its own grave and responsible interests. The profession as requested sent six representatives to meet an equal number of representatives of the clubs, the Mayor presiding. But we regret to learn from our Cork correspondent, as we go to press, that the proceedings terminated without any understanding being arrived at.

THE lectures of the Royal College of Physicians of London for the coming year will be delivered as follows: The Goulstonian Lectures by Dr. Patrick Manson, the Lumleian Lectures by Sir Dyce Duckworth, the Croonian Lectures by Dr. George Oliver in 1896, and by Dr. Greenfield in 1897. The Bradshaw Lecture will be delivered on Nov. 7th, 1895, by Dr. Bradbury.

THE RELATIVE HEIGHTS AND WEIGHTS OF BENGAL PRISONERS.

BY SURGEON-CAPTAIN W. J. BUCHANAN, M.B. DUB.,
SUPERINTENDENT, CENTRAL GAOL, BHAGALPUR, INDIA.

THE following table has been compiled from office records in the Central Gaol, Bhagalpur. It is based upon the recorded heights and weights of over 8000 male adult prisoners, most of whom have been admitted to Bhagalpur Gaol, all in good health, in the last five years. All those recorded as having been admitted in indifferent or bad health have been excluded from these figures. They, therefore, represent the average weight for each height of healthy men. The figures differ slightly from a similar table published by me in the *Indian Medical Gazette* some time ago; that list was found to be based in some instances on too few cases, men over 5 ft. 8 in. not having been found in sufficient numbers. This has been rectified by an examination of all the taller men at present in the gaol, and by use of figures kindly supplied by the medical superintendents of many other gaols in this province. The figures have been found to be applicable to most parts of the province of Bengal, excluding, of course, the hillmen, such as are found in Nepal and the Darjiling Himalayas. They have been tested to a large extent also in the central gaol, Nagpur, in the Central Provinces, and found to apply almost exactly. They do not, however, apply to the inhabitants of the North-West Provinces, Oudh, and the Punjab, where the men are of a taller and heavier type. They contrast markedly with figures recorded for heights and weights of European adults. As no table of the kind appears to have been published before, it is considered they will prove interesting to anthropologists in Europe as well as useful to medical officers in charge of gaols in India. For practical purposes I find the following rule sufficiently accurate for ascertaining the normal weight of a man of this class. Taking 100 lb. as the correct weight for a man of 5 ft., if we add 3 lb. for every inch above 5 ft. we shall arrive at a fair average normal weight—e.g., a man of 5 ft. 5 in. = 5 × 3 + 100 = 115 lb. It must be remembered that a prisoner passed as of "good health" is considered liable to hard labour. I maintain that if a man of this part of India reaches the standard above prescribed he will be capable of performing the severest form of hard labour.

Height.	Weight.	Height.	Weight.
5 ft. 0 in. ...	98 lb.	5 ft. 7 in. ...	118 lb.
5 ,, 1 ,, ...	100 ,,	5 ,, 8 ,, ...	122 ,,
5 ,, 2 ,, ...	103 ,,	5 ,, 9 ,, ...	128 ,,
5 ,, 3 ,, ...	106 ,,	5 ,, 10 ,, ...	132 ,,
5 ,, 4 ,, ...	108 ,,	5 ,, 11 ,, ...	154 ,,
5 ,, 5 ,, ...	112 ,,	6 ,, 0 ,, ...	138 ,,
5 ,, 6 ,, ...	115 ,,		

In his work, "La Donna Delinquente," Lombroso gives a rule for computing the normal weight of an individual derived from measurements of Italians. The rule is as follows: "A person is regarded as having a weight equal to the average in whom the number of kilogrammes which represent the weight is equal to the number of centimetres by which their statures surpass the metre." This is an exceedingly rapid rule for calculating weights for height if we use the decimal measurements. It works out as follows in pounds and inches: starting with 110 lb. for 5 ft., for every inch above this 5 lb. are to be added. This is too high an estimate for ordinary peasants of the province of Lower Bengal, but as far as my experience goes of men of the North-West Provinces and Punjab in India I think it would prove fairly exact.

Bhagalpur.

THE BATTLE OF THE CLUBS AT BRUSSELS.

(FROM OUR SPECIAL COMMISSIONER.)

THE struggle between the medical profession and medical benefit societies has reached a most acute stage in Belgium. The situation across the Channel is identical with what exists in Great Britain and Ireland. The only difference rests in the fact that the medical men who practise in the Belgian capital have created a much better fighting organisation than anything of the sort actually in existence among members of the profession on this side of the Channel. There are about 450 medical men in practice at Brussels, and of these 430 are paying members of the Collège des Médecins de l'Agglomération Bruxelloise (Syndicat). For the sake of brevity this association is generally called Le Syndicat Médical. Each member, to cover working expenses, pays an annual subscription of 3 fr. and pledges himself to pay any levy, whenever made, so long as the sums raised from time to time do not exceed in all the sum of £4 in one year. As yet no levy has been made, and the 430 annual subscriptions of 3 fr. each have sufficed to cover all the working expenses. On the other hand, ninety-five mutual aid or benefit societies of Brussels have federated and elected a general managing council. This is known as the Federation des Mutualists. The members of the Federation number about 12,000, who generally pay 2 fr., or 1*s.* 8*d.*, per annum for medical attendance for themselves and their families, and this represents in all a population of at least 50,000 persons. The

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Federation of the Mutualists had engaged the services of eighteen general practitioners and of two specialists. The salaries paid varied from 700 fr. to 1400 fr. The salary was estimated according to the number of Mutualists residing in the district of each officer. The officers employed had to reserve two hours for consultations every day and to go to the homes of the patients who could not come to their surgeries. They had to see patients whatever the nature of their illness and to help in case of operations. An extra allowance of 25 fr., or £1, was made for accouchements or miscarriages, and 2 fr. for vaccinations at the surgery or 3 fr. for vaccinations at the patient's home. But as these extra allowances had to be paid to the medical man by the patients themselves it very often happened that the officers failed to obtain the money. It is absolutely impossible to estimate what this rate of payment represents per visit. The medical officers in central districts have a larger number of patients, but the distances are much shorter. A medical man who had a suburban district showed me his books, and, roughly speaking, I should say that he gave fifteen consultations per day, Sunday included. His salary was 1200 fr. per annum, so that he would receive on an average 22 centimes, or a trifle less than 2½*d*., per consultation. This, however, is no rule; the proportion of payment varies greatly per district. It must also be borne in mind that the cost of living is much cheaper in Belgium than in England; that where a high-class consulting physician would receive in London a two-guinea fee, in Brussels from 16*s*. to £1 would be given; and that in ordinary practice among the poorer classes fees of one and two francs are considered very acceptable.

As in all other countries, a number of comparatively well-to-do persons have crept into these "mutualist" or benefit societies; indeed, some middle-class societies have been constituted that should never be allowed to contract for such cheap medical service. These are the Fraternelle Belge, the Mutualité Commerciale, and the Société des Voyageurs de Commerce. It is objected that commercial men and commercial travellers can well afford to pay for medical attendance, and cases are cited of members of these societies who are in receipt of incomes equal to even £1000 a year, yet they expect to obtain medical attendance for themselves and their families in exchange for a payment of only 2 fr. (1*s*. 8*d*.) per annum. A case was described to me of one of these wealthy mutualists, as the members of such societies are called, who paid a subscription of 4 fr. or 5 fr. a year. He had an operation performed, and gave the operating surgeon, who was not in the service of the Mutualist Federation, a fee of £24; but he gave nothing to the medical officer of the Federation who also attended him, and he obtained from the Federation medicaments, bandages, &c., to the value of £6. If he could afford to give the operating surgeon £24, why should he not also pay at a proper rate for his medicaments and his ordinary medical attendant? Another medical man related to me how he had been called up in the middle of the night to attend the wealthy owner of a large establishment, who refused to give him a fee on the ground that he paid 1*s*. 8*d*. per annum to a mutualist society. Under these circumstances the Medical Syndicate opened communications with the Mutualist Federation. After lengthy negotiations the Federation suddenly offered to increase the salaries, in some cases to the extent of 500 fr. (£20) per annum. Formerly the increase allowed never exceeded £4 a year. The Medical Syndicate urged that they were not seeking to obtain more money for medical services. That was not the principle at issue. There was no lack of medical men who would gladly give their services for nothing if it was to relieve a genuine case of poverty, but they absolutely refused to attend rich men on the same terms as the poorly paid labouring classes. At last the Federation replied that they would endeavour to eliminate the well-to-do members of their societies; and, acting on this principle, they had refused to admit to their ranks the Israelite Benefit Society and the Société des Sauveteurs. The Federation, however, gave no sort of explanation as to how they proposed to eliminate the well-to-do element. They, on the contrary, refused to take any so-called inquisitorial measures so as to ascertain what was the income of their members. The Medical Syndicate now replied that, if the Mutualist Federation could not or would not do this work, the medical men themselves were quite prepared to carry it out; and claimed that the officers in the service of the Federation should have the right to refuse to attend such members of the mutualist societies as could afford to pay a proper fee. This, and this only, is the point at issue. All other questions raised are of secondary importance. The Federation, however, refused to negotiate further or to in any way amplify the vague promise they had made. Thereupon the twenty medical men in the service of the Mutualist Federation, obeying with exemplary discipline the orders issued by the Medical Syndicate on July 5th last, gave in their resignations on July 6th. Conforming, however, to instructions received from their syndicate, they have from motives of humanity continued to attend the patients actually under treatment when the movement commenced.

To meet this emergency the Federation offered high salaries to anyone who would undertake to replace the medical men who had resigned. The scratch staff of medical officers thus got together were quite incapable of doing all the work required. There were never at any time more than eleven enrolled, and I am assured that at the present moment only four of these render any really effective service. Being thus absolutely incapable of supplying the medical assistance which the Federation are pledged to provide for all their members, an announcement was made that any member of the affiliated mutualist societies might consult any medical man he chose and pay him a fee of 2 fr. The money would be reimbursed to the member by the society to which he belonged, only he was especially recommended not to consult any of the twenty officers who had resigned. The Medical Syndicate met this manœuvre in a very effective and simple manner. They issued orders that all practitioners, except the twenty officers in question, were to refuse to give receipts for the 2 fr. fees offered by the mutualists. The latter were, therefore, unable to prove that they had paid the 2 fr., and consequently could not be reimbursed. They then naturally, and in spite of the recommendation received to the contrary, began to gravitate back to the Federation officers, from whom they had no difficulty in obtaining the receipt for the 2 fr. Thus these officers are getting a number of their patients back again, and, financially speaking, on very much better terms.

In this struggle the Medical Syndicate have no power beyond that derived from the voluntarily accepted discipline of the members. Fortunately, this discipline has been very strictly maintained. The Federation had appointed a medical man, with the high salary of 4000 fr. per annum, as the chief of their medical service. For the success of the movement it was absolutely indispensable to dislodge this adversary. Measures were accordingly taken. He was systematically "cut" by the whole of the profession; no one would enter into consultation with him. If he came near his old medical friends they put their hats on their heads and their hands in their pockets and refused to shake hands with him or to speak to him. If he entered a café or any other public place all the medical men present at once rose and left. He was medical officer to one of the Brussels theatres; his colleague, the senior medical officer of the theatre, went to the manager and threatened to resign his post if his colleague was not at once dismissed. This request was immediately granted. The whole medical staff of the Civic Guard of Brussels tendered their resignations if the officer, who was one of their colleagues in that service, was not dismissed. Though the position of medical officer to the Civic Guard is only an honorary office it is much envied by the profession, as it generally brings with it a considerable increase of private practice. The colonel of the Civic Guard, who did not at all relish losing the services of all the medical men enrolled, at once acted as requested. The result was that the chief of the newly constituted medical staff serving the Mutualist Federation found life absolutely unendurable, and finally came to the Medical Syndicate, apologised for his conduct, joined the Syndicate, undertook to obey their orders, and therefore had to at once resign the appointment the Mutualist Federation had given him. As already mentioned, I am assured that the Mutualist Federation have now only four medical men at their service who are really capable of doing the work required.

Brussels, Aug. 20th.

THE HORSE SICKNESS OF SOUTH AFRICA.

THE recently issued report of the Colonial Bacteriological Institute, Graham's Town, Cape of Good Hope, for the year 1894, is mainly devoted to work done in the investigation of the South African epizootic known as "horse sickness." This

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disease seems to be present in some parts of Cape Colony every year, and at considerable intervals assumes the proportions of a formidable epizootic. During the two years 1854–55, when the colony was much less extensive than at present, it carried off 64,800 horses, mares, and foals, and the mortality in the recent outbreak of 1891–92 has been computed at 13,900 horses and 140 mules. Systematic investigations of this disease by a trained observer were commenced in 1887, when Mr. Joshua Nunn, F.R.C.V.S., as a result of his observations in Natal, concluded that it is not anthrax, and that it is not contagious. In June, 1891, Dr. Alexander Edington of Edinburgh became director of the newly created Bacteriological Institute, and has continued the investigation of horse sickness since the beginning of 1892. The death-rate of animals attacked is from 95 to 99 per cent. Invariable post-mortem phenomena are copious effusion of serum into the pericardium, pleuræ, and pulmonary tissue, the presence of yellow solidified serum in the subcutaneous tissues of the neck, and of yellow fluid in the trachea. Death is immediately due to the effusion into the pericardium, lungs, and pleuræ. The effusion into the lungs is not only along the lines of the interlobular septa, but is actually into the air cells themselves, so that the animal may be practically drowned in its own blood serum. Dr. Edington found that not only is inoculation of healthy animals possible, but that if the material for inoculation be suitably selected a fatal result will constantly follow. In the blood of all horses dying from uncomplicated horse sickness, after a period of nine or ten days' illness, reckoned from the date of infection, he discovered peculiar oval bodies much larger than micrococci. They are composed of a delicate cell wall with flattened and thickened ends, containing a peripheral substance which stains much less deeply than the cell wall, while centrally there is a round or oval body that stains deeply. In size they may be 3·5 μ long by 2·5 μ broad, in other cases 5 μ long by 3 μ broad, while in a few exceptional instances they may be nearly spherical with flattened ends. The ends or poles are characteristic. They are always flat or slightly concave from without inwards, and the extreme points of each flattened pole are usually thickened, so that there is an appearance as of two micrococci lying upon the free ends. The body placed centrally is evidently a nucleus, and stains very deeply. The staining fluids are 1 per cent. aqueous solutions of dahlia, methyl violet, and fuchsine. Cover glasses are prepared with thin films of blood which are dried in the air, quickly fixed by passing thrice through the flame of a Bunsen burner, stained for three minutes, washed in sterilised water, dried, and mounted in balsam. Numerous and varied cultivation experiments were unsuccessful. The organism is not a bacterium, but the vegetative spores of a pathological mould, the mycelium of which Dr. Edington has also discovered. He has proposed for the organism, pending the further working out of its life history, the name of œdemamyces, and for the disease it produces œdemamycosis.

In Cape Colony humanised vaccine lymph is distrusted on account of the prevalence of leprosy, and shortly after Dr. Edington's arrival in the colony he advised the Government that the preparation and public supply of calf lymph should be one of the functions of the Bacteriological Institute. The suggestion was adopted and the work was soon carried out on a great scale, 146,344 tubes having been sent out during 1894, greatly to the financial advantage of the Institute. On April 30th, 1895, he made the very important announcement, in a letter addressed to the Secretary for Agriculture, that he had discovered a vaccine protective against horse sickness. At the same time he requested that he might be admitted to a share in the profits derivable from the sale of his vaccines; but the official reply was that "any discoveries you may have made or may make whilst engaged in investigating the diseases of stock, for which purpose you specially engaged yourself to Government, are, as a matter of course, the property of the State, and I am to inform you that your claim to a share of the profits on any vaccines resulting from your investigations at the Institute cannot be entertained." Dr. Edington afterwards unreservedly withdrew any claim which he might seem to have advanced to a proprietary right in any of the discoveries made in the Institute or in the preparation of the vaccines. The results attained under his management were commended last July by a select committee appointed by the House of Assembly to inquire into the working of the Bacteriological Institute.

FORTY-NINTH REPORT OF THE COMMISSIONERS IN LUNACY TO THE LORD CHANCELLOR.[1]

THE Annual Report of the Commissioners in Lunacy for the year 1894 commences with the statement that the total number of lunatics, idiots, and persons of unsound mind included in the returns, statutory and other, made to their department was, on Jan. 1st, 1895, 94,081, being an increase over the corresponding number on Jan. 1st., 1894, of 2014. The total is made up of 8250 private, 85,089 pauper, and 742 criminal patients, and the summary shows a decrease of 61 in the private class, but increases of 2064 and 11 respectively in the pauper and criminal classes The private patients appear to have increased by 28 in county and borough asylums and by 6 in provincial licensed houses, but they decreased on the other hand by 59 in registered hospitals, by 23 in metropolitan licensed houses, by 3 in naval and military hospitals, and by 10 as regards single patients. The pauper patients appear to have increased very generally, with the exception of a decrease of 1 in registered hospitals and 9 in ordinary workhouses. In only eight of the fifty-six "union" counties in England and Wales was there a decrease in the number of pauper lunatics. The increase was largest—viz., 482—in the county of London, but contrasts favourably with that of 1893—viz., 800. In Lancashire it amounted to 202, which was, however, less by 63 than the increase of 1893. In Yorkshire and Essex, where the increases were 186 and 141, these increases were respectively 75 and 81 more than in 1893. An unusual feature is the increase in the number of out-door lunatic paupers, this class having for many years shown a marked tendency to decrease.

The Commissioners again discuss the important question as to whether the increase in the total number of lunatics implies an increase of insanity in its more active forms. In connexion with this matter they compare the average annual increases since 1859 and point out that the average annual increase in the last six years (1889 to 1894 inclusive)—viz., 1623—is less than that of the decades 1859 to 1868 and 1869 to 1878, when it was 1641 and 1671 respectively, in spite of the large increase of the general population. The proportion, however, of the total yearly admissions of lunatics into institutions for lunatics and as single patients to total population has increased almost continuously from 1869 to 1893, but it is gratifying to find that there was a slight decrease in 1894, the ratio per 10,000 of admissions to population dropping from 5·99 to 5·88. This steady increase of admissions, with the exception of 1894, is attributed partly to the reception in recent years of more cases of mental decay resulting from old age, the ratio of old age admissions to total admissions being 2·2 per cent. higher in 1893 than in 1883.

An important factor in the accumulation of cases is the diminished death-rate in asylums in the last thirty-six years, the ratio falling from 10·31 per cent. of the average numbers resident in the decade 1859–68 to 9·78 for the past six years. Against this, however, must be set the fact that the recovery rate has increased, the ratio last year being 40·31 per cent. of the total admissions, or 1·86 higher than in 1893, and 0·65 higher than the average of the ten years including 1894. The diminished death-rate and increased recovery-rate, however, when balanced against each other are calculated to account for 4228 of the total number under care at the end of 1894. The figures shown in the report certainly give no cause for alarm as to the prospect of a marked increase in the number of cases of insanity in proportion to the population, and the increasing recovery-rate and diminishing death-rate are matters upon which those responsible for the management of institutions for the insane throughout the country are to be heartily congratulated. The report contains the usual statistical tables which space will not permit us to enter upon here. Under the head of County and Borough Asylums the Commissioners refer to the desirability of the establishment by local authorities of special accommodation for pauper idiot and imbecile children, of which there is great lack at present, the association of these children with the adult insane being an undoubted evil. A separate block for this class has been

[1] London: Eyre and Spottiswoode. 1895.

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built at the Northampton County Asylum. The Commissioners express their strong impression of the need of cheap accommodation for the insane who are not paupers, but who cannot afford to pay much for their treatment, and they also desire to advocate the extension of lunatic hospitals on a charitable basis

The Annual Report of the Commissioners always contains some unpleasant reading, and as evidence that patients are not the only people liable to injury in asylums, may be mentioned the fact that no less than three medical superintendents were the victims of murderous assaults by patients during 1894—viz., Dr. Wigglesworth at Rainhill, Dr. Deas at Exeter, and Mr. Case at Leavesden. The Commissioners urge these facts as an additional argument for the recognition by county councils of the arduous and dangerous duties of those having the care of the insane, and the desirability of the universal establishment of pensions for long service or accident. The number of suicides in county and borough asylums was ten only, but there is a rather long list of fatal casualties during the year, and a remarkable death is reported—namely, that of a man from shock following gastrostomy, at which operation nearly 1¼ lb. of nails, buttons, wire, &c., were removed from the stomach.[2]

A large part of the remarks about registered hospitals consists of the Commissioners' report on their special inquiry respecting the death of a patient while in the "dry pack" at the Holloway Sanatorium, and they comment on the fact that their power of control over hospitals for the insane is very limited, and think it ought to be extended by the Legislature. The new regulation on the subject of mechanical restraint, which is found in Appendix P in the Report, is apparently to some extent the outcome of this unfortunate case. The Commissioners report satisfactorily, upon the whole, of the condition of licensed houses throughout the country, though they suggest alterations and improvements in several institutions. The Report closes with the Commissioners' expression of regret at the death of their colleague, Mr. James Wilkes, who, previously for fourteen years medical superintendent of the Stafford County Asylum, had been a Commissioner since 1855.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.

THE fourth annual congress of the British Institute of Public Health assembled at Hull on Aug. 8th, and was largely attended not only by members of the Institute but by official delegates from upwards of seventy municipal authorities, County Councils, School Boards, Metropolitan Vestries and Boards of Works, &c.

The opening ceremony was the formal reception of the visitors on the afternoon of Aug. 8th at Hymers College by Alderman Richardson, who is Mayor of Hull and President of the Congress. He said that this visit of the Institute was very gratifying to the people of Hull, especially as this was the first time that such a meeting had been held in a provincial town. Hitherto the Institute had met in the metropolitan cities of London, Edinburgh, and Dublin, and the selection of Hull on the present occasion was very acceptable to the inhabitants. Their population in the year 1847 was only about 70,000, and the death-rate was 31 per 1000; in 1894, however, the population had risen to over 216,000 and the death-rate had fallen to 16·9 per 1000. A very large sum had been expended in producing this happy result, but the money had been well laid out, because an improvement in the health of the people resulted in an increased capacity for work and for enjoyment of life. Hull was an ancient as well as a prosperous town; its charter of incorporation dated back to 1428, and was the second of the municipal charters of the kingdom.

The Sheriff of Hull and the Mayors of Huddersfield, Folkestone, and Birkenhead having spoken, Professor W. R. Smith, President of the Institute, replied that his first duty was to thank the mayor and corporation for inviting the Institute to hold its congress this year in Hull. They were also greatly indebted to his worship for inducing the various municipalities and county councils to send nearly 300 delegates to assist in their deliberations. The council of the Institute were glad to have an opportunity of coming to Hull, it being the third port in the United Kingdom and the gateway to the great industrial centres of Yorkshire and the north of England. It was worthy of note that the Hull death-rate for 1894 was only 16·9 per 1000, and that this succeeded a death-rate of 20·2 per 1000 during the previous decade. The death-rate from zymotic diseases was rather high during 1893, being as much as 4 per 1000, and it was only right that they who came from districts which were not seaports should recognise that for their low mortality from such diseases they were under deep obligations to Hull and other towns similarly circumstanced. The high death-rate in 1893 was, in fact, mainly caused by deaths from cholera, and it was very satisfactory to those who lived in inland places that that great scourge was promptly dealt with at the ports and prevented from spreading in the country.

Sir Henry Littlejohn said that the corporation of Edinburgh had expended nearly three-quarters of a million in improving the sanitary state of the city.

Sir Charles Cameron expressed his opinion that no better arrangements for preventing the spread of cholera could be made than those which had been carried out at Hull. He thought that the expense of making these preparations should not fall upon Hull and the other seaports, but should be defrayed by the country at large.

The work of the four different Sections began on Friday, Aug. 9th, and concluded on the following Tuesday, and among the many interesting subjects introduced to the notice of the meeting may be mentioned Epidemic Cholera (Surgeon-Lieutenant-Colonel Pringle), Public Water-supplies for Rural Districts (Sir James Russell), Municipal Abattoirs and Meat Inspection (Dr. S. Marsden), Cremation (Sir Henry Littlejohn), and Dust and Refuse Disposal (Mr. S. J. Beaman). We print in our issue to-day the address of Dr. J. Spottiswoode Cameron, the medical officer of health for Leeds borough and President of the Section of Preventive Medicine.

At the conclusion of the work of the Sections votes of thanks were accorded to the chairman and governors of Hymers College for placing the building at the disposal of the Congress, to various local gentlemen who had entertained the members, and to the office-bearers of the Institute.

SHENTON *v.* SMITH:

THE CASE OF MR. HENRY LIONEL SMITH, M.R.C.P. IREL.

OUR readers are familiar with this case, but it is of such striking interest, not only to medical men, but to all whose duties bring them into contact with things official in our colonies, that we consider it right to report from time to time any progress that has taken place in the attempt to secure for Mr. Henry Lionel Smith something a little more tangible than sympathy in his admitted wrongs. The story will always bear recapitulation, for the details are a little involved, though the wrongs inflicted are very patent to comprehension.

In 1887 Mr. Smith received the post of acting medical officer at Albany. In the following year events happened during the transfer of the Albany Colonial Hospital to new buildings which resulted in the death of a patient suffering from enteric fever, the immediate cause of death being, as was alleged, exposure to cold. For this death a coroner's jury of three persons attached blame to Mr. Smith, and the Government dismissed him, an order being passed on July 9th, 1888, informing him that his tenure would cease at the end of the year. Mr. Smith proved that he was not responsible for the mishap, and that the act of the workmen which led to the exposure of the patient to cold was done in his absence and without his authority, and the Government allowed an appeal to the Secretary of State, who upheld the Governor's decision. Thereupon Mr. Smith—having been refused a hearing before the Medical Department in West Australia, while Sir William Robinson had declined to arbitrate after the first trial—entered a Petition of Right, with the Colonial Secretary as defendant. In this trial the jury disagreed, eleven being for Mr. Smith and one against, but in a subsequent trial they found for the plaintiff, with

[2] An account of this case by Dr. J. F. Gemmel, with an engraving of the nails &c. contained in the stomach was published in THE LANCET, vol. ii. 1894, p. 432.

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£200 damages for wrongful dismissal. On the further consideration of whether the plaintiff had or had not been wrongfully dismissed the Court were divided, so that the original verdict remained undisturbed. In an appeal from this, specially allowed to the West Australian Government, before the Judicial Committee of the Privy Council on Feb. 2nd, 1895, the Court ordered that judgment be entered for the appellant (the Government of West Australia), but without costs in regard to the litigation in Australia.

Colonial civil servants, therefore, holding acting appointments can be dismissed at any moment by the Government without any reason being assigned, while the regulations are of no value as protection to them.

On July 12th, 1895, the following official letter was sent by the Royal College of Physicians of Ireland to Mr. Chamberlain, the new Secretary of State for the Colonies:—

"Royal College of Physicians of Ireland, Dublin,
"July 12th, 1895.

"SIR,—I am directed by the President and Fellows of the Royal College of Physicians of Ireland to bring under your notice the case of Mr. H. Lionel Smith, a Licentiate and Member of this College. In 1887 Mr. H. L. Smith was appointed acting medical officer at Albany, West Australia. After a year's service he was notified of his dismissal by the governors, owing to the death of a patient in the Albany Colonial Hospital, for which a coroner's jury, consisting of three persons, attached blame to Mr. Smith. An appeal to the Home authorities having been made in vain, Mr. Smith, by entering a Petition of Right, took proceedings against the Colonial Government. The jury gave a verdict in his favour, finding that the Government had no reasonable cause to dismiss him, and awarding him £200 damages and costs. Against this decision the Colonial Government appealed to the Full Court, and there the verdict of the jury remained undisturbed. A final appeal was then made by the Government to the Privy Council, and this tribunal has given its decision against Mr. Smith, thus affirming the right of Government to dismiss civil servants holding acting appointments without notice and without assigning any cause. The President and Fellows wish to disclaim any intention of disputing the decision of the Judicial Court of the Privy Council, but they think it their duty to lay Mr. Smith's case plainly before your notice. Mr. Smith was dismissed owing to a verdict of a coroner's jury, consisting of three persons, after a superficial inquiry, while subsequently, when the case was heard before twelve jurymen and the whole of the evidence taken, and the doctor's defence fully put forward, he obtained a verdict with £200 damages and costs. This must be taken as overriding the verdict of the jury at the inquest, and therefore Mr. Smith must be considered as free from all blame and to have completely vindicated his character. The result of this proceeding, however, is to Mr. Smith a very serious matter. He obtains no redress—not even the damages awarded him by the jury—and will have to pay his own costs of the colonial proceedings, and now, at the end of eight years of anxiety and litigation, he, although acknowledged to be innocent of the charge for which he was dismissed, finds himself, owing to a decision on a purely legal point, a ruined man, and obliged to begin the world again at an advanced age. For these reasons the College would most respectfully request you to take the matter into your careful consideration, so that Mr. Smith may in some way be compensated for all the hardships to which he has been exposed owing to what the President and Fellows cannot but consider as a wrongful dismissal.

"I am, Sir, your obedient servant,
(Signed) "G. P. L. NUGENT, M.D., Fellow and Registrar."

To this communication the subjoined reply was received, and we may note in passing that the courtesy of Mr. Chamberlain's words is enhanced in our eyes by the promptitude of his answer at a time when it is reasonable to suppose that even his talents for organisation have been strained.

"Downing-street, Aug. 8th, 1895.

"SIR,—I am instructed by the Secretary of State for the Colonies to acknowledge the receipt of your letter of the 12th ult., submitting a representation on behalf of Dr. Henry Lionel Smith, a Licentiate of the Royal College of Physicians in Ireland, in connexion with the circumstances in which he was removed in March, 1889, from the temporary charge of the Albany Hospital, Western Australia. I am to state that Mr. Chamberlain, while glad to think that Dr. Smith was able to disprove the professional misconduct in the case of the boy Webb, which was imputed to him in the verdict of the coroner's jury and in the Governor's minute, feels obliged to point out that the doctor's own evidence at the inquest contributed to the view taken by the jury and the Governor. He thinks also that it is to be regretted that Dr. Smith was advised to take legal proceedings in respect of matters which did not afford him a ground of action, and he feels that it is not possible for him to admit that the ultimate reversal of a verdict which should never have been given is ground for awarding Dr. Smith compensation at the expense of the public. I am to add that it would not in any case have been in Mr. Chamberlain's power to grant compensation in a case of this description, as Parliament has not placed at his disposal any funds from which it could be paid.—I am, Sir, your obedient servant,
(Signed) "JOHN BRAMSTON."

We quite understand that direct pecuniary compensation in such cases is always difficult to obtain. A strong Government (in using the word Government we are not alluding to a party, but to the British Constitution) does not make convenient arrangements beforehand, so that the results of mistakes may be obviated, for it does not anticipate making mistakes at all. But there are other methods than by the gift of so much money of showing practical sympathy with the plight of a citizen who has been caught in the cogs of the machinery of the Constitution and been disabled thereby; and we know that any favour shown to Mr. Smith, who has borne his grievous wrongs with the utmost pluck, will be hailed with acclamation by all who know his story. Reinstalment in the service from which he was dismissed would, we can believe, be awkward both to the department and its restored official, but the means at the disposal of Government by which Mr. Smith's case can be generously met are many.

With regard to the words "temporary charge" in Mr. Chamberlain's letter, it has been proved that Mr. Smith was led to believe that when he accepted office he was to hold for life (of course, subject to good behaviour), and he invested his money in his predecessor's practice on that understanding. We have no doubt that Mr. Smith regrets as much as anyone that he has been involved in legal proceedings which have ruined him, and have left him a middle-aged man with children to begin the battle of life over again, penniless and lying under the stigma (for it is no less) of being "a man with a grievance"; but what—what in the name of prudence even—was he to do? He took legal proceedings under the Petition of Right because, having been refused a hearing before the heads of the Medical Department in West Australia and arbitration by the Governor, he was recommended to take this course by his counsel, Mr. Hensman. Mr. Hensman is now a judge in the colony, and with Mr. Chief Justice Onslow (who ruled in Mr. Smith's favour) constitutes the highest legal authority in the colony. If Mr. Smith had declined to take Mr. Hensman's advice and had quietly sat down under a charge of constructive murder founded on the ill-considered verdict—"which should never have been given"—of an ignorant coroner's jury of three persons, would that have been prudent?

Eight years of his life, it is true, have been wasted in fruitless legislation, but at any rate the Secretary of State for the Colonies has admitted in his letter to the ancient corporation of which Mr. Smith is a Member that the charges of misconduct have been disproved, and that the coroner's verdict should not have been given. This is, we can well understand, highly satisfactory to Mr. Smith, but it will not give him back the time that he has wasted in kicking against official pricks, and it will not feed his children.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6518 births and 3884 deaths were registered during the week ending Aug. 17th. The annual rate of mortality in these towns, which had been 20·7 and 20·8 per 1000 in the two preceding weeks, declined again last week to 19·1. In London the rate was equal to 17·3 per 1000, while it averaged 20·4 in the thirty-two large provincial towns. The lowest rates in these towns were 9·1 in Croydon, 10·7 in Birkenhead, 13·3 in Bristol, 13·6 in Huddersfield, and 13·9 in Halifax; the highest rates were 25·5 in Manchester, 26·0 in Salford, 27·7 in Liverpool, 29·2 in Wolverhampton, and 31·0 in Preston. The 3884 deaths included 929 which were referred to the principal zymotic diseases, against 1178 and 1077 in the two preceding weeks; of these, 610 resulted from diarrhœa, 115 from measles, 82 from diphtheria, 48 from whooping-cough, 38 from scarlet fever, 33 from "fever" (principally enteric), and 3 from small-pox. These diseases caused the lowest death-rate in Plymouth, Swansea, Birkenhead, Halifax, and Newcastle-upon-Tyne; and the highest rates in Sheffield, Salford, Hull, Bolton, and Preston. The greatest mortality from measles occurred in Manchester, Salford, Swansea, West Ham, and Blackburn; from whooping-cough in Liverpool and Salford; and from diarrhœa in Norwich, Wolverhampton, Sheffield, Hull, Bolton, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 82 deaths from diphtheria included 50 in London, 5 in West Ham, and 3 in Birmingham. Two fatal cases of small-pox were registered in Oldham and 1 in London, but not one in any other of the thirty-three towns. There were 336 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Aug. 17th, against 199, 257, and 273 at the end of the three preceding weeks; 79 new cases were admitted during the week, against 115, 60, and

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54 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2522, against 2347, 2423, and 2511 on the three preceding Saturdays; 357 new cases were admitted during the week, against 249, 247, and 281 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 171 and 159 in the two preceding weeks, further declined to 137 last week, and were 40 below the corrected average. The causes of 57, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 18·3 to 17·6 per 1000, further fell to 16·6 during the week ending Aug. 17th, and was 2·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Aberdeen, and 15·4 in Glasgow and in Perth, to 20·8 in Dundee and 21·8 in Paisley. The 479 deaths in these towns included 60 which were referred to diarrhœa, 15 to whooping-cough, 7 to scarlet fever, 7 to measles, 6 to "fever," 4 to diphtheria, and not one to small-pox. In all, 99 deaths resulted from these principal zymotic diseases, against 84 and 102 in the two preceding weeks. These 99 deaths were equal to an annual rate of 3·4 per 1000, which was 1·2 below the mean rate last week from the same diseases in the thirty-three large English towns The fatal cases of diarrhœa, which had been 55 and 68 in the two preceding weeks, declined again to 60 last week, of which 31 occurred in Glasgow, 10 in Dundee, 7 in Edinburgh, and 5 in Aberdeen. The 17 deaths referred to whooping-cough were within 2 of the number in the preceding week, and included 9 in Glasgow. The fatal cases of scarlet-fever, which had been 3 and 4 in the two preceding weeks, further rose to 7 last week, of which 5 occurred in Glasgow. The 7 fatal cases of measles showed a slight decline from the numbers recorded in recent weeks, and included 4 in Glasgow and 2 in Paisley. The deaths referred to different forms of "fever," which had been 5 and 4 in the two preceding weeks, rose again to 6 last week, of which 4 occurred in Glasgow, where 2 of the 4 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 77 and 67 in the two preceding weeks, further declined to 57 last week, but slightly exceeded the number in the corresponding week of last year. The causes of 30, or more than 6 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·7 and 22·2 per 1000 in the two preceding weeks, rose again to 24·0 during the week ending Aug. 17th. During the past seven weeks of the current quarter the death-rate in the city has averaged 23·7 per 1000, the rate during the same period being 20·5 in London and 16·1 in Edinburgh. The 161 deaths registered in Dublin during the week under notice showed an increase of 12 upon the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 25 and 27 in the two preceding weeks; of these, 16 resulted from diarrhœa, 2 from scarlet fever, 1 from small-pox, 1 from whooping-cough, 1 from "fever," and not one either from measles or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 3·8 in London and 1·7 in Edinburgh. The fatal cases of diarrhœa, which had been 24, 17, and 23 in the three preceding weeks, declined again to 16 last week. The mortality from whooping-cough corresponded with that recorded in the preceding week, while the mortality from "fever" showed a decline. The 161 deaths in Dublin last week included 36 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths of infants were fewer than those recorded in any recent week, while those of elderly persons showed a marked increase upon recent weekly numbers. Four inquest cases and 1 death from violence were registered; and 54, or rather more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN HICKSON relieved Surgeon-Captain M. P. Holt at Natal on June 27th. He is not in England, as stated in our issue of June 27th.

ARMY MEDICAL STAFF.

Surgeon-Major George M. H. Colman, M.D., retires from the service, receiving a gratuity. The undermentioned Surgeon-Captains to be Surgeon-Majors:—David Bruce, M.B., Edward H. Lynden-Bell, M.B., John Riordan, M.B., Robert H. Firth, F.R.C.S. Eng., Robert H. Moore, M.D., Alan E. Tate, Charles E. Faunce, and Henry J. Wyatt, F.R.C.S.I.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Services made by the Government of India:—*Bengal Medical Establishment:* Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels (dated March 29th, 1895): Christopher William Calthrop, M.D., and William Alexander Crawford Roe. Her Majesty has approved of the retirement from the Services of the undermentioned officers:—*Bengal Medical Establishment:* Surgeon-Lieutenant-Colonel James O'Malley McDonnell, M.D. (dated July 29th, 1895). *Madras Medical Establishment:* Surgeon-Lieutenant-Colonel Henry Hyde (dated May 25th, 1895). Surgeon-Major A. E. J. Croly is appointed to act as medical officer on the Staff of the Government of India during the absence of Surgeon-Major H. Martin, M.B. Surgeon-Major W. A. Parker, A.M.S., in charge of the Sanatorium and Station Hospital at Mount Abu, is appointed to the Civil Medical Charge of the Station in addition to his own duties. Surgeon-Colonel D. O'C. Raye, Inspector-General of Civil Hospitals, Punjab, is granted three months' privilege leave. Surgeon-Captain T. W. Shaw, M.B., I.M.S. (Bombay), medical officer of the 1st Regiment, Central India Horse, and of the Western Malwa Political Agency, is granted leave to proceed out of India on private affairs for one year.

NAVAL MEDICAL SERVICE.

Staff-Surgeon P. W. Bassett-Smith to the *Magdala*. Surgeons: H. B. Beatty to the *Bellona* and D'Arcy Harvey to the *Impregnable;* A. F. Harper to the Royal Marines, Plymouth; H. F. D. Stephens, to the *Vivid;* and E. A. Spiller to the Royal Marines, Portsmouth.

YEOMANRY CAVALRY.

Middlesex (Duke of Cambridge's Hussars): Surgeon-Lieutenant Leopold Hudson to be Surgeon-Captain. Shropshire: Surgeon-Captain J. D. Lloyd to be Surgeon-Major.

VOLUNTEER CORPS.

Royal Engineers: 1st Devonshire and Somersetshire: Surgeon-Lieutenant J. Fuller to be Surgeon-Captain.

FIELD-MARSHAL LORD WOLSELEY.

The announcement of Lord Lansdowne in the House of Lords as to the successor to the Duke of Cambridge as military head of the army had been generally anticipated, and has been received, we think, with public satisfaction and confidence. Viscount Wolseley unquestionably had the best claim to the appointment, and it is generally recognised that the Government has made the best selection for the post. Lord Lansdowne was careful to explain that the Government would take time to consider the changes in the organisation of the War Office and the conditions under which the General Officer Commanding-in-Chief—if that is to be Lord Wolseley's new title—was to hold his appointment, and that Lord Wolseley accepted the office subject to those conditions. H.R.H. the Duke of Cambridge retains the Commander-in-Chiefship until Nov. 1st, and will consequently carry out the usual autumn inspections. It is quite possible that we are on the eve of great changes, that the scheme of Lord Hartington's Commission will be much modified, and that many administrative changes and reforms may be introduced in the near future.

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THE CASE OF SURGEON-MAJOR CLARENCE SMITH.

This case will be in the recollection of our readers. The officer in question was called upon to resign the service, and from the statement of his case as far as published it seemed to us to be one eminently calling for further inquiry and consideration. We are glad to learn, therefore, that Surgeon-Major Clarence Smith has received a letter from the Madras Government inviting him, on behalf of the Secretary of State, to attend a commission composed of one officer with judicial experience and a military officer, the commission to be neither public nor judicial; Mr. Clegg's letter to be read and Surgeon-Major Smith to be examined on that letter, on his memorial, and on other private letters. It was further stated that Surgeon-Major Smith would be allowed counsel and the right to call witnesses, and the commissioners would exercise a similar right.

THE WAR IN MADAGASCAR.

The soldiers composing the French expedition have had a hard time of it in road-making and clearing the country and in overcoming deficiencies and difficulties of transport and commissariat, notwithstanding that there has been very little fighting. There is a good deal of ineffectiveness from sickness and other causes, amounting, it is even said, to 30 per cent. It is possible, however, that this percentage represents the rate of sickness of certain portions of the force rather than the general sick-rate of the whole force.

THE ARMY MEDICAL SCHOOL, NETLEY.

The *Army and Navy Gazette* of the 17th inst. states that at the recent examination at the Netley Army Medical School four probationers—two for the Army Medical Staff and two for the Indian Medical Service—failed to qualify in one or more of the subjects of instruction, and calls attention to the grave pecuniary loss thereby entailed on the State. If, as stated by our service contemporary, only one-third of the total marks in each subject be necessary to qualify, it seems surprising that four probationers should have failed to pass the examination.

EXPERIMENTS WITH THE LEE-METFORD BULLETS.

Experiments are to be carried out at an ammunition factory in Bengal with five kinds of Lee-Metford bullets in order to test the accuracy of their flight and their ranging power, the ulterior object being to secure a projectile that shall have some "stopping power."

Correspondence.

"Audi alteram partem."

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—Dr. William Duncan, in THE LANCET of Aug. 10th, says that "a man who has operated on a pyosalpinx or a suppurating ovarian tumour can in a quarter of an hour make it perfectly safe for him to attend a lying-in woman." This seems to me a very quick change, and I would not myself, if I could possibly avoid it, be a party to an arrangement whereby a man should go so quickly from operating on a septic condition in the abdomen to a midwifery case, or—and this is equally, if not more, important—from a case of puerperal fever to an abdominal section. The newly delivered uterus and the peritoneum when exposed by surgical means or by accident are both very prone to contract septic disease, and septic infection is not always easily got rid of even by the use of the most powerful antiseptics. Unfortunately it is not possible for any man in extensive practice, whether obstetric or surgical, altogether and at all times to avoid contact with septic mischief, and the serious question raised by Sir William Priestley is whether it is desirable that the obstetric physician should undertake a kind of work which is not obstetrics and which would multiply his chances of becoming a source of danger to a woman in labour. In reply, Dr. Duncan suggests that the obstetric physician would use antiseptics more diligently if he added abdominal surgery to his obstetric work. This might or might not happen, but if the assumption be granted it does not seem to me to follow that abdominal surgery should become a part of obstetrics. The physician might find in brain surgery an equally strong incentive to cultivate that cleanliness which, if I understand Dr. Duncan aright, is not sufficiently considered by those who practise obstetrics alone.

Dr. Duncan says he agrees with Dr. Herbert Spencer "that it would be a wise and gracious act on the part of the surgeons in every hospital to hand over to the obstetric physicians all the cases of disease of the female generative organs requiring abdominal section." In regard to abdominal surgery, however, if there is anything well ascertained it is the uncertainty of diagnosis, and the immense importance to the patient of the surgeon being ready when he opens the abdomen to deal with any condition he may find, and, perhaps, with a condition very different from that which he expects to find; hence the obstetric physicians could not properly, if they would, stop at the surgery of the female generative organs, and the obvious inference is that they should either confine themselves to obstetrics proper and to the preservation and repair of the generative tracts without opening the abdomen, or that they should undertake to become proficient in the whole range of abdominal surgery. There is a possible distinction between work to be done only through the anterior abdominal wall and that which may be done through the vagina; but there is no possibility of separating in any practical way the abdominal surgery of the female generative organs from the surgery of the abdomen generally.

Dr. Duncan has referred, and evidently with disapproval, to the division of duties at the Samaritan Free Hospital, where the work done through the anterior abdominal wall is in the hands of the surgeons, and the medical and vaginal work is in the hands of the physicians. In my humble opinion some such division is essential in a special hospital for diseases of women. There are rarely any midwifery cases in the Samaritan Free Hospital, but it has been judged wise to keep up the distinction as between those who do midwifery and those who do not. I have already indicated that this distinction is important on account of the liability of the newly delivered uterus and of the exposed peritoneum to septic infection. The distinction is essential in another way as a salutary check on the operating zeal of the surgeons. When Dr. Duncan calls in question Sir William Priestley's view that there is over-operating in gynæcology he overlooks the indisputable examples given, taking absolutely no notice of the more important of them. I do not think that anyone who considers the matter carefully, and knows the facts, will deny the pertinency of Sir William Priestley's remarks, for instance, on the recent "epidemic for the removal of the uterine appendages."

In the Samaritan Free Hospital unnecessary operations of this kind are prevented to a great extent, if not altogether, by the physicians. To me personally (and I presume the experience of my surgical colleagues is similar) it has occasionally happened that I have thought a patient could only be cured by the removal of her appendages, whilst a colleague who does not practise abdominal surgery has, in consultation, held a different opinion; consequently the operation has for a time been abandoned. In some of these cases further observation has proved that an operation was unnecessary, whilst in others it has justified the surgeon's view. But a little delay is better than too great haste in matters of this kind, for whenever there is room for doubt it is rarely an urgent question of life and death.

I consider Sir William Priestley's opinion incontrovertible that in the interests of the patient, and therefore of the institution, all special hospitals for women should "have some physicians who do not operate." Without this provision the patients have not the advantage which all patients should have—namely, that of a consultation in cases of doubt with someone not personally interested in operating. At the present moment this advantage is not available in many—I might say in the majority—of special hospitals for women, and, moreover, it is not available in those general hospitals in which the obstetrician does abdominal surgery. However eminent the men concerned may be, this arrangement is bad in principle and is not in accordance with the best traditions of the profession. It seems to me that in Sir William Priestley's suggestion, already carried out in at least one institution, is to be found the best solution of the difficulty that has arisen—namely, that it is a wise plan to attach a gynæcological surgeon to the obstetric department in every general hospital. In some cases the obstetric physician has so devoted himself to abdominal surgery that it might be well to give him the appointment of special surgeon,

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and to elect as obstetrician someone who wishes to practise midwifery alone.

The division of duties at the Samaritan Free Hospital enables that hospital to concentrate its advantages as a school of abdominal surgery in a few hands. The importance of this to every special hospital was prominently brought forward by Mr. Hutchinson in the Address on Surgery to the British Medical Association. He distinguished specialists from special hospitals, remarking that "it is quite possible that the latter may, when the staff is large in proportion to the number of beds, cease to offer the advantages as regards individual experience which they are designed to do." A special hospital which does not offer to its staff superior opportunities for practice, and to its patients superior treatment, is worse than useless.

I am, Sirs, your obedient servant,

Portman-street, W., Aug. 20th, 1895. JOHN D. MALCOLM.

THE PICRIC ACID TEST FOR SUGAR IN THE URINE.

To the Editors of THE LANCET.

SIRS,—In a review with which my book on "The Urine" was recently honoured in one of the quarterly medical journals, I am found fault with for not mentioning that boiling is required to bring out the red colouration on the addition of a solution of picric acid and liquor potassæ in urine containing sugar. Now, the fact is that if a solution of picric acid (about a third) be added, with an equal quantity of liquor potassæ, to urine containing sugar a reddish colouration is produced in the cold. This is undoubtedly intensified on boiling, the fluid assuming a claret colour, which passes on repose and cooling to a deep port-wine colour. What, however, is of more significance, the same results ensue in perfectly normal urine. The reaction is more marked, however, in urine containing an abundance of uric acid. This test, then, is eminently fallacious, and should be discarded for either qualitative or quantitative analysis of sugar in the urine.

I am, Sirs, yours faithfully,

D. CAMPBELL BLACK, M.D.,
Professor of Physiology in Anderson's College Medical School, Glasgow.

Aug. 19th, 1895.

AN IMPOSTOR.

To the Editors of THE LANCET.

SIRS,—It has just come to my knowledge that an unknown person giving an address in Goswell-road, E.C., and writing under the name of Dr. G. R. Saunders, has put himself in communication with old St. Bartholomew's men, stating that he has just returned from New Zealand in distress and asking for pecuniary assistance. I am happy to state that my brother, Dr. G. R. Saunders, is now in New Zealand, and that such an intimation is entirely untrue. I shall be glad to hear from any of the victims of this person.

I am, Sirs, your obedient servant,

FREDERICK W. SAUNDERS, M.B. Cantab.

Chieveley House, near Newbury, Berks, Aug. 20th, 1895.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "A General Practitioner," is, I think, in error when he describes overcharging as if it were the monopoly of specialism. I fear that some general as well as special practitioners are guilty of that crime, though perhaps a specialty lends itself more easily to the felony. In any case it is but a matter of degree in the extent of criminality, and it is greatly to be regretted that practitioners, general and special, are to be found lending themselves to such actions. The general practitioner is aggrieved if the specialist does not charge high fees, and unless he does assumes he seeks to take his patients out of his hands altogether. A solution of the question offers itself, viz., that it be no detriment to the specialist to take moderate fees. And this is probably what will result, that in all cases of difficulty and chronicity, whether among the poorer or the richer classes, the specialist should be consulted. To argue against specialism now is to argue against civilisation. The specialist with special practice must excel. Take one of the simplest of specialties—dentistry. Few departments, if any, are easier to attain a knowledge of, yet what proportion of dental work falls to the lot of the general compared with the special practitioner? There is a division of medicine in which, if in any, the general practitioner should equal the special. Yet in every town of adequate size specialists in midwifery are found. In the more difficult departments the specialisation is more accentuated. The advantage of specialism is that its practitioners have very much greater experience than the general practitioner, and even the general physician or surgeon. For one case of glaucoma, lupus, laryngeal tumour, or nasal polypus, &c., the general man sees, the special will see twenty or fifty or more. In the management of these he must attain to greater and more satisfactory knowledge. General practitioners, as their name implies, are intended to treat the generality of diseases; those which are unusual, tedious, or refractory they would do well to refer to the specialist.

I am, Sirs, yours truly,

Aug. 22nd, 1895. A SPECIALIST.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Corporation and the Mersey and Irwell Joint Committee.

IN THE LANCET of the 17th inst. the relations of the corporation to the joint committee are adverted to, and at the last meeting of the city council Alderman Thompson, chairman of the Rivers Committee, made some remarks on the same subject, saying that "the time had arrived when Manchester ought to be on its dignity as regards the joint committee." The precise bearing of that expression in relation to the pollution of the Irwell by Manchester sewage is not obvious. He alluded to the unpleasant position he had occupied in presiding over that committee (being its vice-chairman) when the Manchester effluent was being denounced, "but now that Sir John Hibbert had been relieved of Parliamentary duties and could take his place as chairman, he (the Alderman) could speak out." The Manchester effluent was said to be bad, but he added that Sir Henry Roscoe, in his report on twenty specimens of effluents from various places, described it as "slightly turbid, containing a little oxide of iron in suspension, and with a slightly tarry smell," while against this the effluents from various residential places were said to have a "sewage smell" and a "putrescent smell." This does not sound very dreadful, but it differs much from the description current some little time since. He went on to say: "Considering the amount of fæcal matter, market refuse, and refuse from dye-works and other places that had to be dealt with in Manchester, he thought they were entitled to praise for the effluent rather than blame." For the moment, perhaps, he did not bear in mind that this is only in part a water-carriage town, and that the market refuse and a good part of that from dye-works are solid, and therefore do not go into the sewers. Some time must elapse before the sewage arrangements of Manchester can be considered perfect, and the corporation cannot at present feel quite happy when the matter is discussed in the joint committee, though great efforts are being made to push on the various works. In the meantime the vice-chairman and his colleagues from the city council must be the victims of contending emotions—on the one side fired with zeal for purity of effluent, and on the other tempted to think that even virtue may be carried to excess. The composition of this joint committee is somewhat complex, but fairly representative of the interests involved. The County Councils of Lancashire and Cheshire send respectively eight and three members, Manchester and Salford six and two, while Bolton, Bury, Oldham, Rochdale, and Stockport send one each. Sir John Hibbert, the chairman of the Lancashire County Council, is also chairman of the Mersey and Irwell and of the Ribble joint committees.

Purchase of Chat Moss.

An important addition to the property of the corporation was announced at the last meeting of the council—viz., the purchase of Chat Moss, with an area of 2500 acres. The cost, *plus* law and other charges, was £147,631 4*s.* 11*d.* This is a large sum for it in these days of diminished land values, but the longer the delay the higher the price would be, so that without doubt the corporation has done wisely in

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completing the purchase. The chairman of the Cleansing Committee thought that if there were no enlargement of the city area there would be ample accommodation for dealing with the refuse for fifty years to come. Carrington Moss, on the Cheshire side of the Mersey, is rapidly becoming converted, by the action of Manchester refuse, from an expanse of peat-bog into fertile agricultural land, producing luxuriant crops, and no doubt Chat Moss will gradually undergo the same change. Though Manchester is slowly becoming a watercloset town, many years must pass before the transformation is complete, and in the meantime restoration to the earth of what was originally taken from it ought to be a less wasteful proceeding than carrying fertilising material out to sea, as Salford is doing, and as some consider Manchester will be driven to do.

Bequests to Local Charities.

The sum of £47,000, free of legacy duty, has just been left to various local charities by the late Mr. Wm. Berry. The Royal Infirmary receives £10,000, the Ancoats Hospital and St. Mary's Hospital £5000 each, and £13,000 are divided among nine other hospitals. The total help, therefore, to the medical charities amounts to £33,000. In addition to this £14,000 are left to local philanthropic institutions, £2000 to the National Life-boat Institution, and £1000 each to Mr. Barnardo's Homes and the Society for the Prevention of Cruelty to Children. Mr. Berry was what is called a self-made man, having had no advantages of education or capital. His business career began by his making blacking on a small scale, with his own hands, and then taking it about to sell as he could. By industry, honesty, and the possession of the commercial aptitude found sometimes to a remarkable degree in men not otherwise intellectually distinguished, he gradually prospered and acquired a fortune nearly, if not quite, reaching half a million. He was a kindly, unostentatious man, who by reading had acquired a good deal of information, more or less perfectly assimilated, and it may be said to his credit that he never pretended to be other than one raised from the ranks.

Manchester Museum, Owens College.

The question of aid to the above museum came up at the last meeting of the council. The library committee recommended that a grant of £400 per annum be made, on condition that the Lancashire and Cheshire County Councils and the local district councils gave £800 a year. As an amendment it was proposed that the £400 should in any case be given. After some discussion it was decided to postpone the further consideration of the question till the members of the council had had the opportunity of seeing the museum. On Thursday and yesterday, therefore, they visited the College and were received by Mr. Edward Donner, chairman of the museum committee, Mr. Henry Wild, F.R.S., Mr. Thomas Ashton, LL.D., Mr. J. Cosmo Melvill, Dr. Leech, Professor Boyd Dawkins, and other gentlemen. Dr. Leech pointed out the importance of the museum to the public in several respects. It was, he said, a teaching museum, and not a mere agglomeration of curios. Lecturers from the whole of the city and the surrounding districts were accustomed to send their classes to verify by observation what they had been taught. Insects and other animals were brought to the museum that it might be ascertained whether they were likely to be harmful to cotton, wood, or crops. Associations concerned with self-education and literary and scientific societies came for entertainment and instruction. Much interest is also, in this district of coal mines, taken in the geological collection, so valuable in relation to the geology of the coal measures. Dr. Leech very properly emphasised the fact—not known as it should be—that the museum is open to the public every day without charge. The members of the council were very favourably impressed by what they saw and heard, and it is to be hoped that the corporation will come to the help of an institution so valuable to the city.

Death after Vaccination.

An inquest was held last week touching the death of a child said to have been due to vaccination. The mother said that up to the age of eleven weeks the child was healthy. "It"—the sex not being named—was then, June 12th, vaccinated from another child, together with six other infants. Nine days afterwards it had a "gathering" in the right ear and a sore on the foot. On July 8th it got worse, and the gentleman by whom it had been vaccinated prescribed for it. Another gentleman attended it for five weeks, but it got worse. There were running sores on the back of the head, side, and legs. After this a third medical man treated it until Aug. 11th, when it died, and he gave a certificate of death from blood poisoning. Mr. Jones, the public vaccinator for the Openshaw district, said he vaccinated the child, which was healthy, with lymph from another healthy child. In answer to the coroner he said "we have to vaccinate from arm to arm." The Government supplied lymph perhaps once in six months. The coroner said: "If there is to be compulsory vaccination it is the duty of the Government to supply lymph," and that he would not have his child vaccinated from another. Mr. J. Collier, F.R.C.S.Eng., who made a necropsy, said there were extensive ulcerations in various parts of the body. "The lungs were congested and there were signs about the heart and other internal organs of death from blood poisoning, which was, in fact, the cause of death. There were no signs of syphilis. ..... He was of opinion that something not medically clean had touched the wound and set up blood poisoning. He had seen the child from which the deceased was vaccinated and it was perfectly healthy." In reply to the jury, he said "vaccination was the indirect cause of the child's death, but some germ had got into the blood afterwards." Mr. Martin, medical officer of health for Gorton, said that when the child was brought to him it was suffering from general blood poisoning, not from syphilis. The disease had been communicated after vaccination. It is satisfactory to find that the jury returned a verdict to the effect that the child's death was due to blood poisoning following, but not due to, vaccination, and that no blame attached to Mr. Jones. As the *Manchester Courier* says: "Openshaw has been within an ace of furnishing anti-vaccinators with a trump card." It thinks it a pity that calf lymph is not supplied by the Government, and asks, "Why should public vaccinators be required to use a species of lymph which is under suspicion?"

Aug. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Proposed Edinburgh City Hospital.

As I have already mentioned, the authorities in Edinburgh desire to erect a temporary hospital within a district which is under the Leith town council as governors of Trinity Hospital. The adjourned petition came up before the Leith Dean of Guild Court on Monday last. The Provost of Leith was in the chair, and he at once made a statement condemning and opposing the scheme, and pointing out that they had power to prevent the hospital being placed on the proposed site. The proceedings were somewhat animated and a tone of irritation ran through them. Leith is at present very sensitive and jealous of its big neighbour, for it evidently dreads absorption, and it knows that the most powerful lever for such a step is the advantage it might be to the public health. The application was almost precipitately hustled out of court.

The Holiday Season in Edinburgh.

Comparatively few of the senior members of the Royal Infirmary staff are in town at present, the work at the infirmary being largely done by the assistant staff of physicians and surgeons. Edinburgh as a city is so wholly given over to holiday-making that private practice is nearly at a standstill this month.

Professor Annandale.

Professor Annandale's numerous friends will be pleased to know that he is recovering. He has had a trying illness, and he has been much missed from his place in the lecture-room and the wards during the past months, but it is hoped and expected that the opening of the winter session will see him at his old post with his accustomed vigour.

Arbroath Infirmary.

At a meeting of the directors of the Arbroath Infirmary held this week the Arbroath local authority and the Arbroath district committee of the county council made a proposal that the infirmary should take charge of the epidemic hospital. The directors asked that each of the local authorities should pay £35 a year in addition to the charge for the patients. The local authorities declined these terms, so the proposal was abandoned.

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Aberdeen University: the New Buildings at Marischal College.

The Mitchell block and other works at Marischal College are being pushed on apace, in order that the inauguration celebration in October may take place in a finished and splendid building. A grant was made at the last meeting of the University Court to enable alterations to be effected in the entrance and main staircase, and there new and rich decorations are being carried out. Inside the Graduation Hall the handsome design is already appearing through the mass of scaffolding. The granite tracery is completed and the stained glass windows now show clearly the arms and portraiture of men distinguished in the annals of the University. The erstwhile students' reading-room and the Wilson Museum are being largely transformed. Direct access can now be had to the tower without passing through the reading-room. Visitors can now ascend to the upper platform of the tower, a considerable distance above the "clock platform," and from this point a most commanding view of the city and neighbourhood is obtained. The inaugural celebration will take place on Oct. 22nd, 23rd, 24th, and 25th, and the following are the arrangements as regards academic costume. 1. Former graduates may appear either in plain dress or in the appropriate costume indicative of their faculty—viz., black gown and the special hood of their degree. In the case of doctors, whether of law, divinity, or medicine, it is optional to wear the black gown and distinctive hood, or to appear in the full-dress robe of doctors now sanctioned for important occasions, consisting of a scarlet gown with facings of the same silk as that which indicates in the hood the degree. In the latter case the separate hood is not required. 2. Graduates who are to receive the honorary degree in laws or in divinity may appear either in black gown and be invested with the appropriate hood after the capping, or in plain forenoon dress, and be invested with the full academic dress of doctors—viz., scarlet robe with distinctive silk facings. In either case the hood or robe will be provided beforehand by the recipient of the degree.

Aberdeen University: the New Appeal to the Public for Contributions for the Completion of the Extension Scheme.

The executive committee have decided to circulate a statement dealing with the financial aspect of the scheme, more or less historically and indicating the probable cost of the remaining portion of the scheme. The remaining works consist of the tower at the extremity of the north wing, the south wing and corresponding tower, central block, front railings and gates, ventilation, fittings, and the alteration of old buildings and agricultural department. The total estimated cost of these, including architect's fees &c. and the present deficiency on sites, works contracted for, &c., is £41,322.

Aberdeen University: Donation by a distinguished Medical Graduate.

Dr. Thomas Irvine Rowell, C.M.G., late principal civil medical officer to the Government of the Straits Settlements and formerly President of the Municipality of Singapore, has contributed the sum of £100 towards the extension fund. The letter intimating the subscription was addressed to his cousin, the Lord Provost of Aberdeen. It expressed the hope that the citizens and graduates would be stimulated and inspired by Dr. Mitchell's munificence to place the University Court in funds sufficient to complete the scheme. The publication of the letter in the Aberdeen papers has given somewhat of a fillip to the fund; but the Court still require £40,000, and a fresh appeal for subscriptions is to be issued. Dr. Rowell when a youth was first bursar at King's College, Aberdeen.

New Convalescent Hospital at Aberdeen.

The difficulties of the directors of the Royal Infirmary in procuring a suitable site are now over. They have found four acres of ground at Hillhead of Pitfodels, about four miles from the General Post Office. The site is near the high service reservoir, and arrangements have been made for laying pipes and obtaining water from the city supply. The ground lies high, but the exposure is good, and the one and a half acres of wood which will be included will afford a sheltered airing ground in hot weather.

Aberdeen Nursing Association.

It is hoped that a member of the Royal Family will open the forthcoming bazaar, the object of which is to provide funds for the alterations on the new home for the nurses and for other purposes of the association.

Aberdeen: Health of the City.

The following is the return of zymotic diseases notified to the medical officer of health for last week: Measles, 2; scarlet fever, 9; diphtheria, 1; typhoid fever, 2; whooping-cough, 32; erysipelas, 5; cholera infantum, 1; total cases, 52, being 24 fewer than in the preceding week.

Aug. 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Dublin.

IN view of the very large influx of visitors to Dublin for the coming Horse Show, to commence on the 27th inst., it is satisfactory to note that the recent reports of the Public Health Committee show the condition of the city and surrounding districts to be more than usually salubrious. Small-pox as an epidemic has practically disappeared, and there has recently been a marked decline in the reduced number of cases in hospital. The Registrar-General's recent report of the Pembroke district, in which the Royal Dublin Society's exhibition will be held, is most satisfactory and compares favourably with similar districts such as Rathmines, Kingstown, &c.

Poisoning in St. Stephen's Green.

Three children were admitted to Mercer's Hospital on the 13th inst. suffering from irritant poisoning caused by their having eaten some berries from a laburnum tree growing in St. Stephen's Green. But for the promptitude with which they were brought for treatment the consequences might have been fatal to one or all of them. They have now been discharged well, but their case is one of the many recorded in which virulently poisonous but ornamental plants growing in public gardens have caused serious danger. Among the commonest of these is the deadly nightshade (Atropa belladonna) and the English laburnum (Cytisus laburnum), and monkshood (Aconitum napellus).

Double Distal Ligature for Innominate Aneurysm.

A man aged forty-nine, suffering from a large and thin-walled innominate aneurysm which had produced dislocation forwards of the right clavicle, and which had defied the usual medical measures of treatment—viz., prolonged rest, iodide of potassium, &c.—is now under surgical treatment at the Mater Misericordiæ Hospital. His right subclavian and common carotid arteries were simultaneously ligatured three weeks ago, and both wounds have long since closed *per primam*. Consolidation has not, however, taken place in the aneurysm, but its pulsation has become much less strong, while its walls have become thickened by fibrinous deposit. The arteries of the patient's right arm are, moreover, pulseless. The distal operation for innominate aneurysm, which the writings of Mr. Barwell of London have done so much to popularise with surgeons, has been performed on three occasions only in Dublin—once by Mr. Conway Dwyer of Jervis-street Hospital and twice by Mr. Coppinger of the Mater Misericordiæ Hospital. The first two patients are now well and apparently cured of their disease, while the last, the most serious of the three, promises fairly.

Richmond District Lunatic Asylum.

A serious irregularity seems to have taken place recently at this institution during the absence on leave of the resident medical superintendent. According to the reports in the public papers, the body of a patient was left, owing to the neglect of some of the attendants, uninterred for nine days.

The Battle of the Clubs at Cork.

The Mayor has communicated with the profession in Cork requesting them to send six representatives to meet a similar number of delegates from the clubs for the purpose of discussing the questions in dispute with a view to arranging a compromise if possible, a result that the Mayor is particularly anxious should be arrived at. Accordingly the following gentlemen were selected to meet the Mayor and the club delegates—Dr. Hobart, Dr. E. Townsend, Dr. Corby, Dr. Magner, Dr. Giusani, and Mr. Lee. The first meeting was held in the municipal buildings, and lasted two hours. Though each side was to be at liberty to communicate with the bodies they represented, one of the club delegates suggested that no information should be given to the press except a brief statement by the Mayor. The Mayor observed his part of the compact

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but a leading article appeared the following morning in a daily paper commenting on the conference in a manner which the profession considers unfair. A second meeting was held on Friday last, and an important decision arrived at. The club delegates announced that no arrangement could be come to unless the profession at Cork would undertake to meet in consultation the three medical men who since the commencement of the dispute have been acting for the clubs. The medical delegates replied that it would be quite impossible to accept such terms. They pointed out that the Cork medical men had made only fair and reasonable demands, and had only done so when they found medical practice in the city was being ruined by the club system, that the three medical men referred to had done all in their power to resist the demands of the profession, and under the circumstances the medical practitioners of Cork could not regard them as professional brethren. The fact was also emphasized that there are only five clubs vacant at present; that the three imported men hold the remainder, constituting the majority of the clubs; that the suggestion of the club delegates, if acted on, would mean that facilities should be given to those three men to remain in possession of the appointments which were resigned by the Cork medical men as a protest against the action of the clubs; and that the original club medical officers would be thereby precluded from ever getting back those appointments. The medical delegates considered it quite unnecessary to refer to the general body of the profession a proposition which would imply such a base betrayal of many of their colleagues. The Mayor then said he would request the three imported medical men to have an interview with him, and he would ascertain from them whether for purpose of facilitating a compromise they would be prepared to leave the city. To-day (Wednesday), at a further conference, the Mayor stated that the three imported medical men were not disposed to fall in with those views, and that they would not agree to any terms which would not imply their recognition by the Cork profession. The Mayor expressed great regret that his efforts to bring about a friendly understanding between the Cork profession and the clubs had not been more successful. The assembled delegates passed a vote of thanks to the Mayor, and the proceedings terminated. Acts, not words, has been the motto of the Cork medical practitioners, and though all the correspondence and speech-making have been the undisputed prerogatives of the clubs it is notable how steadily public opinion has veered round to regard with favour the claims put forward by the Cork profession. As an instance I may mention that early last week, when the Mayor's conference was first proposed, one of the local papers which previously could discover no redeeming feature in the opposition of the medical men to the encroachments of the clubs, published in a leading article the following sentiments: "It is easy to understand that when clubs combine to be granted lower fees than the members would be charged individually, the unfortunate practitioner may find that with very much more than an eight hours' day to work a 'living wage' could not be earned. ..... Each side will be the gainer by a fair settlement, and, dealing as we are with honourable and intelligent men, we are practically certain that the result of the present negotiations will be in all respects satisfactory."

The Legal Proceedings by a Member of a Cork Club for Sick Pay.

After a patient hearing the magistrates unanimously decided on giving a decree against the secretary of the Irish National Foresters for the full amount of sick pay claimed by Mr. Carroll, one of their members. I sent you a brief account of the case in my notes last week. Mr. Blake, solicitor for the secretary, asked to have a case stated for the superior courts. Mr. Healy, solicitor for the plaintiff, complained of the hardship of compelling his client to fight the case in the superior courts. It was eventually decided that the case should be brought on appeal before the Recorder. In the course of the proceedings one of the medical men imported by the Cork clubs was made to admit that he possessed no medical qualification; but it is difficult to see how this fact was relevant to the case.

The Belfast Union.

The half-yearly report of Mr. Agnew, Local Government Board inspector, on the Belfast Union has just been published. He thinks the condition of the separation department requires the urgent attention of the guardians, in order not only that more room may be afforded to the mothers and their children, but also that persons suffering from venereal disease may be removed therefrom and be afforded separate accommodation. He recommends that the sewer at the north end of the premises, which still constitutes a nuisance, should be done away with forthwith by the corporation. He recommends also that steps should be taken to put the yards into proper order and that some efforts should be made to have the boys taught handicrafts. The number of inmates classified as insane was on the day of the inspector's visit 439, and for their accommodation the guardians have provided a large and commodious detached building at a cost of £14,000, and they are, in addition, now expending a sum of almost £2000 in providing apartments for the resident medical officer, nurses, and warders, and also increased dining-hall accommodation, together with additional and improved baths, lavatories, and closets. The inspector recommends the appropriation of a portion of the adjoining ground as a recreation place. The report is favourable to the Belfast Union. In reference to the Fever Hospital, the inspector states that the accommodation is ample, and the nursing, dietary, sanitation, and ventilation are satisfactory.

Science Research Scholarship.

On the recommendation of the Council of Queen's College, Belfast, Mr. William Hanna, M.A., M.B., has been appointed by Her Majesty's Commissioners for the Exhibition of 1851 to a Science Research Scholarship for the year 1895. The exhibition is of the value of £150 and is tenable for two years.

The Proposed Asylum at Purdysburn.

At the monthly meeting of the board of governors of the Belfast Asylum, held on Aug. 12th, in reply to some questions Dr. Merrick, the medical superintendent, stated that the Board of Control considered that Purdysburn would be a better place than Belfast for acute cases, while the governors were agreed that they should keep Belfast as a going concern and send chronic cases to Purdysburn. There would seem to be considerable difference of opinion as to the extent of building to be erected at Purdysburn, and this probably arises from the constitution of the board. Some of the governors are appointed by the Lord Lieutenant, some by the grand jury of county Antrim, and some by the Belfast corporation, while the united body of governors have to act in conjunction with the Board of Control in Dublin. The question of the probable expense of the new asylum is a most important element. Some of the governors thought a building to accommodate, as a hospital, 250 patients would be sufficient, while others were in favour of erecting a complete asylum for between 800 and 1000 inmates. The Board of Control in Dublin approved of the latter plan, and accordingly a resolution was passed at a previous meeting that architects are to be invited to send in designs and specifications for a large and complete building to accommodate 800 patients, and prizes of £100, £75, and £50 are to be given to the designs awarded first, second, and third places. At the meeting on Aug. 12th some of the governors again raised the question that they were not pulling in exact harmony with the city corporation, who had expressed the opinion that they would not build a complete hospital by getting plans which only indicated that they wanted a complete asylum. A prolonged discussion ensued, in which the feeling of the governors was that, when the ratepayers were consulted through the city corporation, two schemes should be submitted: first, a plan for a small building to accommodate, say, 250 patients; and, secondly, a design for a complete asylum, with the full cost and advantages of each plan. Ultimately the following resolution, moved by Mr. Harrison, B.L. (a member of the city corporation), and seconded by Professor Cuming, M.D., was passed unanimously: "That the Board of Control be informed that it was the intention and the desire of the board of governors that separate plans be furnished for a detached asylum building for chronic cases, capable of holding at present 250 patients, and of afterwards being used as an acute hospital."

Garvagh Dispensary

At a special meeting of the Garvagh Dispensary committee Dr. Adams was unanimously appointed medical officer of the district in succession to Dr. McNeary (resigned), and it was also agreed to recommend the Coleraine board of guardians to fix the salary at £115 per annum.

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Rabies in the Downpatrick District.

At the weekly meeting of the Downpatrick board of guardians, held on Aug. 17th, a letter was read from the veterinary department, Dublin, regretting that the guardians had declined to make regulations for the muzzling of dogs in the union, and again enjoining upon them, in view of the continued recurrence of rabies, to exercise the powers conferred upon them by Article 10 of the Rabies Order of this year. The guardians, however, declined to take action, one of them, Lord de Ros, alone dissenting.

The Consumption Hospital, Belfast.

One of the Belfast merchant princes, Mr. Forster Green, a member of the Society of Friends, has purchased, at the cost of several thousand pounds, Fortbreda, a most beautiful residence with commodious grounds in an elevated position in one of the most healthy districts in Belfast, and intends to present it to the committee of the Hospital for Consumption in Belfast. It will be an admirable place for the purpose. This is only one of very many acts of charity done by Mr. Forster Green.

Aug. 20th.

Obituary.

GEORGE STEELE, M.B., C.M. GLASG.

INTELLIGENCE, energy, and amiability, combined with sound professional attainments and a consuming love of his fellow man—such were the characteristics of this young missionary explorer, who succumbed to fever in Ngoniland on June 24th. Dr. George Steele was born in the Bridgetown Division of Glasgow, and, with a view to the practice of medicine, studied at the University, and in due course graduated M.B., C.M. Shortly thereafter he resolved to devote his abilities and acquirements to the moral reclamation of the savage tribes of Central Africa and, strongly aided in his resolve by the Edinburgh promoters of medical missions—conspicuous among whom may be mentioned his friend, Mr. John James Cowan—he placed his services at the disposal of the Livingstonia Committee of the Free Church of Scotland, who, six years ago, sent him to assist Dr. Elmslie of Aberdeen in reclaiming the warrior Zulus to civilisation. Such interest had he inspired in his undertaking that the many friends whom he had made in his academic and post-graduate days assembled *en masse* at the Central Railway Station to see him off and bid him God-speed. Arrived at his destination, his first post was in the Ngoni country, a healthy plateau occupied by the tribe of that name above Bandawé on the western shore of Lake Nyassa. In this region he lived and laboured, doing solid and even brilliant work for many a "noble savage," till the regulation period before furlough found him much in need of rest and change. This well-earned holiday was to have begun on May-day of the present year, but, from causes not yet explained, he postponed his departure. A missionary tour in Australia, devised to arouse colonial interest in Central African work, with a subsequent visit to Scotland in contemplation, was his programme. But it was destined never to be carried out. His much-tried constitution failed to rally under his latest febrile seizure, and, as announced by telegram, he died on June 24th.

Scotland, from Mungo Park downwards, has been honourably distinguished through her medical sons in the field of African exploration, and the great career of David Livingstone has proved to many a young compatriot a powerful incentive to "go and do likewise." Dr. Steele was one of these, and the fate that befel him has been but too typical of what awaits the "missionary hero" in the Dark Continent. Shortly before him, there died in the same region and under similar circumstances Mr. Monteith Fotheringham, to whose ability and energy the African Lakes Corporation is so deeply indebted. Life in the more salubrious uplands in his case, as in Dr. Steele's, was all too inadequate to countervail the fevers contracted on visits, however occasional, to the lower levels around Lake Nyassa and the valleys of Shiré and Zambesi. Five years' residence, even in the healthier hill country, is as much, indeed, as has been found compatible with safety, and so the Livingstonia Committee has made it a rule that its emissaries may go on furlough after their first three years of work. But prudence has seldom a place in the vocabulary of the missionary enthusiast, and so Dr. Steele's exemplar must be added to many others among his profession and vocation, of the self-sacrifice that knows no fear and of the love that is stronger than death.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Kurt Schimmelbusch, for many years assistant to Professor Bergmann in the Berlin Surgical Clinic, after a month's illness, at the age of thirty-five. At the conclusion of his student's course he acted for a time as assistant to Professor Eberth of Halle, with whom he carried out various anatomical, pathological, and bacteriological researches, the best known of which were upon thrombosis and embolism. Afterwards he decided to devote himself to surgery, and became assistant to Dr. Bardenheuer in Cologne, later going to Berlin, where he was looked upon as one of the most rising surgeons of the day.—Dr. Felix Hoppe-Seyler, Professor of Physiological Chemistry in the University of Strasburg, at the age of seventy, from an apoplectic attack, at his summer residence on the Bodensee.

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The seventh session of the above association will be held in Sydney from Jan. 3rd to 10th, 1896, under the Presidency of A. Liversidge, M.A., F.R.S., Professor of Chemistry, University of Sydney. The Presidents and Secretaries of the Sections are as follows:—*Astronomy, Mathematics, and Physics:* R. L. J. Ellery, C.M.G., F.R.S., Government Astronomer, Victoria, President; R. Threlfall, M.A., Professor of Physics, and J. Arthur Pollock, B.Sc., Demonstrator in Physics, Sydney University, Secretaries. *Chemistry:* T. C. Cloud, A.R.S.M., F.C.S., Manager, Wallaroo Copper Works, South Australia, President; W. M. Hamlet, F.C.S., F.I.C., Government Analyst, New South Wales, Secretary. *Geology and Mineralogy:* Captain F. W. Hutton, M.A., F.R.S., F.G.S., Director of Canterbury Museum and Lecturer in Geology, Christ Church, New Zealand, President; T. W. E. David, B.A., F.G.S., Professor of Geology and Physical Geography, Sydney University, and E. F. Pittman, A.R.S.M., F.G.S., L.S., Government Geologist, New South Wales, and Lecturer in Mining, Sydney University, Secretaries. *Biology:* T. J. Parker, B.Sc., F.R.S., Professor of Biology, Otago University, Dunedin, New Zealand, President; W. A. Haswell, M.A., D.Sc., F.L.S., Professor of Biology, Sydney University, and J. H. Maiden, F.C.S., F.L.S., Curator, Technological Museum, Sydney, and Superintendent of Technical Education, New South Wales, Secretaries. *Geography:* H. S. W. Crummer, Secretary of the Royal Geographical Society of Australasia, New South Wales Branch, Secretary. *Ethnology and Anthropology:* A. W. Howitt, F.G.S., Secretary for Mines, Victoria, President; John Fraser, B.A., LL.D., Sydney, Secretary. *Economic Science and Agriculture:* R. M. Johnston, F.L.S., Government Statistician, Tasmania, President; Walter Scott, M.A., Professor of Greek, Sydney University, and F. B. Guthrie, F.C.S., Consulting Chemist to the Department of Agriculture, New South Wales, Secretaries. *Engineering and Architecture:* H. C. Stanley, M.I.C.E., Chief Engineer, Southern and Western Railway Lines, Queensland, President; J. W. Grimshaw, M.I.C.E., M.I.M.E., &c., Supervising Engineer, Harbours and Rivers Department, New South Wales, Secretary. *Sanitary Science and Hygiene:* Hon. Allan Campbell, M.L.C., L.R.C.P., South Australia, President; J. Ashburton Thompson, M.D., Chief Medical Inspector, Board of Health, New South Wales, Secretary. *Mental Science and Education:* John Shirley, B. Sc., District Inspector of Schools, Brisbane, Queensland, President; Francis Anderson, M.A., Professor of Logic and Mental Philosophy, Sydney University, Secretary. Communications and papers for the meeting, or inquiries, may be addressed to the Permanent Honorary Secretary, the Chemical Laboratory, the University, Sydney, New South Wales.

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THE

BRITISH MEDICAL ASSOCIATION.

MEETING IN LONDON.

THE SECTIONS.

PUBLIC MEDICINE.

THURSDAY, AUG. 1ST.

The Prevention of Milk Epidemics.

Dr. KENWOOD, medical officer of health of Stoke Newington and Finchley, opened a discussion on this subject. By means of a circular note addressed to all the medical officers of health of areas situated within the metropolis and the home counties of Middlesex, Surrey, Essex, Kent, Hertfordshire, Buckinghamshire, and Berkshire, he had collected the facts in reference to those milk epidemics that had had their origin in diseased cows in the years 1893 and 1894. In each of his two districts (Stoke Newington and Finchley) there had been such an epidemic during the past year, and it was abundantly clear in both cases that the community was practically unprotected from such visitations; indeed, a sufficient answer to those who might contend that the steps taken at the present day were satisfactory was found in the reply that such outbreaks were not prevented, that they occurred in large numbers in this country, and that they showed a tendency to increase. It was high time, with these epidemics constantly cropping up, that something more should be done to prevent their recurrence. Practically, present action was restricted to preventing the further spread of the outbreak after it had already worked a varying amount of harm, but it was easily practicable to proceed upon lines of true prevention that would aim at removing the possibility of future outbreak. The necessity for further steps was a growing one for the reasons: 1. That the cowkeepers were becoming less and less generally the milk retailers, and they were not, therefore, affected to anything like the same extent as the latter by the consequences of a milk epidemic; moreover, cowkeepers did not (and, it seemed, would not) recognise the necessity of excluding the milk of cows suffering from those transitory, often slight, and generally obscure ailments that might furnish an infective quality to the milk. 2. The establishment of large companies with large and irregular areas of distribution was gradually displacing the man with a small and circumscribed area to supply, and the result was a much greater difficulty in tracing the origin of a milk epidemic. He then proceeded to discuss the powers that had been granted to local authorities and the reasons of their failure. Careful examination of all milch cows at short intervals, preferably once a week, the prompt isolation of those animals likely to furnish infective milk, and the adoption of means that would deter the cowkeeper from mixing the milk of such animals with other milk were, in his opinion, the only ways of dealing with the difficulty. He then dwelt on the necessity for the appointment of special inspectors of cows and cowsheds, discussed the qualifications of such inspectors, and recommended their appointment in some cases by neighbouring authorities in combination. The necessity for such inspectors to notify at once all cases of suspicious disease in cows to the medical officer of health was pointed out. The conditions in cows which might render their milk noxious to human beings were enumerated, and the symptoms that would warrant the inspector in requiring isolation were stated. Suggested rules for the guidance of such inspectors were given.

Brigade-Surgeon-Lieutenant-Colonel PRINGLE said he believed a great deal of the mischief with regard to milk contamination was due to the state of the places where it was retailed. Some shopkeepers who kept milk also sold cheese, bacon, and other things, and in many cases these commodities were in a varying state of decomposition.

Dr. BOND said he had never been able to directly trace a case of outbreak of disease to contaminated milk in his district. At the same time he heartily agreed with Dr. Kenwood's scheme, if practicable, but he thought there would be considerable difficulty in carrying it out.

Vital Statistics of Diphtheria in London, 1891–95.

Dr. F. A. DIXEY, Fellow of Wadham College, Oxford, read an interesting paper on this subject. He said:—The remarkable rise in the number of deaths attributed to diphtheria during the last few years in London has attracted much attention and has given occasion to many valuable memoirs which have largely increased our knowledge of the subject. In the course of the following remarks I propose to examine the recent progress of the disease in London from the statistical side, making chief use of the information contained in the weekly returns of the Registrar-General.

1. *The general course of diphtheria in London, 1891–95.*—The history of fatal diphtheria in London since the beginning of 1891 is shown in Table I., which gives for each week the actual number of deaths returned as due to "diphtheria," together with the average number of deaths attributed to the same cause for the corresponding week of the last ten years, corrected for increase of population.

TABLE I.—*London, 1891–95: Weekly Deaths from Diphtheria, with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks.	1891.		1892.		1893.		1894.		1895.	
	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).
January:										
1	28	22·9	25	24·0	47	25·2	66	28·0	50	33·2
2	23	18·8	29	19·3	61	20·9	55	25·9	34	30·1
3	17	19·8	23	20.1	37	20·7	48	23·2	31	26·6
4	25	21·4	24	22·5	53	23·5	52	26·6	29	30·4
February:										
5	34	23·2	27	24·8	43	25·7	74	28·2	45	33·4
6	29	22·4	18	22·9	62	23·1	56	28·2	34	32·0
7	34	20·2	15	22·1	60	23·0	58	27·9	27	31·2
8	32	20·4	30	22·3	51	24·1	42	27·5	29	30·5
March:										
9	31	15·0	27	20·7	37	22·1	59	24·6	31	29·6
10	18	19·9	34	16·4	38	18·4	53	21·1	34	25·4
11	33	19·5	31	21·4	65	23·3	52	28·3	27	32·4
12	26	17·2	30	18·7	49	19·8	56	23·5	24	28·0
13	24	17 9	15	18·8	36	17·3	57	19·8	31	24·6
April:										
14	26	18·9	34	19·8	38	21·2	63	23·1	23	28 3
15	26	22·8	33	23·9	44	24·4	50	26·9	27	30·4
16	23	16·9	29	17·7	47	18 8	53	21·7	30	25·4
17	24	19·5	17	20·7	50	21·0	63	24 2	27	28·9
May:										
18	24	17·2	31	18·2	54	19·9	58	24·0	29	28·9
19	19	17·6	24	17·3	68	18 5	55	24·3	38	29·3
20	21	16·8	41	17·5	51	20·7	56	24·3	41	29·0
21	27	17·8	39	19·8	41	22·6	41	25·4	37	27·8
June:										
22	24	17·9	40	19·5	51	22·5	36	26·1	41	27·5
23	21	19·0	37	20·1	39	22·1	34	23·9	33	25·8
24	28	19·5	34	20 4	62	22 9	43	27·9	45	29·9
25	31	17·3	39	19·1	68	21·2	44	27·1	37	30·6
26	18	17·9	38	17·9	64	20·7	56	25·9	38	29·7
July:										
27	21	18·9	30	20·3	54	21·7	43	26 2	—	—
28	25	18·3	43	20·2	51	23·8	45	26 6	—	—
29	26	18·3	37	20·1	66	22·6	36	27·3	—	—
30	30	21·4	25	22·7	72	24·4	52	30·6	—	—
August:										
31	24	19·7	42	21·8	64	24·7	57	29·8	—	—
32	22	20·5	35	21·5	63	23·2	62	27 7	—	—
33	24	17·9	37	19·5	63	21·6	57	27·3	—	—
34	24	21·5	38	22 4	56	24·5	43	28·4	—	—
September:										
35	24	19·9	34	21·6	56	23·3	33	27·2	—	—
36	17	19·9	37	20·3	65	22·4	39	27·8	—	—
37	32	21·8	36	24·6	65	26·0	55	30·6	—	—
38	29	24·8	43	26·4	88	29·1	52	35·7	—	—
39	32	26·0	50	28·1	96	30·4	67	38·5	—	—
October:										
40	29	26·3	51	28·1	74	31·1	66	36·9	—	—
41	25	25·4	46	26·7	86	28·8	54	35·4	—	—
42	29	29·6	41	30·4	84	31·8	61	37·7	—	—
43	31	24·4	56	24·9	83	30·0	49	36·5	—	—
November:										
44	25	21·4	47	22·7	88	26·3	54	34·2	—	—
45	24	38·2	51	28·3	103	31·7	42	40·2	—	—
46	30	27·4	29	29·0	91	29·9	44	36·8	—	—
47	26	29·2	46	29·2	90	32·4	48	39·7	—	—
December:										
48	27	26·8	39	27·4	74	29·7	54	34·5	—	—
49	33	29·7	58	30·5	89	34·5	57	41·5	—	—
50	30	26 9	59	28.8	85	33·7	53	40·1	—	—
51	20	24·4	60	24·5	63	29·5	36	34·4	—	—
52	37	23·1	50	25·1	79	29·1	35	35·1	—	—
Weekly mean for whole year	26·2	—	36·2	—	62·8	—	51·4	—	33·5	—

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It will be seen that the number of deaths, though somewhat above the average for the greater part of 1891, had towards the end of the year sunk almost to the normal level. Soon after the beginning of 1892, however, a gradual rise takes place, which, with some considerable fluctuations, is, on the whole, steadily maintained throughout 1892 and 1893, until it culminates in the second week of November in the latter year, when the deaths attributed to diphtheria reached the unexampled total of 103. From this point a descent begins, at first rapid, afterwards more gradual, until finally, in the closing week of 1894, the number of recorded deaths once more coincides with the normal, from which it has not since greatly deviated.

2. *The seasonal prevalence of diphtheria in the years 1891-95.*—The ordinary seasonal relations of diphtheria are well known, having been worked out for London and New York by Sir A. Mitchell and Dr. Buchan in their admirable papers entitled "The Influence of Weather on Mortality from Different Diseases."[1] These authors have shown, from a consideration of the Registrar-General's weekly returns for sixteen years, that the deaths from diphtheria in London rise above the average in the beginning of September and remain above it till the beginning of March. The seasonal prevalence in New York is much the same as in London, except that the rise takes place about a month later and the range between maximum and minimum is of greater extent. They add that in New York the character of the seasonal curve remains fairly constant from year to year notwithstanding much fluctuation in the number of deaths. Looking at the London mortality curve for 1891 we see that the usual seasonal features are on the whole fairly well maintained, in spite of the somewhat exceptional mortality in the earlier part of the year. In 1892 the general rise begins, the most marked step occurring at the end of April and beginning of May, and to the high level of mortality thus abnormally reached and maintained the usual autumn exacerbation appears to be superadded. The curve for 1893 is a very fluctuating one, but in spite of the great variation of numbers from week to week and the general upward tendency of the curve the autumnal invasion is again well marked and of greater value, both absolutely and relatively, than in any previous year. In 1894, however, we find an altered state of things. With the high mortality of November, 1893, the disease seems to have in great measure spent its force; and a downward tendency begins which by the beginning of June brings the deaths to within ten of the corrected average. Here another rise seems to be starting, but it never becomes fully developed; and although September, as usual, shows a considerable increase in the number of deaths, the accustomed heavy mortality of the end of the year is altogether missing. The curve for 1895 has not as yet shown any marked elevation; a slight upward tendency, however, has been in progress since April, the further development of which it will be interesting to watch.

3. *Diphtheria and school attendance.*—In his excellent Annual Report of the Medical Officer of Health of the Administrative County of London, 1893, and more recently in his Presidential Address to the Epidemiological Society in 1894, Mr. Shirley Murphy has adduced much reason for thinking that the increased prevalence of diphtheria in this country is at least partly due to the operation of the Elementary Education Act of 1870. This conclusion, based by him mainly on the observed facts of age incidence of diphtheria, derives additional support from a consideration of the tables before us. The fall during the summer holidays in August and the rise corresponding to the reassembling of the schools in September are plainly shown by the curves of weekly deaths in every case; though, as Mr. Shirley Murphy notes, the August fall is less conspicuous in 1892 than in other years.

4. *Diphtheria and "croup."*—I now turn to the question of the relation between diphtheria and what appears in the Registrar-General's returns as "croup." Dr. Longstaff[2] cites with approval the opinion of Dr. Whitelegge "that there is no such disease as croup"; and it has long been admitted on all hands that a great deal of "croup" is actually diphtheria. In Table II. I have given the figures for "croup" corresponding to those in Table I. for diphtheria, and the same data are presented in graphic form by Wall Diagram 3.

TABLE II.—*London, 1891-95: Weekly Deaths from "Croup," with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks.	1891.		1892.		1893.		1894.		1895.	
	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.
January:										
1	10	16·4	14	15·8	6	15·0	4	13·7	3	12·9
2	10	17·2	14	16·5	5	16·7	3	15·2	3	13·6
3	9	17·6	7	16·8	7	16·1	5	14·1	5	12·1
4	6	15·2	13	13·9	4	13·4	6	12·6	1	11·3
February:										
5	9	13·8	10	12·9	3	12·1	2	10·9	1	9·2
6	12	14·4	6	14·0	4	12·6	7	11·3	5	10·7
7	9	15·5	11	14·8	4	14·8	3	13·1	3	11·9
8	18	15·4	17	15·4	5	15·3	6	14·0	6	13·7
March:										
9	14	15·4	9	15·0	5	14·5	4	12·9	5	11·8
10	6	12·5	6	11·5	1	10·8	4	9·4	3	8·3
11	12	16·6	4	16·3	2	15·2	4	13·2	1	12·3
12	13	12·2	10	11·9	3	11·0	2	9·9	4	9·3
13	12	13·8	8	13·5	6	12·6	3	11·0	3	10·2
April:										
14	10	15·9	4	14·2	8	13·3	4	12·1	4	10·3
15	11	13·4	6	13·1	6	11·4	4	10·1	1	9·2
16	9	12·2	6	10·7	1	9·3	1	8·3	3	7·3
17	8	11·9	—	11·3	2	10·1	3	8·9	4	7·8
May:										
18	9	11·4	3	11·5	4	9·7	3	8·7	4	7·4
19	5	10·0	2	9·3	5	8·2	5	7·3	—	6·1
20	10	13·3	4	12·1	2	10·7	3	9·4	2	8·4
21	8	11·6	6	10·9	1	9·8	3	8·4	3	6·9
June:										
22	8	8·7	3	8·8	2	7·6	—	6·3	5	5·1
23	1	11·9	2	10·6	3	8·5	4	8·1	1	6·9
24	6	11·2	5	10·6	2	9·5	2	8·1	1	6·8
25	4	8·7	1	7·9	4	6·4	3	5·8	4	4·5
26	5	10·6	1	9·8	1	8.3	—	6·5	2	5·4
July:										
27	5	9·1	6	8·3	7	8·0	3	7·6	—	—
28	4	10·9	5	10·0	4	9·1	6	7·8	—	—
29	5	9·4	2	9·2	4	8.2	2	7·4	—	—
30	6	9·5	2	8·7	4	7·1	3	6·8	—	—
August:										
31	3	10·3	3	9·4	5	8·3	3	7·5	—	—
32	5	11·1	6	10·0	1	8·1	4	7·0	—	—
33	7	9·8	4	9·0	—	8·0	2	6·5	—	—
34	4	11·2	2	10·4	5	8·8	1	7·8	—	—
September										
35	4	9·2	2	8·8	2	6·2	4	5·4	—	—
36	3	10·4	2	9·2	2	7·7	2	6·5	—	—
37	7	11·3	2	11·0	6	9·3	1	7·7	—	—
38	4	10·7	4	9·4	4	8·9	5	7·7	—	—
39	10	12·0	5	12·1	4	10·3	3	9·3	—	—
October:										
40	6	12·3	6	11·0	2	9·5	3	8·2	—	—
41	5	15·6	3	13·7	2	12·1	3	10·0	—	—
42	12	17·7	5	16·9	6	15·5	3	14·4	—	—
43	7	14·8	6	14·0	3	12·2	1	10·7	—	—
November:										
44	9	13·3	2	12·7	11	11·6	5	11·4	—	—
45	15	13·7	5	14·0	6	13·2	2	12·0	—	—
46	7	14·7	3	13·6	9	12·0	—	11·0	—	—
47	6	15·9	3	14·1	5	12·3	5	10·7	—	—
December:										
48	5	15·0	4	14·0	3	12·7	4	10·7	—	—
49	10	16·0	4	14·8	7	12·9	3	11·8	—	—
50	6	17·3	5	16·7	6	14·9	3	12·6	—	—
51	10	15·0	11	13·9	3	13·0	3	12·0	—	—
52	5	17·2	3	16·0	10	14·6	4	13·3	—	—

The facts thus disclosed appear to me to make in favour of the view that, at least in past years, "croup" has robbed diphtheria of many deaths that were its due. While diphtheria has been rising, croup, we see, has been falling in a way more suggestive of altering diagnosis than of real diminution of disease.

5. *Effect of the antitoxin treatment.*—The last point which I shall here deal with is the diminution in mortality which has become apparent since the spring of 1894. The average weekly number of deaths from diphtheria for the whole year, which rose from 26·2 in 1891 to 36·2 in 1892, and to 62·8 in 1893, fell in 1894 to 51·4, and for the first half of the present year to 33·5. It is evident that from some quarter fatal diphtheria has received a check. This is not to be explained by any diminished occurrence of the disease, for it has remained, on the whole, as prevalent as ever. Evidence of this is furnished by Table III., with its accompanying diagram (4), which give the weekly number of admissions and cases under treatment for diphtheria in the Metropolitan Asylums and London Fever Hospitals since the beginning of 1893.

[1] Journal of the Scottish Meteorological Society, vol. iv., pp. 187-265, and vol. v., pp. 171-188.

[2] Studies in Statistics, 1891, p. 321, note.

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TABLE III.—*London: Diphtheria: Cases in Hospitals and Admissions for every Week, 1893–95.*

—	1893.		1894.		1895.	
	Cases.	Admissions.	Cases.	Admissions.	Cases.	Admissions.
January:						
1	288	56	289	64	499	64
2	286	35	290	62	517	74
3	271	50	310	70	514	74
4	268	55	319	69	528	72
February:						
5	274	53	320	57	519	76
6	281	57	334	80	500	49
7	290	64	320	50	498	55
8	278	56	310	64	486	54
March:						
9	267	34	303	67	463	43
10	276	64	304	69	455	55
11	277	51	307	63	456	61
12	286	55	299	58	455	64
13	283	47	307	66	435	67
April:						
14	283	58	306	68	440	71
15	280	54	315	71	435	64
16	301	73	316	60	441	73
17	302	60	318	68	432	69
May:						
18	318	71	324	76	467	79
19	332	75	323	60	464	73
20	325	61	306	63	486	87
21	327	64	324	79	492	79
June:						
22	294	49	330	56	508	88
23	306	80	337	83	529	86
24	288	71	347	84	562	107
25	291	76	349	71	593	128
26	293	53	351	78	633	115
July:						
27	304	67	351	90	—	—
28	295	46	365	65	—	—
29	278	59	402	94	—	—
30	293	69	436	102	—	—
August:						
31	281	71	470	99	—	—
32	282	68	482	88	—	—
33	272	69	458	69	—	—
34	291	78	448	71	—	—
September:						
35	291	53	450	75	—	—
36	290	54	464	103	—	—
37	282	54	486	96	—	—
38	287	79	495	101	—	—
39	296	74	496	90	—	—
October:						
40	314	79	502	98	—	—
41	310	59	521	106	—	—
42	309	54	521	96	—	—
43	306	63	523	94	—	—
November:						
44	306	69	537	99	—	—
45	291	70	548	97	—	—
46	301	75	544	83	—	—
47	311	80	526	100	—	—
December:						
48	308	56	517	78	—	—
49	318	54	514	104	—	—
50	298	51	521	101	—	—
51	298	71	510	80	—	—
52	283	43	521	75	—	—

I am aware that these figures form only a rough measurement of the prevalence of disease; for, in addition to the fact that, to quote the Registrar-General's weekly returns, "in a considerable proportion of cases the diagnosis sent on admission is found, after sojourn in the hospital, to have been erroneous," it is also true that the proportion of hospital admissions to total cases notified is a variable one, ranging, for instance, in the cases of the hospitals of the Metropolitan Asylums Board, for the four years 1890–93, from 15 per cent. in 1890 to 25 per cent. in 1892;[3] moreover, it must be remembered, as has been specially pointed out by Dr. Whitelegge, that a period of great prevalence of a disease is by no means necessarily one of great case mortality. Still, when every allowance has been made for these sources of error, it must be granted to be a striking fact that the prevalence of diphtheria from the middle of 1894 up to the present date is out of all proportion to the number of fatal cases. Now, the antitoxin treatment of diphtheria began to be employed in this country in June, 1894, and by the end of the year it was in fairly full operation. It is, I think, an inference well warranted by the facts of the case that this method of treatment was last year instrumental in preventing the usual autumnal rise in the number of fatal cases, and has helped during 1895 in keeping down the diphtheria mortality in spite of the large amount of the disease still present in the metropolis.

[3] See Annual Report of Medical Officer of Health of London, 1893: Diphtheria, Diagram XI.

FRIDAY, AUG. 2ND.

Security of Tenure of Medical Officers of Health.

On Friday the concluding meeting of this Section was held, when Dr. COLLINGRIDGE occupied the chair.

At the commencement of the proceedings Professor G. VAN OVERBEEK DE MEYER invited the members of the Section to a "Conférence Internationale concernant les Services Sanitaires des Chemins de Fer et de la Navigation," shortly to be held at Amsterdam, the matters to be discussed being the personal fitness of the officials, the organisation of the medical service, and the hygienic interests of officials and travellers.

Dr. WHITELEGGE then introduced a discussion on the Insecurity of Tenure of Extra-Metropolitan Medical Officers of Health under the Public Health Act of 1895.

Dr. CARROLL, Dr. MANLEY, Dr. GRAHAM, Dr. MAESDEN, Brigade-Surgeon-Lieutenant-Colonel PRINGLE, Dr. SLADE KING, Dr. GROVES, Dr. CAMERON, Dr. BARWISE, Dr. OGILVIE GRANT, Dr. BOND, and Dr. WILLOUGHBY took part in the discussion, which concluded with the passing of the following resolution: "That this Section desires to reiterate the opinion which has been expressed at previous meetings of the Association that the interests of the public, no less than the just demands of medical officers of health, require that the same security of tenure which is enjoyed by medical officers of health in the metropolis and Scotch counties and by Poor-law medical officers should be conceded to provincial medical officers of health, and requests the Parliamentary Bills Committee to take such steps as may seem expedient to bring this matter under the notice of the Local Government Board."

Dr. SPOTTISWOODE CAMERON read a paper on the Destruction of Town Refuse, and, some other papers being taken as read, the business of the Section concluded.

PATHOLOGY.

THURSDAY, AUG. 1ST.

Pernicious Anæmia.

Dr. HUNTER opened a discussion upon Pernicious Anæmia with a paper in which he reviewed the present knowledge of the subject. He concluded that pernicious anæmia was a special disease apart from the other forms of anæmia, because the latter (such as occur in cancer and other diseases) do not show the same pathological changes in the blood that are met with in this form; because the extreme degree of blood change is always associated with marked pathological changes in the liver, kidney, and spleen such as are not found in traumatic and other anæmias. In refuting Dr. Stockman's views, that the main difference between pernicious anæmia and other forms of anæmia lay in the presence of hæmorrhages in the former and not in the latter, he said that he had failed to produce pigment deposits in the liver by injecting large quantities of blood into the peritoneal cavity of rabbits, and further that in his experience hæmorrhages in pernicious anæmia were very rare except into the retina and meningeal membranes.

Dr. COPEMAN expressed his opinion that pathological urobilin only occurred in those cases of pernicious anæmia associated with high temperature, and he thought that there were other cases in which just as profound changes occurred in the blood without the deposition of pigment in the liver.

Dr. GIBSON and Dr. STOCKMAN joined in the discussion, and Dr. HUNTER replied.

Owing to the time of the Section having been fully occupied with these discussions, the following papers were taken as read:—

Dr. MACFADYEN on the Formation of Methyl Mercaptan in the Body and its Production by Bacteria.

Mr. P. FURNIVALL on Acromegaly.

FRIDAY, AUG. 2ND.

Lymphadenoma and its Relation to other Morbid Growths.

The discussion upon this subject was opened by Mr. W. G. SPENCER, assistant surgeon to Westminster Hospital. Lymphadenoma, he said, is a suitable term for those affections the various forms of which have one feature in common—viz., a growth of lymphadenoid tissue closely resembling in structure that of lymphatic gland. In the present state of our knowledge it is better to rest content

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with some general classification such as can be inferred from clinical facts and to use as few names as possible. It appears to me that the attention of this meeting may most usefully be directed towards a consideration of the causation of lymphadenoma, and as experimental data are wanting the subject of causation must necessarily be considered chiefly from a clinical standpoint. If we do this we may take as a guide at the start the analogy of tubercle, and distinguish a local disease under the head of lymphadenoma from a general affection, lymphadenomatosis, the latter being related to the former perhaps as general tuberculosis to a local mass of tubercle. Of local lymphadenoma we may further mark out two types—one simple lymphadenoma, in which the cause is more or less continuously acting upon the lymphadenoid tissue from the surface of the mucous membrane or skin, whereas in the more malignant form there is a lack of evidence as to the external source of the irritation; but, on the other hand, an essential proclivity on the part of the cells to proliferate, the cause of which must be within the tumour itself.

Simple Lymphadenoma. — The term lymphoma, since it includes no reference to *lymphatic gland*, requires qualification when used. Simple lymphadenoma forms a strictly local overgrowth of lymphadenoid tissue kept up by some cause acting from without, the growth ceasing when the cause ceases to act.

[Mr. SPENCER here gave instances of various irritations which cause simple enlargement of lymphatic glands. He continued:]

Malignant Lymphadenoma.—(The name Lymphosarcoma tends to connect the affection with sarcomas of lymph glands which differ widely from it in character.) In malignant lymphadenoma we have a factor distinct from the local irritation to which we ascribe the simple form, for in it there is the tendency on the part of the cells to proliferate indefinitely. The connective tissue cells of the gland capsule and septa likewise take part to some extent in the growth. We fail to find, at any rate after the earliest stages, any source of irritation sufficient, acting simply from without, to keep up the continued and indefinite multiplication of the cells. The cause of this continued multiplication of cells must therefore be within the tumour. In these respects malignant lymphadenoma resembles sarcoma, but in other points they are unlike. Malignant lymphadenoma does not infiltrate neighbouring structures, exercising its influence by compression. It can be shelled out, as it separates easily from the surrounding tissues. Organs such as the spleen or kidney retain their shape even when greatly enlarged. Tubes such as the œsophagus, intestine, or bloodvessels are surrounded by the growth without the lumen being narrowed. The cell elements show a remarkably long life, and ulceration and degeneration do not occur.

[Mr. SPENCER pointed out the differences between this disease and true sarcoma, and referred to the value of arsenic in treatment. He continued:]

Lymphadenomatosis.—There is clearly some *general* affection which attacks lymphadenoid tissue wherever found. Great variations are met with in different cases, both as regards the severity of the attack, in the incidence upon the several parts, together with the variations which happen in the course of any single case. Hence a number of divisions have arisen, each named after one prominent symptom. The spleen, the lymphatic glands, the bone marrow, lymphadenoid tissue around the alimentary canal or in the subcutaneous tissue—one or more of these structures may be found involved in a general disease accompanied by anæmia, cachexia, hæmorrhages, intermittent irregular fever, and increase of white blood cells. "Lymphatic cachexia," "Anæmia splenica vel lymphatica," "Splenic, lymphatic or myelogenic leucocythæmia," "Hodgkin's disease," "Multiple lymphosarcoma,"—these and other names have been used, just as a number of names have been employed in the past for tuberculosis. But it tends to promote confusion if one of the symptoms of the general malady be thus elevated to the rank of a special disease. As illustrating this we may take the word "Leucocythæmia," or "Leukæmia."

[Mr. SPENCER here referred to the various ways in which an increase of leucocytes may be brought about, and the difficulty of defining sharply any one form of lymphadenomatosis. He continued:]

Leucocythemia should, therefore, be looked upon as one symptom among others of a general disease. A more satisfactory plan would be an attempt to divide lymphadenomatosis according to its several modes of origin and the various ways by which the hypothetical virus may enter. In one group the cause of the disease appears to enter by the alimentary canal. Children suffer from anæmia, cachexia, hæmorrhages, irregular fevers, enlarged intestinal lymph follicles, spleen or retro-peritoneal glands with or without an increase of white cells. Cases of this kind are very numerous; one of these conditions may alone be present, or in combination with others, or all may coexist. The nature of this cause and its connexion with other general conditions, such as intestinal catarrh, inherited syphilis, tuberculosis, and rickets, forms a subject of great practical importance. Again, young men and boys—e.g., army recruits or young prisoners—are subject to sudden attacks in which the mediastinal glands are affected, either those in connexion with the thymus or behind the lungs. The disease is often attributed to cold, damp, and foul air. Does the poison in such cases enter by the lungs? Some of the cases are most acute; in one reported by Guttmann a boy died four and a half days after the first sign of illness, the immediate cause of death being cerebral hæmorrhage, but there was also a general enlargement of lymphadenoid tissue. In some cases an infectious disease precedes the outbreak. Dr. Hale White allows me to mention an acute case commencing in a previously healthy young man after influenza. Some forms suggest a virulent infection, but the evidence as to a transfer of this infection is negative. The only exception which has been brought forward is a case under Obratzow, in which a clinical assistant who helped to plug the nostrils and examine the urine and fæces of an acute case was attacked in a similar manner and died a month after. Other probably mere coincidences have been reported in which an injury in the region of the spleen or to the bones preceded the illness. It is very difficult frequently to distinguish such cases from tuberculosis. Indeed, some appear to be instances of a mixed infection—e.g., caseation in some glands, with adenomatous enlargement, especially of the spleen, which is of course seldom attacked by tubercle except in children. In the absence of exact knowledge it is impossible to discuss the relation between the infection and the resistance on the part of the individual—the relation between the seed and the soil. But by the light of analogy we may be assured that individual differences in resistance may originate many varieties from one and the same kind of infection. If we arrange the facts gleaned from the bedside in some general way, according to the probable mode of entry of the poison, we shall be ready to receive the new light which will doubtless soon be thrown upon lymphadenoma by biological and chemical researches. The experimental work on this subject is as yet merely in a laboratory stage, and the results hitherto obtained, interesting and extremely suggestive as they are, indicate the need for further work and the direction such work should take. Micro-organisms have been found in the growths, leucocytosis and anæmia have been produced by the injection of substances into the blood of animals, and clinical observations on the administration of materials obtained from the thyroid, thymus, spleen, and bone-marrow are going on. Some amount of mutual contradiction and of negative results inevitably take place in the earliest stages of an experimental research, and this prevents for the present any formation of an opinion upon the matter.

Mr. J. JACKSON CLARKE opened the discussion on the paper. He thought that no distinction could be made between lympho-sarcoma, Hodgkin's disease, and lymphadenoma. His experience of the use of arsenic in this disease was that it was only of temporary benefit, and he thought that many of the cases of lymphadenoma eventually went on to typical sarcomatous infiltration. Infiltration of the skin he regarded as a help in the diagnosis, especially in the case of deeper-seated mediastinal growths. In one case of lymphadenoma which he had seen the simple enlargement became eventually tuberculous, and finally a condition of pyæmia was set up. In those cases where cocci are found they are superadded and are evidence of the pyæmic condition of the patient. In leucocythæmia he had noticed lymphomatous growths in various organs, and he hesitated to mark these off as distinct from lympho-sarcoma. He drew attention to the occurrence of lympho-sarcoma in connexion with gout and osteo-arthritis; in the latter the bone-marrow shows small nodules of lympho-sarcomatous infiltration.

Dr. R. MURRAY LESLIE was in favour of the hypothesis that lymphadenoma was organismal in nature. He thought

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considerable light was thrown on the pathology of the condition by a careful study of aberrant forms and allied diseases. He described forms to show that one or more, or all, the lymphoid structures may become involved in different ways, and also that there is a close relationship existing between lymphadenoma and such diseases as leukæmia and splenic anæmia. The number of leucocytes and hæmocytes depend on the relative involvement of blood-destroying structures. Dr. Leslie was of opinion that a study of the pathology of such cases would tend greatly to clear up our knowledge of hæmatogenesis and hæmatolysis. He brought forward the following points in favour of the hypothesis of organismal origin: (1) certain cases seem to owe their origin to exposure to foul air; (2) micrococci and other organisms have been found in the affected structures; (3) the close analogy which exists between this and tuberculosis and other organismal diseases; (4) affection of the cervical glands would point to infection by the mouth, of the mediastinal glands by the lungs, and of the mesenteric glands and Peyer's patches by the alimentary canal; (5) pyrexia and night sweats are present, as in other organismal diseases; and (6) the beneficial effects of arsenic are probably to be attributed to its germicidal action and are comparable with the action of mercury in syphilis. For these and other reasons he would class lymphadenoma in the great group of granulomata, of which syphilis, tubercle, and leprosy are examples.

Dr. G. N. PITT, in a paper, noticed the affection of bronchial glands following on chronic bronchial irritation. He distinguished true lymphadenoma as consisting of an adenoid overgrowth limited to adenoid tissue, which never fungates or infiltrates, and which destroys only by pressure on vital structures. He had seen tubercle and lymphadenoma associated together in the post-mortem room, and he thought that in the future the distinction between new growths and infectious granulomata might turn out to be less than at present supposed. He observed that where there is leucocytosis the spleen is more frequently enlarged than in those cases in which this condition is absent, though, on the other hand, a temporary and variable leucocytosis might occur apart from splenic enlargement. He related a case diagnosed by microscopic examination as spindle-celled sarcoma which had cleared up under arsenic, and he was not therefore in agreement with Mr. Spencer, who concluded that if improvement took place under the use of this drug the disease must be lymphadenoma.

Dr. H. SNOW strongly insisted on the importance of differentiating cancer of the lymphoid tissues from true lymphadenoma or Hodgkin's disease. He recognised three main forms of lymph-gland enlargement, differing from one another widely in microscopic appearance and also clinically. 1. Simple lymphoma. 2. Hodgkin's disease, an obscure general enlargement of glands throughout the body, pyrexial in character, and associated often with pregnancy or exposure to cold or wet, microscopically showing a cirrhosis of the gland, the cell elements being eventually crushed out by redundant fibrous tissue. 3. Lympho-sarcoma or lympho-carcinoma, a true cancer, always primarily local, following injury generally and showing all the features of cancer elsewhere—e.g., progressive cell proliferation, erosion of all adjacent tissues, and progressive tendency to death. He alluded to the marrow as an important adenoid tissue, and thought that implication of this might explain multiple hæmorrhages.

Dr. CLAUDE WILSON made some remarks bearing on the tendency exhibited by speakers to group together, rather than to differentiate, the different diseases under consideration. He mentioned a family in which the grandmother, her two children and two grandchildren all suffered from splenic anæmia, but in which there was no leucocytosis.

Mr. SHATTOCK distinguished between lymphatic growths and tuberculous growths; in the former the tissue was a true lymphatic tissue, whereas in the latter the granuloma consisted of granulatory tissue. He said that it was true that in lymphadenoma the new growth was normal in structure, but he maintained that that also was the case in carcinoma, in so far as it was a reproduction of normal structure, and yet it was malignant.

Dr. WILKS referred to the teaching on the subject in days gone by and asked whether in lymphadenoma the process is not infective in its later stages.

Mr. SPENCER, in reply, said he would like to keep the term lymphoma for affections of the lymphatics and lymphadenoma for those of the glands. He thought that the intervention of a micro-organism was not absolutely necessary for the production of a new growth. Leucocythæmia he regarded as a symptom rather than a disease, and he advised caution in concluding the presence of lymphadenoid growths in the liver and kidneys from the naked-eye changes, as old hæmorrhages bear a close resemblance to them. He argued that the readiness with which lymphadenomatous growths shell out was a means of differentiating them from lympho-sarcoma.

Dr. AULD then read his paper on Hæmatogenous Jaundice, which had been postponed from the previous day, and Dr. HUNTER contributed a few remarks thereon.

Professor BABES (Bucharest) read a paper in French on the Morphology of Pathogenic Bacteria.

Dr. HEWLETT gave a demonstration of the Diazo Reaction in the Urine of Typhoid Fever. The point which he brought forward was that morphine gave the same reaction with Ehrlich's test, even in such dilute solutions as 1 in 5000. He laid stress on the colouring of the froth in the test tube in typhoid fever and with the morphine, which could not be obtained in the urine of patients suffering from tuberculosis and other febrile diseases, though the dark colour in the fluid was obtained with the test. He had tried to obtain a reaction with various other substances besides morphine, amongst which was a fine culture of the bacillus typhosus, but he had not succeeded. In cases of typhoid fever he thought the reaction could be obtained as early as the sixth day, but he did not regard it as an absolutely infallible test. He thought that its absence in a febrile disease (proving the absence of typhoid fever) was of more clinical value than its presence.

Dr. ST. CLAIR THOMSON, in conjunction with Dr. HEWLETT, read a paper on the Fate of Micro-organisms in Inspired Air. From the results of their experiments they were of opinion that in quiet respiration micro-organisms were for the most part arrested by the vibrissæ at the entrance to the nasal passages, and that the mucous membrane of the nose was aseptic.

Dr. SURVEYOR described an experiment which he had made to show that the intestinal gases were void of micro-organisms.

Dr. HEWLETT replied.

The following communications were also made to the Section:—

On Psorospermiasis, by Dr. I. O. W. BARRET and Dr. N. F. SURVEYOR.

The Growth of the Cholera Vibrio in Sunlight, by Dr. F. F. WESTBROOK.

Dr. F. R. WALTERS then read the history and symptoms of a case of Pulmonary Hypertrophic Osteoarthropathy. The patient was shown to the members. Dr. Walters expressed his opinion that the disease was different from acromegaly, and that it was probably due to action on the tissues of the toxines produced by micro-organisms.

On the motion of Dr. F. R. Walters a vote of thanks to Dr. Wilks for presiding was carried by acclamation, and this terminated the proceedings of the Section.

OTOLOGY.

WEDNESDAY, JULY 31st.

Objective Tinnitus.

Sir WILLIAM DALBY, after his preliminary address, which was published in THE LANCET of Aug. 31, showed a case of Objective Tinnitus in a young woman. The noise had existed eighteen months and it did not alter with position. The sound was distinctly audible on approaching the ear to that of the patient, and was of a creaking character synchronous with the pulse. No satisfactory explanation of its occurrence was elicited in the course of the discussion.

Nerve Deafness.

A discussion on the various forms of Nerve Deafness was opened by Dr. DUNDAS GRANT. These might be classified as follows:—I. Diseases of the labyrinth—(1) the labyrinth alone, due to (*a*) circulatory disturances; (*b*) infectious diseases, syphilis, mumps, &c.; (*c*) rheumatism; (*d*) traumatism; (*e*) professional—i.e., the action of sound; (*f*) toxic labyrinthine disease; (*g*) senile changes; (*h*) new growths; (2) labyrinthine disease secondary to middle-ear inflammations—(*a*) chronic catarrhal, including typical Ménière's disease; (*b*) suppurative; (*c*) middle-ear inflammation following general infectious diseases—e., diphtheria, scarlet fever, &c. II. Diseases of the auditory nerve and

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cerebral auditory centres—(1) neuro-labyrinthitis following supurative meningitis and cerebro-spinal meningitis; (2) cerebral syphilis; (3) intracranial and auditory nerve neoplasms; (4) lesions of the cerebral auditory centres; (5) tabes; (6) hysteria; (7) reflexes; (8) diplacusis; (9) colour-hearing. As regards treatment in the first, or labyrinthine, division, depletion was first to be thought of in circulatory disturbances with a full habit; puncturing of the inferior turbinal was a good mode of procuring the desired effect. Syphilitic cases derived benefit from profuse sweating as obtained by a Turkish bath. This accounted no doubt for the benefit sometimes obtained from pilocarpine injections, which, to be successful, must be employed before the effusion, either mucous, serous, or purulent, has become organised, and should therefore always be tried in the first instance. The remedy was not unattended with risk. It was indicated in symptoms of labyrinthine effusions and hæmorrhage, contraindicated in anæmia. There was a good probability of recovery in syphilitic cases if used at once; it should be laid aside if no effect was observable in a fortnight. All cures reported have occurred in the early stages. The deafness of hereditary syphilis was always rebellious. Hill, McBride, Gradenigo, and others have reported cures, but Dr. Grant had not met with an instance. Pilocarpine should be tried in labyrinthitis following mumps and also in leukæmia and infectious diseases. A case of almost complete recovery in labyrinthitis of scarlet fever was reported in vol. iv. of the *Archives of Otology*. The remedy should be avoided and substituted by galvanism in professional deafness. In labyrinthine disturbance and its sudden loud noises, Delstanche's rarefacteur had been known to produce immediate improvement, by restoring to a normal condition the undrawn tympanic structures and stapes. Pilocarpine is also contra-indicated in toxic deafness, new growths, and inflammation of the auditory nerve due to meningitis. Counter-irritants were indicated in the latter instance, with rest, particularly in leukæmia. To obtain functional rest from noise, the ears should be stopped with cotton wool and the head wrapped up. Cerumen is partially protective in such cases, and it became a question as to the advisability of removing cerumen in the case of boiler-makers and others subjected to loud noises. Sedatives were indicated in mental disturbance, and bromides might be used freely unless the anæmic element was present. The galvanic current was also serviceable in tinnitus. The positive pole should be applied to the back of the neck and the negative to the tragus or mastoid. Four to eight milliampères were to be employed, especially in complicated labyrinthitis following exposure to noise, but the remedy must be employed with discretion. Strychnine was useful, especially in women who were overworked and underfed. Quinine was serviceable in counteracting giddiness and vertigo rather than deafness. Depressants such as colchicum should be given in gouty subjects. The case was mentioned of a lady who suffered from disharmonic diplacusis. She had diplacusis for high-pitched tones. Her Galton was 4·7 on the left side, 2·6 on the right. Under colchicum and the iodide her hearing distance improved, and the diplacusis vanished. Hypnotic suggestion was a remedy of some promise in hysteria. The hysterical deafness was a condition of auto-hypnotism. A related form was common in young girls with amenorrhœa. Dr. Grant, after mentioning the acoustic exercises of Urbantschitsch, and the value as a last resource of lip-reading for deafness, concluded by insisting upon (1) the necessity for a careful diagnosis in nerve deafness; (2) upon the importance of pilocarpine as a remedy in selected cases; (3) recognition of the many-sided character of nerve deafness; (4) recognition of changes in the labyrinth due to senility; (5) recognition of the frequency of chronic aural catarrh as a cause of Ménière's disease; (6) the influence of exposure to noise, and the importance of protection from them.

Dr. MACNAUGHTON JONES enlarged upon the difficulty of isolation of diseases of the auditory nerve, and alluded to fifty cases of absolute deafness which he had published. He considered treatment extremely unsatisfactory, but thought some good was obtained by treatment of so much of the deafness as might be attributable to disease of the middle ear. He thought prophylaxis of great importance, and advised careful watching of children with adenoids. He always insisted that children of deaf parents incurred great risk by residing in malarial districts and further remonstrated against operations upon the nose being suggested for the relief of established and incurable deafness.

In the discussion which followed, Dr. BARR sympathised with Dr. Macnaughton Jones in his remarks on implication of the middle ear, the condition of which should be carefully investigated. With reference to the pilocarpine treatment, he had been disappointed with the results. He now thought that when a cure resulted it was due to a mental effect. The patient made an earnest effort to hear better, but when carefully tested the patient's statements were not borne out. A woman who had sclerosis of the middle ear, with a bad prognosis, underwent the treatment for several weeks in the hands of another practitioner, and at the end expressed herself much better, but he did not discover the slightest improvement, in fact her H.D. for the watch was rather worse. He had used pilocarpine in cases of recent effusion into the labyrinthine spaces when vertigo, tinnitus, &c., were present, but without any benefit.

Dr. LAW raised a question as to the benefit obtainable for deaf patients suffering from secondary, tertiary, or inherited syphilis by the use of mercury or iodide of potassium. Two cases had been under his care lately. In the first, the symptoms of secondary syphilis were present, including roseola rash, iritis, and mucous patches in the throat. Mercury was used in the form of inunction, with rest in bed. All the symptoms excepting the deafness disappeared. After this from twenty-five to thirty injections of pilocarpine were administered without benefit. Subsequently paraplegia developed, the iodide of potassium was administered again, the paralysis disappeared, but the deafness remained as before. A similar case in the secondary stage was treated with a similar result. He had not met with any better success in treating syphilitic deafness in the tertiary stage or in the hereditary form.

Dr. WOODS (Dublin) had had a similar experience.

Dr. MILLIGAN (Manchester) recommended the treatment of the middle-ear in cases of nerve deafness following middle-ear disease. Some cases of nerve deafness were influenced by mental treatment, there were in some cases tinnitus and a temporary absence of bone conduction, requiring change of air, rest, and tonics. He had been most disappointed in the results obtained from pilocarpine in both syphilitic and non-syphilitic cases. He had not found benefit in recent effusions into the labyrinth either. He instanced this fact by a case of a gentleman who was a free liver and a great smoker and who awoke one morning quite deaf. There were all the symptoms of effusion into the internal ear. Pilocarpine injections were given for six weeks without any benefit. He thought that in secondary changes of the auditory nerve, the patient was much better left alone.

Mr. E. H. BENNETT (Leicester) reported three cases of slight improvement. He had lately treated a child which had been for some time under care for keratitis, then deafness came on. He tried pilocarpine and also employed Politzerisation. In a fortnight a slight improvement was noticeable, and then after twenty injections altogether, the parents reported that the child heard as well as ever, but, of course, he was not in a position to state that the result was altogether attributable to the pilocarpine treatment.

Dr. WARDEN (Birmingham) began the treatment of syphilitic cases with the perchloride of mercury, followed by tonics, such as strychnine and hydrobromic acid, and quinine, followed by galvanism. Pilocarpine had made no definite impression on his cases. He agreed with Dr. Macnaughton Jones that large doses of quinine had caused persistent deafness.

Mr. G. P. FIELD repeated his experiences. He thought the treatment of nerve deafness was not satisfactory, but he was satisfied with the good results that might be obtained from pilocarpine if the cases were correctly chosen. He had had a good many successful cases.

The PRESIDENT regretted that Mr. Field could not give scientific details of his successful cases, and summed up the views that had been expressed by the previous speakers. He said with referenee to quinine that the results of administering it were very different in deaf patients from that in those who were well. Healthy people regained their hearing after taking the drug, but deaf people recovered with an increased amount of deafness. Knapp had stated that quinine had been pushed till people were absolutely blind, but they recovered their sight when the drug was stopped. With regard to syphilis, the rule was that in the early stages the nervous loss of the hearing is recovered during the ordinary treatment—i.e., administration of iodide &c.—hence it became a question whether we should pursue

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any treatment directed to the hearing apparatus unless the middle ear is involved.

Dr. DUNDAS GRANT, in replying, remarked that middle ear complications were not sufficiently treated when occurring with nerve deafness and syphilitic labyrinthitis; sometimes these complications formed an essential part of the case. He thought that the cases of secondary syphilitic deafness that had been brought forward were so bad that a good result from treatment could hardly be expected. Galvanism was most applicable to the class of cases he had termed professional, and to functional cases, as hysteria. With reference to etiology, there was often a multiplicity of causes in operation, as instanced by the case of a gentleman who lost the hearing of one ear and one testicle by metastasis from mumps. He had taken large doses of quinine; last of all he had had syphilis. Galton's whistle was very useful in the diagnosis of nerve deafness. The lowest turn of the cochlea was for the detection of very high tones, and in nerve deafness this function was lost. The capacity for hearing the tones of the middle range was wanting in disease of the intra-cranial part of the auditory nerve. It was difficult to know what attitude to take with reference to the cases of published cures.

Dr. MACNAUGHTON JONES replied by referring first to the pilocarpine treatment, and reviewed the whole history of its introduction. He thought it should be limited to such cases as apoplectiform vertigo, recent syphilis, leukæmia, high tension in the endolymph and perilymph and the like. In old-standing cases of syphilis there was no prospect of any benefit from any measures employed, but in the first stage a combination of iodide of potassium and the ordinary specific remedies with pilocarpine injections constituted a valuable form of treatment. If galvanism was of any use, it was more in the diagnosis than treatment of nerve deafness.

Tuberculous Disease of the Middle Ear and its Adnexa.

Dr. W. MILLIGAN read a paper upon this subject. He remarked that tubercle more often attacked the middle ear than some writers had believed. Painless perforation of the membrane, especially when complicated with facial paralysis, was usually an indication of tuberculous mischief. He had operated upon ten cases of mastoid suppuration in children, and had inoculated guinea-pigs with scrapings from the diseased bone. In eight out of the ten cases tuberculous infection followed, and upon dissection the abdominal and pelvic glands were found to show distinct evidence of tuberculous infiltration. The dissected guinea-pigs were exhibited before the section with drawings, microscopic sections, &c.

The PRESIDENT thanked Dr. Milligan for his original paper, which was deserving of the highest praise. He referred to the painless inflammations that were met with in the tympanum of phthisical and diabetic patients. As regards mastoid operations in children, these often required to be repeated, owing no doubt to the presence of tuberculous foci in the cells, and he related cases illustrating this fact from his own practice.

The Treatment of Intractable Suppurations of the Middle Ear by Operation through the Mastoid.

Dr. BARR gave an account of eight cases of suppurative disease of the middle ear occurring between the age of sixteen and thirty-two years. Four had been operated upon by himself and four by Macewen. In all the cases the purulent mischief had been of long duration—namely, from fourteen to twenty-six years. Careful treatment had been carried out in each case, and the attic, which was involved in the suppurative process in all of them, had been thoroughly syringed out, but no effect had been obtained. The instrument employed was the globular dental burr followed by the gouge, supplied to him by Macewen; the clean surface left by the burr was of great advantage in estimating the depth and direction of the opening. The burr must be hard and sharp, and should be removed every few seconds for cleaning. The burrs of British make were useless. The time from the operation to the total cessation of discharge was from two to eighteen months.

Attic Disease treated by modified Stacke's Operation.

Dr. BRONNER read notes on five cases of attic disease treated by modified Stacke's operation. All previous treatment had failed. The attic alone was opened up. He did not act through the whole meatus, but made his incision in such a direction that allowed of his pulling the ear forwards and downwards. He prolonged his incison forwards. He did not like burrs, but from what the last speaker had said he had no doubt the fault had lain with the burr.

Dr. LAW in the discussion inquired as to Dr. Bronner's results with reference to the hearing power after operations upon the attic.

Dr. MILLIGAN raised the question as to the advisability of retaining a permanent mastoid fistula. He thought it was better to leave a mastoid fistula, and to ascertain this point he had treated one-half of a series one way and another half the other. Another point was the origin of the disease of the attic; he thought it was probably a suppurative condition arising in the antrum, the pus eventually pointing through Schrapnell's membrane. If this were the case we should expose the antrum and remove the disease. The intratympanic syringe was very useful in attic disease, and this, with excision of the ossicles, was often enough to effect a cure. He asked the authors of the preceding papers how long they generally had to continue the subsequent treatment. He rarely got his wounds dry after mastoid operations under a year.

Dr. WOODS asked if previously to the operations boric acid in spirit had had a fair trial.

Dr. URBAN PRITCHARD spoke with reference to instruments. He had always found a great advantage in using the sharp spoon in preference to the burr. In cases where the bone was sclerosed throughout he has had to chisel before reaching the disease. In these it would take much less time to use the burr. He preferred the burr made by Hallam. The malleus should be removed as a preliminary so as to be able to obtain a free drainage through the ear, and in that way to avoid performing Stacke's operation or having recourse to the removal of more bone. He recalled one case under his care at King's College Hospital, in which there was no rise of temperature, and he hesitated to operate, but there was a dirty discharge, and this was a symptom he disliked very much in a man of middle age. He operated, and found a quantity of diseased bone in the mastoid. The wound healed in six weeks.

Dr. BARR, in his reply, stated that the best burrs were to be had from White of Philadelphia; English burrs rode over hard bone, and did not cut out the eburnated bone. As to the class of case operated upon, they were limited carefully to old suppurations that had gone on for years, in which all other methods (including extraction of the malleus in three of them) had failed, and that in the hands of specialists. In regard to the subsequent treatment, three had practically ceased discharging in three months and the dry treatment adopted. Other cases healed much more slowly. Syringing had been diligently practised backwards and forwards, but the treatment went on for eighteen months, during which he had rung the changes on the dry and wet methods. He soon hoped to get quicker results. The operation was still in its infancy, but he hoped it would soon be possible to cure every form of middle-ear mischief.

Dr. BRONNER stated, in reply, that there was in his cases an improvement rather than the reverse in the hearing power.

Dr. LAW showed a series of forty anatomical specimens sent from Professor Politzer.

THURSDAY, AUG. 1ST.

Discussion on Cerebral Complications in Relation to Middle-ear Disease.

Dr. MACEWEN, in opening the discussion, touched upon three points only, and wished the remainder of his paper to be taken as read. The first point was intracranial abscess, the second tubercle of the middle ear, and the third bacteria and prophylaxis: 1. Regarding the localisation of abscess, it was a fallacy to suppose that bone-conduction was present in cerebral abscess and absent in cerebellar disease. It was also a mistake to assume that bacteria reached the brain through the middle ear. Cerebellar abscess arose from disease of the sigmoid sinus, not from that of the internal ear. If the seventh and eighth nerves were intact and the aural mechanism in good order, the auditory nerve would transmit vibrations in spite of the abscess. A case of fatal leptomeningitis with post-mortem report was cited in support of these statements. 2. Tubercle of the middle ear had not received the attention it deserved. It spread slowly and with little pain or no discharge, and sometimes reached an advanced stage without perforation. Tuberculous products formed excellent culture media for pyogenic bacteria; the latter easily found their way into the softened bones. Tubercle bacilli also invaded the blood-stream by finding their way into the sigmoid sinus. In all such cases the mastoid must be freely opened and

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the tuberculous disease eradicated. The middle ear also formed an excellent incubator; the organisms were afforded all they required in the way of thermic conditions; also food and darkness, and injections practically did them more good than harm. 3. With reference to prophylaxis, Dr. Macewen uttered a caution against conveying disease from ear to ear by means of instruments not properly disinfected. The aurist must be prepared to do more than treat the disorders of hearing; he must be a bacteriologist as well, and his operations are all of them of the nature of bacteriological experiments. In conclusion: (1) the spreading of infection from the middle ear was preventable; (2) when infection was once established we must ensure its eradication.

Dr. LUC (Paris) described a case that had occurred in his practice which was of an insidious character. The patient complained of pain in the occipital region; there had been protracted suppuration from the middle ear and the latter was washed out with a Hartmann's cannula, masses of cholesteatomatous material being removed. After this, Zaufal's operation was performed on the mastoid, the bone being found much diseased; the patient subsequently died, and at the post mortem an abscess was found in the cerebellum.

Mr. MARMADUKE SHEILD regretted that Dr. Macewen had confined his remarks to tuberculous disease. He did not think tubercle of the middle ear was so common as was generally supposed. Naked-eye appearances were fallacious, and the only certain test was inoculation and bacteriological examination. With reference to the disinfection of instruments, he thought much depended upon whether the surgeon made a scratch on the granulation surfaces, for the latter are protective against organisms—i.e., they hinder access to the meninges. He insisted on the importance of removing the infectious foci from the bone when operating, as the least trace left behind acted as a fresh focus for disease. When the latter spread to the base of the petrous bone it was difficult to reach it. He preferred to use a mallet and gouge, and inquired whether Dr. Macewen found it possible to remove all the carious foci by his methods. Regarding the surgical treatment of suppurative meningitis in which a general purulent meningitis extended over the base of the brain, he had not so far succeeded in treating these cases, and he inquired how Dr. Macewen dealt with them.

Dr. MILLIGAN remarked upon a fatal case of cerebellar abscess, in which bone-conduction was good. With reference to tubercle there was no very obvious clinical symptom, but often absence of high temperature, pain, and discharge. The disease was not a simple inflammatory one, therefore it was of greater importance to diagnose it. Inoculation experiments afforded the only means. It was extremely difficult to find tubercle bacilli in the discharge. He narrated the case of a small child in whom he had removed all visible disease, and death ensued from tuberculous meningitis. He could not say that the latter was directly traceable to the middle ear. In a second case death followed from diarrhœa; it was very difficult to remove every trace of disease.

Dr. MCBRIDE referred to the tendency to recurrence of the disease after an apparent cure had been effected. He did not think we were justified in promising a certain cure to the patient by operation. As to the suggestion he had thrown out in a former paper upon the question of diagnosis of cerebellar abscess by means of the tuning-fork, he regretted that what was originally a mere suggestion had since been quoted as a fact.

Mr. BALLANCE said not only did we get cranial complications in tuberculosis of the middle ear, but also serious lesions in other parts. Children suffering from hip and spinal disease often had a history of discharge from the ear, hence the importance of thorough treatment of the ear mischief. Last year he admitted two children to hospital with a discharge from the ear containing tubercle bacilli. There was a good deal of febrile disturbance, but no external sign of mastoid disease. There was at first some relief from the fever after the operation, then the temperature rose again. Eventually both these children died. In the lungs there was abundant post-mortem evidence of tuberculous disease. From these cases he inferred either that the operation was not performed soon enough, or else that the fact remains that we cannot hope for the same success in treating these cases as we meet in other diseases. Referring to what Dr. McBride had stated concerning the tuning-fork test, he had never himself regarded the test as diagnostic, but he should think there was some additional argument towards a diagnosis if no bone conduction was present on one side. Recent researches upon the effects of removing one half of the cerebellum had taught us what signs to look for. All the symptoms were present in the last case in which he operated, including headache, vertigo, vomiting, optic neuritis, nystagmus, deviation of the eye to the opposite side, and paresis of the same side, exaggerated knee jerk and all pathognomonic symptoms. He inquired what Dr. Macewen had to say upon operating on the cavernous sinus. A distinguished Parisian surgeon gave it as his opinion that we could not operate. He thought, however, we ought to be able to operate with some success. He would open the skull and dura mater on the affected side, lift up the temporo-sphenoidal lobe, divide the tentorium, and then make an incision down to the cavernous sinus, and insert a drainage-tube. Referring to the class of case mentioned by Dr. Luc, he recalled that of a child on whom he operated for cholesteatoma which had formed a huge cavity. The child did well for ten days and then died. The pillow was soaked with blood, and death ensued from erosion into the lateral sinus. He (Mr. Ballance) inquired where Dr. Macewen obtained the burrs he employed; he inferred that they were reserved for cases of sclerosed bone. He himself used a broad gouge with a cutting edge at right angles to the handle, three-eighths of an inch broad for the first part of the operation. He thought there was a difficulty in obtaining a permanent cure in Stacke's operation. He did not think Schwarze's was suited for chronic cases. We ought in operating to throw all the cavities into one, so as to have only one to dress. When discharge continued it was because the drainage through the mastoid had not been allowed to continue long enough. A residual abscess remained behind, and more bone must be removed.

Dr. BARR alluded to the danger of removing granulation tissue or polypi from the middle ear without careful antiseptic precautions. He now always subjected the ear to careful antiseptic cleansing for a week or two before removing the granulations, though he knew it was not possible to obtain absolute asepsis. With regard to the tuning-fork he always found that bone-conduction was intensified in the presence of purulent mischief.

Dr. URBAN PRITCHARD recommended avoidance of any treatment of the ear which was not antiseptic, such as syringing with plain water. His plan in a case of small granulations in the middle ear was to syringe with a 1 in 40 solution of carbolic acid several times. Probes were dipped in 10 per cent. carbolic acid in spirit. After scraping out the diseased tissue he dressed the part like a wound with biyanide gauze. On removing the latter he did not syringe, but applied fresh gauze, and on the fourth day he found that small perforations had healed up, the surface being healthy, without a spot of discharge, and there was no trace of infection backwards. He addressed a word of warning to the surgeon: the latter is very apt to try to localise a cranial abscess and operate over that spot, and perhaps successfully, but sometimes he forgets that the mastoid has been the seat of the disease, and he fails to open the antrum and clear out that cavity as well. If we are unable to localise an abscess at first, we should clear out the middle ear by opening the mastoids and antrum, clearing them out, and going backwards to the cranial cavity, taking the lateral sinus as a guide, operating upwards for the cerebrum and below for the cerebellum, and entering the probe carefully in these parts to detect any abscess that may be present.

The PRESIDENT alluded to a paper he had read before the Clinical Society some time ago in which he divided the cases of ear disease that terminate fatally into two classes, which still remained in force. He narrated a case in which he had removed nearly the whole of the temporal bone in a child two years old for disease. He discussed the indications for employing the defensive operations, which were briefly: (1) continuous head pains and giddiness, also for the cure of a hyper- or exostosis; (2) when there was inflammation in the ear with discharge and profuse suppuration, continuing from eight to fourteen days, the patient dying from septicæmia or meningitis, and the discharge being so profuse as to absolutely pour out. In such cases the drainage between the middle ear and the mastoid should be made complete; (3) the presence of epileptic seizures. All such cases should be operated upon.

Dr. ROBERTSON touched upon the after-treatment of mastoid antrum operations. He considered the most effective remedy was the prolonged drainage of the antrum, and he employed a lead stilette for the purpose. Complete cessation of the discharge followed. He deprecated too extensive use of the syringe.

Dr. DUNDAS GRANT had tried the dental burr but gave it

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up again for the small gouge, owing, he thought, to the inferior quality of the steel. He mentioned a case in his own practice which was similar to that described by Dr. Luc. He extolled the local employment of alcohol in suppurative disease of the ear, it being most potent against sepsis and moisture.

Dr. WOODS showed the brain of a case under his care in which "the operation was perfectly successful but the patient died." The patient had cerebellar abscess, and sank after the operation from no apparent cause. He also described a second case (of leptomeningitis) terminating fatally.

Dr. BARR demonstrated a specimen illustrating the effect of the burr upon a sclerosed mastoid.

Dr. MACEWEN, in reply, stated that he hoped those present had not what he called a statistical conscience, those surgeons who had a statistical conscience were apt to let people die for fear of spoiling their statistics. Sometimes the most hopeless cases got well, in one instance that occurred in his practice recently he thought the patient was dead, he was so absolutely moribund. It was a case of cranial abscess, but the operation was successful, and the patient was now alive and well. He then discussed the diagnosis of cerebellar abscess, and explained why no reliance could be placed upon any one set of symptoms, there was considerable variation in the effect of pressure on the medulla by the abscess, dependent on the fact of its being exerted on both sides or on one only. He agreed with Dr. Milligan's method of experimental inoculation; there was always a probability of tuberculous disease being present in suppurating bone. It was the duty of the aurist to prevent pyogenic infection. Could one prevent general tuberculous infection? This was possible if the disease was limited to the mastoid, and all foci here must be removed. When the disease had spread to the petrous bone it was difficult to eradicate it, but the diseased cavities must be opened up and the walls papered with healthy skin to allow free exit for the discharge. He preferred using burrs to chisel and mallet on account of the impact of the latter, which was thus avoided. He held the handle of the burr like a pen and drilled away the offending parts with the greatest ease; the sinus was easily seen through a thin film of bone and avoided. English burrs were of no use, and he employed those of the American Dental Company.

FRIDAY, AUG. 2ND.

A New Form of Rotatory Vertigo.

Professor GUYE described a case of Ménière's disease in which the rotatory sensations of the patient were of a character hitherto undescribed. He had seen similar cases. The patient was a man aged forty-seven who had had influenza four years ago, but had since been in good health. For two months he had tinnitus in his left ear, and then suddenly (last year) an attack of vertigo. He fell down and vomited. These seizures had recurred at intervals and had not yet disappeared. As regards hearing, he heard the ticking of a watch two inches from the right ear and not at all with the left. His was a typical case of Ménière's disease, and he had shown symptoms of labyrinthine disease. As regards the vertigo, he first saw objects turning round before him in the direction of the hands of a clock, then everything seemed to be turning to the right, and vomiting ensued with giddiness, which obliged him to lie down. Professor Guye then pointed out the distinction between this kind of vertigo and the better known form in which the rotatory sensations are in the vertical axis towards the side of the affected ear. When these sensations are slight there is a tendency on the part of the patient to turn involuntarily in the same direction as the sensation. When the rotatory sensation is strong and sudden it produces a reflex unconscious movement in the opposite direction. These rotatory sensations round a vertical axis might possibly be accounted for by supposing the existence of some irritation of the ampullæ of the horizontal semicircular canals. Other forms of rotation were described. Professor Guye sought to explain these phenomena by reference to the anatomical position of the superior and posterior canals. A slight rotatory sensation in the superior canal would give rise to a feeling of falling forwards or backwards, but around an axis which, instead of being transverse, is inclined to the right or left, according to the side affected. An affection of the posterior canal would give rise to a sensation of objects rotating in front of the patient like the hands of a clock the disc of which is not in front but to the right or left of the patient. More accurate observation on the part of aural surgeons and comparison of clinical with post-mortem observations were required.

Objective Tinnitus.

Mr. CRESSWELL BABER showed a patient, a young woman suffering from Objective Tinnitus, but differing in many respects from Sir William Dalby's case. The sound heard was a soft blowing souffle, very distinctly audible by means of an auscultation tube. It was synchronous with the pulse.

Turbinotomy.

Mr. T. CARMALT JONES read a paper on Turbinotomy in cases of Deafness and Tinnitus Aurium. Removal of hypertrophied inferior turbinals and moriform growths should be practised in cases of deafness and tinnitus where the auditory nerve was in a healthy condition. The naso-pharynx was the cause of much secondary ear trouble. He had operated in upwards of 500 cases. The pain after the operation varied, as did the amount of bleeding. The best anæsthetic was nitrous oxide gas or the A.C.E. mixture, the latter being preferable for children. Notes were read of twelve cases of deafness or tinnitus in which turbinotomy had been performed. Eleven of these were cases of deafness and tinnitus combined. Relief to both conditions was afforded in eight cases; slight relief to deafness only in one. In two there was no relief at all.

A discussion followed in which Mr. BABER, Dr. BRONNER, Dr. MACNAUGHTON JONES, Dr. PRITCHARD, and others took part.

Treatment of Nerve Deafness.

Dr. MACNAUGHTON JONES read a paper on: 1. Some Otological Considerations of the Treatment of Nerve Deafness, based upon a case of Ménière's disease. There had been absolute deafness in one ear for many years. The sound ear was subsequently attacked suddenly. Guy's symptom of reeling towards the affected side was present. Careful study of the cause of aural vertigo was important as possibly leading to a diagnosis. The middle-ear element and all other sources of vertigo being carefully excluded, we were in a position to decide upon the apoplectiform character of the case, and might be able to detect unsuspected disease in other organs than the ear. 2. An extreme case of Hyperæsthesia Acoustica. The patient, a woman aged fifty-five, said her hearing was dreadfully acute. She responded perfectly to the usual hearing tests. Music made her giddy; even a clock in the room was unbearable. Some noises sent a sort of shock up her spine. All this came on after a carriage accident and blow on the head. There was now a great improvement, but not a complete relief, after seven years. He thought that in some cases of hypersensitiveness to sound traceable to middle-ear disorders &c. there was an analogy to intolerance of light as occurring in certain retinal lesions, but he did not think there was any ocular condition analogous to such a typical case of acoustic hyperæsthesia as the above.

Mr. LAKE read a paper, illustrated by specimens, to show that the membrana tympani was in direct continuation with the periosteum of the Eustachian tube and external meatus.

Dr. PEGLER showed under the microscope Sections of Turbinate Hypertrophies. Many showed practically no departure from the normal. His main point was that he had not discovered any true hypertrophy of the visceral muscle fibre in the walls of the vascular sinuses. The second set illustrated the structure of so-called moriform hypertrophies, taken from both middle and inferior turbinates and from the wall of the septum, &c. The complete distinction between these growths and true papillomata, with which they were still confounded, was insisted on. He contended that the papilliform hypertrophies were essentially vascular outgrowths which had gradually become the subject of œdematous infiltration. The muscular walls of the sinuses were invaded by the process, so that they became attenuated, and dilatation followed. As to whether true mucoid degeneration was present or not he was extremely doubtful. Most of the septal growths he had examined were of this character, but true papillomata did occur here as well as on the floor of the meatus.

Mr. CRESSWELL BABER exhibited a set of Dummies designed to educate the fingers of students in the Exploration of the Naso-pharynx.

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Dr. WARD COUSINS drew attention to a further improvement in the Artificial Drumhead introduced by himself some time ago. The demonstration gave rise to a good deal of discussion, in which the PRESIDENT, Dr. PRITCHARD, Professor GUYE, Dr. LAW, and others took part.

Dr. LAW showed a series of Anatomical Preparations kindly lent for exhibition in the Otological Section by Professor POLITZER.

The work of the Section concluded with a vote of thanks to the President and secretaries.

DERMATOLOGY.

THURSDAY, AUG. 1ST.

Diet in the Etiology and Treatment of Diseases of the Skin.

An interesting discussion on this subject was opened by Dr. ALLAN JAMIESON (Edinburgh) and Dr. WALTER G. SMITH (Dublin). The former in his opening remarks directed attention, first, to the articles of food known to influence skin diseases; secondly, to the maladies of the skin which could be produced or modified by diet; and, thirdly, to dietetics as a means of treatment in dermatology. Some articles of food produced their effect at once, as in the example of shell-fish, and these acted probably by toxic conditions of the blood, though there was the remarkable and unexplained factor of idiosyncrasy which came into play. But far more frequently the action of foods was slow and prolonged, and their precise mode of action was even more difficult of explanation. Referring to certain articles of diet, Dr. Jamieson thought that alcohol seemed to produce a too ready penetrability of the skin, as witnessed by the liability to sweating and the clammy fingers of topers. Alcohol was not liable to produce skin diseases, but it certainly aggravated some disorders. Second in importance only to alcohol comes tea, and it has been shown that tea when taken too hot, too strong, and in excess causes cold hands and feet and a shrinkage of the integument, in addition to gastro-intestinal disturbance. Dr. White of Boston has shown that strawberries and other fruits containing acid in abundance are liable to produce eczema. Persistent omission of green vegetables from the dietary causes relaxation of the cutaneous vessels, and in extreme cases scurvy. It had long been known that persons presenting a pallor of the surface and other evidences of malnutrition and deficient food are predisposed to eczema. As regards the diseases of the skin influenced by diet, certain of them could be at once eliminated, such as parasitic diseases, scleroderma and most hereditary disorders, herpes zoster, and some others. But there remained a large number which are undoubtedly so influenced. Eczema could be produced and modified by unsuitable diet, drinking large quantities of cold water, and other articles. Dr. Jamieson mentioned hurrying over breakfast as a predisposing cause of the disease in school children. Psoriasis was aggravated by alcohol, and he had seen this disease invade the surface more rapidly under the administration of this article. The influence of diet on lichen planus had not been fully investigated, but this disease often arose in overfed, obese women. Boils were undoubtedly sometimes due indirectly to diet, although the disease was essentially a local one. A sudden change from a poor to a luxurious diet, or *vice versâ*, was capable of producing the malady. Acne is very often associated with a spare diet, such as that which schoolgirls were encouraged to take. Lupus is often associated with a distaste for fat. The cause of the increase of cancer during the last half century, as shown by Heath's statistics, was ascribed by Yeo to the increased consumption of butcher's meat, but he thought it ought rather to be ascribed to the undoubted increase in the consumption of tea. He thought that the abuse of this article during the period of growth was the cause of the increase of cancer The subject of diet in treatment was a very large one. Very different diets were called for in the various diseases, always allowing for idiosyncrasy. Alcohol and the regulation of animal food-stuffs were the most important. The latter which contained iron were very important for the treatment of the anæmia which often accompanied acne and other skin affections.

Dr. WALTER G. SMITH read a thoughtful and humorous paper, stating at the outset that we have no certain knowledge of the real action of diet on conditions of the skin. It is difficult enough to trace the action of drugs, and still more difficult in the case of foods. The influence of diet in skin diseases was, he believed, much less important than is generally thought, and after all it might be best to adopt the rule that what most people eat agrees with them most, and what a healthy person finds appetising agrees with him best. There are, however, three ways in which food may perhaps influence skin conditions: 1. *By lowering the general nutrition*—e.g., in scorbutic and purpuric conditions, and those due to a parasite which finds in lowered vitality a more suitable condition for growth and multiplication. 2. *Reflex conditions*—e.g., from stomach to skin, as in over-eating or taking unsuitable food. These conditions were brought about either by a vaso-motor or a purely nervous mechanism. Urticaria and nearly all such skin conditions are known by their transitory character. They may be dealt with by a visit to Carlsbad, but may equally well be treated at home by purgatives, a good cook, and regulating the quantity and kind of the diet. 3. *Toxic conditions of the blood*—e.g., the effects of tinned or unwholesome foods, and the hyperæmia of the skin produced by full doses of alcohol. It must not be forgotten that the skin is the avenue for the elimination of certain substances—e.g., copaiba and other oleo-resins, and highly seasoned foods which are liable to produce erythematous rashes. Turning next to the different diseases of the skin, Dr. W. G. Smith thought they might be grouped into three classes: 1. Cutaneous diseases acknowledged to be influenced by diet, such as the erythemata, acne rosacea, and perhaps acne vulgaris. 2. Diseases which might possibly be influenced by diet, such as psoriasis and some cases of eczema, though he had never been able to satisfy himself that eczema was ever affected by diet. 3. Cutaneous diseases, which are certainly not produced or modified by food—e.g., herpes and lichen ruber. The effect of diet on leprosy had never been satisfactorily proved, nor, in his experience, had boils ever arisen or been modified by dietetic conditions. The fact that people now consumed 136 lb. of butcher's meat per head per annum, as compared with 46 lb. formerly, had been advanced as a cause for the increase of certain diseases; but he would point out that men probably consumed three-fourths more meat (and alcohol too) than women, and he would like to ask whether these diseases were three-fourths more common in the former. As regards salt meat, which was held to be so bad for skin diseases, he had given it to his skin patients without harm. Alcohol, undoubtedly, might sometimes increase the itching and congestion of the skin; but in reference to its supposed effect in producing skin diseases he would point out that the Parsees in India were not exempt from such maladies. If the skin disorder were secondary to diabetes, gastric or other derangements these, of course, must be treated; but as long as practitioners differed so widely and so oppositely it was impossible to believe that diet had any important effect on the skin condition itself. By way of summary Dr. W. G. Smith stated his belief—(1) that very few skin diseases were directly produced by food (though diet may aggravate some already in existence); (2) that the diseases so arising are always erythematous and transitory; (3) that diet has no influence on the cure of skin diseases, even of acne; and (4) that the only practical rules necessary are to exercise moderation and temperance in all things, and especially in alcohol, to regulate the bowels, and to cure the anæmia if present.

Dr. RADCLIFFE CROCKER agreed with Dr. W. G. Smith in thinking that the influence of diet had been exaggerated. He thought that salt meat and some other unwholesome articles acted chiefly by producing gastro-intestinal catarrh. The cooking and mode of preparation were even more important than the article. As regards the effect of alcohol, it differed widely in the different forms of alcohol; thus beer and port wine might do harm when well-diluted spirit would do good. Boils sometimes occurred in states of lowered vitality, sometimes in very healthy persons.

Dr. A. J. HARRISON (Clifton) agreed with Dr. Jamieson as regards the effects of acid fruits and the causation of boils; but as regards eczema he mentioned a patient who had been getting worse under a restricted diet, but who became rapidly well with a liberal and varied supply of food.

Dr. THIN adverted to the fact that tea was more largely drunk in China and Japan than in England, yet the inhabitants of those countries were not more troubled with the skin maladies said to be so produced.

Dr. MORGAN DOCKRELL believed emphatically that diet played a most important part in diseases of the skin. Amongst other maladies lupus might be mentioned. This disorder was rare amongst the Jews, and he thought the

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circumstance might be accounted for by the careful inspection to which the meat was subjected preventing tuberculous meat being eaten.

Dr. MCCALL ANDERSON would not wish to minimise the importance of diet in the causes and treatment of skin diseases, but he rarely gave much heed to the diet of his skin patients. He did not think tea was likely to do much harm if properly prepared, but if taken too hot or too strong it might give rise to trouble, though this would be chiefly of the alimentary tract.

Dr. SAVILL, though agreeing generally with those who held that diet was not of great importance, wished to emphasise the effect of alcohol in skin maladies. He referred to Anstie's experiments on alcohol which showed that this substance produced vaso-motor dilatation of the dermal vessels and lowered oxidation of the tissues generally. In his experience the omission of alcohol from the dietary had frequently led to recovery from skin disorder of very long duration.

Dr. STOPFORD TAYLOR (Liverpool) and Dr. MYRTLE (Harrogate) also took part in the discussion, and Dr. JAMIESON and Dr. W. G. SMITH replied. The former wished to emphasise the fact that it was not diet *per se* which gave rise to boils, but sudden alterations in the dietary and mode of life which predisposed to them. The latter strongly deprecated the use of the word "gouty" applied to skin maladies as unscientific and unmeaning; and, referring to tea, said that after listening to the remarks that had been made about this dangerous article of diet, he could well understand the derivation of the word "gunpowder" as applied to a certain kind of leaf.

Lichen Planus Verrucosus.

Mr. GILBERT SMITH (Birmingham) read a paper on a case of Lichen Planus Verrucosus. A woman aged forty years was admitted to the Birmingham Lock Hospital on Feb. 4th, 1895, with a severe eruption on both legs and a slight eruption on both wrists. The rash had started eight months before as a small hard pimple like a corn, about the size of a pin's head, on the outer side of the right ankle. Other pimples rapidly appeared in the same region, forming a patch its present size—three inches in diameter. Over the front of the same leg other patches formed in the same way, hard papules also appearing between the patches and extending up the thighs. Three months later the left leg became affected in the same way, but to a less extent. On admission the patient was found to be well nourished, but had a greyish-coloured skin and an anxious expression of countenance. The eruption was confined to the legs and arms. Over the front and sides of both legs were a number of dark-brown patches, raised somewhat abruptly, their centres being much darker than their periphery. The patches varied in size from a pea to about two inches in diameter. The centres of these patches examined with a strong lens had the appearance of a group of closely packed horny plugs. Between these patches and extending more or less over the whole of both legs for some distance up the thighs there were inflamed hair follicles raised and tipped with hard, horny plugs. The eruption on the extensor surfaces of both forearms and wrists was slight, and composed of the typical angular patches of lichen planus. The patient suffered from severe neuralgic pains and irritation in both legs, especially at night. Severe cramps and sick headaches with vomiting troubled her daily. Her general health had been bad ever since the birth of her last child fourteen years ago. Her confinements had always been difficult. There was a marked history of uterine disease until relieved by an "operation." For eight months before admission she had suffered from severe headaches accompanied by vomiting, and every night she had had severe cramps and twitchings of the muscles of the legs. The case was interesting, first, as showing a probable cause of nerve exhaustion consequent on derangement of the generative system in a nervous temperament; secondly, on account of the extent of the eruption; and thirdly, in showing that the warty patches were derived from conical papules seated at the hair follicles, and not from flat papules. That the process is the same as lichen in planus is shown by the presence of a few typical flat papules in other and more usual positions.

Dr. RADCLIFFE CROCKER remarked that such cases were very interesting, as illustrating the follicular origin of these flat papules, and the patches which are built up by coalescence of papules around the sebaceous orifice. These cases also reveal the anatomical relationship of lichen planus—where the papules are usually flat, but may, as we now see, be acuminate—and pityriasis rubra pilaris, where the papules are usually conical, but may be flat.

Dr. NORMAN WALKER (Edinburgh) objected to the use of the word "verrucosus." Looking at the photographs, the papules were not excrescent and warty, but flat. A follicular papule due to hypertrophy of the cuticle should not be called warty, for a wart consisted of dermal overgrowth.

Mr. GILBERT SMITH, in reply, mentioned the extreme rarity of the affection. Out of 22,000 cases he had only seen this one.

The Treatment and Prognosis of Ringworm, based on the Physiology of the Trichophytons.

Dr. LESLIE ROBERTS (Liverpool) read an important communication on the Treatment and Prognosis of Ringworm, based on the Physiology of the Trichophytons. These organisms, he said, always affected the hair; and hair, considered scientifically, was the formed secretion of the cutaneous follicle. Chemically it was as remote from the living substance of the body as it was possible to be. It was unaffected by the soluble ferments, whether acting in an acid or alkaline medium. It was proof against the agents of putrefaction. In the mineral kingdom it was disintegrated and partially dissolved by certain substances whose action was considered by physiologists as analogous to the action of soluble ferments—namely, by strong acids and alkalies. There existed in the vegetable world a class of minute flowerless plants containing a ferment by whose agency hair could be more completely dissolved than by the strongest acids or alkalies. These minute plants were the keratolytic fungi.[1] Chemically speaking, ringworm consisted in the disintegration of the complex carbon-nitrogen compound, keratin, into a simple carbon compound and a nitrogen compound, which were assimilated by the fungus. It followed from these facts that when once the fungus had entered into the interior of the follicle it was master of the situation, since it possessed a power, which we did not, of digesting keratogenous tissues without employing the use of caustic agents. We were, therefore, at a complete disadvantage in our efforts to control the fungus. The lesson which we had to learn was that when once the fungus had entered into the interior of the follicle we ceased to have any further direct control over it. Dr. Leslie Roberts then entered upon the inquiry of the ways and means at our disposal for controlling the operations of the fungus. We had it completely in our power to prevent the development of fresh foci and the scattering of the fungus from one part to another, since the fungus always travelled from one follicle to another by the external surface; but when once the fungus had entered into the interior of the follicle we could influence its life only in an indirect way. This indirect therapeutic influence consisted in our power to artificially provoke proliferation of the living cells of the follicle and to excite the subjacent bloodvessels. After referring to some practical points in the anatomy of the hair follicle, Dr. Leslie Roberts entered upon the relationship of the fungus to the living hair-forming cells. He said its action was to inhibit the normal proliferation of the cells, and sometimes this inhibition was absolute for a time, as in tinea decalvans. It was just on these cells that our therapeutic influence could be brought to bear by means of irritants deposited upon the surface of the skin over the affected follicles. Under normal excitement physiological proliferation resulted, of course, in the formation of hair and the thin insoluble membrane (inner root sheath) lining the interior of the follicle. If the excitement went beyond physiological bounds proliferation became luxuriation, and pus was the result. The formation of pus commonly a useless product, was of great service in the morbid condition of the follicle now under consideration. The practical difficulty was how to control the suppuration. Pus, which resulted from inflammation of epithelium, was produced without any considerable loss of substance and without ulceration; but loss of substance and ulceration were invariably the result when pus was produced in connective tissue. Regarded in this light the problem of how to treat trichophytosis follicularis (ringworm) could be enunciated as follows: to excite the soft cells of the affected follicles to a physiological proliferation, or to a luxuriation (pus formation) which shall not pass beyond the limits of the epithelium. The remaining portion of the paper enlarged upon this theme and concluded with a summary of the present state of our knowledge of the pathology and therapeutics of the disease.

[1] The experimental proofs are given by Dr. Leslie Roberts in the Journal of Pathology and Bacteriology, vol. iii., July, 1895.

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Adenoma Sebaceum.

Mr. WILLIAM ANDERSON narrated a case of Adenoma Sebaceum treated by Excision. The patient was a man aged twenty-seven years, in whom the disease had commenced when he was seven years of age with a few spots on each side of the nose, which grew and multiplied until a great portion of the face was covered. Spots of a different character had appeared on the trunk somewhat later. The family history was negative, and his health had always been good. On admission to hospital he had a large number of pale, brick-red papules varying in size from that of a millet-seed to a pea scattered over the face, but grouped most closely around the naso-labial and labio-mental furrows. Scattered over the trunk, but chiefly collected over the loins and scapulæ, there were a number of mollusca fibrosa, and also some irregular, slightly raised patches, apparently due to the same fibrous growth as the mollusca. There were no subjective symptoms, and the patient was of robust health and good average intelligence. He had never suffered from dyspepsia or any other variety of skin disease. He had been subjected to various kinds of treatment without result. The disease caused much disfigurement, and though it had been stationary during the past year it had shown no tendency to recede. An incision was made along the course of the naso-labial and labio-mental folds and the most conspicuous groups removed. The wound was closed with subcuticular sutures and dressed with iodoform and collodion. Some of the outlying patches were shaved off, and the rest left for a subsequent operation. Some fine linear, hardly noticeable scars resulted, and the loss of redundant tissue improved the contour of the face. Mr. W. Anderson remarked that the case resembled those recorded by others, but it might be noted that the man was of good intelligence and had never suffered from acne or dyspepsia. In the association with mollusca fibrosa it resembled one recorded by Dr. Vidal. The linear scars occupying the position of normal furrows were, he thought, a distinct improvement on the pitted cicatrices which invariably followed the application of galvano-cautery.

Alopecia Areata.

Dr. HENRY WALDO (Clifton) read a paper on Alopecia Areata. He wished to limit his remarks to the circumscribed as distinct from the universally diffused variety, which was generally regarded now as of tropho-neurotic origin. In view of the fact that no one micro-organism had been demonstrated in all or even in most cases of patchy alopecia, he could not subscribe to the parasitic theory of production. Atrophy of the follicle and its contents appeared to be the most constant condition present, and Dr. Waldo believed the cause was often overwork with too little sleep, combined with unsatisfactory hygienic conditions and general malnutrition; worry, anxiety, and nervous shock also played their part in some cases. He had obtained the best results by improving the patient's general condition and by the administration of cod-liver oil and arsenic—two remedies which are also useful in other neuroses—combined with rest and out-door life. Patients often get well without the application of a parasiticide or other local applications, a fact which strengthens the neurotic theory; but moderate stimulation of the more or less anæsthetic surfaces was often advantageous, as, for example, compound tincture of camphor well rubbed in and around the patches. He had not tried oxygen gas, but had used thyroid extract internally with uniformly negative results.

Dermatitis Repens.

Dr. STOWERS exhibited Coloured Drawings of Dermatitis Repens, illustrating a very severe and persistent case in a female. The disease commenced at the age of twenty-seven, forty-four years previously to her death from cancer of the stomach, and continued more or less severely during the whole period. He described in his paper the characteristic features of the ailment, and pointed out the grounds upon which it was accepted that dermatitis repens begins as a peripheral neuritis followed by secondary changes of an inflammatory nature completely destroying the whole structure of the skin. The thumbs of each hand were first involved, but after varying intervals the fingers and toes followed, the nails becoming detached and the matrices destroyed. The history of the case suggested an idiopathic origin, although the few cases previously recorded invariably followed injury to the fingers or hand, from the site of which the morbid process began. The patient was originally in the enjoyment of fairly good health, but occasionally suffered from acute gout, her father having been the subject of gouty trouble from early manhood until the time of his death. Concurrently with the dermatitis the condition known as "glossy" skin appeared and remained throughout. The affection spread towards the trunk, and at one time included the skin of the shoulders, chest, and abdomen in a lesser degree; but eventually this disappeared, leaving the hands and feet only involved. Dr. Stowers considered dermatitis repens to be best described as a spreading dermatitis denuding the epithelium by a slow process of disintegration, accompanied by irregular pustulation, discharging a serous or sero-purulent fluid, and spreading with an undermined and generally well-defined edge. The treatment of the case had proved unsatisfactory, the numerous remedies prescribed alike failing to arrest the disease.

Dr. EDWARD MACKEY (Brighton) read a paper on Cheiropompholyx in association with Eczema; Dr. FRANK H. BARENDT (Liverpool) read the notes of a case of Cheiro-Pompholyx.

The Etiology of Acute Pemphigus.

Mr. GEORGE PERNET read a paper on this subject, founding his remarks upon a fatal case of acute pemphigus which had recently come under his observation,[1] and stating that he had been able to collect four other very similar cases, all like his own, occurring in young journeymen butchers. In three, the disease was fatal in from ten to twenty-eight days. In two cases, one of which recovered, there was a distinct history of a wound, inflicted whilst dressing sheep's heads. He also alluded to two other cases. Adding the whole of the cases together (seven), including his own, no less than six terminated fatally, and in three there was a distinct history of an injury to the hands. In a second series of cases he had collected (eight in number), apart from butchers, but where the nature of the occupation brought the patient in contact with animals or dead portions of animals, the acute bullous eruption was fatal in five (four females, one male). In three of these eight cases there was a distinct history of injury to the hands, and in two others a whitlow of the finger was noticed on admission to hospital. The case of a man who attended horses and milked cows was specially interesting from the fact that the disease followed a wound of the hand and was contracted by inoculation from the teats of a cow. Mr. Pernet then touched upon bullous eruptions found in horses, cattle, &c. With regard to the bacteriology of the case which he had observed, a diplococcus had been found by Dr. W. Bulloch[2] which agreed with the organism first described by Demme, and more recently by Claessen. Mr. Pernet arrived at the following conclusions: (1) there was a group of rare cases of acute bullous eruption, accompanied by severe constitutional symptoms, and generally terminating fatally, which affected butchers; (2) the disease followed a wound of the hands or fingers, and (3) was probably due to a micro-organism; (4) the same etiological factors were probably at work in another group of very similar cases, and affected those who handled animals or dead portions of animals, such as hides, meat, &c. He suggested that in future the following points should be looked for in cases coming under observation: (1) occupation, (butcher, &c); (2) history of a wound; (3) presence, or absence, of a characteristic micro-organism, i.e., Demme's diplococcus; and (4) contact with animals. In conclusion Mr. Pernet insisted on the importance of thoroughly disinfecting, with powerful antiseptics, all wounds of the fingers and whitlows in butchers and those handling meat, &c.

FRIDAY, AUG. 2ND.

This day was entirely set apart for the exhibition of patients. They were so numerous as to block the approach to the room where the meeting was held. Drawings and microscopic preparations were also shown, and there was a large attendance of members.

Exhibition of Cases.

Dr. COLCOTT FOX showed two cases and gave a short description of a Papulo-pustular (acneform) Eruption which he had met with in infants. The children shown, of whose cases the notes were read, were about seven or eight years of age, but it usually appeared in infancy or early childhood. The disease seemed to be a rare one, as he had only seen ten

[1] British Journal of Dermatology, April, 1895.
[2] British Journal of Dermatology, May, 1895.

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cases. The eruption was an indolent, chronic papulo-pustular (acneform) rash and was disseminated over the body, though chiefly occurring on the extensor surfaces of the limbs, the upper part of the buttocks, and the face. The small papulo-pustules were seated about the hair follicles, being at first more or less acuminate in shape, but in the stages of involution they were flat topped, polished, puckered at the borders, and simulating lichen planus. There was a central plug in the follicle, and this often fell out, leaving a little crater. There was neither itching nor any other subjective symptom, but the disease seemed often to arise in debilitated subjects. The eruption had well-marked physical characters and distribution, all the cases presented precisely similar characters, and the disease might therefore be regarded as a distinct entity. One of the children was said to have had "snuffles," and in another there was a suspicion of syphilis in the mother. In two of the cases scrofulo-tuberculous nodules were present. Dr. Fox said the eruption was not amenable to antisyphilitic remedies, and he had never seen it in undoubted cases of syphilis. It could not be regarded as of syphilitic origin. On the other hand, the subjects of it might be called strumous and were sometimes tuberculous. He ranged the affection alongside a similar eruption termed "acne scrofulosorum," met with in older children and adults who were scrofulo-tuberculous. It was, however, probably not directly due to tuberculosis. It yielded to tonic treatment and cod-liver oil.

Dr. RADCLIFFE CROCKER remarked on the rarity of the affection, though he had met with and recorded cases, and emphasised the distribution of the eruption and its predilection for the face and buttocks as an important diagnostic feature. He had not observed any evidence of contagion. He preferred the name "acne scrofulosorum." It was undoubtedly the same disease which he had described under that name, and it was interesting to find from Dr. Fox's observations that the malady occurred in infancy as well as in childhood and adult life, at which times only he had seen it.

Dr. ALLAN JAMIESON thought that it was the same disorder as that of which he had published two cases in the *British Journal of Dermatology*, and that one of the illustrations in the New Sydenham Society's Atlas figured a similar disease, though it was labeled as a variety of molluscum contagiosum. He agreed that the disease was a distinct one, but preferred the name "acne varioloformis." In cases he had observed the crateriform depressions were well marked, but there was no pitting. In one instance, where two children of the same family were attacked, there was distinct evidence of infection. His patients had got well with boracic baths and salicin ointment. The disease was undoubtedly rare.

Dr. WALLACE BEATTY had seen a case in Dublin.

Dr. MORGAN DOCKRELL thought it a pity to call it acne, as it differed from this disease in its pathology. It seemed to him to be a papular disease of tuberculous origin.

Mr. MALCOLM MORRIS showed four cases: 1. A case of Symmetrical Scleroderma in an elderly woman, ulcerating in places. These ulcers might, he thought, be regarded as of trophic origin. They were, as usual, exceedingly painful. 2. An unusual form of Tuberculosis of the Skin, for which Mr. Morris proposed the name "lupus vulgaris erythematoides," for in some respects it resembled lupus vulgaris and in others lupus erythematoides. It was not symmetrical and did not attack the face as in the latter disease, but copied it in its process of repair. Mr. HUTCHINSON and Dr. MCCALL ANDERSON objected to the use of the term "erythematoides" in such cases, which in their main characters corresponded with lupus vulgaris. 3. Two cases of Leprosy. The first patient exhibited had been born in India and first noticed the disease in 1881, when ulcers began to appear on the fingers. In 1887 he first came under Mr. Morris's care, when there were patches of absolute anæsthesia and great atrophy of the phalanges of the feet and hands and wasting of the muscles, also ulcers due to pressure, a tuberculous appearance of the nose, and the typical drawn-up position of the hand. The second leprosy patient, aged forty-nine, had resided in Australia and India. The disease began in 1886 with patches over the back and elsewhere which were described as "erythema" at a London hospital where he went, and where the anæsthesia and paresis from which he suffered were supposed to be malingering. Nothing more definite appeared till January, 1893, shortly before he came under Mr. Morris's care upon his return to England. At that time he had ringed patches all over the back and chest accompanied by anæsthesia and paresis of the limbs. He was put on chaulmoogra oil and had taken from sixteen to twenty capsules a day of four minims each for a long while, altogether having taken some 10,000 capsules. Consequent on this the lightning pains from which he had suffered had entirely gone, the anæsthesia and ringed patches had disappeared, and the general health was extremely good. Mr. Morris thought the recovery might fairly be attributed to the oil. Mr. Hutchinson considered that residence in England was an important factor in the recovery of these cases, and mentioned a patient resembling this one who had been under his care and who got well while living a healthy life in England without any special treatment.

Dr. RADCLIFFE CROCKER (President) exhibited six patients: 1. Two cases of Morphœa or Circumscribed Scleroderma of the Fifth Nerve. 2. A case of Urticaria Pigmentosa occurring in a patient aged nine; it was an inveterate disease which usually begins in the first year of life, but which in this case began at the age of six. This child also exhibited well-marked urticaria factitia. She had improved under small doses of arsenic long continued. 3. General Scleroderma in the atrophic stage in a man aged thirty-nine who had suffered from the complaint for three years. The skin presented a nævoid condition in parts, and the fingers were drawn up and stiffened. He was recovering now and the sweat function was returning under Turkish baths followed by massage. 4. Psoriasis after treatment by salicylate of soda, 15 grs. three times a day. The treatment had been commenced on May 11th, and there was now great improvement. The patient had formerly been treated by thyroid extract, with only slight improvement, although he had had the great advantage of being in bed as an in-patient. 5. Xeroderma Pigmentosum in a patient aged twenty-one. It had begun as usual in the first year of life, and the brown spots had the usual distribution over the face and bust, and the alæ of the nose were scarred. A brother and a sister were similarly affected, only one out of a family of four escaping. Treatment had been unavailing. 6. General Alopecia of five years' standing in a boy five years old, on whom oxygen gas had been tried for three months with doubtful success.

Mr. GEORGE STOKER brought forward a little girl formerly the subject of Alopecia of about one month's duration, but who now had plenty of long white hair, consequent on treatment by oxygen gas. She had at first taken thyroid extract, one tabloid a day for three weeks, with no effect. She had worn the oxygen cap for two months with this beneficial result. Mr. Stoker thought the cause of failure in Dr. Crocker's case might be non-fitting of the cap. He had been induced to try it in alopecia because he found when treating ulcers that the cutaneous hairs beside the ulcer grew so rapidly. The child's hair had been becoming pigmented.

Dr. COLCOTT FOX exhibited three patients. 1. A case of Mycosis Fungoides in a man aged forty-six. The malady had commenced ten years previously with ill-defined eczematoid patches, which in the course of two years presented the typical appearance now seen—solid infiltrating fungating purple ovate tumours of variable size, ulcerating on the surface and situated chiefly on the arms. A general eczematous eruption was scattered between the tumours. 2. A case of Ulceration over the Manubrium of twelve years' duration, which from its characters Dr. Fox regarded as Rodent Ulcer, though its position was unusual. During the last two years he had met with two instances of this disease on the arm, one on the back, and one on the scrotum. 3. A case which might perhaps be regarded as a kind of Recurrent Summer Urticaria of a most intractable kind, and which had affected a boy aged eleven during the past six years. In winter the eruption was comparatively quiescent, but in summer it presented the appearance of rounded, raised erythematous papules the size of a split pea, sometimes, as on the face, becoming confluent, accompanied by itching and burning sensations. These wheal-like lesions were scattered over the body and limbs. There was a history of vesication, but he (Dr. Fox) had not observed it. He had seen several similar cases, and was doubtful whether the disease was to be regarded as a special variety of chronic urticaria or as a papular, erythematous, mild form of hydroa vacciniforme (Bazin) vel hydroa æstivale.

Dr. JAMES GALLOWAY exhibited a patient, a Polish Jew, suffering from Multiple Pigmented Sarcoma of the Skin which at one time had involved the limb with such large masses that amputation had to be performed. Now most of the pigmented, walnut-like growths had disappeared by natural

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involution and only scarring was left. The patient had improved while taking arsenic, but the improvement had probably been spontaneous.

Dr. ABRAHAM COHEN also showed a case of supposed Multiple Sarcomatous Dermatosis in a Polish Jew involving the fronts of both legs. Circular, closely clustered, warty papules of a dark-brown colour could be seen spreading over the middle two-fourths of the skin of the front of the leg, being replaced in some of the central parts by whitish scar tissue the result of a cicatricial healing. This disease, Dr. Cohen said, was almost entirely confined to Central and Eastern Europe and did not affect Jews in other parts.

Dr. PYE-SMITH brought two cases to the meeting. 1. A case of Acanthosis Nigricans which presented certain interesting features. The disease had only appeared five or six years before, since which time the skin generally had assumed a deep bronze colour, but especially over the trunk. The characteristic pigmented warts (papillomata) were to be seen forming a patch on the side of the neck and on the abdomen. In youth the patient had had ulcers, probably tuberculous. Soft soap and warm water had much improved the patient's condition, but had not removed the disease. 2. A young, healthy soldier from India, with numerous Cysticerci under the Skin. A number of small globular tumours about the size of small beans, situated just beneath the skin in the subcutaneous areolar tissue, produced the idea that they might be lipomata, but the removal of one of them showed that they were cysts containing the characteristic fluid and hooklets; thirty or forty in number, they were scattered over the entire surface, though mostly on the legs, arms, and face.

Dr. ALFRED EDDOWES exhibited three patients. 1. A case of Eczema Palmare cured by an ointment consisting of acid. salicylic., 2 dr., ung. hydrarg. oleatis, ad 1 oz. The patient was a washerwoman who had been prevented from doing her work by the complaint for two years. She had been under treatment for three months, and was now able to resume her washing and other work. 2. A case of very chronic Eczema in a boy aged eleven. 3. A case of Angiokeratosis on the leg of a female patient aged fifty-four. There had originally existed a number of large varicose veins reaching from a short distance below the knee almost to the ankle. The disease, which consisted of a purple, horny surface, had been sharply defined and entirely confined to the skin over the veins. The affected parts had been treated with creolin as well as iodine, and the limb covered with zinc gelatine and bandages, one of which dressings had remained unchanged for many weeks. As the result of the treatment, and perhaps also of the disease, the varicosity of the veins had completely disappeared, and the leg appeared to be cured, a little redness and superficial scarring only remaining.

Dr. MORGAN DOCKRELL demonstrated two patients. 1. A case of Ichthyosis Hystrix (vel Sebacea) in a girl aged fifteen, who had, as is usual, had the disease since birth. It differed, however, from most cases in that the wart-like excrescences were confined to the face and scalp. Dr. Dockrell thought that it corresponded more or less with the sensory nerve distribution. 2. A case of Adenoma Sebaceum in a boy aged ten who had been affected ever since birth. It was chiefly on the face, being more on the left than the right side. Associated with this were telangiectodes and freckles, and some cicatrices were believed to indicate that some of the growths had undergone spontaneous involution. The disease was associated, as it not infrequently is, with epilepsy, and two attempts to procure specimens for microscopic examination had brought on fits.

Microscopical specimens of a Diplococcus which Mr. GEORGE PERNET had found in a case of Pemphigus were also exhibited.

A large number of drawings of different diseases were also shown, and Dr. F. M. SANDWITH (Cairo) exhibited some interesting photographs and water-colour drawings of patients suffering from Pellagra, a disease due to eating mouldy or diseased maize, which affects the poorer inhabitants of Egypt, who consume this as an article of food. The sketches showed well the pigmented erythematous patches, which appear only on those portions of the body and limbs exposed to the solar rays. The disease is well known in Northern Italy and elsewhere, but this is the first occasion of its having been reported from Egypt. Besides the skin the poison affects also the digestive and cerebro-spinal systems, and many cases of melancholia and dementia in the Italian lunatic asylums are now known to be due to this disease in a chronic form.

THE MUSEUM.

(Continued from p. 444.)

IV.—SANITARY APPLIANCES.

SANITARY appliances were not conspicuous quite by their absence, but rather by their somewhat meagre representation. Possibly this was on account of the pressure upon space, although of course we do not admit the secondary importance of the subject. Sanitation of a strictly medical kind, as that involved in surgical operations, midwifery, the aseptic treatment of wounds, and so forth, could not possibly be omitted in the demonstration of an exhibition of interest to medical men, but we should like to have seen more illustrations of practical sanitation, as, for example, the disinfection of clothing, of rooms, hospital wards, &c. The most important exhibit connected with this subject was undoubtedly that of Messrs. Defries and Son (Houndsditch), who showed the merits and demerits of various filtering media as illustrated in the chemical and bacteriological effect of these upon water. The Pasteur filter, which stands prominently out as having resisted more than any other form of filter the passage of pathogenic organisms through its pores, was submitted to inspection in various patterns severally suitable for table, travelling, service-pipe, cistern, and other purposes, while diagrams were on view showing the application of the Pasteur system of filtration applied on a large scale. Practical disinfection was represented in the ingenious "Equifex Spray Apparatus" for disinfecting rooms where steam is not available or cannot be applied, and in the Equifex saturated steam disinfector for operating theatres. Illustrations were shown also of the Equifex saturated steam disinfector at medium pressure for public disinfection stations, hospitals, &c., and of the Equifex valveless saturated steam disinfector at low pressure for small town stations, hospitals, casual wards, &c.; also of the Equifex boiling-pan for tuberculous sputa, linen, &c., giving a constant temperature of 100° C., and of the Equifex cleansing disinfectors for cattle markets, stables, &c.—all giving evidence of a thorough acquaintance with the developments of modern bacteriological research and of a practical knowledge of the real requirements of present day disinfection. Messrs. Defries and Son also explain the working of a convenient portable air-testing apparatus, designed by Dr. Scarfield, which enables the observer to obtain a fairly approximate estimate of the efficiency of the ventilation of any given space.

In addition to their well-known and comparatively innocuous but powerfully germicidal creolin preparations, the Jeyes' Sanitary Compound Co. (Cannon-street, E.C.) exhibited a sanitary appliance which, though not new on the Continent, is a novel introduction in this country. It consists of an automatic toilet-box for the watercloset containing papers impregnated with Jeyes fluid, which are delivered one at a time by an ingenious folding arrangement through an opening underneath. The method is one we should like to see generally adopted. Cresol is the basis of the powerful antiseptic fluid of Messrs. C. J. Hewlett and Son (Charlotte-street, E.C.), who also supply some excellent antiseptic jellies, containing 1 part per 1000 of corrosive sublimate combined with agreeable substances like thymol, eucalyptus, otto of roses, &c. An emollient antiseptic cream (in collapsable tubes), which is said to give instant relief in the itching of cutaneous diseases, belongs also to the list of useful antiseptic preparations of this firm. The list of Sanitas preparations is now so great as to comprise a complete antiseptic and disinfectant armamentarium. The composition of most of these is based on "Sanitas" (Sanitas Co., Bethnal-green), a deservedly popular, pleasant, and moreover active compound. The pocket sanitas disinfector, consisting of a small glass bulb enclosed in cotton-wool and containing a sanitas compound, is convenient for extempore use. The merits of the various sanitas soaps, exhaling the pleasant fragrance of sanitas and eucalyptol, have already been discussed in our columns.

Sulphur in various convenient forms (candles, cones, &c.) for disinfectant purposes was exhibited by the last-named firm and by Messrs. Macfarlan and Co. (Moor-street, E.C.), and also Messrs. Seabury and Johnson (Snow-hill, E.C.). Sanitary specialities were represented in the excellent display of towels, accouchement sets, sterilised dressings, &c., of Messrs. Southall and Barclay (Birmingham), whose successes in this branch of sanitation are well known; while the exhibit of the Peat Industries Syndicate (Queen

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Victoria-street, E.C.) contained the peculiar and interesting products of peat fibre, which has proved so valuable as a surgical dressing,[1] and even for the manufacture of hygienic articles of furniture and clothing, as "hygienic socks," mattresses, sanitary covers, blankets, &c. Consistently with their reputation, Messrs. Duncan, Flockhart and Co. (Edinburgh) now produce a good soap superfatted to the extent of 3 per cent. It is prepared from the best materials, and is very agreeably and delicately scented. "Beaumol" soap, as it is called, is also made in the form of carbolic, coal-tar, and terebene soap. Last, but certainly not least, must be mentioned the patent wood-wool preparations (Hartmann) now manufactured solely by the Sanitary Wood-wool Co., Ltd. (Thavies-inn, Holborn-circus, E.C.). Eminently adapted for antiseptic and absorbent purposes in the treatment of wounds and of every kind of discharge, and cleanly to a degree, these preparations, dressings, &c., supply a want that was long unfulfilled.

V.—MINERAL WATERS, BEVERAGES, &C.

The mineral water industry was well represented, and it is a pleasure to record the strict measures and precautions that are now being taken by most respectable mineral water makers to ensure the utmost possible purity of the materials and water used in the production of this important class of beverage. On the stall of the Idris (Camden-town) exhibit, for example, were to be found the appliances necessary for the chemical and bacteriological examination of water, and for the assay of the carbonic acid gas. This company filter water and soften it by well-known means, the product in regard to colour comparing very favourably with distilled water. Admirable preventive measures are also taken to provide against metallic contamination. It is needless to add that the various aerated drinks made by this company—which, by the way, included piperazine water (as a diuretic and solvent for uric acid), and phenocoll hydrochloride aerated water (of stimulant, diuretic, as well as antipyretic characters)—were so grouped as to add very materially to the attraction of this exhibit. Opposite were the clear and bright mineral waters of the Chemists' Aerated and Mineral Waters Association—known in the trade as "Camwal"—(Gifford-street, N.), whose series of huge show syphons suggested the dangers of a bombshell or their application as fire extincteurs had they been charged. The soda, potash, and lithia waters are a decided feature of this firm, which may be relied upon to supply these in accordance with B.P. requirements.

Coming now to natural mineral table waters, not the least interesting was the natural seltzer water known as Catley Abbey water, drawn from the springs in Digby, Lincs, and bottled by the Catley Abbey Natural Seltzer Water Company at that place. It is a clean-drinking, bright, sparkling water, with refreshing saline taste and exhibiting an excellent composition. It deserves to be better known, and the fact that it is a "home production" should recommend it to not a few. We might apply the same remark to the Woodhall bromo-iodine spa waters, also of Lincolnshire, which have been beneficially employed in the treatment of glandular swellings and enlarged joints. The appointments for visitors at Woodhall Spa are, we learn, excellent, and suitable recreation is abundantly provided. Apollinaris (Stratford-place, W.) is too well known to need mention, as is also the proverbially soft Johannis (Regent-street, S.W.) water, both of which formed interesting exhibits in this section. Rosbach water (Messrs. Hertz and Collingwood, Sussex-place, Leadenhall-street, E.C.) is well adapted for table purposes; it is pleasantly sparkling, clean to the palate, and may be taken with confidence as a mild and agreeable antacid. We pass to the saline purgative waters, amongst which should be mentioned Condal water (Lambeth-hill, E.C.), of soft saline taste and only very moderately bitter, the amount of sulphate of soda present in it being in much larger proportion than the corresponding magnesium salt—a fact, it is said, which has rendered it useful and valuable to those with whom magnesium salts do not so easily agree; Æsculap (Messrs. Ingram and Royle, Farringdon-street, E.C.), largely used as a purgative because of its purity and comparatively neutral taste; Friedrichshall (The Apollinaris Co., Stratford-place, W.), the new spring yielding a water of undoubted therapeutic value; a bitter purgative water recently obtained by Messrs. Hertz and Collingwood (Leadenhall-street, E.C.) from a new spring in Budapest, which is unusually rich in mineral constituents and possesses excellent active medicinal characters; Vichy water (Messrs. Ingram and Royle, Farringdon-street, E.C.), renowned in the treatment of kidney complaints and of rheumatism; Grande Grille water for diseases of the liver and biliary organs; and a few others. Home medicinal waters were represented in the exhibit of the Harrogate Corporation, the specimens shown comprising the well-known strong and mild sulphur waters, and strong and mild chalybeate and saline waters, an interesting feature of the exhibit being the specimens of the mineral salts obtained on evaporation of a definite volume of the waters just described. The excellent appointments at Harrogate and the various bath-rooms and bath appliances were shown in an excellent series of striking photographs. The Leamington Town Improvement Association exhibited specimens of the waters of Leamington Spa, the composition of which closely resembles that of many Continental waters which are of reputed medicinal worth. The accommodation and appointments of the Royal Pump-room and baths at Leamington, which were reopened a few years ago, are of admirable design and to offer every comfort to visitors. In regard to mineral waters, Messrs. F. Newbery and Sons (King Edward-street, E.C.) make "lentiforms" of Vichy and lithia which are briskly effervescent when placed in water, producing, it is said, an exact representation of the natural waters, but in accurately adjusted medicinal quantity. We have already pointed out the unique character of the Flitwick chalybeate water, which contains a large proportion of oxidised iron held delicately in solution—a fact which doubtless accounts for its marked tonic properties. It forms a pleasant and refreshing drink combined with lemonade, the combination being called "Wikko" (The Flitwick Chalybeate Co., Borough High-street, S.E.). The arsenio-ferric water drawn from the Levico Springs in the South Tyrol (Messrs. Hertz and Collingwood, Leadenhall-street, E.C.) claims attention as a valuable therapeutic agent in anæmia, chlorosis, and in some skin affections. It is supplied in two strengths, the first (strong) containing $\frac{1}{10}$th gr. of arsenious acid in the pint and 34 gr. of soluble iron salts, and the second (mild) $\frac{1}{20}$th gr. of arsenious acid and 8 gr. of iron in the pint. It is said to be readily tolerated and not to cause disturbance of the digestive functions. The same firm, we notice, are introducing an excellent bitter and stomachic in the shape of a combination of high-class, old, matured Spanish wine (Jerez) with the active principles of choice cinchona bark. It presents tonic and restorative properties in a very palatable form, and is known as Jerezcona wine. The Laurent-Perrier Sans Sucre champagne (Messrs. Hertz and Collingwood) appears to be increasing in popularity, on which we reported analytically in THE LANCET of Jan. 13th, 1894. Despite the almost complete absence of saccharine substances, it possesses all the esteemed qualities of a natural high-class wine. This important fact is evidently being appreciated, and not least by the profession. Lastly, we may add to this list the exhibit of Messrs. Alexander Riddle and Co. (Commercial-street), who undertook the exhibit of Stowers' Lime Juice Cordial and the materials used in its preparation. It is a well-known wholesome beverage, and the peculiar pleasant fragrance of the lime seems to have been imprisoned very successfully in this firm's product.

VI.—MISCELLANEOUS.

Foremost in the rapidly diminishing space at our disposal we must mention some novel apparatus which we observed connected with methods of clinical testing. Messrs. Oppenheimer (Worship-street, E.C.), for instance, have recently introduced Fehling's test for sugar in bi-palatinoid form. On simply dissolving the bi-palatinoid in hot water Fehling's standard solution is obtained, which may conveniently be employed for the detection or estimation of sugar, each bi-palatinoid containing an equivalent of copper representing a definite amount of sugar. Similarly bi-palatinoids are prepared for the detection of albumen in urine by the ferrocyanide method. Messrs. Allen and Hanburys (Plough-court, Lombard-street, E.C.) exhibited Sir George Johnson's complete test cabinet for the quantitative estimation of albumin, sugar, and urea in urine, consisting of Johnson's picro-saccharometer, Esmarch's albuminometer, urinometer, &c., together with the necessary instructions. Useful apparatus, also for the use of medical men and students, including ureasometers, albuminometers, urine-testing cabinets, and bacteriological apparatus, were

[1] Vide THE LANCET, July 21st, 1894.

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amongst the manifold collection of Messrs. Southall Brothers and Barclay (Birmingham). Messrs. Hewlett and Sons (Charlotte-street, E.C.) also exhibited some excellent apparatus in the same connexion, as well as the bismuth test for sugar, the trichloracetic acid test for albumin, the peptone test for bile salts, &c. The Medical Supply Association (Teviot-place, Edinburgh) exhibited also a urinary trial case and a simple instrument for the quantitative estimation of sugar in urine. Of other exhibits not easy to classify should be mentioned that of Messrs. Dowie and Marshall (Strand), who, it is well known, have given special attention to the design of boots for various requirements. This exhibit included designs in wood showing the means adopted for the treatment of flat feet; lasts constructed for contracted feet; boots and shoes made for the treatment of hammer toe; boots and shoes with dividing sole for straightening the great toe; a newly patented bandage boot for the treatment of weak ankles and flat feet; and, lastly, a simple and effective design for separating the great toe. Messrs. Price and Co. (Battersea, S.W.) showed their well-known pure soaps and sanitary soaps, while their exhibit, as a matter of course, included their glycerine, remarkable for its admirable purity, and which has now maintained its excellence for nearly half a century. "Transpirable" vests formed the chief exhibit of the Liverpool Lint Co. (Liverpool), who showed also flax and cotton lints, bandages, domette flannels &c., cotton wools, carbolised tows, protective lint, splint padding, &c. Their "transpirable" wool goods are worthy of marked commendation, since, as undervests, chest protectors, &c., this material allows evaporation of the exhalations of the skin and will not become cold and damp, it is said, even with profuse perspiration. A thick nap or pile is raised on one side of the material, which is of the finest lambswool, making it light, warm, and comfortable, and therefore exemplarily hygienic. Clinical figures and charts and an excellent series of lantern-slide physiological studies were on view at the exhibit of Messrs. Danielsson and Co. (Beaumont-street, W.), while some space was devoted to that most useful of articles, the label, together with sundry indispensables of the same order—midwifery record books, dispensary list and calendar, general case-book, bedside record, temperature charts, date pads, and so on, all of which were shown by Messrs. Silverlock (Knightrider-street, E.C.). We cannot conclude the list without reference to the "Ceres" automatic letter and card files (Messrs. Dawson, Bream's-buildings, Chancery-lane), which relieve the practitioner of much of the burden of keeping his correspondence "in decency and in order."

VII.—LITERATURE.

Books add very little to the brilliance of an exhibition, and this may be taken to be the reason why there were few booksellers represented. Messrs. Cassell and Co. (Ludgate-hill, E.C.) exhibited their well-known and useful series of manuals for students of medicine and the new work on "A System of Surgery," by Frederick Treves, F.R.C.S. Amongst Messrs. H. K. Lewis's (Gower-street, W.C.) announcements were "A Handbook of the Theory and Practice of Medicine," by Fred. T. Roberts, M.D., B.Sc., F.R.C.P.; "On the Treatment of Pulmonary Consumption," by Vincent D. Harris, M.D., F.R.C.P. (in the press); "Dental Materia Medica and Therapeutics," by James Stocker, L.D.S. (in the press); "Handbook of Diseases of the Ear for the Use of Students and Practitioners" (just ready); and several additions to Lewis's well-known Practical Series. Amongst recent issues of Mr. F. J. Rebman should be mentioned "A System of Legal Medicine," by Allan McLane Hamilton, M.D.; "Surgical Pathology and Therapeutics," by John Collins Warren, M.D., and Lawrence Godkin; while a Pictorial Atlas of Skin Diseases and Syphilitic Affections is in course of preparation, and will be published in twelve parts (each 10*s.* 6*d.*), the publication of the first part being promised soon.

Works also in active preparation by F. J. Rebman (Adam-street, Strand) are "Obstetrics," edited by R. C. Norris (admirably illustrated); "Physiology," edited by W. H. Howell, Ph.D., M.D.; and "Water-supplies," by J. C. Thresh, M.B. Vict., Ch.B., D.P.H. Camb., D.Sc. Lond. Messrs. Young J. Pentland (West Smithfield, E.C.) also exhibited a stock of well-known works; while a useful series of books was to be found on the shelves of the exhibit of the Scientific Press, Limited (Strand).

We are asked to state that the medical, surgical, and pharmaceutical antiquities exhibited by Messrs. Oppenheimer, Son and Co., Limited, at the Victoria Rooms, Savoy Hotel, and collected for them by Dr. Luigi Sambon of Rome, are their property and were collected by Dr. Sambon in discharge of a commission.

Medical News.

UNIVERSITY OF LONDON.—INTERMEDIATE EXAMINATION IN MEDICINE.—The following candidates passed in July, 1895:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Battye, Walter Rothney, B.Sc., University College, Bristol and London.
Carr, Janet Waldegrave, London School of Medicine for Women.
Hartley, Harold Owens College.
Hawker, Alice Mary, London School of Medicine for Women.
Hine, Hugh Fitz Neville, Middlesex Hospital.
Singer, Harold Douglas, St. Thomas's Hospital.
Thiele, Francis Hugo, University College.
Wood, William Bird Herapath, Mason College.

SECOND DIVISION.

Adams, Edward William, Sheffield Medical School and Firth College.
Arnold, Frank Arthur, London Hospital.
Benham, Charles Henry, University College.
Berry, Thomas Percival, Guy's Hospital.
Brickwell, Frank, St. Bartholomew's Hospital.
Broadley, John, Yorkshire College.
Bull, Stanley Arthur, Westminster Hospital.
Cleveland, Arthur John, Guy's Hospital.
Cowie, Robert Macnamara, King's College.
Davies, David Lawford Francis, Middlesex Hospital.
Field, Richard Cullingworth, Yorkshire College.
Harston, George Montagu, Charing-cross Hospital.
Hawkesworth, Thomas A., King's College.
Hirst, William James, Yorkshire College.
Jamieson, Harold Henry, St George's Hospital.
Jenkins, Herbert Stanley, University College, Bristol.
Jenkins, John David, London Hospital.
Leaning, Robert Craske, St. Mary's Hospital and Birkbeck Institute.
Leete, Frances Annie, London School of Medicine and Birkbeck Institute.
Lindsey, Colin Dunrod, St. Mary's Hospital and Birkbeck Institute.
Linton, Marion Sanford, B.A., London School of Medicine for Women.
Lloyd, Francis Seymour, St. Mary's Hospital.
Mooney, John, Owens College.
Page, John Basil, St. Mary's Hospital.
Sharman, Mary Nona, Glasgow University and London School of Medicine.
Sheldon, John Henry, Owens College.
Smallman, Arthur Britton, Owens College.
Smith, James Eckersley, University College, Liverpool.
Smith, Sidney Maynard, St. Mary's Hospital.
Swainson, James M. Graham, Westminster Hospital.
Taunton, Edgar, University College.
Telling, Walter Henry Maxwell, Guy's Hospital.
Tolputt, Arnold George, University College, Dundee, and Queen's College, Belfast.
Tyndale, Wentworth Francis, St. George's Hospital.
Watts, Eliza Turner, London School of Medicine for Women.
White, Harold Edward, Mason College.
Whitehead, Clarence Barns, St. Mary's Hospital.
Wiggins, William Denison, St. Mary's Hospital.
Williams, Percy Glyn Savours, University College.
Wilson, Alexander Gordon, London Hospital.
Wright, William, Owens College.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Rowe, William Trethowan, St. Bartholomew's Hospital.
Scott, Henry Harold, St. Thomas's Hospital.
Thwaites, Gilbert Bahn, St. Thomas's Hospital.
Wallis, James Garfit, London Hospital.

SECOND DIVISION.

Aveline, Henry Talbot Sidney, Bristol Medical School and Clifton Laboratory.
Belt, Francis Victor Owen, St. Bartholomew's Hospital.
Cridland, Arthur Bernard, Bristol Medical School and Clifton Laboratory.
Crisp, George Bedford, St. Mary's Hospital.
Handson, Lionel Edwin Charles, Guy's Hospital.
Jones, John Llewelyn, University College.
Mawson, Joseph Arthur, Yorkshire College.
Schölberg, Harold Alfred, St. Bartholomew's Hospital.
Smith, Sidney Robert, Westminster Hospital.
Stock, William Stuart Vernon, University College, Bristol, and Clifton Laboratory.
Whitfield, Lorenzo, Mason College.
Woodbridge, Elliot Wilson, St. Bartholomew's Hospital.

PHYSIOLOGY ONLY.

FIRST DIVISION.

Baker, Alfred Eaton, Middlesex Hospital.

SECOND DIVISION.

Barnes, John Arthur Percival, St. Bartholomew's Hospital.
Bletchly, George Playne, Middlesex Hospital.

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East, William Norwood, Guy's Hospital.
Hall, Edmund Stokes, Guy's Hospital.
Hunt, Edward Lewis, St. George's Hospital.
Lansdown, Charles Ewbank, St. Mary's Hospital.
Marriage, Herbert James, St. Thomas's Hospital.
Maxwell, James Laidlaw, St. Bartholomew's Hospital.
Moore, Percy William, Guy's Hospital.
Winterburn, Joseph Williamson, St. Thomas's Hospital.

N.B.—The names of candidates who have obtained honours do not appear in the above list.

EXAMINATION FOR HONOURS.

ANATOMY.

First Class.

Fagge, Charles Herbert (Exhibition and Gold Medal), Guy's Hospital.
Walker, Frederick Edward (Gold Medal), Guy's Hospital.

Second Class.

Dewhirst, Wilfred Arthur, Yorkshire College.
Sherlock, Edward B., B.Sc., Westminster Hospital.

Third Class.

Morland, Egbert C., B.Sc., Owens College and St. Bartholomew's Hospital.
Dixon, Montague, B.Sc., University College.
Hewitt, Harry Edward, St. Thomas's Hospital.

PHYSIOLOGY AND HISTOLOGY.

First Class.

Morland, Egbert Coleby (Exhibition and Gold Medal), Owens College and St. Bartholomew's Hospital.
Kelsall, Robert (Gold Medal), Owens College.
Walker, Frederick Edward, Guy's Hospital.

Second Class.

Dobson, Joseph Faulkner, Yorkshire College.
Dykes, Campbell, University College.
Sherlock, Edward Birchall, Westminster Hospital.
Richmond, G. E., B.A., B.Sc., Guy's Hospital and King's College.

Third Class.

Cornford, Mary Frances, London School of Medicine and University College.
Turner, Philip, B.Sc., Guy's Hospital.

ORGANIC CHEMISTRY.

First Class.

Pierce, Robert Wynn Charles, B.Sc. (Exhibition and Gold Medal), St. Thomas's Hospital.

Second Class.

Turner, Philip, Guy's Hospital.
Milton, William Tayler, Guy's Hospital.
Morland, Egbert Coleby, Owens College and St. Bartholomew's Hospital.
Sherlock, Edward Birchall, Westminster Hospital.
Richmond, George Ernest, Guy's Hospital and King's College.

Third Class.

Bruce, Harold Wilson, Guy's Hospital.
Nabarro, David N., B.Sc., University College.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

First Class.

Turner, Philip (Exhibition and Gold Medal), Guy's Hospital.
*Sherlock, Edward Birchall, Westminster Hospital.
Milton, William Tayler, Guy's Hospital.
Walker, Frederick Edward, Guy's Hospital.

Second Class.

Pierce, Robert Wynn Charles, St. Thomas's Hospital.
Gardner, Thomas Hudson, King's College.
Hewitt, Harry Edward, St. Thomas's Hospital.

Third Class.

Bruce, Harold Wilson, Guy's Hospital.
Cornford, Mary Frances, London School of Medicine and University College.
Fagge, Charles Herbert, Guy's Hospital.

* Obtained the number of marks qualifying for the Exhibition.
N.B.—The bracket denotes equality of merit.

The following candidates passed the Preliminary Scientific (M.B.) Examination in July, 1895:—

ENTIRE EXAMINATION.

First Division.

Addey, William Fielding, University College.
Bailey, James Connor Maxwell, St. Bartholomew's Hospital.
Bartlett, Albert William, University College, Aberystwith.
Boeddicker, Hans Frederick William, King Edward's High School, Birmingham, and Mason College.
Bullen, Charles Henry, Mason College.
Butler, James Alfred, Guy's Hospital.
Camps, Percy William Leopold, Guy's Hospital.
English, Thomas Crisp, University Tutorial College.
Ford, Harriet Rosa Delo, Owens College.
*Greenwood, William Osborne, private study.
Hamilton, Louisa, University College.
*Hare, George William, Guy's Hospital and Blenheim House.
Johnson, Robert George, University College, Bristol.
*Jones, Bernard Watson, King Edward's High School, Birmingham, and Mason College.
Lewin, Jessie Augusta, University Tutorial College.
McDougall, Olive, Owens College.
*McGavin, Donald Johnstone, King Edward's High School, Birmingham, and Mason College.
Martin, John Ranald, Middlesex Hospital and University College.
*Mason, Edward Daniel, Mason College.
Parkinson, Arthur Stanley, Yorkshire College.
Penny, Charles Burnage, Guy's Hospital and Alwyne Institute.
Ridout, Charles Archibald Scott, St. Bartholomew's Hospital.
Roberts, Bernard H. St. Clair, University Tutorial College and private study.
Rutherford, Richard, University Tutorial College and private study.
Seccombe, John William Smyth, private study and St. George's Hospital.
Soutter, Charles Duncan, King Edward's High School, Birmingham, and Mason College.
Thackray, Christopher, Firth College.
Wilmersdoerffer, Gisela, University Tutorial College.
Wrench, Guy Theodore, Guy's Hospital.

Second Division.

Barnett, Emily Bonnycastle, Bedford College, London.
Bott, Percival George Albert, St. Mary's Hospital.
Brodribb, Charles Hildred, St. Mary's Hospital.
Carlé, Frederick Charles, King's College.
Collinson, Harold, Yorkshire College.
Cook, Lewis, Westminster Hospital and private study.
Dickson, Louis Edington, University College, Liverpool.
Edwards, Francis Robert, King Edward's High School, Birmingham, and Mason College.
*Elliott, Athol Garnet, University College.
Evans, William Thomas, University College, Cardiff.
Fox, Adam, Queen's College, Cork, and private study.
Freear, Alexander, St. Mary's Hospital.
Gale, Caroline Lilian, University College.
Greenfield, Dudley George, Guy's Hospital.
Guest, Leslie Haden, Owens College and private study.
Günther, Charles Frederick, B.A., Firth and University Colleges.
*Hampshire, Florence Elizabeth, Yorkshire College.
Hirst, Walter Clapham, Yorkshire College.
Holyoak, Ernest William, Wyggeston School.
Hunt, John William, St. Mary's School.
Ivens, Mary Hannah Frances, University Tutorial College.
Jackson, Sophia Bangham, University College, Aberystwith.
James, Henry Walter, University College, Cardiff.
John, Ambrose Hilton, St. Bartholomew's Hospital.
Jones, Ernest Williams, Mason College and private study.
*Law, William Jackson, Firth College and Kingswood School.
*Lewin, George, City of London School and University Tutorial College.
Lister, Alfred Ernest John, St. Bartholomew's Hospital.
Lloyd, Brinley Richard, University College, Cardiff.
Longhurst, Frederick William, University College and private tuition.
Marshall, James Cole, St. Bartholomew's Hospital and private tuition.
Maw, George, University College.
*May, John Percy, St. Bartholomew's Hospital and Central Foundation School.
Mooney, Annie, Owens College.
Parrott, Hugh McDowall, Guy's Hospital and Carlyon College.
Phillips, Mary Elizabeth, University College, Cardiff.
Pridham, Arthur Tregelles, St. Bartholomew's Hospital.
*Reaney, Michael Foster, London Hospital.
Reeve, Ernest Frederick, Aske's Schools, Hatcham.
Reynolds, Bryan Ellis, University Tutorial College, Birkbeck Institute, and private study.
Richardson, Catherine Mary, Durham College of Science, Newcastle-on-Tyne.
Rowntree, Hilda Mallinson, University College.
Scholefield, Harry, Owens College.
Smith, Edgar Dyke, St. Bartholomew's Hospital.
Stuart, William Lumsden, King's College.
Tattersall, John, Birkbeck Institute and University Tutorial College.
*Tchaykovsky, Barbara, North London Collegiate School and Bedford College.
Thornley, Robert Lewis, St. Bartholomew's Hospital.
Welchman, Frank Ernest, University Tutorial College and private study.
*Widdows, Sibyl Taite, Dulwich High School and University Tutorial College.
Wrigley, Philip Roscoe, Owens College.

Honours Candidates recommended for a Pass.

Fry, Walter Burgess, St. Thomas's Hospital.
*Williamson, John Samuel, St. Bartholomew's Hospital.

CHEMISTRY AND EXPERIMENTAL PHYSICS.

Amsler, Albert Maurice, St. Paul's School.
†Barron, Robert Macpherson, Guy's Hospital.
Beattie, Frederick Alexander, Guy's Hospital.
Bernstein, Julius Meyer, Owens College.
Birch, Anthony, University Tutorial College and private study.
Bonallo, William, Rutherford College, Newcastle-on-Tyne, and private study.
†Bridger, James Frederick Edmund, St. Mary's Hospital.
Brown, Herbert William, University Tutorial College.
Butcher, William James, Owens College and private study.
Caddy, Adrian, St. Paul's School.
Calcott, James Douglas Clives, Grammar School and University College, Bristol.
†Chapman, John Ellis, Firth College.
Churchill, John Aylward, University College and St. George's Hospital.
†Coleridge, Alfred, University College, Bristol, and private study.
Cope, Gilbert Edgar, Westminster Hospital and private study.
Dalnow, Samuel, Guy's Hospital and private study.
De Pass, Jeannette Rachel, Alwyne Institute.
†Dobson, Margaret Bernard, University College.
Elliott, Arthur Forbes, Oundle School.

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Evans, George, University Tutorial College.
Forsyth, David, Guy's Hospital.
Goodall, Joseph Strickland, City of London College and private study.
†Graves, David Sydney, Alwyne Institute.
Hardy, Horatia Daisy, Bedford College, Battersea Polytechnic, and private tuition.
Hatrick, Charles Dainty, University College.
Hodgkin, Henry Theodore, Leighton Park School, Reading.
†Holland, Laurence, King Edward School, Birmingham.
†Ingram, Percy Cecil Parker, University College, Cardiff.
Izard, Alfred Francis, Cranleigh School.
†Jones, David Thomas Cadvan, Grammar School, Weston-super-Mare.
Kiddle, Horace Harvard, Dulwich and University Tutorial Colleges.
†Klein, Joseph, private study.
Lacey, Hugh Kirbell, Guy's Hospital.
†Lewis, William Edward V., Mason College.
Lindsey, Edward Vaughan, St. Bartholomew's Hospital.
Little, John Wishart, University Tutorial College.
†Löwe, Otto William Axel, University College, Liverpool, and private tuition.
†Male, Maurice Taylor, University Tutorial College.
Manfield, George Herbert Hind, University Tutorial College and private study.
†Mennell, Zebulon, private tuition.
†Miller, Thomas Davidson, University and University Tutorial Colleges and private tuition.
Minkley, Henry Richmond, Mason College and private tuition.
Niall, Eugene Michael, University Tutorial College.
Norton, Robert Charles, B.A., University College, Nottingham, and private study.
Paramore, William Erasmus, Merchant Taylors' School.
Pearson, Arthur, Guy's Hospital.
†Pierce, John James, private study.
†Pocock, Arthur Robert George, University College.
Prall, Edward, Merchant Taylors' School.
Rees, Morgan James, Guy's Hospital.
Stormont, James Henry, Mason College.
Tattersall, Harold, Guy's Hospital.
Taylor, George Orissa, London Hospital.
Thomas, Arthur Hitchings, University College, Cardiff.
Trail, David Herbert, Dulwich College.
Turner, Douglas Duke, Epsom College.
Utley, John Ernest, Owens College.
Wall, Vivian Francis, University Tutorial College.
†Wallbridge, Stephen Edwin J., St. Mary's Hospital.
Waller, Arthur Beaumont, Alwyne Institute.
Ward, Herbert Septimus, University College, Cardiff.
Watson, Robert Nimmo, Westminster Hospital.
Wellby, Alexander Sinclair, St. Thomas's Hospital.
Wetherell, Frank Cordeux, Guy's Hospital.
Williams, Alfred Carleton, King's College.
Wilson, Frederick Ernest, Alwyne Institute.
Woodwark, Arthur Stanley, University Tutorial College and private study.

BIOLOGY.

†Betts, Alfred John Vernon, Westminster Hospital.
†Black, Guy, St. Thomas's Hospital and University Tutorial College.
†Blythe, Thomas Thompson, University Tutorial College.
†Boissière, Felix Anthony, King's College.
Brown, Allen Bathurst, St. Bartholomew's Hospital.
Burgess, Amy Jane, London School of Medicine, University Tutorial College, and private tuition.
Drew, William Sydney, Epsom College.
†Ede, Alfred Gordon, St. Bartholomew's Hospital.
Evans, Joseph William, University College, Aberystwith.
Forsyth, John Andrew Cairns, Yorkshire College.
Fraser, Sarah Louise, Bedford College, London.
Harris, Frederic Rosenberg, St. Mary's Hospital.
Harvey, Percival George, St. Bartholomew's Hospital.
Hayden, Arthur Falconer, St. Mary's Hospital and private study.
Hocken, Herbert Castleman, Kingswood School.
Hutchinson, Margaret Ethel, University Tutorial College.
†Jones, Bertram Seymour, University Tutorial College.
Jones, Evan Tudor, University College, Aberystwith.
†Leah, Thomas, St. Mary's Hospital.
McEnery, William Augustine, Middlesex Hospital and University College.
Marshall, Arthur Thomson, King's College.
†Marshall, Charles de Zouche, University Tutorial College.
Marval, Alice Mariette, University College.
Mecklenburg, Agnes Emma, University College.
Moore, Helen, University College.
†Moxon, Henry Vital, private tuition.
Nelson, Emily, University College, Liverpool, University Tutorial College, and private study.
†Nitch, Cyril Alfred Rankin, St. Thomas's Hospital and private tuition.
Orford, Thomas Christian, Owens College.
Page, William Sidney, St. Mary's Hospital.
†Payne, William, Carlyon College.
Pearce, Thomas Massey, St. Bartholomew's Hospital.
Pearse, Margaret Isabella, Alwyne Institute.
Pickin, Frederic Harold, University College, Bristol.
Rooke, William Sidney, University College.
Savill, Philip, University College.
†Selous, Cuthbert Edmund, St. Thomas's Hospital.
Smith, Douglas Theodore, Edinburgh University and School of Medicine.
Soltau, Alfred Reginald, London Hospital.
†Stallard, Nigel [illegible], University and University Tutorial Colleges and private study.
Stannus, Hugh [illegible], St. Thomas's Hospital and private study.
†Stilwell, Archibald [illegible], private study and University Tutorial College.
Storr, Florence, Dulwich High School and University Tutorial College.
Syms, John Kendall, University College.
Trubshaw, Kenneth Vincent, Epsom College.
Ward, George Stafford, London Hospital and private study.
Wethered, Ernest, St. Bartholomew's Hospital.
Wood, Frank Herbert, St. Bartholomew's Hospital.
Wood, Maurice Dunbar, Guy's Hospital.
Wyld, Ellen Elizabeth Janet, Westfield College.

* These candidates have also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.
† These candidates have now completed the examination.
N.B.—The names of candidates who have obtained honours do not appear in this list.

The following candidates passed the Intermediate Examination in Science (1895):—

FIRST DIVISION.

Allen, Arthur Hinton, private study.
Allen, George Pethybridge, private study and Craigmore College, Bristol.
Beale, Hanway Richard, St. Thomas's Hospital.
Beckton, Henry, Clare College, Cambridge, and University Tutorial College.
Bell, Herbert George, B.A., St. Peter's, Cambridge, University Tutorial College, and private study.
Belton, Frank, private study and Manchester Technical and Central Board Schools.
Berridge, Emily Mary, Bedford College, London, and Royal Holloway College.
Borchardt, Walter Gustav, St. John's College, Cambridge.
Borrow, Frederick Charles, St. Bartholomew's Hospital and private tuition.
Buller, Arthur Henry Reginald, Mason College.
Caudwell, Ben, B.A., private study and University Tutorial College.
Clark, John Alexander, University College, Aberystwith.
Cook, Sydney George, Sidney Sussex College, Cambridge.
Curgenven, Arthur Joseph, St. Paul's School.
Dalton, John Edwin, Yorkshire College.
Edward, James Mitchell, private study.
Forster, Martin Onslow, University Tutorial College.
Gardner, Thomas Jevons, School of Science, Kidderminster, and private study.
Godfrey, Alfred Robert, University College, Nottingham.
Hartle, Hilda Jane, King Edward's High School, Birmingham.
Harvey, Charles John, B.A., private study.
Heaton, Ellis Wright, Yorkshire College and Huddersfield Technical School.
Heitefusz, Hermann Wm. U., private study and St. John's College, Battersea.
Houghton, Robert Harold, Birkbeck Institute.
Huntly, George Nevill, private study and Royal College of Science.
Jack, George, private study and Glasgow Technical College.
Jones, Harry Walton, University College, Aberystwith.
Jones, Humphrey Owen, University College, Aberystwith.
Kent, George Joseph, University Tutorial College and private study.
Lawn, James Gunson, Royal College of Science, private study, and University Tutorial College.
Lewis, Edward Watkin, Aske's School, Hatcham.
Marshall, Bouchier M. Cole, Royal College of Science.
Matthews, Gay Frederick, private study.
Moore, Harold, Middlesbrough High School.
Morland, Helen, Croydon High School.
Neumann, Edgar David M., Balliol College, Oxford.
Nunn, Henry Thomas, University Tutorial College and private study and tuition.
Orme, Philip, University College and Polytechnic Institute.
Paramore, Richard Horace, Merchant Taylors' School, University Tutorial College, and private study.
Parkinson, Alfred Howard, private study.
Pearce, Harold, University Tutorial College.
Picknett, William Allen, Royal College of Science and University Tutorial College.
Pinchin, Ernest Alfred, Birkbeck Institute and private study.
Potts, Ernest Henry, B.A., private study and Birkbeck Institute.
Prince, Henry, Westminster Training and University Tutorial Colleges.
Richardson, Harold Ernest, B.A., private study.
Rowntree, Ernest William, Owens College.
Rylands, Louis Gordon, B.A., private study and University Tutorial College.
Sherlock, Robert Lionel, private study.
Skeats, Ernest Willington, Royal College of Science and private study.
Sprankling, Charles Henry Graham, University College, Bristol, and private study.
Watts, William Herbert, private study.
Whiting, Thomas, University College, Aberystwith.
Winckle, Edward William, King Edward's High School, Birmingham, and Mason College.
Woodhead, Francis John, Yorkshire College.
Worth, Henry John George Rogers, Yorkshire College and private study.

SECOND DIVISION.

Adams, Sophia G. Louisa, University College, Aberystwith.
Ashby, Blanche Mary, University College, Cardiff.
Battersby, Albert, private study.
Bennett, George Richard, University College, Cardiff.
Bigby, Agnes Grace Doull, Westfield College.
Bird, George Arthur, University Tutorial College, Birkbeck Institute, and private study.
Blandy, Wilfrid Boothby, High School and University College, Nottingham.
Brown, Frank William Radford, St. John's College, Green-lanes, and private study.
Brown, John, private study.
Clegg, Harold Fielding, University College, Aberystwith.

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Coates, John Victor Hubert, City and Guilds Central Institute and private study.
Crosland, Zachariah Drake, Technical School, Huddersfield, and private study.
Crosskey, Alexander Nash, City and Guilds Institute and University Tutorial College.
Crossland, Cyril, Windermere Grammar School.
Daniel, Vincent, University College, Cardiff.
Drennan, William St. George, private study.
Edwards, William Buckland, private study and University Tutorial College.
Evans, David, private study and University Tutorial College.
Firth, John Shaw, Firth College.
Fuller, Frank Joseph, B.A., Fitzwilliam Hall, Cambridge University.
Gillmore, Thomas Parker, Hazlecroft, Weston-super Mare, and University College, Bristol.
Goldie, Ellis Gordon, University College, Birmingham, and private study.
Goodwill, Gustave, University Tutorial College.
Herald, Hartley Davy, private study.
Hogg, Herbert Ernest, private study.
Lambshead, William Samuel, B.A., private study and University Tutorial College.
Lathwood, Arthur, Mason College.
Lloyd, John Bennett, Haberdashers' Schools, Hoxton, University Tutorial College, and private study.
Lowndes, Louis, University College, Nottingham, and private study.
Newton, William Henry, University College, Nottingham.
Nott, Gilbert Harwood, University College, Aberystwith.
Orwin, Annie, Royal Holloway College.
Parkinson, John Harold, B.A., University College, Aberystwith.
Parsons, Arthur Ambrose, private study.
Powell, John, Goldsmiths' Institute and private study.
Rawlinson, Percy, Yorkshire College and private study.
Sheard, Gertrude, Westfield College.
Shields, Leonard, Firth College.
Smiles, Samuel, University College.
Sterling, Samuel Frederick, Battersea Polytechnic.
Watson, George, B.A., University College.

HONOURS CANDIDATES RECOMMENDED FOR A PASS.

Aston, Stafford, University College and private tuition.
Briggs, John, private tuition and University College.
Hall, Emma, Royal Holloway College.
Hodgson, Stanley, Guy's Hospital.
Jackson, Henry, Downing College, Cambridge, and Bury Grammar School.
Laws, Arthur Robert, Durham College of Science, Newcastle-on-Tyne.
Ormond, Sidney James, Guy's Hospital and University Tutorial College.

N.B.—The names of candidates who have obtained honours do not appear in this list.

EXAMINATION FOR HONOURS (INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC (M.B.) CONJOINTLY).

INORGANIC CHEMISTRY.

FIRST CLASS.

Parrish, Samuel, Int. Sc. (disqualified by age for the Exhibition), Royal College of Science, Yorkshire College, and private study.
‡Hill, Charles Alexander, Prel. Sc., Pharmaceutical Society, King's College, St. Thomas's Hospital, and private study.
Howard, Albert, Int. Sc., Royal College of Science.
‡Wynn, William Henry, Prel. Sc., Mason College and private study.

SECOND CLASS.

Miller, Ernest Alfred, Int. Sc., Guy's Hospital.

THIRD CLASS.

Morgan, David J., Prel. Sc., St. John's College, Cambridge.
Dixon, Edwin Henry, Int. Sc., Merchant Venturers' Technical College, Bristol.
Platt, P. Polding, Int. Sc., private study.
Clark, Ernest, Int. Sc., Firth College and Central Hall of Science, Sheffield.
‡Mankiker, R., Prel. Sc., University College and private study.
Humphrey, Edith E., Int. Sc., Bedford College, London.
More, Andrew, Int. Sc., Royal College of Science, University Tutorial College, and private study.

EXPERIMENTAL PHYSICS.

FIRST CLASS.

Starling, Sydney George, Int. Sc. (Neil Arnott Exhibition and Medal), Royal College of Science and University Tutorial College.
*†Melton, G. R., Int. Sc., Royal College of Science, University Tutorial College, and private study.

SECOND CLASS.

Drysdale, Charles V., Int. Sc., Finsbury and City Guilds, Birkbeck Institute, and private study.

THIRD CLASS.

Brooks, Ernest E., Int. Sc., private study.
Adams, Walter, Int. Sc., Firth College.
Griffith, Owen W., Int. Sc., University College, Bangor.
Whitin, Paul I., Int. Sc., King Edward's School, Birmingham, and Mason College.
Whittington, H. W., Int. Sc., Sheffield Royal Grammar School and Firth College.

BOTANY.

FIRST CLASS.

Freeman, William George, Int. Sc. (Exhibition), Royal College of Science and St. Olave's Grammar School.

SECOND CLASS.

‡Sollas, Igerna B. J., Prel. Sc., Royal College of Science, Dublin, and Alexandra College.

THIRD CLASS.

Terry, Herbert, Prel. Sc., Owens College.

ZOOLOGY.

FIRST CLASS.

‡Kelly, Agnes, Preliminary Science (Exhibition), University and Bedford Colleges, London.
Lindsey, A. B., Prel. Sc., University, St. Thomas's Hospital, and Birkbeck Institute.

SECOND CLASS.

Singer, Charles Joseph, Prel. Sc., University College.
‡Sollas, I. B. J., Prel. Sc., Royal College of Science, Dublin, and Alexandra College.
Scroggie, W. R. J., Prel. Sc., Islington High School and Birkbeck Institute.

THIRD CLASS.

Savage, T. C., Prel. Sc., University College.

* Obtained the number of marks qualifying for the Exhibition.
† Disqualified by age for a "Neil Arnott" Medal.
‡ These candidates have also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. examination.
N.B.—The bracket denotes equality of merit.

UNIVERSITY OF EDINBURGH.—On Aug. 1st the following candidates were recommended to receive the degrees named below:—

THE DEGREE OF DOCTOR OF MEDICINE.

†Allison, J., M.B., C.M.
*Anderson, J. S., M.B., C.M.
Anderson-Berry, D., M.B., C.M.
Barnes, A. R., M.B.
Battersby, J. H., M.B., C.M.
Bond, C. H., M.B., C.M.
†Cameron, G. C., M.B., C.M.
Carruthers, E. J. W., M.B., C.M.
Clayton, J. S., M.B., C.M.
Connor, F. G., M.B., C.M.
Crawford, W. T., M.A., M.B., C.M.
*Davies, R., M.B., C.M.
Dennison, A., M.B., C.M.
*Dickson, G., M.B., C.M.
†Dixon, C. J. W., M.B., C.M.
Doughty, D. S., M.B., C.M.
*Dow, D. R., M.A., M.B., C.M.
†Dunlop, J. C., M.B., C.M.
‡Ehrke, F. L., M.B., C.M.
Fairweather, D., M.A., M.B., C.M.
Forsyth, E., M.B., C.M.
*George, F. J., M.B., C.M.
*Giles, A. B., M.B., C.M.
*Gladstone, H. B., M.B., C.M.
Gordon, H. L., M.B., C.M.
*Grant, J. T., M.B., C.M.
Green, V., M.B., C.M.
*Grosvenor, W. C., M.A., M.B., C.M.
Hill, J. S., M.B., C.M.
†Home, G., M.B., C.M.
Home, W. B., B.Sc., M.B., C.M.
†Horne, R. M., M.B., C.M.
Hughes, T. B., M.B., C.M.
Jameson, G. B., M.B., C.M.
†Jareja, Sir Bhagvat Sinhji, M.B., C.M.
†Johnston, G. F., M.B., C.M.
*Jones, W. W., M.B., C.M.
Knaggs, W. H. E., M.B., C.M.
‡Koch, W. V. M., M.B., C.M.
Lambert, J. R. P., M.B., C.M.
Lishman, F., M.B., C.M.
*Lyle, F. W., M.B., C.M.
†Macalister, C. J., M.B., C.M.
*Macdonald, J. M.A., M.B., C.M.
†Mackay, F. W., M.B., C.M.
*MacLelland, R., M.B., C.M.
Macleod, H. W. G., M.B., C.M.
*Macnaughton, G. W. F., M.B., C.M.
Martin, E. F., M.B., C.M.
*Moorhouse, J. H., M.A., M.B., C.M.
Morris, S. G., M.B., C.M.
*Morrison, G. E., M.B., C.M.
*Murray, W., M.B., C.M.
†Newman, G., M.B., C.M.
Ogilvy-Ramsay, M., M.A., M.B., C.M.
*Pollock, J. D., M.B., C.M.
Poole, S., M.B., C.M.
Porter, G., M.B., C.M.
‡Ritchie, J., M.A., B.Sc., M.B., C.M.
*Robertson, J. P., M.A., M.B., C.M.
†Robertson, W. F., M.B., C.M.
Ronaldson, R. M., M.B., C.M.
Ross, J., M.B., C.M.
†Shennan, T., M.B., C.M.
†Simpson, J. C., M.B., C.M.
Sinclair, G. T., M.B., C.M.
*Sproule, W., M.B., C.M.
Stalkartt, W. H. S., M.B., C.M.
‡Walker, A., M.A., B.Sc., M.B., C.M.
Watson, J. S., M.B., C.M.
Wilson, T. A. M., M.B., C.M.

* Commended for their Theses.
† Deemed worthy of competing for the Theses Gold Medals.
‡ Those who have obtained Gold Medals for their Theses

THE DEGREES OF BACHELOR OF MEDICINE AND MASTER IN SURGERY.

Aarons, S. J.
Allison, J.
Anderson, C. W.
Anderson, G.
Balfour, H. H.
Bardswell, N. D.
Begg, W., B.A.
Bell, J. A. T.
Benson, H. M.
Birrell, E. T. F.
Blackburn, J. E.
Blackmore, G. J.
§Bowes, J. E.
Bowman, L.
Brierley, E. B.
Caine, N.
Cardale, H. J.
Carr, S. H.
Chipman, W. W.
Coulthard, W. J. C.
Crawford, J.
Cross, R.
Cunningham, R. W.
Dalziel, J. M.
Dawson, J. M.
Dee, M. V.
Dewar, T.
Easmon, A. W.
Eason, W. P.
Ewald, H. J.
Eyres, H. M.
Fenn, A. G.
Fitchett, F. W.
Fleming, A. M.
§Forbes, J., M.A.
Forbes, J., M.A., B.Sc.
Forrest, J. A.
Fraser, J. S.
§Garbutt, W. J.
Gardiner, F.
Gibb, W. A.
Gibson, T.
Gilchrist, J.
Gillillan, S. J., M.A.
Gillies, J.
Gilruth, J. D., M.A.
Glegg, W.
Gorringe, C. J.
Graham, D. J.
Gray, J.
Greig, E. D. W.
Grieve, J. M., M.A.
Griffiths, J. H. K.
Halton, H.
Hay, J. B.
§Haygarth, R.
Hector, C. M.
Heddle, R. P.

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Henderson, G., M.A.
Henderson, G. P.
Henderson, J. H.
Howden, I. D. C.
Hughes, M.
Hunter, W. H.
Huntly, H. E.
‖Husband, A. L.
Hutton, D. M., B.Sc.
Jenkins, G. J.
Jones, D. J.
Kelly, J. I.
Ker, L., M.A.
Kirk, J.
Landsborough, D.
Landsborough, J.
Laurie, L. V.
Lawson, D.
Leebody, H. A.
Leith, R. M.
‖Lewis, T. G.
‖Lillie, W.
Lundie, G. P., M.A.
Lupton, A. C.
Lusk, S. F.
Luttig, P. Ch., B.A.
M'Camon, R.
MacCarthy-Morrogh, A.
Macdonald, A., M.A.
Macdonald, F. B.
M'Donald, J.
Macdonald, W. M.
M'Dowell, W. C. W., B.A.
Macfie, T. H.
Mackay, D. M.
MacLaurin, C.
MacLean, K.
Macmillan, J. G.
Macmillan, N. H.
Malcolm, W. S.
Mander, W. R.
Martin, W. L., M.A., B.Sc.
Momplé, F. J. R.
Moorhead, R. L.
Norwell, J. S., B.Sc.
Ormerod, T. T.
Owen, E. L.
Owen, R.
Parsons, J. A.
Peach, C. W.
Pearson, H. C.
Peill, A. D.
Plante, G. R.
Potts, W. A., B.A.
Price, W. H.
Procter, G. L.
Rait, J. C.
Rankine, D., M.A.
Rau, M. S., M.A., B.Sc.
Raymond, J. K.
Reid, E. S.
Richardson, H.
Richardson, W. P.
Risely, R. J.
Roberts, G. L.
Robson, R. G., M.A.
Roddis, T. E. E.
Ross, V. A.
Roycroft, R.
Sadler, T. D.
Samut, R.
Scott, E. W. K.
Selby, R. G.
Simson, H. J. F.
Skeete, E. M.
Snijman, E. R.
Somerville, J. E. W.
Stanwell, F. S.
Steele, W. H.
Steven, A.
Stewart, G. R.
Stokes, W.
Stuart, J. C.
Stuart, T.
Sutton, D. C.
Taylor, W. M.
Thompson, F. S. C.
Thwaits, J. A.
Tough, J. B. K.
Veitch, J. O.
Wallace, G., M.A.
‖Waterston, D., M.A.
‖Watson, J. R., M.A., B.Sc.
Watt, J.
§Wilson, A. R., M.A.
§Wishart, W. de W.
Wood, J.
Wood, J. B.

THE DEGREE OF MASTER IN SURGERY.

Martin, E. F., M.D.

§ With first-class honours.
‖ With second-class honours.

Thesis Gold Medallists.—F. L. Ehrke, M.D.; W. V. M. Koch, M.D.; J. Ritchie, M.D.; A. Walker, M.D.

The following awards have been made:—The Ettles Scholarship, J. E. Bowes; the Beaney Prize in Anatomy and Surgery, W. J. Garbutt; the Murchison Memorial Scholarship in Clinical Medicine, N. Macvicar; the Goodsir Memorial Prize, G. Mann; the Gunning Victoria Jubilee Prize in Obstetrics, A. Walker; the Gunning Victoria Jubilee Prize in Public Health, G. Newman; the Gunning Victoria Jubilee Prize in Zoology, J. D. F. Gilchrist; the Buchanan Scholarship in Gynæcology, W. W. Chipman; the James Scott Scholarship in Midwifery, D. J. Graham; the Milner Fothergill Medal in Therapeutics, E. M. Smith, M.D.; the Cameron Prize in Therapeutics, Professor Behring; and the Edinburgh University London Club Prize, R. Hutchison.

UNSOUND FRUIT.—An enormous number of unsound greengages have been seized at a jam factory in the East-end of London and condemned.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mrs. Sarah Meadows, of Aylestone Hill, Hereford, has sent a donation of £500 to the general fund of the Hereford Infirmary, and £500 to be invested as a fund for incurables, such fund to take her name.—The late Mr. John Bell Sedgwick, of St. Andrews-place, Regent's-park, London, has bequeathed £200 to the Middlesex Hospital.—Her Majesty the Queen has sent a donation of £100 to the building fund of the Royal Free Hospital, Gray's Inn-road, London.—The Treasurer of the French Hospital and Dispensary, Shaftesbury-avenue, London, has received £1000 from M. Robert Lebaudy.—The Mercers' Livery Company has sent a further donation of 100 guineas towards the rebuilding of the front of the Royal Free Hospital, Gray's Inn-road, London.—The late Mr. Woodfindin, of Kenwood Bank, Sharrow, Sheffield, has bequeathed £400 to the Sheffield Public Hospital, £200 to the Children's Hospital, and *inter alia* two-thirds of the residue of his real and personal estate are to be used in the erection, equipment, and endowment of a convalescent home, to be called the "George Woodfindin Convalescent Home."—The governors of the Haywood Hospital, Burslem, have received a donation of £100 from Mr. S. Round, of Cheddleton.—The late Mr. William Berry of Manchester has bequeathed £10,000 to the Manchester Infirmary, £2000 to the Southport Convalescent Hospital, and £1000 to the Royal Eye Hospital, Manchester.—The Merchant Taylors' Company has contributed 20 guineas to the new building fund of the Royal Ear Hospital, Soho-square, London.—Sir John Williams, Bart., M.D., has contributed £250 to the rebuilding fund of the North London or University College Hospital, Gower-street.—Mr. Henry Yates Thompson has sent on behalf of his mother, Mrs. Thompson of Thingwall, £200 towards the endowment fund of the Crewe Memorial Cottage Hospital, and the Earl of Crewe has contributed £100 towards the same fund.

PRESENTATIONS.—Dr. A. Smith of Whickham, Newcastle-on-Tyne, has been presented by the members of the Whickham Ambulance Association with a carved oak settee, bearing a suitable inscription, in recognition of his services as their lecturer.—On the occasion of their golden wedding Mr. W. U. Buée of Slough and Mrs. Buée have received from their friends and neighbours a most gratifying token of esteem and regard. A committee of residents in Slough and its neighbourhood was recently formed to consider the terms of the presentation, and at its final meeting, presided over by the Rector of Slough, reported that the scheme had been very favourably regarded by the public. As a substantial result of the support which they had received the committee purchased the lease of the house in which Mr. Buée had so long resided for the remainder of the lives of himself and his wife, and money was also invested in Consols in their names. In order to spare Mr. and Mrs. Buée the fatigue incidental to a meeting at the Town Hall, it was resolved that the presentation should be made by a deputation of three persons only, and this part of the proceedings was accordingly carried out at Mr. Buée's house on Aug. 10th. The address, which bore upwards of 270 signatures, was illuminated on vellum and framed. After it had been read and the other documents handed over, Mr. Buée responded on behalf of himself, his wife, and their daughters, acknowledging the gratification which they felt at the manifestation of so much kindness on the part of their friends.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Bonhoff, Assistant in the Hygienic Institute, has been recognised as *privat-docent* in Hygiene.—*Breslau:* The Extraordinary Professorship of Ear and Throat Diseases, has been offered to Dr. Siebenmann of Basle, who has declined it on the ground that there is no clinic to supply the necessary teaching material, and that he would, therefore, have had to take some means of collecting patients himself.—*Erlangen:* Dr. Zelenka, Professor of Zoology, has resigned his chair for the purpose of undertaking a long scientific expedition in remote regions.—*Giessen:* Professor Strahl of Marburg has been appointed as successor to Professor Bonnet in the chair of Anatomy, he having gone to Greifswald in place of Professor Sommer, whose health has unfortunately obliged him to retire.—*Halle:* Dr. D. Ackermann, Professor of Pathological Anatomy, is about to retire, his chair being taken by Dr. Eberth, Professor of Normal Anatomy, and formerly Professor of Pathological Anatomy in Zurich. To the chair of Normal Anatomy Professor Roux of Innsbrück has been appointed.—*Königsberg:* Dr. Franz Meschede has been promoted to an Extraordinary Professorship of Psychiatrics. Dr. Gerber has been recognised as *privat-docent* in Throat and Ear Diseases.—*Tübingen:* Dr. Kallius of Göttingen has been appointed Extraordinary Professor of Anatomy in place of Dr. Froriep, who has been promoted to the ordinary professorship, in succession to Professor Henke, retired.—*Prague:* Professor Rollet of Gratz is expected to be the new Professor of Physiology.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Case of Dr. Herz.

A MEMORIAL for presentation to the Prime Minister with reference to the case of Dr. Herz has been prepared by Sir Edward Reed, and is receiving the signatures of Members of Parliament. The memorial says that no treaty can justly or reasonably be held to bind the Government of this country to a course of conduct which was never contemplated by the Extradition Treaty, and which must be repugnant to the feelings of both the French and English nations, because it cannot be further prolonged without the infliction of certain death. Even if every offence alleged against Dr. Herz had been proved,

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instead of being alleged only, it would nevertheless by this time, after so prolonged a period of imprisonment, have become a public duty, says the memorial, to solicit the intervention of Her Majesty's Government for the termination of the custody in which Dr. Herz has so long been held.

The Drains of the House of Commons.

Representations have been made to the First Commissioner of Works with reference to the state of the drains of the House of Commons during the hot weather, and Mr. Akers Douglas is having special inquiries made with a view to any defects being remedied.

HOUSE OF LORDS.

THURSDAY, AUG. 15TH.

Teaching University for London.

Earl Cowper, Chairman of the Royal Commission on this subject, addressed the House with regard to it in the course of the debate on the address. Everybody, he said, was agreed that it was a positive disgrace that the great population of London was not possessed of that which almost every capital in Europe possessed—a great teaching university, because they could not call by that name the University of London, which was merely an examining board, well as it did its work and eminent as were the people connected with it, and which, in spite of its name, had no more to do with London than it had to do with the rest of the United Kingdom. What was wanted was that for which for years thinking people have been striving—namely, that there should be a proper and economical system of teaching which would apply to poor as well as to rich, and which would conduct the student from point to point up to that final examination which could only be considered as the crowning of the whole, and by which the stamp of a completed education would be conferred. The plan proposed by the Commission of which he had the honour to be chairman had received the support of all the bodies interested in the question, and he urged the Government to act on the report of that Commission without any further delay.—The Duke of Devonshire, Lord President of the Council, said in reply that in the present circumstances of the situation the Government intend to proceed now with no legislative measures except such as were absolutely necessary for carrying on the business of the country. Like their predecessors, the present Government were strongly convinced of the desirability and even of the necessity of meeting the views which had been expressed in favour of the establishment of a Teaching University for London. His noble friend had mentioned the unanimity with which the present scheme had been received by many important bodies in the country, but he had passed over somewhat lightly the strong objection taken to the scheme by a large and not unimportant section of Convocation. It had not been possible for any of his colleagues to look into this matter very closely, and he was afraid that, as it was impossible to legislate at present, it would be premature on his part to commit the Government wholly to the scheme in the shape proposed by the Commission of his noble friend. He could only assure him that the subject would receive careful attention on the part of the Government before Parliament met again for legislative business.

HOUSE OF COMMONS.

FRIDAY, AUG. 16TH.

Cattle Disease.

A number of questions were addressed to Mr. Walter Long, the new President of the Board of Agriculture, with reference to the exclusion of Canadian live cattle from this country. Mr. Long, in his reply, said he was aware that in certain districts it was desired to admit the cattle, but the question was one which he was bound to consider from the point of view of the interest of agriculturists generally, which, in his opinion, imperatively required that every possible safeguard should be taken against the introduction of disease. So recently as the 10th ult. two animals landed in this country from Canada were found to be affected with pleuro-pneumonia, and in view of this fact and of all the circumstances disclosed in the printed papers which had been laid before the House he had no alternative but to maintain in force the requirement that Canadian cattle should be slaughtered at the port of landing.

East London and its Water-supply.

Mr. Chaplin, President of the Local Government Board, answering questions on this subject, said it had been a matter of much regret to him that so large a proportion of the inhabitants, and many of them the poorest, of the district included in the limits of supply of the East London Water Company had been put to very serious inconvenience by the limitation of the hours during which a supply was obtainable, and, as he could not but feel that a continuance of this limitation of the supply might be attended with danger to the public health, the condition of things had caused him some anxiety, and the matter had been receiving his constant attention. The difficulty in which the company had been placed had been occasioned by the exceptional drought which existed until very recently and the insufficiency of the means of storage possessed by the company. The company had in a large number of streets set up standpipes attached to the mains, which were constantly charged with water, and this had, no doubt, been very helpful to a large number of persons when the ordinary supply was cut off. Allegations had been made as to a very serious increase in the mortality in the district of the water company, but he had caused inquiries to be made on this subject in connexion with the returns of the Registrar-General, and he was glad to be able to state that, so far as means of comparison exist, it would appear that the mortality of the district supplied by the company had not been greater than in districts within the limits of supply of other companies where there had been no deficiency in the water-supply. As regards the statutory obligation of the company to give a constant supply, he must point out that by Section 15 of the Metropolis Water Act, 1871, it was provided that a company should not be subject to any liability for not giving a constant supply when the want of such supply arose from unusual drought or other unavoidable cause or accident. He was glad to be able to state that he was informed by the company that they found that through the recent rains they might now safely extend the hours of supply from to-morrow, and that water would be turned on at about six in the morning and left on until about five in the afternoon daily.

Provision for the Aged Poor.

Mr. Balfour, First Lord of the Treasury, said, in answer to a question by Mr. Channing, that the Government were in favour of a further investigation into the various schemes for making provision for the aged poor, and the principles on which it should be conducted were now under their consideration.

TUESDAY, AUG. 20TH.

The University of Wales.

The Chancellor of the Exchequer, replying to a question by Mr. Brynmor Jones, said that a grant of £3000 was made for the preliminary expenses of the University of Wales last year, and he understood that as this sum was insufficient for the purpose, and his predecessor promised a further grant of the same amount in the present year, a vote for that sum would be taken in a supplementary estimate.

The Marking of Foreign Goods.

Mr. Ritchie, President of the Board of Trade, undertook to consider the question of strengthening the Merchandise Marks Act and the regulations made under it, and invited members to supply him with information of cases where the law appeared to be evaded.

Health of the Mediterranean Squadron.

In response to a request for the latest information as to the health of the Mediterranean Squadron, Mr. Goschen, First Lord of the Admiralty, said that on Aug. 13th the Commander-in-Chief telegraphed that it was perfectly satisfactory.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Boulevard Saint-Germain, Paris.
Le Phtisique et son Traitement Hygiénique. Par Dr. E. P. Leon-Petit. 1895. pp. 303.

BAILLIÈRE, TINDALL AND COX, King William-street, Strand, London.
The Animal Tuberculoses and their relation to Human Tuberculosis. By E. Nocard. Translated by H. Scurfield, M.D. Edin., D.Ph.Camb. 1895. pp. 143. Price 4*s*.

CLOWES, WILLIAM AND SONS, Charing-cross, London, S.W.
The Volunteer Surgeon's Guide. By Surgeon-Captain E. H. Sieman. 1893. pp. 95. Price 3*s*. 6*d*.

FANNIN AND CO., Grafton-street, Dublin.
Ireland: its Health Resorts and Watering-places. By D. Edgar Flinn, F.R.C.S., D.P.H. Second Edition. Illustrated and Maps. 1895. pp. 177. Price 2*s*. 6*d*. net.

RICHARDS, W. A. AND SONS, Government Printers, Cape Town.
Cape of Good Hope Department of Agriculture: Report of the Director of the Colonial Bacteriological Institute for the Year 1894. 1895.

THE CALCUTTA CENTRAL PRESS COMPANY, Calcutta.
Handbook to the Jeypore Museum. By Thomas H. Hendley. Illustrated. 1895.

Three Cases of Friedreich's Disease (Hereditary Ataxy) associated with Genetous Idiocy: by M. J. Nolan, L.R.C.P., L.R.C.S. Irel.; reprint (John Falconer, Dublin, 1895).—Baby Buds: by Ellis Ethelmer (Mrs. M. Elmy, Buxton House, Congleton, 1895), price 1*s*.—How to Enjoy a Holiday (the Unicorn Press, Gray's-inn-road, London, 1895), price 1*s*. net.—Some Practical Points in Connexion with Rupture of the Female Perineum: by M. D. Spanton, F.R.C.S. Eng.; reprint (*Provincial Medical Journal*, Friar-lane, Leicester, 1895).—A Baneful Popular Delusion on the Subject of Motherhood: by Wm. Woods Smyth (Simpkin, Marshall, & Co., London, 1895), price 6*d*. net).—Serpents' Venom: by Thomas R. Fraser, M.D., F.R.S., F.R.C.P. Eng.; reprint (Neill & Co., Edinburgh, 1895).—Hastings and St. Leonards Carnival, 1895, Official Handbook and Guide (F. J. Parsons, Hastings).—London Temperance Hospital; Report upon the Surgical and Ophthalmic Cases admitted during the year 1894: by L. Wilde, M.D., M.R.C.P., D.P.H. (J. Vincent & Son, Little Britain, London).—The Natural History of Plants, Part 15 (Blackie & Son, London), price 2*s*. 6*d*. net.—Mittheilungen aus Kliniken und medicinischen Instituten der Schweiz; Annales Suisses des Sciences Médicales; Ueber Paget's Krankheit, von Dr. Rolf Lindt, Hefte 10, 11, 12 (Carl Sallmann, Basel und Leipzig), 1895.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAM, J. L., M.B., C.M. Aberd., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital

ADAMSON, J., M.D. Glasg., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health for the Hetton Urban Sanitary District.

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BURRIDGE, J. W., L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

CLENDINNEN, W. M., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of No. 3 Sedgley District, Dudley Union, vice J. G. Clendinnen, deceased.

CROSSKEY, W. F., M.D., C.M. Glasg., has been reappointed Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

EMSON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Union Workhouse and the Dorchester Sanitary District.

FAWSSETT, F., M.B. Lond., B.S., L.R.C.P., M.R.C.S., has been re-appointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

HALL, P. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

HILL, GEORGE, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Holme Cultram Urban Sanitary District.

HOUGHTON, L. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Liskeard Union.

JAGO, R. O., M.R.C.S., has been appointed Medical Officer of Health for the Irlam Urban Sanitary District.

KINGDON, E. C., M.B., M.R.C.S., has been appointed Honorary Surgeon to the Nottingham Eye Infirmary.

LAIRD, F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ravensthorpe Sanitary District of the Dewsbury Union.

LAMB, WM., M.D., C.M. Edin., has been appointed Medical Officer of Health by the Arnold District Council.

LASLETT, MAURICE H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Assistant Medical Officer to the Somerset and Bath Lunatic Asylum.

MACKEITH, A. A., M.B., C.M. Glasg., has been appointed Medical Officer for the Seventh Sanitary District of the Barnstaple Union.

MASON, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Walton Sanitary District of the Chertsey Union.

NAIRN, R. W., M.B., C.M. Glasg., has been appointed Medical Officer for the Farnsfield Sanitary District of the Southwell Union.

NASH, W. G., L.R.C.P., F.R.C.S., M.B., has been appointed Medical Officer for the No. 7 Sanitary District of the Market Harborough Union.

NASON, W. S., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse of the Nuneaton Union.

O'SULLIVAN, M., M.B., B.Ch. Irel., has been appointed Medical Officer to the Medical Aid Society for the C, D, and G Divisions of the Dublin Metropolitan Police.

PEARCE, J. P., M.R.C.S., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

PERKINS, HENRY CAMPBELL, M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Nayar Brigade, Travancore, Madras.

POOLE, S., M.B., C.M. Edin., has been appointed a District Medical Officer for the Wolverhampton Union.

ROOSE, R., M.D. Brux., L.R.C.P., L.M., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Attendant to the Turkish Embassy in London.

SMITH, R. W. INNES, M.B. Edin., has been appointed Assistant House Surgeon at Ancoats Infirmary, Manchester.

SMYTHE, L., M.D. Glasg., F.R.C.S. Eng., has been reappointed Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

TAYLOR, J., M.D., C.M. Aberd., D.P.H. Camb., has been appointed Medical Officer of Health for the Chester-le-street Rural Sanitary District.

TEMPLEMAN, CHAS., M.D., C.M. Edin., D.Sc. (Public Health), has been appointed Medical Officer to the Town Council and Burgh of Dundee.

THOMAS, J. P., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health and Medical Attendant at the Sanatorium by the Lowestoft Town Council.

TURNER, G. J. K., M.B., C.M. Aberd., has been appointed Medical Officer for the No. 4 Sanitary District of the Chipping Norton Union.

WALKER, F. H. R. J. U., L.S.A., has been appointed Medical Officer for the Coleford Sanitary District of the Frome Union.

WILLETT, EDGAR, M.B. Oxon., F.R.C.S., has been appointed an Additional Non-resident Anæsthetist to St. Bartholomew's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road.—Clinical Assistants.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence, and allowance for washing provided.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120. Also Assistant House-Surgeon for six months. Board, lodging, and washing in the hospital provided.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—House Surgeon. Salary £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton-arcade, Manchester.

NORFOLK AND NORWICH HOSPITAL.—Assistant to House Surgeon for six months. Board, lodging, and washing provided.

THE CHILDREN'S HOSPITAL, Temple-street, Dublin.—Resident Surgeon. Salary 50 guineas, with rooms, fire, light, and attendance.

THE COUNCIL FOR THE BOSTON RURAL DISTRICT.—Medical Officer of Health for the District for five years. Salary £110 inclusive. Applications to the Clerk of the Council, 10, New-street, Boston.

WEST HAM HOSPITAL, Stratford, E.—Senior House Surgeon for one year. Salary £75 per annum, with board, lodging, and washing.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

Births, Marriages, and Deaths.

BIRTHS.

BENSON.—On Aug. 14th, at Grosmont, Pantsilas, R.S.O., the wife of H. P. D'Arcy Benson, M.B., Ch.M., of a son.

BURD.—On Aug. 19th, at Castle House, Shrewsbury, the wife of E. Lycett Burd, M.D. Cantab., of a son.

CORNELIUS.—On Aug. 11th, at Compton-road, N., the wife of Walter Cornelius, M.B. Lond., of twin daughters.

EUSTACE.—On Aug. 11th, at Weston-super-Mare, the wife of E. Eustace, M.D. Durh., of a son.

KNOX.—On Aug. 13th, at East Molesey, the wife of J. J. Knox, M.A., M.B. Cantab., of a daughter.

LIGHTFOOT.—On Aug. 21st, at St. Matthew's-terrace, Leyburn, R.S.O., Yorks, the wife of J. P. Lightfoot, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

ORMEROD.—On Aug. 17th, at 26, Devonshire-terrace, Hyde-park, W., the wife of Charles E. Ormerod, M.D., of a son.

POWELL.—On Aug. 14th, at Pirbright, Surrey, the wife of Surgeon-Captain S. Powell, M.B. Irel., Army Medical Staff, of a daughter.

SEQUEIRA.—On Aug. 16th, at Branksome, Bolingbroke-grove, Wandsworth-common, the wife of G. W. Sequeira, M.R.C.S. Eng., of Aldgate and Streatham, of a daughter.

WHITESTONE.—On Aug. 13th, at Hollingbourne, Kent, the wife of Augustus M. Whitestone, M.B. Dubl., of a son.

MARRIAGES.

EVANS—DIXON.—On Aug. 21st, at All Saints, Wribbenhall, Kidderminster, by the Rev. F. R. Evans, assisted by the Rev. H. Brierley and the Rev. A. Dickins, Oliver Conrad Penrhys Evans, M.D., of Kidderminster, youngest son of the late Colonel H. W. Evans, to Ethel Martha (Patty), daughter of Henry Dixon, Esq., J.P., of Wribbenhall. No cards.

FOTHERGILL—WOON.—On Aug. 15th, at St. Luke's, Chelsea, W. E. Fothergill, M.A., B.Sc., M.B., C.M. Edin., of Manchester, to Edith Alberta, third daughter of J. Dillon Woon, Esq.

HOLDEN—SIKES.—On Aug. 13th, at St. Peter's Church, Sudbury, John Sinclair Holden, M.D. Irel., of Sudbury, to Mary Agnes, eldest daughter of the late John Sikes, Esq., of Sudbury, Suffolk.

STANLEY—HACON.—On Aug. 14th, at the Parish Church of St. John-at-Hackney, Hubert Stanley, B.A., M.B. Camb., M.R.C.S., L.R.C.P., of Brabourne, Kent, to Emily Laura, youngest daughter of Edward Dennis Hacon, F.R.C.S., of Hackney.

YOUNG—WHITE RICKARD.—On Aug. 15th, at S. Columb Minor, Alfred H. Young, M.B., F.R.C.S., of the Owens College, Manchester, to Caroline Davy, daughter of the late R. White Rickard, of The Bays, Putney, and New Quay, Cornwall. No cards.

DEATHS.

BRISTOWE.—On Aug. 20th, at Dixton Vicarage, Monmouth, John Syer Bristowe, M.D., LL.D., F.R.S., F.R.C.P., Consulting Physician to St. Thomas's Hospital, of Old Burlington-street, aged 68.

CORNWALL.—On Aug. 12th, at Glastonbury, John Cornwall, M.R.C.S., in his 79th year.

THOMPSON.—On Aug. 8th, at Exeter, George Thompson, M.D., for nearly twenty years Medical Superintendent of the City and County Asylum, Stapleton, Bristol, aged 52.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

THE LATE SIR WILLIAM SAVORY, BART., F.R.S., &c.

MESSRS. BAILLIÈRE, TINDALL, AND COX have sent us a copy of a photogravure by the Swan Electric Engraving Co., from a photograph by Messrs. Barraud, which they have published of the late Sir William Savory. It is extremely well executed and an admirable portrait. The published price is half a guinea.

J. G., M.B., C.M.—Polyorchidism has frequently been diagnosed during life, but only one case (two testicles on one side) has been found on post-mortem examination, and in this case there was no microscopic verification of the nature of the supposed additional testicle. Orth's Handbook of Pathological Anatomy contains an account of this case.

Civis Colonix.—In answer to a question addressed to our readers last week two correspondents have recommended that communication should be opened with "Cheiron," 460, Oxford-street, W.

PENSIONS TO POOR-LAW MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Kindly inform me through your correspondence columns under what Act of Parliament a board of guardians may grant a retiring pension to a district medical officer, what proportion it may bear to the former salary, and whether a practitioner of fifty-five years of age and a continuous service of twenty-nine years would be eligible for it.

I am, Sirs, yours faithfully,

Aug. 7th, 1895. AN OLD SERVANT.

*** The Act of Parliament relating to superannuation is Vict 29, c. 31. The candidate for full superannuation—namely, two-thirds of his salary—must be sixty years of age and have spent forty years in the Poor-law service. Retirement after ten years' service entitles the Poor-law medical officer to ten-sixtieths of his salary, with an addition of one-sixtieth in respect to each additional year of service until a maximum of forty-sixtieths (or two thirds) be reached.—ED. L.

MEDICAL TITLES.

To the Editors of THE LANCET.

SIRS,—I am a mere licentiate of a College of Physicians and of a College of Surgeons. My doorplate bears the modest inscription Mr. ——, Surgeon. By a recent legal decision it is doubtful whether a licentiate of a College of Physicians has the right to call himself a physician. If this be true it is obvious that the same ruling must hold good in the case of a licentiate of a College of Surgeons. Must I erase the word "surgeon" from my plate, and if so what am I to substitute?

I am, Sirs, yours faithfully,

Aug. 18th, 1895. A MERE LICENTIATE.

THE UTILISATION OF THE LABOUR OF INMATES OF WORKHOUSES.

A CORRESPONDENT makes the following suggestion to us:—

"The utilisation of pauper labour without injury to the labour market appears to be a difficult problem. But there are some channels into which it could be turned with advantage to the working community. For example, a free day-nursery for the children of women who have to work would be a great boon to those poor mothers. There are thousands of widows, deserted wives, and other women who are compelled to support themselves by working out of their homes. They are often greatly handicapped by having very young children, for whose care some provision is, with difficulty, made out of the small wages they earn so hardly. The poor-houses might not be the fittest possible place, but they are better than the streets. No doubt a free nursery would be a gain not only to the mothers of the children but to the ratepayers. It would diminish sickness and accidents among the children, and it would enable women, who now have to take their children into the house, to live outside on their own earnings. But, even if it cost a little, money could not be better spent than in helping those who are willing to do their utmost to keep off the rates."

As is the case with so many kindly and philanthropic proposals there is as much to be said against this one as for it. The proper management of day-nurseries and *crèches* is an exceedingly difficult thing, and it is not very likely that many of the unfortunate derelict women our correspondent refers to would be able to bring to their task any of the qualities necessary for its proper performance, and the risk of the spread of disease would be increased. Again, a free day-nursery would have the objection of all entirely free things. The really hardworking and self-respecting would be inclined to look down upon an institution as open to their idle and dissolute sisters as to themselves, while the thoroughly worthless would make of the charity almost a permanent home for their children. The States of New York and Massachusetts have done more systematic work in this direction, we believe, than any of the countries in Europe and, if our correspondent is interested in the question he cannot do better than write to the New York Board of Charities or the Boston Children's Aid Society for information.

M.B., C.M.—Our correspondent asks our advice so that he may "know how to act should such things occur again." We hope they never may, for they disclose a lamentable state of affairs, but should they, it will be, in our opinion, his best, though his most disagreeable course to disregard his fellow-practitioner entirely—to treat him as one who has placed himself in a situation where the calls of etiquette cannot be worth listening to. His duty will be towards the patient, not his patient strictly, but a sufferer.

A QUESTION OF SALARY FOR MEDICAL OFFICERS OF HEALTH.

To the Editors of THE LANCET.

SIRS,—I am medical officer of health to a rural district council, and I have been requested to formulate a scale of fees for attendance and medicine at the isolation hospital, which is a mile and a half from my residence. The appointment most probably would be permanent, and the administration would devolve on me. The number of patients would vary, and at times there would not be any. What are the usual fees charged; or what could be considered reasonable fees?

I am, Sirs, yours faithfully,

Aug. 19th, 1895. INQUIRER.

*** No general rule can be laid down; but a fixed salary should be given for the general medical control and supervision of the establishment, and the amount of this must necessarily depend upon the distance of the hospital from the writer's residence, the nature of the resident hospital staff, the number of beds, and the frequency of the use of the hospital. To this should be added a fee for attendance on each patient who is not, at his or her own cost, attended by another medical practitioner. The amount of this will, of course, depend upon the fees generally paid in the locality, and the fee should be less when multiple hospital patients are seen at one visit than when journeys have to be paid to see a single hospital patient. But the scale of fees should be fixed in advance, the medical attendant taking the chance of the several attacks being lengthy and troublesome or of short duration and trivial.—ED. L.

Inquirer's communication is receiving attention.

FROZEN SECTIONS.

To the Editors of THE LANCET.

SIRS.—Can any of your readers inform me where I could get any information about frozen sections (say, of brain)? Also what is the best work on brain localisation? I am, Sirs, yours thankfully.

July 20th, 1895. COLONIAL.

*** Information as to the preparation of sections by freezing and other methods will be found in Colman's "Section Cutting and Staining," Goodall's "Microscopical Examination of the Human Brain," and similar works. "Functions of the Brain," by Dr. Ferrier, and the chapter on Localisation in Dr. Gowers' "Manual of Diseases of the Nervous System" contain very complete information upon the subject of brain localisation.—ED. L.

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"PROPER FACILITIES TO THE CORONER."

To the Editors of THE LANCET.

SIRS,—I beg to thank you for your prompt reply to my question in your last issue; but from the opinion expressed in the following part of your sentence I must say that I very strongly dissent, as I think most of my medical brethren will also. The coroner (non-medical, I may state) for this district—and probably the same might be said of many others—seems to be decidedly averse to calling professional witnesses if he can by any means avoid doing so. Though inquests have been held on several cases in which, to my mind, the medical evidence was a most important item, our coroner has always decided not to summon the medical man. Now, without, of course, wishing to outstep the province of the medical practitioner, I would simply point out that it is a gross injustice to any medical man that he should be requested to politely "give a coroner previously to the inquest every proper information within his power," and thus, of course, obviate the necessity of his being summoned. I grant that a great deal of explanation may possibly rest in the interpretation of your word "proper," your definition of which term I should like to see. But I know that, for my own part, I should consider myself "very ill-advised" indeed to give gratis to any person, coroner or any other, professional information for which I am honourably and legally entitled to receive one guinea. Personally, I am not at all anxious to appear in coroners' courts more frequently than is absolutely necessary, but I do think that it is most dishonouring and degrading to our profession that its members should be thus quietly and privately induced to give away freely and gratuitously, as if it were worth nothing, that which is of legally recognised high value, is their own exclusive right as members of the profession, and should be duly prized accordingly. It seems needless for me to add that we have, of course, no claim for remuneration unless under summons, and all other information given is, apparently, never expected to be charged for.

I am, Sirs, yours faithfully,

Aug. 19th, 1895. MEDICUS.

*** Our correspondent's inference is by no means warranted. He placed before us a general case, not a special one, and the information that the coroner in a particular district is a layman and averse to calling professional witnesses has nothing to do with his previous communication. Our reply was based on what we were asked, not on what we did not know. "Proper" information means, of course, general information to be given to a fellow citizen discharging a civic duty, not particular scientific information which the medical man would do well to withhold until upon his oath before the coroner. Such courtesy as we have suggested as advisable between a coroner and a medical man, whatever the profession or proclivities of the coroner, so far from obviating the necessity of summoning the medical man, would in many doubtful cases lead directly to that course. We are perfectly alive to the high value of medical evidence at inquests, as the records of our columns from year to year amply demonstrate. We must add that our correspondent is somewhat unjust as well as illogical in thus (thoughtlessly no doubt) suggesting that we would recommend the adoption of any course of action "dishonouring and degrading to our profession."—ED. L.

Subscriber.—The most correct method is to print the name as follows:—Mr. A—— B——, M.B., C.M. This should defy criticism.

W. S. must pass at least the two final examinations required for the Paris M.D. degree.

M. V.—We cannot insert the letter. We do not recommend individual practitioners.

"UNQUALIFIED PRACTICE."

To the Editors of THE LANCET.

SIRS,—There is one aspect of the question to which I have seen no reference yet in all the discussions. I require someone to do my dispensing, and to attend to anything while I am on my rounds, also to make the "harmless, necessary" perfunctory calls which many of my old poor patients so much enjoy. Of course I refer to the visits between the essential ones. For these purposes, I have always found a young gentleman fresh from the hospital, and reading for his diploma, fully competent. In deference, however, to the growing feeling against unqualified assistants, I am willing to pay the market price for a qualified man, though his time would hang rather heavily, as I prefer to do the visiting myself. In response to my advertisement, only three qualified men applied. One was in Ireland, two far off for a personal interview, and the others were considerably over forty years of age, and therefore, from my point of view, unsuitable. I am, Sirs, yours truly,

Aug. 16th, 1895. PRINCIPAL.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 17th appears a letter signed "Justitia," complaining of the great evil which exists amongst us of unqualified practice. Beneath it you add a note expressing your opinion that the General Medical Council is always ready to act in cases of covering and unqualified practice. May I be allowed to respectfully differ from you in this particular? Some distance from me is a branch surgery far away from the principal, carried on by a resident unqualified assistant, who signs death certificates right and left and otherwise acts as only one "sine diploma" dares. Some two years ago I wrote to the General Medical Council informing it of this flagrant misconduct, and gave three cases, with names and addresses, of persons who had been attended by the unqualified man and had died, the death certificates being signed by the principal, who in neither case had seen the patient, without the slightest trouble. The only satisfaction I got was a request to procure statutory declarations—by which, I suppose affidavits were meant—presumably at my own expense, and, far worse, that of courting publicity in the matter. Naturally this course was not quite to my mind; so I let the matter rest, and have heard nothing since, and the same kind of practice flourishes to-day. This is the "readiness to act" you so confidently put forward.—I am, Sirs, yours faithfully,

Aug. 20th, 1895. NON SEQUITUR.

*** The General Medical Council possesses no machinery for collecting evidence, and does not exist for such purposes. Our correspondent will find it ready to act when a case such as he details is brought forward properly substantiated. No tribunal can do more; for the Council is a disciplinary court, not a detective body.—ED. L.

RAILWAY TRANSPORT FOR INVALIDS.

To the Editors of THE LANCET.

SIRS,—A reward was offered a short time ago in a London daily for "the best and simplest method by which an invalid can be transported by rail so as to receive absolutely no jolting." The advertiser's signature was anonymous, and the offer emanated from a foreign address. Would any of your subscribers be kind enough to state anything they know about this offer or its result? If a satisfactory and winning method was obtained by this means from some competitor in England for use abroad, some of us at home would like to know of it, as some satisfactory and simple method has been for a long time much desired. I have been unable to gather anything concerning the result of the offer by other means, so I trust that some of your subscribers may help me.

I am, Sirs, yours truly,

Aug. 18th, 1895. RAILWAY.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 22nd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 16	30·22	S.W.	67	61	89	74	60	...	Overcast
,, 17	30·21	S.	65	60	116	79	60	...	Cloudy
,, 18	30·37	S.W.	72	64	119	80	59	...	Bright
,, 19	30·04	S.W.	66	60	121	84	59	...	Bright
,, 20	30·08	S.W.	67	62	111	78	62	...	Cloudy
,, 21	30·07	W.	65	62	120	82	60	...	Bright
,, 22	29·87	S.W.	71	67	85	73	61	0·03	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.)

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Toronto Mail, Birmingham Argus, North Wilts Herald, Birmingham Post, Ilfracombe Gazette, Eastern Morning News, Kilburn Post, Manchester Guardian, Dublin Evening Herald, Carlisle Express, Cambrian, Irish Times, Naval and Military Record, Newcastle Leader, Darlington Times, Putney News, Brighton Gazette, Salisbury Journal, Cheltenham Examiner, Midland Daily Telegraph, Leith Burghs, Pilot, Montrose Review, Brecknock Beacon, Le Courrier de la Presse, Tottenham and Edmonton Weekly Herald, Derby Daily Telegraph, Lincolnshire Chronicle, Torquay Directory, Cape Argus, Coventry Times, Inverness Courier, St. Bartholomew's Hospital Journal, Court Journal, Tunbridge Wells Advertiser, Falkirk Herald, Goole Times, Keighley Herald, Ayrshire Post, Staffordshire Chronicle, Morning Leader, &c., &c.*

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N.—Not a Collegiate.

O.—Owens College, Manchester, Dean of.

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V.—Mrs. M. Verran, Lond.

W.—Dr. J. J. Wallace, Norfolk; Mr. E. Williamson, Manchester; Miss Wickham, Lond.; West Ham Hospital, Secretary of.

Y.—York, Lond.

Letters, each with enclosure, are also acknowledged from—

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SAVORY & MOORE'S
BEST FOOD FOR INFANTS.

The attention of the Medical Profession is especially requested to the following characteristics of this old-established **SELF-DIGESTING** *Food, which has so thoroughly maintained its reputation for superiority during an experience of 30 years :—*

Ratio of Albuminoids to carbohydrates. The ratio of the albuminoids to the carbohydrates is the same as in human milk—viz., 1 to 6·4; the ratio in cow's milk being only 1 to 3·8.

Albuminoids easy of digestion, not predigested. The albuminoids are not predigested as in pancreatised foods, but are rendered easy of digestion, leaving (as in human milk) just sufficient work to strengthen and develop the immature digestive powers, instead of weakening and abrogating them by keeping them inactive. Sir WILLIAM ROBERTS' experiments in feeding kittens show that distinct failure of nutrition occurs when the milk is predigested (peptonised), and the same thing has been observed in feeding infants, probably owing, as THE LANCET points out, to atrophy of unemployed glands.

Healthy nature of evacuations. As a consequence of the foregoing the proper peristaltic action of the bowels is maintained, and the healthy nature of the evacuations of infants fed on this food is a satisfactory feature much and favourably commented on by Mothers and Nurses.

The curdling of Cow's milk prevented. When mixed with cow's milk it prevents the troublesome curdling in the stomach which takes place when cow's milk is given alone, and assimilates its composition to that of human milk.

Complete conversion of the starch. The active Malt Diastase present provides for the rapid and complete conversion of the starch at the time of mixing into the soluble assimilable products of maltose and dextrine. The point of the gelatinisation (thickening) of the Food—viz., 140° F.—is just that at which Malt Diastase is most active, and the conversion of the starch is consequently the work of a very few minutes only.

Retention of the Phosphates and Fat. The retention of the fat and of the phosphates of the wheat and malt, which are so essential to bone formation. These exist chiefly in the outer portions of the grain, the very parts which some manufacturers pride themselves upon so successfully rejecting.

Absence of Fermentable sugar. The absence of the fermentable sugar, which in the various malt extracts and milk foods so often gives rise to Diarrhœa and Flatulence.

Verdict of Jury as to inferiority of imitations. It is the *only* Infants' Malted Food which obtained a Gold Medal at the International Health Exhibition, the Jury being comprised of such authorities as Dr. ATTFIELD, F.R.S.; G. W. WIGNER, F.I.C., the then President of the Society of Public Analysts; Dr. JAMES BELL, F.R.S., the Head of the Government Laboratories; and other distinguished Medical and English and Foreign Experts. This affords significant indication of the value to be attached to the numerous imitations, which, whilst pirating the descriptive notices of the Food, utterly fail to approach its standard of excellence.

SAVORY & MOORE,
143, NEW BOND STREET, LONDON, W.

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REPORT OF THE ACADÉMIE DE MÉDECINE OF FRANCE.

Apollinaris

"THE QUEEN OF TABLE WATERS."

"The results of the recent investigations "in Paris and the Report of the Académie "de Médecine of France have placed "Apollinaris Water at the head of all the "waters examined for purity and freedom "from disease germs."

"ADMIRABLY ADAPTED TO THE WANTS OF INFANTS"
Sir Chas. A. Cameron M.D.

Neave's Food

FOR INFANTS. CHILDREN. INVALIDS & THE AGED.

"HIGHLY NUTRITIOUS."
Lancet.

LAURENT-PERRIER ET CIE.

COCA-TONIC CHAMPAGNE.

WINE GROWERS, BOUZY-REIMS.

FOLIA COCA

THE LANCET:—"This wine contains a wholesome and palatable proportion of the acid constituents of the grape, with the addition of a desirable proportion of Coca Leaf Extract."

BRITISH MEDICAL JOURNAL:—"'Coca-Tonic Champagne' has realised a very important and hitherto unfulfilled desideratum. It proves on examination to be a pure wine, FREE FROM SUGAR, and from any kind of loading."

Prof. R. FRESENIUS of Wiesbaden:—"Absolutely pure Champagne, sugar-free, with the addition of a small proportion of the coca principle."

It has proved itself a very valuable agent in coping with all cases of Nervous Disorders, such as Neurasthenia, Hysteria, and Insomnia, and has been favourably reported on as a restorative in convalescence after Typhoid, Influenza, &c.

It is more reliable than Sulphonal, Chloral, Bromide, &c.

Sold by all Wine Merchants and Chemists at 2/- and 3/9 per bottle. Samples and descriptive pamphlet free to practising Members of the Medical Profession on application to HERTZ & COLLINGWOOD, 4, Sussex-pl., Leadenhall-st., London, E.C.

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Clinical Lectures
ON
DISEASES OF THE EYE.

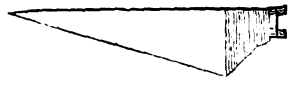
By CHARLES BELL TAYLOR, M.D.,
F.R.C.S. EDIN.,
HON. SURGEON TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY.

LECTURE XI.[1]

THE ACCIDENTS OF EXTRACTION.

MR. PRESIDENT AND GENTLEMEN,—When Von Moltke was asked by what criterion he would judge of the capacity of a general in warfare he said, "He must be tried by the touchstone of disaster"; and I think you will agree with me that it is so in surgery—that it is the accidents, the unforeseen casualties, the sinister contingencies, which tax our resources, which test our skill, which tend to perfect our manipulations, and which enable us at last to triumph over difficulties and dangers which, but for such special practice, must have proved insuperable. Let us see now what are the accidents, the difficulties, and the dangers most likely to beset us during and after the process of cataract extraction; what may be done towards their prevention; and how best to deal with them when, in spite of our care, they threaten destruction to our patients. It is now upwards of two centuries since Wenzel endeavoured to improve upon the ancient method of reclination and depression by opening the cornea with scissors and actually removing the lens from the eye; and it is nearly 150 years since Daviel presented his celebrated memoir on "Extraction à lambeau" to the French Academy of Medicine. Daviel was followed by Beer, who invented the knife (Fig. 1)

FIG. 1.

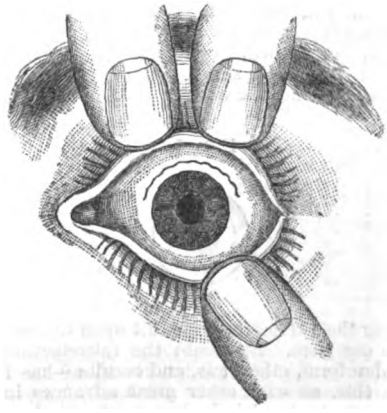


which is known by his name, and both these eminent surgeons made a flap of one-half or more of the cornea, delivering the lens through the natural pupil—an operation which, when successful, certainly left nothing to be desired; but the drawbacks, the accidents, the difficulties and dangers were so numerous, so ever-present, and so frequently fatal, that Beer is reported to have said that he "spoilt a hatfull of eyes before he could save one."[2] In fact, it was exceedingly difficult to make the incision when seated on a chair, facing a sensitive patient who was also seated—the position assumed by Daviel and his successors—or in any way to keep the flap in position; it was constantly falling into folds and frequently became retracted or even reflected upon itself. The vitreous, too, was prone to protrude or to escape in quantity sometimes, followed by hæmorrhage, so that I have more than once heard in the midst of an operation Dupuytren's historic exclamation, "L'œil est perdu." Moreover, even when the extraction was satisfactorily accomplished accidents were frequent. The iris was very apt to prolapse, the flap to become infiltrated in whole or in part, or the eyeball to suppurate; even when matters were not so bad as this there was, in a large proportion of cases, much pain, constitutional irritation, and protracted recovery, so that many blind persons refused operation altogether, and operators were very chary of interfering with patients who had the least sight remaining in either eye, so that if the worst did come to the worst they were in a position to exclaim, with the Thane of Cawdor, "Thou canst not say I did it." All these accidents of extraction were only to be successfully counteracted or avoided by great skill, practice, and foresight on the part of the surgeon, and even the best operators, as the late Mr. Critchett has remarked, "if they would only deal quite honestly with themselves, would have to record cases that, in spite of all their care and all their skill, had given them such an amount of anxiety as to neutralise, and more than neutralise, the satisfaction they derived from their successful cases." Such was the *status quo* with regard to the capital operation of ophthalmic surgery when Waldau, the late Von Graefe's assistant, having noticed that iridectomies were hardly ever followed by any ill consequences, suddenly proposed to excise a portion of iris through a small incision, and to scoop out cataracts with a spoon. Here was a glimpse of heaven! "*Hic est quem quæris.*" No flap to turn down; no iris to prolapse; no wound that could be forced open by post-chloroform sickness, or likely to be damaged by the indocility or stupidity of the patient. But, alas, "Man never is, but always to be, blessed." It was soon discovered that Waldau's procedure was no more free from distressing flaws than any other cataract operation; it was found, for instance, that it was quite inapplicable in certain forms of hard senile cataract; that it was often impossible to insinuate Waldau's scoop between the cataractous lens and the hyaloid fossa without rupturing the hyaloid membrane and setting the vitreous free; that the lens was apt to be dislocated by the spoon, and pushed down into the vitreous chamber, where it had in whole or in part (when possible) to be fished out, to the manifest damage of the eye; that a certain amount of bruising and stretching was inevitable; and that persistent iritis, with the formation of dense secondary cataract, were among the consequences of the traumatism caused by the introduction of such a formidable weapon as Waldau's spoon, with its steep edges, into the interior of the eye. Hence, although the operation survived for a time in this country, specially (with modifications) in the practice of Messrs. Bowman and Critchett, it speedily fell into disuse on the Continent, and ultimately

FIG. 2.



FIG. 3.



only bore fruit in the hands of Von Graefe, who, having visited this country in order to see Mr. Critchett's modification of Waldau's traction instrument, returned to Berlin and forthwith devised his celebrated method of linear extraction. Von Graefe's aim was to dispense with the spoon by enlarging Waldau's incision, and to extract the lens without making a flap, and in order to attain this end he invented a knife (Fig. 2); placed his incision much further back than Waldau's (Fig. 3); excised the iris and delivered the lens behind the artificial pupil. The advantages claimed for this operation were: (1) that the sclerotic, which was

[1] Delivered before the Nottingham Medico-Chirurgical Society on Jan. 2nd, 1895. Lectures I. to X. were published in THE LANCET of Sept. 5th, 1885; May 8th, June 26th, and Sept. 4th, 1886; April 16th and 23rd, 1887; Sept. 10th and Dec. 24th, 1887; Dec. 15th and 22nd, 1888; Nov. 8th, 1890; July 1st, 1893; and Aug. 18th, 1894, respectively.

[2] "If we take into consideration the great and internal difficulties of the operation itself as he (Beer) performed it, we shall come to the conclusion that the statement is not very far from the truth."—"Practical Remarks on the Treatment of Cataract," by the late George Critchett.

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alone incised, was much less likely to suppurate than the cornea; (2) that the elasticity of the tissues in this situation, and the linear character of the wound, rendered separation of its edges almost impossible; and (3) it was contended that the conjunctival flap or overlay would prove a potent safeguard against microbial infection. But the very large iridectomy necessary with this form of incision was a palpable objection. The close approximation of the edges of the wound impeded the exit of the lens, hæmorrhage often complicated the extraction, the vitreous often escaped, and iritis, iridocyclitis, and sympathetic ophthalmia were more frequent with this than with almost any other cataract operation; hence it was speedily evident that Graefe's operation pure and simple could never be anything but a *pis aller* in certain exceptional cases.[3] Nevertheless, it survived in name, but in name only, and in the hands of various operators speedily resolved itself into a mere enlargement of Waldau's incision at each extremity of the wound, just sufficient to enable the surgeon, while retaining the iridectomy, to dispense with the spoon; and this operation, which I adopted before Von Graefe's suggestion was heard of, is the operation *par excellence* with most ophthalmic surgeons to-day. The advantages claimed for it are—that it obviates bruising of the iris, prevents prolapse of the iris, facilitates the exit of the lens, forms a means of escape for the aqueous humour, which in gushing out might otherwise force the iris between the lips of the wound, and reduces the necessity for secondary operations to a minimum. But this operation also has its special accidents, its difficulties, its drawbacks, and its dangers. For instance, the extent of the wounded surface is doubled by the excision of the iris; the pain of the iridectomy is apt to provoke spasm and dangerous resistance on the part of the patient; the iris is always more or less trapped at the extremities of the wound; the exposure of the uveal track, bleeding and prolapse of the capsule between the lips of the incision—all of which are likely to happen—are to be deprecated; while the excision of the iris is fatal to the perfection of the eye.

How are we to prevent or avoid these accidents, these complications, these drawbacks to a method of extraction which is regarded by so many ophthalmic surgeons as the premier operation for cataract to-day? Well, they are to be avoided, and with the greatest ease, by simply enlarging Waldau's incision a little further, and dispensing, not only with the spoon, *but also with the iridectomy*. Now, Gentlemen, that is the operation which I venture to assure you will take the place of all others as the operation *par excellence* in all ordinary cases of cataract. Its supreme excellence is its simplicity, and in order that you may appreciate that excellence I propose to perform the operation in your presence; to show you in the persons of numerous patients who have undergone *double* extraction by this method what splendid results may be attained by it; and lastly to point out to you how the accidents, the difficulties, and the dangers sometimes attendant upon it may be counteracted, controlled, or avoided. The operation, as you see, is extremely simple: it is merely a short flap upwards (Fig. 4), and the wonder is that our predecessors

FIG. 4.



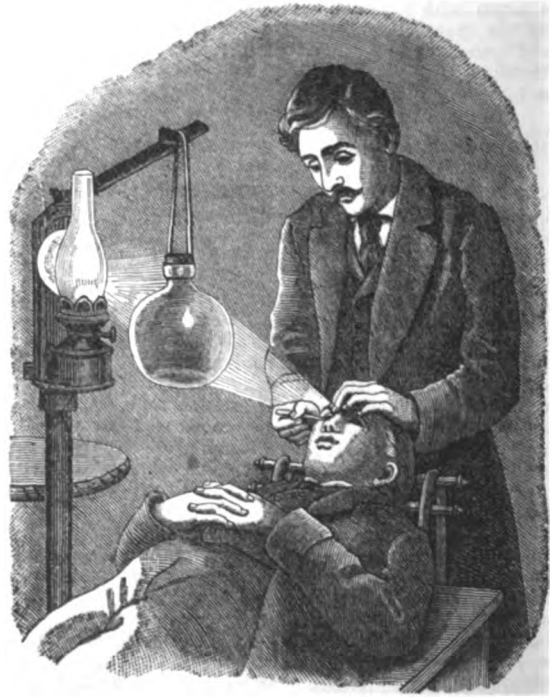
when making the old flap had not hit upon this modification long before our time. No doubt the introduction of anæsthetics—chloroform, ether, gas, and cocaine—has had much to do with this, as with other great advances in surgery. You must be sure, when about it, to make the incision large enough, and to locate it in the corneo-sclerotic junction; any invasion of the fibrous tissue of the sclerotic entails the disadvantages of Graefe's operation, and encroachment upon the cornea is to be deprecated, as wounds in this situation are apt to spoil the normal curve, do not heal so readily, and are frequently the cause of annoying anterior synechiæ.[4] When the wound is made with precision in the position I have indicated, the flap fits like a watch glass, does not override the stump, as is otherwise so frequently the case,[5] and normal conditions are so completely restored, even immediately on the completion of the operation, that fluids when dropped into the conjunctival sac do not penetrate into the anterior chamber except by the usual process of endosmosis. My knife will be found the best for making the incision, and the facility with which the right hand may be used for the left eye, with this modification of Graefe's or Linhart's pattern, is undoubtedly a great advantage (Fig. 5).

FIG. 5.



I always use a lamp for the purpose of illumination, and the facility with which instruments and other appliances may be in a moment sterilised by the hot air flowing from the chimney is not its least advantage (Fig. 6). Unlike many operators, I prefer to incise the capsule with the flame-shaped cystotome rather than with the knife, as it passes across the anterior chamber, and, as a rule, to confine the incision to the periphery of the capsule, on a level with the equator of the lens. When the capsule is incised slight pressure will cause the lens to revolve upon its axis and to present at the pupil, which it slowly dilates, prior to emerging, followed by a mass of cortex. The iris may then be replaced by gentle massage through the

FIG. 6.



closed lids, and the *status quo* maintained by the imposition of a borated pad. If the cataract does not stir on pressure after completion of the capsulotomy

[3] For instance, when one eye has been lost after extraction from malnutrition of the cornea in an old, thin subject, with white hair, hard arteries, and wrinkled, silky skin, the other has a better chance of salvation with a linear incision well back and confined to the fibrous tissue of the sclerotic.

[4] "At the time when I operated on all kinds of cataract without iridectomy I believed at first that prolapse of the iris could be prevented by making a corneal incision like Liebreich's. This was an error from which I promptly recovered, thereafter carrying the entire wound to the vicinity of the edge of the cornea. Prolapse and impaction of the iris are less frequent when this is done, without counting other advantages of the peripheral corneal incision."—Landolt: Cataract Operation in Our Day, p. 158.—"The Transactions of the American Medical Association, 1887, furnish an argument in favour of the flap operation, specially against turning the edge of the knife forward in completing the incision."—Ophthalmic Record, July, 1894.

[5] See Becker and Norris's Atlas of the Pathological Anatomy of the Eye.

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the opening in the capsule is insufficient, the lens larger than supposed, the iris too rigid or adherent, or the corneal wound too small, or the crystalline itself so shrunken as to be uninfluenced by any pressure which may safely be brought to bear, in which case the capsule must be re-incised, the corneal wound enlarged, iridectomy performed, or the cataract removed with a scoop. The results to be obtained by this operation are simply perfect. I have been in the habit of performing it for years, and as with a large practice one sometimes fails to recognise former patients, I find it now and then exceedingly difficult to say whether any operation has been performed or not. Let me illustrate my meaning. A short time ago a farm labourer, aged, gaunt, and weather-beaten, applied to me for treatment on account of catarrhal conjunctivitis affecting both eyes. He had managed to get wet through on his way to the infirmary, did not seem to mind it, and said he had been much exposed to wind and rain both night and day during the then recent lambing season. I satisfied myself that there was no iritis or other deep-seated mischief; treated him accordingly as an out-patient, and he was speedily discharged cured. Later he reappeared in order to solicit my attention to a friend who, he said, was suffering from short sight. This man I found was the subject of congenital cataract, and suggested that he should submit to operation. "Aye, you do," exclaimed patient No. 1; "I have, and it don't hurt a bit." "No, my friend," I said, "you only had inflammation from cold; that has nothing to do with cataract." "Oh, but I had, though," he replied; "you took cataracts off both my eyes six years ago; don't you remember? I was blind; my daughter used to lead me to your surgery." I said, "Where are your spectacles?" "Oh," he replied, "I never use them now without I want to read a bit at night." And this was true; I had operated on him—both eyes at one sitting—years ago, and although I examined his eyes when prescribing for the catarrhal affection I failed to see anything to remind me of what had been done.

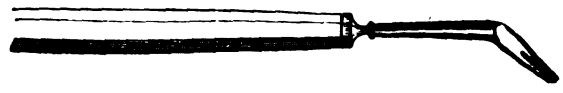
Now, Gentlemen, that is the perfection of art—to conceal art—and I think you will agree with me that while such results are to be attained modern science will never be satisfied with anything less. The instance I have cited is not a peculiar, special, or picked case; I shall show you to-night many cases of double extraction with perfect corneæ and central and movable pupils, and they could be multiplied by the score. Of course, the operation is, as a rule, completed without misadventure, but you must not suppose that this method of extraction, any more than any other surgical procedure, is free from its peculiar accidents, difficulties, and drawbacks. For instance, the lens—as you are doubtless aware—in certain cataractous subjects is apt to become considerably swollen during the process of opacification,[6] and this increase of bulk, as you can readily understand, causes it to encroach upon the anterior chamber, displaces the iris forwards, and renders it exceedingly difficult to incise the cornea in the way I have indicated without wounding that membrane. You may complete the puncture and counter-puncture, but the moment you commence to cut upwards the aqueous escapes, the iris folds over the edge of the blade, and it seems as though you must inevitably either slice off a piece and so spoil the result, or withdraw the knife and postpone the operation. It was this difficulty and danger which led Beer to the adoption of his wedge-shaped keratome, a knife he was enabled to push steadily onwards without any to-and-fro movement, and so retain the aqueous; and it is the same difficulty and danger which is now leading so many ophthalmic surgeons to abandon the last remnant of Graefe's operation—the narrow knife—and resort to Beer's or some imitation of it.[7] I have used Beer's knife and similarly shaped instruments of my own devising, some of which have been adopted by my ophthalmic friends (Fig. 7); but there is one great objection to them all: you are compelled with these wedge-shaped knives to confine the incision to the cornea, and are not able with them to make a wound anywhere with extreme precision. I therefore advise you to adhere to the narrow knife modified according to my pattern, and when the iris folds over the edge of the blade to cut round with the hilt in the corneo-sclerotic junction. In this way any unintentional wounding of that membrane may be avoided, an accident which may be again forestalled by making a shallow incision close to the upper margin of the pupil, and enlarging it after completion of the section at either extremity with scissors; or

FIG. 7.



the operation may be completed with scissors alone, or the section finished with my secondary knife (Fig. 8). The wound with scissors heals readily enough, but you are compelled with them to encroach more upon the cornea than I think either necessary or desirable. Of course, retention of the aqueous is a great safeguard against the folding over of the iris upon the edge of the blade; but, inasmuch as with the narrow knife any evil effects may be readily counteracted, I cannot consider—as some writers do—

FIG. 8.



its premature escape as a formidable accident. It is different, however, when the tissues are so altered that the vitreous in an equally fluid condition drains away, and is followed by complete collapse of the eyeball. When the tissues are in this diseased condition, operative interference, unless conducted with great care, is apt to be followed by disastrous consequences. Here is a case in point. Some time ago I was asked to operate upon a man close on fifty years of age who had been all his life nearly blind from congenital cataract. The right eye had been operated on elsewhere and was, unfortunately, completely lost; nevertheless, as the left seemed favourable for operation I proceeded to extract *secundum artem*. No sooner, however, had I completed the counter puncture than the eyeball visibly shrunk and collapsed, falling into deep wrinkles and receding within the orbit. I immediately withdrew the knife and closed the eye with a borated pad, telling the patient the operation was over. Notwithstanding the slight and incomplete wound inflicted the most intense reaction followed; the eyelid became so swollen that I was obliged to divide the external canthus, to clip away folds of chemosed conjunctiva, to leech, freeze, and paint with nitrate of silver in order to stave off death of tissue from excessive inflammation. The responsibility in such cases is tremendous, and although "de l'audace" is sometimes a good motto, "cavendo tutus" with such patients is far better. I can recall three or four similar cases, and although you may say that I ought to have known that the vitreous was fluid before I commenced the operation I can assure you that it is impossible in many cases to diagnose this condition beforehand. A tremulous iris is, of course, an indication; but one may have a fluid vitreous without a tremulous iris and a tremulous iris without a fluid vitreous. Moreover, a tremulous iris has been observed when only a portion of the vitreous—that within the area of the retina—has been fluid The collapsed eyeball fallen back in the orbit, shrunk, wrinkled, and not much larger sometimes than the end of the finger, has a ghastly appearance; but I have seen the tissues of both eyes completely collapsed without any displacement of their relative positions, detached retina, or separation of choroid from the sclerotic. I have known the whole contents of the vitreous chamber to escape and twelve hours later the chamber to be refilled with fluid, and ultimately good vision restored. Escape of the vitreous, when it is of normal consistence or firmer than natural, entails separation of the tunics of the eyeball, is a much more serious accident, and is an indication of increased tension, which should have been ascertained beforehand and dealt with by iridectomy some time before extraction, or by myotics, or both. In these cases the moment the incision is completed the iris bulges and the cataract bursts through the suspensory ligament, or when the capsule is opened the vitreous gushes out, the patient

[6] This swollen condition sometimes precedes the formation of cataract, and we find patients greatly advanced in years suddenly, to the astonishment of everybody, regain the power of reading without spectacles, a phenomenon which may be also due to weakening of the suspensory ligament and dislocation of the lens forwards.

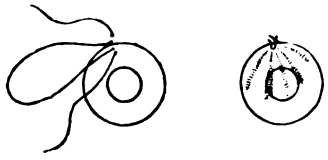
[7] Dr. Graddy, for instance, in his address before the Nashville Academy of Medicine, said: "I think it is only a question of a short time whether we shall all return to the broad knife and classic flap operation slightly modified."

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groans with pain referred to the head and caused by displacement of the ciliary nerves, the vitreous is followed by blood, attempts to retain the tissues and fluids *in situ* by pressure are frustrated by vomiting, straining, or uncontrollable agitation on the part of the patient, the retina and choroid become detached from the sclerotic, and we are sometimes compelled to perform excision of the eyeball at once.

Vitreous may escape with the cataract, or immediately after its removal, owing to straining of the patient—I have seen the major portion of the contents of the eyeball deliberately squeezed out in this way; nevertheless, considerable escape of vitreous may occur and yet all go well. I have known this accident to happen, much to my chagrin, in one eye when both were operated on at one sitting, and the apparently damaged organ ultimately proved the better of the two. Of course, all pressure must be at once removed if this accident occurs, and the lens, if necessary, dipped out with a spoon. Partial dislocation of the lens, which sometimes occurs from undue pressure with a too small wound, may be righted by slight manipulation upon the closed lids and temporary occlusion of the eye. In this way escape of vitreous with possibly detached retina and formation of opacities may be avoided. The introduction of the knife with the cutting edge wrongly placed has been dwelt upon as one of the accidents incidental to this operation, but with an extremely narrow blade the event is of no importance, as it may be readily turned in any desired direction. With regard to accidents *after* extraction, prolapse of the iris is the most frequent and most important of these; it occurs in from 5 to 10 per cent. of all cases and may give rise to considerable irritation or even inflammation. This accident may be prevented by suturing the cornea—a suggestion first made by Dr. Williams of Boston, U.S., adopted by Suarez de Mendoza of Angers, and at present practised by Dr. Kalt of Paris. I have tried the suture, but, according to my experience, it is scarcely ever required. It complicates and prolongs the operation, is in itself a source of irritation, and is not always quite successful in preventing prolapse. Dr. Kalt passes the thread before making the incision, drawing out a loop so as to avoid its severance during the operation.[8] (Fig. 9.)

FIG. 9.



I think the best method of dealing with prolapse, when it does occur, is to leave it alone; according to my experience it disappears spontaneously and ultimately entails no greater defect than would have been occasioned by an iridectomy in the same situation. If, however, the prolapse should be large, and the pupil consequently drawn inconveniently upwards, an iridectomy downwards will generally suffice to restore useful vision. In ordinary cases, and when the patient appears to be fairly healthy, the exigencies of practice often compel me to operate, *séance tenante*, upon the day I see the patient for the first time, and often at my private surgery, the patient walking afterwards to the Infirmary, a distance of five hundred yards; so that my results have been somewhat severely tested. Any uncomfortable feeling after operation, as a rule, passes away, and the patients return home within a week.

If there should be pain, however, and it should last three or four hours, it is well—"Venienti occurite morbo"—to combat it at once by the injection of one-eighth of a grain of morphia under the skin of the corresponding temple. Dr. Smith of Detroit injects one-quarter of a grain as a routine practice, in order, he says, to prevent prolapse by securing contraction of the pupil. I should, however, be afraid from my experience of morphia injections to use so large a dose without tentative experiments upon the patient beforehand. Any continued pain must be looked upon as a formidable symptom and must be met at once with repeated morphia injections, ice or hot fomentations, leeches, or bleeding from the arm; the latter was Graefe's practice, and it is believed that in this way commencing suppuration may be arrested. When one has the opportunity of observing the patient some time before operating it is a good plan to try the effect of a bandage. If this sets up conjunctivitis—and in old persons it is apt to do so—it is well to treat the eye for a short time before doing anything, and to wait until the conjunctiva presents the white, glistening appearance of health before any operative interference. Obstructions in the lacrymal and nasal ducts should also be dealt with, otherwise the wound may be infected by the discharge. In spite of improved methods of procedure and thorough asepsis, and so far as possible antisepsis, and, indeed, without any special constitutional defect, suppuration now and then occurs.[9] According to Mr. Treacher Collins this is more common in old people than in young; but the tendency is greater, so he says, between the sixtieth and seventieth years than between the seventieth and eightieth years, although it is greater between the eightieth and ninetieth years than between the sixtieth and seventieth years. I have operated upon two patients over ninety years who did well, and upon a great number of patients aged eighty and upwards. Many of these have very white hair, thin skins, and rigid arteries, and one must not be surprised if the cornea collapses the moment the lens escapes without any loss of vitreous, or if it falls inwards and assumes a concave form, exactly like a tiny bird's-nest. If the wound, however, is made in the corneo-sclerotic junction, perpendicular to the antero-posterior axis of the eyeball, the flap is maintained accurately *in situ*, and no ill consequences need be feared.

Many persons suppose that, if aged persons are operated upon, the restored sight is likely to be imperfect or not to last; that, however, is not my experience, as hundreds of patients can testify. Seventeen years ago I operated upon the late *doyen* of the medical profession whose recent death has caused much comment in the medical press. I operated upon him in his eightieth year, and at ninety-seven he could see well enough to read and write as well as anyone, and with his own hand indited an essay on Longevity in the Fens. Sight so perfect at such an advanced age naturally was the subject of remark, though the commentators were evidently not aware of the fact that he had been operated on for cataract seventeen years ago. If conjunctivitis should come on after the operation it should be treated by leeches, astringents, and nitrate of silver. None of these, so far as my experience goes, interferes with the healing of the wound, though I am aware—I had it from his own lips—that Graefe had a great dread of leeches when applied to the temple within three or four days of the operation. Delirium sometimes comes on after extraction; it was not infrequent when atropine was freely used after removal of the lens. I have seen a patient so excited by the misuse of atropine that he removed the pads from his eyes and got under the bed, setting his attendants at defiance and dictating terms of surrender from this coign of vantage. No small proportion of the accidents which occur after extraction are attributable to constitutional dyscrasia on the part of the patient. I have known the healing of the wound delayed for months by an obstinate skin affection, and a similar effect to result from imprudence in an alcoholic; I have known diabetes entail suppuration after an ideally perfect operation accompanied by the most rigid asepsis and antisepsis. Gout, syphilis, and rheumatism may prove disturbing elements and need attention, while the danger of auto-inoculation from intestinal sepsis must be carefully guarded against. Putrefaction may be prevented by antiseptics, just as they will preserve meat; but antiseptics are not omnipotent, and we must never forget that healthy tissue is fatal to the microbes on which infection depends; a high state of health, too, will prevent excessive reaction or uncontrollable inflammation. The authorities of the prize-ring are well aware that by augmenting the general health they reduce the risk of sudden incapacity from injury almost to nothing. "Hit him hard, he won't swell," perhaps expresses in fewest words what I wish to convey. The poet Armstrong tells us to—

> "Couch cataracts on a day so fair
> That not a cloud disturbs the air";

but I may say that it is not wise to select what is termed "bad keeping weather" for operations.

> "When meat won't keep sweet,
> Then don't opereete."

[8] The woodcuts are from his paper on the subject, translated by Knapp and published in his Archives.

[9] Panas says that he has got rid of suppuration by injecting the anterior chamber of the eye with saturated solution of boracic acid. "A partir de cette époque nos opérés ont été à l'abri, non seulement de la panophthalmie, mais la réaction post-opératoire est devenue presque nulle."—Traité des Maladies des Yeux, tome 1, p. 580.

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You will perceive that I am no advocate for the indiscriminate adoption of iridectomy in all cases of extraction, but I must again warn you that you will commit a grave error if you neglect this precaution in all cases of glaucomatous tension. Excision of the iris may also be practised some weeks before extraction—as has been recently done by Landolt in the case of Jules Simon—in persons of great age, very feeble health, or when the chances of success are small or the interests at stake very large. In order to secure success in any operation we must foresee what may happen and vary our procedure accordingly. The First Napoleon used to say, "Si je parais prêt à tout, à répondre à tout, à faire face à tout, c'est parce que, avant de rien entreprendre, j'ai longtemps médité, j'ai prévu ce qui pourrait arriver." "He foresaw what might happen." Let us take a leaf out of the book of the greatest military commander and most renowned despot of the century, and if we may not hope for rank and titles such as are freely bestowed upon our friends of the Camp, the Bar, or the Senate, let us console ourselves with the reflection that our lives are spent in endeavouring to do good, in prolonging life, in diminishing suffering, and last, but not least, in restoring sight to our fellows.

Nottingham.

NOTES ON SIX CASES OF CENTRAL RESPIRATORY PARALYSIS.

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IN the following somewhat remarkable series of cases, all of them treated at the Prince Alfred Hospital, Sydney, death was due to a common cause—viz., inability of the respiratory centre to perform its functions, due in all probability to increase of intra-cranial pressure. Besides this common feature several of the cases developed clinical phenomena in themselves of considerable intrinsic interest. We shall give in each case a brief clinical sketch of the symptoms and an epitome of the pathological conditions found after death. These will be followed by brief remarks upon interesting or remarkable symptoms shown by individual cases; and, finally, we shall deal with those features common to them all.

CASE 1. *Interventricular hæmorrhage.*—The patient, a female aged fifty-four years, was admitted in a dazed condition, could answer questions but very slowly, and complained of pain in the occipital region. No paralysis or paresis was present. The temperature was normal. The heart and lungs were clear. Later in the day her condition improved, but about seven hours after admission she was suddenly seized with respiratory embarrassment, followed a few minutes later by total cessation of respiratory effort. At this time the heart was beating strongly and regularly. On practising artificial respiration the air way was found to be quite clear. As no effort at respiration was made artificial respiration was abandoned, and the heart ceased beating in about ten minutes.

Necropsy.—Blood-clot was found in the subdural space in the cerebellar fossa, continuous with a clot which distended the fourth ventricle and extended through the iter into the third ventricle.

CASE 2. *Basal meningitis; chronic internal hydrocephalus.*—The patient, a male aged twenty-seven years, complained of occipital and cervical pain shooting down to the shoulders and aggravated by moving the head. Five years previously he was said to have had a "sunstroke" and to have been "unconscious" for three weeks. Some months previously to admission he had repeated attacks of vomiting. During the last three months pain in the head and neck had appeared. The temperature on admission was 102° F., but fell to normal next day. The heart and lungs were normal, as was also the urinary system. There was tenderness as well as pain in the occipital region and part of the neck below it. There was no impairment of sensation and no paresis. The plantar reflexes were well marked, the patellar reflexes were exaggerated, and there was no ankle-clonus. Ten days after admission the patient became cyanosed and respiration ceased. After entire cessation both of costal and diaphragmatic efforts automatic movements of the lower jaw and alæ nasi persisted, and attempts at swallowing were made. Finally these movements also ceased. The pupils were regular, equal, and contracted, and the conjunctival reflex was present. As the heart continued to beat strongly it was deemed advisable to perform artificial respiration. The shoulders and neck were elevated, the head was thrown back, the tongue was drawn forward, and artificial respiration commenced. This was continued for an hour, strychnine and ether being meanwhile administered hypodermically. At the end of the hour slight attempts at breathing were made; these were continued and the patient recovered. Six days later he had a similar attack and recovered after artificial respiration. After several more such experiences he finally died eight days after the first attack.

Necropsy.—There were signs of both old and recent cervical and basal meningitis. The foramen of Magendie was occluded. There was hydrops of the fourth ventricle, iter, third ventricle, and both lateral ventricles.

CASE 3. *Cerebral hydatids.*—The patient, a male aged nineteen, had been operated on about three years before his present admission and a hydatid pressing on the motor area removed (Mr. Clubbe's case). Since leaving hospital he had enjoyed fairly good health, though being quite blind from optic atrophy following neuritis. He was readmitted with paralysis of the right arm of gradual onset. There was no vomiting. It was proposed to again open the skull, but on the morning of the projected operation his breathing suddenly became stertorous and finally stopped. Artificial respiration being carried on, his heart continued to beat for three-quarters of an hour.

Necropsy.—Four hydatid cysts were found at the posterior part of the left cerebral hemisphere. One was as large as an orange, the second about the size of a goose's egg, the third the size of a hen's egg, and the fourth had collapsed. The brain substance around was somewhat condensed. The largest cyst was bulging into the cavity of the left lateral ventricle.

CASE 4. *Malignant disease at the base of the skull.*—The patient, a female aged twenty-four, had had intermittent pains in the head for three years. The pain was described as commencing at the occiput and "shooting forward out of the right eye." Five months previously the sight in the right eye became so bad that she could not see to read on closing the left eye, and soon after this she noticed a difficulty in breathing through the right nostril. The nose was examined by a surgeon, who observed a mass at the back of the right nostril which he took to be a polypus and removed. Three weeks after the operation she had severe hæmorrhage, and this recurred some weeks later. Shortly after this she had another hæmorrhage, on account of which she was admitted to Prince Alfred Hospital. On admission at 2 P.M. the patient was found to be very anæmic; her pulse was rapid, but not very weak. She was very restless, throwing her arms about a good deal, and complained of thirst. The naso-pharynx was plugged, and a pint of normal saline solution was administered per rectum. At 10·30 P.M. the patient was very restless; the bleeding had ceased and the pulse had improved. She was given another saline enema, and also one-fifth of a grain of morphia hypodermically. At 12 midnight the patient's tongue fell back into the pharynx and she began to choke. On pulling forward the tongue and lowering the head she began to breathe again, but remained quite comatose and had no conjunctival reflex. The breathing, which was slow and stertorous, gradually became slower and finally ceased at 12.45. As the pulse was then good, artificial respiration was commenced and continued for two hours. For an hour and three-quarters the pulse continued fairly good and then gradually failed.

Necropsy.—There was a soft reddish tumour at the base of the skull pressing on the right temporo-sphenoidal lobe and displacing it to the extent of a space about as large as a hen's egg. The right crus was much flattened by pressure of the tumour. The latter had invaded and destroyed the sphenoidal and ethmoidal air cells on the right side and had invaded the upper part of the right nostril. The right side of the Gasserian ganglion and the optic nerve were involved in the growth.

CASE 5. *Basal meningitis, chronic internal hydrocephalus, syphilitic arteritis, and gumma of frontal lobe.*—The patient, a male aged thirty-seven years, had been ailing for two or three months with first giddiness and then headache. The eyesight had been gradually failing, so that he could not see to read. There was no numbness or anæsthesia. The patellar

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reflexes were normal. The pupils reacted to light and accommodation. The tongue was dirty. There were diarrhœa and anorexia, but no vomiting. There was a slight history of alcohol and of syphilis contracted six years previously. About ten days after admission his pupils were observed to be unequal. A further examination of his eyes revealed the following facts. The pupils were unequal, the left circular diameter being 2 mm. and the right, which was vertically oval, about 4 × 3 mm. Both contracted well to near fixation, but were irresponsive to light. Vision of the right eye was = $\frac{6}{12}$, and that of the left = $\frac{6}{6}$. There was slight double optic neuritis. Three weeks after admission it was noticed that the patient's right arm was paretic. From this time onwards his condition went steadily from bad to worse, in spite of forty-five grains of iodide of potassium administered daily. There was marked mental deterioration—first, great emotionalism, and then increasing stupidity. Six weeks after admission his state was as follows. He had scarcely any intelligence and passed both urine and fæces involuntarily. There were paresis of the muscles of the right side of the face, including the orbicularis palpebrarum, marked exaggeration of both patellar reflexes, with patellar clonus and ankle-clonus on the right side. About seven weeks after his admission his respiration suddenly became slower and stopped. As his pulse was still good, artificial respiration was continued for about an hour and a half. Several times the artificial respiration was stopped until the radial pulse became almost imperceptible, then, on recommencing the respiration, the pulse regained its former strength. As after an hour and a half the patient made no attempt to breathe the efforts were abandoned.

Necropsy.—Endarteritis of branches of the basilar artery was found, also basal meningitis closing up the foramen of Magendie, and there was a gumma as large as a small hen's-egg in the left frontal lobe surrounded by an area of white softening.

CASE 6. *Cerebellar tumour; internal hydrocephalus.*—The patient, a female aged ten years, had had nine months before admission some abdominal symptoms diagnosed as tuberculous peritonitis. On admission the symptoms pointed to caries of the lumbar spine. Six weeks previously she had pain in the head and back, with "convulsions"; twelve days after admission she had another attack of "convulsions," leaving pain in the head and back accompanied by strabismus. The pupils were dilated and equal, and there was no paresis. The girl regained her previous condition. Nine days later she had another "fit," when respiration ceased, the pulse remaining strong and regular. The heart continued to beat while artificial respiration was carried on for over two hours.

Necropsy.—A tuberculous mass about the size of a hen's egg, but irregular in shape, was found in the roof of the fourth ventricle, protruding into that cavity and distending it, and at the same time invading the right lobe of the cerebellum. The iter was greatly distended, and to a less extent the third and lateral ventricles. A large amount of clear cerebro-spinal fluid escaped when the brain was being removed, through rupture of the dilated stalk of the pineal body.

Remarks.—Case 2 presents several very interesting features; the symptoms, which resembled a good deal those of caries of the upper cervical vertebræ, were dependent upon a basal meningitis. Probably also the supposed sunstroke five years before was of a similar nature. The cause is difficult to divine. It will be noticed that the conjunctival reflex persisted after attempts at respiration had ceased—exactly the opposite to what is observed in poisoning by chloroform and similar drugs. It seems remarkable also that the accessory movements of respiration should have continued after the essential ones had ceased. Another point of interest is the contracted state of the pupils in a patient dying from asphyxia. Perhaps the strangest feature of the whole case is that natural respiration should have recommenced at all, seeing that the cause of its failure still persisted. Case 4 is in one respect the reverse of Case 2, for the conjunctival reflex was lost before the efforts at respiration ceased. Case 5 presents several points of interest. The steady progress of the disease in spite of large doses of iodide of potassium is contrary to the usual experience. The development of such marked mental symptoms in connexion with a lesion of the left frontal lobe is interesting. A very remarkable point is the development of the Argyll-Robertson pupil while the patient was under observation. Apart from locomotor ataxy and general paralysis the phenomenon must be exceedingly rare. The one feature common to all these cases is that death was in all probability due to the increase in intra-cranial pressure causing paralysis of the respiratory centre in the floor of the fourth ventricle. In four of the cases recovery, complete or partial, was theoretically possible if the immediate cause of death could have been removed. Hæmorrhage, syphilis, and localised tubercle may all be recovered from, while in a fourth case death was clearly caused by a mere blocking of the foramen of Magendie. These are not selected cases, but are simply taken as they occurred successively. The question obviously suggests itself as to whether anything surgical could be done in such desperate cases. If the pressure in the fourth ventricle could be relieved it seems to us that recovery might be possible. If the foramina which connect the ventricles of the brain with the subarachnoid space were patent, then opening of this space would be all that was necessary. If, on the other hand, these were blocked, as occurred in four of our cases, then two possibilities suggest themselves: one is to give temporary relief by tapping one of the lateral ventricles, and the other is to trephine the cerebellar fossa and make an attempt to rupture the roof of the fourth ventricle. No anæsthetic would be needed, but considerable difficulty might be experienced in attempting to operate on the back of the head whilst artificial respiration was being carried on, owing to the position of the patient. It is scarcely likely that an automatic apparatus such as is used in a physiological laboratory would be found in a hospital.

A NEW BOBBIN FOR INTESTINAL ANASTOMOSIS.

BY HERBERT WILLIAM ALLINGHAM, F.R.C.S. ENG.,
SURGEON TO THE GREAT NORTHERN HOSPITAL; ASSISTANT SURGEON TO ST. GEORGE'S HOSPITAL.

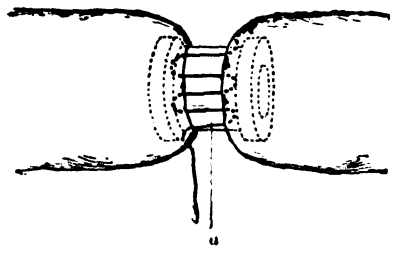
IT is with some hesitation that I venture to suggest a new bobbin for intestinal anastomosis, which appears to me to supply wants and to obviate faults, or rather disadvantages, noticeable in most of the other bobbins or buttons which have been designed. In my opinion some form of apparatus is necessary to unite hollow viscera one to the other. Now, a bobbin acts as a kind of splint while union is taking place, preventing any contraction or dilatation of the gut at the seat of union, and thus does away with any chance of leaking in the line of suturing. When no form of bobbin has been used, as in suturing by Mansel's or by Halsted's method, the seat of suturing has no support, and even a slight dilatation or contraction of the gut may easily allow some leak between the sutures to occur at the place of union. Again, rest and fixation favour union in the case of viscera, in the same way as with other parts of the body, and hence arises the necessity of a bobbin to secure that rest which is imperative for the sound joining of intestine to intestine, stomach to intestine, &c. It is thus seen that in intestinal anastomosis some plate, bobbin, or button is desirable, if not absolutely necessary.

Before describing my new appliance it may be allowable for me to point out some of the disadvantages in the plates, bobbins, or buttons which are the most frequently used in intestinal surgery. The bobbin designed by Mr. Mayo Robson appears to be the best, for it is made of decalcified bone, and as it is therefore absorbed there is no fear of its remaining for an indefinite time in the intestinal tract as a foreign body. The only disadvantage is that the flanges, or rather edges, at the ends of the bobbin are separated from one another by about three-fourths of an inch; hence, when viscera are being brought together, it is necessary to use some kind of suture running from one to the other, a process which takes some time to perform. (See Fig. 1, *a*.) Moreover, when the viscera have been brought together over the bobbin they can slip from one end of it to the other. At times, indeed, there is a fear of the bobbin slipping out from the seat of union, and this has actually occurred in one of my cases. Senn's plates appear to allow the edges of the incision in a viscus to fall together, and thus the communications between the viscera are too small later. This arises from the circumstance that while union is taking place there is nothing in the openings to keep them patent. It is obvious that this condition is rendered impossible by Mayo Robson's

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bobbin or Murphy's button. With regard the latter there are several objections. It does not seem advisable that a hard metal button should be employed for anastomosis; for, in the first place, the button may be delayed in the intestine for a very long time, as in Lane's case, in which it did not come away even in 160 days. Again, when one considers the varying sizes of the ileo-cæcal valve it is readily conceivable that the button might be unable to pass the

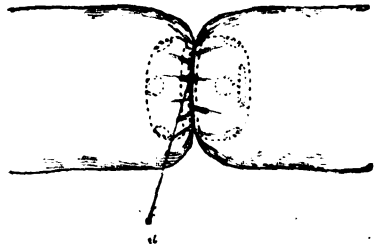
FIG. 1.



a

valve and might cause obstruction at that situation. In gastro-enterostomy the button might fall back into the stomach and then be unable to pass the pylorus or be vomited through the œsophagus. Further, it is not judicious to press intestines together at their seat of union by a button which, as far as I can see, can come away only by absorption or by sloughing of the pressed parts which have been brought together between its two pieces. (Fig. 2, *a*.) In no other way

FIG. 2.



a

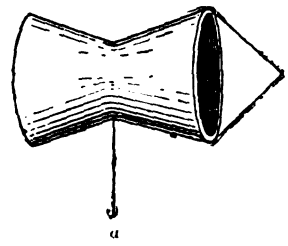
can the button free itself from the intestine at the seat of union. No less than five cases have come to my knowledge in which sloughing with perforation took place at the seat of union, the patients dying from the consequent peritonitis. It is perfectly sound to hold that the intestines at the seat of union should be kept together by pressure, but this pressure must not be too great or too small. Still, it is desirable to devise some mode of maintaining this pressure which will not necessitate any absorption or sloughing in order to free the button when the parts have been sufficiently glued together.

It is to remedy the various disadvantages indicated above that I have designed my bobbin. Its principle rests in the fact that it consists of two cones with their apices coming together to form the centre. The tubes are of bone or ivory, the shape of two hollow truncated cones with their lesser ends together, having the appearance of small dice-boxes. These are carefully decalcified to within about three-sixteenths of the centre (*a*), leaving at the junction of the two cones a hard, unyielding portion upon which any pressure from the sutures is borne. The ends of the tubes are quite soft. There are several sizes, the most usual being—

Diameter of bore.	Diameter of end (outside).	Length.	Angle of cones.	Known as—
¼ inch.	⅜ inch.	1¼ inch.	150°	No. 1 size.
⅜ „	½ „	1½ „	140°	No. 2 „
½ „	⅝ „	1¾ „	140°	No. 3 „
⅝ „	¾ „	1¾ „	140°	No. 4 „

They can be made in any other sizes required, but the above four sizes can always be had without delay from Messrs. Krohne and Sesemann, Duke-street, Manchester-square, W. This appliance is exceedingly simple and appears to serve all the purposes required of a bobbin or button, for it keeps the parts at absolute rest; can be absorbed, as it is made of decalcified bone; and can be liberated without any absorption or sloughing of the parts it unites. Moreover, from its shape it cannot, until the decalcified bone is absorbed, slip away from the seat of union, and when the sutures in each piece of intestine are tied the parts to be joined must be brought together, and yet no excessive pressure is exerted on the edges which it is desired to connect. As the bobbin may be used in various operations, it has been made in different sizes. Those for gall-bladder cases are one-fourth of an inch wide at the narrowest point—viz., the centre (Fig. 3, *a*); in

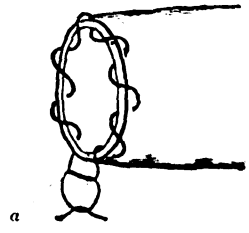
FIG. 3.



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those for small-intestine cases, seeing that the intestinal contents are liquid, the width at the narrowest point need not be more than one-half or three-eighths of an inch. Much larger ones are required for large-intestine cases, as the intestinal contents are solid or semi-solid—viz., three-fourths of an inch. Though the bobbin may be employed to unite intestine to stomach, gall-bladder to intestine, and indeed in any form of anastomosis, its use may be most conveniently explained by presuming that two pieces of intestine are to be

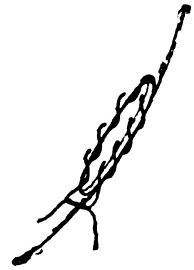
FIG. 4.



a

united end to end. Into or round each piece of intestine a fairly stout continuous silk suture is passed, which should include in each stitch the peritoneum, the muscular coat, and the mucous coat (Figs. 4 and 5). Then one end of the bobbin is inserted into one piece, and the suture is pulled tight by a knot twice threaded, so that it will not slip (Fig. 4, *a*), but the final tie is not made until the other end of the bobbin has been inserted into the other piece of intestine. After this, one of the sutures is tightened up to its utmost; this brings the part down to the centre of the

FIG. 5.

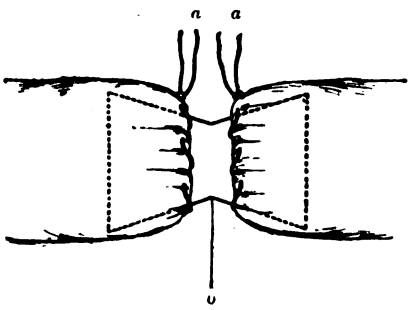


bobbin, for, as the bobbin consists of two cones with their apices pointing to its centre, the tighter the suture is drawn (Fig. 6, *a*) the more completely must it draw the intestine to the apex of the cone (Fig. 6, *b*) which has been inserted into it. A similar tying of the other suture brings the other piece of intestine down to the apex of its cone (Fig. 7, *a*). Thus, from the shape of the bobbin, the parts to be united are brought into exact apposition and at the same time are pressed together. A few Lembert's

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sutures may then be inserted at various points, or a continuous Lembert's suture may be used all round if that be thought necessary. It is wise to scarify the peritoneum of the intestines with a needle for about half an inch round the seat of union. This scarifying promotes the exudation of lymph, which acts as a callus (just as in a fracture of bones) round the ends to be united. Especially should this be done if no Lembert's sutures have been employed. The intestines when united cannot move in either direction, for the sutures, which are tied up tightly at the narrowest part of their

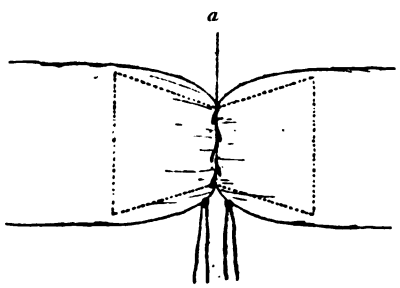
FIG. 6.



respective cones, naturally cannot slip up to any broader portion; moreover, the bobbin itself cannot possibly alter its position either upwards or downwards.

Murphy's button and Mayo Robson's button are sometimes blocked by solid fæces which have to travel through them for some distance (about an inch). Now, since my bobbin is shaped like an hour-glass, there is an extremely small surface to obstruct the passage of solid matter; this may be represented as being merely the extent of a line—i.e., at the meeting of the apices of the cones. This is quickly passed, and then the cones grow wide once more.

FIG. 7.



Simplicity is, I think, the characteristic of the bobbin. No complicated suturing is required, nothing being needed except the continuous sutures—one round one end of the divided intestine, and the other round the other end—or, in a similar manner, round the incisions, one in one viscus and the other in the other. Hence it can be applied very rapidly. Further, it cannot slip, and in consequence of its shape the parts to be joined are brought closely together. Lastly, it is absorbed in time and therefore cannot act as a foreign body. I have experimented many times with the bobbin on the dead body and find it is most easy of application, and the operation rapidly carried out. At present I have had only one opportunity of using it upon the living subject, and in this case with excellent results.

Grosvenor-street, W.

HEAVY FINES FOR ADULTERATING MILK.—At Southwark Police-court, on Tuesday, Aug. 27th, David Jenkins, of Guy-street, Bermondsey, and Joseph William Bramley, of Weston-street, Bermondsey, were summoned under the Sale of Food and Drugs Act, at the instance of Mr. Henry Thomas, inspector to the Bermondsey Vestry, for having unlawfully sold milk adulterated with added water to the extent of 19 and 18 per cent. respectively. The cases having been proved, Mr. Fenwick fined Jenkins, against whom there were previous convictions, £20 and 12*s.* 6*d.* costs, and Bramley £3 and 12*s.* 6*d.* costs.

SPINAL SOFTENING LIMITED TO THE PARTS SUPPLIED BY THE POSTERIOR ARTERIAL SYSTEM OF THE CORD.

BY R. T. WILLIAMSON, M.D. LOND., M.R.C.P.,
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THE spinal cord is supplied with blood at its anterior part chiefly by a long narrow artery, the anterior spinal, and at the posterior parts by two long narrow vessels, the posterior spinal arteries. These arteries are reinforced by numerous small arterial twigs coming from the intercostal lumbar and sacral arteries, which enter the spinal canal by the intervertebral foramina and run along the anterior and posterior nerve roots. A number of small arteries, derived from the vessels on the surface, enter the substance of the spinal cord: the largest of these are the anterior median arteries, which penetrate the anterior median fissure. The exact distribution of these branches within the cord is described in most anatomical text-books. Now the blood supply of the cord may be divided broadly into the anterior and posterior arterial systems; and a transverse section of the cord may be divided roughly into two districts or areas—one supplied by small arteries coming from the anterior arterial system and the other by arteries from the posterior system.[1] The blood supply to the interior of the cord by the anterior spinal arteries is more important than that by the posterior arteries. The distribution of the lesions in a number of spinal diseases is related to the vascular supply, as I have pointed out elsewhere.[2] A spinal cord which I have recently examined furnishes a beautiful example of the localisation of the lesion to the part supplied by the posterior arterial system. During life the patient was under the care of Dr. Graham Steell, to whose kindness I am indebted for the opportunity of making the pathological examination.

A man fifty years of age, suffering from paraplegia, was admitted as an in-patient to the Manchester Royal Infirmary on Aug. 29th, 1894. His previous health had been good until three weeks before admission, when he suddenly lost the use of his left leg immediately before getting into bed in the evening. He had just passed urine and was pulling off his stockings when he found that he was unable to raise the left leg. He thought that the right leg became paralysed soon afterwards. There was no pain in the back or limbs at the onset, but the legs felt numbed. He stated, however, that he could feel when anything touched his legs. Very soon after the onset of the paralysis the legs became painful, especially the left, and there had been dull, aching pain, with occasional sharp, shooting pains, in the legs ever since. Retention of urine had been present from the onset and a catheter had been passed daily. The legs had remained completely paralysed from the commencement. The arms had not been affected, and there had been no pain in the back. There is no history of syphilis or gonorrhœa or rheumatism. With the exception of two attacks of pleurisy (one eight years and the other twenty years before admission) the previous health has been good, until one month before the onset of the paralysis. At that date he began to feel languid, but was able to attend to his work quite well.

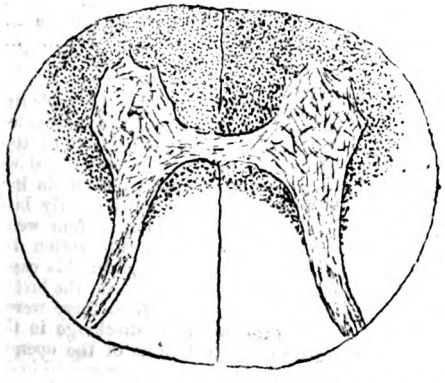
On admission to the infirmary the patient was somewhat wasted. Both legs were completely paralysed, and the feet and toes were "dropped." The legs were flaccid; the knee-jerks were present; there was no ankle-clonus; and the plantar reflex was present on the left side, but was not obtained on the right. The abdominal, epigastric, and cremasteric reflexes were not obtained. A light touch with the head of a pin was not felt on the right leg; a pin prick also was not felt. On the left leg both the point and head of a pin were felt and localised. On the abdomen the head and the point of a pin were not felt on the lower part—up to a point midway between the pubes and umbilicus; above this level both were felt distinctly. There was no zone of hyperæsthesia just above the anæsthesia. The patient could

[1] See Marie: Diseases of the Spinal Cord.
[2] See the Medical Chronicle, Dec., 1894, and Jan. and Feb., 1895.

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distinguish hot and cold test tubes on both legs. The bladder was distended; there was retention of urine, with dribbling. There was also incontinence of fæces. There was no pain in the back, but the patient had considerable pain in the legs, especially when moved. The first lumbar vertebral spine was very slightly prominent, but there was no tenderness on percussion at this region. The arms were unaffected. There was no paralysis of the facial, ocular, of tongue muscles. When the edge of a silver coin was drawn firmly over the skin in any part of the trunk or limbs a peculiar bluish-black mark remained, and the patient's initials could be written quite easily on the chest and abdomen. The pulse was 105 and intermittent; one beat was missed in about every 10. The tension was normal, and the artery not atheromatous. There was a short systolic murmur limited to the apex, but the cardiac dulness was normal. Physical examination of the lungs and abdominal organs revealed nothing abnormal. The urine was dark in colour, ammoniacal, and very fœtid, the specific gravity being 1017. It contained a small amount of albumin and a deposit of triple phosphates, a few pus cells, mucus, and a few red corpuscles. By the end of October the anæsthesia had increased, and both legs were equally affected. The anæsthesia was most marked on the outer side of the leg, but, owing to the patient's dull mental condition, it was not possible to map it out accurately. At a later date the results of examination of the cutaneous sensibility were quite unreliable. Soon after admission a sacral bedsore developed and the general condition of the patient became gradually worse. He complained most of pain in the legs, which was very severe when the limbs were moved. The doubtful prominence of the first lumbar spine did not increase, and spinal tenderness did not develop. The reflexes remained the same as on admission, but the bladder symptoms and the bedsores became much worse, and the patient died on Jan. 2nd, 1895.

Post-mortem examination.—The body was found to be greatly emaciated. There was an extensive sacral bedsore. The pericardium was normal. Fibrous pleuritic adhesion was present on the left side. There was slight thickening of the cusps of the mitral valve. Tuberculous nodules were scattered throughout the right lung. The stomach, intestines, liver, kidneys, and spleen presented no important changes. The bladder showed well-marked signs of cystitis. The spinal column presented no signs of angular curvature or caries. There was no evidence of tumour growth in the vertebræ. The spinal cord appeared to be normal to the naked eye. On section the grey matter in the lumbar and lower dural regions was seen to be congested. The spinal dura mater was adherent in the lower dorsal and lumbar regions to the posterior surfaces of the vertebræ; otherwise the spinal meninges were normal. After hardening in Müller's fluid, the cord, on transverse section, presented to the naked eye well-marked degeneration in the posterior and lateral columns of the lower dorsal region for about two inches. These columns were much lighter in colour than the rest of the transverse section. Above and below the region just mentioned the usual secondary degeneration could be detected. The whole of the lower two inches of the dorsal region of the cord was cut into small pieces, which were embedded in celloidin, and sections made. Every third or fourth section was mounted and examined microscopically. Practically, therefore, the whole of the cord at the seat of the lesion was examined microscopically. The sections were stained according to the methods of Weigert and Pal, and also with logwood and eosin and with aniline blue black. The figure represents the appearance of a transverse section (stained according to Weigert's method) through the lowest dorsal region, at the part where the lesion was most intense. The black dots represent healthy nerve fibres in the white matter, the fine lines represent the small nerve fibres in the grey matter, and the blank part corresponds to the area of degeneration in which nerve fibres are very scanty or altogether absent. (In the sections stained according to Weigert's method this blank area is light brown.) In the figure nerve fibres are represented (by fine black lines) in the posterior horns of grey matter, but in a good number of sections the posterior horns were completely degenerated, and their black-stained nerve fibres absent. The degeneration affected the posterior columns, median and external, with the exception of a narrow zone, close to the grey matter of the commissure and to the neck of the posterior horn; it affected the region of the lateral pyramidal, the direct cerebellar, and the antero-lateral ascending tracts, and also extended a little farther forwards on the surface of the cord. Under a high power the part where the changes were most intense—i.e., the whole of the posterior columns, with the exception of the narrow zone adjacent to the grey commissure and to the neck of the posterior horn—was seen to be densely infiltrated with round cells—large mononuclear cells, compound fat granular cells, and leucocytes. The nerve fibres were absent, and only a few irregular fibres of neurogliar tissue were seen amongst the cell infiltration. The microscopical appearance was that of spinal softening. The bloodvessels were dilated and their walls studded with nuclei, but the vascular changes were certainly not so marked as is usually the case in so-called myelitis. A large portion of the degenerated area in the lateral columns presented similar appearances of softening (cell infiltration, &c.). In some of the sections these changes had extended into and destroyed the posterior horns of grey matter. In other sections at this level of the cord the changes were more chronic than those just described, but involved the same area in the posterior and lateral parts of the cord. The nerve fibres were scanty, or absent altogether; the neuroglia was greatly increased and presented round or oval spaces, from which the nerve fibres had disappeared; and the changes then resembled those met with in secondary degeneration or sclerosis. The grey matter of the anterior horns and the intermediate grey matter appeared to be quite normal. The ganglion cells and fine nerve fibres were brought out quite distinctly—by different methods of staining. The whole of the anterior white matter was normal. In some sections small ante-mortem blood-clots were found in the veins on the posterior surface of the cord, and in a few sections they were also found in the veins near the anterior median fissure. The clots in all cases consisted of numerous leucocytes with a few red corpuscles, and were always separated by a small space from the vessel walls. No clots were found in the spinal or meningeal arteries. The walls of the bloodvessels appeared to be normal except at the seat of the changes in the posterior and lateral columns. Above the seat of the lesion just described there were the usual ascending changes in the posterior columns (secondary sclerosis), and below there was the usual descending sclerosis in the lateral pyramidal tracts. Only in the lower two inches of the dorsal region of the cord were the above-described suffering and degeneration found in the posterior and lateral columns.



Section of spinal cord (Weigert's stain). Black dots and lines=healthy nerve fibres; the blank area=softening and degeneration.

Remarks.—The changes at the seat of the lesion I have described as spinal softening rather than myelitis, because the former term does not necessarily imply an inflammatory origin. The case is of interest on account of the localisation of the changes just to that part of the cord which is supplied by the posterior arterial system. If we compare the above figure (showing the distribution of the lesion) with that given by Marie (Diseases of the Spinal Cord) to show the distribution of the anterior and posterior arteries of the cord, we shall find that the blank area of degeneration corresponds almost exactly with the part of the cord which Marie maps out as that supplied by the posterior arterial system. The very sudden onset of the symptoms is also very suggestive that the lesion was of vascular origin.

Manchester.

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THE RESULTS OF OPERATIONS FOR CANCER OF THE BREAST.

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BEFORE a correct estimate of the true value of any operation can be formed it is necessary to consider the ultimate results with which it is attended. It is not enough to know what the immediate risks of its performance may be; we should also find out what are likely to be its remote effects. It seems to us that hardly sufficient stress is laid on this matter, and that we are too apt to be satisfied if the immediate results come up to expectation. These remarks apply with peculiar force to the operations performed in cases of malignant disease, and it is very possible that if we were more thoroughly acquainted with the late results of operation in such cases we might pause before we recommended our patients to submit to them. The accompanying table deals with all the cases of carcinoma of the breast which were operated upon by Mr. Jones at the Manchester Royal Infirmary during a period of ten years (1883 to 1892 inclusive). It gives particulars of the cases when they first came under observation, and also records the results of our inquiry into their after-history. This inquiry has been a work of considerable difficulty and labour, as anyone who has been engaged in similar work will know; the patients have been widely scattered, and difficulties have arisen from changes of residence and from many other causes. The table includes 55 cases, of which more or less information of the after-progress was obtained in 52 cases. In spite, however, of all our efforts we were unable to learn anything more about the remaining 3 cases. In the present paper we propose to deal in the first place with certain points which are illustrated by the histories given and the symptoms presented by the patients at the time they first came under observation; secondly, with the results of our inquiry into the after-progress of the cases; and, thirdly, with certain conclusions which we have deduced from a careful study of the facts now before us.

From an analysis of the cases we obtain the following particulars with regard to sex, age, family history, &c. All the 55 patients were women; no examples of cancer of the male breast have come under observation during the period under consideration. Seven patients were between the ages of thirty and forty, 30 between forty and fifty, 12 between fifty and sixty, 5 between sixty and seventy, and 1 was over seventy years of age. The great majority—more than half the cases—were thus between forty and fifty, the period of life at which cancer generally is most frequently met with. In 23 of the 55 cases the right breast was affected by the disease, in 29 the left breast, whilst in the remaining 3 cases the notes give no information upon this point. The nature of the growth was in all cases scirrhous; 2 were examples of atrophic scirrhus. A family history of malignant disease was obtained in 7 cases only (12·7 per cent.). In our table we have an account of a mother and daughter and the mother's sister suffering from cancer. The mother's sister (No. 3 in the list) is still living and free from recurrence, although the operation took place eleven years and three months ago. A history of previous breast troubles was given in 11 cases (20 per cent.). There had been abscess in 5, sore nipple in 3, sanguineous discharge from the nipple in 1, "broken breast" after confinement (probably abscess) in 1, and severe pain in the breast during suckling in 1. From this it appears that cancer is especially liable to occur in breasts which have been previously affected by abscess or other disease. A history of injury to the breast was obtained in 8 of the 55 cases. As to the duration of the disease before the patients came under observation, so far as we could learn the disease had in 11 cases been in existence for less than three months before operation, in 9 it had existed from three to six months, in 6 from six to nine months, in 15 from nine to twelve months, and in 9 from one to two years, whilst in the remaining 5 cases the duration is doubtful. It must not be forgotten, moreover, that the onset of cancer of the breast is usually insidious and that the disease has made very considerable progress before it is noticed by the patient. Frequently she discovers a tumour of large size whose presence has hitherto remained unsuspected. The great length of time which often elapses between the discovery of the tumour and the time the patient seeks advice is worthy of notice, since it allows the disease to become much more extensive and thus necessitates a more formidable operation and greatly increases the chances of recurrence. In 32 of the 55 cases the first symptom noticed by the patient was the presence of a "lump" in the breast, in 8 pain was the first symptom, and in 7 retraction of the nipple. In 1 case the patient noticed that the axillary glands were enlarged before she observed any swelling in the breast, and in 2 failure of the general health led to the discovery of the local disease. With regard to the state of the skin over the breast, in 34 of the 55 cases the skin was adherent to the tumour, in 10 of these being distinctly infiltrated by the new growth, and in 1 ulcerated. Several other cases showed dimpling when the overlying skin was pinched up between the fingers. The nipple was retracted in 37 cases, unaltered in 14, whilst its condition was not recorded in 4. In 2 patients it was ulcerated and in 2 the disease was preceded by inveterate eczema (Paget's disease). The axillary lymph glands were distinctly enlarged in 47 cases, apparently uninvolved in 7, and the glands along the pectoral muscle were alone involved in 1. It is very significant (and this has an important bearing on a point of practice which we wish to emphasise) that in 7, or nearly one-eighth, of our cases no enlargement of the axillary glands could be felt before operation, and yet enlarged glands were discovered when the axilla was opened. This proves that it is never safe to conclude that no enlargement of the axillary glands exists unless the examination of the space is conducted through the wound. This is especially true of those cases in which the axilla contains an abundance of fat, under which circumstances small shotty glands may, and very often will, elude detection. The supra-clavicular glands, in addition to those in the axilla, were slightly enlarged in 4 cases, and in these a speedy recurrence of the disease took place after operation; indeed, the operations in these cases were incomplete, as all the infected glands could not be removed. It would have been better if these 4 cases had been left untouched; they were manifestly unfit for operation.

Results of operation.—The ultimate results, so far as we have been able to learn, are as follows:—

Deaths soon after operation	2
Patients who have died without recurrence ...	2
,, ,, ,, from recurrence	34
,, now living with recurrence	8
,, ,, and free from recurrence ...	6
No further information obtainable...	3
	55

Of the 2 deaths which occurred whilst the patients were in hospital 1 (Case 42) took place eight weeks after operation from chronic bronchitis and dilatation of the heart. We think that this death ought not to be put down to the operation, since the patient recovered from its immediate effects and progressed favourably until shortly before her death. The other patient (Case 1) died four weeks after removal of the breast from septic absorption from the granulating surface on the chest wall. In this case it was necessary to sacrifice much of the skin over the breast, and a large raw surface was left; at the time there were several extensive burns with profuse septic discharge in the same ward. With regard to the technique of the operation the axilla was opened and infiltrated glands removed in 47 of the 55 cases, and it was not opened in 7. Unfortunately, the notes of the remaining case are very imperfect and do not give any information upon this point. In one case the affected glands so completely surrounded the axillary vein that a portion of the vessel had to be sacrificed, yet no inconvenience beyond a temporary œdema of the arm was experienced by the patient. In 4 cases only was it deemed necessary to remove a portion of the pectoralis major owing to the extension of the growth to the muscle. In 1 case (No. 37) the tumour, which was situated near the axillary border of the mamma, was excised with some adjacent tissue without taking away the entire breast. This is a method of operating strongly to be deprecated; it was followed by speedy recurrence of the disease which necessitated a second

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OPERATIONS FOR CARCINOMA OF THE BREAST, PERFORMED BY MR. JONES AT THE MANCHESTER ROYAL INFIRMARY, FROM JAN. 1ST, 1883, TO DEC. 31ST, 1892.

Number. Age.	Civil state.	Family history of cancer.	History of previous breast trouble.	History of injury to breast.	Skin.	Nipple.	Axillary glands.	Supra-clavicular glands.	Date of operation.	Axilla opened.	Recurrence.	Time of recurrence after operation.	Seat of recurrence.	Subsequent operations.	Duration of life after operation.	Remarks.
1 [illegible]	M.	No	No	No	Adherent	Retracted	Enlarged	Unaffected	Jan. 9, 1883	Yes	—	—	—	—	Died 4 weeks after operation from septic absorption.	—
2 [illegible]	S.	No	No	No	Unaffected	Not retracted	Enlarged	Unaffected	Jan. 26, 1883	Yes	Yes	10 years	Lungs	—	—	Patient still living.
3 [illegible]	S.	Yes	No	No	Unaffected	Retracted	Unaffected	Unaffected	Feb. 23, 1883	No	No	—	—	—	—	No recurrence 11½ years after operation.
4 [illegible]	M.	No	No	No	Adherent	Retracted	Enlarged	Unaffected	March 30, 1883	Yes	(Whole of growth not removed)	—	—	—	4 months	Operation incomplete; all the affected glands could not be removed.
5 [illegible]	M.	No	No	No	Unaffected	Retracted	Glands along pectoral muscle enlarged	Unaffected	April 10, 1883	Glands along pectoral remov'd	No	—	—	—	—	No recurrence 11½ years after operation.
6 42	M.	No	No	No	Firmly adherent	Slightly retracted	Enlarged	Unaffected	Aug. 18, 1883	?	Yes	12 months	Axilla	—	22 months	—
7 45	M.	No	Great pain in breast when suckling 3 years ago	Injury 6 yrs ago	Slightly adherent	Not retracted	Enlarged	Unaffected	Nov. 19, 1883	No further information can be obtained				—	—	—
8 65	S.	No	History of sore nipple.	No	Unaffected	Greatly retracted	Enlarged	Unaffected	Jan. 27, 1884	Yes	Yes	About 18 months	Chest-wall	Feb. 1, 1886: recurrent growth removed	About 2 years	—
9 46	M.	No	No	Blow on breast 9 m'ths ago Injury 3 years ago	Unaffected	Not retracted	Enlarged	Unaffected	Feb. 8, 1884	Yes	Yes	?	Lungs	—	12 months	—
10 48	S.	No	No		Adherent and puckered	Slightly retracted	Enlarged	Unaffected	April 4, 1884	Yes	Yes	6 weeks	Chest-wall, axilla, and supra-clavicular glands	—	4 months	—
11 50	M.	No	Sore nipple 2 years ago	No	Adherent	Retracted and eczematous	Enlarged	Unaffected	April 23, 1884	Yes	Yes	?	?	—	About 12 months	—
12 [illegible]	M.	No	"Broken breast" after first confinement	No	Unaffected	Not retracted	Enlarged	Unaffected	June 16, 1884	No further information can be obtained				—	—	—
13 65	S.	No	No	No	Adherent and puckered	Retracted	Enlarged	Unaffected	Dec 16, 1884	Yes	Yes	12 months	Axilla	—	3 years	—
14 43	M.	No	No	No	Unaffected	Retracted	Enlarged	Unaffected	Jan. 27, 1885	Yes	Yes	?	Lungs (? in scar)	—	About 4 months	—
15 45	S.	No	No	No	Ulcerated and growth fungating	Not retracted	Enlarged	Unaffected	Jan. 31, 1885	Yes	Yes	3½ months	Chest-wall	June 6, 1885: recurrent growth removed	19½ months	—
16 62	M.	No	No	No	Adherent and infiltrated	Greatly retracted	Enlarged	Unaffected	July 4, 1885	Yes	Yes	3 months	Chest-wall	Oct. 22, 1885: recurrent growth removed	9 months	—
17 47	M.	No	No	No	"Discoloured"	Retracted	Enlarged	One slightly enlarged gland	July 4, 1885	Yes	(Whole of affected glands not removed)	—	—	—	About 6 months	—
18 [illegible]	M.	No	No	No	Adherent	Retracted	Enlarged	One enlarged gland felt	Oct. 15, 1885	Yes	(Whole of affected glands could not be removed)	—	—	—	About 12 months	—
19 49	S.	No	No	No	Adherent and puckered	Retracted and ulcerated	No enlarged glands could be felt	Unaffected	Jan. 2, 1886	No	Yes	?	?	—	10 months	—
20 43	M.	No	No	Injury about 8 years ago	Unaffected	Retracted	Enlarged	Unaffected	Feb. 1, 1886	Yes	No	—	—	—	—	No recurrence 8½ years after operation.

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OPERATIONS FOR CARCINOMA OF THE BREAST, PERFORMED BY MR. JONES AT THE MANCHESTER ROYAL INFIRMARY, FROM JAN. 1ST, 1883, TO DEC. 31ST, 1892.—*Continued.*

Number.	Age.	Civil state.	Family history of Cancer.	History of previous breast troubles.	History of injury to breast.	Skin.	Nipple.	Axillary glands.	Supra-clavicular glands.	Date of operation.	Axilla opened.	Recurrence.	Time of recurrence after operation.	Seat of recurrence.	Subsequent operations.	Duration of life after operation.	Remarks.
21	51	W.	No	No	Injury 6 m'ths ago	Unaffected	?	Enlarged	Unaffected	Feb. 3, 1886	Yes	No further information can be obtained			—	—	—
22	44	M.	No	No	No	Adherent	?	Enlarged	Unaffected	Feb. 27, 1886	Yes	No	—	—	—	—	No recurrence 8½ years after operation.
23	46	M.	No	Abscess 8 years ago	No	Adherent	Retracted and ulcerated	Enlarged	Unaffected	April 24, 1886	Yes	Yes	About 12 months	Chest-wall	May 20, 1887, and June 21, 1888: recurrent growths removed	14 months	—
24	50	M.	No	No	No	Adherent and infiltrated	Not retracted	Enlarged	Unaffected	May 18, 1886	Yes	Yes	6 months	Axilla	April 27, 1887: recurrent growth removed	2 years and 8 months	—
25	31	S.	No	No	Injury 2 years ago	Slightly adherent	Retracted	Enlarged	Unaffected	May 25, 1886	Yes	Yes	3 weeks	Chest-wall	Recurrent growth destroyed with Vienna paste	3 years and 10 months	—
26	39	M.	No	No	?	Adherent	Slightly retracted	Enlarged	Unaffected	July 23, 1886	Yes	Yes	?	?	—	About 5 years	—
27	53	M.	No	No	No	Adherent	Not retracted	No enlarged glands could be felt	Unaffected	July 31, 1886	No	No	—	—	—	About 3 months	Died from alcoholism; probably no recurrence.
28	48	M.	No	History of sore nipple	No	Adherent	Slightly retracted	Enlarged	Unaffected	March 26, 1887	Yes	Yes	About 3 months	Chest-wall and axilla	—	19½ months	—
29	56	W.	No	No	No	Adherent	Retracted	Enlarged	Unaffected	June 13, 1887	Yes	Yes	About 2 years	Axilla	Sept. 10, 1889: excision of glands	About 3 years	—
30	50	M.	No	No	No	Unaffected	Not retracted	Enlarged	Unaffected	June 18, 1887	Yes	No	—	—	—	—	No recurren 7 years afte operation.
31	58	W.	Yes	No	No	Unaffected	Not retracted	Enlarged	Unaffected	Sept. 7, 1887	Yes	Yes	18 months	Chest-wall and axilla	—	3 years and 1 month	—
32	43	M.	No	S'nguineous discharge from nipple 5 years ago and again 3 years ago	No	Infiltrated	Retracted	No enlarged glands could be felt	Unaffected	Nov. 8, 1887	No	Yes	About 5 months	Sub-peritoneal glands	—	6 months	—
33	47	M.	Yes	No	No	Infiltrated	Retracted	Enlarged	Unaffected	Feb. 20, 1888	Yes	Yes	About 6 weeks	?	—	4 months	—
34	42	M.	No	Abscess 10 years ago and again 7 years ago	No	Adherent and infiltrated	Retracted	Enlarged	Unaffected	May 17, 1888	Yes	Yes	5 months	Chest-wall	Nov. 2, 1888, and Oct. 13, 1890: excision of recurrent growths	3 years and 6 months	—
35	54	W.	No	No	No	Unaffected	Not retracted	Enlarged	Unaffected	Oct. 1, 1888	Yes	Yes	4½ years	Chest-wall	Recurrent growth removed in summer of 1893	—	Patient still alive
36	42	S.	No	No	No	Unaffected	Not retracted	No enlarged glands could be felt	Unaffected	Jan. 29, 1889	No	Yes	?	Axilla	—	4½ years	—
37	35	S.	Yes	No	No	Unaffected	Not retracted	Enlarged	Unaffected	May 23, 1889	Yes	Yes	About 3 months	Axilla	—	7 months	Cancer moved w out rem of whi breast Oct., 18 Speedy curren No recur 5 years operati
38	46	M.	Yes	No	Injury 6 m'ths ago	Unaffected	Retracted	Enlarged	Unaffected	Aug. 1, 1889	Yes	No	—	—	—	—	—
39	38	W.	No	No	No	Adherent	Retracted	Enlarged	Unaffected	Sept. 26, 1889	Yes	Yes	9 months	Chest-wall	July 14, 1890, and Jan., 1891: excision of recurrent growths	3 years and 10 months	—

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OPERATIONS FOR CARCINOMA OF THE BREAST, PERFORMED BY MR. JONES AT THE MANCHESTER ROYAL INFIRMARY, FROM JAN. 1ST, 1883, TO DEC. 31ST, 1892.—*Continued.*

Number.	Age.	Civil state.	Family history of cancer.	History of previous breast troubles.	History of injury to breast.	Skin.	Nipple.	Axillary glands.	Supra-clavicular glands.	Date of operation.	Axilla opened.	Recurrence.	Time of recurrence after operation.	Seat of recurrence.	Subsequent operations.	Duration of life after operation.	Remarks.
40	45	M.	No	No	No	Unaffected	Retracted	Enlarged	Slightly enlarged	June 6, 1889	Yes	Yes	About 6 weeks	Chest-wall and other breast.	—	3 months	—
41	33	M.	No	No	No	Infiltrated	Retracted	Enlarged	Unaffected	Feb. 3, 1890	Yes	Yes	5 weeks	Axilla	—	7 months	—
42	38	M.	No	No	No	Adherent	Retracted and eczematous	Enlarged	Unaffected	April 25, 1890	Yes	—	—	—	—	Died 8 weeks after operation from chronic bronchitis and dilated heart.	—
43	44	S.	No	No	?	Infiltrated	Retracted	Enlarged	Unaffected	July 15, 1890	Yes	No	—	—	—	8½ months	Died from bronchitis. No recurrence.
44	52	M.	No	No	No	Infiltrated	Retracted	Enlarged	Unaffected	Sept. 25, 1890	Yes	Yes	?	?	—	18 months	—
45	44	M.	No	No	No	Unaffected	Not retracted	No enlarged glands could be felt	Unaffected	Dec. 2, 1890	No	Yes	?	Uterus (no local recurrence)	—	9 months	—
46	56	M.	No	No	No	Adherent	?	Enlarged	Unaffected	Dec. 26, 1890	Yes	Yes	3½ years	Chest-wall	—	—	Patient still living.
47	46	M.	Yes	No	No	Adherent	Retracted	Enlarged	Enlarged	Feb. 3, 1891	Yes	(Whole of affected glands could not be re-removed)	—	—	—	7 months	—
48	71	M.	No	Abscess 33 years ago	No	Infiltrated	Retracted	Enlarged	Unaffected	June 26, 1891	Yes	Yes	Within 3 months	Chest-wall and axilla	—	5 months	—
49	49	M.	No	No	No	Unaffected	Retracted	Enlarged	Unaffected	Oct. 2, 1891	Yes	Yes	2½ years	Axilla	—	—	Patient still living.
50	66	M.	Yes	Abscess 26 years ago	No	Unaffected	Slightly retracted	No enlarged glands could be felt	Unaffected	April 29, 1892	No	Yes	3 months	Axilla	Sept. 29, 1892: removal of axillary glands.	—	Patient still living.
51	60	M.	No	No	Yes	Adherent	Retracted	Enlarged	Unaffected	May 13, 1892	Yes	Yes	19 months	Chest-wall and axilla	—	—	Patient still living.
52	39	M.	No	Abscess 17 years ago	No	Unaffected	?	Enlarged	Unaffected	Aug. 4, 1892	Yes	Yes	Within 6 months	Chest-wall and liver	—	12 months	—
53	60	S.	No	No	No	Adherent	Retracted	Enlarged	Unaffected	Aug. 11, 1892	Yes	Yes	18 months	Chest-wall	—	—	Patient still living.
54	53	M.	No	No	No	Unaffected	Not retracted	Enlarged	Unaffected	Oct. 5, 1892	Yes	Yes	5 months	Chest-wall	—	—	Patient still living.
55	67	S.	No	No	No	Infiltrated	Retracted	Enlarged	Unaffected	Nov. 29, 1892	Yes	Yes	5 months	Chest-wall	—	16½ months	—

operation, and the patient died seven months later. Our rule is to remove the entire breast, to dissect off the pectoral fascia, to remove portions of the muscle if necessary, to examine the axilla through the wound, and if the glands be infected to clear it out completely, the breast and the glands, along with the intermediate lymphatic tract, being removed together in one piece. The assertion is frequently made that the immediate risks to life are greatly increased by opening the axilla at the time of operation. We contend, however, that the clearing of this space need add little, if any, to the risks, provided the proceeding be conducted with due care, and we would again point out that in 47 of our 55 cases the axilla was freely laid open and its contents completely removed, and yet there was only 1 death. In some of the cases the dissection required in order to excise the glands was most extensive, the axillary vein being frequently exposed for some two inches of its length. We hold, therefore, that no operation for removal of cancer of the breast is complete unless the axilla is carefully examined through the wound. If the glands be enlarged, be it ever so slightly, their removal is imperative. To leave them is to court defeat, as early recurrence in this situation must be expected. The only possible objection to the universal adoption of the rule of examining the axilla through the wound would arise from the additional risk involved, and the contention that the risk is greatly increased by this procedure falls to the ground in view of the results obtained. There is one practical point in connexion with this part of the subject to which we wish to invite attention. It is this: great watchfulness is required on the part of the anæsthetist whilst the axilla is being cleared out; the amount of shock is sometimes considerable, and it is well not to push the anæsthesia too far at this stage. We have been led to dwell at some length on the mode of dealing with the axilla because one sometimes sees cases in which the mammary gland has been successfully removed, but the axilla left untouched or only imperfectly dealt with; the disease has speedily declared itself in the latter situation and has advanced with alarming rapidity, thus bringing the operation into disrepute.

Of the patients who recovered from the operation 2 have since died from other diseases without recurrence of the cancer, one (Case 27) three months after her discharge from excessive drinking, and the other (Case 43) after eight and a half months from bronchitis. Recurrence, including the 4 patients in whom the operation was incomplete, took place in 42 cases, of which 34 have since died and 8 are alive. The average duration of life after operation in the 34 cases was nineteen and a half months; it was under six months in 5, from six to twelve months in 10, one to two years in 9, two to three years in 2, three to four years in 6, and four to five years in 2. Of the 8 cases now living with recurrence the average time since operation is four years; the longest period is eleven years

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and six months and the shortest two years. The date of recurrence after the removal of the breast was doubtful in 8 cases, within three months in 8, three to six months in 7, six to twelve months in 1, one to two years in 8, two to three years in 3, three to four years in 1, four to five years in 1, and after ten years in 1. The recurrent growth was situated in the axilla without recurrence in the cicatrix in 9 cases, it affected the cicatrix on the chest wall or its immediate vicinity in 19, and the internal organs without local reccurrence in 4 (lungs 2, uterus 1, and subperitoneal glands 1). The opposite breast became affected by carcinoma in a late stage of the disease in 4 of the 38 cases. Operations for the removal of recurrent growths were undertaken in 11, or just 20 per cent. of the total number of cases; of these, three had two subsequent operations. The rule with regard to recurrent growths should be to remove them whenever practicable and as soon as possible after they are discovered. The remaining 6 patients are living and show no signs of return of the growth, the time since operation being eleven years, and three months in two instances, eight years and four months in two others, seven years in a fifth, and six years in the sixth. Leaving out of consideration those patients who died soon after the operation, those who have since died from independent diseases, and those who cannot be traced, 6 cases out of 48 have no recurrence after periods varying from five to eleven years. If we adopt Volkmann's rule that if a patient is free from recurrence three years after the removal of the growth she is to be considered cured, we can claim that 12·5 per cent. of our cases were cured by operation. This rule, however, is not always correct, for recurrence sometimes takes place at a very late period; one of our cases had recurrence after ten years.

From a careful consideration of the foregoing facts we have drawn the following conclusions:—1. Cancer of the breast, although a formidable disease, is amenable to treatment by operation, and the proportion of cures so obtained may confidently be put down at 12 per cent. 2. Non-success after operation is very frequently due to the extensive character of the disease when it first comes under observation; probably if relief were sought earlier a much larger proportion of cures would be obtained. 3. Moderate enlargement of the axillary glands is no bar to operation or to a successful issue provided they are systematically and carefully removed and the axillary space thoroughly cleared. 4. It is well-nigh impossible to discover trifling enlargement of the axillary glands by an examination through the unbroken skin. 5. No operation for removal of cancer of the breast can be considered complete unless the axilla be examined through the wound, the additional risks of such a procedure being very slight. 6. The large number of cases in which recurrence occurs locally points to the necessity of very free removal of the disease; all doubtful skin must be taken away and great care must be exercised not to leave any outlying portions of breast tissue. 7. Operation is contra-indicated when the whole of the growth cannot be removed or when the supra-clavicular glands are enlarged. The only condition which might render an operation justifiable under such circumstances would be the presence of a foul cancerous ulcer, the removal of which is desirable on account of the great inconvenience which it occasions.

Manchester.

STATUS EPILEPTICUS; REMARKABLE NUMBER OF FITS; RECOVERY.

BY J. W. ALEXANDER, M.R.C.P. EDIN.,
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THE following case of epilepsy, in which the patient recovered after having had an extraordinary number of convulsions, may be considered of interest. It occurred in a woman twenty-six years of age, who was admitted to Rainhill Asylum on Jan. 4th, 1890, suffering from mania with epilepsy. From the date of her admission till the end of December, 1894, she had on an average four fits per month; one to two days intervened, as a rule, between each, and at no time were more than five fits recorded in twenty-four hours. After each group of fits she became excited, the excitement frequently assuming the form of post-epileptic mania of a violent type. Bromide of potassium was taken by the patient in thirty-grain doses twice daily from the middle of May, 1891, till the middle of December, 1894. The series of convulsions which forms the subject of this communication began on Jan. 2nd of this year, a fortnight after the bromide of potassium was discontinued, and ended twenty-one days later. The aggregate number of fits recorded during these twenty-one days amounted to 3245, the daily total reading as follows:—

Jan. 2nd	... ...	16	Jan. 9th	... ...	159	Jan. 16th	... ...	98
,, 3rd	... ...	38	,, 10th	... ...	51	,, 17th	... ...	123
,, 4th	... ...	280	,, 11th	... ...	112	,, 18th	... ...	135
,, 5th	... ...	330	,, 12th	... ...	98	,, 19th	... ...	238
,, 6th	... ...	285	,, 13th	... ...	165	,, 20th	... ...	168
,, 7th	... ...	211	,, 14th	... ...	151	,, 21st	... ...	87
,, 8th	... ...	321	,, 15th	... ...	89	,, 22nd	... ...	5

The convulsions were almost entirely confined to the right side of the body, beginning in the arm and spreading rapidly to the head, face, and leg. The arm was flexed, the leg drawn up, and the head and eyes rotated to the right; occasionally the left leg was involved, and more rarely the left arm also. During the paroxysm urine was passed, but not fæces, nor was the tongue bitten. Each fit was a distinct entity, well marked and severe, but of short duration, generally lasting from about thirty to forty seconds, and separated from that immediately preceding and succeeding it by a period of semi or complete consciousness. There can be little doubt that the patient's recovery may be attributed to the fact that these periods existed and were taken advantage of to give her a sufficiency of nourishment. As to treatment, a brisk purge was administered at the outset, and 111 grains of chloral hydrate were given in the first twenty-four hours, followed during the second twenty-four hours by 105 grains of the same drug. Afterwards ten grains of bromide of potassium and ten grains of chloral hydrate were given every three hours till Jan. 17th, when the amount of each drug was increased to thirty grains every four hours at first, and less frequently as the fits decreased in number and severity. After the final cessation of the convulsions the right arm and leg remained completely paralysed for a fortnight; then the paralysis gradually passed off. At this time, the patient's mental activity having returned, an examination into the state of her nervous system was made. She complained of great pain in the right shoulder, which was purely due to passive or active movement; there was no hyperæsthesia; sensibility to pain and touch remained unimpaired; the motor speech mechanism was unaffected; ophthalmoscopic examination revealed no morbid change; there was slight wasting of the right arm and leg, and the tendon reflexes were brisk, that of the right patella more so than the left. Concerning the further course of the illness, the paralysis has now (April, 1895) completely disappeared, some slight stiffness of the shoulder alone remains, and no more fits have been recorded.

I am indebted to Dr. Wiglesworth, the medical superintendent, for permission to publish the case, and to Dr. Milne, who was acting as locum-tenens at the beginning of the patient's illness, for the earlier notes.

Armley, Leeds.

CIRRHOSIS OF THE LIVER.

BY FREDERICK J. SMITH, M.D. OXON., F.R.C.P. ENG.,
ASSISTANT PHYSICIAN AND SENIOR PATHOLOGIST TO THE LONDON HOSPITAL.

IN THE LANCET of Jan. 5th there is published a case by Dr. H. B. Donkin which is termed malignant jaundice or acute yellow atrophy. I quite agree with Dr. Donkin that the case is rare and interesting enough to be worthy of publication, but I wish to ask, Was the diagnosis correct? My impression, from a careful study of the report, is that it was a case of the disease which I believe the late Professor Charcot first definitely described—viz., hypertrophic cirrhosis. Before I give the actual reason in my mind for my opinion—viz., an analogous case with microscopical post-mortem examination—I would like to say something about the features of hepatic cirrhosis in general, if it be only to correct what I find is a widespread erroneous view of the condition taken by students. For clinical purposes cirrhosis may be classified as follows: (1) irregular local cirrhosis due to scarring from healed abscesses, gummata,

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hydatids, &c.—in fact, any local disease or injury which has healed by scar; and (2) general cirrhosis (which may, however, in certain cases implicate only a lobe or less), of which the forms are (*a*) congenital syphilitic, (*b*) by contraction of the capsule, (*c*) alcoholic or portal, and (*d*) hypertrophic, biliary, or non-alcoholic. I do not propose to enter into any discussion on irregular cirrhosis or on Groups *a* and *b* of the general class, but I do wish to express an opinion on some points in the features of Groups *c* and *d*.

With regard to Group *c* I accept the generally received opinion that the clinical symptoms are produced by—or, in other words, that the pathology of the condition is—first, the appearance in the portal canal, and its smaller divisions, of numerous small round nucleated cells; secondly, the formation from these cells of fibrous tissue; and, lastly, the contraction of this fibrous tissue with consequent pressure effects. Such being the pathology, it is obvious that process No. 1 must *tend* to increase the size of the liver, while process No. 3 must tend to diminish it. If this be granted, then it must follow that the size of a cirrhotic liver depends upon the relative activity of processes Nos. 1 and 3. This leads me to the error mentioned above—viz., that students always say that a cirrhotic liver is large in the early stages, but subsequently becomes small. That such may be the tendency of the pathological process I am not prepared to deny, but I feel very confident that clinically the small cirrhotic liver is the exception and not the rule. While medical registrar to the London Hospital I very carefully noted the condition of the organ as regards size in all cases diagnosed by the physicians as "cirrhosis of the liver," and in fully two-thirds of the cases the lower border was noted as being palpable below the ribs, often as low as the umbilicus. My experience as pathologist also points in the same direction. I very seldom see a small cirrhotic liver, but frequently enough one as large as or larger than usual; in fact, the most typical example of the condition I ever saw (and of which I have a microscopical slide) was a liver which weighed ninety-six ounces. Leaving now alcoholic cirrhosis for a moment, I pass on to say a few words about hypertrophic cirrhosis, the pathology of which is perhaps best given by its synonyms hypertrophic, non-alcoholic, biliary, and intralobular. The existence of such a disease I am prepared to admit, partly on authority (Charcot and others), and partly on experience of one case reported to me by Mr. J. A. Jones of Aberavon, who kindly sent me for examination a portion of the liver and spleen. A full report of the case appeared in the Transactions of the Pathological Society of London for 1890. Microscopically, the condition was precisely that described by authority—viz., cells and cirrhosis actually invading the individual acini. This disease I believe to be exceedingly rare, usually occurring in quite young subjects and presenting typically a large liver and intense jaundice with nervous symptoms prominent—in fact, just the picture Dr. Donkin draws of his case; this constitutes my reason for asking him if his case could have been of this nature.

My remarks are intended to be of a clinical character, and it is a clinical point on which I wish to insist for the sake of clearness—viz., that when we meet with a case presenting the features of alcoholic cirrhosis (i.e., ascites &c., with but little jaundice), and the liver happens to be enlarged (as is most usually the case), we should use the term "cirrhosis with enlargement," reserving the term "hypertrophic cirrhosis" for those rare cases in very young subjects in which intense jaundice, nervous symptoms, and enlarged liver are the prominent features.

Christopher-street, E.C.

ENTERIC FEVER: A THEORY OF EVOLUTION.

BY W. L. CHESTER, M.B. DUBL.,
SURGEON-MAJOR, ARMY MEDICAL SERVICE.

THE recognition of this disease dates from about the middle of the present century. For convenience I propose to term the time preceding its recognition the "prehistoric period," and the latter times the "historic period" of the disease. I will first propound the following postulates: (1) that enteric fever existed during the prehistoric period; (2) that during the prehistoric period, the days when sanitation as now understood was unknown, the typhoid germ was everywhere abundant, and that the disease attacked all susceptible individuals during their infancy; (3) that in infancy the disease readily escapes recognition; and (4) that since the historic period—the days of sanitation—infants commenced to escape the infection, and then for the first time it became a disease of adolescence, and thus became recognisable by the physicians of the day. Whether the specific or the pathogenic theory is the correct one, it is equally difficult to suppose that a disease, avowedly depending on want of sanitation, should not have existed in the days when sanitation practically did not exist. How does it happen, then, that the older observers failed to recognise it? A common fever, with such well-marked and distinctive clinical and pathological features, could not well have escaped observation or be confounded with other disease by at least some of the clever and observant physicians of the day, and yet while the details of other diseases are recorded with considerable accuracy and skill, enteric fever alone, of all the general diseases, escapes notice.

The explanation now advanced is that during the prehistoric period, the days when there were no public water supplies, but each household depended on its own well, pump, or river, when waterclosets, sinks, or sewers, if they existed, were untrapped, when filth of every description reigned supreme—that in those days an infant had hardly made its entrance into the world before it was brought into contact with the typhoid germ, and, if susceptible, contracted the disease, thereby obtaining immunity in after-life. We know how difficult it is to diagnose enteric fever in infancy—without a thermometer almost impossible. The prehistoric mother would notice her infant ailing, hot, probably with tympanitic abdomen, and diarrhœa. The prehistoric practitioner would say teething or a gastric attack, and who at the present day would blame him? Post-mortem examinations on infants in those days were even rarer than at present. The prehistoric practitioner never had a chance of seeing an adult suffering from enteric fever, and thus we hold him excused. Since the historic period (the days of sanitation) this filth disease, which undoubtedly depends on want of sanitation, has first made its appearance—surely a paradox, unless the above explanation is accepted. The sanitary development made it possible for children to escape, provided they were bred in a sanitary area; as they became older, on removal to a place of less perfect sanitation, they for the first time came into contact with the contagium and contracted the disease. This view is borne out by the following facts, extracted from a communication by the special correspondent of THE LANCET.[1] "The average death-rate of Toulon from typhoid fever is equal to 1·85 per 1000 per annum, and in this respect Toulon ranks next to Havre as the worst town in France. Yet it is well known that no permanent resident of Toulon dies from typhoid fever. This curious and significant fact I described when writing about Toulon some eight years ago. Dr. Galliot of the French Navy brought this forward in an essay for which the Government awarded him a gold medal. On calling the other day on him he again confirmed the fact. The natives of Toulon seem to be proof against typhoid fever. The children between the ages of three and six years, with but few exceptions, suffer from what is called in France *fièvre muqueuse*—an ill-defined fever which, though rarely fatal, confers immunity from typhoid fever. Dr. Galliot has demonstrated that since 1854 no native of Toulon has died from typhoid fever unless he had lost his immunity by living for several years in a thoroughly healthy town and then returned to the impurities of his native town. The victims of typhoid fever at Toulon are the strangers who come to live there; of these, of course, the greater number are soldiers."

Further strengthening evidence is shown in the following, extracted from the *British Medical Journal*.[2] Dr. Low, writing on the use of the water of the River Trent, states: "Persons freshly coming into the valley seem to be more commonly attacked than those whose lives have been spent in the district and who have been drinking for years of the river, the explanation being that, in all probability, many native Trentsiders have had enteric fever in early life, and that perhaps the constant use of Trent water by those who have not had the fever enables them in some way to resist more or less the disease." Similarly, in India and Egypt, both insanitary countries (in this respect resembling England

[1] THE LANCET, July 8th, 1893.
[2] Brit. Med. Jour., March 10th, 1894.

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in the beginning of the present century) in which enteric fever prevails much among Europeans, especially the English, while it is unknown, or almost unknown, among the natives, the contention being that the latter have passed through the disease in infancy. The enormous infant mortality in these countries is to some extent corroborative evidence. These views are further borne out by what one sees in the army. It has been a standing conundrum why this disease appears to increase year by year among the troops abroad, while a few decades ago it was unknown. The cause has generally been attributed to the youth of the soldier of the present day. But formerly there were always at least some young soldiers present with the colours, yet these did not contract the fever, while many cases of enteric fever in men of mature age—from thirty-five to forty-five years of age—have of recent years come under my observation. The deduction is that the recruit of former times had passed through the ordeal in infancy, while he of the present day, being a more carefully nurtured article, escapes the disease in his own country only to be stricken by it directly he arrives in the insanitary areas which are the normal condition of the ordinary tropical or subtropical station.

A well-known South African expression, used for cattle, exactly meets the case: the recruit of former days was "salted," he of the present day is not. To exemplify further. Suppose a recruit born and bred in the slums of an insanitary English town, where typhoid fever is endemic. He will in all probability have passed through an attack of enteric fever, if susceptible to it, before he enlists. He may then go abroad with impunity, so far as enteric fever is concerned. This was the class of recruit of old days, when insanitation was universal. But, on the other hand, suppose a recruit, born and bred in a highly sanitary area—and such areas are becoming more common every day,—he will probably never have come in contact with the contagium before he enlists, and, having no protection, contracts the disease on arrival in an insanitary area. The conclusion from the above would be that the more protection afforded by sanitation to individuals in their native area, the more liability for them to contract the disease on removal to less favoured places, and that in the army an increasing amount of enteric fever must be anticipated until the foreign stations are brought into a sanitary condition as perfect as those at home.

Citadel Hospital, Cairo.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RETROVERSION OF THE GRAVID UTERUS; SPONTANEOUS REPOSITION AT THE END OF THE FOURTH MONTH.

BY RICHARD H. READ, L.R.C.P. LOND., M.R.C.S.

A MARRIED woman consulted me on Aug. 7th, 1894. She was thirty years of age and had had eight children in the past nine years. She said she was between the third and fourth months of her ninth pregnancy. She complained of pains in the bowels and her urine was scanty. She was, however, able to do her ordinary housework, although the pains were severe at times. According to her statement, she had no difficulty with micturition or defecation. A few days later I saw her again, when she complained of diarrhœa. Her symptoms subsided under medicinal treatment, but as she still complained of abdominal pain and backache I examined her at her own house on Aug. 14th. The abdomen was distended, but was not markedly tender on palpation. There was a hard tumour extending from the pubes upwards to the umbilicus. At first it felt much like a gravid uterus, but on closer examination fluctuation was detected. The patient said this swelling had increased rapidly during the past fortnight. Per vaginam a smooth, rounded, elastic swelling was found pressing forward the posterior vaginal wall. Pressure upon this caused severe pain. The cervix uteri could not be felt, although a careful attempt was made to reach it. I had no catheter with me on this occasion. Next day, on making inquiry, the patient adhered to her statement that her micturition was performed naturally. On making pressure on the vaginal swelling a small quantity of urine flowed, and on passing a fine elastic male catheter a quantity of urine sufficient to fill an ordinary utensil once and a half was drawn off. The cervix still could not be felt, and the pelvic tumour seemed as fixed and tender as ever. I prescribed an opiate and ordered poultices to be applied to the lower half of the abdomen. The further progress of the case is interesting, inasmuch as though complete retention of urine followed the first use of the catheter and the patient was for some time in a critical condition with the pelvic tumour apparently as fixed within the pelvis as ever, the induction of abortion otherwise than by puncture (aspiration) through the uterine wall was rendered practically impossible by the position of the os uteri. All reasonable attempts at placing the pelvic tumour in a normal position with the patient in the ordinary and genu-pectoral postures failed. She was now (Aug. 22nd) at the end of the fourth month of pregnancy, and I decided to patiently wait another week before attempting further treatment, since her general health was improving somewhat and there were no signs of mischief around the uterus. After keeping the bladder and rectum empty for five days I was rewarded on the sixth morning, when I found the pregnant uterus in its normal position and the patient able to pass urine in the natural way. On Jan. 22nd, 1895, I delivered her of a male child at term. As the pains ceased soon after the os had been dilated the application of the forceps was necessary.

Hanley, Staffs.

TREPHINING AND DRAINAGE FOR BASAL CEREBRAL HÆMORRHAGE; DEATH.

BY FITZWILLIAM R. A. EVANS, L.R.C.P., L.R.C.S. IREL.

IN November, 1894, I was asked to see a girl aged five years who was said to have been suffering from whooping-cough for about a month previously. On examination I found her to be healthy, well developed, but troubled by occasional paroxysms of cough. She had a very good family history and had until then escaped all the ordinary infantile diseases. On the fourth morning I was sent for as the child had been found "stupid." On my arrival she was lying on her back in bed, motionless, quiet, with slow respiration and pulse, and the temperature normal. She did not notice or respond to questions. Her eyes were open; the pupils were dilated but equal, and reacted slowly to strong light, otherwise accommodation seemed to be constantly and completely relaxed. The membranes of both ears were normal. She moved her limbs lethargically when their cutaneous sensibility was tested, but without utterance or change of facial expression. All other signs were negative, poison excluded. No positive diagnosis was made then or treatment prescribed. Next day, on visiting the patient, the mother told me that the child had not passed urine or swallowed even liquids since I last saw her. The eyes were now fixed, there being no strabismus, but slight right ptosis. The right pupil was widely dilated and would not react; the left was much smaller, with some reaction. With the ophthalmoscope I saw that the right retinal veins were very turgid, the left being much less so. The knee-jerks were greatly exaggerated, particularly on the left side. While there appeared to be a general sensory and motor paresis, there was decided left hemiplegia. To avoid undue prolixity I may say that I diagnosed rupture of a basal cerebral vessel on or in the vicinity of the right side of the pons, with local and general compression, caused most likely by a paroxysm of coughing. I had the patient carried to my surgery and placed on the operating table, my friend, Mr. Graves, giving a little chloroform at first, which, however, we soon dispensed with. I applied a three-quarter inch trephine over the right parietal bone. When the disc was removed the dura mater bulged tensely into the aperture. After the membrane was incised the brain protruded. I then passed a No. 6 gum-elastic catheter downwards between the dura mater and the brain to the tentorium, along which the catheter seemed to slip to the neighbourhood of the pons. Uniformly blood-stained cerebro-spinal fluid to the amount of about three ounces escaped in the hour during which the catheter was allowed to remain *in situ*. The tension decreased, the pupils, especially the right, contracted and reacted, and the patient moaned. However, she never regained more than partial consciousness and died ten hours afterwards.

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Remarks.—I selected the catheter in preference to a trocar, ı its flexibility it could follow the course of the ten- without wounding the sinuses or bloodvessels. Un- tely, I could not obtain a necropsy, but I think that :ory, signs, suddenness, and the result excluded every- :xcept hæmorrhage. In the ordinary cases of com- n, where the clot can be trephined over, the procedure y enough, and the results are often satisfactory. of the readers of THE LANCET—especially general ioners, like myself—have performed this operation :fully I should like to ascertain their *modus operandi*. ngham.

ERUPTION WITH RISE OF TEMPERATURE SIMULATING MEASLES.

By JAMES ROBERTSON, M.B., C.M. GLASG.

following case having occurred on board a Trans- : steamer may perhaps be of interest to medical of such vessels. The patient was a boy aged seven- onths, the child of Polish Jews on their way to the States of America. Two days before embarking he und to have on the centre of his left thigh a deep r sloughing ulcer an inch in diameter and with in- edges. The child was otherwise normal; there was hilitic history or sinus leading to bone. The ulcer ly resulted from an abscess; it was washed and l. Next day the child's pulse and respiration were his temperature was 101°F., and on his legs and arms vas a well-defined measly rash elevated and arranged les; a similar rash, though in a slight degree, was also nt on the body. On the following day the child's con- was unchanged and he was taken on board the ship.)ther and five other children ranging from three years lve, along with the patient, were all kept in hospital the voyage. On the second day at sea the rash dis- ed, having continued four days in all, the ulcer :d a healthy healing character, and the child became ise normal. He had no coryza or cough and throughout is food well. Was this a mild case of measles or was h simulating measles, but really due to absorption of oison from the ulcer? None of the six children ever asles; this child was the only one affected. There case of measles in the district where the family lived o embarkation, and no case occurred during the

sford-place, Glasgow.

TRIGEMINAL NEURALGIA AND NASAL DISEASE.

By MAYO COLLIER, F.R.C.S.

HIN the last twelve months two cases of severe and ent facial neuralgia that up to then had defied all treat- have come under my care; they were referred to me by my colleagues, Dr. Guthrie and Dr. Cagney of the North-West London Hospital. I have postponed till now publishing an abstract of these cases in order to try the validity of the cures by the test of time.

The first case was that of a man aged fifty who was for some time under the care of Dr. Turner, of the Hospital for Epilepsy and Paralysis, Regent's-park, and I am indebted to him for the early notes of this case. In short, this man had suffered severely for the last four years, and latterly the frequency, duration, and intensity of the attacks had made life almost unsupportable. An examination of the nasal cavities revealed extensive disease of the middle turbinated bone on the right side. The removal of this resulted in almost immediate as well as permanent and complete cure. The second case, that of a female aged thirty-eight kindly sent me by Dr. Cagney, was on all fours with the man's case, only of longer duration (twelve years) and at times greater intensity. An examination here revealed disease in the same situation, and the same fortunate result followed its removal. Of the many recorded cases of trigeminal neuralgia I find few attributed to nasal disease, but taking into consideration the wide distribution in the nasal cavities of the many branches of the nasal ganglion on the second division of the fifth nerve, it is not surprising that a considerable number of these cases are, in fact, due to irritation in one form or another of the branches of this nerve in the nose.

Harley-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARYLEBONE INFIRMARY.

A CASE OF GRAVES' DISEASE ASSOCIATED WITH IDIOPATHIC MUSCULAR ATROPHY; REMARKS.

(Under the care of Dr. LULLUM WOOD BATHURST, late Second Assistant Medical Officer.)

A YOUTH aged twenty years was admitted into the St. Marylebone Infirmary complaining of difficulty in walking and weakness of his muscles. About fourteen months previously to his admission he found that in walking he bent over very much to the left side, and this caused his left ankle to ache; he then noticed that the toes of the left foot began to drop and the heel was drawn up so that he could not put it to the ground, and this has grown progressively worse up to the present time; for about two months previously to admission the right heel was being drawn up in the same way. He has had no actual pain in the limb, and only after walking for some time has he an aching sensation in the limbs, chiefly in the left ankle and thigh. For the last four months prior to admission he was unable to follow his employment, which entailed a good deal of walking. He has always enjoyed good health, never suffered from rheumatism or syphilis, and never drank to excess. His father died from phthisis. There is no history of any nervous complaints in the family. The patient is a tall young man with deeply pigmented skin and prominent eyes. His intellect is good. Though the exophthalmos is well marked von Graefe's sign cannot be obtained; the palate is highly arched; there is a prominence in the front of the neck corresponding to the position of the thyroid gland, and the swelling rises with deglutition; there is distinct pulsation over the tumour, but no dilated veins are visible. Slight tremors of the fingers are noticeable on the hands being held out in front of him. The skin of the body is very dark and of pigmented appearance, especially so on the face and abdomen. He complains of palpitation at times, though it does not worry him much. The apex beat is in the fourth space one inch outside the nipple line. The impulse is diffuse, forcible, and heaving. A thrill is felt over the cardiac area; cardiac dulness is increased slightly in an outward and downward direction. The first sound is loud and at times is accompanied by a short but distinct systolic murmur; this is not always audible. The heart's action is irregular and quick. As for the arms, the deltoids are somewhat wasted but can be put into action. The biceps muscle in each arm is almost completely wasted, and they appear to be simply fibrous cords, much contracted, so that the forearms cannot be completely extended. He cannot flex the elbows at all except by the weight of the forearms, for the biceps, brachialis anticus, and coraco-brachialis are atrophied. The power of extension of the elbow-joints is good, the triceps on each side acting well. He cannot pronate or supinate the forearms by muscular action, but there is slight power in the supinator longus. The upper arms are much wasted, but the forearms do not appear to be so. There is very slight power of extension of the wrists; power of flexion is fairly good. The tendon of the flexor carpi radialis is very prominent at the wrist, and on his flexing his hand a distinct clonus is felt in it. Coming to the thumbs, flexion and extension of the phalangeal joints are quite normal, but there is practically no power of flexion, extension, adduction, or abduction of the metacarpo-phalangeal joints. There is great wasting of the thenar eminences. In the face no paralysis, weakness, or wasting can be detected. On examining the neck, the sterno-mastoids and the anterior muscles of the neck seemed to be normal in size and contractile power, but the muscles of the back of the neck were rigid and contracted. He can hyper-extend the head—i.e., flex it on the back—easily, but cannot flex the

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head on the sternum; this seems to be due to contraction of the posterior cervical muscles, for the anterior muscles are felt to be put into powerful action on his attempting to perform the act. As for the back, there is a lateral curvature in the dorsal region, with the concavity to the left, and a compensatory curve in the opposite direction in the lumbar region. The spinal muscles on the right side in the lumbar region are greatly thickened and feel like contracted tendons. The spine is kept absolutely rigid and cannot be flexed; this, as in the case of the neck, is due to the contracted condition of the erector spinæ. There is considerable lordosis of the lumbar spine. The trapezii on both sides act well and powerfully; the shoulders can be shrugged and thrown back. The serrati magni appear to be weak, and lunging can be only imperfectly performed; the vertical edges of the scapulæ stand out prominently. The angles of the ribs are more prominent on the right side, with corresponding prominence of the left side of the chest in front. The respiration is partly thoracic and partly abdominal; the recti and other abdominal muscles contract well. There is some wasting of the muscles of the thigh and calf in either leg, but the muscles contract well, with the exception of the gluteal muscles, which are soft and flabby, and have scarcely any power of contraction. The feet are in a position of talipes equino-varus, especially the left, the head of the astragalus on that side being very prominent. The toes of the left foot are dorsiflexed at the metatarso-phalangeal joints, and the heel is drawn up; the same condition exists in the right foot, but to a much less extent. Neither foot can be everted, nor can the feet be dorsiflexed at the ankle-joints. On attempting to do so the deformity is increased. Coming to the nervous system, sensation both to touch and to heat and cold is good. The pupils react to light and accommodation, and there is no abnormality in the retinæ. The patellar reflexes are absent; the plantar reflexes are normal or rather exaggerated; while the cremasteric and abdominal reflexes are very active. The reaction of the muscles to faradaism is rather increased, otherwise electric excitability is normal. In walking neither heel can be made to touch the ground, the patient treading only on the balls of his toes with the heels about three inches from the floor. He is very unsteady, the knees knocking together and the feet tending to cross. The body rolls from side to side. There is extreme lordosis of the lumbar spine, and the gluteal muscles are quite relaxed. When lying flat on his back he cannot raise himself into a sitting posture without the help of his arms; on attempting to do so he raises himself a little by the aid of his abdominal wall muscles. The inability must be due either to weakness of the anterior spinal muscles (psoas and quadrati lumborum), together with the abdominal wall muscles, or to the intense rigidity and contraction of the components of the erector spinæ; probably the latter would be quite sufficient to account for it. Having been helped into the kneeling posture he is quite unable to rise without aiding himself with his arms. This, again, shows the inaction of the glutei muscles, which are quite flaccid during the attempt. On raising him on to his legs he is able easily to straighten the back up into the erect position without pushing off his thighs. He is quite unable to rise from a chair unaided by his arms. There is no incontinence or retention of urine, and he has good control over the sphincters.

Remarks by Dr. BATHURST. — Dr. BEEVOR, who saw the case several times and took great interest in it, was of the opinion that it was one of exophthalmic goitre associated with idiopathic muscular atrophy, but it was possible that it might be an unusual form of pseudo-hypertrophic paralysis. He regarded the contracted condition of the erector spinæ as most unusual. For permission to publish this case I am indebted to Mr. J. R. Lunn, medical superintendent of the infirmary.

SALVATION ARMY SHELTERS AND SMALL-POX.—On Aug. 27th at Clerkenwell the police reported that a cab-driver, who was remanded last week on a charge of stealing from Upper-street, Islington, a horse and hansom cab, value £76, the property of Arthur Thomas Young, was unable to attend the court. Since he had been on remand he had developed small-pox, and had been removed to the hospital When charged he gave his address at the Salvation Army Shelter, Charles-street, Hatton-garden.

Reviews and Notices of Books.

A Text-book of Physiology. By M. FOSTER, M.D., Professor of Physiology in the University of Cambridge. With Illustrations. Sixth edition. Part II. London: Macmillan and Co. 1895.

THIS part embraces the tissues of chemical action with their respective mechanisms and nutrition. It, therefore, includes salivary, gastric, and intestinal digestion, respiration, and the lacteal, the urinary, and cutaneous secretions. We suppose that the last chapters had gone to press before the author had the opportunity of hearing of the remarkable experiments of Professor Schäfer on the action of the extract of the medullary portion of the adrenals on the blood pressure. So short a period has elapsed since the appearance of the last edition of this part of Professor Foster's work that little is required to bring it up to date. The present part has, however, been increased by about forty pages, and it possesses a separate index, which was much required in the editions of 1891 and 1889.

The additions to and corrections of the text that have been made are in the earlier sections very slight. Thus, for example, whilst in the previous edition it was stated that the branches of Auerbach's and Meissner's plexuses were distributed to the muscular coats of the stomach, in this edition it is added that, whilst many of the fibres are thus distributed, others go to the muscular fibres of the blood-vessels, and some, there is reason to think, "are destined for the glands and end in delicate arborescent terminations in contact with the substance of the cells." It is of such intercalations that the increase in bulk is made up, and the work is maintained as a whole at the high level it has reached.

Medical Handbook of Life Assurance for the use of Medical and other Officers of Companies. By JAMES EDWARD POLLOCK, M.D., F.R.C.P., Consulting Physician to the Hospital for Consumption and Diseases of the Chest, Physician to the Imperial Life Office &c., President of the Life Assurance Medical Officers' Association; and JAMES CHISHOLM, General Manager and Actuary of the Imperial Life Insurance Company. Fourth edition. London, Paris, and Melbourne: Cassell and Co. 1895.

ALTHOUGH the study of the medical questions involved in life assurance tends to become a special department of practice, the subject is one with the general details of which all medical men ought to gain some acquaintance. Proposers often consult their ordinary medical adviser before opening negotiations with an office, and in the numerous cases where the life is neither young nor first class, regarded from an assurance point of view, the family practitioner is not unlikely to be referred to by one side or the other in the course of the business. Dr. Pollock is to be congratulated on his success in providing for his professional brethren a handy and reliable guide to this complicated subject, in which mere precision of physical examination has to be so largely supplemented by the practical teachings of mature experience, by inferences from family histories, and by intuitive generalisations which not everyone can accomplish profitably. His directions for the investigation of cases aim at the eliciting of all the facts. The proposer's interviews with the medical man acting for the company should invariably be private, the interrogatories should be suave and tactful, the physical examination of the chest and abdomen should in all cases be made next the skin, and chemical examination of the urine in every instance is recommended. Albuminuria formerly existing, but followed by a period of perfect health continuing for years, need not disqualify. Albuminuria presently existing and known to have existed for years in persons of otherwise perfect health may justify assurance for a

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short period with an addition to the premium. Cases of albuminuria associated with symptoms of Bright's disease, cardiac disease, gout or rheumatism should be declined. Glycosuria should forbid acceptance of the life, but if it has entirely disappeared for some years the life might be insured with some addition to the premium. Gout and intemperance are prominent among the conditions which result in loss to the insurance company. Dr. Pollock accordingly devotes much attention to them, and explains how these extra risks have to be met either by additions to the age or additions to the premium. The inferences to be drawn from the results of physical examination are explained in much detail, and readers will be greatly assisted in their comprehension of the subject by a series of one hundred typical cases selected from the records of various offices. In these the leading clinical symptoms are summarised in a line or two, and such extra rating as may be based thereon is also shown.

Chemistry of Urine. A Practical Guide to the Analytical Examination of Diabetic, Albuminous, and Gouty Urine. By ALFRED H. ALLEN, F.I.C., F.C.S. London: J. & A. Churchill. 1895.

MR. ALLEN'S contributions to the literature of analytical chemistry are well known and highly valued, because a critical and practical examination of the processes which he describes brings home the assurance that the author speaks not only of that he knows about, but of that he has tried. Analytical chemists have long recognised his work on "Commercial Organic Analysis," which we have reviewed in these columns,[1] as a distinctly reliable book of reference on all matters pertaining to the analysis of various organic stuffs. It contains just those precautionary injunctions and recommendations as to the best and most satisfactory methods of analysis which only practical acquaintance can enable an author to write about with any real or useful purpose. We welcome, therefore, the issue by the same author of a work on urinary analysis, since it is reasonable to suppose that the same confidence may be placed in the observations which he is led to make as to the merits and demerits of the various analytical methods that have been suggested and employed in the important task of differentiating between a healthy and a morbid urine. It is remarked in the preface that a considerable portion of the contents of the book was designed to form part of the concluding volume of the work we have already alluded to—"Commercial Organic Analysis"—Part 3 of Vol. III. of which deals mainly with substances of animal origin, and which he announces will complete the chief literary work of his life. "Of late, however," he goes on to say, "circumstances have led me to devote much attention to the chemical examination of urine, especially in relation to certain pathological conditions of great importance in Life Assurance reports [why life and assurance in capitals, by the way?] as well as in clinical diagnosis and prognosis. These examinations have caused me to investigate critically a large number of the analytical methods which are in vogue for the examination of urine, especially for sugar and albumin, and to confirm or disprove certain statements generally accepted as facts." The publication of the work is sufficiently "up to date" as to have admitted of a digest of the opinions expressed, amongst others, by Dr. Pavy, Sir George Johnson, Dr. Halliburton, and Mr. Allen himself on the somewhat vexed question of the presence of a small quantity of sugar in normal urine, which formed the subject of considerable and lengthy correspondence in our columns early in the present year.[2] The last word, as the author admits, is doubtless yet to be said. And there still probably remain some important points to be cleared up in regard to the possibly disturbing effects of the reagents used in the processes employed for the separation of the sugar, and the question of their action upon bodies not sugar. The book is not burdened with details of processes out of use or of those methods merely now of interest in connexion with the history of the subject; but it is a clear and practical guide to the analytical examination of urine, giving concise and readily comprehensible directions of only those processes which are worthy of recommendation or which, in other words, involve a minimum of trouble, occupy a reasonably short time, and yet afford accurate results—points which are of primary importance to the busy practitioner. One omission has come under our notice—there is no mention of Pettenkofer's well-known and useful test for biliary pigments. We may add that we have found this test more satisfactory by substituting a solution of glucose in strong sulphuric acid for ordinary cane sugar, which is apt to char and therefore to mask any colour that may be produced. Glucose may be dissolved, with little change of colour, in strong sulphuric acid, and when a few drops of this solution are allowed to fall into the centre of a small pool of urine upon a white plate the play of colours due to biliary pigments may be seen under very advantageous conditions.

[1] THE LANCET, Dec. 18th, 1886; Sept. 29th, 1888; and Jan. 14th, 1893.
[2] THE LANCET, January, February, and March, 1895.

Conventional Lies of our Civilisation. By MAX NORDAU London: William Heinemann. 17*s*.

"WHAT is truth?" was a question asked upon an occasion which, *pace* Max Nordau, had a great influence upon the future course of the world, and in this book—an earlier work than "Degeneration"—Max Nordau has set himself to answer the question more or less.

The whole civilised world, according to him, is hollow and rotten; we are all miserable and striving to get away from our age and its disappointments, and the reason of this pessimism is that all our institutions, all the existing conditions of the world, are at war with our recent convictions. Religion, kings, aristocracy, marriage, and everything else are all lies, and according to Max Nordau everyone knows them for such. We leave it for skilled casuists to decide whether a lie which everyone knows to be a lie is really so, and we doubt whether if we all lived in the Palace of Truth we should be much happier. To "let innumerable cats out of unnumbered bags" would not in the least degree lessen social inequalities or reduce the number of illness, but despite Max Nordau's gloomy views the world is a better place than it was and men are grown kindlier one towards another.

The book is well worth reading, for if anyone is inclined to quarrel with this age he will be more satisfied with it when he has read this indictment of modern life.

OUR LIBRARY TABLE.

Bulletin de la Société de Pathologie et d'Hygiène Coloniale. Paris: Paul Lemaire. 1895.—This is a monthly publication, which began with this year and consists of thirty-two pages. As is only natural, our neighbours are chiefly interested in the tropical diseases which affect their colonies, and most of the contributions have, so far, had reference to Madagascar, Haïti, the Lower Senegal, Tonquin, the Niger, Tunis, and the French Soudan; but we see in the June and July numbers that a translation is published of Dr. Sandwith's paper on Anchylostomiasis, which first appeared in our columns.[1] Some very useful advice has been given to intending colonists who desire to preserve their health, and in the

[1] THE LANCET, June 2nd, 1894.

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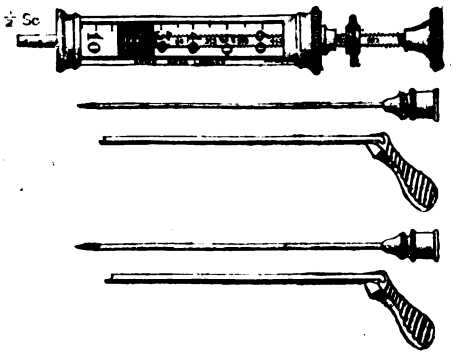
interests of tropical medicine we gladly welcome this new arrival.

Diabetes and its Treatment. By A. VINTRAS, M.D. London: Baillière, Tindall, and Cox. 1895.—This little book of twenty-four pages does not pretend to discuss the difficult question of the pathology of diabetes, and the treatment recommended is the lithia and arsenic method recommended by Dr Martineau, which Dr. Vintras has adopted on the principle of having seen very good results accruing from it. The diet, rules, and hints at the end of the book will be much appreciated by the diabetic as helping to vary the monotony of his food.

New Inventions.

A MODIFICATION OF THE EXPLORING TROCAR.

I BEG to introduce to the profession a modification of the exploring trocar which I think will be found to be useful in the treatment of such collections of fluid as localised empyemata, abscess of the lung, and deep abscesses of the neck and pelvis. I have experienced in my own operations and witnessed in those of others sometimes a difficulty in cutting into an abscess which has been proved to exist by the ordinary exploring needle, and it struck me that if we had a guide on the needle that could be left *in situ* after the needle was withdrawn some operations would be greatly facilitated. I have therefore had made a fine director, to which a suitable handle is attached, fitted on to an exploring



needle. The director very slightly increases the thickness of the needle. The instrument is used with the director encasing the needle; pus having been found, the syringe and needle are withdrawn together, and the director, which can be held steady by the firm handle, serves as a guide for a knife, or in dangerous regions for a sinus forceps to be run down the groove. The instrument has been excellently made for me by Messrs. Down Brothers, 5 and 7, St. Thomas's-street. London, S.E.

ARTHUR W. PRICHARD,
Surgeon, Bristol Royal Infirmary.

COINCIDENCES IN PRACTICE.

BY WILLIAM O'NEILL, M.D., M.R.C.P. LOND., &C.,
LATE PHYSICIAN TO THE LINCOLN LUNATIC HOSPITAL AND PHYSICIAN TO THE LINCOLN GENERAL DISPENSARY, &C.

So many coincidences are met with in the course of medical practice that it would almost seem that diseases and accidents, like sorrows, never come singly. The only cases of glanders in man that I have seen were two in number, and they occurred within a week without having any connexion with one another. A surgical friend recently mentioned the fact that on the preceding evening he had treated two cases of fractured arms in children, although for a long time previously he had not had a similar case. I heard a country practitioner say that he had at the time of speaking three cases of fractured legs under his care, a thing to him unprecedented. It would be easy to multiply examples bearing on the same subject, if it were necessary, to mention occurrences which must be in the experience of every medical man. In the autumn of 1894 and in the early part of the late winter I treated only a few cases of hæmorrhage, chiefly hemoptysis in phthisical patients; but in the month of March quite suddenly a considerable number of cases of bleeding of various kinds came under my observation. These might be explained, perhaps, by atmospheric influences and were not strictly coincidences like the preceding examples, but still they were non-contagious diseases that did not come singly.

Among the cases of hæmorrhage were two or three of interest. One of them was a case of epileptiform convulsions from loss of blood. The subject of the attack was a man about forty-nine years of age who, after getting out of bed in the night to micturate, suddenly fell on the floor insensible and became immediately convulsed, especially on the left side. He gradually regained consciousness, but in less than an hour he was convulsed again. The second attack subsided in the course of a few minutes. The patient then appeared ghastly white and complained of headache, muscular twitchings of the left side of the head, and great prostration of strength. In the course of the day he was profusely purged, the stools being melænic, and this character of the evacuations continued for three or four days. The patient had suffered from painful digestion for several years, but on no previous occasion had he lost blood or been convulsed.

Another case was that of a woman fifty years of age, who consulted me on account of disagreeable sensations in the region of the bladder and scanty flow of urine. On the third day after my seeing her she commenced to void blood with her urine. This was followed by a flow of blood from the nostrils and mouth, and her loose motions also gave evidence that blood was escaping from the intestinal tract. In addition the skin presented patches of ecchymosis, especially wherever the slightest pressure had been made. For two or three days the patient's temperature was increased and her face flushed, but with these exceptions there were no indications of fever, and the only complaint she made was of headache and debility. When this patient was eighteen years of age she had a similar attack, but much milder in character, and a few years ago she had a tooth extracted which caused bleeding so profuse and so prolonged that the dentist declared he would never touch one of her teeth again.

Among the cases of hæmoptysis was an old patient who had suffered from phthisis for upwards of twenty years. One Sunday in the month of June, 1875, he was carried out of a chapel coughing up blood. The day was hot, the congregation large, and he felt oppressed; but before he could get into the fresh air the bleeding came on. He quickly recovered from this attack, but, strange to say, on the corresponding Sunday of the following year a similar occurrence took place. Since then scarcely two years pass without the patient having an attack of bleeding more or less profuse which brings him to death's door. Then when things seem to be at the worst he begins to improve, and this is his condition at the present time.

All the patients afflicted with hæmorrhage suffered from little or no pain with the exception of one or two. In a case of renal hæmorrhage the result of a calculus, the pain which a patient endured for a day or two was very great. From the effects of the hæmorrhage, however, all the patients recovered, and this was a happy consummation for patients and physician. In the case of hæmophilia ergot was of the greatest service, although the drug is not recommended in such cases by some writers.

Lincoln.

THE PORTSMOUTH INFECTIOUS HOSPITAL.—The borough auditors of Portsmouth (Mr. H. B. Morris and Mr. E. E. Hanham) issued their report on Friday, the 23rd inst., on the general municipal and urban sanitary authority's accounts and books for the past year. Every department is dealt with at length, and regarding the health department they say: "We are glad to note that our suggestions, as to the day-book being a complete register of all the patients admitted to the infectious diseases hospital and the charge made being inserted against each name, have been adopted. We note a considerable increase in the amount recovered from patients in the hospital."

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THE LANCET.

LONDON: SATURDAY, AUGUST 31, 1895.

THE question of the remuneration of medical witnesses for attending and giving evidence in courts of law has always been a contentious one, and we fear there is little likelihood of establishing a scale of fees that would be acceptable to members of the profession and intending litigants. Much, however, might be done in the matter of fixing an equitable payment of fees where the courts have the authority of ordering such payment. A medical man is not bound to give evidence on matters of opinion, but he must answer his subpœna on questions of fact like any other witness. It is difficult, however, to dissociate the two cases, for it rarely happens that professional testimony is required except where inferences constitute its essential value. As regards civil actions it has been submitted—(1) that a medical witness should have an entirely free hand in coming to terms with his intended clients—that he should be unfettered by rules of practice or rules of court; (2) that he ought to be satisfied with the regulation conduct fee claimable on receiving his subpœna; and (3) that in certain cases he ought to give evidence and furnish reports *gratuitously*. The first suggestion is, in our opinion, the only tenable one; for otherwise, whilst protection and relief might be given to impecunious yet deserving persons, the door would be opened to others in a position of competence, or even affluence, who would not scruple to take advantage of regulations never intended for their benefit. In the case, say, of a poor man who had been injured, possibly through no fault of his own, it is certainly hard, when he makes a claim for compensation, that he should be unable to support such claim by medical evidence simply because he cannot afford that which some have termed a luxury, but which in reality is necessary to establish his plea. At the same time, it is idle to contend that the medical man who has treated him should be compelled to attend the court and give evidence without a guarantee of remuneration. The plaintiff, let us suppose, is wholly incapable of making good a promise of payment unless he succeeds in his action. It is clear the defendant will not be moved by a spirit of friendly feeling towards the medical attendant of his opponent, and would only pay on judgment against him. The members of our profession have equally "a tear for pity and a hand open as day for melting charity" with other sections of the community but were they on all occasions compelled to be the bright examples, we fear that at no distant date they would be the victims of misplaced confidence and over-exacting claims, for

> "Goodness growing to a plurisy
> Dies of its own too much."

At a recent trial the Common Serjeant made some strong remarks on the duties of hospital surgeons as witnesses "being of opinion that a plaintiff ought to receive a report without any fee; and for a hospital surgeon to demand one and to refuse to give evidence unless he received another fee he thought an improper proceeding." With all submission we directly challenge the contention of the learned judge. We are obviously not in a position to pose as authorities on purely legal matters, but we would suggest that "a report" for the purposes of litigation would be practically valueless. Would the Common Serjeant admit such as coming within the laws of evidence? We think not. For without supplementary personal testimony, where would be the justice to the defendant, who has the right of challenging and testing the value of such testimony by cross-examination? Moreover, on other grounds we demur to his opinion. A hospital surgeon, whether visiting or resident, in many cases serves without any remuneration whatever, and when paid receives in most instances a poor equivalent. We do not complain of this, but we certainly think that he should not be at the beck and call of every claimant patient, not only for his own sake, but even more for that of the many other sufferers under his charge, who, by his perhaps repeated and protracted absence, would not receive the attention they deserve and have a right to demand. No; if medical testimony must be forthcoming there should be some rule sanctioned by the Home Secretary or other official such as obtains in the police-courts, under which a medical man's attendance and evidence meet with some pecuniary recognition.

The existing scales of fees for travelling expenses and for the services of medical men as witnesses in the different courts require regulating with a view to fairness of payment and greater uniformity. Under existing conditions a practitioner if called to attend an Assize Court distant from home is not allowed anything for Sundays, even though it is impossible to leave the locality of the court. This is an injustice to which we have referred on many occasions. The law moves slowly in matters of reform, but we would again urge the right of our professional brethren to their undoubted dues.

IN a recent issue of the *Journal of Comparative Pathology and Therapeutics* there is an instructive paper by Professor HOBDAY, of the London Veterinary College, on the Therapeutic Uses and Toxicological Effects of Cocaine in the Horse, Dog, and Cat. He performed a considerable number of experiments on these animals with this drug, the result of which lend additional support to facts already acquired with regard to its usefulness as a local anæsthetic as well as to the danger that may attend its injudicious application. He was led to institute these experiments from an accident that happened to a dog about to be submitted to an operation, into which the student injected subcutaneously about twenty minims of cocaine in each of six or eight places, the animal—a mongrel spaniel—receiving altogether about sixteen grains of this drug. This produced frenzy, convulsions, and the other indications of cocaine poisoning, and death ensued within ten minutes.

Its therapeutic value as a local anæsthetic in superficial operations on the eyes of horses, dogs, and cats is shown by a number of cases in which foreign bodies, tumours, and the membrana nictitans were painlessly removed, as well as

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eyelids sutured without any difficulty. Its anæsthetic action when applied locally to parts where the skin is tender, thin, or denuded of hair was demonstrated in various instances in which horses had the actual cautery applied for exostosis on the phalanges and other morbid conditions, as well as in division of sensory nerves of the limbs for navicular disease. In the latter cases the solution of cocaine was first injected subcutaneously, then the skin over the nerve was incised, and some of the solution (twenty minims) poured into the connective tissue directly on to the nerve itself; this when cut and a portion removed did not produce any evidence of pain. Mammary and other tumours were also removed from dogs and horses without occasioning any manifestation of uneasiness from the operation, though in some instances the constitutional effects of the drug were exhibited in a more or less marked manner. The toxic action of cocaine on horses, donkeys, dogs, and cats was distinctly shown in various operations, as well as in some experiments, death resulting in some instances after the exhibition of characteristic symptoms, which would undoubtedly interfere with the carrying out of delicate operations. Cases are detailed which would go to prove that cocaine is readily absorbed into the system from serous and mucous surfaces, and that it might be useful in allaying irritation of the stomach by its action on the nerve terminals in the lining membrane of that organ. The fact that cocaine, when brought into contact with a large nerve trunk, will cause anæsthesia of all parts supplied by that trunk below the seat of injection, can be utilised as a valuable aid to diagnosis in certain cases of obscure lameness in horses, was demonstrated in a number of cases recorded by Professor HOBDAY, in which foot lameness was proved to be present by its temporary disappearance after subcutaneous injection of the drug over the metacarpal nerves. The observation made in France that cocaine will diminish the lacteal secretion of animals when applied to the mammary glands was corroborated by the case of a bitch which, when in full milk, had the mamma painted four times daily with a solution composed of five grains of cocaine hydrochlor., one ounce of water, and half an ounce of glycerine. In three days the secretion was very perceptibly decreased, and it had almost ceased in five days.

Professor HOBDAY concludes that there is no absolutely certain antidote to cocaine, though he gives instances which show that opium and amyl nitrite have the power of antagonising the spasms, the latter drug doing this when inhaled or administered hypodermically. The drug was used in no fewer than ninty-nine cases, and the conclusions derived therefrom by Professor HOBDAY are to the following effect:—1. Its therapeutic value in certain cases is unquestionable, but its use in all animals is attended with danger unless proper care is taken to estimate the amount which can be employed with safety. 2. It can readily be absorbed from subcutaneous, serous, or mucous tissues, and is of value as a local anæsthetic in surgery and in certain affections of the stomach—though in surgery there is danger of interference with the operation if too large a dose, not necessarily toxic, be given because of the violent involuntary clonic spasms of the voluntary muscles. 3. The safe and effective subcutaneous dose for the horse is not more than ten or twelve grains, for the dog from two to four grains (by the mouth one to four grains), and for the cat and delicate breeds of dogs not more than one grain. 4. The first sign of danger is great uneasiness, followed by powerful involuntary clonic spasm of the voluntary muscles of the body, especially those of the jaws and limbs. 5. If a diseased condition of the heart or lungs, especially the latter, be suspected, great care must be observed and a minimum dose given. 6. The anæsthetic effect is only manifested locally and around the seat of inoculation from half an inch to an inch and a half, not extending to the deeper tissues, the anæsthesia occurring in from three to five minutes and continuing for about twenty to twenty-five minutes. 7. Toxic doses, subcutaneously, and allowing for idiosyncrasies, are for the dog from three to six grains, and for the cat from two to four grains. The symptoms due to a poisonous dose are enumerated and are as follows. In from two to four minutes after subcutaneous administration the animal becomes unusually quiet if undisturbed; there are constant licking of the lips, and often a smacking sound, increased flow of thin watery saliva, which collects at the back of the pharynx and dribbles from the lips, sometimes interfering with respiration and causing constant gulping and apparently a choking sensation. The animal is very sensitive to all sounds, and attentive when spoken to, and the ears are moved backwards and forwards. Uneasiness then ensues, followed in from two to twenty minutes by the violent clonic spasms already alluded to, which occur about every fifteen seconds and rapidly lead to exhaustion, as the animal appears to be quite unconscious. A curious effect of cocaine on the motor nerves was noted in dogs affected with chorea. Animals so affected, and which could not proceed five yards without staggering and falling, after receiving a dose could walk quite well and appeared bright and cheerful. This effect was very transient, however, and the after-effects were not favourable.

IN his recent Croonian Lectures Dr. MARCET touches on a subject which deserves more attention than is commonly accorded to it—viz., the training of the muscular acts involved in respiration, with the view of combating certain morbid conditions. The case to which Dr. MARCET more particularly refers is that of asthma, which he believes to be due in part at least to a deficient supply of oxygen to the respiratory centres. "Why," he asks, "should not asthma yield to the training of the respiration, carried out by practising the respiratory movements wanted to carry the tidal air through the lungs to oxidise the blood and emit the carbonic acid, while imparting to the circulation a better tendency to work in perfect harmony with the respiratory requirements?" The lecturer professes to have made practical trial of this idea in only one case, but with complete success, and the suggestion is worthy of attention. That asthma is attended by a deficiency of oxygen in the blood is probable, but it is open to question whether this is the cause or the consequence of the affection. The severity of the paroxysms and their remarked periodicity, together with the immunity of the patient in the intervals, suggest that some derangement of the nervous mechanism is at work, but it is quite conceivable that an accumulation of carbonic acid in the blood supplying the nerve centres may

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play a real and large part in the determination of the symptoms of the disease. If this view be well founded, systematic physical exercise directed especially to the play of the respiratory function would offer hope of benefit in the treatment of asthmatics.

The question is, however, a much wider one. How much imperfect development and feeble vitality, how much indifferent health and minor derangement of function, how much phthisis and other pulmonary disease is due to this single cause—viz., the neglect of systematic training of the breathing—would be difficult of determination, but the amount of mischief attributable to this cause is undoubtedly large. In the education of the young this point was long wholly neglected, but, happily, a remedy was in many cases unconsciously applied. Most games practised at schools involve fairly thorough and satisfactory, though undesigned, respiratory gymnastics. Calisthenics, which now form part of the ordinary school régime, though primarily intended for the development of the muscular system generally, are also efficient for the development of respiratory power. In some schools the art of breathing is systematically taught. It is a comparatively simple matter to insist without fussiness or undue self-consciousness upon the great importance of cultivating the habit of taking regular and full respirations, more especially when in the open air, and exercising with a view to health. Such a habit has many indirect as well as direct advantages. Not only does it strengthen the respiratory mechanisms, but it helps to purify the blood, to heighten the general vitality, and to obviate the tendency to certain diseases. There can be little doubt that one of the most fruitful causes of phthisis is imperfect expansion of the lungs, leading to the accumulation of insufficiently oxygenated air, which affords a nidus favourable to the development of the bacillus of tubercle. The fact that tubercle shows such a decided preference for the apices—i.e., for the least expansile portion of the lungs—is a strong corroboration of this view. Hence, in early cases of phthisis, where there is little or no pyrexia or wasting, success in treatment often follows measures designed to promote pulmonary expansion. Regulated exercise, riding, cycling, cricket, golf, judicious mountaineering, are often of signal benefit in such cases, and it seems probable that they operate chiefly by promoting a more efficient performance of the respiratory function. No doubt we must choose our cases with caution, and the off-hand recommendation of exercise, fresh air, and change of climate to phthisical patients is most deplorable. In many cases rest and quiet are rather to be enjoined, but the distinction between the two classes of patient is not as a rule very difficult to draw. What we wish to emphasise is the view that where the absence of acute symptoms permits the treatment of phthisis by the more robust methods the importance of a systematic development of the respiratory function should never be lost sight of. In this connexion the practitioner will do well to bear in mind the value in certain cases of the cultivation of any gift for singing that the patient may happen to possess. That the cautious and judicious practice of these various forms of respiratory gymnastics tends to hæmorrhage is, we think, a mistake. No doubt, this point is worthy of the utmost care and attention, but we think experience shows that in a large proportion of cases pulmonary hæmorrhage does not follow upon exertion, and that it is comparatively somewhat frequent at night and in the early hours of the morning, when the patient has been for some time at rest. Of course, we do not for a moment question the necessity for rest when hæmorrhage either actually exists or has recently occurred.

There is another condition in which respiratory gymnastics are probably the most essential point in treatment—viz., stammering. No doubt there are various types and grades of this disagreeable infirmity, and more than one cause for it exists; but in a large proportion of cases the crucial point is the inability of the sufferer to control his respiratory function. In this case persistent and persevering training will often effect the happiest results. The patient must be taught how to breathe regularly and efficiently, and if this can be effected his defects of vocalisation and articulation will often be easily overcome. It is a great point gained when he comes to realise clearly that his malady is not a mysterious and hopeless affection, but, to a large extent at least, simply an inability to control the breathing. The neglect of the whole subject of systematised breathing is probably owing to the feeling that it is too obvious a matter to require any instruction. Many take it too much for granted that breathing is an instinctive act which requires no training for its efficient performance. We hope we have said enough to show that this view of the subject is a mistaken one.

Annotations.

"Ne quid nimis."

THE DANGER OF TINNED FOODS.

IT is admittedly difficult to reach the "masses," but we think it is the duty of every conceivable agency—the press, "those who know," and even the pulpit—to warn the people of the grave danger of eating tinned foods that have been exposed to the air some time after opening. We should have thought that the cases of wholesale poisoning that have been reported in the newspapers from time to time would have sufficiently placed the public on their guard in this matter; another case, however, comes from Wakefield, in Yorkshire. It appears that a Mrs. Firth bought a tin of salmon which she kept in the house for a few days and then opened. Now she might have kept it unopened for a few months or even much longer without any reason to suppose that it would have been unwholesome so long as the contents of the tin were sound and the ends concave, but the tinned fish was exposed to the air and warmth some time, with the result that when her husband ate a portion for tea he was seized not long afterwards with violent and well-nigh intolerable pains in the back, which culminated in "a night of great agony." A little girl who had partaken of the same tinned fish complained also of sickness, gastric pain, and diarrhœa. Happily there is hope of recovery for both, though, as in most cases of acute poisoning, the progress towards this end must be slow. While the exact manner in which poisonous substances—ptomaines—are produced so rapidly is not known with certitude, the fact that they are produced in sufficient quantity to cause very grave symptoms of poisoning has been brought out in a multitude of cases. It is of the utmost importance to observe, however, that in these instances where such things as meat, fish,

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pâtés, &c. were consumed when fresh each and all proved perfectly wholesome; but the very same viands when eaten one day or a few days later occasioned the most severe sickness. In one well-known case in particular the first half of the contents of a tin of lobster was consumed with no ill effect, but the rest a few days afterwards proved extremely poisonous. We have not one word to say against the use of tinned provisions so long as they are turned out of the tin in good condition. There is, indeed, no ground for doubting their wholesomeness, and in many instances they supply a real need; but consumers of these preserved viands, who, we think, belong mostly to the poorer classes, must be warned of the very real danger which may result from eating them after a day or longer of exposure to the air. As a safeguard, and without injuring their interests, could not the manufacturers of these commodities be induced to label the tins to some such effect as follows?—"The contents of this tin are perfectly wholesome when eaten fresh from the tin and afford good food, but the public are advised not to expose the contents for any length of time to the injurious influences of the atmosphere." It is simply a question of degree. Fresh butcher's meat is wholesome food enough, but there is the same risk attached to eating it if it exhibits signs of putrescence as there is in the case of tinned foods. Either will "turn" after a few days' exposure to the air. We go further, and venture to suggest that some such warning placed upon the label might be insisted upon by the Legislature.

THE HEAT AND THE LATE MILITARY MARCH.

THE number of soldiers who fell out during the late march from Aldershot to the New Forest has been productive of a good deal of attention and comment. There is no doubt that a considerable amount of temporary inefficiency was caused by the heat and fatigue—especially among the young soldiers—on this as on some previous occasions. The heat, which occurred suddenly and lasted only for a short time, was by all accounts exceptionally great, and young soldiers of the British Army bear heat badly until they have undergone some training and become accustomed to it and to the carrying of their arms and equipment in the course of marching. Some of the most remarkable marches on record have been made, however, by the British Army, but the soldiers have been in excellent training at the time and usually mature and well developed. As far as we can learn, the military authorities exercised all practicable care and consideration. On occasions of this kind it is to be remembered that there is commonly some leave-taking and jollification beforehand, and the men do not always start on a march in the best condition possible. Temperance in all things, bathing and cleanliness, light porous clothing, and very open order in marching—the marches being undertaken early in the morning or in the evening when there is moonlight—with halts *en route*, are the best and most common-sense safeguards against the effects of heat. But young and immature soldiers—mere lads—always bear heat, fatigue, and weight-carrying badly, notwithstanding their remarkable recuperative powers.

THE EMOLUMENTS OF AN EXECUTIONER.

M. DEIBLER'S name having been a good deal before the Parisian public lately in connexion with a case which he lost in the law courts, advantage has been taken of the circumstance by the crotcheteers, who are ever ready to seize upon any excuse, however flimsy, in order to call attention to their pet conceits. The partisans of "economy at all costs," for instance, maintain that the gruesome official's emoluments are far too high, and demand a reduction of at least one-half; while the opponents of capital punishment would carry out a still more fundamental retrenchment by abolishing the post altogether. "Without seeking to advocate or contest the opinions of one side rather than the other," says *Le Progrès Médical*, to whom we are indebted for the above information, "it seems to us that the subjoined record extracted from the archives of old Paris possesses sufficient interest to warrant its publication. Our readers will see from it what a terrible thing the capital penalty was in former days and at the same time learn that the gentlemen who acted as executioners, with their assistants and torturers, did not labour for glory alone."

An Executioner's Price List.

	Livres.
To boiling a malefactor in oil	48
,, quartering him while alive	30
,, affording a criminal passage from life to death by the sword...	20
,, breaking the body on the wheel	10
,, fixing his head upon a pole	10
,, cutting a man into four pieces	36
,, hanging a culprit	20
,, enshrouding the corpse	2
,, impaling a living man	24
,, burning a sorceress alive	28
,, flaying a living man	28
,, drowning a child-murderess in a sack ...	24
,, burying a suicide at cross-roads	20
,, applying the torture	4
,, applying the thumb-screw	2
,, applying the buskins...	4
,, administering the Gehenna question ...	10
,, putting a person in the pillory	2
,, flogging	4
,, branding with a hot iron	10
,, cutting off the nose, the ears, or the tongue	10

DEATH UNDER CHLOROFORM.

A CASE of more than usual interest is reported by the *Bombay Gazette*. A male native aged fifty, a Mahomedan, was placed under chloroform by a native lady student and died. The man, Emanbhoy Dadabhoy by name, had been admitted in the Sir Jamsetjee Jeejeebhoy Hospital suffering from disease of his upper jaw-bone. The operator was Mr. Masini, L.R.C.P. and S. Edin., the chloroformist was Miss Dadabhoy, senior student of the Grant Medical College, and the administration was supervised by Mr. B. N. Anklesaria, a graduate of the Bombay University (B.Sc. and L.M. and S.). Surgeon-Major Hatch, the senior surgeon to the hospital, superintended the proceedings, and stated in his evidence that at 8.45 A.M. he directed Miss Dadabhoy to give the chloroform, requesting Mr. Anklesaria to superintend. Chloroform was given from a linen cap, one drachm being administered at a time. One dose was inhaled for five minutes, when another drachm was poured into the cap. A third drachm was subsequently given, and after this the patient showed signs of going "over." The patient had not up to this point breathed well, so the cap was removed and held some distance from the patient's face by Mr. Anklesaria's direction. When the patient was "fairly under"—i. e., after the third drachm—he was conveyed to the operating-theatre for Mr. Masina to make an examination previously to the adoption of operative measures. Surgeon-Major Hatch then left the theatre. The chloroform was continued until six drachms had been inhaled, when, the patient being pronounced "over," the examination by introducing a director and the finger into the nostril was commenced. At the end of the examination the patient was found not to be breathing well. The chloroform was discontinued and artificial respiration commenced. All natural breathing ceased in a few seconds. Upon Surgeon-Major Hatch being fetched he found air was not entering the lungs in spite of artificial

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respiration and therefore performed tracheotomy; artificial respiration was then continued for an hour. All efforts at resuscitation, however, proved futile. The lungs and heart were found to be free from disease, and Surgeon-Major Hatch expressly stated that those concerned in giving the anæsthetic were competent and had had some experience. This is one of the few deaths which have been reported from India, and unless the evidence upon which we base our report is inexact it would appear that possibly the fatality was due to an overdose of chloroform poisoning the respiratory centre. The statement made is that the death was due to failure of respiration. It may be presumed that had the impairment of respiration referred to above arisen from a hæmorrhage started by the examination of the nose or by a fragment of growth detached and fallen back upon the rima glottidis some mention would have been made of it by Surgeon-Major Hatch in his evidence. The point which is not clear is what was the interference with breathing noted as occurring almost from the commencement of the inhalation and from what cause did it arise? The culminating point seems to have been the examination of the nose, which must have caused bleeding. During the performance of artificial respiration the air did not enter the lungs. Here, again, we are left in the dark as to why any obstruction existed if the death was due simply to poisoning of the medullary centres. It would appear more in harmony with the theory that some foreign body—blood-clot—or growth had, during the digital examination of the nose, become detached and had dropped into the trachea. The method of administration appears to have been the one common in India, in which measured quantities of chloroform are poured into a linen mask or cap held over the patient's face, and the respiration is relied upon entirely for guidance as to the condition of the patient and the degree of chloroformisation. As we have said above, we can only rely upon our contemporary for the facts of the case, but trust we may receive an authoritative notice of the occurrence, and, if need be, an emendation of our account.

MADAGASCAR.

IN our notices regarding the French military expedition in Madagascar we have endeavoured to avoid all sensational statements, in view of not increasing the foreboding and depression which have generally characterised the articles that have appeared in the French press. An expeditionary force operating in a malarious climate like Madagascar is sure to have a large amount of inefficiency from sickness. That is only to be expected, and under certain conditions of season and service it may even reach a disastrous figure. This country has altogether had a pretty considerable experience of expeditions in hot and malarious climates. The amount of sickness must always be to a great extent an unknown quantity, but it will nevertheless greatly depend upon the season at which such expeditions are undertaken, the provision that is made for them, and the promptitude and efficiency with which all field arrangements—especially those of transport and commissariat—are carried out. The Ashanti War, in a most malarious and deadly climate, was a very successful expedition, because the right season was chosen and everything had, as far as possible, been provided for the troops, which care and forethought could suggest. Our first occupation of Cyprus, on the other hand, was attended with a very large amount of sickness and much mortality, because the force was sent off in a hurry at the wrong season, and, as it proved, during an exceptionally unhealthy year, without adequate provision for safeguarding their health. There was no fighting, and Cyprus has since proved a very healthy climate for troops occupying suitably selected sanitary positions. We are afraid that the last news from Madagascar must have the effect of increasing the forebodings and expressions of disappointment on the part of the French press and of embarrassing the French Government. There are said to be 5000 men of the French force sick in the various military hospitals and in the sanatorium at Nossi Komba, and the mortality since the arrival of the troops in Madagascar is said to have been very considerable. According to an account published in the *Gaulois*, "the number of dead will never be known in France." In addition to climatic fevers there has been a good deal of diarrhœa and dysentery of a malarious type. It must be remembered that exposure to freshly turned up soil is a fertile source of malarious fever, and many of the French troops have been engaged in road making. There does not seem to be any doubt that the Madagascar expedition has, moreover, been sadly mismanaged in some important particulars. We can only repeat what we have already pointed out—viz., that it is of the greatest importance to the health of the soldiers and the success of the expedition that the force should reach Antananarivo before October, when the rains set in. If the French do not succeed in doing this there is sure to be an increased amount of sickness, and the cost of the expedition, already great, will be largely augmented.

ANOMALOUS CASES OF FRIEDREICH'S ATAXY.

IN a recent number of the *Dublin Journal of Medical Science* Mr. M. J. Nolan has described three cases of this disease which present some variations from the ordinary type, especially in the association of idiocy with the physical signs of the disease. The patients are members of the same family. The parents are living, the father being, it is said, a habitual drunkard and the mother a healthy woman. There is no strong morbid taint evident in the family history. In the particular family with which we are concerned there have been eight children. Of these, the first, second, and seventh are intelligent and healthy, the fourth and sixth are dead, while the third, fifth and eighth are ataxic and idiotic. All were reared at the breast for an average period of one year and nine months. In each of the three cases of disease the signs were noticed by the mother soon after the birth of the children, and became more obvious with increasing age. The first case was that of a woman aged twenty-two who was admitted to the Down Asylum as a "dangerous idiot," she having, it was asserted, assaulted her brother. She had much difficulty in standing and walking, nystagmus was present without pupillary change, the knee-jerks were absent, and there seemed to be scattered anæsthetic patches on the skin. The breasts and genitalia were undeveloped, and there was marked interference with articulation associated with twitchings about the mouth. Athetotic movements of the arms were also present. There was no interference with the visceral functions, and no loss of control over the sphincters. There was a lateral curvature. The second case was similar in most respects, only the knee-jerks were present and exaggerated, and there was unusual development of the external genitalia. He also had the reputation of being a "dangerous idiot." The third patient was only ten years of age, and his symptoms were precisely similar. His knee-jerks were absent. These cases illustrate in most of the important symptoms the disease associated with the name of Friedreich, and even in themselves they illustrate the variability in minute points in the symptoms and signs of the disease. The important sign of the knee-jerk even varies, being present and active in one case, but absent in the two others. All of them show a peculiar mental imbecility, no doubt associated with some interference with the development of the brain, just as the physical symptoms are associated with mal-development

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of the spinal cord. These cases also illustrate the varying incidence of the sclerosis in different parts of the spinal cord. In the two cases in which the knee-jerk is absent we must assume that the posterior columns are most affected, while in the other the lateral columns must be the parts most sclerosed. In a disease like Friedreich's, in which the sclerosis is usually widespread and found to affect many tracts, it is quite conceivable that such sclerosis will sometimes be greatest in the posterior columns, and sometimes greatest in the lateral, and the symptoms, more particularly the knee-jerk, will vary accordingly. The cases constitute an interesting and important addition to our knowledge of Friedreich's disease.

CATTLE DISEASES AND HUMAN HEALTH.

ALTHOUGH no very definite information was given to Admiral Field by the President of the Local Government Board in answer to his question in the House of Commons concerning the steps to be adopted so as to prevent injury to human health owing to the use of milk imported from countries where cattle disease was prevalent, yet it is a satisfaction to learn from Mr. Chaplin that he is already interesting himself in this important subject. Admiral Field's question was perhaps somewhat imperfectly worded, for it mixed up points as to milk in relation to human health—which obviously concern the Local Government Board—with others as to pleuro-pneumonia and foot-and-mouth disease, which, being diseases scheduled under the Animals' Diseases Act, concern the President of the Board of Agriculture. Indeed, the use of the milk of animals so suffering is already prohibited under an Order made by virtue of that Act; and the extent to which those diseases prevail in foreign dairies is a matter for the Agricultural Department. The question was also a little confusing in its comprehensiveness, for it dealt with all manner of infectious diseases; whereas when the Government come to deal with the subject—as, for example, on the report of the Royal Commission on Tuberculosis—the matter will necessarily have to be considered, first, as one of the spread of a bovine disease from animal to animal, and, secondly, in connexion with disease which is communicable to man by reason of food-supplies. It is this latter point, we assume, that Mr. Chaplin will take up, and to which he refers as already occupying his attention.

THE DIFFUSION OF SMALL-POX.

THERE are evidences in the records for the metropolis during last week that small-pox is not showing much disposition to decrease in London. The cases freshly coming to light in the week numbered 26, the bulk of them being ocated in sanitary areas closely bordering the River Thames both on its northern and southern banks, the north and west of London being remarkably free from the disease which clings to a well-defined group of areas in eastern London. As an example, we may state that on Tuesday of last week of the 15 cases admitted to the hospital ships all were from eastern districts. There is matter for congratulation in knowing that nearly all, if indeed not all, the attacks are promptly isolated in the ships, thus saving the metropolis from the added danger of foci of disease being maintained in populous centres. But such action is not all that is needed, for, added to this prompt removal of patients wherever possible, there should be equally prompt recourse to vaccination or revaccination of all inmates of invaded houses when these operations have not been recently or efficiently performed. Indeed, it is not too much to say that the success of the action of the health authorities to cope with small-pox must be in great measure dependent on the facilities offered to the public for securing themselves against the danger of contracting small-pox by means of exposure to the infection in houses actually invaded by the disease. It is satisfactory in this connexion to read the report which Dr. Loane has presented to the Whitechapel board of works on the measures which have been and are in operation in the district and union for securing that all the necessary measures of disinfection of premises, and of vaccination and revaccination of all persons in anywise exposed to infection, are quickly and generally carried out, thus limiting as far as can be done the chance of spread of the disease through the medium of shelters, lodging-houses, and private dwellings. Last week there were as many as six registered deaths in London in almost as many different sanitary districts, three in unvaccinated young persons and the same number in vaccinated adults. There were some 360 patients suffering from small-pox under isolation last Saturday, against 200 at the end of July. A few attacks are reported from suburban districts, but England in its southern, western, and midland counties seems free from the disease. The medical officer of West Bromwich has written to the local press contradicting the statement as to the occurrence there of several cases of small-pox last week, the borough being quite free from the disease. There is still some small amount in Lancashire towns, last week witnessing the the registration of 2 deaths in the borough of Oldham, although the cases were not in excess of that number; and Manchester again had some attacks, 3 in number, as against 6 in the Openshaw division in the preceding week. Salford had to record a single case only. In Dublin in the week ending Aug. 17th there were 3 admissions of small-pox patients to hospital, and the 1 registered death from the disease was in the person of an unvaccinated child aged under five years. The discharges numbered 4, and there were left 25 acute and 3 convalescent cases in hospital.

HOTEL SNOBBERY.

THE use of a uniform, notwithstanding certain obvious advantages conferred by it, is occasionally found by its wearer to be somewhat inconvenient. This would not be remarkable if the dress itself were designed in striking contrast with public taste or good feeling. Neither should it surprise us that the misconduct of individuals can and does bring discredit upon their cloth and all else connected with them. When, on the other hand, no ground of offence exists either in the persons or their clothes it were folly to raise objections against either. Yet this is done, and more, since instances might be cited in which, although the outward aspect has been entirely becoming and the conduct above reproach, still the sentence in some corners of society has been one of ostracism. We may quote an example of this kind which was recently noticed in the daily press. A hospital nurse, having gone to visit her father at a hotel in the West-end of London, appeared in the breakfast-room in uniform. She was there informed that she could not be admitted as a guest, as her dress was objected to. Why, we are unable to say, and we are equally at a loss to discover any reasonable excuse for a prohibition so inhospitable and so near of kin to insolence. Was the garb too plain, too work-a-day, and, if so, wherein was it a whit less neat or less reputable than that of a deaconess or a sister of mercy, or for that matter of a great many ladies not clad in uniform? Are we to suppose that the hospitality of this hotel is denied on principle to every form of dress below a certain expensive standard of quality? Perhaps, however, the nurse's costume is considered to be suggestive of morbid associations, of contagia, and the like. If this be the case, we can reassure a diffident manager and the over-nervous occupants of his establishment. No body of persons in the kingdom understand and obey more fully than do professional nurses the requirements of sanitation in regard to such matters. We hope, therefore, that neither

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the pretensions of snobbish custom nor a somewhat cowardly excess of zeal for sanitation will long be suffered to curtail the just privileges of a class whose existence among us is as great a credit as a boon to society.

ST. BARTHOLOMEW'S HOSPITAL.

SOME years ago the number of surgeons at this hospital was increased from four to five, and a similar step having now been taken with regard to the physicians the newly created post was filled on Aug. 22nd by the election thereto of Dr. Lauder Brunton. This election affords a noteworthy instance of the slowness of promotion at some hospitals. Dr. Brunton has, indeed, had a long wait. He has been seeing out-patients at St. Bartholomew's Hospital for nearly a quarter of a century—i.e., for some four years as casualty physician and for twenty-one years as assistant physician. Dr. Brunton even now may in some respects be considered as fortunate to obtain the full physiciancy, for had no fifth appointment been created he would have had to wait for eight years longer, and had not a vacancy occurred owing to Dr. Southey's resignation some years ago he might never have been physician at all or have only held the post for one or two years, the age limit being sixty-four. It is quite unnecessary to dilate here on the good work which Dr. Brunton has done, since the profession is well acquainted with it, but we may congratulate both St. Bartholomew's Hospital and Dr. Brunton himself on the extended sphere of influence which is now open to him.

CREMATION IN PARIS.

THE number of incinerations called for by the representatives of deceased persons increases every year with great regularity, but the increment is so small that the partisans of cremation are well-nigh reduced to despair. According to some statistics published by the Prefect of Police the number of cremations carried out at the Père-Lachaise Cemetery from August, 1889, to the end of April, 1895, was as follows: 1889, 49; 1890, 121; 1891, 134; 1892, 159; 1893, 189; 1894, 216; and 1895 (four months), 75. The furnace would consequently often be idle were it not for the remains from the hospitals, which amount to from 2000 to 2500 bodies per annum. The apparatus employed is that of MM. Toisoul and Fradet, and works by means of gas with a recuperator. Incinerations are accomplished in an hour, or at most an hour and a quarter, and the cost of the combustible never exceeds 3 fr. per operation. Another apparatus, invented by M. Fichet, has recently been inaugurated. Like the first, it consists of a gazogene furnishing oxide of carbon and a recuperator supplying hot air to the vaulted chamber in which the reduction to ashes takes place. The difference between the two appliances lies chiefly in the application of the oxide, which is used solely for heating the recuperator, the combustion of the body being effected by hot air alone, thanks to the augmented efficiency thus obtained. According to this method incineration takes place a little more rapidly than in the Toisoul furnace, but the expense is greater by nearly a quarter, 18 hectolitres of coke being required instead of 14.

THE ETIOLOGY OF PNEUMONIA.

AN esteemed correspondent, who has, he tells us, been in practice for upwards of fifty years, thinks that the key to pneumonia, bronchitis, and other internal inflammations is not to be found in the infection by specific germs, but rather in autogenetic poisoning. He points out, for example, that pneumonia is often secondary to the specific fevers, and that bronchitis may be one of the earliest manifestations of such a fever. But apparently he thinks a greater share in the production of these inflammatory disorders is taken by depraved blood states due to defective digestion or metabolism, and affirms that the onset of pneumonia is paralleled by the equally sudden and familiar attack of arthritis characteristic of acute gout. In other words, he adopts a humoralistic pathology in contradistinction to prevalent bacteriological doctrines. In this respect he would find himself in line with those advocates of uric acid retention as the efficient cause of a vast number of internal diseases. Nor would we deny that there is much to be said in favour of such ideas, which go far towards explaining the occurrence of secondary pneumonia, pericarditis and the like. On the other hand the adoption of the belief in the necessity of external infection would relegate all these blood states to the region of secondary rather than essential causes. It is not difficult to conceive that, given certain states of nutrition or rather denutrition, the tissues are rendered more prone to attack by specific agencies such as the pneumococcus.

THE INTERNATIONAL CONGRESS OF OTOLOGY.

THE fifth of these gatherings will be held in Florence from the 23rd to the 28th of next month, under the presidency of Professor Grazzi. We have already published the subjects which have been selected for general discussion, to be introduced by Dr. Barr (Glagow), Dr. Gellé (Paris), Professor Gradenigo (Turin), Professor Politzer (Vienna), and Dr. Secchi (Bologna). The complete programme has just been issued containing the titles of fifty-nine original communications. The social aspect of the meeting has already been well provided for by private and public banquets, a concert at the Artists' Club, a reception within the classic walls of the Palazzo Vecchio, and an excursion to Fiesole. The comfort of visitors has been further assured by arranging with several of the leading hotels for bedroom service, lights, attendance, and morning coffee for the very reasonable price of from 3 fr. to 5 fr. All the Italian railway companies have granted reductions of from 30 to 50 per cent. to those attending the meeting, available from Sept. 12th to Oct. 8th. The arrangements in connexion with the various routes and fares made by Messrs. Cook and Son will be found in another column of our present issue. The Congress promises from every point of view to be a most interesting success, and will afford to its members a pleasant opportunity of seeing the Tuscan capital under most favourable circumstances. It is hoped that British otology will be well represented, as it has been decided to invite the sixth Congress to meet in London either in 1898 or 1899. The subscription is 20 francs (16*s.*), and entitles the *Congressista* to a copy of the printed transactions. This can be paid to Dr. St. Clair Thomson, 28, Queen Anne-street, W., from whom vouchers and all particulars as to routes, hotels, &c., can be obtained.

IS HELION IN THE AIR?

IT would appear that helion—that element supposed hitherto to exist only in the sun—has been found in the air. If this be so, then the theory that it has been found on earth only in certain minerals because these have locked it up and brought it to earth from the sun's atmosphere must soon totter. Associated in small quantities with argon, which in turn occurred with its apparently inseparable companion nitrogen, helion has been found issuing as a "stream into the air" in the gases of the springs of Wildbad in the Black Forest. Hence, concludes Professor H. Kayser of Bonn, to whom the discovery is due, free helion must be found in the air along with argon. We do not quite follow this line of argument, however, since many parts of the world, amongst which our own country may be reckoned, are not favoured with fissures

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in the earth or with springs which are constantly pouring a stream of "argoniferous" gas into the air. The spectroscopic lines, he adds, are certainly very faint, but distinct enough for him to consider the presence of helion in the air of Bonn as being beyond any doubt. We believe, on the information of Professor Ramsay himself, who discovered helion, that the most searching attempts to demonstrate the existence of helion as a normal constituent of the air, or at any rate that sweeping across the British Isles, failed entirely, so that if it is about to be shown on the lines recently announced by Professor Kayser that the atmosphere is here with and there without a constituent we may hope possibly for some explanation of the beneficial effect derived from "a change of air." The observation may possibly throw some light, too, upon the value of "taking the waters," since obviously where springs abound, and especially effervescing springs, there is a greater chance of helion, as well as argon, being present. In the face of these developments we are constrained to repeat what we said in a leading article on argon and helion in THE LANCET of May 25th, 1895, that the real importance of the joint discovery of Lord Rayleigh and Professor Ramsay is yet to be estimated.

THE GRIEVANCES OF THE TELEGRAPH SERVICE CLERKS.

A COMMITTEE of inquiry which is now sitting to investigate the grievances of the telegraph service clerks has recently received evidence intended to show that the monotonous and exacting nature of telegraph instrumental work has a seriously damaging effect upon the health of the persons engaged in carrying it on. We have ourselves remarked in former times upon the trying character of such work when performed under the conditions of continuous pressure and prolonged hours, and we should have been fully prepared to find that the conclusions to which theoretical considerations point would be supported by statistics drawn from the experience of the department in dealing with the very large staff employed about its work; but for some reason which we do not understand the statistical evidence does not seem to have been forthcoming. It appears that some years ago the causes of retirement from active service and of death were given with some exactitude in an annual return to Parliament, and that the evidence thus afforded of excessive nervous strain was such as to call for special comment at the time. If it be a fact that the publication of these details was discontinued because of those comments then we think that such conduct on the part of the authorities cannot be too strongly reprobated; but, although a charge of that sort is distinctly hinted at, it is not in any sense proved, and it is therefore proper that we should refrain at present from doing more than to draw attention to the suggestion made, and add a suggestion that it might be wise and even proper in future returns to give the fullest possible information concerning the maladies from which members of the telegraph service are shown to suffer. For want of better material the spokesman on this subject of the telegraphists quoted some statistics drawn from the last published report of the United Kingdom Postal and Telegraph Service Benevolent Society. If these figures could be relied upon they would make a very strong case, but we fear that they cannot be accepted with any confidence. According to our information the Benevolent Society receives all comers without discrimination provided they be members of the service which is to be benefited by the society's operations. Now, if that be so, its membership is, of course, much more attractive to damaged than to sound lives, and the society will, therefore, suffer from an adverse selection of risks, and its experience cannot be expected to be typical of that of the service at [illegible]. If these are the best available figures the fact is [illegible]retted, for best or worst they are really *nihil ad rem*. But it would seem, from some suggestions made by Mr. Spencer Walpole, that better statistics are accessible. If so, we hope that they will be laid before the committee, for the point is one of vital importance to a large and meritorious body of public servants and of no small interest from the medical point of view.

DIPHTHERIA IN LONDON.

HIGH as was the average of the weekly number of deaths registered in London in the four weeks of the present month, ended last Saturday—namely, 46—it has been exceeded in all but one, the respective registrations of fatal cases having been 57, or 23 above the corrected decennial average for the corresponding week; 55, or 23 above the corrected average; 50, or 19 above that average; and last week only 24, or 7 below the average. Thus, although last week witnessed a fall as compared with those preceding, there is no cause for congratulation in this constant overtopping of averages. Allocating the deaths in the four weeks in question to the sanitary areas furnishing multiple fatal cases, the Registrar-General states that in one of the weeks there were 4 each in Chelsea, Paddington, and Mile End, and 6 in Camberwell; in a fortnight 7 each in Bethnal-green and St. Pancras, and 8 in Kensington; and in three weeks 15 in Poplar; Islington figuring in all four weeks with a total of 16 deaths. As regards the number of cases, the records show that in the four weeks just named the cases coming to light were upwards of 800 in total against a total of over 1000 for the like period immediately precedent. But the records show with reference to cases no sufficient warrant for regarding the disease to be much on the wane at present if we have regard to individual recent weeks, last week among them. Taking these four-weekly totals of attacks and the totals of deaths for like periods, it is seen that whereas in the earlier of the two the per case mortality was 17 per cent., in the latter period it was 23 per cent. In Greater London, in the last four weeks, the deaths from diphtheria have been respectively 11, 7, 19, and 5, and of this total of 42 no fewer than 19 are credited to the West Ham district. Last Saturday the patients remaining under treatment in hospital in London numbered 666, having been upwards of 600 in number for many weeks, and having been 681, 686, 689, and 657 in the four weeks immediately preceding.

HONORARY HOSPITAL APPOINTMENTS.

LAST week the appointment of an honorary medical officer to the Royal Albert Edward Infirmary, Wigan, once more showed the humiliating, and we might say the degrading, resources which medical men are subject to for the sake of obtaining an appointment which is unpaid. Almost before the late medical officer was carried to his last resting-place canvassing was commenced, and has been prosecuted with great energy during the last six weeks. We believe that only two out of the six candidates failed to personally canvass. We are pleased to say that one of these gentlemen for his courage came in a good second in the race though he did not quite win. The voting was by ballot and after the manner of a Parliamentary election, the Mayor acting as returning officer; circulars and cards were freely sent, and as many proxies as possible were obtained. At the meeting which was held for the purpose the chairman of the board of management mentioned that it had been suggested that this mode of election should be done away with, and that instead an election committee should be formed consisting of the members of the board of management (which has four members of the medical board in its composition) and a given number of representatives of the donors and governors elected at the annual

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meeting for the purpose; this plan did not meet with the approval of those present. They think, it would appear, that if the mode of election were altered they would be deprived of something which they possess. The representatives of works appear to value the privilege of voting; so much so, that one gentleman gave his proxy for one candidate and then voted for another by ballot. The hospital authorities think that an election like this does them good, reminding subscribers to pay up their subscriptions, and that it also increases the number of subscribers. They might, however, remove a portion of the degradation by making a personal canvass a disqualification.

A SUSPECTED CASE OF CHOLERA.

A CASE exhibiting at first sight some suspicious features has occurred in Wandsworth. The patient was a man named Hancock employed in collecting waste fat &c. On the morning of the 24th he was taken ill with acute diarrhœa and abdominal pain. For some three days previously he had complained of slight diarrhœa, but had continued at his work until Friday, the 23rd. Vomiting commenced on Saturday evening. On Sunday, the 25th, he was worse, and a medical man was called in. The stools were copious, watery, with a few flocculi, but bile-stained. The vomiting was constant, and in the evening he was said to have passed a little urine. The symptoms continued on Monday, with the addition of cramps, and at 7 P.M. a catheter was passed but no urine was found. He died between 9 and 10 P.M. Post mortem nothing definite was found except some slight congestion of the lower part of the ileum and the ascending colon. There was no evidence of obstruction or strangulation. In view of the symptoms during life, portions of the bowels were sent to Dr. Klein for bacteriological examination. As the result of his investigation it has been decided that the case was not one of the true or Asiatic disease. It was probably one of acute diarrhœa, brought on by the unsavoury nature of the patient's occupation.

THE Students' Number of THE LANCET will be published on Sept. 7th, and will be found to comprise every information for those intending to enter the medical profession.

DR. ALBERT GUNTHER, F.R.S., the keeper of Zoology at the Natural History Museum at South Kensington, has resigned his post after having held it for over thirty years.

MR. R. B. FINLAY, Q.C., the newly appointed Solicitor-General, was originally educated as a medical man, and obtained the degree of M.D. Edin.

MEDICINE IN THE SPANISH PROVINCES.

(FROM A CORRESPONDENT.)

AFTER several years' residence in Spain it has occurred to me that English medical practitioners might feel some interest in comparing the present state of their profession in that country with that depicted by the incomparable Gil Blas when he described his stay with Dr. Sangrado. It might cause them to be surprised—nay, incredulous—were they told that one at least of that worthy physician's great remedies—bleeding—is still in vogue among a few of the older school, with whom even the pungent satire in that work of disputed parentage has proved ineffectual. The capitals and larger towns of Europe are fast assuming such a cosmopolitan character that they cease to represent the average advance of any one nation in the march of civilisation, but give one rather the result of a few isolated and more or less successful attempts in that direction. For the purpose, therefore, of this article I have eliminated Madrid and the larger towns of Spain, though at some future time I may perhaps have some words to say about the capital and its magnificent water-supply. In the smaller towns, however, one sees the "medico" as he is—that is, the average practitioner, the rank and file of the profession—some content to do their work in a perfunctory sort of way, others wearing out their energies in an attempted struggle against the mass of ignorance and prejudice that everywhere surrounds them. The system that prevails in Spanish provincial practice is the *iguala*. This is, for all intents and purposes, the same as the club system. Most inhabitants of a town or village pay a yearly subscription for themselves and for each member of their family, entitling them during that period to free medical attendance. Midwifery, surgery, and night cases are alone excepted. Though this has the advantage of enabling a practitioner to gauge his income fairly accurately, it has the disadvantage of placing him at the mercy of cabals. Intellectually the "medico" is the leader of his little world. Should there, however, be any member of the legal profession in the village he would divide the honours with him. The *cura* (priest) may or may not arrive at his intellectual level, whilst the same may be said of the schoolmaster, who is considered a person of such small consequence that they often neglect to pay his salary for periods ranging from six months to three years. As a natural result he has to live on credit during that time, but as protracted credit is often little better than begging on one side and alms on the other this much ill-used class finds it hard to retain its self-respect and authority. So much for intellect.

We now come to the *caciqués*, who really are the influential class. These are the moneyed and landed individuals, employing a great deal of labour and often, unfortunately, increasing their wealth and power by resorting to usury. Being, however, for the most part men of but slight attainments, it is scarcely to be wondered at that they should strive hard to make use of the intellect around them to their own particular advancement. With the advent of the elections a medical man's troubles begin. At the commencement of his hospital walking he may have taken a languid interest in politics, or if of an enthusiastic and restless disposition may have had temporary leanings towards Republican ideals. Once in possession of his practice his political tendencies will have grown cold and he probably looks on polemics and parties with that supreme indifference and superior contempt which most educated Spaniards feel in their hearts.

It may seem a sweeping statement to make and one that will surprise Englishmen, but few intelligent Spaniards have any political faith. Most make use of a party, but centuries of bad government have destroyed all hope of its doing anything really useful. There is a legend which the Spaniards tell that the Virgin Mary asked her Son for various favours for Spain, such as sunny skies and a beautiful climate, and that then she asked as a last favour for good government, but that this was not granted on the grounds that such a measure would convert Spain into Paradise. With no definite political tendencies, therefore, it becomes evident that interest remains the only factor in the selection of a party, and most "medicos" adopt this plan and join the forces of the strongest *caciqué*, who, in his turn, uses his influence in favour of the candidate or the party that he thinks will be of the greatest assistance to himself. However, the followers of the opposite party in the village will never forgive the medical man for not joining their own ranks, and if strong enough will send for another practitioner, to whom they will in due course pay their *iguala*. Through these causes I have known three medical men established in a small town on terms of the most cordial enmity where one practitioner would have sufficed. Abstention from voting does not benefit him, as all parties would have a grievance, and their defection would leave him without a patient and, what is worse, without his fee. However, this is not a political article, and I will now proceed to consider the position of a Spanish provincial medical man in its other aspects. Socially considered, it might well admit of improvement. The absence of that class of small landed proprietors who live mostly on their estates and the concentration of the land into immense properties in the hands of a few wealthy owners, with whom absenteeism is the rule, only varied by

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flying visits every year or two, are amongst the chief reasons accountable for the slow progress of civilisation in the provinces of Spain. A notable exception, however, may be found in some of the northern provinces, such as Galicia, where the more equable distribution of land tends to produce not only greater personal freedom, coupled with more satisfactory social intercourse, but also a much higher intellectual average. It therefore follows that in most of the provinces the medical man has to fall back upon one or two equals in education in the villages and perhaps half a dozen to ten in the more important townships, and of these probably half are, through no desire of his own, political adversaries and therefore just barely civil. It is hardly to be wondered at, then, if in the course of years he drifts down to the intellectual level of his patients, loses the enthusiasm of early days, gradually forgets what he knew, and gets completely behind the age.

In my introductory remarks I have referred to bleeding as being still practised in Spain. It is only fair, however, to say that the present generation of medical men there are in every way equal to the average practitioners of other countries and have set their faces against this practice, which, by some of the older men, is still considered the panacea for all the ills that flesh is heir to. I have known a patient insist on being bled by his medical attendant, who, however, only complied under protest and in the conviction that a little judicious blood-letting by himself would be preferable to handing his patient over to the village barber, whose discretion in the matter might not be so great. This worthy is a recognised though uncertified minor surgeon. Besides his razors, brushes, and scissors he provides himself with lancet, leeches, corn knife, and a variety of surgical and dental instruments. Occasionally, also, he does a little bone-setting, though this is, strictly speaking, within the province of the *curandero*, or bone-setter, to whom I shall shortly refer. On the barber's shelves may sometimes be found a work on anatomy and occasionally a treatise on the virtues of herbs in the cure of ailments. His lack, however, of a good elementary education, to say nothing of the rudiments of medical science, renders these works worse than useless to him, except inasmuch as they enable him to secure a good vocabulary of technical phrases, which, however misapplied to the case in point, have the desired effect of confusing and impressing his already too credulous patrons.

Whilst being shaved in a small town I have had some startlingly new ideas propounded on the theory and practice of medicine. I am afraid, however, that they produced more amusement than instruction, and though careful not to contradict one who, with a razor to my throat, might justly be considered the arbiter of my destiny, I can hardly refrain from hoping that the practice thereof may be strictly confined to the confiding patrons of each village Figaro. The art and mysteries of a *curandero* are handed down from father to son. He devotes himself to setting bones and repairing injuries generally, and his attentions are not confined to man, his field of operations extending to all such members of the animal world as have a master willing to pay the recognised fee, and on the whole his work seems to be fairly well done. Attempts have at various times been made to suppress *curanderos*, but the *vox populi* is with them, and thus far they have been able to maintain their own even in some of the larger towns. I have heard of a noble family sending miles for a celebrated *curandero* when they had the services of two really good surgeons within easy reach. The reasons for their continued prestige are complex and somewhat curious. In the first place, the bone-setter has generally a town and some four to six villages as his field of operations, and in each he, with characteristic modesty, details the marvellous cures he has achieved in the others; secondly, the medical man is an accepted fact, his remedies are supposed to be known quantities, and a knowledge of them open to all who may have the inclination or the means to study them. With the *curandero*, on the other hand, things are differently viewed. His art is a secret one possessed by few, and is looked upon as something like a special gift from Heaven, on the principle of *Omne ignotum pro mirabile*. If we add to this the fact that he has, as a rule, the simpler cases to deal with, and can therefore often show a greater percentage of cures than the certified surgeon, who would be invariably called in to attend a badly fractured limb, it becomes easier to understand how it is that bone-setters still flourish in a country too long deprived of just educational facilities.

NOTES FROM SINGAPORE.

(FROM A CORRESPONDENT.)

The Influenza Epidemic.

THE influenza epidemic of 1895 has not been limited to the "home" countries. During the past three months the Straits Settlements and the adjoining native states have suffered severely from this well-known scourge. The general characteristics of the disease have in no way differed from those which have been noted in Europe. The native Malay, the Eurasian, the immigrant European, Chinaman, Indian, and Arab have all fallen victims to the disease. Amongst Europeans severe or fatal cases have been rare, but the death-rate in the case of Asiatics has been exceptionally high. We have seen the gastro-intestinal, the cerebro-spinal, and the pulmonary forms in great frequency, the last being by far the most common. Pneumonia, broncho-pneumonia, and other forms of pulmonary affections have carried off many of the natives. In a large proportion of these cases the duration of sickness was extremely short. Heart complications have been far from uncommon, and the writer of these notes has met with at least a dozen well-marked examples. The majority have shown acute dilatation of the left ventricle, slow pulse or else a very rapid and feeble one, with frequent irregularity in rhythm, and death from cardiac asthenia in from twenty-four to forty-eight hours. When life in these cases is prolonged various murmurs are to be noted, chief among which are those showing mitral and aortic insufficiency. Irregularity of pulse has persisted in some cases for months after the initial attack, and attacks of angina are frequently met with. As at home, patients who already suffer from heart disease stand a bad chance when struck down by "the grip," and die from cardiac syncope or from a low form of pneumonia. More especially is this the case in beri-beri, for in patients suffering from this disease influenza is exceedingly fatal. When "the grip" occurs in an acute attack little else than cardiac collapse, without appreciable fever or the characteristic pains, the resemblance to an acute attack of beri-beri is most marked. This resemblance is rendered greater in cases, two of which came under my notice, where peripheral neuritis follows close upon influenza as a complication. Both of my cases made perfect recoveries, although one was accompanied by dilatation of the ventricles. Malaria as a sequela has been frequently noted, and in a few cases has been fatal. Amongst Europeans especially I have seen a number of cases of acute phthisis arising as a rule out of unresolved pneumonia, and in these a fatal termination usually ensues in one or two months. Some cases linger on, however, for a longer period. Finally, although I have not the exact figures before me, the death-rate during the last two months or more has greatly exceeded that for the corresponding months of last year.

Epidemic Asiatic Cholera.

Unfortunately, influenza has not been the sole cause of our present high rate of mortality. Asiatic cholera in an epidemic form is a rarity in Singapore, and we have hitherto congratulated ourselves on our immunity from its ravages. Our excellent municipal water-supply has been long held up as the main agent in preventing epidemics of cholera, but that a good water-supply is not a *sine quâ non* in this respect has now been demonstrated to us in a very emphatic manner. Other factors have been at play, such as back-to-back houses, overcrowding, want of proper drainage, and the filthy habits which are a characteristic of most Asiatics. These have finally led to consequences which were sooner or later inevitable. At a meeting of the Municipal Commission on June 19th the medical officer of health, Dr. Middleton, stated that "the death-rate began to rise about the beginning of April, but no cases of cholera were reported. Still it was suspected that there was some epidemic going about the town, though they were unable to get hold of it. Since then, during the last week, the death-rate had risen to 75 per 1000. The first indication of cholera they had was on Monday, the 10th of this month [June], and since then forty cases had been reported, of which thirty-six had proved fatal. ..... There was considerable difficulty in dealing with these cases, because the Chinese and natives concealed them in order to prevent patients being sent to hospital, nor were they usually called in until after death had taken place." The means adopted to check the spread of the disease are, in

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Dr. Middleton's own words, these: "Whenever a case was discovered the man was sent to hospital at once, his mats and bedding burnt, and his drinking vessels broken, compensation being given where such articles were destroyed." In all cases, too, the infected house is thoroughly cleansed and disinfected by the municipal authorities.

The Government and the Municipality.

The following letter, received by the President of the Municipal Commission from the Colonial Secretary, was read at a meeting of the Commission on June 19th:—

"Colonial Secretary's Office, Singapore, June 14th, 1895.

"SIR,—I am directed by the Governor to direct the attention of the Commissioners to the exceptionally high death-rate in Singapore for the month of April last, as shown in the Registrar-General's return, a copy of which was sent to you on the 1st inst. (2) It will be seen that the number of deaths in that month recorded was no less than 770, as compared with 477 in the corresponding month of last year, and exceeded by 172 the highest number previously recorded for the month of April during the last ten years. (3) His Excellency is of opinion that the abnormal figures appear to indicate the prevalence in Singapore during the month referred to of some cause of death intentionally or carelessly kept back by the natives from fear of consequences which might result if it were reported, and I am to request that the Commissioners will give their consideration to a matter which would appear at first sight to indicate that much closer attention and supervision on the part of their medical officer may be desirable.

"I have, &c.,

"J. A. SWETTENHAM, Colonial Secretary."

The irony of this letter is evident when one notes that the death return for April was delivered by the Government to the municipal authorities so late as June 1st, that this was the first official indication to the medical officer of health that the death-rate in April was so unusually high, and that the entire onus of such a lax state of affairs rests with the Government by reason of the present erroneous and inefficient system of death registration. Such a wanton censure of an able and energetic medical officer, such an attempt on the part of the Government to make the Municipal Commission a scapegoat for its failings, have led to universal expressions of indignation from the public of Singapore, who now call emphatically for an immediate and radical change in the methods by which vital statistics are at present obtained.

The Present System of Registration of Deaths in the Colony.

The present law makes it the duty of the occupier of a house, in which a death happens to take place, to notify the death within twenty-four hours to the deputy registrar of the district, who is in all cases a police-constable. These are usually Malays or Tamils. Failing a medical certificate, the constable fills up a form and states the cause of death, either following the notifier's statements or giving his own diagnosis from inspection of the corpse or otherwise. In many cases, as was described by Dr. Dumbleton, a retired municipal medical officer, in a paper read before the Straits Medical Association, a medical certificate is by no means a guarantee of correct registration, but is often altered according to the fancy of the deputy registrar. These registers, usually made out in Tamil or Malay, are translated into English at the end of the month and are then forwarded to the Registrar-General. The latter tabulates them, and finally, well on in the following month—in the specific case referred to in the Colonial Secretary's letter fully a month later—they are transmitted to the municipal medical officer. In this way this official is kept in total ignorance of the death-rate in the district which is his special care, and he can have no guide or indication which might lead him to suspect the presence of any unusual fatal element until some weeks later. It might be argued that the Infectious Diseases Notification Act is a help to him in this direction, but the present epidemic shows the fallacy of this. Almost all the cases have occurred amongst the poorest class of natives, who either do not by preference or cannot afford to call in European general practitioners. That the system calls for immediate alteration at the hands of the Government must be evident to everyone who has the welfare of the Settlement at heart. Deputy registrars should be no longer ignorant police-constables. The posts should either be given to trained apothecaries or something akin to the parochial system should be instituted, so that, failing a certificate from the deceased's medical attendant, a proper medical certificate may in all cases be obtained. All such certificates, too, should be made out in duplicate, one copy going to the medical officer of health within twenty-four hours of the death and the other being sent, as heretofore, to the Registrar-General.

SLAVERY IN ZANZIBAR AND PEMBA.

ZANZIBAR has for many years been known to the public as the starting point of exploring expeditions about to enter Equatorial Africa from the eastern side, and the recent extension of a British Protectorate over the territories of its ruler causes us to regard it with an increased feeling of interest and responsibility. The upper classes are Mohammedan Arabs; they have been slave-traders and slave-owners from time immemorial, and a special investigation of the condition of the negroes has just been made at the instance of the British and Foreign Anti-Slavery Society. The society's commissioner, Mr. Donald Mackenzie, is acquainted with the Arabic language and has had long experience of Mohammedan customs and slavery among the Arabs in North-West Africa. He arrived in Zanzibar on March 2nd, 1895, and devoted about six weeks to his inquiry. The territories of Zanzibar consist of the coral islands of Zanzibar and Pemba, lying about twenty-two miles apart, between 5° and 7° S. latitude; the former island is less than twenty-five and the latter less than thirty-five miles from the African mainland. There are no precise data as to the population, but the late Sultan, who died in 1888, estimated the inhabitants of the two islands at 400,000, of whom 200 were Europeans (merchants) and Goanese (shopkeepers and servants), 8500 were natives of British India (moneylenders and merchants), 10,000 or 15,000 were Arabs (the ruling class), 266,000 were slaves, and the balance were aborigines and slaves who had been set free. The slaves may be classified as domestics (including concubines and eunuchs), plantation workers, chiefly occupied in the cultivation of cloves, and town labourers. These last work under entirely different conditions from the domestic and plantation slaves. They are employed: (1) in the loading and discharging of vessels and in general warehouse and town labour, women being largely engaged in this work and especially in the coaling of steamers, including British men-of-war; (2) as porters who carry goods or stores into the interior of Africa; and (3) as domestic servants to Europeans, natives of British India, and Goanese, who not being themselves allowed to possess slaves have to hire them from their owners. All British subjects deal with the slaves directly and not with the master, or they may hire them from a contractor, who need not necessarily be a slaveholder, but who knows where to get them. Employers pay wages to the slaves, who, in turn, hand to their masters half of their earnings, and with the remainder have to buy their own food and clothes: in the case of porters the hirer has to provide them with food. The pay of porters and harbour labourers is usually ten rupees per month; women labourers receive less. The regulation load of porters is 70 lb. each, but beyond that they have to carry food, water, and cooking utensils, which may bring the load up to 100 lb. or more. They have to march about twelve miles a day. These slave porters are the only means of transport for our Government and for missionaries and merchants between the interior of Africa and the coast. If any of them are taken ill they are left by the path-side to die, their loads are distributed among the others, and the caravan proceeds on its march without any further notice being taken of those who drop by the way. The mortality amongst them was given to Mr. Mackenzie on the very highest authority at 30 per cent. Domestic servants are generally men, and they receive about seven rupees per month; the women are water-carriers and are paid five rupees per month. They all receive their wages directly from their employers, but each hands to the master one-half. A slave is told by his master to seek employment, and if he cannot find it he is punished. The masters have hardly any responsibility as regards the slaves and only provide them with food when they are out of employment. None of the slaves possess any civil rights except that they can complain against their masters to the British Consul-General, but at present very few know of the Consul-General, and under existing circumstances freedom would be no benefit to them, for they would be outcasts, and their masters would have many ways of getting rid of them by poison and otherwise. Many of the slaves who have been set free by the Consul-General have afterwards been kidnapped and all trace of them has been lost. Mr. Mackenzie was much impressed by the fact that very few children are born to slaves, owing, it is said, to the manner in which very young girls are treated

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by the Arabs and others; hence the necessity for continued importation from Africa to keep up the number. Taking the death-rate at 30 per 1000, upwards of 7000 slaves would have to be imported annually. He is of opinion that some 6000 are imported yearly into Zanzibar and Pemba from the mainland, not in dhows, which attract too much attention, but in sailing canoes, of which there are upwards of 2000 in Zanzibar and quite as many in Pemba. The export of slaves to the Arabian coast from the mainland of East Africa is probably some 11,000 per annum. About 1500 dhows are known to make two voyages a year, one to Zanzibar and East Africa and the other back to Arabia in the south-west monsoon; each of these vessels takes on an average seven slaves, though some may carry a larger number. According to the report of the Select Committee on the East African Slave Trade, presented to Parliament in 1871, the export from the mainland into Zanzibar and the Arabian coast amounted to upwards of 20,000 slaves per annum. In nearly all the dhows which have been captured going north in these parts from time to time small boys were found mutilated for eunuchs for the harems in Arabia. These boys are operated upon by native doctors, and the mortality is reported to be very great. The Sultan of Zanzibar is said to have fifteen eunuchs to guard his harem, but it does not appear that any other Arabs have them in these islands. The Sultan is the principal slaveholder, being supposed to own 30,000 slaves. Of his subjects, one has six *shambas* or estates, with 3000 slaves on each, and another has seven *shambas* and 10,000 slaves.

Mr. Mackenzie gratefully acknowledges the assistance and information he received from Mr. Hardinge, the British Agent and Consul-General, Sir Lloyd Matthews, the Prime Minister of the Zanzibar Government, Archdeacon Jones-Bateman, and others. He is convinced that the legal status of slavery should be abolished as soon as possible, although the majority of the European residents are in favour of its retention on economic and utilitarian grounds. He has also given an interesting account of his visit to the island of Pemba, where he spent several days, being, as he understands, the first European to explore it.

THE BATTLE OF THE CLUBS AT BRUSSELS.

(FROM OUR SPECIAL COMMISSIONER.)

THE cause which led to the resignation of the twenty medical men who were engaged in the service of the Federation of Mutualist (or benefit) Societies at Brussels has been fully explained.[1] There are, however, lessons to be derived from this struggle which are worth noting. First and foremost stands the fact that at Brussels, as at Cork, the great mass of the working population at once took sides against the medical men. Undoubtedly, and this has been demonstrated over and over again, it is doubly difficult to bring such a movement to a successful issue unless popular sympathies are enlisted. The first care, therefore, that medical men should take is to put themselves right with the public. The great blunder committed at Brussels has been the omission of this precaution. The Medical Syndicate has negotiated with the committee of the Mutualist Federation, as if these two bodies alone were concerned. The consequence is that a quarrel has broken out in which some 50,000 persons are materially concerned, and not one in a hundred knows what it is all about. Yet it was all the more necessary that the Medical Syndicate should appeal to the rank and file of the Mutualist societies, as the committee representing the federation of these societies is composed in the main of precisely the element most affected by the action of the medical men. What can be said of Brussels will be found to hold good very generally in England. The majority of members of such clubs or benefit societies are workmen or others whom the medical profession are very willing to attend at low contract rates because they are too poor to pay proper fees. But there is also, though in much smaller numbers, a middle-class or well-to-do element which the medical profession rightly consider should be excluded from such benefits. Now, it is precisely this well-to-do, middle-class element which, by reason of its superior education and ability, supplies a very large portion of the members of committees, managers, secretaries, &c. of the clubs. Thus medical men sometimes find themselves obliged to propose the exclusion from medical benefits of the very members of the committees with whom they have to negotiate. Under such circumstances it will be seen how very important it is to appeal from the committees to the constituencies. This is all the more necessary as what the medical men desire is really to the interest of the poor members of benefit clubs. Great care should be taken to point out that comparatively rich persons are unjustifiably trespassing on the time medical men should devote exclusively to the poor. How thoroughly the whole state of the case was misunderstood by the rank and file of the benefit clubs of Brussels I had an excellent opportunity of estimating.

A general meeting of Mutualists was convoked at the Alhambra, one of the largest theatres of Brussels. Though I arrived in good time, and the theatre is said to hold some 5000 persons, I found that the police had already closed the doors, the crowd being so large that an accident was feared. It was with the greatest difficulty, and as a special privilege to the press, that I obtained admittance and standing room to witness the proceedings. The speeches, delivered for the most part by members of the committee of the Mutualist Federation, represented the medical profession as actuated by the most sordid motives. The medical men, the public were told, wished to institute an inquisition so as to ascertain the precise state of every member's fortune. Each member of a benefit society would in future have to be provided with a diploma of indigence. It was an insult to thus qualify them all as paupers. They were not paupers, but prudent men who took out an insurance against possible sickness. It was not because a few persons had attained easy circumstances that the advantages of benefit clubs should be withdrawn from the others. One speaker had joined when he was earning as a clerk £64. He was then able to save enough on this to buy a gold chain for his watch. Now he was earning £180; but, as a husband and father of a family, he found himself so much poorer that any purchase of luxuries was quite out of the question. He felt that with the larger income he was more entitled to join a benefit society than with the smaller income. Another speaker said that benefit clubs were as commercial travellers working on behalf of medical men. They took the young, unknown practitioner, perhaps they did not pay him much, but they made his reputation and created his practice. Medical men were roundly abused by several speakers. Some were described as riding about in luxurious carriages and refusing to put their science at the service of the poor; but they utilised the poor as a mere field for experiments. Then we were led to infer that there was a nice little piece of jobbery going on between the Medical Syndicate and the dispensing druggists. An alliance had been formed between the medical men and the druggists to crush out of existence the "popular pharmacies"; and, if this was successful, it would be the death warrant of all coöperative societies and enterprise.

This was a very effective thing to say, as the whole of the Belgian labour movement derives its strength from vast coöperative productive and distributive societies that pay no dividend, but employ the profits to reduce the sale price and for purposes of political propaganda. This argument was, therefore, a distinct bid for the support of the Belgian Labour Party, which has returned thirty out of the 150 deputies that constitute the Belgian Parliament. It might be inferred that the popular pharmacies are coöperative institutions similar to those founded by the Labour Party; this, however, is not at all the case. The popular pharmacies were started some time ago by an individual, and as a speculation. This individual went the round of the benefit societies, offered to give them a large financial interest in his business if they would reserve their custom to his pharmacies and give him a certain sum to form what he called a guarantee fund. By means of this fund he got the capital for his business and assured himself of the custom of the benefit societies. Nine such so-called popular pharmacies were opened in different parts of Brussels. Of course, when it was seen that the mutualists all went to these popular pharmacies the general public also patronised these establishments, being under the impression that the medicaments were sold at a much cheaper rate. Thus an enormous trade has

[1] THE LANCET, Aug. 24th, 1895, p. 476.

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been done, and the benefit societies got back as their share of the profits a large amount of the money they spent in drugs. I have seen the accounts of one society which paid in the course of last year 13,195 francs for drugs to the popular pharmacies, but got back as its share of profits for the same year 9987 francs! Naturally these profits were made in the main, not out of the members of the benefit societies, but out of the general public, and this of course greatly to the detriment of the ordinary druggists. So keen is this grievance that a law has been passed in the Belgian Parliament, and will come into force next year, by which societies of this description shall be allowed to sell only to their own members and not to the general public. It seems, therefore, that if there is any jobbery at all with regard to the dispensing of medicaments to members of benefit societies, it rests with those benefit societies themselves rather than with the medical profession. The medical men do, however, urge that it is very awkward for so large a town as Brussels to have only nine pharmacies where the members of the societies can get their medicaments. This is the greater inconvenience as, though they often have to go very far for the drugs, they do not get them any cheaper. On the contrary, the 180 dispensing druggists of Brussels have agreed to charge all members of the Federation of Benefit Societies only half what they are in the habit of paying at the popular pharmacies. By this arrangement the rank and file of the benefit societies could go to the nearest druggist or to any druggist for whom they might have a preference. This would be much more convenient and cheaper, but it would put an end to the profits which the benefit societies derive from trading with the general public.

There was one feature in the meeting by which I was greatly impressed. Nearly all the speakers used against the Medical Syndicate the usual arguments brought to bear against trades-unions when there is a strike. Strange to say, the working men who composed a large section of the audience were trades-unionists and must themselves have been on strike many a time, utterly failed to recognise that they were combating the medical men with identically the same arguments which had been employed against them when they as workmen strove for higher wages or shorter hours. For instance, a letter was read from the secretary of the Medical Syndicate, couched in strong language and pointing out to some medical man the consequences that would accrue if he worked for the Mutualist Federation against the interests of his own profession. It was just such a letter as the secretary of a trades-union would write to a "blackleg" during a strike. One would have expected the working men present to have recognised the tone at once and to have applauded its contents; but, on the contrary, they allowed a speaker to invoke the law in favour of the "liberty to work" by which "blacklegs" are protected against strikers, and to declare that no society will submit to the tyranny of a medical syndicate, just in the same language as employers declare that they will not submit to the tyranny of a trades-union. It was extraordinary to note how quickly working men, who were for the moment in the position of employers, at once adopted the tone, the language, and the arguments of the capitalist fighting against the claims of labour, and, furthermore, unanimously voted in favour of a resolution to that effect.

This state of feeling must be reckoned with; and wherever such a struggle breaks out it must be checked or altogether prevented. That it arose at all is due to the fact that the Medical Syndicate limited its efforts to negotiations with the middle-class committeemen of the Mutualist Federation and either did not attempt or was not successful in making its voice heard by the rank and file. It should be made manifest to the working classes that in so far as a medical man earns his living by practising medicine he is, economically speaking, in identically the same position as a skilled artisan who has had to serve a long apprenticeship to learn his trade; that he has the same right to form a trades-union, and, short of physical violence, may morally seek to coerce all members of the profession into joining the union; finally, that if a workman wishes to be well treated by his employer he must, when himself in the position of an employer, treat equally well those whom he employs. There are very few trades-unions in any part of the world which would not readily accept this argument. It is because benefit clubs have in their ranks a considerable number of middle-class men and small employers that these principles have not governed their relations with the medical profession. The latter will find its interests best understood, and best served, by appealing directly to the working-class element — particularly, as in this instance, the economic position and the personal interests of the working class and the medical profession are identical. Besides, as the secretary of the Medical Syndicate pointed out to me, the working men are absolutely robbed by the middle-class element. To use his own words, a rich man by joining a benefit society commits a crime. Charity concerts, bazaars, and other means are employed to raise funds to enable the benefit societies to relieve the poor. Money is spent and given to organise a medical service for that purpose; then a rich man comes and avails himself of this cheap medical service, thus appropriating to himself some of the money and services given expressly for the poor. This state of affairs, if properly understood, would never be approved by the working classes; but medical men, to carry this war to a successful end, must give themselves the trouble to thoroughly educate the masses on the question at issue.

Brussels, Aug. 24th.

THE FIFTH INTERNATIONAL CONGRESS AGAINST THE ABUSE OF ALCOHOL.

AS announced in THE LANCET of Aug. 10th, Bâle was the seat of this the Fifth International Congress for Combating the Abuse of Alcohol, and the 20th inst. the day of meeting. The attendance was considerable, not a few interested in the subject having taken a few days from their Swiss holiday to assist at the proceedings. The president of the Organising Committee, Dr. C. Ch. Burckhardt, bade the meeting welcome, and then the chair was taken by the Dutch Minister of State, M. Heemskerk, president of the permanent committee. His Excellency opened the proceedings by a brief *résumé* of the progress made in the movement since the last Congress at the Hague in 1893, after which three papers were read on the physiological and psychological effects of alcohol. Professor Gaula of Zürich, followed by Dr. Smith of Marbach and Dr. Fürer of Heidelberg, dwelt on the influence exerted by alcohol on the cerebral substance and on the deteriorating effects of the stimulant, even in moderation, on the memory and reasoning faculties. Intellectual work, the two latter contended, is always better during periods of abstinence than when strong drink is even sparingly indulged in. The discussion on these positions was slight, almost perfunctory, but became more animated when the reports of the directors of the lunatic asylums came to be read—reports of which Dr. Legrain of Paris and Professor Forel of Zürich had charge. Their conclusion was that lunacy increases in direct proportion to the abuse of alcohol. This, accepted in the main by M. Milliet, Director of the Federal Office for the Control of Alcohol, was supplemented by the same speaker in a modifying sense, his argument being against absolute disuse of alcohol, while he demonstrated the effect of other causes as responsible for many of the evils ascribed by Dr. Legrain and Professor Forel to alcohol alone. He was effectively supported by M. Bode of Hildesheim; but the preponderance of the meeting's sympathies was evidently in favour of total abstinence, Dr. Ridge being its eloquent and most uncompromising advocate. The first day's proceedings concluded with an elaborate paper by Dr. Lancelot, delegate of the French Minister of Public Instruction. His subject, ably treated, was the Characteristic Effects, Physiological and Psychical, of the Different Kinds of Alcoholic Beverages.

The second day (the 21st inst.) was devoted to the action of the various anti-alcoholic organisations throughout Europe, Monsignor Egger, Bishop of St. Gall, introducing the discussion with a special salutation from the Pope, who is well known as a promoter of the temperance cause. The leading participants in the proceedings were M. L. L. Rochat (representing Switzerland), MM. Bode and Tienken (who spoke for Germany), MM. Kraar and Bergmann (for Scandinavia), the venerable octogenarian Professor Valetan (for Holland), M. Wagener (for Denmark), and Miss Charlotte Gray, who related the work achieved in the different European countries by the Good Templars. From the *ensemble* of the speaking the conclusion was

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inevitable that organised control of the consumption of alcohol is only on the threshold and that the results hitherto attained are, on the whole, satisfactory. The European countries where most progress of a real kind has been made are Norway and Sweden. As usual, the conflicting camps of "absolute abstention" on the one hand and "moderate use" on the other engrossed the greater part of the discussion—the result in point of argument, if not in point of numbers, being "drawn." Later in the day the Rev. Grant Mills and Dr. H. Christ gave interesting accounts of the appalling effects of alcohol among the savage tribes of Africa. This exposition suggested a modification of the Treaty of Brussels of 1890–91 in the direction of a far more stringent prohibition of the importation of alcohol into the Dark Continent. This modification, however, as a question of law, lay outside the power of the Congress, which had, therefore, to remain satisfied with putting on record its opinion. Two important papers followed from MM. Koblinski of Düsseldorf and Marthaler of Berne, penitentiary chaplains, who dwelt on the influence of alcohol in fostering crime. These, the second day's proceedings, were wound up by a banquet the simplicity of which proved no bar to much geniality, which found expression in effective speeches, all impressed with international fraternity.

The effect of alcoholic abuse in fostering crime was on the third and last day made prominent by M. Denis, who endeavoured by elaborate statistical returns to show the length to which European countries had gone in combating this source of criminality. France and Belgium, where no serious attempt has been made to restrain the spread of alcoholism, have, he said, the worst record in regard to crime. Switzerland and Holland, he contended, where the restrictive movement had already begun, had rendered crime "stationary," preluding a reduction in its prevalence as the movement became more energetic. Norway and Sweden, as already indicated, could boast of a distinct diminution in their criminal population, thanks to their control of alcoholism. From this the proceedings diverged into the subject of special asylums for drunkards. MM. Bleuler, Arnold-Bovet, Smith, and others contributed valuable expert evidence to its elucidation and strengthened the conclusion that these asylums should be multiplied, free from State control, and none of them on too large a scale—certainly not on the scale of that proposed in France to be established at the gates of Paris. Then the "full-dress debate" of the day was opened—on the State "monopoly in alcohol"—a principle ably advocated by M. Milliet as the only possible solution of the difficulty, at least in Switzerland, under present circumstances. On the other hand, its application to all countries indiscriminately was strenuously opposed by MM. L. L. Rochat and Moeller of Brussels, while M. Alglave supported it as an ideal to aim at. The afternoon sitting was employed in reorganising the permanent committee, so as to combine into one single committee the executive committee proper and the old permanent committee. Brussels was thereafter named as the seat of the next—the sixth—congress, to be held in 1897. After this, the subject of temperance cafés and restaurants was introduced, followed by the discussion of alcoholism in its relation to the working classes. The proceedings were at this stage enlivened by the intervention of a highly intelligent Socialist artisan, M. Bruno Gutsmann, who vigorously sustained the thesis that the cause of labour will never "find salvation" so long as the representative working man drinks, even moderately; contending at the same time that the state of society, as at present constituted, actually "condemned him almost fatally to alcoholism," a statement which was received with considerable reserve. M. Gutsmann was seconded by his fellow reporter, Mr. Martin Skinner, who replied to the objections raised against abstinence by a certain class of Socialists, and was in turn subjected to some vivacious but perfectly courteous criticism on the part of the "moderates." The concluding papers were occupied with the education of children in temperance principles—a well-considered subject on which the Congress was virtually unanimous.

The consensus of opinion on the Congress is a favourable one so far as its temper and ability are concerned—certainly it has been exempt from such scenes as characterised its predecessor of 1893 at the Hague. But—the besetting sin of all congresses—the agenda paper was far too crowded, the number and length of the papers sent in being out of all proportion to the time at the disposal of the Congress. Fewer subjects, more succinctly treated, and ampler notice given of their tenour, will in future be found a salutary innovation in the system hitherto adopted. As to the general arrangements for the convenience and comfort of the members, this latest one at Bâle contrasts favourably with all its predecessors. A special word of praise is due to the entertainments by which its labours were relieved—the *soirée* given by the abstaining students to the members in the Casino d'Été being particularly commendable for the refined hospitality by which it was characterised.

Bâle, Aug. 24th.

CHOLERA.

WE learn from Singapore that cholera was prevalent among the natives of this station during the summer, and that one European, an officer of the Northumberland Fusiliers, had succumbed to the disease.

But Japan is the country that has had a terrible experience of cholera of late, following the recent war and close communication with China and Corea. The epidemic in Japan attained large proportions and proved very fatal. Out of 25,000 cases 16,000 deaths were returned. We shall, no doubt, be furnished with a medical history of the epidemic by the Japanese medical authorities in the course of the year, and it will be interesting to ascertain the views entertained by an intelligent and very enterprising people as to the causes of the disease and the methods by which it is believed to have been introduced and spread in that country. So far as Europe is concerned, it is not likely that it will be affected by an extension of the epidemic from Japan.

The Vienna correspondent of the *Times* says that on the 23rd inst. a death took place at Tarnopol in Galicia and the provisional diagnosis of Asiatic cholera has now been confirmed by bacteriological examination.

THE CASE OF MR. R. B. ANDERSON.

THAT all British subjects are entitled to the benefits of an impartial administration of justice everywhere throughout this realm is a cardinal maxim of our legal system. The agents and exponents of the law are fallible, like other human beings, but hardships arising from this natural defect in most cases admit of reparation. The broad principles of justice are practically unalterable, and the security of individual members of the community is understood to be guaranteed by publicity and by the right of appeal. The conspicuous integrity of the administration of the law in England tends to foster this belief. Not within the present century have judges in this country been charged with systematic partiality, bias, and misuse of judicial powers. The same, however, cannot be said of all parts of the Queen's dominions. For some time past the columns of THE LANCET have contained frequent references to the remarkable hardships which have been illegally, but in the name of the law, inflicted on a member of our profession, Mr. R. B. Anderson, of the Island of Tobago, in the West Indies. This gentleman, who in 1873 became a Fellow of the Royal College of Surgeons of England, settled in Tobago, where he attained considerable success in practice and received the appointment of colonial surgeon, an office which after he had held it for five years was discontinued, Mr. Anderson receiving a pension by way of compensation. By the year 1889 he had been about sixteen years in practice in the island; he was, moreover, a justice of the peace, an elected member of the Legislative body, and a landowner. In that year, and after he had ceased to be the colonial surgeon, he was consulted by a coloured woman named Marshall, who suffered from limited necrosis of the lower jaw. After some months' preliminary attendance, necessitated by the unsatisfactory state of the patient's health, Mr. Anderson, with the assistance of a medical friend, cut down upon the sequestrum. It did not separate immediately, the patient's husband made himself objectionable, and after some weeks' further attendance Mr. Anderson suggested that they should seek other advice,

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and retired from the case. About a fortnight after his attendance ceased, the sequestrum became loosened, and was easily removed by Dr. Tulloch, of Tobago, merely with his fingers. Mr. Anderson's professional charges not being paid, he took proceedings in the Petty Debt Court, and after some inexplicable delay found that the Chief Justice, Sir John Gorrie, who was then in the Island of Trinidad, had given special directions that this case was not to be tried until his (Sir John Gorrie's) arrival in Tobago. In the meantime Mrs. Marshall and her husband sued Mr. Anderson *in formâ pauperis* for £15 damages; there was no shadow of proof that the female plaintiff had sustained any injury, and the principal charge alleged against the defendant was neglect, inasmuch as he had improperly ceased to attend the plaintiff and retired from the case before recovery was complete. In the result the Chief Justice, in the beginning of 1890, gave judgment for the plaintiff for practically £17 10*s.*, with costs for breach of contract—for which the plaintiffs had not sued, neither had their plaint been amended to include it. Sir John Gorrie further stated, without any reservation, that a medical man, as such, and merely by becoming qualified, was bound to attend all cases of illness to which he was summoned, and that no medical man had a right, without the consent of the patient, to abandon any case which he had begun to treat, even where other medical aid was available and where the patient was running no risk from such abandonment, and that by so doing he laid himself open to an action at law, civil or criminal. He also stigmatised the making of contracts prior to attendance as an unprofessional and improper act on the part of the practitioner. It is almost needless to add that Mr. Anderson's claim for fees was disallowed by Sir John Gorrie. About a year afterwards—viz., on Jan. 20th, 1891—summonses in a non-medical case were taken out against Mr. Anderson. The plaintiff sued *in formâ pauperis*, no affidavit was made to show that the debts were unpaid, and the total amount of the judgment debts, including costs, was £42 2*s.* The case was tried in Tobago before Mr. Justice Cook, and Mr. Anderson was on Jan. 23rd ordered by this judge, upon adjournment of his examination, to give his security in £500 and also to find bail in £500 for his appearance at the adjourned hearing of the summons, and in default of giving such security he was committed to prison, where he remained until the adjourned hearing was resumed on Jan. 30th. On that day Mr. Justice Cook again adjourned the hearing after some examination and required Mr. Anderson to find security for his appearance, as before, in two sums of £500 each. Five well-known residents, three of whom were members of the Legislative Council, perceiving that a grave injustice was being perpetrated, went in a body to the judge to offer the security. Mr. Anderson was sent to England in 1891 by public subscriptions raised in Trinidad, to lay his wrongs before the home authorities and the public. On Sept. 14th of that year he instituted his remarkable action in the Court of Queen's Bench against the Trinidad judges (Anderson *v.* Gorrie and others). The facts disclosed were too flagrant to be overlooked. In 1892 a Royal Commission, consisting of Sir William Markby and Sir Frederick Pollock, was appointed to inquire into the administration of justice in Trinidad and Tobago, and their report resulted in the removal of Mr. Justice Cook from office. Sir John Gorrie was also interdicted pending the formal bringing of charges against him, but the interdiction was soon followed by his death. Mr. Anderson's action against the judges only came on in April, 1894, and occupied seven days, before the late Lord Chief Justice Coleridge and a special jury of Middlesex. In the course of the trial Lord Coleridge stigmatised the imposition of the bail already mentioned as "a piece of unmitigated, unlawful tyranny," and in the course of his summing-up said:—"The proceedings for contempt of court taken against the plaintiff for having petitioned the Queen were quite unjustifiable. Then judgments having been obtained against Mr. Anderson for £42, Mr. Justice Cook held him to bail for £500. He confessed he could not understand how an English judge could have so acted." The verdict was as follows:—"The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice, and found a verdict for the plaintiff for £500." Lord Coleridge, however, entered judgment for the defendant on the ground that no action will lie against a judge for an act done in his judicial capacity, and this judgment has been confirmed by the Master of the Rolls, Lord Esher, and the Court of Appeal.

Mr. Anderson is, therefore, in an exceptional and almost unique manner the helpless victim of judicial persecution. He has been forced into heavy expenditure in the defence of his natural rights—an object so dear to every Englishman—and now he has the additional mortification of finding that the survivor of his persecutors is by a legal technicality placed above the ordinary operation of law, and thereby enabled to evade making reparation for his unlawful acts. Mr. Anderson's courage is admirable, but it is impossible to avoid pitying him. His thriving practice has been broken up, judgments unjustly given against him in Tobago are still in force and prevent him from returning to the island, whilst his means are consumed in the unequal struggle against an impassive officialism which admits the justice of his cause and the reality of his hardships but fails to provide redress.

FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.

IN reference to this congress, which will be held at Florence from Sept. 23rd to 26th, Messrs. Thomas Cook and Son of Ludgate-circus, London, E.C., have made the following arrangements for issuing tickets to Florence by all routes. As delegates will be entitled to tickets at greatly reduced fares on the Italian railways by production of their certificate of membership at the railway station at the frontier, Messrs. Cook and Son also issue tickets to Modane, Vintimille, or Chiasso by all routes. The following are a few examples of the chief routes:—

Route.	Fares. Single journey from London to															
	Chiasso.				Modane.				Vintimille.				Florence.			
	1st Cl.		2nd Cl.		1st Cl.		2nd Cl.		1st Cl.		2nd Cl.		1st Cl.		2nd Cl.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Newhaven, Dieppe, Paris.	5	14 3	4	0 3	4	16 9	3	7 9	6	15 9	4	14 0	7	8 3	5	3 8
Dover, Calais, Paris.	6	15 9	4	13 10	5	19 3	4	1 9	7	18 3	5	8 6	8	10 8	6	17 8
Dover, Calais, Laon.	6	16 10	4	16 2	—		—		—		—		8	16 5	6	3 10

Messrs. Cook and Son can also supply circular tickets from London to Dover, Calais, Laon, Lucerne, St. Gothard, Chiasso, Milan, returning *viâ* Turin, Modane, Paris, Calais, Dover, London, at £11 5*s.* 1*d.* first class and £8 4*s.* second class; and through tickets from Southampton to Genoa by North German Lloyd steamers, leaving Southampton on Sept. 1st and 15th, and arriving at Genoa on Sept. 9th and 23rd, at—single journey, first class £8 13*s.*, second class £5 8*s.* 6*d.*; return journey, first class £14 8*s.* 6*d.*, second class £9 1*s.* Through tickets from London by Orient steamer, leaving Tilbury on Sept. 6th and 20th, and arriving at Naples on Sept. 15th and 29th. Fare to Naples, £14 first class, £10 second class. Or by Peninsular and Oriental steamer, leaving Sept. 13th.

THROUGH SERVICES TO FLORENCE.

London to Paris viâ Calais.

Stations.		1st & 2nd Cl.	1st & 2nd Cl.	1st, 2nd, & 3rd Cl.
Victoria	d.	9 0 a.	11 0 a.	8 15 p.
Holborn	d.	9 0	11 0	8 10
St. Paul's...	d.	9 2	11 2	8 12
Herne Hill	d.	9 10	11 10	8 25
Canterbury	d.	—	11 29	9 41
Dover Pier	a.	10 45	12 50 p.	10 7
	d.	10 55	1 0	10 15
Calais Pier (abt.) English time (about)	a.	12 15 p.	2 20	12 19 a.
Calais Pier (abt.) English time	d.	12 44	2 56	12 59
Calais Pier (abt.) French time	d.	12 49	3 0	1 4
Amiens	a.	3 4	5 12	3 41
	d.	3 9	5 17	3 46
Paris (Nord)	a.	4 45	7 0	5 38

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London to Paris viâ Dieppe.

Stations.	1st & 2nd Cl.	1st, 2nd, & 3rd Cl.
Victoria Station ... ... d.	10 0 a.	8 50 p.
London Bridge ... ... d.	10 0	9 0
Newhaven ... ... d.	11 30	11 0
Dieppe ... ... d.	3 34 p.	4 23 a.
Paris (St. Lazare) ... ... a.	6 55	8 0

Paris to Florence viâ Turin.

Stations.		1st & 2nd Cl.		1st & 2nd Cl.
Paris (Nord Buffet)	d.	7 44 p.		6 23 a.
Paris (Lyon Buffet)	a.	8 26		7 15
	d.	8 50 p.	...	2 15
Aix-les-Bains	a.	6 30 a.	...	12 26 a.
Chambéry	a.	6 58	...	12 51
Turin	a.	2 20 p.	..	8 10
Turin	d.	2 45 p.	8 10 p.	8 40 a.
Genoa	a.	6 14	11 21	12 0 p.
Florence	a.	12 45 a.	7 30 a.	6 54 a.

London to Florence viâ Calais, Laon, and St. Gothard.

Through Carriages, 1st and 2nd class, from Calais to Bâle at 2.50 P.M., and at 1.4 A.M.; also 1st class Sleeping Car at 2.50 P.M. to Bâle, 16s. 6d. each berth.

Stations.		1st Cl. Luxe.	1st & 2nd Cl.		1st & 2nd Cl.
London — Victoria (W. E.)	d.	11 0	11 0 a.		8 15 p.
London — Holborn (C. T.)	d.	11 0	11 0		8 10
London — St. Paul's (C. S.)	d.	11 2	11 2		8 12
Herne-hill (S. Lond.) ...	d.	11 10	11 10		8 25
Dover	d.	1 0 p.	1 0 p.		10 15
Calais Pier	a.	2 20	2 20		12 10 a.
,, (French time) ...	d.	2 45	2 50		1 4
Reims	a.	7 44	8 16		6 36
Châlons (Dine, stop 23 min.)	d.	8 43	‡9 42		8 0
Belfort	a.	1 31 a.	2 44 a.		2 27 p
Delle	d.	3 5	4 22		†
Bâle	a.	5 0	6 30 a.		5 25 p.
Bâle	d.	Interlaken-Engadine Ex. Weds. and Sats. only from Calais, with extra fare.	7 25 a.	7 47 a.	8 35
Lucerne	a.		9 36	10 35	10 51
	d		*9 50 a.	10 50 a.	11 0
Goeschenen (B., 20 min. stop)	d.		*12 33 p.	2 5 p.	2 13 a.
Bellinzona	a.		*2 22	4 10	4 18
Lugano	a.		*3 10	5 10	5 25
Chiasso (Italian Customs)	a.		*3 45	5 55	6 10
Milan	a.		5 23	7 42	7 52 a.
Milan / Bologna / Florence — Adriatic route.	d.		...	10 10 p.	11 30 a.
	a.		...	2 12 a.	2 52 p.
	a.		...	6 23 a.	6 25
Milan / Genoa / Florence — Med. route.	d.		...	8 40 p.	9 15 a.
	a.		...	11 40	12 18 p.
	a.		...	7 30 a.	5 54

* First Class only Lucerne to Chiasso.
† Viâ Petit-Croix.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Surrey County Sanitary District.—Dr. Edward Seaton's report for this district during 1894 is arranged in subject sections; in each section, in addition to a general review by the county medical officer, is given a synopsis of those parts of the district reports relating to the subject. During the year 1894 Dr. Seaton attended numerous conferences and Government inquiries, made a large number of inspections, and drew up several reports. In reference to the county medical officer of health's attendance at Government inquiries an instruction has been drawn up by the council and inserted in the standing orders, that as far as possible he shall attend all such inquiries as relate to the public health of the county for the purpose, in the first instance, of affording to the inspector holding the inquiry any information in his power. He is, however, not to appear as a witness on either side save in cases where his advice has been sought by the sanitary authorities and given to them after consultation with, and with the consent of, the sanitary committee of the county council. Dr. Seaton records considerable improvement in the reports of the district medical officers of health, though there is, he states, still a wide difference between those drawn up by those who devote their whole time to the duties of their office and those who do otherwise. In certain districts Dr. Seaton remarks that substantial improvement in the sanitary condition can only be brought about by the amalgamation of districts and the appointment of medical officers of health who shall devote all their time to their work. The county general death-rate was for 1894 but 11·9—i.e., 2 per 1000 less than the average of the previous quinquennium. Notification is now common throughout the county, and Dr. Seaton, in referring to the influence which county opinion has had upon the general adoption of the Notification Act, alludes to the case of Buckinghamshire, where, as he remarks, the attempt by the county council to cultivate a county opinion has signally failed. Certainly this is so, if we may take the vitality of the Buckinghamshire sanitary committee as evidence. In the matter of zymotic disease diphtheria presents a depressing aspect, giving rise as it did during 1894 to a death-rate of 25 per 100,000 in the urban districts and 38 per 100,000 in the rural districts. Comparing these rates with those for scarlet fever, we learn that this disease causes a death-rate of but 2 per 100,000 in the urban, and 5 per 100,000 in the rural districts. Enteric fever again caused a death-rate of 9 per 100,000 in the urban and 8 per 100,000 in the rural districts. The subject of isolation provision has received much attention during the past year, but Dr. Seaton regrets that he is unable to chronicle the carrying out of any scheme. The water-supply of the county is dealt with very fully and lucidly by Dr. Seaton, and he states that in many of the rural parts of Surrey water from surface wells is still general, in spite of the fact that in certain parts of the district a far safer supply is easily procurable. With reference to the river-water supplies, the need for extending the mains of some of the metropolitan companies and of the West Surrey and South-west suburban companies is insisted upon. There is no evidence, Dr. Seaton remarks, that the floods of 1894 have produced any ill effects as regards the health of the county so far as the river water-supplies are concerned. A very concise synopsis of "Subjects of Importance" referred to by the medical officers of health in the county is given in the form of a sheet in Dr. Seaton's very interesting report, which shows at a glance those matters which are receiving attention and those which are not. The report also gives an abstract of the quarterly reports of the county analyst and of the chief inspector under the Contagious Diseases (Animals) Act.

Essex County Sanitary District.—Calculated upon the usual basis, the population of the administrative county of Essex was in the middle of last year 635,590, that of the urban districts being 363,620, and that of the rural 271,970. The birth-rate for 1894 was in the urban districts 30·2, and in the rural 26·2 per 1000. Commenting upon the decreases which these rates evince, Dr. Thresh observes that there is a disposition to view a declining birth-rate with satisfaction without inquiry as to its cause, the fact that the cause or causes may be anything but satisfactory being ignored. The general death-rate in the urban districts of the county was 13·0 per 1000, and in the rural districts 13·3. Dr. Thresh remarks that these remarkably low death-rates may be due in some degree to favourable meteorological conditions, and also to the devastating influence of influenza which occurred in previous years. We cannot hope, he points out, to reduce our general death-rate to 13·1 per 1000 before many years have been spent in sanitary reform and in the education of the people in all that makes for longevity. The infantile mortality for the whole county was during 1894 but 109 per 1000 births. In the matter of zymotic diseases the most noticeable feature in the county statistics is the fact that both in the urban and rural districts diphtheria is accountable for more deaths than small-pox, scarlet fever, typhoid fever, and measles combined, the diphtheria death-rate being nearly twice that for England and Wales. The mortality from this disease in the rural districts was smaller in proportion to the population than in the urban districts; but the

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fatality rate in the former was rather in excess of that in the latter, a difference which may be due, Dr. Thresh thinks, to the disease frequently assuming a more severe type in country districts than in towns or to trivial cases escaping observation. Possibly greater facility for medical and surgical assistance may, we would suggest, have had some effect. Dr. Thresh undertakes the bacteriological examination of any case of suspected diphtheria, and he supplies culture boxes to medical practitioners in the county, containing minute instructions for the inoculation of the tubes, &c. One instance—an instructive one—is mentioned by Dr. Thresh, in which an inoculation made on one day showed no diphtheria bacilli, while on the following day another inoculation from the same case yielded positive results. There is still much work to be done in Essex in the matter of isolation and provision for disinfection. During 1894 only 10·3 per cent. of notified cases of infectious disease in the urban districts were isolated in hospital; in the rural districts only 5·7 per cent. Only four districts in the county possess a modern form of disinfecting apparatus. In the latter connexion, however, we hear that Dr. Thresh has himself invented a disinfecting apparatus which possesses both efficient and economical qualifications. The reports of the district medical officers show, Dr. Thresh states, a steady and marked improvement; he regrets, however, as also do we, that in the rural districts only 16 out of 20 of the reports are printed, and in the urban only 11 out of 20. To take a medical officer of health's report as read, and evince no further interest in it, is certainly not the way to stimulate this officer to increased activity, but we fear that in some instances it is this very activity which it is the desire of the sanitary authority to check.

Oldham Urban Sanitary District.—In Mr. Charles H. Tattersall's first annual report on the sanitary condition of Oldham there is contained an instructive table, which we here reproduce, showing the incidence of small-pox around the Westhulme Hospital during the periods of its operations both in 1893 and 1894. In the former year, as our readers will probably remember from the valuable reports of Dr. James Niven, cases of acute small-pox were treated in the hospital in question; but in consequence of the increased incidence of the disease upon the surrounding districts arrangements were made for isolating future cases in a locality well remote from aggregations of population. The acute cases, however, during the last outbreak were brought back on becoming convalescent to the Westhulme Hospital. In the following table are given the number of untraced cases of small-pox and the percentage of houses affected upon the areas comprised within the several zones of the hospital, and it will be apparent that while in 1893 the percentage of houses invaded decreased with the distance from the hospital, no such incidence obtained in 1894:—

—	Total number of houses in 1893.	1893. Number of cases untraced in 1893.	1893. Percentage of houses affected.	1894. Number of untraced cases in 1894.	1894. Percentage of houses affected.
Within ½-mile radius of Westhulme Hospital ...	170	10	5·8	0	0·00
Zone ½ to ¾ mile	1,660	62	3·7	3	0·18
Zone ¾ to ¾ mile	2,450	40	1·6	4	0·16
Zone ¾ to 1 mile	5,000	46	0·9	10	0·20
Outside 1 mile radius ...	20,250	49	0·2	19	0·09

The total number of cases in 1894 was perhaps too small to place much reliance upon, but it will be observed that the different effects upon the surrounding population of aggregating on the one hand acute cases of the disease, and on the other the convalescent cases, are parallel with those demonstrated to have occurred over and over again by Mr. W. H. Power, F.R.S., in connexion with the operations of the Fulham Small-pox Hospital. The method adopted by Mr. Tattersall of calculating what he terms *untraced* cases only seem to us not unlikely to involve a fallacy, inasmuch as it assumes that, given a person who has two possible opportunities of being infected, one by personal contagion and the other by means of air-borne infection, the former is necessarily the more probable source of infection. The question is whether we are in a position to take up this standpoint, and whether we are justified in excluding from our calculations all such cases as might possibly have become personally affected. Anyhow, this method cannot be accused of any undue leniency towards aërial convection.

Halifax Urban Sanitary District.—Mr. D. Ainley, in presenting the current annual report, refers to the fact that Halifax has for many years ranked high amongst other towns in the matter of uncertified deaths, and with a view of throwing some light upon this subject he visited during the last five months of 1894 every case returned as uncertified. In some instances the non-certification appears to have been due to the attendance of an unqualified locum-tenens; in others, again, to the attendance of a midwife; and in yet others sudden death from chronic heart disease seems to have been the explanation. In some cases the medical practitioner arrived after death had taken place. Mr. Ainley considers that the small proportion of inquests held in Halifax in cases of uncertified deaths is the chief reason of the excess referred to. Mr. William Ackroyd, the public analyst for Halifax, condemns the practice of greening peas with sulphate of copper, and he insists that too much publicity cannot be given to the fact that French canned peas are thus coloured. The practice is illegal in France, but this fact does not appear to prevent its continuance. Both the samples analysed by Mr. Ackroyd in Halifax in 1894 contained sulphate of copper, one to the extent of fifteen grains per pound.

Hackney Urban Sanitary District.—In his annual report for 1894 Dr. King Warry furnishes a very interesting account of an outburst of diphtheria and infective sore-throat which occurred in a workshop in his district giving employment to some 160 persons. The attacks, 26 in number, were, with 3 exceptions, distributed among 43 adult females occupying a certain workroom. The disease was in the first instance imported from without, and having been introduced it appears to have spread through the agency of infected speaking-tubes and lavatory towels. The 3 earliest attacked were those who habitually made use of the speaking-tubes in question, and the tubes becoming infected were instrumental, in large part at least, in conveying the disease to employés subsequently using them. Of the remaining 3 cases, 1—an occupant of the room below the infected workshop—devoted part of her time to answering the speaking-tubes from the infected workshop; the other 2 were found upon inquiry to have used, contrary to regulations, the lavatory and towels belonging to the inmates of the infected workroom. It may be remarked that the workroom was not, in the sense of the Factory and Workshops Act, overcrowded, and that it was both well lighted and ventilated.

Durham County Sanitary District.—Dr. Eustace Hill, as in former years, prefaces the annual summary of the district medical officers' reports with a general report on the sanitary condition of the county generally. The total population of the administrative county, estimated to the middle of 1894, was 754,494, and in connexion with this estimate Dr. Hill states that some of the district medical officers in their annual reports for 1894 give simply the census population of 1891, while in other districts no recognised method of calculation has been adopted. The general death-rate for the administrative county was 17·2 per 1000—i.e., 2·8 per 1000 less than in the previous year. In the urban districts the rate was 16·9 and in the rural 17·7. The percentage of uncertified deaths to total deaths was 4·08, a rate which exceeded that for England and Wales by 1·58. This large proportion of uncertified deaths is, Dr. Hill remarks, entirely the result of medical practice by unqualified persons. The one serious blot upon the vital statistics of Durham county is the excessive typhoid fever rate; there were during 1894 259 deaths, the death-rate for the county—0·34 per 1000 of the population—being nearly double that for England and Wales. Several local outbreaks were apparently due to the consumption of specifically polluted water, and in the districts where notification is in force the cost of its operation amounted to £1 7*s.* 9*d.* per 1000 of the population. Only 8·8 per cent. of the notified cases were isolated in hospital during 1894, as compared with 11·7 per cent. for 1893. Under the Housing of the Working Classes Act good work has, Dr. Hill reports, been carried out, and he considers that Part III. of the Act might with advantage be brought into operation in some of the rural districts in the county. There is certainly room for at least some experiments under this part of the Act, whether in Durham or elsewhere. In the matter of scavenging we are

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glad to learn that the Local Government Board has, after an inquiry, compelled the Durham rural sanitary authority to themselves undertake this work in most of the populous places in their district. As regards rivers pollution, the action of the County Council in taking proceedings against the urban sanitary authorities of Durham and Barnard Castle will be welcomed by all sanitary reformers.

Chester County Sanitary District.—The administrative county of Chester, for which Mr. Francis Vacher is medical officer of health, had in the middle of 1894 an estimated population of 555,211; the number of persons per acre was 9·98 in the municipal boroughs, 3·21 in the other urban districts, and 0·34 in the rural districts. The general death-rate in the municipal boroughs was 16·5, in the other urban districts 16·0, and in the rural districts 14·8 per 1000. The infantile mortality of the administrative county varied from 236 per 1000 births in Mottram to 26 in Higher Bebington. In referring to the subject of typhoid fever, Mr. Vacher draws attention to an interesting outbreak of the disease which occurred in the Northwich rural sanitary district, and which is reported upon by Mr. J. M. Fox, the district medical officer of health. The disease, in the first instance imported, appears to have spread through the agency of a mismanaged scavenging department; almost every person in any way engaged with the management of the scavenging became affected with the disease. There appears to have been a further complication in this instance in that the chief scavenger was a milk-seller. Mr. Vacher reports that outbreaks of rabies occurred in various parts of the county during the latter part of 1894, and in the borough of Hyde several children were bitten by rabid animals. The town council of this borough very generously sent those bitten to Paris under the supervision of the medical officer of health and the matron of the isolation hospital to undergo treatment at the Pasteur Institute. Mr. Sidebotham, medical officer of health of Hyde, furnishes in his current annual report a short account of his visit to Paris, which, as Mr. Vacher suggests, will be read with much interest by medical officers of health who have equally generous sanitary authorities to deal with. It may be remarked that the diagnosis of rabies in the dogs that bit the patients sent by the Hyde corporation was experimentally confirmed in Paris. Notification is not yet general in Cheshire, there being still four urban and one rural districts where the Act is not in force. The 555,000 persons comprising the population of Cheshire are still very badly off in the matter of isolation accommodation, but doubtless the valuable report which Mr. Vacher has made to the County Council upon the subject will have a stimulating effect. Mr. Vacher goes very thoroughly into all matters connected with the health of the county, and in connexion with each subject he sets forth the powers and responsibilities of the sanitary authority, and discusses the manner in which throughout the county these obligations are carried out. Under the heading of "Unsound Meat" Mr. Vacher observes that "either there is practically no trade in unsound meat &c. in this large county or the trade is not interfered with—the subject is only alluded to in four reports."

Kensington Urban Sanitary District. — Dr. Orme Dudfield's report for the year 1894 is, as usual, full of instructive matter, and will well repay reading by all interested in the sanitary progress of the metropolis. The report comprises some 260 pages of printed matter devoted to subjects connected not only with the parish of Kensington, but also with the metropolis as a whole. The estimated population of Kensington in the middle of 1894 was 167,300, and the ratable value in April of the same year £2,064,073. The population of the parish is to that of London as 1 to 26, and the ratable value as 1 to 16·4. The birth-rate of Kensington was but 21·9 per 1000, that for the town subdistrict being 25·7, and that for the Brompton district 12·6. The illegitimate birth-rate formed 5·8 per cent. of the total births, as compared with rates of 5·4, 4·9, and 4·9 in the preceding three years respectively. The general death-rate in the town subdistrict was 17·6 per 1000, that in Brompton being 11·0; the rate in the male sex was 19·8 and in the female sex 12·9. The total death-rate for the district, 15·7 per 1000, was 1·3 below the decennial average. Under the heading of small-pox Dr. Dudfield refers to a group of cases the first of which was not notified, owing, apparently, to its not being recognised until twenty days after its commencement. Cases such as these show well the limits which are experienced in practice to the utility of notification, and the difficulties of dealing with small-pox without the aid of vaccination and revaccination. As in former years, the report before us contains a most useful summary of the Metropolitan Asylums Board's annual reports; and we are, too, glad to see that the really admirable report of the women inspectors of Kensington, which we noticed in our columns at the time of its issue, is embodied in Dr. Dudfield's annual report of the district. Complaints occurred in Kensington during 1894 owing to a nuisance at a certain gasworks, caused apparently during the removal of spent lime from the gas purifiers. At Dr. Dudfield's suggestion some improvements were effected, but it appears that the nuisance cannot be entirely eliminated. In the matter of a temporary shelter Kensington is still classed with the metropolitan sanitary authorities who have failed to carry out the obligatory provisions of Section 61 of the Public Health (London) Act, 1891, although the subject has, to our knowledge, been frequently brought to the notice of the vestry. The medical officer of health states that during 1894 some sixty-four cases of infectious disease occurred in families occupying single rooms, and in each instance the room was closed for twenty-four hours. We are not told what became of the families during the period of their enforced absence from home.

Battersea Urban Sanitary District.—Dr. W. H. Kempster's report for 1894 should prove a highly interesting one to the sanitary authority for which it is prepared, as it contains a synopsis both of the report of the Royal Commission on the Metropolitan Water-supply and of the criticisms in it as prepared by the officers of the London County Council. In the conclusion of his summary Dr. Kempster observes: "It has always been a cherished article of faith in this country that the water of the river Thames is of unsurpassable quality for all domestic purposes. Nothing can be found in the report which in any way disturbs this conviction, and it may be assumed, as has always been urged in these reports, that the water supplied to London, if properly treated by the avoidance of pollution, ample storage ..... and efficient filtration, is all that can be desired." The existence of the "cherished article of faith" to which Dr. Kempster refers would not, perhaps, be admitted on all hands. There is also a capital summary in the report before us of the provisions of Mr. Asquith's Factory and Workshops Act. Very considerable improvement has been effected in Battersea during 1894 in the matter of public-house urinals as a result of a detailed inspection by a subcommittee of the sanitary authority; this action might be followed with profit in other metropolitan districts. Proceedings were taken in Battersea last year against the vendor of certain cheeses unfit for consumption, but the magistrate inflicted the costs only, and observed that a certain degree of decomposition was allowable in cheese. In, however, the case in question the cheeses were stated to have been in such a condition that the odour from them could be detected 200 yards away, and they were being sold for 2*d.* and 2½*d.* per pound. It seems that these cheeses had been stored in cellars which had been frequently inundated with Thames water, and this fact should certainly have precluded their sale.

Cardiff Urban Sanitary District.—From the view-point of public health the year 1894 will stand out prominently in the history of Cardiff as one in which marked advance was made. In the first place, it was in that year that the Cardiff Corporation Act became law, an Act which, besides containing several clauses bearing indirectly upon the public health, confers important powers upon the corporation in respect to dwelling-houses without proper water-supply, erection of dwellings on flat lands below high-water level, and the erection and maintenance of a crematorium for human remains. A fresh water-supply was introduced and a most complete fever hospital proceeded with. Dr. Edward Walford also, in his annual report, refers to the prospect of a public health laboratory being established at University College, Cardiff, in conjunction with the sanitary authority of that town, in which case facilities for bacteriological examination &c. would be afforded to the medical officer of health. Dr. Walford has been at much trouble to set forth clearly the birth- and death-rates for Cardiff, and he supplies some excellent tables in his report. From 1845 to 1884 the mean death-rates per 1000 for each ten years were as follows: 32·7, 26·7, 23·6, 20·0, and 20·7; the zymotic death-rates for the same periods were 9·8, 5·4, 3·9, 3·3, and 2·7.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6224 births and 4045 deaths were registered during the week ending

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Aug. 24th. The annual rate of mortality in these towns, which had been 20·8 and 19·1 per 1000 in the two preceding weeks, rose again to 19·9 last week. In London the rate was 17·0 per 1000, while it averaged 22·0 in the thirty-two large provincial towns. The lowest rates in these towns were 11·8 in Croydon, 12·4 in Swansea, 12·9 in Plymouth, 15·5 in Bristol, and 15·9 in Leicester; the highest rates were 28·2 in Liverpool, 29·0 in Salford, 30·4 in Manchester, 33·2 in Hull, and 35·6 in Blackburn. The 4045 deaths included 977 which were referred to the principal zymotic diseases, against 1076 and 929 in the two preceding weeks; of these, 657 resulted from diarrhœa, 115 from measles, 64 from whooping-cough, 47 from diphtheria, 46 from scarlet fever, 40 from "fever" (principally enteric), and 8 from small-pox. In the large towns these diseases caused the lowest death-rates in Bristol, Croydon, Swansea, Halifax, and Plymouth; and the highest rates in Bolton, Wolverhampton, Salford, Hull, and Blackburn. The greatest mortality from measles occurred in West Ham, Salford, and Blackburn; from whooping-cough in Liverpool, Gateshead, Blackburn, and Birkenhead; and from diarrhœa in Sheffield, Derby, Wolverhampton, Preston, Salford, Bolton, and Hull. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 46 deaths from diphtheria included 24 in London and 3 in Liverpool. Six fatal cases of small-pox were registered in London and 2 in Oldham, but not one in any other of the thirty-three towns. There were 357 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 24th inst., against 237, 273, and 336 at the end of the three preceding weeks; 65 new cases were admitted during the week, against 60, 54, and 79 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2507, against 2423, 2511, and 2529 on the three preceding Saturdays; 307 new cases were admitted during the week, against 247, 276, and 357 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 159 and 137 in the two preceding weeks, rose again to 170 last week, and were 1 below the corrected average. The causes of 31, or 0·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Hull, Newcastle, and in seventeen other smaller towns; the largest proportions of uncertified deaths were registered in Blackburn and in Birkenhead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·6 and 16·6 per 1000 in the two preceding weeks, was again 16·6 during the week ending Aug. 24th, and was 3·3 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·1 in Leith and 15·0 in Glasgow to 20·6 in Perth and 21·4 in Aberdeen. The 479 deaths in these towns included 42 which were referred to diarrhœa, 24 to whooping-cough, 8 to scarlet fever, 6 to to "fever," 2 to measles, 1 to diphtheria, and not one to small-pox. In all, 83 deaths resulted from these principal zymotic diseases, against 102 and 99 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·9 per 1000, which was 1·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 55, 68, and 60 in the three preceding weeks, further declined to 42 last week, of which 17 occurred in Glasgow, 10 in Edinburgh, and 9 in Dundee. The deaths referred to whooping-cough, which had been 12, 17, and 15 in the three preceding weeks, rose again to 24 last week, and included 6 in Glasgow, 5 in Dundee, and 4 in Aberdeen. The deaths from scarlet fever, which had increased from 3 to 7 in the three preceding weeks, further rose to 8 last week, of which 6 occurred in Glasgow. The fatal cases of "fever," which had been 5, 4, and 6 in the three preceding weeks, were again 6 last week, and of these 4 occurred in Glasgow. The deaths from measles, which had decreased from 11 to 7 in the four preceding weeks, further fell to 2 last week, and included 1 in Glasgow and 1 in Greenock. Only 1 death from diphtheria was recorded, being 3 less than in the preceding week, and that occurred in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 67 and 57 in the two preceding weeks, further declined to 55 last week, but exceeded by 4 the number in the corresponding week of last year. The causes of 31, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·2 and 24·0 per 1000 in the two preceding weeks, fell again to 20·9 during the week ending Aug. 24th. During the past eight weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the rate during the same period being 20·1 in London and 16·5 in Edinburgh. The 140 deaths registered in Dublin during the week under notice showed a decline of 21 from the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 27 and 21 in the two preceding weeks; of these, 9 resulted from diarrhœa, 1 from scarlet fever, 1 from whooping-cough, and not one from small-pox, measles, diphtheria, or "fever." These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 3·0 in London and 0·8 in Edinburgh. The fatal cases of diarrhœa, which had been 17, 23, and 16 in the three preceding weeks, further fell to 9 last week. The mortality from whooping-cough corresponded with that recorded in the preceding week, while that from scarlet fever showed a decline. The 140 deaths in Dublin last week included 26 of infants under one year of age, and 32 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showing a decrease. Seven inquests were held and 8 deaths from violence were registered; and 45, or nearly a third, of the deaths occurred in public institutions. The causes of 10, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL RANDOLPHE HARMAN, M.B., to be Brigade-Surgeon-Lieutenant-Colonel.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain H. B. Luard, at present officiating Agency Surgeon at Gilgit, is appointed to the permanent Medical Charge of the 45th Sikhs, and Surgeon-Captain G. H. Frost to the permanent Medical Charge of the 22nd Punjaub Infantry. Surgeon-Major R. J. Baker, M.D. (Bombay), Officiating Medical Officer of the 2nd Regiment, Central India Horse, and of the Poona Political Agency, is appointed to officiate as Medical Officer of the 1st Regiment, Central India Horse, and of the Western Malwa Political Agency, and during the absence on leave of Surgeon-Captain T. W. Shaw, M.B., or until further orders. Surgeon-Major A. E. J. Croly, F.R.C.S.I., is appointed to act as Medical Officer on the staff of his Excellency the Governor during the absence of Surgeon-Major H. Martin, M.B., or pending further orders.

NAVAL MEDICAL SERVICE.

The undermentioned surgeons have been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet:—Edward John Morley, Hugh Winckworth Macnamara, Joseph Henry Whelan, M.D., Percy William Bassett-Smith, John Patrick Joseph Coolican, Edgar Ralph Dimsey, Joseph Reville McDonnell, M.D., Hamilton Meikle, and Herbert Canton.

The following appointments are announced:—Staff-Surgeon J. H. Whelan to the *Volage*. Surgeons: James L. Smith, M.B., to the *Blonde*; Frederick Fedarb, M.B., to Haslar Hospital; E. P. Mourilyan to the *Cormorant*; W. J. Maillard to the *Excellent*; F. Bradshaw to the *Plassy*; H. Elliott to the *Sphinx*; T. Austen to the *Wildfire*; G. Ley to Bermuda Hospital; H. S. Burniston to the *Active*; J. H. Thomas to the *Pembroke*; G. Welch to the *Tyne*; and E. St. M. Nepean to the *Victory* (additional).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Percival M. Yearsley, having vacated his Volunteer Medical appointment, ceases to be an Officer of the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Suffolk Regiment;

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Surgeon-Lieutenant P. J. L. Morris resigns his commission. 2nd Volunteer Battalion the Suffolk Regiment: Samuel John James Kirby, M.D., to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant S. Braithwaite resigns his commission. 1st Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant G. M. Edmond, M.D., to be Surgeon-Captain.

THE ARMY REORGANISATION.

The Ministerial statement in the House of Lords in reference to the forthcoming reorganisation of the War Office is sufficiently clear and explicit as far as it goes. The new policy is not only based upon, but it is almost identical with, the recommendations of the Hartington Commission, except in one important particular—viz., that there will not be a Chief of the Staff appointed as recommended by that Commission. Lord Wolseley will for the next five years be the military head of the Queen's Army and exercise those functions which have hitherto been discharged by the Duke of Cambridge. There are, of course, a number of other important points embodied in the new scheme of reorganisation, but the foregoing really includes the main considerations of interest to the army and the nation.

DEATHS IN THE SERVICES.

Brigade-Surgeon-Lieutenant-Colonel J. F. Sargent, I.M.S., Madras Establishment, died at Hingoli on July 20th from abscess on the liver, aged fifty-one. He was appointed surgeon in 1873 and surgeon-major in 1878, and attained the rank of brigade-surgeon-lieutenant-colonel in 1890.

Brigade-Surgeon-Lieutenant-Colonel J. Riddick, A.M.S., died in India on July 27th. He joined the Army in 1857, became surgeon in 1873, surgeon-major in 1879, and brigade-surgeon-lieutenant-colonel in 1894; Afghan War, 1880, (medal).

THE WAZIRISTAN HONOURS.

Surgeon-Colonel Lionel Dixon Spencer, I.M.S., is to be Ordinary Member of the Military Division of the Third Class, or Companion, of the Most Honourable Order of the Bath, and Brigade-Surgeon-Lieutenant-Colonel George McBride Davis, I.M.S., is to be a Companion of the Distinguished Service Order.

The War Office have instructed Messrs. Paterson and Cooper to proceed with the erection at Netley Hospital of the Hermite sanitation plant, the cost of which has been provided for in this year's Parliamentary estimates.

Correspondence.

"Audi alteram partem."

COUNTRY PRACTITIONERS AND LOCUM-TENENTS.

To the Editors of THE LANCET.

SIRS,—Kindly allow me space for a few remarks about the troubles, losses, &c. country practitioners experience from individuals they engage to take charge of their practices whilst taking the much-needed holidays. My experiences have been very painful, but, I believe, not worse than those of other general practitioners. Out of seven (all except Nos. 1 and 7 were supplied by agents) No. 1 alone gave satisfaction. No. 3 lamed my horse by jumping it over fences or by other work it was not fitted for. No. 5 took fright at a case of small-pox and bolted after helping himself to money he was not entitled to. No. 6 was so drunken that I had to give up my holiday at an hour's notice to get rid of him just before he had delirium tremens. In fact, all except No. 1 acted as if on a holiday or spree, doing as little as possible and never booking that little legibly or fully, neglecting patients, and during such few hours they thought fit to stay in my house making themselves as untidy, slovenly, and disagreeable as possible. These gentlemen demand three guineas a week, board, lodging, and all expenses. Having got all immediately after the employer's return, there are no means of calling them to account, as their delinquencies are only discovered later on, after their being paid and dismissed. I suggest that two recent references should be required from each applicant, and that even if he is recommended by an agency. If honest replies are sent, then the necessary holiday can be taken without the losses and annoyances I have written about. I quote the following from a letter from a country practitioner whom, although I have never met him, I am glad to know I warned against employing as locum-tenent one of the most ungentlemanly persons that I ever met with. He writes as follows: "I deeply sympathise with your having been served the same way as myself by such worthless, indifferent, and incompetent men going about the country. ..... I am determined before I engage another man to find out his antecedents. ..... If employers were more honest and truthful much heart-burning would be saved." I trust general practitioners will take the advice given by my correspondent, and not only decline to recommend but expose anyone who does not carry out his duties and behave himself as a gentleman ought to do whilst in their employ.

I am, Sirs, yours faithfully,

HENRY PILKINGTON, M.R.C.S. &c.

Ormskirk, Lancs, Aug. 26th, 1895.

THE PAYMENT OF MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—My partner and I had to attend the last Assizes held at Lincoln as medical witnesses in a manslaughter case. On each of three days we had to leave home at 9.20 A.M. On two of the days the earliest time we could possibly get back was 5.20 P.M., and on the third day 1 P.M. We were paid one guinea per diem each, and an allowance of 12*s.* 10*d.* each for expenses—a total of £3 15*s.* 10*d.* for an enforced absence from our practice of nineteen hours and forty minutes. I am writing you this simple statement hoping that you, or some of the numerous readers of THE LANCET, will suggest some means whereby united action can be taken, in order that the present state of things may be altered, so that medical witnesses in similar cases shall be paid reasonable fees for their loss of time and trouble.

I am, Sirs, yours faithfully,

Gainsborough, Aug. 22nd, 1895. JOHN E. S. PASSMORE.

*** Our correspondent will note that the subject-matter of his letter is dealt with in a leading article in our present issue.—ED. L.

"AN IMPOSTOR."

To the Editors of THE LANCET.

SIRS,—The letter you publish in THE LANCET of Aug. 24th from Dr. F. W. Saunders has interested me, for I, too, was favoured the other day from the Goswell-road. In this case the writer signs himself Arthur E. Ronald, which is the name of an old friend of mine who was at Cambridge and St. Thomas's Hospital with me. The letter asks for an immediate loan and promises subsequent explanations. Certain circumstances and signs, however, made me doubt the genuineness of the communication and so save myself from the imposition. A friend of mine writes to me from Cambridge and tells me that a short time ago he actually fell a victim to some (probably the same) rascal, who wrote to him from an address in the Gray's-inn-road, signing himself George Anson, and asking for an immediate loan. In these two instances the four persons written to and from were intimate friends both at Cambridge and at Thomas's Hospital. Drs. Ronald and Anson are at present in practice abroad, the former in Melbourne and the latter in New Zealand. The letters show that their whereabouts were well known to the writer.

I am, Sirs, yours faithfully,

EDGAR TREVITHICK, M.D. Cantab.

Cheltenham, Aug. 23rd, 1895.

"THE TREATMENT OF ACUTE RHEUMATIC ENDOCARDITIS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 17th there is a valuable contribution to this important question by Dr. Caton of Liverpool. I should not have been prompted by the general tenour of his paper to trouble you with any words from me on the subject, but I am tempted to accede to his request when he so pointedly says, "I am anxious to know what the

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experience of others has been in regard to the very grave disease in question, and to hear of alternative or superior plans of treatment. The one thing I am specially anxious about is that members of the profession who have the opportunity of observing cases of acute endocarditis should give this method a fair trial during the early stage of the malady." In the first place, as regards the occurrence of acute endocarditis in the course of, or as a sequel to, a more or less acute rheumatic attack, I doubt if there is any very general recognition of the condition apart from the existence of murmur, and even when murmur is present it is of course a question whether it is or is not due to inflammatory changes in the endocardium. This question, along with some others, I dealt with ten or eleven years ago in a little volume entitled "Investigations into some Morbid Cardiac Conditions," and I do not enter into it now. Most of us will be prepared to accept Dr. Caton's opinion of his own cases as the expression of a reasonable diagnosis. At page 144 of the book referred to I mention that I had treated three cases of what I believed to be active endocarditis by blistering the præcordia and giving iodide of potassium internally, and that the result in these cases was different from others I had not so treated in that they recovered. Since that book was published I have been confirmed in my then expressed opinion that active endocarditis was capable of being diagnosed even when superadded to a previously damaged endocardium; and eleven years of additional experience have only tended to establish in my mind the value of the treatment which Dr. Caton has advocated.—I am, Sirs, yours truly,

WM. RUSSELL,
Assistant Physician, Royal Infirmary.

Edinburgh, Aug. 26th, 1895.

DIPHTHERIA AND ITS CAUSATION.

To the Editors of THE LANCET.

SIRS,—The two chief views put forward to account for the various outbreaks of diphtheria that occur from time to time are (1) defective sanitation, and (2) the aggregation of children in schools. This latter has been specially put forward by Mr. Shirley Murphy, medical officer of health to the London County Council; but with regard to school attendance Mr. Biddle has shown that, though the number of cases increases (as Mr. Shirley Murphy asserts) immediately after the holidays, they decrease again as the term drags on its course. At first sight it appears as if these two ideas are utterly irreconcilable, but I cannot help thinking both may possibly be right. It must be considered that there is no flushing of the school drains during the holidays, and that they only get properly scoured and disinfected after the children meet. I dare say others besides myself have noticed the prevalence of continued dry weather prior to an outbreak of diphtheria, and in this case no doubt deficient flushing of drains is an important factor.—I am, Sirs, yours faithfully,

Surbiton, Aug. 26th, 1895. F. P. ATKINSON.

THE ANTISEPTIC SYSTEM.

To the Editors of THE LANCET.

SIRS,—Now that the benefits derived from antiseptic measures in practice are widely known and accepted it is desirable that a word of caution be uttered as to how far their uses are sometimes adopted unnecessarily and unjustifiably. Anyone who has followed the progress of the treatment of disease will admit that such measures have played a prominent part in the great forces of evolution, which for better or worse are inevitable. I have before me two instances taken from THE LANCET which exemplify the points above mentioned. 1. In THE LANCET of March 2nd, 1895, the following case is recorded:—A child aged three years was accidentally subjected to carbolic acid treatment, the acid being rubbed into the scalp for three minutes, being mistaken for the ointment, and producing unconsciousness in five minutes, followed by coma in one hour, which lasted five hours. 2. In THE LANCET of June 1st, 1895, the following cases are recorded:—(*a*) A boy aged fifteen years on Aug. 24th, 1894, was being prepared for an operation to take place in the evening. At 12 P.M. a carbolic compress was applied over the right thigh. At 2.30 A.M. the patient was found to be comatose. At 10 A.M. on the 28th he was still comatose. At 10.30 he partially regained his consciousness. On Sept. 1st he had recovered. On Sept. 3rd he was again subjected to a compress, an operation being in view; but, again suffering from the effects of the drug, the operation was postponed. (*b*) A boy aged six years and a half on Jan. 30th, 1895, at 12.20 P.M., had a carbolic compress (1 in 20) applied over the skin in the right iliac fossa. At 1.30 P.M. the child was noticed to groan and shortly afterwards found to be comatose. At 6 P.M. the child was recovering consciousness. At 7.30 P.M. consciousness returned, and the history states that he was a few days in regaining his original health. These last two cases, recorded in THE LANCET of June 1st, 1895, are instructive in pointing out the unjustifiable uses of the antiseptic system in subjecting patients of the ages of fifteen and six years respectively to the action of a common poison for two hours and one hour, when all that was necessary from an aseptic point of view could have been done five minutes prior to the operation by ordinary washing with soap and water, to be followed by bathing with some antiseptic solution. I believe there is no record of any case known where infection has taken place through a healthy and unbroken skin, and therefore it is reasonable to infer that any extraneous matter upon the skin likely to interfere with the success of the operation would not be found to penetrate beyond the epidermis. The writer talks about "peculiar susceptibility" of patients. There seems to be nothing peculiar, except that of surprise at not hearing of more such cases. And if by the use of the carbolic compress the full effects are sometimes reached, what relation will a milder dose bear to the state of anæsthesia? The unnecessary application of the "system" is also carried out in midwifery practice.

I am, Sirs, yours faithfully,

Chiddingfold, Aug. 24th, 1895. A. P. WALTERS.

"UNQUALIFIED PRACTICE."

To the Editors of THE LANCET.

SIRS,—I have observed in the pages of THE LANCET several letters regarding unqualified assistants. As this subject will yet, I believe, be taken up and dealt with by the General Medical Council, there is an aspect of the question which I hope that learned body will not overlook—viz., the advantages of an unqualified assistantship to the student of to-day who is the practitioner of to-morrow. Is not one of the defects of modern medical education that it is too theoretical? In this it does not excel or come up to the old apprenticeship days. A student does not gain at lectures or even in the hospital that experience so necessary to the general practitioner, and during his long holidays a medical student could not do better than gain a practical knowledge of drugs by dispensing, attend simple cases in surgery, and attend cases of labour. If he is trusted to do these in dispensary practice at college, why should he not be allowed to do so, perhaps to have a comfortable home during holidays while his resources are limited, or to assist some old practitioner whose means forbid him employing a fully qualified medical man? Of course, it is undoubtedly abused, but that is no argument against the practice.

I am, Sirs, yours truly,

Edinburgh, Aug. 27th, 1895. JAS. ANDERSON.

"THE PARASITE OF MALARIA AND MALARIAL FEVER."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 6th you publish an article by Dr. G. Thin on the above subject, supplying to some extent the much wanted detailed information as to the methods of staining that organism. There are one or two points (which may be of interest) not mentioned: 1. In using eosine and methylene blue for its demonstration the test of a sufficiently well-stained preparation, to be of value as negative evidence, is that the eosinophil corpuscles must show as blue corpuscles with the eosinophil granules as sharply defined red without a tinge of purple. If they are blue the plasmodium will also be stained blue, but if the eosinophil granules are in the least purple the eosin in the red corpuscles will be to some extent replaced by methylene blue, and the plasmodium will be difficult to distinguish. 2. For the preparation of the vessels in the brain and other organs a simple, though rough, method is to take a small portion of the cortex and crush it between two cover glasses. These brain "squashes" can be fixed by heat or any other method and stained with

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eosine and methylene blue and mounted in balsam. Most of the vessels still contain blood, and the results are at least quite equal to the plates in Dr. Thin's paper or in the Italian works, although there may be some distortion of the red corpuscles. 3. Anyone in doubt as to the existence of the bodies will find their presence most easily demonstrated in fatal cases, not necessarily in the most pigmented organ, the spleen, as that, though usually containing many intra-corpuscular bodies, may, although deeply pigmented (probably from the accumulation of pigment formed in other parts of the body), contain none, as in a recent case here where intra-corpuscular bodies were numerous in the cerebral vessels and none were found in the spleen, though this contained much recent pigment. As a rule, however, the spleen is the safest organ in which to look for them, unless the brain be pigmented. 4. It is much to be regretted that no certain and easy method of staining has yet been devised. The aqueous methylene blue has to be quite fresh, the mixed solution of eosine and methylene blue does not keep, and with Löffler's solution the eosine is too rapidly replaced. 5. Without staining too many mistakes occur. Vacuoles are easily taken for the plasmodium, and in much that has been written too little has been made of this liability to error. I am convinced that till some more certain but quick and simple method is found we shall have little help from the discovery of these bodies in differentiating the heterogeneous mass of tropical fevers.—I am, Sirs, yours faithfully,

C. W. DANIELS, M.B. Cantab.,
Pathologist to the Georgetown Hospital,
Georgetown, Aug. 8th, 1895. British Guiana.

"THE EXPLOSION AT THE MILE-END INFIRMARY."

To the Editors of THE LANCET.

SIRS,—Having supplied the press with a veracious account of the recent gas explosion in the grounds of this infirmary I cannot be responsible for the extravagant version published by some of the daily prints, upon which your annotation last week was, no doubt, based. The devastation described by those journals, I am happy to say, existed only in the mind of the contributor, and there was no wreckage of wards, no upheaval of corridors, no breaking of glass, and no panic among the patients whatever, and for the simple reason that the accident occurred in connexion with the gas company's mains quite outside the buildings. It is an unpleasant task to have to deprive the reading public of even a moderately sensational paragraph, but I feel bound, after the lecture you have read the management of this place, to repudiate the inference that there was any lack of supervision on the part of the staff. Without assuming an undue sense of security, I would venture to think that in an institution of this kind, which is manned the twenty-four hours round by a numerous staff of officials, such accidents as the overlooking of a breakdown in the gas supply are almost impossible for but a very short length of time. The possibility in future will, so far as we are concerned, be still further diminished by the adoption by our board of electric lighting throughout the infirmary which is in process of being carried out.

I am, Sirs, yours obediently,

A. H. ROBINSON,
Aug. 27th, 1895. Medical Superintendent.

VOLUNTEER MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—I beg to inform the Volunteer Medical Service through the columns of THE LANCET that my corps has been enabled to obtain permission, after representation to that effect, for regimental stretcher-bearers to wear a permanent badge on their right arm, showing their efficiency in their special instruction. The Geneva Cross hitherto worn has rightly been withdrawn, as regimental stretcher-bearers, being actually fighting men, could not adopt that badge without contravening the provisions of the Geneva Convention. Knowing that the Geneva Cross was much valued and that a badge would be appreciated, and that without some such mark the ambulance work in all regiments would languish and suffer, I made a special representation of the case to the authorities at the War Office, which was strongly backed by my colonel and the principal medical officer of the Home District. The result has been that last week we received an official letter stating that His Royal Highness the Commander-in-Chief had granted the request and that for the future all regimental stretcher-bearers might wear as a permanent badge of their efficiency a distinctive mark on their right arm, a sketch of which was enclosed. This badge consists of a circle of red round a ground of the same colour as the tunic, having the letters S.B. embroidered on it in red and blue, and in due course it will be adopted and ordered. I trust that this willing and ready desire to meet the wishes of the Volunteer Medical Service will prove satisfactory to all; and in concluding I desire to express my opinion that the new badge will in no way interfere with the adoption by all regimental stretcher-bearers, when actually employed as such, of the authorised brassard hitherto worn on the left forearm. I willingly express my thanks to Colonel Josselyn and Surgeon-Colonel Churchill, A.M.S., for the ready assistance which they have given to my application.

I am, Sirs, your obedient servant,

M. BAINES, V.D., M.D.
Surgeon-Lieutenant-Colonel 1st Middlesex Vol., R.E.
Headquarters, College-street, Chelsea, S.W., Aug. 25th, 1895.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—Your correspondent "A Specialist" entirely misreads me when he supposes that I find fault with specialists for overcharging. I have always held that the amount of a fee honestly earned is a matter which rests entirely with the medical man and his patient. What I do complain of is that among certain specialists the fee is too often dishonestly earned. For what name other than dishonesty can be given to the growing practice, almost confined, I believe, to specialists, of subjecting patients after the most trivial operations to after-treatment considered totally unnecessary in the case of hospital patients, and of investing these minor operative procedures with all the gravity associated with a major operation, for the sole object of enabling a larger fee to be asked? To draw attention to this practice was the object of my letter published in THE LANCET of Aug. 17th. In it I took pains to illustrate the charge I laid by cases in point. From the fact that he ignores this I can only assume that "A Specialist" has become so accustomed to viewing life through special spectacles that he fails to recognise as dishonest acts which the ordinary man does not hesitate to pronounce such. If he reflects a moment, too, he will see that the practice in question is equally hard upon the general practitioner as upon the unfortunate patient—e.g., it has happened to myself, and, as I am aware, to many others, that patients for whom I have arranged to remove adenoids have been persuaded by friends to go to London to "see a specialist." On their return I have either been reproached for having represented the operation as being so very trivial, "scarcely more severe than the removal of tonsils," whereas they had been confined to a private hospital for a week or a fortnight with a nurse in attendance; or it has been assumed, and naturally, that I had not recognised the gravity of the case and that much more had been done in the way of operative treatment than I had intended to do. To the hackneyed arguments in favour of the multiplication of specialties which "A Specialist" puts forward I refer him for my answer to the clear and forcible remarks on the subject which have from time to time appeared in the leading articles of THE LANCET.

I am, Sirs, yours faithfully,

Aug. 27th, 1895. A GENERAL PRACTITIONER.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—I venture to trouble you on some aspects of the question of the so-called "over-operating" in gynæcology. What is "over-operating"? Does it mean the wilful undertaking of operations that the operator knows full well in his heart can be of no service whatever to the patient—operations undertaken solely for the purpose of putting money in the purse of the operator? If so, then such "over-operating" at once excites indignation and condemnation at the hands of all right-thinking men, of all honest men, and it is immaterial what the operator may call himself—obstetric physician, surgeon, gynæcological surgeon, or anything else. It is the

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act that is wrong; the act is indeed a crime, and whoever is guilty of it deserves to be branded as a criminal. But perhaps this is not the meaning of "over-operating." It may mean operations undertaken by those who are in a position to act as pioneers, each in his own department. In this sense it merely means operations undertaken in the light of present knowledge that would formerly have been regarded as impossible. If it means this those who use the term mean that we should be content with the state of things at some particular moment and refuse to recognise that there may be more things in heaven and earth than are dreamt of in our philosophy. Anything that is unfamiliar and untried must be wrong; those who try to advance are guilty of "over-operating." In this connexion it is well to take example by the steam-engine, and to observe that what seemed a very high rate of speed to our grandfathers would seem a slow pace to those who travelled by either of the expresses in the recent "race to Aberdeen." The truth is that Sir W. Priestley and those who go with him are obviously opposed to the obstetric physician of the present day operating at all. To take an illustration from Æsop's Fables, they may be divided into: 1. The foxes who have had the misfortune to be born without tails—the obstetric physicians who have never done abdominal operations and never wish to see their successors do so. 2. Those who have had tails, and very fine ones too, but who for reasons of their own have deprived themselves of these useful appendages—the obstetric physician who has given up operating. 3. Those who, whether they would or not, have been deprived of their tails—those obstetric physicians who have done abdominal operations, but have, for one reason or another, been unable to continue performing them. The suggestion that an operator, because he may have removed a suppurating ovarian tumour, is therefore unable safely to attend a midwifery case will not bear a moment's consideration in face of the abundant evidence to the contrary; nor, indeed, can the obstetric physician who does not operate attend midwifery with any cleaner conscience or cleaner hands. For even the obstetric physicians who do not operate practise gynæcology, and in so doing contaminate their hands with all kinds of foul vaginal discharges, such as those in cases of cancer of the uterus; they also see and examine cases of puerperal fever in consultation. If they were consistent they would give up gynæcology altogether, and attend one midwifery case per annum, remaining the other eleven months in quarantine. Even then they might happen to meet and shake hands with an operating obstetric physician or surgeon on their way to their annual case—and so be undone. The whole thing is, however, ridiculous in the face of the teaching of experience; both obstetric physicians who do not operate and those who do are equally dependent on the efficacy of antiseptics, and the safety of their patients depends on the thoroughness with which they understand and perform personal disinfection. As it is, both in the obstetric world and in the animal kingdom, the majority of foxes have not lost their tails and do not intend to part with them, Sir W. Priestley and Mr. Malcolm notwithstanding.

I am, Sirs, yours truly,

Aug. 23rd. VULPES NON EQUIDEM SINE CAUDA.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Is a Crematorium desirable?

THE question of the disposal of the dead is gradually making itself felt by the large populations in our midst. The aggregation in centres and the overcrowding in many places force attention to the dangers which arise and the difficulty in finding an adequate remedy. One deduction without doubt opens a way of relief for the disposal of the dead in a manner from which the living will not suffer. This is to be found in cremation. The results of the process at Woking and Manchester encourage the advocates of the system to believe that additional facilities for carrying it out would lead to progress in the cause. The vast number of inhabitants in this midland area have no provision at present for furthering their views in this direction in a practical form. Sanitarians and those interested in the subject will do well in calling attention to it and in endeavouring to make known the evils of interment in thickly populated places.

Opium and the Pharmacy Act.

A woman aged forty-eight years, whose death was the subject of an inquiry at the coroner's court, seems to have been in the habit of taking laudanum, which was obtained with great ease. An unqualified druggist admitted selling three drachms of the tincture of opium for twopence, and three hours afterwards another fourpennyworth to the same woman. This vicious habit of opium-taking is very common among the poor, the cheapness and readiness with which it can be obtained favouring the spread of the vice, and tending to draw more victims under its pernicious influence. Another instance of opium poisoning was heard the same day in a different court. An actor was charged before the magistrates with attempting to commit suicide. A large dose of laudanum was admitted to have been taken with the intention of destroying life. Prompt action on the part of the hotel landlord frustrated the design taking effect. The culprit was dismissed with a caution.

Ear and Throat Hospital.

An important era in this institution has been inaugurated by the opening of an in-patient department on the 12th inst. under the presidency of Lord Leigh. The hospital, which has been established for fifty years, has often felt the need of beds for the more immediate supervision and treatment of patients. The fact of 18,000 patients having been treated in the year 1894 is sufficient evidence of the necessity for some internal arrangements. At present there is space for thirty beds, though it is proposed to occupy only ten of these until the funds of the hospital warrant a greater number.

The Corbett Hospital, Stourbridge.

The annual meeting was held on the 26th inst. under the presidency of Viscount Cobham. The report showed that not only had the eighteen beds been filled, but that there had been great demand for additional room. Mr. Corbett again very generously had made provision for children to be admitted, giving £1000 for endowment and £500 for the necessary addition to ensure this. The total ordinary income for the year amounted to £980 16*s.* 2*d.*, and the expenditure to £1100.

Aston Flower Mission.

This is a flourishing little society for the sale of flowers given to the mission to purchase letters for the hospitals and to distribute these among the deserving poor. An interest is thus created in the sick, occupation is found, and human sympathies are widened and extended in a number of good ways.

Aug 27th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Epidemic of Homicide and Suicide.

THE terrible frequency of crimes of violence ending fatally and of suicides which has been prevalent all over the country has been very marked in this city and neighbourhood. One very sad case, in which the child of a local practitioner was the victim and a medical assistant the alleged perpetrator, has been already noticed in THE LANCET. As the accused has been committed for trial it would be improper to comment upon the case beyond stating the fact that in this, as in most other cases, intemperance plays a very prominent part. It would be well if the well-meant efforts of temperance reformers could be so regulated that those who are in danger of becoming drunkards could be induced to be total abstainers; but it is necessary to differentiate. There are many who, though not total abstainers, are no more likely to become drunkards than total abstainers; they can use this world and the good things in it without abusing either; and it is a melancholy fact well known to medical practitioners that men and women who have been total abstainers up to middle life have become confirmed drunkards.

Teetotal Ships.

For more than half a century Liverpool, in common with other sea-ports, has made experiments as to the value of enforced total abstinence on a very extensive scale. Of the total number of ships leaving the Mersey the crews of the large majority have been required to sign articles "No grog allowed," and with few exceptions this rule has been rigidly

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enforced. While it is gratifying to note that many seafaring men have been induced to become strictly sober, it must not be forgotten that "no grog allowed" is applied to the forecastle and not to the cabin. Poor Jack, who had to do all the pulling and hauling, and to endure the hardship of laying out on the yard reefing topsails in snow, frost, squalls, and rain, was compelled to be a total abstainer; the captain and officers, who had none of these duties to perform, but whose sobriety was of even greater consequence, might drink grog *ad lib.* This enforced sobriety does not prevent sailors from rushing to the public-house as soon as they land, and it becomes a very grave question whether a reasonable amount of stimulant on board ship might not tend to promote sobriety ashore.

Coffee as a Stimulant and Article of Diet.

Alluding to the annotation in the last issue of THE LANCET on "A German School of Cookery," it is to be lamented that good, wholesome, pure coffee, free from chicory, is not brought to the notice of the public by advertisers as much as tea, cocoa, or chocolate is. Those who have travelled on the Continent know that a cup of excellent coffee can be obtained at an almost trifling cost, and know what an excellent stimulant it is. Why should this be? and why, on the other hand, should coffee, even in the homes of the rich in this country, be too often wholly undrinkable? That there is no difficulty about the making of good coffee is proved by the fact that the best is made in the simplest apparatus—a plain earthenware jug. This, with boiling water and a reasonable amount of berries freshly ground, is all that is required. Both the demand and supply of coffee in this country are diminishing, but a more extended knowledge of its value as a stimulant and as an article of diet would ensure its increased use and in due time its reduced price.

Greater Liverpool.

The extension of the city boundaries is now all but an accomplished fact. Many advantages will be gained, not the least of which will be a more accurate computation of the real population of the city and a fairer estimate of its death ratio. When the healthy suburbs, in which so many of the citizens of Liverpool actually live, are comprised it is more than probable that the mortality of Liverpool will compare favourably with that of any large town or city.

Aug. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Meeting of the British Dental Association in Edinburgh.

THE annual general meeting of the British Dental Association is to be held in Edinburgh on Thursday, Friday, and Saturday of this week. Rooms have been obtained for the meeting in the University. Demonstrations are to be given both there and in the Dental Hospital and School, Chambers-street. Mr. W. Bowman Macleod of Edinburgh is the President-elect. As is usual at such gatherings, the social element has not been omitted. On Wednesday night there is to be a smoking concert in the Waterloo Hotel, on Monday the Lord Provost and magistrates will give a reception at the City Chambers, on Friday the annual dinner of the Association is to be held, and Mrs. Bowman Macleod will give a ladies' reception in the evening at the Waterloo Hotel.

Bazaar for St. Andrews University Students' Union.

A bazaar to pay off the debt on the St. Andrews University Students' Union was held on Thursday, Friday, and Saturday of last week. On Thursday it was opened by the Marquis of Bute, on Friday by Lady Helen Monroe Ferguson, and on Saturday by Principal Donaldson. The result has been most satisfactory, for the takings for the three days amounted to £1370, which is sufficient to pay off the debt, leave a sum for endowment, and a small sum as the nucleus of a fund for a union and reading room for the lady students.

University of Glasgow.

Professor Joseph Coats and Dr. L. R. Sutherland are to conduct during the month of September a post-graduate course for practical instruction in the methods of pathological research. A similar course conducted last year attracted a large number of the younger graduates, who highly appreciated the thorough and practical method of the class. At Queen Margaret College the following lecturers have been appointed: Dr. Charles Workman to the lecture ship in Pathology and Mr. J. Hogarth Pringle to the lecture-ship in Surgery. The instruction of the women students in clinical medicine is to be undertaken by Dr. J. Lindsay Steven, physician to the Royal Infirmary, and he is to be assisted by Dr. W. K. Hunter, who has recently been appointed extra physician to the dispensary of the infirmary.

Glasgow Maternity Hospital.

Two vacancies will shortly occur in the staff of this hospital, Professor Murdoch Cameron retiring from the position of Obstetric Physician and Dr. Malcolm Black from that of Assistant Obstetric Physician. The new appointments are not to be made until November, yet several candidates are already in the field.

University College, Dundee.

Dr. John Yule Mackay, Professor of Anatomy, has been requested to act in conjunction with the chairman of the council in discharge of the duties of the Principalship during the present vacancy.

Aberdeen University: Death of Mr. Charles Mitchell, LL.D.

A great gloom has been cast over the University and the city by the announcement of the death, on Thursday, Aug. 22nd, of Mr. Charles Mitchell, LL.D., the greatest benefactor of the University in modern times. In a month he was to have been the central figure at a great inaugural celebration, at which the magnificent buildings, so closely associated with his name, were to have been opened. Mr. Mitchell, who was in his seventy-fifth year, was a native of Aberdeen, and began his professional life as an apprentice to an Aberdeen firm of engineers. He studied chemistry at Aberdeen University, and had the distinction of being first prizeman in 1840. He left Aberdeen in 1842, but after the lapse of half a century and more, during which time he had amassed a large fortune and pushed his way to the head of the famous Newcastle firm known as Sir W. G. Armstrong, Mitchell, and Company, he still retained the warmest interest in and affection for the city and University that started him in his prosperous and useful career. The glorious Mitchell Tower and splendid Graduation Hall and Students' Union are a standing memorial to his wisdom and generosity. It may almost be said that but for his munificence and the deep interest he showed in the work, the great extension scheme at Marischal College would have come to a deadlock. I copy from the *Free Press* the account of his bequests to the University: "When the Extension Movement was initiated in 1891 Mr. Mitchell immediately responded with a donation of £1000. In the following year he supplemented this by an offer to erect a Graduation Hall and Students' Union, estimated to cost together £13,000. This generous offer, handsome in itself, has since been supplemented by Mr. Mitchell by the provision of a grand organ; by filling (at a cost of £2500) the large window in the Graduation Hall (to be known as the Historical Window) and ten side windows with stained glass commemorative of donors to the University (both King's and Marischal Colleges), the leading principals and professors, and the most distinguished graduates; by laying an oak floor in the old hall of Marischal College (now to be constituted an art gallery); and by supplying the requisite furnishings of the Students' Union. In addition to all this Mr. Mitchell undertook the cost of the heightening of the tower of Marischal College, according to the design of Mr. A. Marshall Mackenzie, A.R.S.A., the architect—a cost estimated at £7000. Quite recently Mr. Mitchell undertook to further complete the artistic effect of the summit of the tower by adding four small turrets, by putting in a clock and bell (estimated to cost £300), and by filling the bay windows of the old portion of the tower with stained glass. Mr. Mitchell also gave £1200 for the purchase of a house in Queen-street to assist in the scheme of extension. Still more recently, we understand, he intimated his intention of contributing £6000 towards the erection of the south wing of the extension scheme, and of the terminal towers of the south and north wings, on condition of the other £10,000 required being subscribed, and even made provision for this being carried out in the event of his decease." He must in all have contributed something like £31,000 to the scheme, and his invaluable assistance and advice enabled many difficulties to be surmounted. In February, 1893, the Senators conferred on him the honorary degree of LL.D., and the tower and Graduation Hall are to be named after him.

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In the altered circumstances the arrangements made for the great celebration next month now no longer hold. Immediately on receipt of the sad news Sir William Geddes, the Principal, telegraphed to Mr. Mitchell's son: "Deeply concerned at most sad tidings. Aberdeen University mourns her generous and noble-hearted son. We beg to offer heartfelt sympathy." The Celebration Committee met and came to the following resolution: "That, in consequence of the sudden and lamented death of Dr. Charles Mitchell of Newcastle, who has been the chief promoter of the extension scheme, and in whose honour the proposed autumn celebration was chiefly designed, the Ceremonial Committee suspends its deliberations until such time as the wish of his family and the resolutions of the Court and Senatus consequent on the altered circumstances are ascertained." A meeting of the University Court is called for Tuesday next to consider the course of action to be taken in reference to the inaugural celebration. Principal Sir William Geddes, the Lord Provost, and Professor Niven travelled through to be present at the funeral service in St. George's, Jesmond, on Monday, Aug. 26th, and a memorial service was held in the West Church, Aberdeen, during the time of the funeral. The great bell Victoria in St. Nicholas Tower tolled from 11 till 11.30, at which hour the funeral was taking place at Newcastle, and representatives of the town council, the University, the school board, and the trades marched in procession to the church, in which also were assembled a large number of the general public.

Health of Aberdeen.

The zymotic diseases notified to the medical officer last week were: Measles, 5; scarlet fever, 12; typhoid fever, 1; whooping-cough, 41; erysipelas, 1; puerperal fever, 1; membranous croup, 1; total, 62, being 10 cases more than for the preceding week.

Aug. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Addresses from the Royal Colleges of Physicians and Surgeons, Ireland, to the new Lord Lieutenant.

ON Monday afternoon his Excellency the Lord Lieutenant received in the Throne-room, Dublin Castle, addresses from the Royal College of Surgeons and the Royal College of Physicians of Ireland. His Excellency was accompanied by the Countess Cadogan and the Hon. E. Cadogan, and attended by Sir William Kay, C.B., private secretary; Mr. Arthur Vicars, Ulster King at Arms; Mr. John Olphert, D.L., Gentleman Usher; Colonel Deane, Chamberlain; and Captain Fielding, A.D.C. in Waiting. The deputation from the Royal College of Surgeons of Ireland, which consisted of the President, Vice-President, and Council, was first introduced, and was most graciously received by his Excellency, who, in reply to an allusion by Sir William Thornley Stoker to the increasing importance of the educational work done by the College since it was incorporated under Royal Charter in 1784, made use of the following words: "I am aware that your schools of surgery have attained a high standard, of which you may be justly proud, and that they possess a reputation which extends to the most distant quarters of the civilised world." The address from the Royal College of Physicians of Ireland was presented by the President, Dr. Walter G. Smith. His Excellency the Lord Lieutenant, in his reply, seemed especially pleased by the reference which the address contained to the prominent position which some members of his ancient family had occupied some two centuries ago in Ireland.

St. Patrick's Home for Trained Nurses, Dublin.

A special service was held in St. Patrick's Cathedral on Sunday in aid of the St. Patrick Nurses' Home. Dublin is now crowded with visitors, both clerical, medical, and lay. His Grace, Lord Plunket, Archbishop of Dublin, addressed an unusually large audience on the occasion.

Royal Hospital Saturday, Belfast.

The street collection in aid of the Royal Hospital will take place on Sept. 14th. The Lord Mayor and the executive committee are putting forth every effort to make the movement this year a decided success.

Ulster Eye, Ear, and Throat Hospital.

At a meeting of the board of management of this institution on Aug. 20th the plans for the extension and improvement of the hospital as finally settled were approved of. The changes will cost £1300, the whole of which is in hand. On the advice of the surgeon, Dr. McKeown, it has been decided that one of the rooms in the extension should be made a special operating-room for delicate operations, such as cataract, and be fitted up in accordance with the requirements of aseptic surgery. It will cost about £65. The extension, amongst other things, will comprise four bath-rooms and closets, two day-rooms for male and female patients, improved accommodation for nurses and servants, additional ward accommodation, the special operating-room, and a laundry. It is hoped that the extension will be completed, or nearly so, in January, 1896, which will be twenty-five years after the foundation of the hospital.

Carnlough Water and Sewerage Scheme.

It is now hoped that this scheme will be pushed on to completion, as the Larne board of guardians have received from the engineer the plans, specifications, and estimate. These will be forwarded to the Local Government Board for their approval, and the water is to be analysed by Professor Hodges of Queen's College, Belfast. The cost will be met, it is proposed, by a loan to be repaid in instalments spread over fifty years.

Glenarm Water-supply.

Mr. L. O'Connor, medical sanitary officer of Glenarm, reported to the Larne board of guardians at their meeting on Aug. 21st that the water-supply is becoming quite inadequate owing to the quantity of water used in the hotel yards for cleaning and watering horses; and he recommends that the drivers of horses should be made to take the horses to the river and not to use the town supply. Glenarm is a centre towards which an immense deal of tourist traffic goes in the summer, and hence the waste of water at the hotels for the horses. The board decided to place one-inch meters on the supply of the two hotels.

Water-supply and Sanitation in Portrush.

A Belfast gentleman staying at Portrush wrote to the Local Government Board a strong complaint regarding the water-supply of Portrush, which he held responsible for an attack of gastric fever to which his son had been subjected. He also alleged that fever was rife in that town. This letter was transmitted to the local authorities, and a report on the matter was presented on Aug. 24th, at a meeting of the Coleraine guardians, from the Portrush Water and Sanitary Committee, in which they say that their medical officer, Dr. Martin, has carefully investigated the whole question and can find but three cases of illness reported, only one of which was under his care. This was a case of gastritis which did not originate in Portrush, as it was brought from a distance. The second case was one of water on the brain; and the third case, that of the son of the gentleman who wrote to the Local Government Board, was not brought under Dr. Martin's notice. The committee are satisfied from the statements of their medical officer that there has been no case of epidemic disease in Portrush this summer, and that the general health of the town has been exceptionally good. The Board of Works having now granted the loan requested for the extension and improvement of the water-supply, the works will be proceeded with without further delay, on the completion of which an ample and pure supply may be relied on.

Garvagh Dispensary.

I am very glad to be able to announce that the Coleraine board of guardians have decided unanimously to grant Dr. McNeary, the retired medical officer of Garvagh Dispensary, the full amount of superannuation which by law they are empowered to give. Dr. McNeary is now sixty-nine years of age. Since 1852 he has been in the service of the guardians, and only on one occasion has he, as a member of the board pointed out, put them to the expense of a locumtenent, when, through hard work and exposure, he contracted a cold which resulted in paralysis and subsequent incapacity for three months. Two-thirds of his salary will amount only to £88 12*s.* 11*d.*, not a large retiring income after such a lengthened service.

Crumlin Dispensary.

Mr. J. H. Carson of Portrush has been appointed dispensary medical officer of the Crumlin district. His golfing friends in Portrush, where he was a member of the council of the Royal Golf Club, have presented him with a valuable gold watch and chain.

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Royal Hospital, Belfast.

At the quarterly meeting held on Aug. 26th, it was reported that during the past quarter 452 intern and 6038 extern patients were treated. Dr. Calwell has been appointed physician to the chest department in place of Dr. S. Smith (resigned). Financially there is an excess of expenditure over receipts for the past eleven months of £978 1*s*. The following members of the staff, who retire by rotation, were re-elected:—Dr. Ross (physician), Dr. J. Walton Browne (surgeon), Professor Byers (physician for diseases of women), Dr. Nelson (ophthalmic surgeon), and Dr. S. Smith (assistant physician). Dr. Lorrain Smith was appointed pathologist.

The Battle of the Clubs at Cork.

Last week I wired you the result of the conference which was held at the instance of the Mayor for the purpose of arranging, if possible, the dispute between the Cork profession and the clubs. I now propose to give you a few further particulars which may prove interesting to many of your readers. At the commencement of the proceedings one of the club delegates thought he would overawe the medical representatives by delivering a speech in which he declared that the rules formulated by the profession had been ignored by the clubs, and that prior to any exchange of opinions the rules should first be withdrawn. One of the medical delegates replied, firmly declining to withdraw the rules, and expressing regret that the previous speaker should think it necessary to assume the attitude he had. The medical delegates, he added, had come there on the invitation of the Mayor to discuss the matters in dispute calmly and even amicably. The Mayor agreed that it would be much better to interchange opinions without any undue heat. The rules were then taken up seriatim. There was considerable discussion on the one which provided that the charges for medical attendance on a member and his family, without medicines, should be 7*s*. 6*d*. when the income was under £100 a year, and 15*s*. when over that sum and under £200 a year. The club delegates stated that in some of the clubs it would be impossible to adopt a sliding scale of the kind for members, and said that in many instances even by having reference to the valuation of members' houses it would be difficult to ascertain their incomes. The medical men had all along been conscious of these difficulties and they were prepared to consider favourably the proposal that if the sliding scale were not insisted on the clubs would be willing to pay any reasonable remuneration. Again, the club delegates would agree to refuse admission to candidates in receipt of over £200 a year, but urged that existing members, no matter what their incomes, should be allowed to continue members of the clubs. As a great number of, I should say, opulent citizens joined the city clubs during the past ten years this proposition would require considerable discussion at the hands of the profession. The rule fixing the limit of distance at two miles the club representatives would modify by naming three miles, with the proviso that a member residing beyond two miles should pay car fare. They agreed to the rule that if a member of two clubs should require the services of the two club officers in consultation he should pay consultation fees to the second club officer. They also made no objection to the rule that a club officer should be at liberty to charge a fee if called to attend a member's wife within eight days after her confinement. It is evident that, as I have already mentioned, the crux of the whole situation was the question whether the medical men of Cork should meet in consultation the three imported officers, and last week I explained to you that loyalty to the Cork medical men who had previously been club officers would prevent the Cork profession from falling in with such an idea. An incident which has been freely commented on is worth referring to. One of the imported officers told the Mayor that he (the officer) should insist on a witness being present at the interview. The Mayor, equal to the occasion, retorted by asking him if he reposed so little confidence in the Mayor of Cork. This *contretemps* was all the more regrettable as both the medical and club delegates bear willing testimony to the impartiality, tact, and courtesy displayed by the Mayor throughout. As to the result of the three conferences I am distinctly of opinion that they were decidedly favourable to the profession. The medical delegates presented their case so incisively and at the same time with such calm dignity that a marked impression was evidently produced, not only on the Mayor, but also on the club delegates. One of the latter, who was most uncompromising at the beginning, was markedly conciliatory at the end of the proceedings, and expressed the hope and belief that the clubs would not introduce any other strangers into the city. In reviewing the present situation of affairs I would reiterate the grave warning given to the clubs by the Mayor. If an epidemic should break out in the city it may prove most serious to the clubs. The problem to be solved is, Can three medical men efficiently discharge duties heretofore performed by about a dozen? The universal opinion amongst the Cork practitioners is that victory is on their side, and that, to use a sporting phrase, they are winning "hands down." Time fights for the Cork men. Theirs is a waiting game, and I have no doubt success to a just cause is within very measurable distance.

Aug. 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Spermin and the Balneary Cure of Rheumatoid Arthritis.

YEAR by year the purely eliminative treatment of gouty and rheumatoid affections by thermo-mineral waters, whether in the form of bath or of beverage, has proved its insufficiency unless reinforced by concurrent measures preventing or antagonising the accumulation of uric acid in the circulation. Severely regulated diet is one, and not the least effective, among these supplementary modes of treatment; but even this—not always practicable, be it said, under the conditions of hotel life abroad—is not enough, and even by itself stands in need of supplement. The agent desiderated had been thought to reside in spermin ($C_5H_{14}N_2$), an organic base found in proportionally greater quantity in the testicles, in the prostate, the thyroid, thymus, and pancreatic glands, and in the spleen and ovaries, as well as in the blood. Investigation has subsequently elicited the fact that this body, so widely diffused in the organism, has a general physiological importance, enabling it to perform an essential part in what German biologists call "Gewebsathmung" (histological respiration). In solution it possesses the property of effecting and promoting physiological oxidation in and through the tissues—acting, in short, as a ferment in furtherance of the intra-organic oxidation referred to. Under normal as well as abnormal circumstances (it is known) the regressive metamorphosis of the albuminoid substances in the tissues yields a number of products, among which leucomaines, in the larger sense, play an essential *rôle*. These leucomaines represent all azotised products of the regressive metamorphosis whose oxidation stops short of urea, products classified as "intermediary," and their accumulation in the tissues (causing the "Autointoxicationen" of German pathologists) evolves, according to the place and character of each individual tissue, diseases of the most complex type, diseases constitutional and nervous, and of themselves predisposing to not a few infective maladies. Among these diseases arthritis urica has a place of its own, in which the imperfect oxidation that underlies it is susceptible of completion, till from the "intermediary" the product reaches the normal condition, and ceases to play the toxic part of its earlier stage. A stimulating, or rather tonic, agency effecting this metamorphosis has undoubtedly been found in spermin, only, however, in solution and as prepared on the principles laid down by its strenuous advocate, Professor Alexander Poehl of St. Petersburg. His paper in the *Zeitschrift für Klinische Medicin*[1] entitled "Einwirkung des Spermins auf den Stoffumsatz bei Autointoxicationen im Allgemeinen und bei harnsaurer Diathese im Speciellen" (Influence of Spermin on Metabolism in "Auto-intoxications" in general and on the Uric Acid Diathesis in particular) has made a profound impression on the balneological medicine of Italy, particularly as illustrated or confirmed by the series of cases (arthritis deformans, among others) in which its efficacy has been proved. With such an adjunct to his therapeutic armoury, aiding the action of the thermo-mineral waters, and reinforced, when indicated, by the "interrupted current," while favoured by a judiciously regulated dietary, the balneary physician approaches even

[1] Band xxvi., Hefte 1 und 2.

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inveterate cases of rheumatoid arthritis with much less of the diffidence, not to say despair, of his predecessors. At the largely frequented waters of the Swiss Baden (Canton Aargau) spermin has been growing in favour with the profession, and its use in Italy has, I know, been sufficiently practised to vindicate for it the fair trial for which Professor Poehl so justifiably pleads.

Endemic Idiocy.

What pellagra is to the Lombardo-Venetian territory cretinism is to the southern slopes of the Alps, particularly in the province of Cuneo, the neighbourhood of Aosta, and all about Sondrio. France, too, has her not inconsiderable share of the scourge, which in her case, also, haunts the mountain regions—120,000, indeed, is the estimated cretin population of the Savoy, the Higher and Lower Alps, Arriège, the Jura, the Vosges, Aisner, the Maritime Alps, and even the Higher Pyrenees. Fully developed specimens of the cretin, moreover, are found in the Austrian Alps, the Carpathians, the Caucasus, and even in Thibet and the Andes. But the Alta Italia is the true traditional *nidus* of that form of "endemic idiocy" in its most marked and incorrigible type, dating from classic Roman times and evoking from Juvenal the exclamation: "Quis tumidum guttur miratur in Alpibus?" But if its presence has been so long familiar, its etiology remains obscure, still baffling the research of local and foreign investigators. Drinking-water deficient in iodine is assigned as one cause, while Mantegazza finds it in a combination of insanitary conditions—scanty ventilation, insufficient light, persistent humidity of the soil depending on special geological formation, and, above all, the unfavourable hygiene implied in the occupation of dwellings little better than caves embedded in mountain ravines and shut out from the genial sun. Of course, concurrent causes have their place in its development if not in its genesis, heredity and alcoholism among the number. A diet exclusively vegetable has also been suggested as one of these; but no explanation satisfactory to science has yet been found for a phenomenon of which we can only say with certainty that, as malaria is coincident with, if not consequent upon, deep-seated glandular disturbance manifested in hypertrophy of the spleen, so cretinism is associated with abnormal development of the thyroid; and that as malaria is favoured by marshy exhalation, so cretinism is at its worst when its victims respire the unrenewed air of confined mountain valleys and drink a water possibly deficient in alterative constituents, and assuredly deprived of the influence of the sun's rays. Such at least is the conclusion indicated by Dr. M. Gioberti in his researches through the Aosta ravines—a conclusion, I may add, not yet checked, as in the case of malaria, by investigations resulting in the detection of a pathogenic micro-organism. Klebs, it is true, some twenty years ago, announced his discovery of *naviculæ*, or special bacilli nestling in the alveoli of the thyroid; bacilli also were found quite recently by Maggi in the water conveyed by the town council of Milan from the Brembo—an Alpine source. But these results have not obtained even the provisional plausibility of those claimed by the discoverers of the malaria microbe; and pathology, for the present, declines to commit itself further than this: that (in the language of Dr. Stura, whose interesting paper is the most recent on the subject) "the goitrous agent affects the cortical substance of the brain, and that the thyroid gland, by hypertrophy, compensates in some measure the pernicious action of the cretinogenous germs up to a given point, beyond which cretinism supervenes by cerebral poisoning. Something similar happens in and through the spleen and liver in the majority of infective maladies, miasmatic as well as contagious." Removed from his native surroundings, the cretin, when not too late, does lose some of his degenerative characteristics; but as a rule these are far too inveterate even for mitigation. The dwarfish stature; the wrinkled, semi-bestial countenance, partaking of that of childhood and old age; the flat nose, *retroussé* and compressed inwards at the root; the blubber lips, and tongue generally protruded and viscous with tenacious saliva; the small eyes, now protuberant, now sunken; the swollen eyebrows; the motionless, stolid look; the soft, pasty, livid integument, with the nails enormously hypertrophied; the thyroid many times its normal size; the head squat and depressed at the vertex and temples, while gibbous at the occiput, and always out of proportion to the body; the hair luxuriant, but shaggy, and falling naturally into wisps; the breast caving in; the fingers thin and elongated, with articulations scarcely perceptible; the soles of the feet large, sometimes curved in pithecoid fashion—such are the physical marks, having their physiological analogue in a languor of all the functions except that of the stomach, though even this has little discrimination as to food, and will on occasion satisfy itself with earth or chalk, or the "pica-*menu*." The cretin lives like an animal, lolling on the highway, generally in the sun when he can get it, or when he attempts to walk, yawing, with pendulous arms, like a drunken man, irrespectively of obstacles or dangers. His life is mercifully a short one, like that of most idiots—the brain being seldom equal to more than instinctive acts, often predatory or inclining to habits mostly evil. Of course, from this type of the absolutely brutish creation there are deviations for the better, in which improvement is possible even to the extent of agricultural labour, sometimes of reading and writing. But ameliorative effort is all too ineffective, and the rehabilitation of the cretin remains among the opprobria of medicine. "It will yield only," says Dr. Stura, whose admirable paper has suggested not a few of the above details, "to the great prophylactic means indicated by hygiene ..... removal of individual cretins from affected localities. This method, the most rational, is unfortunately the most difficult to put in practice. ..... Emigration, facilitated by railway communication with the valleys afflicted with the endemic, would be most advantageous. Very useful would also be improvement of dwellings, pure water-supply, and regeneration of the soil." All these, however, are but general rules for dealing with a phenomenon which, as the product of a violated hygiene, must be counteracted by a reassertion of hygienic law till, as savage beasts inimical to man and civilisation are disappearing from the world's fauna, so cretinism, like other monstrosities, will shrink in prevalence and character and become a memory, preserved in museums, of an ill-regulated and unregretted past.

Aug. 26th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Death from the Electric Current.

AT a recent meeting of the Styrian Medical Society Professor Kratter read a paper on the case of a workman who was killed by a shock received whilst he was occupied in straining telegraph wires. Post-mortem examination, performed twenty-one hours after death, showed a ruptured blister on the left forefinger, marked rigidity, and intense ecchymosis on the dependent parts of the body. There were also hypervenosity of the blood, venous engorgement of the lungs, extravasation of blood into the common sheath of both the carotid arteries and the vagus nerve, and symmetrical hæmorrhages along the spinal cord. If an electric current of 1500 volts acts upon rabbits some of the animals live, and others show typical symptoms such as tetanic contraction of all muscles and instantaneous stoppage of the respiration, the heart nevertheless continuing to act. There may also sometimes be found disorganisation of the brain, with destruction of the peripheral parts of the cortex and intra-cranial effusion of blood. The stoppage of the respiration lasts half a minute. From these experiments it results that the first effect consists in permanent or temporary arrest of the respiration. Death from electric shock is, therefore, a form of suffocation, and persons who meet with such an accident are to be treated by artificial respiration, as in ordinary cases of suffocation.

A Follower of Tolstoi.

Dr. Skarvan, who has until now been on six months' service with the Austrian Medical Staff, has been tried by court-martial on charges of insubordination and expressing opinions subversive of discipline. Being a true follower of Tolstoi, he was fascinated with the utopian schemes of the Russian reformer, and supported his theories in a letter addressed to the commander of the garrison hospital, wherein he pointed out that military service is incompatible with humanity and announced his intention of disregarding authority. The court unanimously found the charges against the prisoner proved, condemned him to three months' imprisonment and to the loss of his diploma, and forbade him to practise his profession in Austria-Hungary or in the States connected therewith by treaty. The matter cannot, however be allowed to end here, for although the court-martial

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may be empowered to punish Dr. Skarvan, it is in nowise authorised to cancel his diploma, which he while a civilian obtained in Innsbrück. This case has not failed to cause a great sensation throughout the medical profession.

Equinia in Man.

Dr. Honl has recorded a case of equinia in the *Klinische Rundschau*. The patient is thought to have contracted the disease while treating a horse affected with nasal catarrh of a suspicious type. He had numerous abscesses, and under his left knee-joint there was a diffuse, fluctuating, painful swelling; there was no discharge from the nasal passages, but there was a slight swelling of the nose and some erosion of the right tonsil and the soft palate. At the post-mortem examination hæmorrhages on the pleura, deficient expansion of the lungs, and brittleness of the cardiac muscle were found. Microscopical investigation showed leucocytes and bacilli. The discharge possesses a characteristic reaction, for when it is injected into the abdomen of a male guinea-pig swelling of the testicle occurs within twenty-four hours, and a culture of the bacilli may be found between the tunica albuginea and the other tunics of the testicle. The disease is communicated to man by the discharge coming into contact with a recent wound or with the mucous membrane of the nose, mouth, or conjunctiva. Sero-therapy will doubtless be the future treatment of equinia, for by injection with serum Cheneau and Pick have succeeded in preserving guinea-pigs from infection.

Serious Effects of Serpent Venom Absorbed through a Wound of the Mouth.

Dr. Hirschhorn has published the case of a man who suffered from the effects of serpent venom after sucking the wound of a girl who had been bitten by a viper. The girl recovered within a week, but the man had a painful swelling of the left submaxillary region extending to the neck, the chest, and the upper extremity, and he suffered also from vertigo, inability to stand, and clonic and tonic spasms of the left side of the body. The seizures lasted from half an hour to three hours, and after they ceased the skin assumed a reddish colour with blotches elevated above the general level. This exanthem resembled urticaria and caused a sensation of itching, disappearing after two hours. The spasms and the aura ushering in the paroxysms suggested epilepsy, but there was no unconsciousness. Examination showed that the inoculation had taken place through the gum, which was lacerated in consequence of the extraction of a tooth. Dr. Hirschhorn supposed these paroxysms to be toxæmic; bromide of potassium was administered, and the patient is at present free from them.

Aug. 24th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Statistics of Kasr-el-Aini Hospital.

THE total admissions for 1894 were 4090, and an analysis of 690 cases admitted into one of the two medical sections of the hospital is interesting as throwing some light upon the relative frequency or rarity of well-known diseases. 19 men were admitted with typhus fever and 1 with relapsing fever; but, on the other hand, as in former years, there were no admissions from enteric fever. This racial difference, seen also in India, has yet to be satisfactorily explained, for unfortunately typhoid fever is common among Europeans. Intermittent fever accounted for 32 cases, and 6 others had enormous malarial spleens and ascites. Ankylostomiasis was diagnosed in 119 men and 6 women, and pellagra was present in 27 men and 1 woman, while bilharziosis was recognised in 20 men and 1 woman. Abscess of the liver was diagnosed in 9 men and also in a tenth which proved to be a suppurating hydatid; but cirrhosis of the liver, generally dependent on some cause other than alcohol, was found only in 4 cases. Aneurysm of the aorta occurred in 1 man; this, like other aneurysms, is rare in Egypt. Parenchymatous nephritis was present in 19 men and 10 women, but the granular form is rare, as might be expected in a country where alcohol and gout are little known. Cerebral hæmorrhage occurred in 5 men and 4 women, but it must be remembered that syphilis is not treated among the lower orders who fill the hospital wards. 2 men had locomotor ataxy, 7 had disseminated sclerosis, and, curiously enough, 3 had general paralysis. This last is a disease which is rare in this country as in most others where civilisation is not far advanced and where the population lives chiefly on cereals. It is regrettable to notice that 11 men and 2 women were admitted drunk, and there were also 4 cases of datura poisoning, besides 1 of hasheesh poisoning and 1 of mercury poisoning (an attempted suicide). The datura poisoning again reminds one of India. The story is always the same. A country man meets a town dweller who is travelling in his direction and who after some conversation proposes that they shall rest in the shade and eat their meal together. Sooner or later the townsman produces a cake or sweetmeat, and the bumpkin remembers no more until he finds himself in a hospital robbed of his money and goods.

The Government Hospital at Alexandria.

This hospital, with 180 patients, has changed so much for the better since 1884 that it can hardly be recognised. Roads have been made, the surrounding ground levelled, gardens laid out, and various pavilions erected. One is for infectious patients and another for sterilising the goods of the whole town, which are sent there in three special carts; while a flying ambulance does the necessary work at the patients' homes. During the month of May, for instance, 902 articles were disinfected, coming from 32 cases of infectious disease, and 49 private rooms were disinfected. A welcome legacy has been expended in building a kiosque where all water for hospital use is filtered by means of the block system. The consequence is that the patients of this hospital have at present a purer water-supply than any provided by the municipality.

Alexandria Water Company.

During the last eighteen months the attention of the municipality has been directed to the improvement of the water-supply of the town, and their efforts have been considerably aided by the able reports of Dr. Bitter, their sanitary inspector, who has had the advantage of being trained under Professor Koch. Assuming that the population of Alexandria is now 250,000, he has shown that the rich get an average of 500 litres of water daily, while about three-quarters of the people have to be content with only two or two and a half litres a day. Moreover, the poor have the privilege of paying for their water at a rate which is forty-six times dearer than the subscription levied on the rich. Until a year ago the intake was direct from a branch of the Mahmoudieh Canal, the banks of which were exposed to every sort of pollution in which the Oriental delights. This stream is now walled or pallisaded in on both sides, an improvement suggested by all sanitarians since the early days of the English occupation; but the quality of the water is, of course, of principal interest. In 1883 Professor Koch found that the so-called filtered water as supplied by the Alexandria Company contained several thousands of germs in a cubic centimetre. In 1894 Dr. Bitter's report was equally unfavourable. To-day the analyses show that both the canal water at the intake and the company's water as supplied to the consumer contain on an average 1500 germs per cubic centimetre. It may be said that in the spring of this year the water company supplied as many as 10,000 micro-organisms in the cubic centimetre; and yet the mortality for the first four months of 1895 showed a diminution of 1500 in comparison with the same period in 1894. It having thus been shown that the company's filter beds were practically of no value and could never supply the ideal water containing always less than 100 germs in the cubic centimetre, Alexandria naturally became desirous of having water at least as good as that supplied to Cairo, where the filter beds are greater in area and better constructed, and where the filtering process is carried on much more slowly. Dr. Bitter's proposal to erect sample filters as an experiment was accepted, and £1200 very generously voted to pay expenses. Since last September three systems have been on trial, and every day a bacteriological analysis has been made of the water of each filter. The block system, and another by which the water is first purified by Anderson's process and then by ordinary sand, yield the best results as to quality, showing only some thirty to fifty germs per cubic centimetre, but it is doubtful whether the necessary quantity could be supplied in the given time. It is possible, therefore, that the company may have to fall back upon sand and gravel as forming the best bed under the circumstances. The company, which is an English one and has a far-reaching monopoly, is fortunately willing to accept the advice, but no always the proposed reforms, of the sanitary inspector.

Cairo, Aug. 19th.

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Obituary.

JOHN SYER BRISTOWE, M.D., F.R.C.P. LOND., M.R.C.S. ENG., LL.D. EDIN., F.R.S.

By the untimely death of Dr. Bristowe the medical profession has suffered a loss which is likely to be long felt. He was sprung from a medical family, his grandfather having been a medical practitioner in Ilkley in Yorkshire, while his father, the late Mr. John Syer Bristowe, M.R.C.S., L.S.A., practised for many years in Camberwell. His mother was one of the Chesshyres of Cheshire, a very ancient family, as indeed was also that of Bristowe. Dr. Bristowe was born at Camberwell in 1827, and after spending a few years at preparatory schools was educated at King's College. After leaving school he remained a year assisting his father at home. In the year 1846 he entered at St. Thomas's Hospital. At that date he had no greater ambition than to succeed to his father's practice, but in a fortunate moment he entered the London University, and his success at the matriculation examination, where, though he just missed the first place, he was specially sent for and complimented by the examiners, was his first encouragement to aim at a higher career. Once inspired with the desire to excel, the energy of his character and the power of his intellect finally asserted themselves. He took most of the prizes that were to be obtained at St. Thomas's Hospital, and in the year 1848 he was awarded the Treasurer's gold medal. He also obtained the Apothecaries' Society's gold medal in botany. At the intermediate examination in medicine at the London University in 1848 he took the exhibition and medal in materia medica. In 1849 he qualified as M.R.C.S. and L.S.A., and in the same year was appointed house surgeon to St. Thomas's Hospital. In 1850 he took his M.B. and obtained the medal and scholarship in surgery and the medal in physiology, and in the same year was appointed curator of the Museum of St. Thomas's Hospital. About the same time he became pathologist to the hospital and performed the duties of that office for ten years. In the same year he was appointed to assist the late Mr. Grainger in the lecture theatre. At this time his sympathies lay rather with surgery than with medicine; however, in the year 1852 he took his M.D. degree, and in 1854 was elected assistant physician to his hospital. In 1859 he became lecturer on botany, and in 1860 was appointed full physician and lecturer on materia medica. In 1865 he was appointed joint lecturer on general anatomy and physiology, and in 1870, on the retirement and at the request of Sir J. Simon, he was appointed lecturer on pathology. In 1876 he became lecturer on medicine, a post which he held until his retirement in 1892. On the death of Dr. Peacock he became senior physician. In 1856 he was appointed medical officer of health to Camberwell, and he held that office till his death. At the end of 1856 he married Miriam Isabelle, eldest surviving daughter of Mr. Joseph P. Stearns, of Dulwich, and afterwards of Cranbrook Park, Essex.

When the Commercial Union Assurance Company commenced a life department in 1862 he was appointed medical officer. This post he also retained until his death. He was also physician to Westminster School for over thirty years, and when the question of the removal of that school into the country was raised he used his influence strongly to prevent it. At the Royal College of Physicians of London he had a distinguished career. He was elected a Fellow in 1858. He was examiner in medicine in 1869 and 1870. In 1872 he was appointed Croonian lecturer, and chose for his subject "Disease and its Medical Treatment." In 1879 he was appointed Lumleian lecturer, the subject then being "The Pathological Relations of Voice and Speech." He was Censor in 1876, 1886, 1887, and 1888, and Senior Censor in 1889. As an examiner he held appointments at the Royal College of Surgeons of England, London University, Oxford University, and the War Office, which last he held at the time of his death. In 1881 he was elected a Fellow of the Royal Society, and was given the honorary LL.D. at the Tercentenary Festival of Edinburgh University, at which he was appointed to represent St. Thomas's Hospital. He was one of the early members of the Pathological Society, and he never ceased to be grateful to the late Dr. Peacock for having induced him to join. He was President in 1885, and his earliest writings are in the third volume of its Transactions. He was President of the Medical Society and Lettsomian lecturer in 1893; President of the Metropolitan Counties Branch of the British Medical Association in 1887; and President of the Neurological Society in 1891. He was also President of the Society of Medical Officers of Health. He was Vice-President of the Sanitary Protection Association; Corresponding Member of the Edinburgh Medico-Chirurgical Society; and Honorary Member of the Ophthalmological Society, of the West Kent Medico-Chirurgical and the Sydenham District Societies. When the West-end Hospital for Diseases of the Nervous System was reorganised he was appointed consulting physician, and he was recently appointed consulting physician to the Victoria Hospital for Children. On the resignation of the late Sir Andrew Clark he accepted the presidency of the Hospitals Association in spite of strong opposition against that body displayed by many of his medical friends. He also interested himself greatly in and was on the council of the Royal National Pension Fund for Nurses. In his earlier days he did a considerable amount of sanitary work for the Public Health Department of the Privy Council. He reported on phosphorus poisoning in the manufacture of matches in 1862, on infection by rags and paper works in 1865, and, in conjunction with Professor Burdon Sanderson, on the cattle plague. In 1863 he reported with Mr. Holmes on the sanitary condition of English hospitals. All of these reports are buried in Bluebooks.



JOHN SYER BRISTOWE, M.D., F.R.C.P LOND., &C.

As a physician probably his reputation stood highest in the department of diseases of the nervous system, and by many of the public as well as of the profession he was regarded as a specialist. His wards always contained a large number of most interesting cerebral and spinal cases. Many of these were specially sent to him, some from long distances. The classes of cases which specially interested him were perhaps cerebral tumours, cerebral syphilis, thrombosis of the sinuses, hysteria, general paralysis, locomotor ataxy, disseminated sclerosis, and paralysis agitans. He threw much light on the diagnosis of tumours of the corpus callosum, and gave

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a very valuable description of the symptoms of that affection. He successfully diagnosed many very obscure cases of cerebral tumour, often localising them very exactly. The cases of "Marion" and "Jimmy," well known to his old pupils, were the exceptions which proved the rule. In the case of "Jimmy," who, after being long an inmate of St. Thomas's Hospital, was taken in at Guy's Hospital and eventually died there, the diagnosis of cerebral tumour made at both hospitals was found to be erroneous, the disease proving to be chronic hydrocephalus. In the case of "Marion," who was an inmate of St. Thomas's Hospital for nearly three years, the original diagnosis of cerebral tumour was given up some time before she died and that of structural disease substituted. No lesion, however, was discovered at the necropsy. To his early recognition of the syphilitic nature of a cerebral affection many a patient owed his life or escape from incurable paralysis. The subject of cerebral syphilis he ably discussed in his Lettsomian Lectures before the Medical Society of London. His work in connexion with the symptoms and diagnosis of thrombosis of the cerebral veins and sinuses also deserves special mention. Of immense value to his pupils was his teaching on the subject of hysteria. From time to time he had most extraordinary examples of this disease under his care. He sometimes, although rarely, took a case of functional disease to be organic, but it was very exceptional, if it ever occurred, for him to diagnose a case as functional which proved to be otherwise. He would tell with much delight of cases where his diagnosis of organic disease had been falsified. He was constantly illustrating and impressing on his pupils the difficulties of diagnosing general paralysis of the insane in its early stages, and often demonstrated the symptoms of the disease both in early and in well-marked cases. Although neurology had a great fascination for him he took an equal interest in diseases of the abdomen and chest. He always examined his cases with very great care. He was an excellent auscultator, and the conclusions he arrived at from physical examination were always very accurate. He had a very large experience of abdominal cases, and his opinion in such was highly prized. He was always ready to go down to the hospital at any hour of the night to see a case of urgency. The cases he was most frequently called to in this way were those of acute intestinal obstruction. In these, wherever the conditions were favourable, he called into requisition the services of the surgeon at the earliest opportunity.

It has sometimes been said of Dr. Bristowe that he belittled treatment and that he did not believe in drugs. Such was really far from being the case. He was ever ready to give such drugs as had a proved value. He would quickly give iodide of potassium in syphilis, salicylate of soda in rheumatism, arsenic in pernicious anæmia, iron in chlorosis, and opium, digitalis, bromide of potassium, &c., where he thought they would be beneficial. He was, on the other hand, strongly opposed to irrational therapeutics and always expected to be given a sufficient reason as to why a certain drug had been prescribed by his house physician. Where there was no special indication for any particular drug his favourite prescription was compound infusion of gentian.

In 1887 his time as physician to St. Thomas's Hospital came to an end; but by the unanimous wish of his colleagues he was requested by the governors to retain his position for another five years. In 1892 he retired and was elected consulting physician and governor. On the occasion of his retirement his old pupils and colleagues subscribed to a testimonial for him, a portion of which was expended on a portrait of himself which was painted by one of his daughters and presented to St. Thomas's Hospital. The greater part of the money collected was, however, at his own request devoted to founding an annual medal as a prize for pathology.

Dr. Bristowe's contributions to medical literature were numerous and valuable. His style of writing was lucid and simple, and he was one of the greatest masters of the English language which the medical profession has possessed. His best-known work was "The Theory and Practice of Medicine," which was first published in the year 1876 and has passed through seven editions. This book has always been one of the leading text-books on medicine and has made his name familiar to the medical profession both in England and abroad. One of the most valuable portions of this work is the chapter on insanity, which was the result of original investigations carried out with the utmost care and patience. In 1888 he published a volume on "Diseases of the Nervous System," which was a compilation of cases. At that time it was his intention to publish similar volumes on diseases of the rest of the body, a work which failing health unfortunately prevented him from accomplishing. To show how varied was the bent of his mind we may refer especially to his presidential address at the Neurological Society, when the subject he chose was "The Relation of Mind to Brain," and his pamphlet on the nature of the Welsh "Ll," in which he showed that it was really an aspirated "l." He also gave much time and attention to the teaching of the dumb to speak and to the question of the formation of the various letters. On this matter he was held as an authority. His varied contributions to the medical journals and societies are too numerous to mention here.

As a teacher Dr. Bristowe was unsurpassed, and so much was his clinical work appreciated that many distinguished physicians of the day were wont to accompany him round his wards; indeed, it may almost be said that as a teacher he displayed his greatest powers, and only those who were privileged to learn from him can properly appreciate the great loss that medicine has sustained. He did not attempt to teach in the wards what might equally well be learnt in the school. He never adopted the plan of sitting down to one particular case and making it a text on which to discourse about the etiology, symptoms, physical signs, diagnosis, &c. of the disease concerned and of perhaps half a dozen other diseases with which it might be confounded. His method was a very different one. He seldom dwelt very long on one individual case, for in the course of his round of two or three hours he made a point of seeing every patient and saying something about each. He would ask for the report of the clinical clerk and house physician, or he would perhaps himself give a short *résumé* of the case. He would then carefully examine the patient and ask some of the students to do so also, attracting their attention to points of difficulty or of special interest. He would ask for opinions and then give his own with his reasons for it. He would often relate *à propos* of a case others from his rich experience which would help to throw light on it. This relation of cases formed a most valuable part of his teaching. He had a wonderful memory, and could recall small details about a case which he had seen perhaps years previously.

It was largely owing to a letter addressed by him to Lord Granville, then Chancellor of the London University, that the question of increasing the facilities for the obtaining of degrees by London medical students is in its present position. During the Marquis of Salisbury's Administration in 1886–92 he was placed on the Royal Commission to inquire into Vaccination, and as long as health permitted he worked hard on its behalf. He devoted most of his time to his professional work, but was no mean artist. In his earlier days he studied painting, and had some thought of devoting his life to art. In his student days he was in the habit of drawing portraits of his teachers, fellow students, and others, a practice he continued through life, and he has been said to have frightened candidates at examinations by this habit. At the age of seventeen he published a volume of poems; since then he has written many others, and during the last few years has published a further volume.

Of Dr. Bristowe's mental and moral qualities little remains to be said. To the outside world he was a quiet and courteous gentleman. To those who had the privilege of his intimate acquaintance he was an attached and faithful friend; and no man was more capable than Dr. Bristowe of inspiring love and admiration. It may be added that he had a considerable fund of humour and was an excellent host. His mind was essentially great. He was absolutely without crotchets and was incapable of petty jealousy or of any mean or paltry act. In his aims he was guided solely by considerations of duty, without regard to personal or selfish motives. His opinions were only formed after mature thought; but when once he had formed them nothing could induce him to depart from the course which he considered to be the right one, even though that course might be detrimental to his own interests. On several occasions during his career this characteristic manifested itself. One of these, which will probably recur to many of our readers, was in 1881, when he ventured in the face of general professional opposition to assert the propriety of not refusing to meet homœopaths in consultation.

His illness dated from the death in 1892 of his brother, Thomas Lynn Bristowe, late M.P. for Norwood, which

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powerfully affected him. This was followed by an attack of influenza, which left trouble behind it, of which his premature death was the final result. Within a week of his end he went with his family to Monmouth in the hope of recruiting his strength. Though he appeared to arrive there in his usual health and in good spirits symptoms of cardiac failure manifested themselves after a few days. He passed away quietly in the presence of his wife and family.

For the following appreciative estimate of the life and work of Dr. Bristowe we are indebted to Dr. W. M. Ord, who was his life-long friend:—

"It is now forty-two years since, as a first year's student at St. Thomas's Hospital, I made the acquaintance of Dr. Bristowe. He was then Lecturer on Botany, and although only some twenty-seven years of age was clearly marked out for distinction. He had been first in his year during his student career, and had attained a very high position in the examinations for the degree of Doctor of Medicine in the University of London, taking more than one scholarship and several medals. His lectures on botany had a distinct attraction for an earnest student. They were delivered with ease and with a singular freedom from affectation, particularly the affectation of superior knowledge or authority. With a frankness characteristic of him through life he was wont to say that he really knew nothing about botany. This was far from true; for, as a result of hard reading and practical study with the microscope, he was much more than sufficiently versed in structural botany, to which he devoted the larger part of his course. It was natural to him to like this kind of investigation, and his logical mind enabled him to put before his class such things as the minute anatomy, the reproduction, and the morphology of the chief divisions of the vegetable kingdom in a terse, coherent, and suggestive form admirably calculated to stimulate the exploring faculty in his hearers. To classification he paid little more than formal attention. Out of class he was genial and affable, setting us, his pupils, perfectly at ease in his presence. Hence a botanical excursion with him as leader was a truly pleasant function, for we felt as we traversed lane, wood, and down with him that our teacher was, notwithstanding his high attainments, of our own flesh and blood. His studies in botany had not included much more than medicinal plants and the ordinary types of orders. When a plant was brought to him which he could not identify he said quite plainly that he did not know it. The avowal and the comic smile with which it came increased our respect for the true man that he was. We were, of course, conscious that he was not specially a botanist, but that he was filling the chair, according to the practice of the time, as a step in medical promotion. None the less, however, did we feel the value of what he taught us. Such early experience was soon after followed by his introduction to us in the wards, in the out-patient department, and in the post-mortem room. In common with the rest of the assistant physicians, he was allotted a few beds in the medical wards. In all these scenes of practical work we found him again the helpful teacher, full of *camaraderie* on the one hand, and, on the other, in knowledge and method a master, himself striving every day to advance medical knowledge. Those who followed him then and after will never forget his painstaking examination of patients, his minute and extensive record, and his pictorial description of symptoms. As he took the cases they came out clear for diagnosis or discussion of diagnosis, with acute note of everything that was irregular or novel. Further, a remarkable facility in drawing enabled him to illustrate on paper or the blackboard the probable conditions of viscera &c., just as the same facility, freely used, had helped to give life to his lectures. He certainly showed an abiding temptation to the artistic use of pen or pencil, mostly of the pen. When a clinical student he might frequently be seen sketching endless varieties of heads, of animals, and *grotesqueries*, generally in excellent style, on the well-suited calf in which the old ward-books were bound. When one of these covers was completely filled, the sketches were touched up and linked by lines and shading, the fantasies of his pen becoming objects of admiration and cupidity. Mr. Whitfield, then medical secretary, became possessed of several of them, his well-known collecting genius appreciating their value and treasuring them accordingly. I think that Bristowe kept one or two; the rest are probably scattered amongst the mementoes of his old fellow students—mementoes of the time and the man. This habit never left him. So long as he continued to attend meetings and committees at the hospital he continued to leave on the foolscap placed on the table drawings and caricatures to be garnered afterwards by appreciative hands. It is, of course, well known that he had early in life and at a later period published many poems of considerable merit, displaying the same imaginative faculty which, in addition to skill of hand, made the value of his sketches. It came to pass, as I knew him more, that two things greatly perplexed me. First, the accomplished artist wrote a hand which, though not ugly, was difficult to read on account chiefly of the blurring of the ends of words and the imperfect formation of many of the letters. He could write plainly enough when he gave his mind to it, but as his thoughts were placed upon paper they seemed to outstrip his pen, leaving a dash here and a wavy line there, only to be interpreted, if interpreted at all, by a reader who had carefully followed the train of argument or the course of statement in which they were intended to play their part. On this point he used to tell with great enjoyment a story against himself. In an examination at the University of London, when he came up for the vivâ-voce his examiner placed before him several words cut out of his papers and asked him to read them to him. In the absence of the context he was unable to supply the information. It was creditable to the patience of the examiner (the late Dr. Carpenter) that he did read the papers, and in the end awarded the scholarship in competition for which they were written to Bristowe. The second puzzle was that the man of imagination should be so strongly filled with a spirit of scepticism as to be a worthy follower of the Apostle after whom our hospital is named. In Bristowe's case imagination was tempered and more than controlled by an innate tendency to questioning, both in regard of facts and inferences. The question did not go so far even as 'Why?' but stopped first at 'Is it so?' leaving the 'Why' to be considered if the answer to the first question was satisfactory enough to allow him to proceed to the second. He could, fairly enough, take nothing for granted; he seemed, however, to go further and to take up a position almost hostile to any new thing, great or small. He would be as slow to accept the existence of a valvular murmur or a friction sound which had been noted by his assistants as to adopt a new theory of the meanings of the heart-sounds in health or disease. This slowness of conviction led him on to most valuable investigations. He would often, in spite of the already accepted opinions regarding them, follow out for himself the intricacies of many obscure symptoms and diseases, sometimes confirming, sometimes dissenting from, the earlier decisions, rarely without adding materially to our knowledge. He was thus always determined to make sure of his evidence, always determined to see, if possible, the truth, independently of all the weight of existing authority. None but those who have carefully followed his work know the great value which this stern spirit of true investigation has attached to it. It appears to me that the whole school of St. Thomas's has been deeply impressed and most wholesomely disciplined by the word and example of Bristowe, himself doubtless influenced, as no doubt others have been, by the severe rules of conscience inculcated by George Rainey. Onward, as time allowed him to verify things that had been often more than doubtful to him, he was able to form conclusions. The scepticism, which had almost amounted to prejudice, tended then to be in many instances replaced by a conviction. Once satisfied, he would support the new or received idea and would do battle for it as strongly as he had before doubted it.

"'There lives more faith in honest doubt,
Believe me, than in half the creeds.'

This is assuredly true of the man whose loss we have at heart. His mental attitude in controversial matters was well seen in respect of his political opinions. For a great part of his life he was a Liberal in politics; but when the Home Rule question filled the field he felt impelled to his wonted process of examination, with the result that he became first a Liberal Unionist, and afterwards something very like a Tory. In one point his scepticism has produced an impression which is far from just or true; I mean in regard of his way of dealing with therapeutics. He is generally said to have given too little attention to the subject of therapeutics, alike in his great work on Medicine and in his hospital teaching. In my belief he could not preach

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many uses of drugs and many accessory treatments because he had not sufficiently proved them. He seems to have felt like David in face of the armour provided for his use. Yet he could use the sling and the stone effectively, and many a time have I seen him trying the armour in hope of availing himself of it when he understood its application. I remember very well witnessing his careful trials of injections of salt water and dealbuminised serum into the veins of cholera patients in 1854. And I know that he urged strongly the establishment of a complete installation of baths of all kinds in the new hospital on the Embankment, in view of a thorough estimation of their remedial applications. Those who knew him know well that it was only the same caution which forbade him to give an absolute diagnosis in a case of doubtful diagnosis which forbade him also to teach decisively any method of treatment about which he was not absolutely certain. For all of us diagnosis must precede treatment. I say without hesitation that diagnosis was so regarded by him, and that he neither despised nor failed to make active use of therapeutics wherever his reasoning allowed. The world may be sure that whatever he said or left unsaid was determined by the use of a strict judicial estimation of the value of the information supplied to him by his extraordinary industry in reading and in research. Those only who have toiled as he toiled can fairly judge him in respect of the matters which have been noted. They are indeed few. In what I have so far written I have put down my recollections of Bristowe as I first saw him, and I have tried to trace the development of the qualities which were then apparent in him.

"As time passed we became colleagues, and I was then admitted to his more intimate friendship and to his home. While I learned more, now, of his vast professional knowledge, I came to learn more of his true, generous quality of heart in dealing with his fellow men, even where he was determinedly opposed to their opinions. I saw the kindly fairness underlying that appearance of rigidity, scarce short of obstinacy, which seemed to make him a hard judge of both theories and actions, and many a time have I felt the kindness and the thrust, only with increase of the trust and the affection which he inspired. His innate fairness, indeed, with his kindliness, led him some years ago to give an address at Ryde of so lofty a character as to expose him to much harsh comment on the part of the people who could not reach to his standpoint. His inner life was essentially domestic. The hours devoted to work were succeeded by a happy life in the family, full of all kinds of wholesome activity. In his recreations he was alike simple. It was his delight to go with his wife and children to places where nature provided the best of society. In such places he would revel, taking long walks with his family and friends, letting the imaginative part of his being find food and response in the hills, by the sea, and on many a country side. Then, the cares of life, the trammels of the daily duty, and the requirements of the publisher forgotten, he would read aloud the glorious page before him, always with some fresh intonation. If I may dare to add a word I should like to say with deep respect how much he was helped by the companionship of his bright, clever, and affectionate wife who is now left to bear the great sorrow of her life. Others, doubtless, will state in detail the achievements of Bristowe's career. They are, indeed, well-known. Whatever they may cover in recital, they cannot cover all that he has done for medicine and for medical men. They can never reveal the influence which he has exerted on fair investigation or the widespread influence of his teaching of the higher class of students during the last four decades. He lived, so to speak, in teaching, in imparting to chosen young men of the higher aptitude the results of his long years of observation and experience. His words have truly, in one way and another, gone out to the ends of the earth. A true, generous, and affectionate friend, he has left a void which can never be filled for those who knew him closely. He was *justus et tenax propositi*, and was ever above the *civium ardor prava jubentium*."

The following is from the pen of a Fellow of the Royal College of Physicians of London who was much associated with Dr. Bristowe and enjoyed the benefit of his friendship:—

"The loss of Dr. Bristowe is a matter for more than ordinary regret, for he was an exceptional man whose character and whose turn of mind tended to exalt the profession to which he belonged. There probably never was a man who practised medicine with less of the commercial bias. He had in him much of the philosopher, nothing of the advertiser; he combined a keen logical faculty with absolute truthfulness, which he brought to bear not only upon his relations to others, but in regard to his own convictions. He was by nature and habit a sceptic, and carried his scepticism into therapeutics, not, perhaps, beyond the wisdom of a philosopher who would not venture further than he was sure of, but too far for the worldly-wise who may often prescribe with more assurance of satisfying the minds of their patients than of benefiting their bodies. He was great as a pathologist, great as an observer of disease in its natural course, and great as a clinical teacher. Critical and uncompromising, he was rather a great professor than a popular practitioner. He followed his line of thought whithersoever it led and never shrank from conclusions which his premisses indicated. Conscientious to the total disregard of his interests, he was 'too fond of the right to pursue the expedient.' It is possible that his consciousness of rectitude of purpose and of logical consistency may have sometimes made him appear pertinacious and even captious to men whose minds were of more slack fibre and whose habitual practice was compromise. In all his personal relations he was kindly, benevolent, and genial. His many friends mourn the loss of one to whom they were closely attached, while the whole profession is made the poorer by the death of an able and honest physician whose whole life was a protest against the authorised quackery of the ignorant, the pretentious, and the insincere."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board in the subjects indicated, under the "five years" regulations, viz.:—

Part I.—Chemistry and Physics:—

Adams, Ernest Beadon Dixon, St. Bartholomew's Hospital.
Adams, Henry Cyril, St. Bartholomew's Hospital.
Alderson, Percy Francis, Middlesex Hospital.
Ashley, Herbert Ernest, St. Bartholomew's Hospital.
Asten, Walter, Mason College, Birmingham.
Atkinson, George James Smith, St. Paul's School, West Kensington.
Austin, Elfred Chalmers, St. Mary's Hospital.
Aylen, Ernest Vaughan, London Hospital.
Baker, Dodington George Richard Sherston, University College, London.
Baker, William Lincoln, St. Mary's Hospital.
Barnes, George, St. Mary's Hospital.
Bartlett, Ernest John Reeve, King's College, London.
Bastian, William, University College, London.
Batchelar, Arthur, University College, London.
Baxter, Charles Thomas, Middlesex Hospital.
Beale-Browne, Thomas Richard, Guy's Hospital.
Beare, Joseph, Firth College, Sheffield.
Beley, Stanley, St. Thomas's Hospital.
Bell, John Cunningham, University College, London.
Bigg, Reginald, St. Bartholomew's Hospital.
Bignold, Henry Howe, Guy's Hospital
Blake, Percy Ryall, London Hospital.
Bostock, Arthur Hastings, St. Bartholomew's Hospital.
Bradley, Richard Walter, St. Mary's Hospital.
Brangwin, Charles Harold, Guy's Hospital.
Braund, Henry, Guy's Hospital.
Brockwell, John Brocas Chambers, Guy's Hospital.
Brown, Thomas Warren, St. Bartholomew's Hospital.
Browne, Thomas Walker Stanley, Guy's Hospital.
Burd, Reginald Shirley, Mason College, Birmingham.
Chalk, Charles Launder, St. Bartholomew's Hospital.
Challans, Frank, London Hospital.
Chaplin, Henry Ayrton, St. George's Hospital.
Churchill, John Aylward, St. George's Hospital.
Coleridge, Alfred, University College, Bristol.
Compton, Alwyne Theodore, St. Bartholomew's Hospital.
Compton, Maurice Winzar, St. Thomas's Hospital.
Cooke, Reginald Torriano, St. Bartholomew's Hospital.
Cory, Harold Myrle, Mason College, Birmingham.
Crompton, Richard Henry, University College, Liverpool.
Cunningham, John Francis, St. Thomas's Hospital.
Davies, Arthur Gerald Capel, Guy's Hospital.
Denny, Herbert Reginald Harry, Guy's Hospital.
Dismorr, Henry Bertram, Guy's Hospital.
Douglas, William Claughton, St. Bartholomew's Hospital.
Dudgeon, Leonard Stanley, St. Thomas's Hospital.
Edmonds, Charles John Ernest, St. Thomas's Hospital.
Edwards, Charles, Guy's Hospital.
Elliott, James Warner, St. Mary's Hospital.
Evans, Sydney James, Guy's Hospital.
Farquharson, Charles Henry, St. Mary's Hospital.

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Fawssett, Basil, St. Thomas's Hospital.
Felton, Edgar Hall, Guy's Hospital.
Foulds, Francis Henry, St. Mungo's College, Glasgow.
French, Frank Austin, St. Mary's Hospital.
Garne, Sydney William, Charing-cross Hospital.
Goode, George Ernest, London Hospital.
Griffith, John Richard, London Hospital.
Gubbins, John Gaspard, St. Thomas's Hospital.
Harbinson, Robert James, St. Mungo's College, Glasgow.
Hart, John Hamilton, St. Thomas's Hospital.
Harvey, Joseph Frederick, Mason College, Birmingham.
Hawes, Ivon Henry Skipworth, St. George's Hospital.
Hawthorn, Henry William John, Mason College, Birmingham.
Heanley, Charles Montague, St. George's Hospital.
Hepper, Evelyn Charles, St. Bartholomew's Hospital.
Heseltine, Verner George, St. Bartholomew's Hospital.
Hicks, Charles Edward, Guy's Hospital.
Higgens, Hugh Arthur, Guy's Hospital.
Higson, Thomas, Owens College, Manchester.
Holland, Edward Torriano, St. Paul's School, West Kensington.
Hollick, Hubert Harry, Mason College, Birmingham.
Holmes, Willmot, St. Mary's Hospital.
Hubert, Edgar Hamilton, St. George's Hospital.
Humby, Harry Robinson, St. Bartholomew's Hospital.
Hutton, Ernest Wilberforce, St. Thomas's Hospital.
James, William Warwick, Middlesex Hospital.
Jupp, Ralph Tennyson, Mason College, Birmingham.
Last, Cecil Edward, St. George's Hospital.
Leech, Frederick Samuel, University College, London.
McClintock, John. King's College, London.
McQueen, Robert Martin, University College, Bristol.
Manning, Ernest John, St. Mary's Hospital.
Marrett, Henry Norman, St. Bartholomew's Hospital.
Mason, Herbert Alfred, Firth College, Sheffield.
Miles, William Percival, St. Bartholomew's Hospital.
Miller, John, Owens College, Manchester.
Morris, Herbert Edward, Guy's Hospital.
Navarra, Norman, Middlesex Hospital.
Newton, Arthur Charles Duncan, Bedford Grammar School.
Noakes, Fred., Charing-cross Hospital.
Nicholls, Percival Thomas, Middlesex Hospital.
Oates, James Christopher, Mason College, Birmingham.
Parker, Christian, London Hospital.
Parsons, Ernest Alsager, Mason College, Birmingham.
Paul, John Frederick, St George's Hospital.
Perkins, Philip Meyler, St. Bartholomew's Hospital.
Pern, Sydney, St. Thomas's Hospital.
Pinches, Henry Irving, St. Paul's School, West Kensington.
Pinches, Horace George, St. Thomas's Hospital.
Pinker, Henry George, St. Bartholomew's Hospital.
Pollock, Aubrey Keating Halliday, St Bartholomew's Hospital.
Pretty, Harold Cooper, University College, London.
Pugh, Arthur Bailey, St. Bartholomew's Hospital.
Randolph, William Henry, St. Bartholomew's Hospital.
Robertson, James Fenwick, St. Bartholomew's Hospital.
Rogers, Frederick Colin, St. Mary's Hospital.
Rodil, Baltasar, Guy's Hospital.
Scorah, Ernest John, Firth College, Sheffield.
Scott, Edward Fletcher, Guy's Hospital.
Shorland, George, Guy's Hospital.
Simpson, George Herbert, St. Mungo's College, Glasgow.
Simpson, John Edgar, University College, London, and King's College, London.
Smith, Francis Maylett, St. Paul's School, West Kensington.
Smith, Sydney Joseph, Charing-cross Hospital.
Smith, Thomas William, Charing-cross Hospital.
Softly, Alfred Ernest, St. Thomas's Hospital.
Speirs, George Benjamin Armes, St. Mary's Hospital.
Stanley, Edmund Hamilton Blake, University College, London.
Steen, Wilfred Alexander, London Hospital.
Symons, Vivian Hood, Mason College, Birmingham.
Takaki, Yoshihiro, St. Thomas's Hospital.
Talbot, Ashley West, Guy's Hospital.
Tayler, Henry Christopher, St. Mary's Hospital.
Thompson, Joseph Bernard, University College, London.
Thorne, Richard Thorne, St. Bartholomew's Hospital.
Turle, James Evan, University College, London.
Twort, Frederick William, St. Thomas's Hospital.
Tytheridge, Ainslie Burton, St. Paul's School, West Kensington.
Vickers, Thomas Hedley, St. Mary's Hospital.
Visger, Charles, University College, London.
Wagstaff, Charles Bertrand, Charing-cross Hospital.
Walker, Robert, St. Bartholomew's Hospital.
Ward, Oswald Erasmus, Mason College, Birmingham.
Waters, Alfred Charles Stanley, University of Cambridge.
Welch, Frederick Day, London Hospital.
Westlake, Bernard Beaumont, Guy's Hospital.
Whitehouse, Mervyn Turberville, Mason College, Birmingham.
Wilson, Richard Eldred, London Hospital.
Woodcock, Henry Cnadwick, St. Mary's Hospital.
Yule, Bransby, University College, London.

Part II.—Practical Pharmacy:—

Acland, Hugh Thomas Dyke, St. Thomas's Hospital.
Alderson, Francis Bellairs, Firth College, Sheffield.
Allen, Thomas Percival, St. Bartholomew's Hospital.
Anley, Frederick Eustace, Charing-cross Hospital.
Ashley, Herbert Ernest, St. Bartholomew's Hospital.
Barwell, Francis Reinagle, University College, London.
Bateman, Herbert Raymond, St. Thomas's Hospital.
Beaumont, Noel Charles, St. Bartholomew's Hospital.
Bell, Robert John, Charing-cross Hospital.
Bevan, Arthur, St Thomas's Hospital.
Bingham, Frank Miller, St. Thomas's Hospital.
Bradley, Alwyn Hewett, Mason College, Birmingham.
Braund, Henry, Guy's Hospital.
Bullen, Edward Harry, St. Mary's Hospital.
Burrows, Harold, St. Bartholomew's Hospital.
Calvert, Herbert, St. Thomas's Hospital.
Chapman, Donald Poyntz, Charing-cross Hospital.
Chetwood, Thomas, London Hospital.
Churchill, John Aylward, St. George's Hospital.
Churton, John Gaitzkill, University College, Liverpool.
Collyns, John Moore, St. Bartholomew's Hospital.
Compton, Maurice Winzar, St. Thomas's Hospital.
Corbett, Sidney d'Alton, St. George's Hospital.
Cornish, Charles Vivian, St. Bartholomew's Hospital.
Cory, Harold Myrie, Mason College, Birmingham.
Danks, Walter Seymour, St. Bartholomew's Hospital.
Davey, John Bernard, Middlesex Hospital.
Davies, Daniel, St. Bartholomew's Hospital.
Davies, David Leighton, University College, London.
Davies, Enoch Howell, University College, Cardiff.
Dawson, Edwin Norman de Vere, St. Thomas's Hospital.
Denniston, William Edward, St. Thomas's Hospital.
Dixon, Godfrey Brookes, Charing-cross Hospital.
Doubble, Meredith Sedgwick, Charing-cross Hospital.
Douglas, William Claughton, St. Bartholomew's Hospital.
Drake-Brockman, Henry George, St. George's Hospital.
Eastment, Gerald Meade, Middlesex Hospital.
Ellery, Richard Frank, St. Bartholomew's Hospital.
Elwes, Frederick Fenn, Middlesex Hospital.
Evans, William, Otago University and London Hospital.
Faulkener, Erasmus Oakes, St. Mary's Hospital.
Fawssett, Wilfred, St. Thomas's Hospital.
Frost, Cecil Scarlett, St. Bartholomew's Hospital.
Gaff, James, St. Thomas's Hospital.
Gandy, Thomas Hall, St. Bartholomew's Hospital.
Gilbert, Walter Raleigh, St. Thomas's Hospital.
Hagon, Albert, University College, Cardiff.
Hamilton, William Gavin, St. Bartholomew's Hospital.
Hancock, William Edwin Harry, University College, Bristol.
Harris, Herbert Stocker, St. Thomas's Hospital.
Harris, William Trengweath, St. Thomas's Hospital.
Hartley, John Dawson, St. Bartholomew's Hospital.
Harvey, Joseph Frederick, Mason College, Birmingham.
Hayes, Arthur Herbert, St. Bartholomew's Hospital.
Heath, Philip Maynard, University College, London.
Higson, Thomas, Owens College, Manchester.
Hodgsons Robert Edward, St. Mary's Hospital.
Hope, Walter Bayard, Guy's Hospital.
Hudson, Edmund, St. Thomas's Hospital.
Humphreys, Jack Edmund, Charing-cross Hospital.
Illius, Henry Warwick, St. Bartholomew's Hospital.
Illius, John Warwick, St. Bartholomew's Hospital.
Inman, William Sam, Firth College, Sheffield.
Jameson, Archibald Douglas, St. Thomas's Hospital.
Jones, Arthur Webb, St. Thomas's Hospital.
Jones, William Forsyth, Charing-cross Hospital.
Judson, Joseph Edward, Owens College, Manchester.
Jupp, Ralph Tennyson, Mason College, Birmingham.
Lamborn, William Alfred, Middlesex Hospital.
Leech, Frederick Samuel, University College, London.
Lees, Charlie, Charing-cross Hospital.
Lilley, Ernest Lewis, Charing-cross Hospital.
Lobb, Hubert Peché, St. Bartholomew's Hospital.
Law, George Harvey, St. Bartholomew's Hospital.
McLachlan, Arthur Ronald, Guy's Hospital.
McLeod, James Alexander, London Hospital.
Martin, Malcolm Murcott, St. Bartholomew's Hospital.
Mayne, William Boxer, University College, London.
Merry, Edward, London Hospital.
Mitchell, Talbot Carter, Yorkshire College, Leeds.
Morley, Arthur Solomon, St. George's Hospital.
Navarra, Norman, Middlesex Hospital.
New, John Sherwood, University College, London.
Nunn, John Wilfred, St. Bartholomew's Hospital.
Nutt, Harold Rothery, St. Mary's Hospital.
O'Hea, John, St. Bartholomew's Hospital.
Olivey, John Michael Abraham, St. Thomas's Hospital.
Parsons, Ernest Alsager, Mason College, Birmingham.
Passmore, William Henry, Charing-cross Hospital.
Peck, William Edward, University College, London.
Perrin, Thomas, St. Thomas's Hospital.
Pitts, Arthur Gentry, Charing-cross Hospital.
Pritchett, George William Morris, University College, London.
Quinby, Frank Gray, University College, Liverpool.
Reid, Archibald Douglas, King's College, London.
Rodil, Juan José, Guy's Hospital.
Russell-Risien, Ernest, St. Bartholomew's Hospital.
Sanders, James Herbert, London Hospital.
Scorah, Ernest John, Firth College, Sheffield.
Scott, Henry Martin, Charing-cross Hospital.
Scott, Sydney Richard, St. Bartholomew's Hospital.
Scrase, James John Sheat, St. Bartholomew's Hospital.
Smith, William Christian Baumgarten, St. Bartholomew's Hospital.
Softly, Alfred Ernest St. Thomas's Hospital.
Sprague, Francis Henry, St. Mary's Hospital.
Stevens, Stanley, St. Bartholomew's Hospital.
Stone, Gerald William, St. Bartholomew's Hospital.
Stratford, Howard Blenheim Martin, Oxford University.
Takaki, Yoshihiro, St. Thomas's Hospital.
Thomas, Harold Sebert, St Bartholomew's Hospital.
Trumper, William Arthur, St. Mary's Hospital.
Turner, Walter Edward, St. Mary's Hospital.
Vaughan, Arthur Llewellyn, St. Bartholomew's Hospital.
Walker, Lewis Augustus, St. Bartholomew's Hospital.
Walters, Charles Ferrier, University College, Bristol.
Waters, James, Middlesex Hospital.
Wells, Albert John Walton, St. Bartholomew's Hospital.
Williams, Gwilym Went Steuart, St. Bartholomew's Hospital.
Wirgman, Charles Wynn, University College, London.
Woodforde, Robert Edmund Heighes, St. Bartholomew's Hospital.
Wood-Hill, Henry Gilbert, St Bartholomew's Hospital.
Yule, Bransby, University College, London.

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Part III.—Elementary Biology:—

Alcock, William, Firth College, Sheffield.
Alderson, Percy Francis, Middlesex Hospital.
Anchumuty, Compson Henry, Westminster Hospital.
Ashmore, Arthur, Yorkshire College, Leeds.
Austen, Cecil Cress, Westminster Hospital.
Baker, Arthur Russell, St. Bartholomew's Hospital.
Baxter, Charles Thomas, Middlesex Hospital.
Bennett, Charles Harold, St. Mary's Hospital.
Braund, Henry, Guy's Hospital.
Brockwell, John Brocas Chambers, Guy's Hospital.
Churchill, John Aylward, St. George's Hospital.
Cunningham John Francis, St. Thomas's Hospital.
D'Aguilar, John Burton Stockwell, University College, Bristol.
Daly, Frederick James Purcell, London Hospital.
Davies, David Morgan, St. Mungo's College, Glasgow.
Davis, Alexander Montague, Mason College, Birmingham.
Denny, Herbert Reginald Harry, Guy's Hospital.
Fagan, Charles Horace, St. Paul's School, West Kensington.
Foulds, Francis Henry, St. Mungo's College, Glasgow.
Fowler, Edwin Samuel George, Yorkshire College, Leeds.
Freear, Alexander, St. Mary's Hospital.
Glaze, Thomas Horace, Mason College, Birmingham.
Gomez, Francisco José, King's College, London.
Griffith, John Richard, London Hospital.
Hall, Robert William Basil, Guy's Hospital.
Harbinson, Robert James, St. Mungo's College, Glasgow.
Hawes, Colin Sadler, St. Bartholomew's Hospital.
Haydon, William Chatterley, St. Mary's Hospital.
Heanley, Charles Montague, St. George's Hospital.
Higgens, Hugh Arthur, Guy's Hospital.
Hughes, Frank Percival, University College, Bristol.
Hutton, Ernest Wilberforce, St. Thomas's Hospital.
James, Charles Willmott Wanklyn, University College, Bristol.
Jefferiss, Frederick Burroughs, King's College, London.
Jones, Frederick John Felix, Guy's Hospital.
Lakeman, Jasper, London Hospital.
Lawson, James Ward, Charing-cross Hospital.
Leech, Frederick Samuel, University College, London.
Leggatt, Claude Edward Heisch, St. Mary's Hospital.
Lister, Alfred Ernest John, St. Bartholomew's Hospital.
McClintock, Guy Reginald, St. Bartholomew's Hospital.
Mandy, Percy Stephen, Guy's Hospital.
Mayer, Thomas Frederick Gisborne, London Hospital.
Moss Blundell, Cuthbert Blundell, St. Thomas's Hospital.
Murdoch, Horace Thomas Thorns, Yorkshire College, Leeds.
Nicholls, Percy Thomas, Middlesex Hospital.
Oliver, Arthur Cardell, University College, Cardiff.
Parkinson, Harold Raby, Owens College, Manchester.
Paul, John Frederick, St. George's Hospital.
Peirce, Thomas James, St. George's Hospital.
Pern, Sydney, St. Thomas's Hospital.
Reardon, Arthur Francis, St. Thomas's Hospital.
Rodil, Baltasar, Guy's Hospital.
Rutherford, William Harper, St. Thomas's Hospital.
Seager, Frank Randolph, Mason College, Birmingham.
Segreda, Francisco Arturo, Guy's Hospital.
Sheehan, Michael, Queen's College, Cork.
Simpson, George Herbert, St. Mungo's College, Glasgow.
Speers, William Gordon, St. Mary's Hospital.
Stanley, Edmund Hamilton Blake, University College, London.
Stevens, Warwick Alan George, Guy's Hospital.
Stokes, Percy Southwell, Firth College, Sheffield.
Thwaites, Cyril Evered, St. Mary's Hospital.
Thwaites, Harry, London Hospital.
Townroe, Eugene Dunbar, St. George's Hospital.
Turner, Charles Harold, St. Bartholomew's Hospital.
Waters, Alfred Charles Stanley, Cambridge University.
White, Charles Vaughan, St. Thomas's Hospital.
Whitehead, Arthur Ernest, Firth College, Sheffield.
York, Thomas, Westminster Hospital.

Part IV.—Elementary Anatomy:—

Austen, Cecil Cress, Westminster Hospital.
Barnes, George, St. Mary's Hospital.
Brangwin, Charles Harold, Guy's Hospital.
Brown, Thomas Warren, St. Bartholomew's Hospital.
Capper, Harold Selwyn, University College, London.
Carlyon, Arthur Farrington, Middlesex Hospital.
Clayton, John Cecil, University College, Bristol.
Crawley, Herbert Edward, Oxford University.
Cross, Gerald Coneybeare, Middlesex Hospital.
Daly, Frederick James Purcell, London Hospital.
Davies, David Morgan, St. Mungo's College, Glasgow.
Douglas, William Claughton, St. Bartholomew's Hospital.
Durance, William Arthur, Westminster Hospital.
Edwards, Charles, Guy's Hospital.
Esser, Samuel Jonathan David, London Hospital.
Etheridge, Charles Edward, Middlesex Hospital.
Evans, William, Otago University and London Hospital.
Facey, Reginald Ambrose, St. Mary's Hospital.
Flint, Harold Edwards, St. Bartholomew's Hospital.
Forbes, Cyril Donald Edward, St. George's Hospital.
Foulds, Francis Henry, St. Mungo's College, Glasgow.
Gould, Reginald, London Hospital.
Gomez, Francisco José, King's College, London.
Green, Sydney Balch, St. Bartholomew's Hospital.
Halliday, John Rutherford, London Hospital.
Harris, John, University of Sydney, New South Wales.
Harris, Thomas Arthur Ball, Firth College, Sheffield.
Hawkes, Alfred Ernest Underwood, University College, Liverpool.
Hayes, Arthur Herbert, St. Bartholomew's Hospital.
Hemstead, Henry, University College, Bristol.
Hobbs, Albert Remington, St. Mary's Hospital.
Holmes, Wilmot, St. Mary's Hospital.
Hudson, Edmund, St. Thomas's Hospital.
Jones, Frederick John Felix, Guy's Hospital.
Judson, Joseph Edward, Owens College, Manchester.
Kerfoot, Stanley James, London Hospital.
Lakeman, Jasper, London Hospital.
Lawson, James Ward, Charing-cross Hospital.
Leclézio, George Joseph Alexis, St. Bartholomew's Hospital.
Leech, Frederick Samuel, University College, London.
Mansell, Thomas, St. Thomas's Hospital.
Martin, John Lemon, St. Mary's Hospital.
Page, Shirley, Mason College, Birmingham.
Palmer, William Grimes, Guy's Hospital.
Panckridge, William Panckridge, Middlesex Hospital.
Pick, Lawrence, St. George's Hospital.
Pinker, Henry George, St. Bartholomew's Hospital.
Quinby, Frank Gray, University College, Liverpool.
Raven, Eustace, St. Thomas's Hospital.
Reardon, Arthur Francis, St. Thomas's Hospital.
Roche, Ivan Joseph, Charing-cross Hospital.
Rockwood, David Pratt, University College, London.
Scott, Claude Sigismund, St. Bartholomew's Hospital.
Shorland George, Guy's Hospital.
Soderberg, John Emil, Westminster Hospital.
Stedman, Percy Taylor Humphry, University College, London.
Sykes, Walter, Owens College, Manchester.
Thompson, Cecil Charles Brandon, St. Bartholomew's Hospital.
Thwaites, Cyril Evered, St. Mary's Hospital.
Thwaites, Harry, London Hospital.
Walker, Robert, St. Bartholomew's Hospital.
Watson, William Bertram, St. Mary's Hospital.
Weston, Herbert Ernest, St. George's Hospital.
Woodforde, Robert Edmund Heighes, St. Bartholomew's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in—

Surgery.—A. F. Blake, London Hospital; G. W. Brown, St. Thomas's Hospital; J. A. Clough, Leeds; R. G. Jones, London Hospital; W. J. Lubeck, Madras; A. R. McCullagh, Charing-cross Hospital; and H. S. Maw, Bristol and St. Bartholomew's Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. A. Blatchford, St. Mary's Hospital; J. A. Clough, Leeds; A. D. Parr Dudley, University College; R. E. T. Ingram, Guy's Hospital; H. S. Maw, Bristol and St. Bartholomew's Hospital; U. W. N. Miles, King's College; D. Pettigrew, Glasgow and Sheffield; and S. J. Wakeham, Charing-cross Hospital.

Medicine and Forensic Medicine.—J. G. Owen, Charing-cross Hospital; A. H. Wade, St. Bartholomew's Hospital; and R. P. H. Whitmarsh, St. Thomas's Hospital.

Medicine.—G. Lowsley, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—D. D. Stewart, Liverpool; and T. W. Wakem, Charing-cross Hospital.

Forensic Medicine.—R. G. Jones, London Hospital; S. E. H. Martin, Royal Free Hospital; and M. White, St. Thomas's Hospital.

Midwifery.—O. W. Gange, University College; D. C. Kemp, University College; and J. Watts, Manchester.

To Messrs. Blake, Blatchford, Brown, Clough, Dudley, Ingram, Jones, Lowsley, McCullagh, Maw, and White was granted the diplomas of the Society entitling them to practise Medicine, Surgery, and Midwifery.

MANY interesting papers will be read at the approaching nineteenth meeting of the American Dermatological Association to be held at Montreal on Sept. 17th, 18th, and 19th. The proceedings will commence with an address by the President (Dr. S. Sherwell of Brooklyn), after which the first day's subjects will be Angiokeratoma of the Scrotum, Raynaud's Disease of the Ears, cases of Hydroa Vacciniforme and Bromide Eruption, a discussion on the Usefulness of Electrolysis in Dermatology, and the Relation of the Epitrichial Layer of the Epidermis to Ichthyosis Congenita. Amongst the numerous subjects announced for the two succeeding days are papers on the Treatment of Erysipelas and on Alopecia.

A QUESTION OF "ISOLATION."—The people of Elson, a village near Portsmouth, are much exercised at a method of "isolation" which certainly has novelty to recommend it. The urban district council requires a site for an isolation hospital, and the action of their committee has opened an old sore. Seven or eight years ago the now deceased local board required a hospital and pitched on this identical site at Elson. A Local Government Board inspector duly made inquiries, and the site was purchased. In 1893 several cases of small-pox occurred, and tents were erected for their accommodation. This brought the military authorities to the fore; they promptly declared Elson out of bounds and hinted at closing the forts in the parish. Such was the local feeling—the tents being "at the very doors" of the people—that without petition the board abandoned the site and advertised for another. The committee of the Gosport and Alverstoke urban district council, which district includes Elson, now recommend, however, that it be once more requisitioned for isolation purposes. Nearly every inhabitant of the village was present at the meeting of protest, and they have unanimously petitioned against a hospital "within a few yards of their doors." The matter, so far as this authority is concerned, is in an initial stage, but the question affects not only a semi-rural but a naval and military population.

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Judson, Joseph Edward, Owens College, Manchester.
Kerfoot, Stanley James, London Hospital.
Lakeman, Jasper, London Hospital.
Lawson, James Ward, Charing-cross Hospital.
Leclézio, George Joseph Alexis, St. Bartholomew's Hospital.
Leech, Frederick Samuel, University College, London.
Mansell, Thomas, St. Thomas's Hospital.
Martin, John Lemon, St. Mary's Hospital.
Page, Shirley, Mason College, Birmingham.
Palmer, William Grimes, Guy's Hospital.
Panckridge, William Panckridge, Middlesex Hospital.
Pick, Lawrence, St. George's Hospital.
Pinker, Henry George, St. Bartholomew's Hospital.
Quinby, Frank Gray, University College, Liverpool.
Raven, Eustace, St. Thomas's Hospital.
Reardon, Arthur Francis, St. Thomas's Hospital.
Roche, Ivan Joseph, Charing-cross Hospital.
Rockwood, David Pratt, University College, London.
Scott, Claude Sigismund, St. Bartholomew's Hospital.
Shorland George, Guy's Hospital.
Soderberg, John Emil, Westminster Hospital.
Stedman, Percy Taylor Humphry, University College, London
Sykes, Walter, Owens College, Manchester.
Thompson, Cecil Charles Brandon, St. Bartholomew's Hospital
Thwaites, Cyril Bvered, St. Mary's Hospital.
Thwaites, Harry, London Hospital.
Walker, Robert, St. Bartholomew's Hospital.
Watson, William Bertram, St. Mary's Hospital.
Weston, Herbert Ernest, St. George's Hospital.
Woodforde, Robert Edmund Heighes, St. Bartholomew's Hospital

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Medicine, Forensic Medicine, and Midwifery.—F. A. Barnes, St. Mary's Hospital; J. A. Clough, Leeds; A. D. Pe[illegible] University College; R. E. T. Ingram, Guy's Hospital; [illegible] Bristol and St. Bartholomew's Hospital; C. W. S. Mi[illegible] College; D. Pettigrew, Glasgow and Sheffield; and S. J. Wa[illegible] Charing-cross Hospital.

Medicine and Forensic Medicine.—J. G. Owen, Charing-cross Hospital; A. H. Wade, St. Bartholomew's Hospital; and R. P. E. [illegible] marsh, St. Thomas's Hospital.

Medicine.—G. Lowsley, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—O. D. Stewart, Liverpool; T. W. Wakem, Charing-cross Hospital.

Forensic Medicine.—R. G. Jones, London Hospital; S. B. H. [illegible] Royal Free Hospital; and M. White, St. Thomas's Hospital.

Midwifery.—O. W. Gange, University College; D. C. [illegible] versity College; and J. Watts, Manchester.

To Messrs. Blake, Blatchford, Brown, Clough, Dudley, Jones, Lowsley, McCullagh, Maw, and White was granted the diploma of Society entitling them to practise Medicine, Surgery, and Midwifery.

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A QUESTION OF "ISOLATION."—The people of Elson, a village near Portsmouth, are much exercised over the method of "isolation" which certainly has novelty to recommend it. The urban district council requires a small-pox isolation hospital, and the action of their committee has opened an old sore. Seven or eight years ago the deceased local board required a hospital and purchased the identical site at Elson. A Local Government Board inspector duly made inquiries, and the site was approved. In 1893 several cases of small-pox occurred, and tents were erected for their accommodation. This brought the matter to the authorities to the fore; they promptly declared Elson within their bounds and hinted at closing the forts in the parish. Such was the local feeling—the tents being "at the very doors of the people—that without petition the board ordered the site and advertised for another. The committee of the Gosport and Alverstoke urban district council, which includes Elson, now recommend, however, that a hospital be more requisitioned for isolation purposes. Another inhabitant of the village was present at the meeting of the test, and they have unanimously petitioned against the "within a few yards of their doors." The matter, so far as this authority is concerned, is in an initial stage, but a question affects not only a semi-rural but a military population.

VACCINATION AND REVACCINATION.—We are glad to see that the following document, signed by the vaccination officers of the Whitechapel Union, has been posted throughout the district:—"The Medical Department of the Privy Council advise that all persons who have been vaccinated in infancy should, as they approach adult life, be revaccinated, and the public are therefore earnestly requested to avail themselves of this great and simple safeguard against small-pox. The best time for revaccination is between fifteen and eighteen years of age. But if there is a prevalence of small-pox, or if individuals from personal circumstances are likely to have chances of infection the age of fifteen should not be waited for, especially in the case of young persons whose marks of vaccination are not satisfactory. In circumstances of special danger, everyone past childhood on whom revaccination has not been successfully performed should, without delay, be revaccinated. The Royal College of Physicians also strongly recommends that all persons who have passed the age of puberty and have not been revaccinated since, should be revaccinated. It will thus be seen that it is considered by the two highest medical authorities in the country that every adult person should be revaccinated." We quote this as given in the *Echo*, which calls the notice an "extraordinary document."

MORLEY HOUSE SEASIDE CONVALESCENT HOME FOR WORKING MEN.—The half-yearly meeting of the board of governors of this institution, which is situated at St. Margaret's Bay, near Dover, was held on the 28th inst., in the Memorial Hall, Farringdon-street, Mr. J. A. Dickinson presiding. The annual report and balance-sheet showed that during the past year 798 patients had been received, an increase of 132 over the previous twelve months. A gratifying feature of the report was that in addition to an increase in the subscriptions and donations increased awards had also been received from the Hospital Sunday and Saturday Funds. The report notes with satisfaction the increased favour the Home is obtaining with agencies, there being now associated with the Morley Home (either in connexion with single beds or wards) the following: the City Police, G.P.O. (for London postmen), Gough and Sons, Beckenham and Penge Societies, Hearts of Oak Society, Governors of the Bank of England, Church of England Temperance Benefit Society, and the Improved Industrial Dwellings Company. An account of the opening of the Caxton Wing in May last by the Hon. W. F. D. Smith is also given. The Home is free from debt, but the number of patients seeking admission is growing so rapidly that some steps must be taken in the near future to increase the accommodation. The report was adopted, and the proceedings closed with a vote of thanks to the chairman.

CHARITABLE BEQUESTS.—The *Daily News* states that estate duty has been paid on £259,557 as the value of the personal estate of Mr. William Berry, of 525, Rochdale-road, Manchester, and of Parklands, Durham Massey, Chester, blacking manufacturer, who died on June 8th last. He bequeaths to the Manchester and Salford Street Children's Mission £500; the Altrincham and Bowdon Provident Society at Altrincham, £500; the Altrincham Hospital and Provident Dispensary, £1000; the Manchester Clinical Hospital for Women and Children, £1000; the Manchester and Salford Sick Poor and Private Nursing Institution, £1000; the Manchester Hospital for Consumption and Diseases of the Throat, £1000; the Manchester Royal Eye Hospital, £1000; the Manchester Institution for Diseases of the Ear, £1000; the Society for the Prevention of Cruelty to Children, £1000; Mr. Barnardo's Homes and Missions, Stepney-causeway, £1000; the Manchester and Salford District Provident Society, £1000; Henshaw's Blind Asylum, Old Trafford, £1000; the Southport Convalescent Hospital and Sea Bathing Institution, £2000; the Manchester General Hospital and Dispensary for Sick Children, £2000; the Old Trafford Schools for the Deaf and Dumb, £2000; the Royal National Lifeboat Institution, £2000; the Northern Counties Hospital for Incurables, Heaton Mersey, £2000; the Salford Royal Hospital, £1000; the Boys and Girls' Homes and Refuge and Children's Aid Society, £3000; the Ancoats Hospital, Manchester, £5000; the St. Mary's Hospital and Dispensary, £5000; the Manchester City Mission, £5000; and the Manchester Royal Infirmary and Dispensary, £10,000. All the residue of his property Mr. Berry leaves to his brother Thomas.

DR. JOHN HAMILTON has rec[eived] for efficient vaccination in the Gresley d[istrict] on-Trent Union for the ninth time.

DR. FARRAR, Chatteris, has [received] gratuity of 5 guineas for efficient vaccina[tion]

THE formal presentation of [the] Prize for the discovery of argon is po[stponed] absence from England of Professor Ram[say]

POST-MORTEM EXAMINATIONS [BY] MEDICAL OFFICERS.—At Tuesday nigh[t's] Strand board of guardians a question of [the] medical officers of metropolitan workhou[ses] the proposition of the chairman (Mr. T[homas]) adoption of the School Visiting Comm[ittee] tion, that in future, when the coroner [desires] examinations to be held on the bodies [of] in the Bear-yard casual wards (Dru[ry] house and schools at Edmonton, or ot[her] the control of the guardians, the necr[opsy] by an independent medical man, and [not] engaged in the service of the board. Wh[ile] professional usage in private practice an[d] he did not think the salaried officials o[f] like workhouses, asylums, gaols, &c., s[hould] conduct these post-mortem investigation[s] death of persons whom they attended in [life] any intention on the part of the com[mittee] slight upon the medical officers at thei[r] houses or other institutions; but it [was] suspicion of scandal which might in [time] to the board in allowing their ow[n] make post-mortem examinations in [cases] might be charged with having som[e] fessional interest.—A guardian observ[ed] suggested by the committee was now i[n] metropolitan institutions, and would soo[n] in all the London workhouses, asylums, [&c.] of Mr. Robert Walker, seconded by [Mr.] M.R.C.S. Eng., it was agreed that, as [the] very great importance, affecting the m[ajority] Strand and other London unions, it shou[ld] General Purposes Committee for conside[ration]

Parliamentary Inte[lligence]

NOTES ON CURRENT TO[PICS]

The Water-supply of East

THE vestries in the East-end of London have [petitioned] of the Local Government Board asking him t[o inquire] into the water-supply.

The Tuberculosis Commiss[ion]

Mr. Lees Knowles has given notice of a motio[n] of the Royal Commission on Tuberculosis an[d the] scope of its inquiry, so that it may further [consider] administrative procedures available for reduci[ng] culous material in the food supplied by animals [for] ment having appropriated all the time, there [being] of the motion being dealt with during the pre[sent]

Inspectors of Meat.

A Parliamentary return is being prepared s[howing] officials employed as meat inspectors in the lea[ding] England and Scotland, the date of their appo[intments] cations, their vocations prior to receiving ap[pointment] such officials act as meat inspectors only [or] emolument in a department other than th[at] medical officer of health.

HOUSE OF COMMO[NS]

THURSDAY, AUG. 22ND.

Disease in Imported Milk

Admiral Field asked the President of the Board [of] he could take any steps under the law as it [stands] this country against the importation of milk [from] foot-and-mouth disease, pleuro-pneumonia, or o[ther] exist, which were liable to be communicated n[ot] human beings, and were consequently dange[rous] and, if the existing law was defective in this r[espect] further Parliamentary powers in the ensuing s[ession] cope with this acknowledged evil.

Mr. Walter Long replied that if any danger t[o]

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should arise by reason of the importation of milk he thought he should be able to meet it by the powers given under the Diseases of Animals Act. Questions affecting the health of human beings, however, were for the Local Government Board to consider, not for his department.

On the following day Admiral Field addressed his question to the President of the Local Government Board, and Mr. Chaplin replied that he had no power to prevent the importation of milk from countries where infectious diseases existed, but the matter was of importance, and would not escape his attention.

The Water-supply in East London.

Mr. James Stuart addressed a number of questions on this subject to the President of the Local Government Board

Mr. Chaplin, in the course of his replies, said he was informed by the East London Water Company that the increase in the quantity of water supplied during the month of June last, as compared with the supply during the corresponding month in the two preceding years, was due (1) to an increase of 36,000 in the population since 1893; (2) to the fact that a large number of pipes belonging to the consumers were burst, 50,000 burst pipes having been found between April 20th and June 29th—in many instances the necessary repairs had not yet been carried out; and (3) to the abnormally dry weather of May and June, when garden watering was a source of great waste. The engineer of the company stated that all pipes belonging to the company within the county of London which were damaged by frost or otherwise were replaced or made good by April 8th. He (Mr. Chaplin) had communicated with Major-General Scott, the Water Examiner under the Metropolis Water Act, and he informed him that he had no information which would lead him to doubt the accuracy of the statements of the Company in the matter. He had made inquiries of the several water companies in London as to the number of days' supply represented by the capacity of their storage reservoirs for unfiltered water. The effect of the replies was: East London Water Company, an average of about seventeen days' supply of Lea water; West Middlesex, six and a third days' supply; Grand Junction Company, three and a half days' supply; New River Company, four or five days' average supply; Southwark and Vauxhall, four days' supply; and Chelsea, thirteen and a half days' supply.

Lunacy in Ireland.

Mr. Gerald Balfour, Chief Secretary for Ireland, replying to a question put by Mr. Kenny, said that the increase in the number of admissions of lunatic patients into institutions was attributed by the Lunacy Commissioners in great measure to causes other than an increase of the disease of insanity in its more serious forms. And in their last report they point to the continuously increasing proportion of old-age admissions as confirming this view. At present he had no well-digested information with respect to foreign countries, and was not satisfied that anything would be gained by an international commission. He would, however, consider the matter during the recess.

Local Authorities and Sanitation.

Mr. Chaplin, in answer to Mr. Yerburgh, said that the practice of the Local Government Board had been to refer to the reports of the Assistant Commissioners in connexion with the examination of the annual reports of medical officers of health, and where the reports of the Assistant Commissioners had contained statements respecting cottage accommodation the Board had communicated with the local authority on the subject when it had appeared to them that advantage would be likely to result from such communication. Apart, however, from the reports of the Assistant Commissioners, the Board were accustomed upon the materials furnished by the annual reports of the medical officers of health to draw the attention of the local authorities to matters of sanitary importance in connexion with the housing of the working classes.

Small-pox in London: the Salvation Army Shelters.

Mr. Chaplin said, in reply to a question, that his attention had been called to a report of the proceedings instituted by the vestry of St. George, Southwark, with regard to alleged overcrowding of the Salvation Army shelter in Blackfriars-road. He understood that the case was adjourned and no decision had yet been given by the magistrate in the matter, and he thought therefore that he could not properly make any observations with reference to it. The Local Government Board were aware that a considerable number of cases of small pox had occurred amongst persons who had been received in the Salvation Army shelters. In the early part of last year the Board directed an inquiry as to the arrangements in connexion with these shelters, especially as regards dealing with cases of infectious disease, and at the beginning of the present month he requested that further inquiries should be made by one of the medical inspectors of the Board as to precautionary measures taken at the shelters with a view to the detection of cases of small-pox among the persons admitted. The general result of the inquiry would appear to be that the Salvation Army authorities realised their responsibility in the matter of small-pox, and were anxious to do all in their power to prevent the spread of that disease by means of the shelters. The Local Government Board were not empowered to enforce a medical inspection. Any powers for this purpose, apart from those which might be exercised by the medical officer of health, could only be obtained by legislation. The subject had been receiving his attention, and the question as to an alteration of the law with regard to these and other similar institutions would be considered by him.

FRIDAY, AUG. 23RD.

The Clothing of the Metropolitan Police.

Colonel Howard Vincent asked the Secretary of State for the Home Department whether he would consider, in conjunction with the Commissioner of Police for the Metropolis, the possibility of reducing the issue of tunics to sergeants and constables to one in two years, and supplying in the alternate year a smart serge jacket for use during ordinary day duty in the summer and by police engaged in office or in-door work, as in many provincial forces, and possibly with a lighter headdress than the felt helmet.—Sir Matthew White Ridley replied that the question of supplying the metropolitan police with a lighter headdress and clothing for summer wear had been repeatedly before his predecessors, and the result of their consideration of the matter had invariably been a decision that, on medical and other grounds, the change would be undesirable. He should be willing, however, to give the matter his consideration and to confer with the Commissioner of Police.

Imported Frozen Meat.

Mr. Walter Long said, in reply to Mr. Dunbar Barton, that representations had been made to the Board of Agriculture that there was not proper inspection of the cattle slaughtered in Australia for export as frozen meat to this country, and information was obtained as to the measures taken in certain of the Australian colonies to prevent the export of meat unfit for human food. The information was communicated to the Local Government Board, with whom it would rest to consider whether any further measures for the security of human health in this country were necessary and practicable.

MONDAY, AUG. 26TH.

Vaccination Commission Report.

Mr. Chaplin said in reply to a question that he caused a letter to be addressed to the Royal Commission on Vaccination on Aug. 13th, in which the commissioners were informed that the Local Government Board were strongly impressed with the urgent importance of the final report being made at as early a date as possible. He was informed that the commissioners were now preparing their final report, which would be presented at the earliest possible moment, but he regretted that he was unable to give any more definite information.

Dispensary Doctors in Ireland.

Mr. Abraham asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Local Government Board sanctioned dispensary doctors having the dispensary in their own houses in towns where premises suitable and convenient to the public could be obtained; whether under these circumstances they would sanction a board of guardians surrendering an existing dispensary held on lease at a reasonable rent in order to accommodate the doctor, five minutes' walk being saved him; and whether, in the interests of the ratepayers, they would refuse sanction to such an arrangement if brought under their notice.

Mr. Gerald Balfour replied that the provision of dispensary accommodation devolves upon boards of guardians under Section 8 of the Poor-law Relief (Ireland) Act, 1851, and it is not the practice of the Local Government Board to interfere with the guardians in the selection of premises unless satisfied that the premises are inconveniently situated or otherwise unsuitable for the sick poor seeking medical relief. With regard to paragraphs 2 and 3 of the question the Local Government Board can express no opinion as to the action they might feel called upon to adopt until all the facts of the particular case are placed before them.

Nursing in Workhouse Infirmaries.

In the course of the debate in Committee of Supply on the vote for the Local Government Board, several members called attention to this important subject. Mr. Chaplin, speaking for the Board, admitted that the regrettable cases which had occurred in workhouses of patients suffering from illness owing to inefficient and inferior nursing ought to receive their careful attention. He had already made inquiries on the subject, and he understood that at the present time there was in existence a Workhouse Nursing Association, by means of which nurses were trained and also recommended. He understood, moreover, that many boards of guardians subscribed to the association. The Local Government Board attached great importance to the work of the association, and also to the nursing duties in workhouses by trained nurses. It was also the policy of the Board to discourage as far as possible the nursing of patients by pauper nurses. This had been the general policy of the department, and it was one which he hoped to continue to carry out in the future, realising how important it was that the nursing establishment connected with workhouses should be thoroughly reformed. Sir Walter Foster, the Parliamentary Secretary to the Local Government Board under the late Administration, also took part in the discussion, assuring the House that of late years the subject of the nursing of the sick poor had received a great deal of attention from local authorities in different parts of the country, and that the Local Government Board had not been idle with regard to it.

TUESDAY, AUG. 27TH.

Ventilation of the London Underground Railways.

Mr. Ritchie, President of the Board of Trade, questioned by Mr. Weir, declined to bring in a Bill next session dealing with the ventilation of the underground railways in London. At another sitting of the House Mr. Ritchie had said that if the companies concerned were to consult their own interests they would take steps themselves to deal with what was a subject of general complaint by those who travel on the railways.

The Gresham University Commission.

Mr. Balfour informed the House that legislation with regard to the report of the University of London (Gresham) Commission would be impossible in the course of the present session of Parliament, and he was unable to say what legislative action would be taken by the Government.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BROWNE, J. WALTON, M.D. Q.U.I., has been reappointed Surgeon to the Royal Hospital, Belfast.

BYERS, PROFESSOR, M.D. Q.U.I., has been reappointed Physician for Diseases of Women to the Royal Hospital, Belfast.

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S, PROFESSOR, M.D. Q.U.I., has been reappointed Hon or Diseases of Women to the Royal Hospital, Belfast.

CONDLER, G., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

CONFORD, G. J., M.B., B.Ch. Oxon., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

CROUCH, H. C., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

DANIEL, R. G. C., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

DAVIS, H. J., M.B., B.C. Cantab., has been appointed House Surgeon to St. Thomas's Hospital.

DIXON, J. L. B., M.B., B.S., has been appointed Senior Assistant Medical Officer at the Workhouse, Manchester, vice McDougall, resigned.

FITCHES, C. A., L.R.C.P. Edin., has been appointed Medical Officer of the Helperby District, Easingwold Union.

HOGARTH, R. G., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the General Hospital, Nottingham, vice Waring, resigned.

HOME, A. L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

JENKINS, T. J. P., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of the South-Eastern District, Freebridge Lynn Union.

JENNER, L. L., M.B., B.Ch. Oxon., has been appointed Resident House Physician to St. Thomas's Hospital.

LAYTON, F. G., L.R.C.P., M.R.C.S., has been appointed Non-resident Physician to St. Thomas's Hospital.

NELSON, JOSEPH, M.D. Q.U.I., L.R.C.S.I., has been reappointed Ophthalmic Surgeon to the Royal Hospital, Belfast.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

ROSS, RICHARD, M.D. St. And., L.R.C.S.I., has been reappointed Physician to the Royal Hospital, Belfast.

SALT, A. D. H., L.R.C.P. Edin., has been appointed Medical Officer of the Sturry District, Blear Union.

SAUNDERS, A. L., M.R.C.S. Edin., L.R.C.P. Lond., has been appointed Medical Officer of the Workhouse and the Eastern District, Freebridge Lynn Union.

SAUNDERS, E. A., M.B., B.Ch. Oxon., has been appointed Junior House Physician to St. Thomas's Hospital.

SECCOMBE, P. J. A., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

SMITH, J. LORRAIN, M.D. Edin., has been appointed Pathologist to the Royal Hospital, Belfast.

SMITH, R. STRAFFORD, M.D. R.U.I., has been reappointed Assistant Physician to the Royal Hospital, Belfast.

STEELE, W. C., M.D., M.R.C.P., has been appointed Medical Officer to the Hexham Union, and Public Vaccinator and Medical Officer to the West Allandale Medical Society.

STONE, N. G., M.B., M.Ch. Oxon., has been appointed House Surgeon to St. Thomas's Hospital.

STYLE, F. W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of the South Brent District, Totnes Union.

THURSTON, E. O., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

WALLACE, L. A. R., M.B., B.Ch. Oxon., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON UNION.—Resident Assistant Medical Officer. Salary £100 per annum, with furnished apartments, rations, washing, &c.

CAMBERWELL INFIRMARY.—Assistant Medical Officer. Two and a half guineas weekly, with board and lodging.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence, and allowance for washing provided.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Clinical Assistant for six months.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120. Also Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

GREAT YARMOUTH HOSPITAL.—House Surgeon on Oct. 3rd next. Salary £90 per annum, with board and lodging.

HORNCASTLE RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary at the rate of £240 per annum, inclusive of all expenses.

LANCASTER INFIRMARY AND DISPENSARY.—House Surgeon (unmarried). Salary £80, with residence, board, attendance, and washing.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham-hill-road.—House Surgeon. Salary £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 33, Barton-arcade, Manchester.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon. Appointments for six months. The House Physician and House Surgeon will each receive a salary at the rate of £60 a year.

NORTHAMPTON GENERAL INFIRMARY.—Dresser for six months.

NORTH CAMBRIDGESHIRE HOSPITAL, Wisbech.—Hou October next, also to undertake the Secretary's dut per annum, with detached house, furnished, coals, provided.

ROYAL FREE HOSPITAL, Gray's-inn-road, W.C. — Medical Officer. Salary £100 per annum, with l and washing.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon for o £60, with board, lodging, and washing.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Physician.

ST. LEONARD, Shoreditch.—Resident Assistant Medical £120 per annum, rising £10 annually to £150 p rations, furnished apartments, and washing in the

THE CHILDREN'S HOSPITAL, Temple-street, Dublin.—R Salary 50 guineas, with rooms, fire, light, and atten

THE COUNCIL FOR THE BOSTON RURAL DISTRICT.—M Health for the District for five years. Salary Applications to the Clerk of the Council, 10, New-st

Births, Marriages, and D

BIRTHS.

ECCLES.—On Aug. 19th, at Netherpenns, Nafferton, wife of Charles H. Eccles, M.R.C.S., L.R.C.P., of a

LANDER.—On Aug. 21st, at Forest Side, Noel-street, wife of Francis J. Lander, M.R.C.S., L.R.C.P. Lond

MACKINNON.—On Aug. 19th, at Woodford House, Alde Surgeon-Lieutenant-Colonel H. Mackinnon, D.S. daughter.

SANDERS.—On Aug. 22nd, at Camden-road, N.W., the Sanders, Surgeon, of a son.

SQUIRE.—On Aug. 24th, at Harley-street, W., the wif Squire, M.D., of a son.

SWINHOE.—On Aug. 26th, at the Close, New Swind George Rodway Swinhoe, of a daughter.

TAYLOR.—On Aug. 23rd, at St. Helens, Ayton, Berwic of D. R. Taylor, L.R.C.P. & S. Edin., of a daughte

WILDEY.—On Aug. 26th, at the Hospital Barracks, Walmer, the wife of Surgeon A. Gascoigne Wi daughter.

MARRIAGES.

BELL—PARSON.—On Aug. 21st, at St. Luke's Churc George Warner Bell, Staff-Surgeon R.N., H.M youngest son of the late Sir Sydney Smith Bell the Cape of Good Hope, to Rosa Maton Parson, fo the late E. K. Parson, J.P., of Southsea and Emsw

CAMPBELL—GRIBBON.—On Aug. 1st, at St. Matthew water, by the Rev. T. A. Chapman, B.A., E. Ke M.B., F.R.C.S., son of Hugh Campbell, of Wimpol late of Eweland Hall, Essex, to Rose Maude, daug Brigade-Surgeon G. C. Gribbon (K.O. Scottish grand-daughter of the late Sir Hugh Allan, of Mon

ELLIOTT—COX.—On Aug. 21st, at Trinity Church, So Gilbert Elliott, M.R.C.S., L.R.C.P., son of Mr. Canfield-gardens, N.W., to Ada Barton, eld Frederick Cox, Vernon-place, Bloomsbury-square,

HELLIER—HARRISON.—On Aug. 22nd, at the We Rooden-lane, Manchester, by the Rev. Dr. Moulto John Benjamin Hellier, M.D., of Leeds, to Lily, y of the late Henry Bowers Harrison, J.P., of Preatw

HEYWARD—VANHOUSE.—On Aug. 20th, at St. Barnabas Henry Heyward, L.R.C.S.I., L.R.C.P.I., to Eliza daughter of the late J. M. Vanhouse.

HILLYAR—ELLERY.—On Aug. 21st, at Plympton St. Devon, Cecil B. Hillyar, L.R.C.S., L.R.C.P. Edin Somerset, youngest son of the late Admiral Henry of Plympton, to Florence, younger daughter of M.R.C.S., L.S.A., of Plympton.

ROBINSON—O'CONOR.—On Aug. 22nd, in Dublin, Be M.R.C.S. Eng., L.R.C.P. Lond., of Oakamoor, Nort the late Thomas Robinson, Surgeon, of Alton, daughter of the late Roderic O'Conor, J.P., Dubl county Roscommon.

SHAW-MACKENZIE—YULE.—On Aug. 24th, at St. Jame by the Rev. E. A. Midwinter, John A. Shaw-Macke M.R.C.S., of 24, Savile row, W., to Fanny, daug Robert Yule, of Gravesend.

DEATHS.

AMSDEN.—On Aug. 27th, at 103, Green-lanes, N., the son-in-law, W. C. Worley, George John Amsden, year.

GLEESON.—On Aug. 27th, at his residence, Benown. cou Edward M. Gleeson, M.R.C.S., L.S.A., in his 80th y

IN MEMORIAM.

WAKLEY.—On Aug. 30th, 1886, at Heathlands-p Chertsey, Surrey, James Goodchild Wakley, M.D. years Editor of THE LANCET, youngest son of t Wakley, M.P.

N.B.—A fee of 5s. is charged for the Insertion of Not Marriages, and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

"THERAPEUTIC" FOLK-LORE.

WE have received the following from a correspondent. Fruit, according to orthodox theology, was the source of all our woe. Now, apparently, the same food is the source of every blessing.

"*Lemon Cures.*—Cures chronic bronchitis, diseased lung, and brings back the voice after being lost, also coughs of the longest standing and nightmare. Directions:—Place a lemon whole as you have bought it on the oven top; keep now and again turning it over, in order to keep it from bursting. It becomes heated all round and turns into a strong acid by this process. Then have a cup and fork ready; touch it with the fork, and it will run whole into the cup; stab it well with the fork, drink off the hot juice neat as sharp as possible, go straight to bed, and you will be asleep directly. I was cured in two nights after being given up by the doctor, who said I should linger away the last stage of chronic bronchitis. In my case I had no pain, and was surprised about nine o'clock after breakfast to loose (*sic*) a great quantity of hard stuff in the nature and form of hard gristle, which for the moment quite stunned me, cut in the form of minute squares. I should say I lost a gill and a half. This is 12 years since.

"*Chronic Rheumatism.*—Have 4 woollen socks, a lemon, and a glass of whisky, which is all that is required. If in the higher part of the frame, the head and the shoulders, hold the lemon in the palm of your right hand, still admitting the lemon in the hand. Pull on the 4 woollen socks singly same as gloves till you get on the 4, which is eight. Take a glass of whisky, and the natural heat of the body will draw the disease into the said lemon, discolouring it; if rheumatism, green—different diseases different colours.

"*Bleeding Piles*—Which I conscientiously feel without doubt in my own mind that this form is chronic. ½ lb. best figs placed in a small dish; pour a little water over them, then stew them in the oven. Drink the water in proportion as you eat a fig before breakfast fasting. This never fails."

G. R. P.—Apply to the Secretary, St. Andrews Ambulance Association, 103, West Regent-street, Glasgow. This is only a suggestion, for perhaps the same rule holds good as with the St. John's Association.

ADVERTISING IN THE LAY PRESS.

WE notice in the columns of a lay contemporary an announcement that "Sir Dyce Duckworth, the well-known physician, has gone to America. He intends to be back in this country about Sept 16th." We are too often compelled to reprove practitioners with advertising, or to call attention to their being advertised by injudicious or stupid friends, and we cannot ignore similar occurrences in the case of leaders of the profession, although we feel sure that the objectionable notice has been inserted without Sir Dyce Duckworth's knowledge or leave. The curse of publicity which necessarily attends upon those in any prominent position makes it, perhaps, more difficult for them than for humbler members to avoid this sort of thing, but owing to their position it is of all the more importance that they should take every means to prevent such notices getting into the public press.

To the Editors of THE LANCET.

SIRS,—One has been highly impressed by your just criticisms which have appeared from time to time in the medical journal *par excellence*, THE LANCET, on the occasion of "puffs" of medical practitioners by the lay press. On turning over the leaves a few days since of "Parke's Drug Stores, Limited" (21, Princes-street, Oxford-circus, W.), which has a very extensive circulation among its customers, I was a good deal surprised to read that pages 42 to 45 were devoted to a "Directory of some London Doctors," which comprise the names of many of our leading hospital physicians and surgeons, with their respective residences, as well as specialists of all diseases, from the throat to the anus. Surely, this is a most flagrant form of advertisement, and deserves your severe censure. It is to be regretted that the leaders of our profession should set their younger members such a reprehensible example, when so much has been written condemning medical advertising. It is, however, just possible that these gentlemen may not have sanctioned their names figuring so glaringly as they do in Parke's price list.

I am, Sirs, yours faithfully,

High-street, Putney, S.W., Aug. 21st, 1895. J. FRENCH BLAKE.

"FACING BOTH WAYS."—HOMŒOPATHY, IF PREFERRED!

THE following card deserves a wider circulation than its author designed for it.

"E. W. J. Ireland, Physician and Surgeon, 142, Elizabeth-street. Hours for Consultation: From 9 to 10.30 A.M., and from 2 to 3 and 6.30 to 7.45 P.M. Telephone No. 92.

"N.B.—Dr. Ireland will treat Homœopathically any of his patients preferring to be so treated."

Mr. Ireland is, we believe, an M.B., C.M. Edin., and practises in Hobart, Tasmania. His estimate of medical duty does not seem so high as we should have expected in the graduate of an ancient and famous University. If a patient is to choose his own treatment, where is the use of the medical man's scientific knowledge? If the medical man consents to be guided by the whims of the patient, where is his conscience and his dignity? Even the public will be apt to appraise lightly the judgment and the principles of a practitioner who to please a section of his patients adopts a practice which he does not pretend to adopt for its own sake.

Dr. C. E. FitzGerald.—The work of translation would probably be arduous, but there is no doubt that the book would receive much attention. It is profusely illustrated, and therefore the best plan would be, in the first instance, to approach some leading firm of publishers respecting its reproduction in this country.

Dr. F. A. Watkins.—The Meath Home for Epileptic Women and Children, Godalming, Surrey. This useful institution is sadly hampered by want of funds, and there are very few free beds. See THE LANCET, March 9th, 1895.

Mr. A. J. Morris.—Not if properly cooked, but improper cooking might happen also when a coal fire is used.

A Guardian, late Medical Officer's, letter shall receive attention in our next regular issue.

H. M. K.—Our correspondent must consult his own medical man.

"RAILWAY TRANSPORT FOR INVALIDS."

To the Editors of THE LANCET.

SIRS,—In reply to a letter signed "Railway" which appears in the current issue of THE LANCET, I beg to state that I was the successful competitor for "the best method." On your correspondent communicating with me I shall be pleased to give some particulars of the method. Also, if I might be allowed space in your columns, I should be glad to give full details of the method, which is as simple as it is absolutely effectual. I am, Sirs, yours obediently,

HAYDN BROWN, L.R.C.P. Edin.

12, St. Charles-square, North Kensington, W., Aug. 24th, 1895.

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A STRANGE REQUEST.

THE questions addressed to us week by week are of a truly encyclopædic nature and the commissions we are asked to execute of a most varied and curious character. The following is perhaps worthy of record:—

"London LANCET.—Mr. Editor,—I ask you to place this letter in the hands of some man or company of men in your city of London who will sell me a wig for my mo ther, who is sixty-five years of age. The wig shall be full size with some gray hairs in it, so that it shall be appropriate for a person of her age. The wig shall be strictly first class and a good one. Send me prices and instruction for measurement."

The letter, which comes from America, is duly signed by "—— ——, M.D." We omit the name, as the letter is doubtless a hoax. Can it be that the writer is aware that from a hairdresser's window facing our office a gentleman whose wig is changed nearly every day has from time immemorial, as it were, fixed his glassy stare on our editorial room? If this information is of any assistance to our correspondent he is welcome to apply to the "Dummy" in question.

MESSRS. FRANCIS NEWBERY AND SONS, of 1, and 3, King Edward-street, E.C., write in reference to our articles on the British Medical Association Museum that their exhibit was made by them on behalf of Messrs. William R. Warner and Co., New York and Philadelphia.

Post Mortem.—We do not think that there is any definite rule; but probably most principals would allow the locum-tenent to take the fee.

Subscriber.—Our correspondent should communicate either with the clerk or chairman of the board of guardians.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. J. B. Pike, looks only at the subject in a selfish way. If Mr. Pike, and those like unto himself who have so long cast a hungry look at the title of "Dr." and have ever been desirous of possessing the same, would but fulfil the necessary conditions requisite for possessing the same, then the feeling of "irritation" and "chronic desquamation with a tendency to itching" complained of would have its causation removed, and the only honest and legitimate treatment prescribed. No amount of sophistry can gainsay this—namely, that to be a doctor one must be a doctor of something, be it medicine, law or theology; without such no person is entitled to the term "Dr." Mr. Pike says the matter could be settled (1) by a consensus of qualifying bodies; (2) by friendly (*sic*) legal action; (3) by obtaining highest legal opinion. I reply that it could not, but only by passing the necessary training and examinations. To me it is incomprehensible how any medical man can wish to appropriate that which he is unentitled to. In medicine the title "Dr." exclusively and incontestably belongs to graduates possessing the degree of M.D., so that it certainly is not honourable for medical men not possessing that degree to style themselves or desire to appropriate, the title "Dr." As for being called and styled "Dr." by courtesy, the idea is absurd and ludicrous in the extreme. Fancy for courtesy's sake expecting and desiring what does not belong to one, thereby rendering the person artificial and more like a fool than an educated man. Again let me recommend those gentlemen who desire the title of "Dr." to take the M.D. or go without it.

I am, Sirs, yours truly,

Aug. 28th, 1895. M.B., C.M.

*** We have received several other communications upon this subject, for which we cannot find room. One correspondent, who has failed to understand us (which has not stood in the way of a desire to criticise our recent leading article very severely) asks: "..... What is there more calculated to mislead and puzzle the general public than trying to explain to them what they never knew, and never will know, and never care to know .....?" We ask with him, What? Our article, however, was not addressed to the public, but, as is our invariable custom, to the profession, and all the letters to which we were to a certain extent replying, save one, were from medical men. This correspondence must now cease.—ED. L.

Consanguis.—THE LANCET, vol. ii. 1883, p. 88; THE LANCET, vol. ii. 1885, p. 680; Brit. Med. Jour., vol. i. 1887, p. 1145; "The Marriage of Near Kin," by A. H. Huth (Longmans, 1887).

W. E.—We never prescribe; our correspondent must consult his own medical man.

Mr. T. Caton, jun.—We know nothing whatever of the matter in question.

M.B., C.M.—Our correspondent has forgotten to enclose his name and address.

COMMUNICATIONS not noticed in our present number will receive attention in our next regular issue.

MIDWIFERY DIPLOMAS.

Truly Qualified.—The right of any registered practitioner to practise midwifery has never, as far as we know, been questioned. The essence of the Act of 1886 was in enacting that henceforth no person should be registered who was not qualified in the three branches of medicine, surgery, and midwifery—midwifery for the first time being placed, as a condition of registration, on a level with medicine and surgery. Even a midwife can recover her fee in a court. 2. The regulation in regard to a pupilage for six months in the fifth year is permissory only, not binding.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 29th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 23	29·87	S.W.	66	63	125	77	61	0·37	Cloudy
" 24	29·95	W.	62	58	114	72	57	...	Cloudy
" 25	30·39	W.	62	55	112	70	50	...	Cloudy
" 26	30·08	S.W.	60	59	89	68	57	0·15	Raining
" 27	29·81	S.W.	62	60	110	73	59	0·03	Cloudy
" 28	30·14	S.W.	62	58	114	75	56	...	Bright
" 29	30·20	WNW	63	60	122	75	60	...	Bright

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Sheffield Independent, Bristol Times and Mirror, St. Helens Newspaper, Ayrshire Post, Morning Leader, Star, Newcastle Journal, Sheffield Telegraph, Northern Echo, Kent Mercury, Macclesfield Courier, Scotsman, Glasgow Herald, Rochdale Observer, Sanitary Record, Yorkshire Post, Local Government Journal, Local Government Chronicle, Auckland Weekly News, Elgin Courant, Bury Times, Adelaide Observer, Newcastle Chronicle, Hornsey Journal, Eastern Morning News, Wolverhampton Chronicle, Standard, Court Journal, Lincolnshire Chronicle, Daily News, Market Harborough Advertiser, Willshire Mirror, East London Observer, Southampton Times, Builder, Evesham Journal, Worcester Herald, Worcester Daily Times, Brighton Gazette, City Press, Hertfordshire Mercury, West Middlesex Standard, Mining Journal, Weekly Free Press and Aberdeen Herald, Levant Herald, West Middlesex Advertiser, Westminster Gazette, Grimsby News, Saturday Falkirk Herald, Bacup Times, Southport Visitor, Pullen's Kent Argus, Grantham Times, Banffshire Journal, Leicester Post, Agricultural Gazette, Times of India, Citizen, Grantham Journal, Pioneer Mail, &c., &c.*

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Communications, Letters &c. have been received from—

A.—Mr. J. Alsop, Newton Abbott; Aston Union, Clerk of.

B.—Dr. J. Barr, Liverpool; Dr. J. B. Bradbury, Cambridge; Dr. J. J. Bailey, Lond.; Dr. A. J. Bentley, Lond.; Mr. F. St. J. Bullen, Bristol; Mr. R. Bowes, Darlington; Mr. Jno. F. Bill, Lond.; Mr. L. A. Bidwell, Lond.; Mr. W. Bernard, Chamounix; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs Black and Co., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; *Birmingham Daily Post*, Proprietor of.

C.—Dr. W. H. Climo, Army Medical Staff; Dr. E. K. Campbell, Lond.; Mr. T. Caton, jun., Blundellsands; Messrs. T. Christy and Co., Lond.; Clerical and Medical Bank, Bristol, Secretary of; Cortland Wagon Co., Lond.; *Clinical Sketches*, Lond., Manager of; Capsicum, Lond.

D.—Mr. L. S. Dudgeon, Wishaw, N.B.; Mr. M. J. Doidge, Haverhill; Madam E. De Fontanier, Lond.; Derbyshire Royal Infirmary, Derby, Secretary of.

E.—Mr. A. R. Edwards, Brampton Brian; Edinburgh School of Medicine, Secretary of; E. M. V., Portsmouth.

F.—Dr. C. E. Fitzgerald, Folkestone; Messrs. Fannin and Co., Dublin.

G.—Mr. A. B. Griffiths, Brixton; Mr. A. G. Gravatt, Lond.; Messrs. E. Gallais and Co., Lond.; Great Yarmouth Hospital, Secretary of.

H.—Dr. F. W. B. Hutchison, Glam.; Dr. H. Hollis, Northampton; Mr. J. Heywood, Manchester; Mr. E. Huxley, Lond.; Mr. F. A. Z. Hammond, Cornwall; Messrs. Henderson and Son, St. Andrew's; Messrs. Hertz and Collingwood, Lond.; Messrs. W. Hay, Ltd., Hull; Home for Epileptics, Maghull, Secretary of; Horace, York.

J.—*Journal of Commerce*, Liverpool.

K.—Dr. P. J. A. Kelly, Yorkshire; Mr. H. M. Kennedy, Cumberland; Messrs. H. S. King and Co., Lond.; Messrs. Kerin and Lynam, Staines.

L.—Dr. J. F. Little, Lond.; Mr. G. E. Lewis, Lond.; Messrs. E. and S. Livingstone, Edinburgh; Liquor Carnis Co., Bucks; Locum, Old Hill.

M.—Dr. H. W. G. Mackenzie, Lond.; Dr. J. D. Mann, Manchester; Mr. H. C. MacBryan, Box; Mr. W. J. Marsh, Bradford; Messrs. Macmillan and Co., Lond.

N.—National Dental Hospital and College, Lond., Dean of; North Cambs. Hospital, Wisbech, Hon. Secretary of; Nucleus, Lond.

O.—Dr. E. B. Owen, Lond.; Mr. J. Odling, Lond.; Messrs. Oliver and Boyd, Edinburgh.

P.—Dr. F. Page, Newcastle-on-Tyne; Dr. A. Percival, Newcastle; Mr. G. R. Penrose, Westmoreland; Mr. R. W. Pollard, Lond; Mr. E. J. Pryse, Keighley; Messrs. Pocock Bros., Lond.

R.—Dr. A. Robinson, Lond.; Mr. W. Reeve, Glasgow; Mr. J. Roberts, Lond.; Messrs. Robinson and Sons, Annan; Messrs. Ridges and Sons, Wolverhampton; Royal United Hospital, Bath, Superintendent of; Royal Portsmouth Hospital;

S.—Dr. R. Steele, Herts; Dr. R. C. Shettle, Reading; Dr. J. Stewart, Batley; Dr. G. Sturrock, Aberdeen; Mr. C. S. Stevens, Lond.; Mr. D. Stead, Shrewsbury; Mr. R. Steiner, Munich; Mr. J. J. Shaw, Scarborough; Mr. E. H. Schofield, Wisbech; Mr. D. Somerville, Colinton, N.B.; Messrs. G. and G. Stern, Lond.; Messrs. Shield and Kyd, Dundee; Messrs. J. P. Segg and Co., Lond.; Messrs. Swan, Sonnenschein, and Co., Lond.; Messrs. G. Street and Co., Lond.; Sanitas Co., Lond., Manager of.

T.—Mr. T. J. Talbot, Leeds; Mr. T. C. Town, Halifax.

U.—Urgent, Lond.

W.—Dr. William Williams, Cardiff; Mr. J. J. Weaver, Southport; Mr. C. H. Woolf, Lond.; Mr. A. Wilson, Lond.; Miss Webb, Eastbourne; Miss C. Willcock, Bideford; Messrs. W. Wood and Co., New York.

X.—X., Lond.

Z.—Z., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. A. E. Ash, Kempsey; Mrs. C. R. B. Alexander, Edinburgh; Austral, Lond.; Alpha, Lond.; Assistant, Lond.; A. P. K., Birmingham.

B.—Mr. W. Bowes, Hythe; Mr. W. H. Boger, Towey; Mr. T. W. Backhouse, Sunderland; Mr. T. B. Browne, Lond.; Mr. H. K. Bean, Wallsend, N.S.W.; Mr. A. Bensusan, Ostend; Messrs. J. Blinko and Son, Ramsgate; Banks, Lond.; Barth'sche Buchhandlung, Aachen.

C.—Mr. H. K. Costello, Ferbane, Ireland; Mr. T. Champness, Rochdale; Mr. Crickett, Talgarth; Miss F. Cox, Buxton; Messrs. A. Cohen and Co., Lond.; Capital, Lond.; Dr. C., Bromley; Cumberland, Liverpool; Carnivor, Lond.

D.—Mr. W. T. Davies, Nantgavedig; Mr. H. A. Drew, Didcot; Dublin Children's Hospital, Secretary of; Drugs, Lond.

E.—Mr. C. H. Eccles, Nafferton; E. T. M., Lond.

F.—Sir J. Fayrer, Lond.; Dr. J. Findlay, Penpont; F., Petersfield; F. G., Lond.; F. C., Pontnewydd.

G.—Dr. A. V. Geoghegan, Paris; Dr. J. F. Gillett, Andover; Mr. T. H. Gillam, Bromyard; Mr. A. B. Griffiths, Lond.; Globe Advertising Co., Lond.

H.—Dr. J. B. Hellier, Leeds; Dr. W. S. Hedley, Brighton; Mr. A. Hillaby, Pontefract; Mr. W. A. Hardiker, Brymbo; Mr. J. Heywood, Manchester; Hydrogen, Lond.; Horace, York.

J.—Dr. R. W. Jones, Penrhiwceibr; Dr. S. Johnson, Stoke-on-Trent; Jullus, Lond.; J. D. G., Lond.; J. H., Lond.

L.—Mr. Laker, Dover; Mr. F. B. Leeder, Leamington; Mr. F. J. Lauder, Nottingham; Mr. H. C. Lawrence, Aysgarth; Messrs. Leader and Sons, Sheffield; Lancaster Infirmary, Secretary of; Lancashire, Lond.; Leucocyte, Lond.; L. G., Lond.

M.—Dr. A. B. McKee, Burnley; Dr. A. Mackay, Crook; Mr. S. B. Mason, Pontypool; Miss Mainwaring, Hastings; Midlands, Leeds; Medicus, Bayswater; Medicus, Lond.

O.—Opisthotonos, Lond.

P.—Dr. C. Pollard, Worcester; Mr. E. W. Paul, Cowes; Principal, West Worthing; Physician, Lond.; Perry, St. Leonard's-on-Sea.

R.—Mr. Ruppli, Lond.; Mr. H. A. Roecbling, Leicester; Rev. C. E. Roberts, Bedford; Mr. B. Robinson, Oakamoor; Rusticus, Lond.

S.—Dr. J. B. Stewart, Dennistown; Dr. W. B. Stokes, Ton Pentre; Mr. H. M. Speechly, Parkgate; Mr. P. C. Smith, Hayes, Middlesex; Messrs. Stralendorff and Renshaw, Manchester; S. T. Tyre Co., Lond., Secretary of; Sharon Chemica Co., Little Chester; Scolpolax Lond.; Seti, Lond.; Spes, Lond.

T.—Mr. G. F. Thomas, Newhaven; Mr. D. R. Taylor, Ayton; Mr. J. W. Turnpenny, Lond.; Mr. Thin, Edinburgh; Mr. D. R. Tata, Dadar, Bombay; Tempus, Lond.

U.—University of Durham College of Medicine, Newcastle-on-Tyne, Secretary of.

V.—Violet, Lond.

W.—Dr. T. N. Wilson, Ibstock; Mr F. A. Wagstaff, Saffron Walden Mr. T. H. Wroger, Radstock Mr. T. F. Wyse, Ologyne, co. Cork Miss Webb, Beccles; Messr Wilcox and Co., Lond.; Messr G. Waterston and Sons, Edi burgh; Messrs. Wing a Broughton, Lond.

X.—X. Y., Lond.

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Books and Publications	Seven Lines and under	£ s. d.
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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 7, 1895.

AN ADDRESS TO MEDICAL STUDENTS.

THE period of year has once more come round at which it is our custom to address some words of advice to those who are about to commence their medical education by entering as students at some one of the regular medical schools. We propose, in the first place, to say a few words as to certain considerations that we think should be borne in mind before any final decision to adopt a medical career is reached. With many the question for preliminary determination will be as to how the profession of medicine stands regarded merely as a career, as a means of earning a living by work, by the employment of whatever powers each one may happen to possess. Considering the matter from this point of view only, it appears to us that our profession, as far as the great body of its members is concerned, has advantages to offer by no means inferior to those held out by any of the other learned professions, or, indeed, to those of any calling likely to attract a man of liberal education. It has at times been somewhat the fashion to make light of these advantages; but to do so appears to us to be a mistake. While we should be the last to say that anyone does wisely in choosing to enter the medical profession if his chief or only desire is to make money for the sake of making it—undertaken in a purely sordid spirit medical work leads to nothing but disappointment—yet, on the other hand, ours is a profession in which work well done, done with the determination to do it as well as lies in the power of the worker, seldom or never fails to bring with it that reasonable degree of affluence that will content a man who desires what is sufficient, but who has no overweening passion for what is superfluous. It is, no doubt, quite true that some large fortunes, comparatively speaking, have been made by members of our profession. Exceptional ability, joined to exceptional opportunity, with exceptional powers of mental and physical endurance, may naturally be expected to produce results, both pecuniary and otherwise, of an exceptional kind. There is always plenty of room in the front rank of every profession. These, however, are only the exceptions which prove the rule. The rule is that, provided he is not too heavily handicapped by disadvantages of circumstance or disposition, it is generally a man's own fault if he fails to make a living as a medical practitioner. So much for an aspect of the matter the importance of which it would be only affectation to ignore. We pass on to the consideration of some of the elements of character more especially needful in the profession of medicine. The most necessary of all is the possession of that quality—using the expression in its broadest sense—known as presence of mind. It must be remembered, when all has been said, that ours is essentially a practical profession. It is, no doubt, highly desirable to start with as large a stock of knowledge as possible. It is essential to have learnt the chief facts structure of the body in health and to hav various changes, both macroscopic and mic that structure undergoes under the influence have studied the functions performed by the d in a state of health and the alteration in t occurring under various morbid conditions; learnt the therapeutic measures recommended rities as applicable according to the particular of each case. All this is very good as far as essential, however, not only to possess the kno have the power of applying it when it is wan practice is largely a labour of emergency. Th never knows at what hour of the day or nig called upon, or what he may be required he is a learned man merely, and nothing el possible that he may be able to write an admi of the etiology, pathology, symptoms, diagnos and treatment of, for instance, scarlet fever, t fail to recognise a case of it when it comes b may know his text-book of surgery, perhaps, a and yet be unable to put up any common frac he may be able to enumerate the characteris all the rare forms of contracted pelvis, and y be the cause of rupture of the uterus from to distinguish between a shoulder and a sentation. In short, as has been well presence of mind he is in the position of with a gold nugget or a £100 note in is unable to get change. There is a young surgeon who went out with two d was shot in the thigh. Some time afte assistance arrived, the surgeon was found knee of blood beside the wounded man, by that ti and making pressure with his thumbs two inc wound. The story affords a good illustration sity of presence of mind. No doubt the have known the position of the main bloodves the lower limb, he may very probably have d fully, and may even have gained the gold anatomy class; but either from a constitutiona or from his mental balance being upset by th on his faculties, he was unable to use his as to save his patient—he lacked presence student would do well to consider carefully respect of this literally vital quality before dec the medical profession. Again, patience and readily sympathising with the troubles of other almost indispensable to the medical man. A doubt, acquire the appearance of the former, originally possess it, by a habit of *self-co* counterfeit sympathy is rarely a satisfactory Yet even from a purely professional point o pathetic attitude is not unimportant. Much th tioner ought to know in the interest of the p withheld if the former's attitude is too cold an regards his patient too much in the light of a case. Many otherwise eminent men have not reproach in this respect. They have, however spite of, rather than because of, their deficien some other facts incidental to the life of a me

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should be clearly understood in the beginning, if disappointment afterwards is to be avoided. A man who looks forward to a great deal of leisure in his life had better turn his attention elsewhere; if he desires to have two or three months' holiday in the course of the year, his destiny is evidently to become a barrister or a schoolmaster, for there is extremely little chance of his getting anything of the sort in the medical profession. The practitioner never knows when his day's work is done. If he is fairly successful he may very probably have to work twelve hours a day and very possibly have to sit up for part, or for the whole, of the succeeding night, and yet do his work as usual on the following day. There is no trades-union limitation of the medical day. This suggests another aspect of the matter. It is obvious that a man cannot long stand the fatigue of busy practice unless he is the fortunate possessor of a sound constitution and good general health. If he has these at starting, it will need some care to retain them. Overwork, mental and physical, is a bad thing, but it may be adequately combated if the fact that it is overwork be recognised in time, and assistance be obtained so as to reduce it to what is felt by the individual to be reasonably within his strength. Overwork persisted in has in every vocation too often led insidiously to the excessive use of stimulants to enable the jaded mind and body to hold on a little longer. Once a man, whether in our profession or in any other, has constant recourse to stimulants whenever he is overworked, his fate is rarely doubtful. Those who have succeeded best in practice have generally had the faculty of putting the patient at his ease. If they have been in a hurry they have nevertheless had the tact to conceal it, and have avoided all appearance of cutting short what the patient has to say. To be a good listener is a valuable characteristic, perhaps more so even than the faculty of talking well. It is not necessarily a mere passive endurance, for the patient may be unconsciously directed in his conversation, so that he tells of what really has a bearing on his case. There is another matter which it may not be inappropriate to touch upon. It has been for generations the tradition and glory of the profession of medicine that its members have always been ready to give their services without fee or reward of any kind to those whose circumstances required it. It will rest with those who are now about to enter the profession to carry on this honourable tradition, though the doing of it will not rarely add very materially to their labour, and involve an additional strain on faculties that are already fully employed.

We have mentioned very briefly some of the advantages and some of the disadvantages belonging to the profession of medicine, as well as some of the qualities without which the pursuit of that profession can scarcely be otherwise than labour and sorrow. It rests with each one to decide for himself whether the advantages outweigh the disadvantages, and whether he feels within himself that natural aptitude which may fairly be regarded as constituting a vocation to the profession. To those who have carefully weighed the matter, and feel attracted towards the profession by an irresistible fascination, we offer our warmest sympathy and congratulations. To our thinking there is no finer field for the exercise of the best powers implanted in man, both intellectual and moral, than is to be found in the practice of medicine. The material for investigation is practically inexhaustible, problems innumerable of infinite variety and all degrees of complexity await solution; and those who are now starting at the beginning as students in the narrower sense of the word will, if they are wise, find that their curriculum is not limited to a period of five years, but that the spirit of investigation accompanies them across the magic boundary that they will cross on becoming qualified members of our profession, and will, indeed, be their companion throughout life itself. Students we have all been at the beginning, and if we would act fairly by ourselves, as well as by our patients, students we should remain to the end.

Having determined to enter the medical profession, and passed some one of the necessary preliminary examinations in general education, the student will have to choose his medical school, if, indeed, circumstances have not already decided this point for him. Where the choice is an open one, and, as in London, there are a large number of schools from which to choose, the selection may not be an easy matter.

To a man of only moderate ability some one of the smaller schools presents the doubtful attraction that his mediocrity may have the chance of passing for something more than its intrinsic value; whereas in the larger and more popular schools it may easily obtain for him a relatively lower and more insignificant place than his actual merits may deserve. As regards these alternatives the latter is probably to most a more salutary experience than the possibly fictitious prominence that may be incidental to the former. In this instance it is better probably to be a minnow among Tritons than vice versâ. What we have said applies more particularly, however, to the school work as distinguished from the clinical work done at the hospital. It is difficult or impossible to say till a student actually begins his work in the hospital what his clinical ability may prove to be. It is no uncommon thing for a student, who has made little or no mark in his earlier work, to develop an entirely unexpected aptitude when the scene is shifted to the wards of the hospital. Other things being equal, however, the man of average ability has a better chance of obtaining resident appointments in the hospital at some of the smaller schools than where, owing to the large number of students, these valuable posts can only be looked for by the brilliant few. Yet every student should do his utmost to hold some one at least of the resident appointments in the hospital connected with his medical school. If he cannot do this, the next best thing is to become house surgeon or resident medical officer at some hospital not attached to a school before actually settling in practice. It should be remembered that a large school means a school at which there are a large number of students, and does not necessarily mean that the hospital connected with the school is a large one. Sometimes both actually and relatively to the number of students the contrary is the case, and a large school has only a small hospital available for its clinical teaching. In such cases the authorities generally insist that, although their hospital may be a small one, they make up for it by a zealous determination to make the very most of their limited material; while the authorities at those schools to which very large hospitals

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medicine. The material for investigation is practically inexhaustible, problems innumerable of infinite variety and all degrees of complexity await solution. Even those who are now starting at the beginning of the curriculum in the narrower sense of the word will, if they are wise, find that their curriculum is not limited to a period of years, but that the spirit of investigation and inquiry carries them across the magic boundary that they will have passed, becoming qualified members of our profession and friends indeed, be their companion throughout life itself, as it is if we have all been at the beginning, and if we would succeed fairly by ourselves, as well as by our patients, we should remain to the end.

Having determined to enter the medical profession and passed some one of the necessary preliminary examinations in general education, the student will have to choose a medical school, if, indeed, circumstances have not already decided this point for him. Where the choice is open to one, and, as in London, there are a large number of schools from which to choose, the selection is not an easy matter.

To a man of only moderate ability [illegible] smaller schools presents the doubtful attraction that mediocrity may have the chance of passing for more than its intrinsic value; whereas in the larger and more popular schools it may easily obtain a relatively lower and more insignificant place than its actual merits may deserve. As regards the latter, the latter is probably to most a more salutary than the possibly fictitious prominence incidental to the former. In this instance probably to be a minnow among Tritons than What we have said applies more particularly the school work as distinguished from done at the hospital. It is difficult till a student actually begins his work in his clinical ability may prove to be. thing for a student, who has made little earlier work, to develop an entirely when the scene is shifted to the wards Other things being equal, however, has a better chance of obtaining the hospital at some of the smaller owing to the large number of students, can only be looked for by the brilliant student should do his utmost to hold the resident appointments in the hospital his medical school. If he cannot do thing is to become house surgeon or at some hospital not attached to a settling in practice. It should be remembered school means a school at which there students, and does not necessarily connected with the school is a large one. actually and relatively to the number trary is the case, and a large school pital available for its clinical teaching. authorities generally insist that, although be a small one, they make up for it by tion to make the very most of their limited the authorities at those schools to which

are attached naturally make the most of this circumstance, and point to it as ensuring the greatest amount of clinical experience obtainable in a limited time.

We would urge on students the importance of regular attendance on their various courses of lectures, both systematic and clinical, and at the proper period arranged for such attendance in the curriculum. It is often said, and with some degree of plausibility, that attendance on lectures is of little use, because everything to be heard there can be got out of books. That is true, no doubt, if the student can suppose himself in the position of a master of the particular subject in question, familiar with the whole, or the principal part at all events, of the literature of the subject, and therefore knowing exactly what books to go to for his information, and what to extract from them when he has got them. The lecturer is familiar with the whole of his subject, and if the student attends his lectures regularly and intelligently he has the advantage of having the facts presented to him in their proper relation and in their true perspective. If the student neglects his lectures, and attempts to get up his work from books alone, he is sure to misunderstand much of what he reads, and to waste time in puzzling over some probably unimportant detail when he should be studying some great principle, leaving the points of detail to be dealt with afterwards. He has often no sort of perception of the relative importance of the various things of which he reads. Some lecturers, of course, have the happy faculty of making their lectures interesting in a greater degree than others, but, even if the student feels inclined to be critical in this matter, he will do well not to miss lectures. The effect of doing so is to some extent demoralising, and is too often the forerunner of idle habits, the consequences of which will become fatally manifest when examination time comes round. The question of note-taking at lectures is one of some difficulty. Generally we think it is a mistake to try to take down practically everything the lecturer says. It is not easy to do so, the attempt to do it is often unsuccessful, and after a time not infrequently the whole thing is given up in disgust. However, we think that it is a good thing to take some notes; but they should be short, and as far as possible illustrated by such diagrams made by the lecturer as are not to be found in the text-book the student reads. Of course, in the case of practical work it may be necessary to take down exactly the details of how this or that is to be done. Such notes, however, need not generally be very long. Teachers and lecturers always afford their pupils the opportunity of asking questions, a privilege they should freely avail themselves of as occasion arises. There is, however, a type of student familiar to many of us—the student who asks questions, not, it is to be feared, really to obtain information, but rather, and generally after reading up some portion of a subject, with the apparent object of either puzzling the lecturer, or showing off how much he himself knows. That sort of questioning is closely related to "heckling," and as it can serve no useful purpose the very appearance of it should be scrupulously avoided. It is well for the student to endeavour to verify as much of his teaching as he can—to hear, feel, and see for himself the things of which he reads. Things so learnt are fixed in the memory more permanently than is possible otherwise. We may, in concl on students the desirability of maintaining a go bodily health. Speaking generally this is not matter. Early to bed and early to rise is prove for most of us. It is especially desirable to a sively long hours of reading, and to make a poin sufficient physical exercise. The authorities a our schools have made it their business to provi for football, cricket, and athletic sports. strongly impress on even the "hardest readers" bility of cultivating their physical powers, which c quite well without in any way neglecting mo work. Industry, perseverance, and moderati things will rarely fail to bring their rewar season—that is to say, in the present instance, tion to practise at the end of the five years' curric

THE STUDENT'S LIBRARY AND ITS U

ALL who follow the medical profession must for ever—students as much in the fifth yea curriculum as in the first; students as much at their life's work as when confronted with th patients. From every case for the real physici genuine surgeon a lesson has to be drawn: per point arises, perhaps only a point confirmatory of been previously familiar; but in either instance worth knowing has to be learned. And this the great difference between book-learning and th that is the outcome of practical observation. T extent the need for book-learning may be fini a great extent this need is modified by the ic of the individual. But no man from the mo he places his foot on the lowest rung of the medicine can dispense with observation, or the observation. This need is never finite. A cer ness in the detection of and a certain facili reading of the meaning of symptoms and sig influence of family history and environment ar some in an extraordinary degree; but most certa any man, being gifted in this fortunate manner, think lightly of, perhaps to forego, some of the observation, in the end he will be the worse talents. He will make errors, and will speedily self, and others will as speedily know him, to be a and unreliable, albeit occasionally brilliant, adv book-learning there is a substitute—practical practical work there is no substitute.

And this difference between book-learning learning that is the outcome of practical work and of all opportunities for observation precisely define method of using books. They are to be employe ever way will best assist in practical work. They to this end only. But all cannot employ books i way. Their use must vary immensely with the k student's mind and the habits of work which he readily conduce to the sure and speedy acquisitio ledge. So that in the selection of a text-book, matter of great importance to the student, nc large number and variety of works render the cho ingly difficult, but infallible advice cannot be give

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counsel to one man will be less valuable to another. In the appended lists of the standard text-books we have endeavoured by brief general remarks to divide the books more or less into three classes—two comprising books specially designed to assist the student in his examinations, being elementary or comprehensive works required respectively for pass or honour examinations; while the third class includes books of reference not designed to be exhaustively read by anybody, but rather to be consulted as a second or elucidatory opinion, where anything in the text-books proper seems obscure or incomplete. But the use that the student will be able to make of these three classes of books will vary entirely with his order of mind. To one man the small elementary book may be well-nigh sufficient reading. He will be able to use it as the skeleton of his knowledge, and will endow it with tissues and life from his personal observation, by practical courses in his school, by clinical work in the wards, and by thoughtful attendance at lectures. This is the student into whose work books do not largely enter. But inasmuch as it is easy to examine fairly and thoroughly upon book-work, while it is difficult to lay down proper standards and discover adequate tests for the appraisement of practical work, the result of examinations must more or less depend upon the ability of the student to answer somewhat in text-book language questions framed somewhat upon text-book lines. Therefore it will be well for the student whose practical order of mind enables him, as it were, to write his own text-book by grafting his practical work on to an elementary manual, to revise his knowledge before entering for an examination by the light of a first-class text-book. This is the best and most feasible way of combining books and practical and clinical work for the formation of a medical education. But it is not in the power of every student to obtain an education in this manner. Practical work is easier to some men than to others, and lectures mean more to some men than to others. The receptive man will benefit by teaching which only arouses opposition in the critical man. The reading of a large text-book by the critically-minded man—the man whose first impulse on hearing a fact is to doubt it or the deductions from it—may very often be the best way in which such a man can gain a knowledge of his subject. He gets an all-round look at it, and though he may not entirely understand everything that he reads, he will obtain a general familiarity with this topic, and see the fallacy of the objections which rise in his mind. The bald statements for which alone the small manual can find room would arouse in him nothing but opposition, and he will be well advised to go straight to the big book where the explanations are included with the facts. But he *must* supplement his wider range of reading with as honest and as earnest a course of practical work as his less literary fellow-students. When confronted with his examination he will find, as hundreds of the most promising students of medicine have found to their considerable discomfiture, that practical work is absolutely necessary, that without it book-work is as nothing, that even to pass in the written part of the examination (for which he feels so amply equipped) will be almost impossible unless his knowledge is fortified and made alive by some measure of practical experience, and, lastly, that no amount of book-work will ever enable him to answer questions by word of mouth.

The short notes upon well-known text-books which follow will enable the student to ascertain the scope of each work, and, with the assistance of advice from his lecturer, he will be able to decide which book is most likely to suit him—that is, which book will best enable him to obtain full benefit from his practical work. He will not be able, perhaps, to decide this point at once; if he is just beginning his career he cannot know for certain in which direction difficulties will assail him. But those are the points we desire to make for his information and encouragement: firstly, all good sound text-books have their place, for knowledge presented in one form to one man is more easily digested if presented in another form to another man; secondly, he must not be disheartened if books, or a particular book, seem to mean more to a fellow-student than they do to him. It is natural that this should be so. If one student finds it difficult to follow the arguments of the larger treatises it is more than possible that to him all sorts of practical work will come as an illuminant. If another man finds that practical work wearies him and puzzles him, although he is earnestly, honestly, and conscientiously desirous of going through his proper course and learning all that it should teach him, it is quite possible that what he requires is a general grasp of his subject, a sort of broad outline of it which would give a meaning to the details that he finds it so wearisome to acquire. It is unnecessary to say that our list of books might be considerably extended. It would be so if we had designed to make it exhaustive. But we do not suggest that the books which we mention are the only ones the students can read with advantage. His regular course of reading will be dictated properly by advice from the lecturers at his school, and, in a measure, by the prevalent fashion at that school. We have only intended to place before him succinct information that shall guide him in his choice, while pointing out to him that all educational books are but a means to an end, and that end is practical knowledge.

ANATOMY.

The standard text-books on Systematic Anatomy are Quain's and Gray's. Both of these have been recently brought up to date. Quain's is the more scientific work and is, indeed, the most advanced and comprehensive treatise on the subject in the English language, if not in all languages. Its morphological, histological, and visceral anatomy is unequalled. The volume on Embryology by Professor E. A. Schäfer is the clearest and best history of development with which we are acquainted. The work is now published in separate parts.

Quain's (Jones) Elements of Anatomy. Longmans and Co. The tenth edition. Edited by EDWARD ALBERT SCHÄFER, F.R.S., Professor of Physiology and Histology in University College, London; and GEORGE DANCER THANE, Professor of Anatomy in University College, London. In three volumes. Vol. I., Part I. Embryology. By Professor Schäfer. Illustrated by 200 Engravings, many of which are coloured. 9*s.* Vol. I., Part II. General Anatomy or Histology. By Professor Schäfer. Illustrated by nearly 500 Engravings, many of which are coloured. 12*s.* 6*d.* Vol. II., Part I. Osteology. By Professor Thane. Illustrated by 168 Engravings. 9*s.* Vol. II., Part II. Arthrology, Myology, Angiology. By Professor Thane. Illustrated by 255 Engravings

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many of which are coloured. 16*s*. Vol. III., Part I. Spinal Cord and Brain. By Professor Schäfer. Illustrated by 139 Engravings. 12*s*. 6*d*. Vol. III., Part II. The Nerves. By Professor Thane. Illustrated with 102 engravings, many of which are coloured. 9*s*. Vol. III., Part III. Organs of the Senses. By Professor Schäfer. Illustrated by 178 Engravings. 9*s*. The remainder of the third volume, dealing with Visceral Anatomy, is in preparation.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S., late Lecturer on Anatomy at St. George's Hospital. The thirteenth edition. Re-edited by T. PICKERING PICK, Surgeon to St. George's Hospital, Member of the Court of Examiners, Royal College of Surgeons of England. Thirteenth edition. 36*s*. London: Longmans and Co. With 636 large Woodcut Illustrations, a large proportion of which are coloured, the arteries being coloured red, the veins blue, and the nerves yellow. The attachments of the muscles to the bones in the section on Osteology are also shown in coloured outline. Royal 8vo. 36*s*.—*Gray's Anatomy* occupies a place only second to Quain's. In popularity it is doubtful if it does not actually precede its larger rival, and for mere everyday work it has points of superiority.

Human Anatomy: a Treatise by various Authors. Edited by HENRY MORRIS, M.A., M.B. Lond., F.R.C.S., Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital. Royal 8vo, with 791 Illustrations, nearly all original, and many of them in several colours, 40*s*.—This is an excellent work. We may mention especially the description of the peritoneum, in which the arrangement of that complicated structure is set out with admirable clearness. (In one volume or in three parts.) 1893. London: J. & A. Churchill.

The Anatomy of the Joints of Man. By HENRY MORRIS, F.R.C.S. 1879. J. & A. Churchill.—This is perhaps the most complete book on the subject yet published. The work is fully illustrated, and many of the illustrations are in colour. Besides the bones, ligaments, and synovial membranes, the various features connected with the arterial and nervous supply of the joints, bursæ, and the muscles which act upon the joints are very thoroughly dealt with.

A Text-book of Human Anatomy: Systematic and Topographical. By ALEXANDER MACALISTER, M.A., M.D., F.R.S., F.S.A., Professor of Anatomy in the University of Cambridge, and Fellow of St. John's College, Examiner in Human Anatomy, University of London. Includes the Embryology, Histology, and Morphology of Man, with special reference to the requirements of Practical Surgery and Medicine. One vol. 1893. 816 Illustrations. 36*s*. London: Charles Griffin and Co.—It is in many respects the most important work on the subject that has appeared in recent years, being thoroughly comprehensive, lucid, and up to date.

Wilson's Anatomist's Vade-Mecum. Eleventh edition. By HENRY E. CLARK, M.R.C.S. Eng., F.F.P.S. Glasg., Examiner in Anatomy, F.P.S., and Professor of Surgery in St. Mungo's College, Glasgow. Crown 8vo, with 492 Engravings and 26 Coloured Plates. 18*s*. 1892. London: J. & A. Churchill.

In Practical Anatomy the student has the choice of text-books by Ellis, Heath, Cleland, and Cunningham. The favourite dissecting-room manuals are probably those of Ellis and Cunningham.

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Demonstrations of Anatomy. By GEORGE VIN F.R.C.S., late Professor of Anatomy in Universit London Eleventh edition. 1890. pp. 782. London: Smith, Elder, and Co.

Heath's Practical Anatomy. Edited by W. A F.R.C.S. With 329 Engravings. 1893. pp. London: J. and A. Churchill.

Dissections Illustrated. By C. GORDON BRODIE A graphic handbook for students of anatomy; 7 Plates and 37 Diagrams. London and New York: and Co.—This is an admirable book and shou place in every student's library.

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The Dissector's Guide. By Professor D. J. CUN M.D., LL.D., D.C.L. Edin., D.Sc. Dublin, F.R.S. Parts. Edinburgh: O. J. Thin.

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Landmarks, Medical and Surgical. By LUTHER F.R.C.S. Fourth edition. 1888. 3*s*. 6*d*. Londo Churchill.

Surgical Applied Anatomy. By F. TREVES, pp. 574. London: Cassell and Co. 1894.

Human Osteology. By LUTHER HOLDEN, Edited by Professor Stewart. Seventh edition. Plates. 16*s*. London; J. & A. Churchill. 1887.

Tablets of Anatomy. By THOMAS COOKE, F These tablets are designed to fix the student's know to help him to retain what he has acquired in either from the part or from the text-books. For rapid revision of work they are excellent. London: Longmans, Green, and Co.

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PHYSIOLOGY.

Text-book of Physiology. By Professor MICHAEL FOSTER, M.D., F.R.S. Four parts. pp. 1550. With an Appendix, *The Chemical Basis of the Animal Body*, constituting a separate volume of 270 pages, by A. SHERIDAN LEA, D.Sc., F.R.S. The best English text-book of the subject; suitable for students preparing for higher examinations. Deals with histology as well as with physiology proper. The parts can be bought separately. Part I. The Blood, Tissues of Movement, and Vascular Mechanism, 10*s.* 6*d.* Part II. The Tissues of Chemical Action and Nutrition, 10*s.* 6*d.* Part III. The Central Nervous System, 7*s.* 6*d.* Part IV. The Tissues and Mechanisms of Reproduction, 10*s.* 6*d.* Appendix, 7*s.* 6*d.* Sixth edition. London: Macmillan and Co. 1893.

An Introduction to Human Physiology. By AUGUSTUS WALLER, M.D., F.R.S. The best manual of medium size; a thorough and attractively written exposition of all departments of physiology proper; well suited to meet medical and other examinations in the subject, but containing very little histology; concise; excellently illustrated; moderate in price. Second edition, 1893. pp. 630. London: Longmans, Green, and Co.

Human Physiology. By Professor LANDOIS. Translated and edited by WILLIAM STIRLING, M.D., D.Sc. Two vols. pp. 1120. Useful for reference; not quite suitably arranged for the student, but containing all the information he can desire to know. Two vols., 42*s.*, with 845 illustrations. Fourth edition. London: Charles Griffin and Co. 1891.

Text-book of Physiology. By JOHN GRAY MCKENDRICK, M.D., F.R.S. A large work, containing in some directions more than the student requires, but a first-class treatise. Two vols. Edinburgh: Maclehose and Sons.

Kirkes' Handbook of Physiology. Edited by MORRANT BAKER, F.R.C.S., and VINCENT HARRIS, M.D. Still one of the best books of smaller size; contains much histology as well as physiology proper; very thoroughly revised in the last edition. Thirteenth edition. London: J. Murray. 1892.

Manual of Physiology. By G. F. YEO, M.D., F.R.S. A good book, somewhat smaller than the foregoing; brought up to date in the last edition. Third edition. London: J. & A. Churchill. 1893.

Elements of Human Physiology. (Student's Guide Series.) By ERNEST H. STARLING, M.D., M.R.C.P., Joint Lecturer on Physiology at Guy's Hospital. Second edition. Crown 8vo, with 94 engravings, 6*s.* 6*d.* London: J. & A. Churchill. 1895.

Physiology for Beginners. By Professor MICHAEL FOSTER, M.D., F.R.S., and LEWIS E. SHORE, M.A., M.D. A capital little book, forming a good introduction to Foster's "Text-book" or to Waller's Human Physiology. Extremely clearly written and thoroughly illustrated. Not sufficient by itself to meet the requirements of medical examinations in physiology or histology. 3*s.* Macmillan and Co. 1894.

PHYSIOLOGICAL CHEMISTRY.

A Text-book of the Physiological Chemistry of the Animal Body. By ARTHUR GAMGEE, M.D. Edin., F.R.S. Two volumes at present issued. Vol. I., Blood, Muscle, and Nerve; Vol. II., Digestion. The best manual on the subject, but only suitable for advanced students. Vol. III. still wanting. The volumes can be bought singly, 18*s.* each. London: Macmillan and Co. 1892.

Text-book of Chemical Physiology and Pathology. By Professor W. D. HALLIBURTON, M.D., F.R.S. An excellent manual for all students. Profusely illustrated. One vol. 8*s.* London: Longmans, Green, and Co. 1891.

The Chemical Basis of the Animal Body. By A. SHERIDAN LEA, D.Sc., F.R.S. A first-rate treatise, constituting an appendix to Foster's Physiology. Smaller, less illustrated and less expensive than either of the foregoing. contains very complete references to original papers. One vol. pp. 270. 7*s.* 6*d.* London: Macmillan and Co. 1892.

HISTOLOGY AND EMBRYOLOGY.

Some physiological text-books deal with Histology sufficiently fully for the pass examinations of the medical student; such books are Foster, Landois, and Kirkes (see above). Special treatises are:—

The Elements of Embryology. By Professor MICHAEL FOSTER, F.R.S., and the late Professor FRANK BALFOUR, F.R.S. Second edition, revised. pp. 470. 1893. Eminently practical; the best book for those examinations in which practical work and manual skill in the subject are required.

Practical Physiology. By Professors MICHAEL FOSTER, F.R.S., and J. N. LANGLEY, F.R.S. Fifth edition. An excellently selected series of laboratory exercises with full instructions to the student. Both, London: Macmillan and Co.

Outlines of Practical Physiology. By Professor WILLIAM STIRLING, D.Sc. Third edition. 1895. Thoroughly revised and partly rewritten, with additional illustrations. Includes chemical and experimental physiology and references to practical medicine; histology not included; the best students' book on the subject; full of information, and beautifully illustrated. — *Outlines of Practical Histology.* Second edition. 1892. Companion volume to the above, and equally good; copiously illustrated. Both, London: Charles Griffin and Co.

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Chemistry: General, Medical, and Pharmaceutical. By JOHN ATTFIELD, F.R.S. A very serviceable manual for preparation work and reference. It has been written especially for medical and pharmaceutical students, and contains at fair length of both inorganic and organic chemistry and contains useful data on the analysis and examination of drugs and morbid products—as, for example, the urine, and blood. Fifteenth edition. 1893. 15*s.* Gurney and Jackson.

Organic Chemistry. By IRA REMSEN. A clear account of the principles, including also the preparation of certain organic substances. 6*s.* 6*d.* Macmillan and Co.

Notes on Analytical Chemistry for Students of Medicine. By A. J. BERNAYS. This is an excellent laboratory book for medical students preparing for every examination, and contains also data of service to the practitioner, for example, the methods of examination of urinary deposits, the estimation of sugar, and the detection of bile constituents &c. in urine. Third edition. 1889. 4*s.* 6*d.* London: J. & A. Churchill.

Practical Organic Chemistry. By S. RIDEAL, D.Sc. A very handy little book for use in the laboratory. It covers all the ground of the London synopsis. 2*s.* 6*d.* H. K. Lewis.

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of Chemical Physiology and Pathology, by D. HALLIBURTON, M.D., F.R.S. &c. all students. Profusely illustrated. Cr. 8 n: Longmans, Green, and Co. 1891.

ical Basis of the Animal Body. By A. , F.R.S. A first-rate treatise, outcr o Foster's Physiology. Smaller, less ex xpensive than either of the foregoi lete references to original papers. 7s. 6d. London: Macmillan and Co. 1

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MATERIA MEDICA AND THERAPEUTICS.

Text-book of Pharmacology, Therapeutics, and Materia Medica. By T. LAUDER BRUNTON, M.D., D.Sc., F.R.S. Third edition, containing the additions (1891) to the British Pharmacopœia. 8vo, 21s.; in two vols., 22s. 6d. Supplement separately, 1s. The student for the higher examinations would be well advised to provide himself with this work. It is equally useful as a practical treatise and as a work of reference, and is admirably written. It is not intended for pass examinations or junior students.

A Handbook of Therapeutics. By SIDNEY RINGER, M.D., F.R.C.P., F.R.S. This is another large and important work, designed more for reference than for daily use. Twelfth edition. pp. 632. 1888. 15s. London: H. K. Lewis.

Materia Medica. By HALE WHITE, M.D., F.R.C.P. London: J. & A. Churchill. 7s. 6d. *The Handbook of Pharmacology, Materia Medica, and Therapeutics.* By J. MITCHELL BRUCE, M.D., F.R.C.P. Twenty-eighth thousand. pp. 582. London: Cassell and Co. 1894. Two excellent practical books for students engaged in any of the pass examinations.

Essentials of Materia Medica and Therapeutics. By Sir A. B. GARROD, M.D., F.R.S., &c. Thirteenth edition. 1890. Edited by NESTOR TIRARD, M.D., F.R.C.P. The subject is regarded entirely from a practical therapeutic point of view, and the work, though more useful to the practitioner, can still be used as a book of reference by the student. 12s. 6d. London: Longmans, Green, and Co.

Of other text-books likely to be of value we might mention:—*Materia Medica and Therapeutics: Inorganic Substances.* By C. D. F. PHILLIPS, M.D. Second edition. 1894. pp. 898. 21s. London: J. & A. Churchill.—*Guide to Therapeutics.* By R. FARQUHARSON, M.D., F.R.C.P., &c. Fifth edition. pp. 417. 7s. 6d. London: Smith, Elder, and Co. 1891.—*Materia Medica and Therapeutics.* By Dr. BARTHOLOW. Eighth edition. pp. 820. 21s. London: H. K. Lewis. 1893.—*The Dictionary of Treatment.* By WM. WHITLA, M.D. Q.U.I. American edition. pp. 921. 17s. 6d. London: Henry Renshaw. 1894. A capital, practical book, and pleasant reading.—*Theory and Practice of Medicine.* By F. T. ROBERTS, M.D., F.R.C.P. Ninth edition. 1894. pp. 1059. 21s. London: H. K. Lewis.—*Materia Medica and Pharmacy.* By Dr. GRIFFITHS, Ph.D. Third edition. pp. 464. 7s. 6d. London: Baillière, Tindall, and Cox. 1887.—*Notebook of Materia Medica.* By SOORERBY JACKSON. New edition. Edited by RALPH STOCKMAN, M.D., and J. RUTHERFORD HILL. London: J. Thin.

MEDICINE.

The number of text-books on Medicine is so large, and their general excellence so high, that it is impossible to make a selection with which no one could find legitimate fault. It must always appear that some books as good or better than the specified list have been omitted. We do not for a moment pretend that this is the best possible list, but the student who is guided by these books will be in very good hands.

In systematic medicine the book which for depth a thoroughness occupies the foremost place is the work the "Principles and Practice of Medicine," by the l Dr. HILTON FAGGE and Dr. PYE-SMITH. It is a book wh must be studied by all who are preparing for the hig qualifications, and its unconventional and practical st makes it an easy work to remember. In QUAIN'S D tionary, an admirable collection of monographs, will found articles which may be required to supplement reading of Fagge's Principles; and the same may be s of the System of Medicine, edited by Sir J. RUSSE REYNOLDS, which contains contributions of perennial va from master hands. It is so many years since this syst appeared that a new edition of it would now mean to intents and purposes a new book; but there are articles REYNOLDS' "System" which cannot be overlooked. As l extensive in range, and therefore more useful to the gene student, may be classed the works of Drs. OSLER, BRISTOW ROBERTS, and F. TAYLOR. Of these well-known text-boo those of Professor F. T. ROBERTS and the late BRISTOWE have enjoyed a term of popularity of m than twenty years, each having in that period pas through several editions. Although similar in scope a purpose, there is a strong contrast between these two wor That by Professor ROBERTS is emphatically written for t class-room; its style is restrained and its plan sever systematic. Abounding in information it presents the fa of medicine in a categorical manner, and needs to be closely studied as a mathematical treatise. Many a stud has passed the highest examinations by confining himself its pages; but on the other hand its very merits a characteristics are distasteful to others who seek gre freedom and originality. To them the work of Dr. BRISTO will be more attractive, for here we have almost the an thesis of style and method to that presented in the fi named work. At the same time no sounder guide in t intricate paths of diagnosis and pathology can be found th the highly esteemed physician whose loss we are now depl ing. His work lives after him and will, we venture think, long remain as a standard text-book for students medicine. Meanwhile more recent candidates for favo have appeared, notably the text-books of Dr. W. OSLER Baltimore and Dr. F. TAYLOR of Guy's Hospital. Both a works of a high class, and are admirably suited to th purpose; and already the latter has gained considera favour. On a line with these may be placed the well-arrang Dictionary of Medicine edited by Dr. J. K. FOWLER. It wou not only be invidious but useless to draw distinctions of me here. Lastly, books of smaller scope, but accurate and tru worthy within their limits, are those of Dr. CARTER and I CHARTERIS. To the beginner in medical study these boo may be read in connexion with lectures on the subje but the student must not be content with them for co plete knowledge. Their authors have not designed to iss comprehensive treatises.

Besides the foregoing systematic treatises there is a la and increasing number of books on clinical medicine—so dealing with the whole subject of diagnosis, others w separate portions of this wide subject. Amongst the for may be recommended the work recently published by JUDSON BURY, the manual edited by Dr. FINLAYSON,

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smaller work of Drs. GIBSON and RUSSELL, or the favourite of many generations of students, and pioneer in this class of literature, Dr. FENWICK'S "Guide." Upon Auscultation there is no better guide than Dr. GEE'S work; whilst upon Urinary Examination, &c., there are many compendia of varied range and style, any one of which may be put to good use by the clinical clerk. We cannot attempt to single out by name the various useful monographs that are at the student's disposal; he will be well advised to follow the fashion of his school in this matter.

Text-book of the Principles and Practice of Medicine. By the late HILTON FAGGE, M.D., F.R.S., and P. H. PYE-SMITH, M.D., F.R.C.P., F.R.S. Third edition. 1891. pp. 2209. 40*s*. London: J. & A. Churchill.

The Theory and Practice of Medicine. By J. S. BRISTOWE, M.D., F.K.S. Seventh edition. 1890. pp. 1285. 21*s*. London: Smith, Elder, and Co.

The Principles and Practice of Medicine. By W. OSLER, M.D. 1892. pp. 1080. 24*s*. London: Young J. Pentland.

Text-book of Medicine. By Professor STRÜMPELL. Second edition. 1893. pp. 1043. 28*s*. London: H. K. Lewis.

Handbook of the Theory and Practice of Medicine. By F. T. ROBERTS, M.D., F.R.C.P. Ninth edition. 1894. pp. 1059. 24*s*. London: H. K. Lewis.

Manual of the Practice of Medicine. By F. TAYLOR, M.D., F.R.C.P. Third edition, with Twenty-five Engravings. 1893. pp. 932. 15*s*. London: J. & A. Churchill.

Elements of Practical Medicine. By A. H. CARTER, M.D. F.R.C.P. Seventh edition. 1895. pp. 496. 10*s*. London; H. K. Lewis.

Guide to Practice of Medicine. By M. CHARTERIS, M.D., L.R.C.S. Edin., &c. Seventh edition. With engravings. 1894. pp. 712. 10*s*. London: J. & A. Churchill.

Dictionary of Medicine. Edited by RICHARD QUAIN, Bart., M.D. Lond., LL.D. Edin., F.R.S., assisted by F. T. ROBERTS, M.D., F.R.C.P., and J. MITCHELL BRUCE, M.D., F.R.C.P. Two vols. 1894. 40*s*. nett. London: Longmans, Green, and Co.

An Index of Diseases: Their Diagnosis, Symptoms, and Treatment. By THOMAS HAWKES TANNER, M.D. Fourth edition. Revised by PERCY BOULTON, M.D. 10*s*. 6*d*. London: Henry Renshaw.

Dictionary of Practical Medicine. Edited by J. K. FOWLER, M.D., F.R.C.P. 1890. pp. 942. 21*s*. London: J. & A. Churchill.

A Manual of Diseases of the Nervous System. By W. R. GOWERS, F.R.S. Vol. I. Diseases of the Nerves and Spinal Cord. Second edition, roy. 8vo, with 179 engravings, 15*s*. 1891. Vol. II. Diseases of the Brain and Cranial Nerves; General and Functional Diseases of the Nervous System. Second edition, roy. 8vo, with 182 engravings, 20*s*. 1893.

The Nervous System, Diseases of. By J. A. ORMEROD, M.D., F.R.C.P., Physician to the National Hospital for the Paralysed and Epileptic. With 66 illustrations, fcap. 8vo, 8*s*. 6*d*. 1892. Two useful works on the subject on which they treat, published by J. & A. Churchill.

Clinical Diagnosis. By JUDSON BURY, M.D., M.R.C.S. London: Charles Griffin and Co.—A very admirable and clearly written work.

Clinical Manual. By JAMES FINLAYSON, M.D., F.F.P.S. Glasg. Third edition. 1891. pp. 719. 8*s*. 6*d*. London: Smith, Elder, and Co.

Manual of Medical Diagnosis. By Professor H. VIERORDT. Large 8vo. With 178 Engravings, many in colour. 1892. pp. 700. 18*s*. Edinburgh and London: Young J. Pentland.

Medical Diagnosis: A Manual of Clinical Methods. By J. J. GRAHAM BROWN, M.D., F.R.C.P., F.R.S. Edin. Third edition. Crown 8vo, cloth. 1887. pp. 380. 10*s*. 6*d*. Edinburgh: Bell and Bradfute.

Fenwick's Students' Guide to Medical Diagnosis. Edited by BRADFORD FENWICK, M.D. Seventh edition. With 117 engravings. 1891. pp. 352. 7*s*. London: J. & A. Churchill.

Physical Diagnosis: A Guide to Methods of Clinical Investigation. By G. A. GIBSON, M.D., F.R.C.P. Edin., and Sir WILLIAM RUSSELL, M.D., F.R.C.P. Edin. Second edition. With 109 illustrations, many coloured. 1893. pp. 383. 10*s*. 6*d*. Edinburgh and London: Young J. Pentland.

Auscultation and Percussion. By SAMUEL J. GEE, M.D., F.R.C.P. Fourth edition. 1893. pp. 327. 6*s*. London: Smith, Elder and Co.

Cardiac Outlines. By WILLIAM EWART, M.D., F.R.C.P. With 62 illustrations. 1892. pp. 165. 5*s*. 6*d*. London: Baillière, Tindall, and Cox.

Clinical Diagnosis. By Professor R. VON JAKSCH. Second edition. Translated and edited by JAMES CAGNEY, M.D., M.R.C.P. 25*s*. London: Charles Griffin and Co.

Guide to Examination of Urine. By J. WICKHAM LEGG. M.D., F.R.C.P. Seventh edition. 1893. pp. 136. 3*s*. 6*d*. London: H. K. Lewis.

Notes on Examination of Blood and Excreta. By SIDNEY COUPLAND, M.D., F.R.C.P. Third edition. 1892. pp. 64 1*s*. 6*d*. London: H. K. Lewis.

SURGERY.

Of surgical almost the same remarks can be made as thos we have made upon medical works. The last edition Holmes' and Hulke's treatise was published in 1883. Th will be found useful for reference by candidates for t higher examinations, as many of the monographs are exc lent and authoritative. In the same way *Heath's Dictiona of Practical Surgery* is chiefly of use as a first-class work reference. *Erichsen's Science and Art of Surgery*, the te edition of which appeared a few weeks ago, remains the b text-book which we have on the subject from the stude point of view. Clear and comprehensive, it is a model what a text-book should be, the illustrations are excell and the type good.

The use of *Keetley's Index of Surgery* as a book ou which to revise general knowledge immediately previo an examination is well known. The students, to benef the work, must be acquainted with the contents of the text-books, and only require to refresh the memor salient points. The chapter on Antiseptics is espe valuable, gaining point from the style adopted in writi Of several books on Surgical Diagnosis those by I and Pearce Gould may be read with advantage t student. The same may be said for the works on Ope Surgery by Treves and by Jacobson. *Jacobson's tions of Surgery* is an admirable text-book. The infor

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is not confined to the mere description of operations, but includes reasons for their performance. The smaller books of Treves and Barker are volumes of convenient size, which contain all that is necessary for the ordinary pass examinations. *Holmes's Treatise on Surgery* is the great rival to Erichsen's in the student's favour. It is not quite so exhaustive in several directions, but its clear and forcible manner will always insure it a wide audience, and the student who knows his Holmes will come to no harm. *Druitt's Surgeon's Vade-Mecum* is of somewhat similar proportions to the last-named, and is intended to answer the same purpose. *Walsham's Theory and Practice of Surgery* is a handy volume which has obtained great success as a student's handbook. It has recently been revised and a new edition brought out, so that the reader will not find himself behind the times.

A System of Surgery. Edited by TIMOTHY HOLMES F.R.C.S., and J. W. HULKE, F.R.C.S., F.R.S. Third edition. Three vols. With Coloured Plates and numerous Illustrations. Price £4 4s. London: Longmans, Green, and Co.

The Science and Art of Surgery. By Sir J. E. ERICHSEN, F.R.S., LL.D. Ninth edition. Edited by the late MARCUS BECK, M.S., F.R.C.S. 1888. With 1025 Wood Engravings. Two vols. 48s. London: Longmans, Green, and Co.

A System of Surgery. Edited by FREDERICK TREVES, F.R.C.S. 1895. Vol. I. With two Coloured Plates and 463 Illustrations. London: Cassell and Co.

This is a notable addition to our standard works on Surgery. It is thoroughly reliable text-book, well printed, copiously illustrated, accurate, and fully abreast of current knowledge. Only the first volume has been issued, but the second volume promises to be as excellent as the first.

Dictionary of Practical Surgery. By C. HEATH, F.R.C.S. Third edition. 1889. Two vols. Vol. I., pp. 970; Vol. II., pp. 884. 32s. London: Smith, Elder, and Co.

Surgery. By C. W. MANSELL MOULLIN, F.R.S. 1891. With 497 Engravings. pp. 1413. 34s. London: J. & A. Churchill.

Treatise on Surgery. By T. HOLMES, F.R.C.S., &c. Fifth edition. 1888. pp. 1004. 30s. London: Smith, Elder, and Co.

Manual of Practice of Surgery. By T. BRYANT, M.D., F.R.C.S. Fourth edition. 1884. With 750 Engravings. pp. 1520. 32s. London: J. & A. Churchill.

Manual of Surgery. By F. TREVES, F.R.C.S. 1894. pp. 574. London: Cassell and Co.

Druitt's Surgeon's Vade-Mecum. Edited by STANLEY BOYD, F.R.C.S. Twelfth edition. With 373 Engravings. pp. 1000. 16s. London: J. & A. Churchill.

Index of Surgery. By C. R. B. KEETLEY, F.R.C.S., &c. Fourth edition. 1887. pp. 526. 10s. 6d. London: Smith, Elder, and Co.

Surgery: its Theory and Practice. By W. J. WALSHAM, F.R.C.S., &c. Fifth edition. 1895. With 380 Engravings. pp. 766. 12s. 6d. London: J. & A. Churchill.

Operative Surgery. By F. TREVES, F.R.C.S. 1894. pp. 1550. London: Cassell and Co.

Surgical Operations. By A. E. J. BARKER, F.R.C.S. With 91 Wood Engravings. 12s. 6d. London: Longmans, Green, and Co.

The Science and Practice of Surgery: a Complete Text-book. By F. J. GANT, F.R.C.S., Senior Surgeon, Royal Free Hospital. Third edition, about 1100 engravings, 2 vols. Price 36s.

The Operations of Surgery. By W. H. A. JACOBSON, F.R.C.S. Third edition, nearly ready. London: J. & A. Churchill.

Guide to Surgical Diagnosis. By C. HEATH, F.R.C.S. Second edition. 1888. pp. 240. 6s. 6d. London: J. & A. Churchill.

Surgical Diagnosis. By A. P. GOULD, F.R.C.S. &c. pp. 584. London: Cassell and Co.

Minor Surgery and Bandaging. By C. HEATH, F.R.C.S. Tenth edition. 1894. With 158 Engravings. pp. 389. 6s.

Essentials of Bandaging. By the late BERKELEY HILL, F.R.C.S. Sixth edition. 1889. pp. 365. 5s. London: H. K. Lewis.

MIDWIFERY.

In this subject the student will find it advantageous to have two books: one a small and elementary work, which he can, if he likes, take with him when attending his cases; and the other, a larger text-book, for systematic reading.

Of the elementary books we mention three;—

First Lines of Midwifery. By G. ERNEST HERMAN, M.B., F.R.C.P. 1892. London: Cassell and Co.—*Obstetric Aphorisms for Students.* By J. G. SWAYNE, M.D. Tenth edition. Fcap. 8vo, with twenty engravings. 3s. 6d. 1893. London; J. & A. Churchill.—*An Introduction to Midwifery.* By ARCHIBALD DONALD, M.D.—All three are excellent for their purpose—that is, they serve well to instruct the student as to his practical duties and the points to be noted and watched in attending his first cases of labour. Dr. Swayne's book is the old-established favourite. The other two are more modern, but by any of the three the student will find himself much fortified.

General Text-books:—

A Manual of Midwifery. By A. L. GALABIN, M.D., F.R.C.P.—A very deservedly popular book; literally a manual as it is in one volume; clear and precise and sufficiently informatory to provide the student with all the information necessary for pass examinations. Third edition. With 262 engravings. 15s. London; J. & A. Churchill.

The Science and Art of Midwifery. By W. T. LUSK, M.D.—This American work is undoubtedly in many ways the best English text-book on the subject. The amount of information contained is very large, the references complete, and the plan of the book is easy to follow. For honour examinations this book is a necessity. Fourth edition. 1892. pp. 671. 16s. London: H. K. Lewis.

The Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P. Eighth edition. Two volumes, each containing 430 and 443 pages respectively.—This has long been a deservedly popular work with students. It practically held the field till the appearance of the two previous treatises, and is still, and we think fitly, the most widely read text-book on the subject. The work is written in such a simple, easy style that the student may find a difficulty in remembering what he has read. Two volumes. Eighth edition. 1893. 28s. London: Smith, Elder, and Co.

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The student will also find the following books of reference of use:—

Text-book of Midwifery. By the late OTTO SPIEGELBERG. Translated from the second German edition by Dr. HURRY. This work in two volumes is published by the New Sydenham Society. Although a text-book in name it is not well adapted to the immediate needs of the student, who, however, may be advised to consult it on special points.—*Difficult Labour*, by G. ERNEST HERMAN, M.B., F.R.C.P., will also be found a useful work of reference on its subject.

GYNÆCOLOGY.

A Manual of Gynæcology. By BERRY HART, M.D., and FREELAND BARBOUR, M.D.—The work consists of two parts and an appendix. Part I. deals with the Anatomy, Physiology, and Methods of Examination of the Female Pelvic Organs, and Part II. with the diseases peculiar to the organs. This favourite manual is especially strong in its anatomical and purely scientific sections, if somewhat less complete as a clinical guide. It has the advantage of giving at the end an Index of Recent Gynæcological Literature. Fourth edition. pp. 722. Illustrated with lithographs and 400 woodcuts. London: W. and A. K. Johnston.

The Student's Guide to the Diseases of Women. By A. L. GALABIN, M.D., F.R.C.P.—A small book that has been useful to several generations of students, and will be useful to generations more. Fifth edition. 1893. pp. 507. 8*s.* 6*d.* London: J. & A. Churchill.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D.—This is also a small book, but somewhat larger than the above, and treats the subject rather more from the clinical point of view. Fourth edition. 1893. pp. 439. 10*s.* 6*d.* London: H. K. Lewis.

The Diseases of Women and their Treatment. By H. MACNAUGHTON JONES, M.D., F.R.C.S.I., F.R.C.S.E. Sixth edition. Price 12*s.* 6*d.* London: Baillière, Tindall, and Cox.—This is a well-known work.

The following books of reference are recommended:—*Clinical Gynæcology.* By T. MOORE MADDEN, M.D.—This book consists of forty-seven lectures on the diseases of women, and may be usefully consulted on special points.—*A Treatise on Gynæcology.* By S. POZZI, M.D.—This work, in three volumes, is published by the New Sydenham Society, and, while not well adapted for general reading, will be found invaluable for reference. The same, to a greater or less extent, applies to the following books:—*Diseases of the Ovaries.* By LAWSON TAIT, F.R.C.S. Fourth edition. 1883.—*Abdominal Surgery.* By J. GREIG SMITH. Third edition. 1889.—*The Surgical Diseases of the Ovaries and Fallopian Tubes.* By J. BLAND SUTTON, F.R.C.S.—*The Diagnosis and Surgical Treatment of Abdominal Tumours.* By Sir SPENCER WELLS.—*Clinical Lectures on the Diseases of Women.* By J. MATTHEWS DUNCAN, M.D. Fourth edition. 1890.

DISEASES OF CHILDREN.

It is only natural that students should be obliged by the medical schools to give some attention to the study of the diseases of children, when it is considered that in general practice one patient at least out of every three will be a child. At present some of the examining boards, as the Royal University of Ireland, require candidates for the M.B. degree to produce certificates of having attended a practical course on the diseases of children, and the studen are also specially examined in this subject. We therefc suggest for their guidance the following text-books: *Diseases of Children, Medical and Surgical.* By HEN ASHBY, M.D., F.R.C.P., and G. A. WRIGHT, B.A., M. F.R.C.S. Eng. Enlarged and improved edition, with 178 ill trations. 8vo. pp. 248. London: Longmans, Green, and This admirable work, as it deals with diseases of chil from both a medical and surgical point of view, can recommended to students as containing everything that t will require to know.—*The Diseases of Children.* By JA F. GOODHART, M.D., F.R.C.P. Fifth edition. pp. 1894. 10*s.* 6*d.* London: J. & A. Churchill. For t who want to study diseases of children from a me aspect we can recommend this most popular manual, wri as it is, by one who convinces the reader that he has everything he describes.—*The Diseases of Chil (Medical).* By H. BRYAN DONKIN, M.D., F.R.C.P. Me 8vo. 16*s.* London: Charles Griffin and Co. This many respects a most original book. For those stu who desire to know the surgical aspect of affections of children there are two useful books, *Surgical Diseases of Children*, by E. OWEN, F.R.C.S. Eng., price 9*s.*, Cassell and Co., Limited, L Paris, and New York; and *The Surgical Diseases of Cl and their Treatment by Modern Methods*, by D'ARCY P M.A., M.B. Oxon., F.R.C.S. Eng., crown 8vo, price 1 London: H. K. Lewis.—A manual which is used a go by Edinburgh students is *Disease in Children*, by CARMICHAEL, M.D., F.R.C.P. Ed. Crown 8vo. p Price 10*s.* 6*d.* Young J. Pentland: Edinburgh and Lor The following larger works are recommended for ref EUSTACE SMITH'S *Treatise on Disease in Children.* edition. Price 22*s.* pp. 895. London: J. & A. Chur *Diseases of Children* (Medical and Surgical). Ed KEATING. Eight vols. 12*s.* 6*d.* per volume. Edinbu London: Pentland.—*Lectures on Children's Disea* HENOCH. Two vols. Translated by JOHN THOMPSO F.R.C.P. Ed., from the fourth German edition. This is published by the New Sydenham Society.—*Di Children.* Edited by LOUIS STARR, M.D., and si ciates. Imperial 8vo volume. Price 40*s.* London: This is the most recent large work on diseases of compiled in America. It is well got up and profu trated.—Another very useful book is that of Dr. C *On the Principles and Exact Conditions to be Obser Artificial Feeding of Infants.* London: Smith, E Co. Price 5*s.*

OPHTHALMOLOGY.

Either of the two following handbooks on Opht will be found to contain all that is necessary to t of medicine who has no inclination to make a sp of the subject.

Handbook of Diseases of the Eye. By HENRY I M.B., F.R.C.S.I. Edited by Louis Werner, M edition. pp. 582. 1895. Price 10*s.* 6*d.*, by H. 136, Gower-street.

The Diseases of the Eye. By EDWARD N F.R.C.S. Fifth edition. 1890. Student's Gu Price 7*s.* 6*d.*, by J. & A. Churchill, 11, New street.

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By those who wish for fuller information on the subject the larger text-books must be consulted, of which, perhaps, *The Text-book of Ophthalmology*, by Professor FUCHS, of the Vienna University, is the most generally useful. This has been recently translated from the German into English by A. Duane, and is published in one large octavo volume, with 173 illustrations, price 21s., by H. K. Lewis, 136, Gower-street.

Most students find the study of errors of refraction difficult and unattractive, and are consequently inclined to neglect this important branch of the subject. "The Manual for Students on the Refraction of the Eye," by GUSTAVUS HARTRIDGE, is a most useful little book, as it explains simply the principles on which are based the methods in use in the out-patient department.

It is unnecessary, and, indeed, undesirable, here to enumerate all the valuable text-books which have been written on diseases of the eye, but the following may be mentioned as generally useful books:—

Diseases of the Eye. By GEORGE BERRY, M.B., F.R.C.S. Edin. Edinburgh and London: Young J. Pentland.

Handbook of Ophthalmic Science and Practice. By HENRY JULER, F.R.C.S.

Diseases of the Eye. By HENRY D. NOYES, A.M., M.D. London: H. K. Lewis.

To those who are conversant with the French language the "Traité Complet d'Ophthalmologie," by L. DE WECKER and E. LANDOLT, may be recommended as the most valuable work of reference. It is published in four large volumes at a price of about 20 francs each volume, and is consequently scarcely adapted for the student's use. A German edition of this work may also be obtained.

Diseases of the Eye. By EDWARD NETTLESHIP, F.R.C.S., Ophthalmic Surgeon to St. Thomas's Hospital. Fifth edition. Fcap. 8vo, with 164 engravings and a coloured plate illustrating colour-blindness, 7s. 6d. 1890. London: J. & A. Churchill.

PATHOLOGY.

Manual of General Pathology. By JOSEPH FRANK PAYNE, M.D. Oxon., F.R.C.P. pp. 702. Illustrations 156. Deals specially with general pathology and pathological anatomy, and the processes and causes of disease, including parasites, both animal and vegetable. Special pathology and pathological histology are not touched upon, but on general pathology it is one of the best books in the language. London: Smith, Elder, and Co. 1886.

A Text-Book of Pathology, Systematic and Practical. By Professor D. J. HAMILTON. An admirably original, but somewhat unequal work. The most complete and systematic work published in the English language. Contains a very full and accurate bibliography. Invaluable for reference and for study for the higher examinations. Published in two volumes (the second volume is divided into two parts), which may be bought separately. Vol. I. (London: Macmillan and Co., 1889, pp. 736, 295 illustrations, woodcuts and coloured lithographs, price 21s. net) deals with the technique of the post-mortem room and the histological and bacteriological laboratories. An account is also given of the general pathological processes of the diseases of the blood, the heart and bloodvessels, and of tumours. Vol. II., 1895, Part 1 (172 illustrations, pp. 514, price 15s. net) treats of diseases of the air passages and lungs, of liver, of the genito-urinary apparatus, and the alimentary tract, except the intestines, whilst Part 2 of Vol. II. (225 illustrations, pp. 624, price 15s. net) completes the description of the diseases of the alimentary tract and then takes in turn the nervous system (very good), diseases of mamma, bones and joints, the skin, malformations, diseases of the fœtal membranes and placenta, vegetable and animal parasites, animal heat and fever. London: Macmillan and Co.

A Text-book of Pathological Anatomy and Pathogenesis. By Professor ERNST ZIEGLER. Translated and edited for English students by DONALD MACALISTER, M.D., F.R.C.P. A good text-book for the higher examinations; like Professor HAMILTON'S work, somewhat unequal in the treatment of different subjects; the English edition is now not quite up to date, having appeared in 1886. References to literature very full. The three parts can be bought separately. Part I. 1885, pp. 360, 117 figs.: General Pathological Anatomy, treating of malformations, anomalies in the distribution of blood and lymph, disturbances of nutrition, inflammation, &c., tumours (very good), and parasites. Part II., 1887, pp. 371, 83 figs.: Blood and lymph, the vascular mechanism, the spleen and lymphatic glands, the serous and mucous membranes, the skin, the alimentary tract, and liver and pancreas. Part III., 1886, pp. 391, 89 figs.: The urinary and respiratory organs and the central and peripheral nervous systems. Each part, 12s. 6d. London: Macmillan and Co. A German edition in two volumes published by Gustav Fischer.

Practical Pathology. By GERMAN SIMS WOODHEAD, M.D., F.R.S.E. Third edition. 1892. pp. 652. With 195 Coloured Plates from Original Drawings.—This book is almost essential to the proper study of the subject. It is not only thoroughly clear and well arranged, but beautifully illustrated. The points where the student might be expected to be most in difficulty have received special attention. Edinburgh and London: Young J. Pentland.

An Introduction to Pathology and General Morbid Anatomy. By T. HENRY GREEN, M.D., F.R.C.P. Revised and enlarged by H. MONTAGUE MURRAY, M.D., F.R.C.P. Engravings.—An excellent *résumé* of pathology from students' point of view. Brought well up to date, especially in the sections dealing with inflammation, the specific infectious fevers, and the nervous system. May be confidently recommended as giving a very good and accurate account of the groundwork of pathology and as containing sufficient information to enable the student to pass an ordinary examination on the subject. Price 12s. 6d. London: Henry Renshaw.

A Text-book of Morbid Histology for Students and Practitioners. By ROBERT BOYCE, M.B., M.R.C.S. pp. 400, with 130 Coloured Photographic Illustrations. 31s. London: H. K. Lewis. 1892.—Contains good descriptions of morbid histological specimens; also a number of photographs, which, however, are of very unequal merit and value. Exceedingly useful for the advanced student and laboratory worker. A carefully selected bibliography appended.

The following books are hardly to be used as text-books

but for one reason or another the student will do well to supplement his reading by consulting them:—

Lectures on Surgical Pathology. By Sir JAMES PAGET, Bart., F.R.S., &c. Revised and edited by Professor WM. TURNER, F.R.S. pp. 844. Illustrations 130. London: Longmans, Green, and Co. 1876. Fourth edition.—Still one of the most valuable books of reference on surgical pathology in our language, and should be read by every student as a model on which to base methods of observation and study.

An Introduction to General Pathology. By JOHN BLAND SUTTON, F.R.C.S. pp. 390. London: J. & A. Churchill. 1876.—An admirable introduction to the subject of evolution in pathology, well worth study by those who wish to gain more than a mere examination knowledge of the subject.

Lectures on Pathological Anatomy. By SAMUEL WILKS, M.D., F.R.S., and the late WALTER MOXON, M.D., F.R.C.P. Third edition, thoroughly revised by SAMUEL WILKS, M.D., LL.D., F.R.S. London and New York: Longmans, Green, and Co. 1889.—An admirable description of macroscopic morbid anatomy, doing for medicine what Paget's lectures have done for surgery. May be studied with advantage both before and after practical work is engaged in.

Lectures on Pathology. By the late HENRY GAWEN SUTTON, M.B., F.R.C.P. Edited by MORRIS EDEN PAUL, M.D.; and Revised by SAMUEL WILKS, M.D., LL.D., F.R.S. London: J. & A. Churchill. 1891.—An admirable, philosophical, and original work on medical pathology, especially useful for senior and qualified students of medicine.

A Manual of Pathology. By JOSEPH COATS, M.D. pp. 977. Illustrations 364. London: Longmans, Green, and Co. Second edition. 1889.—An interesting treatise on pathology; covers a great deal of ground; in most cases very reliable, and a good text-book, especially for the student preparing for the higher examinations.

The following books have different uses for students, which we have tried to briefly indicate:—

Practical Pathology. By JOHN LINDSAY STEVEN, M.D. pp. 266. Glasgow: James Maclehose and Sons. 1887.—A concise and well-arranged description of methods and of pathological anatomy and histology. There are no illustrations, but the descriptions are clear and concise. Useful for a student going in for examination or as a supplement to demonstrations.

Practical Pathology and Morbid Histology. By HENEAGE GIBBES, M.D. pp. 320. Illustrated with 60 Photographic Reproductions. Edinburgh and London: Young J. Pentland. 1891.—A good practical book with a series of photographs of typical pathological microscopic specimens. Useful for private laboratory work rather than for examination purposes.

Elements of Surgical Pathology. By AUGUSTUS J. PEPPER, M.S., M.B. Lond., F.R.C.S. Eng. pp. 532. 84 Engravings. London, Paris, and New York: Cassell and Co., Limited. Fourth edition. 1894.—A compact little handbook of surgical pathology.

A Handbook of Surgical Pathology. By W. J. WALSHAM, M.B., F.R.C.S. Eng.; and D'ARCY POWER, M.A., M.B. Oxon., F.R.C.S. Eng. pp. 634. London: Baillière, Tindall, and Cox. Second edition. 1890.—A clear and concise description of the specimens in the Museum of St. Bartholomew's Hospital, and therefore specially useful to students of that school or to those who have access to that museum. But the descriptions are so good that this work will serve as a capital text-book to any student preparing for an examination in surgical pathology.

Pathological Anatomy of Diseases. By NORMAN MOORE, M.D. London: J. & A. Churchill. 1889.—A small, accurate, and concise, but not very full, student's manual of morbid anatomy of 416 pp., with 110 figures.

Practical Morbid Anatomy. By H. D. ROLLESTON, M.A., M.D., F.R.C.P.; and A. A. KANTHACK, M.D., M.R.C.P. Cambridge University Press. 1894. pp. 240.—A capital account of the methods and course of procedure to be adopted in the post-mortem room. Practical, but thoroughly scientific throughout.

Section Cutting and Staining. By WALTER S. COLMAN M.B. Lond. London: H. K. Lewis. 1888. pp. 107.—A handy little guide to the preparation of normal and morbid histological specimens. Concise, and gives everything that is really necessary for ordinary class work.

BACTERIOLOGY.

The following works will be found useful to students either for examination purposes or for special study:—

Ptomaines, Leucomaines, and Bacterial Proteids. By Professor VICTOR C. VAUGHAN, Ph.D., M.D.; and Assistant Professor FREDERICK G. NOVY, Sc.D., M.D. Second edition. pp. 391. Revised and enlarged. Philadelphia: P. Blakiston, Son, and Co. 1891.—The best book in the language on bacterial products and poisons. Well up to date as regards methods. A new edition is in course of preparation.

Elementary Practical Bacteriology, including Bacteriological Analysis and Chemistry. By A. A. KANTHACK, M.R.C.P., and J. H. DRYSDALE, M.B., M.R.C.P. London: Macmillan and Co. 1895. pp. 181. Sixteen woodcuts. Price 4s. 6d.—An admirable guide to the elementary study of bacteriology. The work deals in turn with general and special methods of cultivation and examination of organisms, with the more important species of bacteria, then with bacteriological analysis and bacterial chemistry.

Practical Guide to the Demonstration of Bacteria in Animal Tissues. By Dr. H. KÜHNE. Translated and Edited by VINCENT DORMER HARRIS, M.D., London: Baillière, Tindall, and Cox. 1890. pp. 53; A practical little handbook.

Pathological Mycology. By G. SIMS WOODHEAD and ARTHUR W. HARE, M.D. Section I.: Methods. Edinburgh and London: Young J. Pentland. well-illustrated description of bacteriological containing also a bibliography of the more works. The first text-book on the subject in English, and somewhat out of date, but containing descriptions of the manipulative methods.

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Bacteriological Technology for Physicians. By Professor C. J. SALOMONSEN. Translated by WILLIAM TRELEASE. pp. 162, with 72 figures in the text. New York: William Wood and Co. 1890.—A most concise and accurate work on methods, well adapted to the use of the student, as the apparatus described as necessary is both simple and inexpensive.

Manual of Bacteriology for Practitioners and Students. With especial reference to Practical Methods. By Professor S. L. SCHENK. Translated by W. R. DAWSON, B.A., M.D. With an Appendix by the Translator. 100 Illustrations, partly coloured. London and New York: Longmans, Green, and Co. 1893.—A really good student's text-book.

Studies on Fermentation. By L. PASTEUR. Translation, with Notes, Index, and original Illustrations, by FRANK FAULKNER and D. CONSTABLE ROBB, B.A. London: Macmillan and Co. 1879. pp. 418, with 12 plates and 85 figures in text.—An admirable work and one that should be read by every advanced student of bacteriology.

On Fermentation. By P. SCHÜTZENBERGER. Fourth edition. London: Kegan Paul, Trench, Trübner, and Co., Ltd. 1891. pp. 331, with 28 Illustrations. (Vol. XX., International Scientific Series.)—A capital *résumé* of the subject for advanced students.

Bacteria and their Products. By GERMAN SIMS WOODHEAD, M.D. 1891. pp. 459, with 20 Photo-micrographs. London: Walter Scott.—Gives a description of the more important micro-organisms and the diseases they produce, and of fermentation; also a short history of bacteriology; includes an appendix dealing with bacteriological methods and with the classification and identification of micro-organisms. Is in every respect a first-class text-book, excellent in arrangement and clear and full in detail.

A Manual of Bacteriology. By GEORGE M. STERNBERG, M.D. New York: William Wood and Co. 1892.—A most complete and exhaustive work of 886 pages, of which over a hundred are devoted to bibliography. An encyclopædic, painstaking, and usually accurate *résumé* of the subject. Well illustrated with chromo-lithographic plates and 268 engravings. Too ponderous for the ordinary student, but very useful for the advanced worker.

Manual of Bacteriology.—By EDGAR M. CROOKSHANK, M.B. London: H. K. Lewis.—A well-written and well-illustrated treatise on the subject. A good text-book, especially for those who have no opportunity of attending a practical course. We are glad to note that a new edition will shortly be issued.

FORENSIC MEDICINE.

Manual of Medical Jurisprudence.—By A. S. TAYLOR. Edited by T. STEVENSON, M.D.—Twelfth edition. 1891. Fifty-six engravings. 14*s.* London: J. & A. Churchill. An authoritative text-book.

Principles of Forensic Medicine.—By W. A. GUY and DAVID FERRIER, M.D., F.R.S. Seventh edition just published. 16*s.* The work has been practically rewritten under the direction of Professor W. R. SMITH, M.D., F.R.S. Edin. London: Henry Renshaw.

Handbook of Forensic Medicine. By A. HUSBAND. Fifth edition. 1889. pp. 623. 10*s.* 6*d.* London: Baillière, Tindall, and Cox.—This is the best of the smaller books on the subject and will be found an excellent supplementary or introductory work to wider reading.

Text-book of Forensic Medicine and Toxicology. By ARTHUR P. LUFF, M.D., B.Sc. Lond. 2 vols. pp. 416 and 360. With numerous illustrations. London and New York: Longmans, Green, and Co.—This recently published work is one of the best on the subject.

Poisons: their Effects and Detection. By ALEXANDER WYNTER BLYTH, M.R.C.S. Third edition. Revised and Enlarged. 1895. 21*s.* London: Chas. Griffin and Co.—A well-known work, much in esteem with Toxicologists, partly as a book of reference, but chiefly as an excellent guide to the detection of poisons. The recent edition treats of the cadaveric alkaloids or ptomaines, and contains also a separate chapter on the connexion existing between the arrangement of the constituent parts of an organic molecule and physiological action.

MEDICAL ELECTRICITY.

Medical Electricity: a Practical Handbook for Students and Practitioners. By H. LEWIS JONES, M.A., M.D., F.R.C.P. Second edition. With illustrations, crown 8vo, 10*s.* 6*d.* London: H. K. Lewis.—This is the best work on the subject in a small compass with which we are acquainted. Of course, it does not pretend to go as fully into the subject as the treatises of Von Ziemssen, and Beard, and Rockwell; but as a thoroughly practical guide to electrical diagnosis, the choice, preservation, and use of electrical apparatus for medical purposes, and the method of application, it is unequalled. The illustrations, reproduced from photographs of patients with paralysis of particular muscles or groups of muscles are a most useful feature of the work.

MISCELLANEOUS.

The following works will prove of service:—

The Anatomy of the Nasal Cavity, and its Accessory Sinuses. By Dr. A. ONODI, Lecturer on Rhino-Laryngology in the University of Budapest. An atlas for practitioners and students, translated by ST. CLAIR THOMSON, M.D. Lond., F.R.C.S. Eng., M.R.C.P. Lond. Plates, small 4to, 6*s.* nett. London: H. K. Lewis.

Diseases of the Ear. Including the Anatomy and Physiology of the Organ, together with the treatment of the affections of the Nose and Pharynx which conduce to Aural Disease (a Treatise). By T. MARK HOVELL, F.R.C.S. Edin., M.R.C.S., Aural Surgeon to the London Hospital and Lecturer on Diseases of the Throat in the College, &c. 8vo, with 122 engravings. 18*s.* 1894. London: J. & A. Churchill.

A System of Dental Surgery. By Sir JOHN TOMES, F.R.S., and C. S. TOMES, M.A., F.R.S. Third edition, crown 8vo, with 292 engravings. 15*s.* 1887. London: J. & A. Churchill.

Dental Anatomy, Human and Comparative. A Manual. By CHARLES S. TOMES, M.A., F.R.S. Fourth edition. Crown 8vo, with 235 engravings. 12*s.* 6*d.* 1894. London: J. & A. Churchill.

Manual of Botany. Vol. I. Anatomy and Morphology.

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By J. REYNOLDS GREEN, Sc.D., M.A., F.R.S., Professor of Botany to the Pharmaceutical Society. Crown 8vo, with about 778 engravings. 7s. 6d. 1895. London: J. & A. Churchill.

BACTERIOLOGY AND THE MEDICAL CURRICULUM.

WHENEVER the addition of a new subject to the curriculum of a medical student is suggested it is very properly pointed out that the present day medical student has already a sufficient amount of work to do in the time at his disposal, even under the conditions afforded by the five years curriculum. At the same time it must be borne in mind that every advance made in the domain of pure science must be accompanied or followed by corresponding modifications in the practice of medicine and surgery, so that it may be necessary from time to time to reconsider and revise the course of study in order that the student may be trained to apply to the greatest advantage the latest knowledge obtained for the welfare of his patients. Bearing this in mind, and taking into consideration the enormous advances, or, at any rate, the great modifications, that have been suggested for the prevention and treatment of disease as the outcome of bacteriological investigation, it is now almost imperative that those who are engaged in the teaching and study of medicine should consider the position of bacteriology in medical education with regard (*a*) to students proper, and (*b*) to those students of more mature years known as post-graduates.

We think that the time has nearly come when it will be insisted upon that every medical student should receive not only some systematic instruction in the principles of bacteriology, but, more important still, should be put through a thorough, if short, course of practical laboratory instruction, in which the theories propounded in the class-room may be clearly illustrated. It may be asked, What is to be gained by the adoption of such a course? Apart from anything else, surely the precision and accuracy requisite for the successful carrying out of bacteriological experiments afford the best kind of technical and mental training, for the slightest error in manipulation or fault in judgment may render useless weeks of accurate work. Then, again, when a student comes to study surgery, especially the treatment of wounds, operative or accidental, he will find that he knows more concerning the true principles of antiseptic treatment if he has enjoyed a week's work in a bacteriological laboratory than he can pick up in six months' ward work, even under the most skilled and experienced teachers. There are so many points to be mastered concerning the actual operation or the nature of the wound, so many side issues to draw off the attention from the main principle, so much mechanical work to do in connexion with the actual dressing, that the fundamental principle on which so much of the success of the treatment depends is apt to be lost sight of. But if a student be placed in a bacteriological laboratory with a few gelatine tubes, a few pure cultures, and a microscope, an opportunity is offered to him of grasping the fact that in a tube containing gelatine, protected only by a thin layer of cotton wadding, there can be no development of organic life so long as this plug remains *in situ*; but that when a similar tube is inoculated with any single kind of organism, having seen the seed-tube, he is able to prognosticate with the utmost certainty what will be the nature of the growth and of the changes that will take place in the gelatine as soon as the inoculation has been made and the cotton-wadding plug reinserted. The student has before him a concrete fact. He knows that if the anthrax bacillus is sown the anthrax culture will make its appearance in the gelatine—there is the characteristic naked-eye growth, there are characteristic changes in the gelatine, whilst the microscopic appearances are also readily recognisable. From this it is but a step to an understanding of the fact that in order that the anthrax bacillus may appear in the blood of an animal the seed of the anthrax bacillus must be introduced from outside. When this is associated in his mind with the definite symptoms that characterise the disease the student has laid the foundation of a knowledge of antiseptic surgery which consists in keeping out specific organisms from the cultivation grounds that are offered by open wounds; and he has also grasped the principles that underlie the study of infective diseases, their causation, and their prevention. If not yet essential, it would be at least an exceedingly good thing if every student received a short course of instruction in practical bacteriology; and, although this would naturally fall under the head of practical pathology, the subject has such wide and intimate connexions with, and bearings on, other parts of the curriculum that it might with almost equal propriety be claimed by the chemist, the biologist, the physiologist, the hygienist, the surgeon, and the physician.

The medical practitioner is confronted at every turn by problems which, without some knowledge of bacteria, their life history, and of their effects on the human organism, he is unable to obtain a satisfactory solution; and nothing has been more striking in the evolution of modern medicine and surgery than the intimate relation which every day is being more and more closely traced between specific bacteria and specific forms of disease. Although, as we have already said, it may be impossible for the student to devote any lengthened period to the study of bacteriology, he should at any rate give it sufficient attention to enable him to have at his fingers' ends a certain amount of the technique ready for instant application. Many of the medical schools in the kingdom have already recognised this fact, and in London alone there are several well-equipped bacteriological laboratories where thorough course of instruction can be obtained by the medical student. Guy's Hospital, University College Hospital, and St. Bartholomew's Hospital, for example, have acquired special facilities for carrying on this work; but there is still much room for the more systematic teaching of the subject. In the large university and other schools, especially in Oxford, Cambridge, Victoria, Dublin, Edinburgh, Aberdeen, and Glasgow, the subject is more or less thoroughly taught, but not in all cases practically as is desirable. Bacteriology, however, is a subject of comparatively recent growth, and many who have left their student days behind but one or two had no opportunity of acquiring even the

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elementary knowledge of the subject, and now feel that it is necessary to make good this deficiency. For preventive medicine may be said to become truly objective when bacteria are recognised as the cause of disease; and there can be little doubt that the great success that has been attained in this country in connexion with our sanitation departments has been largely due to the fact that—sometimes unwittingly, but always very surely—our medical officers of health have aimed at bringing under control all those conditions that are favourable to the growth of micro-organisms. Dirt being matter in the wrong place, sanitary dirt may be looked upon as bacteria in the wrong place; and it is now the object of every sanitarian to bring these bacteria into their right position, receiving their aid in the disintegration of dead organic matter, but preventing them from developing in all places where their presence might be harmful. And how can the medical man, as the guardian of the country's health, be more fitly employed?

Post-graduation courses in bacteriology have, therefore, been in great demand for some years. They have always been successful wherever well conducted, and the demand for this kind of instruction is still increasing. In Berlin, Paris, and Vienna most admirably conducted courses are always going on, but the demand for places in them has become so great that graduates and students have to wait sometimes months and even years before they can be admitted. In London there are facilities for such study at King's College, where there is a regular class of instruction; also in the other medical schools above mentioned; whilst facilities for original investigation are offered at the laboratories of the Conjoint Board of the Royal Colleges of Physicians of London and Surgeons of England and at the British Institute of Preventive Medicine. Bacteriology, though somewhat neglected in this country hitherto, is gradually coming to take its proper position. That it will be popular with students is certain, as it is not only a subject of great value, but also one of extreme interest and even fascination.

ELECTRICITY IN MEDICINE.

THE services which electricity can perform in medicine and surgery are both numerous and varied, and now that they are becoming more generally appreciated by the profession it will be useful to pass in review the present position of medical electricity. This branch of therapeutics has been singularly unfortunate in that it has been grossly abused by people who have made of it a stalking-horse for rampant quackery, and in consequence of these abuses it has tended to fall into disfavour with a large section of the medical profession, and there have been but few men able and willing to make a scientific study of those physiological effects of electrical currents upon which alone their application to therapeutics can find a proper basis.

Electricity has been applied to medicine almost from its first discovery, and at the end of the last and at the beginning of the present century many reports of cures by its means were published. These early cases hardly repay an investigation; many of them seem to have been hysterical in nature, while others are so imperfectly described as to make their diagnosis difficult. Commencing with the electrostatic machine of those days we find that the galvanic battery and the induction coil were each in turn adopted as modes of treatment as soon as invented.

About the year 1850 REMAK in Germany and DUCHENNE in France began to devote themselves to the study of medical electricity, and the former clearly established the important vaso-motor effects which can be produced by the battery current, and applied them with great success to the treatment of joint affections such as rheumatism, rheumatoid arthritis, and sprains, both old and recent; while DUCHENNE in the field of neurology obtained very striking results by the induction coil in the treatment of many forms of paralysis, neuralgia, and other nervous affections.

During the past ten years the impetus given to the study of electricity by its commercial applications has created fresh interest in medical electricity, and there has been much improvement in the apparatus used, particularly in those details of construction which simplify the management of medical batteries and in the introduction of galvanometers for accurate measurement. Fresh methods of treatment have also been proposed, some of which are likely to prove of real value. On the Continent and in the United States electro-therapeutics, as some of its votaries love to call it, is making progress. In France there are two monthly periodicals devoted exclusively to medical electricity, and in America the Electro-therapeutic Association is busily attacking the question of apparatus in order to obtain a series of standard instruments and accessories for the use of its members. England, unfortunately, has as yet hardly begun to treat medical electricity seriously, although the electrical departments at some of the metropolitan hospitals are doing excellent work.

If we examine the physiological basis of medical electricity we find that the chief effects produced upon living tissues by electrical currents may be arranged as follows—viz., stimulating, vaso-motor, electrotonic, and electrolytic effects. All of these are useful in medical practice. The first or stimulating action is the one employed in a very large proportion of all electrical treatment, and it is useful, not merely for its local effects upon nerve and muscle, but also for its action upon the general nutrition of the body. The effects of electricity upon nutrition are at the present time occupying much attention, and general rather than localised electrification is now first in favour.

The high frequency apparatus of TESLA, the modern electrostatic machine of WIMSHURST, and the electric bath with the alternating current of the street mains all have advocates claiming each as the best means for producing general effects on nutrition. Good results have been obtained by all of these methods in such morbid condition as rickets, chlorosis, general debility after exhausting diseases, atonic dyspepsia, in neurasthenia, and in chronic rheumatism and rheumatoid arthritis, and it is probable that the choice of one of these methods is rather to be determined by convenience than by any essential difference existing between them, though we are inclined to give the first place to the electric bath with a properly regulated alternate current from the street mains, because with

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this form of treatment galvanometric measurements can be used to check the strength of the current employed.

The range of utility of localised electrification is also extending, and one very important point is becoming clear from the systematic work done in the electrical departments of the hospitals—namely, that patient electrical applications extending over long periods of time are able to do many things which might be thought unlikely or impossible by those who judge of electricity only by its immediate effects. There is not much which is instantaneous and there is nothing which is magical about the results of electrical treatment, and those who wish to benefit their patients by electricity must be willing to devote much time and patience to the treatment—for example, the gradual amelioration of symptoms in rheumatoid arthritis under electrical treatment is undoubted, but it is slow; so with infantile paralysis months or even years of treatment may be required for some cases, but the final results are better than can be obtained in any other way, and no case of this disease should be condemned as hopeless until after a long and persevering course of electrical treatment has been given. An objection to medical electricity which is often put forward is that the cases which have improved under the treatment would have improved equally well if nothing had been done. This is by no means a convincing argument, for it might be applied equally well to a large percentage of all therapeutic measures, and if it were true then much of all medical treatment would be superfluous. In the case of electricity, however, all those who have had any real practical experience of it can call to mind numerous instances in which morbid conditions, stationary for long periods when left to themselves, have at once commenced to improve when treated by electricity.

The electrolytic action of the current is of use rather in surgery than in medicine, and is of great service for many small operations, as, for example, the destruction of nævi; in what may be called cosmetic surgery it stands unrivalled as a means of taking away unsightly moles and removing superfluous hairs. In its indirect applications to medical and surgical practice as a means for heating cautery wires and of illuminating small incandescent lamps, electricity plays a humble but very useful part; and the introduction of the cystoscope has already considerably advanced our knowledge of the surgery of the bladder.

While electricity has suffered from neglect at the hands of some its progress has also been hampered by the too great enthusiasm of others. Some of those who have written upon the subject of medical electricity show a grievous indifference to the rules of logic and are far too careless in distinguishing between the *post hoc* and the *propter hoc*. This being the case, it is the duty of all those engaged in this branch of treatment to examine their results rigidly and to make use, so far as is possible, of scientific measurements and tests in recording the progress of their cases. Nor is it necessary to seek to extend unduly the scope of medical electricity so as to include all known disorders in its field of action, but rather to confine it to those in which its value is undoubted.

Of the fact that electrical treatment is at the present time practically restricted to the hands of experts there is doubt, but we do not think that there is any necessity t this should always be so, and it will be far better when ev medical man owns and uses a battery as part of his reg armamentarium. Then the self-styled unqualified "med electrician," male or female, will be no longer requi The employment of such people is a mistake of s importance, and it is a matter in which many practitio show very considerable laxity. Even from the lowest p of view—that of pecuniary profit—it is surely unwis place in the hands of unqualified persons work which w be far better done by members of the medical profes Besides, with unqualified medical electricians there security that they will not sooner or later undertak treatment of cases on their own account, promising cur selling electric or magnetic appliances, or advertising selves in the public prints. Indeed, these things are monly done. An aid to the progress of medical elec would, we think, be afforded by the more frequent int tion of questions upon this subject in the final examin because this, more than anything else, would te increase the general knowledge of the younger m of the profession upon a subject which has remarkable vitality under adverse circumstances certain to become an instrument of great value hands of general practitioners.

THE COST OF MEDICAL EDUCATION.

WE have for several years been in the habit of before our readers an estimate of the cost of medica tion in order that those interested in arriving at tl amount of this expense, which is by no means li such obviously necessary payments as fees, board, a ing, may have some trustworthy materials before which to found a decision about joining a medica We obtained our original information from perso munications as answers to a schedule of questio by the aid of the deans and registrars of th medical schools in the hands of a certain n selected students, who were requested to furni form of replies the data from which a general could be prepared for the guidance of others. the habits of the individual students necess a great, even a preponderating, effect upon tl the returns were sufficiently numerous to yield and it was easy to see that the average r more money in the metropolitan centres th provinces, and that the standard of living and maintaining a given standard varied from plac The most complete statement that we received a provincial student whose great economy in of personal expenses could only be looked u example to distantly follow. It would have to expect that every student could live so fr support himself and pay for rent and food (te clothes, washing, recreation, fees, and even " and "unaccounted" expenses out of the small of £65. But these headings will serve as a which we can discuss the subject gene mising that only general information can be g

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worth anything, as a medical student as much as any other young man can make his expenses as large as he wishes, while he can only reduce them to the point that is permitted by the circumstances under which he is studying.

The cost of *rent* is the first item to be considered, and naturally enough is a charge which varies greatly with the locality. A student who occupies rooms in desirable quarters of London will pay from £2 to £3 a week on this account alone, while in many large provincial centres lodgings are almost as expensive as they are in London. We may take it a student's rent for furnished apartments ought not to amount to more than one-quarter of the sum that he can fairly count upon receiving as income. If his parents can allow him £150 per annum (a large sum and one that is beyond the power of the parents of many medical students to set aside for one child) his rent should not be more than £1 a week. We are calculating that he will reside at the particular centre of education for about ten months during the year. In London it is not always easy to live near the hospital and obtain lodgings for much less than £1 a week, so that if a student can only expect £2 a week or £6 a month from his parents he is absolutely compelled to spend an imprudent proportion of his income in rent. Clearly none of this applies either to the students who live with their parents, or those who are studying at a university for an arts degree concurrently. Nothing more definite on this subject can be said than that a careful man can live as a medical student on £80 per annum, if he does not spend more than 10*s*. a week on his lodgings; but he will not always find it easy to obtain the lodgings, and every shilling above this weekly sum will make it very hard indeed for him to make both ends meet.

Referring to other centres, the rent of lodgings in Edinburgh is considerably less than in London, but in Dublin it is about the same as in the English metropolis. In Edinburgh there is a sort of residential club known as University Hall, which affords facilities of social intercourse and mutual aid, as, for example, in the lending of books, which is practised systematically amongst the resident students. In addition to these amenities, the institution secures them lodgings at a very moderate monthly rent. Glasgow lodgings again run at about the same level, whilst in Birmingham rent is cheaper still. The cheapest district of which we have any full information is Aberdeen, where both in the matter of rent and of food we have heard of an economy that is altogether exceptional, 3*s*. 6*d*. a week in summer and 4*s*. 6*d*. in winter, the additional shilling representing the cost of fuel to cope with the Scottish winter. In towns like Cork and Leeds the average rises above this limit, but 15*s*. a week is a somewhat high charge. In the Irish provincial towns the rent of rooms is very low, 5*s*. and 6*s*. being by no means below the average. A somewhat higher rent is asked, but still ranging about 10*s*. a week, in English provincial towns, such as Stockton, or Rugby, or Devonport; but residence in these involves constant railway travelling, and would hardly be adapted for the purposes of a student's career, unless some special considerations influenced the decision with which fine questions of comparative expense would not come into competition. The lodging accommodation afforded by residential colleges, hospitals, and the like institutions should be mentioned. But concerning these a word may suffice. The advantages of residence in a college are manifold, but they are chiefly of the intellectual and social kind. The cost is not less than that of private lodgings thriftily selected. There may also be in some instances impatience on the part of the student of the control imposed by the regulations, which are necessarily devised for the orderly conduct of such institutions. Nevertheless, the select society, and even the inevitable restraint, of such institutions are of great service, especially to young students, who have reason to dread nothing more than solitude and an irresponsible control of any considerable proportion of their own time. On the other hand, the cost of board and lodging in such institutions is not greater than the average cost of the same accommodation in private lodgings in their neighbourhood. A plan that involves no inordinate expense is to place a student in the house of a medical practitioner in the neighbourhood of the school which he is attending. It will be found that when the educational facilities thus placed in his way are taken into account, in addition to the mere commercial value of his board and lodging, the arrangement is usually a very economical one. The opportunities for doing this are, of course, not unlimited, but they are sufficiently numerous to merit mention here.

Passing to the next heading, that of *food*, we may observe that here again nothing can be said precisely, but we can indicate the minimum sum that can be spent, and variation from this sum must be dictated by the student's purse. The prevalence of high prices or of low prices, as the case may be, affects such figures very little, and we may say that £30 is, we consider, in London, the least sum that will meet necessary expenditure on food. This again refers only to ten months in the year.

Clothes cannot properly be chargeable to the education account, since the student would in any case be clothed, and the amount expended upon his wardrobe will be determined by his personal habits, and in no sense by his professional studies or occupations.

Lastly, with regard to *fees*, the composition fee which is published by the various schools, and is in a sense a comprehensive charge, may easily be supposed to be more comprehensive than it is. A glance at our tables will show exactly how it is arrived at and what it covers. Broadly it may be said to include all the professorial fees; but it does not include *books* — that is a matter of course. Equally it does not include *instruments*, and these two items together cannot be fairly written down at less than £8 a year in an ordinary case. Many circumstances may occur to falsify this estimate. A successful student may largely supply himself with books by prize winning, or access to a suitable library may minimise his personal requirements in this respect. With instruments, bones, parts for dissection, and the like, the case is somewhat different, and the expenditure under these heads can only be avoided at the expense of the student's education. A niggard hand in such matters makes therefore a grievous mistake, and this should be clearly appreciated at first, otherwise the temptation to undue parsimony will be supported by a grudging mind. Another item which is for very good reason omitted from the composition payment is the *charge for examination fees*. The reason of this

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will be at once apparent if it is only considered that the teaching bodies and the examining bodies are distinct, and that whereas the composition fee represents a sum payable to institutions of the former class, the examination fees are receivable by institutions exercising the examining function. It will be hard to quarrel with an arrangement which is justified by the importance of paying the fee to the right person. Less obvious, but of the same kind, is the explanation of the circumstance that *tutorial fees* are not included in the composition. Many students pass through their curriculum by the aid of lectures and professorial instruction only. This is very possible when only pass examinations are attempted; but for competitive examinations additional instruction is generally an indispensable preparatory. Such additional instruction must of course be paid for, but its occasional character prohibits its inclusion with the indispensable items in the comprehensive payment.

To sum up, we have this position: The minimum sum that a student must be prepared to spend in London during a year on board and lodging is £60, though £50 will cover his expenditure in these directions in other centres, and less if he is careful. He can save 20 per cent. of this expenditure by living with a fellow-student to their mutual benefit. He must be prepared to spend £10 more at least in books, or instruments, or both. He will be almost the exception if he does not incur one or two extra liabilities in the way of special tuition during his five years' career. He will require another £10 a year as pocket money, and to these figures must be added his fees and the price of his clothes. We do not think that in London any young man should be asked to attempt to maintain himself entirely and pay all necessary fees and expenses of education as well upon a less sum than £100 a year. That many receive less and, to their infinite credit, make it suffice and crown the self-denial of their youth with a success that is sweetened by the struggle to obtain it is undeniable; but many more of their fellow-students receive larger allowances and find them inadequate. Upon individual instances, with their innumerable reasons for special treatment, we do not attempt to dwell, and we desire our readers to remember that, roughly speaking, the figures which we now give for London are a little, perhaps 15 per cent., in excess of those that with the practice of economy would be found to apply to the provinces, Scotland, and Ireland. Our advice is very general and is as follows: If a student cannot command personally or by allowance from his parents £100 per annum, and look to receiving it regularly for at least four out of the five years of his curriculum, we consider that he is rash in these exacting days to embark upon our profession.

SHORTHAND IN MEDICINE.

FROM the time when man first began to express his ideas by means of signs and symbols he must have seen the need of doing so in as brief and expeditious a manner as possible, and this is clearly shown in the evolution of alphabets. It is not known when the art of short writing first originated although some have credited the Egyptians with being its inventors, but it is certain that abbreviated writing or tachygraphy was known to the Romans, and probably to the Greeks at an early date. From the tenth century until nearly the end of the sixteenth all knowledge of the art seems to have been lost, but in 1588 "Characterie: an Arte of Shorte, Swifte, and Secrete Writing by Character, Inuented by Timothie Bright, Doctor of Phisicke," was published. Since that time several good systems have been invented, but phonography—almost the latest—is now in more general use than any of its rivals. One of the first uses to which shorthand was put was, of course, the recording of oratory; but it has been, and is, used in almost all walks of life, the commercial world being perhaps the first to take full advantage of its use in the saving of time and in the expedition of labour. Of its utility in the learned professions there can be no doubt. Amongst lawyers and divines it has been in use for many years, and there are those eminent in the medical profession who attribute much of their success to the fact that they possess a knowledge of shorthand.

To the practitioner who wishes to rapidly take notes of cases or to record facts in his note-book which he has gleaned in reading or by observation, shorthand will be found, not only to greatly economise time, but will change the laborious task of recording notes in longhand into a work of pleasure. Its use by the student is of equal value. In the lecture theatre, in the demonstration rooms, by the bedside, in the out-patients' department, and in a variety of other ways the use of shorthand will enable him to record his experience in less time and in a more convenient manner than by the use of longhand, and, in addition, the information will be ready to his hand when wanted. There is also another advantage, and this not a small one, which the study of phonography confers. Rightly used it has an educational value of its own. In acquiring any kind of knowledge two of the most important habits to develop are attention and method, and both are developed and strengthened by an intelligent use of phonography.

A knowledge of shorthand is one of the greatest helps that a student can have in the study of any profession but in that of medicine, perhaps more than in any other, much will depend upon the way in which the art is used, for unless it is used intelligently it may prove to be one of his greatest hindrances. For example, we can conceive of nothing more useless to the student than a note-book encumbered with his crude attempts to take a verbatim report, and this is generally what the inexperienced person does, or rather attempts to do, with his newly acquired art. Notes such as these are not only useless and a waste of time, but the subsequent endeavour to extract the grain from the chaff is likely to lead him to abandon with disgust what with a little instruction would prove a valuable possession. It is unnecessary here to point out the various ways in which shorthand can be used in medicine, especially as this has been done in two little books published under the auspices of the Society of Medical Phonographers:[1] but apart from its work in mere recording there is another way in which it will be found to be of

[1] The Use of Shorthand by the Student. The Use of Shorthand by the Practitioner. Both issued by the Society of Medical Phonographers and sold by Sir I. Pitman and Sons, 1, Amen-corner, London, E.C., and New York. Price 6d. each.

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inestimable value. A student may sometimes find it convenient to rearrange the facts contained in his text-book in a manner more congenial to his mental tastes and habits, and shorthand provides a ready means of doing this. It is not expected that a student will copy out the whole of a text-book to suit his own ideas, this would be neither wise nor profitable; but there may be certain methods of tabulating facts which he has been in the habit of using in his preliminary studies, and shorthand will enable him to rearrange his facts in a manner best suited to his own ideas. A book of this kind would have the left-hand page blank for supplemental notes, while the right-hand page would contain the tabulated facts in phonography, with headings and sub-headings in longhand. Such a book properly constructed forms a most useful catalogue of facts presented in a manner most useful for review.

As an example of the value of the art in this connexion the author of one of the books referred to gives an instance of a student at the University of London who took notes of the lectures on systematic medicine given by the present President of the College of Physicians, Sir J. RUSSELL REYNOLDS. These were relied upon for systematic knowledge of medicine; no systematic text-book was used, and to these notes alone, so far as systematic reading was concerned, he owed the gold medal which was given at the M.D. examination. Of course, in this case much depended upon the ability of the teacher whose methodical and accurate style is reflected in the notes of the student, and when the lecturer goes from point to point in logical order the notes taken by the student will be of the utmost service. As has already been said, much depends on the way in which shorthand is used, and in "The Use of Shorthand by the Student" an endeavour is made to furnish the student with the necessary information to enable him to use his shorthand intelligently, and the examples by which it is illustrated bear the stamp of the practical man and teacher. The student who makes himself thoroughly acquainted with the advice and examples in this book will find himself in possession of a power which will help him to raise himself far above his fellows who do not possess this knowledge. Indeed, as the author remarks: "Of two students of equal ability, character, and knowledge, of whom one knows shorthand and the other does not, it is certain that the one who knows shorthand will far exceed the other who does not." Excellent examples are given of notetaking in almost every department of the student's curriculum, and the book is one we can thoroughly recommend not only to students of medicine, but to the student of any branch of science. But here a word of warning is necessary. Unless the student can read and write shorthand with facility at the commencement of his studies, he must not expect to obtain the help from it here indicated. It is possible that he may be able to devote say half an hour each day to its acquisition, and if this is done under the guidance of a competent teacher phonography can soon be mastered, but the time which should be devoted to his professional studies should not be encroached upon. If he is quite ignorant of the art when he first enters upon his medical studies it would be wise to wait till the vacation before attempting to learn shorthand. The other little book to which we have alluded is perhaps after all the most important; for it is after the student days are over and the medical man is fairly launched in his profession that shorthand can be utilised in its highest degree of power. This is admirably brought out in "The Use of Shorthand by the Practitioner." In this little work the best way of making and storing notes for future use, based on the experience of medical phonographers whose extensive use of shorthand gives weight to their opinions, is clearly pointed out; specimen pages of actual case-books &c. are given, together with some valuable hints on indexing.

As to the acquisition of phonography it may be self-taught by those who have the necessary ability and energy, but it is far better to obtain the services of a competent teacher. Many excellent text-books and manuals of instructions are published, and there is quite a library of books issued in the phonographic characters, but there is still room for another which might bear the title of "Pitfalls of the Self-learner," and until this is published it is unwise for the student to attempt to acquire the system without at least the assistance of one who already knows phonography thoroughly.

ALLEGED CHOLERA AT GRIMSBY.

THE news as to alleged cholera at Grimsby has revived the suspicion which in 1893 was associated with the sanitary administration of that borough. Happily, though two cases which clinically resembled cholera have terminated fatally, there appear for the moment to be no further attacks of an equally suspicious character; and the material supplied to Dr. Klein for bacteriological examination has not afforded positive evidence that the disease in question was Asiatic cholera. But the attitude of the town council can hardly fail to cause apprehension. Apparently remembering the significance of diarrhœa in connexion with the beginnings of the 1893 epidemic, the notification of this disorder was in progress in the borough, and during the third week of August an alarming increase took place. The town council thus received just the information that they sought, but when it came they actually stopped all further diarrhœa notification, and this at the very instant that it had become of the highest value to them. What could have induced a sanitary authority to take so retrograde a step at such an important juncture remains unexplained; but the fact that they did act thus may be accepted as a sufficient explanation of their decision to exclude reporters at a later meeting held after the visit of Dr. Theodore Thomson of the Local Government Board, at which meeting the notification was apparently ordered to be resumed. So far as we can learn the case of fatal choleraic diarrhœa—or whatever it was—remained unknown to the council almost up to the time of death by reason of this unaccountable action in stopping their sources of information. Fortunately, Grimsby will not be allowed to hide matters thus, for it appears that as early as Thursday of last week the Local Government Board became suspicious as to what was going on there, and next day a medical inspector arrived unexpectedly on the spot. He still remains there, and it is to be hoped that he will see that the town council not only act efficiently, but act openly in regard to a matter that is of importance to England as a whole. Recrudescence of cholera in Grimsby is a thing that might well occur in a season such as we have recently experienced, and we earnestly trust that no trade or other considerations will be allowed to stand in the way of the earliest and most efficient action should any further indications of danger arise. Hull also received the visit of a medical inspector last week on account of some excess in diarrhœa mortality, but, as has been the case before, an efficient administration has thus far been able so to deal with the diarrhœal prevalence that no anxiety appears to exist as to the future.

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SESSION 1895-96.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following are the General Medical Council's Regulations in reference to the registration of students in medicine:—

Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Every person desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study*. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. To the several qualifying bodies it is recommended that, in the case of candidates who commenced study after Jan. 1st, 1892, the final examination in Medicine, Surgery, and Midwifery should not be passed before the close of the fifth year of medical study. The questions of ante-dating and exceptional recognition of Preliminary Examinations not on the Council's list are now dealt with by the Students' Registration Committee, which meets in May and November and reports all such cases to the Council.

The Preliminary Examination in General Education, required to be passed previously to registration as a Medical Student, shall be as follows:—

"1. English language, including grammar and composition. 2. Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors. 3. Mathematics, comprising (*a*) arithmetic, (*b*) algebra, as far as simple equations, inclusive; (*c*) geometry, the subject matter of Euclid, Books I., II., and III., with easy deductions. 4. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) [illegible]."

The Council will not in future accept any certificate of pass in Preliminary Examination in General Education unless the whole of the subjects included in the Preliminary Examination required by the Council for Registration of Students of Medicine have been *passed at the same time*, but this rule shall not apply to those who, previously to Jan. 1st, 1892, have passed a part of any Preliminary Examination recognised by the Council; provided that a certificate of having passed a University Examination required for graduation in Arts, or a Senior or higher Local University Examination, or a Senior Grade Examination of the Intermediate Education Board of Ireland, or the Leaving Certificate Examination (Honours and Higher Grade) of the Scottish Education Department wherein the specified subjects of General Education are included, may be recognised for the purpose of registration.

Professional Education.—1. "The course of professional study after registration should occupy at least five years, conditionally."

2. "The first four of the five years should be passed at a School or Schools of Medicine recognised by any of the Licensing Bodies mentioned in Schedule A of the Medical Act (1858), provided that the first year may be passed at a University or Teaching Institution, recognised by any of the Licensing Bodies, where the subjects of Physics, Chemistry, and Biology are taught."

3. "Graduates in Arts or Science of any University recognised by the Medical Council who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an examination in these subjects for the degrees in question, should be held to have completed the first of the five years of medical study."

4. "The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a Registered Practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities."

5. "The Regulations of the Examining Bodies and of the schools should be so framed that attendance on systematic courses may be concluded at the end of the fourth year of study, so as to permit of the student devoting the fifth year to clinical work, as defined in Resolution 4."

6. "The regulations requiring attendance on systematic Courses of Lectures ought not to require attendance on more than three Lectures weekly in any one Course."

7. "Due time should be set aside for Practical Work in the various subjects. Attendance on a Practical Course should be carefully ascertained and certified. By a Practical Course is understood one in which work is done by the student himself, under the direction of a duly qualified teacher."

8. "In order to promote a practical system of Clinical Teaching the Regulations should specify 'Hospital Practice with Clinical Instruction.' Ample time should be set aside for Hospital Work, and means should be taken to ascertain regularity of attendance in the Wards and Out-patient Departments. Every candidate for the Final Professional Examination at the end of the fifth year should be required to give evidence that he has had sufficient opportunities of practical study."

This Resolution relates to such offices as the following: Clinical Medical Clerkship and Surgical Dressership—either for in- or out-patients; Obstetrical Clerkship; post-mortem Clerkship.

9. "No qualification in Medicine ought to be granted without evidence of clinical instruction in infectious diseases."

Professional Examination.—10. "With the view of securing attention to practical work in Education, the time devoted to the practical part of the examinations in all the subjects should be extended."

11. "The examination in the Elements of Physics (including Mechanics), Chemistry, and Biology should be passed before the beginning of the second winter session." With references to this Resolution the Council, on Dec. 4th, 1894, adopted the following Resolution:—

"A student who has previous to registration attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any University, School of Medicine, or Teaching Institution recognised by any of the Licensing Bodies, may without further attendance be admitted to examination in these subjects; provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study."—*Minutes*, vol. xxxi., p. 163.

12. "Antecedent to the Final Examination there should be three Professional Examinations, arranged in such manner as to secure due continuity and sequence of study."

13. "All examinations, except the Final Examination in Medicine, Surgery, and Midwifery, should be passed before the final year intended for clinical work."

14. "The Final Examination in Medicine, Surgery, and Midwifery must not be passed before the close of the fifth year of medical study."

15. "The system of compensation as between the three different subjects of the qualifying examinations—viz., Medicine, Surgery, and Midwifery—is contrary to the intention of the Medical Act (1886), and the Council directs the attention of the several medical authorities to this fact."

16. "The marks for the written and oral examinations in Medicine and Surgery at the Final Examination should not exceed those for the clinical and practical portions of the examination."

17. "Seeing that the practice of different authorities varies on the question whether a student who fails to satisfy the Examiners in each of the several subjects of Medicine, Surgery, and Midwifery should be referred on all of them, or only on those in which he fails, the Council recommends that some general principle should be adopted with reference to this question; and suggests that a percentage of not less than 60 marks on each of any two subjects—supposing that the pass requirement be 50 per cent.—should exempt from re-examination in those two subjects."

18. "The Council recommends to the Examining Bodies the use of a percentage system of marks; and, for facilitating the work of the inspectors appointed by the Council, the adoption of a uniform pass mark of 50 per cent."

19 "With regard to the Course of Study and Examinations which persons desirous of qualifying for the medical

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profession shall go through in order that they may become possessed of the requisite knowledge and skill for the efficient practice of the profession, the Council now resolves that, in its opinion, the following conditions ought to be enforced without exception on all who commence their medical studies at any time after Jan. 1, 1892 :—

(*a*) "With the exceptions provided for under Resolution 3, the period of professional study, between the date of registration as a medical student and the date of Final Examination for any diploma which entitles its bearer to be registered under the Medical Acts, must be a period of *bonâ-fide* study during not less than five years:

(*b*) "In every course of professional study and examinations the following subjects must be contained: (i.) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity; (ii.) Chemistry, including the principles of the science and the details which bear on the study of Medicine; (iii.) Elementary Biology; (iv.) Anatomy; (v.) Physiology; (vi.) Materia Medica and Pharmacy; (vii.) Pathology; (viii.) Therapeutics; (ix.) Medicine, including Medical Anatomy and Clinical Medicine; (x.) Surgery, including Surgical Anatomy and Clinical Surgery; (xi.) Midwifery, including Diseases peculiar to Women and to new-born Children; (xii.) Theory and Practice of Vaccination; (xiii.) Forensic Medicine; (xiv.) Hygiene; (xv.) Mental Disease."

*** It is to be understood, as regards the above-mentioned subjects, that the Council offers no opinion as to the manner in which the subjects should be combined or distributed for purposes of teaching or examination.

(*c*) "At successive stated times during the first four years of the course of study all students must pass such intermediate examinations as will test their proficiency in the successive earlier branches of medical education, and, while tending to promote a due sequence in the medical studies, will also tend to lighten the final examination of matters which can properly be spared from it."

W. J. C. Miller, B.A., Registrar of the General Council and of the Branch Council for England, 299, Oxford-street, London, W.—James Robertson, Registrar of the Branch Council for Scotland, 1, George-square, Edinburgh.—R. L. Heard, M.D., Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

I.—UNIVERSITIES IN THE UNITED KINGDOM.

The following is a list of Examining Bodies whose examinations in general education fulfil the conditions of the Medical Council as entitling to registration as a medical or dental student the applicant producing satisfactory evidence that he has passed them :—

University of Oxford.—Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects—Greek, French, German. Senior Local Examinations; Certificate to include Latin and Mathematics. Responsions. Moderations. Examination for a degree in Arts.

University of Cambridge.—Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects—Greek, French, German. Senior Local Examinations; Certificate to include Latin and Mathematics. Higher Local Examinations. Previous Examination. Examination for a degree in Arts.

University of Durham.—Examination for Certificate of Proficiency. Examination for students at the end of their first year. Examination for a degree in Arts.

University of London.—Matriculation Examination. Preliminary Scientific (M.B.) Examination. Examination for a degree in Arts or Science.

Victoria University.—Preliminary Examination; Latin to be one of the subjects. Entrance Examination in Arts, to include all the subjects required.

University of Wales.—Matriculation Examination; the whole of the Examination to be passed at the same time, and to include one of the optional subjects required by the Council.

University of Edinburgh.—Local Examinations (Junior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects—Greek, French, German. Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects—Greek, French, German. Preliminary Examination for Graduation in Science or Medicine and Surgery. Examination for a degree in Arts.

University of Aberdeen.—Local Examinations (Junior Certificate); Certificate to include all the subjects required. Local Examination (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects—Greek, French, German. Preliminary Examination for Graduation in Medicine or Surgery. Examination for a degree in Arts.

University of Glasgow.—Local Examinations (Junior Certificate); Certificate to include all the subjects required. Local Examinations (Senior Certificate); Certificate to include English Literature. Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects—Greek, French, German. Preliminary Examination for Graduation in Medicine or Surgery. Examination for a degree in Arts.

University of St. Andrews.—Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects—Greek, French, German. Local Examinations (Junior Certificate), to include all the subjects required. Preliminary Examination for Graduation in Medicine or Surgery. Examination for a degree in Arts.

University of Dublin.—Public Entrance Examination. General Examination at end of Senior Freshman year. Examination for a degree in Arts.

Royal University of Ireland.—Matriculation Examination.

Oxford and Cambridge Schools Examination Board.—Certificate to include the following subjects, an adequate knowledge of English Grammar and Orthography, as shown in the course of the examination, to the satisfaction of the examiners, being held as conforming to the requirements of the Medical Council in regard to those subjects: (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid; (*d*) Latin, including Translation and Grammar; (*e*) Also one of these optional subjects—Greek, French, German.

II.—OTHER BODIES NAMED IN SCHEDULE (A) TO THE MEDICAL ACT.

Apothecaries' Society of London.—Examination in Arts.[1]

Royal Colleges of Physicians and Surgeons of Edinburgh.[2]—Preliminary (combined) Examination in General Education.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary Examination in General Education.[2]

Royal Colleges of Physicians and Surgeons in Ireland.—Preliminary Examination; Certificate to include Mathematics.[1]

III.—EXAMINING BODIES IN THE UNITED KINGDOM NOT INCLUDED IN SCHEDULE (A) TO THE MEDICAL ACT, 1858.

College of Preceptors.—Examination for a First Class Certificate, or Second Class Certificate of First or Second Division, Algebra, Geometry, Latin, and either a Modern Language, or Greek, or Logic, having been taken. Preliminary Examinations for Medical Students.

Intermediate Education Board of Ireland.—Junior Grade Examination; Middle Grade Examination; Senior Grade Examination (Certificate in each case to include all the subjects required).

Educational Institute of Scotland.—Preliminary Medical Examination.

Scotch Education Department.—Leaving Certificates in each Grade and in Honours.

IV.—INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

"The Certificates from Indian, Colonial, and Foreign Universities and Colleges must contain evidence that the Examination has been conducted by or under the authority of the Body granting it, includes all the subjects required by the General Medical Council, and states that all the subjects of Examination have been passed in at one time; and copies of the form of the required Certificate will be supplied by the Registrar of the Council for the purpose. In the case of Natives of India or other Oriental countries, whose vernacular is other than English, an Examination in a Classic Oriental Language may be accepted instead of an Examination in Latin."

REGULATIONS
OF THE
MEDICAL EXAMINING BOARDS IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

THERE are two degrees in Medicine, B.M. and D.M., and two degrees in Surgery, B.Ch. and M.Ch.

The B.M. and B.Ch. degrees are granted to those

[1] The Council has recommended that these examinations be discontinued.

[2] These examinations are conducted by the Educational Institute of Scotland.

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members of the University who have passed the Second Examination. Graduates in Arts (B.A. or M.A.) are alone eligible for these two degrees. In order to obtain the degrees of B.M. and B.Ch. the following examinations must be passed:—1 Preliminary subjects: Mechanics and Physics, Chemistry, Animal Morphology and Botany. 2. Professional. (*a*) First Examination: Subjects—Organic Chemistry, unless the candidate has obtained a first or second class in Chemistry in the Natural Science School; Human Physiology unless he has obtained a first or second class in Animal Physiology in the Natural Science School; Human Anatomy, and Materia Medica with Pharmacy. (*b*) Second Examination: Subjects—Medicine, Surgery, Midwifery, Pathology, Forensic Medicine with Hygiene. The approximate dates of the examinations are as follows:—Preliminaries—Mechanics, Physics and Chemistry, November and June; Animal Morphology and Botany, December and March; Professional (First and Second B.M.), June and December.

The degree of D.M. is granted to Bachelors of Medicine of the University—(1) who took the degree of B.M. previously to the end of Trinity Term, 1886, provided they have spent three years in the practice of Medicine after taking that degree, and have composed a dissertation on some medical subject approved by the Regius Professor of Medicine, before whom it must be read in public; (2) who took the degree of B.M. subsequently to the end of Trinity Term, 1886, provided they have entered their thirty-ninth term and have composed on some medical subject a dissertation which is approved by the professors in the Faculty of Medicine and examiners for the degree of B.M. whose subject is dealt with. A book published within two years of the candidate's application for the degree may be substituted for a dissertation. The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term, who are members of the surgical staff of a recognised hospital, or have acted as Dresser or House Surgeon in such a hospital for six months, and who have passed an examination in Surgery, Surgical Anatomy, and Surgical Operations. This examination is held annually, in June, at the end of the Second B.M. Examination.

The First Examination for the degrees of B.M. and B.Ch. may be passed as soon as the Preliminary Scientific Examination has been completed. The subjects of this examination may be presented separately or in any combination or in any order, provided Anatomy and Physiology be passed together.

The Second Examination may be passed after the completion of the first. Before admission to the Second Examination candidates must present Certificates of instruction in Infectious and Mental Diseases, and of attendance on Labours, and of proficiency in the practice of Vaccination.

Scholarships, &c.—Scholarships in some branch of Natural Science (Chemistry, Physics, Biology) of the average value of £80 per annum, tenable for four years and renewable under certain conditions for a fifth year, as well as Exhibitions of a less annual value, are awarded after competitive examination every year by some, from time to time by other, Colleges. Notices of vacancy, &c., are published in the *University Gazette*. In February there is competed for annually, by those who, having obtained a first-class in any school (Moderations or final) or a Scholarship or Prize open to general competition in the University, have passed all the examinations for the degree of B.A., one Radcliffe Travelling Fellowship. It is tenable for three years, and is of the annual value of £200. The examination is partly scientific, partly medical. The holder must travel abroad for the purpose of medical study. A Rolleston Memorial Prize is awarded once in two years to members of the Universities of Oxford and Cambridge of not more than ten years' standing for an original research in some Biological subject, including Physiology or Pathology.

More detailed information may be obtained from the University Calendar; the Examination Statutes, 1894, which contain the official schedules of the several subjects of examination in both Arts and Medicine; from the Student's Handbook to the University; from the Regius Professor of Medicine; and from the Professors in the several departments of science.

UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep nine terms by residence in the University. He must pass the Previous Examination in Classics and Mathematics, which may, and should if possible, be done immediately on coming into residence in October, or, what is better, obtain exemption through the Oxford and Cambridge Schools Examination Board or the Cambridge Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may, as nearly all students now do, proceed to take a degree in Arts, either continuing mathematical and classical study and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes. The Natural Sciences Tripos is the most appropriate, as some of the subjects are practically the same as those for the first and second M.B. examinations.

For the degree of *Bachelor of Medicine (M.B.)* five years of medical study are required. This time may be spent in Cambridge or at one of the recognised Schools of Medicine. The first three or four years are usually spent in Cambridge, the student remaining in the University till he has passed, say, the examination for the Natural Sciences Tripos and the first and second examinations for M.B. Cambridge being now a complete School of Medicine, all the requisite lectures and hospital practice may be attended here, and many students remain to attend lectures and hospital practice until they have passed the first part of the third examination for M.B. The supply of subjects for Dissection, Practical Surgery, &c., is unusually abundant.

There are three examinations for M.B. The *first* in Chemistry and other branches of Physics, and in Elementary Biology. These parts may be taken together or separately. The *second* in Human Anatomy and Physiology and in Pharmaceutical Chemistry. These may be taken together or separately. The *third* may also be taken in two parts viz., (1) Principles and Practice of Surgery (with Operative and Clinical Surgery) and Midwifery and Diseases of Women; and (2) Pathology, Principles and Practice of Medicine, Elements of Hygiene, Medical Jurisprudence and Mental Diseases. The examinations are partly in writing, partly oral, and partly practical, in the hospital, in the dissecting-room, and in the laboratories. An Act has to be kept in the Public Schools, by the candidate reading original dissertation composed by himself on some subject approved by the Regius Professor of Physic.

As Operative and Clinical Surgery now form parts of the third M.B. examination candidates who have passed the parts of that examination are admitted to the degree of *Bachelor of Surgery (B.C.)* without separate examination and without keeping an Act.

The degree of *Doctor in Medicine* may be taken four years after that of M.B., or four years after that of B.C. An Act has to be kept, consisting of an original thesis sustained in the Public Schools, with *viva-voce* examination and an extempore Essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine or State Medicine.

For the degree of *Master in Surgery (M.C.)* the candidate must have passed all the examinations for B.C. and is required to pass an examination in Surgical Anatomy, Surgical Operations, Pathology and the Principles and Practice of Surgery, and to write an extempore Essay on a Surgical Subject. Before he can be admitted to this examination two years at least must have elapsed from the time when he completed all required for the degree of B.C.

An abstract of the Regulations and Shedules of the examinations in Chemistry, Physics, Biology, and Pharmacy may be obtained upon sending a stamped and addressed envelope to the Registrary, Cambridge. Full information is contained in the *Cambridge University Calendar*.

UNIVERSITY OF LONDON.

The *Matriculation Examination*.—Candidates for degree in this University must have passed the Matriculation Examination. No exemption either from Matriculation or from subsequent examinations is allowed on account of degrees obtained at other Universities or of examinations of other examining bodies that may have been passed. The examinations take place twice in each year—on the first Monday in January and the second Monday in June, but may be held not only at the University of London

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under special arrangement, in other parts of the United Kingdom or in the colonies. Every candidate must, not less than five weeks before the commencement of the examination, apply by postcard to the Registrar for a form of entry, which must be returned not less than four weeks before the commencement of the examination, accompanied by a certificate showing that the candidate has completed his sixteenth year, and by his fee for the examination. A certificate from the Registrar-General in London or from the superintendent registrar of the district, or a certified copy of the baptismal register, is required in every case in which it can possibly be obtained. In other cases a declaration of the candidate's age, made before a magistrate by his parent or guardian, or by the candidate, if of full age, will be accepted. As candidates cannot be admitted after the list is closed, any candidate who may not have received a form of entry within a week after applying for it should communicate immediately with the Registrar, stating the exact date of his application and the place where it was posted. Every candidate must pay a fee of £2, and if he withdraws his name, or fails to present himself at the examination, or fails to pass it, the fee shall not be returned to him, but he shall be allowed to enter for any subsequent matriculation examination upon payment at every such entry of an additional fee of £1, provided that he comply with the other regulations. Candidates must show a competent knowledge of: 1. Latin. (The subjects for January, 1896: Ovid, Heroides, I., II., III., V., VII., XII.; for June, 1896: Cicero, De Amicitia and In Catilinam III.) 2. One of the following languages: Greek, French, German, Sanskrit, Arabic. (No credit will be given for more than one, and candidates desiring to be examined in the last two must give two months' notice to the Registrar.) The Greek subjects for January, 1896: Xenophon Anabasis, Book VII.; for June, 1896: Euripides, Andromache. 3. The English Language, English History, and Geography. 4. Mathematics (Elementary). 5. Mechanics (Elementary). 6. One of the following branches of science: Chemistry, Heat and Light, Magnetism and Electricity, Botany. (No credit will be given for more than one of these subjects. The examination in Botany is only held in the United Kingdom. Candidates in any one of the optional Branches of Science will find it an advantage to have obtained some elementary instruction in the practical use of apparatus.) A pass certificate signed by the Registrar is delivered to each successful candidate after the report of the examiners shall have been approved by the Senate. The first six candidates in the Honours Division, of not more than twenty years of age at the commencement of the examination, shall respectively receive an exhibition or a prize. Any candidate obtaining a place in the Honours Division at the matriculation examination in January shall be admissible to the intermediate examination either in Arts or in Science in the following July.

Provincial Examinations for Matriculation.—These examinations are appointed by the Senate from time to time upon the application of any city, institution, or college desiring to be named as a local centre for one or more examinations, and are carried on simultaneously with the examinations in London under the supervision of sub-examiners also appointed by the Senate. Candidates wishing to be examined at any provincial centre must give notice upon their forms of entry to the Registrar of the University, who will then make all necessary arrangements. Besides the University fee, a fee usually varying from £1 to £2 is charged by the local authorities, and must be paid *at the local centre* immediately before the commencement of the several examinations. The answers of the candidates at the provincial examinations are reviewed by the examiners at the same time as the answers of the candidates examined in London, and a list of the candidates who have passed at each provincial examination is published at the time fixed by the regulations at the place were such examination has been held. The January Matriculation Examinations, 1896 will be held at:—Birmingham: The Mason Science College. Bristol: The Merchant Venturers' Technical College. Cardiff: Dames Street College (for University College) Glasgow: The Training College, New City-road. Leeds: The Yorkshire College. Newcastle-on-Tyne: Rutherford College. Plymouth: The Public School. Portsmouth: The Grammar School. The June, 1896, Matriculation Examination will be held at:—Aberystwith: University College. Bangor: University College. Birmingham: The Mason Science College. Bristol: University College Cardiff: University College. Edinburgh: The Heriot-Watt College. Leeds: The Yorkshire College. Liverpool: University College. Manchester: The Owens College. Newcastle-on-Tyne: Rutherford College. Nottingham: University College. Plymouth: The Public School. Sheffield: Firth College.

The *Preliminary Scientific (M.B.) Examination.*—Professional studies pursued before the whole of this examination has been passed will not count towards the course required for the M.B. degree. The examination takes place twice in each year, once for Pass and Honours, commencing on the third Monday in July, and once for Pass candidates, only, commencing on the third Monday in January. Every candidate must, not less than five weeks before the commencement of the examination, apply by postcard to the Registrar for a form of entry, which must be returned not less than four weeks before the commencement of the examination, accompanied by the candidate's fee of £5. The subjects of the Preliminary Scientific Examination are divided into two sections: (1) Chemistry and Physics, (2) General Biology. Chemistry includes a written examination in Inorganic Chemistry and a *viva-voce* examination in Qualitative Analysis. Physics implies a knowledge of acoustics, heat, magnetism, electricity, and optics. General Biology comprises a knowledge of the elements of zoological (vertebrate or invertebrate) and botanical morphology physiology and embryology. Candidates shall be allowed to enter for the whole examination or for either section. Candidates who present themselves for the two sections together shall be credited with either section in which they may have passed, although they may have failed to pass in the other, but no such candidate shall be placed in the Honours List. Candidates must bear in mind that the standard of attainment for the Honours examination is much higher than that for the Pass examination; and they should therefore exercise due caution in making their choice, to which they will be required to adhere. A candidate who has entered for the Pass examination will not be allowed to take the Honours papers; and only under special circumstances will a candidate who has entered for Honours in any subject be transferred to the Pass examination in that subject. The fee of £5 covers the whole of the examination, whether taken altogether or in sections.

Provincial Examinations for the Preliminary Scientific (M.B.) Examination.—These examinations are appointed by the Senate from time to time upon precisely the same arrangements as those made for the Provincial Matriculation examinations. The practical examinations in chemistry are conducted at the provincial centres, but all candidates must attend at the University for the practical examinations in Physics and Biology.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University not less than five years previously. 2. To have passed the Preliminary Scientific (M.B.) Examination not less than four years previously. 3. To have been engaged in his professional studies during four years subsequently to passing the Preliminary Scientific Examination[3] at one or more of the medical institutions or schools recognised by this University, one year at least of the four being spent in one or more of the recognised institutions or schools in the United Kingdom. 4 To pass two examinations in Medicine.

Intermediate Examination.—The Intermediate Examination in Medicine takes place twice in each year—once for Pass and Honours, commencing on the second Monday in July, and once for Pass candidates only, commencing on the third Monday in January. The subjects of the examination are Anatomy, Physiology and Histology. Organic Chemistry, Materia Medica, and Pharmaceutical Chemistry. The standard of attainment required for Honours is much higher than for a Pass. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least two years previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2 Of having, subsequently to having passed the Matriculation Examination, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on

[3] Candidates who passed the Matriculation Examination in January, 1885, or previously, will be allowed to date the commencement of their professional studies, as heretofore, from that examination.

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each of three of the subjects in the following list: Descriptive and Surgical Anatomy, Physiology and Histology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Preliminary Scientific Examination, dissected during two sessions. 4. Of having, subsequently to having passed the Preliminary Scientific Examination, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry, in applying tests for discovering the adulteration of articles of the Materia Medica and the presence and nature of poisons, and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned) must be transmitted to the Registrar at least four weeks before the commencement of the examination. Fee for this examination, £5.

M.B. Examination.—The M.B. Examination takes place twice in each year—once for Pass and Honours, commencing on the last Monday in October, and once for Pass candidates only, commencing on the first Monday in May. The subjects of the examination are General Pathology General Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. No candidate will be admitted to this examination within twenty-one months of the time of his passing the Intermediate Examination unless he be a registered medical practitioner of not less than three years' standing, in which case he must produce a certificate of having gone through the required course of training at some time previously. Every candidate must produce certificates:—1. Of having passed the Intermediate Examinations. 2. Of having attended a course of lectures on each of two of the subjects enumerated above in the regulations for that examination for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practioner in Medicine. 4. Of having attended the Surgical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine, including, in and after October, 1895, Infectious Diseases and Lunacy. 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the Intermediate Examination in Medicine, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The fee for this examination is £5.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the first Monday in December. Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery and of having operated on the dead subject. The subjects of the examination are Surgical Anatomy and Surgery. Fee £5.

Master in Surgery.—The examination for the degree of Master in Surgery takes place once in each year, and commences on the first Monday in December. Candidates must produce certificates to the following effect: 1. Of having taken the degree of Bachelor of Surgery in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University: (*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; or (*b*) to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (*c*) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *viva-voce* interrogation, and the subjects are Mental Physiology, especially in its relations to mental disorder, and Surgery. Any candidate for the degree of M.S. may transmit to the Registrar, not later than Oct. 1st a printed Dissertation, Thesis, or Commentary, written in view of candidature, or published within two academical years immediately preceding, treating scientifically some special department of Surgical Science, and showing evidence of his own work or generally tending to the advancement of surgical science; and if the Thesis be approved by the examiners the candidate will be exempt from the written examination in Surgery. The fee is £5.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the first Monday in December. Candidates may present themselves for examination either in Medicine or State Medicine. With regard to the latter, candidates presenting themselves for the M.D. Examination in Medicine must produce certificates to the following effect:—1. Of having attended subsequently to having taken the degree of Bachelor of Medicine in this University: (*a*) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of profession; (*c*) or of having been engaged during five years in the practice of their profession, either before or after taking the degree of Bachelor of Medicine in this University. 2. Of moral character, signed by two persons of respectability. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the First Division. The examination is conducted by means of printed papers and *viva voce* interrogation, and the subjects are Medicine (or State Medicine), Mental Physiology. Any candidate for the degree of M.D. may transmit to the Registrar, not later than Oct. 1st, a printed Thesis, written in view of candidature, or published within two academical years immediately preceding, treating scientifically some special department of Medical Science and showing evidence of his own work or generally tending to the advancement of Medical Science; and if the Thesis be approved by the examiners the candidate will be exempt from the written examination in Medicine. Fee for the degree, £5.

UNIVERSITY OF DURHAM.

One Diploma and six degrees are conferred—Diploma in Public Health and the degrees of Bachelor of Medicine, Bachelor in Surgery, Master in Surgery, Bachelor in Medicine, Bachelor in Hygiene, and Doctor in Medicine. These degrees are open both to Men and Women.

For the degree of *Bachelor in Medicine* (*M.B.*) four professional examinations.

The subjects of the First Examination are—Human Anatomy and Elementary Biology, Chemistry, and

The subjects for the Second Examination are—Physiology, Materia Medica, Therapeutics, Pharmacy.

The subjects for the Third Examination are—Surgery, Pathology, Medical Jurisprudence, Public Midwifery and Diseases of Women and Children.

The subjects of the Fourth Examination are Medicine, Clinical Surgery, Psychological Medicine.

N.B.—It is required that at least one of the of professional education shall be spent in at the University College of Medicine, Newcastle. Candidates for the First Examination who have First Examination of the Conjoint Board in candidates who hold a qualification from Licensing Body in the United Kingdom, will from the First Examination of the University the subjects of Chemistry and Physics. Ca

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have passed the First and Second Examinations of the University will be exempt from First and Second Examinations of the Conjoint Board.

For the degree of *Bachelor in Surgery (B.S.)* every candidate must have passed the examination for the degree of Bachelor in Medicine of the University of Durham, and must have attended one course of lectures on Operative Surgery, and one course on Regional Anatomy. Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

For the degree of *Master in Surgery (M.S.)* candidates must not be less than twenty-four years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. degree they must present themselves at Durham for examination in it at one of the ordinary examinations held for this purpose before they can proceed to the higher degree of M.S. They must also have obtained the degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years, subsequently to the date of acquirement of the degree of Bachelor in Surgery, in attendance on the practice of a recognised hospital, or in the naval or military services, or in medical or surgical practice.

The subjects of examination are:—Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, Clinical Surgery.

For the degree of *Doctor in Medicine (M.D.)* candidates must be not less than twenty-four years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. degree, they must present themselves at Durham for examination in it at one of the ordinary examinations held for this purpose before they can proceed to the higher degree of M.D. They must also have obtained the degree of Bachelor in Medicine of the University of Durham, and must have been engaged for at least two years, subsequently to the date of acquirement of the degree of Bachelor in Medicine, in attendance on the practice of a recognised hospital, or in the military or naval services, or in medical and surgical practice. Each candidate must write an Essay, based on original research or observation, on some medical subject selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, and must be prepared to answer questions on the other subjects of his curriculum so far as they are related to the subject of the Essay.

The University of Durham has instituted a special examination whereby the degree of Doctor of Medicine may be obtained without residence. Candidates shall not be under forty years of age and shall have been in active practice for fifteen years as registered medical practitioners. They shall produce certificates of moral character from three registered members of the medical profession, and if they have not passed an examination in Arts previously to the Professional Examination in virtue of which they have been placed on the Register, they shall be required to pass in Classics and Mathematics. They will be examined in the Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics, the Principles and Practice of Surgery, Midwifery, and Diseases of Women and Children, Pathology (Medical and Surgical), Anatomy (Medical and Surgical), Medical Jurisprudence, and Toxicology. The fee will be fifty guineas, of which twenty guineas will be returned if the candidate fails to satisfy the examiners. Examinations in accordance with the above regulations will be commenced in September, 1895, and will be continued in April and September, 1896, at the College of Medicine, Newcastle-upon-Tyne.

For the degree of *Bachelor in Hygiene (B.Hy.)* and *Doctor in Hygiene (D.Hy.)* see Public Health, p. 643.

Candidates for any of the above degrees must give at least twenty-eight days' notice to the Professor of Anatomy, College of Medicine, Newcastle-upon-Tyne.

VICTORIA UNIVERSITY.

Colleges of the University: Owens College, Manchester; University College, Liverpool; and Yorkshire College, Leeds.

Matriculation, which consists in signing the University Register, must precede entry upon any course of study in a College of the University, if that course is to be counted towards the required minimum of attendance for a degree. Those only can matriculate who are registered students of a College of the University.

Four degrees in Medicine and Surgery are conferred by the Victoria University—viz., Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.).

All candidates for degrees in Medicine and Surgery are required to pass an examination called the Entrance Examination in Arts, or to have passed such other examination as may be recognised by the University for this purpose.[4]

Degrees of Bachelor of Medicine and Bachelor of Surgery.—Before admission to the degree of M.B. or Ch.B. candidates are required to present certificates that they will have attained the age of twenty-one years on the day of graduation, and that they have pursued the courses of study required by the University Regulations during a period of not less than five years subsequently to the date of their registration by the General Medical Council, two of such years having been passed in a College of the University, and one year at least having been passed in a College of the University subsequently to the date of passing the First M.B. Examination. All candidates for the degrees of Bachelor of Medicine and Bachelor of Surgery are required to satisfy the examiners in the several subjects of the following examinations: the First Examination, the Second Examination, and the Final Examination.

The First Examination.—The subjects of examination are as follows:—(1) Chemistry; (2) Elementary Biology; (3) Physics. Candidates must have attended during at least one year courses both of lectures and of laboratory work in each of the above-named subjects. The Examination is divided into two parts: Part 1, Physics and Chemistry; Part 2, Biology; and the candidates may pass in these parts separately.

The Second Examination.—The subjects of examination are as follows:—A: (1) Anatomy; (2) Physiology, including Physiological Chemistry and Histology; B: (3) Materia Medica and Pharmacy. Candidates may pass in A or B separately. Candidates presenting themselves in A alone, or in B alone, and failing to satisfy the examiners, must present themselves again in the same subjects or in A and B together.

The Final Examination.—The subjects of examination are as follows:—(1) Pharmacology and Therapeutics. (2) General Pathology and Morbid Anatomy. (3) Forensic Medicine and Toxicology, and Public Health. (4) Obstetrics and Diseases of Women. (5) Surgery, Systematic, Clinical and Practical. (6) Medicine, Systematic and Clinical, including Mental Diseases and Diseases of Children.

Candidates may either present themselves in all the six subjects of examination on the same occasion, or may pass the examination in two parts, the first part consisting of *two* or *three* of the subjects (1), (2) and (3), the second part of the remaining subjects.

Candidates who fail to satisfy the examiners in a first part must either present themselves again in the subjects as selected or in all the six subjects of examination.

Candidates for the First Part of the examination must have completed the *fourth winter* of medical study, in accordance with the regulations of the University.

Candidates for the Second Part of the examination, or for the whole examination, must have completed the fifth year of medical study, in accordance with the regulations of the University.

Degree of Doctor of Medicine.—Candidates are not eligible for the degree of Doctor of Medicine unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. Candidates for the degree of Doctor of Medicine are required to present a printed Dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine.

[4] The examinations at present recognised are:—1. The Preliminary Examination of the Victoria University, provided Latin and Mechanics have been taken up. 2. The Matriculation Examination of the University of London. 3. The Previous Examination of the University of Cambridge. 4. Responsions of the University of Oxford. 5. The Leaving Certificate Examination of the Oxford and Cambridge Boards, provided that it include Latin, English, Mathematics, and Elementary Mechanics. 6. The Final Examination for Graduation in Arts of any university in Great Britain and Ireland.

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No candidate will be admitted to the degree unless his Dissertation, after report from the Departmental Board of Medical Studies, shall have been recommended by the General Board of Studies to the Council for acceptance in that behalf. Candidates may be examined on any subject connected with their dissertations.

Degree of Master of Surgery.—Candidates are not eligible for the degree of Master of Surgery unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. The subjects of examination are as follows: (1) Surgical Anatomy; (2) Surgical Pathology; (3) Practical Surgery, including the performance of operations on the dead body; (4) Clinical Surgery; (5) Ophthalmology.

UNIVERSITY OF EDINBURGH.

Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The degree of Bachelor of Surgery shall not be conferred on any person who does not at the same time obtain the degree of Bachelor of Medicine, and the degree of Bachelor of Medicine shall not be conferred on any person who does not at the same time obtain the degree of Bachelor of Surgery.

Subject to regulations to be made from time to time by the University Court, the University may also confer diplomas in special branches of medical and surgical practice on graduates of the University in Medicine and Surgery.

Before commencing his medical studies each student must pass a preliminary examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate may be substituted for one in either French or German, and an examination in any other classical language for one in Latin or Greek.

No one is admitted to the degrees of Bachelor of Medicine and Master in Surgery who has not been engaged in Medical and Surgical study for five years. No course of lectures will be allowed to qualify unless the lecturer certifies that it has embraced at least one hundred lectures, or fifty lectures, in conformity with the requirements of this section. Three months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

Candidates for the degrees of M.B. and C.M. must have attended for at least three years the medical and surgical practice either of the Royal Infirmary, Edinburgh, or of a general hospital elsewhere which accommodates not fewer than eighty patients and possesses a distinct staff of physicians and surgeons. They must have attended Clinical Surgery during a course or courses extending over not less than nine months. These courses may be conducted by the professor of clinical surgery, or by professors or lecturers appointed for the purpose by the University Court, or by the ordinary surgeons of the Royal Infirmary, Edinburgh, or of a general hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with clinical lectures. A similar course of clinical medicine during a course or courses extending over not less than nine months is required. The candidate must have attended a course of instruction in Mental Diseases of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to time determine. The candidate must have attended a course of twenty-five meetings on Practical Pharmacy in a university or recognised school of medicine, or have dispensed drugs for a period of three months in a hospital or dispensary, or in an establishment recognised by the Pharmaceutical Society. The candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, or of a physician or surgeon, or of a member of the London or Dublin Society of Apothecaries. He must have acted as clerk in the medical wards and dresser in the surgical wards of a public hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying at a hospital or dispensary. Post-mortem Examinations, Fevers Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined. The candidate must have attended, under the superintendence of a registered medical practitioner, twelve cases of labour or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine or have attended for three months the practice of a lying in hospital, or of the maternity department of a general hospital or other public charitable institution, and have conducted personally six or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine. The candidate must have been properly instructed in Vaccination at a public vaccination station, by a public vaccinator, authorised by the proper Government authority to grant certificates of proficiency in vaccination.

Next, with respect to the places and institutions at which the studies of the candidate may be prosecuted, the following regulations have effect:—Two of the five years of medical study must be spent in the University of Edinburgh. The remaining three years may be spent in any university in the United Kingdom, or in any Indian, Colonial, or Foreign university recognised for the purpose by the University Court or in such medical schools or under such teachers as may be recognised for the purpose by the University Court. Of the subjects of study, sixteen in number—viz. Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, Practical Physiology, Practice of Medicine, Surgery, Midwifery, Diseases of Women, Pathology and Practical Physiology, Physics, Botany, Zoology, and Medical Jurisprudence—not less than eight must be taken in the University of Edinburgh or in some other university of the United Kingdom, or in such Foreign or Colonial university entitled to confer the degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a college incorporated with, or affiliated to, a university entitled to confer the degree of Doctor of Medicine, recognised for the purpose by the University Court.

Each candidate is examined, both in writing and orally and clinically where the nature of the subject admits, at First, in Chemistry, Zoology, Botany, and Physics; second in Anatomy, Physiology, Materia Medica, and Therapeutics; third, in Pathology, Medical Jurisprudence, and Public Health; and fourth, in Surgery, Medicine, Midwifery, and clinically in Medicine and Surgery in a hospital. The examinations are conducted, as far as possible, by demonstrations of objects placed before the candidates. Candidates who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes. Candidates who have passed their examination in the first division of these subjects may be admitted to examination in the second division at the end of their first year. Candidates who have passed their examination in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division when they have completed the fifth year of study.

Regarding the Professional Examinations for the degrees of M.B. and Ch.B., and also for the degree of M.D. and Ch.M., the conditions are similar to those which hold for the Glasgow University degrees. The fee to be paid for the degrees of Bachelor of Medicine and Bachelor of Surgery is £23 2*s*., and the proportion of this sum to be paid by a candidate at each division of the examination shall be regulated from time to time by the University Court. The fee to be paid for the degree of Doctor of Medicine is £10 10*s*., exclusive of any stamp duty which for the time may be exigible. The fee to be paid for the degree of Master of Surgery is £10 10*s*.

UNIVERSITY OF GLASGOW.

The University of Glasgow is both a teaching and examining body, but only candidates whose course conforms to Glasgow regulations can be admitted to examination. Within certain limits provision is made for accepting instruction given by recognised medical schools and teachers, but eight of the subjects other than clinical must be taken in this or some other recognised university

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to confer the degree of M.D., and at least two years of the course must be taken in Glasgow University. Under the new regulations four degrees, open both to men and women, are conferred: M.B. and Ch.B. (always conjointly), M.D. and Ch.M. A Preliminary Examination must be passed in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek, or French, or German, with possible options to students whose native language is not English in the case of the fourth subject, and on passing the Preliminary Examination candidates must register as medical students in the books of the General Medical Council. For the degrees of M.B. and Ch.B. a curriculum of five years is required, in each of the first four of which the student must attend at least two five months' courses, or alternatively one five months' course and two courses of two and a half months. The minimum of attendance in the first four years includes five months' courses in the following subjects:—Anatomy, Practical Anatomy (two courses), Chemistry, Materia Medica and Therapeutics, Physiology, Practice of Medicine, Surgery, Midwifery, and Diseases of Women and Infants, and Pathology; and courses of two and a half months in the following:—Practical Chemistry, Physics, Botany, Zoology, Practical Physiology, Practical Pathology, Medical Jurisprudence and Public Health. Candidates must attend at least three years the Medical and Surgical Practice of a recognised hospital accommodating at least eighty patients and having a distinct staff of physicians and surgeons. At least nine months' hospital attendance is required on both Clinical Surgery and Clinical Medicine, and the student must have acted as clerk in medical and dresser in surgical wards, and must have had six months' out-door practice; he must also have attended a course of Mental Diseases and of Practical Midwifery (twenty-five meetings), must have been properly instructed in Vaccination at a public vaccination station, and must have attended at least twelve cases of labour, or three months of the practice of a Lying-in Hospital, six cases being personally conducted. The University is also empowered to require further study in Post-Mortem Examinations, Fevers, Diseases of Children, Ophthalmology, and other special subjects. A candidate may be exempted from attendance and examination in Botany, Zoology, Physics and Chemistry, if he holds a degree in Science or Arts embracing these subjects granted by a British or other recognised university.

There are four Professional Examinations, the first comprising Botany, Zoology, Physics, and Chemistry, to be taken after the completion of the included courses (candidates being at liberty to take two subjects at a time); the second comprising Anatomy, Physiology, and Materia Medica and Therapeutics, to be taken at the end of the third winter session; the third comprising Pathology, Medical Jurisprudence and Public Health, to be taken at the end of the fourth winter session; and the fourth or final, comprising Surgery, Clinical Surgery, Practice of Medicine, Clinical Medicine, and Midwifery, to be taken on completion of the fifth year of study.

The degrees of M.D. (Doctor of Medicine) and Ch.M. (Master of Surgery) are higher degrees in Medicine and Surgery respectively, and candidates (not under twenty-four years of age) who have previously obtained the double bachelorship may be admitted to either M.D. or Ch.M. on completing the after course prescribed, including an examination in Clinical Medicine for M.D. and an examination in Surgical Anatomy, operations on the dead body, and Clinical Surgery for Ch.M.

Fees.—The fees for M.B. and Ch.B. are £23 2*s*. The class fee in each subject of the curriculum for M.B. and Ch.B. is £3 3*s*. and the present fees for hospital attendance are £21. The fee for M.D. is £10 10*s*. (stamp duty being now abolished), and for Ch.M. £10 10*s*. There is a course of instruction (fee £10 10*s*.) and an examination (fee £5 5*s*.) leading to a diploma in Public Health.

The great majority of the students take their hospital course at the Western Infirmary, where clinical instruction is given by professors of the University and other physicians and surgeons. Clinical instruction on Fevers is given at Belvidere Hospital, while special courses, largely of a practical nature and embracing work in Hospital or Asylum wards, are conducted by University Lecturers on the Eye, the Ear, the Throat and Nose, and Insanity. Queen Margaret College, hitherto conducted as a separate institution for the higher education of women, has now been made over to the University, and in it medical classes for women are conducted under University professors and other lecturers appointed by the University Court, whilst for clinical instruction female students are admitted to the Royal Infirmary.

Bursaries and Prizes to the annual amount of about £820 are appropriated to medical students, and Scholarships and Fellowships to the annual amount of about £1600 may be held by medical students who have gone through the Arts course.

In the ordinary course graduations under the regulations for the curriculum of five years introduced in 1892 will begin in July, 1897. Thus far students have been graduating as M.B. and C.M. on a four years' curriculum under the old regulations, and such graduates may afterwards proceed to the degree of M.D. by Thesis after passing a somewhat more stringent preliminary examination, including Greek. Supplementary regulations recently passed by the Scottish Universities Commissioners allow those holding the degrees of M.B. and C.M. under the former regulations to proceed to the new M.D. by Examination and Thesis in the same manner as those who obtain the double Bachelorship under the new regulations. Candidates electing to proceed in this way will be freed from the preliminary examination in Greek, which probably has hitherto deferred many of them from coming forward.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the Universities of Edinburgh and Glasgow.

Professional Examinations will be held twice in each year—namely, in March and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1 1*s*.; summer session alone, 10*s*. 6*d*.

Besides the Royal Infirmary, students have the opportunity of attending the following institutions: General Fever Hospital; Sick Children's Hospital; General Dispensary, and Lying-in and Vaccine Institutions daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on Diseases of the Eye, and on the application of the Ophthalmoscope for their diagnosis.

A diploma in Public Health is granted by the University to graduates in Medicine of a University in the United Kingdom only, after a special examination. The diploma can be entered on the Register of the General Medical Council.

Application for further information should be addressed to the Secretary of the Medical Faculty.

The degrees of B.Sc. and D.Sc. are granted, after examination, in departments of Science, to be selected by the candidate. For regulations apply to the Secretary of Science Faculty.

UNIVERSITY OF ST. ANDREWS.

Under the existing regulations two degrees in Medicine are granted—namely, Bachelor of Medicine joined with Master in Surgery (M.B., C.M.), and Doctor of Medicine (M.D.). New regulations have, however, been prepared, but are not yet in force. They will provide for the conferring of four degrees—viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The curricula and examinations for these degrees will be nearly the same as in the Universities of Edinburgh and Glasgow. It will be a condition that two of the five years of study must be spent in the University of St. Andrews.

The degree of *Doctor of Medicine* may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always that degrees will not be conferred under this section on a greater number than ten in any one year. The examinations are held yearly about the end of March. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate or an affidavit. 2. Holograph certificates from at least three medical men of acknowledged reputation in the medical profession or

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in the medical schools, recommending the candidate to the Senatus for the degree and testifying to his professional skill and position. 3. A portion of the graduation fee (viz., £10 10*s*.), which shall be forfeited should the candidate fail to appear at the time appointed for examination or fail to graduate. A satisfactory examination, written and *viva voce*, must be passed in the following departments — viz., Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery and Diseases of Women and Children.[5]

No one will be received as a candidate for the degree of *Bachelor of Medicine and Master in Surgery* unless two years at least of his four years of medical and surgical study shall have been passed in one or more of the following universities or colleges—viz., the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

Subject to the condition here specified, the studies for candidates for the degrees of Bachelor of Medicine and Master in Surgery will be under the following regulations: The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the school of the College of Surgeons of Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court. Attendance during at least six winter months on the Medical or Surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy, may be reckoned as one of such remaining years.

Every candidate for examination for the degree of M.B. and C.M. is required to lodge a declaration of age, a statement of his course of study, his inaugural dissertation, and all his certificates with the Dean of the Medical Faculty on or before the 25th of February in each year.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5*s*. is payable. No student can be admitted for the winter course after Nov. 25th.

Degrees in Medicine (M.B.), Surgery (B.Ch.), and Midwifery (B.A.O.).—Candidates for these degrees must be of B.A. standing and must be for at least five academic years on the books of the Medical School, reckoned from the date of matriculation. The Arts course may be concurrent with the medical course, and the B.A. degree need not be taken before the final medical examination, but the medical degrees are not conferred without the Arts degree. The following courses must be attended:—(1) Lectures — Systematic, Practical and Applied Anatomy, Chemistry and Practical Chemistry, Surgery and Operative Surgery, Histology, Botany, Zoology, Physics, Physiology, Practice of Medicine, Midwifery, Pathology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene; (2) three courses of nine months' attendance in the Clinical Lectures of Sir Patrick Dun's or other recognised Dublin Hospital, one year at a recognised London or Edinburgh hospital before the commencement of the Dublin curriculum being counted as one year spent in such Dublin hospital; (3) Practical Vaccination, one month's instruction; (4) Mental Disease, three months'; (5) Practical Midwifery with Clinical Lectures, including not less than thirty cases, six months'; (6) Ophthalmic Surgery, three months'. Two examinations have to be passed. The Previous Medical or Half M.B. Examination, including Physics and Chemistry, Botany and Zoology, Anatomy and Institutes of Medicine (Practical Histology and Physiology), may be passed when credit has been obtained for the corresponding subjects, and these may be taken separately if desired. The Final Examination is subdivided into five sections, comprising Applied Anatomy (Medical and Surgical), Applied Physiology, Jurisprudence and Hygiene, Materia Medica and Therapeutics, Medicine, Surgery, Pathology, Midwifery, Gynæcology, Obstetrical Anatomy, Clinical Medicine, Mental Diseases, Clinical Surgery, Operations, Clinical Ophthalmology. The first seven of these subjects may be passed in the fourth year and the last eight in the fifth year. Fee for the *Liceat ad Examinandum*, £10. Fee for the degree, £17.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must read a thesis or undergo an examination before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

Master in Surgery.—A Master in Surgery must be a Bachelor in Surgery of the University of Dublin of not less than three years' standing, and must produce satisfactory evidence of having been engaged for not less than two years from the date of his registration in the study, or study and practice of his profession. He must then pass an examination in the following subjects:—1. Clinical Surgery. 2. Operative Surgery. 3. Surgical Pathology. 4. Surgery. 5. Surgical Anatomy (on the dead subject), and one of the following optional subjects:—1. Surgery in one of the following branches—viz., Ophthalmic and Aural, Gynæcological, and Dental. 2. Mental Disease. 3. Medical Jurisprudence and Hygiene. 4. Advanced Anatomy and Physiology. 5. Comparative Anatomy. Fee for the degree of Master in Surgery, £11.

Master in Obstetric Science.—A Master in Obstetric Science must have passed the M.B. and B.Ch. examinations, and produce a certificate of having attended a summer course in Obstetric Medicine and Surgery.[6] He is then required to pass an examination in the following subjects:—1. Practice of Midwifery. 2 Gynæcology. 3. Anatomy of Female Pelvis and Elementary Embryology. 4. Clinical Gynæcology. Fee for the degree of Master in Obstetric Science, £5.

University Diplomas.—Candidates for the diplomas in Medicine, Surgery, or Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts and five years in Medical Studies. The Course and Examination necessary for the diplomas are the same as for the degrees, except that the candidate is not required to attend the Lectures on Botany and Zoology, nor to pass the Previous Medical examination in those subjects. A diplomate on completing his course in Arts and proceeding to the degree of B.A., may become a Bachelor by attending the Lectures on Botany and Zoology, passing the Previous Medical examination in those subjects, and paying the degree fees. Fee for the *Liceat ad Examinandum*, £10. Fee for the diploma in Medicine, £11.

[5] These regulations are still in force; but a new Ordinance is waiting the sanction of the Queen which will considerably alter them. Under it there will be no examination for practitioners.

[6] Existing graduates in Medicine of the standing of M. required to attend this course.

ROYAL UNIVERSITY OF IRELAND.

All Degrees, Honours, Exhibitions, Prizes and Scholarships in this University are open to students of either sex.

Candidates for any degree in this University must have passed the Matriculation Examination. Students from other universities and colleges are included in this rule.

The following degrees, &c., are conferred by the University in this Faculty:—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, Master of Surgery, Bachelor of Obstetrics, Master of Obstetrics; in Sanitary Science, a special diploma; in Mental Disease, a special diploma.

The Medical Examinations, except that for the diploma in Sanitary Science, will be held twice yearly—viz., in June and in October. The examination for the diploma in Sanitary Science will be held in July.

The course for degrees in Medicine, &c., is of at least five years' duration.

The First Examination in Medicine.—Students may be admitted to this examination until the lapse of two academical years from the time of their matriculation. They must also have previously passed the First University Examination. The subjects of this examination are Natural Philosophy, Theoretic Chemistry, Zoology and Botany. The examination in each subject will comprise two parts: 1. A written examination. 2. Practical work and oral examination. For Chemistry the practical examination takes place at the close of the second year. Particular weight will be given to the practical part of the examination. Candidates at the First Examination in Medicine who at the First University Examination in Arts did not obtain 30 per cent. of the marks assigned to French or German will be required to present themselves for a qualifying examination in French or German. Failure to obtain 30 per cent. of the marks assigned to either of those languages will involve the failure in the examination.

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The Second Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the First Examination in Medicine, provided they have completed the first period of the course of medical studies. The subjects for this examination are Anatomy, Physiology, and Practical Chemistry.

The Third Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the Second Examination in Medicine, provided they have completed the third year of medical studies. The subjects for this examination will be Anatomy, Physiology, and Materia Medica (Pharmacology).

The Examination for the Medical Degrees.—Students will be admitted to this examination after the lapse of two academical years from the time of passing the Third Examination in Medicine, provided they have completed the course of medical studies prescribed for the fourth year. The examination consists of three parts or divisions:—(*a*) Medicine, including Therapeutics and Pathology, Mental Diseases, Medical Jurisprudence and Hygiene. (*b*) Surgery, Theoretical, Clinical, Operative; Surgical Anatomy, with Ophthalmology and Otology. (*c*) Midwifery and Gynæcology, with Diseases of Children. Each part of this examination must be passed as a whole. Upon completing satisfactorily his examination in all three divisions the candidate will, in addition to the parchment diplomas recording his admission to the Medical Degrees of M.B., B.Ch., and B A.O., receive a certificate of having passed a qualifying examination in the subjects of Medicine, Surgery, and Midwifery. The fee for this certificate is £10, which must be paid prior to the candidate's admission to the Medical Degrees.

M.D. Degree.—Candidates may be admitted to this degree after the lapse of three academical years from the time of obtaining the degree of M.B. Every candidate will be examined at the bedside, and required to diagnose at least three medical cases, and prescribe treatment, and to write detailed reports on at least two cases to be selected by the examiners and to discuss all the questions arising thereon.

The M.Ch. Degree.—This degree will be conferred only on graduates in Medicine of the University of at least three years' standing. The examination for this degree will comprise Surgical Diseases and Surgery, both theoretical and operative; Surgical Anatomy; Ophthalmology and Otology; and will include—(*a*) a written examination; (*b*) a clinical examination; (*c*) an examination on Surgical Instruments and Appliances; and (*d*) an examination in Operative Surgery.

The Mastership in Obstetrics.—This degree will be conferred only on graduates in Medicine of the University of at least three years' standing. The examination will comprise the Theory and Practice of Midwifery and of Diseases of Women and Children and the Use of Instruments and Appliances and will include—(*a*) a written examination; (*b*) a clinical examination as far as practicable; (*c*) an oral examination, with practical illustrations; (*d*) an examination on Instruments and Appliances.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.[7]

Regulations relating to the several Examinations applicable to Candidates who commenced their Professional Education on or after Jan. 1st, 1892.

Any candidate who desires to obtain both the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to comply with the following regulations and to pass the examinations hereinafter set forth.

Professional Examinations.—There are four Examinations, called herein the First Examination, the Second Examination, the Third Examination, and the Final Examination, each being partly written, partly oral, and partly practical. These examinations will be held in the months of January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination is required to give notice in writing to Mr. F. G. Hallett, Secretary of the Examining Board, Examination Hall, Victoria Embankment, W.C., fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates.

The subjects of the First Examination are—Chemistry and Physics, Practical Pharmacy, Elementary Biology, and Elementary Anatomy. A candidate may take this examination in four parts at different times. A candidate will be admitted to examination in Chemistry and Physics and Elementary Biology before registration as a medical student, and to examination in Practical Pharmacy on producing evidence of having been registered as a medical student by the General Medical Council, *or he may take Pharmacy as part of the Third Examination;* but he will not be admitted to the examination on Elementary Anatomy earlier than the end of his first winter session at a medical school or than the completion of his first six months' attendance at a recognised medical school during the ordinary sessions—i.e. exclusively of the months of April, August, and September. A candidate rejected in one part or more of the First Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and he will be re-examined in the subject or subjects in which he has been rejected. If referred in Chemistry, Biology, or Elementary Anatomy, he must produce evidence of further instruction. Any candidate who shall produce satisfactory evidence of having passed an examination for a degree in Medicine on any of the subjects of this examination conducted at a university in the United Kingdom, in India, or in a British colony will be exempt from examination in those subjects in which he has passed.

The fees for admission to the First Examination are as follows: For the whole examination, £10 10*s.*; for re-examination after rejection in Part I. £3 3*s.*, and for re-examination in each of the other parts, £2 2*s.*

The subjects of the Second Examination are Anatomy and Physiology. Candidates will be required to pass in both subjects at one and the same time. Candidates will be admissible to the Second Examination at the expiration of two winter sessions and one summer session (or fifteen months during the ordinary sessions) from the date of registration as Medical Students and after the lapse of not less than six months from the date of passing Parts I., III., and IV. of the First Examination.

A candidate referred on the Second Examination will be required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teachers, in a recognised place of study, his Anatomical and Physiological studies during a period of not less than three months subsequently to the date of his reference.

The fees for admission to the Second Examination are: £10 10*s.* for the whole examination, and £6 6*s.* for re-examination after rejection.

The subjects of the Third Examination are: Part I. Medicine, including Medical Anatomy, Pathology, Practical Pharmacy, Pharmacology, Therapeutics, Forensic Medicine, and Public Health. Candidates who have passed in Practical Pharmacy at the First Examination will not be re-examined in that subject at the Third Examination. Part II. Surgery, including Pathology, Surgical Anatomy, and Apparatus. Part III. Midwifery and Diseases peculiar to Women. Candidates may present themselves for examination in Midwifery and Diseases of Women at the Third Examination or at the Final Examination. Candidates may take this examination in three parts at different times, or they may present themselves for the whole examination at one time. They will be required to produce the following evidence before being admitted to any part of the Third, or of the Final Examination—viz., of having studied Medicine, Surgery, and Midwifery; and the following Special Certificates before being admitted to the respective parts of the examination—viz., in Medicine, of having attended Practical Instruction in Medicine, Lectures on Pathology, Clinical Lectures on Medicine during nine months, and of having discharged the duties of Medical Clinical Clerk; in Surgery, of having attended Practical Instruction in Surgery, Lectures on Pathology, of having performed operations upon the Dead Subject, Clinical Lectures on Surgery during nine months, and of having discharged the duties of Surgical Dresser; in Midwifery of having attended Practical Instruction in Midwifery, Clinical or other Lectures, with Practical Instruction in Diseases Peculiar to Women, and of attendance on 20 Labours.

Fees for admission to the Third Examination with or

[7] The diploma of Member of the Royal College of Surgeons of England and the Licence of the Royal College of Physicians of London are no longer granted separately except to students who commenced their professional study prior to Oct. 1st, 1884.

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without Midwifery and Diseases peculiar to Women, are as follows: For the whole examination £10 10*s*. Part I. For re-examination in Medicine, including Medical Anatomy, Pathology, Therapeutics and Public Health, £3 3*s*.; for re-examination in Pharmacology, £1 1*s*.; for re-examination in Practical Pharmacy (if taken at this examination) £3 2*s*. Part II. For re-examination in Surgery, including Pathology, Surgical Anatomy and Apparatus, £3 3*s*. Part III. For re-examination in Midwifery and Diseases peculiar to Women, £3 3*s*.

The Final Examination shall consist of (1) Clinical Medicine, (2) Clinical Surgery, and (3) Midwifery and Diseases peculiar to Women. Candidates may present themselves for examination in Midwifery and Diseases peculiar to Women at the Third Examination or at the Final Examination. The examination in Parts I. and II. consists of Written Papers and *viva voce* on Patients. Candidates who have passed the Third Examination will be admissible to the Final Examination on production of the required certificates of study at the expiration of five years' (five winter and five summer sessions) study from the date of registration as medical students and at the expiration of twelve months from the date of passing the Third Examination. Candidates will be required to present themselves for examination in Clinical Medicine and Clinical Surgery together. No candidate will be allowed to pass in one without obtaining at the same time at least half the number of marks required to pass in the other. A candidate referred on the Final Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection and will be required, before being admitted to re-examination, to produce a certificate, in regard to Medicine and Surgery, of having attended the Medical and Surgical Practice, or the Medical or Surgical Practice, as the case may be, during the period of his reference; and, in regard to Midwifery and Diseases peculiar to Women, a certificate of having received, subsequently to the date of his reference, not less than three months' instruction in that subject by a recognised teacher.

The fees for admission to the Final Examination are as follows: For the whole Examination, £5 5*s*.; for re-examination after rejection in Clinical Medicine, £2 12*s* 6*d*.; for re-examination after rejection in Clinical Surgery, £2 12*s*. 6*d*.; for re-examination after rejection in Midwifery and Diseases peculiar to Women, £3 3*s*.

ROYAL COLLEGES OF SURGEONS AND PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

These Colleges have made arrangements by which, after one series of examinations, held in Edinburgh or in Glasgow, or in Edinburgh and Glasgow, the student may obtain the diplomas of the three Bodies.

The three Bodies grant their Single Licences only to candidates who already possess another and opposite qualification in Medicine or Surgery, as the case may be, recognised by them. Copies of the Regulations for the Single Licence of any of the Bodies may be had on application to the respective Secretaries.

Professional Education.—1. Candidates who commenced medical study *before* Jan. 1st, 1892, must have been engaged in professional study during forty-five months from the date of registration as medical students by the General Medical Council, which period shall include not less than four winter sessions' attendance at a recognised medical school. 2. The candidate must produce certificates or other satisfactory evidence of having attended the following separate and distinct courses of instruction: Anatomy, during at least six months; Practical Anatomy, twelve months; Chemistry, six months; Practical or Analytical Chemistry, three months; Materia Medica, three months; Physiology, six months; Practice of Medicine, six months; Clinical Medicine, nine months; Principles and Practice of Surgery, six months; Clinical Surgery, nine months; Midwifery and the Diseases of Women and Children, three months; Medical Jurisprudence, three months; Pathological Anatomy, three months. The six months' courses delivered in Scotland must consist of not fewer than 100 lectures. The three months' courses must consist of not fewer than fifty lectures. The number of lectures certified as attended at any school not situated in Scotland should not be less than three-fourths of the total number of lectures delivered in a course. 3. The candidate must also produce the following certificates:—(*a*) Of having attended not less than six cases of labour, three of these to be conducted personally under the direct superintendence of the practitioner who signs the certificate, who must be a registered medical practitioner. (*b*) Of having attended, for three months, instruction in Practical Pharmacy; the certificate to be signed by the teacher, who must be a member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicines to his patients, or a teacher of a class of Practical Pharmacy. (*c*) Of having attended for twenty-four months the Medical and Surgical practice of a public general hospital containing on an average at least eighty patients available for Clinical instruction and possessing distinct staffs of physicians and of surgeons. (*d*) Of having attended for six months (or three months, with three months' hospital clerkship) the practice of a public dispensary specially recognised by any of the above authorities; or the out-patient practice of a recognised general hospital, or of having acted for six months as pupil to a registered practitioner who either holds such a public appointment, or has such opportunities of imparting practical knowledge as shall be satisfactory to the coöperating authorities; this attendance should be made after the student has passed the First and Second Examinations. (*e*) Of having been instructed by a registered medical practitioner in the Theory and Practice of Vaccination, and of having performed operations under the teacher's inspection, during a period of not less than six weeks.

Candidates shall be subjected to three Professional Examinations, and they may enter either for the whole of an Examination or for a division thereof.

First Examination.—The First Examination shall embrace the two divisions of (1) Chemistry,[8] (2) Elementary Anatomy,[9] and Histology,[10] and shall take place not sooner than the end of the first year, including the period of winter and a summer session. For the whole Examination taken at one time the sum of £5 5*s*. must be paid to the inspector of certificates not later than one week preceding it, after which no candidate will be entered. After rejection for re-entry in all subjects, £3 3*s*.; for re-entry after obtaining exemption from re-examination in one or two subjects £2 2*s*.; for entering for one division of subjects separately £3 3*s*.; and for each re-entry after rejection, £2 2*s*. A candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the First Examination before any of the boards specified in the Regulations will be exempt from examination in such subjects.

Second Examination.—The Second Examination shall embrace the three subjects of (1) Anatomy, (2) Physiology, (3) Materia Medica and Pharmacy, each of which shall constitute a division of the examination, and may be entered separately. The examination shall not take place before the termination of the summer session of the second year of study, including two winters and two summers. The fee for admission to this examination, payable not later than one week before the day of examination, are as follows:—For the whole Examination, £5 5*s*.; after rejection for re-entry in all subjects, £3 3*s*.; for re-entry, after obtaining exemption from re-examination in one or two subjects, £2 2*s*.; for entering one subject separately, £2 2*s*.; and for each re-entry after rejection, £2 2*s*. Any candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the Second Examination before any of the boards specified in the Regulations will be exempt from examination in such subject or subjects.

Final Examination.—The Final Examination shall embrace the three divisions of—(1) the Principles and Practice of Medicine (including Therapeutics, Medical Anatomy, Pathology) and Clinical Medicine; (2) the Principles

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[8] The examination in Chemistry shall embrace the following particulars: Chemical Physics (meaning thereby Heat, Light, Electricity); the principal Non-Metallic and Metallic Elements, and their more common combinations; also the leading Alcohols, Organic Ethers, Carbo-hydrates, and Alkaloids. The candidate will be examined practically in Testing.

[9] Elementary Anatomy shall embrace: Anatomy of the Bones and Joints of the whole body, and of the Muscles, chief Blood-vessels, Nerves of the Upper and Lower Extremities.

[10] Histology shall include a knowledge and recognition of the morphological elements and structure of Skin, Bone, Cartilage, Fibrous Tissue, Hair, Nails, Teeth, Blood, Muscle, Nervous Tissue, the appearance and distribution of all the different forms of Epithelium, along with a general knowledge of the properties of Protoplasm. Examination on this subject will be practical and oral.

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Practice of Surgery (including Surgical Anatomy and Surgical Pathology) and Clinical Surgery; (3) Midwifery and Gynæcology, Medical Jurisprudence, and Hygiene (which divisions may be entered for separately at different times); and shall not take place before the termination of the full period of study. The fees for this Examination, payable not later than one week before the examination day, are as follows: For the whole Examination, taken at one time, in the case of candidates who have passed the First and Second Examinations, £15 15*s*., of which £10 10*s*. shall be returned to unsuccessful candidates. For entering for each of the three divisions of subjects separately, £6 6*s*., and on re-entry after rejection, £2 2*s*. in respect of each division or part thereof. This rule will also apply to any subsequent rejection. Any candidate admitted to the Final Examination, on the footing of having passed in the subjects of the First and Second Examinations at a recognised board, shall, on entering, pay the full fee of £26 5*s*.

All candidates shall be subjected, in addition to the Written and Oral Examinations, to Clinical Examinations in Medicine and Surgery, which shall include the Examination of Patients, Physical Diagnosis, the Clinical Use of the Microscope, Examination of the Urine and Urinary Deposits, Surgical Appliances, Bandages, Surface Markings, &c.

REGULATIONS FOR CANDIDATES COMMENCING STUDY *after* JANUARY 1ST, 1892.

The curriculum lasts for five years; the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries. Six months of the fifth year may be passed by the student as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as may be deemed satisfactory by the Committee of Management. The student's regularity of attendance in the wards and out-patient departments of the hospitals and at the post-mortem examinations should be duly ascertained and noted on the certificate.

Candidates shall be subjected to four Professional Examinations:

First Examination.—The First Examination shall embrace the following divisions of subjects—(1) Physics, (2) Chemistry, and (3) Elementary Biology. The fees payable for admission to the First Examination shall be for the whole Examination, £5; for each division separately, £2 10*s*.

Second Examination.—The Second Examination shall embrace Anatomy and Physiology including Histology; and candidates may be admitted to this Examination at the end of the second year of medical study. The fees payable for admission to the Second Examination shall be—for the whole Examination, £5.

Third Examination.—The Third Examination shall embrace Pathology, Materia Medica and Pharmacy. The fees payable for admission to the Third Examination shall be—for the whole Examination, £5; for re-entry in both subjects after rejection, £3.

Final Examination.—The Final Examination shall not be passed earlier than the end of the fifth year of study, and shall embrace the following divisions of subjects:—(1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine; (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; (3) Midwifery and Diseases of Women and of New-born Children; and (4) Medical Jurisprudence and Hygiene. All candidates shall be subjected, in addition to the Written and Oral Examinations, to Clinical Examinations in Medicine and Surgery, which shall include the Examination of Patients, Physical Diagnosis, the Clinical use of the Microscope, Examination of the Urine and Urinary Deposits, Surgical Appliances, Bandages, Surface markings, &c. The fees payable for the Final Examination shall be,—for the whole Examination, £15, for re-entry in all subjects after rejection, £5; on entering for each division of subjects separately, £6, on re-entry in each division after rejection, £2.

There are six periods of Examination annually, four in Edinburgh and two in Glasgow, and candidates may present themselves at either examining centre irrespective of the place of the previous examination. The Registrar in Edinburgh is Mr. J. Robertson, 1, George-square; and the Registrar in Glasgow, Mr. A. Duncan, 242, St. Vincent-street, to whom fees and certificates must be sent.

Note.—In applying for copies of the Regulations students should state whether they commenced medical study before or after Jan. 1st, 1892.

ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

Two sets of Regulations are at present in force, under which examinations take place for the conjoint diploma of these bodies. The older Regulations, under which students who commenced their studies before Dec. 31st, 1891, may be examined, have appeared in our Student's Number in previous years, and will be found on pp. 477 and 478 of our second volume of 1888. The following Regulations are obligatory on all students commencing on or after the date already mentioned:—

PRELIMINARY EXAMINATION AND REGISTRATION.

Every candidate for the Conjoint Examinations of the Colleges shall produce evidence—(*a*) of having, before entering on medical studies, passed a Preliminary Examination in general education recognised by the General Medical Council; and (*b*) of having been registered by that Council as a Student in Medicine. Each candidate before receiving his diplomas must produce a registrar's certificate or other satisfactory evidence that he has attained the age of twenty-one years.

Preliminary Examination.—The subjects for examination are identical with those prescribed for the Preliminary Examination by the General Council of Medical Education and Registration.

PROFESSIONAL EXAMINATIONS.

Every candidate is required to pass four Professional Examinations—at the end of the first, second, fourth and fifth years of his professional studies. No candidate shall be admitted to the Final or Qualifying Examination within three months of his rejection at the Final or Qualifying Examination by any other licensing body. All examinations shall be conducted as far as possible by demonstration of objects placed before the candidates.

First Professional Examination.—Every candidate is required, before admission to the First Professional Examination, to produce evidence—(1) of having passed in the subjects of the Preliminary Examination; (2) of having been registered as a medical student by the General Medical Council; and (3) of having attended a course of—(*a*) Demonstrations and Dissections, (*b*) lectures on Theoretical Chemistry, winter courses; (*c*) Practical Chemistry, three months' summer or winter course; (*d*) Elementary Biology; (*e*) Physics. [*Note.*—Biology and Physics may be studied either before or after registration at institutions recognised for the purpose by the Colleges.] (*f*) Practical Pharmacy—(1) evidence of attendance for three months in the compounding department of a clinical hospital, which hospital shall have satisfied the committee of management that its means of instruction are sufficient, and shall return to the committee the names of its students at the commencement of the course, together with a record of their attendance at its close; or (2) evidence of attendance on a course of Practical Pharmacy in a recognised medical school, the course to consist of not less than twenty demonstrations; or (3) evidence of having served a full apprenticeship of three years, or of having acted as paid assistant for not less than one year, in the establishment of a Licentiate apothecary or of a registered pharmaceutical chemist. The fee for this examination is £15 15*s*.

The subjects of the First Professional Examination are the following:—1. (*a*) Chemistry; (*b*) Physics. 2. Practical Pharmacy. 3. Elementary Biology. 4. Anatomy—viz., Bones, with attachments of Muscles and Ligaments, and Joints. Candidates may take this examination as a whole at one time or in four parts, but no portion earlier than the end of the first winter session.

Second Professional Examination.—Candidates are not admissible to this examination before the end of their second winter session. Every candidate is required, before admission to the Second Professional Examination, to produce evidence of having passed the First Professional Examination; also certificates of having attended—(1) a medico-chirurgical hospital for nine months; (2) Demonstrations and Dissections for six months; (3) Practical Histology for three months; (4) Lectures on (*a*) Anatomy for six months; (*b*) Physiology for six months; (*c*) Materia Medica for three months. Materia Medica may be deferred to the third year. The fee for this examination is £10 10*s*.

The subjects of the Second Professional Examination are the following:—1. Anatomy: the anatomy of the whole human body; (2) Histology; (3) Human Physiology;

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(4) Materia Medica. The candidate must present himself, in the first instance at least, in Anatomy, and Histology; if he pass in either of these subjects he may, at the discretion of the examiners, get credit therefor. Physiology and Materia Medica may, at the option of the candidate, be passed at the end of the second or during the third year.

Third Professional Examination.—Candidates are not admitted to this examination before the end of their fourth winter session. Every candidate is required, before admission to the Third Professional Examination, to produce evidence of having passed the Second Professional Examination; also, in addition to the certificates required for the Second Professional Examination, certificates of having attended—(1) a medico-chirurgical hospital for eighteen months; (2) a midwifery hospital or maternity, including evidence of having been present at thirty labours;[11] for six months; (3) clinical instruction in Mental Diseases at an institution recognised by the Colleges[11] for three months; (4) Operative Surgery, including operations on the Dead Subject, not less than thirty meetings of the class; (5) Demonstrations and Dissections, for six months; (6) Vaccination;[11] (7) Practical Pathology, not less than thirty meetings of the class; (8) Lectures on (*a*) Medicine for six months; (*b*) Surgery for six months; (*c*) Public Health and Forensic Medicine for three months; (*d*) Midwifery, including Diseases peculiar to Women and to New-born Children, for six months. Nos. 2, 3, and 6 may be deferred to fifth year. Satisfactory evidence must be produced of attendance in fever wards in connexion with the hospital attendance in either the third or a subsequent year. The fee for this examination is £9 9*s*.

The subjects for the Third Professional Examination are the following:—(1) Medicine; (2) Surgery; (3) Pathology; (4) Therapeutics; (5) Public Health and Forensic Medicine. A candidate must present himself, in the first instance at least, in Medicine, Surgery, and Pathology. Should he pass in either Medicine or Surgery he shall get credit therefor, even if he have failed in other parts of the examination.

Final Professional Examination.—Candidates are not admissible to this examination before the end of their fifth year of medical study. Every candidate is required before admission to produce evidence—(1) of having passed the Third Professional Examination; (2) of having attended—(*a*) Clinical Instruction in Ophthalmic and Aural Surgery for three months; (*b*) a midwifery hospital or maternity, if not taken in the fourth year, for six months; (*c*) Vaccination, if not taken in the third or fourth year; (*d*) Clinical Instruction in Mental Diseases, if not taken in the fourth year.

The subjects for the Fourth Professional Examination are the following:—(1) Medicine, including Medical Anatomy and Mental Diseases; (2) Surgery; (3) Operative Surgery and Surgical Anatomy; (4) Ophthalmic and Aural Surgery; (5) Midwifery, including Diseases of Women and New-born Children; and (6) the Theory and Practice of Vaccination. Every candidate shall produce evidence of having acted as medical clinical clerk and as surgical dresser. The fee for this examination is £6 6*s*.

SOCIETY OF APOTHECARIES OF LONDON.

There are three examinations, Primary, Intermediate, and Final. The Primary Examination is held quarterly, on the first Wednesday and on the Monday and Thursday of the same week, in the months of January, April, July, and October. The Intermediate and Final Examinations are held monthly.

The Primary Examination consists of two parts. Part I. includes Elementary Biology; Chemistry, the Principles of the Science which bear on the Study of Medicine; Chemical Physics, including the Elementary Mechanics of Solids and Fluids, Heat, Light, and Electricity; Practical Chemistry; and Pharmacy. A synopsis indicating the range of the subjects in the examination will be sent with the regulations on application. Evidence of instruction in these subjects must be produced prior to examination. Part II. includes Anatomy, Physiology, and Histology. This examination cannot be passed before the completion of twelve months Practical Anatomy with Demonstrations, and these subjects cannot be taken separately except in the event of the candidate having previously passed in one. Evidence must be produced of the candidate's course of study. A schedule for the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. The Intermediate Examination consists of three parts. Part I. includes the Principles and Practice of Surgery, Surgical Pathology, and Surgical Anatomy. Part II. includes the Principles and Practice of Medicine, together with Therapeutics, Pharmacology, and Prescriptions; Pathology and Morbid Histology; Forensic Medicine, Hygiene, Theory and Practice of Vaccination; and Mental Diseases. Part III. includes Midwifery, Gynæcology, and Diseases of New-born Children and the Use of Obstetric Instruments and Appliances. Part III. may be postponed to the Final Examination, and candidates may enter for Parts I., II., and III. together or separately. The Intermediate Examination cannot be passed before the expiration of forty-five months after registration as medical student, during which time not less than three winter sessions and two summer sessions must have been passed at one or more of the medical schools connected with a general hospital recognised by the Court of Examiners. The Final Examination consists of three Parts. Part I. includes an Examination of and Written Report on Surgical Cases, and Operative Manipulation and Surgical Anatomy, Instruments and Appliances. Part II. includes an Examination of and Written Report on Medical Cases and Medical Anatomy. Part III. includes Midwifery, Gynæcology, and Diseases of New-born Children, and the Use of Obstetric Instruments and Appliances. Parts I. and II. of this examination cannot be passed before the end of the fifth year.

The course of study for the Primary Examination is as follows:—Elementary Biology, not less than three months; Chemistry and Chemical Physics, six months; Practical Chemistry, three months; Pharmacy and Dispensing, three months; Anatomy, six months; Practical Anatomy with Demonstrations, twelve months; Physiology six months; Histology with Demonstrations, three months. The study of these subjects must be pursued at a Medical School or at a place of instruction recognised by the Society. Evidence of having received instruction in Biology and Chemistry before registration as medical student will be admitted. Instruction in Pharmacy and Dispensing must be given by a registered medical practitioner or by a member of the Pharmaceutical Society by examination or in a public hospital, infirmary, or dispensary.

The course of study for the Intermediate Examination includes attendance on the Surgical and Medical Practice (with Post-mortem Examinations) at a hospital connected with a medical school for a period of three winter and two summer sessions; lectures on the Principles and Practice of Surgery, six months; Practical Surgery, three months; Clinical Surgical Lectures, nine months; Dressership,[12] six months. Performance of Surgical Operations on the Dead Body; lectures on Principles and Practice of Medicine, six months; Pathology, three months; Clinical Medical Lectures, nine months; Clinical Clerkship,[12] six months; Forensic Medicine, Hygiene, and Insanity, three months; Midwifery and Gynæcology, three months; Clinical Instruction in the same, three months; a course of Practical Midwifery; attendance on twenty Midwifery cases. The course of medical study must extend over the above-mentioned period of forty-five months.

The course of study for the Final Examination includes either attendance on the Practice of Medicine and Surgery at a hospital or other institution recognised by the Society for a further period of twelve months, or six months as above and six months as a pupil of a registered practitioner holding a public medical or surgical appointment, or attendance at the special hospitals for six months (three months at each hospital), and for six months at a general hospital, all such hospitals to be recognised by the Society. Evidence shall also be given of practical instruction in Infectious Diseases and in Mental Diseases (at a lunatic asylum or in the wards of an institution containing a special ward set apart for the treatment of mental diseases), and in any two of the following subjects: Ophthalmic Surgery, Laryngology with Rhinology and Otology, Dermatology, Diseases of Children. These courses may be taken at a general hospital recognised by the Society any time after the student has held the post of Dresser and Clinical Clerk. No candidate is eligible for

[11] May be taken in either the fourth or fifth year.

[12] These offices may be held at a hospital, infirmary, or dispensary where sufficient opportunities are afforded for the acquirement of practical knowledge.

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Final Examination who has not completed the curriculum prescribed by the Society, in evidence of which a schedule, to be obtained of the Secretary, must be produced, signed by the Dean of the Medical School or other authority. Prior to the Final Examination the candidate must produce certificates: (1) of being twenty-one years of age; (2) of moral character; (3) of the course of medical study; and (4) of proficiency in vaccination signed by a teacher authorised by the Local Government Board. Candidates intending to present themselves for examination are required to give fourteen days' notice. A form for this purpose will be sent on application.

The fee for the three examinations is 15 guineas, or 5 guineas for each examination, except in the case of persons holding a foreign diploma, who are required to pay the entire fee of 15 guineas. The Secretary to the Examiners attends at the Hall of the Society, Blackfriars, E.C., from 10 to 12 o'clock daily.

ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE APOTHECARIES' HALL OF IRELAND.[13]

Every candidate for the Conjoint Diplomas of the Royal College of Surgeons and Apothecaries' Hall must produce evidence—(*a*) of having, before entering on medical studies, passed a Preliminary Examination in General Education recognised by the General Medical Council; and (*b*) of having been registered by that Council as a Student in Medicine. Certificates of medical study will not be recognised if the commencement of the course to which the certificate refers dates more than fifteen days prior to such registration. This registration is not undertaken by the corporations; but the student must apply to the Medical Registrar, 35, Dawson-street, Dublin, in order that he may be so entered. No fee is payable for registration. Every candidate for the Conjoint Diplomas is required to pass a Preliminary Examination as prescribed by the Medical Council and four Professional Examinations. Mechanics and Physics will in future form a portion of the first year's professional study. All examinations in general education recognised by the General Medical Council are accepted by the College of Surgeons and Apothecaries' Hall.

Sessional Medical Examinations.—The Examinations will be held in January, April, July, and October of each year, unless otherwise appointed by the committee of management, beginning with the First Examination.

First Examination.—Candidates are required, before admission to the First Professional Examination, to produce evidence: 1. Of having been registered by the Medical Council as medical students at least six months before examination. 2. Of having attended (*a*) Demonstrations and Dissections, (*b*) Chemistry, (*c*) Physics (winter courses, six months), (*d*) Practical Chemistry, (*e*) Biology (summer courses, three months), (*f*) Practical Pharmacy for three months in the Compounding Department of a Clinical Hospital or a School of Pharmacy, or in the Compounding Establishment of a Licentiate Apothecary. A candidate may take this examination as a whole at one time or in four parts, but the examination in Anatomy not earlier than the end of his first winter session. Fee for First Examination, £5 5*s.*[14]

Second Examination.—Candidates must produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended—(*a*)[15] a Medico-Chirurgical Hospital and of having taken notes of at least three Medical cases and three Surgical cases, or a certificate of Clinical Clerkship; (*b*) the following courses of Lectures: (1) Practical Anatomy; (2) Demonstrations and Dissections; (3) Physiology (winter courses, six months); (4) Materia Medica (or in third year); (5) Practical Histology (summer courses, three months).

Third Examination.—Candidates must produce evidence of having passed the Second Examination; also certificates of having subsequently attended—(*a*)[15] a Medico-Chirurgical Hospital, and notes of at least three Medical and three Surgical cases, or of having acted as Clinical Clerk; (*b*) the following courses of Lectures: (1) Medicine; (2) Surgery (winter courses); (3) Public Health and Forensic Medicine together; (4) Practical Pathology—Laboratory Course, at least thirty meetings of class (summer course). Fee for third examination, £5 5*s.*

Final Examination.—The candidate must produce evidence—(1) of having passed the Third Professional Examination; (2) of having subsequently attended—(*a*)[15] a Medico-Chirurgical Hospital for nine months as extern pupil, or six months as resident pupil; (*b*) Lectures on Midwifery (a winter course); (*c*) a recognised Midwifery Hospital, or Maternity (or in fifth year), for six months, with evidence of having been present at thirty labours; (*d*) Clinical Instruction in Mental Diseases at an institution recognised by the College and Hall (may be taken in either fourth or fifth year); (*e*) Operative Surgery, including operations on the dead subject, at least thirty meetings of the class; of three months' study of Fever in a Clinical Hospital containing fever wards, and of having taken notes of at least five cases of fever; (*f*) Clinical Instruction in Ophthalmic and Aural Surgery (three months); (*g*) Vaccination. *Note.*—Attendance at a Fever Hospital will not be recognised if concurrent with that on Practical Midwifery.

[12] By agreement between the Corporations this conjoint scheme was closed for new entries on June 30th, 1895. Students who entered before that date are allowed to complete their examinations.

[14] Reduction of examination fees: The total fees for the diplomas of L.R.C.S.I. and L.A.H. will in future be £26 5*s.*—i.e., £5 5*s.* for each of the first three examinations and £10 10*s.* for the final. Candidates who commenced study under any previous scheme to this will be entitled to credit for the fees which they have already paid to either the College of Surgeons or the Apothecaries' Hall, as against the amount of the fees for the respective examinations as above stated; but in case they have not passed with either body previous examinations under this scheme they must pay the fees which would have accrued to that body if they had done so.

[15] The student is required to attend a Medico-Chirurgical Hospital for twenty-seven months, to be distributed, at his own discretion, over the last four years of his study.

UNIVERSITY OF BRUSSELS.

British and other practitioners holding registrable qualifications are admissible for the Doctorate of the University of Brussels without any further curriculum. It is necessary, however, that all candidates should leave their diplomas with the Registrar of the University prior to the examination, and no one will be admitted until this condition has been complied with. The fees are—For matriculation, £8 12*s.*; for 1st Doctorate, £4 8*s.*; for 2nd Doctorate, £4 4*s.*; for 3rd Doctorate, £4 8*s.*; for legalisation of diploma, 8*s.*—£22. The unsuccessful candidates may present themselves again three months after rejection. Candidates who have paid in advance the fees for the three examinations, and are unsuccessful in the first, recover the fees paid for the second and third; those who fail in the second recover the fees paid for the third examination. There are three examinations, viz.—1st Doctorate: Medicine, Special and General Pathology and Pathological Anatomy with the Microscope; General Therapeutics; Materia Medica and Pharmacology; Mental Diseases; Diseases of Women. 2nd Doctorate: Surgery; Midwifery; Hygiene; Medical Jurisprudence. 3rd Doctorate: Clinical Examination in Medicine at the Hospital; Clinical Surgical Examination; Examination in Midwifery, consisting in obstetrical operations on the mannikin (model of pelvis); Examination in Operative Surgery, consisting in some of the usual operations on the dead subject, such as Amputation, Ligature of an Artery, &c.; Regional Anatomy on the Dead Body, with Dissections; Ophthalmology. Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science. The examinations, which are *vivâ voce*, take place on the first Tuesday in November, December, February, May, and June. Candidates have the option of passing each Doctorate separately or of taking the three at one examination. The time required for the three examinations seldom exceeds ten days. Saturday, before 2 P.M., is the most eligible day for arriving for candidates with whom time is an object. The examinations are conducted in English. There are in England at present about 600 graduates holding this degree, and an English Association of Brussels Graduates has been formed.

All applications concerning the examination should be made to Dr. Albert Mills, 30, Rue du Pépin, Brussels, or to Mr. Walter Reeve, 28, Victoria-street, Westminster, between the hours of 4 and 5, except Mondays and Saturdays.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Consequent upon the issue of the Royal Warrant of August, 1891, alterations have taken place in the designations of the departmental rank of the officers of the Army Medical

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Staff, and medical officers are also now placed, as regards sick leave of absence on full pay, on the same footing as those laid down for regimental officers. By a subsequent Royal Warrant, dated Nov. 10th, 1891, Art. 1208 of the Pay Warrant was revised by inserting the words "an officer of our Medical Staff" after the words "combatant officer," thus giving medical officers an equal title with combatant officers to reckon time on half-pay towards retirement, when the half-pay has been due to ill-health contracted in the performance of military duty. The substantive ranks of officers of the Medical Staff carry precedence and other advantages attaching to the rank indicated by the military portion of it, with such exceptions and within such limits as are laid down in the earlier Warrant.

In the *Gazette* of Aug. 25th, 1891, it was announced that the Queen had been pleased, by Royal Warrant, dated Aug. 7th, 1891, to approve of the following alterations of the designations of the departmental rank of the officers of the Medical Staff now serving as follows:—Surgeons-General, ranking as Majors-General, to be Surgeons-Major-General; Deputy Surgeons-General, ranking as Colonels, to be Surgeons-Colonel; Brigade-Surgeons, ranking as Lieutenant-Colonels, to be Brigade Surgeons-Lieutenant-Colonel; Surgeons-Major, ranking as Lieutenant-Colonels, to be Surgeons-Lieutenant-Colonel; Surgeons-Major, ranking as Majors, to be Surgeons-Major; Surgeons, ranking as Captains, to be Surgeons-Captain. The rank of the Director-General of the Army Medical Department is that of Surgeon-Major-General.

[For the text of the Warrant of Aug. 7th for the Medical Staff, *vide* THE LANCET of Aug. 22nd, 1891, page 459 *et seq.*]

Admission into the Army and Indian Medical Services is gained as the result of competitive examination. Under special conditions the admission may take place by nomination of the Secretary of State for War. Candidates for both services must, before being admitted to examination, possess a double qualification to practise Medicine and Surgery, and be registered under the Medical Act. They are also now required to produce certificates of having acted as a medical clinical clerk for six months, as surgical dresser for another six months, and of having had not less than three months' instruction at an ophthalmic hospital or the ophthalmic department of a general hospital, including a course on errors of refraction. They must also furnish satisfactory certificates of moral character. A candidate for the Army must be between the ages of twenty-one and twenty eight, in good mental and bodily health, and must sign a declaration upon honour that he is of pure European descent; for the Indian Service a candidate must be between twenty-one and twenty-eight, of sound bodily health, and a natural-born subject of Her Majesty. Both are examined as to physical fitness by a Board of Medical Officers. These conditions being satisfied, the candidate is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. An entrance fee of £1 is payable at the conclusion of the candidate's physical examination, if he be pronounced fit. No candidate for either Service will be allowed to compete on more than two occasions. The subjects of examination are divided into *compulsory* and *voluntary*. The former comprise Anatomy and Physiology, Surgery, Medicine, including Therapeutics and the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of Drugs. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. By an Army Order dated May 1st, 1895, no candidate shall be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the compulsory subjects, and at least one-half of the aggregate of marks for all the compulsory subjects. The *voluntary* subjects are French, German, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with especial reference to Materia Medica, and for the Indian service Hindustani. Although the results of the examination in voluntary subjects do not affect the question of the eligibility of the candidate for a commission, they influence his position on the list, which is determined by the numbers obtained under the two heads conjointly. After having passed this examination, the successful candidates for both services are sent to the Army Medical School at Netley as "surgeons on probation," receiving a daily pay of 8*s.* and certain allowances, to go through a four months' course of instruction in the special duties required of them in the service. The staff of the school consists of four professors, all of them men of high standing in their special departments. The Professorship of Military Medicine is held by Deputy Surgeon General Henry Cayley, I.M.S. Brigade-Surgeon-Lieutenant-Colonel W. F. Stevenson, M.S., is Professor of Military Surgery; Brigade-Surgeon-Lieutenant-Colonel J. L. Notter, M.D., of Military Hygiene; and Dr. A. E. Wright, of Pathology. To each of these an Army Medical Officer is attached as Assistant Professor. The lectures on Military Surgery include gunshot and other wounds, transport of sick and wounded, duties of army medical officers in the field, on board troopships and transports, recruiting, and other duties incident to military service. Those on Military Medicine treat of tropical and other diseases to which soldiers are exposed in the course of their service, the mortality and invaliding by disease, in peace and war, at home and abroad, the management of lunatics under the conditions of military service, &c. The course of six lectures on Lunacy and Military Asylum work is delivered at the Netley Lunatic Asylum by Surgeon-Lieutenant-Colonel Irving. The course of Hygiene comprises the examination of water and air, the general principles of diet, with the quality and adulterations of food and beverages, the sanitary requirements of barracks, hospitals, and camps, the clothing, duties, and exercises of the soldier, and the circumstances affecting his health, with the best means of preventing disease, and instruction in the mode of preparing the various statistical and other returns required of the medical officer. The Pathological course includes bacteriology and demonstrations in Physiological chemistry. The surgeons on probation are detailed for duty in the wards of the hospital, under the Professors and Assistant Professors of Medicine and Surgery. They spend two months in the medical and two months in the surgical division of the hospital, and there they are taught practically the details of the management of patients in a military hospital, the registration of their diseases, the duties of invaliding, the modes of filling up the regulation statistical returns and other service documents. The surgeons on probation are provided with quarters and are extra members of the mess at Netley. After having passed through the course of instruction they are examined on the subjects taught in the school, and their position on the list of those recommended for commissions is determined by the combined results of the competitive and final examinations. At the close of each session eight prizes are awarded: the Herbert Prize of £20 to the surgeon on probation who has obtained the highest number of marks at the Netley examination; the Parkes Memorial Bronze Medal to the one who gains the highest number of marks in the examination in Hygiene; the De Chaumont prize of books to the one who takes second place in Hygiene; the Martin Memorial Gold Medal for the highest number of marks in the examination on Military Medicine: the Montefiore Medal and £21, awarded for Military Surgery; the Montefiore Second Prize a cheque for the purchase of surgical or scientific instruments, to the surgeon on probation who obtains the second highest number of marks in this branch; the Maclean prize of books for Clinical Medicine and Surgery and for Ward Work; and a prize of books for the highest number of marks gained in Pathology.

At the close of the Netley Session those surgeons on probation who have obtained one-third of the possible total of marks in each subject are recommended for commissions as Surgeon Lieutenants. The Surgeon-Lieutenants of the British Medical Service pass on from Netley to Aldershot, where they go through a systematic course of instruction in ambulance drill and equitation. The surgeons of the Indian Medical Service do not go to Aldershot, but undergo, whilst at Netley, a course of instruction in company and ambulance drill and in other military duties.

The Army Medical Staff.—Surgeon-Lieutenants, if recommended by the Director-General, Army Medical Department, are promoted to be Surgeon-Captains on completing three years' full-pay service.

Surgeon-Captains, if recommended by the Director-General, are promoted to be Surgeon-Majors on completing twelve years' full-pay service, of which three must have been passed abroad. Before being promoted they will be required to pass an examination. This examination may be taken at any time after their seventh year of service. It will embrace the following subjects: *a*. Surgery and Surgical Anatomy. *b*. Medicine and Pathology.

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c. Hygiene, within the limits treated of in "Parkes' Practical Hygiene"; also the regulations regarding the sanitation of garrisons, quarters, hospitals, &c., as well as of camps and hospitals in the field, and of transports, troop and hospital ships. *d.* Duties of medical officers at home and abroad and at sea, as defined in the regulations; also hospital organisation and administration in peace and war, including the transport of sick and wounded by land and sea. *e.* The administration, interior economy, command, and discipline of the Medical Staff Corps, together with a knowledge of the principles of military law and their practical application (a certificate of proficiency in military law obtained at a garrison class will exempt the holder from examination in the latter).

A certificate will be required from a recognised teacher of surgery in any medical school, at home or abroad, in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator.

A report on any subject of a practical professional character, to be selected by the officer himself, and certified to be his own composition and in his own handwriting, will also be required. Considerable importance will be attached to the literary and scientific merits of this report.

The examinations will be conducted by printed questions, which will enter so far into the subject matter of each head selected for examination as to show that the officer's knowledge has been fully tested.

The questions and answers will be forwarded, under a sealed confidential cover, to the Director-General for transmission to the examiners, who will report to the Director-General as to the competence of the officer examined.

The examination in Medicine and Surgery will be held by two gentlemen appointed by the Secretary of State; that in Hygiene by the Professor of Hygiene, Army Medical School, Netley; and that in Regulations, Duties, Military Law, *&c.* by an administrative medical officer, nominated for the purpose by the Director-General.

Any higher qualification, such as M.D., F.R.C.S. &c., or any diploma in Hygiene and State Medicine, taken after May 1st, 1890, will not exempt Surgeon-Captains from this examination.

Surgeon-Majors are, if recommended by the Director-General, Army Medical Department, promoted to be Surgeon-Lieutenant-Colonels on completing twenty years' full-pay service.

The selection of Surgeon-Lieutenant-Colonels for advancement to the grade of Brigade-Surgeon-Lieutenant-Colonel is made on the grounds of ability and merit, in determining which the following points will be considered:—The officer to be so selected must have been favourably reported on by the several military and departmental officers under whom he may have served, as set forth in their Annual Confidential reports. He must be physically fit for general service and have the necessary qualifying foreign and Indian service under existing rules.

A Brigade-Surgeon-Lieutenant-Colonel, to be eligible for selection as Surgeon-Colonel, must have served abroad at least ten years, of which three must have been in India. All officers under the rank of Surgeon-Colonel are placed on the retired list at the age of fifty-five, and those of that rank and of the rank of Surgeon-Major-General at the age of sixty, except that in any particular case in which it may be considered necessary for the interest of the public service the age of retirement of a Surgeon-Major-General may be extended for a period not exceeding two years.

Service on the West Coast of Africa.—Officers who entered the Army Medical Staff, or volunteered expressly for service on the West Coast of Africa on or after the 1st of March 1873 receive double pay while actually serving on the Coast. Candidates who present themselves expressly for service in the Army Medical Staff on the West Coast enter under the same qualifications as other candidates, except that they may be admitted up to 30 years of age. After 3 years' actual service on the coast they are eligible for general service. If, however, it be certified by a medical board that any such officer is unfit for further duty on the coast, he shall be eligible for general service, though he may not have completed 3 years service there. For each year's service on the coast an officer is entitled to a year's leave at home. Each year or portion of a year served on the West Coast reckons double towards voluntary retirement or retired pay, provided that an officer has served 12 months on the coast.

Indian Medical Service.—The alteration of titles of medical officers in the Indian Service, so as to assimilate them to those of the Army Medical Staff, was promulgated in a Royal Warrant dated Dec 7th, 1891. The articles of this Warrant were ordered to take effect from Aug 7th, 1891, the date of the Medical Staff Warrant. By this Warrant the ranks of the medical officers in the Indian military forces were declared to be substantive ranks, and to carry with them the same precedence and other advantages as the corresponding ranks in the Army Medical Staff, including command over the medical officers and subordinates, native and European, engaged in hospital service. The function of military command is subject to the same restrictions as in the British service. An important provision of this Warrant is that Surgeon-Lieutenants "shall be promoted" to the rank of Surgeon-Captain on completing three years' full-pay service, Surgeon-Captains to the rank of Surgeon-Major after twelve years' service, and Surgeon-Majors to the rank of Surgeon-Lieutenant-Colonel after twenty years' service. No examination to qualify for promotion is required. All promotions to higher grades are to be given by selection for ability and merit. In case of distinguished service in the field a medical officer may be at once promoted from any rank to the one next above it. The ages for compulsory retirement are the same as those for the Medical Staff.

Naval Medical Service.—Surgeons are promoted to be Staff Surgeons after twelve years from date of entry, provided they pass the requisite examination; and Staff Surgeons to Fleet Surgeons after twenty years' service if recommended by the Director-General. Deputy-Inspectors-General are promoted by selection from the Fleet Surgeons, and Inspectors-General from the Deputy Inspectors-General having three years' foreign, four years' mixed, of which not less than two must have been abroad, or five years' home service in such appointments as preclude foreign service, provided they have not refused to go abroad when called upon to do so. Inspectors and Deputy Inspectors-General are retired compulsorily at sixty (except that if in any particular case the Lords Commissioners of the Admiralty may consider that the interests of the public service will be materially advanced by the further retention of an Inspector-General on the active list, the age for retirement of such Inspector-General may be extended to sixty-two) and other grades at fifty-five years of age, and all ranks at any time if they have not served for five years. In calculating service for retired pay time on half-pay will be taken as equivalent to one-third service on full-pay.

The following tables, showing the rates of pay and half-pay of the three branches, will probably be acceptable to students who entertain any intention of entering the public service:—

ARMY.

Rank.	*Rates of Pay.*	*Gratuities.*	*With the Rank of*
	Daily.		
Surgeon on probation ..	£0 8 0 ..	— ..	—
	Annual.		
Surg.-Lieut. or Surg.-Captain	200 0 0 ..	— ..	Lieut. or Cap
Surg.-Capt. aft. 5 years' service	250 0 0 ..	— ..	Captain
	Daily.		
Surg.-Capt. aft. 10 years' service	0 15 0	£1250* ..	Captain
Surg.-Major or Surg.-Lieut.-Col.	1 0 0	— ..	Maj. or Lt.-Col.
Surg.-Major or Surg.-Lieut.-Col. aft. 15 years' service	1 2 6 ..	£1800* ..	Maj. or Lt.-Col.
Surg.-Major or Surg.-Lieut.-Col. aft. 18 years' service	— ..	£2500* ..	Maj. or Lt.-Col.
		Half-pay.†	
Surgeon-Lieut.-Col.:			
,, aft. 20 years' service	1 5 0 ..	£1 0 0 ..	Lieut.-Colonel
,, 25 ,,	1 7 6 ..	1 2 6 ..	
,, 30 ,,	— ..	1 5 0 ..	
Brigade Surgeon Lieut.-Col.	1 10 0 ..	— ..	Lieut.-Colonel
,, aft. 5 years in rank	1 13 0 ..	—	(but always
,, und. 30 years' service	— ..	1 7 6	senior to
,, aft. 30 ,,	— ..	1 10 0	Surg.-Lieut.-Col.)
Surgeon-Colonel	2 0 0 ..	1 15 0 ..	Colonel
Surgeon-Major-General ..	2 15 0 ..	2 0 0 ..	Major-General

* Applies equally to Surgeon-Lieutenant-Colonel, Surgeon-Major,

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Surgeon-Captain or Surgeon-Lieutenant, according to periods of service—i.e., ten, fifteen, or eighteen years.

† Half-pay is also applicable to the ranks junior to Surgeon-Lieutenant-Colonel after twenty years' service, as follows:—

Surg.-Lieut.-Col., Surg.-Major, Surg.-Capt., or Surg.-Lieut.:

	Daily.
Under 5 years' service	£0 6 0
After 5 ,, ,, ...	0 8 0
After 10 ,, ,, ...	0 10 0
After 15 ,, ,, ...	0 13 6

ROYAL NAVY.

Rank.	Daily pay.	Half-pay.	Gratuities and retired pay. Rank.	Gratuity.
	£ s. d.	£ s.		
Surgeon	0 11 6	0 6	Surgeon and Staff ‡Surgeon:	
aft. 2 years' f. p. in rank	..	0 7	aft. 8 years' f. p.	£1000
4 ,,	0 13 6	0 8	12 ,,	1500
6 ,,	..	0 9	16 ,,	2250
8 ,,	0 15 6	0 10		
10 ,,	..	0 11		
Staff-Surgeon:				
on promotion	1 1 0	0 12		
aft. 2 years' f. p. in rank	..	0 13		
4 ,,	1 4 0	0 14		
6 ,,	..	0 15		
Fleet Surgeon:			Fleet-Surgeon.	Daily.
on promotion	1 7 0	0 17	aft. 20 years'	£1 0 0
aft. 2 years' f. p. in rank	..	0 18	24 ,,	1 2 6
4 ,,	1 10 0	0 19	27 ,,	1 5 0
6 ,,	..	1 0	30 ,,	1 10 0
8 ,,	1 13 0	..		
Deputy Inspector-General:				
on promotion	2 2 0	1 5		1 15 0
aft. 2 years' f. p. in rank	..	1 7		
4 ,,	..	1 9		2 0 0
Inspector-General	2 15 0	1 18		

‡ If the health of a surgeon breaks down before he completes eight years' service, even if his disability be contracted in the service or be due to climatic causes, he is liable to be at once placed on the retired list, receiving a gratuity at the rate of £125 for each year of completed service.

INDIAN MEDICAL SERVICE §

The following are the rates of "Indian pay and allowances" which will be drawn by officers hereafter appointed to the Indian Medical Service:—

Rank.	Years' service.	Indian pay and allowances per Mensem. When not holding an appointment carrying higher pay. Rs. a. p.
Brigade-Surgeon-Lieutenant-Colonel and Surgeon-Lieutenant-Colonel ..	25 and over	888 12 0
Surgeon Lieutenant-Colonel	20 ,,	852 3 7
Surgeon-Major	15 ,,	677 6 11
,, ,,	12 ,,	640 14 6

Rank.	Years' service.	A. When not receiving any staff allowance. Rs. a. p.	B. When receiving staff allowance in addition. Rs. a. p.
Surgeon-Captain ..	10 ,,	451 14 5	410 9 5
,, ,, ..	6 ,,	433 10 2	392 5 2
,, ,, ..	5 ,,	335 12 2	304 14 2
Surgeon-Captain and Surgeon-Lieutenant	under 5	317 8 0	286 10 0

On first appointment they will only come into receipt of "Indian pay and allowances" from the date of their arrival in India.

Officers holding the principal administrative appointments and substantive military charges of the Indian Medical Service receive at present the following consolidated salaries:—

	Rs. per Mensem.
Surgeon-Major-General, Bengal ..	2700
,, ,, ,, Madras ..	2500
,, ,, ,, Bombay ..	2500
Surgeon-Colonel .. .. from ..	2250
to	1800
Brigade-Surgeon-Lieutenant-Colonel or Surgeon-Lieutenant-Colonel of 20 years' service and upwards in substantive charge of a native regiment	1000 with Rs. 90, horse allowance in cavalry regiments.
Surgeon-Major under 20 years' service in substantive charge of ditto ..	800 with Rs. 90 ditto.
Surgeon-Captain above 5 years' full-pay service in substantive charge of a native regiment	600 with Rs. 60 ditto.
Surgeon-Captain or Surgeon-Lieutenant under 5 years' ditto in substantive charge of a native regiment	450 with Rs. 60 ditto.

The salaries of other substantive medical appointments in the Civil and Military Departments are consolidated and vary from Rs. 1800 to Rs. 400 per mensem.

Qualified officers of the Medical Service are also eligible for appointments in the Assay Department. The salaries of these appointments are from Rs. 600 to Rs. 2250 per mensem.

Officers are required to perform two years' regimental duty in India before they can be considered eligible for civil employment.

RETIRING PENSIONS AND HALF-PAY.

Officers of the Indian Medical Service will be allowed to retire on the following scale of pension, on completion of the required periods of service:—

	Per annum.
After 30 years' service for pension	£700
,, 25 ,, ,, ,, ...	500
,, 20 ,, ,, ,, ...	365
,, 17 ,, ,, ,, ...	292

Officers not entitled to pension, when placed on temporary or permanent half-pay will be granted the British rate of half-pay of their military rank, as under:—

Rank.	Rates of Half-pay. Per diem.	Per annum.
	s. d.	£ s. d.
Brigade-Surgeon-Lieutenant-Colonel .. Surgeon-Lieutenant-Colonel	11 0	200 15 0
Surgeon-Major	9 6	173 7 6
Surgeon-Captain	7 0	127 15 0
Surgeon-Lieutenant	3 0	54 15 0

§ No staff or regimental allowance can be drawn until the lower standard examination in Hindustani has been passed. As most surgeon-lieutenants have been sent to the frontier immediately on arriving in India, they have found it impossible to study and pass this examination, and have consequently been doing regimental and other work for Rs. 317 8a. a month. Lately a concession has been granted to medical officers so situated on the frontier, but the rule is still most illiberal and requires alteration.

Officers cannot retire *in India* on half-pay (No. 45, Feb. 28th, 1865).

METROPOLITAN MEDICAL SCHOOLS HAVING A COMPLETE CURRICULUM.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The clinical practice of the hospital comprises a service of 75 beds, of which 676 are for patients in the hospital at Smithfield and 75 for convalescent patients at Swanley. Ten house physicians and ten house surgeons are appointed annually each of them holding office for one year, and provided with rooms by the hospital authorities. The ophthalmic house surgeon is appointed for six months, and is eligible for re-election for a second term of six months. A midwifery assistant is appointed every six months and an extern midwifery assistant every three months. The senior assistant chloroformist and junior assistant chloroformist are appointed annually, and are provided with rooms. Two qualified assistant electricians are appointed every three months. Each of these officers receives a salary of £ except the chloroformists, who receive £75 and £ respectively, and the extern midwifery assistant, who receives £50 a year. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical in-patients and to the out-patients and the dressers in the special departments are chosen from the diligent students. All the appointments are now free.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

Foundation and other Prizes.—Two Open Scholarships in Science of the value of £75 each, tenable for one year, will be competed for in September. Candidates must not be more than twenty-five years of age, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examination

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Physics and Chemistry for the one, and Physiology and Biology for the other.—Two Junior Open Scholarships, one of £150 and one of £50, in the subjects of the Preliminary Scientific Examination of the London University, will be competed for at the same time. Candidates must be under twenty years of age, and must become regular students.—The Jeaffreson Exhibition, of the value of £20, is awarded at entrance after examination in the subjects of general education. It is now an Open Exhibition.—A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry.—Kirkes' Scholarship and Gold Medal in Clinical Medicine, value 40 guineas.—Lawrence Scholarship and Gold Medal, of the value of 40 guineas (founded in 1873 by the family of the late Sir William Lawrence).—Two Brackenbury Scholarships in Medicine and Surgery, £30 each.—Four Junior Scholarships in the subjects of study of the first year: 1st, £30; 2nd, £20; 3rd, £25; 4th, £15.

A prize of £15 for Pathological Anatomy has been founded by the late Mr. Henry Skynner in memory of his brother; a Scholarship of £50, confined to Cambridge graduates in Arts, by Miss Shuter, in memory of her brother, formerly assistant surgeon to St. Bartholomew's Hospital; and a prize of £10 10*s* by Sir F. A. Burrows, Bart., in memory of his father, Sir George Burrows.

Research Studentship in Pathology.—In order to encourage young qualified men to engage in research work the treasurer of the hospital appoints annually a student to engage in pathological research. The studentship is of the value of £100 a year.

The Medical School Buildings include three large lecture theatres, a large dissecting room, a spacious library (containing 13 000 volumes), a well-appointed museum of anatomy, physiology, comparative anatomy, materia medica, botany, and pathological anatomy. The Pathological Museum is the largest and most complete of any in the kingdom. There are laboratories for chemistry, physiology, pathology, pharmacology, public health, and biology, giving ample accommodation in every department.

A large recreation ground of ten acres has been purchased by the school committee at Winchmore-hill for the use of the Students' Amalgamated Clubs, and was formally opened last summer.

Instruction in Preliminary Science is given to University of London students in chemistry, biology, and physics throughout the year.

Laboratory Instruction for the D.P.H. is provided during the winter and summer sessions, and elementary instruction in Bacteriology is given throughout the year.

CHARING-CROSS HOSPITAL AND COLLEGE.—Total fees, 110 guineas if paid in a single sum on entry, or 121 guineas if paid in five instalments; the sons of Registered Medical Practitioners pay 100 guineas in one sum or 110 guineas in five sums; for Dental students, 54 guineas, or 60 guineas in two equal instalments. General students pay proportionately lower fees, and are admitted without additional fee to the courses of Clinical Medicine and Surgery and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the Scholarships, Gold Medal, and Pereira Prize.

Two Entrance Scholarships, of the value of 120 guineas and 60 guineas respectively, are awarded annually at the commencement of each winter session after a competitive examination in the following groups of subjects:—(1) English, including Language, History, and Geography; (2) Any two of the following four languages—Latin, Greek, French, and German; (3) Mathematics, including Arithmetic, Algebra, and Geometry; and Mechanics, including Statics and Dynamics; (4) Inorganic Chemistry and experimental Physics, including Acoustics, Heat, Magnetism, Electricity, and Optics; and (5) Animal and Vegetable Biology. The value attached to each group of subjects is 1000 marks. 200 marks will be deducted from the number of marks given for each paper, so that no credit will be given for any paper in which the candidate obtains less than one-fifth of the total marks. Candidates must be under 25 years of age on the first day of the Examination. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left entirely to the candidate. Candidates must give notice to the Librarian of their intention to compete, and of the groups in which they offer themselves for examination, on or before Saturday, Sept. 14th, 1895. The examination will commence at the School on Monday, Sept. 16th, at 10 A.M., and will continue during the week. The successful candidates will be required to enter forthwith for their complete medical education at the Charing-cross Hospital. A Universities' Scholarship (of the value of 60 guineas) is open to students from the University of Oxford who have passed the First M.B. Examination, and to students of the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London medical school. Subjects: Anatomy and Physiology, including Histology. The examination for this Scholarship, which will be partly practical, will be held at the School on Sept. 16th and 17th. Candidates must give notice to the Librarian of their intention to compete on or before Saturday, Sept. 14th, 1895. The successful candidate will be required to enter forthwith at Charing-cross Hospital for the completion of his curriculum. The Llewellyn Scholarship of £25, for students who have just completed their attendance on lectures; and the Golding Scholarship of £15, for students who have just completed their second year. The Pereira Prize of £5 is open to all general students, and is awarded annually for the best clinical reports. The Governors' Gold Medal is given for excellence in clinical work. Silver or Bronze Medals, or an equivalent in Books, are awarded to the most distinguished students in all classes; and special prizes in the classes of Dental Surgery, Physiology, and Practical Histology.

Classes for the Preliminary Scientific Examination of the University of London are held at this Medical School. The fee for the whole course, which begins in October, is 15 guineas. There are also special classes for the practical work for the Department of Public Health and a course in the subject of Diseases of tropical climates.

Post-graduate Class and Lectures.—Special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at the hospital by members of the staff throughout the year. Practitioners wishing to join the class can receive any further information as to the dates and subjects by communicating with the Honorary Secretary, Dr. Willcocks, at the Hospital.

ST. GEORGE'S HOSPITAL.—Students may become Perpetual Pupils by payment of £145, or of £150 in four annual instalments. Perpetual pupils are entitled to perpetual admission to lectures and demonstrations as well as to the entire medical and surgical practice of the hospital; they may compete for all prizes and exhibitions, may become clinical clerks during six months and dressers during another six months, or longer if required, without fee, may attend midwifery practice, and may compete for all hospital and school appointments without extra charge. Four house surgeoncies and four house physicianciés, and the salaried offices of obstetric assistant, senior and junior anæsthetists, medical and surgical registrar, curator and assistant curator of the Museum, besides demonstratorships and a number of junior hospital appointments, are open to perpetual pupils. Students not being perpetual pupils are admitted to lectures, demonstrations, and hospital practice on payment of £45 annually for two years and £20 annually for succeeding years. Such students may become Perpetual in their third year if they wish and if their conduct has been satisfactory.

Entrance Scholarships.—£145, open to sons of medical men; two of £50 each, open to all students commencing their medical studies; two of £85 each, open to students who have passed or completed the curriculum for the Oxford First M.B. or Cambridge Second M.B.; and one of £85 open to students of Provincial University Colleges of similar standing.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England within two years previously to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery.—The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession and for moral conduct, open to perpetual pupils in their third year of study.—Sir Charles Clarke's Prize (interest of £200 Consols) for good conduct and for clinical work rendered in the service of the hospital; the

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The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1895-96.

LECTURES, &c.	ST. BARTHOL. HOSPITAL. LECTURERS.	FEES. One Course	FEES. Unlimited.	CHARING-CROSS HOSPITAL. LECTURERS.	FEES. One Course.	ST. GEORGE'S HOSPITAL. LECTURERS.	FEES. One Course	FEES. Perpetual
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d. £ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Klein	9 9 0	...	Dr. Pembrey	3 3 0 ...	Dr. Buckmaster	7 7 0	8 18 6
BIOLOGY						Ditto, *Phys. Chem.*	...	...
ANATOMY	Dr. Shore Mr. Walsham Mr. Bruce Clarke	7 7 0 9 9 0	... ...	Dr. Pollard Mr. Boyd	5 5 0 ... 7 7 0 ...	Mr. Turner Mr. Jaffrey	7 7 0	8 18 6
ANATOMICAL DEMONSTRATIONS	Messrs. Waring, Bailey, Hayward, Weir, Fretwell, and Sloane.	10 10 0	...	Mr. Boyd Mr. Waterhouse Mr. Callum	8 8 0 ...	Mr. Grimsdale Ditto, *Osteology* *Histology*	... ... 3 3 0	... ...
CHEMISTRY	Dr. Russell	7 7 0	...	Dr. Morley	6 6 0 ...	Mr. Gardiner Mr. Cockburn	6 6 0	7 17 6
MEDICINE	Sir D. Duckworth Dr. Norman Moore	7 7 0	...	Dr. Bruce	7 7 0 ...	Dr. Whipham Dr. Cavafy	7 7 0	8 18 6
SURGERY	Mr Willett Mr Marsh	7 7 0	...	Mr. Bloxam	7 7 0 ...	Mr. Pick	7 7 0	8 18 6
HOSPITAL PRACTICE:	Dr. Church	3 mths.	36 15 0	Drs. Green, Bruce and Abercrombie	3 mths. Full	Dr. Whipham	12 mth.	42 0 0
PHYSICIANS	Dr. Gee Sir D. Duckworth Dr. Hensley Dr. Champneys (Obstetric)	15 2 0 6 mths. 10 10 0 2 mths 26 5 0		(*Two dept. each*)	6 mths. 21 0 0	Dr. Cavafy Dr. Ewart Dr. Owen *Obst. Phys.:*	10 10 0 2 years 21 0 0	
	Dr. Bruxton	...	...	Dr. Wilcocks, Dr. Murray, Dr. Morley, Dr. Allchin	7 7 0 12 mths. 10 10 0	Dr. Dakin		
ASSISTANT-PHYSICIANS	Dr. Norman Moore Dr. S. West Dr. Orwood	3 mths.	...	*Pract. Medicine:* Dr. Routh	3 3 0	Dr. Penrose Dr. R. Weston Dr. Lee Dickinson	...	...
SURGEONS	Messrs. Smith, Willett, Langton, Marsh, and Barlin	15 2 6 6 mths.	36 15 0	Mr. Bloxam Mr. Morgan	3 mths. Full 3 mths. Full	Mr. Pick, Mr. Howard,	12 months	42 0 0
ASSISTANT SURGEONS	Messrs. Walsham, Cripps, Bruce Clarke, Bowlby and Lockwood	19 19 0 12 mths 26 5 0	...	Mr. Stanley Boyd Mr. Waterhouse Mr. Willis Mr. Callum	6 mths. 21 0 0 7 7 0 Full 12 mths Med. & 10 10 0 Surg.	Mr. Bennett, Mr Dent *Ophth. Surg.:* Mr. Frost Mr. Tweed Mr. Sheild	10 10 0 2 years 21 0 0	
	Ophth. Surgery: Mr Vernon Maclosop				36 15 0	Mr. H. Allingham		
PRACTICAL SURGERY	Mr. Powell	7 7 0	...					
SURGICAL PATHOLOGY	Mr. D'A. Power Mr. Bowlby	...	...	Mr. Waterhouse Mr. Wallis	5 5 0 ...	Mr. Sheild	4 4 0	...
CLINICAL MEDICINE	Drs. Church, Gee, Sir D. Duckworth, and Dr. Bowlby	...	...	The Physicians and Assistant-Physicians	... ...	The Physicians	...	...
CLINICAL SURGERY	Messrs. Smith, Willett, Langton, Marsh, and Barlin	...	...	The Surgeons and Assistant-Surgeons	... ...	The Surgeons	...	...
CLINICAL MIDWIFERY, &c.	Dr. Champneys	...	...	Drs. Black & Routh	... ...	Dr. Dakin	...	...
DENTAL SURGERY	Mr. Paterson Mr. Ackery	...	...	Mr. Colyer	... ...	Mr. H. L. Albert	...	...
PUBLIC HEALTH	Dr. Thorne	3 3 0	*	Dr. Whitelegge (*Pub. Health, Lect.*: Dr. Morley & Allchin)	3 3 0 ...	Dr. Parkes	...	...
SUMMER SESSION.								
MATERIA MEDICA	Dr. Calvert	7 7 0	...	Dr. Willcocks	... ...			
PHARMACOLOGY	Dr. Brunton	...	...	Dr. Willcocks	4 4 0 ...	Dr. Penrose	4 14 6	5 15 6
MIDWIFERY, &c.	Dr. Champneys	7 7 0	...	Dr. Black	4 4 0 ...		...	...
BOTANY	Rev. G. Henslow	...	...	Dr. Willcocks	... ...	Dr. Dakin	4 14 6	5 15 6
MEDICAL JURISPRUDENCE	Dr. Hensley	4 4 0	...	Dr. Abercrombie Dr. Morley (*Toxic.*)	4 4 0 ...	Dr. Owen	4 4 6	5 15 6
THERAPEUTICS	Dr. Brunton	...	...	Dr. Willcocks	... ...			
PATHOLOGICAL ANATOMY	Dr. Kanthack (and in Winter)	7 7 0	...	Dr. Murray	4 4 0 ...	Dr. Penrose Dr. Rolleston	4 4 6	...
PRACTICAL CHEMISTRY	Dr. Russell, Dr. Clowes, Dr. Hawsay, & Mr. Howard	5 5 0	...	Dr. Morley Mr. Richards	5 5 0 ...	Mr. Gardiner Mr. Cockburn	4 4 0 4 4 0	...
COMPARATIVE ANATOMY	Dr. Shore	2 12 6	...	Dr. Pollard	... ...	Dr. Buckmaster	4 4 0	...
OPHTHALMIC SURGERY	Mr. Power Mr. Vernon (in Winter)	3 3 0	*	Staff of Royal West. Oph. Hosp.	... ...	Mr. Frost *Pract. Med.:*	...	...
OPHTHALMOLOGY	...	...	...		...	Dr. Ewart	4 4 0	...
PSYCHOLOGY						Dr. Penrose	...	...
DENTAL SURGERY	Dr. Clave Shaw Mr. Paterson	3 3 0 2 12 6	...	Dr. Percy Smith Mr. Colyer	4 4 0 ...	Dr. Lee Dickinson	...	...
PRACTICAL SURGERY	Mr. Bowlby Mr. D'Arcy Power (and in Winter)	7 7 0	...	Mr. Waterhouse Mr. Wallis	5 5 0 ...	Mr. H. L. Albert Mr. Sheild	... 4 4 0	...
PRACTICAL PHYSIOLOGY	Drs. Lifbins, Fletcher, & Bowman (and in Winter)	10 10 0	...	Dr. Pembrey (and in Winter)	6 6 0 ...	Dr. Buckmaster *Tropical Medicine.*	...	...
PRACTICAL PHARMACY	Dr. Calvert Dr. Bowman	...	...	Mr. Pearce	2 2 0 ...	Dr. Mansm *Clinical Lunacy:*	3 3 0	
OPERATIVE SURG. (DEMON.)	Mr. J. Berry Mr. H. J. Waring Mr. D'A. Power	6 6 0	...	Mr. Waterhouse	‡ ...	Dr. Alexander Mr. Dent *Pract. Midw.:*	6 6 0	...
DISEASES OF THE EAR	Mr. Cumberbatch	...	...	Mr. Waterhouse	... ...	Dr. Dakin		
DISEASES OF THE SKIN	Dr. West	...	...	Dr. Galloway	... ...	Mr. Bull	...	...
ORTHOPÆDIC SURGERY	Mr. Walsham	...	...	Mr. Wallis	... ...	Dr. Cavafy	...	...
DISEASES OF THE THROAT	Mr. Bowlby	...	...	Dr. Willcocks	... ...	Mr. Dent Dr. Whipham	...	...
FEE for all Lectures and Hosp. Med. and Surg. Practice	£157 10s.; or, 1st yr., £42; 2nd yr., £42; 3rd yr., £42; 4th yr., £42.			£115 10s.; or, 1st Win., £34 13s.; 1st Sum., 2nd Win., 2nd Sum., 3rd Win., £23 2s. each.†		£145; or, 1st year, £45; 2nd year, £40; 3rd year, £40; 4th year, £20.§		

* Free to general students of the hospital. † The sons of registered medical practitioners pay 100 guineas in one sum, or 110 guineas in five instalments. Dental students £56 14s., or two instalments of 30 guineas each. A proportionate reduction in their fees will be made to students who have already commenced their education at institutions recognised by the Examining Boards on production of matriculation certificates on joining the school. ‡ Included in Practical Surgery fee. § Fee for perpetual students. ‖ And in Winter.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1895-96—CONTINUED.

LECTURES, &c.	GUY'S HOSPITAL.			KING'S COLLEGE AND HOSPITAL.		
	LECTURERS.	FEES. First Course.	FEES. Subsequent Course.	LECTURERS.	FEES. One Course.	FEES. Perpetual
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Washbourn and Dr. Starling	10 10 0	10 10 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle	8 8 0	...
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Clement Lucas and Mr. Lane	10 10 0	10 10 0	Dr. Curnow, Mr. Kenny, and Mr. Cadman	6 6 0 or 9 9 0 inc. Prac. Anatomy	
ANATOMICAL DEMONSTRATIONS	Mr. Fripp, Dr. Hamilton, and Mr. Steward.	10 10 0	10 10 0	Dr. Curnow, Mr. A. S. Kenny, & Mr. A. W. Cadman	7 7 0	...
CHEMISTRY	Dr. Stevenson and Mr. Groves	5 5 0	5 5 0	Mr. Thomson and Mr. Jackson	8 8 0	...
MEDICINE	Dr. Pye-Smith and Dr. Taylor	10 10 0	10 10 0	Dr. Beale and Dr. Duffin	8 8 0	...
SURGERY	Mr. Howse and Mr. Davies-Colley	10 10 0	10 10 0	Mr. W. W. Cheyne	8 8 0	...
PRACTICAL SURGERY	Mr. Targett	4 4 0	4 4 0	Messrs. Carless, Burghard, Cheatle, and Beale	3 3 0	...
HOSPITAL PRACTICE	Dr. Pye-Smith, Dr. Taylor, Dr. Goodhart, and Dr. Hale White	3 months 15 15 0	Perpetual 42 0 0	Dr. Beale, Dr. Duffin	Summer	42 0 0
PHYSICIANS				Dr. Playfair (*accou.*)	8 8 0	
				Dr. Burney Yeo	Winter	
		6 months		Dr. Hayes (*accou.*)	11 11 0	
	Dr. Galabin (*obst.*)	21 0 0		Dr. Ferrier, Dr. Curnow	1 year	
				Dr. Tirard	13 13 0	
	Drs. Pitt, Perry, Shaw, and Washbourn	1 year 28 7 0	...	Dr. Dalton	...	
ASSISTANT-PHYSICIANS	Dr. Horrocks (*obst.*)			Sir H. Beevor, Bart., M.B.		
				Dr. Phillipps (*accou.*)		
	Mr. Howse,	3 months	Perpetual	Mr. W. Rose, Mr. Cheyne, and Mr. Barrow	...	...
	Mr. Davies-Colley, Mr. Lucas, and Mr. Golding-Bird	15 15 0	42 0 0			
		6 months	...	Mr. A. S. Underwood (*surg.-dentist*)		
SURGEONS	Mr. Higgens (*oph.*), Messrs. Newland-Pedley, Maggs, & Badcock (*dent.*)	21 0 0 1 year		Mr. McHardy (*ophthalmic*)		
	Mr. L. Purves (*aural*)	28 7 0	...			
ASSISTANT-SURGEONS	Messrs. Jacobson, Symonds, Lane, Dunn, Brailey (*oph.*), and Romo, Pillin, & Richards (*dent.*)	...	...	Mr. Carless, Mr. Burghard, Mr. Cheatle, and Mr. Beale	...	...
CLINICAL MEDICINE	Drs. Pye-Smith, Taylor, Goodhart and White *In Summer:* Drs. Pitt, Perry, Shaw, and Washbourn	...	...	Dr. Beale Dr. Duffin Dr. B. Yeo Dr. Ferrier Dr. Curnow	...	...
CLINICAL SURGERY	Messrs. Howse, Davies-Colley, Lucas, and Golding-Bird *In Summer:* Mr. Jacobson, Mr. Symonds, Mr. Lane, and Mr. Dunn	...	...	Mr. W. Rose		
CLINICAL MIDWIFERY	Dr. Galabin & Dr. Horrocks	...	...	[*Osteology:* Dr. Curnow & Mr. A. S. Kenny]		
	[*Medical Classes:* Dr. Shaw] [*Surgical Classes:* Mr. Dunn]			Dr. Playfair & Dr. Hayes [*State Medicine Laboratories:* Dr. W. R. Smith & Mr. Moor]	—	...
SUMMER SESSION.						
MATERIA MEDICA & THERAPEUTICS	Dr. Hale White	5 5 0	5 5 0	Dr. Tirard	5 5 0	...
MIDWIFERY &c.	Dr. Galabin	5 5 0	5 5 0	Dr. Playfair, Dr. Hayes	5 5 0	...
BOTANY	Mr. Beddard, Dr. Campbell,	5 5 0	5 5 0	Mr. Bottomley, Ph.D.	4 4 0	...
BIOLOGY	and Mr. Steward	10 10 0	10 10 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle	...	...
MEDICAL JURISPRUDENCE	Dr. Stevenson	5 5 0	5 5 0	Dr. W. R. Smith	5 5 0	...
DISEASES OF WOMEN	Dr. Galabin	5 5 0	5 5 0	Dr. Playfair	...	...
PRACTICAL CHEMISTRY	Mr. Groves, Mr. Wade, and Mr. Hopkins	5 5 0	5 5 0	Messrs. Thomson and H. Jackson	6 6 0	...
PRACTICAL PHYSIOLOGY	Dr. Starling, Dr. Fawcett, and Mr. Hopkins	10 10 0	7 7 0	Dr. Halliburton, Mr. Beale, and Mr. Lyle.	5 5 0	...
NEURO-PATHOLOGY	...	...	...	Dr. Ferrier & Dr. Turner	1 11 6	...
PRACTICAL BIOLOGY	Mr. Beddard, Dr. Campbell, and Mr. Steward	10 10 0	10 10 0	Mr. Beale, Mr. Lyle	8 8 0*	...
				Mr. W. G. Adams	2 2 0	...
NATURAL PHILOSOPHY	Mr. Reinold	5 5 0	5 5 0	Mr. F. J. Bell (in Winter)	4 4 0	...
COMPARATIVE ANATOMY	...	5 5 0	5 5 0			
PATHOLOGY AND MORBID ANATOMY	Drs. Pitt, Perry, & Shaw	5 5 0	5 5 0	Dr. Duffin, Dr. Dalton	3 3 0	...
BACTERIOLOGY	Dr. Washbourn	2 2 0	2 2 0	Mr. Crookshank	3 3 0	...
OPERATIVE SURGERY	Mr. Dunn	5 5 0	5 5 0	Mr. A. B. Barrow	2 2 0	...
MORBID HISTOLOGY	Dr. Pitt and Mr. Lane	5 5 0	5 5 0	Dr. Dalton	...	...
OPHTHALMIC SURGERY	Mr. Higgens	3 3 0	3 3 0	Mr. McHardy	3 3 0	...
PSYCHOLOGICAL MEDICINE	Dr. Savage	3 3 0	3 3 0	Dr. Ernest White	...	...
DENTAL SURGERY	Mr. Newland-Pedley	...	...	Mr. A. S. Underwood	...	...
AURAL SURGERY	Mr. L. Purves	...	...	Dr. Pritchard	...	...
DEMONST. OF CUTANEOUS DISEASES	Dr. Perry	...	...	Mr. Carless	...	...
VACCINATION	...	...	...	Mr. Webb	...	...
PUBLIC HEALTH	Mr. Turner	3 3 0	3 3 0	Dr. Kelly	1 1 0	...
PRACTICAL PHARMACY	Mr. Collier	3 3 0	3 3 0	Mr. Wilmot	3 3 0	...
				[*Clin. Therap.:* Dr. B. Yeo]	...	...
				[*Pract. Pathol.:* Dr. Dalton]	5 5 0	...
FEE for Lectures and Hospital Medical and Surgical Practice	£150; or by 2 instalments of £75 10s.; or by 4 instalments of £52 10s., £52 10s., £31 10s., and £21.			£135; or in two annual instalments of £70; or three of £48; or four of £37 each.		

* Elementary Course, £5 5s.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1895-96 -(CONTINUED).

LECTURES, &c.	LONDON HOSPITAL. LECTURERS.	LONDON HOSPITAL. FEES. One Course.	LONDON HOSPITAL. FEES. Perpetual.	ST. MARY'S HOSPITAL. LECTURERS.	ST. MARY'S HOSPITAL. FEES. One Session.	ST. MARY'S HOSPITAL. FEES. Perpetual.	MIDDLESEX HOSPITAL. LECTURERS.	MIDDLESEX HOSPITAL. FEES. One Session.	MIDDLESEX HOSPITAL. FEES. Perpetual.
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Mr. Mansell Moullin	7 7 0	...	Dr. Waller, F.R.S.	7 0 0	...	Mr. Lowne	8 8 0	...
EXPERIMENTAL PHYSIOL.	Dr. Leonard Hill	4 4 0	...	Dr. Waller, F.R.S.	...	...	...	5 5 0	...
PATHOL. & MORBID ANAT.	Mr. F. S. Eve and Dr. Percy Kidd	3 3 0	...	Mr. Silcock Dr. Maguire	4 0 0	...	...	...	...
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. T. H. Openshaw [*Pract. Anat.:*	7 7 0	...	Mr. E. Lane	8 0 0	...	Mr. J. B. Sutton	9 9 0	...
ANATOMICAL DEMONSTRATIONS.	Dr. Keith, Dr Sequeira, Dr Leaf	7 7 0	...	Mr. Roughton Mr. Collier	...	...	Messrs. A. Lawson & R. Gladstone	5 5 0	...
CHEMISTRY	Mr. Page, Mr. Candy [*Prac.:* Mr. Page] [*Experim. Physics:* Mr. Page]	7 7 0 5 5 0 3 3 0	...	Mr. A. P. Laurie Mr. B. Russell	6 0 0	...	Dr. Plimpton	6 6 0	...
MEDICINE	Dr. Stephen Mackenzie	7 7 0	...	Dr. Lees Dr. Phillips	8 0 0	...	Dr. W. Cayley	8 8 0	...
SURGERY	Mr. Treves	7 7 0	...	Mr. Owen Mr. Page	8 0 0	...	Mr. H. Morris & Mr. A. Clark	8 8 0	...
PRACTICAL SURGERY	Mr. J. Hutchinson, jun.	5 5 0	...	Mr. Pepper, Mr. Crowle (*assistant*)	4 0 0	...	Mr. Pearce Gould	8 8 0	...
PRACTICAL MIDWIFERY	Drs Herman & Lewers	5 5 0	...	Dr. Gow	3 0 0	...	Dr. Boxall	5 5 0	...
PRACTICAL MEDICINE	Dr. Stephen Mackenzie	...	...	Sir William Broadbent, Bart.	3 0 0	...	Dr. Coupland	8 8 0	...
HOSPITAL PRACTICE: PHYSICIANS	Drs. Fenwick, Mackenzie, Sansom, Turner, Gilbart Smith, Herman (*Obst.*), Warner, Ralfe, Lewers (*Obst.*)	3 mths. 10 10 0 6 mths. 15 15 0 1 year 21 0 0	26 5 0	Sir William Broadbent, Bart. Dr. Cheadle Dr. Lees *To Out-patients:* Drs. Sydney Phillips, Maguire, and Luff	3 mths. 4 0 0 6 mths. 7 0 0 1 year 12 0 0	24 0 0	Dr. W. Cayley Dr. Coupland Dr. D. Powell Dr. Fowler Dr W Duncan (*Obst.*) Dr. Pringle (*Skin*)	3 mths. 6 11 0	...
ASSISTANT-PHYSICIANS	Drs. Percy Kidd, J. F. Smith, Hadley, & Schorstein	...	...	Drs. Handfield Jones & Gow (*Obs.*)	...	...	Dr. Biss Dr. W. Pasteur Dr. W. E. Wynter Dr. Boxall (*Obst.*)	..	...
SURGEONS	Mr. W. Tay (*Oph.*), Mr. McCarthy, Mr. F. Treves, Mr. C. Mansell Moullin, Mr. Hurry Fenwick, Mr. Eve (*Oph.*), Dr. Woakes, & Mr. F. M. Hovell (*Aur.*), Mr. Barrett (*Dent.*)	3 mths. 10 10 0 6 mths. 15 15 0 1 year 21 0 0	26 5 0	Mr. Norton Mr. Owen Mr. Page *To Out-patients:* Mr. Pepper Mr. Silcock Mr. J. E. Lane Mr. Critchett and Mr. Juler (*Opth.*)	3 mths. 4 0 0 6 mths. 7 0 0 1 year 12 0 0	24 0 0	Mr. G. Lawson Mr. Morris Mr. Andrew Clark Mr. S. Bennett (*Dental*) Mr. Lang (*Oph.*) Mr Leopold Hudson (*Aural.*)	3 mths. 6 11 0	...
ASSISTANT-SURGEONS	Mr. J. Hutchinson, jun., Mr. Openshaw, Mr. H. P. Dean	...	...	Mr. Field (*Aur.*) Mr. Morris (*Skin*) Mr. Morton Smale (*Dental*)	...	...	Mr. Pearce Gould Mr. J. B. Sutton Mr. L. Hudson Mr. W. Hern (*Assist. Dental.*)	...	...
CLINICAL MEDICINE	The Physicians and Asst.-Phys.	...	...	Sir William Broadbent, Bart. Dr. Cheadle	3 0 0	...	The Physicians	...	...
CLINICAL SURGERY	The Surgeons and Asst.-Surg.	...	...	Mr. Norton	3 0 0	...	The Surgeons Superintend. of P.-M. exam.; Dr. F. Voelcker.	...	...
SUMMER SESSION.									
MATERIA MEDICA & THERAPEUTICS	Dr. Warner and Dr. F. J. Smith	4 4 0	...	Dr. Phillips Dr. Phillips	4 0 0 ...	... ...	...	...	...
MIDWIFERY, &c.	Dr. Herman	5 5 0	...	Dr. M. H. Jones	5 0 0	...	Dr. Biss	5 5 0	...
BOTANY	Mr. C. Mitchell	3 3 0	...	Dr. W. G. Ridewood	3 0 0	...	Dr. W. Duncan	5 5 0	...
MED. JURISPRUDENCE	Dr. C. H. Ralfe	4 4 0	...	Dr. Luff	4 0 0	...	No lectures	...	...
TOXICOLOGY	Dr. F. J. Smith	4 4 0	...	Dr. Luff	2 2 0	...	Dr. Pasteur	5 5 0	...
PRACTICAL CHEMISTRY	Mr. Page	5 5 0	...	Mr. A. P. Laurie	4 0 0	...	Dr. Plimpton	2 2 0	...
ORGANIC CHEMISTRY	Mr. Candy	5 5 0	...	Mr. A. P. Laurie	2 2 0	...	Dr. Plimpton	5 5 0	...
BIOLOGY	Mr. C. Mitchell	...	...	Mr. W. G. Ridewood	3 0 0	...	‡	4 4 0	...
PATHOL. HISTOLOGY	[*and Bacteriology*]: Dr. Hadley	3 3 0	...				Dr. Voelcker§	6 6 0	...
PATHOLOGY AND MORBID ANATOMY.	...	...	...	Mr. Silcock Dr. Maguire	2 2 0	...	Dr. Voelcker Dr. Fowler	3 3 0 5 5 0	... ...
OPERATIVE SURGERY	Mr. Dean	5 5 0	...	Mr. Pepper	...	...			
PRACTICAL PHYSIOLOGY	Dr. Leonard Hill and Mr. Barnard (& in Winter)	4 4 0	...	Dr. Waller	...	...	Mr. Pearce Gould	5 5 0	...
HISTOLOGY AND THE MICROSCOPE.		...	...	Dr. Waller †	...	...	Messrs. Lowne, Milburn, and Smith	5 5 0	...
OPHTHALMIC SURGERY	Mr Eve	2 2 0	...	Mr. Juler	3 0 0	...	Mr. Lang	...	...
ANÆSTHETICS	Dr. Hewitt	...	...	Mr. Davis	2 2 0	...	Mr. G. E. Norton	1 1 0	...
AURAL SURGERY	Dr. Woakes	2 2 0	...	Mr. Field	3 0 0	...	Mr. L. Hudson	...	...
DENTAL SURGERY	Mr. Barrett	2 2 0	...	Mr. Morton Smale	3 0 0	...	Mr. Storer Bennett (in Winter)	...	...
DISEASES OF THE SKIN	Dr. S. Mackenzie	...	...	Mr. Morris	3 0 0	...	Dr. Pringle	...	...
PSYCHOL. MEDICINE	Dr. Kennedy Hill	...	...	Dr. Hyslop	3 0 0	...	Dr. Mickle	2 2 0	...
DISEASES OF THE THROAT	Mr. Mark Hovell	2 2 0	...	Dr. Spicer	3 0 0	...	Mr. L. Hudson	...	...
PRACT. PHARM. & DISPENS.	Mr. Robertson	3 3 0	...	Mr. Andrews	...	...	Mr. Fardon [*Pub. Health:* Dr. Pasteur]	3 3 0	...
FEE for all the Lectures required by the Colleges & Hall, and Hospital Medical & Surgical Practice	120 guineas; or 130 guineas, by 3 instalments.*			Perpetual studentship £138; or £143 by instalments; 1st year, £45; 2nd year, £40; 3rd year, £30; 4th year, £28.			120 guineas; or 130 guineas by 3 instalments.		

* London Hosp.: *Pub. Health and Hygiene*, Dr. Ralfe, Dr. Hadley, Mr. Page, and Dr. Schorstein; Summer and Winter. Fee for the whole course for D.P.H., including material and attendance under a medical officer of health, £21. Medical Tutor, Dr. Soltau Fenwick; Surgical Tutor, Mr. Hutchinson, jun. A reduction of £15 15s. will be allowed from the Perpetual Fee if paid in full, or £5 5s. from each instalment to the sons of medical men.

† St. Mary's Hosp.: Med. Tutors, Dr. S. Phillips and Dr. Caley; Obst. do., Dr. W. J. Gow; Surgical do., Mr. Crowle—throughout year thrice weekly.

‡ Middlesex Hospital: Medical Tutor, Dr. Wynter; Surgical Tutor, Mr. Leopold Hudson.

§ In Winter.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1895-96—(CONTINUED).

LECTURES, &c.	ST. THOMAS'S HOSPITAL.			UNIVERSITY COLLEGE AND HOSPITAL.			WESTMINSTER HOSPITAL.		
	LECTURERS.	FEES. One Course.	FEES. Perpetual.	LECTURERS.	FEES. One Course.	FEES. Perpetual.	LECTURERS.	FEES. First Course.	FEES. Subsqt. Course.
WINTER SESSION.		£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
PHYSIOLOGY	Dr. Brodie	10 10 0	...	*Professor E. A. Schäfer	3. 5, & 7 gs.	...	Mr. Spencer	6 6 0	2 2 0
PRACTICAL PHYSIOLOGY AND HISTOLOGY	*Dr. Brodie	10 10 0	...	*Prof. Schäfer and Mr. L. Hill	2, 4, & 7 gs.	...	Mr. Spencer	2 2 0	...
PHYS. DEMONSTRATIONS	Dr. Brodie	...	...	...	...	...	*Histol.*: Dr. Gossage	6 6 0	2 2 0
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Anderson	10 10 0	...	Prof. Thane	10 10 0	12 12 0	Mr. Black	7 7 0	3 3 0
ANATOM. DEMONSTRATIONS..	Mr. Makins Messrs. Anderson & Makins, Messrs. Parsons, Robinson, * Stabb, & Fisher	12 mths. 10 10 0	...	Dr. P. Flemming Dr. W. J. Mickle (*Mental Phys.*)	8 8 0 2 2 0	...	Mr. Black and Dr. Marett Tims [*Morbid Histology*: Dr. Hebb]	5 5 0	3 3 0
PATHOLOGICAL ANATOMY	Dr. Hawkins (*Practical Course*)	8 8 0	...	Prof. Horsley (*Pract. Path.*)	3 3 0	...	Dr. Hebb	...	...
CHEMISTRY	Mr. Dunstan	7 7 0	...	Prof. Ramsay	7 7 0	...	Dr. Dupré and Dr Wilson Hake	6 6 0	2 2 0
MEDICINE	Dr. Payne & Dr. Sharkey	7 7 0	...	Prof. F. T. Roberts	9 9 0	11 11 0	Dr. Donkin Dr. de H. Hall	6 6 0	...
SURGERY	Mr. Clutton & Mr. Pitts	7 7 0	...	Prof. Barker	7 7 0	8 8 0	Mr. Stonham	6 6 0	...
SURGICAL PATHOLOGY	Mr. Shattock	...	...	...	...	...	Mr. Yearsley	4 4 0	2 2 0
NATURAL PHILOSOPHY	Mr. Le Sueur	5 5 0	...	[*Chem. Physics*: Prof. Ramsay]	1 11 6	...	[*Physics*: Mr. Somerville]	...	...
HOSPITAL PRACTICE: PHYSICIANS	Drs. Ord, Payne, Sharkey & Acland, Cullingworth (*Obst.*), Semon (*Throat*)	3 mths. 21 0 0 6 mths. 26 5 0 1 year 36 15 0	73 10 0	Drs. Ringer, Bastian, Roberts, Poore, Barlow, Spencer (*obst.*), & Crocker (*Skin*)	12 mths. 21 0 0	36 15 0	Drs. Allchin, Donkin, Havilland Hall, Potter (*obst.*), & Fox (*Skin*) [*Neur. & Alienism*: Dr. Mercier, £22s.]	3 mths. 5 5 0 6 mths. 8 8 0	...
ASSISTANT-PHYSICIANS	Drs. Hawkins, Mackenzie, & Turney, Cory (*Obst.*)			Drs. Bradford, Blacker (*obst.*), and Martin	...	...	Dr. Murrell Dr. Hebb, Dr. Wills, Dr. Gossage Dr. Pollock (*obst.*) Mr. Spencer (*Throat*)	...	...
SURGEONS	Mr. MacKellar, Mr. Clutton, Mr. Anderson, & Mr. Pitts Mr. Nettleship Mr. Lawford (*Ophthal.*)	...	...	Profs. C. Heath, A. E. Barker, R. J. Godlee, J. Tweedy, and V. Horsley Mr. Bilton Pollard Mr. Spokes (*dent.*) *Org. Chemistry*: *Prof. Ramsay	...	...	Mr. Cowell Mr. Macnamara Mr. Bond Messrs. Glassington & Gardner (*dent.*) Mr. Spencer Mr. Hartridge (*Ophth. Prac.*) Mr. Tubby (*Orthopædic*)	3 mths. 5 5 0 6 mths. 8 8 0	...
ASSISTANT-SURGEONS	Messrs. Makins, Battle, Ballance (*Aural*), & Robinson	...	...	Mr. R. Johnson	...	...	[*Aural*: Mr. Black] Messrs. Cooke, Stonham, Spencer, & Tubby	...	...
CLINICAL MEDICINE	The Physicians	...	...	The Physicians	...	...	The Physicians	...	...
CLINICAL SURGERY	The Surgeons in rotation	...	...	The Surgeons	...	...	The Surgeons	...	...
CLINICAL MIDWIFERY, &c.	Sir W. MacCormac (*Special Course*) Dr. Cullingworth [*Vac.*: Dr. Cory] (*Obstet. Demons.*: Drs. Cory & Tate)	...	...	Prof. H. R. Spencer and Dr. Blacker [*Bacteriol.*, £4 4s.]	...	...	Dr. Potter [*Path. Dem.*: Dr. Hebb, weekly]§ [*Minor Surg. & Bandaging*: Mr. Tubby]§	...	...
SUMMER SESSION.									
MATERIA MEDICA, &c.	Dr. Mackenzie	5 5 0	...	Prof. J. R. Bradford	6 6 0	7 7 0	Dr. Murrell	3 3 0	...
MIDWIFERY, &c.	Dr. Cullingworth	6 6 0	...	Prof. Spencer	6 6 0	7 7 0	Dr. Potter	4 4 0	1 1 0
BOTANY	Mr. A. W. Bennett	3 3 0	...	Prof. Oliver	4 4 0	...		...	...
MEDICAL JURISPRUDENCE	Dr. Cory & Mr. MacKellar	5 5 0	...	Prof. G. V. Poore	5 5 0	6 6 0	Mr Bond, Dr Pollock, Dr. Dupré (*Tox.*)	3 3 0	1 1 0
PRACTICAL CHEMISTRY	Mr. Dunstan	6 6 0	...	Dr. Ramsay	5 5 0	...	Dr. Wilson Hake	4 4 0	2 2 0
STATE MEDICINE	Dr. E. Seaton	...	...	Prof. Corfield	...	...		...	...
MENTAL DISEASES	Dr. Rayner	3 3 0	...	Dr. Mickle	1 1 0	...	Dr. Mercier‖	2 2 0	...
HYGIENE AND PUB. HEALTH	Dr. E. Seaton	3 3 0	...	Prof. Corfield	3 3 0	...	Dr. M. Copeman	1 1 0	...
CLINICAL MEDICINE	The Physicians	...	...	Dr. Kenwood As in Winter	...	...	[*Elemen. Chem.*:§ Dr. Hake]	...	...
COMPARATIVE ANATOMY	Mr. Parsons (with Zoology)	2 2 0	...	†Prof. Weldon	6 6 0	...	[*Elemen. Physics*:§ Mr. Somerville]	3 3 0	...
PATHOL. & MORBID. ANATOMY	Mr. Shattock	8 8 0	...	Prof. Horsley	6 6 0	7 7 0	[*Elemen. Anat.*:§ Demonstrators]	4 4 0	...
BACTERIOLOGY	Mr. Shattock	...	...	Dr. Vaughan Harley	4 4 0	...		...	...
OPHTHALMIC SURGERY	§Mr. Lawford	3 3 0	...	†Prof. J. Tweedy	2 2 0	...	†Mr. Hartridge	1 1 0	†
DENTAL SURGERY	Mr. Truman	...	...	†Mr. Spokes	...	...		...	2 2 0	†
PRACTICAL SURGERY	Messrs. MacKellar and Ballance	6 6 0	...	†Mr Bilton Pollard Mr. Johnson	6 6 0	...	Mr. Stonham Mr. Spencer	5 5 0	...
PRACTICAL MEDICINE	Dr. Mackenzie Dr. Turney	3 3 0	...	...	...	...	[*Elemen. Medicine*: Dr. Wills]	...	...
ELEMENTARY BIOLOGY	§Mr. Parsons	6 6 0	...	Profs. Weldon† & Oliver†	4 4 0	...	Dr. Marett Tims§	...	...
PRACTICAL OBSTETRICS	Drs. Cory & Tate	3 3 0	...	...	...	...	Dr. Rivers Pollock§	...	...
OPERATIVE SURGERY	Mr. Battle Mr. Ballance	5 5 0	...	*Mr. Pollard and Mr. R. Johnson	5 5 0	...	Mr. Stonham§	4 4 0 6 6 0	...
PRACTICAL PHARMACY	Mr. White	3 3 0	...	Mr. Elborne	3 3 0	...	Mr. Tanner§	2 2 0	...
FEE for Lectures & Hospital Practice	160 gns.; or by two instalments, £85 and £72 10s.; or by four instalments, £65, £50, £30, and £12 10s.			£141 15s.; or by instalments, £68 5s., £52 10s., and £26 5s.			£115; or two instalments of £60 each; or six instalments of £27 and £17 alternately.		

* In Summer. † In Winter. ‖ Free to students of the hospital. § Winter and Summer. ‖ Lectures, Winter; Demonstrations, Summer.

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Webb Prize in Bacteriology, value £30; the Brackenbury Prize in Medicine, value £32; the Brackenbury Prize in Surgery, value £32; the Treasurer's Prize, £10 10s.; the Thompson Medal; the Brodie Prize for Clinical Surgery; the Acland Prize for Clinical Medicine; the Pollock Prize in Physiology; the Henry Charles Johnson Prize in Anatomy; and General Proficiency Prizes, value £10 10s. each, for students of each year.

GUY'S HOSPITAL.—*Appointments:* House physicians, house surgeons, assistant house physicians and assistant house surgeons, obstetric residents, clinical assistants, surgeons' and assistant surgeons' dressers, surgical ward clerks, clinical clerks, post-mortem clerks, extern obstetric attendants, and dressers and clerks in the special departments are appointed from among the students upon the recommendation of the medical staff, according to merit and without extra payment. The house physicians, of whom there are four, hold office for six months each. The assistant house physicians, who hold office for three months, attend in the Out-patient Department four afternoons in the week, and see all the cases not seen by the assistant physician of the day. The house physicians have the care of the patients in the medical wards, and attend to all emergencies arising in the absence of the physicians. They are provided with board and lodging in the college free of expense. The house surgeons, of whom there are four, hold office for six months each, and are provided with board and lodging in the college free of expense. The Surgical Casualty Department is in charge of two assistant house surgeons. The surgeons' dressers are selected from those students who have completed their third winter session, and have been most diligent in the junior appointments. They hold office for three or six months. Six are attached to each surgeon, and during their weeks of special duty they are provided with board and lodging in the hospital free of expense. The obstetric residents, two in number, are provided with board and lodging in the college free of expense

Scholarships, Prizes, &c.—Entrance Scholarships in Arts (£100 and £50). Subjects: Latin, Greek, French, German, and Mathematics.—Entrance Scholarships in Science (£150 and £60). Subjects: Inorganic Chemistry, Zoology, Botany and Physics. The examination begins on Tuesday, Sept. 24th.—First-year students: First prize £50 second prize £25, for Anatomy, Physiology, and Chemistry; the Arthur Durham Prize for Dissection, £5 to first-year students, £15 to those of later years.—For second-year students: First prize £25, second prize £10, for Anatomy, Physiology, and Materia Medica. The Sands Cox Scholarship of £15 (tenable for three years) for Physiology. The Michael Harris prize of £10 for Anatomy.—For third-year students: First prize £25, second prize £10, for Medical and Surgical Anatomy, Midwifery and Therapeutics. The Beaney Scholarship of 30 guineas for Materia Medica (tenable for three years).—For fourth-year students: First prize £25, second prize £10, for Medicine, Surgery, Midwifery and Medical Jurisprudence. The Golding Bird Prize of £33.—For senior students: The Treasurer's Gold Medal for Clinical Medicine; the Treasurer's Gold Medal for Clinical Surgery; the Prize of £25 for Clinical Reports and Commentaries; and the Beaney Prize of 30 guineas for Pathology. The Physical Society awards a prize of £5 to the author of the best Essay on a selected subject; a prize of £7 for the best paper read before the Society, and two prizes of £4 to the members who have most distinguished themselves in the debates of the session. The Gull Studentship in Pathology, of the value of £150 per annum, and the Beaney Studentship in Materia Medica and Therapeutics, of the value of 30 guineas per annum, each tenable for three years, are awarded without competitive examination to enable their holders to carry on research.

Fees.—1. A ticket, including admission to lectures, demonstrations and hospital practice, competition for prizes and eligibility for hospital appointments, may be obtained—(*a*) by the payment of 150 guineas on entrance; (*b*) by the payment of four annual instalments at the commencement of each academical year: first year 40 guineas, second year 40 guineas, third year 40 guineas, fourth year 40 guineas. 2. A reduction is made in the fees for a perpetual ticket in the case of students who have spent one or more years at another medical school. Students entering as third-year students are charged for their first year at Guy's Hospital 35 guineas second and third years 25 guineas each, or 80 guineas in one sum on entrance. This fee is payable by Cambridge students who have passed in Anatomy and Physiology at the Second M B. Examination.

The College.—The College stands upon a site fronting the east gate of the hospital, and is connected with it by a subway. The building serves as a Residential College for Students, and at the same time provides accommodation for the Students' Club. The Clubs' Union ground is less than twenty-five minutes' journey from the Hospital.

KING'S COLLEGE.—The physicians' assistants, the physician-accoucheur's assistant, the ophthalmic clinical assistant, the house surgeons and senior dressers are selected by examination, whilst the ordinary clerkships and dresserships are appointed, in consideration of their former work in the medical school, from amongst the matriculated students. Rooms and commons are provided at the hospital for the resident officers free of charge. Rooms are provided within the walls of the College for the residence of matriculated students.

Scholarships.—Warneford Scholarships: Two of £25 per annum for three years for Literature. One additional Scholarship of £25 per annum for two years will be awarded this year. Science: One of £30 and one of £20, each for two years. Sambrooke: One of £60 and one of £40 for Science. Rabbeth Scholarship of £20 per annum for Science. College Scholarships: One of £40 per annum for two years; one of £30 for one year; three of £20 for one year. The Daniell Scholarship for Chemistry, of the annual value of £20. Sambrooke Registrarships, of the annual value of £50 each and tenable for two years, are open to all matriculated students who have filled any one of the higher appointments of the hospital or who have become Associates. The Leathes Prizes, value £7, and the Warneford Prizes, value £40 are given annually amongst the matriculated medical students. The Todd Medical Clinical Prize consists of a bronze medal and books to the value of £4 4s. The Tanner Prize for Obstetric Medicine, value £10, and the Carter Gold Medal and Prize for Botany, value £15, are given annually in July. Class Prizes, value £3 3s. each, are awarded annually in every subject. A Warneford Scholarship of £35 per annum for two years, for third-year subjects, is awarded annually to resident students only.

LONDON HOSPITAL AND COLLEGE.—The hospital, which is the largest in Great Britain, contains nearly 800 beds. Last year the number of in-patients was 9703, out-patients 128 310, and the number of accidents 12,733.

The following Scholarships and Prizes will be offered for competition during the ensuing winter and summer sessions:—Six Entrance Scholarships of the value of £120, £60, £60 £35, £30 and £20 respectively will be offered for competition in September. The successful candidates must forthwith become full pupils of the hospital and school, if not already entered. An Epsom Scholarship, value £126, for students of Epsom College only. After entrance: Anatomy and Biology Scholarship, £20; Anatomy and Physiology Scholarship, £25; Letheby Prize, Senior, £20; Letheby Prize, Junior, £10; Scholarship in Clinical Medicine, £20; Scholarship in Clinical Surgery, £20; Scholarship in Clinical Obstetrics, £20; Duckworth Nelson Prize, £10; Hutchinson Prize, £35; Sutton Prize, £20; Sir Andrew Clark Prize, £13 10s.; Out-Patient Dressers' Prizes, £60; Practical Anatomy Prizes, £10.

Special classes are held throughout the year for the Preliminary Scientific Intermediate M.B. Examinations of the University of London and for the Primary and Pass Examinations for the Fellowship of the Royal College of Surgeons. Special entries can also be made for Medical and Surgical Practice, the Operative Surgery classes, &c.

Instruction is given throughout the year in all the details required for the diploma in Public Health.

In addition to the regular courses of lectures there will be given during the summer session a course of lectures on Clinical Surgery by Mr. Jonathan Hutchinson, F.R.S., Emeritus Professor of Clinical Surgery.

ST. MARY'S HOSPITAL.—There are three house physicians and three house surgeons, each appointed for six months, and two obstetric officers, each appointed for six months. They board free of expense in the hospital, except that the obstetric officer resides outside the hospital for the first three months. These appointments are awarded after competition, without additional fee. Two demonstrators

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of anatomy are appointed annually, with a salary of £70 each; and a demonstrator of physiology, at £100 a year. All these officers are eligible for re-election. Two prosectors of anatomy, assistant demonstrators of anatomy, physiology, chemistry, biology and pathology are appointed annually, and receive an honorarium of £5 each. All students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed as clerks and dressers to assist the physicians and surgeons in charge of the out-patients. The hospital contains 281 beds. Two wards are appropriated to the Diseases of Children, and one to those of Women; beds are also provided for Ophthalmic, Aural, and Cutaneous cases. There is an out-patient department for Diseases of Children. Special assistance is given to intending candidates for the final examinations of the Medical, Surgical, and Obstetric tutors. The new wing will present features of the greatest interest in the bearing it must necessarily have upon the future efficiency of the Medical School. The Lying-in Wards will be more especially noteworthy as the first established within a metropolitan general hospital. They will of course be shut off from any direct communication with the other portions of St. Mary's Hospital. This wing will contain (1) a new Out-patients' Department, (2) Lying-in Wards, (3) a Residential College for Medical Officers and Students, (4) additional special Wards, (5) a nurses' Home. This will add 100 beds to the Hospital, making 381 in all, at an estimated cost of £100 000. The prospectus may be had on application to Mr. F. H. Madden, the School Secretary, to Mr. G. P. Field, the Dean, or Dr. A. E. Luff, the Sub-Dean.

Scholarships, Prizes, and Appointments: Scholarships offered for open competition previously to entering at the Medical School.—Entrance Scholarships: The following will be offered for competition on Sept. 24th and 25th at 10 A.M.:—One Scholarship in Natural Science, of the value of 100 guineas, open to any gentleman who has not completed a winter session of study at a medical school. Three Scholarships in Natural Science, each of the value of 50 guineas, under the same condition. One Scholarship, of the value of £133 open to students from Epsom College, being sons of medical men, and who have not completed a winter session of study at a medical school. This Scholarship is not given by competition. Two Scholarships, each of 50 guineas, open to students from the Universities of Oxford, Cambridge, or other University, who have not entered at any London medical school. The examination for the Scholarships will be conducted according to the syllabus of the Preliminary Scientific Examination of London University.

In addition to the Open Entrance Scholarships, Class Prizes, and usual Appointments, Scholarships will be offered for competition at the end of each year, open to all pupils. These Scholarships are of the value of £20, £20, £20 and £20 for the first, second, third, and fourth years respectively.

A residence for students, 33 and 35, Westbourne-terrace, W., in connexion with the hospital, is under the charge of a warden, Mr. E. Roughton, M.D., F.R.C.S., who is prepared to receive applications from students desiring to enter upon residence during the ensuing session. Terms: £75 for the academical year.

Qualified medical men are admitted to unlimited attendance on hospital practice at a fee of £15 15s.

ST. PETER'S HOSPITAL.—The hospital contains 320 beds, and during the past year 3182 patients were treated in the wards and 38,122 attended as out-patients. There is a special department for patients suffering from cancer, consisting of four wards, containing thirty-four beds; here cancer patients are received and attended for a period limited only by the duration of their disease.

Scholarships, &c.—Two Entrance Scholarships, of the value of £100 and £60, are offered for competition just before the commencement of each winter session. One Entrance Scholarship, of the value of £60, open to Oxford and Cambridge students, will be competed for early in October (subjects, Anatomy and Physiology, including Histology). Two Broderip Scholarships, of the value of £60 and £40, are awarded annually to those students in their fourth year who pass the best examination in Clinical Medicine, Clinical Surgery, and Morbid Anatomy. The Murray Gold Medal and Scholarship, founded in connexion with the University of Aberdeen, are awarded every third year to a student of this hospital; it will be next open for competition in May, 1898. The Governors' Prize for Clinical Work and the Lyell Medal for Surgical Anatomy and Practical Surgery are annually open to competition among students at the close of their third year. The Hetley Clinical Prize, value £25, is competed for in the fifth year. Exhibitions, value £5 5s. and £10 10s., are offered for competition at the end of the first and second winter sessions respectively. Class Prizes are also given.

Hospital Appointments.—Clinical Clerkships and Dresserships in all departments are allotted to students without any extra fee. Eighteen Resident Appointments are annually filled from the pupils of the hospital, each appointment extending over six months.

The Curriculum is designed to meet the requirements of the Royal Colleges of Physicians and Surgeons and of the Universities of London, Cambridge, &c. Special Classes are held to prepare students for the Preliminary Scientific M.B. (Lond.) Examination and for the Primary Examination for the diploma of F.R.C.S. Eng.

A Residential College to accommodate about thirty students adjoins the hospital. The charge for residence is £10 10s. and £8 8s. per term, according to the position of the room. Breakfast, luncheon, and dinner are supplied in the College Hall at a very moderate charge.

Fees.—The Composition Fee for the entire curriculum is 120 guineas, or 130 guineas if paid in three instalments. The fee for the Dental Curriculum is 54 guineas, or 60 guineas if paid in two instalments. Students from the Universities and students who have passed the London Preliminary Scientific M.B. Examination are received on special terms.

ST. THOMAS'S HOSPITAL.—*Prizes for the Year 1895–96.*—For First-year students: Two Entrance Scholarships in Natural Science of the value of £150 and £60 respectively, open to all first-year students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Physiology, Botany, or Zoology, at the option of the candidate; the William Tite Scholarship, the proceeds of £1000 Consols, is awarded each year; also prizes of £20 and £10; summer, £15 and £10. For Second-year students: The Peacock Scholarship of £38 10s., or the Musgrove Scholarship of £38 10s., are awarded biennially to the students who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first-class in the subsequent winter examination; making the winter prizes £38 10s., £20, and £10; summer, £15 and £10. For Third-year students (winter): Second tenure of Scholarship £38 10s. and prizes of £20, £15, and £10; summer, £15 and £10. The Grainger Testimonial Prize of £15 annually is awarded to students for original work in Anatomy and Physiology. The Cheselden Medal for Surgery and Surgical Anatomy, and the Mead Medal for Practical Medicine, are awarded annually to fourth-year students. The Bristowe Medal annually for Pathology and Morbid Anatomy. The Beaney Scholarship for Surgery and Surgical Pathology, of the value of £52 10s., awarded biennially to students who have completed their fifth but not their seventh year. The Solly Medal, with a prize of from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year, for the best report of surgical cases. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year student. There are numerous appointments for students who have completed their courses.

An Entrance Scholarship, of the value of £50, is open to University students. Subjects: Anatomy, Physiology, and Chemistry.

The Salters' Company Fellowship, of the annual value of £100 and tenable for three years, has been established and endowed by the Salters' Company with the view to the promotion of research in Pharmacology.

Fees.—The composition fee to Hospital Practice and Lectures may be paid in the following ways:—1. £180 on entrance in one sum. 2. £157 10s. in instalments: (*a*) by two payments, £85 on entrance and £72 10s. at the beginning of the second year; (*b*) by three payments, £75 at the beginning of the first year, £50 at the beginning of the second year, and £32 10s. at the beginning of the third year; and (*c*) by four payments, £65 at the beginning of the

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first year, £50 at the beginning of the second year, £30 at the beginning of the third year, and £12 10s. at the beginning of the fourth year. Gentlemen entering at St. Thomas's for Lectures and Hospital Practice of the second and subsequent years pay £130 on entrance, or three instalments of £52 10s., £42, and £42. Students entering for Lectures and Hospital Practice of third and subsequent years pay a composition fee of £80, or £52 10s. on entrance and £31 10s. one year subsequently. The fee for attendance on the general subjects required of students in Dental Surgery is for the two years £65, or, by instalments, £55 for the first year and £15 for the second year. If certificates for Dental Practice are also required the special fee for that subject has to be paid. Qualified practitioners are admitted on payment of a fee of 15 guineas.

UNIVERSITY COLLEGE, LONDON. — *Composition fees.* — 1. For the entire medical education required by the Examining Board in England and the Society of Apothecaries, 135 guineas, if paid in one sum at the commencement of the course; 140 guineas if paid by instalments, as follows—first year, 65 guineas; second year, 50 guineas; third year, 25 guineas. 2. For those students who do not require to attend Chemistry, Pharmacy, and Elementary Biology at a medical school (under the regulations of the Examining Board in England) the fee will be—117 guineas, if paid in one sum; 122 guineas, if paid by instalments, as follows—first year, 55 guineas; second year, 40 guineas; third year, 27 guineas. 3. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, 55 guineas (paid in one sum). 4. For the course of instruction for the Final M.B. Examination of the University of London, 76 guineas, if paid in one sum; 78 guineas, if paid by instalments, as follows—first year, 45 guineas; second year, 33 guineas. 5. Composition fee for Dental Students, 65 guineas. 6. Composition fee for the whole course of instruction for the Preliminary Scientific (M.B.) Examination of the University of London, 35 guineas.

Exhibitions, Prizes, &c.—Three Entrance Scholarships, one of 131 guineas and two of 55 guineas, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examination are Chemistry, Physics, Botany, and Zoology. The Atkinson Morley Surgical Scholarship of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Sharpey Physiological Scholarship of about £120 per annum. Filliter Exhibition, value £30, is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £60 per annum, tenable for two years, is awarded annually. The Cluff Memorial Prize, value about £15, every second year to the most proficient in Anatomy, Physiology, and Chemistry. The Erichsen Prize: a surgeon's operating case of the value of £10 10s., awarded yearly to the student of the class of Practical Surgery who shall most distinguish himself by manipulative skill. The Morris Bursary of £16 a year, tenable for two years. Besides the above, gold and silver medals and other prizes are awarded in each class. Eight house physicians, six house surgeons, four senior and eight junior obstetric assistants are selected annually by examination from among the senior students. The house physicians and house surgeons reside in the hospital for a period of six months, and the senior obstetric assistants for three months, receiving free board and lodging.

Several professors and other gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons unconnected with the College who receive boarders into their families; among these are several medical gentlemen and clergymen.

The annual dinner of the old and present students of the Faculty of Medicine will be held at the Hôtel Métropole on Tuesday, Oct. 1st, at 6.30 P.M. Professor Michael Foster, M.D., LL.D., F.R.S., will preside.

WESTMINSTER HOSPITAL.—The hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Orthopædics, and for Diseases of Women, and a special ward for Children. The Anatomical Museum is open to the students. There are also Pathological and Materia M Museums.

A curator of the museum and a pathologist, with s of £40 and £50 respectively, and a medical and s registrar, each with a salary of £40, are appointed an Two house physicians, two house surgeons, and a re obstetric assistant are appointed for six months after nation, and are provided with rooms and commons two assistant house surgeons with commons only. C assistants to the physicians and surgeons, and to the o in charge of special departments, are appointed from a qualified students of the hospital.

Scholarships and Prizes.—A Natural Science Schola value £60, and the Governors' Scholarship, value £4 offered annually in May; the Guthrie and Entrance Sc ships, value £60 and £40, in October; and a Senior Sc ship, value £40, to Oxford and Cambridge students. A Entrance Scholarship is offered annually to Dental stud A free presentation to pupils of the Epsom Medical Co The Treasurer's Prize, an Exhibition in Anat Physiology, and Chemistry, value £10 10s., tenabl one year, for first-year men. The President's S Scholarship (Anatomy, Histology, and Physiol value £21, given by his Grace the Duke of W minster, President of the Hospital, to a student of second year. At the end of the fourth winter session p of £5 each (books or instruments) in Clinical Medicine Clinical Surgery. Frederick Bird Medal and Prize, v £15. Subjects of examination: Medicine, Midwi Diseases of Women and Children, and Pathology. Chad Prize, £21 (subjects Medicine and Surgery), and the Prize, value £20 (subject Pathology), to students of any not exceeding the fifth. In most of the classes spe prizes. 2 guineas each, are given.

Preliminary Scientific.—Special classes are held in subjects of this examination—Chemistry, Dr. Hake; Phys Mr. Somerville; Biology, Dr. Tims. The extra fee t general student is 12 guineas.

Intermediate M.B.—Advanced Physiology and Histolo Mr. Spencer; Advanced Anatomy, Mr. Black; Orga Chemistry, Dr. Hake; Materia Medica, Dr. Murrell.

D.P.H.—The course of Laboratory Instruction may n be taken. Physics, Mr. Somerville; Chemistry, Dr. Hal Bacteriology, Dr. Blaxall. Fee 12 guineas.

Bacteriology.—A course in General Bacteriology is giv by Dr. Blaxall. Fee £5 5s.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Hand street, Brunswick-square, W.C.—The winter session of th School, which is in connexion with the Royal Free H pital, Gray's-inn-road, will begin on Oct. 1st, 189 and will end on March 30th, 1896. The summ session will begin on May 1st, and will end on Ju 31st, 1896. No students will be admitted to the study Medicine who has not completed her eighteenth year. Th admission of students rests exclusively with the Executi Council.

Scholarships and Prizes.—The Executive Council offe annually a Scholarship of £30 to women preparing for th medical profession. The following scholarships will b offered for competition on Sept. 20th and 21st, 1895:—1. Th School Scholarship, value £30, open to all candidates wh have passed a preliminary examination in Arts recognise by the General Medical Council. 2. The Fanny Butle Scholarship, value £15 a year for four years, open onl to candidates willing to practise in connexion with the Church of England Zenana Missionary Society The Gilchrist Trustees offer occasionally a Scholarship o £50 a year for five years to the student of the School who takes the highest position in the Preliminary Scientific M.B. Examination of the University of London. The John Byron Bursary of £20 a year is open to students requiring aid for the prosecution of their studies; the next award will probably be made in 1896. Two Mackay Prizes of £20 each are given to the students who take the highest number of marks in the Class Examinations for the first two years' work, one being in preparation for the Scotch or Irish Colleges or for the Society of Apothecaries' Examination, and one for the Universities. The Helen Prideaux Memorial Fund gives a prize of £50 every second year to a graduate of the School, for the further prosecution of her medical studies, at the discretion of the trustees. Three Evans Prizes of £3 3s. each are given in the Midwifery Class to enable students to

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take operative midwifery. There is also a small fund from which assistance can occasionally be given to students and to graduates who specially require pecuniary help to obtain additional experience in operative midwifery. The Wood Prize for Operative Midwifery, value £5 5s., will be offered at the end of the winter session, 1895. Prizes and Certificates of Honour are awarded in each class at the end of the session. Secretary, Miss Heaton.

METROPOLITAN ANCILLARY SCHOOLS OF MEDICINE.

THE following institutions offer a partial curriculum in the form of classes dealing with particular subjects or adapted to special circumstances.

BETHLEM HOSPITAL.—This hospital is open for the admission of two Resident Clinical Assistants who have recently obtained their diplomas to practise Medicine and Surgery. They will be permitted to reside in the hospital for a term generally not exceeding six months, and will be provided with such apartments, rations, and attendance as the Committee shall consider reasonable. They will be under the direction of the Resident Physician, and will be elected by the Committee from candidates whose testimonials appear to be most satisfactory. The students of certain specified London Medical Schools receive Clinical Instruction in the wards of the hospital, and qualified practitioners may attend for a period of three months on payment of a fee. Lectures are also given in connexion with the London Post-graduate Course.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four House Physicians reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms, £1 1s. for one month; six months, £5 5s.; perpetual, £10 10s. Lectures and Clinical Demonstrations are given throughout the year by members of the medical staff on Wednesdays and Fridays at four. The medical practice of the hospital is recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Medical Boards. The hospital contains 321 beds in the two buildings.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park.—During the past year 937 in patients have been admitted, and the large number of 28 674 cases have been treated since the opening of the wards in 1855. The number of out-patients treated during 1894 was 17 215 and 536 976 since the commencement of the institution in 1848. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Subcommittee at the hospital. Consulting Physicians: Drs. J. Andrew and E. L. Birkett. Consulting Surgeon: Sir J Eric Erichsen, Bart., F R S. Physicians: Drs. J. C. Thorowgood, Eustace Smith, G. A. Heron, Vincent D. Harris. E. Clifford Beale, and Harrington Sainsbury. Surgeon: Mr. J. F. C. H. Macready, F R C.S. Assistant Physicians: Dr. T. Glover Lyon, Sir Hugh R. Beevor, Bart., and Drs. W. J. Hadley, E. H. Colbeck, Arnold Chaplin, and H. J. Campbell.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road.—The hospital contains accommodation for seventeen in-patients, and has a very extensive out-patient department, which is open to all medical practitioners and students for the purpose of clinical demonstration and instruction during the hours of the surgeons' visits. During the past year 7163 out-patients and 257 in-patients were treated. Fee for three months' attendance, 3 guineas; for six months, 5 guineas. A course of lectures on the special diseases treated at this hospital will be delivered during the winter months by members of the staff. The date of these lectures is announced in the medical journals prior to their commencement. They are free to qualified practitioners and advanced students of medicine. Consulting Surgeon: Mr. Thomas Nunn. Surgeons: Mr. Lennox Browne, Dr. Arthur Orwin, Dr. Dundas Grant, Mr. Percy Jakins, and Mr. T. W. Carmalt Jones. Assistant Surgeons: Mr. Wyatt Wingrave and Dr. Holloway. Registrars: Dr. Aberorombie, Dr. Spicer, and Dr. Pegler. Dental Surgeon: Mr. George Wallis. Defects of Speech: Mr. William Van Praagh. Secretary: Mr. Richard Kershaw.

HOSPITAL FOR WOMEN, Soho-square, W.—In connexion with this institution there has been for some years a well-organised Clinical Department. This has been enlarged under the title of the London School of Gynæcology. To meet the want increasingly felt by medical men of an accurate knowledge of the ordinary diseases of women, gentlemen are appointed every three months to act as clinical assistants to the physicians and surgeons seeing out- and in-door patients. The appointments are nominally "open to qualified medical men and to students of medicine after their fourth year," but in the selection of candidates preference is naturally given to gentlemen already engaged in practice. The large numbers of out-patients afford quite unrivalled opportunities for practical instruction in the use of gynæcological instruments and for the study of diseases peculiar to women. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter by a member of the Staff. Clinical Lectures are given in the Operating Theatre on alternate Thursdays throughout the winter and summer sessions. Valuable prizes are given, after examination, annually, open to past and present clinical assistants. Fee for the three months' course, £8 8s. Any further information can be obtained by letter addressed to the Dean at the hospital.

COOKE'S SCHOOL OF ANATOMY.—The school is prepared to admit to its supplementary work all who may wish to join the same, but in regard to its curriculum work it does not receive more than half a dozen students in the course of the year. These curriculum students are taken on at reduced fees on the understanding that they shall help in the work of the school from the time of their being capable of doing so till they have passed their examination in Anatomy and Physiology. They are supplied with the necessary material for dissecting the human body two or three times over. The Bland Sutton Presentation, named after Mr. Bland Sutton, F.R.C.S., Sir Erasmus Wilson Lecturer at the Royal College of Surgeons, Surgeon to the Middlesex Hospital, &c. (a former pupil of the school), confers the privilege of free education at the school during the first two years of medical studies. Particulars will be forwarded on application.

The school remains open for anatomical work, not only during the winter, but also during the summer months. Gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, &c.) can get "signed up" from this school for the three or six months' supplementary work they are now required to put in before re-examination. This school is also intended to meet the requirements of qualified practitioners wishing to obtain some of the higher qualifications, and is recognised for the special dissections for the Fellowship of the Royal College of Surgeons. The school possesses a good collection of physiological apparatus. The operations of Surgery are performed by the students on the dead body. Private address: 40 Brunswick square, W.C.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road. (Established 1814.)—This hospital has been enlarged by the addition of a very complete out-patients' department, and also by the erection of a new wing, which provides accommodation for 80 in-patients. Expenditure for 1894 £8249; income (including legacies), £6692. The attendance of out-patients averages 24 000 annually.

ROYAL EAR HOSPITAL, Frith-street, Soho-square, W. (Founded 1816, for the special treatment of Diseases of the Ear.)—During 1894, 204 in-patients and 2146 out-patients were treated; attendances, 9223 The clinique of the hospital is open to medical practitioners and advanced students by previous arrangement with the Secretary. Surgeons: Mr. Urban Pritchard, Mr. Farquhar Matheson, Mr. Cresswell Baker, and Mr. A. H. Cheatle. Hon. Secretary: Mr. Donald Murray. Secretary: M C. Puddy.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N. Consulting Physician: Dr. Cholmeley. Consulting Surgeon: Mr. W. Adams. Physicians: Drs. R. Burnet, E. C. Beale, C. E. Beevor H. W. Syers, James Galloway, and A. Morison. Obstetric Physician: Dr. L. Remfry. Surgeons: Messrs. J. Macready, C. B. Lockwood, H. Allingham, P. T. B. Beale, and G. B. M. White. Ophthalmic Surgeon: A. S. Morton. Throat Aural Surgeon: Mr. W. R. H. Stewart. Skin Department: Dr. Cook. Dental Surgeon: Mr. P. Trær Harris. This hospital is now recognised by the Examining Board in England by the Royal College of Physicians and Surgeons as a place of study during the fifth year of the Medical Curriculum. The hospital contains 155 beds, of which 100 are at present occupied. The large rectangular and circular wards, each of which contains 20 beds, the operation theatre, out-patient, general and special, and the pathological departments, have all been erected since 1887. They are specially designed with a view of offering the greatest facilities for clinical work, and contain all the most recent and approved hygienic and antiseptic requirements for

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the proper care of the sick and for the treatment of disease. Medical practitioners are cordially invited to see the general and special practice of the hospital. In- and out-patient clinical assistants are appointed in the general and special departments and receive certificates at the end of their terms of office. Further particulars from Peyton T. B. Beale, F.R.C.S., Hon. Secretary, Medical Committee, 61, Grosvenor-street, W.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. (Established 1873.)—Physicians: Sir B. W. Richardson, F.R.C.P., F.R.S., Dr. J. J. Ridge, and Dr. J. Fletcher Little. Surgeon: Dr. W. J. Collins, F.R.C.S. Dental Surgeon: Mr. A. Alexander. The hospital contains 110 beds. The in-patients in 1894 were 1044, and the out-patients and casualties numbered 11,120 new cases. The medical and surgical practice of the hospital is open to students and practitioners. Special departments for Ophthalmology and Gynæcology. Operations: Mondays and Thursdays, 3.30. Classes will be held during the winter and summer sessions for students preparing for the final examinations at the Colleges and the Universities. Appointments, vacancies for which are advertised in the medical journals: Registrar and Pathologist; Resident Medical Officer and Assistant Resident Medical Officer. For particulars as to hospital practice and classes apply at the hospital to Dr. W. J. Collins.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—The new hospital, with the Finchley branch, contains 180 beds and cots. The physicians attend every Monday, Tuesday, Wednesday, and Friday at 2.30 P.M. In- and out-patient practice and electrical-room treatment at that hour. Physicians: Drs. Ramskill, Hughlings Jackson, Buzzard, Bastian, and Gowers. Physicians for Out-patients: Drs. D. Ferrier, Ormerod Beevor, and Tooth. Assistant Physicians: Drs. James Taylor and J. R. Bradford. Surgeons: Messrs. Victor Horsley and C. A. Ballance. Ophthalmic Surgeons: Messrs. R. Brudenell Carter and Marcus Gunn. Aural Surgeon: Mr. A. E. Cumberbatch. Laryngologist: Dr. Felix Semon. Anæsthetist: Dr. Dudley Buxton. Pathologist: W. S. Colman. Registrar: A. J. Whiting. House Physicians: Drs. Stoddart and Harris. Medical practitioners and senior students may attend the practice after signing their names in the office. Post-graduate and other lectures are given periodically in the hospital by members of the staff, and a scheme for the fuller development of the hospital as a teaching institution is now in course of preparation.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL AND MIDWIFERY TRAINING SCHOOL, Marylebone-road, N.W.—Consulting Physician: Dr. Brodie. Consulting Surgeons: Mr. H. Lee and Sir William MacCormac. Physicians to In-patients: Dr. W. C. Grigg and Dr. W. S. A. Griffith. Physicians to Out-patients: Dr. W. Rivers Pollock and Dr. W. J. Gow. This hospital, which has been recently enlarged, receives over 1000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing obstetric complications and operative midwifery, on account of the very large number of primiparous cases — nearly three-fourths of the total admissions. Clinical instruction is given on the more important cases which present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and licensing bodies. Pupil midwives and monthly nurses are received and specially trained. Fees: Medical Students, £5 5s. for two weeks; £8 8s. for four weeks; Qualified Medical Practitioners £5 5s. for four weeks. Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks. For further particulars application should be made to Mr. Arthur Watts, Secretary, at the hospital.

SEAMEN'S HOSPITAL SOCIETY, Dreadnought Hospital, Greenwich, S.E. (235 beds). Royal Victoria and Albert Dock Hospital, E. (18 beds). Dispensaries: East India Dock-road, E. and Gravesend.—This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the Principal Medical Officer for students. Honorary Consulting Physicians: Dr. Robert Barnes and Sir Richard Quain, Bart., F.R.C.P. Visiting Physicians: Dr. John Curnow and Dr. John Anderson, C.I.E. Visiting Physician to the Royal Victoria and Albert Dock Hospital: Dr. Patrick Manson. Honorary Consulting Surgeon: Mr. J. N. Davies-Colley. Visiting Surgeon: Mr. G. Robertson Turner. Principal Medical Officer: Mr. W. Johnson Smith. Ophthalmic Surgeon: Mr. D. S. Gunn. House Physician: Dr. C. W. Windsor. House Surgeon: Mr. E. P. Isaacs. Branch Hospital:—House Surgeons: Dr. James Rust and Mr. W. Duncan Lawrie. Gravesend Dispensary:—Surgeon: Mr. O. R. Richmond. Secretary: Mr. P. Michelli.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C., and Cromwell House, Highgate.—The hospital contains about 180 beds. There are ten Clinical Clerkships, and the number will shortly be increased to sixteen, tenable by all students who have taken out a ticket for the hospital. Senior students should note that there is here a thoroughly organised system of clinical instruction both in the medical and surgical wards. Lectures are given at intervals by members of the staff. The hospital offers great facilities for post graduate teaching and for hospital practice. During the winter session Clinical Lectures on the Medical Cases will be given in the wards or in the museum on Tuesdays by Dr. Sturges and Dr. Lees alternately at 2.30 P.M. and 9.30 A.M. commencing Oct. 10th, and by Dr. Barlow on alternate Mondays at 2.30 P.M., commencing on Oct. 11th. Lectures or demonstrations on the Surgical Cases will be given in the wards or in the theatre by Mr. Owen and Mr. Morgan on alternate Wednesdays at 9.30 A.M. commencing on Oct. 4th, and by Mr. Pitts on alternate Thursdays at 9.30 A.M., commencing on Oct. 12th. The out-patients (medical and surgical) are seen every morning from 9 A.M. to 12 noon. Mondays and Thursdays: Dr. Garrod, Dr. Voelcker, and Mr. Hulson. Tuesdays and Fridays: Dr. Lubbock, Dr. Penrose, and Mr. Lane. Wednesdays and Saturdays: Dr. Colman and Mr. Ballance. Ophthalmic Cases: Mr. Donald Gunn, on Tuesdays at 2 P.M. Ear Cases: Mr. Leopold Hudson, on Thursdays at 9 A.M. Fees: For one month, 1 guinea; for three months, 3 guineas; for one year, 5 guineas. Clinical clerks are appointed from amongst senior students without any additional fee.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—The hospital, founded in 1804 and considerably enlarged in 1878, now contains 100 beds for patients, which were occupied during last year by 1961 persons. The out-patients are yearly 25,000; attendances, 113,500 in 1894. Operations are performed daily from 10 A.M. to 1 P.M., and three surgeons attend on each day. Students are admitted to the practice. Fee for six months, £3 3s.; perpetual, £5 5s. Classes, demonstrations, and lectures are periodically given, to which perpetual students are admitted free. Students of the hospital are eligible for the office of house surgeons, or may be appointed clinical and junior assistants. The Secretary, Mr. Robert J. Newstead, will furnish further information as may be desired.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—The hospital contains 30 beds; and the patients, who number 11,000 annually, are seen at 1 P.M., and operations performed daily at 2 P.M. The following are the days of attendance of the surgeons: Mr. Cowell, Mr. Juler and Mr. Griffith, Wednesdays and Saturdays; Mr. Hartridge and Mr. Dodd, Mondays and Thursdays; and Mr. Frost and Mr. D. Gunn, Tuesdays and Fridays. The practice of the hospital is open to practitioners and students. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the hospital are eligible for the post of house surgeon and clinical assistant. Special demonstrations and lectures will be given during the session, commencing in October; for details see weekly journals. Clinical Assistants (who must be duly qualified) to the Surgeons are appointed for periods of six months. Secretary: Mr. T. Beattie-Campbell.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.—The out-patient practice is open to the medical profession at the following times: Every day, except Friday, from 2 to 4 P.M., and Thursday mornings from 10.30 to noon. Specially prepared Clinical Demonstrations, also demonstrations on the different diseases presenting themselves in the out-patient department, followed by Lectures, will be given by Dr. Morgan Dockrell on Wednesday and Saturday afternoons from 2 o'clock P.M. Fee for the complete course, two guineas; or the Wednesday or the Saturday course may be taken separately, at a fee of one guinea for each. Entries should be made with the Secretary, Mr. St. Vincent Mercier.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden. Established

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1860. New Hospital built, 1882.—Honorary Surgeons: Mr. F. R. Heycock, Mr. F. Swinford Edwards, Mr. E. Hurry Fenwick, and Mr. Reginald Harrison. Pathologist: Mr. E. Hurry Fenwick. The hospital contains 24 beds and 2 private wards. Consultations are held and operations are performed each Wednesday and Friday at 2 P.M. Medical practitioners and students are invited to the clinical instructions which are given in the wards and out-patient department daily, and to the operations in the theatre on Wednesdays and Fridays at 2 P.M. Average beds occupied daily, 18; average out-patients seen daily, 115.

VOLUNTEER MEDICAL STAFF CORPS (LONDON COMPANIES), Calthorpe-street, Gray's-inn-road, W.C. — Hon. Commandant: Surgeon-General Sir William Guyer Hunter, K.C.M.G., Q.H.S. Commandant: Surgeon-Lieutenant-Colonel A. T. Norton. The Volunteer Medical Staff Corps bears the same relation to the Volunteer Army as the Medical Staff Corps bears to the regular Army. The course of training has the great advantage of affording, in addition to a knowledge of ordinary military duties, special ambulance instruction useful in all ranks of life. All who have gone through the ranks of this corps are capable of rendering valuable aid in any accident, and in cases of emergency may be the means of saving lives which would otherwise be lost. In addition to the Company and Battalion drills of an ordinary infantry corps, the special training includes stretcher, waggon, and litter drill; the use of improvised seats and stretchers; the use and application of bandages, splints &c.; lectures by the officers on first aid to the injured, and on the elements of anatomy, physiology, hygiene, and nursing, which are so arranged as not to interfere with the lectures &c. carried on at the various hospitals in London. There is also a Shooting Club in the corps, in which instruction in, and facilities for, the practice of rifle shooting are given. A Gymnastic Class meets once a week at headquarters, under an instructor who teaches boxing and fencing; "the class is under the special direction of the adjutant and officers, who see that the exercises are consistent with the physical development of the men, an advantage possessed by no other Volunteer corps." Lectures are delivered during the winter session. The Adjutant, Surgeon-Captain D. M. O'Callaghan, will give any information respecting the above on application to the headquarters, Calthorpe-street, Gray's-inn-road, W.C.

SCHOOL OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Chemistry and Physics: Professor Dunstan, M.A., F.R.S., F.I.C. Practical Chemistry: Professor Attfield, Ph.D., F.R.S., F.I.C. Botany: Professor Reynolds Green, M.A., Sc.D., F.R.S., F.L.S., Dean of the school. Materia Medica: Professor Greenish, F.I.C., F.L.S. Practical Pharmacy: Mr. Joseph Ince, F.L.S. The session commences on Wednesday, Oct. 2nd, at 10 A.M. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures and laboratory work in any or all the courses. Certificates of instruction in this school are received by the Conjoint Board of the Royal Colleges. Application for admission to the school, or for further information, may be made to the Secretary of the school, 17, Bloomsbury-square, London, W.C. The introductory address will be delivered by Dr. F. T. Roberts, Professor of Medicine, University College Hospital, on Wednesday, Oct. 2nd, at 3 P.M.

CITY SCHOOL OF CHEMISTRY AND PHARMACY, LIMITED, 27, Chancery-lane, W.C.—This school was established in 1882 for the advancement of pharmaceutical education. Lecturers and Demonstrators: Mr. Maurice Williams, Principal; Mr. Thomas A. Ellwood, F.I.C., F.C.S. &c.; Mr. Martin J. Cole, Microscopist; Mr. Herbert J. Killick, Secretary and Curator. Subjects: Theoretical and Practical Chemistry, Chemical Physics, Theoretical and Practical Pharmacy, Materia Medica, and Therapeutics. Lectures and Demonstrations are given daily by the Principal, and the student is allowed unlimited laboratory and pharmacy practice. Application for particulars should be made to the Principal.

SOUTH LONDON SCHOOL OF PHARMACY, LIMITED.—This school was established in 1868 and incorporated in 1888. The managing director is Dr. John Muter, M.A., F.R.S.E., F.C.S., F.I.C., who lectures on Chemistry, Physics, and Botany. The other Lecturers are: Mr. W. H. Dodd, F.C.S. (Materia Medica and Pharmacy); Mr. L. De Koningh, F.I.C., F.C.S. (Analytical Chemistry); assisted by a staff of competent demonstrators. The department most valuable to medical students is the Medical and General Science Tutorial Department. The subjects taught are: For First B.Sc. and Preliminary Scientific: Inorganic and Practical Chemistry. For First M.B.: Organic Chemistry, Analysis and Pharmaceutical Chemistry, and Materia Medica. For Apothecaries' Hall and the Conjoint Colleges: Chemistry, Botany, and Materia Medica. For Pass M.B. Lond: Practical Toxicology and Forensic Medicine. For Sanitary Science qualifications: Practical Chemistry and Microscopy. Particulars as to fees may be had from the Secretary, 325, Kennington-road, London S.E.

WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY, Trinity square, Borough, S.E.—The school was established in 1872, and under the directorship of Mr. G. S. V. Wills, F.L.S., F.R.M.S., &c., gives instruction in Chemistry and Physics, Materia Medica and Pharmacy, to Medical and Dental students.

GRIFFITHS'S COLLEGE OF CHEMISTRY AND PHARMACY, 12, Knowle-road, Brixton, S.W.—Instruction is given in Chemistry, Physics, Botany, Biology, Microscopy, Toxicology, &c., for the examinations of the Apothecaries' Hall, Conjoint Board, First M.B. London, Durham, special examinations for B.A. of Cambridge. During the present academic year 34 candidates passed the examinations of the Pharmaceutical Society, 8 passed the Hall, 3 passed the London Preliminary Science, 1 passed Durham, 1 passed the First M.B. London, and 1 passed Royal Navy (Surgeon in). Particulars as to fees may be had from Dr. A. B. Griffiths, F.R.S. Edin., F.C.S., at the above address.

ROYAL COLLEGE OF SCIENCE, London (with which is incorporated the ROYAL SCHOOL OF MINES).—Mechanics and Mathematics: Mr. A. R. Willis, D.Sc. Biology: Mr. G. B. Howes, and Mr. J. B. Farmer, M.A. Chemistry: Professor W. A. Tilden, F.R.S., and Dr. W. P. Wynne. Physics: Professor A. W. Rücker, F.R.S., and Mr. C. V. Boys, F.R.S. Astronomical Physics: Professor J. N. Lockyer, F.R.S. Geology: Professor J. W. Judd, F.R.S. Metallurgy: Professor W. C. Roberts Austen, F.R.S. Mining: Professor C. Le Neve Foster, F.R.S. Agriculture: Professor J. Wrightson. The College reopens on Wednesday, Oct. 2nd, 1895. Communications should be addressed to the Registrar, Royal College of Science, South Kensington, S.W.

ELECTRICAL STANDARDIZING, TESTING, AND TRAINING INSTITUTION, Faraday House, Charing-cross-road, W.C.—Principal, Mr. Hugh Erat Harrison, B.Sc. Lond., F.C.S., A.M.I.C.E., M.I.E.E. Instructor in Mathematics: Alexander Russell, M.A. Glasgow and Cambridge. Instructor in Chemistry: Chas. J. Wilson, F.I.C., F.C.S. This institution, in addition to its ordinary course of training in electrical engineering, which occupies two or three years, also arranges for special instruction in all branches of electricity, either by private tuition or by a specially arranged course at the college or at the works of the companies with which it is associated. There are Entrance Scholarships of the value of 80 and 50 guineas, and Exhibitions of 40 guineas. Particulars may be obtained on application to the Secretary, Mr. Howard Foulds, Faraday House, Charing-cross-road, W.C.

HOSPITALS AFFORDING FACILITIES FOR CLINICAL OBSERVATION.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Physicians: Dr. Eustace Smith, Dr. Horatio B. Donkin, Dr. J. A. Coutts, and Dr. Dawson Williams. Surgeons: Mr. R. W. Parker and Mr. L. A. Dunn. Assistant Physicians: Dr. H. J. Campbell, Dr. T. H. Arnold Chaplin, Dr. J. A. Hayward, and Dr. Morley Fletcher. Assistant Surgeon: Mr. H. B. Robinson. Administrator of Anæsthetics: Mr. Thomas Bird. Resident Medical Officer: Mr. Percy C. Phillips. House Surgeon: Mr. A. W. G. Bagshawe. House Physician: Dr. R. P. Cockburn. Secretary: Mr. Thomas Hayes. The hospital maintains 102 cots, and on an average 178 out-patients are seen daily. Clinical instruction is given by the physicians and surgeons to the hospital, as announced in the advertisement columns. All particulars may be obtained on application to the Secretary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physicians: Dr. W. S. Playfair, Dr. J. F. Goodhart, and Dr. Frederick Taylor. Physicians: Drs. Nestor Tirard and Frederick Willcocks. Physicians to Out-patients: Drs. George Carpenter and W. Soltau Fenwick. Ophthalmic Surgeon: Dr. W. A.

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Bralley. Consulting Surgeons: Messrs. W. Morrant Baker, H. G. Howse, and R. Clement Lucas. Surgeons: Messrs. G. H. Makins and F. S. Eve. Surgeons to Out-patients: Messrs. J. H. Targett and A. H. Tubby. Dental Surgeon: Mr. R. Denison Pedley. Senior Resident Medical Officer: Mr. Arthur Quennell. Junior Resident Medical Officer: Dr. Edwin Sly.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W. (with which is incorporated ST. GABRIEL'S HOSPITAL FOR INFANTS).—The hospital contains 90 beds and has a large out-patient department (nearly 1000 weekly); the home at Broadstairs has 50 beds. Consulting Surgeons: Sir John Erichsen and Mr. Cowell. Physicians: Dr. Ridge Jones and Dr. Dawtrey Drewitt. Physicians to the Out-patients: Drs. Montague Murray, Walter Carr, W. Wallis Ord, and Humphry D. Rolleston. Surgeons: Messrs. Pick and D'Arcy Power. Surgeons to the Out-patients: Messrs. Raymond Johnson and H. F. Waterhouse. Ophthalmic Surgeon: Mr. W. J. Holmes Spicer. Dental Surgeon: Mr. Percy Smith. Anæsthetist: Dr. Paul Frank Moline. House Surgeon: Mr. A. Chaning Pearce, M.R.C.S., M.B. Lond. House Physician: Mr. Toft Barker, M.R.C.S. Secretary: Captain W. C. Blount, R.N. Out-patients are seen as under:—Medical and Surgical Cases: Daily, at 12.30 P.M., and every afternoon at 1.30 P.M. Dental Cases: Saturdays, at 9 A.M.

WEST LONDON HOSPITAL, Hammersmith-road, W.—This hospital has 101 beds, but the erection of a new wing which will contain another 72 beds is now nearly completed. About 1700 in-patients and 20,000 out-patients, whose attendances number 60,000, are treated annually. There are appointments for two House Physicians and two House Surgeons, with board and residence, tenable for six months; also appointments for a limited number of Clinical Assistants. Physicians: Drs. D. W. C. Hood, F. G. D. Drewitt, and J. B. Ball. Physician for Diseases of Women: Dr. Albert J. Venn. Surgeons: Messrs. C. B. Keetley, F. Swinford Edwards, and S. Paget. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant Physicians: Drs. Seymour Taylor, A. E. Garrod, W. Hunter, and W. A. Turner. Assistant Physician for Diseases of Women: Dr. J. A. Mansell Moullin. Assistant Surgeons: Messrs. L. A. Bidwell, G. L. Cheatle, and W. McA. Eccles. Assistant Surgeon for Diseases of the Eye: Mr. H. P. Dunn. Surgeon-Dentist: Mr. H. Lloyd Williams. Physician-in-Charge of Throat and Nose Department: Dr. J. B. Ball. Surgeon-in-Charge of Aural Department: Mr. S. Paget. Surgeon-in-Charge of Orthopædic Department: Mr. C. B. Keetley. Pathologist: Dr. W. Hunter. Dermatologist: Mr. P. S. Abraham. Administrators of Anæsthetics: Messrs. T. Gunton Alderton, Rickard W. Lloyd, and E. W. Lewis. Electrician: Dr. F. O. Buckland. Secretary: Mr. R. J. Gilbert. The practice of the Hospital is open to practitioners and to senior students (on payment of a small fee); clinical assistants are appointed to the wards, and clinical instruction is given in the out-patient department. Courses of post-graduate lectures are given by the staff on Wednesdays at intervals, particulars of which are advertised in the medical journals. Further information can be obtained on application to the Honorary Secretary of the medical staff, Mr. L. A. Bidwell, at the hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E. For the sick children of the poor under twelve years of age. Established 1867. City Offices: 27, Clement's-lane, E.C.—Fifty-eight beds. Last year 701 in-patients and 13,124 out-patients (representing 47,313 attendances) were relieved, 198 of the in-patients being under two years of age. Consulting Physicians: Drs. A. E. Sansom, W. Cayley, and F. C. Turner. Consulting Surgeons: Messrs. Jonathan Hutchinson, Waren Tay, and R. J. Godlee. Physicians: Drs. W. A. Wills, James Taylor, H. G. Adamson, and J. H. Sequeira. Surgeons: Messrs. Bilton Pollard and H. Percy Dean. House Surgeon: Dr. G. M. Edwards. House Physician: Mr. G. J. K. Martyn. Junior House Physician: Mr. Percy E. Adams. Lady Superintendent: Miss E. W. Curno. Secretary: Mr. T. Glenton-Kerr. The surgeons attend on Wednesdays at 2 P.M. and Fridays at 9 A.M.; the physicians daily at 2 P.M. The practice of the hospital is open (free) to students of either sex.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—This hospital provides 53 beds and has a large out-patient department. There are appointments for two Resident Medical Officers, with board, residence, and washing. The Senior Medical Officer also receives £50 per annum. Honorary Medical Staff:—Consulting Physician: Dr. Donald W. Hood. Physician: Dr. Harry Campbell. Surgeon: Mr. Frederic Durham. Assistant Physicians: Drs. Walter Sibley, Leonard G. Guthrie, and James Cagney. Assistant Surgeons: Messrs. M. P. Mayo Collier, C. Gordon Brodie, J. Jackson Clarke. Accessory Staff: Drs. J. Herbert Stowell, John Shaw, and Wm. J. Collins, and Mr. C. F. Ribbett. Resident Medical Officer: Mr. H. N. D. Mackenzie. Assistant Medical Officer: Mr. J. S. Hosford. Secretary: Mr. Alfred Craske.

ENGLISH PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

MASON COLLEGE, BIRMINGHAM.—Two Ingleby Scholarships are offered annually after examination in Obstetric Medicine and Surgery and Diseases of Women and Children. The Scholarships are open to students who have completed two years of their curriculum in this college. One or more Sydenham Scholarships will be offered annually of the value of 30 guineas each. The orphan sons of former students of the Birmingham Medical School have priority of election. No Sydenham scholars are elected whose age exceeds twenty-three years on the day of election. Scholarships are held for three years, subject to good behaviour. A Queen's Scholarship will be offered annually of the value of 30 guineas. It may be held for three years, one-third being paid each year, subject to good behaviour. A Sands Cox Scholarship is offered annually, of the same value as the last, and is held under similar conditions. The Russell Memorial Prize is awarded annually after examination in Nervous Diseases. There are Faculties of Arts, Science, and Medicine, and students are prepared for the various examinations of the University of London. The medical courses qualify for the diplomas of all Licensing Bodies and for the degrees in Medicine and Surgery of British Universities. There are various Scholarships on Entrance and otherwise. The Dental Department, in conjunction with the General, Queen's, and Dental Hospitals, affords a complete curriculum for all Dental diplomas. The Library contains upwards of 24,000 volumes. Syllabus containing full information as to the various courses of instruction, lecture days and hours, fees, scholarships, etc., will be forwarded on application to the Registrar.

GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM. *General Hospital*: Consulting Physicians: Dr. Fletcher Sir W. Foster, and Dr. Wade. Consulting Surgeon: Mr. Pemberton. Physicians: Drs. Rickards, Saundby, Stephens, and Wilson. Surgeons: Messrs. Chavasse, Barling, Harrison, and Heaton. Obstetric Officer: Dr. Malins. Assistant Physicians: Drs. Short and Russell. Assistant Surgeons: Messrs. Lucas and Gamgee. Assistant Obstetrical Officer: Dr. Thos. Wilson. Beds, 271; average occupied. Patients in 1894: in-patients, 4336; out-patients, 49,83

UNIVERSITY COLLEGE, BRISTOL (Faculty of Medicine). Students can complete in Bristol the entire course of study required for the Medical and Surgical degrees of the University of London, and for the diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instruction given in the Faculty of Arts and Science are adapted to the various Preliminary Arts Examinations above referred to and also to the Matriculation and Preliminary Scientific examinations of the University of London; whilst the Faculty of Medicine, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the various examining boards. All necessary information may be obtained from the Dean of the Faculty of Medicine, Prof. E. Markham Skerritt, M.D., F.R.C.P.

UNIVERSITY COLLEGE, CARDIFF, MEDICAL SCHOOL. Owing to the very rapid increase in the population of Glamorganshire and Monmouthshire, and the consequent increase in the Infirmary accommodation, the basis on which to build a Medical School in South Wales is amply sufficient for every need. University College, Cardiff, has for some years past prepared students in Physics, Chemistry, Zoology and Botany; and these students have in consi-

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numbers passed these subjects as part of their medical curriculum and have finished their studies elsewhere. The recent appointments of a Professor of Anatomy, a Professor of Physiology, and of a Lecturer on Materia Medica and Pharmacy will afford facilities to students who may wish to continue their studies in Cardiff until the end of their third year. Large laboratories are now ready; they comprise spacious lecture-rooms to seat 100 students each, a dissecting-room, anatomical museum, bone-room, and preparation-room; a class-room for practical physiology, physiological preparation and research rooms, and photographic and instrument-rooms, and museum of Materia Medica. Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London or Durham may compound for their classes by paying a composition fee of £57 10*s*. The College classes are recognised by the Scottish Universities. Students who are preparing for the examinations of the Conjoint Board or of the Society of Apothecaries, London, may compound for their classes by paying a composition fee of £47 10*s*. In all cases the composition fees may be paid in instalments, and fees include hospital attendance. Physics.—Professor J. Viriamu Jones, M.A. Oxon., B.Sc. Lond., Fellow of University College, London, F.R.S. Assistant Professor: A. L. Selby, M.A., Fellow of Merton College, Oxford. Demonstrator and Assistant Lecturer: W. S. Hensley, B.A., Christ's College, Cambridge. Chemistry. — Professor C. M. Thompson, M.A., Trinity College, Cambridge, D.Sc. Lond., F.C.S. Assistant Lecturers: E. P. Perman, D.Sc. Lond., and A. A. Read, F.I.C., F.C.S. Biology. — Professor W. N. Parker, Ph.D. Freiburg, F.Z.S. Assistant Lecturer: A. H. Trow, B.Sc. Anatomy. — Professor Alfred W. Hughes, M.B., F.R.C.S. Eng. and Edin. Physiology. — Professor John Berry Haycraft, M.D., D.Sc., F.R.S.E. Materia Medica: D. R. Paterson, M.D. The Infirmary, within three minutes of the College, is provided with 200 beds. Attached to the hospital is a large out-patient department and special departments for the Eye, Ear, and Throat. Further information may be obtained from Dr. John Berry Haycraft, Dean of the Medical Faculty.

BRISTOL ROYAL INFIRMARY (founded 1735).—270 beds. Honorary and Consulting Physicians: Dr. Edward Long Fox and Dr. William H. Spencer. Honorary and Consulting Surgeons: Mr. Augustin Prichard and Mr. Edmund C. Board. Physicians: Dr. R Shingleton Smith, Dr. Henry Waldo, Dr. John E. Shaw, and Dr. Arthur B. Prowse. Obstetric Physician: Dr. W. C. Swayne. Assistant Physicians: Dr. P. Watson Williams and Dr. F. H. Edgeworth. Surgeons: Mr. Arthur W. Prichard, Mr. J. Greig Smith, Mr. W. H Harvant, and Mr. J. Paul Bush. Ophthalmic Surgeon: Mr. F. Richardson Cross. Dental Surgeon: Mr. W. R. Ackland. Assistant Surgeons: Mr. G. Munro Smith and Dr. James Swain. Pathologist: Dr. Theodore Fisher. House Surgeon: Mr. Thomas Carwardine. House Physician: Mr. H. F. Mole. Junior House Surgeon: Mr. R. C. Leonard. Junior House Physician: Mr. M. C. Barber. Secretary and House Governor: Mr. E. A. Leonard.

Scholarships and Prizes.—Two Entrance Scholarships, 35 guineas and 10 guineas, awarded annually in October after examination in general subjects; Surgical and Medical Suple Gold Medals, 5 guineas each, with 7 guineas added in money; Clark Prize, 11 guineas; Crosby Leonard Prize, 7 guineas; Tibbitts Prize, 9 guineas; Midwifery Prize, 3 guineas in books or instruments; Pathological Prize, 6 guineas; Ophthalmic Prize, 3 guineas in books or instruments; Dental Prize, 3 guineas in books or instruments.

There are four resident appointments—viz., House Surgeon, House Physician, Junior House Surgeon, and Junior House Physician, the last two of which are intended specially for qualified students of the Bristol Royal Infirmary, who are elected after a practical examination. Medical Registrars and Surgical Registrars are appointed for periods of six months. The Dressers reside in the Infirmary in rotation, free of expense. The Maternity student also has rooms in the Infirmary. The whole of the clinical work has been carefully rearranged to meet the requirements of the five years' curriculum. There is class instruction in the wards by the physicians and surgeons on five days a week, in addition to the regular clinical lectures. Practical instruction in Dental Surgery at 1 P M on Tuesdays and Fridays. Clinical Clerkships and Dresserships, 5 guineas for each six months. Perpetual Medical and Surgical Practice, 35 guineas in one sum. There are special departments for Diseases of Women, the Eye, Ear, Throat, &c, with Clerkships and Dresserships attached.

Further information can be obtained from Dr. Arthur B. Prowse, Dean of the Faculty.

BRISTOL GENERAL HOSPITAL.—200 beds. Physicians: Drs. Markham Skerritt, Harrison, and Michell Clarke. Physician to Throat and Nose: Dr. Barclay Baron. Assistant Physician: Dr. Parker. Surgeons: Messrs. Pickering, Penny, Barclay, and Morton. Assistant Surgeon: Mr. Lansdown. Registrar: Mr. Fisher. Anæsthetist: Mr. Freeman. House Surgeon: Mr. Firth. Physicians' Assistant: Mr. F. E. Peake. Assistant House Surgeon: Mr. C. M. Phillips. Clinical Clerkship, six months, £5 5*s*. Dresserships, six months, £5 5*s*. Obstetric Clerkship, three months, £3 3*s*. Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women and in Dental Surgery. Further information may be obtained of the Secretary, at the hospital, or from Dr. Markham Skerritt, Dean of the Hospital Faculty.

Scholarships and Medals. — Lady Haberfield Entrance Scholarship: This Scholarship, founded in 1875, of the value of about £30, being the interest of £1000 bequeathed for the purpose by the late Lady Haberfield, is awarded annually at the commencement of the winter session after a competitive examination in subjects of general education. Second Entrance Scholarship: An additional Entrance Scholarship of the value of £20 is awarded when more than six candidates present themselves. Clarke Scholarship: A Surgical Scholarship, of the value of £15, founded by H. M. Clarke, Esq., of London is awarded annually at the end of the winter session after an examination in Surgery. Sanders Scholarship: A Scholarship founded by the late John Nash Sanders, Esq., of the value of £22 10*s*., is awarded annually at the end of the winter session after examination in Medicine, Surgery, and Diseases of Women. Martyn Memorial Pathological Scholarships, founded in 1878 by public subscription, in memory of the late Dr. Samuel Martyn, Physician to the hospital: Two Scholarships, each of the value of £10, are awarded annually: one at the end of the summer session and one at the end of the winter session. A student may, at the option of the Faculty, hold both these Scholarships. After a competitive examination in Pathology and Morbid Anatomy the successful candidate is appointed Pathological Clerk to the hospital for the term of six months. Committee Gold Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the student of the fourth year who has most distinguished himself during his career at the hospital and medical school. Committee Silver Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the next most distinguished student of the fourth year. The rules relating to the several Scholarships may be had on application.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Clinical Lectures in Medicine and Surgery, in connexion with the Cambridge Medical School, are delivered at this hospital twice a week during the academical year; and practical instruction in Medicine and Surgery in the wards and out-patients' rooms is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical Clerks and Dressers are selected from students according to merit, and without payment. The composition fee for pupilship is 8 guineas.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—The following Scholarships and Prizes are awarded annually:—A University of Durham Scholarship, value £100, for proficiency in Arts, awarded to full students in their first year. The Dickinson Scholarship, value interest of £400, and a Gold Medal, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value the interest of £400, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value the interest of £700, for Medicine. The Gibb Scholarship, value the interest of £500, for Pathology. The Goyder Memorial Scholarship (at the Infirmary), value the interest of £325, for Clinical Medicine and Clinical Surgery. The Luke Armstrong Memorial Scholarship, value the interest of £680. The Stephen Scott Scholarship in Surgery, value the interest of

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE PROVINCIAL SCHOOLS OF MEDICINE FOR THE SESSION 1895-96.

LECTURES, &c.	UNIVERSITY OF DURHAM COLL. OF MED., NEWCASTLE-UPON-TYNE.		UNIVERSITY COLLEGE, LIVERPOOL.		OWENS COLLEGE (VICTORIA UNIV.) SCHOOL OF MEDICINE.		SHEFFIELD SCHOOL OF MEDICINE.	
	LECTURERS.	FEES. One Course.	LECTURERS.	FEES.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.
WINTER SESSION.		£ s. d.		£ s. d.		£ s. d.		£ s. d.
PHYSIOLOGY	Prof. Oliver, Mr. Williamson	5 5 0	Prof. Sherrington Mr. Macdonald	5 5 0	Prof. Wm. Stirling *(with Histology)*	5 5 0	...	
PRACTICAL PHYSIOLOGY	Prof. Oliver, Mr. Williamson *(in Summer)*	5 5 0	Prof. Sherrington†† Mr. Macdonald	...	Prof. Stirling, Mr. Menzies, Mr. Horne	...	Dr. Arthur Hall Dr. Arthur Hall	4 4 0 3 3 0
ANATOMY, DESCRIPTIVE AND SURGICAL	Prof. Howden	5 5 0	Prof. Paterson, Mr. Gullan	5 5 0	Prof. A. H. Young	5 5 0	Mr. E. Skinner, Mr. Chas. Atkin	4 4 0
ANATOMICAL DEMONSTRATIONS	Prof. Howden	3 3 0	Prof. Paterson Mr. Gullan	3 3 0	Prof. Young, Dr. Robinson, Dr. Thompson	1 1 0	Mr. Scott, Dr. Rhodes	2 2 0
CHEMISTRY	Prof. Bedson	5 5 0	Prof. Campbell-Brown,§ Dr. Kohn, Dr. Bailey	3 0 0	Prof. Dixon, Prof. Perkin	3 10 0	At Firth College	4 4 0
PHYSICS	Prof. Stroud	...	Prof. Lodge, Dr. Howard§	6 0 0	Prof. Schuster	...	...	...
MEDICINE	Prof. Philipson	5 5 0	Prof. Glynn	5 5 0	Prof. Dreschfeld	5 5 0	Drs. Dyson and Porter	5 5 0
SURGERY	Prof. Arnison, Mr. Page	5 5 0	Prof. Parker, Mr. Thomas	5 5 0	Prof. Jones, Mr. Thorburn	5 5 0	Mr. A. Jackson	5 5 0
PRACTICAL SURGERY	Prof. Arnison, Mr. Page.	5 15 6	Prof. Parker, Mr. Thomas	4 4 0	Mr. Wright and Mr. Collier	2 2 0	Mr. R. J. Pye-Smith	3 3 0
PATHOLOGY	Dr. Drummond *(in Summer)*	...	Prof. Boyce, Dr. Abram	4 4 0	Prof. Delépine	5 5 0	Dr. Burgess *(in Summer)*	...
BACTERIOLOGY	Prof. Murray	5 5 0	Prof. Boyce	4 4 0	...	...	...	...
EXPERIMENTAL PHYSICS	Prof. Stroud	2 2 0	Prof. Lodge	6 0 0	Prof. Schuster	2 12 6	At Firth College	2 2 0
PUBLIC HEALTH	Dr. H. E. Armstrong	5 5 0	Dr. E. W. Hope††	4 4 0	Dr. Paget	2 2 0	Dr. Harvey Littlejohn	
HOSPITAL PRACTICE:					*[Zoology:* Prof. Hickson]			
	ROYAL INFIRMARY, NEWCASTLE.	6 months	LIVERPOOL ROYAL INFIRMARY.	6 mnths.	ROYAL INFIRMARY.		SHEFFIELD GEN. INFIRMARY.	
PHYSICIANS	Drs. Philipson, Drummond, Oliver, and Limont	8 8 0 12 mnths		6 6 0 12 mnths	The Physicians	Composition fee, full period, £42	Drs. Dyson, Porter & Cocking	6 m., £6 6s.; 3 m., £3 3s.; perp. (Med. & Surg.) £45; or by 2 instalments of £26 & £22.
				7 7 0			Messrs. A. Jackson, Shaw, and Hallam	
SURGEONS	Dr. Arnison, Mr. Williamson, Dr. Hume. Mr. Page	12 12 0 Comp.	Dr. Glynn, Dr. Davidson, Dr. Caton	12 mnths	The Surgeons			
			Mr. Banks, Mr. Parker, Mr. Paul	6 mnths.				
ASSISTANT SURGEONS	Mr. J. R. Morison Mr. W. G. Black Mr. Walter Ridley Mr. A. M. Martin	126 5 0 ...	Mr. R. A. Bickersteth Mr. Hamilton Mr. Thelwall Thomas	7 7 0	...	...	ROYAL HOSPITAL.	
					[Dent. Mech.: Mr. Tanner]	3 3 0	*Phys.:* Drs. Burgess, Arthur Hall, and Clapham	
					[Dent. Anatomy: Mr. Hooton]	3 3 0	*Surgs.:* Mr. Pye-Smith, Dr. S. White, & Mr. H. Lockwood	
					[Dent. Metallgy.: Dr. Burghardt]	3 3 0		
					[Op. Dent.: Mr. Whittaker]	3 3 0	Dr. Cocking	3 3 0
SUMMER SESSION.							Dr. Keeling, ¶ Mr. R. Favell, and Dr. Martin	4 4 0
MATERIA MEDICA	Dr. McBean	5 5 0	Prof. Carter *(& Therapeutics)*	2 2 0	Prof. Leech	4 4 0	At Firth College	
MIDWIFERY, &c.	Dr. Nesham¶	5 5 0	Prof. Wallace, Dr. A. Wallace‡‡ *(and Gynæcology)*	5 5 0	Prof. Sinclair	4 4 0		
			Prof. Gibson, Mr. Jones§	3 0 0	Dr. Ashby *(Dis. Chil.)*	2 2 0		
BOTANY	Prof. Potter	...	Prof. Herdman	6 0 0	Prof. Weiss	2 12 6	Dr. Littlejohn	3 3 0
BIOLOGY	Prof. Potter	5 5 0	Prof. Paul, Dr. Buchanan	4 4 0	...	...	...	...
MEDICAL JURISPRUDENCE	Dr. Murphy	5 5 0	Dr. Wiglesworth	1 1 0	Prof. Dixon Mann	3 3 0	At Firth College	3 3 0
MENTAL DISEASES	Dr. McDowall	...	Prof. Campbell Brown	4 4 0	Dr. Mould	1 11 6	...	...
PRACTICAL CHEMISTRY	Prof. Bedson	5 5 0	Prof. Lodge	...	Prof. Dixon	4 4 0	...	...
PRACTICAL PHYSICS	Prof. Stroud	2 2 0	Prof. Herdman	...	...	...	...	...
COMPARATIVE ANATOMY	Prof. Brady	2 2 0	Prof. Boyce	2 2 0	Dr. Hickson] *(with Embryology)*	2 12 6	Dr. Burgess	4 4 0
PATHOLOGY AND MORBID ANATOMY	Dr. Drummond	5 5 0			[*Dis. of Ear:* Dr. Milligan] Prof. Delépine	2 2 0	...	...
			Mr. Edgar Browne‡	1 1 0	Dr. Brooke *(Skin Diseases)*	1 1 0	Mr. Snell	2 2 0
OPHTHALMIC SURGERY	Mr. Williamson	...	**[*Dental Surg.:* Mr. Phillips]	3 3 0	Dr. Little	3 3 0	...	...
DENTAL SURGERY AND MECHANICS	Mr. Markham	...	[*Mechanics:* Mr. Councell]	3 3 0	Mr. G. G. Campion	1 1 0	[*Med. Officer to Skin Department:* Mr. W. Dale James]	
	[*Dis. of Throat, Nose, & Ear:* Mr. Walter Ridley]		[*Dental Anat.:* Prof. Paul]	4 4 0	[*Dis. of Larynx:* Dr. Hodgkinson]			
	[*Dis. of Skin:* Dr. Limont]		[*Dental Metall.:* Mr. Royston]	...				
OPERATIVE SURGERY	Prof. Arnison, Mr. Page	5 5 0	Prof. Parker, Mr. Thomas	...	Mr. Southam	4 4 0	Mr. Pye-Smith	2 2 0
CLINICAL MEDICINE	Physicians and Surgeons of Infirmary	...	Physicians and Surgeons of the Royal Infirmary	...	Physicians and Surgeons of the Royal Infirmary	...	Phys. & Surg. of Gen. Infr. & Royal Hospital	...
CLINICAL SURGERY			[*Dis. of Child.:* Dr. P. Davidson]	2 2 0	Prof. Whitehead			
			[*Dental Path.:* Prof. Boyce]	4 4 0	[Comp. fee, Dental course, £50]			
			[*Hum. & Mamm. Embryology:* Prof. Paterson]	60 0 0	...	70 0 0	...	...
				42 0 0	...	42 0 0		45 0 0
FEE for all Lectures required by the College & Hall	...	73 10 0						
Ditto for Hospital Medical & Surgical Practice	...	126 5 0						

† In winter. ‡‡ In summer.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE PROVINCIAL SCHOOLS OF MEDICINE FOR THE SESSION 1895-96.

LECTURES, &c.	MASON COLLEGE, BIRMINGHAM.		UNIVERSITY COLLEGE, BRISTOL.		CAMBRIDGE UNIVERSITY.		YORKSHIRE COLLEGE, LEEDS.	
	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES.	LECTURERS.	FEES.
WINTER SESSION.		£ s. d.		£ s. d.		£ s. d.		£ s. d.
PHYSIOLOGY	Prof. F. J. Allen	6 6 0	Prof. G. M. Smith	5 5 0	Prof. Foster	...	Prof. Birch and Demonstrator	10 10 0
ANATOMY, DESCRIPTIVE & SURGICAL	Prof. B. C. A. Windle	6 6 0	Prof. E. Fawcett	5 5 0	Prof. Macalister	...	Prof. Griffith and	10 10 0
					Sir G. M. Humphry		Mr. Robinson	
ANATOMICAL DEMONSTRATIONS	Messrs. Manners-Smith and Haslam	5 5 0	Mr. Bush, Mr. Morton, and Dr. Edgworth	5 5 0	Prof. Macalister and Demonstrators	...	Prof. Griffith and Demonstrators	...
PRACTICAL PHYSIOLOGY	Prof. Allen	4 4 0	Dr. Clarke	8 8 0	Prof. Foster (and in Summer)	...	Prof. Birch and Demonstrator	6 6 0
ELEMENTARY BIOLOGY	Prof. Bridge & Mr. W. B. Collinge	5 5 0	Prof. L. Morgan, Mr. Reynolds	5 5 0	Mr. Darwin and Mr. Sedgwick	...	Professor Miall	6 5 0
CHEMISTRY	Prof. P. F. Frankland & Dr. Baker	4 4 0	Mr. Coomber	5 5 0	Prof. Liveing	...	Prof. Smithells & Dr. Cohen	5 5 0
					Prof. Dewar			
MEDICINE	Prof. Suckling, Prof. Saundby, and Dr. Russell	6 6 0	Profs. Markham Skerritt and Shaw	5 5 0	Prof. Allbutt	...	Prof. Eddison and	6 6 0
					Dr. MacAlister		Dr. Chufton	
THERAPEUTICS	Prof. Carter	3 3 0	...	...	Prof. Bradbury	...	Prof. Barrs	3 3 0
SURGERY	Prof. Barling, Prof. B. May, and Mr. Morrison	6 6 0	Prof. J. G. Smith	5 5 0	Sir G. M. Humphry	...	Prof. Robson	6 6 0
HYGIENE	...	...	Dr. Davies	4 4 0	Dr. Anningson	...	Mr. Ward (*Prac. Surg.*)	4 4 0
GYNÆCOLOGY	...	...	...	...	Mr. Douty	...	...	...
HOSPITAL PRACTICE:	GENERAL HOSPITAL AND QUEEN'S HOSPITAL.	3 months 5 0 0	BRISTOL ROYAL INFIRMARY, AND BRISTOL GENERAL HOSPITAL.	...	ADDENBROOKE'S HOSPITAL.	Perpet. 8 8 0	Dr. Hellier	2 2 0
PHYSICIANS	(*See Additional Information on Schools.*)	6 months 7 0 0		...	Dr. Latham, Prof. Bradbury, Drs. MacAlister & L. Humphry	...	LEEDS GENERAL INFIRMARY. Physicians: Drs. Churton, Barrs, and Chadwick	...
SURGEONS	...	1 year 11 11 0	(*See Additional Information on Schools.*)	...	Mr. Wherry, Mr. Deighton, Dr. Griffiths, Mr. Douty	...	Assist.-Phys.: Drs. T. W. Griffith and Trevelyan	...
	[*Ophthalmology*: Mr. Priestley Smith. No fee.]						Surgeons: Messrs. Robson, Ward, Brown, and Hartley	...
							Assist.-Surgs.: Mr. Littlewood and Mr. Knaggs	...
SUMMER SESSION.								
MATERIA MEDICA, &c.	Mr. Barclay	1 1 0	Dr. Prowse	3 3 0	Prof. Bradbury		Prof. Barrs	4 4 0
					Mr. Easterfield			
MIDWIFERY, &c.	Prof. B. Malins	5 5 0	Prof. Aust Lawrence	4 4 0	Mr. Douty		Prof. Wright and Mr. Croft	5 5 0
GYNÆCOLOGY	Prof. Savage and Dr. Purslow	...	...	...	...		...	...
PRACTICAL SURGERY	Mr. Jordan Lloyd	2 2 0	Mr. Prichard	3 3 0	Mr. Wherry		Mr. Ward	4 4 0
OPERATIVE SURGERY			Mr. Pickering	3 3 0			Mr. Ward	...
BOTANY	Prof. Bridge	...	...	3 3 0	Prof. Babington		Prof. Miall	5 5 0
					Mr. Darwin, Mr. Gardiner			
HYGIENE AND PUBLIC HEALTH	Prof. B. Hill	3 3 0	...	...	...		Mr. Hartley	2 12 6
MEDICAL JURISPRUDENCE	Prof. Wilders	4 4 0	Dr. Enger	3 3 0	Dr. Anningson		Mr. Scattergood and	5 5 0
	Dr. A. B. Hill		Dr. Harrison	...			Dr. Chadwick	
MENTAL DISEASES	Prof. Whitcombe	1 1 0			Dr. Rogers		Mr. Lewis	2 12 6
PRACTICAL CHEMISTRY	Prof. P. F. Frankland	3 3 0	Mr. Coomber	3 3 0	Prof. Liveing		Prof. Smithells	4 4 0
PRACTICAL PHYSIOLOGY & HISTOL.	Prof. Allen and Dr. Vincent	4 4 0	Dr. Clarke	...	Prof. Foster		Prof. Birch	...
CHEMICAL PHYSICS	Prof. Poynting	3 3 0	...	...	Prof. Liveing		Prof. Smithells	6 6 0
COMPARATIVE ANATOMY	Prof. Bridge	...	Prof. Morgan	4 4 0	*Prof. Newton (Winter, Mr. Sedgwick)		Prof. Miall	...
PATHOLOGY & MORBID ANATOMY	Prof. Kauffmann & Mr. Heaton	4 4 0	Dr. Baron	5 5 0	Prof. Roy, Dr. Lloyd Jones		Prof. Trevelyan	4 4 0
PRACTICAL HISTOLOGY	...	...	...	3 3 0	Dr. Hill		Prof. Birch and Demonstrator	...
DENTAL SURGERY	Mr. Huxley	3 3 0	Mr. Acland	3 3 0	Dr. Cunningham		...	...
DENTAL ANATOMY & PHYSIOLOGY	Mr. Humphreys	3 3 0	Prof. G. M. Smith	3 3 0	Dr. Cunningham		...	...
DENTAL METALLURGY	Mr. McMillan	2 2 0	Mr. Hayman	3 3 0	...		...	...
DENTAL MECHANICS	Mr. Goffe	2 2 0	Mr. Hayman	...	...		...	...
CLINICAL MEDICINE	Physicians of the two Hospitals	...	...	...	The Physicians		Physicians of the Infirmary	...
CLINICAL SURGERY	Surgeons of the two Hospitals.	...	...	...	The Surgeons to Addenbrooke's Hospital		Surgeons of the Infirmary	...
	[*Dean of the Faculty*: Prof. Windle]		[*Pharm. & Ther.*: Dr. Prowse, £3 3s. *Pract. Medicine*: Prof. Shaw, £4 4s.]				[*Practical Pharmacy*: Mr. Branson]	
							[*Ophthal.*: Mr. Sacker Walker]	2 12 6
Fees for all the Lectures required by the College and Hall	...	70 0 0	...	68 5 0 or 57 15 0	...		...	73 10 0
Composition Fee for Hospital Medical and Surgical Practice	...	42 0 0	...	36 15 0	...		...	42 0 0

The fee for each course of lectures on demonstrations is one or two guineas per term.

*With Zoology

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£1000. Heath Scholarship: The late George Yeoman Heath, M.D., M.B., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, has bequeathed the sum of £4000 to found a Scholarship in Surgery, the interest to be awarded every second year; the first award will be in 1896. The Gibson Prize, interest on £225, in the department of Midwifery and Diseases of Women and Children. At the end of each session a Prize of Books and Honours Certificates are awarded in each of the regular classes. Assistant Demonstrators of Anatomy, receiving each an honorarium of £5, Prosectors, and Assistant Demonstrators of Physiology and Pathology are elected yearly. Pathological Assistants, Assistants to the Dental Surgeon, Assistants in the Eye Department, Throat and Ear Department, and Skin Department, Clinical Clerks, and Dressers are appointed every three months.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.—Physicians: Drs. Philipson, Drummond, Oliver, and Limont. Surgeons: Drs. Arnison, Hume, and Page, and Mr. Williamson. Assistant Surgeons: Mr. James Rutherford Morison, Mr. W. Glaholm Black, Mr. Walter Ridley, and Mr. A. M. Martin. Pathologist: Dr. Drummond. Dental Surgeon: Mr. R. L. Markham. Skin Department: Dr. Limont. Eye Department: Mr. Williamson. Throat and Ear Department: Mr. Ridley. Senior House Physician: Dr. T. Beattie. Anæsthetist: Dr. W. D. Arnison. Surgical Registrar: Mr. W. G. Richardson. The infirmary contains 280 beds. Clinical Lectures are delivered by the Physicians and Surgeons in rotation. Pathological Demonstrations are given as opportunity offers by the Pathologist. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Instruction is given in Psychological Medicine at the Coxlodge Lunatic Asylum. A Special Course of Instruction is given in the City Hospital for Infectious Diseases by the Superintendent, the City Officer of Health, Mr. H. E. Armstrong.

LEEDS GENERAL INFIRMARY AND MEDICAL DEPARTMENT OF THE YORKSHIRE COLLEGE.—The Leeds General Infirmary has accommodation for 471 in-patients, medical and surgical, including forty-two beds at a "semi-convalescent home" in the country. During the last year 5714 in-patients and about 40,000 out-patients were treated. Clinical teaching takes place daily in the wards, and Clinical Lectures are given in Medicine and Surgery by the Physicians and Surgeons. There are Medical, Surgical, Ophthalmic, Aural, and Electrical Departments, in each of which special instruction is imparted to students A Gynæcological and Extern Obstetric Department, together with Laryngeal and Skin Clinics, are in operation. The Public Dispensary, the Hospital for Women and Children, the Fever Hospital, and the West Riding Lunatic Asylum are other medical institutions which are made use of by the Leeds students. In October last the new buildings of the Medical School were opened by their Royal Highnesses the Duke and Duchess of York. Erected on a commanding site, close to the Infirmary, the New School of Medicine contains complete accommodation for the training of medical students upon the most approved modern methods. A very fine dissecting-room, extensive laboratories for Physiology and Pathology, with the most recent improvements in fittings and apparatus, ample lecture-room accommodation, a large Library, and separate Museums for Pathology and Anatomy—these are some of the most striking features of the new buildings. Careful provision for the convenience of students, in the shape of a common-room, a refectory, &c., has also been made a feature of the school. The classes in Systematic and Practical Chemistry, Physics and Biology, and Practical Toxicology are held in the Science and Arts Department of the College, in College-road. Two Entrance Scholarships are offered: one, of the value of 64 guineas, covering admission to all requisite lectures; and the other, of the value of 40 guineas, covering the cost of admission to the medical and surgical practice of the infirmary. Several valuable prizes are given at the end of each session. The following appointments at the infirmary are annually open to students: Resident medical officer, resident surgical officer, resident casualty officer, resident ophthalmic officer, appointed for twelve months, and eligible for re-election; resident obstetric officer, 2 house physicians, holding office for twelve months; 4 house surgeons, for twelve months; 36 physicians' clerks, for six months; 32 surgeons' dressers, for six months; 16 ophthalmic and aural surgeons' dressers, for three months; 16 gynæcological ward clerks, for three months; 12 gynæcological out-patient clerks, for three months; 32 assistant physicians' clerks, for three months; 32 assistant surgeons' dressers, for three months; 32 dressers in the casualty-room, for three months; 32 post-mortem clerks, for three months.

There are appointments open to students in other medical institutions in the town and also in the West Riding Lunatic Asylum.

UNIVERSITY COLLEGE, LIVERPOOL.—In addition to the £25,000 presented to the College last year by the Earl of Derby and Mr. George Holt for the endowment of the chairs of Anatomy and Pathology, the Medical School has been further enriched by a donation of £15,000 from the Rev. S. A. Thompson Yates for the erection of new Physiological and Pathological Laboratories. These are now in course of erection, and the laying of the foundation-stone will form part of the ceremony at the opening of the coming session. The Chemical Laboratories are at present being extended, so as to provide *inter alia* more complete accommodation for those engaged in Laboratory work for Diplomas in Sanitary Science. Still more recently steps have been taken towards providing for the extension of the Anatomical Department, and structural alterations for this purpose are at present in progress. During the past year the electric light has been introduced into the dissecting-room and theatre. The chair of Pathology has secured adequate temporary accommodation in Ashton Hall, an institute adjacent to the College, which has been recently opened, and contains ample class-room and laboratory appliances for study and research in Pathology and Bacteriology.

The Museums of Anatomy, Pathology, Materia Medica, and Public Health are furnished with complete provision for the needs of students, and have recently been reorganised and revised.

ROYAL INFIRMARY.—The Royal Infirmary, which adjoins the School, contains 300 beds, with 40 special beds for the treatment of Diseases of Women. The Lock, Lying-in, Eye and Ear, Children's, and Dental Hospitals are in the immediate vicinity, and their practice is open to students of the Medical Faculty.

Fees.—The composition fee for lectures and classes is £24 15*s.* for Preliminary Science Classes: £60 for the Medical Classes required for the Victoria University degrees; £70 for all the classes required for the diplomas of the Conjoint Boards. The medical composition fees are payable in two instalments at intervals of twelve months. The fee for hospital attendance at the Royal Infirmary is 40 guineas, also payable in two annual instalments.

Appointments.—Three house surgeons, three house physicians, and one external house surgeon to the Thornton Wards are appointed for six months after (if necessary) competitive examination. Candidates must have a legal qualification. Three clinical clerks for each physician, three or more dressers for each surgeon, and two clerks to the Thornton Wards for Diseases of Women are appointed every three months. Post-mortem clerks are appointed for six weeks; all students are required to perform this duty before the schedule for the Final Examination is signed.

Scholarships.—(*a*) Two Holt Tutorial Scholarships, each of the value of £100 for one year, are awarded annually by the Medical Faculty to senior students. The successful candidates are required to devote a year to tutorial work and investigation in the Anatomical and Physiological Departments. (*b*) Two Lyon Jones Scholarships of the value of £21 each for two years are awarded annually: a Junior Scholarship, open to Victoria University students at the end of the first year of study, in the subjects of the first M.B. examination; and a Senior Scholarship, open to all students at the end of the third year of study in the subjects of Anatomy, Physiology, and Materia Medica. (*c*) The Derby Exhibition of £15 for one year is awarded in Clinical Medicine and Clinical Surgery in alternate years. Students may compete in their fourth or fifth year. In 1896 the subject will be Clinical Surgery. (*d*) The Torr Gold Medals in Anatomy and Physiology and class prizes are awarded annually.

Communications should be addressed to the Dean, Professor Paterson, M.D., University College, Liverpool.

MEDICAL DEPARTMENT OF OWENS COLLEGE, VICTORIA UNIVERSITY.—This medical school is located in a large new building, which forms a part of Owens College. It is provided with a very large dissecting-room, physiological

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laboratory, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. In order to give the fullest possible opportunities for teaching and investigation in the departments of Anatomy, Physiology, Pathology, and Materia Medica, an extension of the school buildings has been made. The additions were recently opened by the Duke of Devonshire, President of the College, and occupy a parallelogram bounded on three sides by Coupland-street, Lloyd-street, and Walter-street. The greater part of the buildings is devoted to the departments of physiology, pathology, toxicology, anatomy, and public health. The new physiological department occupies more than half of the new buildings, and includes a large lecture theatre, accommodating 350 students, with preparation and diagram rooms adjacent to it, and a research laboratory fitted with the necessary apparatus for the use of advanced students, research scholars, or practitioners of medicine undertaking the investigation of some special subject. In the new pathological laboratories ample provision is made for the teaching of the various branches of pathology and for the prosecution of original research. In the toxicological department there is a large laboratory, capable of accommodating fifty students, lighted from both sides and also from the roof, completely equipped with all that is necessary for the practical teaching of toxicology; also a small laboratory for private research, containing the apparatus and fittings necessary for investigations in toxicological chemistry. In the public health department suitable laboratory accommodation is provided for the study of sanitary chemistry, physics, and practical bacteriology in the departments of chemistry and physics and in that of pathology. A large room is provided in the new buildings for a museum of apparatus, models, plans, and other sanitary appliances for the practical instruction of the students, together with a special library of works on State medicine, hygiene, vital statistics, and sanitary engineering. In addition, a large lecture theatre for general purposes, accommodating 250 students, has been provided, and the existing accommodation for students is supplemented by the provision of a larger common room. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, to which are attached a fever hospital, a lunatic asylum, and a convalescent home. Medical and Surgical Clinical Classes are conducted in the infirmary, and separate instruction is afforded in the elements of Medical and Surgical Physical Diagnosis, in Obstetric Medicine, Ophthalmic Surgery, and Pathological Anatomy by the different members of the staff of the Medical School and Infirmary. The following entrance scholarships are offered for award to persons proposing to enter a medical course of study at the College:—Seaton.—One of £40, tenable for two years. Subjects: Greek and Latin Translation at sight, and Prose Composition. Credit given for knowledge of Mathematics (Geometry and Algebra); Elements of English Language, Literature, and History; French and German. Rogers.—One of £40, tenable for two years. Subjects as in Seaton. Dalton.—Two of £40, tenable for two years. Subjects: Geometry (Euclid I.—IV., and VI., or the subjects thereof); Algebra (as far as the Binomial Theorem, inclusive); Plane Trigonometry (to Solution of Triangles); Elementary Analytical Geometry; Conic Sections. Credit given for knowledge of Classics, Elements of English Language, Literature, and History; French and German. Hulme.—£35, tenable for three years. Subjects: English Language (Grammatical Structure and Outlines of its History); English Literature (an essay on some subject of English literature); and Modern History (Outlines of English History and Geography); with at least two of the following: Latin (Translation at sight, Grammar, and Easy Composition); Greek (ditto); French (ditto); German (ditto). Credit given for knowledge of Mathematics (Geometry and Algebra). James Gaskill.—£40, tenable for two years. Subjects: Mathematics, Geometry (the substance of Euclid I.—IV. and VI.), Algebra (as far as the Binomial Theorem, inclusive), Plane Trigonometry (to Solution of Triangles), Elementary Mechanics, Chemistry. Credit given for knowledge of Classics, Elements of English Language, Literature, and History, and French and German. Manchester Grammar School.—£18 per annum, tenable for three years. The examinations for all these scholarships are held in the month of June. A subject for an English Essay will also be set in each year. Kay-Shuttleworth (Sir James Phillips).—£30 per annum, tenable for three years. Examination in June. Subjects: Mathematics, Elementary Mechanics, Chemistry. Dauntesey Medical Scholarships.—Two Scholarships of £50 each are open to all students preparing for a medical course who shall not have attended lectures or Laboratory courses on human anatomy or physiology, or a purely medical or surgical course in the Owens College or any other Medical School in the United Kingdom. Candidates will be examined in Zoology, Botany, and Chemistry. Medals are awarded on the results of the various class examinations at the end of each session. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the Physiological Laboratory of Owens College, has prosecuted the best original investigation in Physiology and has passed a satisfactory examination in Physiology. Two Platt Exhibitions, of the value of £15 each, to be competed for by first and second year students in the class of Physiology. A Dumville Surgical Prize of £20 is offered annually for proficiency in Clinical Surgery. The Turner Medical Prize of £25 is awarded annually. The John Henry Agnew Scholarship in Diseases of Children (£30) is also offered for competition each year. Medical and Surgical Clinical Prizes, each of the value of 6 guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the infirmary.

MANCHESTER ROYAL INFIRMARY (300 beds).—Consulting Physicians: Drs. Frank Renaud, H. Browne, Sir Wm. Roberts, and Henry Simpson. Consulting Surgeons: Messrs. George Bowring, E. Lund, and F. A. Heath. Physicians: Drs. D. J. Leech, J. Dreschfeld, Graham Steell, and Thos. Harris. Assistant Physicians: Drs. J. S. Bury and A. T. Wilkinson. Consulting Obstetric Physician: Dr. Lloyd Roberts. Obstetric Physician: Dr. Archibald Donald. Surgeons: Messrs. Walter Whitehead, Thomas Jones, Jas. Hardie, and F. A. Southam. Assistant Surgeons: Messrs. G. A. Wright and Wm. Thorburn. Ophthalmic Surgeon: Dr. D. Little. Dental Surgeon: Mr. G. W. Smith. Medical Registrar: Dr. R. T. Williamson. Surgical Registrar: H. W. Pomfret, F.R.C.S. Administrators of Anæsthetics: Mr. Alexander Wilson and Mr. A. G. Andrews. General Superintendent and Secretary: Mr. W. L. Saunder.

BARNES CONVALESCENT HOSPITAL, Cheadle, Cheshire (in connexion with the Manchester Royal Infirmary; 136 beds).—Secretary: Mr. W. L. Saunder. Resident Medical Officer: Mr. F. H. Westmacott, F.R.C.S.

RADCLIFFE INFIRMARY, Oxford (120 beds).—This infirmary is open to students for Medical and Surgical work in the wards and out-patients' departments. Clinical lectures are given by the Lichfield Clinical Lecturers in Medicine and Surgery. Also tutorial instruction and demonstrations are given in special Regional Anatomy (medical and surgical), methods of Medical Diagnosis, and Surgical Manipulation. Demonstrations of Elementary Pathology are given in the post-mortem room and at the Pathological department of the museum. Practical Pharmacy is taught in the Infirmary Dispensary. The whole course of study at the museum and infirmary combined is intended for students until they have passed the Second Conjoint Examination or the First Oxford M.B.

SHEFFIELD SCHOOL OF MEDICINE.—An entrance scholarship of the value of £110 will be awarded to the best candidate (if of sufficient merit) in Mathematics, Elementary Physics, Inorganic Chemistry, Latin, and English. The examination will be held at Firth College on Sept. 26th and 27th. Applications to be sent to the school secretary not later than Sept. 19th. Prizes for Clinical Medicine and Surgery of 10 guineas are offered by the Clinical Committee. Prizes in books and certificates awarded annually. The medical school is provided with dissecting-room, physiological laboratory, museum, library, and class-rooms. The course of lectures and instruction is adapted to meet the requirements of the various examining bodies. Chemistry, Physics, Comparative Anatomy, Elementary Biology, Botany, and Toxicology are taken out at Firth College. The Sheffield General Infirmary contains 200 beds, including Ophthalmic and Dermatological departments, a museum of Pathology, library, and post-mortem theatre, with microscopes and all the appliances for clinical research. The Sheffield Royal Hospital contains 101 beds, and is recognised by the examining bodies. Perpetual fee for hospital practice £45 in one payment; or by two instalments: £26 on entering for hospital practice, and 22 guineas within twelve months afterwards. A tutor's fee of £2 2s. is required from students entering for Anatomy.

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and Physiology. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women, to the Borough Fever Hospitals, and the South Yorkshire Asylum.

JESSOP HOSPITAL FOR WOMEN, Gell-street, Sheffield.—The hospital is devoted to Diseases peculiar to Women. There is also an Obstetric Department for the admission of a small number of cases. A staff of midwives connected with the hospital attend lying-in women at their own homes, and, in case of need, are assisted by the members of the medical staff. Out-patients are attended daily. Students can attend the practice of the hospital and be supplied with cases of midwifery. Communications should be addressed to the Secretary, York Chambers, York-street, Sheffield.

ENGLISH PROVINCIAL HOSPITALS HAVING SPECIAL CLASSES AND FACILITIES FOR CLINICAL STUDY.

DEVON AND EXETER HOSPITAL, Exeter.—Medical and Surgical Staff: Consulting Physician: Dr. Drake. Physicians: Drs. H. Davy, Arthur G. Blomfield, and Wm. Gordon. Consulting Surgeons: Messrs. A. J. Cumming, T. W. Caird, and James Bankart. Surgeons: Messrs. J. D. Harris, E. J. Domville, Charles E. Bell, and A. C. Roper. House Surgeon: Mr. Henry Andrew. Assistant House Surgeon: Mr. H. H. Lloyd Patch. The hospital contains 218 beds (including special children's wards). There are a good library, museum, dissecting and post-mortem rooms. Attendance on the practice of this hospital qualifies for all the examining boards. Arrangements can be made by which students can attend Midwifery. There is also a Nurses' Home attached to the Hospital. For further particulars as to fees &c. apply to the House Surgeon.

WEST OF ENGLAND EYE INFIRMARY, Exeter.—Surgical Staff: Messrs. Bankart and Toeswill. Assistant Surgeon and Registrar: Mr. Roper. Secretary: Mr. R. C. Cole. The infirmary contains fifty beds. Students of the Exeter Hospital can attend the practice of the Eye Infirmary. Patients for the year ending Michaelmas, 1894, 2287. Total number of patients since the opening of the Infirmary in 1808, 85,673. Days of admission: Mondays, Tuesdays, and Fridays, at 11.

GENERAL KENT AND CANTERBURY HOSPITAL.—Opened for the reception of patients April 26th, 1793. 55,255 in-patients and 98,979 out-patients have been admitted since the hospital was opened. The hospital contains 106 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury Medical Society for £7 7s. Operation day, Thursday, 11 A.M. Physician: Dr. Henry Alex. Gogarty. Consulting Surgeons: Mr. James Reid and Mr. Charles Holttum. Surgeons: Messrs. Frank Wacher, T. Whitehead Reid, J. Greasley, and Sydney Wacher. Dentist: Mr. Martin L. Bell. House Surgeon: Mr. J. H. Joyce. Assistant House Surgeon: Mr. E. C. Frend. Secretary: Mr. Arthur J. Lancaster. Over 700 in-patients, 2000 out-patients and casualties, and 1000 dental cases are attended in a year.

LIVERPOOL NORTHERN HOSPITAL (160 beds).—There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. Consulting Surgeons: Mr. W. H. Manifold and Dr. W. Macfie Campbell. Physicians: Dr. E. H. Dickinson, M.A.; Dr. James Barr. Surgeons: Messrs. Chauncy Puzey, Damer Harrisson, and A. H. Wilson. Fees for hospital attendance: Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s.; Practical Pharmacy, £2 2s. Students can enter to the medical or the surgical practice separately on payment of half the above fees.

LIVERPOOL ROYAL SOUTHERN HOSPITAL (CLINICAL SCHOOL).—Physicians: Dr. Cameron, Dr. Carter, and Dr. William Williams. Surgeons: Mr. Bawdon, Mr. Alexander, and Mr. Robert Jones. Ophthalmic Surgeon: Mr. Richard Williams. Aural Surgeon: Mr. Charles G. Lee. Dental Surgeon: Mr. Royston. Lecturer on Practical Medicine: Dr. Macalister. Surgical Tutor: Mr. Davey. Consulting Pathologist: Professor Boyce. Pathologist: Dr. Barendt. Medical Tutor and Bacteriologist: Dr. Hugh R. Jones. The hospital is situated within convenient distance of the School of Medicine and contains 200 beds. There are special wards for accidents and Diseases of Children, and there are also beds appropriated to the Diseases of Women. Clinical teaching is given in the hospital, and arrangements have been made to render it thorough and systematic. The members of the staff the wards daily, and clinical lectures are given every w Tutorial classes are also held each day at which the ju students are instructed in the methods of diagnosis and seniors are prepared for their final examinations. The p logical department has a good laboratory attached in w the students receive practical instruction. Recent bacteriological laboratory has been added, where stu are able to obtain a practical knowledge of bacteriolo relation to medicine. In connexion with the hospi course of instruction for gentlemen desirous of obtai diploma in Public Health is given, and with this obj chemical laboratory under Mr. Herbert Davies, M.A. Ca B Sc. Lond., has been opened. In addition to the clinical and post-mortem clerkships, which are open t students, the resident post of Ambulance Officer is awa every three months to the student whom the board consider most suited to hold it. A Scholarship of is competed for annually, which has attached to it clinical and pathological duties; and three prizes of £5 are yearly offered for the best series of clinical re Fees: Perpetual £26 5s.; one year £10 10s.; six months £ three months £4 4s. A limited number of resident p can be received. Terms (exclusive of fees for Ho Practice), £15 15s. per quarter. The practice of the ho is recognised by all examining bodies. For further ticulars apply to the Dean, Mr. Robert Jones, 11, N street, Liverpool.

ROYAL INFIRMARY, Liverpool. — The buildings o new Royal Infirmary were completed and occupied in They stand on the old site, adjacent to the college enlarged by the purchase of a fine frontage in Pem place and of the street known as Pembroke-ga Externally, they form a handsome and imposing gro buildings, the general arrangement of which ma gathered from the plan at the beginning of the prosp Every available open-air space has been taken advant to secure good airing grounds for the patients, an beauty of the buildings has been not a little enhan the numerous balconies, colonnades, and flat roofs a to the same purpose for both patients and re staff. Internally, no point in modern sanitary scien been omitted. There are 295 beds exclusive of the Hospital. The wards—some parallelograms, some circ have floors of waxed oak blocks laid on an iro cement substratum. Three operating theatres clinical lecture theatre have been provided. Th an electrical room, and provision for special kinds of The out-patient department comprises rooms for the ment and study of minor medical and surgical ma for diseases of the eye, skin, larynx, nose, and as well as a gynæcological department. There a Lock Hospital. A room has been allotted to the tutors, in which they may keep their records, whil surgeon and physician has a private room in con with his wards, where his dressers and clerks ma up and tabulate cases and investigate morbid pr The pathological department, which is daily becor more importance in medical education, has had muc expended upon it, so as to give proper facilities study of morbid anatomy. It is hoped that the f for clinical work will be such as not merely to ena present students to learn the practical parts of th fession thoroughly, but to attract students fron crowded institutions where the number of pupils i excess of the opportunities for the bedside study of In no hospital in the country are the resident ph and surgeons so comfortably lodged. Each is with a bedroom and a private sitting-room in add the music-room and dining-room, where all the sev dents meet in common. R. Caton, M.D., Secre Medical Board, 86, Rodney-street, Liverpool.

NORFOLK AND NORWICH HOSPITAL (220 beds). £10 10s. for six months', £15 15s. for twelve months' and surgical practice. Pupils: resident and non-r Consulting Physicians: Sir P. Eade, M.D., and Sir Bateman, M.D. Consulting Surgeon: Mr. W. F.R.C.S. Physicians: Dr. Barton and Dr. Burton-J Surgeons: Mr. Williams, Dr. Beverley, and Mr Robinson. Assistant Surgeons: Mr. S. H. Burton D. D. Day. Dental Surgeon: Mr. R. Wentworth House Surgeon: Mr. Reginald Crosse. Secretary: M Gabbett.

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NORTHAMPTON GENERAL INFIRMARY (established 1743; rebuilt 1793).—In-patients, 1461; out-patients, 8673. The number of beds is 160. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica and Practical Pharmacy. Non-resident pupils are taken at a fee of £10 10*s*.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-on-Trent.—The New Infirmary, opened in 1869, is built on the pavilion plan, has accommodation for over 220 patients, including Children's wards, special Ovarian wards, and a special department for the treatment of Diseases of the Eye. In-patients last year, 1934; out-patients, 9783. The attendance of pupils at this infirmary is duly recognised by all the examining boards; and there are unusual facilities for acquiring a practical knowledge of the profession. Physicians: Dr. A. M. McAldowie and Dr. J. Charlesworth. Surgeons: Messrs. J. Alcock and W. D. Spanton. Ophthalmic Surgeon: Mr. Herbert Folker. Assistant Ophthalmic Surgeon: Mr. J. F. Arlidge. Assistant Physicians: Dr. S. King Alcock and Mr. H. Nicholls. Assistant Surgeons: Drs. G. S. Hatton and W. Hind. Dental Surgeon: Mr. A. Baines. House Physician: Mr. William C. Allardice. House Surgeon: Mr. John L. Sawers. Secretary: Mr. R Hordley, Hartshill, Stoke-on-Trent, from whom particulars as to fees, &c., may be obtained.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL (founded 1848; beds, 230).—A preparatory school of Medicine and Surgery. The pupils have the advantage of seeing the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. The attendance of pupils at this hospital is recognised by all the examining boards. Operations are performed every Thursday at 11 o'clock.

SUSSEX COUNTY HOSPITAL (188 Beds).—During the year 1894, 1576 in-patients have been treated. The total number of out-patient attendances on the books during 1894 was 35,786. This hospital affords ample facilities for students, possessing a large out-patient department, a library, and a well-appointed museum. The hospital does not take resident pupils, but out-pupils may attend the practice of the hospital for any period not exceeding two years on payment in advance of such a fee, not exceeding 20 guineas, as the Committee of Management shall direct.

MANCHESTER GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury and Gartside-street.—The hospital contains 140 beds, including 28 for scarlet fever. The medical staff visit the hospital daily at 10 A.M. Clinical instruction is given by the medical staff at the Hospital and Dispensary. Out-patients are seen daily at 9 A.M. at the Dispensary, Gartside-street, Manchester. Physicians: Drs. Ashby and Hutton. Surgeon: Mr. G. A. Wright. Assistant Surgeon: Mr Joseph Collier. Resident Medical Officers: Dr. Carruthers and M. A. Byers, M.B. Medical Officer at the Dispensary: Mr. J. Hepworth, M.R.C.S. During 1894 there were 1284 in-patients, and 10,007 out-patients were under treatment at the Dispensary.

ROYAL PORTSMOUTH HOSPITAL.—One year's attendance recognised by the Examining Boards. Consulting Surgeon: Mr. K. E. Knight, M.R.C.S. Honorary Physicians: Edward J. Wallace, M.D., and J. Watson, M.D. Honorary Surgeons: J. Ward Cousins, M.D., F.R.C.S., A. Lloyd Owen, M.D., M.R.C.S., and H. Rundle, F.R.C.S. Gosport District: J. R. Kealy, M.D., E. T. Crouch, M.R.C.S. Dental Surgeon: W. H. Kirton, L.D.S.R.C.S.I. Medical Officer for Out-patients: C. H. Newby, F.R.C.S.

SCOTLAND.

MEDICAL SCHOOLS WITH FULL CURRICULUM.

EDINBURGH.

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, Edinburgh.—The students who enter the classes of the School of Medicine are students proceeding to University degrees; but also students who are intending to take other qualifications, such as the conjoint qualifications of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, the Conjoint qualification of the Royal College of Physicians of London and the Royal College of Surgeons of England, and others. The number of students varies much in the classes and subjects. It is within the limit to say that some 1000 students avail themselves each year of the opportunity of attending the school. The lectures qualify for the University of Edinburgh and other Universities, the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, the Faculty of Physicians and Surgeons of Glasgow, and other Medical and Surgical and Public Boards. In accordance with the recent Statutes of the University of Edinburgh one half of the qualifying classes required for graduation may be attended in this school. The regulations require that the fee for any class, taken for Edinburgh University graduation, shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

Fees.—For a first course of lectures (Royal Colleges, &c.), £3 3*s*.; University Graduation, £4 4*s*.; for a second, £2 4*s*.; perpetual, £5 5*s*. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4*s*. Practical Anatomy, with course of demonstrations, £4 4*s*. Practical Chemistry, £3 3*s*. Analytical Chemistry, £2 for one month, £5 for three months. Clinical Surgery and Clinical Medicine, each £3 5*s*. Practical Physiology, Practical Pathology, Practical Materia Medica and Pharmacy, Operative Surgery, Practical Medicine, Medical Diagnosis, Physics, and Biology, each £3 3*s*.; Diseases of the Ear and Throat, Diseases of the Skin, Diseases of the Chest, Diseases of Children, Diseases of the Eye, and Diseases of the Tropics and Climatology, each £2 2*s*. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4*s*.; Practical Anatomy, including Anatomical Demonstrations, £2 2*s*.; Operative Surgery, £3 3*s*.; Insanity, £2 2*s*.; and Vaccination, £1 1*s*. Extra and senior classes are held in a number of branches of medical science which are beneficial to senior students and post-graduates.

The following order of study is recommended as a guide to the student for a five years' course, though not enjoined:—First Year: Biology, Physics, Anatomy, Practical Anatomy, Chemistry and Practical or Analytical Chemistry. Second Year: Anatomy, Practical Anatomy, Physiology, Practical Physiology, Surgery and Materia Medica—the last either in this or the third year—and Hospital. Third Year: Practice of Medicine, Clinical Surgery, Practical Pharmacy, Clinical Medicine, Pathology, and Hospital. Fourth Year: Surgery or Clinical Surgery, Midwifery and Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Operative Surgery, and Hospital. Fifth Year: Classes on Special subjects, Hospital and Dispensary Practice.

SURGEONS' HALL, SCHOOL OF MEDICINE, Edinburgh.—At Surgeons' Hall, where the class-rooms of many of the lecturers are situated, lectures qualify for the University of Edinburgh and other Universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin; and other Medical and Public Boards.

In accordance with the statutes of the University of Edinburgh, one-half of the qualifying classes required for graduation may be attended in this school, in addition to the class of Practical Materia Medica and the classes of Clinical Medicine and Clinical Surgery. The regulations require that the fee for any class taken for graduation in Edinburgh shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

Fees.—For a First Course of Lectures, £3 5*s*.; for a Second, £2 4*s*.; Perpetual, £5 5*s*. To those who have already attended a First Course in Edinburgh the Perpetual Fee is £2 4*s*. Practical Anatomy (six months' course), £3 3*s*.; Course of Demonstrations, £2 2*s*.; Perpetual, £4 4*s*.; Practical Anatomy, with Course of Demonstrations, £4 4*s*.; Practical Chemistry, £3 3*s*.; Analytical Chemistry, £2 for one month, £5 for three months, or £10 for six months. Practical Physiology, Practical Pathology, and Practical Materia Medica and Pharmacy, each £3 3*s*. Diseases of the Ear and Throat and Diseases of the Eye, each £2 2*s*. For Summer Courses of Clinical Surgery and Clinical Medicine, each £2 4*s*.; Practical Anatomy, including Anatomical Demonstrations, £2 2*s*.; Operative Surgery, £3 3*s*. Insanity, £2 2*s*. The minimum cost of the education in this School of Medicine for the Triple Qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE MEDICAL SCHOOLS OF SCOTLAND FOR THE SESSION 1895-96.

LECTURES, &c.	ABERDEEN UNIV. Professors and Lecturers.	Fees. One Course.	ST. ANDREWS UNIV.§§ Lecturers.	Fees. One Course.	EDINBURGH UNIV. Lecturers.	Fees. —	GLASGOW UNIV. Professors.	Fees. One Course.	ST. MUNGO'S COLL. & SCHOOL of MEDICINE Lecturers.	Fees. One Course.	GLASG., ANDERSON'S COLL. MED. SCHOOL. Lecturers.	Fees. One Course.	GLASGOW WESTERN MEDICAL SCHOOL. Lecturers.	Fees. One Course.
WINTER SESSION.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.
ANATOMY	Prof. R. W. Reid	3 3	Prof. Mackay	3 3	Sir William Turner	4 4	Dr. J. Cleland	3 3	Mr. Kent	4 4	Dr. A. M. Buchanan	4 4§	Mr. R. H. Parry	2 2
PRAC. ANAT. & DEMONS.	Prof. Reid	3 3	Prof. Walker	3 3	...	...	...	3 3	Mr. Kent	...	...	...	...	...
CHEMISTRY	Prof. Japp	3 3	Prof. Purdie¶	3 3	Dr. Crum Brown (Adv. Class in Sum.)	4 4	Dr. J. Ferguson	3 3	Dr. Marshall	2 2	Mr. J. R. Watson	2 2	Dr. J. P. Munro	...
	[*Pract. Pathology:* Prof. Hamilton]	3 3	Prof. Walker	3 3			[*Chemical Lab.:* Dr. J. Ferguson]	10 10	[*Throat and Nose:* Dr. Fullerton]		[*Physics:* Mr. Peter Bennett]	2 2		
											[*Zoology:* Dr. Todd]	1 11 6		
PHYSIOLOGY (INST. OF MED.)	Prof. MacWilliam	3 3	Prof. Pettigrew¶	3 3	Dr. Rutherford	4 4	Dr. McKendrick [Summer Course]	3 3	Dr. Barlow	2 2	Dr. D. Campbell Black	2 2	Dr. Munro	...
GENERAL PATHOLOGY, &c.	Prof. Hamilton	3 3	Prof. Reid	3 3	Dr. Greenfield	4 4	Dr. J. Coats	3 3	Dr. C. Workman	4 4	(In Infirmary)	...	...	...
MEDICINE	Prof. D. W. Finlay	3 3	...	...	Sir Thomas Grainger Stewart	4 4	Dr. Gairdner	3 3	Dr. Robertson	2 2	Dr. Gemmell	2 2	...	...
SURGERY	Prof. Alex. Ogston	3 3	Dr. MacEwan (*systematic*)	2 2	Dr. Chiene	4 4	Dr. Macewen	3 3	Mr. Clark	2 2	Dr. Dalziel	2 2	Mr. R. H. Parry	2 2
	[*Bacteriology:* Prof. Hamilton]	3 3					[*Physics:* Mr. Magnus Maclean]	3 3			[Dr. R. Barclay Ness]	2 2		
MATERIA MEDICA, &c.	Prof. Cash	3 3	...	...	Dr. T. R. Fraser	4 4	Dr. Charteris	3 3	Dr. Dougall	2 2	Dr. Wm. L. Reid	2 2	...	...
MIDWIFERY, &c.	Prof. Stephenson	3 3	...	...	Dr. Simpson (Dis. Wom. & Child.)	4 4	Prof. Cameron [*Pub. Health:* Drs. Simpson & Ferguson]	3 3	Dr. Stirton	2 2	...	2 2	Dr. Marshall	1 1
	[*Physics:* Prof. Niven]	3 3						10 10	[*Bacteriology:* Dr. Workman]	2 2	[*Dis. of Throat & Nose:* Dr Macintyre]	Free	[*Ophthalmology:* Dr. Fergus.]	1 1
MED. JURISPRUDENCE, &c.	Prof. Hay (In Summer)	3 3	...	...	Sir D. Maclagan (in Summer only)	4 4	Dr. Simpson [Law Class, ditto]	3 3 3 3	Dr. Glaister	2 2	Dr. R. M. Buchanan (in Summer)	2 2	...	...
NATURAL HISTORY	Prof. Nicholson	3 3	Prof. McIntosh¶	3 3	Dr. Ewart	4 4	Dr. Young	3 3	...	2 2	[*Public Health:* Dr. Munro]	...	...	...
NATURAL PHILOSOPHY	Prof. Niven	3 3	Prof. Thompson	3 3	Mr. Tait	3 3	...	...	Mr. Blyth (and *Physics*)	2 4 6	[*Dis. of Ear:* Dr. Meighan]	Free	...	...
HOSPITAL PRACTICE:	ABERDEEN R. INF.		Prof. Stegall	3 3	EDIN. ROYAL INF.		GLASG. ROY. INF. AND WEST INF.				GLASGOW ROY. OR WESTERN INF.			
PHYSICIANS	Drs. A. Fraser, Blaikie Smith, and Finlay (Daily) [*Assist.-Phys.:* Dr. Rodger]	One year, £3 10s. Perpetual, £6.	...	...	...	Perpet. ticket, £12 12s.	The Physicians and Surgeons of the Infirmaries (and in Summer)	1st year, £10 10s.; 2nd year & perpetual, £10 10s.	The Physicians & Surgeons of the Glasgow Royal Infirmary	Perpetual, including Clin. Lectures, £21	The Medical and Surgical Staffs.	1st year, £10 10s.; 2nd, £10 10s.; aft. free; 6 months, £6 6s.; W.I., £7 7s.; 3 months, £4 4s.	The Physicians & Surgeons in the Western Infirmary.	
SURGEONS	Drs. Ogston, Garden, & Booth Williamson (*dental*) Daily		...	...	...		... [*Dis. of Ear:* Dr. T. Barr, £1 1] [*Dis. of Throat &c.:* Dr. J. W. Downie, £1 1]		[*Hygiene:* Drs. Glaister and J. C McVail]		...		...	
ASSISTANT SURGEONS	Drs. Riddell, Sinclair, and Marnoch		...	...	...				[*Diseases of Skin:* Dr. Alex. Morton]		...		...	
CLINICAL MEDICINE	Drs. A. Fraser, Blaikie Smith, and Finlay	3 3	The Physicians of the Royal Infirm'ry, Dundee	...	Sir T. G. Stewart, Fraser, Greenfield, & Simpson on Diseases of Women	4 4	Drs. M'Call Anderson & Gairdner (and in Summer)		Dr. McVail and the Physicians of the Royal Infirmary	...	The Physicians [*Dis. of Ear:* Dr. Erskine, M.A.]	... Free	...	...
CLINICAL SURGERY	Drs. Ogston, Garden, & Booth	3 3	The Surgeons of the Royal Infirm'ry, Dundee	...	Dr. Annandale	4 4	Dr. Buchanan & Dr. Macewen (and in Summer)	...	Dr. Knox and the Surgs. of the Royal Infirmary	...	The Surgeons [*Zoology:* Dr. Todd]	... 1 11 6	...	...
SUMMER SESSION.														
PRAC. ANAT. & DEMONS.	Prof. Reid	3 3	Prof. Mackay	2 2	Sir Wm. Turner	3 3	Dr. Cleland and Demonstrators	2 2	Mr. Kent	2 2	Dr A. M. Buchanan†† Mr. King	2 2 1 11 6	...	...
BOTANY	Prof. Traill	3 3	Prof. Geddes** Mr. Robertson¶	3 3 3 3	Dr. Bayley Balfour* (*Physics:* Mr. Tait)	4 4 3 3	Prof. Bower	3 3	Dr. Swanson	3 3	...	...	...	...
HISTOLOGY	Prof. MacWilliam	3 3	...	...	...	...	Dr. McKendrick [*Phys. Lab.*]	3 3 5 5	Dr. Barlow	2 2	Dr. D. Campbell Black	2 2	...	...
COMPARATIVE ANATOMY	...	...	...	...	...	...	...	...	Mr. M. Laurie	2 2	...	...	...	...
PRACTICAL CHEMISTRY	Prof. Japp	3 3	Prof. Walker††	2 2	Dr. Crum Brown	3 3	Dr. J. Ferguson	3 3	Dr. Marshall	2 2	Mr. J. R. Watson	2 2	Dr. Munro	...
DISEASES OF THE EAR	Dr. McK. Booth	1 1	...	...	...	...	[*Prac. Mat. Med.:* Dr. Charteris]	3 3	Dr. J. Kerr Love	1 1	[*Physics:* Mr. Peter Bennett]	2 2	...	...
DISEASES OF THE EYE	Dr. M. Davidson & Dr. Usher	1 1	...	...	Dr. A. Robertson,	3 3	Dr. T. Reid	2 2	Dr. Napier*	2 2	Dr. Meighan	Free	Dr. Fergus.	1 1
DISEASES OF CHILDREN	Prof. Stephenson	...	...	...	Drs. Carmichael &	1 1	...	...	Dr. Adams*	2 2	...	...	...	...
NATURAL HISTORY	Prof. Nicholson	3 3	Prof. Thompson	3 3	Dr Ewart* (Playfair*	4 4	Dr. Young (*Lab.*)	3 3	Mr. M. Laurie*	2 2	...	...	...	...
MED. PSYCHO. & INSANITY	Dr. Reid	1 1	...	...	Dr Clouston †	3 3	Dr. Yellowlees	2 2	Dr. A. C. Clark	2 2	Dr. Carswell	1 1	...	1 1
GYNÆCOLOGY	Prof Stephenson**	2 2	...	...	Dr. Simpson	4 4	Prof. Cameron	2 2	Dr. Kelly*	1 1	...	...	Dr. Marshall*	...
MIDWIFERY, &c.	[*Prac. Hygiene:* Dr. Hay]	...	...	...	[*Pr. M. Anat. & Path.* Dr. Greenfield]	4 4	...	...	Dr. Stirton	2 2	...	...	...	...
OPERATIVE SURGERY	...	3 3	Dr. MacEwan‖	2 2	Dr. Chiene*	3 3	Dr. Macewen	2 2	Dr. Whitson	2 2	[*Path.:* Dr. Munro] Dr. Dalziel	... 2 2	Mr. Parry	2 2

* Also in Winter. † With Clinical Instruction at an Asylum, £3 3s. ‡ In Summer. § This fee includes Practical Anatomy. ‖ Dundee. ¶ St. Andrews. ** In Winter.
†† There is a Winter Session in Botany at St. Andrews, conducted by Mr. Robertson: *Theoretical Course*, £2 2s.; Junior Practical Course, £2 2s.; Senior Practical Course, £3 3s. ‡‡ With Osteology.
§§ By a recent decision of the House of Lords the union between St. Andrews University and University College, Dundee, has been annulled for the time being.

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE MEDICAL SCHOOLS OF SCOTLAND FOR THE SESSION 1895-96.—(CONTINUED.)

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

LECTURES.	LECTURERS.	FEES. £ s.
WINTER SESSION. (*Commencing Oct. 15th.*)		
ANATOMY	Drs. Ryland Whitaker and Musgrove	3 5
PRACT. ANATOMY & DEMONS.		4 4
CHEMISTRY (PRACTICAL, &c.)	Dr. S. Macadam, Mr. King, Mr. I. Macadam, and Drs. Aitken and Readman	*
PHYSIOLOGY (INST. OF MEDICINE)	Dr. Noël Paton	3 5
GEN. PATHOL., &c...	Drs. Bruce, Russell, and Leith	3 5
BOTANY	Mr. A. N. McAlpine†	
PRACTICE OF PHYSIC	Drs. Wyllie, James, Affleck, Bramwell, Gibson, and Philip	3 5
SURGERY	Messrs. Caird, Hodsdon, Shaw McLaren, and Thomson	3 5
MATERIA MED., &c.	Drs. Craig† and Stockman†	3 5
MIDWIFERY, &c. ..	Drs. Hart, Murray, and Haultain	3 5
MED JURISPRU., &c.	Dr. Littlejohn	3 5
NATURAL HISTORY	Mr. Arthur Thomson†	3 5
NAT. PHILOSOPHY	Dr. Turner and Mr. Purvis	3 5
HOSPITAL PRACT. PHYSICIANS	Edinburgh Royal Infirmary Drs. Wyllie, Affleck, Smart, James, and Croom	Perpet. Ticket, £12 12s.
SURGEONS	Messrs. Duncan and Miller, Drs. Maclaren and MacGillivray	
CLIN. MEDICINE ..	Drs. Wyllie, Affleck, Smart, James, & Dr. Croom (Diseases of Women)	3 5
CLIN. SURGERY ..	Mr. Duncan, Mr. Miller, Dr. Maclaren, and Dr. MacGillivray	3 5
DIS. OF THE SKIN	Drs. Jamieson† and Stirling†	2 2
DIS. OF THE CHEST	Dr. Philip†	2 2
VACCINATION	Drs. Husband† and Buist†	1 1
GYNÆCOLOGY ..	Drs. Croom (Systematic), Brewis (Clinical), and Berry Hart (Advanced)	2 2
DIS. OF THE TROPICS & CLIMATOLOGY	Dr. Felkin†	2 2
SUMMER SESSION. (*Commencing May 1st.*)		
PRACT. ANATOMY AND DEMONS.	Drs. Ryland, Whitaker and Musgrove	2 2
PRAC. PHYSIOLOGY	Dr. Paton	3 3
BIOLOGY	Messrs. Thomson and Turnbull‡	3 3
PRAC. CHEMISTRY ANAL. CHEMISTRY	Dr. S. Macadam, Messrs. King, I. Macadam, Drs. Aitken and Readman	§
DIS. OF THE EAR	Drs. Duncanson‡ and McBride‡ (and Throat)	2 2
DIS. OF THE EYE	Mr. Berry ‡ Dr. Mackay‡	2 2
DIS. OF THE SKIN	Drs. Allan Jamieson and Stirling	2 2
DIS. OF CHILDREN	Mr. Joseph Bell,‡ Drs. Murdoch,‡ Thomson,‡ Ballantine,‡ and Danlop‡	2 2
MED. PSYCHOL. & INSANITY	Dr. Tuke	1 1
GYNÆCOLOGY ..	Drs. Brewis and Haultain	2 2
MIDWIFERY	Drs. Croom, Hart, Barbour, and Ferguson	3 5
OPERATIVE SURG.	Messrs. Caird, Hodsdon, Shaw, McLaren, and Alexis Thomson	3 3
PRAC. PATHOLOGY	Drs. Bruce, Russell, and Leith	3 3
PHYSICS	Dr. Turner‡ and Mr. Purvis	3 3
LARYNGOLOGY & MED. OPHTHAL.	Dr. Wyllie	2 2
PRAC. MEDICINE & PHYSICAL DIAG.	Dr. James	3 3
PRACTICE OF MED.	Drs. Bramwell, Gibson, and Philip	3 3
MEDICAL ELECTRICITY, &c.	Dr. Turner	2 2
DISEASES OF THE CIRCULATION	Dr. Gibson	2 2

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

SPECIAL CLASSES FOR WOMEN.

LECTURES.	LECTURERS.	FEES. £ s.
WINTER SESSION.		
ANATOMY	—	3 5
PRAC. ANATOMY & DEMONS.	Messrs. Longden and Hardie	4 4
CHEMISTRY (LECTS. AND PRACTICAL)	Mr. Ivison Macadam and Dr. Aitken	3 5 3 3
PRAC. OF PHYSIC	Drs. James and Philip	3 5
SURGERY	Mr. Thomson and Mr. McLaren	3 5
GEN. PATHOLOGY	Dr. Russell	3 5
PHYSIOLOGY (INST. OF MED.)	Dr. Noël Paton	3 5
PRAC. PATHOLOGY	Dr. Bruce	3 5
MATERIA MED., &c.	Dr. Craig	3 5
CLIN. MEDICINE ..	Dr. Bramwell, Royal Infirmary	3 5
CLIN. SURGERY ..	Royal Infirmary	3 5
PHYSICS	Dr. Dawson Turner	3 3
BIOLOGY	Mr. Thomson and Mr. Turnbull	3 3
DISEASES OF CHILDREN	Mr. Bell, Dr. Murdoch, and Dr. Cumming	2 2
VACCINATION	Dr. Husband and Mr. Cadell	1 1
DIS. OF THE TROPICS & CLIMATOLOGY	Dr. Felkin	2 2
PRAC. GYNÆCOL.	Dr. Brewis	2 2
SUMMER SESSION.		
PRAC. ANATOMY..	Mr. Longden and Mr. Hardie	2 2
PRAC. CHEMISTRY	Mr. Ivison Macadam and Dr. Aitken	3 3
MAT. MED., &c... ..	Dr. Craig	3 3
OPER. SURGERY & SURG. ANATOMY	Mr. Alexis Thomson and Mr. McLaren	3 3
MATERIA MEDICA & THERAPEUTICS	Dr. Stockman	3 3
MIDWIFERY & DIS. OF WOMEN	Drs. Ballantyne and Jex-Blake	3 5
MED. JURISPRUD. & PUB. HEALTH	Sir Henry Littlejohn	3 5
CLIN. MEDICINE ..	Royal Infirmary	3 5
CLIN. SURGERY ..		3 5
PRAC. PHYSIOLOGY & HISTOLOGY	Dr. Paton	3 3
PRAC. PATHOLOGY	Dr. Russell	3 3
BIOLOGY	Mr. Arthur Thomson and Mr. Turnbull	3 3
PHYSICS	Dr. Dawson Turner	3 3
DISEASES OF CHILDREN	Mr. Bell, Dr. Murdoch, and Dr. Cumming	2 2
OPHTHALMOLOGY..	Mr. Berry	2 2
INSANITY	Dr. Tuke	2 2
PRAC. GYNÆCOL...	Dr. Brewis	2 2

* Lectures, £3 5s.; Practical, £3 3s.; Analytical, £2 a month, or £5 for three months. † Also in Summer Session.
‡ Also in Winter Session. § Practical, £3 3s.; Analytical, £2 a month, or £5 for three months.
N.B.—Where two or more lecturers appear as teaching the same subjects, their lectures are not conjoined, but each gives an independent course.

of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, including the fees for the Joint Examinations, is about £100, which is payable by instalments during the period of study.

The following Order of Study is recommended as a guide to the student for a five years' course, though not enjoined:—First Year: Biology, Physics, Anatomy, Practical Anatomy, Chemistry, and Practical or Analytical Chemistry. Second Year: Anatomy, Practical Anatomy, Physiology, Practical Physiology, Surgery, and Materia Medica—the last either in this or the Third Year—and Hospital. Third Year: Practice of Medicine, Clinical Surgery, Practical Pharmacy, Clinical Medicine, Pathology, and Hospital. Fourth Year: Surgery or Clinical Surgery, Midwifery and Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Operative Surgery, and Hospital. Fifth Year: Classes on Special Subjects, Hospital, and Dispensary Practice.

The appointment of Resident Physician to the wards in the Royal Infirmary under the care of the Ordinary Physicians is open to those members of their clinical class who have clerked in their wards for at least six months. Six Residentships

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are appointed during the year for a period of six months each. Resident Surgeons are also appointed by the Ordinary Surgeons to the Hospital. In all respects the students are taught under regulations similar to those at the University of Edinburgh and the other Universities of Scotland, and they receive similar certificates at the close of each session. Moreover, the University College authorities in Edinburgh call upon each recognised lecturer to supply them at the close of each session with a statement giving the number of students attending the class, the number of lectures or prelections delivered during the session, the class examinations held, and the general mode of conducting the class. The courses on special non-qualifying subjects have for the last quarter of a century formed a marked feature of the school. Indeed, such medical subjects could be studied in Edinburgh only in this school until lately, when the University of Edinburgh appointed from the school, lecturers on Diseases of the Eye, Insanity, and Diseases of Children to take charge of classes intra-murally, and a tabular list of the classes and lecturers will be found above. The various classes in the school are conducted in several separate buildings (such as at Surgeons' Hall, Nicolson-street; Minto House, Chambers-street; Nicolson-square; New School, Bristo-street, &c.). Special courses of instruction for women students are also included in the curriculum of this school. Further particulars regarding the school will be found in the calendar, which will be forwarded *gratis* by the Secretary to the school, 24, Forrest-road, Edinburgh.

GLASGOW.

ANDERSON'S COLLEGE MEDICAL SCHOOL, Glasgow.—This medical school was founded in the year 1800. It has given twelve professors to the University of Glasgow, of whom four at present hold office. The following courses are given, which qualify for all the licensing boards and for the Universities of London, Durham, Ireland, Edinburgh, and Glasgow (the latter two under certain conditions):—In winter: Anatomy, Professor A. M. Buchanan, M.A., M.D.; Chemistry, Professor J. Robertson Watson, M.A.; Physics, Professor Peter Bennett; Zoology, Professor Geo. Bell Todd, M.B.; Physiology, Professor D. Campbell Black, M.D.; Surgery, Professor T. Kennedy Dalziel, M.B.; Practice of Medicine, Professor Samson Gemmell, M.D.; Midwifery and Diseases of Women and Children, Professor Wm. L. Reid, M.D.; Materia Medica, Professor R. Barclay Ness, M.A., M.B.; Ophthalmic Medicine and Surgery, T. Spence Meighan, M.D.; Aural Surgery, James Erskine, M.A., M.B.; Diseases of Throat and Nose, John Macintyre, M.B.; Hygiene and Public Health, Dr. J. Pearson Munro. In summer: Anatomy, Practical Anatomy and Osteology, Practical Chemistry, Physics, Zoology, Practical Materia Medica and Pharmacy, Practical Physiology, Operative Surgery, Medical Jurisprudence, Professor R. M. Buchanan, M.B.; Botany, Professor King; Ophthalmic Medicine and Surgery; Mental Diseases, Dr. Carswell; Hygiene and Public Health, and Aural Surgery. The Chemical Laboratory is open daily from 10 to 6. The Dissecting-room is open in winter from 9 A.M. to 6 P.M., and in summer from 6 A.M. to 6 P.M. The students are assisted in their dissections by the Professor and Demonstrators, by whom frequent examinations and demonstrations on the parts dissected are conducted. The supply of subjects for dissection is ample, and students are consequently provided with parts as soon as they may be ready for them. The Dissecting-room is provided with a complete series of dissected specimens, mounted in plaster-of-Paris, illustrating the anatomy of the human body. Candidates for the licence in Dental Surgery can obtain the full medical curriculum in Anatomy, Chemistry, Physiology, Surgery, Practice of Medicine, and Materia Medica. The courses special to Dentistry are conducted at the Glasgow Dental Hospital and School.

The new buildings are situated in Dumbarton-road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of it, and four minutes' walk of the University. Extensive accommodation is provided for Practical Anatomy, Practical Chemistry, Practical Physiology, Practical Pharmacy, Public Health, and Operative Surgery. There are also provided a large library and reading-room, and a students' recreation-room.

Fees:—For each of the above courses of Lectures (Anatomy, Chemistry, and Biology excepted), first session, £2 2*s.*; second session, £1 1*s.* Anatomy Class Fees: Winter, first session (including Practical Anatomy), £4 4*s.*; second session (including Practical Anatomy), £4 4*s*; third session, £2 2*s.* To those who have had the necessary courses of Practical Anatomy the fee will be £1 1*s.* Summer, Lectures and Practical Anatomy, £2 12*s.* 6*d.*; Lectures alone, £1 11*s.* 6*d.*; Practical Anatomy alone, £1 1*s.*; Osteology and Practical Anatomy, £2 12*s.* 6*d.*; Osteology alone, £1 11*s* 6*d.* Chemistry Fees: First course, £2 2*s.*; second course, £2 2*s.* Biology fee (Botany and Zoology), £3 3*s.* Matriculation Fees: Winter, 10*s.* to those taking out two or more classes; 5*s.* to those taking out only one class. The fee of 10*s.* represents a combined fee for the winter and summer sessions. Summer, 5*s.*, except to those who have paid a fee of 10*s.* for the Winter Session. Students who have attended classes at other schools, and who desire to pursue their studies at Anderson's College Medical School, will be admitted to such classes as they may have attended elsewhere at the reduced fees.

Royal Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10*s.*; second year, £10 10*s.*; afterwards free. Six months, £6 6*s.*; three months, £4 4*s.*; Pathology, both courses, £3 3*s.* Vaccination Fee, £1 1*s.*

Western Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10*s.*; second year, £10 10*s.*; afterwards free. Six months, £7 7*s.*; three months, £4 4*s.* Pathology, first course, £3 3*s.*; second course, £2 2*s.* Practical Pathology, first course, £3 3*s.*, second course, £2 2*s.* Vaccination Fee, £1 1*s.*

Eye Infirmary.—Fee: Hospital Practice and Clinical instruction, six months, £1 1*s.*

Certificates of attendance on the lectures at Anderson's College Medical School are received by the Universities of London, Durham, Ireland, Edinburgh, and Glasgow (the latter two under certain conditions); by the Royal Colleges of Physicians of London and Edinburgh; by the Royal Colleges of Surgeons, England, Edinburgh, and Ireland; by the King and Queen's College of Physicians, Ireland; by the Faculty of Physicians and Surgeons of Glasgow; by the Apothecaries' Hall, London; and by the Army, Navy, and East India Boards. Communications relating to the Medical School to be addressed to the Secretary of the Medical Faculty, Professor A. M. Buchanan, M.A., M.D., Anderson's College Medical School, Dumbarton-road, Partick, Glasgow. Communications relating to the Preliminary Examination in General Education to be addressed to Alexander Mackay, Esq., LL.D., Educational Institute Office, 40, Princes-street, Edinburgh. Communications relating to the Triple Qualification to be addressed to Alexander Duncan, Esq., B.A., Faculty Hall, 242, St. Vincent-street, Glasgow. Communications relating to the Dental School to be addressed to D. M. Alexander, Esq., 97, West Regent-street, Glasgow.

At *Anderson's College Medical School* Professorships of Physics and Zoology and a Lectureship on Mental Diseases have been recently instituted. Lectures on Physics and on Zoology are delivered in winter and summer, and lectures on Mental Diseases in summer, the fee for Mental Diseases being £1 1*s.* The Kerr Bursary in Anatomy (value £10) is open to students of the Junior Anatomy Class during Winter Session 1895-96.

ST. MUNGO'S COLLEGE AND GLASGOW ROYAL INFIRMARY.—This College was incorporated in 1889. The Glasgow Royal Infirmary was founded in 1791. The Faculty of Medicine of the College occupies new buildings erected for the purposes of a medical school, adjoining and communicating with the Royal Infirmary. The Laboratories, Museums, and Lecture-rooms are equipped and adapted to modern scientific requirements. Recent additions consist of Public Health, Practical Zoology, and Bacteriological Laboratories. The Royal Infirmary, which is at the service of the College for the purpose of clinical and practical instruction, is one of the largest general and special hospitals in the kingdom. It has nearly 600 beds, and will almost immediately have considerably over 600. It has special wards for Diseases peculiar to Women, for Venereal Diseases, Erysipelas, Burns, and Diseases of the Throat and Nose. At the Dispensary special advice and treatment are given in diseases of the Eye, Ear, Teeth, and Skin, Women, Throat and Nose, in addition to the large and varied number of ordinary medical and surgical cases—over 37,000 per annum—which in a great industrial centre daily require attention. Students of the College and Hospital get the benefit of dispensary experience free of charge. All appointments are open. There are five Physicians' and seven Surgeons' Assistants, who board in the hospital free of charge and act in the capacity of House Physicians an

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House Surgeons. These appointments are made for six months, and are open to gentlemen who have a legal qualification in Medicine or Surgery, and preference is given to the students of this College and Hospital. Clerks and Dressers are appointed by the Physicians and Surgeons. From the large number of cases of acute disease and accidents of varied character received into this hospital these appointments are very valuable. In the Pathological Department assistants are also appointed. The session will open with an address by Professor F. H. Napier on Wednesday, Oct. 23rd, at the College buildings.

Ophthalmic Department.—The Ophthalmic Institution in West Regent-street having been amalgamated with the Royal Infirmary, the usefulness of this department is very much increased, and greater opportunities are afforded to students for the practical study of Diseases of the Eye. Dr. Napier, the ophthalmic surgeon, attends the Royal Infirmary every Tuesday and Friday at 12 noon, and daily at the Institution in West Regent-street from 1 to 2 o'clock. Students can attend both without payment of any additional fee. Lectures are delivered twice a week during the winter and summer sessions. Fee for the course, £2 2*s.*

The fee for each class is £2 2*s.*, except for Anatomy, which is £4 4*s.*, Pathology £4 4*s.*, Zoology £4 4*s.*, Botany £3 3*s.*, and for Physics, which is £2 4*s.* 6*d.*, and certain extra classes, for which the fee is £1 1*s.* The governors have arranged a sessional fee, payment of which entitles the student to attendance not only on the curriculum classes, but all the classes—nearly as many more as the curriculum classes,—and this sessional fee is only slightly greater than the sum total of the fees required for the curriculum classes. Students are strongly recommended to begin their course on the sessional fee plan. This fee, exclusive of hospital practice, is £17 19*s.* 6*d.* for the first year, £15 15*s.* for the second, £10 10*s.* for the third, and £5 5*s.* for the fourth. The hospital fee (including clinical lectures) is £21 for a perpetual ticket. The classes in St. Mungo's College and in the Glasgow Royal Infirmary are for male students exclusively. Further particulars can be obtained in the Calendar of the College (price 1*s.*), which can be obtained on application to the Dean, Prof. R. T. Kent, 86 Castle-street, Glasgow. Remittance should accompany application.

GLASGOW WESTERN MEDICAL SCHOOL.—This School is situated in University-avenue, close to the University and Western Infirmary, in which latter students obtain their Hospital Practice and Clinical Lectures. Lectures and Demonstrations are given on Chemistry, on Anatomy, on Surgery, on Physiology, on Midwifery and Gynæcology, and on the Eye.

Class Fees.—For each course of Lectures the fee is £2 2*s.*, or in some cases £1 1*s.* There is no matriculation fee.

QUEEN MARGARET COLLEGE, University of Glasgow.—Queen Margaret College was founded in 1883 by the Glasgow Association for the Higher Education of Women (instituted in 1877), and handsome buildings and grounds near the University were presented to the College in 1884 by Mrs. John Elder. In 1890 a School of Medicine for women was added to its Arts Faculty. In 1892 when the Universities Commissioners issued an ordinance empowering the Scottish University Courts to make provision for the instruction of women, the Council of the College and Mrs. Elder transferred to the University the College, its buildings, grounds, and endowments, on condition that these should be devoted to the maintenance of University classes for women only. The College then became the women's department of the University of Glasgow; its classes are taught by professors of the University and other lecturers appointed by the University Court, and it is governed by the University Court and Senate. The curriculum, regulations, and fees are the same as those of the male students, and the University degrees are open to women on the same conditions as to men. They have access to the University Museum and can borrow books from the University Library, besides having a library of reference in Queen Margaret College. The number of students enrolled in session 1894–5 was 211, of whom 58 were studying medicine, and the rest arts or science. The School of Medicine is a special feature of the College and gives full preparation for the medical degrees. In July of last year, for the first time in the history of any Scottish university, women students graduated in medicine at the "capping" in Glasgow University. Excellent facilities for clinical work are given in the Royal Infirmary and other hospitals. By a gift of £5000 lately granted for the purpose by the Bellahouston Trust the University Court was enabled to add to the College a large new building for the study of Anatomy and Physiology, which it is expected will be opened next October. The Arthur Scholarship will be open in 1895 to students of the first year entered in October, 1894; and the Universities Commissioners have issued an ordinance making regulations for the admission of women to certain University bursaries, scholarships, and fellowships. A house of residence for students of the College coming from a distance was opened by the Queen Margaret Hall Co., Limited, in October of last year.

DUNDEE.

UNIVERSITY COLLEGE, Dundee. — The classes of this College have been specially recognised for purposes of graduation in Medicine and Science by the Universities of Glasgow and Edinburgh; they also qualify for the degrees of the University of London and the Royal University of Ireland and for the licences of the Royal Colleges. Equipment is provided for the first three years of the medical curriculum; and of recent years the laboratory accommodation in the departments of Chemistry, Botany, Zoology, Anatomy, and Physiology has been largely added to. The Royal Infirmary of Dundee contains about 300 beds, and the clinical instruction and hospital attendance in its wards are recognised by the various degree-giving and licensing bodies. The teaching staff of the school has lately been increased by the appointment of Lecturers on Medical Jurisprudence and Public Health, Mental Diseases, and Ophthalmology, and in these departments, as also in Operative Surgery and Practical Obstetrics, special facilities are offered to senior students.

Scholarships:—First year: (*a*) Three Armitstead Scholarships of £20 each, tenable for one year. (These Scholarships were founded and endowed in 1883 by George Armitstead, Esq., M.P.) (*b*) Three Scholarships of £15 each, tenable for one year. Second year: Three Armitstead Scholarships of £20 each, tenable for one year, to be awarded to day students entering upon their second year. Candidates must have attended not less than two regular courses at the College during the year immediately preceding the competition. (*c*) Bute Bursary, founded in 1893 by the Most Honourable the Marquess of Bute, K.T.; this bursary consists of the free proceeds of £1000. (*d*) Two bursaries of the annual value of £25, and tenable for three years, either "at University College, Dundee, or at any Scottish University."

Fees.—Chemistry, £3 3*s.*; Prof. P. F. Frankland, F.R.S. Practical Chemistry: Winter £3 3*s.*, Summer £2 2*s.*; Prof. P. F. Frankland, F.R.S. Physics: Winter £3 3*s.*, Summer £2 2*s.*; Prof. Steggall, M.A. Zoology, £3 3*s.* (including Practical Class); Prof. D'Arcy W. Thompson, M.A. Botany, £3 3*s.* (including Practical Class); Prof. Geddes. Anatomy, £3 3*s*; Prof. Paterson, M.D. Practical Anatomy: Winter £3 3*s.*, Summer £2 2*s*; Prof. Paterson, M.D. Physiology, £3 3*s.*; Prof. E. W. Reid, B.A., M.B. Practical Physiology and Histology, £2 2*s.*; Prof. E. W. Reid, B.A., M.B. Surgery, £2 2*s*; Dr. MacEwan. Operative Surgery, £3 3*s*; Dr. MacEwan. Clinical Medicine, Drs. Stalker and Mackie Whyte. Clinical Surgery, Drs. MacEwan and Templeman. Hospital fee, £2 2*s.*; Dispensary, £2 2*s.* The Lectures and Classes for the winter session will commence on Thursday, Oct. 10th.

ROYAL INFIRMARY.—The infirmary contains 286 beds, including a special ward for the Diseases of Children, Eye, and Lock cases. In addition, there were during last year 7523 out-patients and 5305 home patients. The Royal Infirmary offers exceptional facilities for practical work to students. Two qualified Resident Assistants and Clinical and Pathological Assistants are appointed as vacancies occur. Appointments: Two qualified Resident Medical Assistants are appointed annually. Clinical Clerks and Dressers are attached to the Physicians and Surgeons, and students are appointed as assistants in the Pathological department. There is in connexion with the hospital course a class of Minor Surgery and Bandaging, conducted by the Assistant Surgeon, and a class of Practical Pharmacy and Materia Medica held at the Dispensary. Full information can be obtained from Dr. Nathan Raw, Medical Superintendent.

ROYAL ASYLUM.—Clinical instruction is given at the Royal Asylum. Appointments: One paid qualified Resident Assistant and two unpaid Resident Clinical Assistants.

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ABERDEEN.

ABERDEEN ROYAL LUNATIC ASYLUM.—Contains, with Agricultural Branch, about 720 beds. Medical Superintendent: Dr. William Reid. Assistant Physicians: Drs. C. Angus and J. F. Philip. Secretary: Mr. W. Carnie. Clinical instruction is given to students during three months in summer.

ABERDEEN ROYAL INFIRMARY.—Contains about 200 beds. Physicians: Drs. Argus Fraser and P. B. Smith, Professor Finlay, and Dr. James Rodger, Assistant Physician. Consulting Surgeon; Dr. J. C. O. Will. Surgeons: Professor A. Ogston, Drs. R. J. Garden and McK. Booth. Assistant Surgeons: Drs. J. S. Riddell, W. Sinclair, and J. Marnoch. Ophthalmic Surgeon: Dr. C. H. Usher. Pathologist: Professor David James Hamilton. Assistant Pathologist: Dr. George Dean. Dental Surgeon: Dr. Williamson. Chloroformist: Dr. G. M. Edmond. Medical Electrician: Dr. A. MacGregor. Treasurer and Secretary: Mr. W. Carnie.

INSTITUTIONS AFFORDING FACILITIES FOR CLINICAL OBSERVATION.

ROYAL INFIRMARY, Edinburgh.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, and on Diseases of the Skin; and in the surgical department on Diseases of the Eye, the Ear, the Larynx, and the Teeth. Separate wards are devoted to Venereal Diseases, Diseases of Women, Diseases of the Eye, the Ear, and the Skin, and also to cases of Incidental Delirium or Insanity. Three wards are specially set apart for Clinical Instruction to Women Students. Post-mortem examinations are conducted in the anatomical theatre by the pathologists, who also give practical instruction in Pathological Anatomy and Histology. The fees for hospital attendance are as follows—viz.: Perpetual ticket, in one payment, £12; annual ticket, £6 6s.; six months, £4 4s.; three months, £2 2s.; monthly, £1 1s. Separate payments amounting to £12 12s. entitle the student to a perpetual ticket. No fees are paid for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for six months. The appointment may be renewed for a like period by special recommendation. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the pathological department are appointed by the pathologists.

EDINBURGH EYE, EAR, AND THROAT INFIRMARY, 6, Cambridge-street, Lothian-road.—Clinical Lectures and Instruction are given in this institution, which is open at 1 o'clock daily for out-door patients for Eye Diseases; Mondays, Thursdays, and Saturdays at 12 noon for out-door Ear Patients; and Tuesdays and Fridays at 4 P.M. for out-door Throat Patients. Special Practical Ophthalmoscopic Classes by arrangement. Patients whose diseases require operations or more than ordinary care are accommodated in the house. Consulting Surgeon: Dr. Joseph Bell, F.R.C.S. Surgeons: Dr. J. J. Kirk Duncanson, F.R.C.P.E.; Dr. G. Hunter Mackenzie; Dr. William George Sym, F.R.C.S.E.; and Dr. Alexander Black, F.R.C.P.E. Dental Surgeon: Mr. G. W. Watson, L.D.S. Treasurer and Secretary: Mr. A. P. Purves, 12, Queen-street.

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR, 28, Elmbank-crescent.—The hospital, which contains twelve beds for in-door patients, is always open for urgent cases. Hours of surgeons' visits 2 P.M. daily; clinical teaching daily. Out-patients are seen on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Saturdays, at 2 P.M., by Dr. Barr and assistants. Course of Lectures and Clinical Instruction given during winter months by Dr. Barr.

GLASGOW WESTERN INFIRMARY.—This hospital adjoins the University of Glasgow. Number of beds upwards of 400. Special wards are set apart for Diseases of Women and for Affections of the Skin. In the out-patient department there are special cliniques for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students require to enter their names at the beginning of the session for the class which they propose to attend. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other boards in the kingdom. In the Pathological Department the course is both systematic and practical, and extends through the winter and following summer; these are likewise recognised by the University for graduation. Nine resident assistants are appointed annually, without salary, from those who have completed their course. The fee for the hospital practice, including the various courses of clinical instruction, is 20 guineas in one payment, or in two equal instalments for the first and second year; for six months, 7 guineas; and for three months, 4 guineas.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow, situated at Garnet Hill.—This hospital was opened in December, 1882, and is now available to medical students for clinical instruction in the diseases peculiar to childhood. The hospital includes 77 beds for non-infectious cases only. A specially designed Dispensary, or Out-patient Department, was opened in October, 1888. Students may be enrolled at any time. Fee £1 1s. Particulars on applying to the House Surgeon, 45, Scott-street, Garnet-hill, Glasgow.

GLASGOW OPHTHALMIC INSTITUTION, 126, West Regent-street (30 beds).—Clinical and systematic course of lectures for students during the winter and summer sessions. In-patients, 453; out- or dispensary patients, 8647. Operations on Tuesdays and Thursdays. Consulting Surgeon: D. N. Knox, M.B., C.M., F.F.P.S.G. Acting Surgeon: Francis H. Napier, M.B., B.S., F.R.C.S. Assistant Surgeon: A. T. Thomson, M.D. This institution has recently been amalgamated with the Glasgow Royal Infirmary, of which it forms an integral part.

GLASGOW EYE INFIRMARY, Berkeley-street and Charlotte-street.—This institution, the largest of its kind in Scotland, was founded in 1824. The Infirmary now consists of two large buildings—that in Berkeley-street being occupied as the Infirmary proper, and that in Charlotte-street (new buildings opened June, 1894) as a dispensary. The Infirmary is devoted exclusively to the treatment of Diseases of the Eye, and is intended primarily to provide treatment, and, when necessary, board and lodging, for those who are unable to do so for themselves. The average number of new patients for the last ten years has been 11,527, and the total number of cases treated in 1894 was 17,264. The Medical Staff is as follows:—Senior Surgeons: Thomas Reid, M.D. Surgeons: Thomas S. Meighan, M.D., A. Freeland Fergus, M.D., and A. Maitland Ramsay, M.D. Assistant Surgeons: William Robertson, M.B., C.M., Andrew Wilson, M.B., C.M., and James Hinshelwood, M.A., M.D. Pathologist: Leslie Buchanan, M.B., C.M. House Surgeon: Thomas D. Moffat, M.B., C.M. Assistant House Surgeon: William A. Kirkwood, M.B., C.M. Clinical Assistants: A. Lewis M'Millan, M.B., C.M.; William Weir, B.Sc., M.B., C.M.; Henry L. G. Leask, M.D.; W. Ernest Thomson, M.A., M.D.; and W. C. Murray, M.B., C.M.

Regulations as to Attendance of Students.—(1) Gentlemen may attend as students on payment to the treasurer of the following fees:—For six months £1 1s., twelve months £2 2s. (2) All students when duly entered in the Infirmary Register may attend the clinical instruction of any or every member of the medical staff on production of their tickets. The days on which the surgeons respectively attend to receive patients may be ascertained at the Infirmary. Students have the privilege of being present in the Dispensaries at such hours as are arranged. They may enter the wards along with the Surgeon whose clinique they are attending when he visits his patients. They may also be present at operations under the sanction of the surgeon operating, but no student may enter the wards or operating-room except under the aforesaid regulation. Students may be allowed the use of the journals and case-books for examination on applying to the House Surgeon. Secretary: William George Black, 88, West Regent-street.

IRISH SCHOOLS OF MEDICINE.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Belfast.—Eight Junior Scholarships have been founded in the Faculty of Medicine of the annual value of £25 each. Two are

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TABULAR LIST OF THE CLASSES, LECTURERS, AND FEES AT THE MEDICAL SCHOOLS OF IRELAND FOR THE SESSION 1895-96.

LECTURES &c.	DUBLIN UNIVERSITY.	DUBLIN R.C. OF SURGEONS.		DUBLIN, CATHOLIC UNIVERSITY.		BELFAST, QUEEN'S COLLEGE.		CORK, QUEEN'S COLLEGE.		GALWAY, QUEEN'S COLLEGE.	
	LECTURERS.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES. First Course.	LECTURERS.	FEES. First Course.	LECTURERS.	FEES. First Course.
							£ s.		£ s.		£ s.
HISTOLOGY & PHYSIOLOGY.	...	Prof. Scott	Course, £3 3s., in all Classes, ex. Descr. Anat. (£5 5s.), Oper. Surg. (£5 5s.), Pract. Chem. (£5 5s.), Pract. Histology (£5 5s.).	Dr. Coppinger & Dr. Coffey† Dr. Birmingham	£3 3s. each Course, except Dissections, Pract. Chem., Oper. Surg., Histology, and Pub. Health, which are £5 5s. each.	Dr. W. H. Thompson	3 0	Dr. J. J. Charles.	3 0	Dr. Pye	3 0
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Cunningham Dr. Brooks	Profs. Fraser, Heuston, and Nixon				Dr. J. Symington	3 0		...	Dr. Pye	3 0
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Cunningham Dr. Brooks	Profs. Fraser, Heuston, and Nixon		Dr. Birmingham,† assisted by Drs. Fagan & Dempsey		Dr. Symington & Demonstrators	...	Dr. Charles and Demonstrators.	3 0	Dr. Pye and Demonstrators	4 0
CHEMISTRY	Dr. Reynolds	Profs. Sir C. Cameron and Lapper		Dr. Campbell		Dr. Letts	2 0	Dr. Augustus E. Dixon	2 0	Dr. Senier	2 0
PRACTICAL CHEMISTRY ...	Dr. Reynolds			Dr. Campbell*		Dr. Letts†	3 0	Dr. Augustus E. Dixon	3 0	Dr. Senier	3 0
MATERIA MEDICA AND PHARMACY	Dr. W. G. Smith	Prof. Duffey		Dr. Quinlan*		Dr. W. Whitla	2 0	Dr. C. Y. Pearson	2 0	Dr. Colahan	2 0
BOTANY AND ZOOLOGY ...	Dr. Wright Prof. Mackintosh	Profs. Minchin and Cosgrove‡		Dr. Sigerson † & Mr. Blaney		Dr. R. O. Cunningham‖	2 0	Professor Hartog	2 0 each	Dr. R. J. Anderson	2 0
INSTITUTES OF MEDICINE AND PATHOLOGY	Dr. Purser	Prof. Myles		Dr. McWeeney		...	...	...	...	Dr. Lynham	2 0
NATURAL PHILOSOPHY ...	Prof. FitzGerald	...		Prof. Stewart†		Dr. J. D. Everett	2 0	Mr. William Bergin	2 0	Prof. Anderson	2 0
HOSPITAL PRACTICE	SIR P. DUN'S OR OTHER DUBLIN HOSPITAL.	...		THE VARIOUS DUBLIN HOSPITALS.		BELFAST ROYAL AND OTHER HOSPITALS.	...	NORTH AND SOUTH INFIRMARIES.	...	GALWAY HOSP'L, GALWAY UNION HOSPITAL, & GALWAY FEVER HOSP'L	Sess. 4 4
CLINICAL LECTURES	...	...		...		...	...	...	...	Drs. Kinkead, Pye, Brereton, Colahan, and Lynham	...
SURGERY	Dr. E. H. Bennett	Profs. Sir W. Stokes and W. Stoker		Mr. J. P. Hayes & Mr. McArdle		Dr. Sinclair	2 0	Dr. S. O'Sullivan	2 0	Dr. W. Brereton	2 0
OPERATIVE SURGERY	...					Dr. Sinclair*	2 0	...	...	...	...
MIDWIFERY, &c....	Dr. A. V. Macan	Prof. S. R. Mason		Dr. A. J. Smith		Dr. J. W. Byers	2 0	Dr. Corby	2 0	Dr. Kinkead	2 0
MEDICINE	Dr. Finny	Prof. J. W. Moore		Sir C. J. Nixon		Dr. Cuming	2 0	Dr. E. R. Townsend	2 0	Dr. Lynham	2 0
MEDICAL JURISPRUDENCE	Dr. Bewley	Prof. Auchinleck		Dr. Roche		Dr. Hodges	2 0	Dr. C. Yelverton Pearson	...	Dr. Senier Dr. Kinkead	2 0
COMPARATIVE ANATOMY ...	Prof. Mackintosh	...		Dr Sigerson & Mr Blaney†		...	...	...	2 0	[*Modern Languages*: Prof. Steinberger]	...
PRACTICAL PHARMACY ...	Dr. W. G. Smith	Prof. Duffey		Dr. Quinlan		Dr. V. G. L. Fielden	2 0	...	...	...	2 0
LOGIC	The College Tutors	...		...		Prof. J. Park	2 0	Professor Stokes	1 0	Dr. T. W. Moffett	2 0
PHYSICS	...	Prof. Lapper		[*Medical Registrar*: Dr. Birmingham] Dr. Coffey †		...	...	...	...	...	...
PSYCHOLOGICAL MEDICINE	...	...		...		...	...	Dr. Oscar Wood	...	...	...
PATHOLOGY...	Dr. Purser	Prof. Myles		Dr. McWeeney		Dr. J. Lorrain Smith	2 0	Dr. Cotter	2 0	Dr. Lynham	2 0
OPHTHALMOLOGY AND OTOLOGY	...	Profs. Jacob, Fitzgerald, and Story		Dr. Werner		...	...	Dr. Sandford	...	...	...
HYGIENE	Dr. Bewley	Sir Charles Cameron		Dr. Roche		...	...	Dr. Donovan	...	...	...

* In Summer. † In Winter and in Summer. ‡ Zoology in Winter; Botany in Summer. ‖ Including Biology.

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tenable by matriculated students, of the first, second, third, and fourth years of their course respectively. The examinations for Junior Scholarships in the Faculty of Medicine take place at the commencement of the session. Matriculated students in Medicine intending to compete for Medical Scholarships of the second year must be of not more than one year's standing as students of Medicine, and must have attended, in some of the Queen's Colleges, or in a University capable of granting degrees in Medicine, two at least of the following courses—viz.: Chemistry, Botany and Zoology, Anatomy, Materia Medica, Practical Chemistry, and Physiology. Matriculated students in Medicine intending to compete for Medical Scholarships of the third year must be of two years' standing and not more, and must have attended, in some of the Queen's Colleges, or in a University capable of granting degrees in Medicine, four at least of the following courses—viz: Chemistry, Botany and Zoology, Anatomy, Materia Medica, Practical Chemistry, and Physiology. Matriculated students in Medicine intending to compete for Medical Scholarships of the fourth year must be of three years' standing and not more, and must, in addition to the qualifications prescribed above, have attended, in their third year, two at least of the following courses—viz: Theory and Practice of Medicine, Theory and Practice of Surgery, Midwifery, and Diseases of Women and Children.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Cork.—The building is provided with a very large, well-ventilated dissecting-room, with physiological and toxicological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed physical and chemical laboratories, and a large natural history museum in the adjoining building, and part of the College ground is laid out as a botanical garden. The plant houses are now completed and well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy and for Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course. Eight scholarships (value about £30 each), as well as several exhibitions and class prizes, are awarded every year.

IRISH ANCILLARY MEDICAL SCHOOLS.

ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' hospital attendance, £12 12*s.*; six months, £8 8*s.* Summer, three months, £5 5*s.*

Staff.—Physicians: James Little, M.D., M.R.I.A., Wallace Beatty, M.D., F.R.C.P.I. Surgeons: Kendal Franks, M.D., F.R.C.S.I.; F. T. Heuston, M.D., F.R.C.S.I.; J. H. Scott, M.B., F.R.C.S.I. Obstetric Surgeon: R. D. Purefoy, M.B., F.R.C.S.I. Ophthalmic Surgeon: H. R. Swanzy, M.B., F.R.C.S.I. Assistant Physician: H. T. Bewley, M.D., F.R.C.P.I. Assistant Surgeon: T. E. Gordon, M.B. Pathologist and Bacteriologist: J. Alfred Scott, M.D., F.R.C.S.I. Medical and Surgical Registrar: G. Peacocke, M.B., B.Ch. House Surgeon: A. L'E. Orme, L.R.C.P., and L.R.C.S.I.

A resident surgeon is elected yearly, and three resident pupils half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, and in Obstetric Medicine, will be awarded.

Hudson Scholarship.—In addition to the junior prizes, the Hudson Scholarship, £30 and a gold medal, as well as a prize of £10, together with a silver medal will be awarded at the end of the session for proficiency in Clinical Medicine and Medical Pathology, Clinical Surgery and Surgical Pathology, Pathological Histology, Surgical Appliances, including Instruments and Bandaging, Ophthalmology and Gynæcology.

The certificates of attendance are recognised by all the Universities and licensing bodies in the United Kingdom. Farther particulars may be obtained from Mr. F. T. Heuston.

COOMBE LYING-IN HOSPITAL AND GUINNESS DISPENSARY FOR THE TREATMENT OF DISEASES PECULIAR TO WOMEN, Dublin.—This hospital contains nearly 70 beds, and consists of two divisions, one of which is devoted to lying-in cases, and the other to the treatment of the diseases peculiar to women. The maternity department is one of the largest in Ireland, 3000 cases being annually treated either as intern or extern patients. A regular course of lectures is delivered in the hospital, and clinical instruction is given daily at the bedside. There are two large dispensaries connected with the institution, at one of which instruction is given on the General Diseases of Women and Children, and, in the other, on the Diseases peculiar to Women. There is accommodation for a limited number of intern pupils, who enjoy exceptional advantages of acquiring a practical knowledge of this branch of their profession. Two Resident Pupil Midwifery Assistants and one Clinical Clerk are elected half-yearly from among the pupils of the hospital. Certificates of attendance at this hospital are accepted by all licensing bodies, and the diploma is recognised by the Local Government Board as a full legal midwifery qualification. Fees (six months' course): extern pupils, 6 guineas, half payable in advance; intern pupils, 18 guineas for six months' residence. If pupils enter as interns by the month, the fees are £4 4*s.* for first month, and £3 3*s.* for each succeeding month. Intern pupils enjoy very special advantages, which can be learned on application. Registration fee on entrance, 10*s.* 6*d.* Students can enter for attendance at any time. Further particulars may be had on application to the Master or the Registrar at the hospital.

SIR PATRICK DUN'S HOSPITAL.—Fees for attendance of students—nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* The hospital is open to extern students as well as to the students of Trinity College, and the certificates are recognised by all the licensing bodies in the kingdom. Dr. Ball, Secretary to the Medical Board, will give any further information.

MATER MISERICORDIÆ HOSPITAL, Dublin.—Consulting Physician: Dr. Francis R. Cruise. Physicians: Sir Christopher Nixon, Drs. Joseph Redmond, Michael Boyd, and John Murphy. Surgeons: Messrs. Patrick Hayes, Charles Coppinger, Arthur Chance, and John Lentaigne. Obstetric Physician: Dr. Thos. More Madden. Ophthalmic Surgeon: Mr. Louis Werner. Dental Surgeon: Mr. Daniel Corbett, jun. Pathologist: Dr. Edmond McWeeney. Anæsthetist: Dr. Michael O'Sullivan. House Physician: Dr. Alexander Blayney. House Surgeons: Messrs. William Dargan, Joseph O'Dwyer, Charles O'Gorman, and Hugh Kennedy. This hospital, the largest in Dublin, at present containing 323 beds, is open at all hours for the reception of accidents and urgent cases. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases. Instruction at the bedside will be given by the Physicians and Surgeons at 9 A.M. daily. Clinical Instruction will commence on Tuesday, October 1st, at 9 o'clock A.M. A course of Clinical Instruction on Fever will be given during the winter and summer sessions. A certificate of attendance upon this course, to meet the requirements of the licensing bodies, may be obtained. Opportunities are afforded for the study of Diseases of Women in the ward under the care of the Obstetric Physician, and at the Dispensary held on Tuesdays and Saturdays. Ophthalmic Surgery will be taught in the Special Wards and Dispensary. Surgical Operations will be performed on Mondays, Tuesdays, Thursdays, and Saturdays at 10 o'clock. Connected with the hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, &c. Instruction will be given on Pathology and Bacteriology. Junior Appointments: A House Physician and four House Surgeons will be appointed annually. Eight resident pupils will be elected from the most attentive of the class to hold office for six months. For the current session the elections will take place in the first week of November and in the first week of May. Dressers and Clinical Clerks will be appointed, and certificates will be given to those who perform their duties to the satisfaction of the staff. Leonard Prizes: One Gold and one Silver Medal will be offered for competition annually in the subject of Medicine, and one Gold and one Silver Medal in the subject of Surgery. Junior Leonard Prizes: One prize value £3 and one prize value £2 will be awarded in Medicine, and one prize value £3 and one prize value £2 will be awarded in Surgery. They will be awarded on the aggregate of marks gained for Reports of Cases and at a Clinical Examination to be held at the close of the summer session. For further particulars see prospectus. Certificates of attendance upon this hospital are recognised by all the Universities and licensing bodies in the United Kingdom. Private Wards have been opened for the reception of Medical and Surgical cases. A Training Scho

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and Home for Trained Nurses have been opened in connexion with the Hospital.

Terms of attendance.—Nine months, £12 12*s.*; six winter months, £8 8*s.*; three summer months, £5 5*s.* Entries can be made with any of the physicians or surgeons, or with the Registrar, Dr. Joseph Redmond, 8, Clare-street. A prospectus containing in detail the arrangements for Clinical Instruction, Prizes, &c., may be obtained from the Secretary, Arthur Chance, F.R.C.S., &c., 90, Merrion-square West, Dublin.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.—These hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic Diseases. A Resident Physician and a Resident Surgeon are appointed each year, and are paid for their services. Clinical Clerks: Ten Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c. These appointments are open not only to advanced Students as formerly, but also to those who are qualified in Medicine or Surgery. The Dressers are selected from among the best qualified of the pupils without the payment of any additional fee. For prospectuses apply to W. Thomson, F.R.C.S., Treasurer, 54, Stephen's-green East; or to Guy P. Nugent, M.D., Hon. Sec., 19 Lower Fitzwilliam-street, Dublin.

ROTUNDA HOSPITAL, Rutland-square, Dublin.—This institution consists of two distinct hospitals—namely, the Lying-in Hospital and the Auxiliary Hospital, the latter for the reception of patients suffering from Uterine and Ovarian Diseases. There is also a large extern maternity and a Dispensary for Diseases peculiar to Women, which is open daily. Clinical instruction is given daily (Saturdays excepted) in Midwifery and the Diseases peculiar to Women, special attention being directed to the application of antiseptics in Midwifery, and lectures on these subjects are delivered regularly throughout the session. Accommodation is provided for a limited number of intern pupils.

DR. STEEVENS'S HOSPITAL.—This hospital, containing beds for 200 patients, is situated close to the Kingsbridge Terminus of the Great Southern and Western Railway, occupying a position in the centre of one of the busiest manufacturing districts of the city, otherwise unprovided with medical institutions, and affords exceptional advantages for clinical instruction. Immediately adjoining is St. Patrick's (Swift's) Asylum for the Insane. The hospital is easily accessible by two lines of tramways. There is a ward entirely devoted to Syphilitic Disease, a detached building for Fever Cases, and an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Eye, Ear, and Teeth.

The hospital is visited daily at 9 A.M. by the physicians and surgeons. The surgical wards are also visited by the resident surgeon each evening. Clinical Lectures are given by the physicians and surgeons during the session. There is accommodation in the hospital for two medical and six surgical resident clinical assistants.

Fees.—Hospital Practice: Nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* Dressership: £10 10*s.* each three months. Further information may be obtained from the Resident Surgeon or from R. A. Hayes, M.D., Hon. Sec., 82, Merrion-square South.

LONDON POST-GRADUATE COURSE.

THIS course is specially arranged to meet the wants of the practitioner and to enable him during his leisure time to brush up his knowledge on subjects about which he may desire further information. It has been both popular and successful and has been attended by men from all parts of the Empire, from all branches of the Services, from the United States of America, as well as from foreign countries. Members can enter for each or all of the courses of lectures for the term, for half the term, or for all the lectures for one week, and thus each can obtain just what he wants and in the shortest possible time. The Vacation Courses have been attended by large numbers of practitioners and have been much appreciated. By this means men who wished to bring themselves abreast of the scientific knowledge of the day have been able to learn the elements of the technique of bacteriology and the latest advances in hygiene in a fortnight's daily course. The staffs of the following hospitals have associated themselves for teaching purposes—viz., the Hospital for Sick Children, Great Ormond-street; the National Hospital for the Paralysed and the Epileptic, Queen-square; the Royal London Ophthalmic Hospital, Moorfields; the Hospital for Diseases of the Skin, Blackfriars; the London Throat Hospital; and the Bethlem Royal Hospital for Lunatics; and courses are given at the Bacteriological Laboratory, King's College, at the Parkes Museum on Hygiene, and at the Cleveland-street Sick Asylum on Clinical Medicine and Surgery. The fees are £1 1*s.* and £2 2*s.*, according to the number of lectures in the course. Further information can be obtained from, and fees should be paid to, Dr. Fletcher Little, Secretary, 32, Harley-street, Cavendish-square, W.

MEDICAL TEACHERS.

MR. J. BECKTON, assisted by his son, Mr. H. BECKTON, B.A. (Graduate in Honours, late Scholar of Clare College, Cambridge), prepares candidates for the London Matriculation, Medical and Law Preliminary, University Entrance, Local, 1st Conjoint, and other Examinations. The Mathematics and Physics for the D.P.H. coached by post. Boarders received.—19, Keppel-street, W.C.

Mr. A. H. DAWES, 1st B.A. Lond., prepares students for London Matriculation and all Medical and other Professional Preliminaries. Tuition privately, in small classes, or by post.—55 and 56, Chancery-lane, W.C.

Mr. JOHN T. SARLL, B.A. Lond. (for eighteen years with the late Mr. HENRY SERGEANT), holds special classes, morning and evening, for London University Matriculation, the Preliminary Medical Examinations, &c.—University Institute, 192, Euston-road.

Mr. R. C. B. KERIN, B.A. London, first in First Class Honours in Classics, assisted by a staff of B.A. and B.Sc. Honour Graduates, prepares candidates in class and by private Tuition for Medical Preliminaries, London Matriculation, Preliminary Scientific Inter. Science, Hospital Scholarships, &c. Chemical and Physical Laboratories. For last three years 61 London University Successes and 2 Hospital Science Scholarships, &c.—Carlyon College, 56 and 56, Chancery-lane, W.C.

Dr. MAYBURY, D.Sc. Lond., M.R.C.S., D.P.H. Dublin, L.S.A., A.R.S.M. & C., and Dr. Stokes, M.D. Brux., M.R.C.S., L.R.C.P., 453, Strand, or 19, Bloomsbury-square, London, prepare candidates for all Examinations in Medicine and Science.

The University Examination Postal Institution prepares candidates through the post or personally for all medical examinations. The four medical tutors have the M.D. or M.S. degree and are Medallists or Prize Men. Preparation also by the other tutors for the Preliminary Arts or Science Examinations. Laboratory for D.P.H. candidates. Numerous recent successes.—Apply to the Manager, Mr. E. S. Weymouth, M.A. Lond., Office, 27, Southampton-street, Strand, London, W.C.

M.D., B.S. Lond., M.R.C.P. Lond., prepares for all the Professional Exams. Small classes are held for the Final College of Surgeons and Physicians, the Hall, the M.D.'s of Brussels, Durham (fifteen years' standing), and St. Andrews. Tuition by correspondence.—Address, M.D., 23, Wimpole-street, Cavendish-square, W.

Laboratories have been set up and classes will be held to prepare pupils for the Prel. Sci., Inter. Sc., &c. Examinations. Private lessons to supplement the Hospital preparation for the above. Residence if desired. For terms, apply to Principal, Candidates' Laboratory, 18, Hogarth-road, Earl's-court.

Special preparation, in class, privately, and by correspondence, for the Triple Qualification, Edinburgh. Also for Fellowship Examinations of Royal College of Surgeons, Edinburgh, and M.D. Brussels. Resident pupils received.—Address, Class Rooms, 7, Chambers-street, Edinburgh.

Private coaching in Surgery and Medicine (clinical and museum work included), Anatomy and Physiology for all examinations by an M.D., M.R.C.P., on the Medical and an F.R.C.S. Eng. on the Surgical Teaching Staff of a London Hospital Medical School. Especial advantages for provincial men. Tuition by correspondence.—Tasma, THE LANCET Office, 423, Strand, W.C.

INSTRUCTORS IN ELOCUTION, &c.

Mr. H. N. DIXON, M.A. Lond. and Cambridge, F.L.S., gives a thorough and high-class Education to Deaf Children, based upon the Oral Method. Special arrangements made for very young children.—Apply, Wickham House, East Park Parade, Northampton. The school has recently been removed to new and enlarged premises in, however, the same situation.

Mr. WILLIAM VAN PRAAGH, the public introducer of the Pure Oral System of Teaching Deaf Mutes, has made the subject of Lip-reading and the cure of all Defects of Speech, both acquired and congenital, his special study. Papers on the various subjects can be had at 11, Fitzroy-square, W.

Professor ALTSCHUL, Ph.D., has made Stammering, Stuttering, Lisping, Falsetto, recent or of long standing, due to Nervousness, &c., irrespectively of age or sex (without any mechanical appliances), his special life-long study.—9, Old Bond-street, W.

Miss D'ORSEY (King's College), 162, Sloane-street, treats Defects of Voice. Principles of correct voice use at reduced fees to clergy, teachers, &c., in two visits. References permitted to specialists.

Mrs. EMIL BEHNKE gives instruction in Voice Training and treats Stammering and other Defects of Speech at 18, Earl's-court-square, W.C.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY.

THE following list is as nearly complete as the Editors have been able to make it, and gives such prizes as would enter into a Student's calculation of the cost of Medical education. It does not contain prizes of less value than £10, or prizes of greater than this value which are given in any form except money or necessaries of medical study and research:—

INSTITUTION.	TITLE OF SCHOLARSHIP, &C.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
OXFORD UNIVERSITY ..	Burdett-Coutts Scholarships.	£80 per annum.	2 years.	Competitive Examination.	....
	Radcliffe Trav. Fellowship.	£200 ,, ,,	3 years.	Ditto.	Foreign Travel for purpose of Medical Study.
	Rolleston Prize.	£60 ,, ,,	....	Original Research.	M.B. taken within 3 years.
LONDON UNIVERSITY ..	....	£40 per annum.	2 years.	By first place with distinction in ANATOMY at July Intermediate M.B. Examination.	Ditto.
		£40 per annum.	2 years.	By first place, with distinction in PHYSIOLOGY AND HISTOLOGY at July Intermediate M.B. Examination.	Ditto
		£30 per annum.	2 years.	By first place with distinction in ORGANIC CHEMISTRY at July Intermediate M.B. Examination.	Ditto.
		£30 per annum.	2 years.	By first place with distinction in MATERIA MEDICA and PHARMACEUTICAL CHEMISTRY at July Intermediate M.B. Examination.	Ditto.
	University Scholarship in Medicine.	£50 per annum.	2 years.	By first place with distinction in MEDICINE at M.B. Honours Examination.	
	University Scholarship in Obstetric Medicine.	£30 per annum.	2 years.	By first place with distinction in OBSTETRIC MEDICINE at M.B. Honours Examination.	
	University Scholarship in Forensic Medicine.	£30 per annum.	2 years.	By first place with distinction in FORENSIC MEDICINE at M.B. Honours Examination.	
	University Scholarship in Surgery.	£50 per annum.	2 years.	By first place with distinction in B.S. Honours Examination.	
*EDINBURGH UNIVERSITY	Theses Gold Medals.	....	....	Candidates for M.D. who present Theses of high merit.	None.
	Crichton Research Scholarships in Anatomy, Physiology, Materia Medica, and Pathology.	£100 per annum.	1, 2, or 3 years.	Competitive Examination for M.B.'s of the University of not less than four years.	....
	Syme Surgical Fellowship.	£105 17s. 6d. per annum.	2 years.	Competitive Thesis by M.B. of not more than three years' standing.	None.
	Leckie Mactier Fellowship.	£70 per annum.	3 years.	Competitive Examination among M.B.'s of not more than three years' standing.	
	Sibbald Scholarship.	£40 per annum.	3 years.	Competitive Examination among University Students.	None
	Hope Prize.	£25.	....	Distinction in MINOR CHEMICAL CLASS.	None
	Vans Dunlop Scholarship.				
	,, No. 1.	£100.	3 years.	First place in MEDICAL PRELIMINARY EXAMINATION.	None.
	,, No. 2.	£100.	3 years.	NAT. HISTORY, BOTANY, and GEOLOGY.	None.
	,, No. 3.	£100.	3 years.	Highest marks in Class Examinations in PHYSIOLOGY and SURGERY.	None.
	,, No. 4.	£100.	3 years.	Competitive Examination in ANATOMY, PHYSIOLOGY, MATERIA MEDICA, and PATHOLOGY.	One year's study at the University, and 2 years' original research
	Murchison Memorial Scholarship.	Interest on £1000.	1 year.	Competitive Examination in CLINICAL MEDICINE among registered Students of Medicine.	None.
	Buchanan Scholarship.	Interest on £1000.	1 year.	Competitive Examination and Class Work in MIDWIFERY and GYNÆCOLOGY.	None.
	James Scott Scholarship.	£45.	1 year.	Competitive Examination and Class Work in MIDWIFERY.	None.
	Ettles Scholarship in Medicine.	£35.	....	Distinction in M.B. and M.S. Examination.	None.
	Mackay Smith Scholarship in Chemistry.	£25 per annum.	2 years.	Competitive Examination in CHEMISTRY among University Students.	None.
	Sibbald Bursary.				
	,, No. 1.	£30.	....	....	....
	,, No. 2.	£30.	....	....	....
	Heriot Bursary.				
	,, No. 1.	£30 per annum.	3 years.	Competitive Examination among Matriculating Students.	None.
	,, No. 2.	£30 per annum.	3 years.	Ditto.	None.
	Thomson Bursary.				
	,, No. 1.	£25 per annum.	4 years.	Distinction in Preliminary Medical Examination.	None.
	,, No. 2.	£25 per annum.	4 years.	Distinction in Preliminary Medical Examination.	None.
	Grierson Bursary.				
	,, No. 1.	£20.	1 year.	Distinction in Preliminary Medical Examination. (Holder must be native of Crawford or Leadhills.)	None.

* Several Fellowships, Scholarships, Bursaries, &c., are not mentioned in the above list, which are occasionally vacant in alternate years.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
EDINBURGH UNIVERSITY —*continued.*	Grierson Bursary.				
	,, No. 2.	£20.	1 year.	Competitive Examination in CHEMISTRY, BOTANY, and NATURAL HISTORY among Second-year Students. (Holder must be native of Crawford or Leadhills.)	None.
	,, No. 3.	£20.	1 year.	Ditto.	None.
	,, No. 4.	£20.	1 year.	Competitive Examination in ANATOMY and PHYSIOLOGY among Third-year Students. (Holder must be native of Crawford or Leadhills.)	None.
	,, No. 5.	£20.	1 year.	Competitive Examination in MATERIA MEDICA and PATHOLOGY among Fourth-year Students. (Holder must be native of Crawford or Leadhills.)	...
	Crichton Bursary.	£50 per annum.	4 years.	Distinction in Medical Preliminary Examination.	Born in Scotland.
	Dr. J. A. Carlyle Bursary.				
	,, No. 1.	£28.	1 year.	Proficiency in Class Examinations in ANATOMY and CHEMISTRY.	None.
	,, No. 2.	£28.	1 year.	Proficiency in Class Examinations in ANATOMY and PHYSIOLOGY.	None.
	Mackenzie Bursary.				
	,, No. 1.	£21 5s.	....	Industry and Skill in Junior Class work of PRACTICAL ANATOMY.	None.
	,, No. 2.	£21 5s.	....	Industry and Skill in Senior Class work of PRACTICAL ANATOMY.	None.
	Beaney Prize.	£37 10s.	....	Highest Marks taken in ANATOMY, SURGERY, and CLINICAL SURGERY, by University Student in M.B. and C.M. Examinations.	None.
	Hope Chemistry Prize.	£100.	....	Competitive Examination among University Students.	None.
	Neil Arnott Prize.	£42.	....	Distinction in Natural Philosophy in the M.A. Examination.	None.
	Wightman Prize.	£10 10s.	....	Competitive Reports on Cases by Clinical Students.	None.
ST. BARTHOLOMEW'S MEDICAL SCHOOL	Entrance Scholarships. No. 1.	£75.	....	Open Competitive Examination in PHYSICS and CHEMISTRY.	Full Course at St. Bartholomew's Hospital.
	,, No. 2.	£75.	....	Open Competitive Examination in BIOLOGY and PHYSIOLOGY.	Ditto.
	,, No. 3.	£150.	....	Open Competitive Examination in PHYSICS, CHEMISTRY, and BIOLOGY.	Ditto.
	Preliminary Scientific Exhibition.	£50.	....	Open Competitive Examination in PHYSICS, CHEMISTRY, and BIOLOGY.	Ditto.
	Jeaffreson Exhibition.	£30.	....	Open Competitive Examination in LATIN, MATHEMATICS, and GREEK, FRENCH, or GERMAN.	None.
	Shuter Scholarship.	£50.	....	Competitive Examination among Cambridge Graduates in ANATOMY, PHYSIOLOGY, and MATERIA MEDICA.	None.
	Junior Scholarship.				
	,, No. 1.	£30.	....	Competitive Examination among Students in ANATOMY and PHYSIOLOGY.	None.
	,, No. 2.	£30.	....	Ditto.	None.
	,, No. 3.	£25.	....	Ditto.	None.
	,, No. 4.	£15.	....	Ditto.	None.
	Senior Scholarship.	£50.	....	Competitive Examination among Students in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	Study at St. Bartholomew's Hospital.
	Kirkes Scholarship.	£30 and Medal.	....	Competitive Examination among Students in CLINICAL MEDICINE.	
	Brackenbury Scholarships.				
	,, No. 1.	£35.	....	Competitive Examination among Students in MEDICINE.	
	,, No. 2.	£35.	....	Competitive Examination among Students in SURGERY.	
	Lawrence Scholarship.	£42 and Medal.	....	Competitive Examination among Students in SURGERY, MEDICINE, and MIDWIFERY.	None.
	Sir Geo. Burrows' Prize.	£10 10s.	....	Competitive Examination in PATHOLOGY among Students.	
	Skynner Prize.	£15.	....	Competitive Examination in REGIONAL and MORBID ANATOMY among Students.	
	Matthews Duncan Medal and Prize.	£30.	....	Competitive Examination among Students in MIDWIFERY and GYNÆCOLOGY.	None.
	Research Studentship in Pathology.	£100.	....	By Election, on the recommendation of the School Committee.	None.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—continued.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
CHARING-CROSS HOSPITAL AND COLLEGE	Entrance Scholarships, No. 1.	£120.	...	Open Competitive Examination in any three of the following groups of subjects: (1) ENGLISH, including LANGUAGE, HISTORY, and GEOGRAPHY; (2) ANY TWO of the following four Languages—LATIN, GREEK, FRENCH and GERMAN; (3) MATHEMATICS, including ARITHMETIC, ALGEBRA, and GEOMETRY, and MECHANICS, including STATICS and DYNAMICS; (4) INORGANIC CHEMISTRY and EXPERIMENTAL PHYSICS, including ACOUSTICS, HEAT, MAGNETISM, ELECTRICITY, and OPTICS; and (5) ANIMAL and VEGETABLE BIOLOGY.	Full Course at Charing-cross Hospital.
	,, No. 2.	£63.	....	Ditto.	Ditto.
	,, No. 3.	£63.	...	Competitive Examination in ANATOMY and PHYSIOLOGY, open to Students from the University of Oxford who have passed the First M.B. Examination, and to Students from the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London Medical School.	Completion of Curriculum at Charing-cross Hospital.
	Llewellyn Scholarship.	£25.	...	Competitive Examination among Fourth-year Students in ANATOMY, PHYSIOLOGY, PHARMACOLOGY, MEDICINE, SURGERY, THERAPEUTICS, and MIDWIFERY.	None.
	Golding Scholarship.	£15.	...	Competitive Examination among Second-year General Students in DESCRIPTIVE ANATOMY, PHYSIOLOGY, CHEMISTRY, and BIOLOGY.	Students must have attended the Classes in each subject at this School.
ST. GEORGE'S HOSPITAL	Entrance Scholarships, No. 1.	£145.	...	Competitive Examination among First-year Students, being the sons of medical men, in LATIN, GREEK, FRENCH, GERMAN, MATHEMATICS, PHYSICS, CHEMISTRY, and PHYSIOGRAPHY; three at option.	Previous entrance at St. George's School.
	,, No. 2.	£85.	....	Competitive Examination among Students being First M.B.'s of Oxford and Second M.B.'s of Cambridge, in ORGANIC CHEMISTRY, ANATOMY, PHYSIOLOGY, ZOOLOGY, and BOTANY; two at option.	Ditto.
	,, No. 3.	£85.	....	Ditto.	Ditto.
	,, No. 4.	£85.	....	Competitive Examination among Students of Provincial University Colleges of similar standing in the same subjects.	None.
	,, No. 5.	£50.	...	Competitive Examination among Students in the same subjects as Entrance Scholarship No. 1.	Complete Course at St. George's School.
	,, No. 6.	£50.	....	Ditto.	Ditto.
	Wm. Brown Exhibition.	£100 per annum.	2 years.	Competitive Examination among Perpetual Students having registrable qualification in the PRACTICE OF MEDICINE, MIDWIFERY, and SURGERY.	None.
	,,	£40 per annum.	3 years.	Competition among Third-year Students in the same subjects.	None.
	Brackenbury Prize in Medicine.	Interest on £1103.	...	Competitive Examination among Students of not more than five years' standing.	None.
	Brackenbury Prize in Surgery.	Interest on £1103.	...	Competitive Examination among Students of not more than five years' standing.	None.
	Treasurer's Prize.	£10 10s.	...	Proficiency in Clinical Examination of three Medical and three Surgical Cases, together with a written Examination in Medicine, Surgery, and Midwifery.	None.
	H. C. Johnson Memorial Prize.	£10 10s.	...	Competitive Examination among Second-year Students in PRACTICAL ANATOMY.	None.
	Pollock Prize.	Interest on £372.	....	Competitive Examination among Second-year Students in PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY, and HISTOLOGY.	None.
	Clarke Prize.	Interest on £209.	....	Awarded for Clinical Work in the Hospital.	None.
	Thompson Medal.	Interest on £185.	...		
	Brodie Prize.	Interest on £220.	....		
	Acland Prize.	£5.	....		
	General Proficiency Prizes, No. 1.	£10 10s.	....	Competitive Examination among First-year Students in ELEMENTARY ANATOMY, BIOLOGY, CHEMISTRY, and MATERIA MEDICA.	None.
	,, No. 2.	£10 10s.	....	Competitive Examination among Second-year Students in ANATOMY, PHYSIOLOGY (including HISTOLOGY), and PHYSIOLOGICAL CHEMISTRY.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
ST. GEORGE'S HOSPITAL—*continued.*	General Proficiency Prizes. No. 3.	£10 10s.	....	Competitive Examination among Third-year Students in the PRINCIPLES and PRACTICE of MEDICINE and SURGERY, PATHOLOGY, and MIDWIFERY.	None.
GUY'S HOSPITAL..	Entrance Scholarships. No. 1.	£100.	....	Open Competitive Examination among Candidates under twenty years of age in LATIN, GREEK, FRENCH, GERMAN, ARITHMETIC, EUCLID, and ALGEBRA.	Course at Guy's Hospital.
	,, No. 2.	£50.	....	Under twenty-five years of age, ditto.	Ditto.
	,, No. 3.	£150.	....	Open Competitive Examination among Candidates under twenty-five years of age in INORGANIC CHEMISTRY, GENERAL BIOLOGY, and EXPERIMENTAL PHYSICS.	Perpetual Course at Guy's Hospital.
	,, No. 4.	£60.	....	Ditto.	Course at Guy's Hospital.
	Arthur Durham Prizes.	£5.	....	Dissections by First-year Students.	
		£15.	....	Dissections by Students of later years.	
	First Year's Prizes.	£50.	....	Competitive Examination among First-year Students in ANATOMY OF BONES, LIGAMENTS, and MUSCLES, PHYSIOLOGY, and CHEMISTRY.	None.
	,,	£25.	....	Ditto.	Ditto.
	Second Year's Prizes.	£25.	....	Competitive Examination among Second-year Students in ANATOMY, PHYSIOLOGY, and MATERIA MEDICA.	None.
	,,	£10.	....	Ditto.	Ditto.
	Michael Harris Prize.	£10.	....	Competitive Examination among Second-year Students in HUMAN ANATOMY.	Ditto.
	Sands Cox Scholarship.	£15 per annum.	3 years.	Competitive Examination among Second-year Students in PHYSIOLOGY, HISTOLOGY, and PHYSIOLOGICAL CHEMISTRY.	Course at Guy's Hospital.
	Third Year's Prizes.	£25.	....	Competitive Examination among Third-year Students in ANATOMY (Medical and Surgical), DIAGNOSIS, OPERATIVE and MINOR SURGERY, MIDWIFERY, and THERAPEUTICS.	None.
	,,	£10.	....	Ditto.	Ditto.
	Fourth Year's Prizes.	£25.	....	Competitive Examination among Fourth-year Students in MEDICINE, SURGERY, DISEASES OF WOMEN, and MEDICAL JURISPRUDENCE.	None.
	,,	£10.	....	Ditto.	Ditto.
	Golding Bird Prize.	£20 and Medal.	....	Competitive Examination among Fourth-year Students in DIAGNOSIS.	Ditto.
	Prize for Clinical Study.	£25.	....	ORIGINAL REPORTS on Three Medical and Three Surgical Cases.	None.
	Beaney Prize for Pathology.	£31 10s.	....	Competitive Examination among Students in PATHOLOGY.	Ditto.
	Beaney Scholarship for Materia Medica.	£31 10s. per annum.	....	For Research in MATERIA MEDICA.	Ditto.
	Gull Studentship.	£150 per annum.	3 years.	For Research in PATHOLOGY and allied subjects. *Not* awarded by Competitive Examination.	Study at Guy's Hospital.
KING'S COLLEGE	Warneford Scholarships. No. 1.	£25 per annum.	3 years.	Competitive Examination among Matriculated Medical Students in DIVINITY, ENGLISH, HISTORY, LATIN, GREEK, FRENCH, GERMAN, and MATHEMATICS.	Perpetual Course at King's College.
	,, No. 2.	£25 per annum.	3 years.	Ditto.	Ditto.
	,, No. 3.	£25 per annum.	2 years.	Ditto.	Ditto.
	,, Class II.	£25 per annum.	2 years.	Competitive Examination among Matriculated Medical Students in the third year, residing in the College.	
	Sambrooke Exhibitions. No. 1.	£60.	....	Competitive Examination among Matriculated Students in MATHEMATICS, ELEMENTARY PHYSICS, INORGANIC CHEMISTRY, BOTANY, and ZOOLOGY.	Course either as Science or Medical Student at King's College.
	,, No. 2.	£40.	....	Ditto.	Ditto.
	Rabbeth Scholarship.	£20.	....	Competitive Examination among Matriculated Students in Science.	None.
	Science Exhibitions. No. 1.	£30 per annum.	2 years.	Competitive Examination among Candidates under nineteen years of age in MATHEMATICS, MECHANICS, PHYSICS, &c., or alternative Subjects.	None.
	,, No. 2.	£20 per annum.	2 years.	Ditto.	None.
	Medical Scholarships. No. 1.	£40 per annum.	2 years.	Competitive Examination among Third- and Fourth-year Students.	
	,, No. 2.	£30.	1 year.	Competitive Examination among Second- and Third-year Students.	
	,, No. 3.	£20.	1 year.	Competitive Examination among First-year Medical Students.	
	,, No. 4.	£20.	1 year.	Ditto.	
	,, No. 5.	£20.	1 year.	Ditto.	
	Sambrooke Registrarship. No. 1.	£50.	2 years.	Competitive Examination among Matriculated Medical Students who have filled certain appointments at hospitals.	
	,, No. 2.	£50.	....	Ditto.	
	Daniel Scholarship.	£20 per annum.	2 years.	Open Competitive Examination among six months' Laboratory Students.	
	Carter Prize.	£15.	....	Open Competitive Examination in Botany.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
KING'S COLLEGE—*continued.*	Tanner Prize.	£10.	....	Competitive Examination in OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.	None.
	Todd Prize.	£4 4s. and medal.	....	Competitive Examination in Clinical Medicine.	
LONDON HOSPITAL	1. Price Scholarships.	£120.	....	Competitive Examination among Students in subjects of Preliminary Scientific M.B. Examination at University of London.	
	2. Entrance Scholarships. No. 1.	£60.	....	Ditto.	
	,, No. 2.	£35.	....	Ditto.	
	3. Epsom College Scholarship.	Free Education.	....	....	
	4. Price Scholarships.	£60.	....	HUMAN ANATOMY AND PHYSIOLOGY.	Study at Oxford or Cambridge.
	Baxton Scholarships. No. 1.	£30.	....	Competitive Examination among Students in subjects of Preliminary Examination.	
	,, No. 2.	£20.	....	Ditto.	
	Scholarship.	£20.	....	Competitive Examination in CLINICAL MEDICINE.	
	,,	£20.	....	Competitive Examination in CLINICAL SURGERY.	
	,,	£20.	....	Competitive Examination in CLINICAL OBSTETRICS.	
	Sutton Prize in Pathology.	£20.	....	Competitive Examination in PATHOLOGY.	
	Duckworth Nelson Prize.	£10.	....	PRACTICAL MEDICINE and SURGERY.	
	Biennially: Letheby Prizes.	£20 and £10.	....	Competitive Examination in CHEMISTRY.	
	Scholarship.	£25.	....	Competitive Examination in ANATOMY AND PHYSIOLOGY.	
	,,	£20.	....	Competitive Examination in ANATOMY and BIOLOGY.	
	Dressers' Prize.			ZEAL, EFFICIENCY, and KNOWLEDGE OF MINOR SURGERY.	
	,, No. 1.	£15.	....	Ditto.	
	,, No. 2.	£15.	....	Ditto.	
	,, No. 3.	£10.	....	Ditto.	
	,, No. 4.	£10.	....	Ditto.	
	,, No. 5.	£5.	....	Ditto.	
	,, No 6.	£5.	....	For the best essay upon a subject in CLINICAL SURGERY.	
	Triennially: Hutchinson Prize.	£35.	....	....	
	Practical Anatomy Prizes.	£6.	....	....	
		£4.			
	Sir Andrew Clark's Prize.	£13 10s.	....	....	
ST. MARY'S HOSPITAL ..	Natural Science Scholarship. No. 1.	£105.	....	Competitive Examination among Students in NATURAL SCIENCE.	
	,, No. 2.	£52 10s.	....	Ditto.	
	,, No. 3.	£52 10s.	....	Ditto.	
	,, No. 4.	£52 10s.	....	Ditto.	
		£133.	....	For Students from Epsom College being sons of Medical Men.	
		£52 10s.	....	Competitive Examination among Students from Oxford, Cambridge, or other University in SUBJECTS OF PRELIMINARY SCIENTIFIC EXAMINATION AT LONDON UNIVERSITY.	
		£30.	....	Competitive Examination among First-year Students.	
		£20.	....	Competitive Examination among Second-year Students.	
		£30.	....	Competitive Examination among Third-year Students.	
		£20.	....	Competitive Examination among Fourth-year Students.	
MIDDLESEX HOSPITAL ..	Entrance Scholarship. No. 1.	£50 per annum.	2 years.	Open Competitive Examination.	Course at Middlesex Hospital.
	,, No. 2.	£30 per annum.	2 years.	Ditto.	Ditto.
	,, No. 3.	£30 per annum.	2 years.	Competitive Examination among Students from Oxford or Cambridge. (Subjects: ANATOMY and PHYSIOLOGY, including HISTOLOGY.)	
		£126.	....	To Students of Epsom College, on Nomination of Head Master.	
	Broderip Scholarship. No. 1.	£30 per annum.	2 years.	Competitive Examination among Fourth-year Students in CLINICAL SUBJECTS.	
	,, No. 2.	£20 per annum.	2 years.	Ditto.	
	Governor's Prize.	£21.	....	Competitive Examination among Third-year Students in CLINICAL SUBJECTS.	
	Hetley Clinical Prize.	£25.	....	Competitive Examination among Students during Final Year of Study.	
	John Murray Gold Medal and Scholarship.	....	3 years.	Examination in MEDICINE, SURGERY, and OBSTETRICS.	
	Lyell Medal.	£5 5s.	....	Examination in SURGICAL ANATOMY and PRACTICAL SURGERY.	

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued.*

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
ST. THOMAS'S HOSPITAL.					
SUMMER.	College Prizes.				
	,, No. 1.	£15.	....	Competitive Examination among First-year Students.	
	,, No. 2.	£10.	....	Ditto.	
	,, No. 3.	£15.	....	Competitive Examination among Second-year Students.	
	,, No. 4.	£10.	....	Ditto.	
	,, No. 5.	£15.	....	Competitive Examination among Third-year Students.	
	,, No. 6.	£10.	....	Ditto.	
WINTER.	Entrance Science Scholarship. No. 1.	£150	....	Competitive Examination in PHYSICS, CHEMISTRY, PHYSIOLOGY, BOTANY, or ZOOLOGY.	Perpetual Course.
	,, No. 2.	£60.	....	Ditto.	Ditto.
	,, No. 3.	£50.	....	Competitive Examination in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	Perpetual Course from third year.
	Wm. Tite Scholarship.	£27 10s.	....	Competitive Examination among First-year Students.	
	College Prizes.				
	,, No. 7.	£20.	....	Ditto.	
	,, No. 8.	£10.	....	Ditto.	
	Musgrove Scholarship.	£38 10s.	2 years.	Competitive Examination among Second-year Students.	
	Peacock Scholarship.	£38 10s.	2 years.	Ditto.	
	Grainger Testimonial Prize.	£15.	1 year.	For work in ANATOMY and PHYSIOLOGY.	
	Biennially:				
	Beaney Scholarship	....	....	For SURGERY and SURGICAL PATHOLOGY.	
	College Prizes.				
	,, No. 9.	£30.	....	Competitive Examination among Second-year Students.	
	,, No. 10.	£10.	....	Ditto.	
	,, No. 11.	£20.	....	Competitive Examination among Third-year Students.	
	,, No. 12.	£15.	....	Ditto.	
	,, No. 13.	£10.	....	Ditto.	
	Cheselden Medal.	....	....	Competitive Examination in SURGERY and ANATOMY.	
	Mead Medal.	....	....	Competitive Examination in MEDICINE and PATHOLOGY.	
	Bristowe Medal.	....	....	Competitive Examination in PATHOLOGY and MORBID ANATOMY.	
	Solly Medal and Prize.	....	....	SURGICAL REPORTS.	
	Treasurer's Gold Medal.	....	....	General Proficiency.	
	The Salters' Company Research Fellowship.	£100 annually.	3 years.	Promotion of Research — PHARMACOLOGY.	
UNIVERSITY COLLEGE, LONDON.	Entrance Scholarships.				
	,, No. 1.	131 gs.	....	Open Competitive Examination in CHEMISTRY, PHYSICS, BOTANY, and ZOOLOGY.	Perpetual Course at University College.
	,, No. 2.	55 gs.	....	Ditto.	Ditto.
	,, No. 3.	55 gs.	....	Ditto.	Ditto.
	Atkinson Morley Scholarship.	£45 per annum.	3 years.	Theory and Practice of Surgery.	
	Atchison Scholarship.	£60 per annum.	2 years.	Competitive Examination among Medical Students.	
	Sharpey Physiological Scholarship.	£120.	....	Proficiency in Biological Science.	
	Fillitter Exhibit'n.	£30.	1 year.	Competitive Examination among Students in PATHOLOGICAL ANATOMY.	
	Cluff Mem. Prize.	£15.	....	Competitive Examination among Students in ANATOMY, PHYSIOLOGY, and CHEMISTRY.	
	Erichsen Prize.	£10 10s.	....	Practical Surgery.	
	Morris Bursary.	£16.	2 years.	....	
WESTMINSTER HOSPITAL.	Natural Science Entrance Scholarship.	£60.	....	Competitive Examination in subjects of Preliminary Scientific of London University.	Perpetual Course at Westminster Hospital.
	Guthrie Entrance Scholarship.	£60 (total).	....	Open Competitive Examination among Candidates under twenty-five years of age in LATIN,* MATHEMATICS, EXPERIMENTAL PHYSICS, CHEMISTRY, and GREEK, FRENCH, or GERMAN.	Ditto.
	Entrance Scholarship.	£40 (total).	....	Ditto.	
	Dental Scholarship.	£20 (total).	....	Ditto, as above, save that Dental Students only can compete. A free presentation open to Pupils of the Epsom Medical College, obtained by recommendation.	
	Governors.	£40 (total).	....	Open Competition in CHEMISTRY and EXPERIMENTAL PHYSICS according to the Synopsis of the Conjoint Board.	
	Senior Scholarship.	£40 (total).	....	Competitive Examination among Oxford and Cambridge Students in ANATOMY and PHYSIOLOGY.	For Students entering in the Summer Session.

* The Latin Book is that of the Matriculation, University of London, in the preceding June.

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SCHOLARSHIPS GIVEN IN AID OF MEDICAL STUDY—*continued*.

INSTITUTION.	TITLE OF SCHOLARSHIP, &c.	ANNUAL OR TOTAL VALUE.	HOW LONG TENABLE.	HOW OBTAINABLE.	CONDITIONS ATTACHED TO TENURE.
WESTMINSTER HOSPITAL—*continued*.	Treasurer's Prize.	£10 10s.	...	Competitive Examination among First-year Students in ANATOMY, PHYSIOLOGY or BIOLOGY, and CHEMISTRY.	
	President's Prize.	£21.	...	Competitive Examination among Second-year Students in ANATOMY, PHYSIOLOGY, and HISTOLOGY.	
	Clinical Medicine.	£5.	....	Notes and commentaries on 12 cases.	
	Clinical Surgery.	£5.	....	Ditto.	
	Chadwick Prize.	£21 in books or instruments.	...	Competitive Examination among Medical Students in MEDICINE and SURGERY, including PATHOLOGY and APPLIED ANATOMY and PHYSIOLOGY.	
	Bird Medal and Prize.	£14 in medal, books, or instruments.	....	Competitive Examination amongst Fourth-year Students in MIDWIFERY and DISEASES of WOMEN, MEDICINE, and PATHOLOGY.	
	Fish Prize.	£20.	....	PATHOLOGY by paper, also *viva voce* in Post-mortem Room and on MICROSCOPIC and MUSEUM PATHOLOGY.	
MASON COLLEGE, BIRMINGHAM.	Ingleby Scholarships (1 or more).	£10 to £15.	1 year.	....	Candidates must have spent first two years of curriculum at the College.
	Sydenham Scholarship.	£10 10s. per annum.	3 years.	Award of Council to orphan sons of Medical Practitioners.	
	Sands Cox Scholarship.	£10 10s. per annum.	3 years.	Competitive Examination among sons of Medical Practitioners under eighteen years of age in ARTS SUBJECTS.	
	Queen's Scholarship.	£10 10s. per annum.	3 years.	Open Competitive Examination in ELEMENTARY SCIENCE, with a Modern Language.	
	Dental Scholarship.	£15 15s.	1 year.	Open Competitive Examination in subjects learnt during apprenticeship.	
BRISTOL GENERAL HOSPITAL.	Lady Haberfield Entrance Scholarship.	Interest of £1000.	...	Competitive Examination among Medical Students in Subjects of GENERAL EDUCATION.	Perpetual Students.
	Second Entrance Scholarship.	£20.	...	Ditto.	
	..	£10 10s.	....	Ditto.	
	Clark Prize.	£15.	....	Class Work of Third-year Students.	
LEEDS SCHOOL OF MEDICINE (YORKSHIRE COLLEGE).	Entrance Scholarship.	£67 4s.	....	Competitive Examination among Medical Students who have passed Preliminary Scientific Examination at London or Victoria University.	Complete Course of Lectures and Practical Classes at Leeds School.
	Infirmary Scholarship.	£42.	...	Competitive Examination in ARTS among Students who have passed one of the Preliminary Examinations.	Complete Course of Hospital Practice and Clinical Lectures at Leeds Infirmary.
	Hardwick Prize.	£10.	...	Competitive Examination among Clinical Clerk Students of two years' standing in CLINICAL MEDICINE.	
	McGill Prize.	£10.	....	Competitive Examination among advanced Surgical Students in CLINICAL SURGERY.	
	Thorp Prizes.	£10 and £5.	....	Examinations in Forensic Medicine and Hygiene.	
	Thorp Prize Essay.	£15.	...	Essay or research on some subject connected with FORENSIC MEDICINE, TOXICOLOGY, or PUBLIC HEALTH.	Every three years to former students of the Leeds School.
UNIVERSITY COLLEGE, LIVERPOOL.	Holt Tutorial Scholarships (two annually).	£100 each.	1 year.	Vote of Faculty to Student of not less than four years' standing.	Teaching and Original Research.
	Lyon Jones Scholarship. No. 1.	£21 per annum.	2 years.	Competitive Examination among Junior Students in 1st M.B. SUBJECTS.	Perpetual Course at Victoria University.
	,, No. 2.	£21.	....	Competitive Examination among Third-year Students in ANATOMY, PHYSIOLOGY, and MATERIA MEDICA.	
	Derby Exhibition.	£15.	...	Competitive Examination among Fourth- or Fifth-year Students in CLINICAL SUBJECTS.	

PUBLIC HEALTH.

INSTRUCTION FOR DIPLOMAS IN STATE MEDICINE.

ENGLAND.

THE following recommendations, designed with a view of ensuring "the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health," were adopted by the General Medical Council in 1889. The regulations require that—"(1) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery and the examination for a diploma in Sanitary Science, Public Health, or State Medicine; (2) every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months, practical instruction in a laboratory approved of by the body granting the qualification; (3) every candidate shall have produced evidence of having for six months practically studied the duties of out-door sanitary work under the medical officer of health of a county or large urban district; (4) the examination shall have been conducted by examiners specially qualified, and shall comprise laboratory work as well as written and oral examination; (5) the rules as to study shall not apply to—(*a*) medical practitioners registered, or entitled to be registered, on or before Jan. 1st, 1890." It was enacted by Section 18 (2) of the Local Government Act, 1888, that after Jan. 1st, 1892, no such appointment (that of medical officer of health) may be made in any county, or in any district or combination of districts with a population of 50 000 or upwards, unless the officer—having, of course, qualifications in Medicine, Surgery, and Midwifery—is registered as

the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or has during any three consecutive years preceding 1892 been medical officer of a district or combination of districts with a population of 20,000 at least, or has for three years previous to Aug. 13th, 1886, been a medical officer or inspector of the Local Government Board. With the sanction of the Local Government Board, the same person may be appointed medical officer for two or more districts.

London University.—Sanitary Science is included under the head of State Medicine in the M.D. degree, and a certificate has to be produced showing that a course of practical instruction has been attended for the prescribed period, and that the course has included such chemical, microscopical, and meteorological work and exercises as more especially relate to sanitation. The attendance includes six months' practical instruction in a laboratory and six months' out-door sanitary work. Certificates will be received from the holder of any public health office directly or indirectly subject to control by a Secretary of State or a Government Department. If a candidate have held for a period of two years the position of medical officer of health in any sanitary district, or for a period of three years the position of medical officer of health in any sanitary district, he will be eligible for the examination.

Cambridge University.—An Examination in so much of State Medicine as is comprised in the functions of medical officers of health will be held during the year 1894 in Cambridge, beginning on the first Tuesday in October, and ending on the following Friday, or at latest on the following Saturday. Any person whose name is on the Medical Register is eligible as a candidate for this examination: Provided (*a*) he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part; (*b*) a period of not less than twelve months shall have elapsed between the time when he first obtained a registrable qualification and the time when he presents himself for either part of the examination; (*c*) he produce evidence of having, before or after obtaining a registrable qualification, attended the clinical practice of a hospital for infectious diseases approved by one of the licensing bodies recognised under the Medical Acts; (*d*) he produce evidence of having, after obtaining a registrable qualification, attended during a period of six months on one or more courses, approved by the Syndicate, of practical laboratory instruction in Chemistry, Bacteriology, and the Pathology of those diseases of animals that are transmissible to man; (*e*) he produce evidence of having, after obtaining a registrable qualification, practically studied for six months the duties of out-door sanitary work under the medical officer of health of a county or large urban district, unless he have himself held an appointment as medical officer of health under conditions not requiring a special sanitary diploma. The provisions (*b*), (*c*), (*d*), (*e*) are not to apply to (*a*) candidates whose names shall have been placed on the Medical Register on or before Jan. 1st, 1890, or who have obtained a registrable qualification on or before that date; (*β*) candidates who have for a period of three years held the position of medical officer of health to any county, or to any urban district of more than 20,000 inhabitants, or to any entire rural sanitary district. The examination will be in two parts. The first part will comprise Physics and Chemistry; the principles of chemistry and methods of analysis, with especial reference to analyses of air, water, and food; application of the microscope, including the investigation of micro-organisms; the laws of heat and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water-supply; and statistical methods in their application to public health. The second part will comprise Laws and Statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate. The following is a list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the Syndicate: The Chemical Laboratory, Cambridge; the London Hospital Medical College; St. Bartholomew's Hospital Medical College; King's College, London; University College, London; the Army Medical School, Netley; Owens College, Manchester; the University of Durham Medical School, Newcastle-on-Tyne; Mason College, Birmingham; University College, Liverpool; St. Mary's Hospital Medical College; Charing-cross Hospital College; University College, Bristol; and Yorkshire College, Leeds. The examination in both parts will be oral and practical, as well as in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in, and reporting on, subjects connected with out-door sanitary work. Every candidate will be required to pay a fee of £5 5*s.* before admission or readmission to *either part* of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a diploma testifying to his competent knowledge of what is required for the duties of a medical officer of health. All applications for information respecting this examination should be addressed to Dr. Anningson, Barton-road, Cambridge, Secretary to the Syndicate. Candidates who desire to present themselves for the examination in October next must send in their applications on forms supplied for the purpose and transmit the fees to J. W. Clark, M.A., Registrary, University of Cambridge, on or before Sept. 17th. Cheques should be crossed "Mortlock and Co., Ltd." The fee for either part of the examination cannot be returned to any candidate who fails to present himself; but he will be entitled, without an additional fee, to be a candidate on one subsequent occasion. The applications of candidates whose names have not been on the Medical Register for three years should be accompanied by a certificate of birth or other proof of age.

University of Oxford.—An examination, open at present to those only who have obtained the degree of M.B. in the University of Oxford, conducted partly in writing, partly *viva voce*, and in each subject partly practical, is held in Michaelmas Term in the following subjects:—General Pathology, with special relation to Infectious Diseases, the Laws relating to Public Health, Sanitary Engineering, Vital Statistics. The fee for admission to the examination is £10. Candidates (*a*) must have their names on the Medical Register of the United Kingdom; (*b*) must have spent after registration a period of at least six months studying in a public health laboratory approved by the Board of the Faculty of Medicine. Candidates must also (*c*) have had their names on the Medical Register of the United Kingdom for a period of at least twelve months; (*d*) have spent after registration a period of study, of not less than six months in all, under the medical officer of health of a county or of a city or town containing at least 50,000 inhabitants, or under two or more such medical officers of health. Certificates of proficiency are granted to those who pass this examination.

University of Durham.—Sanitary Science is the special object of the degrees in Hygiene. Candidates for the degree of Bachelor in Hygiene (B.Hy.) must be at least twenty-two years of age and registered, and before presenting themselves for examination must have been for at least twelve months graduates in Medicine of a recognised university. They shall spend six months at Newcastle-upon-Tyne studying Public Health, Comparative Pathology, Practical Bacteriology, Outdoor Sanitary Work, Infectious Diseases, Sanitary and Practical Chemistry. They have to pass an examination in Sanitary Chemistry, Physics, Sanitary Legislation, Comparative Pathology, Vital Statistics, Nosology, Distribution of Health and Disease, Sanitary Medicine, and Practical Hygiene. The fee for the examination for the degree of B.Hy. is 10 guineas, and for the degree £6. Candidates for the degree of Doctor in Hygiene (D.Hy.) must have acquired the degree of Bachelor in Hygiene, must for two years subsequently have been engaged in practice as a Medical Officer of Health, and must write an essay upon some practical hygienic subject. The fee for the examination for the degree of D.Hy. is £5, and for the degree £6. The regulations for education and examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor of Hygiene, except that the candidate is not required to be a graduate in Medicine of a recognised university, and the course of study need not be passed at Newcastle-upon-Tyne. The fee for the examination and diploma in Public Health is ten guineas.

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Victoria University.—An examination in Sanitary Science is held yearly, beginning about the middle of July, under the following regulations: The examination is in two parts, and is written, oral, and practical. Candidates before entering for either part of the examination must have held for not less than twelve months a registrable qualification in Medicine, Surgery, and Midwifery, and must present satisfactory certificates of having attended courses of instruction in Public Health and in Chemistry as applied to Public Health in a college of the University, or in a college or medical school recognised for this purpose by the University; of having attended, after obtaining a registrable qualification, during at least six months, practical instruction in a laboratory approved by the University; of having practically studied the duties of out-door sanitary work for not less than six months under the Medical Officer of Health of a county or of a large urban district. Candidates may present themselves for Parts I. and II. separately or at the same time, provided that no candidate be admitted to Part II. unless he has already presented himself for Part I. No candidate's name will be published until he has satisfied the examiners in both parts of the examination. The fee for each part is £4 4*s.*, and must be paid on or before July 1st in each year. For any subsequent examination in the same part the fee will be £2 2*s.* Every candidate who has passed both parts of the examination to the satisfaction of the examiners, and who is legally registered, will receive a diploma in Sanitary Science. The examinations will begin on the third Monday in July each year.

Royal College of Physicians of London and the Royal College of Surgeons of England.—The following are the regulations for obtaining the diploma in Public Health: Section 1: Candidates must be registered under the Medical Act. The examination consists of two parts. The fee for each part is £5 5*s.* A candidate intending to present himself must give fourteen days' written notice to the Secretary, at the Examination Hall, Thames Embankment, W.C. A candidate registered under the Medical Act on or before Jan. 1st, 1890, will be admissible to Part I. of the examination on producing evidence of being at least twenty-three years of age, and to Part II. on producing evidence of being at least twenty-four years of age. A candidate registered under the Medical Act after Jan. 1st, 1890, will be admissible to examination in Part I. on producing evidence (1) of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least twelve months; (2) of having attended, after obtaining such registrable qualification, practical instruction in a laboratory recognised by the Examining Board in England during a period of six months; and (3) of being at least twenty-three years of age. A candidate will be admitted to Part II. of the examination on producing evidence (1) of having, during a period of six months after obtaining a registrable qualification, either practically studied the duties of out-door Sanitary Work under the medical officer of health of a county or large urban district or else held appointment as medical officer of health under conditions not requiring the possession of a special Sanitary diploma; (2) of having attended the clinical practice of a hospital for infectious diseases recognised by the Examining Board in England, either before or after obtaining his registrable qualification in Medicine, Surgery, and Midwifery (this certificate is not required in the case of a candidate who produces evidence that he has commenced special study of Sanitary Science before Jan 1st, 1894); and (3) of being at least twenty-four years of age.

King's College, London.—A course of lectures will be given in the summer session by Professor Charles Kelly, M.D., F.R.C.P. Practical instruction will be given in the uses of Sanitary Appliances at the Parkes' Museum, Margaret-street, Regent-street, W. The lectures will be given during the summer session on Thursdays at 12.30 P.M. Fee for the course, £2 2*s.*, payable in advance in the College Office. Medical students at King's College, free. The necessary Laboratory Instruction to comply with the regulations of the various Universities and other Medical Licensing Bodies will be given by Professor William R. Smith, M.D., D.Sc., and Professor Edgar M. Crookshank, M.B. Lond. The syllabus includes Physics, Chemistry, Microscopy; Parasites and other Organisms Infesting Food-stuff or the Human Body; Bacteriology, including the Cultivation and Recognition of Micro-organisms. The course will last six months, four months of which will be spent in the Laboratories of Public Health, and two months in the Bacteriological Laboratory. Fee 20 guineas, payable in advance in the College Office. Under the direction of Professor William R. Smith, M.D., D.Sc., and Demonstrator, C. G. Moor, M.A., practical instruction will be given in the laboratories in the methods of Analysis of Air, Water, Foods, &c.; Detection of Poisons. Fees, one month, £4 4*s.*; three months, £10 10*s.* The laboratories are also available for original investigations and practical work in Public Health, and are open daily from 9 A.M. to 4 P.M. and on Saturdays to 1 P.M. In Public Health special classes will be held during the winter session by Professor W. R. Smith; fee, £12 12*s.* The Bacteriological Laboratory is open daily for original research under the direction of the professor and demonstrator of Comparative Pathology and Bacteriology. For one month for original research, 3 guineas. For a longer period by arrangement. For one month for private study, with supervision 4 guineas. For a longer period by arrangement. Practical course for a month, with attendance on lectures, 5 guineas. For a year, 30 guineas. Professor H. G. Seeley, F.R.S. will deliver a course of six lectures on Physiography. For further particulars connected with any of the foregoing classes apply to Professor W. R. Smith, King's College, London.

University College, Bristol.—A course of lectures on Principles and Practice of Hygiene is given at the Medical School, Bristol, by D. S. Davies, M.B.Lond., D.P.H. Cant. on Mondays and Fridays, 10–11 A.M., commencing on the first Monday in October. A six months' course of Practical Laboratory Instruction is given at the Western Counties Laboratory, Park-street, by Mr. F. Wallis Stoddart, commencing on the first Wednesday in October, and including the subjects of Chemistry, Physics, Bacteriology, and Deposites. Demonstrations on the provisions and practical working of the various Acts relating to Public Health and of Orders, Circulars, and By-laws of the Local Government Board are delivered by Mr. J. C. Heaven on Mondays and Fridays, commencing on the first Monday in October. Gentlemen taking out the course are admitted to practise out-door sanitary work during the session, under the supervision of the Medical Officer of Health for the city and port of Bristol. They are considered as pupil assistants, are required to carry out diligently such of the duties of medical officers of health as they may be directed to undertake. Facilities are afforded during the course for the study of those diseases of the lower animals which are communicable to man. Fee for the entire course, 20 guineas.

SCOTLAND.

Edinburgh University.—Two degrees in Science in the Department of Public Health are conferred by the University of Edinburgh—viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.). Every candidate who desires to proceed to the first examination for the degree of B.Sc. must give evidence that he has taken a degree in Medicine in the University of Edinburgh or in a recognised University, and that he has worked for at least six months during the usual winter session, in a laboratory where practical instruction is given in the methods of investigation in subjects pertaining to Public Health. Laboratory work recognised in which provision is not made for the study of Public Health laboratory in accordance with the regulations for laboratory work issued by the Senatus, nor will time be recognised if such work is not taught by a specially appointed teacher. Candidates will not be admitted to the First Examination for the said degree until one year after taking a degree in Medicine, nor until an interval of at least six months has elapsed after passing the First Examination. Two laboratories are entirely devoted to Public Health, and the demonstrator teaches in them from 10 A.M. to 4 P.M. daily. The teaching is both individual and by means of groups of students. The latter are given twice a week, and deal with the *rationale* of the methods employed in practical work.

Bachelors of Science in the department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department, on producing evidence that they have been engaged in Practical Sanitation since they took the said degree of Bachelor of Science, and on presenting a Thesis on some subject in the department of Public Health. For the First Examination for the degree of Doctor the fee is £5 5*s.*, and for the Second Examination for the degree of Doctor, £5 5*s.*; fee for registration as a member of the University Council (unless previously registered), £1. New regulations, however, are in preparation.

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Glasgow University.—The University provides instruction in Public Health by laboratory training and otherwise. The subjects of instruction are:—Duties of health officer, air and ventilation, food and its adulterations, water and water-supply, sewerage and drainage; construction of hospitals, public buildings, and dwellings; overcrowding, manufactories, insalubrious trades, cemeteries, nuisances, quarantine, disinfectants and deodorisers, outbreaks of zymotic diseases; climate, topographical and seasonal; its influences in relation to health and disease; geographical distribution of diseases; knowledge of leading Sanitary Acts of Parliament; vital statistics. The laboratory training is provided in a special department of the Chemical Laboratory. Practical instruction is given in the subjects of water, air, soils, antiseptics, and disinfectants, foods, diseases of animals transmissible to man. The diploma in Public Health may be obtained by any Bachelor of Medicine of the University on his passing the required examination not less than twelve months after he has taken the degree of M.B. Every candidate for a diploma in Public Health shall give sufficient evidence by certificates: that after obtaining the degree of M.B. he has undergone the practical training prescribed above, and that he has, after obtaining such degree, practically studied for six months the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district, or else has himself held an appointment as Medical Officer of Health under conditions not requiring the possession of a special sanitary diploma; and that he has attended the clinical practice of a hospital for infectious diseases recognised by the University, provided that such a course of instruction may not have been taken as part of the curriculum for his degree of M.B. The examination is written, practical, and oral. The fee for the course of instruction is £10 10*s.*, and for the examination £5 5*s.*

University of Aberdeen.—The diploma in Public Health (D.P.H.) is conferred only on graduates in Medicine of a University in the United Kingdom; and a period of not less than twelve months must elapse between medical graduation and entrance to the examination for the diploma. Every candidate must produce evidence of having attended, after graduation in Medicine, during a period of six months, practical instruction in Hygiene in a laboratory approved of by the University, together with having for a like period after graduation practically and daily studied the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district, or also of having himself held appointment as Medical Officer of Health. He must also have regularly attended for six months the wards of a general fever hospital containing not less than fifty beds. Every candidate who is not a graduate in Medicine of this University must have attended a course of instruction in the University in one or more of the subjects embraced in the examination for the diploma. The diploma is conferred after an examination in Public Health held in March and July of each year. Candidates desiring to appear for examination at either of these periods must send in their names, with the necessary fee, to the Secretary of the Medical Faculty before the first day of the month in which the examination takes place. The fee for the examination is £5 5*s.* The examination is conducted by specially qualified examiners appointed by the University. Candidates may enter for the whole examination at one period, or they may enter for Parts I. and II. at one period and for Parts III. and IV. at another and subsequent period.

The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow.—All candidates for the diploma in Public Health must have been qualified for at least one year. Those qualified before 1890 and also those who have held the position of Medical Officer of Health to a county or to an urban district of more than 20,000 inhabitants, or an entire rural sanitary district, do not require to produce evidence of attendance on any special courses. All other candidates must have attended, after qualifying, six months' practical instruction in a recognised public health laboratory, and must have studied for six months the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district, or must themselves have held an appointment as Medical Officer of Health under conditions not requiring the possession of a sanitary diploma. It is also recommended where possible to take out a course of instruction in the diseases of animals transmissible to man.

There are two examinations, and candidates may enter for both at one period or for either separately. The First Examination includes Chemistry, with laboratory work, physics, and meteorology; the Second Examination embraces epidemiology and endemiology, vital statistics, practical sanitation, and sanitary law, together with a practical examination and report on cases in a hospital for infectious diseases, of the sanitary condition of premises to be visited, and of carcases (diseased or otherwise) in a public abattoir. The fee is 10 guineas for both examinations, or 5 guineas for either of them. The examination is held twice yearly in May and October. The published regulations provide detailed synopses of the subjects of examination and give lists of books from which to select. The Registrar for Edinburgh is Mr. James Robertson, 1, George-square; and that for Glasgow Mr. Alexander Duncan, 242, St. Vincent-street.

IRELAND.

Royal University of Ireland.—This University grants a diploma in Sanitary Science. It is conferred only on graduates in Medicine of the University. Candidates are not admitted to this examination until the lapse of twelve months from the time of obtaining the first registrable qualification; they must give notice in writing to the Secretaries of their intention to present themselves and must pay the fee, £2, at least one month previously to the examination. Candidates are required to produce a certificate of having, after obtaining the degree of M.B., B.Ch., B.A.O., attended six months' practical instruction in a laboratory approved by the University, and also of having for six months practically studied the duties of out-door sanitary work under the Medical Officer of Health of a county or large urban district.

University of Dublin.—The diploma in State Medicine is conferred, after examination, on the following conditions:—The candidate must be a Doctor in Medicine, a graduate in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the Medical Register at least twelve months before the examination. The candidate must have completed, subsequently to registration, six months' practical instruction in a laboratory approved by the University and also have studied practically out-door sanitary work for six months, under an approved officer of health. The subjects of examination will be—(*a*) State Medicine and Hygiene, including causation and prevention of disease, contagion in different diseases, morbid diathesis, congenital diseases and malformations, diseases of animals in relation to the health of man, diseases of the vegetable kingdom, famine diseases, causes of origin and spread of epidemics, principles of bacteriology, quarantine, disinfection &c.; (*b*) Chemistry, including air, water, and articles of food and drink, and their chemical and microscopical examination and analysis, the detection of common poisons and recognition of injurious pigments &c.; (*c*) Physics and Meteorology; (*d*) Engineering; (*e*) Morbid Anatomy; (*f*) Vital Statistics; (*g*) Medical Jurisprudence; (*h*) Practical Sanitary Engineering.

Royal College of Physicians and Royal College of Surgeons in Ireland.—Stated examinations for the diploma in State Medicine are held on the Tuesday, Wednesday, and Thursday following the first Friday of the months of February, May, and November. A special examination for the diploma can be obtained on payment of £5 5*s.*, in addition to the ordinary fees mentioned below, and on giving notice at least one fortnight before the date of the proposed examination. Every candidate for the diploma in State Medicine must be a registered medical practitioner. He must subsequently to qualification (1) receive six months' laboratory instruction in Chemistry, Bacteriology, and the Diseases of Animals transmisible to man, and (2) during six months either practically study out-door sanitary work under a Medical Officer of Health or himself hold an appointment of Medical Officer of Health under conditions not requiring the possession of a special sanitary diploma. Candidates beginning the study of sanitary science after Jan. 1st, 1894, shall be examined on four days commencing on the first Tuesday of February, May, and November, and shall as an additional requirement attend a hospital for infectious diseases. Each candidate must return his name to the secretary of the committee of management under the conjoint scheme three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh. The fee for the examination is £10 10*s.* The examination for the diploma in State Medicine comprises the following subjects:—State Medicine

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and Hygiene, Chemistry, Meteorology and Climatology, Engineering, Morbid Anatomy, Vital Statistics, Medical Jurisprudence, Law. For further particulars apply to the Secretary, Committee of Management Office, Royal College of Physicians, Dublin.

DENTAL SURGERY.

ANYONE who is on the Medical Register is entitled to practise as a dentist, although he cannot register as such without the special licence; but it is of eminent advantage to take the L.D.S., otherwise few dental appointments at general or special hospitals or dispensaries are available, and, what is still more important, the manual dexterity and knowledge of mechanics requisite for the successful practice of dentistry can only be gained by long and careful training at the dental operating chair and in the dental laboratory; and, this having been attained, it costs but little trouble to pass the special examination. The subjects beyond those included in the general qualification are—Dental Anatomy and Physiology (Human and Comparative), two courses; Dental Surgery, two courses; Dental Mechanics, two courses; Metallurgy, one course; Practice of Dental Surgery at a recognised school, two years, and an apprenticeship in Dental Mechanics to a competent practitioner for three years, but in the case of qualified surgeons two will suffice. The Dental Schools in London are the Dental Hospital of London, the National Dental Hospital and College, and Guy's Hospital Dental School. Most of the large provincial towns have now dental hospitals. A convenient arrangement by which the M.R.C.S., L.R.C.P., and L.D.S. can be taken is as follows:—The Preliminary Examination in General Education having been passed, the student should become apprenticed to a qualified dentist and register as a dental and medical student. (This instruction, however, may be taken prior to the date of registration as a dental student.) During his apprenticeship the student should receive instruction in Chemistry, including Chemical Physics, Practical Chemistry, Pharmacy, and Materia Medica, and pass in these subjects before entering the hospital. Having entered the hospital, the student should attend the dental and general courses contemporaneously, and pass the Elementary Anatomy Examination at the end of the first winter session, and at the end of the second winter the Second Conjoint Examination in Anatomy and Physiology. When time permits it is advisable to attend the general hospital only until after the First and Second Conjoint Examinations have been passed. At this point a break may be made to admit of the completion of the dental curriculum and the passing of the final examination for the L.D.S. diploma. The best course, however, is to entirely finish the curriculum for the M.R.C.S. and L.R.C.P. and then take the special Dental work. The student should now devote the rest of his time to the requirements of the Conjoint Board. The regulations for the Dental Licence of the Royal Colleges of Ireland and Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow are very similar to those of the English College. The L.D.S. can also be obtained alone.

REGISTRATION OF DENTAL STUDENTS.

The registration of dental students is carried on at the Medical Council Office in London in the same manner as the existing registration of medical students, and subject to the same regulations as regards Preliminary Examinations. Students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures before July 22nd, 1878 (when dental education became compulsory), are not required to produce evidence of having passed a Preliminary Examination. Candidates for a diploma in Dental Surgery must produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner. One year's *bonâ-fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student either before or after his registration as a student; but no year of such mechanical instruction will be counted as one of the four years of professional study unless taken after registration.

[redacted] for anyone practising Dental Surgery in [redacted], and no foreign qualifications are admitted. Formerly exception was made with regard to the Universities of Harvard and Michigan.

The Royal College of Surgeons of England grants a diploma in Dental Surgery under the following regulations: A candidate must produce certificates: 1. Of registration as a dental student by the General Medical Council, 299, Oxford-street, London, W. 2. Of having been engaged during four years in the acquirement of professional knowledge subsequently to the date of such registration. 3. Of having received instruction in Chemistry, including Chemical Physics, Practical Chemistry, and Materia Medica. 4. Of having attended a recognised medical school where he followed (*a*) a course of lectures on Anatomy during not less than six months, or one winter session; (*b*) a course of lectures on Physiology during not less than six months, or one winter session; (*c*) a separate practical course of Physiology during not less than three months; (*d*) a course of lectures on Surgery during not less than six months, or one winter session; (*e*) a course of lectures on Medicine during not less than six months, or one winter session. (Students are required to attend examinations, which are held in the several classes. 5. Of having performed dissections at a recognised school during not less than twelve months. 6. Of having attended at a recognised hospital or at hospitals in the United Kingdom the practice of Surgery and clinical lectures on Surgery during two winter sessions. 7. Of having attended at a recognised school two courses of lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by lecturers recognised by this College. Students are required to attend examinations which are held in the several classes. 8. Of having been engaged during a period of not less than three years in acquiring a practical familiarity with the details of Mechanical Dentistry under the instruction of a competent practitioner. In the cases of qualified surgeons evidence of a period of not less than two instead of three years of such instruction will be sufficient. This instruction may be taken prior to the date of registration as a dental student. 9. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, practice of Dental Surgery during the period of two years. 10. Of being twenty-one years of age. (Professional study prior to the date of registration as a dental student is not recognised except in the case of Chemistry, Practical Chemistry, and Materia Medica, and of instruction in the details of Mechanical Dentistry—see Clauses 3 and 8.) Candidates who have passed the Second Examination of the Examining Board in England, or who shall produce evidence of having passed the Examination in Anatomy and Physiology required for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons of Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an Examination in Anatomy and Physiology required for a Degree in Medicine or Surgery at a University in the United Kingdom, will be exempted from re-examination in those subjects. Candidates who are Members of the College, or who have passed the examination in Surgery of the Examining Board in England, or who shall produce evidence of having passed the examination in Surgery for the Licence of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an examination in Surgery for a degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in Surgery and Pathology. A candidate whose qualifications are found insufficient will be referred back to his studies and will not be admitted to re-examination within the period of six months unless the Board shall otherwise direct. The fee for the diploma is £10 10s., not including stamp duty.

Royal College of Surgeons, Edinburgh. Incorporated For the licence in Dental Surgery all candidates must pass a preliminary examination in general knowledge and have their names inscribed in the Register of Dental Students of the General Medical Council. A copy of regulations and a list of preliminary examinations recognised for entering this licence, as well as of the subjects of the professional examinations, may be obtained from Mr. Robertson, Clerk to the Royal College of Surgeons, 1, George-square, Edinburgh. Students who have begun their professional education by apprenticeship or by attendance on lectures before July 22nd, 1878, are exempted from the preliminary examinations. Candidates must produce

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of having, subsequently to the date of registration, been engaged for four years in professional studies, and of three years' instruction in Mechanical Dentistry from a registered dental practitioner, except in the case of previously registered medical practitioners, when two years will be considered sufficient. 1. Candidates who have commenced their studies *prior* to Oct. 1st, 1890, must have attended the following curriculum: Anatomy, one winter course; Practical Anatomy and Demonstrations, nine months, or Practical Anatomy, nine months, and Anatomy of Head and Neck, one course of twenty lectures; Physiology, one course of not less than fifty lectures; Chemistry, one winter course; Surgery, one winter course; Medicine, one winter course; Materia Medica, one course of three months; Practical Chemistry and Metallurgy, one course of three months; attendance on the practice of Surgery and Clinical Lectures on Surgery, at a recognised hospital, one course of six months, or two courses of three months. 2. Candidates commencing their studies *after* Oct. 1st, 1890, must have attended the following curriculum: Anatomy, one course of six months; Practical Anatomy, twelve months; Chemistry, one course of six months; Practical Chemistry, one course of three months; Physiology, one course of six months; Materia Medica, one course of three months; Surgery, one course of six months; Medicine, one course of six months; attendance on the practice of a recognised general hospital, with Clinical Instruction, twelve months. (Candidates who commenced study in accordance with the regulations in force before July, 1895, shall not be required to attend more than six months' hospital work.) These courses must have been attended at a University, or in an established school of medicine, or in a provincial school specially recognised by the College as qualifying for the diploma in Surgery. In addition to these courses candidates will be required to have attended in a recognised dental hospital, or with teachers recognised by the College, the following special courses of lectures and instruction: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery and Pathology, Dental Mechanics—one course each; two years' attendance at a dental hospital or the dental department of a general hospital recognised by the College. Certificates of attendance on such of these courses of the new curriculum as may be respectively required will entitle candidates to appear either for the first dental examination or for the first and second examinations for the triple qualification as they may select, and subject to the existing regulations for each qualification. Candidates who have passed the first and second examinations for the triple qualification under the four years' course will be exempt from the first dental examination, and will have the advantage of being admissible either to the Final Dental Examination or to the Final Examination for the Triple Qualification, or to both. But the First Dental Examination will not be held as equivalent to the first and second Triple Examinations, and will admit to the Final Dental Examination only. Candidates who are Licentiates of this College, or who may be registered medical practitioners, will be required to produce certificates of attendance on the special subjects only, and will be examined in these only for the Dental diploma. First Professional Examination: The candidate must have attended the courses on Anatomy, Chemistry, and Physiology. The examination embraces Anatomy, Chemistry, and Physiology. The fee is £4 4s. Second Examination: The candidate must have attended the remaining courses of the curriculum, must be twenty-one years of age, and must pay a fee of £6 6s. The examination embraces Surgery, Medicine, Therapeutics, and the special subjects of Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics. Unsuccessful candidates will be repaid £2 2s. in the First and £3 3s. in the Second Examinations. Candidates who claim exemption from the First Dental Examination, on the ground of having passed the First and Second Triple Qualification Examinations, will, before being admitted to the Second Dental Examination, be required to pay the total fee of £10 10s., payable for the Dental diploma, of which £3 3s. will be returned in case of rejection.

Faculty of Physicians and Surgeons of Glasgow.—The regulations as to certificates, curriculum, number, and subjects of examinations, fees &c., are in effect similar to those of the Royal College of Surgeons of Edinburgh. Special provision is made for candidates who intend to qualify both in Medicine and in Dentistry. There is a practical examination in Mechanical Dentistry and also an examination in Practical Dentistry conducted in a dental hospital.

Royal College of Surgeons in Ireland.—All information concerning the licence in Dentistry may be obtained from the Registrar of the College, who will receive the applications of candidates for permission to be examined. The bank receipt for fees, together with all certificates, &c., are to be lodged with him at least seven days prior to the day fixed for the commencement of the examination. The Primary Dental Examinations commence on the second Monday in the months of February, May, and November. The Final Dental Examinations commence on the Thursdays immediately following the Primary Dental Examinations. Candidates are required to pass three examinations—viz., Preliminary (in General Education), Primary Dental, and Final Dental. Preliminary Examination.—All examinations in general education recognised by the General Medical Council are accepted by the College. Preliminary Examinations are held conjointly by the Royal Colleges of Physicians and Surgeons on the third Wednesdays in March and September. Primary Dental Examination, £10 10s.; re-examination, if rejected, £5 5s. Every candidate[1] is required, before admission to the Primary Dental Examination, to produce evidence: (1) of having passed a recognised preliminary examination and of having been registered as a medical or dental student by the General Medical Council; (2) of having, subsequently to registration as a dental or medical student, attended at a recognised medical school the following courses: Lectures on Practical Anatomy, including Dental Anatomy, six months; Demonstrations and Dissections, two courses of six months each; Lectures on Chemistry, six months; Lectures on Physiology including Dental Physiology, six months; Practical Histology; Practical Chemistry, including Metallurgy, three months; (3) of having attended Clinical Instruction at a recognised general hospital for one year. The subjects of this examination are: (1) Physics;[2] (2) Chemistry, including Metallurgy; (3) Anatomy; (4) Physiology and Histology; and (5) Surgery. Final Examination.—Candidates holding L.R.C.S.I. or students who have passed Primary Dental or Third Professional Examination of the College, £10 10s.; re-examination, £5 5s. Fees for Final Examination of all other candidates, £26 5s.; re-examination, £10 10s. Extra fee for Special Examination, £5 5s. Candidates must produce evidence of having passed the Primary Dental Examination of this College, or the Third Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College, and are required to produce certificates of having attended: (1) the following courses of lectures recognised by the College: Dental Surgery and Pathology (two courses), Dental Mechanics (two courses); (2) for two years the practice of a dental hospital recognised by the College, or of the dental department of a general hospital so recognised; (3) of having been engaged during four years in professional studies; (4) of having received three years' instruction in Mechanical Dentistry from a registered dentist. Candidates holding a diploma in Surgery shall be admissible to the Final Dental Examination on producing certificates of having attended: (1) One course of Lectures on Dental Surgery and Pathology; (2) One course of Lectures on Dental Mechanics; (3) For one year the practice of a Dental Hospital recognised by the College, or of the Dental Department of a General Hospital so recognised, where such attendance has been subsequent to the date of diploma (this remission (3) has been made on the understanding that the surgeon devotes his whole time to dental work); (4) of having been engaged during a period of not less than two years in acquiring a practical familiarity with the details of Mechanical Dentistry under the instruction of a registered dentist. The following are the subjects of examination: Dental Surgery, Theoretical (including Dental Pathology), Clinical, and Operative; Dental Mechanics, Theoretical, Clinical, and Practical (including the Metallurgy of the workshop). Examinations for the Licence in Dentistry *sine curriculo*: The Council has power to admit to examination, *sine curriculo*, candidates whose names are on the Dental Register, published under the direction of

[1] Candidates educated in England or Scotland are admitted to the Primary Dental Examination on the production of the certificates that would be necessary for both Primary and Final Examinations in their own countries.

[2] Candidates who have passed in Chemistry and Physics at a First Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination, recognised by the College, are exempted from examination in these subjects at the Primary Dental Examination.

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the General Medical Council, and who are unable to furnish the certificates required by the foregoing regulations, on presentation of a special schedule of application.

TEACHING INSTITUTIONS.

ENGLAND.

Dental Hospital of London and School of Dental Surgery, Leicester-square.—The school was founded to provide the special dental education required by the Royal College of Surgeons for the licence in Dental Surgery. The general part of the curriculum may be taken at any general hospital. The hospital is open from 9 A.M. to 4 P.M., there being one staff for the morning and another for the afternoon of each day. There is a good mechanical laboratory, under Mr. A. J. Watts, and opportunity is afforded students of gaining practical experience in taking models and fitting dentures into the mouth. The demonstrators at the commencement of each session give a course of lectures on Operative Dental Surgery. The five house surgeoncies are held for six months each, and are open to all qualified students. The lecturers, in addition to their lectures, give special demonstrations on the Microscopy of Dental Anatomy and Dental Surgery. The lecturer on Dental Mechanics also gives practical demonstrations in the mechanical laboratory. A scholarship of the value of £20 has been founded by Sir Edwin Saunders and will be awarded to the student who has obtained the highest aggregate number of marks in the five class examinations—viz., the four Lecturers' Prizes, the Operating Prize—and in additional special *viva-voce* examinations in Practical Dentistry. Prizes and certificates are awarded by the lecturers for the best examinations in the subjects of their respective courses, at the end of the summer and winter sessions. Arrangements have been made for a prize in Operative Dentistry. A prize of the value of 5 guineas is given by Messrs. Ash and Sons for the best essay on some surgical subject connected with Dental Surgery. The conditions under which this prize is to be competed for are the same as those for the Saunders Scholarship, with this exception, that the papers are to be written in the hospital during the summer session. Consulting Physician: Sir Richard Quain, Bart., F.R.S., M.D., F.R.C.P., LL.D. Consulting Surgeon: Mr. Christopher Heath, F.R.C.S. Consulting Dental Surgeons: Sir John Tomes, F.R.S., F.R.C.S., L.D.S., and Mr. T. Arnold Rogers, M.R.C.S., L.D.S. Dental Surgeons: Storer Bennett, L.R.C.P., F.R.C.S., L.D.S.; Mr. C. E. Truman, M.A. Cantab., M.R.C.S., L.D.S.; Leonard Matheson, L.D.S.; E. Lloyd Williams, L.R.C.P., M.R.C.S., L.D.S., L.S.A.; W. B. Paterson, F.R.C.S., L.D.S.; and W. H. Woodruff, L.D.S. Assistant Dental Surgeons: A. Clayton Woodhouse, M.R.C.S., L.D.S.; F. J. Bennett, M.R.C.S., L.D.S.; J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S.; C. F. Rilot, M.R.C.S., L.D.S.; H. Baldwin, M.R.C.S., L.D.S.; H. Lloyd Williams, M.R.C.S., L.D.S.; W. H. Dolamore, L.R.C.P., M.R.C.S., L.D.S.; Percy Smith, L.R.C.P., M.R.C.S., L.D.S.; G. Hern, L.R.C.P., M.R.C.S., L.D.S.; J. G. Turner, L.R.C.P., F.R.C.S., L.D.S.; and A. R. Colyer, L.R.C.P., M.R.C.S., L.D.S. Anæsthetists: G. H. Bailey, M.R.C.S.; Dudley W. Buxton, M.D., B.S. Lond., M.R.C.P. Lond.; Frederic W. Hewitt, B.A., M.D. Cantab.; and Carter Braine, F.R.C.S. Assistant Anæsthetists: Henry Davis, M.R.C.S., L.S.A.; George Rowell, F.R.C.S.; E. A. Bridger, M.D.; and B. H. Comerford, M.R.C.S., L.R.C.P. Demonstrators: T. H. Clarence, L.D.S.; E. Gardner, L.D.S.; W. J. May, L.D.S.; and A. B. Densham, M.R.C.S., L.R.C.P., L.D.S. Medical Tutor: W. H. Dolamore, L.R.C.P., M.R.C.S., L.D.S. Curator of Mechanical Laboratory: A. J. Watts, L.D.S.I. Lecturers.—Dental Anatomy and Physiology (Human and Comparative): Arthur Underwood, M.R.C.S., L.D.S., on Wednesdays and Saturdays, at 8 A.M. (Summer). Dental Surgery and Pathology: Storer Bennett, L.R.C.P., F.R.C.S., L.D.S., on Tuesdays and Fridays, at 8 A.M. (Summer). Mechanical Dentistry: David Hepburn, L.D.S., on Wednesdays, at 5 P.M. (Winter). Metallurgy in its Application to Dental Purposes: Dr. Forster Morley, M.A., F.I.C., F.C.S., on Thursdays, at 5 P.M. (Winter). During the sessions the surgeons of the day will give demonstrations at stated hours. The house surgeons attend daily while the hospital is open. The Saunders' Scholarship of £20 per annum and prizes are open for competition. Fee for two years' hospital practice required by the curriculum, including lectures, £50 in one payment, or 50 guineas in two yearly instalments. The curriculum requires two years to be passed at a General Hospital; the fee for this is about £55. Both hospitals can be attended simultaneously. The Dean, Mr. Morton Smale, attends at the hospital every Wednesday morning from 10 to 12, and daily from 5 P.M. to 6 P.M. from Sept. 26th to Oct. 2nd, and from April 29th to May 28th, or he can be seen by appointment. Letters to be addressed—40, Leicester-square, "to be forwarded."

National Dental Hospital and College.—Winter Session, 1895-96, commences on Oct. 1st at the new building at the corner of Great Portland and Devonshire-streets, W.—Consulting Physicians: Sir B. W. Richardson and Sir W. H. Broadbent. Consulting Surgeons: Sir Spencer Wells and Mr. Christopher Heath. Consulting Dental Surgeon: Sir Edwin Saunders. Honorary Visiting Physician: Dr. James Maughan. Honorary Visiting Surgeon: Mr. E. W. Roughton. Dental Surgeons: Mr. F. H. Weiss, Mr. A. Smith, Mr. J. Davis, Mr. A. F. Canton, Mr. H. G. Read and Mr. C. V. Glassington. Assistant Dental Surgeons: Mr. W. Weiss, Mr. E. Beverley, Mr. S. W. Read, Mr. T. G. Read, Mr. Rushton, and Mr. W. H. Wheatley. Anæsthetists: Mr. C. Cosens, Dr. W. Reid Holmes, Mr. C. J. Ogle, Mr. G. Norton, Dr. J. Maughan, and Dr. Harold Low. Lectures (winter), Dental Anatomy and Physiology: Dr. J. Pare, Tuesdays and Thursdays, 5 P.M., in October, November, and December. Operative Dental Surgery: George Cunningham, Mondays, 6.30 P.M., in October, November, and December. Dental Materia Medica and Therapeutics: Mr. C. W. Glassington, Tuesdays, 7.30 P.M., in October, November, and December. Dental Metallurgy: Dr. W. Lapraik, Tuesdays, 7.30 P.M., in January, February, and March. Dental Mechanics: Mr. H. Rose, Mondays, 7 P.M., in January, February, and March. Summer—Dental Surgery and Pathology, Mondays and Thursdays, 6 P.M., in May, June, and July. Elements of Histology: Dr. J. Maughan, Mondays and Thursdays, 5 P.M., May, June, and July. The hospital is lighted throughout by electricity and warmed and ventilated by approved methods. Clinical Lectures and Demonstrations are given from time to time, and each student on entering passes through a preliminary course under a demonstrator. The stopping rooms have accommodation for sixty chairs. Dresserships in the extraction room are rearranged every three months. An Entrance Exhibition, of the value of £15, is open for competition at the commencement of each summer and winter session. Six prizes in medals are open for competition at the end of each course of lectures. Certificates of honour are awarded in each class. The Rymer Medal for General Proficiency, value £5, is awarded annually to the most meritorious student; and the Ash Prize, value £3 3s., for a thesis on a subject in Dental Surgery. General fee for the lectures required by the curriculum of the Royal College of Surgeons of England, £15 15s. For the Two Years' Hospital Practice required, £15 15s. Total fee for the Lectures and Hospital Practice required, £31 10s. Single Courses: Dental Anatomy and Physiology, Dental Pathology and Pathology, Operative Dental Surgery, and Dental Mechanics, each, one course, £2 12s. 6d.; two courses Dental Metallurgy, one course, £3 3s.; two courses Dental Materia Medica, £2 2s.; Demonstration of Dental Mechanics, Elements of Histology, each, £1 1s. Practice to registered practitioners by special permission of Committee, twelve months, £12 12s. Information regarding the Hospital Practice and the College may be obtained of the Dean, Mr. Sidney Spokes, who attends at the College, 40, Great Portland-street, on Tuesday mornings.

Guy's Hospital.—The work of the Dental Department begins daily at 9 A.M. both in the extraction room and in the conservation room. *The Extraction Rooms:* Patients are admitted between 9 and 10.30 A.M., and are seen by the dental surgeon for the day, the dental house surgeon, the assistant dental house surgeon, and the dresser. Such cases as are suitable for conservative treatment are transferred to the conservation room, taking with them a dental chart to indicate the treatment required. *Conservation Room:* This room is under the charge of the dental house surgeons from 9 A.M. till the completion of the extractions, and he receives patients as they come from the extraction rooms and allots the cases to the dressers. The members of the staff attend every morning, and on certain afternoons in the week to give demonstrations and otherwise assist students in their work in the Conservation Room and Mechanical Laboratory. Dental students have the opportunity of attending concurrently at the hospital the two courses of instruction required by the examining board for the L.D.S. Eng., viz., the lectures and practice of the Dental Department

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general lectures and practice of the Medical School. The fees for these two courses may be paid separately, as shown in paragraphs (1) and (2) below, or together, as in (3), or they may be combined with the fees required to be paid for the course for a medical diploma, as in paragraph (4). (1) By a ticket which gives admission to the Special Lectures and Demonstrations and Dental Practice only on payment of £50 on entrance; (2) by a ticket which gives admission to the General Lectures, Demonstrations, and Hospital Practice required for the L.D.S.Eng. on payment of £60 paid on entrance, or 60 guineas paid in instalments of 30 guineas at the beginning of the first year and 30 guineas at the beginning of the second year; (3) a ticket which gives admission to the General and Special Lectures and Demonstrations, and to the Hospital and Dental Practice required for the L.D.S.Eng., may be obtained by payment of £110 on entrance, or of 60 guineas at the beginning of the first year and 50 guineas at the beginning of the second year. From these fees the reduction mentioned in No. 2 will be made; (4) the inclusive fee for students entering for the course of instruction for the M.R.C.S., L.R.C.P., and L.D.S. Eng. is 190 guineas paid in one sum, or 200 guineas paid by instalments at the commencement of each academical year. Students who pay this inclusive fee are allowed to pursue their study of Dentistry during any period of their medical course most convenient to themselves without further charge.

London Hospital.—Mr. Barrett gives practical instruction during the winter session on Tuesdays at 9 A.M., and during the summer session on Tuesdays and Thursdays at the same hour. The attention of dental students is particularly directed to the fact that the Council of the Royal College of Surgeons recognises the dental department of the London Hospital as a school at which may be obtained the dental practice necessary to qualify a student for the examination for the Dental diploma. Dental students may also obtain the general medical education (apart from certain lectures to be attended at the dental school) and the dental practice necessary for the diploma at the London Hospital School. In selecting from candidates for the office of Dental Assistant priority will be given to those who have attended the greatest number of lectures on Dental Pathology and Surgery, and have also been the most punctual in attendance in the dental department on the Tuesday mornings. During the summer a class for special instruction in filling teeth will be formed by Mr. Barrett.

Mason College, Birmingham.—The teaching of Dentistry is undertaken by the Mason College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that the students may fully qualify themselves for the Dental diploma of the Royal Colleges. There is a special and well-equipped Dental Museum and Laboratory. Special courses of lectures are delivered on Medical and Surgical Diseases of the Mouth, &c., and there is a special course of Practical Dental Histology. An Entrance Exhibition, value £15, is awarded annually at the commencement of the winter session. Medals and honour certificates are awarded annually in the various classes.

Liverpool Dental Hospital, Mount Pleasant.—The Liverpool Dental Hospital, founded in the year 1864, combines the work of a most useful charity with all the advantages of a dental school recognised by all the licensing bodies of Great Britain and Ireland. During the past winter the whole of the top storey has been converted into one large operating room capable of accommodating fifty chairs. In its construction special attention has been paid to the ventilation and lighting; the electric light alone is employed for operating during the evening. Each chair has been provided with a specially constructed canting pendant which can be fixed at any angle. The chairs are of the well-known Morrison pattern, which, together with other fittings and fixtures, render this room one of the finest in the kingdom. There is an abundant daily supply of patients. Over 23,000 cases were treated during last year. The hospital staff consists of twelve honorary dental surgeons, one of whom is present each morning and evening. In addition to these there are one or more house surgeons to superintend all the hospital work and devote themselves to clinical teaching, advising and helping the students in their studies. Every facility is afforded to students who are anxious to acquire proficiency in Dental Surgery and to prepare themselves for the Dental diploma of the Royal College of Surgeons. The fee for the two years' Dental Hospital Practice required by the Royal College of Surgeons is £12 12*s.*, which must be paid on entrance. Fee as a perpetual student, £15 15*s.* Composition fee for all Lectures: a payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months). Fee for General Hospital Practice, £10 10*s.* All communications relating to the medical department should be addressed to Professor Paterson, Dean of the Medical Faculty, University College; and all communications relating to the Dental Hospital should be addressed to R. Edwards, 50, Mount Pleasant.

Bristol General Hospital.—Mr. Genge gives practical instruction in Dental Surgery at 9.30 A.M. on Mondays and Thursdays.

University College, Bristol.—Dental Students can enter for the full curriculum at Bristol. The Lectures are provided at the Medical School in connexion with this University. Practical instruction is given at the Royal Infirmary by Mr. Ackland and at the General Hospital by Mr. Genge, both institutions being recognised by the Dental Board of the Royal College of Surgeons. Full information may be obtained of the Dean of the Medical Faculty, Dr. A. B. Prowse, University College, Bristol.

Owens College, Manchester.—Arrangements have been made for dental students to attend the hospital practice at the Manchester Royal Infirmary and the practice at the Victoria Dental Hospital. Lectures on special subjects will be given in the College as follows:—Winter session: Dental Mechanics, Mr. Tanner, Thursday, 4 P.M. Summer session: Dental Anatomy and Physiology, Mr. Hooton, Tuesday at 4 P.M., Friday at 2 P.M. Dental Surgery, Mr. Campion, Tuesday and Friday, 3 P.M. Operative Dentistry, Mr. Whittaker, Wednesday: Lecture, 2.30 P.M.; Demonstration, 4 P.M. Dental Metallurgy, Dr. Burghardt, Monday, 2.30 P.M. Demonstrations in Dental Pathology and Histology, Mr. Headridge. For the course of Metallurgy the fee is £3 3*s.*; for other lectures, one course, £3 3*s.*; two courses, £4 4*s.* Dental practice for two years at the Manchester Royal Infirmary, £10 10*s.*; at the Victoria Dental Hospital at Manchester, £12 12*s.*, paid in advance, or £8 8*s.* for the first year and £5 5*s.* for the second year. At the Victoria Dental Hospital patients attend at 8.30 A.M. daily, and at 7 P.M. on Monday, Wednesday, and Friday. Consulting Physicians: Dr. H. Simpson and Professor D. J. Leech. Consulting Surgeons: Mr. E. Lund, Mr. F. A. Heath, Professor T. Jones, and Mr. J. Hardie. Consulting Dental Surgeons: Mr. H. Campion and Mr. G. W. Smith. Dental Surgeons: Mr. G. G. Campion, Mr. E. P. Collett, Mr. W. Dougan, Mr. L. Dreschfeld, Mr. J. W. Dunkerley, Mr. W. Dykes, Mr. W. Headridge, Mr. W. A. Hooton, Mr. I. Renshaw, Mr. W. Simms, Mr. W. Smithard, Mr. T. Tanner, and Mr. G. O. Whittaker. Assistant Dental Surgeons: Mr. P. A. Linnell, Mr. F. W. Minshall, Mr. C. R. Morley, and Mr. C. H. Smale. Administrators of Anæsthetics: Dr. A. Wilson and Dr. J. P. Stallard. Dean: Mr. G. G. Campion.

University College, Liverpool, School of Dental Surgery.—There is a school of Dental Surgery in connexion with the Medical Faculty. The curriculum includes Lectures and Demonstrations on all the subjects required for the licences in Dental Surgery of the Royal Colleges of England, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. In addition, Laboratory courses are conducted in Dental Histology and Dental Pathology. Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant. Fees:—A payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months), entitles the student to attendance on all lectures and demonstrations (medical and dental) required for the Dental Diploma of the Royal College of Surgeons. The fee for two winter's hospital practice at the Royal Infirmary is £10 10*s.*, and for two years' dental hospital practice £12 12*s.* Further information can be obtained from the Dean of the Medical Faculty, Professor Paterson, University College, Liverpool.

Devon and Exeter Dental Hospital, Castle-street, Exeter.—Established 1880.—The hospital is open daily (Sundays excepted), and patients are admitted between the hours of 9 and 11 A.M. Students attending the practice of the hospital must consider themselves strictly under the control of the medical officers, and must not undertake any operation without the consent of the dental surgeon for the day. Hon. treasurer, Mr. J. M. Ackland; hon. secretary, Mr. Henry Yeo.

SCOTLAND.

The Incorporated Edinburgh Dental Hospital and School, 5, Laureston-lane, Edinburgh.—For the special classes, both theoretical and practical, required by dental students the

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directors have secured the services of an efficient staff of dental officers and lecturers. There will also be a course of demonstrations in Mechanical Dentistry. Students will receive instruction in Practical Dental Mechanics under the mechanician. The fee for clinics in gold filling is included in the Dental Hospital fee of £15 15*s*. The minimum cost of classes for the whole course of dental instruction amounts to £78 13*s*. Consulting Physician: Dr. Alex. Peddie. Consulting Surgeon: Mr. Joseph Bell. Consulting Surgeon-Dentist; Dr. John Smith. Dental Surgeons: Messrs. W. Bowman Macleod, Andrew Wilson, Malcolm Macgregor, George W. Watson, J. S. Durward, James Mackintosh, and W. Forrester. Assistant Dental Surgeons: Messrs. John S. Amoore, J. Graham Munro, T. Gregory, John Turner, David Monroe, and F. Page. Extra Assistants: Messrs. Sewell Simmons, R. Nasmyth Hannah, Hume Purdie, Alexander Wilson, John Malcolm, and D. Baillie Wilson. Tutorial Dental Surgeon: Mr. Robert Lindsay. Dean: Mr. William Bowman Macleod, 16, George-square.

Dental Hospital and School, Glasgow. — The summer session was opened on Tuesday, May 7th, 1895, and the lectures are delivered as under:—Dental Surgery and Pathology, on Tuesdays and Thursdays, at 8 A.M. Mr. Rees Price, lecturer. Dental Anatomy and Physiology, on Tuesdays and Fridays, at 7 P.M. Dr. Wm. Wallace, M.A., M.B., L.D.S., lecturer. The winter session opens on Nov. 5th, 1895, and the lectures will be delivered as under: Dental Mechanics, on Tuesday evenings at 7 P.M., beginning Nov. 5th. Mr. John A. Biggs, lecturer. Fee for each of the above courses of lectures, £3 3*s*. The lectures on Dental Anatomy and Dental Surgery are arranged to extend over two summer sessions, as required by the English College, thus enabling students to present themselves for examination at any of the four Licensing Boards. The fees for attendance at the Dental Hospital and lectures amount in all to £25 4*s*., and can be paid separately, but may be compounded by a payment of £23 2*s*. on entering. Intending students before commencing to attend the lectures or hospital practice must produce evidence of having passed the preliminary examination prescribed by the regulations of the General Medical Council for registration of dental students. Dean: Mr. J. Rankin Brownlie. Secretary: D. M. Alexander, 97, West Regent-street, Glasgow. The hospital is open daily from 5 to 7 P.M. (Saturdays excepted); Saturdays from 9 to 11 A.M. Students may enrol at any time, their period of attendance counting from date of entry.

Glasgow Royal Infirmary (Dental Department).—Mr. W. H. Gray, L.D.S., attends at the Royal Infirmary at 3 P.M. on Mondays, Wednesdays, and Saturdays, and gives a course of Dental Surgery on these days in summer. The following course in the curriculum can be taken at St. Mungo's College: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months; Clinical Surgery, six months; Dental Surgery, six months, and attendance for two years on the dental department of the hospital. The attendance on the Dental Clinic is free to students of the hospital; to dental students, one year, £5 5*s*.; perpetual, £10 10*s*.

CHANGES IN THE MEDICAL SCHOOLS AND HOSPITALS.

St. Bartholomew's Hospital.—At this hospital it has recently been decided by the Governors to elect an additional Physician and Assistant Physician. Dr. Lauder Brunton has been appointed Physician. During the past year Mr. Henry Power has resigned the office of Ophthalmic Surgeon, and Mr. Vernon has succeeded him. Mr. Jessop has been appointed Junior Ophthalmic Surgeon, Mr. H. J. Waring, M.S., F.R.C.S., has succeeded Mr. Jessop as Senior Demonstrator of Anatomy, and Mr. R. C. Bailey, M.S., has been appointed Demonstrator of Anatomy. Dr. Calvert has been succeeded as Assistant Demonstrator of Medicine by Dr. Fletcher. Dr. Horton Smith has been appointed Casualty Physician and Assistant Demonstrator of Physiology. Mr. A. N. Weir, Mr. P. Furnivall, and Mr. J. S. Sloane have been elected Assistant Demonstrators of Anatomy, and Mr. W. L. Brown and Mr. T. J. Horder have been appointed Assistant Demonstrators of Biology. Dr. Waldo, Medical Officer of Health for Southwark, has been appointed Tutor in Public Health.

Charing-cross Hospital.—Dr. Sangster has been appointed Consulting Physician for Diseases of the Skin, and Dr. Galloway has been appointed to succeed Dr. Sangster as Physician for ditto; Dr. Lubbock did not seek re-election at the annual meeting of governors as Physician in Charge of Out-patients; Dr. C. J. Arkle has been appointed Assistant Physician and succeeded as Curator and Pathologist by Dr. W. Hunter; Dr. Percy Smith has been appointed Lecturer on Psychological Medicine in place of Dr. Hack Tuke, deceased; Dr. H. P. Pollard has been appointed Lecturer on Biology to succeed Dr. Chalmers Mitchell, resigned; Dr. Patrick Manson has been appointed Lecturer on Diseases of Tropical Climates; Drs. Galloway and Arkle have been appointed Lecturers on Practical Medicine, to succeed Drs. Murray and Willcocks; and Mr. Collum has been appointed Surgical Tutor, to succeed Mr. Waterhouse; Dr. Mott, having been appointed Pathologist to the London County Asylums, a post just created by the London County Council, resigned his post as Lecturer on Physiology, and Dr. Pembrey, Demonstrator of Physiology, University of Oxford, has been appointed to succeed him.

St. George's Hospital.—Mr Rouse, Senior Surgeon, has been appointed Consulting Surgeon; Mr. Dent, Senior Assistant Surgeon; Mr. Herbert Allingham, Assistant Surgeon; and Mr. Grimsdale Assistant Ophthalmic Surgeon. Dr. Patrick Manson has been appointed Lecturer in Tropical Medicine: Dr. Alexander, Teacher of Clinical Lunacy; Dr. Ewart (late Lecturer in Practical Medicine), Lecturer in Advanced Practical Medicine; and Drs. Penrose and Dickinson, Lecturers in Practical Medicine. Mr. Cockle has been appointed Demonstrator in Chemistry.

Guy's Hospital.—Mr. Lane has been appointed Lecturer on Anatomy, and Mr. Dunn, Teacher of Operative Surgery in place of Mr. Jacobson and Mr. Symonds; Mr. F. Steward, M.B., B.S., has been appointed Demonstrator of Anatomy in place of Mr. Targett, who now holds the office of Demonstrator of Practical Surgery.

King's College Hospital.—Mr. Lyle takes the place of Mr. Brodie as Demonstrator in Physiology and Lecturer in Animal Biology. Mr. G. Stillingfleet Johnson, F.C.S., has resigned the Senior Demonstratorship of Chemistry.

London Hospital.—A second Lecturer on Physiology, Mr. Leonard Hill, has been appointed, who will take charge of the practical work and University of London Classes. A Second Lecturer (Mr. Hugh Candy) has been appointed in Chemistry. He lectures on Organic Chemistry and takes charge of the University of London Classes. Dr. F. J. Smith has succeeded Dr. Galloway as Demonstrator of Materia Medica. Mr. Arthur Keith has been appointed Senior Demonstrator of Anatomy in place of Mr. Hutchinson, Junior, and Dr. Schorstein has been appointed as one of the Pathologists in place of Dr. Charles Turner.

St. Mary's Hospital.—Mr. A. P. Laurie, M.A., B.Sc. has been appointed Lecturer on Chemistry in place of Dr. Wright (deceased); Dr. Sidney Phillips, Joint Lecturer on Medicine; Mr. H. B. Lacey, Demonstrator of Biology in place of Mr. F. A St. John (resigned); and Mr. Arthur Collier, F.R.C.S., Demonstrator of Anatomy, in place of Mr. W. Hill. Dr. W. Hill has been appointed Aural Surgeon Out-patients.

Middlesex Hospital.—During the year the following gentlemen have passed away: Dr. Goodfellow, Consulting Physician; Sir John Tomes, Consulting Dental Surgeon; Mr. J. W. Hulke, Senior Surgeon. Dr. J. J. Pringle, Consulting Physician, has resigned, but retains the office of Physician to the Department of Diseases of the Skin; Dr. A. E. Brown has been appointed Assistant Physician; Mr. Leopold Assistant Surgeon; Mr. W. McC. Wanklyn, Casualty Officer, vice Mr. W. A. Ward; Mr. Andrew Clark, Lecturer in Clinical Surgery; and Dr. J. J. Pringle, Lecturership in Practical Medicine. Mr. J. [illegible] been appointed Senior Demonstrator of Anatomy, Arnold Lawson and Mr. Reginald Gladstone, Demonstrators in Anatomy; Mr. L. Milburn, Demonstrator in Physiology and Biology; Mr. E. Protheroe Smith, Demonstrator in Physiology.

St. Thomas's Hospital.—Dr. T. Gregor Brodie has been appointed Lecturer in Physiology and Practical Physiology in the room of Dr. Sherrington; Mr. A. F. [illegible] has resigned the Demonstratorship of Physiology, and is succeeded by Dr. S. W. F. Richardson and Dr. [illegible]. Mr. Lawford has received the appointment of Senior Surgeon, Dr. A. W. Crossley Demonstrator of

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Mr. H. R. Le Sueur Demonstrator of Physics and Assistant Demonstrator of Chemistry, Dr. Turney Demonstrator of Morbid Anatomy, and J. H. Fisher, M.B., B.S. Lond., F.R.C.S., Junior Demonstrator of Anatomy and Demonstrator of Ophthalmic Surgery. The following house appointments have just been made:—Resident House Physicians: E. G. C. Daniel, B.A. Cantab., and L. L. Jenner, M.A., M.B., B.Ch. Oxon. Non-resident House Physicians: P. J. A. Seccombe, M.A. Cantab., and F. G. Layton. House Surgeons: E. O. Thurston, A. L. Home, W. G. Stone, M.A., M.B., B.Ch. Oxon., and H. J. Davis, B.A., M.B., B.C. Cantab. Assistant House Surgeons: L. A. R. Wallace, B.A., M.B., B.Ch. Oxon., H. C. Crouch, J. L. Prain, and G. J. Conford, B.A., M.B., B.Ch. Oxon. Obstetric House Physicians — Senior: G. Candler, B.A. Cantab. Junior: E. A. Saunders, M.A., M.B., B.Ch. Oxon. Clinical Assistants in Special Departments—Throat: J. W. Cornwall, M.A., M.B., B.C. Cantab. Skin: G. G. Genge, and G. B. C. Blount. Ear: E. W. Palin, M.A., M.B., B.Ch. Oxon., and H. H. Haward, B.A. Cantab. Clinical Assistants in the Electrical Department: W. E. Dixon, B.Sc. Lond. Ophthalmic House Surgeon—Junior: A. H. P. Dawnay.

University College Hospital.—Dr. Bastian has resigned the Professorship of the Principles and Practice of Medicine, and Dr. Fred. T. Roberts has been appointed to succeed him. Dr. Roberts has resigned the Professorship of Materia Medica, and Dr. J. Rose Bradford, D.Sc., F.R.S., has been appointed as his successor. The title of the Chair now is "Materia Medica, Therapeutics and Pharmacology.

Westminster Hospital.—Soon after the beginning of the Winter Session the school suffered a great loss by the death of Dr. Sturges. He had been for twenty-seven years one of the chief teachers in the school and had but recently ceased to lecture on medicine. It has been decided to name one of the hospital wards after him, and a memorial is being raised by past and present members of the school in which some of the governors have joined. It is hoped that this will take the form of a prize or a scholarship in medicine. In consequence of the death of Dr. Sturges the following appointments have been made:—Dr. Potter, treasurer; Dr. De Havilland Hall, Physician to the Hospital; Dr. Gossage, Assistant Physician; Dr. J. P. Parkinson, Medical Registrar. Dr. Gossage has become Lecturer on Histology; Mr. A. H. Tubby has been appointed Assistant Surgeon and has been put in charge of the Orthopædic Department—he will give the Lectures on Minor Surgery and on Orthopædic Surgery; Mr. Brooksbank James has been appointed Assistant Demonstrator of Anatomy; and Mr. R. N. Watson, Demonstrator of Biology.

Mason College, Birmingham.—The chair of Midwifery, vacant by the death of Mr. John Clay, has been filled by the appointment of Mr. Edward Malins, M.D. Edin., M.R.C.P.; Mr. James W. Russell, M.A., M.D. Cantab., M.R.C.P., has been appointed Assistant to the chair of Medicine; Mr. J. T. J. Morrison, M.A., M.B., F.R.C.S. Eng., Assistant to the chair of Surgery; and Mr. C. E. Purslow, M.D., M.R.C.P., Assistant to the chair of Midwifery and Gynæcology. Mr. Wm. F. Haslam, F.R.C.S. Eng., has also been appointed Lecturer on Applied Anatomy.

Owens College.—Professor Ransome has resigned, and Dr. Paget alone takes charge of the class of Public Health. Mr. P. Thompson succeeds Dr. Chalmers as Demonstrator of Anatomy.

University College, Liverpool.—Physiology: Professor C. S. Sherrington, M.A., M.D., F.R.S., has succeeded Professor F. Gotch, M.A., F.R.S., appointed to Waynflete chair of in Physiology the University of Oxford. Dr. A. G. Gullan has been elected Demonstrator of Anatomy in place of Dr. Evans, resigned. Dr. R. J. M. Buchanan has been appointed Demonstrator of Toxicology, and Mr. J. A. Woods, L.D.S., Demonstrator of Dental Anatomy and Histology.

University College, Bristol.—Dr. J. E. Shaw has been appointed Joint Professor of Medicine in the place of Dr. Shingleton Smith, who has resigned; and Dr. Aust Lawrence has been appointed sole Professor of Midwifery, Dr. Swayne having resigned the half-chair.

Sheffield School of Medicine.—Dr. Harvey Littlejohn has been appointed Lecturer on Public Health vice Dr. Sinclair White; Dr. Andrew Walker, Assistant Demonstrator of Practical Physiology; and Dr. Wilkinson and Dr. Somerville Demonstrators of Practical Pathology.

Radcliffe Infirmary, Oxford.—Professor J. S. Burdon Sanderson, M.A., M.D., LL.D., F.R.S., has been appointed Consulting Physician, vice Sir H. W. Acland, Bart., K.C.B., M.D., resigned. W. Tyrrell Brooks, M.B. Lond., M.A. Oxon., W. Collier, M.A., M.D. Cantab., F.R.C.P. Lond., and G. J. Wilson, M.A. Oxon., M.D., M.R.C.S. Eng., are the Physicians, the last named gentleman being recently appointed. Alfred Winkfield, F.R.C.S. Eng., Horatio P. Symonds, M.R.C.S. Eng., F.R.C.S. Edin., and W. Lewis Morgan, M.A. Oxon., M.R.C.S., L.R.C.P. Lond., occupy the post of Surgeons. Ernest W. Blackburn, M.B., B.Ch. Oxon, M.R.C.S., L.R.C.P. Lond., has been recently appointed House Physician, as has also John Clay, M.B., B.S. Durh., House Surgeon. E. A. Bevers, M.R.C.S. Eng., L.S.A., is Consulting Dental Surgeon.

Anderson's College, Glasgow.—The following changes have taken place during the year:—Physics: Professor Peter Bennett, vice Professor Peter Alexander (deceased). Surgery: Professor T. Kennedy Dalziel, M.B., vice Professor James Dunlop, M.D. (resigned). Medical Jurisprudence: Professor R. M. Buchanan, M.B., vice Professor T. Kennedy Dalziel, M.B. (resigned). Hygiene and Public Health: Dr. J. Pearson Munro, vice Dr. W. Campbell Downs (resigned). Aural Surgery: Dr. James Erskine, M.A., vice Dr. Thomas Barr (resigned).

St. Mungo's College.—Dr. Lindsay Steven has resigned the chair of Pathology on being elected a Physician to the Royal Infirmary. Charles Workman, M.D., F.F.P.S.G., &c., has been appointed to the chair of Pathology. Alexander Thomson, M.A., LL.B. Advocate, has resigned the chairs of International Law, Public and Private. The vacancy has not been filled up.

University College, Dundee.—Chemistry: Professor James Walker, D.Sc. &c. Anatomy: Professor J. Yule Mackay, M.D. Medical Jurisprudence Lecturer: Dr Templeman. Mental Diseases Lecturer: Dr. Rorie. Ophthalmology Lecturer: Dr. McGillivray.

UNITED HOSPITAL ATHLETICS.

THE student, on entering at a London hospital, is early confronted with the question of athletic exercise, in what form it can be obtained, at the expense of how much time, and—a matter of great consequence to many students—at what cost. To obtain a satisfactory answer to this question—and it is one concerning which he will be unable to ascertain anything definite before his entry into the hospital—his best course of proceeding is, immediately on joining, to inquire for the secretaries of the various clubs, who will be only too glad to give every information in their power. The financial aspect of the question is settled in an excellent manner at some hospitals—e.g., Middlesex Hospital, by the addition to the total sum of fees paid by the student on joining of a sum of three, or at most five, guineas, which will make him a member of the amalgamated clubs, or of their various branches, for the whole five years of his curriculum. At other hospitals the system of payment by instalments—which may be compounded at any time by payment of a lump sum—is in vogue, and is of advantage to occasional students. With regard to the time expended on the pursuit of athletics, whilst they are necessarily of secondary importance to work, the student will find that his work does not suffer at all, but is even improved, by a certain amount of active exercise, even though he may grudge the time and discomfort involved in the railway journey which is unfortunately a necessary accompaniment to games played in the neighbourhood of London. On the other hand there is the acknowledged truism that he will be unable to work the whole of his time, and so, unless able to join with others in games of different kinds, he will find time fall very heavily upon his hands, and that socially he is apt to be relegated to a lower scale amongst his fellow students. There must unfortunately be always at a hospital some men who will rush to extremes in the matter of sport, and whose work consequently suffers; but as the student goes on he will notice—perhaps to his surprise—that many of the men who have done best in work at the hospital and in after-life have also been noted for prowess in the athletic field. With regard to the varieties of athletics open to the student there can be little cause of complaint. Several hospitals now possess private grounds, which are of inestimable value both by tending to improve the athletic status of the hospital and also socially by producing and maintaining friendly relations between senior and junior students.

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Amongst those possessing private grounds are Guy's Hospital, at Honor Oak, and King's College, at Wormwood Scrubs. Within the past year St. Bartholomew's Hospital has followed their example by obtaining a ground within easy reach at Nunhead, whilst students at St. Thomas's Hospital have the benefit of practising upon the grounds adjoining Lambeth Palace. On these grounds cricket, tennis, and both varieties of football are played, whilst rowing and golf are practised by the students of some hospitals.

In RUGBY FOOTBALL St. Thomas's Hospital again succeeded in retaining the Cup, which they have held in succession for three years. Considerable excitement was caused by their drawing with St. Bartholomew's Hospital in the semi-final round, the score being one try each; but on their meeting a second time St. Thomas's Hospital won pretty easily and defeated Guy's Hospital in the final without much difficulty. A match was played with the United Hospitals of Dublin, in which the Londoners won by one try. In ASSOCIATION FOOTBALL Guy's Hospital and St. Bartholomew's Hospital contested the final, when the latter won by three goals to one after a hard game.

The CUP for LAWN TENNIS also fell to St. Thomas's Hospital, who defeated St. Bartholomew's Hospital by a narrow margin.

A BOXING CONTEST was held early in June last, but was unfortunate in the time and in the venue selected. It was only sparsely attended, and can hardly be considered to be representative. The majority of the events were won by University College Hospital.

A BICYCLING COMPETITION was held at Herne Hill, when Guy's Hospital and the London Hospital tied for first place. This is the first competition of the kind held under the auspices of the United Hospitals.

With regard to ATHLETIC SPORTS the Shield was won by Guy's Hospital by the narrow majority of half a point over St. Mary's Hospital, the scores being 3½ to 3. Munro again won the Mile and Three Miles, but Bell was beaten in the 100 Yards by Woodyatt, a fast sprinter from University College Hospital, and could only manage to make a dead-heat of the High Jump with Adams of Middlesex Hospital. Butler of St. Mary's Hospital won the Quarter- and Half-mile in very good time, establishing a hospital record for the latter distance. A contest took place with the Cambridge University Athletic Club, in which the hospital representatives, though beaten by 6 events to 3, made a very good fight, being only beaten by the very narrowest margins in two of the events. Altogether, it may be considered that the athletic sports are much the most satisfactorily managed branch of sport in connexion with the United Hospitals.

Guy's Hospital were again successful in retaining the HARE AND HOUNDS Cup for long distance running, and also obtained the Challenge Cup for WATER POLO by defeating St. Bartholomew's Hospital. The SHOOTING Cup, annually competed for at Bisley, fell again to St. Thomas's Hospital for the eighth year in succession.

OPENING OF THE MEDICAL SCHOOLS.

WINTER SESSION, 1895-96.

METROPOLITAN.

St. Bartholomew's Hospital.—The session will open on Tuesday, Oct. 1st. The old students' dinner will be held in the great hall of the hospital on the same evening.

Charing-cross Hospital.—The term will commence on Tuesday, Oct. 1st.

St. George's Hospital.—The school will open for the session on Tuesday, Oct. 1st, when the introductory address will be delivered by Mr. G. D. Pollock at 4 P.M.

Guy's Hospital.—The school begins its winter term on Tuesday, Oct. 1st. On the evening of the same day the first meeting of the Physical Society will be held, under the presidency of Dr. Wilks, F.R.S. Mr. George De'Ath will read a paper on Our Profession, our Patients, our Public, and our Press.

King's College Hospital.—Tuesday, Oct. 1st, is the date fixed for the opening of the Winter Session.

London Hospital.—The school opens on Tuesday, Oct. 1st. In the afternoon there will be a distribution of prizes to the students and probationers. On the same occasion the portrait of Dr. Hughlings Jackson, F.R.S., subscribed for by his friends on his retirement from the active staff of the Hospital upon the conclusion of his full term of office, will be presented to him. The old students' dinner will be held in the evening at 7.30 P.M. at the Criterion Hotel.

St. Mary's Hospital.—On the occasion of the opening, Tuesday, Oct. 1st, the Introductory Address will be delivered by Mr. A. P. Laurie, M.A., B.Sc. The annual dinner of past and present students will be held at the King's Hall, Holborn Restaurant, on the same evening Mr. Malcolm Morris in the chair.

Middlesex Hospital.—The session commences on Tuesday Oct. 1st. The introductory lecture will be given b Dr. W. Julius Mickle.

St. Thomas's Hospital.—The winter session will commence o Wednesday, Oct. 2nd, and terminate on March 31s The prizes will be distributed in the Governors' Ha on the same day at 3 P.M., when the introducto address will be delivered by Sir Edwin Arnol K.C.I.E., C.S.I. During the afternoon the vario departments of the hospital and school will be op for the inspection of visitors. Refreshments will provided in the Library. The annual dinner, in whi all former and present students are invited to join, w take place the same evening at the Hôtel Métropo at 6 for 6.30 o'clock, Dr. Payne in the chair.

University College.—The school opens on Tuesday, Oct. 1 and the introductory address will be delivered by J. Rose Bradford, M.D., D.Sc., F.R.S., at 4 P.M. annual dinner of the old and present students of Faculty of Medicine will be held at the Hôtel Mé pole on Tuesday, Oct. 1st, at 6.30 P.M. Profes Michael Foster, M.D., F.R.S., will preside.

Westminster Hospital.—The introductory address will delivered by Dr. Monkton Copeman, medical inspe H.M. Local Government Board. Lectures on Pu Health will be delivered on Tuesday, Oct. 1st, at 4 at the school, Caxton-street, and will be immedia followed by the distribution of prizes by the Right H Viscount Peel. The annual dinner will take plac the Café Monico at 7 P.M., Dr. de Havilland Ha the chair. Secretary of dinner, Dr. W. A. Wills.

School of Medicine for Women (Royal Free Hospit The winter session will begin on Tuesday, Oct when the opening address will be given by Ellaby, M.D., at 3.30 P.M.

Dental Hospital (Leicester-square).—The school ope Tuesday, Oct. 1st.

National Dental Hospital (Great Portland-street).—The ing date is Tuesday, Oct. 1st.

Pharmaceutical Society of Great Britain.—The fifty- session, 1895-1896, will commence on Wedn Oct. 2nd. The prizes of the last session will be buted by the President on Wednesday, Oct. 2nd P.M., and an inaugural address to the students given by Dr. Frederick T. Roberts, F.R.C.P., Pr of Medicine in University College, London.

Royal Veterinary College.—The opening address delivered by Professor Penberthy on Wed Oct. 2nd.

PROVINCIAL.

Mason College, Birmingham.—The term begins on T Oct. 1st, and the introductory address will b by Professor Percy F. Frankland, Ph.D., B.Sc., on Pasteur and His Work, the Debt of Med Chemistry.

Durham University.—The term will commence on Oct. 1st.

Yorkshire College, Leeds.—The opening address delivered by Prof. D. J. Leech, M.D., F.R Tuesday, Oct. 1st, and the prizes will be di on the same occasion.

Owens College, Manchester.—The term will comm Friday, Oct. 18th.

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University College, Liverpool.—The College will open on Tuesday, Oct. 1st, at 3 P.M., when Mr. Jonathan Hutchinson, F.R.C.S., will deliver the Introductory Address. The foundation-stone will afterwards be laid of new Physiological and Pathological Laboratories.

University College, Bristol.—The winter session commences on Tuesday, Oct. 1st.

Sheffield School of Medicine.—Tuesday, Oct. 1st, is the date fixed for the opening of the winter term, and the introductory address will be delivered by Victor Horsley, F.R.S., at 4.30 P.M.

SCOTLAND.

Anderson's College, Glasgow.—Opens on Tuesday, Oct. 22nd.

St. Mungo's.—The session opens on Wednesday, Oct. 23rd, when Professor F. H. Napier, M.B., F.R.C.S., will deliver the inaugural address.

St. Andrews University.—The College formally opens on Tuesday, Oct. 8th, and the winter session will commence on the following day.

University College, Dundee.—The opening date of the term is Thursday, Oct. 10th.

IRELAND.

Queen's College, Cork.—The session commences on Tuesday, Oct. 15th.

Owing to the great pressure on our space we have been compelled to hold over till next week the List of Prizemen and Medallists at the Metropolitan Medical Schools.

Annotations.

"Ne quid nimis."

H.R.H. PRINCE EDWARD OF YORK.

IN an illustrated American paper of Aug. 17th a paragraph is published in which it is urged that a rumour which has circulated "all over the world" to the effect that Prince Edward of York is both deaf and dumb should, if untrue, be promptly contradicted as tending to give unnecessary pain to his parents and the rest of the Royal Family. We are glad to be able to state authoritatively that there is absolutely no truth in the report in question. Indeed, we have excellent reasons for knowing that Prince Edward of York is in every respect a very fine child, that he displays remarkable intelligence for his age, and that he can already repeat a number of words. Do our go-ahead American cousins expect a child nowadays to speak as soon as he (or she) is born?

THE ALLEGED DEARTH OF SKELETONS.

THE alleged dearth of skeletons is a matter of serious import to anatomical schools. A paragraph has lately been going the round of the American press from which it would appear that on the other side of the Atlantic a good skeleton commands the price of a good horse. Within three weeks of the issue of our Students' Number there will be an immense demand among students all over the United Kingdom for "bones," and it is gratifying to know that up to the present time there has been no paramount difficulty in meeting it. We hope that the price of "bones" will not go up with us, as we think that every student who can possibly afford it should have a set from which to study. The foundation of sound anatomy is a knowledge of the bones, and to acquire this a man must have a set always by him so that he can be constantly assuring and reassuring himself that the foundations are firm, even after he has reared upon them elaborate structures of after knowledge, physiological and embryological. Plates and diagrams are of every use, and good demonstrations are of invaluable assistance, but a deep familiarity with the "bones"—all the "bones" and all their minutest features, not a more or less temporary acquaintance with some of the salient points of the more recondite parts of the skeleton—is indispensable to the student of anatomy who desires to become an anatomist. Let every student who can possibly meet the necessary expense become the owner of a set. But to this word of advice we would add one word of caution. It is a good thing to study the "bones" used by another student occasionally, for sometimes a man will carry his acquaintance with one set of "bones" to such a point that he only knows the osseous points upon his private possession, and cannot distinguish, for instance, the borders and surfaces of the fibula upon a fellow student's unfamiliar specimen.

MEDICINE AND CRICKET.

IN days when something like a general conspiracy may seem to exist in the press to exalt athletic prowess unduly, some may, perhaps, question the wisdom of calling attention in our Students' Number to the cricketing feats of the medical profession witnessed during the season that is now closing. But the remarkable prominence of the position taken by several gentlemen following our calling demands, we think, a few words from us. The foremost cricketer the world has ever seen, who commenced the season of 1895 by surpassing in many ways all his previous performances, wonderful as they were and ranging over twenty-five years of first-class contests, Mr. W. G. Grace, is a medical man. His brother, Mr. E. M. Grace, who has but recently ceased to appear uniformly for Gloucestershire, is also a medical man. Other well-known names are those of Mr. Russell Bencraft, the careful and indefatigable captain of the Hampshire county team; Dr. W. J. Scott and Dr. G. Thornton, who each at different times rendered valuable service for Middlesex; Mr. J. A. Dixon, one of the few amateurs who played regularly for Nottinghamshire in the lace county's palmiest days, and who has struggled this year as hard as any member of the team to avert the fate that has befallen them of figuring so low upon the inter-county championship list; Mr. W. G. Heasman, a valuable though only occasional supporter of Sussex; and Dr. F. J. Poynton and Surgeon-Captain Trask, fairly regular members of the Somersetshire team. We do not attempt to make the list exhaustive, but only to give enough names to show that in the national game our profession has not been found wanting; and if the names are not many the form displayed is at any rate very high, while it must be remembered that it is not often that a medical man can find time to pursue a sport making such demand upon his time as first-class cricket. But when opportunity occasionally permits him to do so it is gratifying to find that his services are generally valuable to his side.

THE STORY OF THE HEALING ART.[1]

IT is a fact, acknowledged and regretted, that very few graduates and diplomates in medicine and surgery embark on professional practice with anything like an adequate appreciation of the history of their calling. Beyond some vague notions of the empiric, or more properly the "dæmonic," medicine of the East and of its first development as a science under Hippocrates, they know little or nothing of the steps by which the scientific stage was reached. How the Father of Medicine conceived and dealt with human maladies as a branch of natural history, to be studied like any other process of nature and mastered by observation, supplemented

[1] Medical History from the Earliest Times: a Popular History of the Healing Art. By Edward Theodore Withington, M.A., M.B. Oxon. With Two Illustrations. London: The Scientific Press, Limited. 1894.

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by experiment and checked by experience; how the theorising tendency and the craving after "system" deflected the course of medical science and practice into channels issuing only in confusion and failure; how the reforms in method, inaugurated by Bacon and Galileo, gradually weaned the students and practitioners of the healing art from the seductions of "the high *priori* road," until the opening of the nineteenth century, and the progress made in physics, chemistry, and physiology—the so-called "institutes of medicine"—witnessed and promoted a return to the sound Hippocratic school,—all this, we say, is imperfectly known even in outline, still more imperfectly in detail, even by many consultants and teachers of the highest accomplishment in their respective walks. Medical history, as a branch of professional knowledge, indeed, has been too long a study by itself—a field exclusively cultivated by the curious in scientific scholarship and literature too long divorced from the appreciation of a calling which justly claims to be "liberal" in the same sense as theology and law. No student in divinity considers his equipment complete without a course of Church history; no student of law who aspires to the higher grades of the profession denies himself a survey, at the hands of a competent lecturer, of the successive phases through which the conception of right and its practical applications have passed. Medicine alone among the sister professions permits its votaries to leave its halls without that study of its past which "intelligent curiosity" alone would of itself seem to impose as at once a pleasure and a duty.

In proof of this we may notice the fact that until quite the other day the medical student—in the British Isles at least—had no work in the vernacular from which he might acquire a sound and comprehensive view of the rise and progress of his profession. France, Germany, Italy—all had histories of medicine, exhaustive or summarised, in which the student, whether thoroughgoing or superficial in his demands, could get what he wanted. Great Britain alone had nothing of either kind to show since Dr. Freind's treatise, published early in the last century, or the fragment by Dr. Meryon, which came to a premature stop in the later decades of the nineteenth. Int recen years, however, a growing sense of the importance of the subject, manifested even in the necessarily restricted articles on it in our encyclopædias, has elicited more than one treatise addressed to the British student. Translation, moreover, has brought within his range such admirable treatises as that of the Austrian Puschmann. And now, following closely on each other, we have had several abridgements, various in merit if identical in aim, of the master works of Harser, Puccinotti, and Daremberg, all of them appealing to the British practitioner and each of them supplying with more or less fulness and accuracy that survey of the medical past in which his interest has at length, if all too tardily, been awakened.

Of these works, by far the best is Dr. Withington's. He has come to his task well equipped with the necessary qualifications, professional, scholarly, and literary. His "standard" is high, quite in keeping with that of the University whose function was declared by one of its most eminent sons to be this: "To teach the student to know what knowledge of a subject means"; and he keeps throughout a watchful eye on what it is necessary his reader should be familiarised with and what he may without prejudice leave on one side. It is a history of medicine, in short, which the profounder student may accept as an introduction to the more exhaustive works of Continental, especially German, authors, and which the busy practitioner will find supplies him with all he may reasonably be expected to know. To have hit this happy mean has cost Dr. Withington no small pains, evidenced in the scrupulous care with which he dwells on the central figures of his subject, and relegates their satellites to compendious summaries, which he calls "Notes," for those who are content with nothing but the "omne scibile" of the subject. These notes consist largely of references to original and more voluminous authorities, and if followed up will place the reader in full enjoyment of the "atmosphere," so to speak—the environment, moral and material—in which the medical world of the special period lived and moved. A few test passages will assure the reader at once as to how far Dr. Withington has kept himself abreast of contemporary advance. Take, for instance, that devoted to Glisson, whose rehabilitation made peculiarly memorable Professor Virchow's recent visit to London. The reader will find that as regards the priority claimed for Haller in the discovery of "irritability," Gli anticipation of the great Swiss physiologist is establ beyond cavil. Again, the interesting section (pp. 254 on Paracelsus is quite up to date, the well-known vie Hirsch and Virchow on "that most striking figure amor physicians of the sixteenth century, perhaps in the of medical history," being evidently familiar to our a The appendices, too, on subsidiary points of m interest are well worthy of independent perusal; a them that on Mediæval Monastic Medicine, and, more, that on "the Galenic system" being careful judicious expositions of two much disputed episodes i history of medicine. But we have said enough to attra reader to a work as interesting as it is attractive, an merely add that the illustrations form a highly eff feature of some of its obscurer passages, and th elaborate, though not too minutely detailed, index faci references admirably.

THE SERVICES.

ANY man who has still to study with a view to pass examination is a student, and we take the opport therefore, in our Students' Number of printing the set in the last examination of candidates for entry Majesty's Army and Indian Medical Services. We a quently asked for copies of these examination papers an expression of opinion on the text. The questi natural science have been omitted.

Three hours allowed for each subject.

MEDICINE (DR. ALLCHIN).

1. Comment on the following cases in reference (A) nature and situation of the lesion, setting forth the g for the diagnosis; (B) the prognosis:—

A.

W. M——, fifty-two, a painter, admitted into hospital June 1 His family history unimportant. He has always been very ten Has never had syphilis. Is said to have suffered from acute n ten years ago, and two years since fell from a scaffold, breaki arms and cutting his forehead; the scar of the latter persists, right elbow has always been somewhat stiff since the accide months ago he is reported as having had a "fainting fit," particulars of it are to be obtained.

The present illness began on June 1st, when he was at work suddenly feeling giddy and almost falling, but with no loss of co ness. With assistance he was able to walk a short distance, three-quarters of an hour after the first attack whilst at home felt "queer" and giddy, and quickly lost power on his right s without any impairment of consciousness. He was at once take hospital and admitted.

On admission he was found to be well nourished, fully int completely paralysed in the right arm and leg, and with son facial paralysis. Speech thick, but no confusion of words. L rather larger than right; both act readily to light and accomm Movements of eyeballs normal. Tongue protruded to th General sensation in right arm and leg somewhat impaired. Ki equal and fairly sharp. Pulse 60, regular, full; vessels hard, impulse very indistinct, but felt slightly external to nipp accentuation of aortic second sound. A hyper-resonant percuss over the whole of the front of the chest. Nothing abnormal in the abdomen. No blue line at edges of gums. Urine, sp. acid, contains a trace of albumen, no sugar.

In the course of eight or nine days patient began to recov power in his shoulder and elbow, but was unable to move hi three weeks after the attack, by which time he could move tolerably well. He complained of occasional twitchings and tary startings of his right arm and cramp in his legs, but ther rigidity in either limb. Sensibility was completely restored. sign of facial paralysis was to be recognised on June 20th. T always contained a trace of albumin.

B.

J. P——, aged fifty, occupied all his life as a painter, admi hospital May 22nd, 1895. Nothing of interest or bearing on was ascertained in respect to his family history. He had b free from illness all his life, and could only remember "a slight colic" in 1871, and "rheumatism" in 1884, but no certain fa these ailments were obtainable. He had never had syph described himself as being "very temperate," which appears been true.

The illness for which he came under treatment began sud the early evening of Saturday, Jan. 19th, this year. He is have had a hearty dinner midday and also later a heavy tea half an hour after the latter, immediately following an actio bowels, he expressed himself as "feeling queer," and in two fell insensible across a table, though without injuring hims three weeks he remained unconscious, often very noisy, his s thick as to be unintelligible, frequently trying to get out of for the first week incontinence of urine and faces. From the right side of his face and right limbs were paralysed, the la pletely so. At the end of three weeks an improvement set i in his speech and his intelligence, and slowly continued, but t

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very slight recovery of muscular power, and it was only with much difficulty and assistance that he could drag about.

On admission he appeared to be a well-nourished man, perfectly clear-headed and intelligent, with no noticeable defect of speech. Face slightly flatter on right side and drawn very little to the left, tongue protruded in straight line and lying evenly in the mouth, no ocular paralysis, pupils equal and react equally and well to light and accommodation. The power of voluntary movement in his right arm is limited to partial movement of his fingers, but he can raise the whole leg a short distance off the bed, and there is imperfect movement in the toes and at the ankle and knee. Sensation over the right arm is impaired, and he does not distinguish satisfactorily between heat and cold over the same limb; these defects are much less noticeable in the leg. The skin of both right limbs is much moister than on left side. The patellar tendon reflex is increased on both sides, but more marked on the right, and there is also ankle clonus on the same side. The plantar reflexes are very active, and the cremasteric reflexes noticeably sluggish.

Pulse 64, regular, small; arteries hard. Cardiac impulse displaced outwards and somewhat heaving in quality; first sound dull and prolonged, and aortic second sound accentuated. Lungs normal. No blue line on gums. Alimentary organs normal. Urine acid, pale, sp. gr. 1020, trace of albumen, no sugar.

During the next month patient remained in much the same state, the power in the right leg was sometimes rather better, and then appeared as if there were no improvement. Generally some stiffness was perceptible in the right arm, which occasionally was considerable. The urine continued as described.

2. Describe the morbid condition known as "fibroid phthisis," and the signs and symptoms upon which its diagnosis would be made.

3. What are the causes of chronic peritonitis? Describe the symptoms, course, post-mortem appearances, and treatment of a well-marked case.

4. Describe in full detail the entire treatment you would adopt for a severe case of scarlet fever complicated by acute nephritis in a young adult.

SURGERY (SIR WILLIAM MACCORMAC).

1. Enumerate the causes which may produce epididymitis. Give the symptoms, differential diagnosis, possible complications, and treatment succinctly of each form.

2. State in detail the circumstances which may render excision of the eyeball necessary, and describe the operation.

3. What causes tend to produce popliteal aneurysm in a young adult? Describe the changes which take place in the artery and adjacent structures, the treatment you would adopt, and the results which may follow.

4. Describe a case of severe cut-throat occurring in the more common situation. What structures may be involved or endangered? What complications may ensue? Give your treatment of the case.

CHEMISTRY AND MATERIA MEDICA (DR. SHORE).

1. Give an account of fluorine—how it has been isolated, its properties, and its most important compounds.

2. What is the chemical constitution of a fat? Into what substances is a fat resolved by heating it with steam under high pressure? What is the relation between a fat and a soap? Give equations.

3. Mention the chief remedies which may influence the heart's beat, and classify them according to their modes of action.

4. What is the botanical nature of ergot? Mention its preparations. Describe its physiological actions and its uses in medicine.

5. What is meant by "antagonism" between two drugs? To what extent are opium and belladonna antagonistic, and in what way are nux vomica and Calabar bean antagonistic to each other?

ANATOMY AND PHYSIOLOGY (MR. MAKINS).

1. Describe the cavernous sinus, mention its communications, and give its relations to included and surrounding structures.

2. Give the origin, course, relations, and distribution of the anterior crural nerve.

3. Describe the condition known as hemiopia. What varieties are met with, and how may they be explained on physiological grounds?

4. Give a short account of the manner in which the organic elements of food are prepared for absorption into the system, and state how the proteid, carbohydrate, and fatty elements respectively are taken up.

MR. WILLIAM C. ELLIS, L.R.C.P. and S. Edin., has received the award for efficient vaccination in the Tollerton district of the Easingwold Union.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLDEN, SIDNEY J., M.D., has been appointed Medical Officer of the Third District, Bridport Union.

HALL, GILBERT C., M.R.C.S. Eng., L.S.A. Lond., has been appointed Medical Officer of Health, Ambersley District, Droitwich Union.

HOGARTH, R. G., who has been appointed Senior Resident Medical Officer to the General Hospital, Nottingham, has recently been made a Fellow of the Royal College of Surgeons of England.

YEARSLEY, P. MACLEOD, F.R.C.S., has been appointed Clinical Assistant to the Central London Throat and Ear Hospital.

YOUNG, A. G., M.B., B.S. Dubl., has been appointed Medical Officer of the Billington District, Norton (out relief) Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON UNION.—Resident Assistant Medical Officer. Salary £100 per annum, with furnished apartments, rations, washing, &c.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Surgeon, tenable for two years. Salary £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence, and allowance for washing provided.

COUNTY COUNCIL OF CUMBERLAND.—Lady Lecturer in Nursing and Hygiene, qualified. Salary £100 and travelling expenses.

DENTAL HOSPITAL OF LONDON.—Two Demonstrators. The honorarium is £50 per annum.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Clinical Assistant for six months.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120.

GREAT YARMOUTH HOSPITAL.—House Surgeon on Oct. 3rd next. Salary £90 per annum, with board and lodging.

LANCASTER INFIRMARY AND DISPENSARY.—House Surgeon (unmarried). Salary £80, with residence, board, attendance, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon. Appointments for six months. The House Physician and House Surgeon will each receive a salary at the rate of £60 a year.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. No salary, but board, lodging, and washing provided.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon for one year. Salary £60, with board, lodging, and washing.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Assistant Demonstrator of Chemistry.

ST. LEONARD, Shoreditch.—Resident Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150 per annum, with rations, furnished apartments, and washing in the Infirmary.

WARNEFORD ASYLUM, Oxford.—Locum Tenens for Assistant Medical Officer for four weeks.

WEST KENT SANITARY DISTRICT.—Medical Officer of Health. Salary £600 per annum and £100 for a clerk.

Births, Marriages, and Deaths.

BIRTHS.

KENNEDY.—On Aug. 28th, at 113, Balaam street, Plaistow, E., the wife of Angus E. Kennedy, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., of a daughter.

POPE.—On Aug. 31st, at Goldhawk-road, W., the wife of H. Campbell Pope, M.D. Lond., F.R.C.S., of a daughter.

MARRIAGES.

BANKS—DAVEY.—On Aug. 29th, at Holy Trinity, Ryde, Alfred Banks, F.R.C.S., to Elizabeth Maud, daughter of Alexander G. Davey, M.D.

SMITH—WILKS.—On Aug. 28th, at St. Mary's, Oatlands, T. W. Smith, M.D., to Alice Maud, daughter of the late J. J. Wilks.

DEATHS.

ALDRIDGE.—On Aug. 27th, in London, suddenly, Arthur Russell Aldridge, M.D., J.P., of Yeovil, Somerset.

CARTER.—On Aug. 30th, at Cambridge, James Carter, F.R.C.S.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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OUR CURRENT NUMBER

Being almost exclusively devoted to information especially interesting to Students, we are necessarily compelled to defer the publication of communications on other important subjects.

We tender our best thanks to those gentlemen who have kindly at considerable personal trouble supplied us with the returns and prospectuses upon which the information given in this Students' Number of THE LANCET *relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom is based.*

Communications, Letters &c. have been received from—

A.—Dr. J. Attlee, Lond.; Mr. H. E. Armstrong, Newcastle-on-Tyne; Messrs. Allen and Hanburys, Lond.; Alpha, Lond.

B.—Dr. P. H. Boyden, Bombooke Dock; Dr. D. C. Black, Glasgow; Dr. A. O. Bobardt, Barrier Reef, Queensland; Mr. F. Brown, Lond.; Mr. R. F. Bate, Sheerness; Mr. C. Birchall, Liverpool; Mr. M. G. Biggs, Lond.; Mr. J. Beckton, Lond.; Messrs. Blackie and Son, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Birkbeck Literary and Scientific Institution, Lond.

C.—Dr. T. J. Croke, Harrogate; Dr. J. Culross, Newton Abbot; Mr. T. Cooke, Lond.; Mr. J. N. Cregeen, Liverpool; Mr. W. F. Clay, Edinburgh; Messrs. C. S. Cox and Co., Lond.; Messrs. C. J. Clay and Sons, Lond.; Cortland Wagon Co., Lond.; Chesterfield Hospital, Secretary of; Cumberland County Council, Carlisle, Secretary of; Class Rooms, Edinburgh; C. J. H., Lond.

D.—Dr. R. Drew, Hamburg; Surg.-Capt. H. E. Drake-Brockman, Bombay; Mr. A. Duke, Cheltenham; Mr. W. Duncan, Jersey; W. E. Davies, Rochdale; Mr. C. M. Davidson, Lond.

E.—Mr. W. C. Ellis, Yorkshire.

F.—Mr. H. J. Finch, Guildford; Mr. T. B. Flint, Manchester; Messrs. Fannin and Co., Dublin; Forceps, Lond.

G.—Mr. J. Gay, Lond; Messrs. Godfrey and Cooke, Lond.; Globe Advertising Co., Lond.

H.—Dr. W. S. Hedley, Brighton; Mr. M. P. Holt, Aldershot Camp; Mr. R. B. Hunt, West Ham; Mr. W. Herbert, Rickmansworth; Mr. G. Hermanni, jun., Lond.; Mr. G. Hamilton, Lond.; Mr. J. Heywood, Manchester; Mr. F. Hobday, Lond.; Mr. G. R. Harcourt, Lond.; Mrs. Heberden, Weston-super-Mare; L. N. Harding, Brighton; Messrs. Hooper and Batty, Lond.; Messrs. Hertz and Collingwood, Lond.; Messrs. Haasenstein and Vogler, Geneva; Hamilton Association, Lond.

I.—Mr. J. Iredale, Mablethorpe; Insurance, Nuneaton.

J.—Dr. C. E. Jennings, Lond.; Dr. Jangery, Dieppe; Mr. A. W. L. Jones, Aylesbury; Mr. Y. M. Jones-Humphreys, Cemmaes; Mr. T. Johnston, Wood Setton.

K.—Dr. C. F. Knight, Portobello; Mr. M. N. Korde, Umaria, India; Miss M. H. Kelly, Paris.

L.—Mr. H. K. Lewis, Lond.; Local London Press Exchange; Life Saving Society, Lond., Secretary of; Government Health Branch, Cape Town; Laryngo, Lond.

M.—Mr. A. B. Myers, Instow; Mr. T. C. Maguire, Lond.; Mr. H. M. N. Milton, Cairo; Mr. R. H. Monks, Wigan; Mr. R. G. Mullen, Bromley; Mr. F. G. Melkardo, Lond.; Messrs. Macmillan and Co., Lond.; M., Hythe; Medicus.

N.—N., Lond.

P.—Mr. H. J. Pryse, Keighley; Mr. J. B. Pike, Loughborough; Mr. H. Petty, Lond.; Messrs. Pestonji, Perozshaw, and Co., Hyderabad; Principal, Lond.

R.—Dr. R. D. Russell, Cedar Bluffs, U.S.A.; Rotherham Hospital, House Surgeon of; Registrar-General, The, Brisbane.

S.—Dr. R. C. Shettle, Reading; Dr. A. F. Street, Westgate-on-Sea; Mr. H. Stuart, Lond.; Mr. G. H. Smart, Lond.; Mr. E. Streachan, Lond.; Mr. W. B. Shuttleworth, Canada; Mr. A. Stenhouse, Glasgow; Rev. W. J. Stavert, Burnsall; South Devon and East Cornwall Hospital, Plymouth, Secretary of; Scholastic, Clerical, and Medical Association, Lond.; Specialist, Liverpool; Student.

V.—Victim, Notts.

T.—Mr. J. Thin, Edinburgh; Mr. J. Terry, Surrey; Mr. J. J. Tate, Manorhamilton.

W.—Dr. F. Waring, Brighton; Dr. R. T. Williamson, Manchester; Dr. J. C. O. Will, Aberde R. Willson, Oxford; D Wall, Lond.; Mr. W. Woo Lond.; Mr. V. Wood, Lor P. Wilson, Lond.; Me Wood and Co., New Warneford Asylum, Medical Superintende Westminster Colle Chemistry, Secretary of,

X.—X. O. X., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Adams, West Malling; Mr. R. H. Adams, Bolton; Mr. A. H. Allen, Sheffield; J. Attlee, Lond.; Mrs. M. Allen, Lond.; Apollinaris Co., Ltd., Secretary of; Ashton-under-Lyne District Infirmary, Secretary of; Alpha, Lond.; Aconite, Banbury; Ætas, Lond.; Assistant, Portsmouth; Assistant, Lond.

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A Lecture
ON
THE TREATMENT OF ADENOID GROWTHS IN THE NASO-PHARYNX.

Delivered to Students attending the Course on Diseases of the Ear at Glasgow University, June 7th, 1895,

BY THOMAS BARR, M.D. GLASG.,

LECTURER ON DISEASES OF THE EAR, GLASGOW UNIVERSITY; AURAL SURGEON TO GLASGOW WESTERN INFIRMARY AND GLASGOW EAR HOSPITAL; AND AURIST TO GLASGOW SICK CHILDREN'S HOSPITAL.

GENTLEMEN,—We have already considered the symptoms of post-nasal growths, the defective nose breathing, the open mouth, the compressed nostrils, the snoring and even embarrassed breathing during sleep, the sluggish intellectual powers, and notably the defective hearing from middle-ear disease. Such a combination of symptoms occurring in early life generally denotes the existence of these growths in the naso-pharynx.

Importance of early removal.—We found that these vegetations tended to atrophy and disappear spontaneously when adult age is reached, and hence the question might be asked, Why not wait for their spontaneous disappearance? No doubt in slight cases, presenting few symptoms, and especially if unattended by ear mischief, no harm would follow the policy of waiting for their spontaneous disappearance. In most instances, however, such delay might be fraught with most important consequences. Dr. Semon gives the following pregnant reasons against delay in removing these growths: (1) the influence of the obstruction upon general health, mental development, and upon the formation of the face, results which remain for ever even if the glands themselves undergo atrophy; (2) the ever-present danger of ear complications; and (3) the greater liability to and seriousness of infectious diseases of childhood, especially diphtheria and scarlet fever, so long as the hypertrophic glands are present.

Modes of operating.—The operative is the only form of treatment worthy of consideration. Of the many methods of operating for the removal of these growths that with Gottstein's curette or some of its modifications is, I think, the simplest and most efficient. It is right, however, that you should be acquainted with the various other methods which are employed, and I shall describe these, as well as the operation with Gottstein's curette, in the following order: (1) the natural finger-nail; (2) the artificial nail; (3) Hartmann's curette; (4) Gottstein's curette or its modifications; (5) Golding-Bird's curette; (6) Lowenberg's forceps and modifications; and (7) Meyer's ring-knife. Sometimes a combination of methods is adopted—the forceps for removing the large tough portions, and the curette and finger-nail for the softer variety and for those growing on the lateral walls of the pharynx. We shall first, however, consider—

The question of anæsthetics.—The question of whether or not an anæsthetic should be administered in the removal of adenoid vegetations, and, if administered, which is the safest and best, has been much discussed.[1] There is no doubt that a general anæsthetic adds a slight element of risk to this operation, which, without an anæsthetic, may be said to be absolutely free from danger. On the other hand, it is found that in the cases of children or very nervous adults it is very difficult without an anæsthetic to eradicate the whole of the growths, at any rate at one sitting. A general anæsthetic is more frequently given in this country than on the Continent, where it is quite customary to repeat the operation, it may be, several times. One of the chief risks in operating under an anæsthetic is that of blood finding its way into the larynx or bronchial tubes, causing asphyxia or failure of the heart's action or subsequent inflammation of the lungs. This danger may be said to be almost entirely averted by the adoption of a suitable position for the patient, by the prompt use of sponges, and, above all, by a proper method of giving the anæsthetic. In regard to the position of the patient during anæsthesia most surgeons operate with the patient's head hanging backwards over the end of the operating-table, so that the blood or fragments of detached growth may pass out through the anterior nares or mouth. Unfortunately, this dependent position of the head tends for the time being to increase the bleeding, which, however, as a rule, soon ceases after the head has been raised. Some operators, such as Mr. Hovell, prefer that the head should be on a level with the body and trust to the rapid mopping up of the blood with sponges. Mr. Butlin operates with the patient on his side, the thighs being flexed and the head bent a little forward on a low pillow. Mr. Braine, in giving nitrous oxide gas and ether, chiefly for the operation with the finger-nail, first places the patient in the semi-recumbent position, and, when the narcosis is sufficiently complete, he flexes the trunk forcibly on the thighs—the blood escaping from the mouth and nose into a basin placed between the patient's knees. In the curette operation under an anæsthetic I always operate with the dependent position of the patient's head, and even then rapid removal of the blood by sponges is necessary to prevent the suction of blood into the trachea. With nitrous oxide gas the sitting posture may be justifiable. In regard to the kind of anæsthetic employed, the fact of several deaths having occurred from the use of chloroform has led some to discard it and to resort to ether or nitrous oxide gas, or to both. It is alleged in favour of ether that the power of coughing and swallowing is generally retained, and that the noisy respiration of ether anæsthesia, compared with the quiet breathing of chloroform, keeps you better informed as to the state of the respiration; while in the event of obstruction to the respiration the heart's action under ether does not fail so quickly. On the other hand, the large quantity of frothy secretion which is usually poured into the throat and the more profuse bleeding due to great venous turgidity are highly objectionable features of ether narcosis; while the laboured and stertorous breathing, instead of being an advantage, may rather tend to suck the blood and frothy secretion into the larynx. Nitrous oxide gas may suffice with the nail operation or even with a rapid curette operation, but it does not allow of sufficient time for the use of forceps. In order to save time the gag should be introduced before the beginning of the administration of the gas. Some operators begin with nitrous oxide gas, then go on to ether, and when the patient is fairly deeply anæsthetised they continue with chloroform till the end of the operation. While I have operated both with ether and nitrous oxide gas as anæsthetics, my experience has led me to prefer chloroform, cautiously and sparingly given on a mask, with a plentiful supply of air, care being taken that while the corneal reflex is abolished the cough and swallowing reflex should not be entirely in abeyance. It is important, however, that, though very deep chloroform narcosis is to be avoided, it should be deep enough to relax the muscles of the face and to prevent retching during the operation. When the growths are numerous and large, prolonging the operation, the anæsthesia may be cautiously maintained by pumping in more of the vapour through a tube from Junker's apparatus held at the side of the gag. It is right to mention, however, that such an important authority on anæsthetics as Dr. Silk disapproves of giving chloroform or any other anæsthetic after anæsthesia has been induced and the operation begun. Upon the importance of this Dr. Silk places great stress. Here it may be remarked that a competent anæsthetist with special experience in these cases is of very great importance. He should wait beside the patient till perfectly satisfied that he is safely out of the anæsthetic. The deaths which have occurred seem to have been in some cases due to the neglect of this precaution. While the surgeon and anæsthetist turned aside for a few minutes to attend to some other matter, thinking the operation was safely completed and the anæsthesia passing off satisfactorily, the fatal result took place from sudden failure of the heart's action.

The finger-nail operation.—Some authorities—such as Mr. Pritchard, Mr. Field, and Mr. Lennox Browne—seem to trust entirely to this method, which was first advocated by Dr. Guye of Amsterdam. There is a decided feeling, however, on the part of most specialists that this method of removal is in general insufficient, and that when employed, subsequent operations are not infrequently required. Only in the softer and flatter forms, occurring in very young children, do I think the method of scraping them away with the finger-nail sufficient by itself to eradicate the growths. The

[1] THE LANCET, Feb. 18th, 1893. See report of discussion on this subject at the Harveian Society.

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finger-nail may, however, be employed with advantage for the clearing away of remnants of growths after the use of a curette or forceps. If the finger-nail treatment be employed the nail of the right index-finger should be kept properly pared, so as to be neither too short nor too long. If too long the nail is apt to bend or even break when tearing off the vegetations. The finger-nail should, of course, be scrupulously clean, and before operating it is a good plan, as proposed by Mr. Pritchard, to immerse it for a short time in rectified spirits, both for its antiseptic effect and its hardening influence on the nail. If no general anæsthetic is given, a 10 per cent. solution of cocaine should be applied to the naso-pharynx either with a spray through the nasal passages or a plug of cotton on forceps introduced from the lower pharynx. The cocaine is more efficient in adults, as we are able in them to apply it more freely and with greater safety to the walls of the naso-pharynx than in children. The child is seated in a chair while the arms and legs are held firmly by assistants, and the right index-finger is introduced into the mouth, moved rapidly backwards, and turned up behind the soft palate. The nail of the finger is then made to tear or cut through the soft tissue in the roof and back wall and from the neighbourhood of the Eustachian prominences, if any there exist. In order to prevent the patient biting the finger of the operator the first phalanx and the metacarpo-phalangeal joint should be protected by thick indiarubber tubing, or, as some operators do, by pressing the cheek of the patient between the patient's teeth on the left side. In some cases the soft palate moves backwards before the finger so as to close the way to the naso-pharynx and prevent the introduction of the finger; in such cases I have found it a good plan to introduce a uvula retractor and press the uvula and soft palate firmly but gently forward with the left hand. When the finger is well into the naso-pharynx the retractor is withdrawn.

The artificial nail.—An artificial nail of steel is used by some authorities, such as Dalby, Capart, and Bezold. It is fixed to the index-finger, and, being of course stronger than the natural nail, is more capable of penetrating and removing the growths. But I have found its use unsatisfactory owing to the impaired tactile sensibility and the increased bulk of the finger preventing safe and efficient use. Justi and Trautmann employ an artificial nail fixed on the end of a stem which is attached to the finger. Of this method I have had no experience.

Gottstein's curette.—Gottstein's curette is a triangular fenestrated instrument attached at a right angle to a long handle. The inner edge of the base of the triangle is sharp as a knife. This is the instrument which I now generally employ in removing these growths, and I have found this method more convenient and satisfactory than any other. In this my experience agrees with that of Politzer, Rosenberg, Semon, McBride, and others. In this country, when Gottstein's curette is employed, the patient is usually anæsthetised with chloroform, and lies on his back with the head hanging well over the end of a table, supported with the hands of an assistant, the back of the neck resting on a firm pillow. A waterproof cap, similar to a bathing cap, should cover the head in order to prevent the blood which flows from the nose mingling with the hair. A large towel or piece of jaconet should envelop the upper part of the body. A gag (Mason's) should be applied on the left side, well guarded with thick indiarubber tubing so as not to injure the teeth or gums. The teeth should be examined, and if a loose tooth is found care must be taken in case the gag should separate it altogether, and endanger the patient by the tooth slipping into the larynx during the operation. The chloroformist is at the head of the patient, the operator on the right side, and an assistant for attending to the gag and sponges at the left side. A dozen small honeycomb sponges, clean and aseptic, secured on sponge-holders, should be at hand. The finger is introduced into the naso-pharynx to determine the quantity, situation, and character of the growths. The triangular end of the curette is then introduced behind and above the soft palate, with its convexity upwards and backwards, avoiding the lateral walls, until the blunt edge of its base is in contact with the posterior edge of the nasal septum. The handle is now grasped firmly, the curette is pressed well down upon the roof of the pharynx, and drawn backwards and then downwards, so that the sharp edge is made to sever all the vegetations in its sweep. With the ordinary curette the vegetations, removed in this way, are either expelled through the nose, mingled with the blood, or are mopped out with the sponges, or are swallowed.

A useful modification has recently been introduc which there is an arrangement with two sharp pro front of the triangular steel frame for detainin vegetations cut off with the sharp edge of the c I usually employ three strokes before withdrawi curette, and then, with one sponge quickly introduce another into the pharynx, the blood is mopped up assistant. Once more the cavity is examined wi finger, and if any growths are still found the is again introduced, or the finger-nail may be su If the curette is employed without an anæsthetic the should be seated on a chair having a low, broad-cu back, over which the head is bent and supported assistant. After cocaine has been freely applied walls of the naso-pharynx, the tongue is pressed dov a spatula, and the curette is employed in the same as when an anæsthetic is used.

Hartmann's curette.—Hartmann's curette is prefe some operators, such as Krause of Berlin, and Bru Bradford. The force is applied laterally and not posteriorly, as with Gottstein's curette. An ana is rarely used by those who employ this inst The patient, if a child, sits upon the knee trained assistant, who, with the legs and left fixes respectively the patient's legs and arms, the same time holds the patient's head firmly, with t of the right hand placed firmly against the patien head. In this way the head of the patient is held im against the chest of the assistant. Light is reflec the throat, the tongue is depressed by a spatula, curette is pushed up into the naso-pharynx. It pressed on the posterior wall and roof of the naso- then it is moved, as on a pivot, to one of the later and the edge of the curette is made to sweep acro opposite side with firm pressure so as to sever an the vegetations in its course. My limited experienc method of operating has not impressed me favourab not think it is so efficient as Gottstein's instrum usually leaves untouched the growths in the front p naso-pharynx, while I think it is apt to injure the E prominence and excite middle-ear disease. My fr Seright, however, who frequently witnessed it Krause's hands, believes it to be a very efficient inst

Golding-Bird's curette.—This is an oval fe instrument connected with a long stem bent at ra than a right angle near the fenestra. The cutting o edge, instead of being on the inner aspect of the bas on the lower side. It is applied in a similar wa stein's curette, but on account of the position of th edge it penetrates more deeply and is particularly s scooping out the growths situated at the junction c and back wall of the naso-pharynx. Whilst I ha much experience of this instrument it seems to me able one.

Löwenberg's forceps and modifications.—Many prefer the use of forceps devised by Löwenberg an at different times by various workers. Up till a ago my own method was to operate with forceps, a them particularly suitable with the patient in posture. There is no doubt that when patien friends shrink from the use of a general anæst mode of operating is probably more convenien painful than other methods. With the patient s chair, and the head, arms, and legs firmly hel reflected in the ordinary way into the pharynx. blades closed the forceps are introduced as posterior wall of the pharynx. The blades pushed up to the roof of the naso-pharynx, wh widely separated and made to lay hold of one or adenoid projections, which are brought away cutting and partly by traction. The forceps way be introduced three or four times at one si blades of the forceps should have their cutting and behind, while there should be a free space as to lessen the chance of catching hold of th the nose. Owing to the anxiety of the operator septum the growths immediately behind it escape the forceps. Mr. Hovell (who discards or scraping instruments) has modified the forc the two cutting edges are circular and do no to edge, but are so arranged that the one bla the other, their action being thus that of a claims for this modification that it avoids the ri away shreds of mucous membrane or of injuring

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Whatever forceps may be used it is important that they should not be too large. Many of those sold by instrument makers are much too large for children, in whom, as you know, most of the cases of post-nasal growths occur. Just as after the curette operation, the finger-nail may be used with advantage to remove any fragments which may remain after the forceps have been employed. If the operation is performed during anæsthesia the patient should lie on his back with his head on a level with the body. A gag is used as in the curette operation, and the index-finger of the left hand is introduced into the naso-pharynx with the back of the hand downwards and forwards so as to guide the blade of the forceps to the individual growths. In this way the forceps are introduced several times and the growths individually pulled or cut away until, as informed by the finger, they are all removed. This sounds very satisfactory, but in practice it is often found to be no easy matter to accommodate the index-finger and the blades of the forceps in the small naso-pharynx of a child so as to manipulate freely, and the efforts to do so often lead to much bruising and injury of the parts. When operating with the forceps, while the head hangs over the end of the table, especially great care should be taken to avoid laying hold of the septum. I hold a skull before you in this dependent position, and you will see how very apt it is for the forceps to lay hold of the septum. Indeed, in this position the use of the forceps is unjustifiable unless one is able with the left index-finger to guide accurately the blades of the forceps.

Meyer's ring-knife.—We must not omit to mention the method of operating adopted by the late Professor Meyer of Copenhagen, to whom the profession is under a deep debt of gratitude for being the first to draw attention to the existence of these growths in the naso-pharynx. He operated through the nasal passages and used a ring-knife having one sharp edge, attached to a steel stem, which is introduced through the wider nasal passage. When the knife has reached the naso-pharynx it is turned horizontally if the growth is in the roof. The left index-finger of the operator is introduced through the mouth into the upper pharynx, and the ring-knife is pressed up so as to encircle one of the growths, when the knife is drawn forwards, severing the growth. Few operators have followed this method of Meyer.

After-treatment.—It is well after an anæsthetic operation that the patient be turned on his side, retaining the head on a level with the body, or somewhat raised, while the gag is kept between the teeth for a minute. Some operators, in order to prevent bleeding, maintain pressure on the walls of the naso-pharynx for a few minutes with a sponge or folded gauge or curved forceps. In most cases, however, blood is swallowed in considerable quantity, frequently exciting vomiting, the vomited matter consisting of blood mixed with the contents of the stomach. It is well always to warn the friends that vomiting is likely to take place, if it has not already done so, and that someone should be at hand beside the patient ready to help. Pieces of ice placed in the mouth, or even in the nostrils, after the patient has regained consciousness tend to check the sickness. The ice may be given at intervals for twenty-four hours, during which the patient should abstain from *hot* liquids or solids. Bleeding of an alarming nature is very rare, but I have been twice sent for, a few hours after the forceps operation without an anæsthetic, owing to pretty copious bleeding. Pressure upon the roof of the naso-pharynx by means of a fold of cotton moistened with a styptic solution, introduced with forceps, easily controlled it. The patient should rest in bed for two days and keep the house for a week after the operation, during which no local treatment of the nose with douche or syringe should be employed. These precautions are especially important in damp, cold weather, so as to avoid middle-ear inflammation, which I have, however, almost never found in my own practice to follow this operation. There is no doubt that injudicious nasal treatment after the operation is apt to excite inflammatory mischief in the middle ear.

Enlarged tonsils.—Not infrequently these growths are found associated with hypertrophied tonsils, which are often regarded erroneously as the sole cause of the nasal obstruction and the deafness. Probably the safest plan is to first remove the enlarged tonsils, without, if possible, an anæsthetic, and then, after the healing process is complete, the post-nasal growths should be operated upon. Some specialists remove the tonsils and the post-nasal growths at the same time under an anæsthetic, and in certain cases this is perhaps the best method. To produce so extensive a bleeding surface, however, might in some persons be attended by considerable risk, partly from the bleeding and partly from the greater risk of septic infection.

Mouth breathing after operation.—If mouth breathing continue in spite of the operation, and we are confident that the post-nasal growths have been thoroughly eradicated, we should carefully examine the nasal passages in order to make sure that no obstruction exists there. If, in either side, the inferior spongy body is found to be enlarged or hypertrophied, cauterization with the galvanic cautery or chromic acid may be required. In mild forms of obstruction a prolonged but careful use of an alkalo-saline solution with a spray apparatus or a suitable syringe may prove sufficient. If the obstruction be due to spurs upon the septum or deflections, these may require operation, but such forms of obstruction are not common in childhood. If, after the mechanical impediment of free nasal breathing has been removed, the mouth breathing still continues, means must be adopted to help the person to overcome this habit. The simple plan should be first tried of causing the patient to sit still for fifteen minutes, twice or thrice daily, during which he studiously keeps the mouth closed and breathes through the nose alone. If after a time this prove insufficient, an appliance should be provided consisting of a small indiarubber cup, on which the chin rests, the cup being kept in position by means of bands secured round the head. This should be worn for a time at night so as to keep the lower jaw from falling. Or we may use an indiarubber band with a mouthpiece of soft leather secured round the head during sleep, so that the leather mouthpiece covers the mouth and compels nasal breathing. Another plan, which I have known a female patient to adopt, is to retain the lips in contact by means of long strips of sticking-plaster. Some writers ridicule the use of these aids to nose breathing, alleging that if the nose and naso-pharynx are really free from obstruction, the breathing will naturally become nasal without any such contrivances, and that if there is defective nasal breathing we shall find a mechanical cause in the nasal cavities, which must be removed by suitable treatment. I am, however, disposed to differ from those writers. I have undoubtedly seen cases remedied by these artificial helps, where the mouth breathing had persisted after ample breathing space had been secured in the nose and naso-pharynx.

General treatment.—In connexion with post-nasal growths there is not unfrequently a constitutional flaw, such as the strumous or anæmic condition. Iron tonics, cod-liver oil, plenty of fresh air, and a sufficiency of nutritious food may, therefore, prove important additions to the operative treatment.

THE PREPARATION OF ANTIRABIC SERUM AND THE METHOD OF DETERMINING ITS STRENGTH.

BY PROFESSOR GUY TIZZONI AND DR. EUGENE CENTANNI.

I.—ACCOUNT OF SERUM-HEALING IN RABIES.

BABES and LEPP,[1] when treating of vaccination against rabies, have tried to determine whether with the blood of a vaccinated animal it is possible to transmit immunity from that disease to another animal. In spite of all the experiments performed to settle this question, they tell us nothing of those practised on the rabbit, so as to enable us to judge of the value of the final result of the experiments, or whether misleading results had been obtained, either through the infection having been brought about by an unreliable method, such as that of subcutaneous injection, or through all the animals having died too soon from an intercurrent disease for the full results to have been observed. Nor, on the other hand, can those performed upon the dog (four in all) have an absolutely trustworthy value, since the two successes obtained upon this animal are reduced in reality to one single experiment in which the animal was infected by trephining. Nor can another experiment be

[1] Recherches sur la Vaccination Antirabique. Annales de l'Institut Pasteur, Nov. 7th, 1889.

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accepted as being of proved worth, in which, though the animal survived the infection a long time, it had been determined by a method so little reliable as is the infliction of the bite of a rabid dog. Not until four years after these researches were made known did we commence the publication of a long series of experiments, all carried out in this institution, and by which we are not only able to state that the question of serum-healing in rabies has been studied, but we are able to declare, further, that it has been definitely solved. All these researches were made upon the rabbit because it was possible by such means to give to the experiment a wider scope, but also—the rabbit being an animal much more susceptible to rabies than is the dog (?)—the results obtained upon it would have a greater value.

In a former work it was shown[2] that the serum of vaccinated animals is able, not only to destroy *in vitro* the pathogenic power of the virus of rabies (*virus fixe*), canine virus of the streets during the process of transition (exaltation) and also when fixed, but is also capable of preserving the rabbit from rabies and of hindering the development of the disease when the infection has been made twenty-five hours before the treatment. It was proved that the serum of the rabbit has in that animal a stronger protective action than that of the dog; that the active substance of this serum in the presence of magnesium sulphate behaves like a globulin and is not dialysable; and that it is precipitated with alcohol and with neutral salts, but loses in this precipitation part of its activity. Later, with a view to extending our researches on serum-healing in rabies and of drawing from these the greatest results possible, as much for the benefit of science as for advantage in practice, a new method of vaccination against rabies was sought which should give a higher degree of immunity than that obtained by Pasteur's method. Taking as a starting-point the experiments of Eusebius Valli,[3] we established satisfactorily that the gastric juice at first effectively weakens and at last completely destroys the pathogenic power of the virus of rabies, whilst at the same time it does not interfere with its vaccinating power. Therefore, following this path patiently with a numerous series of experiments, we succeeded[4] in determining the principles of a new method of vaccination—with virus weakened by gastric juice—a method of vaccination which in honour of Valli, from whom we have taken the idea, and to distinguish it further from the French method devised by Pasteur, we have designated the "Italian method of vaccination against rabies," the superiority of which was at once clearly demonstrated by the positive results obtained by us in the vaccination of the rabbit against infection with the virus of the dog, and by the possibility of protecting that animal comparatively easily even against subdural infection with a fixed virus. A serum of the highest protective power being obtained by this method, it was easy to demonstrate with it in successive and unvarying experiments that the alcoholic precipitate of the serum of vaccinated animals serves, not only to hinder the development of the disease when it is injected a little before or after the infection practised under the dura mater or on the nerve, but leads to the same result even when the virus is infected long before—i.e., during the period of incubation (seven to fourteen days as against the canine virus)—and even succeeds in stopping the course of the disease when the injections are practised[5] after the first symptoms have shown themselves. A demonstration more absolute than that of the efficacy of serum-healing in rabies and the advantages which it has over vaccination with Pasteur's method can certainly not be offered. Lastly,[6] we proved that the results obtained in the rabbit by the Italian method of vaccination against rabies could also be obtained in larger animals—viz., dogs and sheep—and that from the species of sheep employed could be drawn a protective serum sufficient in quantity and curative power for all pr requirements. We succeeded in determining the dos injected into those animals in order to confer im upon them—a decided step forward—whilst we wer to trace the curve which represents at various per the vaccination the quantity of the protecting subst the blood, thus indicating the best time at which to t blood for use.

After the publication of the first of our memoir serum-healing in rabies, Babes communicated to the national Congress of Hygiene in London (August, 18 results of experiments made upon man with serum c partly from a protected man and partly from a pr dog. But to these observations great value can attached—it may be because they are wanting in a experimental basis or because they were made accor the method of Pasteur. Shortly afterwards appea extended work of Babes and Cerchez[7] on the sub ject, in which were related two new successf obtained on the dog with the serum of blood of va dogs, but for the rabbit the conclusion was again at "que le sang du chien réfractaire inoculé aux avant ou après infection avec le virus de la rage, n pas sensiblement sa virulence." So, while our fi appeared at a time when, with regard to serum-he rabies, science could only point to the success c on the dog, it demonstrated absolutely that the s the blood of a vaccinated animal injected into th either before or after the infection hinders the ment of rabies, and enabled us at last to un the principal property of the protective substa tained in the serum; whereas in the work of Babe appeared after ours, the possibility of saving the l means of the serum of a vaccinated animal was puted. A final memoir upon serum-healing in r been published by Babes and Talasescu.[8] The in this work record results better than those obtaine preceding experiments: they were completely succ the rabbit, and were able to inject largely the qua serum (into a medium-sized animal of 5·0 c.cm., s times up to about 15 c.cm.), yet here, as in the experiments, any plan of obtaining results always and favourable is still wanting. Moreover, a the experiments related, on two or three only ca opinions be formed, the other animals having died, either after a few days from accidental c from something or other not well determined, in seems to recognise the symptoms of a wasting ra to the serum not conferring sufficient immunity virus of rabies is transmitted from dog to do the most recent results obtained by the authors be relied on to confirm a fact which is now a patrimony of our science, nor do they in any wa the more important question which to-day sc practice in turn demand should be solved — t determine the precise conditions on which the is constantly verifiable to investigate the me its production, and finally to establish all tho which serum-healing in rabies can be entered up tice, no longer blindly and guided only by the ca physician, but illuminated even in the smallest by the light of experiment. It is precisely to th our studies have been directed, and, taking ou researches as a starting-point, we have tried to acq result in those points in which they seemed to be to give an account of some exceptions v time to time were met with in the preceding e and, lastly, to solve other particulars of the quest ledge of which we have believed to be indispen passing from animals to the application of the t man.

II.—MODE OF PREPARATION AND PRESERVAT ANTIRABIC SERUM.

We shall in this part study the following poi number of injections, the length of the period of the quantity of material to be injected, and the attenuation necessary to obtain an immunity high—it may be with the first series of i

[2] Tizzoni and Schwarz: The Serum of Animals Vaccinated against Rabies in its Immunity from and Treatment of that Disease. Riforma Medica, No. 188, Aug. 22nd, 1891.

[3] Biographical Notes of Dr. Eusebius Valli of Ponsacce, Pisa. Pontedera, 1886.

[4] Centanni: The Italian Method of Vaccination against Rabies, communicated to the Royal Academy of Science of Bologna at the sitting of April 24th, 1892. Riforma Medica, Nos. 102, 103, and 104, May, 1892.

[5] Tizzoni and Centanni: On the Cure of Rabies developed in Animals. Statement made to the R. Accad. dei Lincei, May 8th, 1892. Riforma Medica, No. 182, May, 1892. Deutsche Medicinische Wochenschrift, No. 27, July 7th, 1892, p. 624. Further Researches on the Cure of Developed Rabies. Riforma Medica, No. 182, August, 1892,. Deutsche Medicinische Wochenschrift, No. 31, Aug. 4th, 1892.

[6] Tizzoni and Centanni: That Serum for Rabies at its Highest Protective Power is applicable to Man. Memorial read at the Royal Academy of Science at Bologna, at the sitting of Dec. 10th, 1893. Berliner Klinische Wochenschrift, No. 8, 1894.

[7] Experiments upon the Attenuation of the Fixed V Annales de l'Institut Pasteur, No. 10, 1891.

[8] Etudes sur la Rage. Annales de l'Institut Pasteu 1894, p. 435.

[9] Celli and Marino Zuco: Annals of the Institute of I University of Rome, vol. ii., 1892.

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with a series of progressively increasing strength; (2) whether the strengthened injections can gradually raise the original immunity obtained with the first series of vaccinations, and up to what limit; (3) the interval which should be allowed to elapse between the different series of the strengthened injections in order to obtain the best results from them; (4) the most favourable moment for taking the blood of a vaccinated animal; and (5) the mode of preservation of the antirabic serum which for facility, economy, and safety best corresponds to clinical needs. All these questions have been studied by us on the sheep, which we were aware, through our preceding researches, was the animal most adapted to furnish material of the highest protective power necessary to satisfy the needs of practice.

1. *Number of injections, length of period of vaccination, quantity of material to be injected, and the degree of attenuation necessary to obtain with the first series of vaccinations a fundamental immunity of sufficiently high degree.*—In this respect we have been able to confirm and also better to determine much that we had established in our preceding experiments. Thus in four other sheep we have obtained by means of the constant mode during the first series of vaccinations serum of the highest protective power, and have determined more exactly that to arrive at this end seventeen injections in twenty days must be made, each injection consisting of 0·25 gramme of the nerve substance properly weakened by gastric juice, as described in our previous work, for every kilogramme of the animal's body weight. In fact, with the serum of these animals we succeeded, by the *constant mode*, in saving rabbits from subdural infection with an infecting unit of the canine virus (as demonstrated elsewhere), not only when there were injected under the skin, twenty-four hours before infection, considerable quantities of serum (5 to 0·33 c.cm.), but also when the serum injected was in the proportion of 1 part of serum to 25,000 of body weight, as shown in Table I.

The establishment of the data given in the series of injections was also more important than during the first vaccinations, in order not to be always obliged to have recourse to fresh animals in the preparation of the antitoxin of rabies, which, not possessing any original immunity, would have at least to undergo a longer series of injections in order to give material as powerful as that of the revaccinated animals. The numerous trials patiently carried out to this end on our sheep have demonstrated to us that in revaccination the best result with respect to the degree of the protective power of serum is met with where ten injections have been administered in twelve days, each injection consisting of 0·25 gramme per kilogramme of the weight of the body of nerve substance duly diluted. In such a way we succeed in obtaining a serum which, in the quantity of 5 to 2 c.cm. for subcutaneous injection, and finally in the proportion of 1 to 25,000 compared to the weight of the body, invariably saves the rabbit from subdural infection with the canine virus administered twenty-four hours afterwards (see Table II.).

In these experiments, then, we have been able to demonstrate clearly that the quantity of the material which is injected is of very great importance in the production of the protective substance of the serum, but also that, beyond a certain limit, the quantity of nerve substance, more or less diluted, which is introduced by these injections is harmful rather than a help. Thus, taking from ten to twelve as the number of the progressive injections, and each time injecting one-fourth rather than one-third of a gramme of nerve substance per kilogramme of the body's weight, we find that the serum collected has a very much lower strength—about half that of the preceding case. In fact, not one of the rabbits injected under the skin with this serum in the proportion of 1 to 25,000 compared to the weight of the body resisted the subdural infection with the infecting unit of the canine rabic virus; and with the proportion of serum indicated we succeeded in saving these animals when the dilution of the virus was only increased twofold, keeping fixed the quantity of emulsion which is injected under the dura mater, which was equivalent to lowering the strength of the serum by about one-half (see Table III.). Our researches have also resulted in showing the very great influence which the degree of attenuation of the virus has upon the production of the protective substance of the serum—an influence which necessarily appeared greater when, in the hope of shortening by some days the period of vaccination, we increased contemporaneously the dose of the nerve substance injected each time—carrying it, that is to say, to one-third of a gramme per kilogramme of the body weight. In the following experiments with serum taken at the same period of time from Sheep I., II., and III.—all revaccinated with eight injections made in from eight to nine days, being infected each time with one-third of a gramme of nerve substance per kilogramme of the weight of the body, while in the last four injections the mass of the virus was not subjected to any digestion with gastric juice, hence virulent in the highest degree—we have found that the subcutaneous injection of the serum of the first sheep in doses of from 2 to 3 c.cm. saved the rabbits from subdural infection with the infecting unit of the canine virus in the proportion of 62 per cent. We have found that that of the second and third sheep, in the quantity of 2 c.cm., gave under the same conditions a mortality of 100 per cent.; and, finally, that that of the third sheep, given in the quantity of 5 c.cm., gave, against the same infection, a percentage of cure of only 66, as will be seen from Tables IV., V., and VI.

The influence of the conditions indicated upon the production in the serum of the antitoxin—i.e., the number of the injections, the length of the period of revaccination, the quantity of nerve substance injected, and its degree of attenuation—appears hence to be more evident when the results obtained on the same animal in two revaccinations are compared, as in the second and third revaccination of Sheep I. (see Tables II. and IV.)—the first comprising eight injections in eight days with a dose of one-third of a gramme per kilogramme of nerve substance (in the four last injections not digested at all), while in the second there were ten injections in twelve days with a dose of a fourth of a gramme per kilogramme of nerve substance and with all the virus more or less digested for a considerable time. Meanwhile, with this second manner of revaccination, which we hold to be the best, we have 100 per cent. of cures; whilst when the quantity of serum is to the weight of the body as 1 to 25,000 we obtain with the first hardly 62 per cent. of cures when from 2 to 3 c.cm. of serum are injected—a quantity that is thirty-five times as great as that which was given in the preceding case. Hence it stood confirmed by our researches what had been affirmed in one of our earliest works upon rabies—that the virus of rabies[10] in its attenuation by the Italian method—that is, with half the digestion performed by gastric juice—whilst it loses its virulence by degrees, does not lose—or only very slightly—its vaccinating power. We may add to this that the virus of rabies not submitted to any digestion may be hurtful, not only from the absorption of poisonous products, but also because the materials injected in that condition can be more easily absorbed. It is worth while, further, to put forward another very great advantage which vaccination with the virus digested by gastric juice must have over that in which the nerve substance diluted by means mostly physical is injected diluted only with water, as is practised in the Pasteurian method. The methods of vaccination and revaccination which we have found to be the best are better tolerated by the animals. These, especially at the first injections, are affected by slight shock; they remain more willingly in the lying position, eat less, and show that their movements are only slightly hampered, especially in the hinder part, perhaps from the mechanical distension of the skin produced by the injection, generally performed in the region of the flanks; but soon, even during the process of vaccination, they regain their vivacity and the appetite. The weight of the body is lowered during the vaccination by 3 or 4 kilogrammes, but after this has been accomplished it increases rapidly, so that the injections appear to have a fattening effect. Thus, Sheep I., thirty days after the first strengthened series, rapidly increased in weight from 18·380 to 21 kilogrammes; Sheep III. went from 28 to 36 kilogrammes only twenty-six days from the date of the vaccination.

2. *Whether the strengthened injections are able to gradually raise the original immunity obtained with the first series of vaccinations, and up to what limit.*—This also was a very important question; it was of the greatest interest to know whether, after deducting the time necessary for the vaccination, there could be obtained a material as strong again as that found with a successively strengthened series, or whether with these, at a standard which was always increasing, one would be able to have the serum of a protective power always raised to a corresponding degree. Such a

[10] Centanni, loc. cit.

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TABLE I.

Source of the serum.	Number of register.	Weight of the rabbit in kilogrammes.	Infecting units of canine virus under the dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experiment.
SHEEP III. First vaccination with seventeen injections in twenty days of 0·25 gramme per kilogramme each. Virus always digested.	35	1·560	½	c.cm. 0·062	1 : 25,000	Lived.
	32	1·500	1	,, 0·06	1 : 25,000	,,
	34	1·410	1	,, 0·057	1 : 25,000	,,
	147	1·170	1	,, 0·333	1 : 25,000	,,
	148	1·510	1	,, 0·333	1 : 25,000	,,
	98	1·350	1	,, 5·000	1 : 270	,,
	100	1·390	1	,, 5·000	1 : 278	,,
	99	1·370	2	,, 5·000	1 : 274	Died 28th day.

TABLE II.

Source of the serum.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of canine virus under the dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experiment.
SHEEP I. Four vaccinations with ten injections in twelve days of 0·25 gramme per kilogramme each. Virus always digested.	140	1·960	1	c.cm. 0·08	1 : 25,000	Lived.
	141	1·730	1	,, 0·07	1 : 25,000	,,
	144	2·220	1	,, 2·00	1 : 1,110	,,
	145	2·140	1	,, 2·00	1 : 1,070	,,
	117	1·640	1	,, 5·00	1 : 330	,,
	118	1·500	1	,, 5·00	1 : 300	,,
	119	1·320	1	,, 5·00	1 : 264	,,

TABLE III.

Source of the serum.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of canine virus under the dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experimen
SHEEP II. Second vaccination with twelve injections of 0·33 gramme per kilogramme each in seventeen days. Virus always digested.	41	1·600	2½	c.cm. 0·064	1 : 25,000	Died.
	42	1·680	2½	,, 0·067	1 : 25,000	,,
	49	1·680	1	,, 0·067	1 : 25,000	,,
	50	2·250	1	,, 0·09	1 : 25,000	,,
	48	1·620	½	,, 0·065	1 : 25,000	Lived.
	67	1·880	—	,, 0·075	1 : 25,000	,,

TABLE IV.

Source of the serum.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of virus "da strada" under the dura mater.	Quantity of serum injected twenty-four hours before infection. Absolute.	Quantity of serum injected twenty-four hours before infection. Relative.	Result experim
SHEEP I. Third vaccination with eight injections in eight days of 0·33 gramme per kilogramme each. Last four injections with undigested virus.	78	1·590	2½	c.cm. 0·032	1 : 50,000	Died
	79	1·270	2½	,, 0·052	1 : 25,000	,,
	76	1·900	2½	,, 2·0	1 : 950	,,
	80	1·140	2½	,, 2·0	1 : 570	,,
	81	1·750	1	,, 1·40	1 : 1,250	,,
	82	1·820	—	,, 1·46	1 : 1,250	,,
	83	2·020	—	,, 1·62	1 : 1,250	Live
	92	1·980	—	,, 2·0	1 : 980	,,
	93	2·200	—	,, 2·0	1 : 1,100	,,
	94	2·330	—	,, 2·0	1 : 1,165	Die
	97	2·500	—	,, 2·0	1 : 1,250	Live
	77	2·800	—	,, 3·0	1 : 933	,,

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TABLE V.

Source of the serum.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of virus "da strada" under the dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experiment.	Percentage of survivals.
SHEEP IV. Third vaccination with eight injections in eight days of 0·33 gramme per kilogramme each. Last four injections with undigested virus.	63	1·740	½	c.cm. 0·071	1 : 25,000	Died.	—
	70	1·720	1	,, 1·72	1 : 1,000	,,	
	71	1·700	1	,, 1·70	1 : 1,000	,,	—
	72	1·590	1	,, 1·60	1 : 1,000	,,	
	73	1·770	1	,, 1·80	1 : 1.000	,,	

TABLE VI.

Source of the serum.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of virus "da strada" under the dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experiment.	Percentage of survivals.
SHEEP III. Second vaccination of eight injections in nine days of 0·33 gramme per kilogramme each. Last four injections with undigested virus.	111	1·850	1	c.cm. 2·0	1 : 925	Died.	—
	112	1·940	1	,, 2·0	1 : 970	,,	
	88	1·430	1	,, 5·0	1 : 290	,,	
	101	1·510	1	,, 5·0	1 : 300	Lived.	66
	102	1·500	1	,, 5·0	1 : 300	,,	

TABLE VII.

Day of taking the blood.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units of canine virus under the dura mater.	Quantity of serum injected twenty-four hours before infection. Absolute.	Quantity of serum injected twenty-four hours before infection. Relative.	Result of experiment.	Percentage of survivals.
Tenth day	139	1·680	1	c.cm. 0·061	1 : 25,000	Died.	50
	138	1·770	1	,, 0·07	1 : 25,000	Lived.	
	143	1·970	1	,, 2·0	1 : 985	Died.	50
	142	2·500	1	,, 2·0	1 : 1250	Lived.	
	103	1·320	1	,, 5·0	1 : 1264	,,	
	104	1·380	1	,, 5·0	1 : 276	,,	100
	105	1·190	1	,, 5·0	1 : 238	,,	
	106	1·340	1	,, 10·0	1 : 134	,,	100
Twenty-fifth day	140	1·980	1	c.cm. 0·09	1 : 25,000	Lived.	
	141	1·930	1	,, 0·07	1 : 25,000	,,	100
	144	2·220	1	,, 2·0	1 : 111	,,	
	145	1·140	1	,, 2·0	1 : 570	,,	100
	117	1·640	1	,, 5·0	1 : 328	,,	
	118	1·500	1	,, 5·0	1 : 300	,,	100
	119	1·300	1	,, 5·0	1 : 264	,,	

question, then, was very important, not only in connexion with the cure of rabies, but also with general considerations on vaccination made with a view to find curative serum and with the solution of the problem at present so keenly debated and of such interest from the therapeutical point of view, whether the intensified injections are able to increase without decreasing the protective power of the serum, or whether the protective power of this is able to combine only within determined limits with the poisoning power of the vaccinating material used. The question is excessively important, and we are able to pronounce upon it in a concise and general way. In so far as the infection of rabies is concerned, we are inclined to hold, through observations made on many animals and in many series of experiments, that in this infection a series of vaccinating injections, when they are made of material of constant quantity and power, gives always, as many times as it is repeated on the same animal, a serum of the same degree of activity. We have seen in part in the reports given above (Table I.)—and it will appear more clearly in the experiments which we report further on (Tables XIII. and XVI.)—that already with the first series of vaccinations upon a fresh animal we can have at one stroke the highest type of protective serum, and that on repeating successively on the same animal at various times one and the same series of vaccinations, at intervals varying from two to five months, the protective power of the serum is maintained at a constant level. And, for this reason, we are inclined to believe that in rabies the power of the blood may be a power exclusively passive, in the sense that we do not treat of a special function which the organism may acquire and render perfect under the stimulation of the modified virus; most certainly the substance to which the serum owes its activity proceeds directly from the material which little by little pours itself out in a circle near the subcutaneous deposit of such virus. This is certain: We cannot expect an increase of value in our serum by repeating the series of vaccinating injections of animals which have been previously deeply and repeatedly vaccinated; we ought to trust rather in the progressive improvement of the vaccine itself, rendering it more supportable and more concentrated.

3. *The interval which should be allowed to elapse between the different series of the intensified injections in order to obtain the best results from them.*—With regard to this question we have been able to establish that the sheep is sufficiently tolerant of these injections of rabid virus, and that without

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exhausting the animal too much the vaccinations may be repeated every two or two and a half months. The only object of leaving a sufficient time between each revaccination is not to stimulate to excess the subcutaneous connective tissue, in order not to run into any difficulty by making the revaccinations too soon, by beginning a new series before the irritative effects of the last have faded away or are repaired; besides which, there are the not very serious effects which must necessarily be produced in the preceding series by the mechanical and chemical action of the injected emulsion—as a result of which the absorption of the active material must be made with great difficulty. And we have often said the rapid and complete absorption of the vaccine on the part of the connective tissue is an essential and indispensable condition because the protective power of the serum can be raised at a given moment to much higher degrees, since it is natural that the suppuration of the infected part and other complications may detract from the wealth of antitoxin in the blood, because with this are separated, destroyed, or eliminated the useful part of the injected vaccinated material, and the organism is thus deprived of a portion more or less great of the products to which the serum owes its protective and curative properties. To collect on a sufficiently large scale the nervous system of a rabid animal, and to keep it aseptic amidst all the manipulations to which it must be subject up to the moment in which it is injected under the skin of the sheep, we are now provided with satisfactory appliances, and after a long trial we have met with the best means of avoiding any complication in the injection of vaccine—above all, the suppuration of the part injected.

4. *The most favourable moment for taking the blood of a vaccinated animal.* — We have already expressly occupied ourselves with this question in our preceding work,[11] but during the present and last years, having gathered much material from our studies, and being in possession, as we shall see in the following part, of methods more exact for the determination of the protective powers of the serum, we have not wished to neglect to review them, but to extend and definitely settle this point of the question, it being so important to gain from the vaccinated animals the best results possible in the serum-healing treatment. Nor in order to establish these data have we been able in any way to have recourse to as much as has already been made known in regard to the best moment for taking the blood in other infections, especially in tetanus and in diphtheria, because, besides the very great difference in the duration of the period of incubation of these maladies compared to rabies, there exist considerable differences in the methods with which in each of them the fundamental immunity is obtained and the strengthened injections are practised. In rabies, in fact, in order to obtain the strength of the acquired immunity, instead of a single injection, and with a cultivation made artificially, we make a series of injections with a virus cultivated by natural means much stronger and weakened according to a descending scale; therefore, wishing to apply to this malady what has already been established for another, it cannot be said *a priori* whether the computation of the days which should pass between the vaccination and the moment of taking the blood ought to be made from the beginning, from the middle, or from the end of the strengthened injections. Nor at first can it be judged what influence the heterogeneous injected materials may have upon the protective value of the serum. The researches pursued with this idea have fully confirmed what we had previously established—viz., that the most opportune time for practising bloodletting and collecting the serum of animals vaccinated against rabies is the twenty-fifth day starting from the last injection of the series of revaccinations. Besides, we have been able to determine that whenever the strengthened injections are made according to the proper rules and are perfectly successful the accumulation of the protective material in the blood has in the vaccinations against rabies a period sufficiently long, by which, not looking for the highest terms of the power of the serum, it would seem that little or no difference exists in the protective value of the same serum taken at various times after the vaccinating injections. Thus, taking the blood from the same animal ten and twenty-five days after a revaccination—the first time in small quantity (so as not to influence by a too abundant subtraction of antitoxin from the results which would be obtained at the second bl we succeeded equally with 5 c.cm. of serum injected the skin in saving all the rabbits infected twenty-fou afterwards with the canine virus; but, contrariwise with the serum of the blood collected at the twenty-fi we also obtained the same effects with a proportion o to the weight of the body of 1 to 25,000, with th collected on the tenth day we arrived scarcely at portional quantity of serum last indicated only sav the animals infected, as may be clearly seen from to the two parts of Table VII.

5. *The mode of preservation of the antirabic serum for facility, economy, and safety best corresponds to needs.*—It is certainly very important to find them preserving the antirabic serum against any contamina in a form which renders its despatch easy and in w serum loses nothing of its protective power. With this it is found, as with tetanus,[12] that the desire compassed perfectly when the serum is first in volume by distillation at 38° C. *in vacuo*, where dried *in vacuo* over sulphuric acid. Numerous cor experiments have demonstrated, in the case o that we obtain upon animals the same result when use of fresh serum as when a corresponding qu dried serum is injected, even if this has been for some months, so that now in our experiments either serum indifferently. In the sheep the proportic serum to the liquid serum of recent cultivation one-third of the original weight, since 7 and antitoxin correspond to 100 c.cm. of serum. T serum has the appearance of red and yellow sca dissolve easily in ten times their own weight preserved in a coloured phial and protected damp by a perfect-fitting stopper, it keeps its prot perties unaltered for a very long time. It there itself very well to the needs of practice.

(To be continued.)

[11] Tizzoni and Centanni: Antirabic Serum at the Highest Power, &c., loc. cit.

[12] Tizzoni and Centanni: Fresh Experiments on the Va Horse against Tetanus. Gazetta degli Ospedali, No. 47,

SUBMAXILLARY EXCISION OF HA TONGUE.

By W. G. SPENCER, M.S., F.R.C.S. En
SURGEON TO OUT-PATIENTS AND TO THE THROAT DEPA WESTMINSTER HOSPITAL.

OPERATIONS on the tongue and floor of the epithelioma have become so much less dangero immediate mortality therefrom has almost vanishe for well-selected cases. Unfortunately, the fin regards cure is yet far from successful, and ul considerable size are too often followed after malignant disease of the submaxillary lymph The method often adopted at the present time half the tongue by scissors and then to shell ou small incision any submaxillary lymph glands wh felt to be enlarged. There are thus left the passing from the affected tongue across the mouth, through, or behind, the mylo-hyoid mus remainder of the submaxillary lymph glands w at the time sufficiently big to be felt. But gl the size of a haricot bean may not be felt before t for they lie between two layers of fascia or lobules of the submaxillary salivary gland, and by a more or less thick layer of subcutaneo only sign of enlarged glands before op be slight tenderness as compared with the yet after removal all the submaxillary lymp found increased in size. Formerly, surgeons ascribe such tenderness to simple inflammation likely now to hold such a view in the light g more thorough microscopic examination of suc the careful observation for some time afterw wherein such glands have been left behind. aim to take away the whole diseased area complete way than would have been wis

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days, when the immediate mortality after the operation was so great. The typical operation, whether it include the glands below the jaw, those in the axilla or in the groin, is the same—viz., the excision of the cancer, together with a wide margin of apparently healthy tissue, and of the lymphatics running from the area removed as well as the glands to which the lymphatics go, all in one piece, so that none of the disease shall be overlooked. The operation adopted is briefly as follows:—1. Anæsthetic: nitrous-oxide gas and ether; later chloroform. 2. Skin incision: (*a*) vertically from the point of the chin to the hyoid bone; (*b*) horizontally along the hyoid bone to the great cornu; and (*c*) obliquely upwards and backwards to the outer border of the sterno-mastoid opposite the angle of the jaw. This skin flap is turned up on to the face. 3. Division of the superficial and deep fascia with the platysma along the line of the skin incision. These structures, containing the submaxillary, lymph, and salivary glands, are then raised from the muscles and hooked upwards. 4. Ligature of the lingual and facial arteries. The vessels are cut across after being tied on the proximal side, and the distal end clamped. The lingual is exposed in the digastric triangle by separating the fibres of the hyoglossus with forceps to avoid pricking the lingual vein, which swells up in front of the artery of the living subject. Moreover, there is thus no possibility of wounding the pharynx should the patient make a sudden expiration. By hooking up the submaxillary gland the facial artery is straightened out, and is, therefore, easily ligatured in front of the posterior belly of the digastricus. 5. Division of the fascia by cutting along the lower border of the jaw, the distal end of the facial artery and vein on the face both needing a ligature. 6. Separation from the jaw of the genio-hyoid and mylo-hyoid muscles along with the mucous membrane of the floor of the mouth, from the middle line to the angle, by keeping the edge of the knife applied to the inner surface of the bone. 7. Removal of the half of the tongue with the floor of the mouth and glands through the submaxillary opening. The tongue is first split down the middle, and by means of a ligature through its tip drawn out well into the submaxillary triangle, then cut away from the hyoid bone along with part of the anterior pillar of the fauces. 8. The wound is covered with iodoform filled with strips of gauze, the ends of which hang out of the mouth, and the skin flap fixed in its former position by a continuous suture.

The chief point of the operation is the complete removal of the submaxillary and sublingual glands along with the lymphatics running to them from the tongue. Experience has shown how impossible it is to detect by digital examination early disease in glands. The microscope will frequently bring to light a small focus of disease in glands apparently unaltered. There is no need to divide the jaw unless it be actually invaded by the disease; a preliminary tracheotomy is not wanted, for, the arterial supply having been controlled, there is only venous oozing to contend with when the tongue itself is being divided. The objection raised as to the greater danger in opening a free communication between the mouth and neck is now unimportant, since the treatment after operation by iodoform crystals has been introduced as well as Whitehead's plan of urging the patient to get up as soon after twenty-four hours as possible. There is sufficient room also to remove the soft palate or tonsil if necessary. The kind of case in which this operation must fail is illustrated by the following one, which is also worthy of note by reason of the sex and age of the patient. A governess aged twenty-three, to look at the picture of good health, had an ulcer opposite the lower molar teeth. In two and a half months from the first occurrence of the ulcer an epithelioma had involved half of the tongue throughout its length, the floor of the mouth, the adjacent portion of the soft palate, and the surface of the tonsil. No enlarged glands could be felt, but after removal evidence of disease, mainly microscopic, was found. The site of the operation healed soundly and the patient regained clear speech, only to fall a prey to recurrence deep in the neck from which she died within ten months of the beginning of the ulcer. Her father had died eight years before from cancer of the throat (? larynx) after suffering for two years.

Brook-street, W.

MR. JAMES WIGG, L.R.C.P. Lond., has been elected a member of the St. Pancras Vestry for Ward 3 at a by-election.

LABORATORY NOTES ON THE BACTERIOLOGY OF DIPHTHERIA.

BY E. B. SHUTTLEWORTH, PHAR. D., F.C.S.,
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A CONSIDERABLE amount of bacteriological work relating to antitoxin experiments was performed in the laboratory of the Toronto Board of Health during the closing months of 1894, but it was not until Feb. 1st last that the examination of diphtheria exudates was carried on in a regular and systematic manner. The importance of such investigations was clearly demonstrated by the results obtained in the hospitals for infectious diseases in Berlin and Paris and by the extensive researches of the Health Department of New York. It was therefore determined by Dr. Sheard, health officer of Toronto, that similar work should be undertaken in connexion with the isolation hospital, an institution entirely under city control in which the greater number of patients are the victims of diphtheria. The objects sought were: (1) to confirm clinical diagnosis and determine doubtful cases; (2) to distinguish between cases of true diphtheria and those caused by cocci, so that patients affected by the latter could be isolated and more speedily discharged; (3) to demonstrate the absence of the specific bacillus from the respiratory passages of convalescents from true diphtheria, with a view of shortening the usual twenty-eight days' detention in the hospital; (4) to assist in the diagnosis of outside cases, thus saving isolation and disinfection, with their attendant inconvenience and expense; and (5) to afford a means of contributing towards a knowledge of the disease. The purpose of this paper is that of presenting a brief account of the work performed and of summarising such facts as seem likely to be interesting or useful. To this end the same general plan has been followed as that adopted in the joint report of Dr. Park and Dr. Beebe of the bacteriological laboratory of the New York Health Department, and presented to Dr. Herman M. Biggs, chief pathologist.[1] Results may in this way be more advantageously compared than with those of Berlin and Paris, where a type of disease of greater severity than that in either New York or Toronto seems to prevail.

From Feb. 1st to July 1st there were admitted to the isolation hospital 188 patients said to be suffering from diphtheria. The records also embrace, for the same time, sixty private cases in which the exudates were submitted by city physicians. The details of these 248 cases are complete so far as the examinations are concerned and are included in the statements made as to organisms present, but as these outside cases could not be readily traced no further particulars were sought. With regard to the hospital cases it may be assumed that the clinical diagnosis was sufficiently conclusive to warrant the admission of the patients, and it may also be noticed that, as most of them belonged to the poorer classes, they cannot be considered as being amongst the most hopeful. In other words, the hospital clientage may be taken as consisting of apparently pronounced cases, with an unfavourable history, and any statistics gathered from such records will certainly not lead to an under-estimate of the diseases commonly classed as diphtheria.

Collection of the exudate.—The infected material is collected by the attending physician by passing a swab firmly over any patches of visible exudate on the tonsils or the pharynx, and is at once sent for examination to the laboratory of the Health Department. This method is deemed preferable to that commonly practised, in which a culture is at once made by the physician, as it affords an opportunity for the bacteriologist to make an examination of the exudate as well as the culture, thus forming a check of some value and also often enabling a reliable diagnosis to be at once pronounced. Another advantage is that the condition of the culture medium can be guaranteed and the manipulation be in more experienced hands. The swabs are prepared by cutting No. 15 steel wire into six-inch lengths, roughening one end by a few strokes of a chisel-edged hammer, and firmly winding on a little ordinary cotton-wool so as to make an application of about a quarter of an inch in diameter. The other end of the wire is then passed through a tapered cork of

[1] New York Medical Record, vol. xlvi., Nos. 11 and 13.

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the best quality, which fits into the non-lipped mouth of a stout, well-annealed test-tube of 15 mm. internal diameter by 100 mm. in depth (say, five-eighths of an inch by four inches). The object should be that of preventing the infected material from soaking into the swab, and preference is therefore given to ordinary cotton-wool rather than the absorbent kind hitherto recommended. A cork will also be found an improvement on the usual plug of cotton-wool, and is practically a sufficient protection from extraneous germs. The tubes containing the swab are sterilised by one and a half hours' exposure to a dry heat of 150° C. The swabs are supplied free to any physician requiring them.

Culture. — Experiments have been made with various media; but Löffler's blood-serum mixture, prepared by the quick method, has been found to best answer the requirements, although, when recently made and bearing water of condensation, it does not appear to give such good differential staining as when dry or older. The white and yelk of an egg, with one-third its bulk of bouillon containing 1 per cent. of glucose, may on occasion be used, as also glycerine agar, which is, however, slower than serum, though yielding much better microscopic preparations. Dr. Park and Dr. Beebe claim that glycerine agar is not so reliable for diagnostic purposes as serum, and I have noticed that the growth of Löffler's bacillus on this medium is less luxuriant, while the cocci appear to develop more rapidly and vigorously. In making a culture the infected swab should be lightly but firmly passed over the surface of the slanted serum, but not with such force as to abrade it. The infected tubes are then kept in an incubator at 35° to 37° C. for, say, twelve hours, when the growth will be easily recognised. As a matter of fact, the cultures are set one day and examined next morning. Cultural characteristics are of value as affording collateral evidence of the presence of the specific organism, and on transparent media the colonies are more or less easily recognised. It is, however, on morphological characters and peculiarities of staining that reliance must be placed.

Staining.—A smear from a swab is made directly on a slide and is dried, fixed, and stained with Löffler's blue. In making a preparation from a culture a small drop of water is put on a slide by means of a platinum loop, and a portion representing the entire growth on the surface of the serum is removed by a platinum needle and evenly distributed in the water, and is then dried, fixed, and stained. A drop of cedar oil is put on the slide, and the examination made by a one-twelfth oil immersion lens. Staining directly on the slide, as in the recognition of bacillus tuberculosis, is quicker and handier than using a cover glass, and, with proper skill in using the objective, is practically safe.

Characteristics of the diphtheria bacillus.—It will be unnecessary to repeat the well-known descriptions of this organism, and I would only emphasise its great liability to variation in form and size. This tendency to "sport" is sure to puzzle the inexperienced observer, though, when understood, it becomes diagnostic. The organisms found in the exudate are often presented as diplobacilli, which stain more or less uniformly and at most show polar darkening, while in other and much rarer cases they are exceedingly characteristic, resembling those grown on serum and possessing strongly marked interruptions. The cause of this variation may possibly be found in the condition as to reaction, or composition of the mucous membrane or secretion, in the throats of different patients. This seems likely, as under artificial cultivation the character of the medium greatly influences the appearance of the bacillus. I may say that I have found these characteristic specimens most frequently in the exudates from adults. The variations shown in the bacilli of cultures are not, however, to be wholly accounted for by the character of the medium or by the temperature or staining manipulations. Cultures of different exudates grown together under conditions precisely similar, and stained in like manner, often show very different results. In some the bacilli may be uniform in shape, size, arrangement, and diagrammatic staining, while other specimens exhibit wide differences in all respects, presenting extremely long rods with wide interruptions, or clavate, fusiform, or even pyriform organisms of the most bizarre description. It is thought that these are involution forms, or, according to Dr. Klein, that they represent a relationship to a mycelial fungus. The variations are very interesting and invite further study.

Relation between the length of the bacillus and its virulence.—The results of Dr. Park and Dr. Beebe are not in accord with those of some others who hold that the longest bacilli are the most virulent. The observations of the above-named writers show that the greatest mortality occurred in those instances in which the rods were shorter than the average, while there was a diminished death-rate with the long forms and a still lower rate with the evenly stained short forms with badly marked characters. Ample opportunity was afforded by the records of the isolation hospital for learning the clinical history of the cases there, and from a comparison of such data with those obtained from the bacteriological examination the conclusion to be formed is in accord with that arrived at in New York—viz., that the bacilli afford little evidence on which to base a prognosis, but if anything the longer rods produce less fatal results than those of average dimensions.

Persistence of the bacilli in the throats of infants.—Some observations have been made on this point. The shortest period for the disappearance of the bacilli after the patient's admission to hospital was five days, and the longest forty-two days. A somewhat interesting case was that of patient No. 1820, an adult, in which by the thirteenth day the bacilli had entirely disappeared and recovery was progressing rapidly On the thirteenth day after this, and within one day of the termination of the stipulated period of convalescence, reinfection occurred, as evidenced by the clinical signs of the disease and confirmed by the bacteriological test. By the thirteenth day the bacilli had again disappeared and the discharge of the patient followed shortly afterwards. This was a clear case of reinfection, and, taken in connexion with the ascertained variability in the persistence of the bacilli, shows conclusively that a definite time limit cannot be placed to the period of convalescence, and that though a detention of fourteen days after the disappearance of the exudate is a fairly well chosen term it is sometimes too long for the safety of the patient and often not long enough to prevent infection being carried by those who are discharged. Dr. Park and Dr. Beebe think that the isolation of patients should continue until cultures prove the absence of bacilli, and when such examinations cannot be made at least three weeks should elapse after the disappearance of the membrane. During the past two months, as confidence has been established in bacteriological results, considerable advantage has been taken of such tests in governing the discharge of patients, and in no instance has there been any reason to doubt the correctness of the conclusions.

Diagnosis by examination of the exudate.—The question is often asked whether by a microscopical examination of a smear of the exudate it is possible to make a diagnosis. In many cases a reliable conclusion can thus be formed, but in others it is quite impossible. Failure may arise from the fact that the bacilli are few while other organisms are very numerous, and, as I have before stated, the characters of the Löffler bacillus are in the natural medium often very difficult of recognition. On looking over the records of the last 100 exudates examined I find that the bacillus was noted as being undoubtedly present 36 times, and as being probably present 39 times. In the other cases the organism was either not present or not recognisable. According to this it is possible to make from the exudate a sure diagnosis in at least one-third of the cases, and to form a fairly correct idea as to the nature of about three-quarters. Negative results have not any diagnostic value, as failure to detect the bacilli does not necessarily prove their absence.

Number of species of bacteria found in cultures.—Considering the apparently fertile source it is quite remarkable that so few species are found in serum cultures. Miller isolated more than 100 species from the juices and deposits of the mouth, and it does not seem unlikely that a large proportion of these might reach the tonsils or pharynx. The greater number of such bacteria are derived from food or air, and the mouth organisms proper were found by Miller to be strictly parasitic and not capable of cultivation on artificial media. This may possibly account for the small number of species represented by cultures from the throats of diphtheria patients, and the temperature at which cultures are grown no doubt exercises an inhibitory influence on many species. I have found that the range is confined to about twenty organisms, and the occurrence of some of these is quite rare. The species include Löffler's bacillus and pseudo-form, the pyogenic staphylococci and streptococci, micrococcus tetragonus, white and pink yeasts, the diplococci of Fränkel and Friedlander, Pfeiffer's bacillus, streptococcus articulorum, bacillus mesentericus vulgatus, and other spore-bearing organisms.

Character of pathogenic organisms found.—The following table shows the general character of the organisms present

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in 188 hospital cases and 60 in private practice. The results are calculated in the nearest whole percentages:—

	Hospital cases.	Private cases.
	Per cent.	Per cent.
Bacillus diphtheriæ	36	21
,, and streptococci ...	11	18
,, and staphylococci	10	6
,, with streptococci and staphylococci...	19	15
Streptococci only	4	16
Staphylococci only (other than micrococcus tetragonus)	6	7
Streptococci and staphylococci ...	12	14
Other organisms	2	2
Löffler's bacillus present	75·5	61·7
,, ,, absent	24·5	38·3

It is commonly supposed that Löffler's bacillus is much more generally associated with cocci than is indicated by this table, but I can only give the facts as observed. It may, however, be explained that there is a bare possibility that the cases of combination are understated on account of the somewhat slower growth of cocci on serum. Observations of the cultures were in all cases made after twenty-four hours' development, except in the case of those set on Saturdays, when twice this time elapsed. Cocci were found to grow in the shorter period, and there is no definite reason to conclude that a longer time in the incubator would have produced a different result. The fact that nearly one-quarter of the cases admitted to the isolation hospital as diphtheria were really not so is a most important one, and points strongly to the necessity for "suspect" wards in institutions of this character. The isolation should be perfect, and all patients should be detained in such quarantine until the results of a bacteriological examination are known. This seldom requires more than twenty-four hours, and by the exudate may sometimes be decided in a few minutes. In the 5611 cultures made in New York from May, 1893, to May, 1894, and representing hospital, dispensary, and private cases, the specific bacillus was found to be absent in 27 per cent of the cases. This agrees fairly well with the results obtained here.

Occurrence of staphylococcus pyogenes aureus.—All cultures were laid aside for fourteen days after microscopical examination so that the golden staphylococcus might reveal itself by its chromogenic character. It was found in 27 out of 188 cases, or about 14 per cent. It is significant that it was present in nearly 19 per cent. of the fatal cases.

Occurrence of micrococcus tetragonus.—The frequency of this organism in diphtheria exudates and cultures calls for special remark. As judged by morphological characters I have found it to be present either in the exudate or cultures in 91 per cent. of the hospital cases examined. This is, I think, a greater proportion than is observed in health; but whether the fact is of any pathological importance I am not in a position to say.

Susceptibility as influenced by age and sex.—The following table affords some data for arriving at conclusions on these points, but it is to be regretted that cases of true and false diphtheria are not separately enumerated. The percentages apply to the ages of hospital patients only.

	Per cent.
7 years and under	50
Between 7 and 14 years	21
,, 14 and 21 years	14
,, 21 and 28 years	10
,, 28 and 51 years	5

The tables of Dr. Park and Dr. Beebe cannot be compared, item by item, with this, but it may, however, be concluded that young children are here much less liable to the disease while adults are more susceptible than in New York. The proportion of females to males was 55 and 44 per cent. respectively, figures which approximate very closely to those applying to New York.

Mortality.—The type of disease prevalent in Toronto appears to be, relatively, of an average character. This is shown by the observed death-rates in various American cities as given in the last report of the Toronto Board of Health. A few of these figures may be reproduced: Cleveland, Ohio, 63·5 per cent.; Des Moines, Iowa, 44·8 per cent.; Brooklyn, N.Y., 36·9 per cent.; Rochester, N.Y., 33·3 per cent.; Boston, Mass., 32·3 per cent.; New York, N.Y., 30·6 per cent.; Philadelphia, Pa., 29·0 per cent.; Detroit, Mich., 28·6 per cent.; Toronto, Ont., 1894, 27·9 per cent.; Toronto, Ont., 1892-94, 22·1 per cent.; Duluth, Minn., 19·0 per cent.; Harrisburg, Pa., 13·0 per cent.; and Toledo, O., 11·7 per cent. General health returns cannot be accepted as being as accurate as those of hospitals, where the facilities for obtaining statistics are complete and under perfect control. It will, therefore, be better to class the death-rate of the isolation hospital with other institutions of the same class, of which a few records are at hand:—

	Per cent.
Sick Children's Hospital, Paris, average of five years	51·70
English hospitals, quoted by Dr. Washbourn, Dr. Goodall, and Mr. Card, average	38·90
Trousseau Hospital, Paris	32·00
Willard Parker Hospital, New York, average of four years	23·77
Willard Parker Hospital, New York, 1894 ...	27·00
Isolation Hospital, Toronto, 1893	19·32
,, ,, ,, 1894	14·05
,, ,, ,, February to June inclusive, 1895	18·08

In the Toronto returns there have not been any deductions for cases which were in a moribund condition when admitted, but every death occurring in the institution has been included. The low rate is highly creditable to Dr. Tweedie, the physician in charge, but, nevertheless, I think the conclusion may be formed that the bacillus is less virulent or the subjects more resistant in Toronto than in many other cities.

Organisms present in fatal cases.—Of the 34 deaths which took place during the last five months there were 33 examinations of exudates, as in one instance the patient died a few minutes after admission and a swab was not taken. In another case, that of an infant twelve months old in a moribund condition from membranous croup, the swab was unsatisfactory. The records of the 32 remaining cases are as follows:—

	Per cent.
Löffler's bacillus only	37·5
,, ,, with streptococci	25·0
,, ,, ,, staphylococci	18·7
,, ,, ,, streptococci and staphylococci	18·7

The staphylococci were in all cases staphylococci pyogenes aurei. No fatal results took place when only cocci were present.

Sex and age in fatal cases.—The proportion of males and females was respectively 44 and 56 per cent., being precisely identical with the ratio of affected cases. Age is represented by the following percentages:—

2nd year	26 per cent.	7th year	15 per cent.
3rd ,, ...	12 ,, ,,	8th ,, ...	3 ,, ,,
4th ,, ...	17 ,, ,,	10th ,, ...	3 ,, ,,
5th ,, ...	15 ,, ,,	13th ,, ...	3 ,, ,,
6th ,, ...	6 ,, ,,		

It will thus be seen that the mortality was 91 per cent. during the first seven years, while the number of patients under that age was 50 per cent. Of the 29 per cent. of patients over fourteen years of age not a single death occurred. Sixty-seven per cent. of the deaths took place within five days after admission to hospital, and 88 per cent. within eight days. The longest period from admission to death was fourteen days.

Relation between organisms present and severity of the disease.—I offer with great hesitancy any remarks on this subject, as some of the results indicated by my investigations are as surprising to me as they doubtless will be to others. I have, however, no reason to question the care with which the bacteriological observations were made, though, in regard to the records of the character of the disease, it may be explained that such were not specially kept for this purpose, but were partly obtained during conversations with the medical superintendent and partly from his notes of cases. Further experience and more perfect records may throw

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additional light on this subject, but in the meantime I venture to submit what I have up to the present observed. In the following table the cases have been classified as mild, severe, very severe, and fatal, and the proportion with reference to each organism or combination is given in round percentages:—

—	Mild.	Severe.	Very severe.	Fatal.
Bacillus diphtheriæ	46·6	11·2	22·5	19·3
,, and streptococci ...	32·1	17·8	21·4	28·5
,, and staphylococci...	27·2	18·1	22·7	31·8
,, with streptococci and staphylococci	54·3	11·4	20·0	14·2
Staphylococci only	97·3	2·7	0·0	0·0
Streptococci only	100·0	0·0	0·0	0·0
Staphylococci and streptococci ...	100·0	0·0	0·0	0·0

The general belief that the most fatal cases result from the association of Löffler's bacillus with staphylococci or with streptococci is confirmed by the above figures, and the former combination is the most serious. It is, however, extraordinary that when both cocci are present with the Löffler bacillus the death-rate is apparently reduced by one-half. This would indicate an antagonism between the combined cocci and the bacilli—a supposition which I do not care to urge until further evidence is obtained, and this I shall take particular pains to procure. There are other interesting deductions which might be drawn from the above statistics, but I shall not further trespass on patience which must be already overtaxed.

Toronto.

A CLINICAL STUDY OF THE ANTI-SUDORIFIC PROPERTIES OF PICROTOXINE.[1]

BY DR. M. SEMMOLA,

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THAT most important function of the skin, perspiration, is, like all other vital functions, regulated by various factors. Many different causes may provoke its augmentation or diminution, such as the surrounding temperature, excess of water in the blood, extreme activity of the heart, dilatation of the peripheral vascular system, some medicinal substances, several pathological states, and, finally, the influence of special secreting nerves. Eliminating accidental causes, those which remain to preside over the sudoriparous secretions are the bloodvessels and the system of secreting nerves, which are almost always closely dependent on each other; in fact, a vaso-dilatation often succeeds an excitation of the secreting nerves. However, perspiration, which often takes place when the skin is pale, like that due to strong moral excitement and the cold sweat of the death agony, proves that the secreting fibres can act even when the constricting fibres of the vascular system are excited. That there are special sudoriparous nerves independent of the vaso-motor system has been demonstrated by the famous experiments of Goltz, Kendall, Luchsinger, and Ostruomon; indeed, the secretion of perspiration has even been verified in the secreting nerves of a limb just amputated. Nor are secreting nerves the only known cause, for the presence of sudorific centres has been discovered. Thus in the cat a lumbar centre has been shown to influence the posterior limbs; a cerebral centre the anterior ones (Vulpian, Luchsinger, Nawrocki, and Ostruomon); and a bulbar one, which influences all four limbs (Marmé and Adamkewiez) and may in a cat cause perspiration of these limbs to continue up to three-quarters of an hour after its death. At other times perspiration is in direct proportion to the quantity of blood distributed on the surface of the skin, as has been shown by the celebrated experiment of Dupuy, who, after cutting the sympathetic nerve of a horse, saw the correspondin the neck break out into a profuse sweat; and als of Nitzelnadel, who galvanised the cervical sy nerve of a man and observed the consequent perspiration.

The cause of the increase or diminution of secretions being so various, it is clear that there m differences in the methods by which several s influence this function. Whether they act direct bloodvessels or the excitability of the nervou system, or simultaneously on both these factors always obtain by their means an increase or dim perspiration. We have substances in our Pha which act on the cutaneous functions in utterly manners and by various processes. Thus there a agents more or less efficacious in producing diapho vary in their mode of action because their i variously developed; they may act by increasing of blood, as in the case of copious draughts of ho by exciting the action of the heart, as in abundan warm spirituous liquors; they may, again, act b ing the sudorific centre, as in muscarine, phy nicctine, or acetate of ammonia, or the wh secreting nervous apparatus, both central and may be stimulated as by pilocarpine; and, vaso-motor organs may be paralysed, as by antin ipecacuanha, &c., and a hyper-functionabil apparatus produced. On the other hand, we therapeutics many substances that by means different actions have antisudorific properties. and cold water, *douches écossaises*, &c., by the vascular system, tend to re-establish the peripheral vessels and so diminish the secretio Tannic and gallic acids would produce an irr on the vaso-motor centre (Fikentscher) and action on the vessels and sudoriparous g diminishing transpiration and evaporation. lead has a styptic action; white agaricus and agaric acid (Haen, Barbut, Piermy, To Lauchmann, Hoffmeister, and others) possess effect on the peripheral apparatus of secretion. Camphor and camphoric acid (Leu, Combenale) act as general stimulants to system; atropine paralyses the secreting nerves picrotoxine acts by first exciting the vaso-m centre and then consecutively constricting (Planat, Bokai, and others); all these dr or more rarely arrest the secretions. T therefore, possesses several antisudorific reme they differ in their actions so should they l therapeutic indications, for increase of pers arise from various causes which may ha different actions. Before, therefore, we antisudorific treatment it is necessary to form ception of the pathogeny of the disturbance tions; and, according to whether the nervous s the vaso-motor system, or the smooth fibres vessels, &c., enter into play, we must choose ceutical substance which, when absorbed, can t counteract the disturbances which in that e have caused the diaphoresis. In other terms, an ephidrosis due to excitement of the sudori system we must have recourse to the r agaricine, atropine, &c., which have an inhibit compensating the increase of function; or when we believe the ephidrosis is caused by p vaso-motor centre we should administer ex such as picrotoxine; and, lastly, if there is vascular tone from peripheral disturbance hydropathy, which has such a marked action of the bloodvessels. Guided by these ideas truly splendid results in cases where many been uselessly experimented with without peutic indication, which should especiall scientific practice. I will briefly report a cl the greatest importance in the nature of f tion, and the rational treatment followed, complete recovery.

The patient was a woman aged forty-th at home. She had no morbid history of n ditary or acquired. In December, 1893, sh with high and persistent fever, headache, s still slighter expectoration. These morbid c

[1] A paper read at the Institution of Clinical Therapeutics of the Royal University of Naples, and edited by Dr. Carlo Gioffredi, assistant at that Institution.

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ceased, she continued to remain in bed on account of great general prostration. Her appetite and digestion were, however, well preserved. During convalescence, which is always long after influenza, she gradually began to show a great tendency to perspire, doing so profusely without the smallest muscular effort, even though it was in the middle of winter. This tendency constantly increased, until streams of perspiration poured off the patient, when she was only dressed and covered as lightly as if it were summer time. Together with this there were frequent peripheral vaso-motor disturbances, chiefly shown by livid red patches more or less extended and persistent. The skin was cool on account of the constant cutaneous evaporation. On examination of the nervous system no alteration worthy of note presented itself either functionally or subjectively. On careful examination of the heart an increase of the transverse diameter was noted, and a systolic murmur at the apex, with accentuation of the second sound over the pulmonary area. The other organs were normal. There was anæmia caused by the great drain on the system, and the general state of the patient was very low. Several antisudorific remedies had been tried to counteract this morbid process — atropine, agaricine, camphor, camphoric acid, &c.—but all had proved inefficacious. If we except the insufficiency of the mitral valves, the most important clinical points in the history were the preceding influenza, ephidrosis, cutaneous patches, and the prostration. The onset of perspiration had occurred immediately after a serious attack of influenza with great weakness, and had progressively developed, notwithstanding that the other phenomena of the disease had entirely disappeared. I considered that we were treating a perspiration due to paresis, more especially caused by some of the many toxines which are often superadded to influenza, and which in this case exerted their action on the sudoriparous centre and the vaso-motor centre of the bulb—a frequent seat of action of these toxines, as has already been demonstrated by the examination of the urine of patients suffering from it.[2] The livid red marks on the skin were certainly due to vaso-motor paresis, and so confirmed the diagnosis. And this was why atropine had proved useless; it had no marked action on the peripheral bloodvessels, which were the actual cause of the perspiration. Agaricine had been equally inefficacious, as it acts in much the same way as atropine; indeed, we may add that this drug, having, according to Hoffmeister, a peripheral action on the vaso-motor centre, would certainly have aggravated in this case the pathogenic cause of the ephidrosis. Starting, then, from this conclusion—i.e., deeming that the perspiration in this patient must be referred to exhaustion of the vascular tone from paresis of the bulbar vaso-motor centre — I prescribed picrotoxine as a remedy potent to stimulate that centre, which was weakened by a special toxine—in fact, a treatment founded on elective antagonism. The results obtained were in complete accordance with my predictions and fully confirmed the theory I had formed of the pathogeny of this singular functional disturbance. Scarcely three days after the picrotoxine had been given (in doses of half a milligramme twice a day) the sweats gradually diminished and entirely disappeared on the eighth day of treatment, while hitherto they had been obstinate against all other remedies. The effects of paralysis of the vaso motor centre also entirely ceased with the perspiration, and by degrees the patient lost all sense of general weakness, which was the effect of the drain made on the system by profuse sweats, and returned to complete health.

The rational therapeutic indications which ought to form the basis of modern clinical study have in this case a marked confirmation. Antisudorific therapeutics, like all other therapeutics, should no longer be empirical. To varying pathogeny, to the different processes of production *en rapport* with the etiology, different indications should correspond. Now that physiology and pathology have shown us the various causes which may originate disturbance in the secretions of the sudoriparous glands, and pharmacology has enlightened us on the ways in which different substances act on the functions of the skin, every form of ephidrosis should no longer be treated indifferently with any chance antisudorific remedy, or by passing all such drugs in systematic review, as is frequently done in practice. It is needful to study the pathogenesis of the special morbid form under treatment, and thus choose that remedy which most reasonably suits the case.

[2] Transactions of the Académie de Médecine, 1891-92.

ON CURETTING THE UTERUS IN CASES OF PUERPERAL SEPTICÆMIA.

BY ALEXANDER DUKE, F.R.C.P., L.R.C.S. IREL.,
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HAVING been present during the interesting discussion on the preventive treatment of puerperal fever (improperly so-called) at the last meeting of the British Medical Association (Obstetric Section), I was surprised that no allusion whatever was made to the treatment in such cases by curetting with blunt wire the cavity of the uterus. I am under the impression that I was the first to suggest this proceeding in the *British Medical Journal* in 1889 and in THE LANCET in 1890, and my name appears in this connexion in Neale's valuable "Digest" (Section 1595), third edition. This suggestion (which I have on several occasions acted on with satisfactory results, and which I still recommend in suitable cases) was commented on in a pamphlet published by Mr. E. Tenneson Collins (Cardiff) in 1894, entitled, "Pathological Objections to Curetting the Uterus in Puerperal Fever," in which he condemns this proceeding. On the title-page he states: "This paper was the outcome of a suggestion by Dr. Alexander Duke to curette the uterus in puerperal fever, followed by frequent irrigation, and he argues on a supposed analogy between the puerperal uterus and one affected by chronic endometritis." Mr. Collins's arguments, however, are not convincing to me, as he evidently supposes I use an instrument sharp enough to produce a breach of the surface, which I am most particular to avoid, by using only a blunt wire loop which I can attach to an irrigation tube if required. A French gynæcologist, M. Rapin (Lausanne), who has adopted this treatment, says:[1] "Everyone admits the utility in cases of retention of practising curettage as soon as symptoms of endometritis set in (fever, fetid lochia), in order to relieve the womb of the tissues which would form a favourable field for the development of microbes. This curettage is superior to cauterization or intra-uterine injections." I certainly consider that curetting with blunt wire (followed by drainage if necessary) is much less dangerous than intra-uterine injections alone, and for the reason that the micro-organisms which exist in these cases are found in far greater numbers near the vaginal outlet, and consequently would be much more likely to be carried upwards into the uterus by syringing than by the curette. I cannot, therefore, agree with the last sentence in Mr. Collins's pamphet: "It is unjustifiable to curette the uterus in puerperal fever." For my own part I much prefer to have recourse to curetting than to rely on the old treatment by drugs alone. I cannot help thinking that the antiseptic treatment in midwifery would be seldom required if more attention was paid to the aseptic, one of the most important plans being thorough flushing of the entire genital tract directly after labour. M. Rapin states that "After each delivery there remains a more or less large quantity of tissue in the uterus destined to undergo fatty degeneration and mortification. This is the decidua vera, and furnishes the greater part of the materials constituting the lochia." Is it not common sense, I ask, to remove this *débris* by flushing and so entirely take away this primary source of mischief, which later, if left (more especially by contact with a broken surface, such as a lacerated cervix or perineum), might perhaps inoculate the patients and set up puerperal septicæmia? Those who have never taken the trouble to thoroughly wash out the uterine cavity directly after labour (the time it can be best and most easily accomplished) can have little idea of the amount of *débris* which, if left behind, must take a considerable time to be expelled, and is certainly likely, to say the least, to prove a source of danger to the lying-in patient. In washing out the uterus I place the patient on the back and use either a syringe or douche. I employ plain water at a temperature of 110° F. which has been previously boiled; a little tincture of iodine may be added if preferred. I keep the left hand over the uterus while the fluid enters the cavity; the cervical canal is patulous, and therefore offers no resistance to the the introduction of the tube, there being sufficient room for the return current. This treatment is stimulating, cleansing,

[1] Medical Press and Circular, Aug. 28th, 1895.

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and hæmostatic. In fact, there is everything to recommend the proceeding, and nothing (that I know of) to forbid its general adoption in all cases of labour and miscarriage.

Cheltenham.

ON GRANULAR KIDNEY FOLLOWING SCARLATINAL NEPHRITIS.

BY J. DIXON MANN, M.D. ST. AND., F.R.C.P. LOND.,
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THE absence of any essential distinction between the pathological processes concerned in the production of the different forms of Bright's disease is once more forcibly demonstrated by the following case. The patient was under my observation from the time she was attacked with nephritis until her death—a period of twenty-eight years.

In 1866 a girl aged fourteen years, previously healthy, had an attack of scarlet fever followed by nephritis and dropsy. There was nothing unusual in the course of the acute stage of the kidney disease; it subsided in a few weeks, and the patient regained her former state of health except that albumin continued to be present in the urine. From this time until her death, which took place in October, 1894, the urine was examined six or eight times every year, and albumin was found to be present on every occasion. For seven or eight years after the original attack the patient had occasional subacute attacks of nephritis, during which the urine became scanty, cloudy, and smoky, or red; at such times it contained numerous hyaline and fatty casts. In the intervals the urine was clear, of medium colour, and was free from excessive deposit, only an occasional cast being present. In some of these attacks there was considerable œdema of the hands and feet as well as of the face; at all other times no trace of œdema was present. These attacks usually followed exposure to cold; sometimes they occurred without any ascertainable cause. Each attack lasted about two or three weeks; they were entirely absent during the later period of the patient's illness. With the exception of occasional slight attacks of bronchial catarrh and of subacute rheumatism the general health was good. As a girl the patient was of a rosy complexion, and she retained the greater part of her facial colour throughout life; she never became anæmic. She was moderately stout and did not lose flesh until the last year of her life. At the age of twenty-eight she married, but had no children. From 1866 to 1880 the urine invariably contained a considerable amount of albumin, varying from 0·2 to 1 per cent. Somewhere about the year 1880 a change was noticed in the character and the quantity of the urine; in place of being of medium, or rather higher than medium, colour, and of moderate amount—thirty-four to forty-five ounces daily—it became of lower specific gravity, 1005 to 1010, paler in colour and more abundant, eventually reaching sixty to eighty ounces daily. The percentage of albumin also diminished, never exceeding 0·3 per cent. Casts were now very rarely, and blood-corpuscles never, found, the urine being almost free from deposit. From time to time observations were made as to the relative amounts of serum albumin and serum globulin in the urine. The proteid quotient was found to range within wide limits, being sometimes as high as 35, and at others as low as 0·8. The only striking feature observed was that the mean of the quotient tended to fall as the case advanced. The diminution was by no means regularly progressive, but, taking the whole series of observations, there was a decided drop during the last year; this was probably due to the altered constitution of the blood plasma induced by the disease. The daily excretion of urea did not materially deviate from the normal, although during the latter part of the patient's life the percentage of urea in a given volume of urine was diminished. A few weeks before death a considerable reduction in the amount daily excreted took place. The arterial tension gradually rose as time went on and the left ventricle became hypertrophied. In 1888 a mitral systolic murmur was observed. In September, 1894, the patient was troubled with persistent headache and sleeplessness, having previously been a heavy sleeper. Retinal hæmorrhages had been observed a short time before. She then became worse, and, after having been unconscious for several days, died from uræmia in October, 1894.

Post-mortem examination showed that the heart was considerably hypertrophied, especially the left ventricle. The liver was rather large and hyperæmic; it showed no cystic changes. The kidneys were very small; the left weighed two ounces, and the right a few grains under two ounces. They were dark-red in colour, without any white or yellow spots or patches. I am indebted to the kindness of my colleague, Professor Sheridan Delépine, for the following minute description of the kidneys: "Both the kidneys were small, measuring three inches and a half in length and one inch and three-quarters in width. Generally speaking they were normal in shape. The ureter and pelvis were of normal size. The capsule could not be stripped off without the substance of the cortex being torn and a number of cysts opened. The denuded surface of the cortex was very granular, cystic, and congested; some of the cysts projected much beyond the surface of the organ, the largest measuring about half an inch in diameter. This cyst contained a thickish, colloid-looking material. Microscopically examined, the organ presented all the appearances generally associated with the term "granular kidney." The capsule was thickened and rough on its external surface, indicating fibrous induration of the perinephral tissues. The interstitial tissue of the cortex was much increased, especially in the region of the pyramids of Ferrein, where the tissue was very transparent, finely fibrillated, and œdematous or myxœdematous looking; here and there it was moderately cellular, but there was no evidence of any recent small-celled infiltration. In the labyrinth the fibrous tissue was more scanty, denser-looking, and more coarsely fibrillated. In the medulla the increase of connective tissue was also very well marked and the œdematous look more striking; in many places the bloodvessels (capillaries) were separated from the collecting tubes by a layer of connective tissue thicker than the diameter of the tubules or of the blood vessels themselves. The large arterial arches and many interlobular arteries were little altered, but were surrounded by a large amount of adventitious connective tissue. The smaller arteries, especially the terminal branches of the interlobular arteries immediately under the capsule, showed great thickening of their walls, most marked in the tunica intima, which in some exceptional cases was so thick as nearly to obliterate the lumen. The veins were generally dilated and also the capillaries. The Malpighian glomeruli and the capsule of Bowman were almost without exception scarcely distinguishable owing to fibrous transformation; those which remained distinct were in a state of fibro-hyaline degeneration; only a few Malpighian bodies appeared to be capable of performing any function. The convoluted tubules were mostly dilated, giving to the labyrinth an appearance resembling that of lung parenchyma. In many of the dilated tubules the atrophied epithelium could be recognised; in some the epithelium was lying loose in the lumen, in others the atrophied cells were pressed against the basement membrane by a mass of colloid matter in which cells more or less degenerated or vacuolated could be recognised. Some of the most dilated tubules formed cysts quite distinct to the naked eye, reaching in one instance a diameter of half an inch. In a small proportion of convoluted tubules showed considerable atrophy. The straight tubules in the medullary rays were much atrophied, and here and there large cysts could be found in the labyrinth. In the papillary region of the pyramids of Malpighi some of the large collecting tubules were also much dilated."

Professor Delépine's report places this case among those in which, as a sequence of acute parenchymatous nephritis, a pathological condition is met with indistinguishable from that associated with the common type of granular kidney. The resemblance is complete; the tissues attacked, the character of the changes produced are identical. It is necessary to emphasise this lest the case should be regarded as one of arterio-sclerotic atrophy. In this form of contracted kidney the changes are almost entirely limited to the renal arteries and their branches. The arteries become gradually obliterated by thickening of the intima, the glomeruli supplied by them are rendered functionless, and in consequence, atrophy along with the tubules connected with them; localised patches of cicatricial contraction of the cortex ensue, and these may be so numerous as to involve the entire cortex, producing naked-eye appearances which resemble those of the ordinary cirrhotic kidney. The difference consists in the limitation of the morbid process to the renal arteries; there is practically no increase of the connective tissue, nor are Bowman's capsules thickened.

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case the connective tissue throughout the cortex was greatly increased, Bowman's capsules were almost obliterated by fibrous invasion, and the larger and many of the interlobular arteries were but little altered, only the intima of their terminal branches being thickened. That the original disease which attacked the kidneys in the case under notice was of the acute parenchymatous type the clinical history clearly shows. That after a time it merged into chronic parenchymatous nephritis is equally obvious, and that the ultimate result was a condition absolutely indistinguishable from the ordinary granular kidney is demonstrated by Professor Delépine's report. The continuity of the morbid processes is established by the fact that albumin was always found to be present in the urine during the whole of the post-scarlatinal period of the patient's life, and also that the urine gradually approached in character the urine from an ordinary case of contracted kidney. During these twenty-eight years the kidneys were undergoing a series of changes, the character of which altered as time went on. The primary disease being scarlatinal nephritis would chiefly attack the glomeruli, but accompanying this there would also be more or less diffuse interstitial inflammation. The usual course is towards recovery or to comparatively early death. In the latter case the effect of the inflammatory processes on the vascular parenchyma is to produce more or less rapid and permanent loss of function, which ends matters forthwith; or, when the inflammation is less destructive, it leads to chronic changes which are also to a preponderating degree parenchymatous. Any changes that occur in the interstitial tissue are of negligible quantity, simply because, being of much slower type, they have not time to assert themselves before the more vital structures succumb. In my case, however, neither the original attack nor the subacute attacks which followed were of such virulence as to permanently damage the glomeruli beyond a point which was consistent with considerable duration of life. The necessary factor—time—consequently came into play; interstitial hyperplasia took place, with subsequent contraction of the overgrowth, together with the other indurative changes met with. It would thus appear that the condition found after death was simply the ultimate expression of one not unfrequently seen, in a modified form, in cases of chronic parenchymatous nephritis (large white kidney), which have survived rather longer than usual. In such cases some amount of fibrous hyperplasia of Bowman's capsules, along with cicatricial contraction of the cortex, which may reduce the kidney to less than the normal size, are by no means uncommon. The essential feature of the case was its singularly protracted course, which allowed the cirrhotic changes to reach a most advanced stage.

Manchester.

ON THE VALUE OF BICHROMATE OF POTASH IN CERTAIN AFFECTIONS OF THE STOMACH.

BY J. B. BRADBURY, M.D. CANTAB., F.R.C.P. LOND.,
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I BROUGHT back with me from the meeting of the British Medical Association at Clifton in August, 1894, a small box of soft gelatine capsules—prepared by Messrs. Duncan, Flockhart, and Co. of Edinburgh—each containing one-tenth of a grain of bichromate of potash. With the box were no directions, and for some months I could not make out in what diseases they were intended to be used. At the beginning of this year Professor Fraser of Edinburgh kindly sent me a paper which he read before the International Medical Congress at Rome [1] on the use of this drug in certain affections of the stomach, and I soon had the opportunity of testing its value in the case of my parlour-maid.

CASE 1.—In February she had an acute attack of gastralgia, which neither bismuth, morphia, nor iron, with the most careful dieting, would alleviate. She had had many similar attacks before and had always been relieved by a powder containing bismuth, opium, magnesia, and soda, or by iron. The pain was so severe that she was compelled to give up her work; it came on usually *directly* after eating, occasionally before, and was relieved by vomiting. She was slightly anæmic, but the bowels and catamenia were fairly regular. I determined to try the capsules, and after taking one three times a day for two or three days on an empty stomach she became much better and continued to improve. She has kept quite well ever since. Altogether she took two boxes of the capsules, each box containing about twelve.

CASE 2.—A man aged thirty, married, was admitted into Addenbrooke's Hospital, Cambridge, on April 3rd of this year suffering from attacks of vomiting after food. Generally the attacks came on many hours (from ten to twelve) after a meal, and most often occurred in the early morning. No pain was felt after food had been taken, but occasionally bright blood was found in the vomited matters. The Sunday before admission he brought up two tablespoonfuls of blood in the vomit. He had been troubled with these attacks of sickness for three years, and in consequence had been almost constantly an in- or out-patient at the hospital. Relief was obtained for a time, but the attacks quickly recurred. The patient was somewhat wasted, but there was no evidence of any other disease. He was of temperate habits. He was dieted on beef-tea and milk, and the day after admission was given one capsule of potassium bichromate (one-tenth of a grain) three times a day. He vomited on each occasion an hour after taking the first three capsules and once four days afterwards. On April 10th, one week after admission, he was allowed bread, on the 13th fish, and on the 17th pudding. On April 28th he left the hospital greatly improved in every respect, having gained weight and the power to take solid food.

CASE 3.—A woman aged forty-six was admitted to Addenbrooke's Hospital on April 17th last suffering from pain in the stomach and vomiting. These symptoms commenced seven years ago and had been more or less present ever since. She had lost flesh and occasionally had brought up dark blood in the vomit. She was the mother of eighteen children, of whom ten were living, and there was a pronounced family history of phthisis on the father's side. When admitted the patient presented a somewhat wasted appearance; the gastric pain was constant, being worse after food, and vomiting occurred after every meal. There was tenderness in the epigastrium and right hypochondrium, but no tumour was felt. The tongue was slightly coated and the appetite poor; the bowels were regular. She was put on a milk and beef-tea diet, but no improvement occurred, and three days afterwards was ordered one potassium bichromate capsule (containing one-tenth of a grain) three times a day, with an occasional dose of an elixir of cascara sagrada. During the night she vomited once, but the next day she was free from pain. The improvement continued. On April 28th, eight days after commencing to take the capsules, fish was added to her diet, and on May 5th full diet was allowed. This, however, produced retching and abdominal discomfort, and it was therefore found necessary to replace the meat by fish. Subsequently the patient gradually improved and was finally discharged on May 11th. Reporting herself at the hospital two weeks later, she stated that the improvement had continued and that she was practically well.

CASE 4.—A man aged fifty-nine was admitted into Addenbrooke's Hospital on April 6th last complaining of a constant gnawing pain in the epigastrium and occasionally shooting into the loins. This first commenced about a month before Christmas and had continued ever since. It was sometimes worse about an hour after food, but there was no definite relation to meals. The patient stated that he had lost two stone since Christmas; he had never vomited, and no family history of cancer was obtained. The bowels were constipated. On examination of the abdomen the superficial veins were found distended; an ill-defined roundish mass, slightly tender, was felt in the region of the umbilicus, but no enlargement of the liver or spleen could be detected. A trace of albumin was found in the urine. On admission he was put on a milk and beef-tea diet, a purgative and a simple enema being also given. No improvement occurred. On April 10th potassium bichromate capsules, one three times a day, were given. Improvement almost immediately followed; the pain abated, the patient gained weight and was soon discharged, being able to take solid food with impunity.

CASE 5.—A young woman aged eighteen first consulted me on May 14th, 1892. Her symptoms were pain after eating and extending between the shoulders, occasional vomiting, but no hæmatemesis. She was afraid to eat on account of the pain. The bowels were very costive. The catamenia were regular. She had not been well for two

[1] Vide THE LANCET, April 16th, 1894.

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years. There was slight tenderness in the epigastric region. These symptoms were relieved by a mixture containing bismuth, morphia, and magnesia, and by careful dieting. Later in the year she became anæmic and the catamenia irregular, and she was successfully treated with iron pills. In August, 1894, she had a recurrence of the pain, vomiting, constipation, and tenderness in the epigastrium, and the symptoms were again relieved by a bismuth and morphia mixture. The catamenia were, however, irregular, often not reappearing for seven or eight weeks. On March 23rd, 1895, she came to me again with the same symptoms, and I gave her the bichromate capsules. I did not see her again till May 18th, when she informed me that the capsules had stopped the vomiting and that she had had neither sickness nor pain for about seven weeks. Her appetite was better, the bowels more regular, and she felt stronger. She is still continuing to take the capsules.

The next two cases were not successful.

CASE 6.—A man aged about fifty consulted me in December, 1889, for pain in the stomach, or rather a feeling of rawness and soreness. The bowels were regular and the tongue a little coated. He was benefited by a mixture containing bismuth and belladonna. In May and June of the following year the pain, rawness, and soreness returned, and sometimes the pain was very acute. Morphia and bismuth gave him some relief, but a good holiday did him more good than anything. He did not consult me again till April, 1895, when he had the same symptoms as before. His appetite was fair, but he was afraid to eat on account of the pain. I prescribed the bichromate of potash capsules for him, and although he tried them for a fortnight he received no relief. I then placed him upon a mixture containing bismuth, sulpho-carbolate of soda, and Fowler's solution; but I have not seen him since and do not, therefore, know the result.

CASE 7.—The patient was a woman past the menopause who had had at times for years severe attacks of gastralgia, which a powder containing bismuth, magnesia, soda, and compound powder of opium usually relieved. I gave her the capsules, and I thought at first they were benefiting her; but she had a most excruciating attack of pain, and I was obliged to place her upon a strict diet and a bismuth, morphia, and magnesia mixture.

The cases are few in number, but they show the extent of the action of potassium bichromate in the treatment of gastric conditions. That this salt is beneficial in many cases of dyspepsia can no longer be doubted. Both Vulpian and Fraser have described successful cases, and Hare of Philadelphia also mentions its value. Vulpian's cases[2] exhibited a variety of symptoms, but were all of a more or less chronic character. In some patients pain was a prominent symptom, in others there was none; in some no tenderness existed, others on the contrary presented tenderness more or less severe and localised; anorexia was not infrequently absent, and in some blood was found in the vomit. Other cases of his had decided dilatation, and a few were probably cases of malignant disease. In some of the last-named cases the relief was so marked that he thought it was probably due to a specific effect, and consequently he gave the drug in cases of uterine cancer, but without benefit. He thinks, however, that the drug is most useful in those cases of dyspepsia which simulate cancer. Like myself, he does not appear to have been always successful, for in speaking of one case he says, in parenthesis, "I speak only of those cases where I obtained great amelioration." Fraser's cases are very similar to those of Vulpian and my own. They presented very dissimilar symptoms, or perhaps I ought to say combinations of symptoms, but nearly all of them might be classed under what is termed "chronic dyspepsia." Ten of his cases were diagnosed as gastric ulcer, but in all the cases more or less relief immediately followed the potassium bichromate treatment. In cases of anæmia the gastric disturbance was relieved or cured, but the drug had no effect upon the condition of the blood. When iron was administered, however, the amount of hæmoglobin and number of corpuscles very quickly increased, and the patient soon became well. The salt does not appear to possess any great hæmostatic power, and it is practically useless in the treatment of ordinary hæmatemesis. Although the therapeutic value of potassium bichromate is thus evidenced, a rational explanation of its action—that is, its pharmacology—is by no means easy. At the present time numerous cases of poisoning by this salt, of a more or less acute character, are on record, and many experiments (by Orfila, Vulpian, and others) have been made to determine its pharmacological action, but it is peculiarly difficult to draw conclusions from the administration of toxic doses as to the action of minute doses administered therapeutically. Shortly, potassium bichromate in large doses acts upon the nervous system and secreting structures. Administered by the mouth, subcutaneously, or intravenously, it almost invariably produces vomiting and often diarrhœa. After death congestion and ecchymosis of the alimentary tract are usually found. It is, in fact, an irritant poison. As it produces such profound changes when given in toxic doses it is not improbable that in smaller doses it may act as a stimulant to the secretary cells. In all cases of chronic dyspepsia the activity of the gastric cells is modified; indeed, it is usually this modified condition which keeps up the dyspepsia. The stomach is not doing its work, the blood-supply is less active, the structure of the mucosa is changed, and the active cells are perhaps degenerated and are further degenerating. What we wish to do, after removing the cause if this still exists, is to bring back the cells to a normal condition. Sometimes this can be done, but often the pathological changes are such as to make it impossible. In such cases, however, we may alleviate the condition and by careful dieting the patient may continue in apparent health. It is very probable that potassium bichromate acts by modifying this nutritive activity of the various gastric cells, at the same time increasing the blood-supply and producing a more normal digestion. Vulpian thinks it acts on the terminations of the nerves in the mucous membrane, and Fraser also thinks that this may be a factor in its therapeutic action. It has been shown to possess considerable antiseptic power,[3] but it is but slightly astringent. Thus Fraser found that a solution of albumin rendered hazy by a 0·01 per cent. (1 in 10,000) solution of silver nitrate was not affected by a 3 per cent. solution of potassium bichromate. Nevertheless, it must not be forgotten that potassium bichromate is an acid salt with a slight acid reaction, and to this fact part of its pharmacological effect may be due. On the whole, I think we must include this salt under the head of gastric tonics or stomachics. The dose, as I have already indicated, is one-tenth of a grain (one-eighth to one-twelfth) on an empty stomach. It may be given in pill or in solution, with a flavouring agent, or, as I prefer, in capsules. Of contra-indications to its use I know none. Gergens produced nephritis experimentally (degeneration of renal epithelium, albumin, and tube casts in urine), but this only after large doses. Excitation, followed by depression of the nervous system, also occurs after large doses, but although potassium bichromate has been administered therapeutically for some time no such ill effects have been produced.

Cambridge.

[2] Journal de Pharmacie et de Chimie, 5me série, tome viii, p. 215, 321 (1883).

[3] Fraser. Also Laujorrois: Comptes Rendus de l'Académie des Sciences, 1877, i., p. 625.

TREATMENT OF SUNBURN (ERYTHEMA SOLARE) DURING THE VOLUNTEER WEEK AT ALDERSHOT.

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LAST year's experience as surgeon in the largest Volunteer camp was sufficient to show me that the various methods of treatment adopted for this sometimes serious form of suffering were unsatisfactory, at least in bad cases. Consequently, I determined to go into camp again this year, specially arming myself with additional remedies which, from my knowledge of their usefulness in skin affections generally, seemed likely to prove of value in relieving a trouble which ranks second only in importance to sore-foot amongst the few drawbacks attending what forms one of the best possible holidays for a town man. Though the week in camp this year was neither sunny on the whole nor dusty, there were produced sufficiently numerous and severe cases of sore and swollen faces, necks and arms to test the relative merits of my remedies. Briefly stated, my conclusions were as follows:—

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Slight cases may be easily relieved by spirit and powder or lead lotion, or, better still, by a mixture of the latter with lotio calaminæ co. (equal parts).

Cases with a tender but fairly dry surface.—For these contractile collodion containing about 5 per cent. of prepared calamine appeared to answer well. I added the powder in order to give the collodion a dull and flesh-coloured appearance and in the hope that perspiration would the more readily escape through it.

The worst cases.—1. Those of the face and neck obtained most relief from "epidermin"—an emulsion of wax which has somewhat recently been introduced into skin practice from Vienna and is probably already well known to some readers of THE LANCET. As the preparations of epidermin originally made for me soon became mouldy I had a small amount of salicylic acid added to it, and Messrs. Savory and Moore were kind enough, at my suggestion, to colour the remedy, which is ordinarily white, to agree very well with the normal colour of the skin. Before applying the compound the inflamed part was dried, when necessary, with cotton-wool or a towel. The remedy was then applied as rapidly, accurately and evenly as possible with a spatula, no attempt being made to obliterate small ridges, as they settle down during the process of drying. Though the wax sets fairly soon, it appears desirable that it should be applied some time before a hat is placed upon it or it is subjected to much friction. A film as thick as ordinary brown-paper or as butter is usually laid on bread is sufficient. Additions or patchings can be readily made at any time without disturbing the portions which have been found adhering well to the skin. The 0·5 per cent. which was the amount of salicylic acid added does not appear to irritate the already inflamed skin in the very least degree. Whether it assists in releasing pent-up serum in the blisters which frequently accompany the dermatitis is doubtful at present, but certainly blisters quickly disappear under the artificial covering formed by the dressing. 2. The swelling of arms, which is sometimes so acute and sharply circumscribed as to suggest at first glance the possibility of its being erysipelas, is rapidly curable by Unna's zinc-glue dressing with butter-cloth bandage—a dressing which, by the way, is greatly improved in appearance when dyed a true flesh colour and dabbed with cotton-wool of the same hue.

Crude and brief as my observations have necessarily been, they are worth publishing as the hot weather has probably not yet passed, and as other members of the profession, who may have better opportunities than I, may perhaps be induced to employ the above-mentioned remedies and record their results. Those who reside in London will well understand that it does not afford a good field for observation of sunburn.

Old Burlington-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

"Nullaautem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare."—MORGAGNI *De Sed. et Caus. Morb.* Lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

TWO CASES OF INDURATION OF THE ERECTILE STRUCTURES OF THE PENIS CAUSING RETENTION OF URINE.

(Under the care of Mr. HENRY MORRIS.)

THE literature on the subject of affections of the corpora cavernosa is not extensive and these two cases will therefore be read with care. The first case is probably the less interesting of the two, as it is apparently clear as regards its nature and causation, whilst the prognosis of such cases is good. The character of the deposit in the other case must remain uncertain; it appears to have differed from the conditions described by van Buren—i.e., a chronic inflammation slowly extending in patients over middle age—for in its progress it much resembled a malignant infiltration of the part and caused very much suffering. For the notes of the cases we are indebted to Mr. G. H. Berkeley, late house surgeon.

CASE 1. *Hæmatoma of the left corpus cavernosum from strain a cause of retention of urine.*—A man twenty-six years of age was admitted into the Broderip Ward of the Middlesex Hospital on Oct. 20th, 1893, with retention of urine of more than twenty hours' standing, and with a hard painful swelling extending along the left side of the root of the penis to the perineum. This was within the left crus and corpus cavernosum. He stated that four days before (Oct. 16th) he was helping to lift a very heavy wringing machine when it fell over, pulling him with it. To save himself he gave a sharp jerk sideways and felt a sudden violent pain just above the symphysis pubis. This pain passed away and he felt nothing more of it till the next day. He passed urine without difficulty, but it was "very high coloured." On the day after the strain (Oct. 17th) he felt a pain extending along his penis to the perineum, and on the 18th he suffered great pain when passing urine, and detected a swelling behind his scrotum and on the left side of his penis. The swelling increased, and with it he experienced increasing difficulty in micturating, the urine at length merely dribbling away from him; so he continued up to the time of his admission on the 20th. Mr. Morris passed a catheter and drew off about four pints of normal urine. Some little difficulty with the urine continued for a day or two, but passed off as the swelling in the perineum subsided under rest in bed. By Oct. 31st the swelling, though less, was more clearly defined and its anterior extremity had a pouched process. All pain had gone. By Nov. 7th the swelling had almost disappeared and he left the hospital practically well.

CASE 2. *Consolidation, in nodular form, of the corpora cavernosa and corpus spongiosum, resulting in painful and difficult micturition and occasional retention of urine; cause unknown; median perineal urethrotomy; insanity; death.*—A man aged forty years was admitted into the Broderip Ward of the Middlesex Hospital on Oct. 23rd, 1893, on account of difficulty in passing urine. He stated that, with the exception of gonorrhœa followed by gleet fourteen years before, to the best of his recollection, he had never had any illness. About two years previous to present illness he had some slight difficulty in passing urine, but nothing was done for this, and eventually it got right of itself. A week before admission to the hospital he again experienced difficulty in micturition, trying sometimes ten minutes before any urine came, and then it passed only drop by drop at first, and afterwards would flow in a very small stream. So it had continued with him since, and he has had also pain of a burning character in the penile urethra during micturition. On admission there was felt near the root of the penis a hard oval swelling about the size of a filbert, situated partly on the dorsal aspect and partly on the left side of the organ. It was not adherent to the skin, which moved freely over it, but seemed to be confined and fixed within the left corpus cavernosum. There was also a similar swelling, but of a more elongated shape and about one inch in length, on the under surface of the penis; it was very hard and tense and in close proximity to the urethra, which it in fact surrounded. It was here that the pain was felt on micturition. The urine had a specific gravity of 1020 and did not contain albumin, blood, pus, or sugar. On the following day Mr. Morris passed a No. 10 silver catheter without difficulty, but stated that he met with some little resistance in the penile portion of the urethra. The patient bled a little after the catheterisation, and next morning there were several patches of bloodstaining each the size of a shilling on the sheets. During the thirty hours afterwards he passed twelve ounces of urine; then the catheter was required and twenty-six ounces were withdrawn. A No. 10 olive-headed instrument was used and passed without difficulty. Again a little blood followed the use of the catheter, and again for a few hours afterwards he micturated more readily, but with pain; but then once more difficulty occurred, requiring the reintroduction of the instrument. On Oct. 28th a catheter was tied in and hot fomentations were applied over the indurated parts of the penis and urethra. The catheter *en demeure* set up some simple urethritis which required aseptic irrigation, but the instrument was retained and the discomfort of urinating was thereby removed, and the swellings seemed to become softer. During November various treatment was tried, but things remained much about the same. The nodules in the cavernous and spongy bodies were not appreciably altered, but micturition seemed easier, and so on

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Nov. 29th the patient sought his discharge. It was noted on this day that "the nodules are just as hard and seem to be joining one another more than before." On Dec. 5th he was readmitted. He then stated that he had remained quite easy till Dec. 2nd, when he was again unable to pass urine, and he applied at the out-patient department about 6 P.M. Unsuccessful attempts to relieve him by catheters were then made, and as there was no vacant bed in the hospital he was sent to the University College Hospital. Here, after several unsuccessful efforts had been made, a No. 7 silver instrument was passed, after which he bled a good deal during the night and had to rise to micturate every hour or two during the next day, micturition being attended with great pain. As he had been discharged from the University College Hospital owing to want of beds he returned to the Middlesex Hospital and was admitted. It was at this time noted that "both corpora cavernosa are now infiltrated with hard nodules or masses which extend nearly the whole length from the glans penis to the rami of the pubes." The glans itself was painful and ulcerated, and the urethra was the seat of considerable smarting pain, but there was no discharge from it. Chordee now became a marked symptom, and pain on micturition continued. The urine was of a specific gravity of 1018 and was strongly acid; it contained a trace of albumin, but no blood, pus, or sugar. After four days in the hospital it was noticed that the glans penis was becoming gradually enlarged and hardened, and as time went on it threatened to slough. All kinds of remedies were tried—ice, ointments, and lotions locally, and iodide of potassium, mercury, colchicum, salicylate of sodium, and many other drugs internally. On Dec. 18th he was seen by the late Mr. Hulke in consultation with Mr. Morris, and it was decided to apply nitrate of mercury ointment to the indurated parts, and to continue perchloride of mercury and potassium iodide internally. On Dec. 29th, as the urethra was almost obliterated, the passing of urine attended with great pain, and the deposit, whatever it was, had infiltrated the whole of the erectile structures of the penis, it was decided to open the membranous urethra in order to give physiological rest to the fore part of the urethra with the hope that absorption of the deposit would take place, and that relief from the constantly recurring pain of micturition would be realised. In performing the boutonnière in the ordinary way the crura penis were seen to be greatly enlarged and looked and felt like cartilage. Very free hæmorrhage followed the incision of the floor of the urethra. A drainage-tube was introduced into the bladder from the perineum and about thirty ounces of urine were withdrawn. The tube was tied in and the wound was plugged and dressed with iodoform. Subsequently cocaine was frequently injected down the urethra to relieve the pain, which was almost constant. The penis was after, as well as before, the boutonnière always in a state of nearly complete erection, and the patient bitterly complained of the aching pain this caused. During the first fortnight of January, 1894, the condition became more aggravated; the glans penis assumed a greenish hue all over its dorsal surface; there were "stinging" pains in the penis, and such restlessness and excitement, especially at night, that a special attendant was required. On Jan. 17th the state of things was so bad, and becoming rapidly so much worse, that Mr. Morris was contemplating obtaining the patient's sanction to amputate the whole penis, and he did propose to him to make free incisions into the indurated parts, but the man refused any further operation. The drainage-tube was retained in his bladder, and the slough on the glans spread peripherally, but not much in depth. The smell of the discharge from it was very offensive, and the patient continued in great pain in spite of the administration of morphia and other anodynes. By Jan. 23rd his sleeplessness, excitement, and restlessness had so increased that he was unquestionably insane and had to be put into an isolation ward, and the next day he was transferred to the Marylebone Infirmary. There he died within a day or two of his removal, and on inquiry it was ascertained that, unfortunately for the complete understanding of this case, no post-mortem examination was made.

Remarks by Mr. HENRY MORRIS.—These two cases from their great rarity seem to be worthy of being placed on record in the Hospital Mirror of THE LANCET. Case 1 is one of intra-cavernous hæmorrhage resulting from a strain, and it is interesting on account of its causing painful micturition and afterwards complete retention of urine. This was doubtless due to the direct pressure upon and deflection of the course of the urethra which the blood extravasating into and stretching the corpus cavernosum produced. The condition cleared up after a short period of rest in bed and the occasional use of the catheter.

Case 2 was altogether of a different character, though there was much the same effect produced upon micturition. Neither simple nor gonorrhœal nor syphilitic inflammation, nor injury, gout, tubercle, nor gummata were the cause of this disease. Neither was it an instance of calcification of the sheath and septum of the corpora cavernosa, nor of the cicatricial contraction after inflammation or gummata. I do not know how to classify this case, and I do not know, in the absence of a microscopical examination of the deposit, to what change to assign it. Its course was more like multiple malignant neoplasms. The chief symptoms were the nodular masses, which gradually coalesced, and which at length resulted in a condition of priapism, or at any rate of chronic thickening and stiffening of the organ which resembled nearly complete erection. Associated with these physical changes in the organ were the pain in the penis and urethra, which became at last constant, and the difficulty in micturition. The superficial sloughing of the glans penis is also noteworthy. As to treatment nothing did the patient any good so far as diminishing the induration of the erectile tissues of the penis; the boutonnière relieved the bladder, but made no change otherwise. The pain in the penis, and the terrible mental distress, sleeplessness, and excitement remained unabated by it. I have no doubt that the insanity which supervened was the direct effect of these causes. In the absence of a post-mortem examination I offer no explanation of the cause of death, which took place after he had left my hands. Should a similar case, equally untractable to local and internal remedies, come under my care I should certainly propose to freely lay open the diseased parts, and, if necessary, amputate the penis at its connexions with the pubes.

ESSEX AND COLCHESTER GENERAL HOSPITAL.

A CASE OF ADENOMA SEBACEUM.

(Under the care of Mr. H. LAVER.)

THE disease of the skin described below by Dr. Coleman is undoubtedly a very rare one, as he observes. There have, however, been a few cases published in recent years by Balzer, Pringle, and Caspary. In Caspary's case the little tumours had developed after small-pox. Microscopical examination showed them to consist of a great number of sebaceous glands, closely packed in the deeper parts of the corium, the other structures of the skin being healthy.[1] For the notes of this case we are indebted to Dr. Percy Coleman, house surgeon.

The patient is a man twenty-seven years of age. He attended the hospital to be treated for an injury to his hand, but, his skin affection being noticed, he was admitted as an in-patient. He stated that he was about eight years of age when the disease first made its appearance on his face. It commenced on the face on both sides of the nose as "small pimples," so small that no attention was paid to them. These "pimples" then began to form round the angles of the mouth and on the upper lip and chin. The last parts to be attacked were the eyelids and forehead. His family history is good. Seven brothers and two sisters are alive and healthy. One brother died in infancy. There is no history of new growths or insanity in the family. He is a healthy-looking, well-nourished man with an eruption on most parts of the face. The growths vary in size from mere papules to nodules each as large as a split pea. At the sides of the nose the papules are so thickly packed that they run together and form an irregularly nodulated surface with no healthy skin between. Below the lower lip there is a narrow belt of the disease running parallel to the lip and about half-way between the margin of the lip and the lower border of the jaw. The skin over the inferior maxillæ, as far back as the angles of the jaw, is thickly studded with papules, but here they are discrete. On the nose there are only a few papules, but several of the larger nodules. A few papules are to be seen on the forehead

[1] Sajous' Annual of the Universal Medical Sciences, 1892, vol. i A 2.

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and on the skin covering the mastoid processes of the temporal bones. The lesions themselves are reddish in colour, firm to the touch, and at first sight have some resemblance to acne, but they are evidently not inflammatory. One or two of the larger nodules show an attempt at pedunculation. Nothing like an orifice to the sebaceous gland can be detected on any of the little growths, even with a lens. There is a scanty sprinkling of comedones about the rest of the face. On stripping the patient it was found that the skin of the back exhibited several soft flaccid tumours, some one-fourth of an inch in length. These are evidently soft fibromata. In addition to these there were numerous flat growths—the largest as big round as a sixpenny-piece—of a pale-pink colour and having the appearance of multiple warts. The skin over the shoulders, both front and back, was similarly affected. Here also there were many growths looking like solitary warts of a pale pinkish tint. In the left infra-clavicular region there was a patch of skin about four inches square thickly studded with whitish elevations somewhat resembling milium, but quite solid. Each elevation was about the size of a millet-seed in circumference, but very slightly raised, being only just perceptible to the finger. This patch had existed ever since the patient was an infant. His mother told him that "a frog had spit upon him on that place and had left that mark." He merely complains of a slight itching when he gets over-heated or works in an atmosphere laden with dust.

Remarks by Dr. COLEMAN.—This disease is so rare that the case described above seemed to me to be worthy of a detailed description. Very little mention is made of it in any of the text-books on medicine and surgery in general use. Hilton Fagge's work on Medicine states that "the little tumours appear to undergo spontaneous involution." It seems probable that the patch above described as existing beneath the left clavicle is the seat of this change in the growths. One other case, in which the disease was limited to the face, has come under my notice. The patient was a female idiot seventeen years of age. The description given above of the facial appearance is almost equally applicable to her case. Mr. William Anderson, of St. Thomas's Hospital, has kindly examined the case and confirmed our diagnosis.

Reviews and Notices of Books.

Leçons de Chirurgie (La Pitié, 1893–94). Par le Dr. FÉLIX LEJARS. Paris: G. Masson. 1895. pp. 629.

CLINICAL lectures have a distinct function of their own. They serve to concentrate attention on a special subject in a manner which cannot be attempted in a systematic treatise, and their educational value is great. It is becoming more generally recognised that many clinical lectures are worthy the attention of an audience more extensive than that to which they were first delivered. In the volume before us are forty-seven clinical lectures on various departments of surgery, delivered by Dr. Lejars at La Pitié Hospital during the session 1893–94. The first seven lectures are devoted to general surgical pathology; 19 refer to the surgery of the limbs, 3 to the head and neck, 3 to the alimentary canal, 7 to the genito-urinary organs, and 8 deal with gynæcological subjects. The lectures are too numerous to be referred to individually, but some are of more striking interest than others. One of the lectures on surgical pathology deals with Thiersch's grafts (or Ollier-Thiersch grafts, as Dr. Lejars prefers to call them, as Ollier practised this method as early as 1871, while Thiersch published his first results in 1874); the results which have been obtained by this procedure in the hands of Dr. Lejars have been exceedingly satisfactory, and especially was this the case with "varicose ulcers" of the leg, even when the ulcer has been annular; he concurs with Thiersch in insisting on prolonged rest in bed after the operation in order to assure the vitality of the grafts. Another interesting lecture in the same section deals with the exostoses occurring in childhood, and a case is quoted from Heyman which is greatly in favour of their hereditary nature, a woman and five of her six children being affected with multiple exostoses. In a lecture on fracture of the clavicle Dr. Lejars is inclined to advocate suture in recent cases when the deformity is very great; a good account is given of the various methods of suturing this and other bones.

Forty-two cases of radical cure of hernia form the basis of a lecture on that subject, and much emphasis is laid on the importance of choosing the cases on which to operate. The results recorded are certainly good, but in many of them sufficient time had not elapsed to allow a definite statement as to their permanent cure to be made. Suprapubic cystotomy receives an extended notice, and three indications are given for its performance. It should be performed: (1) in cases of acute prostatitis with complete retention when attempts to pass a catheter have failed; (2) when micturition is painful and difficult, and catheterisation, though possible, is accompanied by much trouble and bleeding; and (3) when septic infection of the bladder has become well marked. The gynæcological lectures are of great interest, especially the one dealing with the operative treatment of suppuration in the Fallopian tube or ovary. A lecture on the surgical statistics of the hospital for the year fittingly concludes the volume.

It may safely be said that there is no lecture in the whole volume which is without interest to the surgeon. The illustrations, 128 in number, have been very neatly drawn and engraved, and serve to enhance the appearance of the text, the typographical excellence of which is very great.

Heart Inflammation in Children. By OCTAVIUS STURGES, M.D. Cantab., F.R.C.P. Lond., &c. London: John Bale and Sons. 1895.

THE revision of this little book of eighty-two pages was the last work of the life of its lamented author. It is a reprint of the Lumleian Lectures delivered at the Royal College of Surgeons in 1894. It is also the ripe fruit of the mature and extensive experience of an observant and thoughtful physician too soon lost to his profession. Many much more pretentious monographs contain not a tithe of the value and guidance to be found in these pages, and to that large class who come more or less constantly in contact with ailing children we consider it our duty to recommend their perusal and reperusal. Apart from the valuable matter contained in the little work, there are an occasional felicity and sentiment in diction which indicate the cultured and sensitive gentleman, and which call for comment. "The heart of a little child, I say, at the first blush, would seem to be as simple in physical as it is in moral respects; but experience teaches otherwise. The child's heart holds as many secrets as the man's, and is even more deceiving" (p. 4). And again he quaintly remarks, in speaking of the friction rub of pericarditis as a diagnostic sign, "It may be said ..... of this sound, as of other things in Nature, that the noise it makes is not proportionate to its importance" (p. 22). There is a careful study of the pathology of cardiac inflammation, with good illustrations of the microscopic state of the muscle at various stages of the disease. The physical indications of this state are dealt with in the second lecture, and among other interesting points discussed the author enters in some detail into the question of the clinical recognisability of adherent pericardium, granting the possibility of diagnosing that "quite exceptional condition," costo-pericardial adhesion, when the pericardium is at the same time adherent to the heart (p. 40), but not that of "old adherent pericardium as we usually encounter it"—an opinion which the experience of most physicians will endorse. The author believed that extensive pericardial effusion, by tiding over the time during which the pericarditic surfaces were likely to adhere, had an

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influence in obviating cardiac symphysis. Dr. Sturges was also one of those who was of opinion that the endocarditis of chorea was not necessarily rheumatic, and wisely criticises the tendency of extending the "idea" of rheumatism, which he likens to the eternal *noumenon* of ancient philosophy (p. 67), over too wide an area. There are many other points, alike in diagnosis, prognosis, and treatment, which the reader will find in this valuable guide to the subject with which the monograph deals, and which space forbids our particularising. Distinguished as the author was, and worthily so, he made perhaps less noise in the world than many less observant, less profound, and less reliable physicians, but in leaving to his profession the legacy of this masterly study of a very difficult subject he has laid those who survive him under a debt of gratitude, done much to perpetuate among us his memory, and in the length and interest of art to reconcile us to the brevity of life.

The Student's Text-book of Botany. By SIDNEY H. VINES, M.A., D.Sc., F.R.S. London: Swan Sonnenschein and Co. New York: Macmillan and Co. 1895. 15*s.*

THE name of Professor Vines is familiar to most students of botany in association with the well-known manual by "Prantle and Vines." In the work at present under consideration the author has to some extent followed the general arrangement of the older publication, but has made such extensive additions to all the sections that the book, besides retaining its special value for those commencing the subject, will now also serve as a useful guide to those who have gone beyond the elements of the science. The work is divided into four principal sections, which deal respectively with Morphology, Anatomy and Histology, Classification, and the General Physiology of Plants. The section on Classification occupies a large proportion of the book, and is based upon the natural fundamental relationship which exists between plants. This mode of classification, though necessarily at present incomplete owing to our deficiency of knowledge, is, as Professor Vines points out, superior to the more artificial methods, which must always be more or less arbitrary, the most successful of such artificial classifications being that of Linnæus, which is known as the "sexual system," and classifies the orders by the number and mode of arrangement of the floral organs. The last section of the book, which treats of the general physiology of plants, is very interesting, many of the chemical processes being fully given, and a table is drawn up to show the modes of income and expenditure both in those plants which possess chlorophyll and those which do not. The general physiology of reproduction is given, the laws of heredity and variation are touched upon, and there is an account of the various movements, automatic and otherwise, to which a plant is subject. The whole forms a very complete volume, which we have no doubt will be welcomed by those interested in the subject. The book is well illustrated and nicely bound.

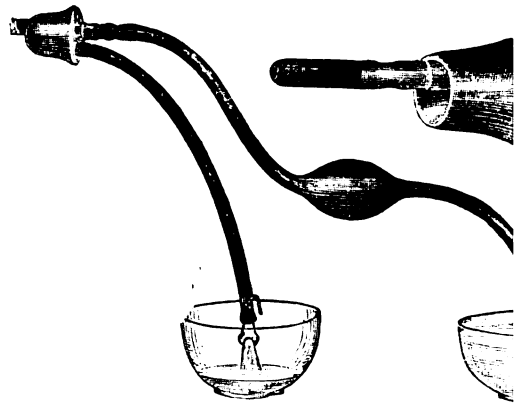
Infant Feeding by Artificial Means: a Scientific and Practical Treatise on the Dietetics of Infancy. By S. H. SADLER. London: The Scientific Press, Limited. 1895.

THIS excellent manual is not only well stored with information necessary for mothers and nurses, but contains much that is of interest to the medical reader. The authoress has spared no pains in the collection of materials, and has consulted the best English and French authorities, quotations from their works being frequently given at considerable length. After some preliminary pages on the use of the feeding-bottle she describes the rearing of prematurely born infants by means of the "thermostatic nurse" or "couveuse" (a small wooden box warmed with hot-water tins), and the feeding of them with the œsophageal tube. Cow's milk is, of course, in most cases the staple sustenance of hand-reared infants. As it differs from human milk in having an exc of casein and a comparative deficiency of sugar, it l to be adapted to the digestion of infants by vari expedients, such as admixture with water, bar water, lime-water, tea, whey, and other diluents. may also be peptonised or partially digested with p creatic juice, and may be to some extent replaced the milk of the ass or goat. The authoress acknowledg preference for "artificial human milk," prepared by ad whey and milk sugar to cow's milk enriched with e cream. The formula for "artificial ass's milk" at p. will, perhaps, surprise her readers. Some more informa might have been given with respect to the sterilisatio Pasteurisation of cow's milk. The concluding secti devoted to various farinaceous proprietary foods, arrow raw meat juice, beef-tea, jellies, and puddings.

New Inventions.

THE "ZULA" SYRINGE AND IRRIGATOR.

THIS syringe has the advantage of being pr with a tube through which the fluid that has njected may flow away into the vessel intended to rece It therefore not only supplies a constant stream of flu vaginal injection, but avoids the usual annoyance of w or staining the underclothing or sheets during the a tion. The tube from the indiarubber ball leads into a vulcanite plug which completely closes the entrance



vagina and compels the surplus fluid to pass through opening in this plug, and so into the special outfl The ball with its injection tube may be readily detac the vaginal plug and fitted to an accompanying bo or rectum tube, and is then available for use as a syringe. The apparatus is made of enamelled blac and is packed in a box six inches by eight inches inches high. It may be obtained from any dr surgical instrument maker.

DEATH IN A HOSPITAL BATH.—A strang formed the subject of an inquest at Portsmouth on Aug. 29th. A man aged thirty-two was sent Newby as an applicant for admission to the Ro pital at Landport. He was suffering from bron both lungs, and, having been examined by the house was sent to get a bath and go to bed. The w from 90° to 100° F. in temperature, and on nurses asked him before he was left if he was s fainting fits, to which he replied in the negative. been in the bath-room about ten minutes when requiring something from the compartment, se to get it. The latter found Bunting (the under the water and at once ran for assistance. was, however, quite dead, and he had not the app asphyxia from drowning. A necropsy revealed a aneurysm.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 14, 1895.

THE British Association for the Advancement of Science held its sixty-fifth meeting this week at the ancient town of Ipswich, where it had assembled forty-four years ago. Ipswich, among other things, has a grammar school, where the renowned Dr. VALPY disciplined and taught the rising generation of his day, and where not so long ago a very notable Greek scholar of our time (Dr. H. HOLDEN) was the headmaster. It was at Ipswich, also, that HUXLEY first made the acquaintance of TYNDALL at the meeting of the Association in 1851. Sir DOUGLAS GALTON, K.C.B., D.C.L., F.R.S., the President of the Association, delivered the presidential address. The name of Sir DOUGLAS GALTON is a well-known one in scientific circles, and for many years past it has been associated with the advancement of sanitary science and the progressive development and practical advocacy of the principles of modern hygiene. He tells us that he first began to attend the meetings of the British Association about forty-six years ago, and that he was elected one of its general secretaries twenty-five years ago. It was both natural and fitting, therefore, that he should recall to the minds of his hearers the conditions under which science was pursued at the formation of the Association, the progress that has been made between 1831 and 1895, and the remarkable position which the Association has occupied in relation to science in this country. He made this consequently the text and pivot of his address. There was no lack of interesting and important material in the subject selected, and, indeed, it must have called for an exercise of the scientific judgment, and of the scientific imagination also, to know what not to say as well as what to say on the occasion. Sir DOUGLAS GALTON may be fairly congratulated, however, on having given his audience a very interesting and graphic account of the progressive steps in the march of modern science. We cannot, of course, traverse the whole field occupied in this presidential address—we can only follow a few of the furrows along which Sir DOUGLAS GALTON, in the orderly arrangement of his able review, disposed of his material, interspersing comments of his own which are generally conceived in a spirit of scientific faith in the future, although sometimes possibly in a too optimistic one. It has to be borne in mind that it is the main function of science to trace out the uniformities of sequence in all departments of nature, and the invariable consequences, within human experience, of certain antecedent conditions. The how and the why are mysteries that sometimes cannot be explained, but the work of science has been so fruitful of results that it always excites enthusiasm. Before passing to the more immediate subject of his address Sir DOUGLAS GALTON incidentally referred to the great loss which science has recently sustained by the death of the Right Hon. THOMAS HENRY HUXLEY. HUXLEY, he said, was pre-eminently qualified to assist in sweeping away the obstruction by dogmatic authority, which in the early days of the Association fettered progress in certain branches of science. For whilst he was an eminent leader in biological research, his intellectual power, his original and intrepid mind, his vigorous and masculine English made him a writer who explained the deepest subject with transparent clearness.

In 1831, when the British Association was founded, communication between different parts of the country was slow and difficult owing to the absence of railways. Science was, therefore, localised, and in addition to the universities in England, Scotland, and Ireland the towns of Birmingham, Manchester, Plymouth, and York each maintained an important nucleus of scientific research. In its origin the British Association invited the philosophical societies dispersed throughout Great Britain to unite in coöperative union, and within recent years it has endeavoured to consolidate that union. At the present time almost all important local scientific societies scattered throughout the country, some sixty-six in number, are in correspondence with the Association, which has, moreover, shown that its scope is conterminous with the British Empire by holding one of its annual meetings at Montreal, and it is likely soon, we are told, to hold a meeting in Toronto. Speaking of the condition of certain sciences at the formation of the British Association and of the enormous strides which have been made since 1831 in the investigation of facts to elucidate the laws of nature, Sir DOUGLAS GALTON adverted to the impediments offered to the progress of investigation by the mental condition of the community, which had been for so long satisfied to accept assumptions without undergoing the labour of testing their truth by ascertaining the real facts, and he furnished two illustrations of this habit of mind selected from the early reports of the Association. The whole habit of mind of the population of the Western world has been changed, he added, since the beginning of the century from willing acceptance of authority as a rule of life to a universal spirit of inquiry and experimental investigation; and he conjecturally asked whether this rapid change may not have arisen from society having been stirred to its foundations by the causes and consequences of the French Revolution, and proceeded to trace out this idea in connexion with the origin of the conviction that the basis of scientific research lay in the accuracy of the standards by which observations could be compared and the principles that were laid down as a basis for their measurements of length, weight, and capacity. Sir DOUGLAS GALTON followed up and illustrated his suggestive inquiry in various interesting directions. Passing over such subjects as our progress in geological and geographical science, chemistry, astronomy, and physics, we may, nevertheless, parenthetically allude to the force and *verve* embodied in that section of his address devoted to the consideration of the progress we have made in the sciences which are included under physics. The late Professor ROMANES held that no reason can be assigned why God should not be immanent in nature or why all causation should not be the immediate expression of His will; and, speaking of

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the probable close connexion of electricity with the vibrations which cause heat and light and which seem to pervade all space, Sir DOUGLAS GALTON, with an exercise of his scientific imagination, remarked: "Vibrations which may be termed the voice of the Creator calling to each atom and to each cell of protoplasm to fall into its ordained position, each, as it were, a musical note in the harmonious symphony which we call the universe." Under the head of animal physiology allusion was made to CUVIER, who died in 1832, Sir RICHARD OWEN, and DARWIN, and to the non-acceptance by OWEN of the latter's theory of evolution—a doctrine now generally accepted, but on the threshold of which we are still standing as it were, and concerning which each fresh investigation suggests fresh problems. Evolution, as Sir WILLIAM FLOWER said, is the message which biology has sent to help us on with some of the problems of human life, and so Sir DOUGLAS GALTON had a good deal to say about anthropology in relation to heredity, psychology, and the science of preventive medicine. His address also gave a brief but excellent sketch of the origin, progress, and relations of the modern science of bacteriology to our knowledge of life, health, and disease, forming a point of meeting, as he said, where the biologist, the chemist, the physicist, and the statistician unite with the sanitary engineer in the application of the science of preventive medicine.

As might have been expected, Sir DOUGLAS GALTON condensed much useful information in his remarks on sewage purification, and spoke with the authority that comes of knowledge in dealing with the scientific principles which should guide us in this respect. He concluded his address with some pertinent and forcible observations on the relations of science to the State and the way in which our Governments have so largely profited by science, and remarked upon the small measure of recognition in the way of honours that have been conferred by the State upon leaders of science as compared with those awarded to its own officials, to the army and navy, and to politicians. He considered that Government assistance to science in other respects might also be more pronounced than is the case.

As might have been anticipated at this season there has been a revitalisation or recrudescence of cholera, but happily not on any large scale, at various places abroad where the epidemic had already prevailed in past years. According to official returns from St. Petersburg over 2000 cases of cholera, with 718 deaths, occurred in the government of Volhynia between July 11th and Aug. 17th. The town of Vladivostock has been declared infected with the disease, and so has the province of Podolia. Some cases have also occurred in Galicia and in districts adjoining the Russian frontier. There has been a sharp outbreak of cholera at Tangier, and communication between that place and Gibraltar and Malta has been stopped in consequence. We learn from San Francisco that the disease has been recently prevailing at Honolulu, and that the United States Consul at that place warned the captain of an American-Australian Line steamer of the fact in view of none of the passengers being landed. No further news has arrived from Japan of the extensive epidemic outbreak of cholera in that country to which we alluded last week. The disease in this case followed the Chino-Japanese war and the increased communication between Corea and Japan. But cholera is said to be raging in China, a large number of deaths occurring daily at Pekin. There was a remarkable decrease in the amount of cholera in India last year, but it was unusually prevalent in Burma, where no fewer than 7428 deaths were recorded, which was very largely in excess of the mortality of the previous year from this cause.

As regards this country the alleged reappearance of cholera on the Humber and the reported occurrence of two suspicious cases at Grimsby, both of which terminated fatally, gave rise to some apprehension. This feeling was very natural under the circumstances, especially as it was stated that cases of diarrhœa had been exceptionally prevalent of late in Grimsby and Hull. The Medical Department of the Local Government Board despatched one of their inspectors to inquire into the facts and ascertain the local conditions of the Humber ports. But the results of Professor KLEIN'S bacteriological observations have happily not been corroborative of the fears that were entertained that the cases in question were those of Asiatic cholera. The failure to discover the comma bacillus, on the one hand, and the non-extension of the disease in the locality, on the other, show that the cases at Grimsby were in all probability only those of so-called English cholera, such as might be expected to arise at this season from ordinary causes, and they do not consequently at all justify the belief that there is any recrudescence of the late epidemic at Grimsby. Bearing in mind the period of the year which we have now reached, the hot and dry autumn we are enjoying, and our freedom from any manifestations of a cholera epidemic in this country up to the present time, we are not inclined to be apprehensive of the extension to this country of the epidemic which has marched from the East and prevailed with such force in Russia and other countries on the continent of Europe.

As we have already intimated, the natural life-history of an epidemic usually covers a period of from three to four years. We have still much to learn as to the time during which the cholera-cause or pathogenetic micro-organism may remain dormant or latent, but still capable of renewing the manifestations of its vitality under the operation of favouring conditions. It is clear that a good deal will depend upon several circumstances, some of which are of an apparently insignificant, but really of an important and influential, character in determining the renewed activity or recrudescence of the disease. If we may judge from what we know of cholera in the past one thing seems to be fairly well established—viz., that there may be recurrences of outbreaks in a locality without any fresh reimportation of its cause. Whether we regard the bodies of the sick as the exclusive sources of the development and multiplication of the cholera-cause, or look rather, as some do, to the environment for an explanation of these phenomena, it seems clear that the infecting cause may long remain dormant, and that the environment is an important factor in the history of cholera, otherwise removal from an infected locality would not be attended with

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the results which experience has shown to be the case. Although we have not by any means yet attained a perfect hygienic standard, the sanitary state of our cities, towns, and rural districts is altogether superior to that of most places abroad. We are aware of our defects and keenly alive to the importance of keeping our systems of water-supply protected from all contamination, and, thanks to the sanitary surveillance exercised by the Medical Department of the Local Government Board and our port sanitary authorities we are promptly made acquainted with any sources of danger and infection from without and have adopted a simple, practical, and, to judge by the results of our experience during the recent epidemic, an apparently successful method of dealing with them, simply because those methods are such as commend themselves to the intelligence and common sense of the community at large and are practicable in their application.

OUR readers no doubt have read the accounts of the recent pilgrimages to Lourdes and the marvellous cures alleged to have been effected at the shrine of the Virgin in the little Pyrenean village. The story of the arrival of trains laden with sick folk, the vast processions of the lame, the halt, and the blind, the imposing ecclesiastical ceremonies, and the alleged miraculous recoveries seems to take us back to the Middle Ages, and it requires an effort to convince ourselves that all this is really going on in free-thinking France and in the nineteenth century. But France has no monopoly of the modern miracle. It is not long since the little village of Knock in the West of Ireland was the scene of pilgrimages on the part of sick people, and when even the plaster from the walls of the shrine there was held by the faithful to possess the most magical healing powers. And now another case reaches us from St. Winifride's Well at Holywell. A retired soldier forty-two years of age, alleged to be suffering from "heart disease, diseased bloodvessels in the leg, and to be of a consumptive tendency"—a fairly comprehensive, if not very exact or convincing, diagnosis—was brought to the well by an attendant (the patient being a cripple) and lifted into the water. He stated that he felt "as if he had electric batteries at work all over him," and after a time said that he thought he could stand. He did so and was able to move freely about to the astonishment of all present, as only a short time previously he had come to the place on crutches. On the same afternoon he was seen walking comfortably about the streets and apparently well. The correspondent who describes the incident concludes by saying that "the cure is generally regarded as one of the most extraordinary that have yet taken place at the well." We give the facts as they have appeared in the lay press. This case is, of course, in no way exceptional and belongs to the numerous class whose thank-offerings of votive legs, arms, eyes, &c. presented at the various shrines are among the most familiar objects of Continental travel.

There are three possible attitudes which may be assumed towards these alleged miracles of healing. There is the attitude of the pious believer, who accepts these stories on the authority of his ecclesiastical superiors, whose faith is to a large extent independent of evidence and to whom the essential point is not scientific accuracy but pious edification. We need hardly say that with this class we have no direct concern, and we are by no means disposed to insult the convictions of those who differ widely from ourselves. There is a second class who take the view that these alleged cures are all absolute frauds, a mere playing by cunning men upon the superstitions, frailties, and misfortunes of the ignorant multitude. We do not regard this position as by any means wholly satisfactory, or one that can be easily reconciled with the facts of the case. We think a third view, intermediate in character, more tenable. We think it probable that many of the prominent leaders in these scenes act quite *bonâ fide*. That actual "cures" take place is by no means incredible. They have been repeatedly attested by men whose *bona fides* is incontestable and whose incapacity for making a correct observation is by no means to be lightly assumed. Having said so much by way of admission, we must add that we have seen no evidence that in the least degree inclines us to admit any supernatural or miraculous element in these cases. Probably these alleged cures are capable of differentiation and are not to be readily grouped under one heading. Putting aside cases of imaginary ailments and of conscious or unconscious imposition—and we are entirely of the opinion that these two classes are largely represented at most shrines of healing—let us assume that there remain a considerable number of cases in which definite maladies have disappeared after recourse to these shrines or sacred wells. It by no means follows that a miracle has been wrought, though by pious and ignorant observers this seems the natural, the inevitable deduction. The question first arises whether any of these sacred waters—it is to be observed that a spring or a well is an almost invariable, certainly a very frequent, adjunct of these shrines of healing—might possibly possess some real therapeutic virtues. There is nothing improbable in such a supposition. The electric bath is a therapeutic agent of considerable potency. A bath in water surcharged with carbonic acid gas exercises an influence over the organism, and especially upon the nervous system, which may in certain subjects produce surprising results. How far certain of these so-called miraculous springs and wells may possess qualities analogous to these we cannot say, but there is nothing extravagant in the supposition that such analogies may exist.

But we must frankly confess that we have a strong conviction that the great majority of these "cures" belong to a wholly different class; that they are, in fact, identical with those neurotic cases with which hypnotism has made us so familiar. It will always be observed in reading the accounts of the phenomena alleged to occur at Lourdes, Knock, and elsewhere that the cures occur precisely in the sort of patient and in forms of disease most likely to be affected by forces identical with, or analogous to, hypnotism. Highly strung, enthusiastic, and visionary girls figure largely in these accounts, while the diseases alleged to be most amenable to cure are such affections as catalepsy, paralysis, blindness, &c., all of which occur frequently as functional affections liable at any moment to be dissipated by any cause that makes a strong impression on the nervous system. No doubt cures of such conditions as advanced phthisis have been repeatedly alleged, but, so far as we know, a careful investigation by competent persons has

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always disproved the genuineness of such cases. Often the marked temporary improvement has been merely the result of an extreme exaltation of the nervous system, to be quickly followed by a resumption of all the old symptoms and the inevitable end. It is not our business to touch on questions of a theological nature—e.g., such as the possibility of miracles or the like. We may leave such subjects to the professed theologian or to his assailants. But we are much concerned in anything that vitally touches the science of medicine or the art of healing, and therefore we need make no apology for offering these observations to our readers. While not denying all reality to these curious phenomena it must always be a pathetic sight to see multitudes of suffering men and women turning away from the well-proved methods of scientific medicine and following strange paths which in the vast majority of cases can conduct to nothing but disappointment and death.

Annotations.

"Ne quid nimis."

MEDICAL ADVERTISING IN AUSTRIA.

THE members of the Vienna Medical Chamber have recently been engaged in the consideration of professional advertising, the main point at issue being the fixation of limits beyond which the practice should be prohibited. After a lengthened and animated discussion the following articles were adopted. A medical man committing any of the acts hereafter specified shall be considered guilty of an offence against professional dignity: 1. Causing, or permitting, or refraining from preventing (when he has the power) the insertion of advertisements in newspapers, journals, indexes, guide-books, annuals, leaflets, circulars, or any other description of printed matter. This article, however, does not refer to medical publications, nor is it meant to hinder a medical man from publicly proclaiming his entry into practice, his return after a prolonged absence, or his change of domicile, provided the notification is not repeated more than three times. The same information may also be conveyed by means of a circular, but in both cases the notice must contain nothing additional beyond the name of the advertiser, his academical qualifications and legal medical designation, an indication of the speciality he professes, his address, and the hours he is at home for consultation. 2. Publishing, or allowing to be published, letters of thanks and expressions of gratitude from patients who have been treated by him. 3. Recommending, either directly or indirectly, in pamphlets and popular publications, his own system and methods of treatment in preference to those of other practitioners. 4. Allowing commission to midwives, waiters, commissionaires, porters, &c., in return for their services in procuring him patients. 5. Drawing public attention to himself by means of a charlatan's sign-board. 6. Endeavouring in an unbecoming manner, after the fashion of quacks, to attract notice to the medical establishment he either owns or directs. From the foregoing it is evident that far more latitude in the way of advertising is allowed to the medical profession in Austria than is the case with us. We are certainly of opinion that the best way to safeguard professional dignity is by drawing up a hard and fast regulation prohibitive of personal announcements of every kind and description. Half measures are never productive of good. We sincerely hope that the permission to insert professional advertisements in the lay press, no matter how severe the limitations, may never become acclimatised in England. In order to show how liable a concession is to abuse it is only necessary to mention the inordinate growth of practitioners' door-plates in Paris. Originally, as with us, simple rectangular pieces of brass, bearing the name of the practitioner in letters of modest dimensions, they have now, according to M. le Baron, developed into gigantic sign-boards affixed in many cases to windows or even to balconies.

THE EXAMINATION FOR THE DIPLOMA OF PUBLIC HEALTH (ENGLISH CONJOINT BOARD).

A "PROSPECTIVE M. O. H." writes protesting against the present mode of conducting the examination for the above-named diploma, which, he says, "bids fair to the establishing of an unsurmountable barrier to any general practitioner ever again hoping to obtain it." The unsuccessful candidate is apt to attribute his failure to the fact that he did not manage to satisfy the examiners concerning his knowledge of some few technical points, when possibly it may have been rather a general lack of information with regard to the subject matter of examination which proved his ruin. In the present instance the papers of a "Prospective M. O. H." are not in evidence, but, taking him upon his own ground, the case he makes out is far from being a strong one. He objects to being expected to understand the mechanism of the Bramah press, and complains of being questioned concerning the influence of climate, damp, and soil on acute rheumatism. He says the differential diagnosis of a scarlet-fever rash is a "purely medical question," and should not be made the subject of examination for a public-health diploma. The practical part of the examination consisted, he tells us, of "rushing the candidates round some sewage works," and requiring them to write a paper on sewage. The fact is, he concludes, that the whole system of examination as at present conducted is "rotten to the core." The line of argument of a "Prospective M.O.H." is far from being convincing, and the instances he cites do not appear to tell in his favour.

THE LATE MILITARY MARCH.

As might have been anticipated, numerous reasons have been assigned in explanation of the fact that a large number of soldiers fell out during the late march from Aldershot to the New Forest. That there was a sudden accession of heat, which was great while it lasted, and that the force was largely composed of young soldiers, who were unequal and comparatively unaccustomed to the physical strain and fatigue of carrying their arms and equipment on long marches through dusty roads in sultry weather, everybody admits. That the men showed a good deal of pluck under the circumstances, and that many of them, footsore and distressed, nevertheless manfully struggled on, is not denied. Practically speaking, there is no good in dwelling upon the fact that young soldiers cannot sustain heat, fatigue, and weight-carrying as well as those who are older and more matured and better trained. We must take our soldiers when we can get them—that is, when they are young. The men are good enough if only time be given them to develop and to be physically trained for military exercises and marches. The British army has always given a good account of itself in the field, and, after all, we are no worse off under a short service system than are Continental nations in this respect; but we have to meet requirements in regard to foreign service—in India and the colonies—such as do not fall to the lot of other nations. The question arises whether nothing can be done in the way of better adjusting our systems of military dress and equipment to the soldier's occupation and the varying seasons and circumstances in

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which he is placed. A great many years ago an article appeared in *Blackwood's Magazine* entitled "How shall we dress him?"—to which a practical reply still remains to be given. We have no doubt vastly improved upon the system in vogue at the time of the Crimean War and for some years subsequently, but we have not yet attained our object. The marching power, other things being equal, will, for example, greatly depend upon the way in which the soldier is shod. A good deal has, no doubt, been done in this direction, but the ammunition boot is not perfect—it is too heavy and inelastic, for hot weather especially. This is not to be wondered at, considering the irritation and distress which we all of us more or less undergo at the hands of our bootmakers in civil life. The Metropolitan Police Force are a splendid body of men, but they cannot run fast. The dress of a sailor of the Royal Navy contrasts very favourably with that of the soldier in regard to ease and freedom of movement. As to weight-carrying, the recruit or young soldier wants to have his kit carried for him on a long march until his body and limbs become developed and he has been fitted by a gradual process of training to carry it for himself. The return march of the troops was a much more satisfactory performance. To provide a suitable dress for different seasons of the year is, of course, a matter of difficulty and grave expense where a large army is concerned.

OVER-ZEAL.

MR. HANKIN, the official bacteriologist at Agra, is said to have had a narrow escape from death from cholera through being too confident in the powers of his disinfecting drugs. Mr. Hankin has been for some time engaged in the special investigation of cholera, and has devoted a great deal of attention to the disinfection of the drinking water in the wells, and after various experiments finds potassium permanganate to give the best results. In many cases after the well water had been thus disinfected cholera ceased in the immediate neighbourhood supplied by the well. In one instance, however, Mr. Hankin, anxious to impress the natives with the efficacy of these measures, is said to have himself drunk some water from the well very shortly after the potassium permanganate had been put in. The result was, as might have been expected, an attack of cholera, which, however, proved to be a mild one and terminated favourably. While Mr. Hankin deserves all thanks for his important researches and his devotion to his work, we cannot think that any such experiments on himself as the one above described are justifiable. The world cannot afford to lose valuable lives by experiments which can only prove dangerous to the operator and are not in any way directly the means of saving other lives.

SCARLET FEVER IN BIRMINGHAM.

THE sanitary officials of Birmingham have for some time past been kept actively engaged in their efforts to cope with an ever-increasing epidemic prevalence of scarlet fever in that city. It is true that the prevailing malady is of a mild character, the deaths registered in the three last weeks of August having been only 3, 4, and 5 respectively, and only a single death was registered in the first week of the present month; but the cases newly arising from week to week have been in increasing amount, and August has witnessed a larger total of attacks than did July, though the deaths have been almost identical in number. Great encouragement is felt in the much more frequent recognition of hospital treatment on the part of parents, as beneficial in comparison with home treatment of patients, the percentage of removals to attacks being some 80, so that the hospital register can now be looked upon as containing by far the larger proportion of total cases coming to light. And it is just this register which goes to show the rapid growth of scarlet fever this year in Birmingham over its incidence in 1894. Twelve months ago the highest number in hospital was 239, and the number gradually sank until in February last it had declined to 170, rising again to 200 in the succeeding two months, with a further increase to 240 by the end of May and up to 260 in June. In July the cases coming to the knowledge of the health department showed the disease to be rife in all parts of the city, patients being received into hospital from all quarters, and the beds occupied numbering 340, whilst towards the close of last month the cases under treatment were as many as 460 in number, being nearly double the total of any day in August of last year. The sanitary authority has not, however, lost heart, and Dr. A. Hill is looking hopefully for a steady decline now that what he regards as the maximum epidemicity has been reached. We sincerely trust it will shortly be manifest that the worst is over.

THE ADULTERATION ACTS.

A NICE point of law arose last week in a case in which a provision dealer was summoned before the Wigan County Justices charged with two offences under the Margarine Act, 1887—viz., that he had exposed margarine for sale without a distinguishing label being attached to it, and also that he had sold it as butter. The defendant pleaded guilty. An inspector employed by the Royal Lancashire Agricultural Society visited the defendant's shop and saw *round pounds* of butter exposed for sale in the window. He purchased a pound and then told the defendant who he was, whereupon the defendant admitted it was margarine. The inspector did not tell the defendant he was going to have it analysed, and did not offer him a portion in order that he might have it analysed because he admitted it was margarine. The assistant magistrate's clerk advised that owing to this omission the bench could not deal with the case. The prosecuting solicitor said as the defendant had pleaded guilty the bench had power to convict, but this was overruled. Here we have a case in which the defendant pleads guilty, and yet escapes the penalty because the inspector omits what appears to be a technical compliance with the provisions of the Act.

MADAGASCAR.

THE news brought each succeeding day from Madagascar regarding the health and sanitary state of the French expeditionary force in that country is more and more unsatisfactory. The engineering corps and those of the troops who have been engaged in road-making have suffered greatly—as we had indicated they probably would—from the effects of malarial disease due to soil emanations and from exposure to the heat and climatic influences. About 40 per cent. of the force are said to be inefficient or in hospital suffering from fever, dysentery, and other diseases, and there has been a heavy list of mortality and invaliding. The hospitals must, indeed, be full to overcrowding according to the descriptions of them afforded by correspondents. The low-lying districts are especially hot and unhealthy, and of the soldiers still in the field it is stated that a large number of them are suffering from malarial anæmia, footsoreness, and swollen feet. The fighting casualties have been insignificant; the real enemies have been heat and malaria and the difficulties of transport and food supplies for the force. The special correspondent of the *Débats* gives a somewhat gloomy description of the expedition. The march from Mojanga to Suberbieville was across a very hot and unhealthy country, and a great deal of the sickness is ascribed to it and to the construction of a road for the waggon transport. This correspondent also finds

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fault with the hospital arrangements and insufficient number of medical officers and sick attendants, but this seems to be mainly accounted for by the amount of sickness among them. The French troops are generally too young for the work and unacclimatised. A feeling of discontent prevails in the expeditionary force, and the news from Madagascar is likely to cause great disappointment in France and prove a source of trouble for its Government. It seems surprising that the French War Office were not better informed as to the climatic and local conditions that would have to be encountered in Madagascar before undertaking the expedition. It is impossible not to have some misgivings as to the future, but we sincerely hope to hear better news when the force succeeds in reaching Antananarivo.

FACIAL HEMIATROPHY AFTER INFLUENZA.

A CURIOUS case of facial atrophy is briefly related in the *Neurologisches Centralblatt* in an abstract of a paper by Dr. Berend in *Orvosi Hetilap*. A girl aged twelve suffered from a severe attack of influenza two years ago, and a few weeks later had sharp pains in the face. The parents soon noticed a wasting of one side, and when she came under observation it was found that the hair on the left side of the head was thinner and the skin wasted as low as the corner of the mouth. Below this level the opposite side of the face was affected in a similar way. The changes were most marked in the skin and the subcutaneous tissues, but the bones also showed distinct changes. Dr. Berend refers the changes to an affection of the first and second divisions of the nerve on the left side, and to a similar affection of the third branch on the right side.

MICROBES ON MONEY.

THE *Revue d'Hygiène* publishes an interesting account of some experiments made at the bacteriological laboratory of the Military Hospital of Dey at Algiers. Dr. H. Vincent explains that money is specially liable to be contaminated by saliva, pus, pathological secretions, dust, and the morbid germs that may be found in dirty pockets or on dirty fingers. He does not think, however, that evidence of this danger can be easily obtained by placing dirty coins in culture broth. The investigations at the Dey Hospital were conducted in a different manner. A piece of cotton-wool about the size of a pea was dipped in water and sterilised. Pieces of wool thus prepared were seized with pincers that had been held in a flame and were gently passed over the coin to be examined. The pieces of wool were then placed in culture broths and kept in a temperature of 35° C. The product, which soon contained various micro-organisms, was sown anew in gelatine plaques so as to isolate the bacteria. In other cases it was inoculated in doses varying from one to five cubic centimetres in the blood or under the skin of rabbits, guinea-pigs, and white rats. A lengthy description of the methods employed and the results obtained is given. The number of bacteria found on the surface of coins varied very considerably—on silver and gold from 460 to 3500, and on copper a still larger number. To destroy many of the non-pathogenic microbes some experiments were made at a temperature of 37° C. The injection of mixed cultures from coins only produced death or serious results in about one out of every ten inoculations. Death was sometimes rapid, with symptoms of acute septicæmia. In one case tuberculosis was communicated to a rabbit by a piece of wool which had been passed over a ten-centime copper coin. In another case there was slight tetanus. There can be no doubt that germs of disease are often to be found on the surface of coins—notably the microbe of suppuration, the staphylococcus pyogenes, and the streptococcus. Nevertheless, as the experiments were repeated they proved that there were fewer infectious germs than had been anticipated. Another series of experiments was then made which demonstrated that though coins are often contaminated they possess in themselves antiseptic qualities which greatly reduce the risk. If pathogenic germs are placed on coins it is seen that they do not live long. The time varies according to the temperature and the nature of the metal. In a cold temperature the germs of typhoid fever and the Friedlander bacillus are killed in eighteen hours if placed on a sterilised copper or silver coin; and the pyocyanic bacillus and that of green diarrhœa in twenty-four hours. At a temperature of a pocket, about 36° C., the bacilli of typhoid fever, of blue pus, of diphtheria, and the streptococcus are destroyed in less than six hours. The bacilli of diphtheria are among the most tenacious, and in cold will live three days on silver and six days on bronze. Gold, of course, is less antiseptic, and the Eberth bacilli will live five days and that of diphtheria six days on a gold coin in a temperature of 20° C. At a damp temperature of 36° C. the destruction of the microbes is very rapid, and that is the temperature which often prevails in the pockets of clothes. It is some consolation to find that the danger, when it exists, is not one of long duration; still, there is time enough, even in six hours, for much mischief to be accomplished. It is, therefore, the moral duty of all who are suffering from infectious disease to refrain from handling pieces of money.

THE BRITISH DENTAL ASSOCIATION.

THE annual gathering of this association was held at Edinburgh on Aug. 29th, 30th, and 31st, and proved to be most successful. The new President, Mr. Bowman Macleod, delivered a most interesting address and strongly advocated the establishment at our leading institutions of a chair in Clinical Dental Surgery. A large number of papers were contributed, that by Dr. Frederic Hewitt on Chloroform in Dental Surgery creating most interest. The writer's facts were clearly put, and his statistics of the number of deaths under anæsthetics in dental surgery tended to show that the death-rate runs a long way the highest in Scotland, where the use of chloroform is so prevalent. The paper gave rise to a valuable discussion, Dr. W. H. Williamson trying ably to defend the administration of chloroform in Scotland. The demonstrations were given at the Edinburgh Dental School and proved as attractive as usual. At the Microscopical Section several communications and papers were brought forward, including a most valuable one from Professor Hunter on the subject of photomicrography, and the system shown and advocated produces the very best results without the aid of the expensive objectives that are in general use. The association will hold their meeting next year in London during the month of August.

FILTERS IN INDIA.

WE have for a long time past persistently urged on the Government of India the importance of adopting the Pasteur-Chamberland or the Berkefeldt filter in substitution of that in ordinary barrack-room use in Indian cantonments, which is not only inefficacious, but under certain circumstances a source of positive danger to the troops. Mr. Hankin, the Government Bacteriologist of the North-Western Provinces of India, in addition to other excellent work which he has done for his own Government and that of India generally, has shown as the result of his experiments and observations that the filter in ordinary use allows the passage of starch grains, the diameter of which, it is needless to add, far exceeds that of the comma bacillus or other micro-organisms. But experiment shows that some of the cholera microbes nevertheless remain behind in the filter, where they go on breeding. In

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the case of the late outbreak of cholera in the East Lancashire Regiment at Lucknow, for example, it was proved to the satisfaction of the commission of investigation into its causes that the exacerbation of the outbreak among the troops who had been moved into camp was attributable to infected filters having been removed from the cholera-infected barracks to camp. Mr. Hankin states that under certain conditions traces of the cholera microbe will even pass through the Pasteur-Chamberland or Berkefeldt filters, although he has reasons for thinking that this will not detract from their practical utility. Why should not experimental trials be made of these filters at several selected stations in India where enteric fever is unduly prevalent? It should not, surely, be difficult to devise a number of experimental trials in order to determine whether their employment was followed or not by a cessation or diminished prevalence of the disease.

THE LATE MR. DURHAM.

WE have received the following appeal from the Treasurer of Guy's Hospital:—"Dear Sir,—We are sure that the friends of the late Mr. Arthur Edward Durham would desire that steps should be taken to perpetuate his memory in association with Guy's Hospital, to which he devoted the best years of his life and work. The particular form which such a memorial should take has been a matter of careful consideration, and with the full assent and approval of his family it has been decided that at the present time, when the finances of the hospital are so seriously embarrassed, the best tribute which can be paid to his memory is the endowment in perpetuity of two beds, one in each of his old wards, Lazarus and Martha, to be called the Arthur Durham Beds. For this purpose a sum of £2000 will be requisite. In appealing to his old friends and admirers for liberal subscriptions towards this worthy object it is needless for us to dwell upon the manifold services Mr. Durham rendered to Guy's as a teacher and surgeon of the first rank, upon the unaffected kindness of his disposition, and upon those genial traits of character which endeared him to all who had the privilege of knowing him. Contributions should be paid to Mr. C. H. Wells, at the Office of the Medical School, and they will be acknowledged from time to time in the *Guy's Hospital Gazette*. In the belief that many will be glad to possess such a memento, it is proposed to present subscribers of one guinea and upwards with a platinotype enlargement of what is regarded as the most life-like photograph of Mr. Durham, in a form suitable for framing.—We are, dear Sir, yours faithfully, E. H. LUSHINGTON, Treasurer; P. H. PYE-SMITH, Senior Physician; H. G. HOWSE, Senior Surgeon."

THE BORDEAUX CONGRESSES.

IF only congresses and contentment were always united the city of Bordeaux should be simply brimming over with complacency. Taking advantage of the fact that an exhibition was in progress, the representatives of no fewer than seven erudite associations decided to hold their annual reunions in the sunny capital of South-western France; and the consequence was that during the early days of August the banks of the Garonne were thronged with learned men of well-nigh every European nationality. As Dr. E. Masse has it in his weekly bulletin:[1]—"Our town of Bordeaux can never congratulate itself sufficiently on having had the honour of affording hospitality to such a large number of *savants*, of physicians, and of surgeons, who came together from all the points of the universe—Russians, Belgians, Spaniards, Portuguese, Swiss, Italians, Bulgarians, Roumanians, Greeks, all have comported themselves with honour at the diverse congresses." England alone seems to have been unrepresented; English names are conspicuous by their absence from the various records of the proceedings, and yet the subjects dealt with were both opportune and interesting, as may be seen by the following list of titles: Geography, Protection of Infant Life, the Latin Tongues, Alienism and Neurology, the Advancement of Science, Medicine, Gynæcology, and Obstetrics. Inasmuch as four, if not five, of these congresses were concerned with matters appertaining to the science and art of medicine the absence of representatives belonging to this country is much to be regretted; but doubtless the abstention was owing to the coincidence of the British Medical Association meeting in London. Be this as it may, there can be no question that a holiday amidst the vines of Gironde would have been highly enjoyable. Notwithstanding the plethora of congresses the entire time of the 3000 visitors was by no means exclusively devoted to business. On the contrary, the majority of them contrived to find ample leisure for amusement, and the way a lengthy programme of fêtes, banquets, and excursions was done justice to clearly shows that the Continental disciples of science know how to give effect to the old Horatian maxim by a judicious admixture of the useful and the agreeable.

[1] Gazette Hebdomadaire des Sciences Médicales, Aug. 11th.

OCCUPATIONS FOR WOMEN.

THE *Woman's Signal* notices that in one portion of the daily press women's energies are directed towards weddings and in another towards burials. Our contemporary then says: "Ought not THE LANCET to follow with an intermediary suggestion?" As far as we can see there is no need for our interference. The intermediary state between weddings and funerals is birth, and women can and do attend at this function only too frequently as it is. We always fail to see the force of the constant cry of new occupations for women—there is nothing they do not do nowadays from literature to massage. We ourselves have seen in Armenia a woman ploughing—we mean drawing a plough,—the remainder of the team being made up of a donkey and a camel. It should be mentioned that the woman was not an Armenian, but a Tatar, and although this occupation may appear unfeminine it would seem far more hygienic and no less fitting an employment for women than much of our factory labour. To come nearer home, however, we know of a metropolitan mortuary where the assistant at post-mortem examinations is a woman, and, as far as handicraft goes, she is a most excellent and handy helper. If this employment is open to women, surely the emancipation of the sex is complete. While on the subject of post-mortem examinations in public mortuaries we wish to call attention to the fact, as we believe, that the medical man making the examination has to provide his own post-mortem instruments. This, it seems to us, is wrong. Every vestry should provide a set of its own for use in cases which are examined at the mortuary. They are not expensive and could be easily kept in order by the mortuary keeper.

UNIVERSITY STATISTICS IN SWITZERLAND.

"A HOLIDAY CONTRIBUTOR" writes under date Zürich, Aug. 28th:—"Following up your recent annotation giving the university statistics of Switzerland for the winter *semestre* of 1894–95, I have been favoured with the official return of the same for the summer *semestre* of 1895. The seven Swiss seats of learning during this half-year have numbered 3108 students, of whom 47 were ladies, and 634 amateurs, of whom 144 were ladies. The total is 3742 (191 ladies), or 71 (9 ladies) fewer than the preceding half-year. The distribution of students and amateurs into faculties is as follows: Theology, 440 (274 Protestants and 166 Catholics); law, 648 (5 ladies all at Zürich); medicine,

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938 (200 ladies); and philosophy (science and literature), 1656 (286 ladies). Of the 3108 students properly so called 1774 are Swiss (42 ladies); Germany furnishes 504 students 51 ladies); Russia, 348 (199 ladies); Bulgaria, 131 (10) ladies); France, 56 (2 ladies); Austria, 53 (9 ladies); Roumania, 49 (9 ladies); Turkey, 39 (8 ladies); Italy, 36; and North America, 32 (7 ladies). The University of Zürich counts the greatest number of students properly so called (673 of whom 125 are ladies); Geneva comes next with 665 students (117 ladies). If, however, to the students we add the amateurs, Geneva leads the van with 824, of whom 176 are ladies; Zürich follows with 752 students and amateurs (158 ladies); Berne, 649 (96 ladies); Bâle, 609 (5 ladies); Lausanne, 493 (44 ladies); Fribourg, 308; and, finally, Neuchâtel, 107 (12 ladies). Fribourg and Bâle, as in the previous half-year, count the greatest number of theological students (161 in the former and 81 in the latter). Lausanne numbers most in the faculty of law (her 125 have risen to 161), while Berne falls from 150 to 147. Medicine always counts most students at Zürich (331) and at Geneva (274). The latter has 376 students and amateurs in science and literature and Zürich 347."

INTOXICATION BY CHLORALOSE.

DR. HERZEN describes a case of this kind in the *Revue Médicale de la Suisse Romande*. The patient was suffering from phthisis and twenty centigrammes of chloralose were administered. An hour later he became collapsed—pale, unconscious, covered with sweat, and with a flickering and very rapid pulse. Every fifteen or thirty seconds he had convulsive movements of the extremities and of the muscles of mastication. Ether was administered subcutaneously and after two hours the contractions ceased, and in four hours the patient had recovered. Dr. Herzen says that his patient was used to morphia and chloral, and the very profound effects produced by a medium dose of the drug suggest that a considerable amount of care should be used in its administration.

THE DIFFUSION OF SMALL-POX.

THE deaths from small-pox in London in the last week of August were 4 in number, and occurred in as many different sanitary areas in the East-end. During August 14 deaths were ascribed to this disease in London, as compared with 6 in the previous month. Last week the deaths registered were 5 in number, 2 belonging to Camberwell and 1 each to Islington, Whitechapel, and Plumstead sanitary areas. Of the 9 deaths thus occurring in the last fortnight 3 were in vaccinated adults, 2 in unvaccinated, and 1 in vaccinated young children, and concerning the remaining 3 (all of whom were adults) there is no statement as to their vaccination. The new attacks recorded in the fortnight were 37 and 36 respectively, and the admissions to hospital 36 and 25. As before, the southern and eastern groups of districts suffered in much greater proportion than the western and northern sections of the metropolis. The cases remaining under treatment in hospital had been gradually increasing from 19 on June 15th to 357 on August 24th; but on Sunday, Sept. 1st, a decline to 333 was shown, 196 cases being accommodated at Gore Farm, 135 on the hospital ships, and 2 at the South Wharf. On Saturday last a further decline to 328 was recorded. A few attacks are stated to have occurred recently in West Ham. In the Midlands an outbreak, limited at present to the members of one family, has been discovered at Loughborough, and two of the patients have been removed to hospital; the third case, though the small-pox was apparently mild, proved fatal from syncope. In Boston workhouse a tramp fell ill with small-pox three weeks ago, and this case has been followed by 4 others in that institution; all of them were removed to the fever hospital, and upwards of a hundred inmates of the workhouse were vaccinated. In the last week of August a fatal case was registered in Preston, and another in Oldham, in which latter town some half-dozen attacks are reported to have come to light. Last week there was another death in Oldham, and one in Manchester, where 5 attacks were heard of. In Dublin a continued decline was manifested in the week ended Aug. 24th, only 3 admissions to hospital being reported, against 10 discharges, and in the succeeding week 3 admissions, against 6 discharges, only 15 acute cases being left in hospital on the last day of August, as compared with 28 three weeks earlier.

POISONOUS LITERATURE AND ITS ANTIDOTES.

SOME day, perhaps, the law may interfere directly with the publication and sale of sensational literature; as yet the prohibitory line has not been drawn or even described with the accuracy required for legal definition. We may, at all events, be thankful that some countenance is given by the Statute-book to the view that sheer immorality of expression is incompatible with social order. In times when the frank and open condemnation of indecent practices is treated by many as a mere prudery, a Puritanic affectation, this is something to be thankful for. We would fain hope that those legal authorities who in this country represent the *censor morum* will before long find means of analysing the penny dreadful, and of including it within their poisons' act. As an aid in the same work, though far too little used, we have already the great force of education. This weapon, indeed, has a double edge. By conferring the power to read it has opened a road to every mind for the widely distributed germs of morbid fancy. It is bound by public duty to provide a remedy, and we have in the meantime no agent so reliable as it may easily become for the purpose of mental disinfection and invigoration. It is to its powerful influence, whether employed by a parent or a teacher—and a duty is incumbent upon both in this connexion—that we must chiefly trust in order to attain this purpose. To forbid what is pernicious is not sufficient. Parents and teachers alike must go further and seek frequent occasion out of school or in school not only to expose the idle and mischievous tendency of the cheap horrors of publication, but to substitute for these equally light and attractive but wholesome reading. There is plenty of such material in circulation, but much of the best is still somewhat expensive. We would only add a hope that more of it may be brought out in penny editions.

HOW FEVER IS SPREAD.

IT is vain to expect that all our precautions to arrest the spread of infection will be effectual unless they be assisted by the loyal coöperation of private persons. The importance of this fact cannot be too strongly insisted on. In a matter of this kind our neighbour's interest is our own, and if it is not so regarded the effect of our selfish unconcern may at any time recoil upon ourselves. No rightly thinking person can, therefore, find fault with a decision given last week in the Thames Police-court against a woman who in removing from her home conveyed her son (who was suffering from scarlet fever) in a tramcar. Such cases are not known to be of frequent occurrence, though we suspect that a certain unknown proportion of them successfully run the gauntlet and escape detection. The observant care of medical men, of sanitary inspectors, and of the non-professional but most deeply interested community at large cannot be employed with too much zeal in this direction. It appears to us, moreover, that less than enough is now done to render the transit of infected persons convenient and safe. When we come to look into the subject there is practically only one means to this end which is of general utility—namely, the hospital ambulance. Obviously, too, this method

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is itself seriously hampered by restrictions. It is part of the service of a special institution, and is not readily available in emergencies for which that service is not directly responsible. A few cabs are kept by some owners for ambulance purposes, but so few that their existence might almost be ignored. Railway companies make no special provision for the fever-stricken. Yet everyone can appreciate the dilemma which confronts an invalid so smitten and his friends when illness overtakes him in a seaside or country lodging, with home accessible if only he were not infectious, and perhaps no hospital either near or suitable to his condition. The whole question is worthy of consideration by those who have to do with organising our means of transit, and if a satisfactory solution could be arrived at the working efficiency of the Public Health Act would be thereby increased.

ALLEGED CHOLERA RECURRENCES.

WE are glad to state that, although there has been another death of an adult from "diarrhœa" in Great Grimsby and more than one suspicious attack, there is as yet no bacteriological evidence of a recrudescence of cholera, and we hope there will be none. Great Grimsby has by no means a clean record as to autumnal diarrhœa; but it is unusual to find adults succumbing to even severe attacks of that disease. We would therefore urge on the town council the utmost vigilance at this critical season, especially in view of the history of Great Grimsby during the present European cholera epidemic.

DIPHTHERIA IN LONDON.

THE decided diminution in the number of deaths from diphtheria in London, shown by the Registrar-General's returns to have occurred in the third complete week of August, was, unhappily, not maintained in either of the last two weeks, the number of deaths registered in the week ended Saturday, Aug. 31st, having risen from 24 to 40, a total which was 11 in excess of the corrected average for the corresponding week of the preceding decennial period, whilst in the week ended Sept. 7th the registered deaths were 38—that is, 9 above the average. The patients remaining under treatment in hospital on Saturday last amounted to 662, and have not diminished in number. The preponderance of deaths among children is once more manifested, and with the recent reopening of schools in London it seems hardly likely that a decline of the disease will now take place. In the two months just ended there were in the nine registration weeks 416 deaths from diphtheria in London alone, yielding a weekly average of 46; and some slight consolation may be derived from the fact that this average was in excess of the deaths recorded during the last half of August as well as during the first week of the present month. In West Ham registration district, which is extra-metropolitan, 6 deaths occurred in the concluding week of August, and 9 during last week.

THE minutes of evidence which the Select Committee on Food Products Adulteration have been able so far to take are contained in a Blue-book published this week. The volume consists of 462 pages and deals for the most part with that very important and perhaps most interesting section of the inquiry—viz., the evidence and views of traders and manufacturers. Even in a rapid glance through the numbered paragraphs we have alighted upon not a few statements of the "startling revelation" order, but these and other points we propose to discuss at some length in a future issue.

Two deaths from hydrophobia have been recently reported, one from Rochdale, and the other from Preston.

WE regret to say that Sir Douglas Galton, during his delivery of the presidential address (referred to in our leading columns) before the British Association at Ipswich, was seized with sudden illness, which prevented him from reading the concluding portions of the address. We are glad to be able to state that he recovered sufficiently to acknowledge a vote of thanks.

WE regret to announce that Dr. Ruffer will not be able to deliver the course of lectures, as advertised, at the British Institute of Preventive Medicine, as he is suffering from an attack of diphtheritic paralysis and will not be able to do any work for some time.

THE fortune of the late Mr. Charles Mitchell, LL.D., is estimated at £1,800,000, and it is stated authoritatively that no further public benefactions are announced. Owing to his death the Aberdeen celebrations have been postponed till December.

Pharmacology and Therapeutics.

YEAST IN DIABETES.

DR. CASSAËT finds that a couple of ounces of yeast taken at meal-times are very useful in diabetes. At first the yeast tends to cause eructations and even diarrhœa, but after a few days the system tolerates it perfectly well, and the patient finds his appetite improved, his pains less, and his general condition better than before commencing the yeast. Even in a case where phthisis was present and there had been considerable loss of weight there was a gain of several pounds at the end of a fortnight, and the dynamometer showed an increase in muscular power. The amount of sugar in the urine decreased, in one case from 32 to 7½ parts in 1000. This yeast treatment of diabetes is not new—indeed, there are few remedies which have not been at one time or another employed in this affection. Dr. Herepath recommended it as long ago as 1854, and Dr. Oppolzer again employed it in 1868.

BROMIDE OF LITHIUM IN BRIGHT'S DISEASE.

A Russian physician, Dr. Polakoff, has found bromide of lithium of great service in Bright's disease, both in acute and chronic forms. He has employed it in twenty-two cases and finds that it acts as a certain and powerful diuretic, diminishing the quantity of albumin in the urine and frequently causing the œdema to disappear entirely. The patients were not kept on milk diet, but were allowed to eat ordinary food, and no other drugs were given at the same time nor any baths. The effect appeared to be more marked in acute than in chronic nephritis. The albuminuria began to decrease after a short period of treatment, on the thirteenth day at the latest, the diminution continued up to a certain point, and then the amount of albumin became stationary; but if the salt was stopped for a few days and then recommenced it was found possible to obtain a further decrease in the albumin. In one of the cases—that of a woman with puerperal convulsions—the attacks, which had resisted baths, morphia, and even chloroform, disappeared after a single day's treatment with bromide of lithium. As a rule the drug was well borne, but in two of the patients it produced nausea and vomiting and had to be stopped for a time. In one case of acute nephritis, too, hæmaturia was produced, which, however, rapidly ceased on the drug being discontinued and some tannin being given. The mixture ordered consisted of 1½ to 2 parts of bromide of lithium and 4 parts of bicarbonate of soda in 240 parts of distilled water flavoured with peppermint. Of this three or four tablespoonfuls were ordered per diem.

SUCCINATE OF AMMONIA IN LABOUR.

According to Dr. Remy of Nancy, succinate of ammonia is very useful in spasmodic cramp-like pains and in partial contraction of the internal os during parturition. In a case where this contraction occurred during the third stage of labour, rendering it impossible to deliver the placenta, a couple of doses of the above-named remedy relaxed the spasmodic condition and enabled the after-birth to come

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away without difficulty. The mixture recommended is a simple solution of the succinate in 140 times its weight of water, a tablespoonful dose being given every quarter of an hour until relief is obtained.

PRIZEMEN AND MEDALLISTS AT THE METROPOLITAN MEDICAL SCHOOLS.

St. Bartholomew's Hospital and College. — Lawrence Scholarship and Gold Medal: J. K. Murphy. Brackenbury Medical Scholarship: S. Gillies. Brackenbury Surgical Scholarship: L. Giles. Matthews Duncan Medal and Prize: T. S. Pigg. Senior Scholarship in Anatomy, Physiology, and Chemistry: E. C. Morland. Open Scholarships in Science, Chemistry, and Physics: A. L. Ormerod. Biology and Physiology: W. L. Brown; Junior, F. C. Borrow and S. R. Scott (equal). Preliminary Scientific Exhibition: L. A. Walker. Jeaffreson Exhibition: C. A. S. Ridout. Kirkes Scholarship and Gold Medal: not awarded. Bentley Prize (medical): E. W. Groves. Hichens Prize: not awarded. Wix Prize: C. C. I. Turnbull. Harvey Prize: H. Davies. Sir George Burrow's Prize: not awarded. Skynner Prize: T. J. Horder. Practical Anatomy, Junior (Treasurer's Prize): F. C. Borrow, W. H. Leonard, and S. R. Scott (equal), H. Burrows, A. R. Baker, C. S. Frost, H. S. Thomas, E. Wethered, C. R. Brown, and L. A. Walker. Practical Anatomy, Senior (Foster Prize): R. Raines (Prize), E. C. Morland, L. A. Baiss, and G. E. Gask (equal), A. O. B. Wroughton, W. T. Rowe, S. A. Millen, H. E. Waller, H. D. Everington, and F. Horridge. Shuter Scholarship: not awarded. Junior Scholarships: (1) S. R. Scott, (2) F. C. Borrow, and H. G. Wood-Hill (equal). Junior Scholarship in Chemistry, 1894: H. A. Colwell and E. C. Morland (equal).

Charing Cross Hospital Medical School.—Pereira Prize: F. P. Jones. Governors' Clinical Gold Medal: D. C. Rees. Anatomy Prize (Junior): C. B. Wagstaff. Biology Prize: C. B. Wagstaff. Chemistry Prize: J. E. Humphreys. Physiology Prize (Senior): W. E. Morgan. Physiology Prize (Junior): W. H. Unwin. Practical Physiology Prize: W. E. Morgan. Medicine Prize: W. C. Bosanquet. Surgery Prize: C. Hudson. Practical Medicine Prize: W. C. Bosanquet.

Guy's Hospital.—The Treasurer's Gold Medal for Clinical Medicine: Francis J. Steward. The Treasurer's Gold Medal for Clinical Surgery: Francis J. Steward. Gurney Hoare Prize for Clinical Study: Arthur H. Leete. Beaney Prize for Pathology: Francis J. Steward. Sands Cox Scholarship for Physiology: George E. Richmond, prize £15. Michael Harris Prize for Anatomy: Frederick E. Walker, prize £10. The Arthur Durham Prizes for Dissection—First Year's Students: John T. M. M'Dougall, prize £5; Second Year's Students: Frederick E. Walker, prize £15. The Hilton Prize for Dissection: John O. Garland. Third Year's Prizes: Robert P. Rowlands, prize £25; Robert Howard, second prize, £10. Second Year's Prizes (1894): Edmund I. Spriggs and Robert P. Rowlands (equal). Dental Student (1895): Joseph L. Payne, prize £15. First Year's Prizes (1894): Philip Turner, first prize, £50; George E. Richmond, second prize, £25. Dental Students (1895): Kenneth W. Goadby and Norris Snell (equal), £5 each. Practical Dentistry Prize: Edward C. Dimock, prize £10. Open Scholarships in Arts: Arthur Pearson, £100; George William Hare, £50. Dental Student: Guy Chatterton, £30. Open Scholarships in Science: Thomas F. Rutter, £150; John T. Dunston, £60.

St. George's Hospital.—Brackenbury Prizes (Medicine): Sidney Smith. (Surgery): F. Morley. Treasurer's Prize (the gift of his Grace the Duke of Westminster): Walwyn Thomas. Certificate of Honour: E. T. Fison. Brodie Prize: R. A. Cooper. Henry Charles Johnson Prize (Anatomy): H. L. Barwell. Pollock Prize (Physiology): R. E. Drake-Brockman. First Year's General Proficiency Prize: T. M. Neatby. Honorary Certificates: F. Paul, H. G. Drake-Brockman, A. Morley, and Lawrence Pick. Second Year's General Proficiency Prize: H. L. Barwell. Third Year's General Proficiency (Honorary Certificates): H. M. Vernon, J. W. Watson, and H. P. Foulerton. William Brown Exhibition of £100 per annum, tenable for two years: Walwyn Thomas. Entrance Scholarship (October, 1894) of £145: T. M. Neatby. University Scholarships of £85: J. T. Watson, B.A., St. Peter's College, Cambridge, and J. E. Kirk, B.A., Christ's College, Cambridge.

King's College.—Warneford Scholarship: Class I., W. L. Stuart and A. T. Marshall for three years; A. C. Williams for two years. Class II., M. S. Mayou. Rabbeth Scholarship: F. C. Carle and W. L. Stuart (equal). Senior Scholarship: J. M'D. Troup and G. H. Lansdown (equal). Second Year Scholarship: T. H. Gardner. Junior Scholarship: W. H. M'Mullen, C. A. Sprawson, and A. Brown. Sambrooke Exhibitions: C. A. Sprawson and A. Brown. Clothworkers' Exhibition: R. W. H. Bailey and C. F. Mott. Warneford Prize: R. P. Williams. Divinity: Barry Prize, A. T. Marshall; prize, A. D. Reid. Anatomy: J. C. Briscoe. Physiology: J. C Briscoe. Chemistry: J. C. Briscoe. Botany: R. H. Gompertz. Medicine: J. M'D. Troup. Clinical Surgery: A. H. Burt. Surgery: G. H. Lansdown. Tanner Prize: G. H. Lansdown and W. B. Bell (equal). Forensic Medicine: R. P. Williams. Obstetric Medicine: W. B. Bell. Materia Medica: A. Brown. Todd Clinical (Medical): A. H. Burt. Pathological Anatomy: J. M. Schaub. Hygiene: J. M. Schaub.

The London Hospital Medical College.—Price Scholarship in Science, £120: W. R. Dunstan. Price Scholarship in Anatomy and Physiology, £60: H. W. L. Barlow. Entrance Science Scholarships: £60, H. D. Pollard; £35, R. Howard. Buxton Scholarships: Arts, £30, T. Chetwood; £20, J. S. Dudding. Clinical Medicine: £20 scholarship, Elgar Down. Clinical Surgery: £20 scholarship, H. F. Tod. Clinical Obstetrics: £20 scholarship, E. Maynard. Duckworth Nelson Prize: £10, Elgar Down. Letheby Prizes: Senior, £20, L. C. Lander; Junior, £10, G. S. Ward. Sutton Scholarship, £20: E. Mallam. Anatomy and Physiology: £25 scholarship, I. W. W. Hunter and T. S. Novis (equal). Anatomy and Biology: £20 scholarship, A. F. Tredgold. Dressers' Prizes: C. Pike, C. W. Chaplin, J. M. Garman, and A. Orme (equal); I. W. W. Hunter, H. G. Frankling, S. Gaster, and G. H. Herbert (equal).

St. Mary's Hospital.—Entrance Scholarships in Natural Science: 100 guineas, J. J. Pierce; 50 guineas, C. W. Buckley; and 50 guineas, W. A. Trumper. University Scholarships of 50 guineas: A. A. Bathe, M.A., and A. Graham Butler, B.A. Exhibition in Natural Science: 25 guineas, H. J. Van Praagh. Summer Session, 1894.—Prizes. Third Year: Practical Surgery, A. Stanley. Second Year: Midwifery, W. Ashdowne; Medical Jurisprudence, J. E. P. Davies. First Year: Materia Medica, A. Howell; Practical Chemistry, A. F. Hayden; Chemistry, H. T. Mann. Winter Session, 1894-95.—Third Year: Medicine, A. W. Sanders; Surgery, A. W. Sanders; Pathology, R. H. Steen, B.A., and A. H. L. Newstead, B.A. Second Year: Physiology, F. S. Dawe; Histology, R. C. Leaning. First Year: Anatomy, A. Von Rosen; Physiology, W. B. Watson. Third and Fourth Years: Prize in Ophthalmology of £10 10*s.*, R. Percy Smallwood, B.A., and Basil Pares; Prize in Dermatology of £5 5*s.*, H. H. G. Knapp, B.A., and J. O. Skevington; Clinical Surgery, 1894, R. W. Dodgson; Clinical Medicine, 1894, R. W. Dodgson. Special prizes, 1894, for general proficiency in Anatomy and Physiology (including Histology), A. Howell; for general proficiency in Medicine and Surgery (including Operative Surgery), Mr. A. Stanley; Prosectors, R. C. Leaning and S. M. Smith.

Middlesex Hospital Medical School.—Broderip Scholarships: J. C. K. Braine-Hartnell and E. D. Aubin. Hetley Clinical Prize: N. B. Harman. Governor's Prize: F. C. B. Gittings. Murray Scholarship and Medal: F. C. B. Gittings. Lyell Medal: H. P. Noble. Exhibition, Second Year: G. H. Lucas. Exhibition, First Year: A. J. Knowlton and W. A. S. Lamborn (equal). Entrance Scholarships: E. H. M'Enery and A. J. Knowlton. University: G. H. M'Cleary. Class Prizes—Medicine: E. D. Aubin. Surgery: E. D. Aubin. Practical Surgery: C. Roberts. Practical Midwifery: E. D. Aubin and E. K. Herring (equal). Anatomy: A. E. Relph. Physiology: A. E. Relph. Chemistry: W. A. S. Lamborn and C. T. Baxter. Biology: H. Hipwell. Dissections: F. H. Lawson. Practical Medicine: H. E. Wise. Pathological Anatomy: A. E. Walter. Obstetric Medicine: C. Roberts. Practical Physiology: F. F. Elwes. Pharmacology and Therapeutics: C. Roberts. Psychology: J. T. Wills. Practical Pharmacy: C. G. Pugh.

St. Thomas's Hospital.—Entrance Science Scholarships: J. Gaff, first scholarship, £150, and certificate of honour; H. R. Beale, scholarship, £60, and certificate of honour; H. Calvert, exhibition of £20 and certificate of honour. University Scholarship: W. M'Dougall, scholarship, £50,

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and certificate of honour. First Year's Students: J. Gaff, the William Tite Scholarship, £27 10*s*., and certificate of honour; H. R. Beale, College Prize, £20, and certificate of honour; H. Calvert, College Prize, £10, and certificate of honour. Second Year's Students: H. E. Hewitt, the Musgrove Scholarship, £38 10*s*., and certificate of honour; R. W. C. Pierce, College Prize, £20, and certificate of honour; H. D. Singer, College Prize, £10, and certificate of honour. Third Year's Students: A. W. Sikes, College Prize, £20, and second tenure of Peacock Scholarship, and certificate of honour. Practical Medicine: F. B. Thornton, the Mead Medal founded by Mr. and Mrs. Newman Smith; P. S. Hitchens, certificate of honour. Surgery and Surgical Anatomy: B. Dyball, the Cheselden Medal, founded by the late George Vaughan; A. J. Martineau, a Bronze Medal. Pathology and Morbid Anatomy: A. L. Home, the Bristowe Medal. For General Proficiency and Good Conduct: A. J. Martineau, the Treasurer's Gold Medal.

University College, London: Faculty of Medicine.—Entrance Exhibition (£57 15*s*.): H. Hawker. Atchison Scholarship (£55 per annum for two years): J. H. Cook. Atkinson-Morley Scholarship (£45 per annum for three years): A. Dimsey. Cluff Memorial Prize (£15): Charles Bolton. Bruce Medal: J. H. Cook. Pathology and Morbid Anatomy (Tuke Silver Medal): Charles Bolton; (Tuke Bronze Medal): H. J. Price. Surgery (Gold Medal): J. H. Cook. Physiology (Theoretical and Practical) Senior Class (Gold Medal): Campbell Dykes; Junior Class (Silver Medal): H. Hawker. Anatomy (Senior Class) (Silver Medals): Montague Dixon and A. Martin-Leake (equal); Junior Class (Silver Medal): J. E. Simpson. Medicine (Gold Medal): J. H. Cook; Silver, A. Dimsey; H. J. Price and H. B. Shaw (equal). Practical Surgery (Erichsen Prize): H. B. Shaw. Clinical Medicine (Senior Class) (Fellowes Gold Medal): T. H. C. Stevenson; Fellowes Silver Medals: A. Dimsey, A. J. Rodocanachi, and E. W. M. Westcott (equal); Junior Class (Fellowes Silver Medal): C. Bolton. Clinical Dental Surgery (Silver Medals): C. C. Clarkson and A. Dimsey (equal).

Westminster Hospital Medical School.—Entrance Scholarships (October): G. E. Cope (£60) and S. Dodd (£40). Oxford and Cambridge Entrance Scholarship: F. R. King (£40). Entrance Scholarship (May): G. H. Auchmuty (£40). Treasurer's Prize for First Winter Subjects (prize): Lewis Cook (10 guineas). President's Prize for Second Winter Subjects (prize): E. B. Sherlock (20 guineas). Class Prize Medicine: R. H. F. Towne and F. Riley (equal). Class Prize Surgery: F. Riley. Clinical Surgery: R. H. F. Towne. Clinical Medicine: G. F. S. Genge. Bird Prize and Medal: R. H. Norman (£14). Chadwick Prize: A. J. Smith (£21). Physics: F. W. W. Dawson. Practical Chemistry: G. E. Cope. Histology: W. A. Durance. Pathology: A. E. Jerman.

London School of Medicine for Women. — Physiology (prize): Miss Leete. Biology (prize): Hon. Ella Scarlett. Anatomy first year (prize): Miss Clapham. Anatomy, second year (prize): Miss Hawker. Organic Chemistry, 1893-4 (prize): Miss Garrett Anderson. Organic Chemistry, 1894-95 (prize) Miss Hawker. Medicine (prize): Miss Despard. Surgery (prize): Miss Hull. Operative Midwifery (Prize of £5 5*s*. given by Mr. Wood): Miss E. G. Adams. Summer Session, 1895.—Materia Medica (prize) Miss Carr and Miss Sharman (equal). Practical Organic Chemistry (prize) Miss Iles. Practical Histology (prize): Miss Castledine. Pathology (prize) Miss Mabel Webb. Forensic Medicine (prize): Miss Hull.

The London School of Dental Surgery.—Saunders Scholar, W. H. Pidgeon; Ashs' Prize, F. J. Padgett. Winter Session, 1894-95.—Dental Mechanics: First Prize, W. H. Pidgeon; Second Prize, H. K. Jeffes. Metallurgy: First Prize, G. Fisher; Second Prize, H. K. Jeffes. Operative Dental Surgery: First Prize, W. H. Pidgeon; Second Prize, W. Marston. Summer Session, 1895.—Dental Anatomy: First Prize, H. Dunlop. Dental Surgery: First Prize, F. J. Padgett; Second Prize, H. Dunlop. Students' Society Prize: F. J. Padgett and H. W. Turner.

PROFESSOR LIONEL BEALE, F.R.S., F.R.C.P.Lond., proposes to give a lecture on the Foundation of Medical Science, introductory to his part of the course on the Principles and Practice of Medicine, in King's College, London, on Friday, Oct. 4th, at 4 P.M.

THE BRITISH DENTAL ASSOCIATION IN EDINBURGH.

THE annual meeting of the British Dental Association was held in Edinburgh on Aug. 29th, 30th, and 31st. The meetings were held in the University, the necessary rooms being willingly granted for the purpose. There was a large display by various firms of apparatus and materials used in dental work, these being accommodated in the examination hall and in the practical zoology class-room. The exhibits were tastefully displayed and attracted much attention. The proceedings commenced with a meeting of the representative board, which sat beyond its advertised time and thus delayed for some time the general meeting, which was advertised for 10.30 A.M.

In the absence of Mr. C. S. TOMES (London), the President of the Association, the chair was occupied by Mr. J. SMITH TURNER (London), vice-president. He referred to the family bereavement which had prevented Mr. Tomes from being present, and read a short valedictory address which Mr. Tomes had prepared. He (Mr. Tomes) thought that during the past year a little real progress had been made in many directions. In the administration of the Dentists Act they had succeeded in prosecutions which had broken fresh ground, and so had crippled fresh forms of evasion which had hitherto been untouched. One form of attempt to evade the Act was for the intending offender to constitute himself into a bogus or "one-man" company. A departmental committee was appointed by the Board of Trade to inquire into and suggest amendments to the existing Companies Act, and this committee had been so far influenced by the facts laid before it by various bodies that they introduced into their draft Bill a clause which, if it became law, as it probably would, would enable complainers to have any company formed for a fraudulent or illegal purpose compulsorily wound up, and the Court might in such a case declare the liability of any or all of the members to be unlimited. With reference to the additions to the literature of the profession, Mr. Hopewell Smith's "Handbook of Dental Histology" was commended as a book which every dentist should have beside him. He also referred to papers by Dr. Black of Jacksonville, in which he had determined the force exerted in ordinary mastication, and had shown that that exercised by an artificial denture fell far short of that exercised by a patient's own teeth. He also referred to Dr. Black's amalgam experiments.

After the reading of this the Chairman introduced the new President, Mr. W. BOWMAN MACLEOD, of Edinburgh, who was very heartily received. He referred in appreciative terms to the late Sir John Tomes, whose loss the Association had recently to lament. He also acknowledged and thanked the University authorities for the readiness with which they had placed at their disposal whatever accommodation was required for the meeting. He then touched upon historical points connected with the University and interesting to their profession. The University had been established in the reign of James VI. of Scotland who became James I. of England, and he quoted evidence to show that that pedantic monarch was sufficiently interested in dentistry to have himself drawn several teeth. He traced the relation between the University and the city authorities, who had cared for and fostered the town's college and protected it through many perilous years. Referring to the influence Goodsir had in developing the University as a teacher of anatomy, he mentioned that Goodsir had served his time to Nasmyth, the father of Scottish dentistry, and that probably much of his success was due to the training he had received as an apprentice. He dwelt upon the advances made in surgery during the past half century, and on those also which had been made in their own profession. One of the principal factors towards the betterment of their profession had been the establishment of dental hospitals, in which the youth of their profession were being educated in the possibilities of conservative dentistry, and in which the public were being taught that by a little timely attention many an errant tooth could be restored to health and usefulness. Their hospitals were good, but he complained of the meagre assistance they got from the wealthy and well-to-do. Good as their hospitals were, they would never be what they might and ought to be until they could support a chair

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in clinical dental surgery. Other divisions of study had claims for considerations, and chairs for these would come in time, but this one had, to his mind, the most urgent claims and should be the primary object of their efforts in shaping the immediate future of their educational institutions. The occupant of such a chair would require to be a man of experience, who would devote much of his time to teaching and superintending the work, and one whose knowledge and experience would give authority to his instruction and directions. The great want was the lack of money. He considered the possible channels by which they might get money. Money out of Imperial funds could not be relied upon, although he was not without hope that help might be given to them some day from that quarter. They had mainly to look to themselves and to the ever-increasing class of wealthy persons who were looking for channels into which they could direct surplus wealth where it would be utilised for the amelioration of distress. That they had so little encouragement in the past from this source was because they were young. Other and older institutions had claimed attention. Here was something to interest themselves in, a fresh development to stimulate them to renewed and increased energy, a fresh and additional plea to place before those who had helped in the past, and a stronger and broader claim to urge on those from whom they would seek assistance in the future.

On the motion of Mr. NEALE (Birmingham), seconded in humorous terms by Dr. CAMPBELL (Dundee), a vote of thanks was very heartily accorded Mr. Macleod for his address. At this stage Principal Sir WILLIAM MUIR entered, and in a few suitable words welcomed the Association to the University and commented on the importance of the dental profession.

The TREASURER'S report showed a satisfactory state of the funds and a considerable sum on hand and on deposit receipt.

The SECRETARY'S report dealt with a variety of legal cases. The object of prosecutions was not so much the expectation of arresting the evil of illegitimate practice, but rather to establish the meaning of the Act of Parliament and thereby to gather experience and power to grapple with the evil in a more extensive and efficient way at a not distant future. The question of "covering" was referred to as a fruitful source of imposition and injury to the general public. The question of direct representation on the General Medical Council had also received attention, but the progress had not realised the expectations of the more sanguine. Their claim was still before the Privy Council. The committee for the collective investigation of the teeth of school children was still at work, and though working in silence it would tend more to forward the Association's reputation in public estimation than perhaps any other influence at their disposal.

It was intimated that the next meeting was to be held in London in 1896, and that Mr. FREDERICK CANTON, L.R.C.P. Lond., was the President-elect.

In the microscopical section Mr. MUMMERY (London) delivered an address on the Progress of Microscopy in Dentistry.

In the report on school children's teeth it was stated that 700 children had been reported on during the year, bringing the total number examined up to 11,422. The investigations showed that teeth inevitably decayed as age advanced, and that the teeth of the children of the wealthy classes seemed more prone to decay than those of poor charity children.

Dr. FREDERICK HEWITT (London) read a paper in the afternoon entitled, "An Inquiry into the Safety and Sphere of Applicability of Chloroform as an Anæsthetic in Dental Surgery." He had endeavoured to obtain particulars of every fatality which had occurred in the British Isles during the past fifteen years. Although deaths from all general anæsthetics were included, a special analysis was made of chloroform fatalities. These constituted a very large proportion of the total number, and were so numerous that it was contended the time had come for the expression of some authoritative statement as to the proper sphere of applicability of chloroform in dental surgery. While admitting the value of chloroform in general surgery, dental operations differed widely from major surgical operations in that the general circumstances under which they took place were not nearly so favourable so far as the anæsthetic was concerned. It was, therefore, clear that there was special need in dental surgery for the employment of anæsthetics with a wide margin of safety—a quality with which chloroform was certainly not endowed. He contended that, with such an alarming death-rate from chloroform in this branch of practice, this anæsthetic should only be used under very exceptional circumstances, and that ether—an equally satisfactory agent when properly administered—should be chosen when the operation was such that nitrous oxide was inadmissible. He maintained that it was the duty of everyone who was called upon to administer an anæsthetic for a dental operation to employ that one which was least likely to destroy life. For short operations nitrous oxide should be selected, for longer ones ether, and chloroform should only be chosen for exceptional cases. The number of deaths during the period referred to was 37. Of these, 14 occurred in Scotland, 21 in England and Wales, and 2 in London. The discussion of this paper was postponed until the following day, but it may be referred to here.

Dr. D. WALLACE opened the discussion. He said that with regard to the deaths it was to be remembered that they did not know how often the various anæsthetics had been used, and he was inclined to think that probably chloroform was most used. In the Dental Hospital in Edinburgh he understood that within recent years probably over 300 cases had been chloroformed and no accident had occurred. Taken all over it seemed to be granted that ether was safer than chloroform, also he held that maladministration was much less probable with ether than with chloroform, as the former was given by special anæsthetists as a rule, while chloroform was given by all and sundry. He condemned operating during light anæsthesia. He also considered chloroform more convenient than ether. As to the causes of accidents from chloroform, he thought that even such discussions as they were engaged in tended to engender a feeling of terror about chloroform and they were led into the risk of giving too little. He followed Syme and Simpson in giving it and in attending to the respiration only. He disapproved of feeling the pulse, as the pulse became feeble if the patient became sick, and sickness was an indication to push the anæsthetic. His two points were that the patient should be recumbent, and that nothing should interfere with free respiration.—Mr. COLYER argued in favour of nitrous oxide gas and said that other anæsthetics were very seldom necessary.—Dr. WILLIAMSON (Aberdeen) pointed out that the medical men recommended chloroform in Scotland.—Dr. HEWITT, in reply, insisted that if it were shown that ether was safer than chloroform it was their duty to use it, and the medical men ought to be educated in the administration of it.

Mr. ROBBINS (London) read a practical paper on the Use of Amalgams in Everyday Practice, in which he strongly advocated their utility.

Mr. HERN (London) read a paper on Oral Hygiene, in which he referred to the care of the teeth.

Mr. G. CUNNINGHAM (Cambridge) made a communication entitled "What the Dentist can do for the State," in which he pointed out the importance of attending to the teeth, and how this point was entirely neglected, and suggested that there should be State dental officers.

Various interesting and instructive demonstrations were given, the most interesting of which was, perhaps, that by Mr. FRASER (Inverness) in which he used the electric mallet, and showed the method of adjusting a Logan crown to a front tooth. Methods of taking casts and the uses of electricity in dentistry were demonstrated.

The scientific part of the meeting was satisfactory and successful, and the weather was fairly propitious for social functions and sight-seeing. On the evening of the opening day the Lord Provost and magistrates gave a reception. On Aug. 30th the annual dinner was held, and Mrs. Bowman Macleod gave a successful and pleasant reception in the evening. On Aug. 31st there was an excursion to Loch Lomond, and the last general meeting was held in the Tarbet Hotel.

THE CASE OF MR. R. B. ANDERSON.

THE Civil Rights' Defence Committee, 3, Mitre-court, Temple, E.C., is making active endeavours to obtain some redress for Mr. Anderson, and in furtherance of this object a deputation, headed by the Right Hon. the Earl of Stamford, had an interview with several members of Parliament on Aug. 29th in the Conference Room of the House of Commons. Earl Stamford, after a review of the whole case,

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an account of which recently appeared in our columns,[1] explained that the illegal judgments and orders of the colonial courts are still in force against Mr. Anderson, and that he is anxious to appeal to the Privy Council to have them cancelled, but has hitherto been prevented by lack of funds. General Graham, following Earl Stamford, stated that the colonial judges, among other illegal acts, incited and permitted speculative and fraudulent suits to be brought *in formâ pauperis* against Mr. Anderson, the plaintiffs not being paupers, and the affidavits of poverty and of the facts required by law being systematically dispensed with, contrary to the provisions of the Bill of Rights. In these suits Mr. Anderson was illegally denied his right to give evidence, he was deprived of his lawful professional charges, and penal damages were inflicted on him for lawfully exercising his right of retiring from a medical case and for lawfully recovering possession of his freehold land. To enforce these judgments he was illegally committed to prison and refused the writ of habeas corpus, excessive bail was illegally exacted (£1000 in civil claims of £42), and judgment in his appeals against these orders was withheld for three and a half months in order to keep him under restraint. Finally, having come to England and gained an action against the colonial judges, he was deprived of damages on the ground that no action could lie against a judge for acts done in his judicial capacity. The deputation urged that if this be the state of the law then it is essential in the interest of individual rights and liberties that some remedy for such abuses and some redress for such wrongs should be devised.

Messrs. Benjamin L. Cohen, M.P., H. Dalziel, M.P., W. Jones, M.P., J. Herbert Lewis, M.P., and Reginald McKenna, M.P., having assured the deputation of their sympathy and their intention to give the matter the utmost consideration, it was arranged that a second conference should be held at an early date. Dr. Ward Cousins (Southsea) then spoke at some length on the bearings of the case in relation to the medical profession, and the proceedings terminated.

A VISIT TO PROFESSOR KITASATO'S INSTITUTE FOR INFECTIOUS DISEASES.

BY J. M. ATKINSON, M.B. LOND., M.R.C.S. ENG., L.S.A.,
COLONIAL SURGEON, HONG-KONG.

ON July 28th I visited this institution and was shown round by Professor Kitasato, Dr. Nakagawa, a Japanese gentleman who is a graduate in medicine of New York University, acting as interpreter. Professor Kitasato, although having an intimate knowledge of German, does not speak English. We first proceeded to the laboratory, and I was shown the following specimens: (1) tubercle bacilli; (2) plasmodium malariæ; (3) pneumococcus (Fränkel's); (4) Löffler's bacillus; (5) tetanus bacillus; (6) bacillus anthracis; (7) plague bacillus; (8) lepra bacillus; (9) typhus fever (enteric fever) bacillus; (10) cholera bacillus; and (11) gonococcus. Professor Kitasato's method of obtaining the plasmodium malariæ is first to fix the specimen with a 1 per cent. solution of corrosive sublimate, afterwards staining with a saturated solution of eosin in absolute alcohol and then with Löffler's solution of methylene blue. With reference to diphtheria I had a long conversation with Professor Kitasato. He has succeeded in obtaining an antitoxin much stronger than any yet used. To show this 9 c.c. of his serum are all that he injects to cure a case of diphtheria; with Roux's serum, on the other hand, it is necessary to use as much as 100 c.c. He can obtain this from the blood of a horse, but prefers that of a sheep. I was shown large pieces of diphtheritic membrane which had been coughed up by patients who had been injected with this antitoxin. The "tetanus bacillus" was a beautiful specimen and is shaped somewhat like a clove, the head being the spore, and is stained red with carbolised fuchsine, the body of the bacillus being stained blue. The sixth specimen showed the spore formation very well, the spores being, as in the previous case, stained with fuchsine and the bacilli with methylene blue. The plague bacilli are very distinctive and are exactly similar to those which were obtained this year from the few plague cases which have occurred in Hong-kong. They are of an oval shape, presenting two deeply stained poles with a clear non-stained interval between them. The simplest way to obtain the plague bacilli is to take some of the juice from one of the affected lymphatic glands, smear it on a cover-glass, and, after fixing, stain with eosin or methyl blue. Bacilli are found to be present in great numbers; they are almost identical in appearance with those of chicken cholera. The bacillus of enteric fever, which was quite new to me, presents a deeply stained body with a number of fine filamentous processes passing off from it; none of these are branched. The specimen was from a culture obtained from the fæces in a typhoid fever case. After this I was taken round the menagerie, where there was a large number of animals—guinea-pigs, dogs, rabbits, mice, monkeys, &c.—for the purposes of inoculation, investigation, &c., and finally I visited the wards. In one room there were two patients convalescent from diphtheria who had been injected with Professor Kitasato's antitoxin; in another ward he showed me a case of leprosy in which the tubercles were disappearing under the influence of an antitoxin which he is now investigating. In another ward there was a child with traumatic tetanus; this case was also on a fair road to recovery, the seizures being much less since the injection of a tetanus antitoxin and the temperature having fallen after each injection. There were also some twelve cases of phthisis. Just off the wards there was a Lyons steam disinfector. The laboratory was furnished with every requisite, and one could not but be convinced that here, in the middle of Tokio, some excellent scientific research is being carried on by Professor Kitasato and his assistants.

[1] THE LANCET, Aug. 31st, 1895

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bristol Urban Sanitary Authority.—The population of Bristol proper was estimated to the middle of 1894 as 226,578; it is, however, well to note that the city itself is practically continuous on two of its sides with other urban districts containing an aggregate population of 59,509, so that in reality the population of which Bristol forms the centre amounts to nearly 300,000. It is obviously important to have regard to this consideration in estimating the value of Bristol's death-rates &c. The population of Bristol had up to the time of the result of the 1891 Census been known to be considerably over-rated, the over-estimation having been in 1891 no less than 10,199. The corrected general death-rate of Bristol for 1894 was 17·92 per 1000, the lowest yet recorded for the city; the infantile mortality for the same period was 148·3 per 1000 births. In commenting upon diphtheria Dr. D. S. Davies observes that the tendency of this disease to increase in the large urban districts of England and Wales is now unhappily shown in Bristol, although the death-rate for this district is found still to compare favourably with that of the thirty-three great towns. With regard to phthisis Dr. Davies considers that hospital isolation as is practised in other infectious diseases is not possible in this, but he thinks that good results would accrue from its notification. Bristol seems to be in a fair way to provide itself with satisfactory isolation accommodation, the urban sanitary authority having procured sites for the separate isolation of small-pox and other infectious diseases. The relations of Bristol to the surrounding urban sanitary districts already referred to would seem to indicate some joint hospital scheme as the most economical.

Huddersfield Urban Sanitary Authority.—Dr. J. R. Kaye reports that for the third year in succession the general death-rate of Huddersfield has been the lowest on record since the incorporation of the borough, the rate for 1894 being 15·9 per 1000 of the population. These gratifying results are, Dr. Kaye remarks, "largely the reward of wise sanitary work, but corporate action is not limitless and much may be ascribed to favourable atmospheric conditions." The birth-rate of the district was for 1894 but 20·25 per 1000, there having been a very marked decline in this respect since 1878, when the birth-rate was 35 per 1000. Among the thirty-three large towns the nearest approach during 1894 to the birth-rate of Huddersfield was that of Halifax, 23·1

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per 1000 births. In connexion with the low birth-rate of Huddersfield Dr. Kaye points out in his report that its ultimate effect will be to produce an age distribution of the population favourable to an increased death-rate. The infantile mortality of Huddersfield for 1894 was 160 per 1000 births, as against one of 152 for the thirty-three large towns. The subject of providing a proper fever hospital for Huddersfield has, Dr. Kaye tells us, been "driven from pillar to post" for the last decade, but there is, it seems, a fair prospect of a suitable building being shortly erected. In connexion with the subject of food-supply Dr. Kaye points out—and it is certainly a very important consideration—that, although since the erection of the abattoir a large amount of the meat sold in the borough is supervised, the sale of carcases brought from other towns is on the increase; and he observes that these difficulties point to a national system of inspection of all animals intended for human consumption. Unfortunately, in the case of England—dependent as it is, in large part at least, upon foreign meat—the inspection of home-raised cattle would form but a small part of the supervision necessary, and the introduction of foreign carcases from abroad presents a further difficulty. If the result of a rigid inspection of home produce is to increase foreign importation, the advantages from the standpoint of public health are not altogether obvious. As regards the smoke nuisance in Huddersfield, Dr. Kaye reports that the recent bad trade and a poor quality of coals have tended to increase it. A complete survey of the principal streams in Huddersfield has recently been made, and the pollutions discovered are to be immediately rectified on the completion of a new sewer. The conditions of the rivers Holme and Colne are now receiving the attention of the Rivers Board, and Dr. Kaye expresses a hope that some improvement will soon result. At the present time, he states, the condition of these two rivers as they enter Huddersfield is filthier than when they leave it. If this is so the corporation of Huddersfield will have much to gain and nothing to lose by supporting the action of the Rivers Board.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6321 births and 4042 deaths were registered during the week ending Aug. 31st. The annual rate of mortality in these towns, which had been 19·1 and 19·9 per 1000 in the two preceding weeks, was again 19·9 during the week ending Aug. 31st. In London the rate was 15·9 per 1000, while it averaged 22·8 in the thirty-two large provincial towns. The lowest rates in these towns were 14·2 in Bristol, 15·0 in Halifax, 15·9 in London and in West Ham, and 16·1 in Leicester; the highest rates were 31·0 in Sunderland, 31·3 in Hull, 34·1 in Bolton, and 35·6 in Burnley. The 4042 deaths included 1071 which were referred to the principal zymotic diseases, against 929 and 977 in the two preceding weeks; of these, 762 resulted from diarrhœa, 99 from measles, 65 from whooping-cough, 56 from diphtheria, 43 from scarlet fever, 40 from "fever" (principally enteric), and 6 from small-pox. In the large towns these diseases caused the lowest death-rates in Swansea, Plymouth, Bristol, Croydon, London, and Huddersfield; and the highest rates in Blackburn, Hull, Sunderland, Bolton, and Burnley. The greatest mortality from measles occurred in West Ham and in Blackburn; from whooping-cough in Bradford; and from diarrhœa in Blackburn, Norwich, Sunderland, Hull, Bolton, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 56 deaths from diphtheria included 40 in London, 4 in Birmingham, and 3 in Liverpool. Four deaths from small-pox were registered in London, 1 in Oldham, and 1 in Preston, but not one in any other of the thirty-three towns. There were 341 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday, Aug. 31st, against 273, 336, and 357 at the end of the three preceding weeks; 36 new cases were admitted during the week, against 54, 79, and 65 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of August was 2512, against 2511, 2529, and 2507 on the three preceding Saturdays; 264 new cases were admitted during the week, against 276, 357, and 307 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 137 and 170 in the two preceding weeks, declined again to 102 during the week ending the 31st ult., and were 51 below the corrected average. The causes of 44, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Portsmouth, Newcastle, Bradford, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Salford, Blackburn, and Sheffield.

In thirty-three of the largest towns 6329 births and 4050 deaths were registered during the week ending Sept. 7th. The annual rate of mortality in these towns, which had been 19·9 per 1000 in each of the two preceding weeks, was again 19·9 last week. In London the rate was 16·1 per 1000, while it averaged 22·6 in the thirty-two provincial towns. The lowest rates in these towns were 11·1 in Plymouth, 12·4 in Swansea, 12·5 in West Ham, 13·2 in Croydon, and 15·3 in Bristol; the highest rates were 33·8 in Preston, 34·7 in Blackburn, 35·6 in Hull, 37·1 in Wolverhampton, and 40·5 in Sunderland. The 4050 deaths included 1071 which were referred to the principal zymotic diseases, against 977 and 1071 in the two preceding weeks; of these, 775 resulted from diarrhœa, 75 from measles, 66 from whooping-cough, 62 from diphtheria, 49 from "fever" (principally enteric), 37 from scarlet fever, and 7 from small-pox. These diseases caused the lowest death-rates in Plymouth, Bristol, Swansea, and Croydon, and the highest rates in Burnley, Wolverhampton, Blackburn, Sunderland, and Hull. The greatest mortality from measles occurred in West Ham, Salford, and Blackburn; from whooping-cough in Wolverhampton, Bolton, Bradford, and Gateshead; from "fever" in Sunderland; and from diarrhœa in Wolverhampton, Blackburn, Burnley, Sunderland, Preston, and Hull. The mortality from scarlet fever showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 38 in London, 4 in Birmingham, 4 in Leeds, and 3 each in Wolverhampton, Birmingham, and Liverpool. Five fatal cases of small-pox were registered in London, one in Manchester, and one in Oldham, but not one in any other of the thirty-three towns. There were 328 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 7th inst., against 336, 342, and 340 at the end of the three preceding weeks; 25 new cases were admitted during the week, against 79, 65, and 36 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2600, against 2529, 2507, and 2512 on the three preceding Saturdays; 336 new cases were admitted during the week, against 357, 306, and 264 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 170 and 102 in the two preceding week, rose again to 134 last week, but were 21 below the corrected average. The causes of 47, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leicester, Nottingham, Bradford, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Bristol, Wolverhampton, and Birmingham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·6 in each of the two preceding weeks, rose to 17·3 during the week ending Aug. 31st, and was 2·6 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·8 in Paisley, 15·6 in Edinburgh, and 15·7 in Leith to 18·2 in Dundee and 24·0 in Perth. The 499 deaths in these towns included 78 which were referred to diarrhœa, 12 to whooping-cough, 10 to "fever," 8 to scarlet fever, 5 to measles, 5 to diphtheria, and not one to small-pox. In all, 118 deaths resulted from these principal zymotic diseases, against 99 and 83 in the two preceding weeks. These 118 deaths were equal to an annual rate of 4·1 per 1000, which was 1·2 below the mean rate during the same period from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 68 to 42 in the three preceding weeks, increased again to 78, of which 34 occurred in Glasgow, 15 in Dundee, and 12 in Edinburgh. The

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deaths referred to whooping-cough, which had been 17, 15, and 24 in the three preceding weeks, fell again to 12, and included 7 in Glasgow and 3 in Aberdeen. The fatal cases of "fever," which had been 6 in each of the two preceding weeks, rose to 10, and of these 8 occurred in Glasgow. The deaths from scarlet fever, which had increased from 3 to 8 in the four preceding weeks, were again 8, of which 3 occurred in Glasgow, 3 in Leith, and 2 in Edinburgh. The fatal cases of measles, which had declined from 8 to 2 in the three preceding weeks, rose again to 5, and included 3 in Glasgow. The deaths from diphtheria, which had been 4 and 1 in the two preceding weeks, rose again to 5, of which 2 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 57 and 55 in the two preceding weeks, were 54 during the week under notice, and were within one of the number in the corresponding week of last year. The causes of 16, or more than 3 per cent., of the deaths in these eight towns were not certified.

The annual rate of mortality in the eight Scotch towns, which had been 16·6 and 17·3 per 1000 in the two preceding weeks, further rose to 17·5 during the week ending Sept. 7th, but was 2·4 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·6 in Dundee and 16·7 in Dundee to 20·6 in Leith and in Perth, and 23·5 in Greenock. The 504 deaths in these towns included 74 which were referred to diarrhœa, 15 to whooping-cough, 8 to scarlet fever, 4 to "fever," 2 to measles, 2 to diphtheria, and not one to small-pox. In all, 105 deaths resulted from these principal zymotic diseases, against 83 and 118 in the two preceding weeks. These 105 deaths were equal to an annual rate of 3·6 per 1000, which was 1·8 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 42 and 78 in the two preceding weeks, were 74 last week, of which 26 occurred in Glasgow, 22 in Edinburgh, and 14 in Dundee. The deaths referred to whooping-cough, which had been 15, 24, and 12 in the three preceding weeks, rose again to 15 last week, and included 7 in Glasgow and 3 in Dundee. The 8 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 4 in Glasgow and 2 in Leith. The deaths referred to different forms of "fever," which had been 6 and 10 in the two preceding weeks, declined to 4 last week, of which 2 occurred in Glasgow. The 2 fatal cases of diphtheria were recorded in Edinburgh and the 2 deaths from measles in Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 55 and 54 in the two preceding weeks, were 56 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 33, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·0 and 29·0 in the two preceding weeks, rose again to 23·6 during the week ending Aug. 31st. During the first nine weeks of the current quarter the death-rate in the city averaged 23·4 per 1000, the rate during the same period being 19·6 in London and 16·4 in Edinburgh. The 158 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the preceding week, and included 20 which were referred to the principal zymotic diseases, against 21 and 11 in the two preceding weeks; of these, 12 resulted from diarrhœa, 5 from "fever," 3 from whooping-cough, and not one from small-pox, measles, scarlet fever, or diphtheria. These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 3·3 in London and 3·0 in Edinburgh. The fatal cases of diarrhœa, which had decreased from 23 to 9 in the three preceding weeks, rose again to 12 during the week under notice. The mortality from "fever" and from whooping-cough showed an increase. The 158 deaths in Dublin included 35 of infants under one year of age, and 39 of persons aged upwards of sixty years, the deaths both of infants and of elderly persons showing an increase. Six inquests were held and 5 deaths from violence were registered; and 43, or more than one-fourth, of the deaths occurred in public institutions. The causes of 20, or nearly 13 per cent., of the deaths in the city last week were not certified.

The death-rate in Dublin, which had been 20·9 and 23·6 per 1000 in the two preceding weeks, declined again to 22·2 during the week ending Sept. 7th. During the past ten weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the rate during the same period being 19·2 in London and 16·5 in Edinburgh. The 149 deaths registered in Dublin during the week under notice showed a decline of 9 from the number in the preceding week, and and included 13 which were referred to the principal zymotic diseases, against 11 and 20 in the two preceding weeks; of these, 8 resulted from diarrhœa, 2 from whooping-cough, 1 from scarlet fever, 1 from diphtheria, 1 from "fever," and not one either from small-pox or measles. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 3·2 in London and 5·1 in Edinburgh. The fatal cases of diarrhœa, which had been 9 and 12 in the two preceding weeks, declined again to 8 last week. The mortality from whooping-cough and from "fever" showed a decline from that recorded in the preceding week. The 149 deaths in Dublin last week included 31 of infants under one year of age and 28 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. Six inquest cases and 6 deaths from violence were registered; and 40, or more than a fourth, of the deaths occurred in public institutions. The causes of 10, or nearly 7 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING AUGUST, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during August in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9·9 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 6·8, 8·4, and 11·6 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, Westminster, Hampstead, St. Martin-in-the-Fields, St. Olave Southwark, Lewisham, and Lee; while they showed the largest excess in Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and St. Saviour Southwark. The prevalence of small-pox in London showed a further increase in August, 231 cases being notified during the month, including 37 in Bethnal Green, 28 in Whitechapel, 22 in Camberwell, 21 in Mile End Old Town, 11 in St. George-in-the-East, and 11 in St. George Southwark sanitary areas. The Metropolitan Asylum Hospitals contained 331 small-pox patients at the end of August, against 20, 33, and 232 at the end of the three preceding months; the weekly admissions averaged 57, against 5, 10, and 49 in the three preceding months. The prevalence of scarlet fever in London showed a slight decline during August; this disease was proportionally most prevalent in Strand, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and St. Saviour Southwark sanitary areas. The Metropolitan Asylum Hospitals contained 2435 scarlet fever patients at the end of August, against 1481, 1845, and 2340 at the end of the three preceding months; the weekly admissions averaged 292, against 167, 229, and 263 in the three preceding months. The prevalence of diphtheria in London showed a marked decline during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, and Greenwich. There were 666 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of August, against 508, 633, and 680 at the end of the three preceding months; the weekly admissions averaged 80, against 81, 109, and 103 in the three preceding months. The prevalence of enteric fever in London showed a marked increase during August; this disease was proportionally most prevalent in Kensington, Fulham, City of London, St. George-in-the-East, Limehouse, Mile End Old Town, Camberwell, and Woolwich sanitary areas. Erysipelas was proportionally most prevalent in Kensington, Holborn, Shoreditch, Bethnal Green, Whitechapel, and St. George-in-the-East sanitary areas. The 23 cases of puerperal fever notified during August included 3 in Hackney and 3 in Greenwich sanitary areas.

The mortality statistics in the accompanying table relate

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—AUGUST, 1895.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,392,346	231	1605	802	1	262	5	23	403	6	3338	9·9	14	243	84	167	73	1	42	1	613	1237	3·7	5687	16·9	189
West Districts.																										
Paddington	122,756	2	37	17	—	1	—	2	9	—	68	7·2	—	—	1	9	3	—	—	—	11	24	2·5	137	14·6	195
Kensington	167,671	2	21	29	—	12	1	1	26	—	92	7·2	—	2	1	6	2	—	2	—	17	30	2·3	163	12·7	150
Hammersmith	108,429	1	29	10	—	7	—	—	11	—	58	7·0	—	2	3	2	1	—	2	—	16	26	3·1	122	14·7	216
Fulham	117,745	—	22	22	—	9	1	—	6	—	60	6·8	—	8	—	2	4	—	1	—	27	42	4·7	153	16·9	246
Chelsea	99,930	1	41	17	—	2	—	1	10	—	72	9·4	—	1	3	1	1	—	—	—	14	20	2·6	128	16·7	251
St. George Hanover-square	74,037	1	12	1	—	1	—	—	5	—	20	3·5	—	—	1	—	1	—	—	—	5	7	1·2	63	11·1	138
Westminster	54,003	—	9	4	—	1	—	—	1	—	15	3·6	—	4	—	—	1	—	—	—	7	12	2·9	84	20·3	186
St. James Westminster	23,149	—	6	5	—	1	—	—	—	—	12	6·8	—	1	—	—	—	—	1	—	1	3	1·7	21	11·8	48
North Districts.																										
Marylebone	137,392	4	36	18	—	10	1	1	10	—	80	7·6	—	2	—	3	2	—	3	—	18	28	2·7	173	16·4	150
Hampstead	77,592	1	8	9	—	4	—	—	4	—	26	4·4	—	—	—	1	—	—	—	—	8	9	1·5	60	10·1	193
St. Pancras	233,543	3	96	29	—	8	—	1	26	—	163	9·1	—	21	3	10	2	—	1	—	38	75	4·2	311	17·4	195
Islington	336,929	3	125	34	—	10	—	2	22	—	196	7·6	—	14	5	14	5	—	3	—	26	67	2·6	353	13·7	134
Stoke Newington	35,234	—	12	4	—	—	—	1	2	—	19	7·0	—	—	—	1	—	—	—	—	2	3	1·1	28	10·4	134
Hackney	216,623	4	80	19	1	12	—	3	15	—	134	8·1	—	12	1	2	3	1	3	—	34	56	3·4	249	15·1	195
Central Districts.																										
St. Giles	37,654	3	18	4	—	3	—	—	4	—	32	11·1	1	1	1	1	—	—	1	—	4	9	3·1	39	13·5	106
St. Martin-in-the-Fields	13,536	—	2	—	—	—	—	—	—	—	2	1·9	1	—	—	—	—	—	—	—	—	1	1·0	13	12·5	200
Strand	22,586	—	17	2	—	2	—	—	1	—	22	12·7	—	—	2	—	—	—	1	—	—	3	1·7	37	21·4	278
Holborn	32,188	7	13	5	—	3	—	—	5	—	33	13·4	—	6	—	—	—	—	—	—	4	10	4·0	63	26·5	365
Clerkenwell	66,036	6	25	8	—	4	1	1	8	—	53	10·6	—	7	2	1	2	—	—	—	8	20	4·0	94	18·8	180
St. Luke	40,763	1	13	8	—	1	—	1	5	—	29	9·3	—	18	—	—	—	—	1	—	10	29	9·3	92	29·4	222
City of London	33,824	—	9	5	—	6	—	—	2	—	22	8·5	—	1	1	—	—	—	1	—	2	5	1·9	45	17·3	261
East Districts.																										
Shoreditch	122,932	6	51	21	—	11	1	—	16	—	106	11·2	1	10	5	8	1	—	2	—	16	43	4·6	171	18·1	185
Bethnal Green	130,061	37	87	39	—	13	—	2	19	—	197	19·7	2	10	3	11	2	—	1	—	15	44	4·4	199	19·9	167
Whitechapel	75,820	28	65	28	—	2	—	—	10	—	133	22·9	3	13	1	10	2	—	—	—	7	36	6·2	149	25·6	195
St. George-in-the-East	45,227	11	28	31	—	5	—	—	8	—	83	23·9	—	10	3	8	—	—	1	—	13	35	10·1	108	31·1	250
Limehouse	56,385	4	44	15	—	7	—	—	2	—	72	16·5	—	8	6	3	3	—	1	—	7	28	6·4	127	28·7	289
Mile End Old Town	108,443	21	85	43	—	10	—	—	13	—	172	20·7	1	18	5	11	4	—	—	—	19	58	7·0	183	22·0	163
Poplar	171,230	8	95	69	—	12	—	—	17	—	201	15·3	1	15	8	18	7	—	2	—	30	81	6·2	250	19·0	197
South Districts.																										
St. Saviour Southwark	26,570	3	19	4	—	1	—	—	1	—	28	13·7	—	2	—	—	—	—	—	—	6	8	3·9	58	28·5	328
St. George Southwark	60,168	11	16	10	—	1	—	1	3	—	42	9·1	—	4	3	1	2	—	1	—	9	20	4·3	95	20·6	194
Newington	119,358	4	26	27	—	9	—	1	11	—	78	8·5	1	7	1	5	2	—	—	—	21	37	4·0	159	17·4	192
St. Olave Southwark	13,065	—	3	1	—	—	—	—	—	—	4	4·0	—	2	—	—	—	—	—	—	5	7	7·0	28	28·0	481
Bermondsey	83,861	2	40	7	—	2	—	—	10	—	61	9·5	—	9	3	1	3	—	1	—	12	29	4·5	108	16·8	132
Rotherhithe	40,713	8	11	10	—	3	—	—	4	3	39	12·5	—	2	—	2	1	—	1	—	12	18	5·8	54	17·3	162
Lambeth	284,883	9	117	59	—	19	—	—	21	2	227	10·4	—	13	4	6	8	—	2	—	45	77	3·5	389	17·8	192
Battersea	165,130	2	57	19	—	5	—	—	22	—	105	8·3	—	7	4	7	1	—	—	—	24	43	3·4	215	17·0	223
Wandsworth	185,956	5	37	19	—	10	—	—	18	1	90	6·3	1	2	1	1	1	—	2	—	19	27	1·9	175	12·3	184
Camberwell	252,737	22	89	77	—	33	—	2	27	—	250	12·9	1	6	5	8	2	—	2	—	36	60	3·1	321	16·6	200
Greenwich	175,183	3	65	58	—	11	—	3	17	—	157	11·7	—	1	6	13	7	—	2	—	29	58	4·3	232	17·3	187
Lewisham (excluding Penge)	82,410	—	7	7	—	3	—	—	5	—	22	3·5	—	2	1	—	—	—	1	—	14	18	2·8	77	12·2	186
Woolwich	42,768	—	7	5	—	6	—	—	1	—	19	5·8	—	—	—	2	—	—	—	—	4	6	1·8	50	15·2	208
Lee	38,832	—	6	1	—	—	—	—	1	—	8	2·7	—	1	—	—	—	—	—	—	1	2	0·7	44	14·8	159
Plumstead	61,494	8	19	2	—	2	—	—	5	—	36	7·6	1	1	1	—	—	—	—	—	17	23	4·9	67	14·2	189
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 35 cases of membranous croup.

† Including deaths from membranous croup.

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to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Aug. 31st, the deaths of 5687 persons belonging to London were registered, equal to an annual rate of 16·9 per 1000 of the population, against 15·9, 14·9, and 21·0 in the three preceding months. The lowest death-rates during August in the various sanitary areas were 10·1 in Hampstead, 10·4 in Stoke Newington, 11·1 in St. George Hanover-square, 11·8 in St. James Westminster, 12·2 in Lewisham (excluding Penge), 12·3 in Wandsworth, and 12·5 in St. Martin-in-the-Fields; the highest rates were 25·5 in Holborn, 25·6 in Whitechapel, 28·0 in St. Olave Southwark, 28·5 in St. Saviour Southwark, 28·7 in Limehouse, 29·4 in St. Luke, and 31·1 in St. George-in-the-East. During the four weeks of August 1237 deaths were referred to the principal zymotic diseases in London; of these, 613 resulted from diarrhœa, 243 from measles, 167 from diphtheria, 84 from scarlet fever, 73 from whooping-cough, 42 from enteric fever, 14 from small-pox, and 1 from typhus. These 1237 deaths were equal to an annual rate of 3·7 per 1000; the lowest zymotic death-rates were recorded in St. George Hanover-square, St. James Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Field, Strand, and Lee; and the highest rates in St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and St. Olave Southwark sanitary areas. Fourteen fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 6; of these 14 fatal cases 3 belonged to Whitechapel and 2 to Bethnal-green sanitary areas. The 243 deaths referred to measles were 91 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Holborn, St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Bermondsey. The 84 fatal cases of scarlet fever almost corresponded with the corrected average number; this disease showed the highest proportional fatality in Strand, St. George-in-the-East, Limehouse, and Mile End Old Town sanitary areas. The 167 deaths referred to diphtheria were 45 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Shoreditch, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, Poplar, and Greenwich. The 73 fatal cases of whooping-cough were little more than half the corrected average number; this disease showed the highest proportional fatality in Limehouse, Poplar, and Greenwich sanitary areas. The 42 deaths referred to enteric fever were within 6 of the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 613 fatal cases of diarrhœa were 102 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, St. Luke, St. George-in-the-East, St. Saviour Southwark, Rotherhithe, and Plumstead. In conclusion, it may be stated that the mortality in London during August from these principal zymotic diseases was very slightly below the average.

Infant mortality in London during August, measured by the proportion of deaths under one year of age to registered births, was equal to 189 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. James Westminster, Islington, Stoke Newington, St. Giles, and Bermondsey; and the highest rates in Strand, Holborn, City of London, Limehouse, St. Saviour Southwark, and St. Olave Southwark.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers have received orders to proceed to India at an early date:—Surgeon-Lieutenant-Colonel Brown, Surgeon-Majors Lane, Coates, Haywood, Peterkin, Rhodes, and O'Keefe, and Surgeon-Captain Durant. Surgeon-Captain Adamson has arrived from Egypt on leave. Brigade-Surgeon-Lieutenant-Colonel Macnamara has assumed Charge of the Station Hospital at Fermoy. Surgeon-Captain M. L. Hearn is ordered to hold himself in readiness to proceed to the Straits Settlements for duty. The following officers have embarked in the *Victoria* for a tour of service in India:—Surgeon-Lieutenant-Colonel Blood, Surgeon-Major Burton, and Surgeon-Lieutenants Pollock, Rivers, Longhurst, Symons, and Buswell. Surgeon-Major Kirkpatrick has been appointed to Winchester. Surgeon-Captain Birch has been invalided from Bombay, and Surgeon-Captain Day has returned to Malta from leave of absence. Surgeon-Major Russell has arrived in England from Gibraltar. Surgeon-Colonel Muir will shortly proceed to India in relief of Surgeon-Colonel Wilson, tour expired.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following admissions to the Indian Medical Service:—To be Surgeon-Lieutenants: *Bengal:* John Stephenson, Frank Needham Windsor, Walter Barrie Turnbull, Ernest Edwin Waters, Asher Leventon, and Philip Francis Chapman. *Madras:* Frederick Linton Blenkinsop, Alfred Moore, Edmund Moritz Illington, Thomas Edgar Watson, and Charles George Webster. *Bombay:* Alfred Hooton, Arthur Frederick William King, Robert Frazer Standage, Andrew Armstrong Gibbs, and Henry Alfred Forbes Knapton. The following appointments are announced:—Surgeon-Captain J. B. Jameson, Officiating Medical Officer, 5th Bombay Cavalry and Officiating Civil Surgeon, Jacobabad, is appointed to officiate as Medical Officer of the 2nd Regiment Central India Horse, and of the Goona Political Agency until further orders. Surgeon-Lieutenant-Colonel J. McConaghy, Civil Surgeon, Lucknow, to hold Charge of the current duties of the office of Inspector-General of Civil Hospitals, North-West Provinces and Oudh, in addition to his other duties, until further orders. Surgeon-Lieutenant-Colonel G. C. Hall, Officiating Inspector-General of Prisons, North-West Provinces and Oudh, on being relieved by Sir John Tyler, to revert to his substantive appointment as Superintendent, Central Prison, Allahabad. Surgeon-Captain H. W. Elphick, Officiating Superintendent, Central Prison, Allahabad, on being relieved by Surgeon-Lieutenant-Colonel G. C. Hall, to be Civil Surgeon, Muzaffarnagar. Brigade-Surgeon-Lieutenant-Colonel B. Franklin, Surgeon to the Viceroy, is appointed to hold Charge of the office of Inspector-General of Civil Hospitals in the Punjab, in addition to his own duties, until further orders. Surgeon-Captain H. J. Dyson, Deputy Sanitary Commissioner in the Punjab, is appointed to be Sanitary Commissioner of Bengal. Surgeon-Colonel A. F. Churchill, A.M.S., is brought on the Administrative Medical Staff of the Army. A good service pension has been conferred on Surgeon-Colonel L. D. Spencer, M.D., in place of Surgeon-Major-General W. R. Rice, M.D., retired. Brigade-Surgeon-Lieutenant-Colonel, A. Barry, M.D., Bombay Establishment, 6th Regiment of Bombay Cavalry (Jacob's Horse), retires from the service.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeons: E. R. Dimsey to the *Sappho;* S. W. Johnson to the *Melita;* E. J. Biden to the *Scout;* Donald T. Hoskyns and Ernest E. Bray to the *Boscawen;* Alex. L. Christie to the *Camperdown;* J. A. McAdam to the *Grafton.* Surgeons: James Mowat to the *Albacore,* and W. R. Knightley to the *Camperdown.*

YEOMANRY CAVALRY.

Royal Wiltshire (Prince of Wales's Own Royal Regiment): Surgeon-Lieutenant G. T. K. Maurice resigns his commission.

VOLUNTEER CORPS.

Artillery: 1st Cheshire and Carnarvonshire: Surgeon-Major W. Bell resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement. 1st Cumberland: James Brown Bird, M.B., to be Surgeon-Lieutenant. *Rifle:* 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Lieutenant T. Johnston resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement. 9th Lanarkshire: Surgeon-Lieutenant C. Symington, M.B., resigns his commission.

THE WAR OFFICE REORGANISATION.

We confess that we are unable to understand the exact nature of the newly proposed scheme of War Office organisation or see how it is to accomplish the end in view or prove workable in practice. So far from clearly defining and fixing responsibility and simplifying matters generally, it seems to us that responsibility and power will be in future dissipated in a multitude of councils, and no one will be able to say in which of these or with whom the responsibility really resides. There is to be, first of all, a Commander-

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in-chief as military head of the army just as there was before and is at the present time, not that this matters much, and it is on the whole desirable, we should say, to retain the title. But there is to be a Board, presided over by the Commander-in-chief, with four military members, who will be directly responsible for their departments to the Secretary of State. Next there is to be a War Office Council, presided over by the Secretary of State, of which the Commander-in-chief and the Under-Secretary and Financial Secretary will be members; to which is added apparently a third council, with specialised but higher functions, to complete the three-storeyed edifice. As regards the Army Board it will either happen that Lord Wolseley as president and military head of the army will practically and in effect constitute the board or be subjected to the risk of opposition and contention on the part of its independent members, who are subordinate to him in military rank, with the option of a direct appeal from any of them to the Secretary of State. There are other points, too, provocative of misgiving or criticism; but it is probable that when Parliament meets again the Government will have thoroughly considered the subject of the scheme as a whole. They will then have had time to weld the machinery together into something like a more perfectly adjusted and self-balanced scheme. We do not see that any place is given, by the way, for any direct representation of the medical service at any board or council.

THE CASE OF SURGEON-MAJOR CLARENCE SMITH AND THE MADRAS GOVERNMENT.

Our readers' attention has been already called to this matter, and there is no need to recapitulate the facts so far as they have been published. It will be remembered, however, that the Secretary of State for India had consented to reconsider the matter, and the Madras Government has consequently offered Surgeon-Major Smith the option of having the case further investigated before a Commission composed of a military officer and an officer of judicial experience, both sides to be allowed counsel and the right to call witnesses, but the Commission was to be neither judicial nor public. Mr. Clegg's letter was to have been read and Surgeon-Major Smith examined on it, as well as upon his memorial and certain private letters. It is understood that Surgeon-Major Smith has declined to accede to these terms. In our opinion this is to be regretted. The course hitherto pursued may have been a wrong one and unfair to the officer concerned; still, the present offer shows that there is a disposition now to get at the truth and to do Surgeon-Major Smith justice, and there is no reason to suppose that the members of the Commission would not be impartial and ready to listen to anything that could be adduced in his favour and to report thereon accordingly. The proposal to Surgeon-Major Smith may not have been of the nature or in the form that he would have preferred, but it nevertheless gave the opportunity of having the matter fully represented and examined from his as well as the Government point of view. According to the *Pioneer Mail* of the 21st ult., just received, we learn that in consequence of a telegram from the Secretary of State Surgeon-Major Smith has consented, under protest, to appear before the Commission. We think him well advised in doing so under the circumstances, and hope the result may be favourable to him.

THE STRENGTH OF THE ARMY MEDICAL STAFF.

The *Army and Navy Gazette* states that "rumours are abroad which indicate the probability of further reductions in the administrative ranks of the Army Medical Staff. From some thirty-five officers that were found in the Surgeon-Colonel's List (old style, deputy surgeon-generals) only twenty-four are now provided for in the Army Estimates. The pruning knife is, we understand, likely to be applied shortly to the Surgeon-Major-General's List."

UNIFICATION OF THE INDIAN MEDICAL SERVICES.

The *Pioneer Mail* says: "The unification of the Indian Medical Services in the three Presidencies will shortly be carried into effect. It is part and parcel of the Army Reorganisation scheme, and only awaits the formal sanction of the India Office. The three Services will be amalgamated, and will be worked as at present through the Surgeon-General with the Government of India."

ARMY MEDICAL STAFF.

[illegible]-Captain Arthur L. H. Dixon retires from the

The appointment of Brigade-Surgeon-Lieutenant-Colonel Notter as Professor of Military Hygiene at the Army Medical School, Netley, has been renewed for a second term of office.

The War Office authorities, having decided to largely extend the military hospital at Stoke, Plymouth, are stated to be negotiating for the purchase of a site of about four acres for the purpose. It is intended to erect four new blocks, for 100 patients each, with additional quarters for medical officers.

Correspondence.

"Audi alteram partem."

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,— I have been much interested in reading the remarks upon the physiology of death by electric shock which have recently appeared in THE LANCET.[1] The conclusion arrived at by Dr. A. M. Bleile of Ohio is "that death in electric shock is really due to the fact that the current produces a contraction of the arteries through an influence on the nervous system, and that this constriction of the arteries throws in such a mechanical impediment to the flow of the blood as the heart is unable to overcome." The grounds upon which this conclusion is based, being well established by a series of investigations and experiments, are, in my opinion, incontestable. But from these indisputable facts there arises a subject for consideration which is both of very deep interest and of very great importance. It is the question of the precise manner in which the electric force is productive of the observed results. This is a question which has a widely extended and most intimate and essential connexion with all biological phenomena.

I venture to hope that you will be able to afford space in THE LANCET for the solution which I offer of this interesting problem, the more especially as the investigations which I have conducted through a long series of years assure me that it is quite impossible to separate the physics of the cause of death under the conditions named from the physics which are continuously operating to maintain the phenomena of life, except as regards the quantity of the current which traverses the body in a given time. I will explain as briefly as possible the mode in which, as it appears to me, the observed phenomena are brought about. The points to be noticed are as follows: (1) the left side (of the heart) is completely relaxed and the right side intensely gorged with blood, as also are the large veins in the immediate vicinity of the heart; and (2) the arteries are contracted down to a very small calibre. The cause of these phenomena will be more readily seen if I reverse the order in which they are enumerated. 1. The contraction of the arteries is unquestionably due to a physical cause acting primarily upon the contents of the vessels—i.e., the blood—and secondarily through the blood upon the nerve and muscular fibres which enter into the composition of their structures. This physical cause is the passage of the electric current, and its effect is first produced in the arteries for the following reason: the arteries and veins are both filled with blood, but the magnetic charge in the arterial blood is greater than in the venous blood.[2] This difference in the amount of magnetic charge is due to the oxygen which has been absorbed during the circulation of the blood through the lungs, and is in proportion to the oxyhæmoglobin which has been formed thereby. The electric force is therefore drawn to the arteries and passes through them, producing simultaneously, in accordance with a well-established principle, a contraction of the nervous and muscular fibres with which the highly electrified blood is associated. 2. The electric current in its passage through the arteries in proportion to its electromotive force carries with it the blood which they contain, and on leaving the body deprives this arterial blood of its active magnetic properties. This removal of the magnetism seems to be effected partly by the union of the oxygen with other bodies, through which compounds are formed which are

[1] THE LANCET, July 27th and Aug. 3rd, 1895.
[2] This fact I experimentally determined in 1875. Vide Proceedings of the Royal Society, 1875, No. 157.

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not magnetic, and partly also by the actual sweeping away of the oxygen in the rush of the electric current and by its attractive force. But, whatever may be the exact manner in which this change is accomplished, the absence of oxyhæmoglobin in the blood after death by electric shock is a fact beyond dispute. Thus a large quantity of deoxydised blood is at once pressed into the venous system, which by it becomes completely gorged. This engorgement of the right side of the heart appears, therefore, to take its origin partly in the great inequality produced by the current between the muscular forces in the two sides of the heart, partly in the rapidity of the process by which the blood is carried through the arterial and into the venous system, and partly in the fact that the heart loses all power of action beyond that which is due to the immediate effects of the shock.

I have stated that it is impossible to separate the physics of the cause of death from electric shock from the physics which are continuously operating to maintain the phenomena of life. I will now endeavour to prove this statement. 1. The magnetic charge in the arterial blood exceeds that in the venous blood in proportion to the oxyhæmoglobin which the arterial blood contains. 2. Magneto-electric induction determines that a current of electricity is generated in a wire by the motion of a magnet across it. 3. The coats of the arteries are composed of muscular, nervous, and fibrous structures which are brought into most intimate relation with the blood corpuscles. Now the physical laws just mentioned must obtain as certainly and as perfectly in the living body, where motion prevails naturally, as they do in inanimate matter, where the motion may be artificial. 4. But there is another great principle of the same nature which materially assists in the production of these results. The earth is a great magnet, and lines of magnetic force are constantly passing away from every portion of it. (This fact is very readily proved by connecting the two ends of a strand of wire with a galvanometer, and then sweeping the middle portion of the wire through the atmosphere. A current of electricity is generated in the wire, and the movement of the galvanometer needle is in proportion to the direction in which the sweep of the wire has been made, being greatest as the sweep has been more immediately to the north or to the south.) Thus these lines of magnetic force pass at all times through every form of matter, animate or inanimate, and every moving body, such as the blood, must of necessity collide with some of them. The nature, therefore, of the blood corpuscles, on the flow of which the energy of every living animal depends, is determined in this respect partly by the magnetic force of the oxyhæmoglobin and partly by the rapidity with which they traverse any given space and strike the lines of the earth's magnetic force; and the character and amount of the current energy originated in any living animal by the motion of its blood depends upon the nature of the blood corpuscles, and also upon the number of the corpuscles which are passing at any given moment over a nerve or other conductor of the impressions. We thus perceive how marvellously the capillary circulation is adapted for the generation of the amount of force which is required to maintain the molecular and chemical changes which are effected in the structures of those animal bodies; and we thus arrive at the physical cause of that perfect law of animal life that the vital force of every animal is in exact proportion to its requirements. So during the process of life under normal conditions the currents of energy through the nerves and the countless changes and operations of animate being take place in exact accordance with the animal's natural requirements, being all alike produced and characterised and regulated by the peculiar constitution and motion of its blood. But in the case of death by electric shock the current in proportion to its quantity is productive of abnormal and disruptive effects; for, to quote Dr. Hedley's words, "a weak current for a long time is a very different thing from a strong current for a short time, although in each instance the joules may be the same."

In conclusion I may allude to the curious fact that, though the stimulating power of oxygen is acknowledged by all, so little attention has been paid by physiologists to the study of its physical properties or of the manner in which it does its work. Now oxygen, and especially ozone, is a highly magnetic substance, and as such it has great power to disturb energy, not so much by its mechanical motion as by the lines of force which pass away from it in every direction; and in this respect it is to the air what iron is to the earth. When this fact is recognised it seems to me impossible to mistake the mode in which it does its work in the living body.

As my theory shows that natural vital phenomena are maintained by the blood corpuscles constantly inducing magneto-electric currents in the nerves, it will be seen that the extent of those pathological conditions which result from electric shock must be in proportion to the degree in which the shock exceeds the natural production of the current. Indeed, upon this principle it will be found that the variations in the pathological conditions which have been seen by different observers are to be attributed partly to the extent of the shock and partly to the physical condition of the individual when subjected to it.

I am, Sirs, yours faithfully,

Reading, Aug. 14th, 1895. RICHARD C. SHETTLE.

*** The important *rôle* assigned by our correspondent to the passage of magnetic lines of force through the body is not supported by the experimental work which has been done in submitting men and animals to the influence of the strongest available magnetic fields. If death from electric shock were simply a violent disturbance of the normal magnetic lines of flow through the body, we should at least expect marked physiological effects in animals placed in strong magnetic fields of large electro-magnets, for under these conditions the lines of magnetic flow through the body are completely altered. No such effects, however, are manifest, the man or animal placed under such conditions being completely unconscious that anything abnormal is going on.—ED. L.

"THE GRIEVANCES OF THE TELEGRAPH SERVICE CLERKS."

To the Editors of THE LANCET.

SIRS,—I have to thank you for the energetic remarks you make in THE LANCET of Aug. 31st upon the absence of any reliable official statistics concerning so important a matter as the health of the large bodies of men employed by the Post Office. As you appear, however, to be under a misapprehension concerning the reliability and typical value of certain statistics that I used in my evidence before Lord Tweedmouth's Committee I should be glad of an opportunity to explain. As the chairman of our association in London is secretary to the United Kingdom Postal and Telegraph Service Benevolent Society you will understand that we are in a position to estimate to the full the value of this society's returns. In the first place I would remind you that all the clerks employed in the Telegraph Service pass two severe medical examinations before receiving their appointments, and this is held to be so good a guarantee of sound health that insurance companies such as the North British offer to insure their lives at a reduced premium, and until this year without any further medical test. The misnamed "Benevolent" Society exacts from all entrants a declaration of health, which is supported by the testimony of another member of the society whose interest it would be, under the method of payment of premium, to exclude as far as possible all bad lives. The society, therefore, far from suffering from any "adverse selection of risks," is particularly well protected from damaged lives, and represents, as I contended in my evidence, "not the least frugal and careful of the employés." Under these circumstances I think you will be willing to admit that, pending the appearance of fuller and perhaps better statistics, those I used are certainly not *nihil ad rem*, but, on the contrary, distinctly *ad rem*. I must add that my figures are drawn from ten years' returns, not one year's, as you state. I am, Sirs, yours faithfully,

Aug. 31st, 1895. CHARLES H. GARLAND.

*** We have much pleasure in giving publicity to the above letter, but our correspondent still seems to have fallen short of establishing the authority of the Benevolent Society's statistics. If our information is correct, the rule of which he speaks requiring a declaration of health is of comparatively recent introduction, and can have had but little effect upon the mortality experience of the last ten years. The society, as we understand, was founded somewhere about fifteen years ago, and at that time and for some years afterwards, during a period of very large and rapid growth, it accepted all comers, subject only to the condition mentioned in our article of the 31st ult. In the second place, the protection supposed to be afforded by a declaration of health and the

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certificate of a personal friend is of quite unproved and very doubtful efficacy. It is certainly a very poor substitute for medical examination.—ED. L.

"SUPERNUMERARY MAMMA IN A MAN."

To the Editors of THE LANCET.

SIRS,—The case of supernumerary mamma published in THE LANCET of Aug. 24th by Mr. W. F. Adams is, I think, highly anomalous. Unusual cases of this kind certainly ought to be sharply criticised before they are definitively accepted. Under these circumstances it is regrettable that Mr. Adams has not described the abnormal structure with rather more detail and precision. In spite of this, however, I have no doubt his diagnosis is correct, for it is confirmed by analogies. The condition is one of extreme rarity, for supernumerary mammary structures—so common in the thoracic region—are hardly ever found in connexion with the lower half of the trunk. A very thorough search has brought to my knowledge only eight cases of this kind. Nearly all of these were ventral in position, the redundant structures occupying the front of the abdomen in one or other of the axillary inguinal lines. However, in two cases they occupied a dorso-lateral position, as in Mr. Adams's case. It seems to me that Schultze's recent observations on the development of the mammæ in certain multimastic animals throw light on the mode of occurrence of these rare anomalies. He finds that the first mammary rudiment presents as a linear thickening of the epidermis, extending on each side from the base of the evolving anterior extremity to the inguinal region. This is the "mammary ridge," or common rudiment of the mammary glands. At first it lies nearer the dorsal than the ventral surface. In its course spindle-shaped thickenings appear, whence the mammæ of the adult are evolved. After a time the connecting strands usually disappear, and only the lenticular thickenings are left. This dorsal position of the mammary rudiments is not long retained, for migration to the ventral surface soon takes place. Although the presence of "mammary ridges" has not yet been demonstrated in the human embryo, we may, nevertheless, with tolerable certainty infer their existence from a knowledge of the facts of polymastia. It seems probable that these dorsally placed mammary structures result from abnormally developed glandular rudiments arrested while migrating to the ventral aspect of the abdomen. In females abnormally placed glands sometimes attain considerable size and secrete milk; but this is quite exceptional. In men they are invariably rudimentary. The great size of the redundant structure in Mr. Adams's case is unique and suggests gynæcomastia.

I am, Sirs, yours truly,

Preston, Sept. 7th, 1895. W. ROGER WILLIAMS.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—I beg leave to differ from the views entertained in his letter in THE LANCET of Aug. 24th by "A Specialist," "that in all cases of difficulty and chronicity ..... the 'specialist' should be consulted." Any good all-round physician or surgeon should be much preferred for many reasons; his advice would be more valued, he would be more reliable and equally, if not more, competent, especially when we are aware that the "specialist"—so-called—*does not* stick to his specialty, but attends *all* cases ushered into his consulting-room. This is not honest. Were the "specialist" to strictly adhere to the particular branch which he has chosen he would be held in higher estimation by the general practitioner and the public alike than he is at the present time. Undoubtedly we should have the aurist, the dentist, and the oculist, but this should be the limitation of specialism in medicine. When a student in Charing-cross Hospital (1869-1872) I well remember the late Dr. Silver, the lecturer on physiology, taking for his subject on one occasion, instead of his usual lecture, "Specialism," when he illustrated to his class how misleading it was and instanced the case of a young lady who perchance called at the residence of a "gynæcologist" for disease of her eyes. The "specialist" bid his fair patient to recline on his couch, when he applied the customary caustic to the os uteri. These applications were from time to time repeated, until the medical man, perceiving that his patient was becoming dissatisfied by being subjected to such a peculiar form of treatment for the complaint for which she had sought his advice, informed her that he "was most happy to say that she was now quite well." "But," quoth the lady, "the object of my visit to you was to consult you about my eyes." Many old Charing-cross Hospital men may not have forgotten this particular lecture of Dr. Silver; nay, they may probably recollect it better than his customary lectures on physiology—albeit these were both instructive and interesting.—I am, Sirs, yours faithfully,

J. FFRENCH BLAKE,
Formerly Resident Medical Officer, Charing-cross Hospital.

Aug. 30th, 1895.

To the Editors of THE LANCET.

SIRS,—"A General Practitioner," in his communication in THE LANCET of Aug. 31st, thinks that specialists have almost a monopoly of dishonesty in the profession, the dishonesty consisting in the exaggeration of the seriousness of complaints and consequent unnecessary length of treatment. My experience has been different; I have found the same dishonesty in general practitioners. Before becoming a specialist I was some fifteen years in general practice. In that time I lost various patients through the exaggeration of general practitioners—e.g., I was attending a child with the slightest of simple sore throats, when its mother was told by a neighbouring practitioner that the patient was suffering from diphtheria, according to her statement; though when I taxed the practitioner with saying this he said he used the term "diphtheritic sore throat," which was perfectly misleading and wrong. This exaggeration with the consequent prolongation of treatment is far too common, and more so, I believe, among general than special practitioners. The latter are more exposed to criticism, their work is judged by the ordinary medical attendant of patients, while "the family doctor" is autocratic in many cases without any critical supervision. One class of practitioners I have found specially given to this vice; I refer to homœopathic ones. These exaggerate systematically and recklessly; I have heard an illness called intermittent fever where there was not a sign of ague; others have been termed remittent fever, and "typhoid fever of the kind that gave way to medicine"—a gem in its way. But these are out of the pale of ordinary practice, of course. The profession might lose in money but would gain in respect if exaggeration were avoided as much as possible. It is a fruitful source of differences and disagreements among medical men and leads many to seek glory and gain at the expense of both their patients and their fellow practitioners. But I have yet to learn that it is peculiar to the much-abused specialist.

I am, Sirs, yours truly,

Sept. 4th, 1895. A SPECIALIST.

THE VOLUNTEER MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—I feel sure that many Volunteer medical officers will be glad to know that the representations made to the War Office authorities by Surgeon-Lieutenant-Colonel Baines and others have been successful in producing a modification of the stretcher bearers' badge for regimental stretcher bearers of Volunteer corps. I cannot, however, agree with the description of the modified badge which Surgeon-Lieutenant-Colonel Baines gives in his letter published in THE LANCET of Aug. 31st, in which he states that the groundwork is to be of the same colour as the tunic. Reading from the memorandum issued by the War Office to all commanding officers of Volunteer corps I find that the groundwork of the new badge is to be white. If it was of the same colour as the tunic the badge would be visible at a very short distance only.

I am, Sirs, yours faithfully,

R. R. SLEMAN,
Aug. 31st, 1895. Surgeon-Captain, "Artists" R. V.

DISCUSSION ON NERVE DEAFNESS IN THE SECTION OF OTOLOGY OF THE BRITISH MEDICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—In regard to one or two points in my introduction to the discussion on the treatment of the various forms of nerve deafness I do not appear to have made myself perfectly

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clear, and I will ask you to allow me to amend with the utmost brevity the otherwise excellent report of my remarks which was published in THE LANCET of Aug. 24th. 1. The use of Delstanche's rarefacteur was advised in *labyrinthine disturbance due to sudden loud noises or explosions* for the purpose of restoring to a normal position the indriven tympanic structures and stapes. 2. Pilocarpin is not contra-indicated in *inflammation of the auditory nerve due to meningitis*, but, on the contrary, is to be recommended in recent cases in view of the fact that the labyrinth is usually implicated. 3. In the use of the galvanic current in cases of nervous tinnitus the *positive pole* should be applied to the tragus, and not the negative, as stated in your report. When one ear only is being galvanised the current should not exceed from two to four milliampères, and it is only when the current is divided between the two ears, both being treated at the same time, that it is at all advisable to double the strength of the current. 4. In my conclusions I was anxious to draw attention to the *functional element* in many cases of nerve deafness, which explained disappointments and successes in treatment otherwise difficult or impossible to account for. I should like, finally, to acknowledge my indebtedness to Professor Gradenigo for the excellent classification of the various forms of nerve deafness given in his exhaustive article in Schwartze's "Handbuch der Ohrenheilkunde."

I am, Sirs, your obedient servant,

Upper Wimpole-street, W., Aug. 30th, 1895. DUNDAS GRANT.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—The interesting letters of Dr. W. Duncan and Mr. Malcolm, published in recent issues of THE LANCET, on "Over-operating in Gynæcology" raise several questions. One of them—viz., the provision in every hospital that the patient who is to be the subject of an operation shall have the benefit of the opinion of a physician who does not operate—is of great importance and has been significantly favoured by you on several recent occasions. I agree entirely with Mr. Malcolm that all patients should have the advantage of a consultation in cases of doubt with someone not personally interested in operating. It is no disparagement of the surgeon to ask him to accept this principle. The very splendour of his achievements and the enormous improvements in his art make such acceptance reasonable. These improvements have led to operations which twenty years ago were not dreamt of. A large proportion of these operations have been justified by their results; but the alternative of success is often death within a short time, a much shorter time than would represent the chance of life from the disease for which the patient seeks treatment. The choice of such an alternative is one in which the patient can have no sound judgment. He or she is at the mercy of the surgeon. And though I should uphold the humanity of the surgeon against that of most other men I maintain that both in his interest and in that of the patient the question of operating should not rest with him, but should be determined by a consultation and the concurrence of those who have no kind of interest in the mere operation. The consultation should include, whenever practicable, a medical practitioner from the outside who knows the patient and his circumstances. But in any case it should include a colleague who does not operate and who views the matter from the non-operating side of medical work. There are, of course, many cases in which the strict application of this principle would be unreasonable, such as cases of strangulated hernia, accident, &c.; but in all doubtful cases and in all cases involving serious mutilations and loss of function its application should be imperative. It is undeniable that operations with such consequences are occasionally called for oftener than surgeons of a very conservative turn are ready to admit; but when surgery has to mutilate so seriously it should surely surround itself with the gravest sanctions. This is the clear ground of the confidence of the public in our profession and in the hospital system. The rich man and his family have this security. The poor think they have it in the nature of the voluntary hospital system, which provides, not a single officer for the treatment of all cases, but a staff of physicians and surgeons who can assist each other and check each other. This is the enormous advantage of the voluntary hospital system over mere State infirmaries or hospitals, and those who wish well to the voluntary system will respect it more and more. The surgeon who does not recognise this restraint on his unbounded freedom is not worthy of office in an institution so unboundedly trusted by the public and the poor. Trusting that these views will have your support,

I am, Sirs, your obedient servant,

Sept. 7th, 1895. OBSERVER.

"COUNTRY PRACTITIONERS AND LOCUM-TENENTS."

To the Editors of THE LANCET.

SIRS,—In the correspondence columns of THE LANCET of Aug. 31st a serious complaint is made against locum-tenents. Having on many occasions held such posts I should like to give my experience. Twelve times I have been employed, with the result that in eleven instances my services were appreciated and I was re-engaged. I was treated with every consideration, and I believe I gave the fullest satisfaction, as I am still on most friendly terms with all. My last experience was different. From an agency I received at a moment's notice an engagement at £4 4*s.* a week. On my arriving I found the practitioner had left, leaving an untidy woman to come in occasionally during the day to see if I required anything. The consulting-room (and my only sitting-room) was the kitchen, and the surgery the scullery, where, besides dispensing, this maid-of-all-work cooked what I required. As my employer left no address I was bound to remain. Upon his return, although I did my best under the circumstances, I was informed that I had neglected his work, and abuse commenced. However, I was enabled to insist on my full salary, and I left him with no regret. Doubtless, however, he represents me to my profession as an undesirable locum-tenent. I found the medical agency quite satisfied with the explanations I offered, and great regret was expressed. If general practitioners are only willing to pay a proper salary of £3 3*s.* a week good men are sufficiently plentiful to supply all they need, but indifferent pay leads to discontent, and it is not to be wondered at that serious complaints should arise. The locum-tenents are at the mercy of their individual employers, who can seriously injure them, and I regret to hear not infrequently this has occurred. Medical assistants are employed on similar dangerous ground and need protection. They are at the mercy of one man who might ruin them. I once undertook a medical assistantship. After remaining nine months I left as my principal was generally unfit to perform his duties. My reason for leaving was that I was owed four months' salary, and after frequently applying for it never received an answer and finally had to employ solicitors. By this means I obtained it, but a reference for further work was refused. However, his patients and others, amongst them medical men, gave me a most satisfactory testimonial. I had means, so I could fight him; but what would have been my position if I had been otherwise? Since I have heard his previous assistants had similiar experiences. By all means let us see if we can ensure reliable locum-tenents to be available; but equally as important is it that effort should be made to stop "the sweating system" which locum-tenents and assistants are suffering from. It dishonours our profession, lowering the prestige which it is the first duty of one and all to uphold.

I am, Sirs, yours faithfully,

Sept. 9th, 1895. LOCUM-TENENT.

MEDICAL STUDY IN GERMANY.

(BY OUR BERLIN CORRESPONDENT.)

THE following article ought to have appeared in our Students' Number, but was unfortunately crowded out owing to the great pressure on our space. The subject, however, is full of interest, not only to those still *in statu pupillari*, but to all medical men.

Academical life and the study of medicine are quite different in Germany and in England. It may, therefore, be of interest to English medical men and students to know how their professional brethren in Germany are trained, how they acquire a knowledge of medical science, and finally what they are expected to learn before they are made duly qualified practitioners. A young man desiring to enter on an

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academical career with a view to becoming a clergyman, lawyer, medical man, or doctor of philosophy has to make up his mind at a somewhat early age, for he has previously to be educated in a so-called "gymnasium." These schools, whose name recalls the recreation-grounds of ancient Greece, have, however, nothing in common with the athletic sports of antiquity; in them it is the mental and not the bodily powers which are actively exercised. After at least nine years' stay in the gymnasium the aspirant has to pass a very severe examination in presence of a Government commissioner. This so-called "Abiturienten-Examen" includes Latin, Greek, French, German, mathematics, history, geography, and theology. This examination alone entitles young men to enter upon one of the above-named branches of academical study. Although it is not the purpose of the present article to criticise the method of education in Germany, it may be remarked that the training in the gymnasia, which is perfectly appropriate for the other academical careers, is not a fit preparation for medical study. Sciences such as chemistry, physics, and natural history are much more necessary for medical men than Greek is, and yet, strangely enough, the former subjects are very little or not at all taught in the gymnasia, and are not required for the final examination. There are plenty of schools (Realschulen) where these subjects preponderate, but the pupils of such schools have not the right of becoming medical students. The "Realschulen" have for a long time been striving to obtain the same privileges as the gymnasia, but their efforts have hitherto been unavailing. To become a medical student the young man has to apply to one of the twenty-one universities of the empire, show the certificate he has received from the gymnasium, and become "matriculated"—i.e., enrolled in the register of the university. Then he has to "belegen" the lectures he intends to attend—i.e., to pay the fees. In Germany no general fee is paid for medical education, but students have to pay for each lecture and for each course separately, which makes study—especially that of medicine—rather expensive. These formalities duly performed, the student, who at the gymnasium has been under very strict supervision, at once begins to enjoy absolute liberty. Nobody cares either what he does, or how he works, or whether he works at all. Only the subsequent examinations prove whether he has been a model student or has belonged to the types described by Sir J. Russell Reynolds in his genial lecture[1] as Superficialis Hurry or Vane Velox. Many of the young men in consequence of this unrestricted liberty fall into disolute habits, from which some may eventually escape, but by which others are permanently lost to society. Well-to-do students are in the habit of joining a fashionable "Verbindung" (students' association), a circumstance which does not materially assist them in prosecuting their studies. There are no precise regulations as to the method of medical study; students are entirely left to their own discretion in respect of the lectures they may attend, and a young man, if he is foolish enough, may begin his curriculum with obstetrics and finish it with anatomy or physiology. In nearly all the universities the students, however, receive printed notices at the matriculation, in which the most advisable course of study is described. Students very often go from one university to another, and it is a usual thing in Germany for a student to have been in four or five universities. Some change their universities without any special or valid reason, but others do so in order to follow the lectures of the best teacher of each subject, in which case hardly anything can be said against this custom. The course of study lasts five years and is divided into two parts. During the first two years the so-called preparatory sciences are to be learned: anatomy, physiology, chemistry, physics, microscopy, dissections, botany, zoology, &c. The university dissecting-rooms are generally very well kept and a large supply of subjects for dissection is provided. The chemical, physical, physiological, and other laboratories are often, especially in the larger universities, models of their kind. After two years' work the students may present themselves for the first examination, the so-called "tentamen physicum." This examination, which is merely theoretical, includes anatomy, physiology, chemistry, physics, and natural history. It may be taken at a later period than the close of the second year, but judicious students usually pass it before they begin the second part of medical study. The last three years are occupied with lectures and courses on surgery, materia medica, therapeutics, midwifery, and the other special branches of medical science.

[1] THE LANCET, Jan. 5th, 1895.

The difference between German and English methods is very great even in this part of the student's career. In German medical education theory is predominant even in clinical matters. At the clinical lectures the students seldom have an opportunity of examining the cases for themselves, and the medical staff do not like to see students in the hospital wards except during the lecture hours. Many rare cases may be seen and the students may hear the diagnosis explained in a very genial manner, but they are seldom permitted to approach the bed of a patient. It is true that these drawbacks do not exist in the smaller universities; they are to be found chiefly in the larger ones, and there is a remedy for them in the great number of private lectures given by "Privat-docenten" in private hospitals and out-patient departments. These private courses are often followed with much more zeal and regularity than the official lectures. Very few students are lucky enough to become clinical clerks or dressers, and as there is no formal competition it may happen that the most clever are not always chosen for these appointments. After five years' study students are eligible to undergo the "Staatsexamen," by passing which they become duly qualified practitioners. For this examination certificates are required that the candidate has passed the "tentamen physicum," that he has attended the medical and surgical clinics for two half-years, and that he has been present at four confinements. The examination consists of several different parts, called "stations," and is both theoretical and practical, the candidate being obliged to make a dissection, to perform an operation, and to examine patients in the surgical and medical wards in presence of the examiners. As no new "station" may be begun till the previous one has been passed, the duration of the examination is sometimes rather long. A candidate who has been rejected may repeat the "station" twice; if he does not pass the third time he must give up all hope of becoming a medical man. The Staatsexamen does not confer the title of Doctor, for which there is a separate examination. This may be taken either before or after the Staatsexamen, and being merely theoretical is much easier than the latter; but it is much more expensive, as the fees are very high and the candidate must have a dissertation or thesis printed at his own expense. A full description of all the mediæval formalities observed at the conferring of a medical degree would be too long for the compass of the present article. The examination for the degree of Doctor does not give a right to practise unless the Staatsexamen has also been passed. Foreigners are admitted to the former examination exclusively, and not to the latter. Some foreign medical men, however, who have got a Doctor's diploma at a German university make their friends at home believe that they are qualified German practitioners. Attempts have been made either to abolish the examination for the degree of Doctor or to combine it with the Staatsexamen, so that every duly qualified medical man may call himself M.D.; but although this arrangement has for a long time been in force in Austria and has given general satisfaction there, the universities of Germany have successfully resisted the innovation.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Medical Man, Coroner, and Policeman.

A CASE occurred at the City Coroner's Court on the 21st ult. showing the inconvenience that a medical man may be subjected to under the relations at present subsisting between that court and the profession. The acting deputy coroner (Mr. Louis J. Aitken, barrister) informed the jury that he had received a report of the sudden death of a publican who had lived in Great Ancoats-street, and said that if the medical man who attended the deceased would sign a certificate of death an inquest might be dispensed with. He asked Mr. Macneilage, who was in court, if he would give the necessary certificate. The medical man said it was the first time he had had to appear before that court, and he wished to ask if he was to regard a verbal message as the equivalent of a formal summons. The deputy coroner said that his not having been formally summoned was purely a matter of courtesy, and that if he wished to be summoned an inquest would have to be held. In answer to an inquiry by Mr. Macneilage, who said he was speaking purely in the interests of his profession, as to whether he should be

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entitled to his fee, having come in response to a verbal message—"Is my fee secured by a verbal message?" he was told: "To be enabled to give you your fee I must hold an inquest." It then transpired that the deceased had been a patient for some time, and that Mr. Macneilage had been called to him two hours before his death and was prepared to give a certificate of death; that he was awakened at half-past one the next morning by the night-bell ringing and found two policemen, who asked if he were Mr. Macneilage, and said they wanted him to come here (the coroner's court) "and speak to the death of John Ruvane." No wonder the medical man was annoyed at such an unnecessary disturbance of his night's rest, and he was reported to have used words "in the nature of a threat" towards the coroner. This the medical man repudiated: "It was not so, sir. You can understand that when a message comes through a blue-coat it is often perverted." In the end the certificate of death was given; the inquest was not held. The deputy coroner promised that in future the medical man should be formally summoned, but that his fee on this occasion could not be granted because there was no inquest. The deputy coroner, addressing the officers of the court, said that to disturb a medical man at half-past one in the morning was a most improper proceeding, and the officer had exceeded his duty. Though not without its humorous aspect this narrative shows how much annoyance and loss of time are sometimes caused by fussy and over-zealous officials attached to coroners' courts.

Death from Vegetable Poisoning.

An inquest was held on the 21st ult. on the body of a little girl six years of age who went into Gorton Park and the fields adjoining on the day but one before, and, according to her statement, ate some "green sauce." She was taken ill and died the next night. As given in the report in the *Manchester Courier*, "the medical evidence was to the effect that henbane, which grows wild, would produce the symptoms exhibited by the deceased when she was taken ill, but not the leaves of sorrel nor poisonous fungi. Death was due to eating some vegetable poison. A verdict of 'Died from misadventure' was returned." This does not seem quite satisfactory. Henbane is a comparatively rare plant, not likely to be found in Gorton Park or its vicinity, and its appearance, moreover, would probably repel rather than attract the child. The symptoms are not described. It surely would not be difficult to examine the locality carefully and ascertain what poisonous plants grow there.

Salford Union Infirmary and its Inmates.

Though the Salford guardians showed little anxiety as to the physical well-being of the children from three to nine years of age who were regaled with potato pie of which the paste, only half cooked, measured in thickness between three and four inches, before the medical officer reported against it, they must not be thought hard-hearted or only semi-civilised, for at a recent meeting of the infirmary committee the clerk read a letter from the Local Government Board adverting to one from the guardians "requesting their consent to the substitution of the word 'patient' for the word 'pauper' in the form of bed-card prescribed by the regulations for the management of the Salford Union Infirmary, and to inquire the reasons which have led the guardians to make this application." One guardian said the word "pauper" as applied to the inmates of the infirmary was detested by the board and the people of Salford. Another said he had not heard that the people of Salford wished the word "patient" used. It was a workhouse hospital and a pauper institution, and "if they removed the word 'pauper' from their rules they would open the way to persons who should be treated elsewhere." Mr. U——: "Such people come here now." Mr. S——: "They have no business to come to a place which is maintained by the rates. If a man is a pauper it is no injustice so to describe him." It is gratifying to find a sensitiveness so charming among the guardians, even though sentiment flourishes at the expense of logic; for it was moved and carried that the word "patient" should be used instead of "pauper." But how comes it, as asserted, that "patients" who are not "paupers" use this "pauper hospital"? Does this indicate another hospital abuse? The clerk said his reply would be that the guardians did not like the word "pauper," especially as it was a sick hospital, "and further that the word was not sufficiently expressive." The last reason is curious, as they seemed to think it so expressive that it must be banished from their vocabulary.

Autumnal Diarrhœa.

With the gradual increase in the ground heat there has been an increase of diarrhœa, from which young infants have suffered seriously. In his last weekly report Dr. Niven says that on the previous Saturday (Aug. 24th) "the slow-acting thermometer, suspended at a depth of four feet from the surface, attained its highest point this season—viz., 59°." In the six preceding weeks the deaths from diarrhœa and English cholera rose from 9 to 47 per week, and in that ending on the 24th ult. they rose to 59, and of these 47 were among infants under a year old. During the past eight weeks 231 deaths have been registered, "and of this number 171 had not completed their first year of life."

The Port Sanitary Authority.

An intimation has been received by the local sanitary authorities of the districts on the banks of the Ship Canal to the effect that the Local Government Board are of opinion that arrangements should be made for an investigation of the proposal that a joint board should be constituted to act as the port sanitary authority for the Customs port of Manchester. The Local Government Board consider that it would be necessary for such a port sanitary authority to come to some arrangement with the port sanitary authority of Liverpool with a view to dealing with infected ships arriving in the Mersey and intending to pass up the Ship Canal, and also with ships on which cholera may break out after they have entered the canal, and they suggest that a conference of representatives of the riparian authorities on the canal should be held to discuss the question.

Sept. 3rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death of the High Sheriff of Northumberland.

AT his house, the Chesters, on Thursday, Sept. 5th, died Mr. N. G. Clayton, the High Sheriff of Northumberland. On Sept. 5th, 1751, the foundation stone of the infirmary at Newcastle was laid, an ancestor of the deceased gentleman, Mr. W. Clayton, being sheriff. Ever since its foundation the Clayton family have taken an interest in the institution, and Mr. N. G. Clayton was no exception, he having been on the committee of management for upwards of twenty years and always an active and liberal supporter of the charity. The Claytons are an old Yorkshire family, and there is no name more respected than theirs in the town of their adoption. It may well be so, for there is no charitable institution in Newcastle with which the name has not been for long associated.

Site for a New Infirmary, Newcastle-upon-Tyne.

This question seems no nearer settlement than it was four or five years ago. The governors have asked the civic authorities to give them, or to assist them in procuring, a new or an enlarged site; but so far, though the city council expresses sympathy and says it will do what it can to assist, both propositions made by the infirmary authorities — first for a new site on the Leazes, and secondly for a portion of the cattle market to augment the present site—have been refused in the one case and reported upon adversely in the other. It seems that the cattle market in Newcastle-upon-Tyne cannot be moved out of the centre of the city, though an equally convenient site could readily be found for it on ground belonging to the town, because there are vested interests which would suffer. There are many reasons, however, why the cattle market should be moved. The driving of droves of cattle through the main thoroughfares of a populous city on two or three days a week is inconvenient and not free from danger—indeed, many serious accidents have been treated in the infirmary owing to foot-passengers being gored by bulls. Sooner or later, there can be no doubt, the cattle market will be moved, and should, unfortunately, a prominent citizen be injured by an excited beast perhaps the transfer would be sooner than later. In another month the city council will consider the report of the Finance Committee, presented on Sept. 4th, recommending that no ground should be given to the infirmary for the purpose of enlarging the present site—a report characterised by Mr. Alderman Richardson as "a very one-sided report."

The Newcastle-upon-Tyne City Lunatic Asylum.

The annual report of the above has just been issued. In

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it the commissioners express themselves as well satisfied with the condition of the patients and of the wards, and draw attention to the fact—eminently satisfactory—that "no mechanical restraint" has been employed and only one patient placed in seclusion during the year. The daily average of patients has been 463, of whom 47 were epileptics. Sixty per cent. of the males and 71 per cent. of the females had been usefully employed during the year. Dr. James Callcott, the medical superintendent, states the percentage of recoveries to have been 33·6; the deaths were 41, a percentage of 8·8. The coroner held an inquest in one instance only, and a verdict of "Death from natural causes" was returned. The enlargement of the institution is being rapidly pushed forward.

Death of Mr. Chas. Mitchell, LL.D.

Dr. Mitchell, who has just died at Jesmond Tower, has left an enormous fortune of some £2,000,000, all made by him on Tyneside. Dr. Mitchell built one of the most sumptuous churches in the North of England, near his residence, and presented it, together with a fine house for the clergyman, to his diocese, spending some £31,000 in the process. He was also munificent in his gifts to the University of Aberdeen, of which university he was an honorary graduate and had been an under-graduate. By his will the cottage hospital at Walker, built and given by him to the town, receives a legacy of £1000 free of legacy duty.

Entertainment to Nurses.

Sir George and Lady Trevelyan, of Wallington Hall, Northumberland, entertained on Tuesday, Sept. 3rd, a party of nurses from the Royal Infirmary, Newcastle-upon-Tyne. A saloon carriage conveyed them from the Central Station at 8.20 A.M. to Scots Gap Station, where carriages from Wallington Hall awaited their arrival. On reaching the Hall Sir George and Lady Trevelyan received them most kindly, and showed them over the house, with its most interesting collections of paintings and old china. Luncheon was provided at one o'clock, and the guests afterwards spent a very pleasant time in the grounds and gardens, returning to tea in the Hall. Each nurse was presented with a bunch of lovely flowers, and also with a photographic view of the interior and exterior of the house; and, having spent a most enjoyable day, they all returned at 6.30 P.M.

The Dean of Durham, the Very Rev. Dr. Kitchin, has returned much improved in health, and has undertaken to distribute the prizes to successful students at the opening of the University of Durham College of Medicine at Newcastle-upon-Tyne next month.

Newcastle-upon-Tyne, Sept. 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Matriculated Students in Scotland.

A NEW regulation with regard to matriculated students under the Universities (Scotland) Act, 1889, has just been published, and is to the effect that no person shall be deemed to be a matriculated student in any Scottish university or shall enjoy the privileges of a matriculated student unless in addition to paying the matriculation fee he is enrolled as a student in attendance in one or more classes of the university and pays fees entitling him to such attendance.

Re-election of Mr. Finlay, Q.C.

Mr. R. B. Finlay, Q.C., has been re-elected Member of Parliament for the Inverness Burghs. Mr. Finlay is a graduate of medicine of Edinburgh and comes of a medical stock, his father having been a practitioner in the neighbourhood of Edinburgh, and he has a brother who is also in practice.

Reported Outbreak of Glanders in Glasgow.

The local health authorities have recently been considering some rather sensational rumours with regard to the presence of glanders in the city. Professor McCall of the Veterinary College has been able to assure the authorities that the rumours are considerably exaggerated, and that every reasonable precaution has been taken to protect the public health. It has been decided to send a detailed statement of the facts to the Board of Agriculture.

West of Scotland Convalescent Homes, Dunoon.

At the annual meeting of this institution the secretary reported that the homes during the year had accommodated 3750 convalescents. The gross expenses per week for each inmate had been 10*s.* 10*d.* In their statement the directors acknowledge the receipt of £500 from Mr. Alex. Sinclair of the *Glasgow Herald*, and a valuable contribution to the library from Sir James King. The Rev. Dr. Donald Macleod, in speaking in support of the annual report, suggested that the well-being of convalescents on leaving hospital might be still further consulted by the conversion of a large ship into a home. This might be anchored off the Island of Arran and would secure for invalids all the benefits of a sea voyage.

The Purification of the Clyde.

The Glasgow Police Commission have decided by a large majority to apply to Parliament for power to proceed with a scheme for dealing with the sewage from the northern part of the city. The estimated cost of the scheme is £600,000.

New Hospital for Infectious Diseases, Glasgow.

The memorial stone of the new Corporation Hospital at Ruchill Park, in the north-west portion of the city, was placed in position on the 30th ult. by Lady Bell, the wife of the Lord Provost. On the invitation of the corporation a large number of medical men and leading citizens were present, but the ceremony was somewhat marred by the extremely wet weather. At the luncheon which followed the ceremony the toast of the medical staff was responded to by Dr. Johnstone, the superintendent of the Fever Hospital at Belvidere, and by Dr. A. K. Chalmers, one of the medical officers of health for the city. The senior medical officer of health, Dr. J. B. Russell, has been laid aside by illness for some months, but his numerous friends will be glad to hear that he is now convalescent and will shortly resume his duties.

Hospital and Nurses' Home for Coatbridge.

The late Mr. John Alexander (a partner of the firm of William Baird and Co., Limited, iron and coal merchants) has in his will left a sum of £30,000 to build and endow a hospital for the treatment of medical and surgical cases in the town of Coatbridge. The institution is to be called the Alexander Hospital, and in connexion with it there is to be a home for trained nurses, who are to work amongst the sick poor of the town and neighbourhood.

Sanitary Association of Scotland.

This association met for its annual congress at Greenock in the last week of August under the presidency of Sir Michael R. Shaw-Stewart, who in his opening address reviewed recent sanitary progress, more especially in rural districts. Amongst the papers read to the association were the following: The Rates of Mortality in Scotland in relation to Sanitary Progress, by Dr. Matthew Haig, Professor of Medical Jurisprudence and Public Health in Aberdeen University; Infectious Diseases in Scotland and Hospital Isolation, by Dr. A. Campbell Munro, medical officer of health, Renfrewshire; the Diseases of Occupations, by Dr. Nasmyth, Ayr; Diphtheria, by Dr. Leslie Mackenzie, Leith; and the Housing of the Submerged Tenth, by Bailie Chisholm, Glasgow. The discussion of these and other papers was taken part in by a large number of the members, who were also given abundant opportunities for seeing the beauties of the Clyde and for cultivating those social developments for which, at least in part, annual conferences exist.

Aberdeen University: the Inaugural Celebrations.

At a meeting of the Senatus held at the end of August it was agreed that, owing to the lamented death of Mr. Charles Mitchell, LL.D., Newcastle-on-Tyne, the ceremonial on the inauguration of the Graduation Hall &c. should be of a comparatively simple character. It has now been agreed that there shall be only one series of ceremonies, not extending beyond two days, and that the date thereof shall be postponed till December out of respect to the memory of the deceased. The Students' Union will be opened without any formal ceremony at the beginning of the present session. Unfortunately, this postponement will prevent the celebrations falling within the period of civic office of Lord Provost Stewart, to whose advocacy and support the progress of the extension scheme has been so largely due. The great "historical window" in the new Graduation Hall is now completed, the finishing touch being put to it last week by Colonel Crawford, who, as the trusted financial head of the great firm of Lord

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Armstrong, Mitchell, and Co., has been for half a century Dr. Mitchell's valued colleague. The window, which costs upwards of £2500, illustrates the history of the college by a series of brilliant heraldic and portrait representations of the more notable figures connected with the university. It measures 32 ft. high by 28 ft. broad, and comprises four tiers of panels. The two upper tiers are filled with the arms of George Keith, fifth Earl Marischal, founder of the college; the city of Aberdeen, joint-founder; and of the eleven noblemen who succeeded the founder as chancellors of the college. The second tier consists of three groups of five panels each. The group to the left is decorated with the arms and figure portraits of representative alumni prior to 1700; the group to the right with those of alumni of the period 1700–1800; and the central group with those of alumni of this century, especially of gentlemen prominently associated with the university in the present day. The fifteen panels of the lower tier have the armorial bearings of thirty benefactors of the college, covering a period of nearly 250 years.

The Extensions at Marischal College.

The Sites and Plans Committee of the University Court have approved of plans submitted by Mr. Mackenzie, A.R.S.A., of the tower to be erected at the extremity of the extended north wing of Marischal College fronting Broad-street. The plans show a lofty and graceful structure of dressed granite.

Monument to a Philanthropic Aberdeen Practitioner.

There has just been erected by public subscription in the interior of New Porthill School, Gallowgate, Aberdeen, a mural tablet of Gothic design to commemorate the late Dr. Reith's services in that populous though poor district. The memorial is in grey and red granites, and was designed and executed by Mr. Arthur Taylor, sculptor, Aberdeen. The inscription on the panel is as follows: "To the memory of Archibald Reith, M.D., founder and superintendent of this school, who entered into rest 30th December, 1894, in his 58th year. Consecrating in early manhood the gifts of a rich and generous nature to the service of his Lord, he devoted himself for thirty-four years to the spiritual and moral well-being of the young people of this neighbourhood with single-hearted enthusiasm and self-sacrificing love. By his exertions and according to his plans this building was erected in 1876.—He saith unto Him, 'Yea, Lord, Thou knowest that I love Thee.' Jesus saith unto him, 'Feed My lambs.'"

The Health of the City of Aberdeen.

The following is the return of zymotic diseases notified last week: measles, 1; scarlet fever, 22; diphtheria, 1; whooping-cough, 51; erysipelas, 6; total, 81—being 42 cases more than in the preceding week. The rise is due to an increase in scarlet fever and whooping-cough.

Sept. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Rotunda Hospital.

THE ceremony in connexion with the opening of the new wing of this hospital, which was announced to take place on Aug. 30th, has been postponed.

Reorganisation of the Army Medical Staff.

An effort to revive the old and vexed question of the position and titles of the Army Medical Staff is now being made in Dublin, whence so many of the present corps of army surgeons have come. A letter appeared on Sept. 2nd addressed to the editor of the *Irish Times*, in which attention is called to the fact that military surgeons have recently been honoured by very frequent mention in despatches, notably in the case of the Chitral campaign, and that they can now claim to have received "the largest proportion of Victoria Crosses in the service." The writer suggests among other changes the following:—The formation of a Royal Medical Corps and the complete control of it by army medical officers. The abolition of the superfluous titles of Surgeon-Lieutenant, Surgeon-Captain, &c., and the substitution instead of Lieutenant, Captain, &c., of the Royal Medical Corps. There is no doubt that army medical men have many real grievances which should be removed. State service, however, is very popular in Dublin. There was a time when, on the other hand, the Medical Department of the Royal Navy was eagerly sought by young surgeons recently qualified at our University and schools. Now, the improved status of medical men in the army and the high-sounding though curious and cumbersome titles which they by persistent agitation have acquired have changed all this. The naval medical authorities have expressed surprise at the small number of candidates who have presented themselves at their examination of late years; but, apart from the causes which have been mentioned, there are other reasons which tend to induce young medical men from here to choose the army in preference to the naval medical service. Naval medical officers, and, indeed, naval combatant officers, are but little known here, and accordingly hold a much less well-recognised social position than their brethren of the army. There is, of course, a naval guardship at Kingstown, but, on the other hand, there are always crack regiments stationed here and at the Curragh.

Queen's College, Belfast: The President's Report: the Students' Union.

The President of Queen's College, Belfast (Dr. Hamilton), has recently presented to Her Majesty his annual report for 1894–95. During the past session 117 students entered the college for the first time, and the total numbers enrolled show that the medical school contributes the great majority. In the faculty of arts there were 145 students, in law 26, in engineering 13, while in medicine there were 212; 15 ladies attended the college. Of the students in attendance 336 came from Ulster, and as regards age 230 were over twenty-one and 156 younger. The President referred with great regret to the death of Dr. McCosh, President of Prince Ion College, New Jersey, U.S.A., who for a period of seventeen years occupied the chair of Logic and Metaphysics in Queen's College, Belfast. Queen's College attains its jubilee this year, and the council have resolved that it shall be fittingly celebrated.

The plans for the Students' Union have been prepared by Mr. Robert Cochrane, F.R.I.B.A., F.S.A., and promise a building which will be in every respect well adapted for the purpose aimed at. Tenders have been accepted, and the total cost, with furnishing, will be about £7000. The building will be commenced forthwith, and it is expected it will be ready for occupation by students at the beginning of the session after next.

Death of a Workhouse Fever Patient.

The guardians of the Ardee (county Louth) Union have just received from the Local Government Board their decision in reference to the death of a patient in the Fever Hospital. The Local Government Board say they cannot but regard this case as discreditable and as tending to shake confidence in the management of the Fever Hospital. The patient whilst in a state of delirium escaped from the Fever Hospital at 3 o'clock in the morning with nothing on but his shirt, and was not brought back until almost 11.30 A.M. The exposure to which he was subjected must undoubtedly have accelerated his death, which occurred next day. The Local Government Board consider that the blame in the matter rests with the master and porter of the workhouse, and request the board of guardians to call upon these two officials to resign. It would appear that though warned by the medical officer and nurse the master took no trouble to procure paid assistance from outside the workhouse when he was, as he states, unable to procure it inside. This painful case will certainly tend to strengthen the hands of those who have been recently criticising the provision made for the care of the sick poor in Irish workhouses.

Death of a Lunatic in Lisburn Workhouse.

An inquest has been held in reference to the death of a woman forty years of age who was admitted on Aug. 23rd to the Lisburn Workhouse with acute mania, and who died from bronchitis, syncope, and weakness on Aug. 28th. The coroner said, in addressing the jury, that such cases should be removed from workhouses to asylums, which were the proper places for them and had the proper accommodation for treatment. The jury returned a verdict of "Death from syncope of the heart, the result of weakness and mental excitement," and added that in their opinion "the lunatic department on the female side of the workhouse is in a most wretched, insanitary, and crowded state, and unfitted in every way for the reception of the weak-minded poor who are at present placed there."

Death of Mr. Mark Anthony Savage, M.B. Edin., Newry.

I regret to announce the death of Dr. Savage of Newry,

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which occurred on Aug. 29th. It seems that about three weeks ago he went to Wigton, Scotland, to do duty for a brother medical man, an old school friend, and while there in the course of his duty he cut his hand. He thought the wound was healing and returned to Newry on Aug. 28th. He was out that day, but during the night alarming symptoms set in, and, despite every care and attention on the part of Dr. Crosslé and Mr. Smartt, he died from blood poisoning the next day. Deceased, who was thirty-seven years of age and was a graduate of the University of Edinburgh, had served for five years as surgeon on board one of the warships of the Chilian Government, and he came recently to Newry to take up the practice of his late father.

The Battle of the Clubs at Cork.

At a meeting of the Cork United Trades' Association held on Aug. 29th the president alleged that the members of the Cork clubs are systematically boycotted by the city hospitals. He carefully avoided giving details, though he promised they would be forthcoming if the hospital authorities should think fit to make inquiries on the subject. He hinted that the corporation grants might be withheld, and suggested to the mechanics of the city to think twice before they contributed to the Hospital Saturday Fund. After mentioning that one club patient had received "an unsatisfactory reply" at the South Infirmary and that another was refused admission at the North Infirmary he treated his audience to a peroration, in which he asked, Was "such traffic in human lives to be tolerated"? The president happens to be a member of a benefit club, and his anxiety to attack the Cork medical men apparently made him forget that he was addressing a body of trades-unionists. However, no time was lost in reminding him of the fact. One of the members, Mr. Murphy, said that as far as he understood the hospitals were not boycotting anyone, and if he desired admission to a hospital he could go in, and he added that as trades-unionists they should not recognise the imported medical men. Mr. Kelleher considered it was unfair for the president to bring forward such a matter at all, it having been ruled out of order that night week. Mr. Harty considered that they should not entertain the subject at all, and a resolution which he proposed to that effect was carried by twelve votes to seven. A couple of days later leading articles on the subject appeared in two of the local papers, and though the phraseology was different the ideas were precisely the same. The whole tone was, "we can hardly believe the staffs of the hospitals acted in the manner stated, but it looks uncommonly like it." So far I have been able to make inquiries with regard to two of the principal hospitals referred to, and I find that club patients have been freely treated at these institutions. No doubt club patients have in some instances been refused admission, but solely because they were considered to be cases unsuitable for treatment in a general hospital. This incident is regarded by the Cork medical men as an indication that the clubs are sorely mortified by the falling through of the recent negotiations. The *personnel* of the club delegates at the mayor's conference was remarkable. No less than five of them were Oddfellows. One was secretary to a lodge and corresponding secretary to the several lodges in Cork. Another was secretary to a club which embraces numerous rich members, but the poorer clubs had no direct representatives. Hence it is easy to understand why the delegates made such a vigorous fight for the retention of existing members in receipt of over £200 a year. I hear every day of club members feeing private practitioners, and it is only natural to expect that, under the circumstances, the clubs will become gradually decimated. The richer members know this, and they are very anxious for a compromise which will still secure for them medical services at a comparatively cheap rate. However, the Cork profession will not desist till they compel these gentlemen to pay adequate medical fees in the future. When the usual half-yearly grants to the North and South Infirmaries were being considered by the corporation reference was made to the allegations of the president of the Cork United Trades' Association, to the effect that patients were refused admission to those hospitals because they belonged to benefit clubs. Some members of the council voted in favour of the money being withheld pending an investigation, but the Mayor pointed out that the statements were *ex parte*, and ultimately the grants were sanctioned. The governors of the South Infirmary having requested the president to supply further particulars, he gave the name of only one patient, who, on inquiry, was found to suffer from paralysis agitans, and in accordance with a rule of the hospital could not be admitted because his case was incurable. The secretary had absolutely no knowledge as to whether the patient belonged to a benefit club or not, and, moreover, informed the governors that several club patients have been treated in the hospital. The authorities of the Mercy Hospital have already contradicted the statements with regard to the institution under their control, and the governors of the North Infirmary will probably not be slow to follow their example.

Viceregal Visits to Hospitals.

Her Excellency the Countess Cadogan has recently visited many of the Dublin Hospitals, including the Adelaide, with its children's ward and its "nurses' home"; the Children's Hospital, Temple-street, under the charge of the Sisters of Charity; the Dublin Orthopædic Hospital, where her Excellency was conducted to the gymnasium, with which she was much pleased; and the Rotunda Lying-in Hospital, which is, of course, one of the largest of its kind in Europe, if not the very largest. Lady Cadogan was conducted through the wards of this great maternity hospital and graciously promised to attend the opening in November of the new wing, which she considered "would be a valuable addition to what is now one of the finest institutions of charity in the city of Dublin." Her Excellency has, indeed, been indefatigable in her wish to extend her patronage to the medical charities of Dublin. She drove out on Saturday accompanied by Lady Betty Balfour and Captain Algernon Peel to Blackrock to visit the Convalescent Home at Linden, with which she expressed herself as being much pleased. The institution is managed by a community of nuns, and is, with the exception of some sixteen beds which are endowed by the Mullen's Fund, dependent on the voluntary contributions of the public for its existence.

School of Medicine, University of Dublin.

The prospectus for the coming winter and summer sessions of 1895–96 has recently been issued. The Regius Professorship of Surgery has not been filled since the lamented death of the late Sir George Porter. The position of University Anatomist is now occupied by Dr. Charles Ball, in succession to Dr. St. John Brooks, resigned. Mr. Alexander C. O'Sullivan, M.D., F.T.C.D., has been appointed to the long-vacant University Lectureship on Pathology, and he will lecture on pathology thrice weekly during the winter, and conduct a class of "Practical Pathological Histology" during the summer session. Dr. Edward H. Taylor now occupies the position of University Examiner in Anatomy.

Medical School of the Royal College of Surgeons in Ireland.

"A Guide to Medical Students," containing much useful information as to the course they should follow in preparing to qualify for the diploma of the Conjoint Board of the Royal Colleges of Physicians and Surgeons in Ireland and the expense they must incur in the shape of fees &c., has recently been published by the Royal College of Surgeons. From this it will be seen that the school buildings there have recently been reconstructed, the capacity of the dissecting-rooms much increased, while special pathological, bacteriological, public health, and pharmaceutical laboratories have been fitted with the most modern appliances to facilitate the progress of students of medicine. Among novel features is to be seen the announcement that a luncheon-room is now provided, while special rooms have been set apart for the convenience of lady students.

Sir Patrick Dun's Hospital.

Her Excellency the Countess Cadogan recently paid a private visit to this hospital, and was conducted round the wards by Miss Huxley, Dr. Walter Smith, and Dr. C. B. Ball, the governors of the hospital being represented by the Rev. Dr. Haughton. The annual prospectus for the session 1895–96 has just been issued, the only changes in it being the vacancy in the position of consulting surgeon, caused by the death of the late Sir George Porter, and the appointment of Dr. Edward H. Taylor on the surgical staff in succession to Dr. St. John Brooks, resigned.

Maguiresbridge Dispensary.

At a meeting of the Maguiresbridge Dispensary committee on Sept. 4th Mr. Aiken of Kesh was elected medical officer.

Sept. 10th.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

Death of Professor Luigi Galassi.

WE have lost the dean of our medical faculty in Dr. L. Galassi, Ordinary Professor of Special Pathology in the University, who died on the 31st ult. after a long and painful cardiac disease. Dr. Galassi had a distinguished record as a man of science and as a teacher. He was for many years President of the Accademia Medica di Roma, a member and Vice-President of the Consiglio Superiore di Sanità, Vice-President of the Red Cross, Rector of the University, and President of the Faculty of Medicine. His extra-professional honours were hardly less conspicuous. He was Commendatore of the Crown of Italy and Saints Maurice and Lazarus, Knight of the Crown of Prussia, and the holder of many other decorations of a scarcely inferior order, Italian and foreign. But his life-work was in the clinical ward, the dead-house, the laboratory, and the lecture-room, where his scientific accomplishment and winning powers of exposition and persuasion made him a universal favourite with pupils and colleagues alike. The University displayed its banner, half-mast high and draped with mourning, as soon as his death was made known, and on the 1st inst. a public funeral took place, the pall-bearers being Signor Constantini, Under Secretary of State in the Ministry of Public Instruction; Dr. Panizza, Sanitary Assessor of the Municipality; Professor Monaci (representing the Rector of the University, absent through illness); the Commendatore Silvestrelli, delegate of the Red Cross; the Senator Dr. Todaro, Professor of Anatomy (deputed by the Accademia Medica); Colonel Martinelli of the War Office; Professor Ballori; and Dr. Ciccolini, representing the Medical Aid Society of the Practitioners and Pharmacists of the Province of Rome. The long train of mourners which followed included the leading physicians and surgeons of the city and a numerous body of students, mainly of the medical faculty.

The Petrifaction of the Human Subject.

This, like the cognate art of embalming, is almost an Italian specialty, in which the past master was the naturalist Dr. Girolamo Segato, whose marvellous feats in petrifying the dead and preserving their features and even their complexion for all time are *en évidence* in the Florentine Museum, of which they constitute one of the chief attractions. A highly successful example of his skill—the petrified head of a young woman who had died from pulmonary tuberculosis—had been known to exist, but for sixty years, in spite of every effort to trace it, it was nowhere to be found. His grandsons, anxious to recover this, the last, and perhaps the most striking, specimen of his art, have been indefatigable in the search for it, but without avail until a few days ago, when by the merest chance they alighted on it in Bavaria and immediately took steps, with no small difficulty and outlay, to restore it to the treasures of Italian anatomical science. The numerous "changes of address" it had undergone in those sixty years have done it no appreciable damage; indeed, its preservation is so perfect that in the words of Signor G. Segato fù Andrea, who announces the discovery, "its luxuriant blonde hair, quite wavy and soft, is like that of a living person." Its present provisional place of custody is at Pieve di Cadore, whence it will be transported in a few days to Belluno and kept on view for the inspection of the scientific public, after which it will go either to Florence or, more probably, to some other medical school less rich in specimens of Dr. Segato's peculiar and weirdly fascinating *métier*.

A Health Resort for Rome.

This is no other than Rocca di Papa, 750 metres above the sea level, situated on the southern rim of the Alban Mount, high above all malarious influence. In fact, those who resort to it even when labouring under palustral fever make a speedy recovery from the disease. The mortality of its inhabitants taken from the sanitary returns between 1884 and 1894 has been not more than 18 per 1000, while that of Italy during the same decennium averaged 26·17 per 1000. The air is peculiarly fresh and exhilarating, the walks and mountain paths well shaded, and as for the water (quite recently analysed), it is among the best *acqua potabile* in Italy. The mineral salts are in scanty proportion; ammonia, nitrous acid, and sulphuric acid are wanting; nitric acid exists only in traces; and organic substances are "conspicuous by their absence." Bacteriological examination confirms this favourable finding, while the supply is as abundant as it is pure. The mean temperature may be inferred from the following table, compiled by Professor Lucchesi, director of the Meteorological Observatory on the Alban Mount:—

Average Degrees of Temperature (Centigrade).

—.	Ordinary.	Minimum.	Maximum.
June	15·64	12·22	19·41
July	19·53	15·96	23·24
August	19·39	15·97	23·31
SUMMER AVERAGES...	18·19	14·72	21·29
September	15·89	13·13	19·12
October	11·25	8·60	13·81
AUTUMN AVERAGES...	11·45	8·90	14·15

And yet it is only now that steps are being taken to utilise this charming upland village for the benefit of the Roman population, whether as convalescents or in quest of summer quarters. A good railway and good hotel and *pension* accommodation will shortly, I understand, be made *faits accomplis* and Rocca di Papa be restored to the place it had in Republican and Imperial times as one of the "lungs" of the city, not less conducive to physical than to moral rehabilitation.

Queen Margherita and the Italian Hospital in London.

There is on its way to the Italian Hospital in London another token of the interest taken in the institution by the Queen of Italy. It is a photograph of Her Majesty, sent by Queen Margherita herself and bearing the following autograph inscription: "Possano gl'italiani raccolti in questo luogo ritrovare sotto le benefiche ali della carità la patria, lontana nello spazio ma sempre presente nel desiderio del cuore.—Margherita." (May the Italians gathered together in this place under the beneficent wings of charity be able to find once more their native land—distant, indeed, in space, but ever present in the heart's desire.—Margherita.)

A New Health Resort at Vallombrosa.

As I close this letter I hear from Florence that that city is about to have a much-needed adjunct to her medical resources in the form of a new health resort at Vallombrosa. At the instance of his Excellency Signor Barazzuoli, Minister of Agriculture, and of the Director-General under the same department of Government, there will be established at this salubrious and picturesque station in the Apennines an institution for convalescent patients. Its design and construction have been committed to the experienced hands of Dr. Giuseppe Corradi, Professor of Clinical Surgery in the Florentine School, whose competence in all such undertakings is universally conceded. A pure and abundant water-supply will, as a primary requisite, be immediately provided, and every appurtenance, internal and external, for the use of the resident staff and the patients will be in readiness within a year, the period assigned for the completion of the work. In connexion with the establishment Professor Corradi has also undertaken the enlargement and reappointment of the local hotel, well known as the "Croce di Savoia."

Sept. 7th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Galicia.

SOME three weeks ago the newspapers announced an outbreak of epidemic diarrhœa among the soldiers in the garrison of Przemysl, in Galicia, and some fatal cases of Asiatic cholera are now reported from Tarnopol. This outbreak is attributed to the impurity of the water in the river Sereth and to infection from the adjacent parts of Russia, where epidemic cholera has of late years prevailed. It has not died out there; it has only been dormant, and has recently manifested itself in a sporadic form in Podolia and Volhynia. The Government has sent sanitary experts to advise as to the necessary measures to be undertaken.

Antistreptococcic Serum.

Dr. Marmorek has published in the *Medicinische Wochenschrift* further details on the streptococcus and the serum

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which is not only curative in diseases caused by this microbe but prophylactic as well. As a result of many experiments it has been shown that this coccus may be cultivated in a mixture of two parts of human serum and one part of peptonised bouillon and will maintain its virulence, which may be augmented by a continual passage through the system of rabbits, a dose of 0·000,000,000,01 c.c. (hardly containing more than one streptococcus) being sufficient to kill a rabbit in a short time with symptoms of septicæmia. Some investigators have already succeeded in immunising animals against this microbe by both sterilised and living cultures, the latter producing a higher degree of immunity. The serum is to be taken not earlier than four weeks after the last injection. Its prophylactic energy may be judged from the quantity necessary to immunise a rabbit weighing from 1500 to 1800 grammes against a tenfold quantity of the lethal dose. The serum has been used in numerous diseases caused by the streptococcus—namely, erysipelas (423 cases with a mortality of 3·87 per cent.), angina, phlegmon, and other septic processes. The patient's general condition was advantageously influenced, the temperature being lower and the redness, swelling, and albuminuria being less. In the gravest cases a dose of 20 c.c was injected, followed by 10 c.c. next day, the maximum dose amounting to 120 c.c. Among seven cases of puerperal fever no death occurred, whereas it was given without benefit in cases which were complicated with bacterium coli. Very gratifying results have also been obtained in cases of phlegmon and of pseudo-membranous angina caused by the streptococcus.

Suicide in Vienna.

According to returns made by the Central Statistical Commission the number of suicides in Vienna during 1889-1893 amounted to 1254, equivalent to a rate of 3·2 per 10,000 of the population. Among the corresponding returns of some other Continental towns may be mentioned Paris with 3·6, Brussels with 3·29, Berlin with 2·98, Munich with 1·98, and Breslau with 3·91 per 10,000 of the population. During the seven preceding quinquennial periods 360 cases of suicide occurred in 1854-1858, 367 in 1859-1863, 565 in 1864-1868, 631 in 1869-1873, 1020 in 1874-1878, 1129 in 1879-1883, and 1196 in 1884-1888. Among 100 cases of suicide 77 were men and 23 were women. Adolescents appear to have every year more frequent recourse to this method of terminating their real or supposed miseries, the highest rate being registered at the age of sixteen to twenty-five years. Among 100 suicides 32·5 ended their days by hanging, 23·5 by pistol shots, 22·4 by poisoning, and 5·8 by drowning. With respect to the poisons, cyanide of potassium was resorted to in 12·7 per cent. of the cases, caustic lye in 22·7 per cent., phosphorus in 26·1 per cent., and sulphuric acid in 7·2 per cent. As for seasonal distribution, the proportions were: in January 8·5 per cent., in February 7·6 per cent., in March 8·9 per cent., in April 9·1 per cent., in May 10·5 per cent., in June 8·7 per cent., in July 8·1 per cent., in August 7·2 per cent., in September 7·4 per cent., in October 8·3 per cent., in November 7·8 per cent., and in December 7·9 per cent.

The Inebriates Bill.

The Minister of Justice has at last submitted the Inebriates Bill to Parliament. The medical profession has for a long time urged that the existing laws for dealing with inebriates should be strengthened; it has also long advocated the absolute exclusion of inebriates from lunatic asylums, where they are disturbing elements by reason of their mental superiority. Preceding Governments did not attend to these recommendations; on the contrary, in Galicia, which is a hotbed of alcoholism, it has not infrequently happened that clergymen and other persons who commented on this vice have been reprimanded on the ground that the interests of the distillers might thereby be injured. Thanks to the endeavours of the present Government this difficulty is now apparently overcome, and Austria will have asylums for inebriates such as already exist in Great Britain, in the United States, in Sweden, and in Switzerland. According to the Bill these asylums are to be established either by the State, the province, or the municipality. Detention may be either voluntary or compulsory, but voluntary inmates will not be allowed to leave the asylum at their own option. The compulsory cases will include those who have by their drunkenness brought themselves more than thrice into the police-courts within the last year, drunkards convalescent from mental disease, and those persons who without any mental disease endanger their own interests and those of their family by drunkenness. The inebriates are to be discharged in the event of a reversal of their sentences or after a three years' residence in the asylum. They may also be liberated upon trial after the lapse of one year. The Bill, moreover, provides for punitive measures against attempts to frustrate the successful working of the asylums.

Lunacy Statistics in Lower Austria.

According to the report of the Provincial Government of Lower Austria, the number of lunatics at present amounts to 2636. Of these, 932 are in Vienna, 196 in Langenlois, 541 in Ybbs, 487 in Kierling, 407 in Klosterneuburg, and 73 in Mödling. Among the 498 male patients detained in the Vienna Asylum there are 60 officers, 1 lawyer, 3 architects, 5 writers, 5 professors, 2 clergymen, 7 merchants, 340 workmen, 19 farmers, 33 servants, 2 foresters, and 21 of no definite occupation.

Sept. 4th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Jenner Centenary in Russia.

IN connexion with the centenary of the introduction of vaccination, which is to be commemorated next year,[1] the Russian National Health Society offers four prizes for the best literary work upon small-pox and vaccination, under the following conditions. The essays may relate either, firstly, to the general question of small-pox and vaccination, or, secondly, to the technique of vaccination itself. Under the first heading are mentioned: (*a*) text-books on vaccination; (*b*) historical, medico-geographical, and medico-statistical works; (*c*) clinical, pathological, bacteriological, or chemical investigations; and (*d*) popular works on the utility of vaccination. Under the second heading are mentioned: (*a*) essays on the preparation of vaccine lymph and the best methods of preserving and transmitting it; (*b*) new suggestions as to the best forms of instruments used for vaccinating man and animals; and (*c*) suggestions for a model vaccination institute. Authors are not limited to any one of the above, and other aspects of the subject may be treated of in the essays. The essays may be written in either Russian, French, German, or English; they may be in manuscript or print, but must not have been printed anterior to May 2nd (14th), 1894. They must be sent in not later than March 2nd (14th), 1896, addressed to the Council of the Russian National Health Society, Dmitrovski Pereoulok No. 15, St. Petersburg. Authors may sign their own names or may write over a pseudonym, in which case they must send their own names in a sealed envelope. The first prize will be a gold medal and 1000 roubles (100 guineas approximately); the second and third, gold medals; and the fourth, a silver medal. The essays will be judged by a special commission and the results announced on the day of the centenary, May 2nd (14th), 1896.

Russian Mushrooms.

Mushrooms are found in immense quantities in the Russian forests. They form not only an important item in the diet of the peasant, but are also a considerable article of trade. There are some places, such as Vilkovishki (on the main line between Berlin and St. Petersburg), the inhabitants of which exist entirely by the sale of mushrooms. Kargopol again sends yearly to St. Petersburg as many as 5000 poods (a pood is thirty-six English pounds) of the fungi, representing in money value some thousands of pounds. M. Nadson recently read a very interesting lecture at the Botanical Gardens in St. Petersburg throwing much light upon the whole subject, particularly as to the differences between edible and poisonous forms of mushrooms. Fortunately, the poisonous forms are comparatively rare in Russia; but here, as elsewhere, there is no golden rule to distinguish them from the harmless. The lecturer mentioned an enormous number of varieties of both kinds; the most fatal seems to be the "pale *poganka*"; cases of poisoning from this form of toadstool have a mortality of 75 per cent. In Siberia the Samoyeds, Ostiaks, and Kamtchadales have long known the intoxicating properties of one form of mushroom—the *mukhomor*. Sometimes alone, sometimes mixed with the juice of a certain berry (the *golubika*), they make from it an

[1] THE LANCET, Aug. 10th, 1895.

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infusion which has a stupefying effect similar to that of opium or hashish.

Diphtheria: Antitoxin Statistics.

The following figures are from the government of Podolia. They are published by Dr. Zabolotnui in a local journal and quoted in the *Meditzinskoé Obozriénié*. In 109 cases proved bacteriologically to be true diphtheria injections of anti-diphtheritic serum were employed. The number of deaths was 14; the percentage death-rate was, therefore, 12·8. Previously, under the older forms of treatment, the death-rate had been 48 per cent. Prophylactic injections were given to 228 healthy persons, stated to be members of families in which cases of diphtheria had occurred. None of these persons contracted the disease. Dr. Zabolotnui himself underwent the treatment for an attack of diphtheria and describes graphically the rapid subjective improvement after the first injection; the disappearance of headache and of the apathetic state into which he had fallen, with corresponding rise in spirits and improvement in all the specific symptoms. The temperature fell from 39·6° C. to normal after the second injection.

St. Petersburg, Aug. 19th (31st).

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Protection of the Inmates of Hospitals against Fire.

AT the last session of the Legislature of the State of New York a law was passed which provides that all hospital buildings used for general hospital purposes, or asylums or hospitals for the insane, or any hospital buildings that are more than two storeys high shall have properly constructed iron stairways on the outside thereof, with suitable doorways leading thereto from each storey above the first for use in case of fire. It shall be the duty of the trustees, managers, owners, or proprietors of such hospitals or asylums to cause such stairways to be constructed and maintained. If the trustees or owners of any hospitals, except those owned and maintained by a city, a county, or the State, shall fail to provide such stairways before Oct. 1st, 1896, then the local authorities shall proceed to erect such stairways, and the cost thereof may be recovered by an action at law from the property of the said hospital. The district attorney of each county is charged with the execution of this statute, except in the case of hospitals erected by the State, city, or by a county. This law is to take effect on Oct. 1st, 1895.

Temperance v. Crime.

In the annual report of the State Board of Pardons of Ohio attention is called to the fact that the board has in most cases deemed it prudent to include in the recommendation for pardon a condition requiring abstinence from the use of intoxicating liquor. This is done in the belief that it will lessen the liability of the pardoned prisoner to again commit the crime. "It is a conspicuous fact," says the report, "that in nearly every case of crime against the person the offender was either under the influence of liquor or became involved in an affair by reason of being in a place where intoxicating liquor was sold."

A State Board of Health commended by the Legislature.

The State Board of Michigan, one of the oldest and most useful health organisations of this country, has recently been investigated with gratifying results. The committee concludes as follows: "Your committee find that the Michigan State Board of Health, as at present organised, is one of the most useful and worthy of the departments of our State government. Through it the people have received the unrequited and the unselfish labours of distinguished citizens of our State who stand pre-eminent among the sanitarians of the country. The board has attained a renown second to none among all similar organisations in the world. It has organised and developed a public health service in this State second to none in efficiency, and which has added to the health, life, happiness, and prosperity of our people. It has materially reduced sickness and deaths from several preventable causes, and it is a demonstrable fact that these labours have resulted in an actual money saving to the people of this State many fold more than their cost."

Obituary.

PROFESSOR DE SURY.

THE Swiss school has just lost one of its most distinguished representatives in Dr. Ernest de Sury, Extraordinary Professor of Legal Medicine in the University of Bâle.

Born of a good old Helvetian family at Soleure on April 30th, 1850, de Sury when still a boy removed with his parents to Bâle, where his education was thenceforward carried on. At the university he became a zealous and proficient student of medicine and graduated with great distinction in 1874. His first professional post was that of assistant physician in the lunatic asylum at St. Gall, which he held with much acceptance for four years, until, finding himself too isolated for scientific, especially clinical, observation, he returned to Bâle. There his exceptional ability, his pleasant address, and his high integrity rapidly drew round him an influential *clientèle*. He was particularly successful with that class of patients who have contracted the "invalid habit" till they seem almost to nurse their ailments and pride themselves on proving that their case at least is too difficult for medicine. It was here his alienist experience happily intervened, not a little aided by a geniality which disarmed querulousness. The same characteristic made him extremely popular among the poor, his skill, always at their service, being enhanced by a generosity so delicate that he never burdened its object with the sense of obligation.

His connexion with the University of Bâle dates from 1880, when he opened a "cours libre" in forensic medicine. His lectures were largely attended and numbered many "post-graduates" among their hearers. In recognition of his philanthropy and public spirit, especially in behalf of the poor, he received the freedom of the city of Bâle in 1883 and in 1887 was elected to the Grand Council of State by the constituents of the Spaten quarter. He was a member of not a few commissions, on which his judgment and experience, professional and lay, were of conspicuous service, particularly on the commission for making assurance against illness compulsory, and that for reserving the Sundays intact for the repose of the working man. In 1890 he was promoted by the University as Professor Extrordinary of Legal Medicine, and was in the zenith of his powers and his popularity when, on the 26th ult., he was suddenly cut down.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ignacio Pirovano, formerly Professor of Clinical Surgery in Buenos Ayres.—Dr. Valentini, Surgeon-General in the Prussian Army, at the age of seventy-seven.—Dr. Slawczynski, one of the oldest and most respected members of the medical profession in Berlin.—Dr. Friedrich Miescher, formerly Professor of Physiology in Bâle, at Davos, after a long illness, at the age of fifty-one.—Dr. Pasquale Landi, Professor of Surgery and Operative Medicine in the University of Pisa, aged seventy-nine.—Dr. Texier, Professor of Internal Pathology in the Medical School of Algiers.—Dr. E. Góth, Extraordinary Professor of Midwifery and Gynæcology in the University of Clausenburg.—Dr. Francesco Bertè, Professor of Anatomy in Catania.—Dr. W. C. Jarvis, Professor of Laryngology in the University of New York.—Dr. Luigi Galassi, Professor of Special Medical Pathology in the University of Rome.

VACCINATION GRANT.—Mr. C. M. Leakey, L.S.A., of Caistor, has received for the second time a grant for successful vaccination as public vaccinator for district No. 2 of the Caistor Union.

THE following members of the medical profession have been selected for admission to the Order of the Hospital of St. John of Jerusalem in England, or enrolled as Honorary Associates of the order:—As Knights of Grace: Mr. Charles Edward Milnes Hey, M.R.C.S.; Sir William Overend Priestley, M.D., LL.D.; Deputy-Inspector-General Belgrave Ninnis, M.D., R.N. Enrolled as Honorary Associates: Mr. Reuter Emerich Roth, M.R.C.S., of Sydney, New South Wales; Mr. John Edward Squire, M.D.; and Mr. Alfred Croudson Tunstall, M.D.

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Medical News.

APOTHECARIES' HALL.—The following candidates passed the Preliminary Examination in Arts on Sept. 6th and 7th:—

First Class.—None.

Second Class.—F. G. Cross, O. B. Gauntlett, F. S. S. George, C. J. Graham, G. W. Greene, J. W. Harrison, M. Mulrhead, D. S. Sandiland, and F. W. Smith.

The following passed in one or more subjects:—

N. Hodgetts, S. C. Jellicoe, A. B. Muscott, T. Richards, S. Rogers, and H. Tilbury.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bâle:* Dr. R. Metzner of Freiberg has been appointed to the chair of Physiology in succession to Dr. Miescher, resigned. Dr. Fritz Egger has been recognised as *privat-docent* in Medicine.—*Barcelona:* Dr. Gil Saltor Lavali, Professor of Histology, Normal and Pathological, has been appointed to the chair of Surgical Pathology.—*Breslau:* Dr. A. Buchwald, *privat-docent* in Medicine, has been granted the honorary rank of Professor. Dr. Jacobi has been appointed Professor of Forensic Medicine.—*Bonn:* Dr. Finkler has been promoted to the Ordinary Professorship of Hygiene.—*Columbian University, Washington:* Dr. W. Reed has been appointed to the chair of Bacteriology and Pathology, and Dr. M. T. Phillips to that of Hygiene.—*Catania:* Dr. M. Guzzardi has been recognised as *privat-docent* in Surgical Pathology.—*Granada:* Dr. Rafael Mollá y Rodiguez of Havana has been appointed Professor of Clinical Surgery.—*Genoa:* Dr. Canalis has been promoted to the Ordinary Professorship of Hygiene.—*Greifswald:* Dr. Enderlen has been recognised as *privat-docent* in Surgery.—*Harvard University:* Dr. Harold C. Ernst has been appointed Professor of Bacteriology.—*Leipzig:* Dr. Eigenbrodt of Bonn has been recognised as *privat-docent* in Surgery.—*Naples:* Dr. Gennaro de Luca has been recognised as *privat-docent* in Medical Pathology, and Dr. C. Conca as *privat-docent* in Materia Medica and Pharmacology.—*New York (Policlinic):* Dr. Wilbur B. Marple has been appointed Professor of Ophthalmology, Dr. W. R. Pryor Professor of Gynæcology, and Dr. W. R. Townsend Professor of Orthopædic Surgery.—*Prague (German University):* Dr. Ewald Hering has been recognised as *privat-docent* in Experimental Pathology. *(Bohemian University):* Dr. O. Frankenberger has been appointed *docent* in Laryngology and Rhinology; Dr. J. V. Rohon has been appointed Extraordinary Professor of Histology.—*St. Petersburg (Military Medical Academy):* Drs. Petersen, Mochukovski, and Hitikin have been made Honorary Professors.—*Tomsk:* Dr. F. Krüger of Iurieff (Dorpat) has been appointed Extraordinary Professor of Medical Chemistry.—*Tübingen:* The names mentioned for the chair of Ophthalmology vacant by the death of Dr. Nagel are Drs. Berlin of Rostock, Uhtoff of Marburg, and Schleich of Stuttgart.—*Würzburg:* Dr. K. Rieger has been promoted to the ordinary Professorship of Psychiatry.—*Zürich:* Dr. H. von Wyss has been appointed Extraordinary Professor of Forensic Medicine.

THE DRUG, CHEMICAL, AND ALLIED TRADES EXHIBITION.—As announced in our issue of Aug. 16th, the Drug, Chemical, and Allied Trades Exhibition, was opened on the 10th inst. at the Agricultural Hall. Though the display, compared with some of the huge exhibitions held in the Agricultural Hall from time to time, was small it was not devoid of interest, and the freedom of space between the exhibits afforded an opportunity of comfortable inspection and a relief from the usual crowded state of exhibitions of this kind. Viewed as a first attempt, moreover, the attendance of a fairly large proportion of visitors, especially in the evening, must have proved a source of encouragement to the organisers. Drugs were well represented, as were also mineral waters, artificial and natural; while glass-blowing and improved methods of distilling, percolation, &c., and other processes incidental to the preparation of pharmaceutical substances, afforded subjects of peculiar interest to those closely connected with the drug industry and allied trades. This inaugural movement is, we think, one deserving of support, since, apart from its inevitable commercial aspects, it should possess a distinctly educational value inasmuch as it is calculated to spread a knowledge of the improvements and progress that are desirable in so important a branch of industrial affairs as pharmacy and manufacturing chemistry.

THE LATE MR. REESE OF YSTRADGYNLAIS.—The very sudden death of Mr. Reese, L.F.P.S. Glasg.—who was instantly killed by lightning while on his way to visit a patient—created such an amount of sympathy and kindly feeling, not only among the workmen to whom he acted as medical attendant, but also among the public at large, that a general desire has been expressed that funds should be collected for a memorial stone to be erected upon his grave and a testimonial in money to be presented to his widow. On Aug. 7th a public meeting was held, at which a committee was formed and officers appointed, whose names appear below, for the purpose of collecting funds, and they have every confidence that their appeal will receive a liberal response when sympathisers know that Mr. Reese had not insured his life and that his widow and eleven children, four of whom are quite young, have been left unprovided for. Chairman: Mr. John Rees, M.E., Seven Sisters, Neath. Hon. secretary: Mr. Thos. Watkins, Castle Bank, Ystradgynlais. The Rev. E. L. D. Glanley, Rector of Ystradgynlais, has kindly consented to act as treasurer.

VISIT OF THE SHAHZADA TO ST. THOMAS'S HOSPITAL.—The Shahzada, attended by Sir Michael Biddulph, Sir Adalbert Talbot, Sir Acquin Martin, Surgeon-Major Leahy, Colonel Mahomed Husan Khan, Colonel Mahomed Akram Khan, and other members of his suite, visited St. Thomas's Hospital on Aug. 31st. His Highness spent the whole afternoon in the wards of the hospital and in the medical school. He inquired as to the foundation of the hospital, the manner in which it was supported, and then personally inspected the whole working of the institution, visiting the wards, examining the surgical appliances, and asking for a demonstration of the whole method of carrying out antiseptic surgery in the operating theatre. The arrangements for heating, ventilation, cooking for the patients, the dispensing of medicines, and the recording of hospital cases were also studied by him with much interest. The Shahzada also visited the Nightingale School for Nurses; and he minutely inspected the whole arrangements for the teaching of students in the Medical School. The Pathological and Anatomical Museum especially attracted his interest, and he asked for information regarding medical education in this country and discussed what he saw with the members of his staff present. His Highness, besides warmly expressing his thanks for what had been shown him, was pleased to make a generous donation of £150 to the fund at present being raised to clear off the debt and completely open the hospital.

LITERARY INTELLIGENCE.—The works promised by Messrs. J. & A. Churchill to be ready for the winter session include "Mental Physiology, especially in its relation to Mental Disorders," by Dr. Hyslop, assistant physician, Bethlem Royal Hospital, and the third edition of Dr. Clowes' and Mr. Coleman's "Quantitative Chemical Analysis." The same firm also announce that they have the following works in preparation: "A Manual of Midwifery," by Dr. Lewers, obstetric physician to the London Hospital; "A Students' Text-book of Mental Diseases," by Dr. Percy Smith, resident physician and medical superintendent, Bethlem Royal Hospital; "A Handbook of Diseases of the Eye," by Mr. Jessop, ophthalmic surgeon to St. Bartholomew's Hospital; a fifth edition of Dr. Lloyd Roberts' "Practice of Midwifery"; a third edition of Mr. Jacobson's "Operations of Surgery"; and Professor Reynolds Green's second and concluding volume of his "Manual of Botany," treating of the classification and physiology of plants.—Messrs. Longmans will shortly publish "The Life of Sir Henry Halford, Bart., G.C.H., M.D., F.R.S., President of the Royal College of Physicians, Physician to George III., George IV., William IV., and to Her Majesty Queen Victoria," by William Munk, M.D., F.S.A., Fellow and late Vice-President of the Royal College of Physicians of London. Also "The Life and Letters of George John Romanes, M.A., LL.D., F.R.S." Written and edited by his wife. This life of the well-known naturalist, the friend and disciple of Darwin, includes correspondence between Mr. Romanes and Mr. Darwin; also many of Mr. Romanes' letters to scientific men and to private friends.—Her Royal Highness Princess Christian has accepted the dedication of a new novel, entitled "Perfect Womanhood," from the pen of Mr. Frederick James Gant, F.R.C.S. Eng. It will be published at the end of September by Messrs. Digby Long and Co.

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LIFE-SAVING AND AMBULANCE WORK ON THE SOUTH COAST.—With its usual crop of bathing casualties the past summer, more, perhaps, than has been the case in any previous year, has been noticeable on the south coast for the long list of rescues and restoration to consciousness of the apparently drowned. At Brighton the police have been several times publicly complimented by the magistrates on their promptitude in the matter of first aid. Quite recently a soldier, brought from the sea in an absolutely unconscious condition, was practically resuscitated by the efforts of a constable. In reference to the fireworks fatality in Preston-park, on which occasion no less than a score of cases were treated at the Sussex County Hospital, it was stated at the inquest that but for the good use made by the police of their ambulance training the deaths must have been more numerous. Both in Brighton and Hove a large majority of the policemen have passed one or more of the St. John examinations. In the matter of rescue it has been especially gratifying to note the bravery of onlookers at an accident. At Portsmouth last week a yacht capsized, and at once two men swam to the rescue, one of whom, entangled in the sunken shrouds, had to be himself aided. Here no life was saved. At Worthing a young man fetched a bather from the bottom and induced respiration artificially afterwards by means of half an hour's hard work. At Eastbourne, Hastings, and on the rivers the same thing has been done more than once. The Royal Humane Society's awards have been made in many of these instances, and they have done much to keep before the public the undoubted value of life-saving and ambulance instruction.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Close of the Session.

THE short session of the new Parliament, which opened on Aug. 12th, was brought to a close on Thursday, Sept. 5th, when the Queen's Proclamation was read in the House of Lords.

HOUSE OF COMMONS.

THURSDAY, AUG. 29TH.

Health of the Troops at Aldershot.

Mr. Brodrick, Under Secretary of State for War, replying to a question by Mr. Pierpoint, said that during the last six months there had been admitted to the hospitals at Aldershot 137 cases of diphtheria and 525 cases of sore-throat. In the latter the returns did not differentiate septic sore-throat. In the diphtheria cases the type had been that known as "benign," and they had readily yielded to the antitoxin treatment, only one death having resulted from this complaint. Although full investigation was made, in none of the cases could the origin of the disease be definitely traced. Some medical officers, however, were inclined to ascribe its prevalence and that of septic sore-throat to the recent necessary opening up of the old drains for the purpose of reconstruction. The question was engaging most careful attention.

The Government and the Unemployed.

Mr. Herbert Lewis addressed a question to the First Lord of the Treasury asking whether the Government intended to take any, and if so what, practical steps to obviate distress arising from want of employment during the coming winter. The reply to this question was made by Mr. Chaplin, President of the Local Government Board, who said that the Government fully appreciated the importance of the subject, and would watch very closely any increase of destitution due to want of employment, with every desire to render such assistance as circumstances admitted if and when the conditions during the coming winter foreshadowed by the hon. member should unhappily arise.

Insanity and the Use of Alcohol.

Mr. McKillop addressed a question on this subject to the Local Government Board, and Mr. Jesse Collings replied that he was afraid it would be impossible to obtain a return by the medical officers of asylums in the United Kingdom showing what percentage, if any, of the patients in their experience suffered from temporary or general madness arising from the presence of fusel oil, ether, methylated spirits, antimony, or other adulterant poison in spirits consumed by the people of the country; but he would consult the Commissioners in Lunacy to ascertain whether it were possible, and he would communicate with the hon. member. In the report of the Lunacy Commissioners for the present year the hon. member would find a return of the cases of insanity caused by intemperance generally. The proportions were 20 per cent. of males and 8 per cent. of females. The hon. member would find the exact figures in the report and other information bearing on the question of insanity and intemperance.

The Local Government Board in Ireland.

The vote for the salaries and expenses of the Local Government Board in Ireland gave rise to a long discussion at this sitting with regard to various matters connected with public health in Ireland.

Mr. Power called attention to the want of hospitals for the accommodation of persons who could afford to pay a little towards their maintenance.

Mr. Tully complained of the increase in the vote in respect of vaccine lymph, declaring it to be due to indiscriminate and wholesale revaccination carried on in some districts. He also called attention to night nursing in union hospitals and to the accommodation of pauper lunatics.

Mr. Farrell criticised at length the constitution of the Board.

Mr. Gerald Balfour, the new Chief Secretary for Ireland, replying to these and other speeches, claimed for the Local Government Board that it had not been remiss in dealing with special cases of distress in Ireland, and announced that he himself intended at a very early period to visit the poorer districts and see with his own eyes the exact state of things. He admitted that the treatment of the sick in workhouses left very much to be desired, and he assured the House that the Local Government Board were at the present time doing their utmost to induce guardians to improve the condition of things in their hospitals, and more especially the system of night nursing; but, as he had said before, it was not unwillingness but want of resources that prevented the guardians in poor unions from doing better things for the sick in their hospitals. There was a great deal to be said in favour of sending pauper lunatics to asylums instead of to workhouses, but he feared that at present there was not sufficient accommodation in the existing asylums to receive all the pauper lunatics.

Mr. Power, speaking as a Poor-law guardian in the Cork Union, said that he had seen something of asylums for pauper lunatics in Ireland, and he regarded these institutions as a public scandal. The medical officers were at work early and late and were most inadequately paid.

Mr. Arthur O'Connor invited the Chief Secretary to consider the treatment of paupers in England and compare it with what he found in Irish workhouses. Let him compare the dietary scales in English and Irish workhouses. Let him then consult any medical authority he chose upon what was necessary to keep a human being in normal health, and he would find in no English prisons or workhouses was such a dietary scale known as prevailed in Irish workhouses. According to all medical testimony the whole dietary scale in Irish workhouses was far inferior to that in English workhouses. For many years his efforts to induce different Irish Secretaries to deal with this question had failed, but he was bound to say that he had great hope that the present Chief Secretary would remedy the evil if he found that it really existed.

Mr. Gerald Balfour delivered another speech, in which he undertook to consider in a sympathetic manner the different points that had been put before him.

FRIDAY, AUG. 30TH.

Factory Laws on the Continent.

Sir Matthew White Ridley said, in reply to Mr. Drage, that his attention had been called to the report of the Chief Inspector of Factories for the year 1894, and the *précis* drawn up by one of Her Majesty's inspectors (Miss Anderson) of the regulations under the factory laws of France, as well as the general regulations with respect to sanitation, ventilation, and the restrictions placed on the employment of women and children in French industrial establishments. He had communicated with the Chief Inspector of Factories, who told him that he hoped to include in the next annual report a *précis* of the Austrian and German law on the same subjects.

The Marching Powers of the Army.

Mr. Brodrick said that the attention of the Secretary of State for War had been drawn to the statements as to the number of soldiers in the force now mobilised for the manœuvres in the New Forest who were unable to keep up with their regiments and had fallen out of the ranks on the line of march, and he had called for full reports on the subject from the general officer commanding. Until these reports were received no opinion could be expressed as to defects in marching or as to the causes of such defects. The Secretary of State was alive to the importance of good marching under service conditions, and the results of the manœuvres in this respect would be carefully considered by the military authorities.

MONDAY, SEPT. 2ND.

The Water-supply of London.

On the motion of Sir Albert Rollit a return was ordered showing as regards each water company supplying water in the metropolis—(*a*) the name of each metropolitan parish where the supply throughout the parish is a constant supply; (*b*) the name of each metropolitan parish where the supply is a constant supply only in part of the parish, and, in the case of each such parish, a description of the part of the parish where the supply is constant; (*c*) with respect to each parish at whose instance the constant supply was ordered or given; (*d*) the name of each metropolitan parish where the supply throughout the parish is intermittent; (*e*) the name of each metropolitan parish where the supply is intermittent only in part of the parish, and, in the case of each such parish, a description of the part of the parish where the supply is intermittent; and (*f*) with respect to each parish or part of a parish where the supply is intermittent the period during which water is supplied daily to the premises of consumers.

The Boots of the Army.

Mr. Brodrick, answering a question put by Mr. R. G. Webster, said that, owing to the difficulty of obtaining hand-sewn boots fully up to standard in sufficient quantities for the requirements of the army, it was decided some years ago to restrict the issue of hand-sewn infantry boots to regiments serving abroad. The machine-sewn boot issued at home was somewhat cheaper, but there was no reason to suppose it was less durable. It was, however, unquestionably stiff and heavy, and experiments were being made with the view of introducing a lighter and more flexible boot. The shape of the boot would also be considered.

Ventilation and Sanitation of the Houses of Parliament.

Mr. Akers Douglas, replying to a question by Mr. Weir, said that his attention had been directed to the subject of the ventilation and sanitation of the Houses of Parliament, and he would further consider it during the Recess. His examination of the question so far led him to regard with confidence the general system which was now in operation, and which was supported by the decisions and recommendations of the Select Committees which had so recently investigated the matter. He was not at all prepared to adopt the views of Mr. Keith, whose knowledge of the arrangements appeared to be imperfect. In some parts of the building there was, he thought, room for improvement in the ventilation, and these would be carefully looked into.

The Case of Dr. Herz.

Mr. Byron Reed asked the Under Secretary of State for Foreign Affairs whether the British and French Governments had come to an

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agreement regarding the modification of the extradition laws between the two countries, so that for the future any person whose extradition was demanded might be examined at his residence without being arrested; and, if so, whether it might be understood that this applied to the case of Dr. Cornelius Herz.—Mr. Curzon replied that Her Majesty's Government had suggested to the French Government that a supplementary convention should be signed in order to give effect to the Extradition Act (1895), and had reason to hope that there would not be any difficulty in coming to an agreement. No convention had, however, yet been signed.

TUESDAY, SEPT. 3RD.

Provision for the Aged Poor.

Mr. Balfour, in reply to a question with regard to the form the proposed further inquiry into this subject will take, said that he could not make any final statement, but the inquiry would not be by a committee of this House, but would probably be departmental. If it was he trusted it might be at work before the next session of Parliament.

Post-mortem Examinations in Scotland.

Mr. Caldwell asked the Lord Advocate to explain why it was that in the case of William Agnew, shoemaker, Glasgow, who was tried for murder at Glasgow on the 29th ult. and acquitted, the Crown refused permission to medical men appointed by the prisoner to be present at the post-mortem examination of the deceased. This matter, he said, was causing very great interest in Glasgow. He did not believe that in any other country in the world a prisoner would have been refused the application to have two medical men present on the occasion of the post-mortem examination. It was a case of circumstantial evidence, and it was known that the most material link would be the post-mortem examination by the medical men. Accordingly the prisoner applied that two medical men, whose names were mentioned to the Procurator-Fiscal—men of eminence in Glasgow—should be present on his behalf, and the application was refused by the Crown authorities. The matter would obviously not stand reasoning, for undoubtedly a prisoner was entitled to bring forward medical evidence to rebut that of the prosecution, and it was essential for the defence that they should have all the material necessary to present their case.

The Lord Advocate replied that as soon as he began his duties he found that this matter was prominently brought before him, and he hoped it would content the hon. member if he answered him that his predecessor had only commenced an inquiry into the expediency of any modification of the practice in this matter. He had succeeded to that inquiry, and was prosecuting it as actively as he could. He said that without any pronouncement one way or the other as to the expediency of changing the practice, but no one knew better than the hon. member that it had been the practice of many successive Lord Advocates to hold to the principle that in conformation with the Scotch system of criminal inquiry—which he had yet to learn did not possess the confidence of the public—the Lord Advocate and the Crown officials had always held that it was within their discretion in each particular case to allow the presence of outside medical men. At the necropsy a prisoner could on application obtain an investigation for himself; but to allow outside medical men to be present at the post-mortem examination which was made on behalf of the Crown was a question which could not be decided offhand. He did not think the hon. member was correct in saying that the medical profession in Glasgow were unanimous on the subject. He had evidence, at all events, that certain members of the profession in Glasgow did not take that view. But he did not think it would be appropriate on this occasion and at this stage of the inquiry which was now going on to say anything further.

WEDNESDAY, SEPT. 4TH.

A Herbal Specific for Hydrophobia.

Mr. Farrell asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the death from hydrophobia, at Hyde, of a young man named Haywam, who had been previously treated for that disease at the Paris Pasteur Institute. Whether he was aware that Philip McGovern, of Glan, county Cavan, claimed to possess a specific herbal remedy for the treatment of this disease, which had resulted in the cure of thousands of cases since the days of King Charles I. And whether, having regard to the necessity of doing something to cope with the increase of rabies, the Government would cause an inquiry to be made into the efficacy of this remedy, with a view to its adoption and use in some central hospital in Dublin or elsewhere.

Mr. Gerald Balfour replied that his attention had not been called to the unfortunate occurrence mentioned in the first paragraph of the question, nor was he aware of the remedy for hydrophobia for which Philip McGovern claimed so much efficacy. As regarded the last paragraph, he was afraid he must maintain the same attitude of caution and reserve which, to judge from the hon. member's question, had been adopted by Irish Governments ever since the days of Charles I.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Illustrations of Pathological Anatomy. By Professor Dr. A. Kast and T. Rumpel. English edition, revised and edited by M. A. Ruffer, M.D. Oxon. Parts 9, 10, 11, 12.

CASSELL AND CO., London.

Diseases of the Joints and Spine. By Howard Marsh, F.R.C.S. New and revised edition. Illustrated. 1895. pp. 532. Price 12s. 6d.

CHAPMAN AND HALL, London.

Dialogues of the Day. Edited by Oswald Crawfurd. Illustrated. pp. 262.

Some Old Love Stories. By T. P. O'Connor. 1895. pp. 337.

CHURCHILL, J. & A., New Burlington-street, London.

Mental Physiology, especially in its relation to Mental Disorders. By T. B. Hyslop, M.D. 1895. pp. 552. Price 18s.

EDWARDS AND DOCKER CO., Philadelphia.

Modern Medicine and Homœopathy. Two Addresses by J. B. Roberts, A.M., M.D. 1895. pp. 69.

GRIFFIN, CHARLES, AND CO., Exeter-street, Strand, London.

Outlines of Practical Physiology. By William Stirling, M.D., Sc.D. Third edition. Illustrated. 1895. pp. 402. Price 12s. 6d.

KEGAN PAUL, TRENCH, AND CO., Charing-cross-road, London.

The Origin of Plant Structures by Self-adaptation to the Environment. By the Rev. G. Henslow, M.A., F.L.S., F.G.S. 1895. pp. 256.

The Two Thrones, &c. By John A. Goodchild. 1895. pp. 256.

LIVINGSTONE, E. & S., Edinburgh.

The Student's Practical Materia Medica. By G. H. Giffen, L.R.C.P. and S. Edin. 1895. pp. 88. Price 2s. net.

LONGMANS, GREEN, AND CO., London.

The Stark Munro Letters. Edited by A. C. Doyle. 1895. pp. 346. Price 6s.

MALCOLM, A., Ann-street, City, Glasgow.

A Trip to Chicago. By M. C. Ward, M.D. 1895. pp. 124.

PHILIP, GEORGE, AND SON, Fleet-street, London, E.C.

The English Lakes. By H. R. Mill, D.Sc., F.R.S.E. With Maps and Illustrations. 1895. Price 3s. 6d.

REBMAN, F. J., Adam-street, Strand, London.

The Law and Chemistry of Food and Drugs. By H. M. Robinson, LL.D. Lond., and C. H. Cribb, B.Sc. Lond., F.I.C. 1895. pp. 499.

RENSHAW, HENRY, Strand, London.

Principles of Forensic Medicine. By W. A. Guy, M.B. Cantab., F.R.S., and D. Ferrier, M.D., LL.D., F.R.S. Seventh edition, revised by W. R. Smith, M.D., D.Sc., F.R.S. Edin. 1895. pp. 832.

SIMPKIN, MARSHALL, AND CO., London.

The Woman who Wouldn't. A Novel. By Lucas Cleeve. 1895. pp. 225.

STOCK, ELLIOT, 62, Paternoster-row, London, E.C.

The Origin and Nature of Man. By S. B. G. McKinney. 1895. pp. 95.

STOCK, W., Paternoster-square, London, E.C.

The Growth of the Brain: a Study of the Nervous System in relation to Education. By H. H. Donaldson. 1895. pp. 389.

STREET AND CO., Cornhill, London.

Orotava as a Health Resort. Illustrated. pp. 62. Price 1s. 6d.

SWAN, SONNENSCHEIN, AND CO., Paternoster-square, London.

An Introduction to the Study of Zoology. By B. Lindsay. Illustrated. 1895. pp. 356. Price 6s.

Studies in the Evolutionary Psychology of Feeling. By H. M. Stanley. 1895. pp. 392. Price 7s. 6d.

Analytical Key to the Natural Orders of Flowering-Plants. By F. Thonner. 1895. pp. 151. Price 2s.

WRIGHT, JOHN, AND CO., Bristol.

Eyesight and School Life. By Simeon Snell, F.R.C.S. Edin. Illustrated. 1895. pp. 70. Price 2s. 6d.

University College, Bristol: Calendar for the Session, 1895-96 (J. W. Arrowsmith, Quay-street, Bristol).—Wright's Improved Physicians' and Consultants' Visiting List; compiled by R. Simpson, L.R.C.P., L.R.C.S.; 1896: third edition (John Wright and Co., Bristol); price 5s. 6d.—Le Paludisme; par le Dr. A. F. Duberge; 1896 (Société d'Éditions Scientifiques, Paris).—Des Dégénérescences secondaires du Système Nerveux; par le Dr. G. Durante; 1895 (Société d'Éditions Scientifiques, Paris).—Bibliographie der Klinischen Helminthologie: Heft 9: Eustrongylus Gigas (Diesing), Trichina Spiralis (R. Owen); von Dr. J. Ch. Huber (J. F. Lehmann, München, 1895).—Medical and Surgical Reports of the Boston City Hospital; sixth series; edited by G. B. Shattuck, M.D., W. T. Councilman, M.D., and H. L. Burrell, M.D. (published by the Trustees, Boston, 1895).—The Exchange Telegraph Company, Cornhill, London; Poll Book, 1885, 1886, 1892, 1895; price 2s.—The Insurance File of the Principal Insurance Offices of the United Kingdom (W. J. West, Queen Victoria-street, London, August, 1895); price 1s.—Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens; Heft 9 (A. Hirschwald, Berlin, 1895).—China Imperial Maritime Customs; Eleventh Special Series; No. 2; Medical Reports for the Year ended Sept. 30th, 1892; forty-third and forty-fourth issues (P. S. King and Son, King-street, Westminster, S.W.)—The Thumb as an Initial Factor of Civilisation; by W. R. Whitehead, M.D. Paris; reprint (Trow Directory Co., New York, 1895).—Magazines for September: Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Pall Mall Magazine, The Picture Magazine, English Illustrated Magazine, Hearth and Home, Our Bubble (a coloured Magazine for Boys and Girls), London, Home, and The Strand Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BENNETT, W. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Otley Urban District.

CAMPBELL, H. I., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed Physician to the Bradford Infirmary.

CHARPENTIER, A. E. L., M.B. Durh., has been appointed Medical Officer for the Uxbridge Sanitary District of the Uxbridge Union.

CRAWFORD, A. D., M.B., C.M. Glasg., has been appointed Medical Officer for the Marston Green Cottage Homes, vice H. W. Thomas.

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DAWSON, W. B., L.R.C.P.I., has been appointed Admiralty Surgeon to Walton-on-Naze.

DOBB, JAMES, L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Golbourne Urban Sanitary District.

EVANS, W. C., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the First Sanitary District of the Hawarden Union.

FEGEN, C. M., M.R.C.S., L.R.C.P., and Diploma in State Medicine, has been appointed Medical Officer of Health to the Ampthill Rural District Council.

GODDARD, C. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Wembley Urban District Council.

GOULD, J. E., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health to the Chesterfield Town Council.

GREENHALGH, T., L.R.C.P., L.M. Irel., M.R.C.S., has been appointed Medical Officer for the Fylingdales Sanitary District of the Whitby Union.

HALL, S. H., M.B., C.M. Edin., has been appointed Medical Officer for the Fusehill and Harraby Hill Workhouses of the Carlisle Union, vice C. S. Hall.

HALLIGAN, A. M. I., L.R.C.P., L.M. Irel., has been appointed Medical Officer for the Ballyroan Dispensary District of the Abbeyleix Union.

HARCOURT, GEORGE R., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer at the Lambeth Infirmary.

HARVEY, R. J., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Assistant Surgeon to the Richmond Hospital, Dublin.

HEAD, JOHN H., B.A., M.D., B.Ch., B.A.O. has been appointed House Surgeon to the Morpeth Dispensary.

JENKINS, J. H., L.R.C.P. Edin., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health to the Lytham Urban District Council.

JOHNSTON, G. JAMESON, M.A., M.B., B.Ch., B.A.O., has been appointed Assistant Surgeon to the Richmond Hospital, Dublin.

LAWS, W. G., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Nottingham and Midland Eye Infirmary, vice E. Beckit Truman, resigned.

LINDE, T., M.D., C.M. Edin., has been appointed Medical Officer for the No. 5 Sanitary District of the Westbury-on-Severn Union.

LOUDON, M M., M.D., M.Ch., L.M.R.C.P. Irel., has been appointed Public Vaccinator for the Arundel District of the East Preston Union.

MACDONALD, J. A., M.B., C.M. Glasg., has been appointed Medical Officer for the Denton District of the Grantham Out-relief Union.

MCINTOSH, L. M., M.D. Dubl., B.Ch., has been appointed Surgeon to the Blackpool Hospital, vice F. A. Heslop, deceased.

MACINTYRE, H., M.B., M.S. Glasg., has been appointed Assistant Medical Officer to the Shoreditch Infirmary.

MINTER, L. J., M.D. Brux., L.R.C.P. Lond., M.R.C S., has been appointed Medical Officer for the Workhouse of the Uxbridge Union.

MONKS, E. HODKINSON, L.R C.P., L.R.C.S. & L.M. Edin., has been appointed Honorary Surgeon to the Royal Albert Edward Infirmary, Wigan, vice W. C. Barnish, deceased.

ORCHARD, E. R., M.B., M.S. Aberd., has been appointed Medical Officer of Health to the Kingussie and Irish Parish Council.

OSBORN, E. C., L.R.C.P. Lond., has been appointed Assistant Medical Officer for the Workhouse and Infirmary of the Parish of Kensington, vice Cooper, resigned.

PEARSE, R. M. F., L.R.C.P. Lond., M.R.C.S., has been reappointed House Surgeon to the Jagersfontein Hospital, Orange Free State, South Africa.

REILLY, F. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Billinge Urban Sanitary District.

ROBERTS, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Malling Rural District Council.

ROBERTS, B. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 1A Sanitary District and the Workhouse of the Hawarden Union.

ROBERTS, F. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Llandrindod Wells Urban Sanitary District.

SHAW, HAROLD, B.A., M.B. Camb., D.P.H., has been appointed Medical Superintendent of the County Asylum of the Isle of Wight.

SPURRELL, CHARLES, F.R.C.S., L.M., L.R.C.P. Lond., has been appointed Medical Superintendent for the Poplar and Stepney District Sick Asylum, vice W. H. Pearce.

STEVENS, R. C. J., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Devon and Exeter Hospital, vice H. H. Lloyd Patch, resigned.

SYLVESTER, K. F., L.R.C.P., L.M., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Melksham Union, vice G. M. Sylvester.

VIGURS, C. R. C., M.R.C.S., has been appointed Medical Officer for the No. 5 Sanitary District of the St. Columb Major Union, vice N. A. Norway, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN CITY HOSPITAL.—Resident Physician at the City (Infectious Diseases) Hospital. Salary £50 per annum with board and residence at the hospital. Applications to the Town Clerk, Town House, Aberdeen.

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, London, S.W.—House Surgeon. Board, fuel, and lights provided.

BETHLEM HOSPITAL, London.—Two Resident Clinical Assistants.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and washing.

CARNARVONSHIRE JOINT SANITARY COMMITTEE.—Medical Officer of Health for five years. Salary £694 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Surgeon, tenable for two years. Salary £100 per annum.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Honorarium, £40 per annum, with board, lodging, and washing. Applications to the Hon. Secretary, Clayton Hospital, Wakefield.

COUNTY BOROUGH OF NEWPORT.—Medical Officer or Health for the Borough and the Port Sanitary District for five years. The salaries amount together to £350. Applications to the Town Clerk.

DURHAM COUNTY ASYLUM.—Junior Medical Officer. Salary £100 per annum, with board and lodging. Applications to the Superintendent, Winterton, Ferryhill.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £100 a year, with board and lodging. Applications to the Hon. Sec., 16, South Bailey, Durham.

ESSEX AND COLCHESTER HOSPITAL.—House Surgeon, single or widower without a family. Salary, £80 per annum, with board and lodging in the hospital. Applications to the Secretary.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

NEW HOSPITAL FOR WOMEN, Euston-road, London.—Medical Woman as Clinical Assistant in the Out-patient Department.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, N.W.—Resident Medical Officer, for four months. Salary at the rate of £60 per annum, with board and residence.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Board, lodging, and washing provided.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, London, W.—Resident House Surgeon. Salary £100 per annum, with partial board.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Assistant Demonstrator of Chemistry.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary not exceeding £30 per annum, with board, washing, and residence in the hospital. Applications to the Secretary, Brighton.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

SHERWOOD.—On the 4th inst., at Eastbourne, the wife of A. P. Sherwood, M.D., of a daughter.

WADHAM.—At Strathfield, Sydney, N.S.W., the wife of Frederick Wadham, F.R.C.S., of a daughter.

MARRIAGES.

BUTLER—SMITH.—On Sept. 5th, at St. Mark's, Surbiton, by the Venerable Archdeacon Burney, assisted by the Rev. R. H. Pring, Charles Butler, M.R.C.S., L.R.C.P., youngest son of the late William Eldridge Butler, late of Le Court, Hants, to Alice Barbara, youngest daughter of the late John George Smith, of Hill House, Surbiton.

DAWES—POVEL.—On Wednesday, Sept. 4th, at St. Edward's Roman Catholic Church, Victoria-park, Manchester, by the Rev. T. Croskell, B.A., Mr. J. W. Dawes, M.B., son of Mr. W. J. Dawes, M.R.C.S., of Longton, Staff., to Marie, second daughter of Anthony Povel, Esq., of Manchester. At home third and fourth week in October. No cards.

HARCOURT—ELLISON.—On Sept. 7th, at Martin Chico, Carmelo, Uruguay, Richard Eugene Harcourt, M.D. Irel., to Mary Duncan, only daughter of John Ellison, Stoneleigh, Anfield, Liverpool.

JOYNSON—PARKINS.—On Sept. 10th, at St. Mark's, Hamilton-terrace, Northwich, Gerald George Joynson, M.R.C.S., L.R.C.P. Lond., of Witton House, to Gertrude, younger daughter of Mr. Parkins, Boundary-road, South Hampstead, N.W.

DEATHS.

BURTON.—On Sept. 6th, at Lichfield-street, Burton-on-Trent, Leonard William Burton, M.R.C.S., second son of Frederic Burton, of Knatchbull-road, S.E., aged 36.

GROSVENOR.—On Sept. 9th, at 9, Greville-place, Maida-vale, London, Elizabeth, the beloved wife of William Grosvenor, L.R.C.P., &c., late of Hanley, co. Staffordshire, and second daughter of the late Daniel Wilshaw, of Talk o' th' Hill, Staffordshire, aged 60.

HODGES.—On Sept. 7th, at Leicester, Frank H. Hodges, F.R.C.S., Ophthalmic Surgeon to the Leicester Infirmary. Friends are requested to accept this intimation.

ROBERTSON.—On Sept. 7th, James D. Robertson, M.D., of The Friarage, Penrith, aged 54.

STEEDMAN.—On Sept. 2nd, at The Lawns, Wellington, Shropshire, John Francis Steedman, M.D. Glasg., aged 78 years.

STEVENSON.—On Aug. 29th, at Whitby, from accidental drowning, Harold Thomas Stevenson, elder son of Thomas Stevenson, M.D., F.R.C.P., of Sandhurst Lodge, Gresham-road, S.W.

WHITNEY.—On Sept. 9th, at Bessborough-gardens, Westminster, formerly of Great College-street, William Underwood Whitney, M.R.C.S.E., aged 82.

WRIGHT.—On Sept. 4th, at Shipston-on-Stour, William Wright, M.D. Edin., eldest son of the late Edward Welchman Wright, M.D., of Shipston-on-Stour, aged 72.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 12th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 6	30·09	S.	67	64	102	75	62	...	Hazy
" 7	29·96	S.W.	64	64	113	80	62	1·53	Raining
" 8	30·24	S.E.	68	61	109	75	60	...	Fine
" 9	30·14	S.E.	63	60	112	81	58	...	Foggy
" 10	29·89	S.W.	67	64	110	75	63	0·09	Cloudy
" 11	29·76	S.W.	61	57	106	68	56	...	Fine
" 12	30·03	S.W.	57	54	82	63	52	0·04	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

PRINCIPALS' CLAIMS TO FEES PAID TO ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—A is an out-door assistant and lives a hundred yards from his principal, B. At 10 P.M., two hours after A has left B's premises and is in retirement and in his dressing-gown, he hears a horse furiously gallop past his door, and knowing it has bolted hurriedly gets up and finds a horse at a standstill a few yards from his door, and a trap smashed all to bits. Learning there have been people thrown out, A hurries on as he is and sends a boy for his cap, thinking the occupants of the trap may be only a few yards from him, but has to go into the country half a mile. There he finds a woman, unknown to him, partly conscious, suffering from injuries to the head, and, receiving the help of another carriage, superintends her removal home and sees her in bed. He asks who is her medical attendant *en route*, and is told that her brother authorises him to call in his principal, B. B has not attended her for some years, but arrives, and B and A minister to her wants. A sees her next morning, but B visits her till her death, which takes place twenty-two hours after the accident from concussion. A gives evidence on citation, and receives the usual fee, which B appropriates, of which A feels aggrieved. A holds that as he went out, as any ordinary Christian would, to render assistance, irrespectively of anyone found injured being anyone's patient, he is entitled to the fee. B holds otherwise. Both B and A would be much gratified by having your opinion. I am, Sirs, yours faithfully,

Sept. 9th, 1895. JUS CIVILE.

*** The case is somewhat exceptional. A acted as "any ordinary Christian" *should*—but not, certainly, as all ordinary Christians *do*—act. And for doing so he has his reward. But that is not exactly in the fees paid by the coroner. These have to be disposed of on professional principles. In so far as he was acting medically he was acting for his principal. The patient's friends wished the principal to be sent for, and doubtless would have sent for him had A not acted with so much prompt humanity as he showed. The case is somewhat out of the ordinary run of cases and one of those in which the fees should be shared equally between the principal and the assistant.—ED. L.

A. and X.—Judging from the statement before us—of course only a one-sided statement—we should say that X has much reason to complain of A's conduct. Let us dismiss one or two questions. The fact that A has only one qualification does not in any way affect X's duty or rights. Again, the question of "covering" does not arise. That offence exists only when an unregistered person is protected by one on the Register. What redress, then, has X? His legal claim to damages is rendered doubtful from the fact that the agreement is only that between an ordinary assistant and his principal, presumably binding him not to practise. But the cards and the plate implying partnership remove the case from an ordinary one of assistant and principal, and give strong colour to X's claim to be regarded otherwise. We could not willingly recommend his setting up in opposition to A if the contract forbids such a course; but in the absence of any such stipulation, and supposing the statement before us to be a complete and unbiased version of the facts, and A to refuse all compensation, we should not think it unreasonable for him to threaten A with commencing practice, subject to a lawyer's approval of the course.

Medicus.—Our correspondent does not give sufficient particulars for us to form an opinion on the *legal* responsibility of the principal. Did the illness arise during the term of service? What were the terms of the engagement between the assistant and the principal? But whatever the legal aspects of the question, no right-minded principal would fail to see that an assistant contracting fever in his service had a great claim on his consideration.

A Poor but Observant Student has not enclosed his name. We do not answer anonymous questions.

Portion of Slate Pencil in the Ear.—Our correspondent is strongly urged to consult a medical man.

PAYMENT OF ASSISTANTS IN ILLNESS.

To the Editors of THE LANCET.

SIRS,—Will you kindly advise me as to what is the proper thing to do in the following case? My assistant takes scarlet fever immediately on returning from his holiday. I will allow he caught it from one of his patients. He has been away for six weeks, and never done a stroke of work during that time. Is he legally entitled to his full salary during this period? He is leaving me, and has written to say he will not return. I am, Sirs, yours faithfully,

Sept. 7th, 1895. B. SEATON COCKELL.

*** The question proposed seems to be one as to the effect of an agreement, and the answer would largely depend upon its terms. But if, as probably is the case, the agreement provides that the service can only be terminated by notice on either side, and contains no provision as to the suspension of salary in case of incapacity from illness, then it would probably be held that the assistant was entitled to payment of his salary throughout the period of illness; but if he takes advantage of his position to break his agreement by discharging himself without proper notice, he would probably be held to have waived his claim to salary accruing due after the date of his becoming incapacitated.—ED. L.

M.A., M.B.—We cannot give an absolutely definite answer on the information before us. A, we suppose, has a perfect right to seek election, as we take it the post is thrown open by advertisement, and we see nothing in the facts before us to enable us to assume that B, because he has been on the out-patient staff, has any absolute right to be transferred to the in-patient, though as a matter of courtesy he naturally would be. But the contention of A that B cannot hold the post of in-patient *physician* because he has previously been *surgeon*, or rather medical officer to the out-patients, cannot be supported.

Mr. T. C. Maguire.—We never prescribe. The class of people mentioned is to be avoided.

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THE PREVENTION OF HYDROPHOBIA.

A CORRESPONDENT sends us the following suggestion:—"That a county where cases of hydrophobia have occurred recently be taken and the dog licence fee be increased to at least two guineas. Such dogs to wear a collar with a special Government registration tally. All other dogs within that county to be done away with, the police to receive remuneration for every dog captured. That all dogs imported into that county shall have a health certificate and undergo a period of quarantine lasting two months (incubation period of rabies being from three to five weeks as a rule). With such measures strictly carried out we should be able to judge in five years or so, and if a very marked diminution in the number of cases of hydrophobia and rabies should occur, then the plan might be adopted over the whole country. In this way all muzzling might be stopped, and there are a great many people who would rather pay their two guineas licence fee than be compelled to put a muzzle on their pet dog each time they take it out."

Forceps.—The claim would not be a strong one; therefore not one to take into court. The patient gave notice beforehand, releasing the practitioner from his engagement. We should not advise any further action.

Mr. J. W. Hill, Snowdrop, Victim, and *M.*—We never prescribe or recommend individual practitioners. Our correspondents should consult their own medical attendants.

Mr. Howard Slater.—The other derivation is usually given as "ad æquales," which certainly seems more plausible than the one our correspondent cites.

Insurance might apply to the Secretary of the Medical Sickness, Annuity, and Life Assurance Society, 33, Chancery-lane, W.C.

A SIMPLE METHOD BY WHICH AN INVALID CAN BE TRANSPORTED BY RAILWAY SO AS TO RECEIVE ABSOLUTELY NO JOLTING.

To the Editors of THE LANCET.

SIRS,—The following details of my method of railway transport for invalids may prove of service to readers of THE LANCET if space for its insertion can be afforded.

If an injury should be of such a nature (spinal, cranial, or other), or if an illness be of such a character (nervous, for example), and in such a situation, as to necessitate removal with absolutely no jolting, a hammock should be procured, having spreaders and stout indiarubber bands between the terminal strings of the netting itself and the particular bands by which the hammock is to be slung. Whether the patient be on the railway line, public road, or in bed, the hammock should be placed under him with as much care as possible. If in bed it can be slipped under the blankets without moving the patient to any extent. Should the place from which the patient is to be removed be some distance from the departure platform, then the patient and hammock under him can be placed on any ambulance conveyance, or on a padded door or shutter, rather than be carried any great distance in the hammock only. Having got the hammock under the patient, and having arrived at the station platform and procured the help of two or three porters, if these should be required, a car of any class is to be reserved. The patient is borne into the car, and the hammock is slung upon the *diagonally opposite* stays of the luggage racks on either side. The rope-ends of the hammock had better be two or three in number at each end than a single one for various reasons, but particularly that one can be hanked on to a neighbouring rack-stay to give a further security, as well as resistance to any lateral swaying there might possibly be. Through the diagonal position of the hammock *in situ* the other diagonal corners of the car are left for attendants or nurses, who can very easily prevent any lateral swaying that might possibly occur *en route* when the train starts or stops, though no one need touch the hammock if extra cords are attached to it, one on each side about its middle, and fastened to an opposite rack-stay.

By the above method a patient can be conveyed from Aberdeen to London with little more shaking than is experienced on a journey from a hospital bed to the operating-room, if it is properly carried out. The apparatus required is so simple and inexpensive that railway companies might have hammocks such as the one described at their principal termini in case of railway accidents, suicides on the line, or for the convenience and advantage of those who for any reason or purpose desire to be removed to their own home or to a hospital when these may be some considerable distance away.

If accident hammocks were provided at the principal railway stations they could be conveyed by return train long distances after being telegraphed for. Surgeons or others would be in a position to direct by telegraph that a car shall be reserved at a particular station, and that an accident hammock shall be provided and porters' help at hand for any train that he might look out in his Bradshaw. Short and simple instructions might be hung up where the hammocks were stored, so that porters should at once know the proper use of them if their assistance were necessary.

I am, Sirs, yours truly,

Sept. 9th, 1895. HAYDN BROWN, L.R.C.P., L.R.C.S. Edin.

COTTAGE HOSPITALS.

To the Editors of THE LANCET.

SIRS,—Can you, or any of your readers, give me an idea as to the probable cost of a cottage hospital, thoroughly equipped, to hold four beds, and also an approximate annual expenditure to keep such a hospital in a state of efficiency?

I am, Sirs, yours faithfully,

Ramsbottom, Sept. 10th, 1895. B. CRAWSHAW.

Justice.—The best course will be to refer the clerk to the Infectious Disease (Notification) Act, 1889, itself. Section 11 is as follows: "A payment made to any medical practitioner in pursuance of this Act shall not disqualify that practitioner for serving as a member of the council of any county or borough, or as member of a sanitary authority, or as guardian of a union, or in any municipal or parochial office."

J. W. S.—A comprehensive list of books to be read and consulted by candidates for the diploma of public health was formerly issued by the University of Cambridge, and a copy of this can probably be obtained on application to Dr. Anningson, Waltham Sal, Cambridge, or from the Cambridge University Press Warehouse, Ave Maria-lane, E.C.

M.D. will be obliged if any of our readers can inform him whether there is an opening for medical or dental practice in or near Johannesburg.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Star (Guernsey), Herts Guardian, Yorkshire Post, Midland Weekly Herald, Mining Journal, Sanitary Record, Australasian Medical Gazette, Guy's Hospital Gazette, North Middlesex Weekly Standard, City Press, Harrogate Advertiser, Surrey Advertiser, Local Government Journal, Brixton Free Press, Bradford Observer, Australian Medical Gazette, Weekly Free Press and Aberdeen Herald, Leeds Mercury, Local Government Chronicle, Liverpool Daily Post, Hertfordshire Mercury, Morning, Bristol Mercury, Crewe Guardian, Western Press, Echo, Birmingham Mail, Nottingham Daily Express, Sheffield Independent, Newcastle Daily Journal, Leicester Post, Daily News, Southampton Times, Blackpool Herald, Wakefield and West Riding Herald, County Council Times, Aberdeen Journal, Batley Reporter, Folkestone Express, Dumfries Standard, Holborn Guardian, Bucks Advertiser, Lincolnshire Echo, Derby Daily Telegraph, Banffshire Advertiser, Clifton Chronicle, Bath Herald, Newcastle Daily Journal, Times of India, Architect, Pioneer Mail, Le Courrier de la Press, Builder, &c., &c.*

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Y.—Dr. L. T. Young, City Umbala.

Z.—Z., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. Adams, Reading; Mr. E. Appleton, Stockton-on-Tees; Adjuvans, Lond.; Assistant, Lond.; Antares, Lond.; A. H., Lond.; Ægis, Lond.; Assistant, Portsmouth; Alpha, Harrow-road; Argentotype, Lond.; A.B., Lond.; Alpha, Stepney.

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A Clinical Lecture
ON
HYDATIDS OF THE PLEURA AND OMENTUM.

Delivered at the Middlesex Hospital on Jan. 25th, 1895,

BY SIDNEY COUPLAND, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—The recent concurrence in Hertford Ward of two unusual examples of hydatid disease suggested to me the subject of this lecture; but I had no sooner decided to speak of them than I felt serious misgivings as to whether such a topic would, after all, prove of much practical advantage to you. I adhered to my intention, however, when I came to consider that occasionally even the study of rare cases of disease may be turned to much profit, since it may enable us to put to the test the diagnostic criteria we are daily using. It is obvious that a rare case of localised thoracic or abdominal disease must exhibit in its history or its manifestations some departure from the ordinary course of better-known affections of the same part, even if it does not present any so-called pathognomonic signs; and although we may not be able, because we have never met with such a case before, to make an accurate diagnosis, yet we may have fixed in our minds the points in which it seems to depart from the common type. This is particularly well illustrated in the two cases I propose to speak of to-day. Both are rare cases; they are, I believe, the first of their kind which I myself have seen, and it is highly probable that you may pass your whole career without ever meeting one of them again. I cannot, therefore, describe them with any view of enabling you to be prepared to make a diagnosis should a similar experience happen to you, nor do I select them from the mere interest which everything that is novel necessarily has for us, but rather to test the value of certain physical signs which we are habitually seeking.

Amongst human parasitic diseases—a class that may be said now to include even the great groups of infective disorders—hydatids are responsible for a large mortality. Their distribution is spread more or less over the whole globe, but to a varying extent in different regions. In the British Islands hydatid disease is not a very common affection, whereas in Australia it is comparatively so common that if a practitioner there meets with an anomalous thoracic affection—such, for instance, as the one I shall presently relate—it may occur to him, although it might never to us, that it belongs to this class of hydatid disease. In Iceland it is even more common than in Australia, some early writers on the diseases of that country actually estimated that at least one-seventh of the population of Iceland suffer from this parasite, but that statement has been called into question, and on more critical examination the proportion has been very sensibly reduced. However, you will see from the table, which Mr. Pugh has written out—extracted mainly from figures given in Dr. Davies Thomas's work on Hydatid Disease—that even with material from the most authentic sources the proportions vary very much in all parts of the world. These figures do not represent the total amount of hydatid disease met with in the places indicated, they only represent those persons who came under treatment (in hospitals mostly) suffering from this disease. They do not include those who have never exhibited symptoms of suffering from the disease, but in whom post-mortem observation has shown that hydatids exist. The figures referring to Middlesex Hospital are based on our Registrar's records for the twenty-six years, from 1867 to 1893, and show that of 32,319 persons admitted into the medical wards during this period only forty-four were suffering from signs of hydatid disease. But this proportion does not accurately represent the average incidence of hydatids in this community, for it must be familiar to you that now and again there are to be seen in the post-mortem room the relics of hydatid cysts in subjects who exhibited no signs of such infection during life, or, as happened lately in a case in Hertford Ward, the patient, having been formerly treated and cured of hydatid disease, may die in hospital from some totally different affection. The case I allude to was that of a man who died from stricture of the œsophagus, the malignant nature of which was held to be confirmed by the fact that he also had a very palpable, firm tumour of the liver. He had, however, passed his early life in Australia, and had many years ago been "tapped" there for hydatids of the liver. As the event proved, the tumour was, in fact, the shrivelled, semi-calcified remains of a hydatid cyst, whilst the œsophageal stricture was lacking in any obvious cancerous characters. Bearing such cases in mind, it might be nearer the truth to nearly double the above figures if the actual hydatid rate were to be estimated. The remaining statistics, collated from the exhaustive work by the late Dr. Davies Thomas of Adelaide, tend to show that in London 1 per 1000 of the classes admitted into hospital are treated for hydatid disease; that in some places—e.g., Breslau and Vienna—the proportion is much less; that in other parts of the world, as in Australia, it varies from twice to six times that figure, whereas in the practice of one Iceland practitioner the proportion was as high as 28 per 1000. It would be possible, by a comparison of the hospital reports which are now habitually published in all large towns, to draw up a more extended list, but the table before you will suffice to show the relative prevalence of the disease in London and other parts.

*Table showing the Relative Proportion of Patients admitted into Hospital suffering from Hydatid Disease.**

Place.	Total number of patients in hospital.	Number of cases of hydatid disease.	Proportion of hydatid disease per 1000 of all patients.
Middlesex Hospital (medical wards, 1867-1893)	32,319	44	1·3
London Hospital (medical wards, 1876-1881)	13,297	24	1·7
St. Bartholomew's Hospital (medical and surgical wards, 1880-1884)	115,402	108	0·9
St. Thomas's Hospital (medical and surgical wards, 1871-1881)	34,559	44	1·2
St. George's Hospital (medical and surgical wards, 1865-1879)	45,599	22	0·5
Breslau	85,062	20	0·2
Vienna...	360,713	38	0·1
Iceland: Ofjord (by Finsen) ...	596	16	28·5
Australia—Victoria (8 hospitals)	134,104	835	6·2
,, New South Wales ...	35,760	103	2·8
,, Adelaide	38,671	175	4·5
New Zealand	40,271	54	1·3

* The figures for the Middlesex Hospital are from the Medical Registrar's annual reports. The rest are extracted from Dr. Davies Thomas's work on Hydatid Disease.

The diagnosis of hydatid cysts in various organs, and the gravity of the disease depends largely on its situation, as well as on the liability of the cyst to suppurate. I need not recapitulate at length what is known of the life-history of the echinococcus. In its adult form it is a small tapeworm (Tænia echinococcus) inhabiting the intestine of a dog, and its ova, shed from the proglottides, probably gain entrance into the human body through the alimentary canal. It is not difficult to conceive of the manner in which the liberated embryo from this tract finds its way into the liver or into other organs through the blood-channels—the two seats most commonly attacked being the liver and the lung. Dr. Thomas collected nearly 1900 cases of hydatid disease from various sources, and found that in about 60 per cent. the hydatid has its seat in the liver, and in about 12 per cent. in the lung, thus leaving a comparatively small percentage to be distributed among the other parts and organs of the body, amongst which are to be found examples in the cases I am now about to relate, the one belonging to the chest, the other to the abdomen.

CASE 1. *Hydatids of pleura simulating pyopneumothorax; paracentesis; drainage; recovery.*—The more interesting of the two cases is that of a lad fifteen years of age, who was admitted on Nov. 2nd, 1894, with a note from Dr. Travers-Smith of the Kilburn Dispensary, which he was attending, to the effect that he was suffering from pleural effusion and urgently required hospital treatment. It appears

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that the boy had been attending at the dispensary since Oct. 15th. On his first attendance Dr. Smith noticed that there were unusual features about the case, and he was recommended to go to a neighbouring hospital. This advice was rejected for a time, and meanwhile the boy kept to his bed, but attended at the dispensary occasionally. The actual illness began rather acutely on Oct. 12th, when he was attacked with headache, pain in the side, and feverishness, with severe cough. It appears, however, from inquiry that he had been really ailing for some months prior to this, for since the preceding Christmas he had been complaining of a pain in his left side and had also frequently suffered from cough. His mother says he had always been delicate since he was five years of age, when he received a burn on the chest. So far as we could gather from both her and the boy, it did not seem that he had ever had any spitting of blood. Their statements to us do not, however, tally with those in Dr. Smith's notes, where "hæmoptysis" had been put down as a previous symptom. When admitted the lad was very thin and anæmic, suffering from a certain amount of fever, the temperature being nearly 101° F., and he complained of aching pain in the left side and of a troublesome cough, but was singularly free from any marked dyspnœa. On looking at his chest, which was covered by an enormous scar from the burn which he received when he was five years old, it was seen to be markedly bulged on the left side. In a cyrtometric tracing made at the time, taken just below the level of the nipple, the left side is seen to be bulged both in front and behind. Then the movements of the left side were much impaired, and on palpation vocal fremitus was rather excessive from the second rib to the nipple, but below that level it was abolished; on the right side movements and fremitus were normal. On percussion the pulmonary resonance was normal on the right side of the chest, save that on the level of the fourth rib, midway between the nipple and the sternum, there was an area of dulness, extending on each side obliquely downwards to merge in the hepatic area below. On the left side the percussion note was not fully resonant, being rather impaired beneath the clavicle, and more so under the second rib, whilst a markedly tympanitic note occurred in a somewhat quadrangular area, laterally from the sternum to the axilla, and reaching from the third rib above to the fifth below. Below that there was absolute dulness, which extended over the ribs to the costal arch, completely obliterating the area of gastric resonance, known as Traube's "semilunar space." The apex of the heart did not occupy its usual position. It was seen beating on the right side below the right nipple. On auscultation we heard sounds which required some consideration to explain. The right lung signs were practically normal—if anything, rather harsh and exaggerated. On the left side the breathing was low-pitched and rather blowing at the apex, distinctly amphoric in the third interspace and the upper part of the tympanitic area in the axilla, but suppressed below this. Posteriorly there was no marked difference, except absolute dulness over the whole of the left back and diminished fremitus, and diminished breathing sounds. Two sounds were absent which we expected to find present. Whenever you get a cavity containing air or gas, sound is transmitted readily, and if the air space is considerable there is reinforcement of the echo due to this cavity. The bell-sound elicited by striking together two coins on the wall of the sac and auscultating at a distance from them is a characteristic sign of a cavity containing air. We tried to elicit it here, but in no part could we get that characteristic ring or bell-sound. Another sign was unexpectedly absent: there was no succussion splash. Further, there could be felt a smooth rounded swelling projecting from beneath the left costal arch, which we inferred was the displaced spleen. The urine was normal and the abdominal organs were apparently natural. The diagnosis was somewhat difficult. We had to explain the presence of this tympanitic area in front, limited as it was, and its connexion with the dull area below. You may remember that the conclusion arrived at at the time was that we had to do with an anomalous case of empyema, possibly from ulceration of a small tuberculous focus in the lung with limited pneumothorax. The condition might thus be one of pyopneumothorax, limited anteriorly by pleuritic adhesions. But if this were the true explanation of the signs, it yet was most anomalous and unsatisfactory. In the first place this hardly explained the remarkable and extraordinary displacement of organs—the heart beating under the right nipple, the spleen diplaced downwards and forwards; and, secondly, this extreme displacement of organs and bulging of the chest by a pyopneumothorax so limited in its gaseous contents that although the patient was lying on his back we did not have, as might be expected, tympanitic resonance over the whole front, but confined to an area above the fifth rib. The diagnosis of empyema did not seem satisfactorily to explain this singular fact, but as we were satisfied that the fever was probably due to the presence of pus there was no undue delay in making an exploration by means of an aspirator, with the result that about twelve ounces of dark-greenish inodorous pus, together with a considerable amount of gas, were withdrawn. The result was simply to increase the area of tympanitic resonance in front of the chest, with no change in the position of organs or any effect on the fever, so that it was quite obvious that there ought to be a free opening made, and on Nov. 6th Mr. Pearce Gould operated. He made an incision over the seventh rib, in the posterior axilla, excised a portion of the rib, and opened the chest, when there escaped a considerable amount of flaky, greenish-yellowy pus mingled with bubbles of gas and shreds of material which looked like inspissated lymph and pus. There seemed to be rather a large amount of this material, which did not apparently differ from that yielded by other cases of empyema of some standing. The operation was very successful, and the fever abated. The temperature fell to 99° and 98°, and for weeks afterwards maintained a normal range. The heart soon swung back to its normal position, the area of dulness to the right of the sternum disappeared, and gradually the left side of the chest-wall became retracted. These and other facts were recorded by the clinical clerk, Mr. Gittings, from time to time; but I will not weary you with their full recapitulation. Suffice it to say that in all respects there was very great improvement, and even the left lung seemed to be regaining its function. But there was one direction in which no further progress was made. As weeks went by and the sinus still remained patent, yielding daily from an ounce to two ounces of purulent discharge, it was clear that there must be something behind keeping up suppuration, or that the drainage was not as thorough as it should be. The local condition was not cured in spite of general improvement, and I therefore asked Mr. Gould to explore the sinus, either with a view of enlarging the outlet or of determining the cause of the continued suppuration. The exploration was carried out on Jan. 15th, and the result was the removal of a large quantity of shreds of translucent membrane, which on examination were found to be indubitably portions of the wall of hydatid cysts. Under the microscope, as you can see from the specimens on the table, this membrane presented the lamination characteristic of hydatid. To be sure, no scolices were to be found, but they are not always present. The extraction of these membranes and their identification threw a flood of light upon the whole case, whilst there can be no doubt that their removal has materially enhanced the prospect of the lad's complete recovery. The extent of the shrinkage of the chest, which has been in progress since the first operation, and is no doubt still going on, is seen when the cyrtometric tracing taken the other day is compared with that taken on his admission. Owing to the curvature of the spine, the contraction of the lung, and the recession of the sternum the antero-posterior diameter is actually lessened. It will further be seen that the left side of the chest is comparatively shrunken anteriorly. On percussion a tympanitic note, obviously due to the underlying stomach, has replaced the area of dulness which previously extended to the costal margin. The area of cardiac dulness is now almost normal and the heart can be felt beating below the left nipple. The percussion note is somewhat impaired from the nipple to the second interspace, but thence to the clavicle the note is even fuller than that on the right side. It may therefore be inferred that the left lung, which had been too long compressed to fully re-expand, has done so to a certain extent. As the lung has not expanded below, the diaphragm has risen, and the thoracic wall has fallen to the extent shown by the cyrtometric tracing. I may add that the spleen can no longer be felt, and its area of dulness is obscured by the stomach note.

Looking back now upon the history of the case, with the added knowledge so recently acquired, it may be asked whether the somewhat anomalous signs originally observed may be considered characteristic of hydatid disease of the lung or pleura? There are no distinctive signs of these conditions. Pulmonary hydatids may in their course and signs simulate phthisis, for cough and hæmoptysis are their usual

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concomitants, and at a later period signs of excavation may be yielded by a suppurating cyst communicating with the bronchi. Or the existence of so formidable an affection of the lung may be first revealed by the development of signs of pleurisy, or of pneumothorax from rupture of the cyst into the pleura; or, more obviously, by its rupture into the bronchi, with expectoration of the membrane and scolices. A very remarkable case of pulmonary hydatid was made the subject of a clinical lecture by Sir W. H. (then Dr.) Broadbent some years ago.[1] In this case the right lung was occupied by an enormous cavity formed by a suppurating hydatid, which during life had yielded signs simulating those of pneumothorax. The patient had complained of pain in the chest for two months, but her fatal illness, which commenced abruptly, with a sense of "something giving way" in the chest after unusual effort, lasted less than three weeks. I cannot forbear quoting the lecturer's closing remarks in his commentary on this case. He said: "Was a diagnosis possible? and could we have done more for the patient had an accurate diagnosis been made? I will answer the latter question first. Had I known exactly the state of things I should certainly have ordered a free opening to be made into the cavity, and I am sure that we should have then have given the poor girl a better chance of recovery. In reply to the first I would say that a diagnosis, though difficult, was no doubt possible. I say so because I think that perhaps you or I might make out a similar case, were such a one to come before us. In order, however, to interpret the complex signs and symptoms offered by disease we must be prepared by personal experience or by acquaintance with the recorded experience of others; and until this case came under my care I did not possess the knowledge that hydatid disease could so nearly simulate pneumothorax." *Mutatis mutandis*, these words may well apply to the case we are now considering. A point of some importance is to determine whether in our patient the hydatid had its primary seat in the lung, the pleural complication being due to its rupture into that sac. We cannot speak with certainty on this matter, for, with the exception of the somewhat equivocal symptom of hæmoptysis, the history of our patient would be consistent with the rarer, primarily pleural affection. The fact that there were signs of limited pneumothorax does not, I think, militate against this latter view, and must be attributed to decomposition of the purulent contents of the hydatid, whose rupture coincided with the onset of the acute attack. In any case we have, happily, now good reason to believe that the patient has been freed from his disease and is practically cured, although with a permanently carnified lung.

Before finally leaving this question of diagnosis I should like to point out that the great displacement of the heart and spleen, and the other physical signs, seem to prove that the fluid was confined within a tense sac. Similar signs would have been yielded by a subphrenic abscess, but we had ocular proof that in this case the disease was above the diaphragm. Yet amongst the causes of subphrenic abscess, the majority of which are due to perforation of the stomach or intestine, one must not forget that hydatids take a share either in the more common case of hepatic hydatid or in that of hydatid connected with the spleen. The course of events, as now interpreted, was therefore probably as follows. At some time or other the boy became infected with the echinococcus, but whether directly from the one small dog which lived in the house, or indirectly from the consumption of uncooked vegetables—particularly that popular and wholesome article, watercress—it is, of course, impossible to say. Indeed, it is very rarely possible to trace the origin of any case, although there is ground for the belief that the greater prevalence of hydatids in Iceland, and perhaps also in Australia, is not remotely connected with the like (comparative) preponderance of the domestic dog. Ordinarily introduced through the stomach, the hydatid may find its final resting-place in any part of the body. It has been suggested that the larger proportion of pulmonary hydatids in Australia may be owing to the inhalation of the ova scattered in the dust in that wind-swept continent, but the hypothesis is not needed, for, once taken into the stomach, the liberated embryo may wander anywhere. In this case we believe that they found entrance into the left pleura, and, growing, compressed the lung, but not materially impairing health until the rupture of one cyst, or the suppuration of the mother cyst, excited the pleurisy and concomitant phenomena. That the correct diagnosis was not made on the occasion of the first incision is an instructive feature of the case; but it was owing simply to the fact that the material then escaping had none of the characteristics of hydatid membrane. Nor can we say even now that there is no hydatid in any other organ, for experience shows that a multiple distribution of these parasites is not uncommon, and that this is more likely to be the case when a region so rarely attacked alone, as is the pleura, is in question. According to Dr. J. D. Thomas the liver is the seat of hydatids in about 57 per cent. of all cases, the lung in about 12 per cent., and the pleura alone in only 1 per cent. It is curious that, whereas in Australia the proportion of pulmonary hydatids is above the average—namely, 16 per cent.—in Iceland it is considerably below it—namely, 2·7 per cent. (Finsen). In this country certainly hydatids of the lung are rare. Of the 44 cases in the Middlesex Hospital from 1867 to 1893, inclusive, there was only one in which the lung was primarily involved—i.e., 2·2 per cent. But 3 were peritoneal and the rest hepatic. This proportion of peritoneal cases is above the average estimated by Dr. J. D. Thomas, being over 6 per cent., instead of 1·3 per cent., which he gives. It has been raised still more in our own statistics by the recent occurrence of two (perhaps three) cases of omental and peritoneal hydatid, to one of which I will now briefly refer.

CASE 2. *Multiple hydatids of omentum; laparotomy; removal; recovery.* — The patient, a man forty-two years of age, was sent into the hospital by Dr. Mortimer of Horley on account of a painful swelling in the abdomen. He was admitted on Nov. 23rd, 1894, and stated that in the previous August he first began to suffer from abdominal pain, at first very severe. The pain was referred to the right side of the abdomen, in the iliac region. A liniment and a purgative were prescribed for him, and he resumed his work after four days. He remained free from pain until about three weeks before his admission, when it recurred in the same region, and on examination the swelling was discovered. He was a ruddy, robust-looking man, apparently in excellent health, his digestion being good, the bowels regular, and his only trouble being that connected with the swelling, which caused a manifest prominence in the right hypochondrium and adjacent part of the epigastric and umbilical regions. The tumour was smooth, ovoidal in shape, extending to the left as far as the middle line of the abdomen, to the right for five and a half inches from that point, above (in the recumbent position) nearly to the costal margin, and below to the umbilical level. The tumour, which when the abdominal muscles were contracted was proved to lie behind them, was mobile. As he lay in bed it clearly descended with the diaphragm in inspiration, and it could be moved from side to side for quite two inches. It was not difficult to place one's hand deeply between the upper margin of the tumour and the liver, especially when the patient was in the sitting posture, whilst on percussion there was not only resonance between the tumour and the costal arch, but over the greater part of the swelling itself. On the right the flank was also resonant. Manipulation did not elicit any tenderness, the pain complained of being of a dragging, aching character, referred to the right loin, especially when he was lying on the left side. Moreover, the tumour was only mobile towards the left; it could not be pushed towards the right loin. Its character was that of a tense, elastic body, possibly cystic. Various opinions were expressed as to the probable nature of the cyst. On the whole there was most concordance as to its being of renal origin, particularly as in the usual position of the kidney on the right side there was much less resistance on palpation than there was on the left. The late Mr. Hulke, however, whilst not discarding this view, thought it more likely that it was connected with the omentum, and credit must be given to Mr. Lock, who was then house surgeon to Mr. Hulke, for advancing the opinion that the case was one of hydatid cyst of the omentum. It is obvious that if it were renal—and its situation and mobility certainly did not accord with a cyst of the kidney, which still remained in place—the organ must have been dislocated, perhaps a movable kidney. Only in this way could its appearance in front of the colon be accounted for. The patient was transferred to the care of Mr. Gould, who performed laparotomy on Dec. 12th. Before the abdomen was opened, and when the patient was fully anæsthetised, the cyst could be freely moved in every direction, and Mr. Gould therefore concluded that it was a

[1] THE LANCET, Oct. 26th, 1878.

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omental hydatid. So, indeed, it proved, and it was readily detached from the surrounding omentum. The cyst was about the size of an ostrich's egg, its wall being translucent and its contents clear. In addition, there were found three smaller cysts (omental hydatids are always multiple), one as large as a Tangerine orange, the others quite small. The liver was free from any cyst. The recovery of the patient was uninterrupted, and he left the hospital on Jan. 16th, 1895. We may hope that he has been entirely relieved of his unpleasant parasite, although it would be rash to assert this yet; for, in a serous sac like the peritoneum, when once a hydatid has gained entrance it may become disseminated to remote parts, and perhaps some day fresh trouble may arise from the appearance of a similar cyst, say in the recto-vesical pouch. At any rate there is this comfort that we have no evidence of hydatid in connexion with any of the solid abdominal viscera.

ON PRESYSTOLIC APEX MURMUR WITHOUT MITRAL STENOSIS.[1]

BY ARTHUR G. PHEAR, M.D. CANTAB., M.R.C.P. LOND.

THE connexion of the mitral presystolic murmur with stenosis of the mitral orifice was first placed on a firm basis by Fauvel[2] in 1843, who gives an account of three cases in which the diagnosis thus made by the stethoscope was verified post mortem. He enters into the exact rhythm of the murmur with some care, describing it as a "bruit de râpe," commencing in the silence following the second sound and terminating at the instant the first sound is heard. Walshe[3] in 1851 was the first of British authors to draw attention to the murmur so significant of obstructive narrowing of the mitral orifice; he also was careful to define its rhythm with precision, describing it as post-diastolic or presystolic rather than exactly coincident with the diastole. Subsequently mitral constriction and its physical signs received special notice at the hands of Gairdner,[4] Hilton Fagge,[5] and others; and the view rapidly gained ground that not only did mitral constriction produce a presystolic apical murmur, but, further, that such a murmur was conclusive evidence of narrowing of the mitral orifice. For some years this sign was regarded as an almost infallible indication of organic mitral disease. Yet so early as 1862 two cases were published by Austin Flint[6] in which a mitral presystolic murmur had been heard during life, but in which the necropsies revealed no morbid change of the mitral orifices or valves. The same author described another case of similar nature in 1883,[7] and three years later in an article on "The Mitral Cardiac Murmurs"[8] he discussed the mechanism of the production of this anomalous murmur. Subsequently similar cases have been placed on record by Guitéras,[9] Osler,[10] Charlewood Turner,[11] Graham Steell,[12] Gairdner,[13] Maguire,[14] Lees,[15] and Sansom[16]—nineteen cases in all, in which the absence of mitral stenosis was ascertained by post-mortem examination. A feature common to sixteen of these was aortic regurgitation, and a close connexion has been held to exist between this condition and the presystolic murmur in question. More recently a number of cases has been collected by Theodore Fisher[17] in which presystolic or diastolic apical murmurs have been present in association, not with narrowing of the mitral orifice or with incompetence of the aortic valves, but with adherent pericardium. Two cases of like nature are recorded by Graham Steell.[18] In the Lumleian Lectures of 1894 the late Dr. Sturges has alluded to the frequency with which presystolic murmur is met with in children without the discovery of corresponding stenosis post mortem.

It is proposed in this paper to give an account of two further cases[19] of presystolic apex murmur without mitral constriction. In both the aortic valves were competent; in one the pericardium was adherent and in the other case this structure was healthy.

CASE 1.—A girl aged ten years and a half was admitted to University College Hospital complaining of severe headache and vomiting, probably of uræmic origin; these had been present in some degree for a year; no account could be obtained of any previous acute attack of nephritis; there was no history of scarlet fever or of rheumatic fever. The child was very anæmic, but not dropsical. From twenty to thirty ounces of pale urine were passed daily, containing a small quantity of albumin. The fundus of each eye showed extensive degenerative changes with hæmorrhages. It is noteworthy that the radial arteries even at this early age showed evidence of degeneration, the walls being thick and fibroid; the pulse was regular, but could be compressed without difficulty. The condition of the heart at the time of admission was as follows. The præcordial region was not bulged. An impulse was visible in the fourth and fifth left interspaces, its maximum point lying in the fifth interspace just to the outer side of the nipple line; the impulse was localised and of heaving character. The stethoscope revealed over this area a loud, low-pitched systolic murmur, obscuring the first sound and conducted outwards to the axilla; on this occasion no other apical murmur was heard: at the base a systolic murmur of hæmic origin was audible over the second left interspace; the second sound here was accentuated, but not reduplicated. A fortnight later a diastolic murmur had presented itself at the apex: this new murmur was of rough quality and of low pitch; its rhythm was not constant; at one time it immediately followed the second sound, and at another there was a short but definite interval between the second sound and the commencement of the murmur; occasionally it was presystolic, running up to and becoming merged in the systolic murmur; on one occasion it occupied the mid part of diastole, being separated by an interval from the second sound on the one hand and the systolic murmur on the other. During the child's residence in the hospital her condition gradually deteriorated. There was a steady diminution in the output of urine; obstinate vomiting set in, muscular twitchings appeared, and death ultimately ensued from uræmia.

Necropsy.—The heart was found to be hypertrophied, particularly the left ventricle, the walls of which were in places more than half an inch thick; the muscle was firm in consistence. The chordæ tendineæ attached to the mitral valve were both thickened and shortened; the curtains of the mitral valve showed no further deviation from the normal than a slight degree of thickening; the mitral orifice admitted two fingers; this in a child aged ten years cannot be regarded as a condition of narrowing. The aortic valves were healthy except for a little thickening at the attached margin of one of the cusps; they were perfectly competent. The tricuspid and pulmonary valves and orifices were normal, and the pericardium was healthy. The kidneys were very small and contracted, weighing together less than three ounces.

CASE 2.—A male patient was under observation on several occasions during a period of five years. His first illness of importance in the present connexion occurred at the age of thirteen in 1888, when he was admitted to University College Hospital for chorea. The attack was not a severe one and rapidly gave way to treatment. The heart at this time was normal. He had not long recovered from chorea when he fell a victim to rheumatic fever, of which there had previously been abundant manifestations among his family, although the boy himself hitherto had escaped. This attack kept him from work for more than two months and was almost immediately followed by a second outbreak of chorea. About a

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[1] Read as a thesis at the University of Cambridge on May 29th, 1895.
[2] Archives Générales de Médecine, 4me série, tome i., 1843.
[3] A Practical Treatise on the Diseases of the Lungs and Heart, 1851.
[4] Edinburgh Medical Journal, 1861, vol. vii., p. 438.
[5] Guy's Hospital Reports, 1871, Series 3, vol. xvi., p. 247.
[6] Austin Flint: The American Journal of the Medical Sciences, July, 1862.
[7] Austin Flint: THE LANCET, Jan. 27th, 1883.
[8] Austin Flint: The American Journal of the Medical Sciences, 1886, vol. i., p. 27.
[9] Guitéras: Transactions of the Association of American Physicians, 1887, vol. ii., p. 37.
[10] Osler: Ibid., 1888, vol. iii., p. 138.
[11] Charlewood Turner: St. Thomas's Hospital Reports, New Series, 1886, vol. vii., p. 177.
[12] The Medical Chronicle (Manchester), vol. iv. (1886), p. 9; and vol. xi. (1889), p. 38.
[13] Gairdner: The American Journal of the Medical Sciences, 1889, vol. ii., p. 137.
[14] Maguire: The Medical Chronicle, 1890, vol. xii., p. 180.
[15] Lees: The American Journal of the Medical Sciences, 1890, vol. ii., p. 460.
[16] Sansom: The Diagnosis of Diseases of the Heart and Thoracic Aorta, 1892, p. 381.
[17] Brit. Med. Jour., April 28th, 1894; and Medical Press and Circular, Oct. 10th, 1894.
[18] Graham Steell: The Practitioner, April, 1894.
[19] For permission to give an account of these cases I am indebted to the kindness of Dr. Ringer and of Dr. Barlow.

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year later he again came under observation, this time suffering from acute pericarditis. In addition to the signs of a moderate degree of pericardial effusion there was to be heard a to-and-fro friction sound, systolic and diastolic, of rough but superficial quality, the maximum intensity being at the base. There was also a rough systolic murmur at the apex, conducted to the axilla and round to the back, and presumably endocardial. Three weeks later he was convalescent. Friction was no longer audible; but the systolic apical murmur remained, and note also was taken of a systolic basic murmur, probably of hæmic nature. Some eighteen months after this he was again admitted to the hospital on account of severe pain in the region of the heart and shortness of breath. There was no fever, and the pulse—from 90 to 100 per minute—was regular and of fair tension. A diffuse undulatory impulse extended over the left intercostal spaces from the second to the sixth inclusive. In the fourth and higher spaces the chest wall could be seen to recede at the moment of systole. In addition to the systolic murmur, which presented the same features as before, there was to be heard at the apex and in its immediate vicinity a harsh presystolic murmur. The temporary benefit derived from treatment soon disappeared on the boy's departure from the hospital, and the progress of the case during the ensuing year and a half, though irregular, was on the whole one of progressive deterioration. On the occasion of his admission to the hospital for the last time in October, 1892, he was wasted and was suffering from bronchitis with slight hæmoptysis. Though the lungs were thus hampered there was no evidence of tricuspid regurgitation, the veins of the neck were not visibly pulsating, and dropsy had not made its appearance. The præcordial region was bulged. An impulse was visible over a wider area even than before, extending now for nearly an inch to the left of the left nipple line; the impulse was of heaving character and preceded by a *thrill*, of *presystolic rhythm*, confined to the region of the apex. No presystolic murmur, however, was to be heard on this occasion; that of systolic rhythm was as conspicuous as before. The disappearance of the presystolic murmur was only temporary; three weeks later it was again to be heard, and in addition a third murmur had made its appearance in the mitral region, of low pitch, rather rough quality, and occupying the early part of diastole. Occasionally the presystolic murmur was absent. The thrill also was variable, being at one time presystolic, at another time early diastolic, and occasionally absent. At the base the pulmonary second sound was accentuated; no murmur was audible. In the course of time signs of cardiac failure developed; the pulse became frequent and irregular; pulsation appeared at the epigastrium and in the veins of the neck; the legs became tense with dropsical fluid, which collected also in the peritoneal cavity; and the liver became enlarged and pulsatile and a slight degree of jaundice developed. The more urgent symptoms were, however, relieved by means of digitalis and by draining the fluid from the legs by incisions; the subcutaneous dropsy was in this manner reduced, and even for a time disappeared. The abdominal cavity remained, however, as tense as ever with ascitic fluid, which accumulated again and again in spite of repeated tappings; this was taken to indicate that permanent cirrhotic changes had developed in the liver—a conclusion which was justified subsequently. Throughout the later stages of the disease a distressing symptom was pain in the region of the heart, occurring in paroxysms especially at night-time. The termination of the case was abrupt, being due to syncope.

Necropsy.—There were extensive and firm adhesions of the pericardium, both to the heart and to the chest wall. Both sides of the heart were dilated, the left to a greater extent than the right; the left ventricle was hypertrophied. The mitral valve and the chordæ tendineæ were thickened and the curtains of the valve slightly adherent; the mitral orifice admitted three fingers with ease. The aortic valves were slightly thickened, but perfectly competent; a row of minute granular vegetations was present on the ventricular aspect of each cusp near its free border. The liver was small, its surface being roughened and capsule thickened; its substance was very tough, and there was evidently a marked excess of connective tissue.

It appears that a murmur may be audible over the mitral area which, though independent of mitral narrowing, resembles the murmur of that condition in that it may occupy the beginning, middle, or end of the diastolic period; it may be of early diastolic, mid-diastolic, or presystolic rhythm. The frequency with which aortic regurgitation is associated with this murmur renders it necessary to consider how far, in dealing with a murmur of mitral locality and of early diastolic rhythm, it is possible to exclude conduction from the aortic orifice as its cause. The difficulty is always great and is often insuperable. The presence or absence of a diastolic basal murmur affords but little help; if present it does no more than indicate that the aortic valves are incompetent; if absent, still the aortic valves may be diseased, producing a murmur audible only at the apex. The area of audibility of the aortic regurgitant murmur probably depends more on the amount[20] and strength of the reflux current than on any other factor; for it to be heard at the apex, not only must the valvular defect be considerable, but for the production of forcible recoil the initial strength of the heart beat must be great; so the heart is found hypertrophied and the pulse of characteristic "water-hammer" quality. As a rule, the apical diastolic murmur of mitral origin is accompanied by neither cardiac hypertrophy nor water-hammer pulse. The quality of the murmur, though of subsidiary importance, yet may afford help. That produced by aortic regurgitation is of high pitch, "whiffing" in quality, and becomes raised in pitch (or rather the lower-pitched of the elements of sound constituting the murmur become lost) as the stethoscope is shifted from the base in the direction of the ensiform cartilage or apex; the mitral diastolic murmur is of low pitch and comparatively harsh quality.

The murmur of presystolic rhythm stands on a different footing; this cannot anyhow be mistaken for a conducted aortic regurgitant murmur, contrasting as it does not only in quality but in rhythm. Various explanations have been offered of the manner of its production. It was suggested by Keyt[21] that the murmur, though preceding the first sound, was truly of systolic rhythm and generated at the aortic orifice. Charlewood Turner also supposes that the murmur, though apparently presystolic, in reality occupies the commencement of systole; he maintains that it is due to dilatation of the ventricle, a condition which allows regurgitation of blood through the mitral orifice, the reflux, however, being transient and confined to the commencement of systole, since, he argues, when a certain amount of contraction has been accomplished, the mitral curtains, previously unable to meet, become competent to close the orifice. This explanation depends on the view, first enunciated by Ormerod,[22] and later supported by Barclay[23] and Dickinson,[24] that all the so-called presystolic murmurs are in reality not presystolic at all, but systolic in rhythm, and are due to mitral regurgitation. Among many difficulties in the way of accepting this theory attention may be drawn to three: 1. The murmur commonly designated as presystolic is in many cases not of short duration, but prolonged, occupying, in fact, the greater part of the diastole, commencing soon after the second sound, and gradually increasing in loudness and roughness up to the first sound or systolic murmur. 2. If the so-called presystolic murmur is due to regurgitation, why should it be present in some cases of regurgitation and not in all? It is at the commencement of systole that the blood will regurgitate, if at all; and it is at the commencement of systole that the murmur should be of most constant occurrence. 3. A murmur produced from beginning to end by regurgitation should be conducted similarly throughout its length. This condition is not fulfilled by the so-called double mitral murmur; the early part of this, usually described as presystolic, is heard over a limited area, being conducted in most instances to a short distance only from its point of greatest intensity, although at this point it is loud and rough; the murmur commonly recognised as systolic is conducted well and in a characteristic direction. Maguire believes the murmur in question to be closely related to aortic regurgitation. He propounds an ingenious theory, which is based on the anatomical relations of the anterior flap of the mitral valve. This lies in close proximity, not only to the mitral, but also to the aortic, orifice. He suggests that this flap, hanging between two converging currents, both flowing into the ventricle, the one from the aorta and the other from the auricle, is thus caused to vibrate, the vibrations being

[20] The late Dr. Hilton Fagge in his article on Valvular Disease in Reynolds's System of Medicine (vol. iv., p. 645) has expressed his belief that the murmur of aortic regurgitation is propagated in the direction of the apex when the regurgitant stream is large, and that hence it is of particularly unfavourable prognosis.

[21] Boston Medical and Surgical Journal, July 12th, 1883.

[22] Medical Times and Gazette, 1864, vol. ii., p. 154.

[23] THE LANCET, March 2nd, 16th, and 23rd, 1872.

[24] THE LANCET, Oct. 1st and 8th, and Nov. 12th, 1887.

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audible (as in the case of other mitral murmurs) at the apex. If the aortic regurgitant stream is copious, he says, there is produced an early diastolic murmur audible at the apex; in other cases the murmur is not produced until the auriculo-ventricular current is reinforced by the auricular contraction, which causes a vibration of the mitral flap of presystolic rhythm. An objection may be raised to this theory on the ground that the two currents are not both in action at the time when the presystolic murmur occurs; the aortic regurgitant flow has practically come to a standstill at the moment when the auricle contracts; under these conditions it seems hardly more probable that the auriculo-ventricular current should cause the mitral flap to vibrate than in normal circumstances. Again, given the simultaneous flow of the two currents, would not the valve hang passive between the two, supported on each side, rather than be thrown into vibration? If the valve were taut, and the current passing in the opposite direction so as to impinge on its free edge, doubtless vibrations would be set up, and a murmur, probably of musical quality, produced. The theory originally advocated by Flint presupposes as the immediate cause of the murmur what may be termed a "functional" narrowing of the aperture through which the blood passes from auricle to ventricle. He points out that in cases of aortic regurgitation the left ventricle rapidly fills with blood; the rapid inflow of blood, he suggests, floats the mitral valves away from the ventricular walls, so that they may actually be brought into coaptation before the commencement of the auricular contraction. With the auricular systole the valves, approximated as described, are thrown into vibration. An essential part of this, as of the theory propounded by Maguire, is aortic valvular disease, permitting regurgitation of blood. On either theory, then, the mitral presystolic murmur, though deprived of its former precise significance as a sign of diseased mitral valve, yet retains value as evidence of cardiac valvular defect. There have been described, however, by Osler, Graham Steell, Theodore Fisher, and in a previous part of this paper cases of presystolic murmur independent, not only of mitral stenosis, but of aortic regurgitation. Theodore Fisher draws attention to the frequent occurrence of adherent pericardium among these cases; he suggests that damage to the nerve-supply of the heart muscle may result from the antecedent pericarditis; hence loss of muscular tone and a condition favouring vibration of the muscular wall—vibration which may actually be set up by the blood propelled into the ventricle from a dilated and hypertrophied auricle.

Although so much attention has been directed to the presystolic apex murmur as occurring without mitral stenosis, the manner of production of this murmur remains obscure; the subject is, therefore, one worthy of further study. The size of the mitral orifice may be lessened by contraction of the fibrous ring to which the valves are attached, or by structural disease of the mitral valve, the segments of which may become thickened, shortened, and adherent, thereby leaving a much narrowed opening—it may be only a slit—for the passage of the blood. It seems possible also that the aperture between the curtains of the valve may become narrowed so as to obstruct the blood flow, independently of such gross organic changes, in a manner to be described. It is generally recognised that one function of the musculi papillares is, by their contraction, to draw together the flaps of the mitral valve and so aid in the closure of the mitral orifice. These structures (the papillary muscles) are disposed in the left ventricle in two groups, the one situated anteriorly and to the left, and the other posteriorly and to the right; from the former chordæ tendineæ pass to be attached to the free edge and ventricular surface of the anterior portions of both flaps of the mitral valve, the posterior parts of the valve being similarly connected by chordæ tendineæ with the posterior set of musculi papillares. The effect of this arrangement may be illustrated by a quotation from Foster's Physiology:[23] "From the disposition of the flaps of the valve and their relation to the papillary muscle, the chordæ tendineæ of a papillary muscle being attached to the edges of and spreading over the surfaces of two adjacent flaps, we may infer that when the papillary muscles contract, taking their share in the whole ventricular systole, they on the one hand bring at least the edges, if not part of the surfaces, of adjacent flaps into apposition, and on the other hand tend to pull down the whole of the valve, more or less in the form of a narrow funnel, into the cavity of the ventricle"—a condition of things almost identical, it will be noticed, with one of the varieties of mitral stenosis—valve edges in apposition, and the whole valve projecting in the form of a funnel into the cavity of the ventricle. By contraction of the papillary muscles, then, the valves are not only rendered tense, but are pulled downwards in such a way that their edges are brought into proximity, if not into apposition, and the mitral orifice, if not actually closed, is converted into a mere slit. Similar tension may be brought to bear on the valves by conditions other than contraction of the papillary muscles. Chordæ tendineæ are not infrequently seen in the post-mortem room presenting a thickened and contracted appearance. This is met with as one of the results of chronic endocarditis, accompanying more or less well-marked valvular disease. The condition is also seen, apart from any gross lesion of the mitral valve, under circumstances of strain such as is produced by the cardiac hypertrophy of Bright's disease or of aortic valvular disease. In such cases the mitral valves may present a normal appearance, or by slight thickening may show evidence of the strain to which they have been subjected; but the condition is not necessarily associated with the slightest degree of organic mitral stenosis. With shortened and thickened chordæ tendineæ the mitral valves are held permanently in the position which in the normal heart they are made to occupy rhythmically by the contraction of the musculi papillares; this practically amounts to a narrowing of the aperture through which the blood has to pass, and, given a fair auricular contraction, will be attended during life by a presystolic murmur, although post mortem it may be found possible to introduce as many fingers through the mitral orifice as in the normal heart. The first of the cases described above is an example of presystolic murmur without mitral stenosis proper, but with contracted chordæ tendineæ. Apart from the morbid change in the latter a similar condition of valvular tension may result from increase of the distance between the point of their origin and the line of insertion of the mitral valves. In the event of dilatation of the ventricular cavity the distance between any two points on the walls of the ventricle is increased. As the cavity gradually expands the two sets of musculi papillares from which the chordæ tendineæ spring are displaced away from the ring to which the mitral valve is attached, and at the same time become separated from each other. The downward displacement tends to put the valve on the stretch lengthways, and to draw the flaps together; the effect of the lateral movement is to produce tension along the line of the free edges of the valves. In this way the curve which is formed by the margin of each flap is straightened, and the aperture included by the flaps is elongated and narrowed. The manner of modification of the mitral orifice by displacement of the musculi papillares may be studied in the normal heart by detaching these structures from the heart wall and making slight traction with them in a downward and outward direction, away from the mitral orifice. It is submitted, therefore, that either of these two conditions—shortening of the chordæ tendineæ, or dilatation of the left ventricle—may produce a narrowing of the aperture through which the blood passes in its course from auricle to ventricle. A second factor, however, is necessary for the production of a presystolic murmur; this is the occurrence of an auricular contraction sufficiently forcible to generate a fluid vein. It is probably owing to failure in this respect that presystolic murmur is not a more common accompaniment of ventricular dilatation. The latter condition is frequently associated with dilated auricle; and dilatation of the auricle, unless combined with well-marked hypertrophy, means feeble auricular contraction — too feeble to provide the force requisite for the production of a murmur.

In conclusion I venture to suggest that many of the cases recorded of presystolic murmur without mitral stenosis, but with aortic regurgitation, may have been due to one or both of the conditions to which attention has been drawn above. In aortic insufficiency there is commonly some degree of ventricular dilatation; commonly, too, the chordæ tendineæ are thickened and retracted. Similarly, adherent pericardium is a condition of rarity apart from enlargement of the heart, the enlargement consisting of combined hypertrophy and dilatation in varying proportions. This may serve to explain the fact that, of the cases on record of presystolic murmur apart from narrowing of the mitral orifice, aortic incompetence has been present in so large a proportion, while in so many of the remainder adherent pericardium has been found.

[23] A Text-book of Physiology, 1893, Part I., p. 233.

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The following is an abstract of previously recorded cases of presystolic apex murmur without mitral stenosis. The references will be found among the footnotes already given.

A.—Cases in which Aortic Regurgitation was present.

CASE 1.[6]—A male aged fifty-six in whom the impulse was strong, the apex beat being in the nipple line in the seventh left space. At the apex there was a presystolic "blubbering" murmur, and at the base a soft diastolic murmur conducted down the sternum. Post mortem the weight of the heart was 16 oz. There was hypertrophy of the left ventricle. There were a few vegetations on the mitral valve, but otherwise it was healthy. The aortic segments were sound, but insufficient from enlarged orifice.

CASE 2.[7]—Presystolic blubbering apex murmur; aortic direct and regurgitant murmurs. Post mortem the heart weighed 17½ oz. There was hypertrophy of the left ventricle; the mitral valve was healthy; the aortic valves were contracted and insufficient.

CASE 3.[8]—Presystolic and systolic apex murmurs; double aortic murmur. Post mortem the heart weighed 17½ oz.; the mitral valve was normal; the aortic valves were thick and contracted.

CASE 4.[11]—A male aged thirty-three. The impulse was diffused; the apex beat was in the nipple line, two inches below the nipple. There was an occasional presystolic thrill; a presystolic apex murmur occurred with every other beat, alternating with systolic murmur; there was a diastolic murmur after every beat, and a double basic murmur. Post mortem the heart weighed 20½ oz.; the mitral valves were much thickened, but competent, the girth of orifice being 4·79 in. The aortic valves were very incompetent and shallow.

CASE 5.[11]—A female aged thirty-two, with rheumatic history. There was a systolic apex murmur, at first by itself and later followed by soft diastolic murmur, almost continuous with the systolic, which commenced with presystolic character. Post mortem there was recent pericardial lymph; the heart weighed 20 oz.; both ventricles were enlarged; the mitral valves were thickened and incompetent, and the aortic valves were apparently incompetent.

CASE 6.[9]—There was a low-pitched, rumbling, presystolic murmur over the fourth, fifth, and sixth left interspaces, and also a double aortic murmur. Post mortem the heart weighed 21½ oz.; the mitral orifice admitted three fingers; the valve was opaque, slightly thickened, not adherent, and competent; the aortic valves were short and thickened.

CASE 7.[10]—A diastolic thrill was present in this case, and a loud, rough, presystolic apex murmur. Post mortem the mitral valve was normal, but the aortic yalves were extremely incompetent.

CASE 8.[13]—A male aged twenty-four. At the apex there was a brief, rather indefinite, auriculo-systolic murmur; later it was rather more decidedly auriculo-systolic. Aortic regurgitation was not entertained. Post mortem the heart weighed 16 oz.; there was a half-inch perforation in the right aortic valve. (The mitral valve was not mentioned, being presumably healthy.)

CASE 9.[14]—A male aged forty, with rheumatic history. The apex beat was one inch and a half outside the nipple line in the sixth space. A faint systolic apex murmur was audible, there being later a rather blowing presystolic murmur, limited to an area within and above the apex beat; still later this murmur disappeared. At the base systolic and diastolic murmurs were heard. Post mortem the weight of the heart was 22 oz. All the cavities were dilated. The mitral orifice admitted three fingers, the anterior flap of the valve being slightly thickened, and the ventricular aspect roughened; the chordæ tendineæ were neither thick nor short. The aortic valves were incompetent, thick, and shrunken.

CASE 10.[14]—A male aged fifty-five. The apex beat was without the nipple line, in the fifth space. In the fourth right space there was a diastolic murmur, conducted to the ensiform cartilage. Just below the left nipple there was a short, blowing, presystolic murmur; this became rougher and less localised, and later disappeared. Post mortem the heart weighed 25½ oz.; all the cavities were dilated; the chordæ tendineæ were healthy. The mitral orifice admitted three fingers; the valves were healthy, except for an atheromatous patch. The aortic valves were incompetent and much shrunken. An aneurysm of the left coronary artery bulged into the left auricle, but was free from the mitral orifice and the cusps of the mitral valve.

CASE 11.[15]—A male aged twenty-one, with a history of chorea followed by rheumatic fever. Presystolic and systolic murmurs were heard at the apex; later the presystolic murmur occupied a large part of the diastole; still later it disappeared; afterwards it reappeared, and the systolic murmur vanished. There was a double aortic murmur. Post mortem the pericardium was found to be completely adherent. The heart was much enlarged, especially the left ventricle. The mitral orifice admitted three fingers, the valve being thickened, and there was some recent endocarditis. The aortic valves were thick; fresh vegetations with ulcerations were present.

CASE 12.[15]—A male aged thirty. The apex beat was displaced considerably downwards and outwards. There were apex murmurs, at times being systolic and diastolic, and at other times presystolic and systolic. At the base a loud, rough systolic murmur was heard; a short diastolic murmur was localised in the second right space. Post mortem the heart weighed 27½ oz. The mitral orifice admitted three fingers; the valve was normal. The aortic valves were fused into a calcareous mass; an opening was left of the size of a cedar pencil, which would have directed the stream towards the mitral valve.

CASE 13.[13]—A male aged thirty-one. The impulse was between the fifth and sixth spaces two inches without the nipple line. There were a presystolic rumbling apex murmur and systolic and diastolic basal murmurs. Post mortem the weight of the heart was 35 oz. All the cavities were dilated; the chordæ tendineæ were normal. The mitral orifice admitted five fingers; the valve was normal. The aortic valves were slightly thickened and incompetent.

CASE 14.[15]—A male aged forty-five. The impulse was feeble. There was a local presystolic apex murmur of cantering character, and a systolic murmur to the left of this. At the base there was a loud systolic murmur, and a soft diastolic with maximum at the fourth left space. Post mortem the weight of the heart was 19 oz. The mitral orifice admitted four fingers; the anterior flap and the chordæ tendineæ were thick, but not shrunken; the posterior flap was slightly thickened. The aortic valves were much diseased and quite incompetent.

CASE 15.[16]—A male aged thirty. A well-marked presystolic thrill was present. There was a murmur over most part of diastole at apex, (?) ceasing for a very brief period before the first sound; also simulated reduplication of second sound. Post mortem there was no stenosis whatever of the mitral valves. The aortic valves were incompetent.

CASE 16.[26]—A male aged thirty-two. There was an apex beat in the nipple line in the fifth space. There was a presystolic thrill. At the apex there was a presystolic "rolling" murmur localised to the area of impulse; between this and the sternum there was a systolic murmur. At the base there was a diastolic murmur to the left of the sternum; behind the sternum there was a loud half-squeaking, half-musical murmur. Post mortem the pericardium was found to be healthy. The weight of the heart was 22½ oz. The left ventricle was hypertrophied. The mitral orifice measured 4 in.; the valve was healthy. The aortic valves were slightly thickened, the right posterior cusp was retroverted, and there was thickening of the endocardium over the septum where the regurgitant stream had impinged.

CASE 17.[26]—A male aged forty-five. The apex beat was in the fifth space three inches without the nipple line. There were a presystolic thrill and a harsh presystolic apex murmur. There was also a to-and-fro basal murmur. Post mortem the mitral orifice measured 4½ in.; the valve was normal. The aortic valves were not diseased, but incompetent from dilatation of the aorta. There was a thickened patch on the septum.

B.—Cases in which the Pericardium was entirely or partially Adherent.

CASE 18.[16]—A female aged nineteen. There was a history of rheumatic fever. There were a diastolic thrill, systolic and diastolic apical murmurs, with doubled second sound. There was also a systolic aortic murmur. The pulmonary second sound was accentuated. Post mortem the pericardium was found to be generally adherent. There was dilatation of all the cavities. The chordæ tendineæ were hard and short. The mitral orifice admitted four fingers, the valve was thickened, and there were vegetations on the auricular surface. The aortic valves were competent.

CASE 19.[18]—A male aged twenty-three. There was a

[26] Theodore Fisher: THE LANCET, March 9th, 1895.

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diastolic thrill. At the apex there were a systolic murmur, doubled second sound, and a short diastolic murmur. At the base there were a systolic murmur and reduplicated second sound. Post mortem the pericardial cavity was found to be obliterated. The weight of the heart was 22 oz. There was great dilatation of the mitral orifice; the valve was thickened and indurated. The aortic valves were slightly thickened, but apparently competent.

CASE 20.[27]—A female aged twelve. At the apex there were a loud systolic murmur and a rumbling diastolic sound. Post mortem the pericardium was found to be adherent. The weight of the heart was 23 oz. There were hypertrophy and dilatation. The mitral orifice was dilated and the valve slightly thickened. The aortic valves were competent.

CASE 21.[27]—A male aged ten. There was a thrill (? rhythm). At the apex there was a systolic murmur, and after it a sound, probably a diastolic bruit. Post mortem the pericardium was found to be adherent. The weight of the heart was 10 oz. There were hypertrophy and dilatation. The aortic and mitral valves were healthy, except for bead-like granulations.

CASE 22.[27]—A male aged thirteen. At the apex there were a systolic and rumbling presystolic murmur. Post mortem the pericardium was found to be adherent. The heart weighed 22 oz. There were hypertrophy and dilatation. The mitral orifice was dilated. The valves were healthy.

CASE 23.[27]—A male aged twelve. There was a systolic thrill. At the apex was a systolic murmur, and later a diastolic murmur. Post mortem the pericardium was found to be adherent. The heart weighed 13 oz. There were hypertrophy and dilatation. The mitral orifice was enlarged. The valves were normal.

CASE 24.[27]—A female aged eleven. There were a systolic thrill and systolic and diastolic apical murmurs. Post mortem the pericardium was found to be adherent. The weight of the heart was 17 oz. There were hypertrophy and dilatation. The mitral orifice was dilated and the valves were thickened. The aortic valves were normal.

CASE 25.[27]—A male aged thirteen. At the apex was a systolic murmur, preceded by a rumble. Post mortem universal pericardial adhesions were found. The heart was greatly enlarged. The mitral orifice admitted five fingers.

CASE 26.[28]—A female aged eleven. There were a presystolic apical thrill, systolic apex murmur, and also a rumbling long diastolic murmur. Post mortem the pericardium was found to be universally adherent. The weight of the heart was 17 oz. The mitral orifice measured 4 in.; the valve was thickened. There were small granulations on the mitral and aortic valves.

CASE 27.[28]—A female aged seventeen. There was an apex thrill, now presystolic, now systolic. There were apical systolic and diastolic murmurs. Post mortem the pericardium was found to be adherent over the front of the left ventricle. There was great dilatation. The mitral orifice measured from 3¾ to 4 in.; the valve was thickened. The aortic valves were healthy.

CASE 28.[28]—A male aged fourteen. There were a systolic apical thrill and mitral systolic and mid-diastolic murmurs; at another time there was a localised presystolic murmur. Post mortem general adhesion of the pericardium was found. The heart weighed 21½ oz. The mitral orifice measured 4¾ in.; the valves were thick, but not shrunken. The aortic valves were slightly thickened, but not contracted.

CASE 29.[28]—A male aged nine. There were a mitral diastolic thrill, mitral systolic murmur, and a diastolic "rumbling" sound; there was no presystolic murmur. Post mortem universal pericardial adhesions were found. The heart weighed 10 oz. There were bead-like granulations on the valves, otherwise they were healthy.

CASE 30.[28]—A male aged nine. There were a systolic apex murmur and a short "roaring" diastolic sound. Post mortem the pericardium was found to be universally adherent. The weight of the heart was 10¼ oz. The mitral orifice measured 4½ in.; the valves were thick, but slightly shrunken, and fringed with small granulations. The aortic valves were healthy.

CASE 31.[28]—A male aged ten. There were a harsh systolic apex murmur and a long, rumbling, diastolic murmur heard over a wide area. Post mortem the pericardium was found to be universally adherent. The heart weighed 9 oz. The mitral orifice was capacious. There were recent vegetations on the valves.

CASE 32.[28]—A male aged thirteen. There were a systolic apex murmur and a rumbling presystolic murmur localised to the area of impulse. Post mortem universal adhesions of the pericardium were found. The weight of the heart was 22 oz. The mitral orifice took three fingers easily; the valves were healthy.

CASE 33.[28]—A male aged twelve. There was a systolic apex murmur. At different times a rumbling sound followed the second sound, and there were mid-diastolic and presystolic murmurs at the apex. Post mortem the pericardium was found to be universally adherent. The heart weighed 13½ oz. The mitral orifice was enlarged; the valves were scarcely thickened. The aortic valves were normal.

CASE 34.[28]—A female aged thirteen. There were presystolic and systolic apex murmurs. Post mortem the pericardium was found to be universally adherent. The weight of the heart was 10½ oz. There was no stenosis of the mitral orifice, but slight thickening and shrinking of the valves. There was a fringe of small granulations. The aortic valves were normal.

CASE 35.[28]—A female aged fourteen with systolic apical murmur, rumbling diastolic sound, and double squeaky pericardial rub. Post mortem recent adhesions of the pericardium to the front of both ventricles were found. The weight of the heart was 13¼ oz. The left auricle was dilated and hypertrophied. The mitral orifice took three fingers; the valves were thickened. Small granulations were present on the mitral and aortic valves.

CASE 36.[29]—A male aged eighteen with a history of chorea and afterwards of rheumatic fever. The patient had a mitral systolic murmur, and later a variable diastolic murmur, now early diastolic, now presystolic, and at times absent; it was associated with a thrill. Post mortem the pericardium was adherent to the heart and chest wall. There was dilatation of both sides of the heart, especially of the left. The mitral orifice admitted three fingers; the valve was slightly thickened. The chordæ tendineæ were thickened, but not shortened. The aortic valves were competent; on them were small vegetations.

C.—Cases in which there was neither Aortic Regurgitation nor Pericardial Adhesions.

CASE 37.[11]—A male aged thirty-six in whom the apex beat was 2 in. on the outer side of the nipple line. At the apex there were systolic and long diastolic murmurs; with stronger beats there was a rough presystolic murmur, followed by a flapping first sound, but no systolic murmur. At the base there were an indistinct systolic and a diastolic murmur. Post mortem both ventricles were dilated and hypertrophied. The mitral orifice took three fingers; the valves were competent; the margins were thick and rough. The aortic valves were thickened, but showed no patency.

CASE 38.[11]—A female aged thirty-five with a history of rheumatism. There were a systolic thrill and a systolic apex murmur; later a presystolic murmur appeared, and the systolic disappeared. Post mortem the heart was somewhat enlarged symmetrically. The mitral orifice measured 4½ in. The mitral and aortic valves were normal.

CASE 39.[10]—A child with a presystolic mitral murmur. The heart was pushed upwards by an enormous spleen. Post mortem the mitral valve and orifice were found to be normal.

CASE 40.[27]—A male aged eight. There were a systolic thrill and a systolic apex murmur, and in addition a low-pitched systolic and diastolic rumble. Post mortem the weight of the heart was 10 oz. The mitral orifice measured 3¾ in.; the valves were thick and contracted. The aortic valves were thick, but competent.

CASE 41.[28]—A male aged forty-six with a presystolic apex bruit. Post mortem the heart weighed 21 oz. The mitral orifice took three fingers; the valve was thickened. The kidneys were healthy.

CASE 42.[28]—A male aged eight with a systolic thrill. At the apex a hard, harsh, blowing systolic murmur was heard, and also a long rumbling sound, systolic and diastolic. Post mortem the weight of the heart was 10 oz. The mitral orifice measured 3¾ in.; the valve was thickened and somewhat shrunken. The aortic valves were thick, but not shrunken. The left auricle was dilated and hypertrophied.

CASE 43.[26]—A male aged forty-seven in whom a presystolic apex murmur was audible. Post mortem the mitral orifice

[27] Theodore Fisher: Brit. Med. Jour., April 28th, 1894.
[28] Theodore Fisher: Medical Press and Circular, Oct. 10th, 1894.
[29] This paper.

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admitted four fingers. The aortic valves were adherent, but considered competent.

CASE 44.[36]—A female aged twenty. There were a presystolic thrill and presystolic and systolic apex murmurs; later a diastolic murmur replaced the presystolic. Post mortem the weight of the heart was 18 oz. The mitral orifice measured 3¼ in. The aortic valves were healthy. There were hypertrophy of the right ventricle and atheroma of the pulmonary artery.

CASE 45.[36]—A child aged eight. At the apex there were systolic and long, loud, diastolic murmurs. Post mortem the mitral orifice measured fully 3 in.; there were a few small granulations on the auricular surface of the valve.

CASE 46.[36]—A female aged eleven. There was an apical systolic murmur, and later a diastolic in addition, its place in the diastole varying, being now early diastolic, now mid-diastolic, and now presystolic. Post mortem hypertrophy of the left ventricle was found. The mitral orifice admitted two fingers; the valve was slightly thickened. The chordæ tendineæ were short and thickened. The aortic valves were normal. The kidneys were small and granular.

In 17 of these 46 cases the aortic valves were incompetent; in 20 the pericardium was adherent. In 12 cases presystolic or diastolic thrill was present; this cannot, therefore, be so certain a sign of mitral stenosis as has been supposed. The condition of the chordæ tendineæ is mentioned in seven cases only; in three of these they are recorded as healthy; in two they were thickened, but not short; and in two they were found to be shortened.

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NOTES ON A RECENT DEATH FROM LIGHTNING-STROKE AT SHOEBURYNESS, ESSEX.

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DURING the recent meeting of the National Artillery Association at Shoeburyness, where I was doing duty as camp-surgeon, the following fatality occurred. On Tuesday, Aug. 6th, 1895, at 6.50 P.M., a man, whilst walking with a female companion along the footpath leading from South Shoebury to Shoeburyness railway-station, was struck by lightning and killed instantly. He was a London cab-driver, single, aged thirty, had been in the army, and was an army reserve man at the time of his death. The footpath is about six feet in width, having on one side a shallow ditch and a row of tall old elm trees, and on the other an iron railing about five feet high, the rails forming a row of pointed spikes six inches long above a horizontal bar. The tree nearest to the deceased was the last of the row. It was to the man's left hand, and the woman was between him and the railings. They were walking. There had been no rain for about three-quarters of an hour. Deceased was perfectly dry. I saw him within four minutes of his death. He had fallen on his face diagonally across the path, with his head towards the tree. His face was livid and suffused with blood. His eyes were closed; yellow mucus was exuding. He was quite dead, so I had him placed on a small ladder and removed at once, as there were still frequent flashes of lightning, a possible source of danger to onlookers. There was probably a rise of temperature, for I observed the body was very warm to the touch, and there was a very powerful smell of burnt hair and flesh. His companion was thrown against the railings, but did not fall. She was able to answer my questions, but was very pale. She said she felt heat on the left side of her face. Her left ear was filled with débris of hair. On examining the body at 8.30 A.M. next morning, in conjunction with Surgeon-Colonel Coats, A.M.S., garrison surgeon, the body was found to be well nourished, muscular, and well developed. Rigor mortis was well marked. On examining the head the point of probable entrance of the electric fluid was found to be at the vertex, almost central; slightly to the left of the central line showed an oval excavation in the hair about one inch. No wound was apparent. The hair was all singed short over the left side of the head. The left eyebrow, eyelashes, and left side of the moustache were practically gone. Fluid was escaping from the left ear. On tracing the burns on the left cheek and under the left lower jaw several large ones were found on the left thorax and sternum; thence centrally over the abdomen. The hair of the pubes was all singed short; the scrotum was swollen and livid; thence along the inner side of the right thigh and calf over the internal malleolus, the point of exit of fluid being at the inner and central point of the right heel. The burns were of various sizes and interrupted, the largest being that on the sternum, about one inch and a half in diameter. The surface of the burns was dried. The epidermis was entirely destroyed and gone. On examining the clothing, the hat was found to be in small shreds, but the coat and waistcoat were very slightly damaged. A blue woollen jersey was not much damaged. The shirt (grey flannel) was split in the same direction as the burns, and a merino undervest next the skin was split in the line of the burns two-thirds from above downwards—the edges of this crumbled when handled, but were not charred black. There was a hole through the watch pocket. The trousers were split into long vertical ribbons in both legs, but more especially along the line of burns. The right pocket was blown to shreds (there had been about 14s. silver money in this, which was picked up at the time of removing the body). The drawers were very much torn. The boots were of the front lace-up pattern, the soles and heels of which were entire, but some brass nails had started in the sole of the right boot. Half of the inner uppers of each boot was entirely gone; also the metal eyelet holes. The right boot was blown off the foot entirely at the time of the accident. The collar and cuffs were in shreds. The necktie (a bow) was split in two in the middle. The tree showed a spiral interrupted track of the lightning, the bark being broken off. The lightning apparently left the tree about ten feet from the ground, and four days later I observed just below this point one small thin twig (only) about two feet long, the leaves on which had withered. This would correspond to a point about eighteen inches above the man's head. The following articles were found on the deceased:—Money—besides the silver—in left-hand breast coat pocket, inside: Thirty-seven sovereigns and twenty-eight half-sovereigns in a common leather jaw-opening purse which had a metal rim and closed by two small knobs. The coins (nearly all) were wrapped in separate pieces of thin paper and the purse tied up in a handkerchief. In the waistcoat pocket, on the right side, a silver match-box containing two unignited wax matches and silver Geneva watch (no chain) were found. There was also a gold ring on one of the fingers. A pocket knife was also found. With regard to the condition of the coins, two half sovereigns were slightly fused and adhering together; one sovereign was partially fused on one side as though a splash of metal had been thrown on it. Many more of the gold coins showed traces of fusion of the milling of the edges only; several of the silver coins also showed similar fusion of the edges. The watch (open-faced) had a hole a quarter of an inch in diameter through the outer case by the hinge, and on opening this there was a splash of metal on the rim of the dome, and another on the bow. The watch had stopped at 6.55, but could be wound up. The steel hair-spring would not recoil, as probably it had lost its temper. The watch glass was broken. The ring and knife showed nothing. The metal rim of the purse had a small point of fusion on one side—inside—and the purse also had a hole through one side of the leather.

It would be interesting to know whether the base of the skull was fractured, as fluid was seen issuing from the left ear and not from the right one; whether from the apparent direction of the electric fluid in the line of the left pneumogastric nerve this would sooner affect the heart's stoppage; and, also, whether the deceased received the whole of the discharge or whether any passed over the woman's head to the pointed railings. There can be but little doubt that the gold attracted the lightning. Had deceased not been immediately under the tree his head would probably not have been struck first, but the gold would have received the discharge direct. The path of the lightning also should be noted—from the largest burn on the *left* chest (close to the heart's apex) through the watch pocket to the gold, thence to the *right* trousers pocket, touching the watch on its way, and giving a slight radiation towards the match-box. A violent explosive force was expended in the right trousers pocket so as to blow it to pieces and throw the silver coins towards

[36] Duckin: The Diseases of Childhood, p. 415.

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and under the railings, where most of them were picked up at the time of removing the body. The next greatest force was expended in the right boot so as to blow away the adjacent inner sides of both boots. I gave evidence at the inquest, but the coroner would not give me leave to make a post-mortem examination, which no doubt would have added still more to what has been to me a case of great interest.

Reading, Berks.

NOTES OF TWO CASES OF ENUCLEATION OF THYROID CYST.[1]

BY W. H. BROWN, F.R.C.S. IRELL.,
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THE treatment of cystic goitre has hitherto been of a disappointing character, and the methods mentioned in the various text-books have always, so far as I have seen, been attended with much febrile disturbance and great personal discomfort, not to mention the uncertainty of success and the very tedious progress towards convalescence. In the two cases which follow I adopted the plan first carried out, I think, by Dr. Vachell of Cardiff in 1885. The cases are so alike in many points that I do not propose to make anything like a detailed separate report. I can supply any particulars that may be asked for as being important. Both tumours occurred in young unmarried women aged respectively eighteen and twenty-five years. The growths had been noticed between three or four years. No inconvenience had arisen until within a few months of my seeing them. There was no evidence of any general nervous disturbance or blood change. The reason they sought advice was the same in both cases—i. e., an occasional difficulty in swallowing and attacks of dyspnœa, the latter becoming gradually more severe and increasing in frequency. Upon examination, the tumours were firm and elastic, painless, and occupying the position of the left lobe of the thyroid gland. The tumours were almost the size of a large orange, fluctuation could not be made out, and the circumference of the neck was fifteen inches over the most prominent part of the swelling. Under ether I made an incision three inches and a half long over the most prominent part of the swelling down on to the capsule of the cyst. All bleeding caused by the incision was next stopped by pressure forceps, then with the finger and a blunt director the cyst was stripped from its attachments, steady sponge pressure following up this process; after that, the cyst having been freed on both sides, I opened it and allowed the fluid contents (about four ounces) to escape. This permitted of more room in the wound cavity and enabled me to complete the detachment of the posterior surface of the cyst wall with greater freedom of manipulation. After the removal of the tumour the cavity was packed with sponges for a few minutes; this effectually did away with any tendency to oozing. To give some idea of the depth of the wound, I may mention that it required six fair-sized sponges to fill it. After the washing out with carbolic water the wound was closed in the ordinary manner, and a large rubber drainage tube was inserted at the lower angle. This was removed after twenty-four hours. In both cases union by first intention was obtained, and the after-treatment does not need mention save perhaps that in the first week the patients were kept constantly upon the back, their heads being firmly fixed between two large sandbags. In neither case was there any important rise of temperature. Both patients are now well.

Until quite recently I had looked upon thyroid enlargement of this character as being somewhat beyond satisfactory operative treatment. The list of remedies given in the text-books does not mention one that in my opinion can be compared with the plan I have just described, and which, by the way, is not spoken of in any surgical work to which I have had access, save in Heath's Dictionary, where Dr. Felix Semon suggests that enucleation *might possibly* be undertaken, but does not advocate it, and by Mr. Jacobson, who advocates antiseptic excision, but quotes a case which is not very encouraging. In his recent work on tumours Mr. Bland Sutton states that all cystic growths of the thyroid gland have their origin in adenomata and that they can readily be shelled out from their bed, whether cystic or solid: and lately I have had the opportunity of verifying the statement by enucleating an adenoma of the thyroid gland in a girl of fifteen, the operation being perfectly straightforward. This case is also doing well. So far as I have seen, the operation itself is not difficult; once the tumour has been fairly exposed hæmorrhage ceases to be troublesome. In stripping the cyst wall I used the finger and blunt director, and thus avoided lacerating the gland tissue; unless this be done hæmorrhage of an embarrassing nature must occur. The originator of this operation worked through a small incision, opening the cyst at once and dragging it out of the wound afterwards. I prefer a freer opening so as to be in a position to command a good view of the wound cavity. In the second case the wound was fully five inches in depth, going down behind the sternum; and bleeding from such a distance would be most difficult to combat through a small incision. I need hardly point out that in this operation every detail of cleanliness must be most carefully observed, as carefully indeed as within the peritoneum; for nothing could more readily end in disaster than septic infection of the thyroid gland, and given that infection, septicæmia of an almost certainly fatal character would follow. Now that the distinction between the general enlargement of the thyroid gland and a growth in that gland, whether cystic or solid, has been made clear, and the fact that the latter can be dealt with by a safe operation having been demonstrated again and again, the operation of enucleation will probably soon obtain recognition in the text-books and become more general. It may often be impossible to say whether a given swelling is solid or cystic—in such cases exploratory puncture will help towards a diagnosis; but even if that should prove negative as to the presence of fluid, if the tumour appear to be in the thyroid gland and not of it, then operation can be entertained, as evidence Mr. Sutton's statement and my later case. Let it not be supposed that this operation applies to all cases of thyroid enlargement. Selection must be made or disaster will follow, and odium will be cast upon what is to my mind a very valuable addition to the surgery of the thyroid gland. Since writing the above I have had brought to my notice Mr. Charters Symonds' paper read before the Clinical Society in which he advocates operative treatment very much on the same lines, and quotes many successful cases.

Leeds.

[1] Read before the meeting of the Yorkshire Branch of the British Medical Association, at Scarborough, Nov. 2nd, 1894.

MELANCHOLIA, WITH SPECIAL REFERENCE TO ITS CHARACTERISTICS IN CUMBERLAND AND WESTMORLAND.[1]

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THE subject of melancholia has many features of interest both for the general practitioner and for the asylum physician, and it is one that should give rise to much useful discussion. The family physician has the advantage of seeing the case at its onset, of studying the causes that have led to it, of watching its gradual development and growing intensity, of adopting measures for combating the attack in its earlier and more curable stages, and finally in severe cases it often devolves upon him to decide as to the necessity for asylum treatment; and his knowledge of the family history and surroundings of the patient must prove of great service to him in giving his prognosis and in formulating his treatment. The asylum physician, on the other hand, only sees the more severe cases, and those as a rule only after they have undergone treatment for a longer or shorter time at home; nor has he in many cases the same opportunities for ascertaining all the particulars as to the personal and family history of his patients.

Nature of melancholia.—Melancholia is characterised by the presence of mental depression out of proportion to any exciting cause and tending to become more and more independent of any such external agency. The patient begins gradually to lose interest in his former pursuits and pleasures, he shuns society, retires within himself, and gives way to morbid introspection and gloomy forebodings. For a time there may not be much noticeable alteration in the conduct of the sufferer; he retains at first

[1] Read before a meeting of the Border Counties Branch of the British Medical Association at Penrith, May 31st, 1895.

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sufficient self-control to keep his troubles to himself—he knows they are morbid and have no real basis. In course of time, however, the mental aberration becomes more marked, he grows more and more unfit to pursue his ordinary avocations, the increasing difficulty of thought and of all mental work begets a feeling of resistance to the outer world, and hence originate the painful delusions which are so frequent in melancholia. In only 30 per cent. of the cases of melancholia treated at Garlands Asylum during the twenty-seven years from 1865 to 1891, inclusively, has there been simple depression without the presence of distinct delusions; in the remaining 70 per cent. delusions were more or less prominent; of course, in the large number of mild cases that never require asylum treatment there is a much greater proportion of cases of simple depression. According to the degree of mental depression, cases of melancholia have been artificially grouped into different varieties, as simple melancholia, hypochondriacal melancholia, delusional melancholia, and so on; but such subdivisions are purely arbitrary. All cases begin as simple depression and delusions are gradually evolved as the disease progresses; these at first are slight and fleeting, but gradually become more fixed and unchanging. The delusions of melancholiacs vary greatly in character. Delusions of suspicion and persecution are very common: the patient fancies that all his relatives and neighbours are in league against him, that he is being robbed of his property, or that his food is poisoned; in other cases some unseen agency is suspected to be at work—e.g., he fancies that electricity is played on him by invisible people. Very frequently the delusions refer to the spiritual welfare; the patient asserts that he has been very wicked, that he has committed the unpardonable sin, and that he is lost for time and eternity. In many cases the patient's whole attention is concentrated on the state of his bodily health; these form the group of hypochondriacal melancholia; such patients frequently exhibit an intense craving for sympathy and are constantly pouring forth lengthy statements of their imaginary maladies, some of the details being loathsome in the extreme. They complain that their bowels are never moved and they constantly clamour for aperients, or their throat is blocked up, or their stomach is gone, and so on. Some hypochondriacal melancholiacs talk much of putting an end to their woes by suicide, but they seldom make genuine attempts at self-destruction. In addition to other delusions, hallucinations of the special senses are frequent in melancholia. Hallucinations of hearing are most common; the patient hears voices mocking him, accusing him of crimes or inciting him to suicide. Next in frequency are hallucinations of sight; he is troubled by flashes of light or sees visions of various kinds. More rarely there are hallucinations of taste or smell; the patient complains of a persistent bad taste or of horrible odours. Some melancholiacs (often more chronic cases) pass into a state of great motor restlessness and excitement; they roam up and down wringing their hands, beating themselves about the body, loudly bewailing their fate, moaning and groaning continually. One such case in Garlands Asylum at present constantly declaims in somewhat the following strain: "Oh, what a fool I've been, I'se nought but a bit o' skin, I've no stomach, no bowels," and so on. This is the condition called melancholia agitans. Again, in some cases the depression passes into stupor more or less complete; the patient becomes more and more oblivious of surroundings till a state of complete apathy is reached; the expression is vacuous; no notice is taken of anything and no replies are given to questions; in extreme cases saliva dribbles from the mouth; at the same time there is vascular paresis, and the extremities become clammy and cold. There are two varieties of stupor: (1) melancholic stupor or melancholia attonita; and (2) inert or anergic stupor, or acute dementia. Melancholic stupor is characterised by the presence of some fixed delusion which absorbs the whole attention; there is a concentrated self-absorbed expression; it is often combined with great muscular resistiveness to all passive movements; after the stupor passes off the patient can often give a clear, connected account of all that happened while he was in the stuporose condition. Inert or anergic stupor is often the sequel of melancholic stupor; the patient is completely fatuous, lives a purely animal existence, and pays no attention to the calls of nature; there is no muscular resistiveness, but there is often a cataleptic condition with a tendency to maintain any position in which the body may be placed; there are no delusions; if recovery takes place there is no memory of anything that occurred whilst the stupor lasted. Such are the main varieties that melancholia may assume. The suicidal impulse is present to a greater or less degree in a large proportion of the cases. Out of 730 cases treated in Garlands Asylum it existed in over 65 per cent.; more than half of the melancholiacs who had this tendency had made one or more actual attempts at suicide; the remainder had only threatened it. The proportion of suicidal cases was 11 per cent. higher amongst the males than amongst the females; this relationship of the two sexes is still more marked with regard to suicides outside of asylums, for, according to Morselli,[2] "in every country the proportion of suicides is one woman to three or four men." Cumberland holds an unenviable position amongst the English counties with regard to suicide. Morselli[3] tabulated the suicides in every county in England and those in North and South Wales for the years 1872–76, and showed that Cumberland had the fourth highest rate, the annual average of suicides in this county being 96·2 per million inhabitants; in North Wales, where the rate was the lowest, the proportion per million was 36·7; and in Rutlandshire, which had the highest rate, the proportion was 153·9. Westmorland had a proportion of 58·3 per million inhabitants. The bodily symptoms of melancholia are characteristic. There is a condition of lowered vitality and anæmia, the complexion is muddy, the appetite is poor, digestion is impaired, and the bowels are torpid; the muscles are flabby, and there is a lack of vigour in all movements; neuralgic pains are often complained of at the onset, and sleeplessness is a most distressing feature. In many cases there is in addition some distinct organic disease, which may, indeed, be the exciting cause of the mental depression. Such a concomitant has existed in 29 per cent. of the cases of melancholia treated in Garlands Asylum. Phthisis pulmonalis was the disease most frequently associated with melancholia; it was present in almost 10 per cent. of the total number of cases; heart disease was present in almost 8 per cent. of the cases; whilst cancer and various other bodily diseases existed in smaller proportions of cases.

Causation of melancholia and suicide.—By far the most important factor is that of hereditary predisposition. The tendency to the mental disease is inborn and only lies dormant till at some critical period of life it is called into active existence. The cause popularly ascribed for an attack is usually just the spark which sets the train in action. Some bodily ailment or some mental shock which would produce no mental disease in a person with a healthily constituted brain is sufficient in those with hereditary mental taint to induce an attack of depression of a severity out of all proportion to the strength of the exciting cause. These immediate or exciting causes are most frequently of a physical nature; in considerably over half of the cases of melancholia treated in Garlands Asylum the attack had been preceded by some agency through which the general health had been lowered; included amongst these physical causes is intemperance in drink, which preceded the attack in 11·5 per cent. of the total number of cases. In about one-third of the cases the mental depression had been preceded by some trouble of a moral or mental character which was assigned as the cause; even in some of these cases, however, there was in addition some physical disorder preceding the attack; business anxieties constituted the most common moral cause in men, and domestic affliction in women. Considering now the question of hereditary transmission, there can be no doubt that melancholia is pre-eminently a hereditary disease. Hereditary predisposition was ascertained in over 38 per cent. of the cases of melancholia treated at Garlands Asylum during the twenty-seven years from 1865 to 1891, and undoubtedly it really existed in a much larger proportion of the cases. The relatives of the insane are often very loth to admit the fact that there has been previous insanity in their family, and, on the other hand, many of the poor are unable to give much reliable information about their ancestors for more than one generation back. It is an unfortunate thing for the race that attacks of melancholia are so curable and that individuals with this tainted constitution are allowed to marry and to propagate a degenerate stock, thus causing a more widespread deterioration of the race. Many of the country districts of Cumberland and Westmorland have only recently been opened up into free communication with the outside world; there for

[2] H. Morselli: Suicide, second edition, p. 189. [3] Op. cit., p. 46.

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generations intermarriage has been going on to a most unhealthy and unnatural extent, with the result that the defects in the stock are further disseminated and intensified in each succeeding generation. The racial characteristics of the Cumbrians also foster the prevalence of melancholia. Remnants of old superstitions abound in many country districts, the inhabitants have not a superabundant supply of animal spirits, and they are often prone to look on the dark side of things; any little extra worry or some trivial bodily ailment is apt to upset their mental balance and produce undue depression or an actual melancholic attack. The inherited mental taint which predisposes to melancholia and suicide need not necessarily be derived from insane parents, it is an evidence of an unsound stock, and there may have been no actual insanity in the family for some generations back. Further, the unsoundness of the stock may not have previously exhibited itself as insanity at all, but as some allied nervous disorder, such as epilepsy, neuralgias, chorea, spasmodic asthma, &c. Drunkenness is a fertile source of race degeneration, and the victims of melancholia and suicide often have an alcoholic family history, though there may have been no previous insanity in the family. As already mentioned, outbursts of alcoholic excess also precede and act as the exciting cause of attacks of melancholia in a considerable number of cases. Alcoholism thus exerts its baneful effects, not only on the drunkards themselves, but equally, if not more, on their descendants. Then it has been attempted to prove that there is a relationship between the state of morality in a district and the amount of suicide in it. The state of sexual morality in any district can be roughly gauged by observing the proportion of illegitimate to total births. Dr. S. A. K. Strahan, in his book, "Suicide and Insanity," quotes a table of the suicidal and illegitimacy rates in the English counties; in Cumberland the illegitimacy rate is very high, 76 out of every 1000 births being illegitimate; this rate is only exceeded in one county in England, Shropshire, where the illegitimate births are 82 per 1000; in Westmorland the rate is 70 per 1000. The high rate of illegitimacy thus corresponds in Cumberland with the high proportion of suicides; but, as Dr. Strahan points out, there is not a similar correspondence in other counties in England. Thus Rutlandshire, which has the highest suicidal rate in England, only comes nineteenth on the list as regards illegitimacy; while Shropshire, which has the highest rate of illegitimacy, only comes thirtieth in the list of counties arranged according to frequency of suicide.

Course and terminations of the attack of melancholia.—Of the cases of melancholia admitted into Garlands Asylum from 1865 to 1891 inclusively, 58 per cent. terminated in recovery. As a rule recovery takes place gradually, and along with the improvement in the mental state there is a corresponding improvement of the bodily health; it is a favourable sign when the patient begins to put on fat. The duration of the attack in cases that recover varies greatly; of the cases that recovered in Garlands Asylum, 10 per cent. were discharged within three months, 47 per cent. within six months, 66½ per cent. within nine months, 73 per cent. within twelve months; 87 per cent. recovered in less than two years, leaving 13 per cent. who took more than two years to get over the attack. In some cases recovery takes place after a very prolonged attack of melancholic depression; three of the series of cases at Garlands Asylum recovered after having been in the asylum more than ten years; so long as the case remains one of pure depression, without marked impairment of the intellectual powers, there is always a chance of recovery; this constitutes one of the hopeful features of melancholia. Of the cases that do not recover a considerable number remain throughout life in a chronic melancholic condition; the face retains its expression of woe, the sufferers may still give utterance to mournful statements and painful delusions, but these are largely the result of habit; the physiognomy suggests more mental pain than is really felt; there is more loss of self-control than in the earlier stages, and there is a good deal of mental enfeeblement combined with the depression. Some cases pass into a state of mania, and a small proportion become demented; but melancholia is much less prone than mania to terminate in complete dementia. Twenty per cent. of the cases of melancholia treated at Garlands Asylum died without recovering from the mental disease. Phthisis pulmonalis was the most frequent cause of death, 22½ per cent. of the total number of deaths resulted from that disease. Gradual exhaustion from the melancholia without localised organic disease was the next most frequent cause of death (16½ per cent. of the total); in two other cases dying from exhaustion gangrene of the lungs set in before death and accelerated the fatal issue. Twelve deaths resulted from senile exhaustion, 10 from cancer, and various other bodily diseases caused the remaining deaths, with the exception of 6 which resulted from suicide. Three patients cut their throats (one of these had committed the act before admission to the asylum), one patient hanged himself, one was killed by jumping from a lofty window in an attempt to escape, and one patient, while out on trial for a month, had a relapse and committed suicide on the railway. Only two of the suicides were females; both cut their throats. Persons who have had one attack of melancholia are liable at some subsequent period of their lives to have a recurrence of the disease. Of the cases of melancholia admitted into Garlands Asylum 22 per cent. had had one or more previous attacks of mental disease. In a considerable number of cases melancholia has been preceded by a former attack of mania, and in other cases mania may attack persons who have previously suffered from melancholia.

The prognosis of an attack of melancholia is on the whole favourable. Contrasting the recovery rate of the cases of melancholia treated at Garlands Asylum with that of the cases of mania during the same period, it is found that the proportion of recoveries has been 4 per cent. higher in the former than in the latter. The following factors are of importance in forming a prognosis:—1. The age on attack. The statistics of Garlands Asylum show that melancholia is chiefly a disease of middle and advanced life; it is proportionately much less frequent than mania before the age of thirty, and considerably more frequent after sixty. The younger the patient is when attacked by melancholia the greater are the prospects of recovery, and the recovery-rate gradually falls as the age on attack increases; but even when melancholia comes on in advanced life there is still a fair chance of recovery. 2. Sex. In Cumberland and Westmorland melancholia seems to attack the female more frequently than the male sex; in the cases of melancholia admitted into the asylum females were in the proportion of 118·5 to every 100 males, while in the general population of the two counties there were in 1891 only 102·3 females to every 100 males. Of the male melancholiacs admitted 60·5 per cent. recovered, compared with 55·8 per cent. of the females, so that in this district the chances of recovery from melancholia are slightly greater in the male than in the female sex. 3. Hereditary predisposition. In hereditary cases attacks of melancholia are apt to come on earlier in life than in non-hereditary cases; the individual attacks are more curable and the death-rate is lower, but relapses are more frequent. 4. Cause of the attack. When the exciting cause of the depression has been of a temporary or removable nature the chances of recovery are greater than when it has been brought on by incurable bodily disease or by prolonged mental worries and suspense, endured it may be for years before the mind has finally given way. The melancholia of the heart-broken girl after a love disappointment is, as a rule, transient and short-lived; the depression that follows a drinking bout is usually quickly recovered from, frequently to relapse when supervision is withdrawn and the evil habit is returned to; on the other hand, the melancholia that is associated with a serious bodily disease, such as phthisis pulmonalis, often ends only with death. 5. Mode of onset. The prognosis is more favourable when the onset of the mental depression is rapid, and is in contrast to the natural temperament of the individual, than when the melancholia sets in deliberately or is simply the climax of the gradual evolution of an inherently gloomy and joyless disposition. 6. Duration of the attack before treatment is commenced. The sooner the patient is placed under proper care and treatment the greater are the chances of recovery. 7. Severity of the attack. Simple depression is much more curable than melancholia with delusions. If the delusions are fixed and unchanging, and especially if they are of a visceral nature or if hallucinations are present, then the outlook is less hopeful. In cases where there is extreme restlessness and acute delirium in patients of feeble constitution the prognosis is extremely grave. Other serious signs are continued bodily wasting, persistant refusal of food, and long duration of the attack in spite of treatment. It is well to remember, however, that so long as there is no marked impairment of the intellectual powers there is always the hope of recovery, even though the depression may have lasted for years.

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Treatment of melancholia.—Mild cases of melancholia are more amenable to home treatment than most other forms of insanity, and many such cases can be, and are, treated at home throughout their whole course. The patient's friends notice his increasing abstraction and unhappiness, but, apart from a feeling of solicitude for him, they themselves are not appreciably inconvenienced, and consequently they are less anxious about having him removed from their midst. On the other hand, the onset of mania is generally more rapid; the individual suffering from this disease much sooner becomes actively objectionable to those in his vicinity; his restlessness, his loquacity, his noise and combativeness, all combine to make him an uncongenial associate, and quickly reconcile his relatives to his removal elsewhere. In confirmation of this statement an examination of the admissions into Garlands Asylum for the past year shows that on an average the duration of the attack of insanity prior to admission to the asylum has been considerably greater in the cases of melancholia admitted than in those of mania. The period at which a melancholic patient is sent to an asylum is also dependent to a considerable extent on his pecuniary position. A case of melancholia, which in the upper and middle classes might be treated at home throughout the whole of its course, would, if it occurred in a working-class family, be sent to an asylum as soon as the individual was so far affected as to be unable to continue his occupation; he ceases to earn a livelihood for himself and becomes a burden upon the other members of the household which they are unable to bear; and, besides, it is not possible in the houses of the poor to provide the adequate accommodation or supervision for the treatment of such cases. Corroboration of this general statement is afforded by an examination of the pauper and private admissions of cases of melancholia into Garlands Asylum; the average duration of the attack prior to admission has been considerably greater in the private than in the pauper cases. It may be well here to briefly summarise some of the points which must be kept in view in deciding on the question of home or asylum treatment. Over twenty years ago Dr. Clouston read a paper on this subject before the Border Counties Branch of the British Medical Association, and most of what he said then still holds good to-day. Each case must be decided on its own merits. The physician must take into consideration the nature and severity of the symptoms and the circumstances and surroundings of the patient. Many mild cases can be satisfactorily treated at home, where the patient will have the kind care and attention of his friends. In more advanced cases, however, suspicion and distrust of all friends and relatives often become distressing features, and then the surroundings and associations at home may aggravate the disease; in such cases removal from home is often necessary before any alleviation of the symptoms can take place. Where there is persistent refusal of food and medicines, unless the medical man can attend several times a day to feed the patient artificially, asylum treatment is demanded. If the suicidal impulse is strongly developed, then the asylum is much the safest place for the patient; however careful friends and attendants may be, there are always far greater opportunities for committing suicide at home than in an asylum. Even mild cases of melancholia may have to be sent to an asylum if after prolonged treatment at home recovery does not set in; the complete change of surroundings, the regulated life and the amusements of the asylum, will often produce the desired improvement. As already indicated, the patient's means must be taken into account; if special attendants have to be provided home treatment becomes too expensive for those with small incomes, and for this reason removal to an asylum may be necessary. It is extremely difficult to treat a bad case of melancholia in a large town, and if the friends are unable to send the patient with proper attendants to a quiet country place, an asylum, being situated, as it usually is, in the country, is more suitable. Where the case is one at all suited for home treatment, it is always best for all concerned to keep the patient out of an asylum so as to avoid the stigma, unjust though it be, which is attached to those who have been in an asylum or who have had relatives under treatment there. In the treatment of melancholia the first indication is to combat any agencies which may have induced or may be fostering the mental depression. All undue mental effort and all harassing brain work must be stopped. In the young too much attention to religious exercises should be forbidden; they should not be allowed to attend too many prayer-meetings. If possible the patient should be removed from depressing surroundings. In mild cases change of scene is advisable—removal to a quiet country district, with life in the open air as far as possible and outdoor recreations; or he may go with a cheerful companion for a course of travel by easy stages. The diet is of great importance; the patient should have abundance of fat-forming food, plenty of milk, butter, eggs, and easily digested food; too much butcher's meat should be avoided, and the cooking should be good so as to tempt the appetite. In cases where food is absolutely refused artificial feeding by the stomach-tube must be resorted to twice or thrice daily; the simplest and best form of liquid diet to be given in this way is a liquid custard made with milk, sugar, and several eggs; soup may also be given, and if feeding has to be continued for a long time meat and vegetables may be pounded up in a mortar with beef-tea and administered by the tube; along with the food malt extract, stimulants, or drugs may also be given by the tube. In addition, general tonic treatment should be employed; iron, quinine, strychnine, and vegetable bitters are often serviceable. Attention must be paid to the state of the bowels, constipation being often a troublesome symptom. Stimulants are often useful when the health is much run down, especially malt liquors, such as beer or porter; in some cases a little whisky at bedtime aids sleep. Much distress is often caused by sleeplessness; this can frequently be remedied by getting the patient to take plenty of outdoor exercise, and a good meal shortly before bedtime frequently acts as an excellent soporific; if these measures are not sufficient it becomes necessary in addition to administer sedatives. At Garlands Asylum paraldehyde has proved in many cases a most efficacious hypnotic; bromide of potash, sulphonal, or chloral may also be used to procure sleep. In excited cases of melancholia it often also becomes necessary to give sedatives during the day. Sulphonal given in small doses twice or thrice daily has proved very serviceable in cases of melancholia agitans; it subdues the motor restlessness, induces sleep, and promotes recovery, but its action must be carefully watched, as when its use has been long continued it has been found in some cases to produce very deleterious effects on the blood. The bromides may also be used as day sedatives, and they may advantageously be combined with tincture of cannabis indica. Opium at one time was extensively employed in the treatment of melancholia, but it has been found to produce injurious effects on the system. If there is the slightest suspicion of suicidal longings the patient must have constant companionship with someone who must never allow him out of his sight. A suicidal patient must not be allowed to sleep in a room by himself; all articles, such as razors, guns, &c., which can suggest the idea of suicide should be removed. In cases that require to be sent to an asylum the mere change of scene and surroundings, the regulated life, the discipline and the amusements of the asylum, and the removal from relatives and friends, whose attentions often increase the patient's distress, are of themselves sufficient in many cases to initiate a quick improvement in the mental state. The opportunities afforded for attempts at suicide are fewer. The patient is given open-air exercise sufficient to promote appetite and to improve the tone of the system, but not unduly fatiguing. The diet is carefully attended to; tonics and stimulants are prescribed when necessary, and sedatives are made use of. An endeavour is made to get the patient to take part in games and amusements, and to employ himself usefully. The general object of treatment, in short, is, by improving the bodily health and rendering the environment of the melancholiac as agreeable as possible, to substitute a feeling of well-being for the unhappy emotions that have laid hold of him. As regards prophylaxis in melancholia, great care must be taken as they grow up of children who have a hereditary tendency to this disease; they should be made to partake largely of fattening foods, should live much in the open air, and should not be forced to work too hard at school; they require special attention at the time of puberty and during adolescence. Those who have already had an attack of melancholia should live well-regulated lives, avoid exciting occupations and arduous brain work, and take a good holiday in the country whenever they feel a little run down. They should always endeavour to have a good night's sleep, and whenever they begin to pass sleepless nights should at once discontinue all work and go into the country.

Carlisle.

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A CASE OF

FRACTURED BASE OF SKULL WITH LACERATION OF BRAIN, ACCOMPANIED BY SUGAR AND ACETONE IN THE URINE.

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THE following interesting case came under notice at the West London Hospital in July last. The patient, a police sergeant, was on night duty on Friday, July 12th. On Saturday morning, the 13th, he returned to the police station at the usual time, and there gave a written report of his night's work. From this report it was shown that he had met police constables about every hour during his rounds. Nothing strange or peculiar in his manner was noticed by any of these men, and the inspector to whom he made his night's report said he was apparently in the best of health. The patient had some food and then went to bed about 10 A.M. on Saturday morning. During the daytime he got out of bed on several occasions and went downstairs to the watercloset. Later in the day a police-constable who shared the same bedroom noticed that the patient was not quite himself, that he appeared irritable when spoken to, and later seemed "drowsy and bilious." The divisional surgeon was called in to see him at night and diagnosed the case as epilepsy. Two bruises were detected by the surgeon, one behind the left ear and the other at the inner canthus of the left eye. These bruises he supposed to have been inflicted during the epileptic fit, and his present drowsy condition to be one of post-epileptic coma. The patient was a strong, athletic man, who up to the present time had always enjoyed good health. On Sunday night, July 14th, he was admitted into hospital, when he lay on his side with closed eyes and breathing easily. He violently resented any attempt at examination, and answered incoherently when roused by shouting in his ear. The pupils were equal and normal. The pulse was 56, full and strong. He was very restless. The lungs, heart, and other organs were apparently healthy. There was no paresis. A bruise was noticed behind the left ear over the mastoid process, and another at the inner canthus of the left eye. The specific gravity of the urine was 1030. There was no albumin, but strong sugar reaction. The patient was very restless during the night, and made several attempts to get out of bed. He had incontinence of urine. On Monday, the 15th, he was quite unconscious. The restlessness had passed off. There was no paresis. The swelling and bruising behind the left ear were much more marked. Sugar was present in the urine. The coma becoming more pronounced, a consultation was held in the afternoon, when the question was raised as to whether the symptoms, in the absence of any history of injury, were not due to post-epileptic or diabetic coma. It was decided, however, to make an exploratory operation. At 6.30 on Monday evening, under an anæsthetic, Mr. Bidwell operating, an incision was commenced immediately behind the mastoid, and on turning down a large square flap an extensive fracture was discovered. This fracture was followed, and was found to extend from the centre of the lambdoidal suture behind to the posterior part of the zygoma in front, traversing the occipital (slightly) squamous portion of the temporal and parietal bones, and also part of the zygoma. The fracture was fissured and splintered. Mr. Bidwell removed the splintered portion of bone, together with some more bone around it, in the neighbourhood of the middle meningeal artery, and on opening the dura mater a large amount of lacerated brain substance mixed with fluid blood and small clots escaped. The mid-meningeal artery was intact, but one of its posterior branches was ruptured. As further operative treatment was considered inadvisable the wound was closed. Although the patient appeared to improve somewhat after operation, in a few hours the coma began to deepen. Paresis set in, commencing first on the right side. Some urine was now collected and tested. Sugar was present, and with it acetone, the tests on this occasion being carried out by Dr. Archibald Garrod. This was the first time on which the acetone test had been applied. From this time until his death the patient gradually got weaker, and died at 12.30 A.M. on July 17th, three days after admission. About six hours before death some urine was collected and tested, when it was found that the sugar and acetone had disappeared.

Necropsy.—At the post-mortem examination the following lesions were found. On removal of the scalp a fissured fracture was seen, extending from the posterior end of the zygoma to the middle of the lambdoidal suture. From a point about two inches behind the commencement of this fracture another ran across the middle fossa to the foramen ovale, and thence to the foramen lacerum medium. The trunk of the middle meningeal artery was uninjured, but a small posterior branch was torn across. A smaller fracture extended from the foramen ovale to the sphenoidal fissure. Rather below the groove for the left lateral sinus another fracture was traced from the end of the main fracture almost to the jugular foramen. A clot was lying loosely along this fracture, but the lateral sinus was apparently uninjured. The mastoid cells were full of clot, but the middle ear had escaped injury. The left hemisphere of the brain had sustained most extensive injuries, and the right hemisphere also had not escaped, the lesions here being apparently due to contre-coup, the anterior extremity of the second right temporal convolution being much lacerated, the laceration extending from the surface into the fissure of Sylvius, in which there was a large clot. The left temporal lobe had sustained an even more severe injury, the anterior extremities of the first and second left temporo-sphenoidal gyri being reduced to a pulp. The posterior extremities of the second and third temporo-sphenoidal gyri were in a similar condition, being immediately under the depressed piece of bone which was removed at the operation. In the left frontal lobe there was a large laceration with much blood clot on the orbital surface and another at the apex. In the right frontal lobe there was a similar condition on the orbital surface and another laceration at the junction of the external and orbital surfaces. The basal surfaces of both frontal lobes were practically reduced to cysts. Elsewhere, both on the right and left hemispheres there were numerous small subarachnoid effusions and a small laceration involving the third left occipital convolution. There were adhesions of the right pleura. All the other organs were healthy.

Remarks.—This case appears to us of considerable interest both from a medico-legal and from a purely medical aspect. Firstly, the absence of any history of injury does not negative the view that the patient suffered violence. In hospital practice we are well acquainted with cases of fracture, especially of the posterior fossa, in which the patient has walked up to the hospital on the following day or later, and has complained of headache without remembering any accident. Many such cases have been recorded in THE LANCET, the most remarkable being that of a man who fell on his head, but was not stunned, and had no symptoms for fourteen days, when he became comatose and died the next day. An extensive star-shaped fracture in the left mastoid was discovered at the necropsy. In another case a man aged forty fell thirty-five feet, alighting on his feet. He felt shaken, but was not stunned, and he went to work the next day. He had no symptoms until the fourth day, when he complained of pain in the ear. This, however, did not prevent him following his occupation. Three weeks after the accident he had severe headache and paralysis of the right sixth nerve. He remained in the same condition for four months, when he had very violent delirium and died within twenty-four hours. The necropsy disclosed a comminuted fracture of the petrous portion of temporal bone. Secondly, we know that glycosuria does occur in head injuries. But we are not aware that acetone has ever been found in association with the so-called "traumatic glycosuria." The urines in these cases of head injuries are not often tested, owing chiefly, no doubt, to the fact that incontinence is generally present. Thirdly, were the acetone and glycosuria in this case of any value from a medico-legal point of view—i.e., was the injury due to a fall while the man was in a state of diabetic coma, or were the glycosuria and acetone secondary to the trauma inflicted on the brain? Fourthly, if the case were one primarily of diabetic coma, would the acetone and sugar in such a case disappear several hours before death, as happened in this case? Lastly, would it

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be possible for a man apparently in the best of health and without any history or symptoms whatever of diabetes to suddenly develop the coma of diabetes? These are, we think, important points to consider in giving evidence in such a case before a jury. In this case the police ridiculed the idea of foul play. The coroner's court returned an open verdict.

THE PREPARATION OF ANTIRABIC SERUM AND THE METHOD OF DETERMINING ITS STRENGTH.

BY PROFESSOR GUY TIZZONI AND DR. EUGENE CENTANNI.

(Continued from page 664.)

III.—MODE OF DETERMINING THE PROTECTIVE POWER OF THE ANTIRABIC SERUM.

IT was evident from the results of the preceding experiments upon rabies executed in our laboratory that the importance of an exact method of determining the dose to be used against this infection was very great, it being observed that a determinate quantity of serum was alone of value in the neutralisation of a given quantity of virus. In our successive studies the difficulties which from time to time were met with in determining the power of a given serum obliged us to return to the question of dosage and to ascertain the various conditions whereby we might be able to obtain constant results. Moreover, since our researches had not simply a scientific aim, but contemplated an eminently practical one, it is clear that, until the conditions indicated had been complied with, it would have been very imprudent to pass to the application of our remedy to man. The general lines of our method follow those actually in use in serum-healing, but in their application to rabies, which is quite a special infection, they necessarily undergo some modification and additions, which we shall now proceed to specify.

1. DOSE OF THE VIRUS.

a. Importance and difficulty of the determination of the dose of the virus in rabies.—In our preceding research we unfortunately had not taken the dose into account. We limited ourselves to the production of the infection as is commonly done in antirabic institutes—with a highly variable material, regulating the dose by the concentration of the emulsion and by the quantity injected. To graduate the power of the infection we make use only of virus—the fixed virus and the canine virus. It is certain, however, that in rabies the question of the quantity of the virus which is used in the test infection ought to have no less importance than the differing strength of the virus itself, as has already been reliably demonstrated in the two typical infections upon which serum-healing has been founded. We know, in fact, that in tetanus the smallest fraction of the established dose of the poison suffices to kill, because the animals die without being affected at all by the injections of the serum, which would otherwise have surely saved them against the exact dose of the poison. If these difficulties are found, then, in experimenting with soluble and therefore exactly measurable toxic substances, how much greater ought they to be when in the material employed for experimental infection one has to deal with living germs—that is, instead of with an intoxication, with an infection properly so-called, and with an infection of which we do not know the active agent or the manner of artificially cultivating it. In the intoxications, the quantity of antitoxin introduced into the body remaining constant, if there is any excess of injected poison the least quantities of toxine not neutralised by the serum are manifested by morbid phenomena proportional to their dose. In the infections, on the other hand, including rabies, as will be demonstrated later, a small quantity of germs not rendered inactive by serum, proceeding to develop, ultimately kill the animal (after some considerable time perhaps)—in general, as much later as the residual quantity of the virus is less. Although the toxic infection can be utilised for the determination of the serum, in the case of rabies the inquiry must be restricted to the quantity of serum capable of completely neutralising in the body a given quantity of virus, without, that is, the animal presenting any morbid phenomena, its sole effect, therefore, being to postpone a fatal result.

b. Directions for the preparation of the infecting material.—In rabies we must make use of a natural cultivation of the virus which contains a large quantity of foreign materials, all constituents of the nervous system. As yet there is no artificial way of making a cultivation of the virus of rabies; this constitutes an inconvenience, especially with the canine virus, which is extremely variable in intensity, according to its derivation. The fixed virus we may consider is certainly relatively, if not absolutely, more constant. With this last virus the activity can also be varied by several factors—the individual condition of the animal; the rapidity with which it dies; the part of the central nervous system which is chosen for the infection; and, lastly, the period of preservation in glycerine. We have tried to reduce to a minimum all these inconveniences. For the fixed virus we have always allowed the animals to die spontaneously, because, having killed one of them, actually *in extremis* and for a long time paralytic, the dilutions, usually active, were unsuccessful. To obviate all mistakes which could arise from the diverse quantity of germs contained in the various regions of the nervous system we have always taken the material from the same part—that is, from the bulb. From the great frequency with which we made our experiments, not always having the opportunity of practising infections from head to head, we have often been obliged to have recourse to infections with virus preserved in glycerine. But, since the duration of this preservation is not indifferent in the determination of the degree of virulence, we have always tried to make use of a virus which had been collected for not more than three or four days. In the case of the virus "da strada" we have not been able to put into practice all these precautions—unassociated as we are with any anti-rabic institution. We have usually chosen a virus which killed in from sixteen to twenty days, obtaining results which would represent a mean between those obtained with a virus of varying derivation. However, the canine viruses have been rejected as being either too weak or too energetic, and we have had among the last of these one which gave the first signs of disease at the eighth day and death at the eleventh. The material was preserved like the fixed virus, but rather longer, we having observed that the differences which can come from its gradual attenuation, by its preservation for three or four months in glycerine, are less marked than those which we come across when having frequent recourse to the virus of another animal. For the rest, along with every series of experiments numerous controls are always made as a guarantee that the material employed had preserved its virulence to the desired degree. The virus of rabies which is found in the nervous system presents another disadvantage compared with bacterial culture, and much more as compared with soluble toxin—it exists in a solid and insoluble form. It is necessary, therefore, to reduce it to the state of greatest sub-division, whereby the injection is made to represent a condition of mean stability. To this end we take a piece of virus always in a quantity of 10 grammes, exactly weighed, and break it down for a long while in some combination of fluid, in the common conical graduated glasses, by means of a rod of glass polished with emery; it is then slowly mixed with the desired quantity of sterilised distilled water.

c. Choice of the most suitable dilution of the canine virus.—It is known how in the rabid nervous system the virus may be highly concentrated, so that it is necessary to make certain dilutions before being able to follow the varying duration and intensity of the morbid phenomena. And, further, we meet with extended series of dilutions from which we obtain a progressive lengthening in the period of incubation before any effect whatever appears. These facts have been demonstrated specially upon the fixed virus by the experiments of Pasteur and of Babes. It is worth noting that in the emulsion of virus which is commonly used to infect rabbits one finds a multiple of the minimum fatal dose of the same virus, a multiple for several reasons variable, and which would render useless any precise measure it might be desirable to use in testing the anti-rabic serum. We have chosen for the infection of our rabbits a dilution always definitely determined, and however stronger the emulsion it always produced death without delay after the ordinary period of incubation. Wishing to have a means of measurement which should demonstrate not merely the higher degrees of the power of the serum we were obliged to keep the virus at a dilution not too concentrated. In the

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virus "da strada" these experiments to determine the most suitable dilution have been made with a material which in the concentrated emulsion gave the first phenomena at from the eleventh to the fourteenth day, and death at from the sixteenth to the twentieth day. It will be understood that of the final dilution there was always injected a known quantity exactly proportional to the weight of the animal—that is, 0·013 c.cm. (one-fourth of a drop) for every kilogramme. The results of these experiments are collected in the following chart.

TABLE VIII.

Number of register.	Weight of rabbit in kg.	Degree of dilution.	Equivalent in virus.	Results.	
				First Signs.	Death.
43	1·430	Virus: water 1 : 50	0·00026 gr. per kg.	15th day.	18th day.
39	1·410	1 : 100	0·00013 ,, ,,	17th day.	20th day.
52	1·700			14th day.	22nd day.
44	1·690	1 : 200	0·000075 ,, ,,	—	91st day.
45	1·110	1 : 500	0·000026 ,, ,,	Survives. Four months' observation.	

Experiments similar to the preceding have been repeated with virus taken from a second dog, which produced, however, death after a period of incubation of from sixteen to twenty days. Thus in this case we have found that the dilution limit before any delay whatever in the incubation period was obtained was represented by 1 in 100. We, however, in order to remain within the bounds of a safe injection, and in order to cover the small inevitable variations in the strength and in the distribution of the virus, have avoided the extreme dilution, adopting for the subdural infection the double degree—that is, the dilution 1 in 50 (10 grammes of virus in 500 c.cm. of water). As of this dilution we injected 0·013 gramme per kilogramme of the body weight of the animal, we had to inject for every kilogramme of the animal 0·00026 gramme (one-fourth of a milligramme) of pure virus.

d. Choice of the suitable dilution of the fixed virus; advantage of the fixed virus over the canine virus in estimating the power of the serum.—Notwithstanding that our researches upon rabies were well advanced and combined a degree of exactness and desirable safety—we now think we find ourselves completely free from any inconvenience in the determination of the power of the serum—it was still necessary to test our remedy against the most active virus of rabies to be obtained. The determination by means of the canine virus demands above everything a great loss of time, not only as regards the regular periods of incubation, but especially as regards the long periods of subsequent observation to which it was necessary to subject these animals. For if the least quantities of virus remained not neutralised, as we pointed out a little while ago, we were always obliged to wait for a very long time in order to see whether the rabbits died from rabies—sometimes as long as four months. From this it will be understood how, wishing to make a complete series of graduated experiments in order to establish the power of a given serum, we might have to keep a considerable number of animals under observation for several months, thereby losing precious time, since in this period the criterion for passing to another series of experiments was wanting. On the other hand, with the fixed virus we can, as early as the fifth day, infer the result of the experiment from the diminution in the weight, and in a certain number after from fifteen to twenty days such a result can be definitely declared, since the virus is either quite destroyed, or the smallest quantities which remain not neutralised, when a virus so energetic is used, cause death comparatively early. It is on this account that, while great delays in death, according to the dose and the quantity of serum employed, are not rare when we make the determination with the virus "da strada" instead of with the fixed virus, we have, in a large number of experiments, seen death protracted over the limit indicated in one case only. From the rapidity in the determination of the strength of the serum there is also derived an economic advantage not to be despised, as one is no longer obliged to keep under observation the same series of animals and one is able to set aside for vaccinating material the nervous system of those animals which would have died in the trial of the serum after the infection with the fixed virus. But a most important consideration compelled us to find a still more suitable method of research. As we were obliged to supply our serum to various experimenters, it was necessary to find a common term of measurement in order that the repeated experiments might be comparable with our own, it being known how much the power of the virus of rabies "da strada" varies in different dogs. This continued efficacy can only be hoped for with the fixed virus; there is further, however, another advantage. As soon as our serum has been shown to be efficacious against the most active virus we shall be able to silence the possible objections to its application to man and to calmly await the practical test. For some time we continued to make attempts to confer immunity against the fixed virus by means of our serum; we were assured of the final success of these attempts, as we believed that in vaccination dealing with specific actions every vaccinating virus is of value to protect against itself. We were obliged ultimately with our serum to succeed in neutralising the virus which would be employed in vaccination. We have not, however, treated of the qualitative differences, although there was the difficulty, on the one side, of obtaining a serum so energetic as to counteract a virus so intensified, and, on the other hand, of fixing the dose of the fixed virus to be injected in such a manner as to have degrees of infection exactly determinable. Of course, our first experiments undertaken with serum not yet very strong and with an excessive quantity of the virus necessarily failed. We have undertaken these experiments successively, and our first care has been to determine the dose of the fixed virus to be injected. As we had already found for the virus "da strada," so also have we found, for the fixed virus, the larger dilution which would cause death to the animal without any delay. For the infection we have used the subdural method, and the quantity of emulsion introduced has always been 0·013 gramme per kilogramme of the weight of the animal.

TABLE IX.

Number of register.	Weight of rabbit in kilogrammes.	Degree of the dilution.	Equivalent in virus.	Death.
172	2·000	Virus: water 1 : 50	0·00026 gr. per kilog.	Eighth day.
151	1·600	1 : 500	0·000026 gr. ,,	,, ,,
152	1·600	1 : 1000	0·000013 gr. ,,	,, ,,
154	1·620	1 : 5000	0·0000026 gr. ,,	,, ,,
153	1·350	1 : 10,000	0·0000013 gr. ,,	,, ,,
160	1·570			Ninth ,,
171	1·790			Eighth ,,
158	1·850	1 : 20,000	0·00000075 gr. ,,	Ninth ,,

Repeating the same observation for a fixed virus obtained from another laboratory, we have found that the greatest dilution which regularly produced death without delay was one of 1 in 5000. In the experiments made with the first of these viruses we have, therefore, adopted the dilution of 1 in 10,000, and in those made with the second that of 1 in 5000. Of this we are particularly careful, because in controlling our material we have, first, the warning given in the determination of the greatest dilution in which the fixed virus with which one makes the trial gives fatal effects without delay, that this dilution is not constant for the various samples of fixed virus, even though these produce death in the regular term of seven days. Injecting 0·013 gramme of the dilutions for every kilogramme, the quantity of fixed virus which can be injected in the proportion of 1 in 10,000 corresponds to 0·0000013 gramme, and in the proportion 1 in 5000 to 0·0000026 gramme. We see, therefore, that with the virus of rabies, as with every other infection, the different cultures of it in equal quantities of volume and weight do not contain a material of a constant strength; in order, therefore, to determine the dose of a given cultivation we are compelled to have recourse, as is already done in the case of tetanus and diphtheria, to the measure of the pathogenic effects produced upon the animal organism. In our case we shall call the "infecting unit" the greatest dilution of a virus which in the dose of one-fourth of a drop per kilogramme of the body weight succeeds in causing fatal rabies without any prolongation of the normal period of incubation. We have thus the infecting unit for each of the two viruses—viz., for the

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fixed virus causing death in from seven to eight days, and for the canine virus in from fifteen to twenty days.

e. The place and method in which we practise the infection.—To introduce the virus we make use of the smallest glass syringe with the finest needle, all exactly graduated to 0·026 c.cm. (half a drop), which corresponds to the dose of the emulsion per two kilogrammes, the mean weight of our rabbits. We have, in the course of our experiments, made use of two methods of infection—viz., the subdural in the neck and the intra-nervous in the sciatic nerve. For the subdural infection we follow the common course of making the needle slide somewhat horizontally for a certain distance between the bony walls and the dura mater before transfixing this last in a manner that the puncture is made beyond the trepanned area. In this way, after the virus is injected and the needle withdrawn, the opening left is compressed against the bony walls, and thus closed so that any regurgitation of the injected liquid is avoided, which, if it happened, would take away all value from the experiment. The infection by the sciatic nerve has been undertaken by us only in a few cases, nearly always comparatively with the infection by way of the neck. By means of this infection we approach much more to the natural mode of infection in man, and to the smallest mortal dose of the virus, inasmuch as the direct lesion of a large nerve trunk always represents a more serious lesion than any small bite. As it seems that the value of the infection in the sciatic nerve is not understood by all, and that the accuracy of the results obtained by this mode of infection is not generally recognised, we continue to assert, pointing both to our long experience and to the results obtained by others (Divestia and Zagari), which are recognised as being exact even in Pasteur's laboratory, that the injection of the virus of rabies into the sciatic nerve of the rabbit succeeds just as when the injection is made under the dura mater. This success is the fruit of careful management. Having laid bare the nerve and raised it with a blunt hook we introduce the needle by a long track into its thickness, parallel to the fibres and with lateral movements repeated both going and coming; we thus break and separate the nerve fasciculi in such a fashion as to form a long canal, which is soon filled with virus. We consider that we have thus overcome the objections raised to those among our experiments made by the intra-nervous infection method; as for the rest, basing our results always on a considerable number of experiments with relative control experiments, one was not invariably able to invoke for them an exceptional fate (reading *fato* instead of *fatto*). The sole difference which we have been able to note between the one form of infection and the other is that in the intra-nervous infection the course of the diseases is a little longer. In our experiments on the sciatic nerve—to put ourselves within the limits of the surely fatal dose, and regard being had to the smaller sensibility of the part—we have always employed a stronger solution than is used for the neck: That is, we have in the case of the virus "da strada" made the infection with the dilution 1 in 20 instead of that of 1 in 50, introducing a quantity almost equal to that used for subdural infection. For the fixed virus the dilution has been considerably greater—i.e., 1 in 1000—when we have experimented, as we shall see, with the direct protective method. The dose of the serum offers no difficulty. We have employed in our experiments both liquid serum and dried serum with identical results. All the calculations upon its power are made taking for a basis the liquid serum; between this and the solid, as we have said, there exists the mean relation of 13 to 1. In order to inject the smallest quantities dilutions are made with the physiological "normal" solution of chloride of sodium. The protective power in life is expressed by Behring's method—that is, the mean ratio between the number of grammes of rabbit protected by a c.cm. of serum. In the experiments *in vitro* the power is expressed by the ratio between a c.cm. of serum and the number of infecting units which it is capable of neutralising. As for the ways of introducing the serum, we have made use of the subcutaneous connective tissue of the back and the subdural space of the neck; in no case in this new series of experiments have we had recourse to intra-peritoneal or intravenous injection. With respect to the quantity of serum to be injected we have not been able to take as a rule the least quantity capable of neutralising a determined dose of virus, because (by reason of mistakes of which we have spoken earlier) such a quantity of serum was at one time shown to be sufficient, at another to be insufficient, to destroy every effect of the virus. Here it occurs to one naturally, not only to take into account the small variations which arise out of individual dispositions, but also to introduce a quantity of virus little if any greater than that absolutely necessary for the most easy and ready multiplication. On the part of the serum, also, there may be slight variations depending on the different rate of absorption when injected under the skin, and on the variable readiness with which the active principle comes to be assimilated by the tissues or destroyed and eliminated. In order to confirm these facts we shall give an example taken from Table VII., which demonstrates how before the power of the serum enters into the domain of constant results a large zone exists in which there are oscillations depending precisely on the aforesaid reasons. It results from the experiments reported in this table that, while a dose of serum 1 in 25,000 is undoubtedly sufficient to protect the rabbit against the established subdural infection, the smallest errors which enter into the determination of the same infection are not less compensated for completely by increasing the dose of serum twenty-five times (e g., Examples 142 and 143 with dose of mean ratio of 1 in 1000); but it is necessary to reach a dose 100 times higher (e.g., Examples 103, 104, 105, with a mean dose of 1 in 250) in order to see all the errors indicated and compensated for, and to save all the animals. We understand, therefore, that the data which ought to guide us in the determination of the power of a given serum should be considered in connexion with the special conditions of the infection of rabies. We were not able, therefore, to construct our scale upon experiments on one or a few animals and with the minimum dose of serum as we do for an intoxication exactly measurable by dose; but it was necessary for us to make for each serum a longer series of experiments with diverse quantities and so find some dose which would in all the series give positive results. We have ordinarily made for every weight three series of experiments, each composed of from two to five animals, trying for the canine virus the powers 1 in 25,000, 1 in 1000, and 1 in 250; for the fixed virus in the majority of cases we have tried the powers of 1 in 400, 1 in 200, and 1 in 100. The first series in which all the animals survived established the "title" of the serum under examination.

TABLE X.

Number of register.	Weight of rabbit in kilog.	Quantity of serum injected under the skin twenty-four hours before infection.		Infecting units of canine virus under the dura mater.	Result of experiments.
		Absolute.	Relative.		
103	1·320	5 c.cm.	1 : 264	One	Lived.
104	1·380		1 : 276		Lived.
105	1·190		1 : 238		Lived.
142	2·500	2 c.cm.	1 : 1250	One	Lived.
143	1·970		1 : 985		Died 22nd day.
138	1·770	0·07 c.cm.	1 : 25000	One	
139	1·680		1 : 25000		Died 10th day.

Thus, in this instance the title where the virus of rabies "da strada" is used is 1 in 250, which is rather low because the blood was taken prematurely—that is, the tenth day after vaccination. With this method of standardising some of our figures naturally may be too high to express the power of our serum, because, putting aside losses which occur to the serum in the body, as we shall demonstrate later, there is, on the one hand, required a constant result; whilst, on the other hand, the dose of the virus chosen by us for infection does not actually represent the minimum fatal one. Hence the title of the serum which by our method is established is in effect only a multiple of the least dose capable of acting against the least infection adopted. With the actual methods of vaccination we were able to obtain a serum of a power sufficient for the needs of practice, which we have taken as the unit of measurement—a species of normal serum analogous to that of Behring for diphtheria—which we shall call "typical serum"= ST. Our typical serum has the following activity. It is employed subcutaneously as a preventive twenty-four hours before the infection made with the infecting unit of the canine virus introduced under the dura mater, and is effective in the case of the rabbit in a dose 1 in 25,000—that is to say, with about

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a drop and a half of serum we protect an animal weighing 2 kilogrammes. As a curative against the same virus, introduced into the sheath of the sciatic nerve diluted to twice the strength used for the subdural infection, our ST injected under the skin at the eighth day—that is, towards the middle of the period of incubation—is of value in cutting short the disease in the dose of 1 c.cm. for a rabbit, say, of two kilogrammes. Against the fixed virus by subdural infection made with one infecting unit our ST is effective at the "title" of 1 in 100—that is to say, at the dose of 10 c.cm. per kilogramme of the animal injected under the skin twenty-four hours before infection. By direct contact *in vitro* 1 c.cm. of our ST neutralises a quantity of fixed virus corresponding to 1200 infecting units; this determination *in vitro* against the fixed virus is therefore the method which we hold is the most suitable and which we commonly practise in order to standardise a given serum. Hence we shall base upon it our "protective unit," and we shall call by that name the quantity of serum capable of neutralising directly the action of an infecting unit of fixed virus. The figures set forth above, we repeat, are established by constant results, whilst even for the smaller doses, the half or the third, the positive results are always sufficiently numerous. There exists a constant relation between the various ways of establishing the power of the serum, whence it is possible, the serum being proved with one unit of virus, to deduce the dose which will be suitable for the others. The preventive dose against the canine virus is curative on the eighth day as 1 in 10; the preventive against the virus of rabies is to the preventive against the fixed virus as 1 to 200, and so forth. In like manner, if we have a serum differing from the typical serum—for example, 10 times less active $\left(\frac{ST}{10}\right)$—it will be enough to multiply or divide all the ratios by the highest power or the lowest power discovered experimentally by any of the methods of standardisation.

2.—EXAMPLES WHICH DEMONSTRATE THE IMPORTANCE OF EXACT DOSAGE OF THE VIRUS AND OF THE SERUM.

In order to give exactly the reason of the importance of the facts set forth, and to demonstrate the constant necessity of establishing a safe line of practice with which we are able in every case, without exception, to arrive with precision at the power of a given serum, we report a series of experiments in which the influence of an imperfect dose appears to be manifest. The category A of the experiment in Table XI. demonstrates how even only a fraction of the full dose of the canine virus injected is enough to kill the animal with little delay. In category B we see that against the usual injection with the fixed virus the serum is effective at 1 in 108 (Example 173); at 1 in 118 death follows with noteworthy delay (Example 163); on the other hand, with a proportion of serum considerably greater—viz., 1 in 77 (Example 158)—death comes without delay through a double infection being made. In category C we see that the serum is active at 1 in 25,000 as long as the infection is made with the infecting unit, using the dilution 1 in 50 of the canine virus. When, therefore, the infection is made with the dilution 1 in 20, which is more than twice as much concentrated, death follows without delay (Example 19); if, however, we raise the proportion of the serum as much as

TABLE XI.

Conditions of experiment.	Number of register.	Weight of rabbit in kilogrammes.	Infecting units.	Quantity of serum injected preventitively under the skin. Absolute.	Quantity of serum injected preventitively under the skin. Relative.	Results.	Observations.
A. Excess of virus "da strada."	89	1·390	1	c.cm. 5	1 : 278	Lived.	(1) Two trepannings were made through a reflux having been had from the first.
	99	1·370	1½	—	1 : 274	Died 28th day (1)	
	100	1·430	1	—	1 : 286	Lived.*	
B. Excess of fixed virus.	158	1·390	2	c.cm. 18	1 : 77	Died 8th day (1)	(1) Receives two complete infections with a day's interval.
	163	2·360	1	,, 20	1 : 118	Died 44th day	
	173	1·620	1	,, 15	1 : 286	Lived.	
C. Disproportion between the dose of serum and the power of the infection with the canine virus.	35	1·560	½	c.cm. 0062	1 : 25,000	Lived.	(1) Infection with 2½ infecting units succeeds only when we increase correspondingly the quantity of serum, making it 2½ times greater. Ex. 18.
	32	1·500	1	,, 006	1 : 25,000	,,	
	34	1·410	1	,, 0057	1 : 25,000	,,	
	19	2·060	2½	,, 0082	1 : 25,000	Died 20th day (1)	
	18	1·520	2½	,, 015	1 : 10,000	Lived.	

TABLE XII.

Sheep which gives the serum.	Number of register.	Date of death.	Degree of infection and of treatment.	Reasons for failure.
SHEEP II. First strengthening (injection).	42	Thirty-sixth day.	Subdural infection with virus "da strada," 1 : 20; serum 1 : 25,000 preventively.	Imperfect serum through bad vaccination of sheep (compare Table III.: as preventive with strength of 1 : 2,000 acts only against a dilution of virus at 1 : 100.
	36	Sixty-fifth day.	Sciatic infection with virus "da strada," 1 : 20; serum 1 : 10,000. Curative at eighth day.	
	41	Eighty-third day.	Subdural infection with virus "da strada," 1 : 20; serum 1 : 25,000 preventively.	
SHEEP II. Second strengthening.	65	Forty-fourth day.	Sciatic infection with virus "da strada," 1 : 20; serum 1 : 25,000 preventively.	Defect in the vaccination of the sheep (compare Table V.); as a preventive it is no use except at the degree 1 : 1000.
	59	Forty-sixth day.	Infection in the sciatic with virus "da strada," 1 : 20; serum 1 : 1000. Curative at the eighth day.	
	58	Fifty-sixth day.	As the preceding.	
SHEEP I. Second strengthening.	79	Thirty-sixth day.	Subdural infection with virus "da strada," 1 : 20; serum 1 : 25,000 preventively.	Defect in the vaccination of the sheep (compare Table IV.) the same as preventive is uncertain at 1 : 100 as curative the dose would have to be at least six times larger.
	84	Seventy-seventh day.	Sciatic infection with virus "da strada" 1 : 20; serum 1 : 550. Curative at the second day.	
SHEEP III. Vaccination.	163	Forty-fourth day.	Subdural infection with the fixed virus 1 : 10,000; serum 1 : 118 preventive.	Serum of the power S T, but the slightly lower than that es for 1 : 100.

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that of the virus is raised, the animal survives. It is clear that if we have even a slight over-dose of the virus the action of the injected serum becomes completely masked, since the animal so treated dies; it will thus appear, as it did to us and as it has without doubt appeared to other observers, that a good protective serum has been obtained without the fact being recognised. A substantial difference has been noted between the immunity conferred by the injection of a virulent material more or less attenuated—i.e., vaccine—and the immunity conferred by the injection of serum. This last immunity soon establishes itself, but in compensation lasts only for a much more limited time than the first. This fact enters little into consideration in the case of infections which have a rapid course and which have not the faculty of remaining long latent in the organism. Rabies, from this point of view, exists under the most favourable conditions, since it can develop many months after the actual contagion takes place. It was absolutely necessary to establish whether by means of antirabic serum the malady could be for ever banished, or at any rate kept in abeyance within the time during which the immunity conferred by the serum would last. To this end we have never judged any result as being definite unless the animal has been kept under observation for a period of not less than four and even up to six months. By this system of observation we have been able to convince ourselves that when the serum is administered in sufficient quantity, in proportion to the degree of infection, the danger of a remote manifestation of rabies is completely eliminated. It is very true that some animals treated with serum have died at a period still further removed from the time of infection, but that has happened solely when the proportion between the dose of the virus and that of the injected serum was found to be incorrect. In proof of this we have consulted the entire series of our "protocols" to see what animals would have died after considerable delay, and we have gathered them all into Table XII., putting before each of them the reasons of the partial failure. There are only nine animals among a total of 300; to these we may add those treated with serum against the infection with canine virus and with the fixed virus after having found more exact methods of fixing the dose. Thus, in the earlier years, when we possessed weaker serum and did not fix the dose — either the concentration or the quantity of the virus—only exceptionally have we seen death follow at a time remote from the infection. The table demonstrates that the delay follows more frequently between a month and a half and two months after the infection and never passes beyond the third month, whence the duration of observation practised upon our animals must be held to be sufficient for the formation of a definite judgment. It is noteworthy that the animals which have presented delay in death all belong, except one, to those treated with the serum of a sheep to which was applied an unsuitable system of vaccination—it may be by excess of the dose, it may be by incomplete digestion, which we have discussed at the beginning of this article. There is, however, one animal infected with the fixed virus which has presented considerable delay in its death. It is the only one out of a hundred rabbits infected with the fixed virus and treated with our serum. This rarity is in harmony with what we previously enunciated—that is, that either the fixed virus becomes completely neutralised by the serum or that the quantities which remain, however small, are the remains of a virus so energetic that they are capable of producing death very rapidly. Example 163 does not invalidate the law, because in this case the quantity of serum injected very nearly approaches the fixed dose, so that the quantity of the fixed virus not neutralised must have become extremely small, whence the length of time demanded to produce death. And then, by this table, we are able to substantiate once again the fundamental law of serum-treatment in rabies—viz., that the virus and the serum act reciprocally to the determined dose, and that a disproportion between them leaves active a part of the virus, which produces effects as much more remote as the quantity left was smaller. With regard to the *duration of the immunity*, we are not at present able to pronounce absolutely; but from the preliminary experiments, which form part of a series of special researches upon this point and to which we shall refer specially at some future time, we are already able to infer that the strength of the immunity conferred on the rabbit, by the serum injected after the infection with the virus as well as with the serum only, is of a sufficiently long duration. For the rest, when it is demonstrated that the mechanism with which the serum acts is that of destroying the virus, and that the serum injected can become sufficient in quantity and strength to make this distinction complete by eliminating absolutely any later development of the malady, the duration of the immunity assumes a secondary importance from our point of view.

(To be continued.)

ROUGH NOTES ON REMEDIES.[1]

By WILLIAM MURRAY, M.D. DURH., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO THE NEWCASTLE-ON-TYNE HOSPITAL FOR SICK CHILDREN, AND LATE LECTURER ON PHYSIOLOGY AT THE UNIVERSITY OF DURHAM.

No. III.

NITRATE OF SILVER IN EPILEPSY.

I HAVE read with great interest the Manchester address and the clinical lecture on "Silver and Epilepsy" by Dr. Gowers. The former is a marvellously lucid exposition of what can at present be known of the intimate physics of life, and it penetrates further into the "mist on the horizon" than anything hitherto produced. I trust Dr. Gowers will give us another insight into the workings of his mind on this subject. If I have grasped his meaning aright, he thinks with reason that while ordinary muscular contraction is (like the heat given off in ordinary combustion) due to the force set free by the union of carbon and oxygen, which in combining have parted with some portion of their minute motion, and therefore move less rapidly when combined, the amount of energy given off is the difference between the minute motion of the compound and the minute motion of the elementary atoms. He thinks that while the burning of fuel such as coal is comparable to the ordinary contraction of muscle, the violent explosion of more highly combustible matter is comparable to the violent muscular explosion of an epileptic fit. With regard, then, to the treatment of epilepsy, it is manifest that our efforts must be directed to the removal or hindrance of this tendency to an explosive discharge in the nervous and muscular systems. Without attempting to explain how this inhibited state of the nerve centres is brought about by several remedies whose effects are fully established by abundant experience, I think I am justified in saying that some of them at any rate do their work by hindering this explosive union of atoms or molecules. One of these remedies—nitrate of silver—offers a fair field for study in this direction. I have often expressed the opinion years ago that a deposit of silver in some form, probably chloride, in the molecules or submolecules of the nerve cell and fibres so altered the polarity—i.e., the explosive tendency—of the molecules as to arrest the epileptic discharge. And now comes the more accurate and more complete interpretation of Dr. Gowers, who gives us a mental picture of what actually takes place in the action of the nervous and muscular tissues when force (minute motion) is set free. He points out that the susceptibility to nervous and muscular action needs but the influence of a stimulus—i.e., of "added motion"—to bring about a manifestation of the latent energy in these tissues, and that an increase of susceptibility or of stimulus—i.e., added motion—may evoke an epileptic explosion. It seems to me a fair inference to suppose that a remedy which is deposited in the tissues—perhaps irrevocably deposited—may by its chemical inertia interfere by its presence with the minute motion or chemical activity of adjacent atoms and thus prevent their explosive union. The solution of this question would be materially aided by an inquiry into the nature of the silver deposits. Do they exist permanently in the interior of the body as they do in the exposed parts? They doubtless do exist in some of the mucous membranes—in the mouth, for instance. Are there any changes of colour in the nerve tissues indicating an oxide of silver there? A microscopic, or chemical, or perhaps a spectroscopic, examination would help us to decide this question of silver deposit. As I know of no ascertained facts I am obliged to fall back on the old-fashioned empirical

[1] Nos. I. and II. of this series were published in THE LANCET of Feb. 25th and Nov. 4th, 1893, respectively.

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resource[2]—experience. What does experience teach us as to the use of nitrate of silver in epilepsy? Experience has taught us two remarkable things—first, that nitrate of silver will cure epilepsy where the bromides have utterly failed; and, secondly, that a patient who has subjected himself or herself to a course of silver, producing a deposit, secures a remarkable immunity from a number of small nervous ailments, such as neuralgia, gastric uneasiness with nervousness, &c. I think this latter effect throws a flood of light on the subject and corroborates the view that "the silver blunts the polarity of the nerve centres," renders them stable and less easily disturbed by outward influences, which would come under the head of Dr. Gowers's "added motion." In confirmation of these statements I must produce some "facts," or my theory will fall to the ground.

I submit the following case, which is one of several, in proof of the power of nitrate of silver to cure epilepsy. Twenty years ago I was consulted by the manager of an important railway department. He had become a confirmed epileptic, suffering from frequent and severe fits. Bromides had been fully tried in large doses by several eminent physicians. Partial relief only was obtained, and that at a great sacrifice of memory and general business alertness (I sometimes wonder whether the mere postponement of fits is worth the serious detriment which the patient suffers in these respects from bromides), and the gentleman was face to face with the resignation of a valuable appointment. I plainly put before him the alternative—Did he mind the leaden tint which would certainly follow a long course of silver if he got rid of his fits? "Not a bit," said he, "it is a mere featherweight in the balance compared with my present heavy burden." So I put him on nitrate of silver for nine months. He had no fit after the first month of the course, and he has never had one since. His health has been much better—no small ailments—and he bears me no grudge. I passed him the other day, and he, as he always does, lifted his hat with a grateful smile. This is in severe contrast with Dr. Gowers's patient, who jacketed his medical attendant, but then, poor fellow, he was not cured.

Now, again, a gentleman in easy circumstances has been more or less epileptic for thirty years; he has been a prey to a number of small ailments, to which, I believe, bromide by lowering vitality largely conduces. Neuralgic headaches, muscular twitching, lassitude, frequent lapses of *petit mal*, not to speak of loss of memory and an occasional large fit, combined to render his life a burden. He deliberately accepted a course of nitrate of silver, regardless of consequences, and has since reaped his reward. He is seldom out of sorts, is comparatively free from headaches, has no twitchings, and has never had a trace of epilepsy, not even *petit mal*. I might refer to several similar cases. The above sufficiently illustrate my views. I ought to state that in this latter case the faintest touch of leaden hue was produced, and the patient was not aware of it.

With regard to the effect of nitrate of silver in minor ailments, there is no more striking illustration of it than in those cases of weak, irritable stomachs which are characterised by intense depression of spirits, apprehensions, and failure of pluck or courage. In these cases a remarkable change takes place both in the functions of the stomach and in the tone of the nerve centres of emotion. I will refer the readers of THE LANCET to an old work, "Johnson on Indigestion," which contains many illustrations of these effects of nitrate of silver. To get the best results in these "stomach cases" the nitrate should be dissolved in distilled water and taken on an empty stomach. I think one gets a distinct local effect on the mucous membrane as well as the more remote effects on the nerve centres by giving it in this form.

I fear my rough notes will stand out in rude contrast when placed beside the refined disquisition of Dr. Gowers, but this result I may claim—that I have given a practical application of his theory, and to some extent may have confirmed his speculative views.

Newcastle-on-Tyne.

[2] A post-mortem report of a patient stained with nitrate of silver is very desirable. Does it exist?

MEDICAL MAGISTRATES.—Mr. John Wm. Rowlands, L.R.C.P. Edin., L.F.P.S. Glasg., of Llanaelhaiarn, has been placed on the Commission of the Peace for the county of Carnarvon; and Mr. John M. Dennis, L.D.S., of Grimsby, has been appointed a magistrate for that borough.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A PECULIAR CASE OF PUERPERAL SEPTICÆMIA.

By CHARLES H. GEOFFREY RAMSBOTTOM, M.B., B.CH.VICT.,
LATE SENIOR RESIDENT MEDICAL OFFICER TO ST. MARY'S HOSPITAL AND TO THE MANCHESTER AND SALFORD LYING-IN-HOSPITAL.

I SHOULD like to mention a case of puerperal fever, which appears to me to have been one of pure septicæmia—that is to say, a case where the blood was a form of reservoir of toxic organisms without any absolute local manifestation whatever. The patient had been attended by a midwife, who, as no progress seemed to be made, and as, to use her own expression, she could not feel any child presenting, sent for my assistance, stating that the woman was flooding. On my arrival I found a marginal placenta prævia and delivered easily with forceps, expressed the placenta and attended to the usual antiseptic and aseptic precautions. The patient progressed favourably until the third day, when she had a rigor (102·5° F.). I washed out the uterus with a 1 in 2000 solution of perchloride of mercury and gave her quinine. The next day she seemed all right. There was nothing retained in utero. The following day, however, she had another rigor (103°). I repeated the previous treatment, and on the next morning the temperature had fallen to 101°, when I again washed out the uterine cavity with perchloride solution; but in the evening the temperature again rose to 103°. I then ordered quinine regularly, douched her myself twice daily, and prescribed milk, meat juice, eggs, and stimulants for diet. I noticed her right leg was swelling, and consequently this was wrapped in cotton wool (fifth day from her delivery). The following morning the temperature was 103° and rose to 104° in the evening, the pulse being 130. The temperature ranged from 103° to 105° from Oct. 22nd to Nov. 16th (twenty-four days), and was oftener at 104° than otherwise during this long period; on one occasion the temperature was 106° and on another 106·5°. The pulse varied with the temperature, from 110 to 130 per minute, and yet throughout all this period her respirations were seldom exaggerated. The tongue was moist and consequently she took large quantities of fluid nourishment, stimulants, and quinine, until she became quite deaf. She never became delirious, never complained of pain, except a little headache in the evening and also when her temperature became hyperpyretic, on which occasions she complained of feeling a great oppression in the chest and expressed the belief that she was dying. During the whole time she perspired profusely, and although she had cold packs, quinine, salicylate of soda, antifebrin, Dover's powder, uterine douches of perchloride of mercury, carbolic, and uterine insufflations of iodoform, no definite impression could be made on the febrile condition. On Nov. 17th, a calendar month from the date of her delivery, her temperature became 102°, and on the following morning 101·5°, and then on the same evening it rose again to 103°, and she developed a cough with expectoration; she complained of pains, the first she had noticed during the long illness, in her chest, and began to expectorate a frothy rusty sputum, and on auscultation I detected fine râles and roughened breath sounds, but no definite dulness. She rapidly became worse and died, exhibiting the Cheyne-Stokes respiration.

The interesting features of this case appear to me to be that the onset was severe and almost from the first the blood seemed to become toxic, and that there seemed to be a struggle between micro-organisms and the human organism, whether lymph cells or otherwise, for supremacy; moreover the reason of the high temperature for so long a period and the comparative ease of the patient and the readiness for imbibition of nutriment may be accounted for a little, perhaps, by the free action of the skin and her fixed determination to get better, as throughout she struggled bravely to recover. Another curious point is that from the leg beginning to swell—it was exactly like a condition of

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phlegmasia dolens—she had no pain in it whatever. On the whole it was, in my opinion, a rather remarkable case of puerperal septicæmia.

Granby Fields, Queensbury, Bradford, Yorks.

COMPLETE TRANSVERSE FRACTURE OF THE HUMERUS BY MUSCULAR ACTION.

By GEORGE T. WILKINSON, L.R.C.P. EDIN., L.R.C.S. IREL.

A CASE of the above kind is, I think, of sufficient rarity and interest to merit reporting. On Aug. 3rd last a youth aged sixteen years, one of twins, but differing from his brother in being much taller and more robust and muscular, in fact, being a youth possessing physical development above the average, was brought to my surgery complaining of pain in, and inability to move, his right arm. On examination I found a complete transverse fracture of the humerus below the insertion of the deltoid. He informed me that being sent to turn in a horse which was out on grass he threw a stone at the animal, and after the missile had left his hand he felt a sudden severe pain and lost all power in his arm. The fracture united well and rapidly.

Cloughton, Scarborough.

SPONTANEOUS ANEURYSM OF THE BRACHIAL ARTERY SUCCESSFULLY TREATED BY PROXIMAL LIGATURE.

By FREDERICK PAGE, M.D. EDIN.

A MAN aged thirty-one years, with very extensive aortic disease, showed me in August, 1894, an aneurysm of the brachial artery about the size of a hen's egg at the bend of the left elbow. It arose without any injury, and had been noticed only for a few weeks. It was increasing in size, and causing so much pain that the arm was useless to him. Twelve years ago, wishing to enter a benefit society, he was rejected on account of heart disease. A year after this he contracted a venereal sore on the penis, but no constitutional symptoms followed, and he was not treated for syphilis. The artery was tied a little above the joint with a catgut ligature. No difficulty arose from the chloroform. The wound healed by first intention. Now, a year after operation, there is no trace of the aneurysm, and the patient says his left is the better arm. Spontaneous aneurysm of the brachial artery is rare and not always successfully treated by proximal ligature. For these reasons I think the case is worth recording.

Newcastle-upon-Tyne.

CASE OF ORBITAL SARCOMA IN A CHILD.

By W. M. BEAUMONT, M.R.C.S. ENG.

A GIRL aged ten years came to the Bath Eye Infirmary on Sept. 17th, 1893, complaining of a red, hard, new growth of one month's duration in the ocular conjunctiva. It was situated at the inner commissure of the right eye and had the appearance of a small cock's-comb, which showed between the lids when they were closed. It was apparently quite superficial and was easily removed. Under the microscope it had the structure of a simple polypus, small bloodvessels and cells lying in a matrix of connective tissue, and it was not pigmented. It was considered innocent and the patient returned home. She came back six months later (April 2nd, 1894) with a large recurrence in the same situation, but involving the upper lid. Chloroform was administered, and the growth, together with the inner half of the tarsal cartilage, excised; the globe was quite free and the conjunctiva and orbital cellular tissue were alone affected. On examination the tumour was found to be soft and friable, and under the microscope its structure was highly suspicious of malignancy. The wound, however, healed satisfactorily, and she had no pain. She returned home again well, but the distance from Bath prevented the possibility of watching her constantly. On June 3rd she came back again with a recurrence, which filled the orbit and proptosed the eye. There was still no pain, and the eye, though immovably fixed, was not involved in the growth. Chloroform was administered and the eye removed; the orbit was exenterated, the whole of the cellular tissue being infiltrated with the soft neoplasm as far back as the sphenoidal fissure. The tumour was about three times the size of the globe, but there was not much loss of blood in removing it. If there had been any doubt from the clinical symptoms the microscope now clearly showed the characteristics of a round-celled sarcoma. Gradually the growth reappeared until there was a tumour as big as her fist outside the patient's orbit; it then became stationary and began to slough. She died exhausted, but without having suffered much pain, on Sept. 23rd, 1894. It is not always that one is able, as in this case, to watch the life-history of tumours from their innocent infancy to their malignant maturity. It has long been recognised that growths may remain quiescent for long periods and then, volcano-like, burst suddenly into fury without any explainable reason. In the case described above it would seem almost as though the operation were the cause of the change in the character of the tumour, and that by it a fatal traumatic malignancy was started.

Bath.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Procemium.

KENSINGTON INFIRMARY.

A CASE OF CONGENITAL ABSENCE OF THE RECTUM; NECROPSY.

(Under the care of Mr. W. M. WOODHOUSE, Senior Assistant Medical Officer.)

FROM time to time reports of cases of imperforate anus and partial development of the rectum have appeared in the medical journals, but a considerable period has elapsed since a case of complete absence of the rectum has been recorded. It is also noteworthy that in this instance the malformation escaped notice for three days. The exact condition here described cannot usually be recognised until an incision has been made at the site of the anus in the hope of reaching the bowel. The type of pelvis found at the post-mortem examination is that which is commonly seen when the rectum is absent. The following are the details of the case.

A woman aged thirty years was admitted into the Kensington Infirmary three days after the birth of her first child—a male. The mother, a thin, weakly looking woman with a bad family history of phthisis, stated that her child had been constantly sick since six hours after birth, when she first nursed him, and although abundant urine had been passed the bowels had never acted. A purgative powder, obtained from a local druggist, had been administered without effect. On examination shortly after admission Mr. Woodhouse found that the child was thin and puny, repeatedly crying out and exhibiting evident symptoms of pain. The abdomen was much distended and tympanitic. The anus was absent, nor was there any evidence of its presence in the normal situation beyond a slight depression close to the median raphé. There was no impulse or bulging in the perineum when the child cried. It was decided to at once make an attempt to relieve the child and establish patency of the rectum, which it was thought would probably be within a short distance of the surface. The patient having been placed under chloroform, Mr. Woodhouse made an incision an inch long in the middle line in the normal situation of the anus, cutting upwards and backwards, and keeping close to the sacrum. From time to time the little finger was introduced into the wound, but nothing indicating gut could be felt, even at the depth of an inch and three-quarters. He then proposed to perform inguinal colotomy, but the anæsthetist considered it inadvisable to continue the chloroform owing to the exhausted

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condition of the patient. The wound was then dressed with boracic acid powder and salicylic wool. The patient gradually became weaker and succumbed five hours after the operation. The post-mortem examination revealed the fact that the intestines were much distended, but otherwise normal, until a point was reached close to the brim of the pelvis in the left iliac fossa, when the sigmoid flexure abruptly terminated in a cul-de-sac. The peritoneum was intact and showed no signs of peritonitis. All the other pelvic organs were normal. The pelvis itself was smaller than usual and the tuberosities of the ischium much closer together.

Remark.—No similar case has occurred in nearly 2000 births in this infirmary, and only one case of imperforate anus is recorded.

ROCHDALE INFIRMARY.

A CASE OF HYDROPHOBIA.

(Under the care of Mr. R. B. SELLERS.)

IT is, we think, important to publish from time to time the account of a case of hydrophobia, if only to remind members of the profession of the symptoms of the disease and its hopeless nature when it has developed. Rabies in dogs in this country is by no means stamped out; in fact, during last year there was a very considerable increase in the number of animals affected. During the six years 1889–1894 the numbers were 312, 129, 79, 38, 93, and 248 respectively. The preventive treatment of Pasteur is at present the only one in which any reliance can be placed; and although it may be commenced any time after the bite before the symptoms develop the patient's chances are much improved if it is carried out early. We have not space to enter into the statistics of patients treated by this method; thousands have now been submitted to it; but we would remind our readers that, instead of a mortality of 15 per cent., which follows the bites of animals supposed to have been rabid, under any other method of treatment, Pasteur's plan of preventive inoculation has reduced the mortality to 0·92 per cent., and this amongst patients bitten by animals certified to have been rabid. For the notes of this case we are indebted to Mr. W. E. Davies, resident medical officer of the Infirmary.

On Monday, Sept. 2nd last, at 10.15 P.M., a youth aged seventeen was admitted to the Rochdale Infirmary suffering from hydrophobia, to which he succumbed on Tuesday, Sept. 3rd, at 3.40 P.M. From evidence given at the inquest it appears that the patient was bitten by dogs on two different occasions. The first bite was inflicted on his leg at some indefinite date more than twelve months ago. The second bite was inflicted on May 3rd of this year. On the latter occasion he was bitten on the proximal phalanx of the middle finger of his right hand. The hand was put into a strong solution of salt and hot water, but not cauterised until two hours and a half later, when he was attended to by Mr. Lord of Castleton. The dog was destroyed on the same day, having bitten another man just before it was poisoned. It was not believed to be rabid, but was done away with in order to prevent it from biting children. No bad symptoms set in until Sept. 2nd. The boy complained occasionally of stiffness and pain in his right arm, these being attributed to playing cricket. From the evidence given he did not seem to trouble about the bite after the wound healed. On Monday, Sept. 2nd, he went to wash himself during the afternoon and appeared to be suddenly seized with a kind of spasm, jumped back from the water at once, and walked into the house. He made no remark, and no further notice was taken until he sat down to tea at 5 P.M. He then had great difficulty in taking any liquid and could only take sips. He was advised to see a medical man and went to Mr. Lord, who ordered him to bed and then arranged to bring him to the infirmary. On admission Mr. Lord gave a brief history of the bite, and the patient was not questioned. Mr. Lord refrained from mentioning his fears to the boy and from questioning him about the dog-bite, but telegraphed for the parents. No signs of inflammation were noticed about the finger, and the patient made no complaints about it. The youth, who was tall, thin, pale, and with an anxious expression, complained of attacks of spasm, with difficulty in breathing, whenever he attempted to take a drink. On being offered a little milk in a cup he took the cup to make an effort, and then shrank away from it with horror and begged not to be forced to take it. He offered to take a little from a feather, as he was very thirsty. When asked why he would not drink he explained that attempts at drinking brought on attacks of spasm with difficult breathing. He was placed in an isolation ward, and half a grain of morphia was injected subcutaneously into his arm. He had a very restless night, no sleep, complained of great thirst, and took drops of water from a camel-hair brush, making sharp efforts each time he took a drop. Even these drops brought on a spasm in his throat occasionally. All the muscles of the neck were then hard. He made several attempts to get up and asked for his clothes in the early morning, said he was going to Paris and talked wildly of dog-bites, although all care had been taken not to mention such things in his hearing. During the night he had periods during which he was maniacal. At 8.30 A.M. on Sept. 3rd he became furious and jumped on one of the nurses when she happened to turn her back for a minute, but did not do her any injury beyond pinching her severely. A strait-waistcoat was then put on, and half a grain of morphia repeated. He took a great dislike to the nurse above mentioned, but allowed the night nurse to go near him and give him water by means of the brush. He bid others keep away and said that though he had no wish to hurt anyone he could not help himself if they came near. At 10 A.M. Dr. March, Mr. Pooley, and Mr. Sellers, three of the honorary surgeons, saw the patient, held a consultation, and agreed with the diagnosis made. At this time the muscles of the neck were rigid, both sterno-mastoids being prominent. His appearance was wild and he talked incessantly, though there were intervals during which he was less excited. A handkerchief was waved casually in front of him, but he objected and gasped for breath. He begged for the proceeding not to be repeated. He still talked of Paris. He recognised one of the surgeons, to whom he delivered a telegram at some period, and knew one person from another quite well. His room was kept dark and everything as quiet as he himself would permit. His temperature was 103° F. and the pulse 120. At the consultation Mr. Sellers suggested subcutaneous injections of conia. Accordingly it was decided to push the conia until its physiological action was produced, the object being to paralyse the muscles. Three minims of a solution of conia with rectified spirit and water (strength 1 in 6) were injected hypodermically at 10.15 A.M., 11 A.M., 12 noon, and 1 P.M., and four minims at 2 P.M., but no effect appeared to be produced. The temperature at 1 P.M. was 103·4°. During this time he continued his excited conversation about dogs and Paris, had illusions, said he could see his pet dog through the door, and begged that it might be allowed to come in so that he could kiss it. He had no sleep, but the spasms were few. The muscles of the neck continued rigid, but not always of the same tension. At 2.30 P.M. he again became very boisterous, kicked all the clothes off, and tried to kick the attendants. He expectorated a great deal of frothy mucus all over the room and at his attendants. His lower limbs had to be fastened to the bed to keep him in. His pulse was rapid and weak. One-third of a grain of morphia was injected hypodermically. At 3 P.M. he became quiet, and mucus collected in his throat. An attempt to remove this brought on a spasm, and the patient gasped for breath. He gradually passed into a state of coma and died at 3.40 P.M. from exhaustion and asphyxia.

Remark by Mr. SELLERS.—I cannot but regret that the conia was not at hand when the boy was admitted.

THE Medico-Psychological Association of Great Britain and Ireland announce that the next examination for their certificate in nursing and attending on the insane will be held on Nov. 4th, and that Monday, Oct. 7th, will be the last day for the entry of candidates' names. The Registrar (Dr. Spence, Burntwood Asylum, near Lichfield) will supply schedules, which should be filled up, signed, and returned to him at least four weeks before the date of examination.

TORQUAY MEDICAL SOCIETY.—On Friday, Oct. 4th, at 5 P.M., Mr. Hutchinson, F.R.S., will deliver an address to the above society on Heredity in Disease, in the Clarence and Avondale Institute (adjoining the Albert Hall). Members of the profession outside the Torquay district will be welcome on giving notice beforehand to Mr. G. Young Eales (honorary secretary), 7, Portland-place, Torquay, of their intention to be present. The annual dinner will be held in the Albert Hall after the meeting.

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Reviews and Notices of Books.

The Climates and Baths of Great Britain. Being the Report of a Committee of the Royal Medical and Chirurgical Society of London. W. M. ORD, M.D. Lond., Chairman; A. E. GARROD, M.D. Oxon., Hon. Secretary. Vol. I., The Climates of the South of England and the Chief Medicinal Springs of Great Britain. London and New York: Macmillan and Co. 1895.

IT has, as everybody knows, become more and more the practice of persons under circumstances of health and disease—pleasure-seekers and health-seekers alike—to have recourse to the advantages, real and supposed, of change of climate. There is no subject on which members of the medical profession have more frequently to originate a recommendation in this respect, or about which they are more often appealed to by their patients for advice and suggestions. The amount of information of a more or less reliable—and sometimes, if the truth be spoken, of a very little reliable—character, that is scattered throughout various guide-books, pamphlets, and publications is no doubt considerable, but it is not always readily accessible, and when obtained, it may be added, is very often not of the kind that is required. It is not the precise, systematised, scientific information which is needed, nor are all the necessary data given on which to form a correct judgment as to the relative merits of different places so as to guide us in the selection of one of them as specially or best adapted for the purpose in hand. The Council of the Royal Medical and Chirurgical Society initiated, therefore, a really useful and important movement when in 1889 it resolved that "a scientific committee be appointed for the purpose of investigating questions of importance in reference to the climatology and balneology of Great Britain and Ireland, and to report thereon to the Council from time to time." The outcome of the labours of the committee in this direction, so far as they have at present gone, is the admirable volume now published. We do not think that we could do better than recapitulate some of the facts recorded in the preface as to the constitution of the committee and the nature and scope of their investigations, for they afford a guarantee of the recognised ability of the writers to conduct an inquiry of this nature and of the systematic and scientific methods on which they have tried to carry it out. As at first constituted the committee consisted of Dr. Ord (chairman), Dr. Ballard, Dr. Mitchell Bruce, Dr. Dickinson, Dr. Murrell, Dr. Frederick Taylor, Mr. Treves, Dr. Symes Thompson, and Dr. Herman Weber. Of these Dr. Ballard and Mr. Treves were unfortunately unable to serve. The following names were subsequently added to the committee: Dr. Ewart, Dr. Theodore Williams, Dr. Penrose, Dr. Norman Moore, Dr. Barnes, Dr. F. Roberts, Dr. Cheadle, Mr. Malcolm Morris, Dr. Maguire, Dr. Lazarus-Barlow, and Dr. A. E. Garrod, who was appointed to act as honorary secretary.

After instituting some inquiries of a general character the committee formulated letters to be addressed to medical men practising in the more important climatic resorts and bath-places, and prepared a form of inquiry for those connected with the smaller spas. In addition to the information obtained in this way certain members of the committee were deputed to make a personal investigation of the districts having important climatic value, and of the several bath-places. In both aspects, of course, a thorough appreciation and use of published and recognised meteorological reports was indispensable, and the investigators have for this purpose had recourse to the reports of the Meteorological Office and of the Royal Meteorological Society. Dr. Theodore Williams, a late President of the Royal Meteorological Society, was, it will be noted, a member of the committee. The present volume, which is the first report, gives the results of three lines of investigation—viz., the information received from medical men practising in the various localities, the results of the personal investigations to which we have referred, and the results of various statistical analyses of the several localities which were considered. In climatology are included the results of inquiry into the relative prevalence of health and disease and the influence of the climate on these in the several districts. The inquiries into climatology, so far, have mainly related to the south coast of England from the Land's End to the North Foreland.

The volume, which is an excellent and reliable handbook of reference, is not one that easily lends itself to the purposes of review as ordinarily understood, nor would extracts from it, if confined within any reasonable limits, afford any adequate idea of its nature and contents. We must be content, therefore, to give our readers in a more or less general way the impressions we have derived of its character and value, in addition to the information which we have summarised from the prefatory remarks to the volume itself. It contains, in the first place, a good map illustrative of the climates and baths of Great Britain, a coloured chart showing the annual death-rate per 100,000 persons in Brighton for twenty-two years, and numerous meteorological and statistical tables of a very useful kind are interspersed throughout the text.

We may briefly refer to some of the contributions to the volume and their authors. Dr. Ord is the writer of some excellent introductory remarks on the climates of the South Coast of England and on the medical springs of Great Britain, as well as of the reports—written in conjunction with Dr. Garrod in both cases—of the medicinal springs of Bath and Buxton. Dr. W. H. Dickinson treats of the climate of Cornwall, Dr. Symes Thompson and Dr. Lazarus-Barlow of that of Devonshire and the Channel Islands, Dr. Mitchell Bruce of Somerset, Dr. William Ewart of the South-Eastern Counties and Surrey, Mr. Malcolm Morris and Dr. Penrose of the springs of Harrogate and Strathpeffer, Dr. Garrod of Matlock, Bakewell and Stoney Middleton, Droitwich and Leamington, Dr. Robert Barnes of Woodhall Spa, Mr. Malcolm Morris of Moffat, and Dr. Frederick Roberts of the medicinal springs of Wales.

The line of treatment generally adopted by the contributors to the volume deals with such points as the following:—The general, physical, geological, and topographical characters and climatology of the county or district and the sea temperature; and then the characters of the several towns and districts are taken up and described separately with reference to the vital statistics and the prevailing diseases, and more especially with reference to the several classes of disease for the cure, treatment, or amelioration of which these are adapted. Regarding the climatology, the medical history, and the advantages which a locality offers, the data and observations are very pertinent as well as sufficiently exhaustive without being too redundant and consequently confusing. The information has been carefully analysed and condensed and has been arranged in such a way as to afford facility of reference, and—a great point in a work of this kind—the contents are well indexed. In reviewing this volume we have selected several districts and places more or less well known to us, and have been much gratified with the results of our study of the medical climatology and medical history which is given of them, and especially with the spirit of impartiality and discrimination with which the materials have been selected and commented upon. In addition to change of scene a certain class of invalids needs a restful contemplation of nature remote from "trippers," while others want only sunshine, invigorating air, and sea breezes, and nearly

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all are benefited by escaping from the dirt and turmoil of towns and by being able to live in the open air. The volume is, in our opinion, an excellent book of a very useful and practical kind, which was much needed by the medical profession and for which they will be very thankful to the committee of the Royal Medical and Chirurgical Society of London. The task imposed upon them was a laborious one, and the members of the committee have fulfilled it with honesty and ability.

The Causes and Treatment of Lateral Curvature of the Spine. By RICHARD BARWELL, F.R.C.S.Eng., Consulting Surgeon to Charing-cross Hospital. Fifth Edition, revised. London: Macmillan and Co. 1895. Pp. 216. Price 6*s*.

THE treatment of lateral curvature of the spine has for many years been the subject of great divergence of opinion. There are some who look to mechanical support for a cure of this condition. Elaborate contrivances of bands, bars, straps, and springs attempt to "support" the patient's body and to force back the displaced bones into their normal position; yet, by depriving the muscles of all inducement to act, they lead to their further wasting and an increase of the feebleness and the curvature, which the machine was intended to correct. Though occasionally one still meets with a patient encumbered with one of these "supports," fortunately these methods are now but rarely used, as a more correct and scientific knowledge of the pathology has led to a wiser and more successful treatment. The wasted muscles are encouraged to take up once more the function, so long in abeyance, of supporting the spinal column, the relaxed ligaments are strengthened, and those which have become contracted owing to the malposition are gently stretched to their former length. At first, when the reaction commenced against the "mechanical" treatment, recourse was had to simple gymnastic exercises; but those then employed were found to be inadequate to remove the curvature already produced, though they were of value in strengthening the enfeebled muscles and in preventing further curvature. More systematic methods were developed later, and the results now attainable far surpass those formerly achieved; but the treatment must be carefully applied. We welcome, therefore, the reappearance, in what is almost a new form, of Mr. Barwell's work on Lateral Curvature of the Spine, as in it the important question of treatment is fully dealt with. The book contains an account of the various causes leading to lateral curvature, the diagnosis of the condition is amply gone into, and the author describes his "scoliometer"—an instrument by which smaller deviations from the normal can be detected than are recognisable without its aid. The chapters on treatment are satisfactory, and are illustrated by a number of engravings of patients showing the effect of the treatment; these have been prepared from photographs and illustrate well the deformity present. In an appendix are placed some chapters on the Anatomy and Pathology of the Spine. The whole volume may confidently be accepted as a careful treatise on a difficult subject.

The Climates of the Geological Past and their Relation to the Evolution of the Sun. By M. EUGÈNE DUBOIS. London: Swan Sonnenschein and Co. 1895. Price 3*s*. 6*d*.

THIS is a well-written little book on an interesting topic. It consists of a brief review of what is known of the climates of past ages according to palæontological and geological data, and also a series of arguments to prove that these changes have been due essentially to changes in the solar heat. The writer shows that while no fixed relation can be shown to exist between the climate and the character of the organic world—thus, identity of climate does not carry with it identity of vegetable and animal life, and *vice versâ*—yet the data of palæontology when cautiously interpreted are of great value in throwing light upon the climates of past times. These data are of the greater value the more recent the period whence they are obtained. The various climates of geology are passed in review. It is shown to be probable that there was a general greater equality of climatic condition in the past than now. Proofs are given that the fossil Arctic flora could only have originated in a warm climate. A mild climate is shown to have been a necessity for the coal flora. M. Dubois examines at length the well-known hypothesis that the differences between the climates of past geological ages and of the present time were due to a displacement of the poles. Very slight displacements of the poles are known to occur, but the author is entirely opposed to the view that such displacements are in any way adequate to produce the phenomena in question. We cannot reproduce his arguments, but we may quote the following passage: "Should astronomers and physicists raise no objections to a considerable displacement of the poles, the facts observed with regard to the Arctic vegetation of the Tertiary period still offer sufficient arguments against such a supposition. The displacement of the earth's axis and of the poles, if any have taken place at all in early periods, can have been but trifling, for the climatic distribution of organisms during those periods which we have been able to examine in this respect corresponds with zones which concentrically surround the present poles." The author proceeds to state the many cogent reasons which point to alterations in the solar heat as the efficient cause of the variations of climate in past geological ages. The book is well worth reading.

LIBRARY TABLE.

The Veterinarian.—The July and August number of the *Veterinarian* are both of considerable interest, not only to veterinary surgeons, but also to those interested indirectly in diseases of animals. A new feature in the July number is the use of photo mechanical blocks in illustration of various pathological and clinical cases; some of these illustrative blocks add greatly to the interest of the papers. The first paper is a "Case of Diseased Prostate in a Dog," by R. H. Clarke, M.A., M.B., M.R.C.S., and is well illustrated with naked-eye and microscopical specimens. Mr. Hutton records "The Great Outbreak of Anthrax in North Devon." The paper on Red-water Disease in Cattle is concluded, and suggested means of controlling the disease are given, the principle of which seems to be founded on the supposition that ticks are the carriers of infective material from animal to animal, and the author states that in his opinion the most satisfactory and effectual way of dealing with the ticks is to burn off the grass on the whole of the run, which would not only eliminate numbers of ticks, but destroy other parasites which spend part of their life history on the ground; protection from overheating from the direct rays of the sun is also recommended, whilst the carcases of cattle that die should wherever possible be destroyed by fire. A number of clinical cases are recorded, and a number of abstracted notes and science jottings make up a very readable number for July. In the August number is a paper on the Determination and Regulation of Sex in the Breeding of Horses, which is of interest to medical as well as to veterinary readers, as is also a paper on the Results of Tuberculin Test in a large Dairy Herd, from which out of 95 cows 71 were found to be tuberculous, 20 were sound, and 4 were doubtful, giving a percentage of 74 affected. It is interesting to note that of these 71 tuberculous cows most of the "suspects" were disposed of in the public markets, their future history being lost. It seems to be almost incredible that such disposal

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should still be legal. The abstracts are again of considerable interest. The meetings of the various veterinary societies are reported in a separate supplement, as the new system has been found to work very well.

The Veterinary Journal and Annals of Comparative Pathology.—In the July number Professor Fraser's communication to the Royal Society of Edinburgh on the Rendering of Animals Immune against the Venom of the Cobra and other Serpents, and on the Antidotal Properties of the Blood Serum of the Immunised Animals is reprinted. An "Essay on Anæsthesia," by Mr. T. K. Mulcahy, is commenced in the July number and continued in the August number; whilst this is followed by a note on "The Early Days of Anæsthetics in Veterinary Surgery—a Retrospect," by Mr. E. Wallace Hoare. A number of clinical cases and cases in practice conclude the July number with the exception of the accounts of the various Veterinary Associations and a number of extracts and notes from foreign and other journals. In the August number the chief papers are one on Texas Fever by Principal Williams and an abstract of Professor Fraser's second paper entitled "Further Observations on Antivenene and on the Production of Immunity against Serpents' Venom; with an account of the antidotal properties of the blood-serum of venomous serpents." Cases in Practice, Legal News, Notes and Abstracts, make up a very interesting number.

The Elements of Botany. By FRANCIS DARWIN, M.A., M.B., F.R.S. (London: C. J. Clay and Sons and H. K. Lewis. 6*s.*)—This little volume contains the substance of the course of lectures on botany given to medical students at Cambridge, and is as far as possible meant to meet the requirements of the first examination for the M.B. degree at that University. The plan of the book is to teach general principles and illustrate them by suitable examples, those being chosen as far as possible which fit in with the object of the book. In this way, the general principles being learnt, the student can apply them to other examples which cannot be included in this work, and so further extend his knowledge. One of the most valuable parts of this work is the appendix, which gives directions for a course of practical work to illustrate the previous chapters. The book is well printed, easy to read, and the diagrams are clear; it should prove a valuable work for those commencing the subject.

A Handbook of Systematic Botany. By Dr. E. WARMING, with a revision of the Fungi by Dr. E. KNOBLAUCH. Translated and edited by M. C. POTTER, M.A., F.L.S. (London: Swan Sonnenschein and Co. New York: Macmillan and Co. 1895. 15*s.*)—This book is a translation taken partly from the text of the third Danish edition of Dr. Warming's work and also from Dr. Knoblauch's German edition of that work. It consists of a very complete systematic classification of plants with all their principal characteristics. The plan of the classification is arranged as far as possible according to the natural relations which the different orders bear to each other, and throughout the book these relationships are from time to time brought up by pointing out the links by which one order passes into another and by various comparisons, and so any disjointedness between the different sections is prevented. There is a short reference to the works of Hoffmeister and others, which serves to make clear the connexion between cryptogams and phanerogams. The fungi are classified according to the recent work of Brefeld and are divided into phycomycetes (algal fungi), mesomycetes, and myomycetes (higher fungi), each of these having their subdivisions and varieties. The bacteria have been revised by Dr. Migula, and those which are pathogenic to human beings are pointed out, with short references to the diseases which they may cause. There is an interesting appendix to the book in which many examples of artificial classification are given which have been formed by botanists at different periods, and that of Hooker and Bentham is very fully given. It is a book well worth reading and is well printed and illustrated.

Dod's Parliamentary Companion. Second Edition. London: Whittaker and Co., White Hart-street, E.C. 1895. Price 4*s.* 6*d.*—The election of a Parliament in which 188 new Members were returned makes us welcome the publication of the second edition for 1895 of this useful little book of reference. We do not think we can pay any better tribute to its value than by confessing that a glance at its pages has supplied certain items of knowledge with which we might, perhaps, have been supposed to be familar, but which have hitherto escaped us. We have always been puzzled as to the medical qualifications of the honourable Member for the Tullamore division of King's County (Dr. J. F. Fox), and in giving our list of medical M.P.'s had to acknowledge our inability to describe his qualifications. But Dod says he "took the degree of M.D. at the University of Cincinnati. Is an F.R.C.P. and S. of Kingston, Canada, and has practised medicine and surgery at Troy, New York State." We also find duly recorded the fact that the member for the Eastern Division of Norfolk (Mr. R. J. Price, whose name was omitted in our list) is an M.R.C.S., 1876, though he subsequently, like the present Solicitor-General, Sir R. B. Finlay, Q.C. (whose M.D.Edin., 1863, is also *en évidence*) became a barrister.

Herbal Simples. By W. T. FERNIE, M.D.Durh. Bristol: John Wright and Co. 1895. Price 5*s.*—We are told that the object of this book is to revive or retain the use of such simple herbs as are common amongst us and have been proved to be of medicinal value, and so it is recommended to the public in emergency and to the practitioner "when his customary medicines seem to be out of place or beyond reach." As an historical review of the use of many of these drugs the book is interesting and shows a large amount of knowledge and research on the part of the author; but much of it can scarcely be taken for serious use at the present day, for good as many of their actions may be we fail to see their superiority over those in use. The author believes largely in the law of similarity, which is carried to absurdity when in speaking of sundew he says: "The sundew when given experimentally to cats has been found to stud the lungs with true tubercular matter. ..... Meantime, it has been well demonstrated that at the onset of pulmonary consumption in the human subject a cure may nearly always be brought about, or the symptoms materially improved by giving the tincture of sundew throughout several weeks." We are also told that parsley, especially when uncooked, is liable to bring on epilepsy, but that it has been given with signal success in an inveterate case of that disease: indeed, the book abounds in such legends.

Wintering in Egypt. By ARTHUR J. M. BENTLEY, M.D. Edin., and Rev. C. G. GRINFFINHOOFE, M.A. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1894.—This small handbook, which is very well illustrated with plates from photographs, is divided into two parts—one entitled "Under the Shadow of the Pyramids," the other "Hints to Invalids." It is popularly and pleasantly written, and gives a good deal of useful information of various kinds about a country which is full of interest, together with some helpful advice and hints to invalids and others as to their personal hygiene and the maintenance of their health in Egypt. The remarks as to the cases that are and that are not suitable for wintering in that country, the nature of its climate, and the dangers occasionally arising from chills, are sound and judicious. For the intelligent tourist and for suitably selected cases it goes without saying there is no more delightful or health-restoring place in the world than Egypt during the winter.

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Bread, Bakehouses, and Bacteria. By F. J. WALDO, M.D. Cantab., medical officer of health to St. George's Hospital, Southwark, and to the Inner and Middle Temple; and DAVID WALSH, M.B., C.M. Edin. London: Baillière, Tindall, and Cox. 1895.—This volume is a reprint of five articles already published (one of them in THE LANCET, Oct. 20th, 1894), with the addition of reports of police-court proceedings against insanitary bakehouses, containing some very unpleasant details. The authors' experiments show that the heat required for baking does not invariably sterilise dough, as micro-organisms can often be cultivated from the centre of loaves within a few hours of their being taken from the oven.

Pocket Therapeutic Notes. Second Edition. Bristol: Ferris and Co. 1894.—This small volume of about 300 pages is a very useful and well-stored handbook of the more recent and energetic additions to the materia medica. Considering the number and variety of such preparations, there are few practitioners who do not find themselves occasionally in need of such a comprehensive book of reference as this. There is an appendix containing the fluid extracts of the United States Pharmacopœia and more than 160 formulæ of pills. Prices of the various drugs and preparations are appended.

MAGAZINES.

The September number of the *Practitioner* shows signs of the languor which pervades most periodical literature about this time of the year; still this magazine is never without one or two, at least, interesting pages. In an editorial note a suggestion is made that there ought to be a medical party in the House of Commons who would sink all political differences in order to "act together in safeguarding the public health." This is a most admirable suggestion, and one which we hope may soon assume reality. The Medico-Literary Causerie deals with Dr. Withington's "History of Medicine," which was recently reviewed in our columns. Mr. George Heaton has a good paper on the Symptoms and Treatment of Infective Disease of the Cerebral Sinuses, and there is a number of interesting notes from foreign journals.

The *Twentieth Century* for August has a thoughtful and suggestive article on Certain Bogus Insurances, condemning the anomalous system under which vendors of useless medicines and medical or surgical appliances are at full liberty to delude the public with mendacious advertisements. The law in this particular no doubt requires to be altered and amended with a view to the protection of the ignorant and unwary, for, as the writer of the paper remarks, sufferers may by such specious inducements be dissuaded from seeking proper advice during the initial period of disease, when professional skill has the best chance of giving relief. He might also have mentioned that the State is not free from complicity in the deception, for the Government stamp and the designation "patent medicine" no doubt encourage credulous purchasers in believing that advertised nostrums really possess the qualities claimed for them.

In the current number of the *Asclepiad* the principal articles are a memoir (with portrait) of John Abernethy and an essay on Cycling and Heart Disease. Sir Benjamin Ward Richardson continues the narrative of his researches in nervous matter and describes a new observation on the reproduction of forms by various electrified powders, of which bone-dust yields the best results.

A CORRESPONDENT having written to the Home Secretary calling his attention to the large number of deaths which have occurred in the past few months from lamp explosions has received the following answer:—"I am certainly favourable to the reappointment of a Select Committee on these dangerous oils and lamps, and hope it may be found practicable to start it again next session. Legislation, without the advice of the committee, is, I think, in this case well nigh impossible."

New Inventions.

THE AREMA VAPORISER.

THE treatment of phthisis by atmospheric medication and the inhalation of antiseptic vapours has for several years engaged the attention of Dr. W. H. Spencer of St. Leonards-on-Sea, who in 1891 published an account of the vaporiser which he had been employing for the previous four years. The apparatus has since then undergone some modifications, and in its present simplified form is sold by the "Arema" Manufacturing Company, 27, High Holborn, W.C. It consists essentially of a water-bath, which is kept at a constant temperature by means of a special oil lamp. The body of the lamp is about three inches in height and stands on a wooden disc six inches in diameter, which supports a stout upright wire frame twelve inches high. The water-bath slides vertically in this frame, so that it may be placed at any required distance above the lamp. The upper part of the water-bath contains the substance to be vaporised, which will usually be one of the volatile oils, such as eucalyptus oil or terebene, and of which about an ounce or an ounce and a half will be used every twelve hours. The lamp holds rather more than two ounces of oil, which should be the best French colza, and lasts for about twelve hours; the wick is about five-eighths of an inch long and is carried in a holder which floats on the oil. The water in the outer pan of the water-bath is kept at a temperature of about 180° F. and requires renewal every twenty-four hours. The entire apparatus is simple, portable, and easy to manage.



AN INVALID CUSHION.

WE have received from Messrs. Thos. J. Syer and Co., 45, Wilson-street, Finsbury, E.C., a new pattern of horsehair cushion which is very convenient and comfortable and may be used in an ordinary chair. Like most articles of the kind, it is provided with ties passing quite through its thickness, in order to maintain the shape and prevent the stuffing from being displaced. In this cushion these ties are ingeniously arranged in two lines, so as to give it a wedge shape and prevent pressure on the sciatic nerve. Pressure on the sacrum is effectually avoided by a recess in that part of the cushion which is furthest from the edge of the chair.



MEDICAL BOOK-KEEPING.

IN connexion with my system of medical book-keeping I have felt that some means of making notes on cases ought to be provided, but it was impossible to make this addition to the book itself without great additional expense in interleaving and increasing the size unduly. To meet this requirement and to obviate the difficulty, I have designed "Memoranda Leaves," alphabetically arranged to correspond with the list and day book pages, for temporary insertion each month. At the end of the month these are placed in a box-file and fresh ones inserted, so that a record of each case can be found in a moment. The dates, which follow each other successively, and the names are arranged in columns at the end of each page, with printed headings, so that in referring it is only necessary to turn over the pages in the same manner as the page of a book is sought for. The "Leaves" are sent out (by Messrs. Silverlock) in sufficient number to last the six years that the book lasts, and each box-file thus contains the notes of all cases during that period. They can be obtained bound as a separate volume, but the loose leaves are more convenient in a busy practice.

W. WRIGHT HABDWICKE, M.D.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 21, 1895.

WE have from time to time animadverted upon the rosy view taken by some of our contemporaries and others in regard to the tampering of food, and the contrary opinions we have given expression to are now officially stamped as correct by the disclosures contained in the second Blue-book of the Food Products Adulteration Committee, which, however, deals with only a part, but a very important part, of the subject—viz., the evidence of those connected with the wholesale trade. None the less one fact stands out prominently, and it is with no little satisfaction that we observe it, and that is that the malpractice most to be complained of now is not the use of adulterants of an unwholesome or even poisonous character, but simply the addition of cheaper substances, perhaps to improve the appearance, but more probably to add to bulk. Thus the public have little to fear in regard to injurious admixture, though suffering largely from deception. Moreover, the deception and fraud, it would appear, are as a rule the acts of the wholesale vendor rather than of the retailer or small shopkeeper. He would have been sanguine indeed who expected that the action of the memorable Analytical Commission of THE LANCET in 1850 would have entirely stamped out every shape and form of food and drugs adulteration; still when the gross practices then shown to exist, and brought to light by the founder of THE LANCET, are called to mind, there can be but little doubt of the excellent results of this inquiry—an inquiry which was fraught with tremendous issues and responsibilities. It must surely be conceded that credit is justly due to the late Mr. WAKLEY when a present day Blue-book records that adulteration with substances injurious to health is practically a thing of the past, and that although fraud is yet existent it is practised, not so much by the shopkeeper, who was the principal offender brought to justice by THE LANCET inquiry, as by the wholesale dealer, *whom the operations of the Food and Drugs Act do not reach*. Hitherto it has been the retailer who has been mainly controlled in regard to the sale of food, and on this account injustice doubtless has frequently been meted out to him. The remedy for this state of things is obvious and will no doubt be provided when the members of the Committee draw up their important report. Already, however, the evidence contained in their second Blue-book shows how great a public benefaction was THE LANCET'S initiative in the matter of a perilous crusade against adulteration nearly fifty years ago. In those days it was chiefly the shopkeepers who were convicted of gross fraud, and in many instances of selling articles of food sophisticated to a serious extent with injurious substances. The evidence of the Blue-book now shows the absolute necessity of applying the law to the manufacturer and to the wholesale importer, who has no doubt often escaped punishment wrongly inflicted on the retailer, the latter doubtless in some cases having been unconscious of selling a fraudulent article. The evidence on this matter is all the more convincing because it comes from large traders and trading associations who are desirous of stopping these malpractices.

We gather the following conclusions from the statements sworn to before the Committee by some of the leading representatives of the grocery trade. Butter is adulterated to a large extent, a great quantity of it being imported; the adulterants are chiefly foreign fats, while an excess of water sometimes over 40 per cent. is frequently met with. Spurious cheese is largely imported from America, and in smaller quantities from Hamburg and Holland; the so-called filled cheese is composed of skimmed milk, lard, "oleo oil," and other foreign fats. Cocoa is supplied either concentrated by the elimination of its 50 per cent. of fat or attenuated with starch and sugar; in the absence of a definition, however, for pure cocoa it is difficult to institute proceedings unless the admixture is proved to be unwholesome. Coffee is largely adulterated, and the gradual decrease of its consumption is probably due to the unscrupulous way in which it is mixed with chicory. Milk is the subject of considerable adulteration, and attention is drawn to the fact that large quantities of milk and cream are now imported without any precautions being taken to ensure their freedom from infection and impurities. Lard does not appear to be seriously adulterated, although admixtures are sold containing cotton-seed oil or beef stearine, but at a much lower price than that of pure lard. Oatmeal in one instance proved to be adulterated with barley meal. Olive oil is largely worked up with cotton and other oils. Pepper has been the subject of extensive adulteration with ground rice, "long pepper," olive stones, &c., although the practice has received considerable check by the vigorous application of the Sale of Food and Drugs Act, 1875. In the case of certain imported goods the Act has, however, been powerless; in one notorious case 70,000 lb. of so-called pepper dust, consisting of 1 per cent. of pepper and 99 per cent. of sand and clay, were offered for sale and disposed of by public auction in Mincing-lane. The desirability of extending the Act so as to make it include wholesale dealings is also manifest in the following case; a consignment of so-called salvage pepper, which had been soaking in Thames water and was saturated with rotten matter so as to be offensive, was disposed of at Mincing-lane to the extent of 240,000 lb. Instances of spurious drugs have likewise occurred in this connexion. Thus a quantity of gum kino was offered for sale by the brokers which "was no more (we are quoting Mr. UMNEY) like kino to the initiated than chalk is like cheese." Similarly spurious buchu leaves are palmed off as genuine ones, and false ipecacuanha for true. Cane sugar is largely replaced by beet sugar, which is ingeniously coloured with aniline dyes to imitate the superior and higher priced article. Spirits are chiefly diluted with water, but the publican contracts himself out of the Act by setting up a notice that "all spirits sold are diluted." In regard to ginger it is said that the trade of the country is being destroyed by the adulteration going on, the practice usually consisting in grinding up refuse or exhausted ginger with the genuine article. Liquorice, especially that imported from France, is heavily adulterated, principally with rice, starch, sago flour,

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miller's sweepings, and other substances which often induce the presence of weevils and maggots. Caraway seed appears to be deprived of much of its oil and to be then sold mixed with genuine seed in the same way as ginger. Cinnamon has also been found to be adulterated with ground walnut shells, which, of course, are quite worthless. It is unnecessary to extend this list, but it is quite evident that the sooner the scope of the Act is made to include the wholesale trade, the factories, and the port of entry in the case of imported goods, so much the better will it be. Against all this it is satisfactory to record that the retail pharmacist's dealings have on the whole been most creditable.

A word on the administration of the Acts must not be omitted. There is no doubt that the Act of 1875, *so far as its scope went*, has done excellent service in the prevention of adulteration and has raised the standard of purity to a very creditable position, and this despite its shortcomings in regard to the details of its practical working. The Food and Drugs Act is a huge piece of legislative machinery, and it would have been surprising if breakdowns had not occurred. The time has come, however, when not only its scope should be extended, as we have already indicated, but when its administration should be strengthened and enforced. The Act is, as it were, just passing out of its experimental stage, and we are learning its defects. These defects must, indeed, be now patent to the members of the Committee, who will, doubtless, recommend to Parliament the desirability and necessity of making speedy reforms and of effecting some important administrative changes. As the evidence already shows, the system of taking samples needs modification, some greater control over the action of inspectors is wanted, a greater uniformity in magisterial decisions in adulteration cases is desirable, the scale of fines should be uniform and commensurate with the offence, and so forth. Lastly, there is the question of standards, and of a court of appeal, and of the emoluments and the qualifications of the public analyst. We hope to return to these subjects at a future time, but the direction in which legislation is needed on these points has already been indicated, and we confidently expect that a new Act more in accordance with the requirements of the present day, when it is largely a case of setting science to catch science, will arise Phœnix-like out of the ashes of the old one, which, nevertheless, has done the community excellent service, and which we are justly proud of reminding our readers had its origin in the famous Analytical Commission which was set on foot by THOMAS WAKLEY, the founder of THE LANCET, solely in the interests of the people's good and well-being.

IT is not much more than half a century ago that the executors of a clergyman sued the Providence Assurance Company for £2000, the amount of an insurance effected upon his life, when, after hearing conflicting evidence on the point, the judge left it to the jury to decide whether insanity had a tendency to shorten life, instructing them that if they decided that insanity had such a tendency they must find for the defendant, and, if it had not, for the plaintiff. After a short deliberation the jury found for the plaintiff on the ground that insanity had no tendency to shorten life. This case was referred to by the late Dr. WILLIAM FARR in his well-known paper, read before the Royal Statistical Society in 1841, entitled "Report on the Mortality of Lunatics," as an nstructive commentary on the misconception that then existed as to the effect of insanity upon mortality. Dr. FARR in this paper, from such statistics as were then available, came to the conclusion that "the mortality of severe cases of insanity cannot, I think, in favourable circumstances, be less than 6 per cent. (annually); so that the mortality is three times greater among lunatics than among the general population at the same age." Mr. NOEL A. HUMPHREYS, in his paper read before the same society in 1890 on Statistics of Insanity in England, deplored the fact that since Dr. FARR wrote on the subject so little progress had been made in the recording of statistical data on which more definite information concerning the influence of insanity upon mortality could be based.

Since the last-mentioned paper was read the Lunacy Commissioners have added to their reports a new and valuable table, which will before long supply the much-needed material for calculating the precise effect of insanity upon the rates of mortality of males and of females at different ages. Although the full value of these tables cannot be attained until they are available for a series of years, it may not be without interest to note some of the results shown in the table referred to, which appears in the recently issued forty-ninth report dealing with the insane patients known to the Commissioners on Jan. 1st last. It should be stated that the table now under notice relates to the rates of mortality among the insane in various kinds of asylums during the year 1893, which are calculated upon the numbers of inmates of those asylums on Jan. 1st in that year. It may be noted, in passing, that the calculated death-rates in this table would have been more correct had they been based upon the mean numbers of inmates at the beginning and at the end of the year during which the deaths occurred—namely, on Jan. 1st, 1893, and Jan. 1st, 1894. The effect of the method adopted by the Lunacy Commissioners is slightly to overstate the rates of mortality, but this scarcely invalidates them for comparison with the death-rates at the same groups of ages in the general English population. Among 30,533 male inmates of asylums on Jan. 1st, 1893, the death-rate per 1000 during the year 1893 was lowest, 77·4, at the age period twenty-five to thirty-five, and steadily rose to 352·5 among the small number living at the ages seventy-five to eighty-five. Thus the mortality of the insane, as of the general population, naturally increases with age. It is, however, very interesting to note that the excess of mortality due to insanity is far greatest at the earlier ages, and declines steadily to the end of life. Taking 100 to represent the rate of mortality among males in the general English population at each successive age period, the mortality among the male insane was 2237 at from fifteen to twenty, 1409 at from twenty to twenty-five, 1046 at from twenty-five to thirty-five, and 867 at from thirty-five to forty-five. At subsequent age periods the proportion to 100 declines still more rapidly from 519 at from forty-five to fifty-five to 246 at from seventy-five to eighty-five. It is scarcely

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necessary to point out that the far greater relative excess of the mortality of the insane at the earlier ages is due to the much larger proportion of acute cases among the inmates of asylums under forty-five years of age. This is a point on which further statistical information would be both interesting and valuable. The mortality statistics of the female inmates of asylums give very similar results. It may be noted, however, that the rate of mortality in 1893 was lowest — 63·3 per 1000—at the age period forty-five to fifty-five, and at later periods rose successively to 270·9 at the seventy-five to eighty-five period. The rate at each age period was very considerably lower than the male rate at the same age. Consequently, the excess of mortality due to insanity was also far smaller among females than among males. The relative excess of female mortality was, however, as in the case of male mortality, greatest at the earlier age periods and steadily declined to the end of life. The death-rate among the female insane at the age of fifteen to twenty years was 1547 to 100 among the general population, at twenty to twenty-five years it was 1254, and at twenty-five to thirty-five years it was 893; the proportion to 100 further receded at subsequent age periods, and at seventy-five to eighty-five years it was only 208. The Lunacy Commissioners in their table compare also the mean mortality of the insane at all ages with the general English rate at all ages. This comparison is, however, absolutely valueless and misleading, unless correction is made for the abnormal age constitution of the insane population, which includes no infants and but few children, and a very excessive proportion of persons over sixty years of age.

It would be unwise to attach too much importance to this consideration of the Lunacy Commissioners' valuable figures for a single year, but it is safe to conclude that Dr. FARR very considerably understated the effect of insanity upon English mortality when he said that the mortality of the insane "is three times greater than among the general population at the same age." In 1893 the rate of mortality among the inmates of the English asylums, male and female, between the ages of twenty-five and fifty-five, when the inmates are most numerous, was more than six times the rate that prevailed at the same ages among the general English population.

IT is possible, and even probable, that the electrical conditions of the atmosphere have an important bearing on bodily health. As evidence of this may be instanced that tendency to headache, irritability, and general malaise experienced by many persons just before a thunderstorm. Amongst the conditions that predispose to sunstroke in India there has been noticed that peculiar condition of the air "in which the hairs of a horse's tail repel each other, in which the hairs of the head stand on end, in which a man exposed to its influence becomes irritable, headachy, and restless without knowing exactly what is the matter with him." Various observers have remarked that a thunderstorm is often preceded by an increased frequency of cases of heat apoplexy. Whether this phenomenon be strictly attributable to electrical conditions, to the heat, to some alteration in the respirability of the air, or to other causes, it is difficult to determine.

As to the source of atmospheric electricity there are many hypotheses, but little positive knowledge. The problem of the thundercloud still awaits solution; yet this would seem only to require a series of well-arranged laboratory experiments on a sufficiently extensive scale. In the meantime it is safe to say that the electrification of the air is in some way connected with the presence of water. Whatever be the determining cause, the air before a thunderstorm becomes charged with electricity, and a charge of opposite sign is induced upon the earth; in other words, the difference of potential between the earth and the air goes on increasing. The body of a man standing on the earth's surface, and having, therefore, the earth's potential, may be regarded as a discharging point doing its best to effect the restoration of electric equilibrium between the earth and the air in its vicinity. This process will continue until, either by a steady discharge or by the disruptive discharge of the thunderstorm, tension is relieved and equilibrium is effectually restored. The man has really been suffering from an accelerated rate of electrical discharge. Now if his body be regarded as a connexion between earth and air it is to be remembered that the difference of potential between the two latter, and therefore between the head and feet of the man, is subject to various sudden and extensive fluctuations. A potential difference at one moment of 100 volts or less may in a few minutes rise to the same number of thousands. Experimenting in the Isle of Arran, Lord KELVIN found the difference of potential between the earth and an insulated burning match at a height of nine feet to vary from 200 to 400 volts, and "during breezes from the east and north-east it went up to 4000 volts." He points out that "the gradual variations minute after minute through so wide a range as three or four to one, and not infrequently rising to twenty times the ordinary minimum, must have been due to positively electrified masses of air within a few hundred feet of the place of observation, wafted along with the gentle winds of five feet or ten feet or fifteen feet a second." If, therefore, the body be subjected to such variations of potential as occur in fine weather between the earth and the electrified masses of air of which Lord KELVIN speaks, much more formidable must be the conditions that exist between the earth and the heavily charged thundercloud. The animal body, accustomed as it has become to its electrical environment, and little sensitive to the slighter fluctuations of potential, may nevertheless be seriously influenced by the severer manifestations of the thunderstorm. Questions of this kind raise some interesting points in connexion with the therapeutic use of the so-called electro-static bath. This consists, as is well known, of the simple placing of the insulated body in connexion with one or other pole of the static machine. Not that under these conditions the electricity is strictly "static" or at rest; the body of the patient is traversed by a current at very high potential which completes its circuit through the air. It is stated that with a four-plate Holtz machine the insulated body was brought to a potential of 30,000 volts, the current passing being about $\frac{1}{1000}$ of an ampère. For this procedure there are claimed well-determined physiological effects, such as increased action of the skin; an influence on blood pressure, as shown by

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sphygmographic tracings; an increase in the frequency and the depth of the respirations; as well as increased excretion of urea and phosphates.[1]

Now, reverting to what has been already stated, it is evident that a living body exists on the earth under definite, although changeable, electrical conditions. In point of fact, it lives and moves and has its being in an electro-static bath. The kind of bath—that is, the electrical condition of the air, and therefore of the earth—varies with the weather. There seems to be "a normal fair weather positive of natural atmospheric electricity." On a cloudy day the sign varies. How far do facts of this kind help to explain the influence of weather upon health? It has been suggested[2] that, inasmuch as the neurasthenic, the gouty, the rheumatic, and persons suffering from diseases of the spinal cord are better on a clear day than on a cloudy one, the indication is to treat them by negative electrification. It must be in the highest degree difficult to trace such effects to the electrical rather than to the hygrometric or other conditions of the atmosphere; still, vague as such conjectures are, it is not impossible that the electrical condition of the air may eventually furnish the key to treatment by the electro-static bath.

Annotations.

"Ne quid nimis."

STATE BACTERIOLOGY.

PROBABLY the Medical Department of the Local Government Board never stood so high in public estimation as it does to-day. The experience of its work done in the best interests of public health and for the furtherance of sanitary science during many years past has been such as to claim the gratitude of the nation again and again. Yet it is in such circumstances that our contemporary the *Daily Chronicle*, in its issue of the 14th inst., takes pains to dilate in a lengthy leading article on the so-called "bacteria madness" of the Medical Department. Dealing with the recently issued volume of 1893–94, the paper speaks of "its 500 pages of microscopic portents." Save in so far as all the work of the Department, of whatever character, savours of a "microscopic" regard for precision of fact, the statement is a serious exaggeration. The report in question consists of 556 pages of printed matter, and less than 100 of them are devoted to bacteriology as applied to sanitary science, and this in the sole State-issued document on such a vital subject. In the other 400 and odd pages we find discussed at length such matters as vaccination, water-borne enteric fever, cholera prevalences, lead poisoning by water-supplies, epidemic skin disease, and the like, so that the "bacteria madness" sinks into comparative insignificance and is, moreover, relegated to the end of the volume. But if it were not so why decry, as our contemporary does, bacteriology as an adjunct to public health work? Surely the *Daily Chronicle* and its readers will not readily belittle the part played by the bacteriological laboratory in our recent cholera panic of 1893, or the advantage it is now affording towards the prompt diagnosis of diphtheria; or the significance of the present day knowledge, by the aid of bacteriology, of disorders in the lower animals which have an important bearing on certain infectious diseases in man. The value of disinfection of one and another kind, too, has only been ascertained with any degree of certainty by laboratory experiment, and these are but instances of our indebtedness to bacteriology. It is, as a branch of preventive medicine, of necessarily slow progress; and it is often only by years of patient research that definite practical results are arrived at. But perhaps the most absurd view taken by the *Daily Chronicle* is that of the professional experts at Whitehall being "glued to their microscopes." We have searched in vain to find the name of any one of the bacteriologists, details of whose work find place in the volume in question, among the staff of the medical inspectorate. Just as their work is a subsection of public medicine, so these workers are themselves only from year to year attached to the Public Health Department, and only supplement the clinical and etiological observation of disease by the aid of the microscope and the culture tube. The truth of the matter is that the nation has at Whitehall a small body of sanitary experts whose whole time is occupied in the duty of safeguarding the public health in the broadest sense of the term, and to whom the community is glad and able to look with full confidence in any time of national danger by reason of formidable threatenings of disease.

[1] E. Huet: Manuel de Médecine (4), p. 704.
[2] Dr. Morton: Transactions of the American Institute of Electrical Engineers, November, 1893, p. 560.

ANTHROPOPHAGI AND MOTHERS-IN-LAW.

THE Anthropological Section of the British Association had a most interesting meeting on Sept. 14th. The first paper was read by Mr. Myres, and consisted of an abstract of the report of the committee appointed to investigate the North-Western tribes of Canada. In British Columbia there is a tribe known as the Ts'ets'a'ut, among whom is "found the custom of avoidance between mother-in-law and son-in-law (*Matuo Ha*) which was common to all the Tinneh tribes. They were ashamed to talk to each other or even to see each other." The custom of avoidance of mothers-in-law is, we fancy, not unknown among tribes which have attained a higher degree of civilisation than the Ts'ets'a'uts, but these untutored people have an advantage over their more superior brethren in that among them the avoidance is mutual, while in the records of the Newcome and Lovel families it is noted on the authority of their biographer that neither did the Campaigner avoid Clive Newcome, nor did Lady Baker avoid Frederick Lovel. From this subject the session passed to consider the subject of cannibalism. It is the tendency of the age to modify if not to entirely alter preconceived notions as to the wickedness of those whom we have been brought up to believe were monsters of iniquity. Thus the gracious sovereign lady whom we were all taught to stigmatise by the opprobrious epithet of "Bloody" has lately been shown to be a lady of most mild and merciful disposition. Blue Beard, if not absolutely harmless, was merely an involuntary sufferer from "psychopathia sexualis," and now we have the whitewashing of the cannibal. Captain Hinde, who has been travelling and fighting for some years, was the courageous person who took upon himself to show that the cannibal has, after all, many lovable traits. True, he is somewhat cruel in his ways of preparing food; for instance, "certain tribes of the Bangala race themselves acknowledge that they break the arms and legs of the victim, and place the body thus mutilated and still living in water for two or three days, on the supposition that this pre-mortem treatment renders the flesh more palatable." But this is no worse than our forefathers' custom of whipping pigs to death, or roasting geese "quick" as the incomparable Sidonia did. After a fight Captain Hinde's followers invariably ate up the killed, a method of "disposal of the dead" which has its merits. Cannibalism probably originated in the religious idea that the godhead was incarnated in

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some human being or animal, and that by eating this the eaters became imbued with some spark of divinity. In the lower races the idea of divinity was lost and only the qualities of bravery or strength remained. It may be said with all reverence, as one speaker pointed out, that the deepest mysteries of the Christian religion are founded on this, and closely connected is the Holy Grail legend, the Christianised form of a Pagan semi-cannibal myth. It would take up too much space to enter into all the branches of this subject—corpse cakes, mell dolls, ancient sacramental rites, the swallowing of the children of Cronos—but we have said sufficient to show that in a custom regarded with abhorrence by all modern races there lurk some faint traces of the universal longing for something higher than our mere humanity.

THE PLAISTOW MATRICIDE.

THE above case is one of the most remarkable in the history of legal medicine. A crime more revolting, foul, and unnatural it would be difficult to conceive, and its only extenuating feature is that it was committed by a person who, according to the finding of the jury, was irresponsible for the act. On July 13th last Robert Allen Coombes slew his mother by stabbing her in the heart whilst in bed with her. There is ample proof that the murder was premeditated and carried out in the most cold-blooded way. The prisoner, acting in collusion with his younger brother, having determined to kill his mother, carried out his fell purpose in the manner described. He then covered up her body and with the proceeds of the robbery of the effects belonging to his parents indulged himself in attending cricket matches. It was not until many days after the murder that the crime was discovered. At the inquiry of a relative as to what had become of his mother the lad, after prevarication and lying, boldly confessed that he had compassed the deed, and that the corpse was lying in a room adjacent to the one in which he was playing cards with his brother and a sailor named Fox. The latter was indicted as being an accessory after the fact, but there was no proof that he knew that Coombes had murdered his mother or that he was aware of the presence of the corpse in the house. A curious legal point arose at the trial at the Central Criminal Court—viz., whether Fox could be convicted as an accessory after the fact if the murder was committed by Coombes whilst in a state of insanity. Mr. Justice Kennedy, after consulting the authorities, uled that as the felonious act of an insane person was not legally a crime Fox must be acquitted if the jury found Coombes to have been a lunatic at the time when he killed his parent. This in effect was their verdict, and so, independently of the merits of the case, Fox was acquitted. We are not in a position to traverse the reading of the statute, and although the above interpretation may be good at criminal law it certainly strikes us as running counter to the dictates of common-sense. The younger Coombes was certainly an accessory before and after the fact, but as he was to a great extent under the domination of his brother it was wisely decided not to proceed against him. Had the charge been pursued it is probable the jury would have acquitted him. It is to be hoped that with such a fearful past he will not be allowed to shape his future for himself. Robert Coombes, whom the jury found to have been insane when he murdered his mother, was a good instance of a particular type of insanity. Judged by the strict letter of the law, which holds that the proof of insanity is the knowledge of right and wrong, and consequently of the nature and quality of the act, the contention of the prosecuting counsel and the direction of the learned judge can well be understood. Coombes was not suffering from intellectual insanity, and this is the only form recognised as relieving from criminal responsibility; but his life-history points to moral alienism as his usual state and to impulsive homicidal mania as the culminating feature of his mental disorder. He seems from the evidence to have been brought into the world by instrumental aid, which had left permanent marks. Years ago he had to be treated for severe headache. Of course it may be asserted that the carelessness with which he viewed his position after committal, and the recklessness with which he spoke and wrote on the matter of his trial and its possible issue, were assumed in order to mislead the medical officer of the prison and others, and thereby construct a defence against the capital charge. We hold, however, that it is far more likely that a boy, however deep his moral depravity, would, on realising and reviewing such a monstrous and unnatural crime, be seized with remorse and shame. Again, although there was some motive for the act, the evidence conclusively shows that it was totally inadequate. After a careful consideration of the case in all its aspects we unhesitatingly endorse the verdict of the jury. To have convicted Coombes would have been an injustice; to have sacrificed his life would have been a crime. It is matter for congratulation that the sound common-sense of the jury prevailed over what was probably the strict interpretation of the law in its bearing on criminal responsibility.

IS THE SMOKE NUISANCES ACT PROPERLY ENFORCED?

NOT the least important section of the Public Health Act is that which gives power to local authorities to compel the owners of factories &c. to prevent nuisance arising from the escape of smoke and worse emanations. Any chimney (not being the chimney of a private dwelling-house) sending forth black smoke in such quantities as to be a nuisance may be dealt with summarily under this clause of the Act. Yet those who journey to and from the suburban districts every day must have observed that in a great majority of instances this useful Act is not applied as it should be. Indeed, there is every appearance that it is most wantonly disregarded. Within a circle of about four miles' radius outside the city of London several, if not the majority, of London's factories are situated, and these, comprising glue works, soap works, match works, chemical works, not to mention other offensive trades, may be seen every day vomiting forth heavy black smoke which eventually enshrouds in hideous murk and gloom just those densely populated places where pure, fresh air is most needed. We have reason to believe that this offence is being committed on all sides of the metropolis. We will, however, quote one instance of which we have had ocular demonstration. Travellers by that branch of the Great Eastern Railway running between Bow and Stratford can count a score or so of chimneys connected with the factories of this low-lying district emitting huge volumes of densely black smoke in the most outrageous manner, and it is well known that when a tendency to fog exists it is between these points, as the railway officials must find to their cost, where it is thickest and most persistent. It not infrequently happens also that the passengers are sickened by the offensive smells pervading the compartments as the train passes through this district. The evil is, of course, accentuated by the train stopping, when the ordeal becomes really severe. We have reason for believing that similar nuisances exist elsewhere at places a few miles out of the city, so that, however fresh and pure the prevailing wind may be, and in whatever direction it blows, some gloom and contamination must reach the inner metropolis. We trust that the authorities may be roused to action in this matter and take immediate steps to bring to book any offender, especially as he can avail himself of simple means by which the production of objectionable smoke may be immensely minimised. We

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might point out that now is the time to act, before the mischief is accentuated by sudden changes of pressure and temperature, and before the subject is brought forcibly home to us by the onset and prevalence of a real "pea-souper."

THE CHITRAL FORCE.

THE latest Indian papers contain several items of interest about the late expedition to Chitral. Surgeon-Major Sir George Robertson will have arrived ere this at Chitral and have declared the intentions of the Indian Government. As soon as the reports from Sir Robert Low and General Stedman have been considered the Government will settle the final details regarding the camps and fortified posts that are to be occupied. In the meantime the Chitral Relief Force is being rapidly broken up, and the European regiments have returned to India without the exhibition of any hostile signs on the part of the tribes during their withdrawal. The losses from disease and exposure in the field have, as usual, far exceeded those attributable to casualties in action during the late expedition. Enteric fever is stated to have prevailed among the troops on the highlands beyond the border, just as it does among troops in their cantonments, and to have caused many deaths; but no cholera has occurred so far among the regiments during their return march, such as, it will be remembered, took place on the return march of the force from Gandamak in the Afghan campaign of 1878–9. Cholera was then prevailing in a severe epidemic form, which is not the case at present, and this fact makes all the difference. Fever is, however, very common in the Peshawar Valley at this season and has to be taken into account. But the Indian authorities are stated to have taken great care as to their sanitary arrangements, camping grounds, and the transport of the troops and their prompt entraining at Nowshera.

ARTISTIC OR HYGIENIC LONDON?

IT is idle to deny that the discussions which the daily papers open their columns to in the "hungry" season are useful and instructive, if not productive of practical good. The subject of beautifying London is one, for instance, upon which everyone is entitled to contribute an opinion, and out of a crop of suggestions a few surely are certain to be feasible and worthy of consideration. Invariably, however, there are those—or at least there is certain to be one—who think that other questions of reform are more pressing. And the suggestion that we should turn our attention to the sweetening and cleansing of the air of our streets and to the removal of effete animal products is a case in point. On hygienic grounds it should be considered first, while from an artistic point of view even the effect upon the nose surely requires as much studying as the effect upon the eye. An eyesore is comparable with a stench, but the removal of the latter first would, we imagine, be the step preferred by most people. The atmosphere of our streets is very often loathsome and sickening, especially when the weather is warm and when there is an absence of breeze. The offensive smell is due in the main to the effete gaseous, liquid, and solid products given off by hard-worked horses, and as long as horses are used in our streets it is not easy to suggest a remedy beyond that now applied—the speedy removal as far as is possible of these products by scavengers. When street locomotion comes to be accomplished by means of steam or electric power or by means of petroleum motors—a day that may not be far distant—we may hope to have 'no complaining in our streets" of the filthiness of the atmosphere, but what will those who clamour for the beautifying of London have to say to such a horribly inartistic idea? We might remind them, also, of a third sense that is rudely assailed in our streets—that of hearing—but we may hope that this will soon be in part mitigated by the general adoption of the rubber or inflated tyre. We have nothing to suggest but legislative measures to clear the streets of "the special editions" and other itinerant cries, besides "the music" performed gratis to the passers-by. But who shall say which attack on these three senses is the least nuisance, and which affects most prejudicially the health? Each is an important factor in this connexion, since we know the restorative value to health of a change of scene, of a change of air, and of quiet.

A QUESTION OF RESPONSIBILITY.

TWO men were suffocated in a cistern at Bristol last week under very unusual circumstances. Some defective drains were found in the house of a dental surgeon, and when the drain was opened it was discovered that a rain-water pipe led directly into a cistern. The cistern was on the cellarage floor, and access was obtained to it by means of a manhole. A pipe also led from a photographer's into the tank, and the chemicals used in his work would drain into it. It was advised to clean out the cistern and fill it up with rubble, so as to get rid of any nuisance, as well as the cistern itself. The contents of the tank were pumped out to about twelve inches from the bottom; this sediment the unfortunate men tried to remove, but they were quickly overcome by the sulphuretted hydrogen gas which was liberated by the disturbance of this sediment. They both expired before any assistance could be given them. This gas was the product of special chemical action by the percolation into the tank of the waste preparations used in the process of photography. At the inquest the coroner stated that there was no criminal negligence of any sort. Certainly the case is most exceptional, and the question of responsibility is practically incapable of solution.

DIPHTHERIA IN LONDON.

DIPHTHERIA prevalence in London is now again as it was in the beginning of August, when the school holidays were commencing. Before that period, and during the month of July, the amount of diphtheria in the metropolis was larger than it has been since, but during the three weeks that have elapsed since the board schools reopened after the summer vacation the recorded attacks have been again growing in number The facts seem to show that, although the closing of the schools may have had little influence on diphtheria mortality in London, yet the closing had a marked effect on the number of sufferers from the malady. Thus in the month of July the weekly record of attacks averaged some 275; in the succeeding four weeks of school holidays this average fell to just over 200; but in the subsequent three weeks it has again risen to 220. In the matter of liability to attack the school holidays have therefore saved children to the extent of some 35 per cent., but the resumption of school work has in the three weeks in question quite obliterated the good results of the holidays. With reference to fatality, the deaths from diphtheria in July averaged 47 weekly; during the month of school closure the average only fell one point, whilst in the subsequent period of three weeks the average was reduced to 44. Last week the number of deaths was 21 in excess of the corrected decennial average for the corresponding week of the years 1885–94. Much the same thing took place last year, but on a somewhat smaller scale, for this year there is a larger prevalence than during 1894. The weekly average of cases in July, 1894, was 200, and in the following month of school holidays it fell to 190, with a further fall to 184 in the next three weeks. But the deaths, while 44 per week in the month preceding and the three weeks following school closure, were

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as high as 55 per week during the holiday period. Thus, in 1894 the three weeks after the holidays showed a continued fall in the amount of the disease and a substantial fall in its fatality as compared with the time of actual closure. Still the facts point to much good resulting from the release of children from the aggregation inevitable in school. In London there were 55 deaths last week, as against 24, 40, and 38 in the three weeks before; all but one being in children and persons under the age of twenty years. There were 5 deaths each in Mile End Old Town, Poplar, and Greenwich, and 4 each in Hackney and Lambeth sanitary areas. The admissions to hospital were 105 as compared with previous weekly figures of 81, 86, and 78, and the mortality was about 22 per cent. of the attacks. There remained in hospital at the close of the week 663 patients, a number only slightly varying on successive Saturdays for several weeks past. In the metropolitan outer ring 14 deaths were attributed to diphtheria, and among these 8 were those of persons belonging to the West Ham registration district.

DEATH IN BANK-NOTES.

ACCORDING to *L'Indépendance Belge* the cashier of a Viennese bank met with his death a short time ago under circumstances as remarkable as they are happily rare. Having to count a large number of used bank-notes, all more or less soiled and difficult to separate from each other, he incautiously, and in spite of a friendly warning regarding the risk he was thereby encountering, endeavoured to facilitate his work by moistening his fingers and thumb with his saliva. The same evening he felt a tingling pain in his lips, but did not pay much attention to the symptom, thinking it would pass away. The next morning, however, as his mouth and tongue were hot and swollen, he began to feel alarmed, and without loss of time consulted a medical man, who is said to have forthwith incised the tumour. What the effects, immediate and remote, of this procedure were we are not told, the remainder of the history being briefly summed up in the following terms: "Notwithstanding the operation the patient died three days subsequently from the effects of the poison which he had absorbed." There are some points in this case, as set forth by our lay contemporary, which require elucidation. It is to be hoped, therefore, that an account from a qualified source will be forthcoming.

AN INEBRIATES BILL.

THE medical profession in Austria is to be congratulated on a success recently attained by views which have long been maintained by its members in common with their brethren in other parts of the world. The position of the drunkard in social life has hitherto been regarded in some quarters as an anomaly not so nearly related to the state of lunacy as to justify its treatment on similar lines. There has always existed a feeling that the craving for drink with its consequences ought to be treated as a mere bad habit, a temporary and recoverable error, not really a form of mental disorder. At last there are signs of a return to sounder reasoning. As announced by our Vienna correspondent in our columns last week a Bill now about to be submitted to the Austrian Reichsrath proposes to treat the persistent drunkard as mentally incapable. As such he shall be restrained from injuring either himself or others dependent upon him. This restraint may take the form either of voluntary or compulsory detention in specially appointed retreats. In cases where the confinement is compulsory, provision is made for a regular trial in which witnesses, both lay and medical, will be heard. The justification for detention will consist in such facts as repeated previous convictions of drunkenness, proof of danger to life, and other evidence strong enough to leave no doubt that the alcoholic passion has become ungovernable and has rendered its victim morally or economically a source of danger to himself or others. The term of detention will be two years, and this term is liable to reduction or renewal as occasion requires. The Bill may be taken as fairly representing medical opinion on this subject. Modifications in detail may, perhaps, be found advisable as time goes on, but the measure cannot but be approved on its general outlines. As the first practical attempt to deal candidly with the drink craving, and to treat it as what in very many cases it is—a masterful and engrained vice which has really absorbed all traces of a resisting will—it deserves, and we hope it will receive, a fair trial. We entirely fail to see how injustice can be complained of under such an Act as this, where every precaution is taken to render the preliminary investigation as searching as possible, where no personal privilege is lost by detention, and where the patient's own interest will be served in a degree at least equal to that of his relatives and friends.

INTRA-CRANIAL OPERATIONS ON THE FIFTH NERVE.

IN a recent number of the *Neurologisches Centralblatt* an abstract is given of an important paper on this subject by F. Krause which appeared in the fiftieth volume of Langenbeck's *Archiv;* of eight cases operated upon by him only one died, a man aged seventy-two, whose death occurred, six days after the operation, from heart failure due to atheroma of the coronary arteries. The others all did well, and in no case in which there was total removal of the ganglion has any recurrence of pain as yet taken place. In the only case in which Krause restricted himself to an operation on the second division of the nerve there was recurrence of pain, and then the ganglion was removed and the pain disappeared and remained absent. A comparison of the cases operated on by Rose's method and those operated on by the method of Krause and Frank Nartley shows a mortality of 18 per cent. in the former and 9·8 in the latter. Curious functional disturbances are described as following the operation. Sometimes there is difficulty in opening the mouth, apparently determined by contraction taking place in the muscles of mastication. In spite of the complete anæsthesia of the cornea and conjunctiva, only in one case was there observed by Krause a slight corneal ulcer, which quickly healed. The masseter, temporal, and pterygoid muscles were weakened on the affected side, but little inconvenience resulted. The peculiar and varying sensory impairment in the different regions is also described, and finally the indications for this very radical operation are clearly set out.

HOSPITAL ABUSE AT BRIGHTON.

A RECENT number of a local paper contains a letter on the abuse of hospitals at Brighton which is well worth the attention of the inhabitants of that favoured place. The letter is by Dr. Francis J. A. Waring and is admirable alike in the spirit in which it is written and the facts which it adduces. Dr. Waring, while making it abundantly clear that the medical profession is unanimous in wishing all deserving cases to have every attention and consideration at hospitals, expresses his conviction that a vast number of persons who can well afford to pay are treated at the various medical charities—to wit, the Sussex County Hospital, the Hospital for Children, Hospital for Women, Throat and Ear Hospital, Eye Hospital, Brighton and Hove Dispensary, and the two Homœopathic Dispensaries. Out of a population of 150,000 no less than 38,113 patients are treated at these charitable institutions. Of 3704 births in Brighton and Hove in 1894 no less than 1240 women, or

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one-third of the whole, have been attended by one charity alone. Dr. Waring says that it is a common thing for men earning from 35*s.* to 40*s.* a week to say that they have been taking their children to a hospital. Such facts are a discredit to Brighton and to the administration of its charities. They tend distinctly to injure the medical charities by hardening the hearts of those who have the means and the disposition to help them, and they tend to degrade those who are relieved by treating them as if they were paupers. Dr. Waring's letter should be seriously pondered by the subscribers and the committee of every medical charity in Brighton.

THE DIGESTIBILITY OF GASEOUS BEVERAGES.

MM. CARRION AND CAUTRU are the authors of an interesting paper on the Digestion of Gaseous Beverages which was read at one of the Bordeaux Congresses. According to these observers sparkling cider champagne and seltzer water are all endowed with the property of prolonging the digestive process, while at the same time they add greatly to its intenseness. Cider, moreover, is essentially diuretic, and it also exercises a favourable influence on nutrition. It would seem, therefore, that this old-fashioned beverage may with advantage be recommended for use at meals to sufferers from that form of dyspepsia in which the stomach evacuates its contents too quickly, to the detriment of the thereby overworked intestines. In addition to the good qualities already mentioned, well-made cider is reputed to be an efficient corrective of the uric acid diathesis. In Normandy, where the juice of the apple constitutes the staple drink of the lower classes, gout is said to be unknown save amongst the wealthy who indulge in wine. Gravel and stone in the bladder are likewise very rare, and MM. Carrion and Cautru are satisfied that the immunity from both these forms of disease should be placed to the credit of cider.

THE ADULTERATION OF BUTTER IN FRANCE.

THE Central Committee of Hygiene in Paris is to be congratulated on its action with regard to the preparation of butter for exportation, a matter of considerable importance from the point of view of the British consumer. About the year 1876, on the strength of a report drawn up by M. Boullay, in which it was maintained that the admixture of borax and its associates with butter was permissible inasmuch as the addition had never been shown to produce bad consequences, the practice received official sanction and has ever since been habitually resorted to in the trade. In 1883, however, a re-examination of the subject was instituted by competent observers, who came to the conclusion that the continual ingestion of borax was liable to bring about deterioration of the blood corpuscles, and some years later M. Pouchet was able to confirm this dictum from his own investigations. Satisfied with the proof thus afforded, the committee revised its former decision and issued a recommendation to the effect that the employment of borate of soda and boracic acid for the preservation of butter should be made illegal, as in the case of wine. This advice was accepted by Government after deliberation, and in due course a law appeared forbidding the use of borax for the conservation of all provisions, whether destined for home consumption or for export. The first application of the amended ordinance took place recently, when a Normandy butter merchant was tried and condemned for neglecting to conform his practice to its prescriptions. As may be supposed, this new departure has had a most disturbing effect amongst the exporters of French butter, who are loud in their remonstrances against what they endeavour to stigmatise as inconsistency on the part of the Committee of Hygiene. A public body, having once come to a decision on any given subject, should never be allowed to change it under any circumstances, say the would-be adulterants in default of a more logical argument; but they likewise dwell upon the interests of a great national industry already overhandicapped by competition, and wind up a somewhat unblushing petition with the naïve contention that, after all, the butter in question is destined for consumption abroad. Commenting on the matter in *L'Union Médicale*, M. Jules Rochard makes the following sensible observations: "This agitation will cease of its own accord. It is to the interest of our commerce that its products should be above suspicion; in order that they may preserve their good reputation the first essential is that they should be of an irreproachable purity. Borax and boracic acid, like the salicylate of soda, are far oftener employed for the purpose of masking defects in the substances to which they are added than they are for the conservation of sound and wholesome provisions."

EXPLOSIVE LAMPS.

FATAL accidents arising from the use of lamps are happily not very common if we take into account the nearly universal employment of this form of artificial light. Neither is it to be expected that we can, by means of any safeguard known to us, entirely abolish the possibility of their occurrence. Even in regard to this matter no substitute can be found for personal discretion and no code of rules can possibly be framed to meet and obviate the effects of every chance emergency. It has been abundantly proved, however, that precaution may be carried much further than it now is. Such an event as the spontaneous explosion of a lighted lamp while apparently in working order ought certainly to be, if it is not, preventable. The cause in such a case must be due either to a fault of management or of construction. It is already well known that the usual source of explosion is found in the mixed gas of oil vapour and ordinary air which fills the upper part of a partially exhausted lamp chamber. The development of this mixture is, therefore, to be prevented as far as possible, and this object can only be attained by regularly and completely filling the reservoir with fresh oil. Not less important is the relative adaptation of the wick and its holder. Cheap lamps are apt to be defective in regard to this requirement, and they are, in fact, constructed on an explosive principle. In other cases the reservoir is easily breakable, or, again, the pedestal may be unsteady, but it is needless now to go into further details. We would, however, insist very strongly upon the necessity and the duty of obliging manufacturers to supply only such articles as conform to a set standard of security. This duty is well within the power of the Legislature, and it lays no additional burden of cost on the producer, only that of taking due pains in a work which is not in itself difficult. Be the form and finish what they may, certain qualities ought to be legally required in the construction of every lamp. These, already referred to, may again be briefly summarised. They include a broad and firm base, a pedestal of only moderate height, a reservoir of solid material, and a wick and holder accurately adapted to each other. We would have no lamp sanctioned by authority which did not conform to these necessary structural conditions.

THE DIFFUSION OF SMALL-POX.

SMALL-POX in the metropolis last week showed precisely the same features as in several preceding weeks—namely, some three dozen cases, mostly in the eastern and southern groups of sanitary districts. Two deaths from this disease were registered—one each in Lambeth and St. George Hanover-square sanitary areas, one of these cases being an

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unvaccinated child aged between one and five years of age, and the other an adult concerning whose state as to vaccination nothing is known. The admissions to hospital last week numbered 42, as compared with 65, 36, and 25 in each of the three preceding weeks; the number of patients remaining in the wards has been steadily falling since it stood at 342 on Saturday, Aug. 24th, and was 307 on Saturday last. A few cases have occurred in the Ham districts, but otherwise the home counties seem to be free, and the western and midland registration areas show but little evidence of the disease. Some half-dozen towns in Lancashire continue to record attacks; in the Openshaw portion of the county borough of Manchester 3 fresh cases appeared last week, as well as 1 in Salford; one death occurred in the city also; but Oldham, while having a few cases, was free from fatal attack. In Dublin the cases are few and of a decidedly mild type, since no death has been registered for some weeks; and in the first week of this month only 4 admissions to hospital were reported, together with 6 discharges, leaving 13 acute cases under isolation.

THE PHENYL-HYDRAZIN TEST FOR SUGAR IN URINE.

DR. R. T. WILLIAMSON of Manchester has recently published in brochure form the results of his experience of the value of the phenyl-hydrazin test for sugar in urine for clinical work. He points out that the test may yield crystals from normal urine if the mixture is heated too long, but he has never succeeded in obtaining these crystals when the urine was boiled in a test-tube for two minutes only, a fact which he thinks removes the objection that the test is too sensitive. He proceeds as follows. A test-tube of ordinary size is filled for about half an inch with powdered hydrochlorate of phenyl-hydrazin; then acetate of soda in powder is added for another half-inch. The test-tube is next half filled with urine and boiled over a spirit lamp. By shaking the tube the salts soon dissolve, and after the liquid has reached boiling point the boiling is continued for about two minutes. The tube is then allowed to stand and is finally examined. If sugar is present a yellowish deposit forms at the bottom of the tube, and on microscopical examination this deposit is seen to consist chiefly of beautiful needle-shaped crystals of a bright sulphur-yellow colour. The test can be performed and the characteristic crystals easily obtained even if the urine contains a large quantity of albumin, the crystals of phenyl-glucosazone being easily distinguished under the microscope from the amorphous granules of coagulated albumin. By the manner of proceeding just described no crystals are obtained, it is said, in normal urine. Small crystals, which may be due to glycuronic acid or to minute traces of sugar, are, however, obtained on prolonged heating; but phenyl-hydrazin possesses the one distinct advantage over Fehling's test that it gives no reaction with uric acid, creatinine, or hippuric acid. Some of the disadvantages of the Fehling test to which Dr. Williamson alludes are avoided, we may point out, by the use of ammonia with Fehling's solution, as suggested by Dr. Pavy.

FORMALDEHYDE DISINFECTION BY MEANS OF LAMPS.

FORMALIN or formic aldehyde has been largely employed of late as an antiseptic, and an important application of its properties is its increasing adoption as a preservative for milk, beer, and other liquids. Its employment for this purpose does not appear to be open to any objection, since very minute quantities suffice. It has recently been proposed to prepare this substance by a somewhat novel method which may be conveniently available for disinfecting rooms &c. It is well known that the partial combustion of ordinary alcohol may be effected by means of a previously heated platinum wire. Thus, if a spiral of platinum wire be wound around the wick of an ordinary spirit lamp so that the spiral projects half an inch or so above the top of the wick, combustion continues to go on after the flame has been blown out, the wire remaining incandescent, while the spirit undergoes a change from alcohol into aldehyde. It is an instance, so to speak, of incomplete combustion in which the incomplete product of oxidation, aldehyde, is obtained instead of the complete product, acetic acid. Thus, $C_2H_6O + O = C_2H_4O$ (aldehyde) $+ H_2O$, but $C_2H_6O + 2O = H_2O + C_2H_4O_2$ (acetic acid). It is only necessary to substitute wood spirit for ordinary spirit of wine when, instead of acetic aldehyde, formic aldehyde is obtained. Lamps have been especially constructed with platinum screens for this purpose, and it is suggested that they would afford a convenient means of giving off the vapours of formaldehyde for disinfecting hospital wards, infected dwellings, &c. Since the vapours of formaldehyde have no injurious effect upon furniture and metal fittings, this method may prove a useful precautionary sanitary measure and an important addition to our ordinary means of disinfection. We are not so sure, however, that it can be an economical method, as from the very nature of the process—namely, that of imperfect combustion—the yield of formaldehyde is sure to fall short of theoretical requirements, while loss from volatilisation of unchanged spirit is another factor that must be taken into account.

MEDICAL VACATION NOTES.

(FROM HOLIDAY CORRESPONDENTS.)

I.—NORTH CORNWALL.

THERE are indications that North Cornwall is about to be a favourite holiday resort. And there are many reasons why it should be so. This region (Tintagel and Boscastle) has still the great charm for Londoners of being off the great highway of tourists. The line from Okehampton is a single one, and there are four or five miles to be traversed by coach from Camelford. There are occasional invasions for the day by trippers in carriages, to the embarrassment of the limited commissariat of the one or two hotels and the two or three shops of the place. But the scale of the cliffs and downs makes their presence scarcely felt by the regular visitors, who can vary their walks or drives every day for a month and still feel that there is much to see and interest them. The people themselves are a study, and a pleasant one. There is an air of primitive courtesy about them. The humblest labourer or his children have a civil and kindly salute for every stranger they meet, and in their dealings are reasonable and unexacting. They are not rich, but they are comfortably and contentedly poor. The children are nice-looking and healthy in appearance. They are dressed in taste, with good shoes and stockings, contrasting favourably with what one would see in corresponding districts of other parts of the United Kingdom. Wages are fairly good, about 15*s*. a week. Commodities are few and humble; wants are correspondingly simple. One of the social features of the district is the extreme temperance of the people; public-houses are scarcely to be seen. Teetotalism is common and almost an element in the creed of the natives, who in their way are very religious, with a strong tendency to Nonconforming types of worship, more or less Wesleyan in character, and "Bible-Christian," whatever that may mean. The industries of the district are mostly agriculture and slate-quarrying. Medical men are not in much demand. The two practitioners of the district are well employed and much appreciated. But there is no room for more. The chief charm of the place, of course, is its scenery of cliffs and sea. The castle and its rock, with its historic and prehistoric associations, and the old churches on the westernmost cliffs of this almost westernmost coast looking straight over to

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Labrador, may be left to the guide-books. The cliffs, dark and steep and high, on a scale scarcely to be equalled in any other part of England, afford infinite "harvests" for "a quiet eye," and at some points a grand view of the Atlantic horizon, with a characteristic coast line of thirty or forty miles. The cliffs are of infinite variety, but all bold and precipitous, befitting the office they serve of breakwaters to the magnificent seas by which they are so splendidly assaulted on the smoothest summer days. They are backed by downs altogether worthy of the sea. These downs are covered with fine grass, heather, gorse, and wild flowers in great variety, affording the amplest field for the botanist, the sketcher, or the mere walker who finds his rest and recreation in the open, undulating hills rising at points to 1000 ft. and with "the chartened winds beating about him." The prevailing winds are south-west, but the warmth is tempered by the sea breeze, which rarely fails one on the cliffs. Among walks so exquisite and so varied it is almost invidious to single out any for special praise; but that to Trebarwith, including Backways, to Boscastle by the cliffs, and a visit to the Rocky Valley at the hour of high tide, and to the Tintagel Willapark, cannot go unmentioned. The visitor is within an hour's drive of the mountains to be ascended, Row Tor and Brown Willy, of the slate quarries of Delabole, &c.

There is only one drawback to the charm and merit of this district considered as a health resort. But it is a serious one. It admits of easy remedy, or would do so if the easy-going, good-natured inhabitants were not too contented with their natural environment. I refer to certain grave sanitary defects, and especially to the want of drainage and of a sufficient and pure water-supply. Drainage is not regulated by any by-laws of the sanitary authority. The district abounds in natural springs, the water from which in its pure state is exquisitely pure and good. Wells are to be found everywhere, almost at every house. The temptation to use these is irresistible, as fetching water from a distance means either trouble or expense. Yet many of them are liable to the most obvious and coarse contamination. Boscastle, I believe, has already selected a source of unobjectionable water and is on the point of receiving it. In Trevena, too, the principal village of Tintagel, the water-supply is for the most part good. But the outlying houses, apart from the larger villages, depend on local wells and springs exposed, as already said, to many sources of filth. Accordingly one is not surprised to learn that in certain houses typhoid fever and diphtheria have asserted themselves with an unpleasant emphasis. The incidence of such outbreaks has been typically vivid in its significance of intensely local causes. They have been sharply limited to a few houses or to those having a connexion with them. As far as I know, they have never affected visitors, but have been confined to the inhabitants who most resist the elementary lessons of public and domestic health. What is almost more discouraging than such occurrences is the inadequate perception of their significance by the inhabitants affected, of the most decent and even religious character, but too ready to attribute to the will of God evils altogether in their own control. In one house, or in connexion with it—that of a leading and most useful inhabitant—as many as seven cases of typhoid fever occurred over a period of years. He was a most active member of the district council and shut his eyes to the lesson of successive cases on or connected with his premises. At last, and quite lately, he himself was attacked. He was then convinced and declared that when he recovered he would see to putting things right. But it was too late. He succumbed, partly from organic complications,—the only fatal case of the series, most or all of which might have been prevented. Such evils could be easily removed with a little more public spirit and local intelligence in regard to the causation of disease. But these are plants of slow growth in sequestered spots like this. The only hope of amendment is in the immediate reform of the sanitary administration. The medical officer of health for Tintagel and Boscastle holds his responsible office at a salary of £12 a year. But the £12 a year is the whole salary for acting as medical officer for seven parishes, with deduction for income-tax &c.—that is to say, at the rate of about 35s. per parish per year. The arrangement is a mockery in all its aspects, disrespectful to the holde rof the office, and inconsistent with public health. It must indefinitely postpone the development of this delightfu district as a health resort. Throughout Cornwall, I believe, the same arrangement holds. What is wanted is the appointment of a medical officer of health for a large district or for the county, excluded from private practice, and with a proper salary. I have every reason to believe that such an arrangement would be approved of by the local practitioners. Every consideration should dispose the inhabitants to acquiesce in such a reform and in the rigid administration of sanitary law. Without these they are liable to the most tragic occurrences of disease in their own homes and cannot hope to see that prosperity of the district as a health resort which would surely come if the evils I have felt it my duty to point out were removed. The great majority of parishes in Cornwall, thirty-one out of thirty-six, have adopted the Notification Acts. But these are only a means to an end, and will of themselves neither isolate nor prevent disease. In the Tintagel and Boscastle district there is neither an isolation hospital nor disinfecting apparatus.

II.—IN THE TYROL.

THE Tyrol may be conveniently approached either by way of Munich and Innsbruck, or through Constance and the Arlberg Tunnel, or from Venice. For various reasons unnecessary to specify we chose the third of these routes, and after a rapid journey found ourselves once more in the mysterious City of the Lagoons. Venice may be fairly reckoned among those few things in the world which are absolutely unique. It is unique in its situation, unique in its history, and unique in its vast accumulation of artistic wealth. It is not, indeed, unique in its fate, for other great cities have suffered an even greater fall. But that fate is sufficiently pathetic. Venice is now a second-rate provincial town of Italy, with an empty harbour and a mendicant population. Yet

"Once did she hold the gorgeous East in fee."

Time was when she "sate in state, throned on her hundred isles." Now she is a discrowned queen. But her charm remains unaltered, if not, indeed, deepened by the irony of history. The Doge's palace stands erect in all its splendour, and the masterpieces of Tintoretto and Paul Veronese still look down from its walls, recalling the regal past and challenging comparisons with the present. St. Mark's is still there, glittering within and without with the spoils of the East and the West, and bearing testimony to the pomp and magnificence, if not to the piety, of the generations that are gone. The tides of the Adriatic still flow under the Rialto, and one thinks of Antonio and Shylock, of Desdemona and the Moor, and feels that the creations of the mighty magician are hardly less substantial than the warriors and statesmen who sleep their last sleep in the Frari or the Church of San Giovanni e Paolo. But it is on the Lagoons that one realises most fully the special charm of Venice. To drift in a gondola in view of St. Theodore and the Lion of St. Mark, while a light breeze is setting in from the Adriatic and the fishing boats are coming up from Malamocco, to listen to the chime of many bells across the still waters, and to watch the declining sun making a glory in the West—this is sufficient to stir the most sluggish blood and to fire the feeblest imagination. Although it was August we found the temperature by no means oppressive. The breeze from the sea seldom failed, the constant wash of the tide seemed to preserve freshness and purity in the canals even in the dog-days, and the charming sea-bathing at the Lido was compensation for an occasional hot hour or an infrequent mosquito bite. Our countrymen were conspicuous by their absence, but there were many Italian visitors and some Americans. At night the Piazza of St. Mark's presented a gay appearance, the whole population turning out to enjoy the evening cool to the strains of excellent military music. Venice is indeed the paradise of the pleasure-seeker. Her silent waterways, where the only sounds are the chimes of bells or the warning calls of the gondoliers, her majestic but half-empty churches, her palaces and galleries, her petty industries and innumerable beggars—all these seem to make existence a mirage, work a delusion, and energy an anachronism. "It is impossible to take life seriously here," said a friend to the writer, and truly in Venice Anglo-Saxon vitality and progressiveness seem a sort of solecism. To enjoy the luxurious present and to dream over the magnificent past—this seems natural and fitting in Venice, and the holidaying tourist in search of rest and

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refreshment will find few places so well adapted for his purpose.

Leaving Venice by the evening train we found ourselves traversing a rich plain covered with vines and mulberries, orange and lemon trees, maize and olives. It is afflicting to think that poverty should be rife among a people to whom Nature has been so lavish in her gifts. With a proper agriculture and a wise Government, Italy should be one of the richest and most prosperous of countries. Late at night we arrived at Belluno, at the foot of the Alps and near the entrance to the Val d'Ampezzo, by which we proposed to enter the Tyrol. On the following morning we started by diligence for the long drive to Cortina in the Dolomite region. The weather was magnificent, and the scenery soon became Alpine in character. We were ascending the picturesque bed of the Piave, now in these August heats a tiny stream creeping over white sands towards the Adriatic, but showing traces all round of winter turbulence and widespread devastation. On either hand arose Alpine heights dark with pine and clothed with rich forests of birch and castagna. In a few hours the first peaks of the Dolomites began to raise their quaint pinnacles and minarets above the surrounding mountains, announcing our approach to a region of remarkable geological formation and of exceptional interest. In the afternoon we halted for a brief space in the little village of Pievè-di-Cadore, the birthplace of Titian, which occupies a magnificent situation high above the steep valley of the Piave. A statue of the great painter stands in the little piazzi, in one of the houses of which he first saw the light. Ruskin's persistent depreciation of Titian is puzzling to the tourist in Italy who can boast of nothing more than an amateur's knowledge of art. To the unsophisticated eye his paintings seem to possess a felicity of design, a grace of arrangement, and a richness of colouring hardly surpassed by Raphael or Rembrandt. That he does not touch the supreme heights of inspiration and that his pictures lack the special note of sanctity may be admitted, but what great merits remain, what power, what grace, what versatility. The facts that Titian is a universal favourite and that his masterpieces are found in every great collection are surely decisive proofs of his true greatness. He has deeply touched—*pace* Ruskin—the general heart of humanity. In art, as in most things, it remains true that "everybody is wiser than anybody"—*Securus judicat orbis terrarum*. Late at night we reached Cortina.

Cortina is grandly placed in the centre of the Dolomite country. The monarchs of the Dolomites stand around—Tofana, Cristallo, and Sorapiss—all fine peaks from 10,000 to 11,000 feet in height. These mountains will not compare in height or in expanse of snowfield and glacier with the giants of the Bernese Oberland—the Jungfrau, the Eiger, and the Fuisteraarhorn—or with the still loftier summits of the Pennine Alps, but they have a special character and a peculiar beauty of their own. They are composed chiefly of magnesian limestone, and they are remarkable for their jagged outline and serrated summits. One of the most noteworthy of these is the Drei Zinnen, not far from Cortina, which resemble three vast cromlechs piled heavenwards. These mountains are difficult of access and present to the mountaineer all the worst problems of rock climbing in their acutest form. But they have all been overcome, for in these days nothing daunts the climber and nothing stimulates his ambition so much as an untrodden and presumably inaccessible peak. We did some modest climbing among these Dolomite Alps, nothing heroic or dangerous, but sufficient to get a glimpse of their beauties and to form some estimate of their dangers. One is struck with the contrast between the bare and precipitous peaks and the smiling and luxurious valleys at their base. In these southern regions of the Tyrol the general aspect is that of Italy rather than Austria or Switzerland. The varied colour and rich luxuriance of the valleys that slope up from the plain of Italy, the soft air and azure sky, the complexion and tongue of the inhabitants—all speak of the south. Although in Austria, we are still to the south of one of Nature's physical and moral watersheds. Only the gaunt peaks of the Dolomites remind us that we are in a region geologically *sui generis*, though the Government is Austrian and the tongue Italian. On our return from one of our excursions at Cortina we enjoyed the sensation of a heavy Alpine thunderstorm. The morning had been fine and hot, but lowering, and about four o'clock, when we were tramping on foot from Schluderbach towards Cortina, the sky suddenly darkened, there was an ominous muffled roar towards the south, and in a few minutes the storm burst furiously over us. The lightning flashed incessantly, now in magnificent sheets, again in ghastly zigzags; the thunder hurtled and crashed and reverberated, awakening symphonies of Titanic music amidst the rocky fastnesses of Monte Cristallo and the Croda Rossa; the rain descended in solid cataracts. There was no shelter, so we trudged on, not without some inward qualms, but determined not to show the white feather. Nearer and more fierce grew the tumult, until at last with one final explosion, as if all the ironclads of the world had poured a broadside into all the china-shops extant on this planet, the storm seemed to have exhausted its violence and retreated with angry rumblings towards the north. We reached our hotel tired and wet to the skin, but uninjured.

From Cortina we went by a somewhat circuitous route to Meran, and found that charming health resort entirely out of season and dull to a degree. As a matter of fact, we had arrived at quite the slackest of the slack-water period. Meran has a grape cure in autumn, a milk and whey cure in spring, and is a favourite sanatorium for pulmonary invalids in winter, but in the height of summer it is deserted. The town is charmingly situated amid vine-clad mountains, and shelter is excellent on all sides except towards the south, where the broad valley of the Adige opens up towards Italy. The climate is sunny and dry and on the whole mild, but the winters are cold as compared with those of the Riviera, Malaga, or Palermo. The elevation is 1050 feet, and the climatic conditions may be loosely reckoned as in some sense resembling those of Montreux. It is, perhaps, hardly fair for one who has no practical experience of the grape cure or the milk cure to offer any criticism upon those methods of treatment, but it is a little difficult to take either one or the other quite *au grand sérieux*. That for many persons who have eaten and drunk not wisely but too well to live for a few weeks chiefly on grapes or whey might be most desirable is true enough, but this is hardly serious scientific treatment As a winter resort for the phthisical Meran is well worth attention, but its merits are, perhaps, sufficiently well known. It is a good example of the sheltered, sunny, dry, somewhat elevated, and moderately tonic resort. Cases that find Davos or St. Moritz too severe might do well at Meran. The surroundings are most attractive and the accommodation excellent.

From Meran we pushed on for the Great Ortler, the great goal and object of ambition to all tourists with mountaineering tastes who visit the Tyrol. This superb mountain is one long day's drive from Meran, and mountaineers may elect to stay either at Sulden or at Trafoi on the Stelvio route. We chose the latter and found comfortable quarters at the Hotel de la Poste. Soon after arrival we completed arrangements with two Tyrolese guides to start on the following afternoon for the ascent of the Great Ortler. This mountain, which is just under 13,000 ft. in height, is one of medium difficulty and danger. While free from avalanches and almost free from falling stones, and presenting no special feature of peril, it is not a mountain for the novice in climbing. It is steep almost throughout, much of the climbing consists of steps cut in a precipitous ice wall, and several of the *arêtes* call for a steady head and practised nerves. But for the mountaineering expert, accompanied by good guides, the Great Ortler is an easy mountain. We left our hotel at Trafoi about 2.30 o'clock in the afternoon, and, crossing the brawling Trafoierbach at once, began the steep ascent through pine woods. It was an August afternoon, hot and sultry, and heavy masses of clouds wreathed themselves round the higher peaks, rendering the meteorological prospect somewhat doubtful; but our Tyrolese guides were sanguine on this score, so we braced ourselves for the considerable effort before us. Our intention was to go on the first evening only so far as the Payerhütte, a hut erected on the Great Ortler by the Austrian Alpine Club at an elevation of about 10,000 ft. The first two or three hours of an ascent are in some respects the most trying. One has not quite escaped from the hot air of the valleys, and the heart and lungs have not fully accommodated themselves to the altered mechanism rendered necessary by the increasing rarefaction of the air and the severe muscular efforts. It is a cardinal rule of mountaineering to proceed very deliberately at first, and never to allow palpitation or dyspnœa to get the mastery. The guides plod on usually in silence, most watchful at all dangerous points and ready and expert in giving the needful aid. After nearly two hours of steep and continuous climbing we emerged from the pine

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forests and entered upon a long track of stone and rock. Already we had attained a considerable elevation, and the vistas became every moment more extensive and impressive. At a prodigious depth below our feet lay our hotel at Trafoi, and so steep was the ascent that it seemed almost as if a stone might be dropped upon it. In another hour, at an elevation of about 9000 ft., we first touched snow and began the passage of the first glacier of the Great Ortler. This safely surmounted, a short reach of severe rock climbing brought us to the Payerhütte about nightfall. Here we found a numerous party of Austrians and Tyrolese guides assembling with a view to the ascent next morning to the summit. Great was the anxiety about the weather. The night closed in ominously enough: the sun sank luridly behind great banks of clouds in the west, shooting out a few parting rays to illumine the peaks and snowfields of the Tyrol, great masses of mist began to surge up from the valleys, and we retired to our narrow quarters in the hut in rather a desponding mood. Next morning we were on foot shortly after 5 o'clock, and were agreeably surprised to find that the weather prospects, though still doubtful, were encouraging. The prospect from the Payerhütte at this hour was most imposing. The sun was rising over the Eastern Tyrol, and peak after peak was struck by his brilliant beams. The view embraced the Ortler Alps, most of the Tyrol, the Bernina chain, the Engadine region, and the highlands of Bavaria. The air was keen and crisp and the thermometer at the door of the hut marked 5° below Zero (C.). After some light refreshment we were roped to our guides, and the last and most difficult stage of the ascent began. From the Payerhütte to the summit of the Ortler is a steep ascent of 3000 ft. over snowfield and glacier. The guides go in front, cutting steps in the ice and snow as may be needful, and the mountaineer follows cautiously in the rear. There are many places where a serious slip would be immediately fatal, but with great care and sufficient physique and nerve the dangers are probably moderate. The panorama was extensive and magnificent, but at above 11,000 or 12,000 ft. the distant views became indistinct and one was conscious only of a vast expanse of mountain and valley and distant plain. We reached the summit at 9 o'clock, but found it in cloud. After a short rest and some refreshment we began the descent, and reached our hotel in Trafoi at 2 o'clock in the afternoon without mishap. We drank some milk and brandy and went straight to bed. After a short sleep we rose and dined, and we can commend this plan to mountaineers. To eat a full meal when in a state of extreme fatigue is a great blunder. Our experience also inclines us to the view that one should be most sparing in eating and drinking during the actual ascent, and that alcohol should either be avoided or taken in great moderation; cold tea is refreshing and safe; on the other hand, when the fatigues of the ascent and descent are over alcohol is invaluable as a restorative.

From Trafoi we proceeded to Laudeck by the beautiful Frustermünz Pass, the Great Ortler grandly dominating the landscape for many miles; from Laudeck to charming Innsbrück, and thence to England by Munich and the Rhine. The Tyrol forms an almost ideal holiday resort. The scenery is in a high degree varied, interesting, and beautiful; the accommodation is, on the whole, excellent and cheap; while the people are frank, intelligent, and obliging. True, the Tyrolese *Jodel* has to be endured, but where is the rose that is quite thornless?

REPORT OF THE COMMISSIONERS IN LUNACY FOR SCOTLAND FOR THE YEAR 1894.

ON Jan. 1st, 1895, there were 13,852 insane persons under official cognisance in Scotland. Of these, 2138 were maintained from private sources, 11,660 by parochial rates, and 54 at the expense of the State. With regard to the distribution of the insane in the different classes of establishments and in private dwellings, the following differences appear in the manner of distribution of registered lunatics at Jan. 1st, 1895, when compared with what it was at Jan. 1st, 1894. In royal and district asylums there is an increase of 87 private patients and an increase of 222 pauper patients. In private asylums there is a decrease of 6 patients. In parochial asylums there is an increase of 112 pauper patients. In lunatic wards of poorhouses there is an increase of 7 pauper patients. In private dwellings there is an increase of 5 private patients and an increase of 112 pauper patients. Tables I., II., and III. (Appendix A) show the number of patients, the manner of their disposal, and their proportion to population and to ordinary pauperism at Jan. 1st, 1895, as compared with previous years.

The general results during 1894, as compared with 1893, are, in regard to registered lunatics, as follows: 1. There was a total increase of 539, of whom 87 were private patients and 452 were pauper patients. 2. Of the total increase of 539, the increased number in establishments was 422 and in private dwellings 117. 3. Of the increased number of 422 in establishments, 82 were private patients and 340 were pauper patients. As the average annual increase in the number of private patients in establishments in the five years 1891–95 has been 49 and of pauper patients 206, the increase in the number both of private and of pauper patients in establishments during the last year has been considerably above the average annual increase of the quinquenniad. 4. All pauper lunatics in establishments continue to be provided for in institutions of a public character.

The increase of 452 in the number of pauper patients is stated to be the largest that has taken place in any one year since the Board of Commissioners entered on its functions in 1858. Mention is made of the localities in which the increase has chiefly occurred, and it appears that of the total year's increase 56 per cent. were contributed by the following counties, all of which have large urban centres of population: Aberdeen, Edinburgh, Forfar, Lanark, and Renfrew; 15 per cent. by counties having smaller active industrial centres, either towns or rural mining districts—namely, Ayr, Dumbarton, Linlithgow, Selkirk, and Stirling; and 18 per cent. by three large and purely Highland counties: Argyll, Inverness, and Ross. The Commissioners point out, however, that in the first two groups of counties the population is increasing, and that the increase in the number of pauper lunatics is therefore to some extent, though not to a large extent, due to increase of population. But in the three Highland counties named the population is falling, and the increased numbers of pauper lunatics in these counties which have come upon the register must, therefore, be ascribed wholly to causes other than increase of population. The Commissioners, in seeking an explanation of this increase in the Highland counties, refer to the change in social conditions and views of life even in these remote parts, where insane persons now placed on the register would formerly have been kept at home, and where the inhabitants are now ready to acquiesce in or even to urge their removal to asylums. Again, where they do not remove insane members of the community to asylums there is shown an increasing readiness on the part of relatives to claim the State contribution in aid, registration thereafter becoming a necessity. The table of admissions discloses the facts—(1) that the number of private patients admitted during last year was 515, being 16 less than during the preceding year and 19 less than the average for the quinquenniad 1890–94; and (2) that the number of pauper patients admitted was 2661, being 148 more than the number during the preceding year and 233 more than the average for the quinquenniad 1890–94.

There were 197 private patients discharged recovered during the year, and this number was 27 below the number for 1893 and 13 below the average for the five years 1890–94. The number of pauper patients discharged recovered was 1130, or 55 below the number for the preceding year and 58 above the average for the five years 1890–94. The number of private patients who died in establishments during 1894 was 106, which is 38 less than in 1893 and 27 less than the average of the five years 1890–94. The number of pauper patients who died was 712, which is 11 less than in 1893 and 7 below the average of the five years 1890–94. With reference to the number of patients liberated on probation the Commissioners state that of the 4010 patients so liberated since 1862 801 were replaced before the expiry of the period of probation, but they add that they "continue to be of opinion that in some establishments a more frequent application of the probationary discharge to patients whose fitness for residence in private dwellings may be uncertain would probably lead to a larger number of permanent discharges than takes place at present." This is very true; but we always feel that unless the surroundings into which the patient is discharged are well adapted for his proper care and supervision the risk of premature discharge is one that ought not lightly to be run.

The whole number of escapes during 1894 was 236. Of

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these, 131 were brought back within twenty-four hours, 63 within a week, and 17 after a week; 25 were not brought back during the currency of the Sheriff's order or the certificate of emergency on the authority of which they had been detained. Of the 25 patients not brought back 4 were removed from the asylum registers as recovered, 10 as relieved, 7 as not improved, 2 were permitted to remain out on pass or probation, 1 was drowned, and 1 committed suicide by hanging. The two latter occurrences are referred to under the heading "Accidents in Asylums." The following statement shows the comparative expenditure for pauper lunatics since the quinquenniad 1859–63.

—	Annual expenditure per patient. In asylums including institutions for imbecile children.	In lunatic wards of poorhouses with restricted licences.	In private dwellings.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1859–1863	23 17 3	17 11 7	8 13 1	18 11 6
1864–1868	24 8 4	19 13 1	9 15 11	20 6 1
1869–1873	25 0 1	17 17 4	11 1 9	21 16 6
1874–1879	26 19 5	20 15 3	12 13 11	24 6 5
1880–1884	26 7 4	19 14 8	14 2 1	24 5 5
1885–1889	25 16 6	19 1 0	15 6 7	23 12 5
1890–1894	25 1 10	19 1 1	16 0 5	23 5 3

The Commissioners speak in very favourable terms of the general condition and management of establishments for the insane. The Deputy Commissioner, Dr. Lawson, reports as follows on patients in private dwellings. "Another year devoted to the inspection and supervision of insane persons living under domestic care in Scotland confirms in my mind two opinions which I have formerly expressed. The first is that the method of retaining or recalling from institutions suitable insane persons to share in the benefits of private life has a rational justification in the social instinct from which springs the desire for a specific home and a circle of habitual associates. The second is that prolonged experience shows that in Scotland a large percentage of those who are registered as lunatics can, from the first or at a later stage of their malady, be provided for and treated in private dwellings in a manner which yields results satisfactory to themselves, and which causes little, if any, departure from the current of daily life of the families and the communities in which they are placed. In short, the system of providing in private dwellings for properly chosen patients has the sanction of an elementary instinct; it acts as a boon to many of the insane as well as to the ratepayers, and it causes no appreciable interference with either the performance of the duties or the enjoyment of the privileges of the general public."

The Commissioners record their great regret at the retirement of Sir Arthur Mitchell from the board, and they pay a well-deserved tribute to the leading part that he has taken in the institution and development of the system of lunacy administration as it now exists in Scotland.

THE MANCHESTER MEDICAL CRICKET CLUB.

LOVERS of the national game will be gratified to hear that the Manchester Medical Cricket Club has prospered during the season which has just closed. It has about 120 members, medical men and students, and is in the sixth year of its existence as a regularly constituted club with president, vice-presidents, committees, &c. Its history dates back for about eight years, during the first two of which several matches were played, but in these early days its programme was less ambitious than it now is. The club's expansion since it has been conducted on the present lines is very marked, and affords a happy illustration of the readiness of medical men to coöperate with one another in availing themselves of opportunities for healthful recreation and the cultivation of social amenities. Of late years as many as eight or ten matches have been played in the course of a season against such opponents as the Clergy, the Law, Cheadle Asylum, Prestwich Asylum, and the Liverpool Medicals, to which must be added Past *versus* Present matches. The contest with the Liverpool Medicals has become the event of the year, and takes place alternately at Old Trafford (Manchester) and Aigburth (Liverpool). This year it was played on the picturesque ground at Aigburth in splendid weather and in the presence of a large gathering of medical men and their friends. The annual subscription to the club is five shillings for members of the profession who are players and half a crown for those who are not players and for students. Most of the playing members belong also to the county or local clubs and take part in matches against elevens from all parts of Lancashire, Cheshire, and Derbyshire. There is, therefore, but little inconvenience occasioned by the fact that the club has not yet acquired a ground. The Manchester clergy can make up a strong eleven, and their contest with those of Liverpool is generally very keen. The formation of medical cricket clubs in the larger centres of population is an excellent idea and a precedent worthy of imitation wherever circumstances permit. Perhaps some day inter-county medical matches may be played. The relaxation and change of scene provided by occasional visits to the cricket ground are welcome interruptions of the daily routine of practice, and, in addition to benefiting the health and the temper, they afford invaluable opportunities for the commencement of acquaintanceships and the promotion of general good feeling. Moreover, there is no dearth of capable players in our ranks, for the elevens engaged in county matches sometimes include members of our profession who, though far from approaching the exploits of the champion medical cricketer, nevertheless contrive to do good work for their sides. Our cricket-playing colleagues in Manchester, Liverpool, and Preston[1] have our hearty good wishes, and we sincerely hope that their respective clubs may long continue to flourish.

POISONING BY SOUP AT WOLVERHAMPTON.

As our readers are aware,[2] several cases of illness and one death unhappily followed the use of soup distributed last August from the vicarage of Heath Town. At the inquest, which was concluded on Sept. 16th, the vicar's cook stated that on Thursday, Aug. 8th, she prepared the soup for the usual Friday distribution. The ingredients were a portion of a roast sirloin of beef cooked on the previous Sunday, some fresh loin of mutton, and part of a chicken that had been boiled on Thursday for the family dinner. These were cut into small pieces and boiled in an ordinary iron saucepan with the broth left after the cooking of the chicken. When the soup was ready the saucepan with its contents was set to cool on the stone floor of the adjoining scullery, and as the family were going from home it remained there in the uncovered saucepan until Saturday morning, when the distribution took place. She tasted it on Saturday and found it to be perfectly sweet and not fermented at all; no colouring was used in it. The scullery sink had an open pipe to the drain outside. The deceased woman, who was fifty-five years of age and married, warmed some of the soup at home in a tin saucepan, and it was consumed by herself and husband and their son and grandson. The same evening these four persons and five others, relatives and neighbours residing in the same street, who also had some of the soup, were seized with serious illness, purging, and vomiting. A medical man who was called in on Monday, Aug. 12th, found the deceased, her husband, her son, and four other persons suffering from vomiting, purging, and abdominal pains. He was unable to obtain a sample of the soup. The deceased expired on Aug. 17th, and the house physician at the Wolverhampton General Hospital, who made the post-mortem examination on Aug. 19th, said that the body was then in a high state of putrefaction, the face and hands

[1] THE LANCET, July 20th, 1895, p. 165.
[2] THE LANCET, Aug. 24th, 1895, p. 460.

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being black, and he was unable to form any conclusion as to the cause of death. He sealed up the stomach, liver, kidneys, and spleen in jars. Two witnesses, mother and son, who received some of the soup from the vicarage, stated that it was very nice, and they experienced no ill-effects. Dr. A. P. Luff, lecturer on Medical Jurisprudence at St. Mary's Hospital, London, said that the viscera were forwarded to him on Aug. 23rd, and were free from mineral or vegetable poisons. The stomach and liver contained small amounts of ptomaines, but he could not say whether this was derived from the soup or from the decomposition of the viscera independently of the soup. Assuming that the poisonous matter was in the soup, the immunity of those witnesses who suffered no ill effects might, perhaps, be due to their having made it hotter than the other families did. The verdict was, "Death from syncope, the result of ptomaine poisoning, such poisoning being accidental."

CHOLERA.

IN referring last week to the cholera prospects of this season we briefly summarised the facts so far as they were known regarding the prevalence of this disease at the present time. There has no doubt been a revitalisation or recrudescence of cholera in various countries and places abroad where the epidemic had already prevailed during previous years, but the renewed activity has happily not been manifested on any large scale. The occurrence of some suspicious cases at Grimsby naturally gave rise to some fears when viewed in connexion with the past history of that town. These were, however, soon dispelled when the results of the bacteriological examination became known and it was also found that the disease showed no signs of spreading.

At the present time, in addition to the officially reported prevalence of cholera in Russia and the existence of the disease in other countries bordering on the Russian frontier, cholera still seems to be prevailing in Tangier, where it broke out a short time ago. Six fresh cases and 9 deaths were registered at Tangier on the 17th inst., and the existing restrictions imposed by the Gibraltar Board of Health on arrivals from that place are maintained, a short quarantine having also been imposed upon arrivals from Ceuta and other ports on the Moorish coast. A serious cholera outbreak is reported at Algiers. The deaths from that disease are stated to have been forty-three on the 17th inst. With regard to the alleged outbreak of cholera at Honolulu no further intelligence has been received, nor has any additional news reached us from the East regarding the epidemic in China and Japan.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Nottingham Urban Sanitary Authority.—As an instance of the importance of measles as a factor in mortal statistics, Dr. Philip Boobbyer reports that during 1894 this disease caused more deaths than did scarlet fever, enteric fever, and diphtheria combined. Four schools were closed during the year under review in an attempt to check the spread of measles, but no good results from the action were, Dr. Boobbyer reports, apparent. The system adopted at Nottingham of paying for the persons exposed to small-pox during a period of sixteen days' quarantine has been found to work extremely well, and it has curtailed considerably the spread of the disease. In the matter of scarlet fever Dr. Boobbyer, as in former years, contrasts the hospital with the home fatality rate, that for the former being 2·7 per cent. and that for the latter 10·4. While admitting that part of the difference may be due to the fact that very severe cases are kept at home, Dr. Boobbyer considers that the chief factor has been the careful nursing provided at the hospital, together with the confinement to bed of all patients for a minimum period of three weeks. The meaning of the accompanying table is sufficiently obvious, and it will be of a special interest to our readers since we have on former occasions reproduced similar tables from Dr. Boobbyer's reports. The most noticeable feature in the figures is, perhaps, the high fatality rate amongst cases infected by those discharged from hospital, and in whom it might be supposed the power of infectivity was, if present at all, but feebly so. Dr. Boobbyer has noticed this point for some years past, and its explanation is by no means obvious. It may, perhaps, be that recurrent discharges from the nasal and oral passages of otherwise non-infective patients may possess a high degree of virulence and contain a septic element in addition to the specific element.

Class of cases.	Number of cases.	Percentage of cases.	Number of deaths.	Deaths per cent. of cases.	Total death-rate per cent.
Hospital cases—					
(*a*) Primary	771	66 per cent. of all cases notified	17	2·2	
(*b*) Secondary in houses from which (*a*) came within 21 days of their removal	110	13·5 per cent. additional to (*a*)	4	3·6	2·7
(*c*) Secondary after return home from hospital within 21 days of return... ...	41	4·5 per cent. additional to (*a*) and (*b*)	4	9·7	
Home cases—					
(*a*) Primary	170	14·6 per cent. of all notified cases	16	9·4	10·4
(*b*) Secondary during progress of case at home...	60	35 per cent. additional to (*a*)	8	13·3	

The Nottingham mortuary is not as highly appreciated by the public as such a building should be, but the fact that in this case it is situated in the immediate proximity of a refuse depôt is certainly a sufficient explanation of its unpopularity. From a material standpoint the locality is, perhaps, a fitting one, but a sanitary authority which neglects sentiment as a factor in human affairs must not wonder if their efforts are sometimes not appreciated. In the absence of a public abattoir efficient supervision of the meat-supply is not, Dr. Boobbyer remarks, possible, and as illustrating this point he refers to the case of Edinburgh, a town not much larger than Nottingham, but in which the amount of butcher's meat seized in one month frequently exceeds that seized during the whole year in Nottingham. During 1894 there were condemned in Nottingham 2057 stones of fish and 249 stones of "shell-fish"; of the latter 192 stones were mussels.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6156 births and 3917 deaths were registered during the week ending Sept. 14th. The annual rate of mortality in these towns, which had been 19·9 per 1000 in each of the three preceding weeks, declined again last week to 19·3. In London the rate was 15·4 per 1000, while it averaged 22·0 in the thirty-two provincial towns. The lowest rates in these towns were 11·7 in Plymouth, 13·1 in Norwich, 13·6 in Croydon and in Nottingham, and 13·9 in Bristol; the highest rates were 30·0 in Manchester, 30·8 in Hull, 32·7 in Blackburn, 33·5 in Burnley, and 37·5 in Sunderland. The 3917 deaths included 991 which were referred to the principal zymotic diseases, against 1072 and 1071 in the two preceding weeks; of these, 706 resulted from diarrhœa, 75 from diphtheria, 60 from whooping-cough, 58 from "fever" (principally enteric), 49 from measles, 40 from scarlet fever, and 3 from small-pox. The lowest death-rates from these diseases were recorded in Plymouth, Huddersfield, Swansea, and London, and the highest rates in Bolton, Burnley, Blackburn, Hull, and Sunderland. The greatest mortality from measles occurred in Blackburn; from whooping-cough in Norwich, Birkenhead, Bolton, Burnley, and Bradford; from "fever" in Sunderland; and from diarrhœa in Blackburn, Manchester, Bolton, Burnley,

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Hull, and Sunderland. The 75 deaths from diphtheria included 55 in London, 5 in West Ham, 2 in Birmingham, and 2 in Burnley. Two fatal cases of small-pox were registered in London and 1 in Manchester, but not one in any other of the thirty-three large towns. There were 307 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 14th inst., against 342, 340, and 323 at the end of the three preceding weeks; 42 new cases were admitted during the week, against 65, 36, and 25 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2674, against 2507, 2512, and 2600 on the three preceding Saturdays; 365 new cases were admitted during the week, against 306, 264, and 336 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 102 and 134 in the two preceding weeks, declined again to 122 last week, and were 46 below the corrected average. The causes of 49, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Bradford, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Wolverhampton, and Norwich.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 16·6 to 17·5 per 1000, declined again to 16·9 during the week ending Sept. 14th, and was 2·4 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 14·9 in Leith to 18·5 in Dundee and 20·3 in Paisley. The 489 deaths in these towns included 61 which were referred to diarrhœa, 11 to whooping-cough, 9 to "fever," 5 to diphtheria, 4 to scarlet fever, and not one either to small-pox or measles. In all, 90 deaths resulted from these principal zymotic diseases, against 118 and 105 in the two preceding weeks. These 90 deaths were equal to an annual rate of 3·1 per 1000, which was 1·8 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 78 and 74 in the two preceding weeks, further declined to 61 last week, of which 20 occurred in Glasgow, 10 in Edinburgh, and 8 in Dundee. The 11 deaths from whooping-cough showed a decline of 4 from the number in the preceding week, and included 8 in Glasgow. The deaths referred to different forms of "fever," which had been 10 and 4 in the two preceding weeks, rose again to 9 last week, of which 6 occurred in Glasgow. The 5 fatal cases of diphtheria exceeded the numbers recorded in recent weeks, and included 2 in Glasgow and 2 in Edinburgh. The deaths from scarlet fever, which had been 8 in each of the three preceding weeks, declined to 4 last week. The deaths referred to diseases of the respiratory organs in these towns, which had been 54 and 56 in the two preceding weeks, were 52 last week, and were 15 below the number in the corresponding week of last year. The causes of 26, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·6 and 22·2 per 1000 in the two preceding weeks, rose again to 25·4 during the week ending Sept. 14th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·9 in London and 16·5 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed an increase of 21 upon the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 20 and 13 in the two preceding weeks; of these, 12 resulted from diarrhœa, 4 from "fever," 3 from whooping-cough, 1 from small-pox, 1 from scarlet fever, but not one from measles or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 2·9 in both London and Edinburgh. The fatal cases of diarrhœa, which had been 12 and 8 in the two preceding weeks, rose to 12 last week. The deaths referred to different forms of "fever," which had been 5 and 1 in the two preceding weeks, rose again to 4 last week. The fatal case of small-pox was the first recorded within the city during the past four weeks. The 170 deaths in Dublin last week included 43 of infants under one year of age, and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded the numbers recorded in the preceding week. One inquest case and 4 deaths from violence were registered; and 45, or more than a fourth, of the deaths occurred in public institutions. The causes of 16, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers have embarked in the *Britannia* for service in India:—Surgeon-Lieutenant-Colonel Brown, Surgeon-Major Lane, and Surgeon-Captain Durrant. The following officers are under orders to leave India at an early date for home:—Surgeon-Lieutenant-Colonel Blennerhasset and Surgeon-Major Smythe. Surgeon-Major Johnstone has embarked for India in the *Victoria*. Surgeon-Lieutenant Vaughan Williams has been transferred to Fermoy.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotion in the Indian Medical Service:—*Bengal Medical Establishment:* To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Charles John Walford Meadows (dated April 1st, 1895).

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Surgeons: A. E. Weightman to Haslar Hospital; F. J. Lilly to the *Katoomba;* W. A. Whitelegge to the Royal Marine Division, Portsmouth; W. J. Colborne to the *Icarus;* S. H. Youel to the *Ruby;* and E. C. Cridland to Devonport Dockyard. Surgeon and Agent: W. E. Dawson at Walton-on-the-Naze.

VOLUNTEER CORPS.

Artillery: 2nd Northumberland (Percy) Western Division, Royal Artillery: Surgeon-Lieutenant J. S. Forrest to be Surgeon-Captain. 4th West Riding of Yorkshire (Western Division, Royal Artillery): James Black Milne, M.B., to be Surgeon-Lieutenant. *Rifle:* 6th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Lieutenant J. Anderson, M.B., to be Surgeon-Captain.

ENTERIC FEVER IN INDIAN CANTONMENTS.

We are extremely glad to learn that the sources of enteric fever in India are engaging the attention of Mr. Hankin, the energetic and able bacteriologist to the Government of the North-Western Provinces, whose labours in the cause of scientific hygiene and pathology are deserving of great praise. The theory held in Europe and this country of the dependence of enteric fever on a specific agent intimately associated with fæcal contamination of water, milk, soil, or air and with the presence of the typhoid bacillus discovered by Eberth and Gaffky rests upon a large and repeated number of observations, the cumulative effect of which amounts to very strong evidence. While it is admitted, however, that outbreaks of this fever in our Indian cantonments are frequently traceable to and acknowledge the same causes that they do in England, it is contended by many observers that we have not by any means exhausted our knowledge of the causation of enteric fever in India, and that the difficulties in the way of explaining the prevalence of the disease in that country are considerably greater than are commonly realised. Mr. Hankin says that the general excellence of sanitary arrangements in cantonments appears to him to make it improbable that enteric fever is, as a rule, due to any of the hitherto recognised sources of infection. The questions that have now to be determined are whether all the enteric fever of India is associated with the presence of a specific pathogenic bacillus, how that bacillus gains an entrance into the body, and what are the conditions of environment most favourable to its growth and spread. What we want is a systematically and carefully conducted series of observations by a skilled and impartial investigator, and Mr. Hankin can render no greater service to the cause of humanity and science than by devoting his best labours to the subject.

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REPUTED REMEDIES FOR SNAKE-BITE.

From time to time announcements are made with more or less confidence that an antidote for snake-bite has at last been discovered, but the efficacy of one and all fails to be established. The Anglo-Indian papers state that Dr. D. D. Cunningham of Calcutta has just published the results of an elaborate series of experiments which he has been conducting with the view of testing the claims of various reputed antidotes, but these results have proved disappointing, for the remedies have all been found to be utterly inefficacious, and a true antidote has yet to be discovered. It is said that Dr. Cunningham has demonstrated that a non-venomous snake, such as the dhamin, may be immune to the poison, thus raising a serious obstacle to the theory of auto-inoculation. It will be remembered that, acting on the hypothesis originally started by Surgeon-Major Waddell—viz., that venomous snakes are autotoxic—Professor Fraser of Edinburgh has been conducting a series of experiments to find an antidote by inoculation with prepared venom. The possibilities of securing protection by means of the serum of immunised animals have lately engaged the attention and been the subject of experimental observations in France by Calmette, and in Edinburgh by Professor Fraser.

Correspondence.

"Audi alteram partem."

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—This subject, as Dr. Shettle says in the last issue of THE LANCET, is of deep interest and of great importance. I believe if we could understand it rightly it would give us the solution to many physiological problems. With your permission I would attempt to give a simpler explanation of the phenomena observed. That strong arterial contraction, and engorgement of the large veins and right side of the heart are present in death from electric shock cannot, I believe, be contested. The contraction of the arteries is unquestionably due to a physical cause, but I do not think with Dr. Shettle that this cause acts primarily on the contents of the vessels (blood being a conductor), but rather upon the badly conducting or insulating nerves and arterial centres. Faraday taught us long ago that the seat of the phenomena was not in the conductors, but in the insulating medium surrounding them. The electrical energy does not travel by the wire but by the insulating sheath or dielectric surrounding it; the function of the wire is to dissipate the energy crowding into it from the dielectric, which else would take up a state of strain and cease to transmit any more. The blood, fluids, and opaque tissues of the human body act as the conductors, or wires, and the transparent tissues as the dielectrics, and these transmit all the energy. This I have tried to explain elsewhere.[1] The kinetic electricity in traversing such tissues becomes static, resulting in a strain of the medium; the shearing stress of the current has altered the condition of the molecules; there is no displacement of the molecules as a whole, as has been pointed out by Professor Lodge,[2] but of their constituent atoms, and the stress, if strong enough, may result in electrolytic disruption. There is tension along the lines on which electricity is travelling and pressure at right angles to this. This is just the force that would narrow the calibre of the artery; this atomic displacement is most probably propagated along the nerve in the same manner as in the causation of muscular contraction. It is a spring-back force, and under normal conditions would stimulate at make and break of the current, but under the conditions we are considering the molecular structure has been so altered by death that there is no spring-back possible, the arteries remaining permanently contracted.

I am, Sirs, yours faithfully,

Cromer, Sept. 17th, 1895. HENRY MCCLURE.

[1] Transactions of the American Electro-Therapeutic Association, 1893.
[2] Modern Views of Electricity.

MALIGNANT JAUNDICE IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—My attention has just been called to an article by Dr. F. J. Smith on Cirrhosis of the Liver in THE LANCET of Aug. 31st, the text of which is the questioning of a case diagnosed by me as "malignant jaundice" and published in THE LANCET of Jan. 5th this year. Dr. Smith is of opinion that my case was one of "hypertrophic cirrhosis," a disease which he says is "exceedingly rare, usually occurring in quite young subjects and presenting typically a large liver and intense jaundice, with nervous symptoms prominent—in fact, just the picture Dr. Donkin draws of his case." Dr. Smith gives as his reasons for being prepared to admit the existence of such a disease as hypertrophic cirrhosis, first, the authority of Charcot and others, and, secondly, a post-mortem examination of the liver and spleen of a case reported to him from a distance. It may be fairly assumed, I think, that Dr. Smith has no further reasons either for his belief in hypertrophic cirrhosis or for his disbelief in the original diagnosis of my case. The existence of hypertrophic cirrhosis of the liver, with the changes usually described by pathologists, and marked clinically by enlarged liver and jaundice, with nervous symptoms prominent, need not be argued here. But, whatever its nature and definition may be, it is not an acute disease; it occurs mainly in adults and cannot be diagnosed during life except by a demonstration of enlargement of the liver. My case *was acute*, occurring in a child two years old; death took place in a little over three weeks from the onset of any illness and two weeks after the jaundice set in. The liver was *not enlarged* at all as far as clinical examination showed, for it was felt but one finger's breadth below the costal margin, as livers of healthy children two years old may be felt as often as not, and the upper limit of liver dulness was noted as "perhaps a little lowered." I do not desire to contend for the correctness of my diagnosis, for it was but based (a necropsy being disallowed) on analogical inference from two quite similar cases observed clinically by myself and examined post mortem by my colleague Dr. Hebb, who quite concurred in my view that these cases were examples of "malignant jaundice" or "acute yellow atrophy." I have reported them in some little detail in my book on "Diseases of Childhood." But I think I may contend that a careful study of my case, as reported in THE LANCET of Jan. 5th, in no way suggests the diagnosis of "hypertrophic cirrhosis," either as commented on by Dr. Smith or as usually described in the text-books.

I am, Sirs, yours faithfully,

London, Sept. 17th, 1895. H. B. DONKIN.

"THE VOLUNTEER MEDICAL SERVICE."

To the Editors of THE LANCET.

SIRS,—I am obliged to Surgeon-Captain Sleman for his correction of my description of the new badge to be worn by regimental stretcher bearers while efficient, and which I have been instrumental in obtaining for the Volunteer force. The official answer to my application to the War Office on the subject reached me as I was on the eve of starting for the Continent, and having read it hurriedly I trusted to my memory when I addressed my letter to you from the South of France. The ground of the badge is to be white, containing the monogram "S.B." in blue and red enclosed within a red circle one inch and a half in diameter, which "will be worked in wool on cloth of the same material as the tunic." Hence my mistake. The original order for Volunteers to wear the armlet on the left forearm is not revoked, and I presume it will be employed when the bearers act as the stretcher section to their battalion, this new badge being simply a recognition of proficiency to be used in the ranks and identifying such men as are available for ambulance work when required.

I am, Sirs, yours obediently,

W. BAINES, V.D., M.D.,
Surgeon-Lieutenant-Colonel, 1st Middlesex Vol., R.E.

Headquarters, College-street, Fulham-road, S.W.,
Sept. 16th, 1895.

"DEATH FROM VEGETABLE POISONING."

To the Editors of THE LANCET.

SIRS,—The paragraph under the above heading from your Manchester correspondent in THE LANCET of Sept. 14th is,

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to quote from one of the sentences, "not quite satisfactory." There was no reporter present at the inquest, hence the meagre report in the *Manchester Courier*, whence your correspondent acknowledges he obtained his information. The symptoms were very fully described. There is no difficulty in examining the locality, and I shall be happy to show your correspondent round, when I have no doubt he will be satisfied as to there being a poisonous flora. There are two open spaces, both called Gorton Park, one of which is kept like any ordinary park, and is situated in Manchester, while the park into which deceased went consists of very rough land, partly waste, and is situated in Gorton. I had full notes of the case, which I destroyed only a day or two before your correspondent's paragraph appeared, and which I would have been happy to place at his disposal: but as his taking notice of the affair is rather belated I am deprived of the pleasure of satisfying his curiosity as to the symptoms, and can now only refer him to Taylor's Jurisprudence, where the description of henbane poisoning corresponds to what I observed in this case.

I am, Sirs, your obedient servant,

Gorton, Sept. 17th, 1895. B. W. MACARTHUR.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—I have perused the correspondence on this subject with interest, great, but strongly mingled with regret that what has been said so often on the other side should have had so short a remembrance and should have made so little impression. As regards all novelties there are two notable tendencies in the human mind, the first being to run into too great extremes, and the other to resist all things that are new and to be obstinately satisfied with things as they are. Happy are those who can safely steer a middle course. I am curious to know why gynæcology should be picked out now as the special field for opprobrium. No reason has been given, and none can be shown, save that it is the newest field of progress. But it is not far to go back to the introduction of such simple proceedings as tenotomy, concerning which I am sure all of us over fifty can remember how the streets and the lanes were scoured for the squinting and the club-footed; how they were impelled to come in, and how many a decent eyesight which could have been improved by a proper set of lenses was irretrievably ruined by division of the internal recti tendons; how many a useful talipal foot was effectually lamed by unwise division of ligaments and tendons. The physician stands aghast at the apparent ease and certainty with which an operation is recommended and performed in cases which used to haunt his consulting-room for months and years, and the operating surgeon listens with ill-concealed impatience to the pleadings of the physician for a little more waiting, and another try at this, that, or the other form of expectant treatment; whilst there is a third party to the argument who boldly set forth their theories and practice, that whilst pus in the breast should speedily be evacuated, so long as it remains in the pelvis all is well. Of the last the less said the better; it is but a matter of time for their entire disappearance from the discussion. The question lies between the two former, and the pity of it is that both are covertly influenced by another failing of humanity, the difficulty of seeing the whole of a question, and possibly by the still lower motive and belief of the financial taint, each for himself and against the other. This has never been openly stated in the present issue save by Sir William Priestley himself. It was at a meeting of the Obstetrical Section of the International Congress in 1881, in the discussion of a paper which I read on Removal of the Uterine Appendages, in which Sir William said that he feared that in such operations there might be a tendency to recommend them under the influence of a prospective fee at the conclusion of the case. As an answer I told a story, the details of which were quite as well known to Sir William as to myself—a story which showed that the facts and conclusions run exactly the other way. We had under our joint care a lady who had a bleeding myoma and immense wealth. I had recommended removal of the appendages—a course not approved of by Sir William and not favoured by the patient and her friends, and therefore not pressed by me. The result was she remained under my care (occasionally, when death from hæmorrhage was imminent, joined by Sir William), and in bed most of the time, for about thirteen years, when the climacteric relieved her from her severe symptoms at the age of sixty-three or four. During that time her illness cost thousands of pounds, a proportionate share of which fell to the lot of Sir William Priestley and myself. If I had operated on her—with a bagatelle risk of 1·6 per cent. mortality—I should have had probably 150 guineas and Sir William about as much more at the end of a successful case (and I do not think that a fatality would have altered the amount), or somewhere about a fifth of what we actually did get.

If the financial motive is to govern us then I shall go in for tinkering with everybody, for prompt and speedy cures do not pay half as well, and the incident of every operation death involves a heavy financial loss. Let us suppose that the utmost of the charge made against operating gynæcologists is true, and that occasional errors, diminished rapidly by increased experience, have occurred by the performance of operations proved or believed afterwards to be unnecessary—are these more than the inevitable blunders inherent to everything that is human, especially in such a branch of life as surgery, which is in itself so hateful that nothing but wild enthusiasm would ever enable a man to follow it? Let the excess of zeal be corrected, but let it be by instruction in wisdom and righteousness, and not by abuse and ill-treatment. Let the correction be made by those who do not live in glass houses, and who may, therefore, have some likelihood of being able to throw stones without risk of retaliation. Such are certainly not the physicians whose utterances we hear of in anonymous articles, nor are they the authors of behind-the-back slanders. The operating surgeons can certainly lay against such the charge of acts of omission and neglect of canons clearly established, which acts tend to the most frightful disasters. Less than a month ago I waited daily for a summons to a distance to remove a suppurating ovarian tumour. The operation was postponed day after day by a physician who ruled that the patient was not fit for an operation so long as she had a pulse of 130 and a temperature of 104°F., and that we must wait till she improved in health. In vain I pleaded that a return of health was impossible so long as she had pints of pus in her abdomen, and, therefore, I was not surprised, but was exceedingly angry, to receive a telegram from the medical attendant, "—— died this morning." How long is this sort of thing to go on? How long is my reiterated question to remain unanswered, "Why is there to be one canon of surgery for the knee-joint and another for the pelvis?" My colleague, the physician in this case, would promptly have called in someone to evacuate pus if it had been found in the buttock, why should the mere presence of the os innominatum have induced him to prevent me doing the same thing when I found pus on the other side of it?

I could narrate a very long list of cases of this type—so long and ghastly a list that I am convinced that if every shred of gossip that has been uttered against every abdominal surgeon in England, and in order to swell that list thoroughly I will include myself, were true and thoroughly established, it would not weigh a stone against a hundredweight for the mischief done to surgery, to our patients, and to us by the persistent "Wait, wait, wait" of the tinkerers.

I am, Sirs, yours faithfully,

The Crescent, Birmingham, Sept. 14th, 1895. LAWSON TAIT.

"BERI-BERI."

To the Editors of THE LANCET.

SIRS,—I have more than once drawn attention to the fact that though the above disease is very seldom seen in England yet it must be evident to all that year by year we hear of more cases. Various are the signs and symptoms and still more various are the treatments. Having seen some hundreds of cases in Upper Assam, to which place it had come by importation, a few words may be of use to junior medical officers either in Assam or on board ship. The first point noticed with those stricken with beri-beri was their "anæmic appearance," which did not yield to a treatment of iron or arsenic; the patient gradually became worse, fever, dropsy, and dysentery came on, ending in death. A post-mortem having been obtained after great difficulty, hundreds of worms were found in the intestines, but for the most part in the duodenum, these small thread-like worms being found in balls, one ball containing over 250.

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The best treatment I found to be the exhibition of large doses of thymol, ninety grains or more—given in three doses of twenty grains, thirty grains, and forty grains respectively—in twelve hours, followed by ol. ricini if required. The natives called this the "puggla" or "mad medicine," on account of the sensations. All the motions were collected on muslin and washed, when hundreds of these little worms were to be seen. A few weeks on tonics and good food put the poor patient all right again. Ship medical officers on their voyage home from India and other hot climates should look well into any cases of anæmia amongst the native crew, as all who have any experience of coolies and their black brothers know how easy it is for drinking water to be infected by anyone suffering from this disease. I have some of these worms, and anyone wishing to see them can do so on writing to me.—I am, Sirs, yours truly,

A. WILBERFORCE SHEPERD,
September, 1895. Medical Officer of Health, Cowbridge.

A WARNING.

To the Editors of THE LANCET.

SIRS,—May I state through your columns that it has come to my knowledge that a certain individual unknown to me has been sending begging letters signed with my name to various medical men stating that I have been suffering from nephritis and albuminuria and am in straitened circumstances, and asking that money should be sent to me at Great Ilford, Essex? The whole story is a fabrication, and I hope none of your readers have been taken in by it.

I am, Sirs, yours truly,
Micklegate, York, Sept. 17th, 1895. D. S. LONG, M.D.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—Specialists as a class aspire to a position of leadership in medicine, or, at all events, in certain branches of it. Nevertheless, "A Specialist," in THE LANCET of Sept. 14th, appears to justify acts of dishonesty on the part of his *confrères*, which he makes no attempt to deny, by bringing a countercharge of exaggeration against the rank and file of the profession. Nor does the case he cites necessarily support his charge. For, even assuming that he was right and the case was one of "simple sore throat," and not "diphtheritic," it does not follow that the "neighbouring practitioner" was not acting *bonâ fide* when he pronounced it the latter. Allowing, however, that "A Specialist's" construction of the incident was correct, it must be remembered that among so large a body of men as general practitioners black sheep are sure to be found. As to homœopathists, whose ways he quotes, these no more concern the present issue than do those of quacks.

I am, Sirs, yours faithfully,
Sept. 17th, 1895. A GENERAL PRACTITIONER.

TYPHOID AND CONTINUED FEVERS AMONGST OUR SOLDIERS AND SAILORS IN THE MEDITERRANEAN.

(FROM AN OCCASIONAL CORRESPONDENT.)

THE following facts, which are believed to be as correct as they can be obtained otherwise than from official sources, are certainly suggestive both as regards the nature and the amount of illness which has recently been prevalent in the Mediterranean, and as to the manner in which the convalescents therefrom are sent home.

The Peninsular and Oriental steamship *Valetta* arrived at Plymouth on the night of Sept. 10th last, having on board a complement of some 300 persons, including the crew and numerous first- and second-class passengers. The *Valetta* was on a voyage from Bombay to London and after discharging some passengers at Brindisi had called at Malta on Sept. 3rd. She there took on board a number of so-called convalescents from the naval and military hospitals. These were brought to the ship in a large barge covered with an awning, and the majority of them were so ill that they had to be carried on board in cots. This work was done by a party of sailors detailed for the purpose from a man-of-war in the harbour. Amongst the invalids were four naval officers (all of whom were so ill as to require to be carried on board in cots), and the remainder were sailors and soldiers of various grades, seventeen in all. The four officers were accommodated in the first-class saloon cabins and the other invalids amongst the second-class passengers, of which the ship carried 120, nearly every berth being full. Almost without exception the invalids put on board had been suffering from fever, either typhoid fever or that form of continued fever known as Mediterranean fever. Of the officers three were admittedly recovering from true typhoid fever, as was probably also the case with the fourth.

The stimulating effect of the prospect of going home and sea air had speedily a beneficial effect on most of them. One officer improved rapidly and another was soon able to be on deck, though evidently very weak; but one was not able to leave his berth at all during the voyage, and another, though he managed to get up and walk with assistance on to the tender at Plymouth on Sept. 10th, had only been able to get on deck a few times previously. The invalided sailors also markedly improved in health. Cots were sent on the tender to meet the invalids landing at Plymouth, but were only used in the case of one officer. In this case the patient was in an acute stage of illness on the day of landing, with high temperature, &c. (104° F. the previous day), and other symptoms of severe relapse. The other invalided sailors, although looking very ill, had improved considerably on the voyage. The invalided soldiers went on to London. They did not appear to have improved so much. Those able to get on deck presented a miserable appearance, and four of them had been unable to leave their berths during the greater part of the voyage.

After discharging the invalided sailors and some passengers at Plymouth the *Valetta* proceeded to London and reached the Albert Docks on the morning of Sept. 12th. Even at that date two of the soldiers were very ill; one had only been able to get on deck on the previous day, and another had not been able to leave his berth at all since he was put on board at Malta. These soldiers did not know whether they were bound for Netley or where, though probably someone eventually met them on landing. As regards medical attendance and diet, the invalids were most carefully and ably looked after by the surgeon of the ship. The provision made for nursing in the case of the soldiers was *nil*, and the four who for a long time were unable to leave their bunks or wash themselves had to depend upon the good offices of their fellow sufferers or of the passenger stewards. The sailors (officers and men) were somewhat better off, as amongst the sailors invalided with fever was a naval sick bay steward from the *Itamillies*, who was really convalescent and who was of great service to those requiring nursing assistance and in directing the stewards upon whom the carrying out of various sick-room details necessarily fell, especially in the case of the invalid officers.

The above facts suggest two chief points for consideration. How far, having regard to the travelling public, is it justifiable for such cases to be transmitted in an ordinary passenger vessel, and how far is it proper for the sake of the patients themselves that they should be sent a voyage under such conditions? Although that form of continued fever from which the majority of the cases referred to above had suffered, and known variously as Mediterranean fever, Malta fever, typho-malarial fever, &c., has admittedly a very close resemblance to typhoid fever, and by some medical officers of experience is considered as identical with that disease, though modified by local climatic conditions, it is not usually considered communicable; there were, however, amongst the invalids carried on board at Malta undoubtedly several cases of true typhoid fever, and the natural history of this disease certainly indicates that it is most undesirable that those performing any office of nursing in such cases should have anything to do with food distribution except under very strict conditions of disinfection and precision in cleanliness. The use of the terms "convalescents" and "non-infectious fevers" gave a large amount of very salutary confidence to the other passengers in the vessel, but no precautions were taken to isolate any of the latrines, and the ship stewards, who were said to do various nursing

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offices for the patients, handed food to the passengers at meal-times as usual, and although the ventilation of the Peninsular and Oriental steamships is most free and efficient the conditions of life on board a ship are necessarily more intimate than they would be on shore. Probably the risk of infection to other passengers was exceedingly remote, but what could not be carried out in the case of cholera without great risk should not be attempted in the case of typhoid fever and allied diseases. As regards the patients themselves, there can be no question that cases of acute disease, although approaching convalescence, should not be sent a voyage except under suitable and special conditions of accommodation and nursing, and then only when sufficiently recovered to bear the journey well. The admitted benefits, in cases of prolonged and tardy convalescence from continued fever, to be derived from a sea voyage and a homeward journey can then be most fully taken advantage of. The stimulating effect of the latter may be judged from the statement made on good authority that when it became known in Malta Hospital that a draft of invalids was about to be sent home the average temperature of the convalescent cases fell markedly.

As regards the health of the fleet generally, the hot weather of early autumn is the season when attacks of Mediterranean fever are to be looked for; but, unless current local reports have much exaggerated matters, there was an exceptional outbreak of true typhoid fever on several vessels of the fleet during its recent cruise in the Levant. Popular opinion in the fleet associates this outbreak with the prolonged stay in Boudrun Bay in the neighbourhood of Smyrna, where the fleet lay for some weeks and during the whole of July. Some ships suffered much more than others, and the *Collingwood* is said to have had upwards of 50 men attacked, of whom 7 died. When the *Valetta* left Malta there were 175 patients in the naval hospital, and every time the store ship returned from the fleet she was said to bring additional invalids. If these statements as to an extensive outbreak of undoubted typhoid fever be correct, doubtless some explanation and report will be forthcoming in due time.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

THE SITUATION AT PORTSMOUTH.

THE question of medical aid for benefit clubs, always delicate and complicated, is fraught with an extra and local difficulty at Portsmouth. As a general abstract statement it may be said that when benefit societies were first organised and medical men lent willing aid to the work it was never foreseen that these societies would grow so rapidly and become the gigantic and powerful institutions that exist to-day. Then in very many cases the medical officer of such societies thought that if he attended the bread-winner on cheap club terms he would have the other members of the family as ordinary paying patients. Now, on the contrary, the benefit societies want the wives, the daughters, and even the infants to share in the benefits. Thus the hope of creating a general practice by doing club contract work would be reduced to a minimum, if not obliterated altogether. At Portsmouth the Manchester Unity, which is the largest branch of the Oddfellows' Society, now desires to admit children of both sexes from the age of three months. Actually, only male children who are three years old are admitted to medical insurance. They pay from 2*s.* to 2*s.* 6*d.* per annum according to the lodge. The men pay 4*s.* and it is proposed to form lodges for adult females at the same rate of payment. The Foresters and the Druids pay 4*s.* for males and 2*s.* for every child from three to eighteen years of age. The Manchester Unity wishes to admit children of both sexes from three months. One lodge proposes 2*s.* 6*d.* for infants from three months to three years, 2*s.* for boys from three years to eighteen years, 2*s.* for girls from three years to fifteen years, and 3*s.* 6*d.* for girls from fifteen to twenty-one years. After these ages the members would join the lodges for adults. The feeling in the medical profession is naturally very strong against the admission of women and children, particularly as the sum paid for the adult males is so small. The Manchester Unity has some 5000 members at Portsmouth, the Foresters 4000, and the Druids 1200. Then there is the Temperance Society of the Rechabites. The latter pay 3*s.* 6*d.* for adults and 2*s.* for children; and quite recently, without so much as consulting their medical officers, they decided to admit infants from the age of six weeks. Many of these Rechabites are shipwrights and dockyard artisans who are in receipt of good wages, live in comfortable houses, and formerly easily payed proper fees for the medical attendance given to their children. Now these same children are brought to the Society's medical officers, who have to attend to them for the meagre sum of 2*s.* a year.

Unfortunately, in resisting these encroachments the medical profession at Portsmouth are met by the special local difficulty to which I have alluded. The benefit clubs reply to all such objections by pointing to the Dockyard Medical Benefit Society, which takes in all the members of the families concerned, and argue that they must do the same. This Dockyard Society was started at Deptford some twenty-five or thirty years ago. Then when much of the shipbuilding work for the British Navy was transferred to Portsmouth the society was implanted in the Portsmouth Dockyard. None are admitted except persons who work in the dockyard, and the members pay ½*d.* per week for themselves and for each member of their families. The society is managed by the workers themselves and the whole of this sum is given to the three medical men engaged by this organisation. The society is well organised; the money is collected free of expense. There used to be a guinea fee allowed for accouchements; but some six years ago the society resolved to reduce this to 15*s.* and 7*s.* 6*d.* for miscarriages. All the three medical officers were also expected to meet in consultation without receiving any extra fee. No limit was put to age, and one medical officer told me pathetically that he had been asked to give club papers for the enrolment of a child three days old. Two of the medical men, Dr. Blackman and Mr. Goss, refused these increased burdens and resigned; but their places were quickly filled by other medical men, who eagerly accepted these posts. Some of the dockmen, however, sympathised with the medical officers who had resigned and formed another society, where the terms are more favourable to the profession.

The great question for the moment is how to prevent all the benefit clubs of Portsmouth from following the example of the Dockyard Society. Some of the medical men concerned have shown me their ledgers. These prove that men who only pay 4*s.* a year for medical attendance as members of clubs pay 2*s.* 6*d.* a visit to their club officer when he attends members of their family. One account showed that these visits amounted to £7 10*s.* in the course of the year. In other cases £2, £3, £5, and £6 were paid by members of clubs for attendance on their families. These sums are paid without complaint, and this makes it worth while to be a club officer. But all these advantages will be abolished if the families of members are also to be taken in by the clubs. A struggle is likely to ensue on this point, and the question arises, first, whether the medical profession at Portsmouth is sufficiently well organised to hold its own against the clubs, and, secondly, whether they will be loyally supported by the members of the profession outside Portsmouth. As already described at the last annual meeting of the British Medical Association, a Medical Union has been constituted at Portsmouth. Its president is Mr. F. Lord, who has a very extensive club practice in the town; the vice-presidents are Mr. James Green and Dr. Lysander Maybury. Dr. T. Frederick Pearse, 12, Norfolk-street, Southsea, is the honorary secretary; and Dr. J. G. Blackman, Poplar House, Kingston-crescent, Portsmouth, is the honorary treasurer. This union was formed to defend the interests of the medical profession, to encourage friendly relations between members of the profession, to enable them to obtain advice and united support, to facilitate interchange of views, and to secure combined action and consolidated influence when difficulties arise. Such is the general object of the union, but its particular purpose is, first, to "consider and take action upon the relations of medical officers with friendly societies and medical aid associations, and with regard to Poor-law and other official appointments; secondly, to establish, maintain, and circulate among members of the union a patients' black list; thirdly, to promote the improvement of medical fees"

These ends are to be attained, with regard to friendly societies, by the united action of the members of the Medical Union, so as to enforce a wage limit beyond which members

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of friendly societies shall not be admitted to participate in medical benefits. It must be admitted that, under this heading, little or nothing has been done. Everyone acknowledges the necessity of a wage limit. Even the members of the friendly societies themselves do not deny the justice of this demand. But who is to define the wage limit, and on what principle is it to be established? Shall there be a difference between married and unmarried men? Undoubtedly a bachelor earning £1 a week is much better off than a married man with a family who earns 30s. a week. Then there is the more complicated question of constant employment. Here, at Portsmouth, men work in the Royal Dockyard for a smaller wage than they would earn in the same trade if working outside, but they have constant employment and pensions for old age. There is no risk of loss of employment through the fluctuations of trade, through fire, or the employer's bankruptcy; thus, taking an average of a life, the man who is paid 35s. in the dockyard earns more than the man whose wages outside the dockyard and for the same sort of work usually amount to £2 per week. How is the wage limit to be established in that case and who is to estimate the relative income of the two men? Supposing, however, answers can be found for these and many other similar questions as far as Portsmouth is concerned, is the Medical Union to establish a wage limit for Portsmouth alone without taking into consideration the state of affairs in other parts of the country? Already at Cork it has been proposed to fix the wage limit at £4 per week, but every medical man I have spoken to on the subject repudiates such a proposal and considers this wage limit far too high. As no town can fight its battle alone, but its action must be approved and supported by the medical profession throughout the country, a general consensus of opinion on this question of wage limit must be obtained.

The Portsmouth Union also proposes to enforce the medical examination of the new members of friendly societies and the payment of a special fee for such examination. Members of clubs who do not subscribe to the surgeons' fund and who require certificates are to be made to pay for such certificates. For instance, I had the case of a man who belonged to the Foresters' Society explained to me. He paid for the medical benefits as a Forester, but he wanted to join the Druids for financial benefits only. Before the Druids would thus insure him they wanted a medical certificate, and sent him to their medical officer, who was also the officer of the Foresters' Society. The latter obtained no fee for examining the man, and as he did not pay for medical benefits from the Druids the officer got no advantage whatsoever for examining this case and giving a certificate. The wife of this man was also sent to the officer to be examined before she was admitted to funeral benefits. Again the officer received no fee. Indeed, men constantly come for examination, they pay no fee, and there is no evidence to show that they are going to pay for medical insurance. If they are examined merely for financial benefits then the medical officer's work is absolutely unrequited. The Medical Union further urges that visiting members should not be allowed medical benefits except after a satisfactory medical examination. The Southsea district of Portsmouth is a health resort. Many old members of benefit societies, who have paid their subscriptions for many years in the business centres where they have lived and worked, retire in their old age and establish themselves at Southsea at that period of declining life and health when they are likely to require the most medical assistance. Because they belong to the same societies that exist at Portsmouth these so-called visiting members expect to be attended by the Portsmouth medical officer of their society. This throws an altogether unfair burden on such medical officers at health resorts or places where people go precisely because they are delicate, old, or ill.

The other objects of the Portsmouth Medical Union are to alter the tenure of office so that there should be a three months' notice on either side, to raise the rate of subscription for juveniles, and to obtain the united action of members of the union with regard to the admission of females to the medical benefits of friendly societies, but I have already dealt at length with these points.

The rules of the Portsmouth Medical Union are that every registered medical practitioner shall be eligible for membership on payment of an annual subscription of 5s. to cover working expenses. Besides the officials whose names are given above there is a committee of six members, and four form a quorum at committee meetings. Officers and committeemen are elected at each annual meeting, and the committee has power in the interval to fill up such vacancies as may occur. The committee is to meet once a month or oftener if necessary. On a requisition of six members a general meeting of the whole union must be called, but such meeting shall discuss no other question than that for which it was convoked. The most important rule is that which exacts a personal pledge from all members of the union that they will not oppose any practitioner "in any course of action which he may take with the concurrence of the committee in his official capacity concerning any public appointment." This does not implicitly pledge the members to improve their positions; but, as it includes cases where medical men resign their posts on a matter of principle, it will, if carried out, tend to greatly improve the conditions under which club work is done. There are some two hundred medical men at Portsmouth, but the majority are retired from the army or naval service. There are about eighty medical men in practice at Portsmouth, and they have all signed this pledge. All are therefore in honour bound not to accept any post which may be vacant because its former occupant has, with the approval of the committee of the Medical Union, resigned on a matter of principle. If, however, any member proves false to this pledge then "any member acting, in the opinion of a special meeting called for the purpose, contrary to the laws and regulations of the union shall, upon a majority of at least three-fourths of the members present, be suspended or expelled, and without appeal, from the advantages of the union." A fourteen days' notice must be given for the convocation of such a meeting. The great question remains whether such expulsion from the union will in itself be in all cases a sufficient deterrent to ensure implicit obedience on the part of all the members of the Medical Union. If so, then will not some medical men from other towns, who do not belong to the Portsmouth Union and who have not given any pledge, come and take the vacant posts? What in that case will be the action of the Portsmouth Medical Union? These questions show how necessary it is that medical unions should be national as well as local.

Portsmouth, Sept. 10th.

(To be continued.)

THE FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.

(FROM A SPECIAL CORRESPONDENT.)

THE organising committee, of which Professor Vittorio Grazzi is president, is in daily receipt of fresh "adhesions" to the membership of the Congress, and of those already sent in I may mention the following: Dr. Abery (Copenhagen), Dr. B. Alvarez (Madrid), Dr. Arsian (Padua), Dr. Ascensio (Spezia), Professor Avoledo (Milan), Mr. Baber (Brighton), Dr. Baratoux (Paris), Dr. Barkan (San Francisco), Dr. Barr (Glasgow), Dr. Bèco (Liége), Dr. Bobone (San Remo), Dr. Botey (Barcelona), Dr. Boucheron (Paris), Dr. Brieger (Breslau), Dr. Bronner (Bradford), Dr. Brunetti (Venice), Dr. Burnett (Philadelphia), Dr. Buscaroli (Imola), Dr. Capart (Brussels), Dr. Carralero (Madrid), Dr. Chincini (Rome), Dr. Coosemans (Brussels), Dr. Corradi (Verona), Professor Cozzolino (Naples), Dr. D'Aguanno (Palermo), Sir William Dalby (London), Dr. Daly (Pittsburg), Dr. Delie (Yprès), Dr. Delsaux (Brussels), Dr. Delstanche (Brussels), Dr. de Rossi (Rome), Dr. Dundas-Grant (London), Professor Ferreri (Rome), Professor Ficani (Palermo), Dr. Flatau (Berlin), Dr. Galetti (Milan), Dr. Garzia (Naples), Dr. Gellè (Paris), Dr. Goris (Brussels), Professor Gradenigo (Turin), Professor Grazzi (Florence), Dr. Grünwald (Munich), Dr. Hartmann (Berlin), Dr. Haug (Munich), Dr. Heimann (Warsaw), Professor Lannois (Brussels), Dr. E. Law (London), Dr. Lichtwitz (Bordeaux), Dr. Locatello (Pesaro), Dr. Lubet-Barbon (Paris), Professor Lucä (Berlin), Dr. Macnaughton-Jones (London), Dr. Martin (Paris), Professor Masini (Genoa), Dr. Menière (Paris), Dr. Mongardi (Bologna), Dr. Morpurgo (Trieste), Dr. Moure (Bordeaux), Dr. Okuneff (St. Petersburg), Professor Ottolenghi (Siena), Dr. Palazzolo (Catania), Professor Politzer (Vienna), Dr. Pritchard (London), Dr. Rattel (Paris), Dr. de Roaldes (New Orleans), Dr. Royat (Lyons), Dr. Rutten (Namur), Dr. St. Clair Thomson (London),

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Dr. Schiffers (Liége), Dr. Secchi (Bologna), Dr. Secretan (Lausanne), Dr. Sexton (New York), Dr. Soffiantini (Novara), Mr. G. Stoker (London), Dr. Strazza (Genoa), Dr. Suarez-de-Mendoza (Antwerp), Dr. Sune y Molist (Barcelona), Dr. Szenes (Budapest), Dr. Verdos (Barcelona), and Professor Zufai (Prague).

The programme has been finally arranged and will begin on Sunday evening, the 22nd inst., at 9 o'clock, with a *réunion* in the house of the President, Professor Vittorio Grazzi.

On Monday, the 23rd inst., at 10 A.M., the Congress will be inaugurated in the Great Hall of the Istituto di Studi Superiori, followed by a sitting from 2 P.M. to 4 P.M., and in the evening there will be a concert given in honour of the Congressisti at the Circolo degli Artisti. On Tuesday (24th inst.), at 8.30 A.M., and at 2 P.M. there will be two sittings; at 9 P.M., a banquet at which the foreign Congressisti will be entertained by the President, Professor V. Grazzi. On Wednesday (25th inst.), again, at 8.30 A.M. and 2 P.M., there will be two sittings, and at 4.30 P.M. a reception at the Palazzo Comunale in the Quartiere Leone X. On Thursday (26th inst.), at 8.30 A.M., there will be a sitting, followed at 1.30 P.M. by another, at which the Congress will be formally closed. At 4 P.M., by special invitation of the Communal Administration, there will be an excursion, conveyed by special electric tram, to Fiesole; and at 7.30 a public banquet will be given to the foreign members of the Congress by their Italian colleagues and the citizens of Florence.

Concurrently with the Otological Congress there will also be held in Florence a meeting of the Italian Association of Laryngology, Otology, and Rhinology.

Florence, Sept. 14th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Rowdyism Rampant.

MANY complaints have lately been made from the suburbs of the city as to the bad behaviour of roughs and the wilful damage and destruction of property. Nor is the viciousness confined to the outlying districts. The city magistrates had a long day on the 16th inst. investigating charges of assaults upon policemen by various gangs. The favourite instrument of aggression is the buckled belt. Wielded with the facility of familiar use this becomes a formidable weapon, capable of fracturing skulls and doing grievous injury to the inoffensive and unarmed. Policemen are cautioned to use their truncheons with discretion, but in the midst of a conflict, often savage and unprovoked, human nature must necessarily assert itself in the interest of self-protection. The law should be strong in protecting the men who are employed to uphold its power. Light sentences produce but little deterrent effect, and fines are readily paid by the companions of the guilty. A recognition of the *argumentum ad hominem* should be more effectual in suppressing these cowardly attacks, the results of which give our hospitals much work and divert the sources of charity from the more deserving.

Cycling Dangers.

The more general use of cycles brings with it certain dangers. Two instances of death from cycling accidents have lately occurred in this district, each from causes apparently accidental. In one the rider was thrown off his machine, falling under the wheels of a passing cab; and in the other the foremost rider of a tandem sustained a fracture of the skull which proved fatal. Care is evidently necessary as to speed, and attention to the accurate working of the machine. Trifling defects or inexperience place the riders in crowded thoroughfares in much danger, not to omit that incurred by the many pedestrians, whose movements add to the possble risks of both.

Paraffin Lamps.

The old story of paraffin lamp explosions, in its repetition, emphasises the demand that some measures should be framed to make the danger less possible. Accidents of this kind are of almost daily occurrence, and yet could be easily prevented. As long as cheap lamps can be purchased they will be used and the danger will still continue. No amount of reiteration will be successful in the way of warning. The Legislature evinces a fostering care with regard to unhealthy trades and restricts the liberty of the subject in many wise ways. Why should it not pass some law with regard to the protection of person and property in this direction?

Sept. 17th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Proposed Conference of Sanitary Authorities.

THE position of Liverpool as a great maritime highway is now accentuated by the fact that the Manchester Ship Canal can only be reached *vid* the river Mersey. So far as relates to port sanitary matters this has been already alluded to by your Manchester correspondent in last week's issue of THE LANCET. Acting in conformity with the suggestion of the Local Government Board the Liverpool Port Sanitary Committee have instructed the town clerk to make arrangements with the authorities riparian to the Manchester Ship Canal, or abutting upon the waters constituting the port of Manchester, for a meeting in Liverpool. It has also been arranged that the Lord Mayor, the chairman, and the deputy chairman of the Port Sanitary Committee, with Messrs. Paull and Walker, Dr. Clarke, the town clerk, and the medical officer, Dr. Hope, shall be appointed to represent the Liverpool Port Sanitary Authority at the proposed conference. It is expected that an early date will be fixed.

Small-pox, Vaccination, and Isolation.

An addition to the many illustrations already given as to the protective powers of vaccination, and also as to how small-pox is spread, was made at Wigan on the 16th inst. A woman residing at Longshoot Scholes was summoned for failing to notify a case of small-pox to the sanitary authority. It appeared that an outbreak recently took place in defendant's house. There were eight children in it, and the child that died from small-pox was the only one amongst the number that had not been vaccinated. Eleven other cases were traced to the outbreak in defendant's house. The bench imposed the full penalty of 40*s.* and costs.

Sept. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Public Health Difficulty at Port Glasgow.

A CURIOUS position has been reached as the result of a dispute between landlord and tenant in regard to the responsibility for a nuisance in connexion with a dwelling-house in the burgh of Port Glasgow. The tenant, who is a medical man, communicated with the Local Government Board, from which instructions were sent to the local authority to proceed against the owner of the property under Section 255 of the Burgh Police Act. The representatives of the landlord then offered to comply with the section of the Act provided the certificate which the Act requires were produced. But it has been found that no medical man in the burgh possesses the public health qualification, which is needed in order to sign the certificate, and so the local authority cannot move further in the matter.

Glasgow: Fatal Accident Inquiries Act.

This new law, under which fatal accidents are reviewed before a sheriff and jury, has now been put in force in a number of cases. Some differences of practice on the part of different sheriffs with regard to the action of the juries have already occurred. Thus, in one recent case, in which a railway shunter was killed whilst engaged in his occupation, the jury proposed to add to the statement of fact in the verdict an expression of opinion that the system of signalling was defective; but the sheriff altogether discouraged this and informed the jury that to do so would be to take upon themselves a responsibility to which they were not called. In other cases, however, the sheriff, whilst telling the jury they were only compelled to consider the immediate cause of death, has received and even encouraged expressions of opinion in reference to the question of personal responsibility for the accident.

Hospital Vacancies.

Professor Coats, M.D. Glasg., has resigned his position as pathologist to the Royal Hospital for Sick Children,

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Glasgow. He has held this office since the establishment of the hospital in 1882. There are also vacancies on the medical side of the out-patient department, and a qualified clinical assistant is to be appointed to the dispensary. The Western Infirmary is advertising for applications for a vacant position on the medical dispensary staff, and there is a surgical vacancy at the Central Dispensary.

Infectious Diseases in Glasgow.

The city is now practically free from small-pox, only a single case being at present in hospital. Scarlet fever and to a less extent enteric fever are, however, on the increase. The number of cases of the former known to exist on the 14th inst. was 555, whilst 184 patients suffering from enteric fever were noted in the medical officer's report.

Aberdeen Royal Infirmary.

The infirmary directors have now fixed on a site for the new convalescent hospital. It is to be built on about four acres of ground feued from Mr. William Pyper on his property of Hillhead Pitfodels. It will accommodate about twenty-five patients and is within twenty miles' easy walk of Cults Station, commanding a far-reaching view of the Deeside valley and mountains. The old Convalescent Hospital and grounds at Lochhead have been disposed of for a satisfactory price to the Royal Asylum. The Infirmary Board have also resolved to appoint an assistant anæsthetist to act with Dr. Edmond, the present chloroformist. The funds of the hospital fell short of the expenditure last year by some £500, and the chairman announced that he had addressed appeals to various parishes throughout the county whose contributions fell far short of the amount spent on patients sent from them, and that he had received hopeful replies.

Aberdeen University: The Inaugural Celebrations.

As I informed you last week the University Court and Senatus resolved to postpone till December the celebrations held to inaugurate the new buildings at Marischal College as a mark of respect to the memory of the late Mr. Charles Mitchell, LL.D., in whose honour they were largely to be held. Since then his son, Mr. C. W. Mitchell, has informed them that it would be more in accordance with his mother's and his own wish that the celebrations should be held as previously arranged in October. A meeting of the Court, therefore, is to be held this week to consider which course they shall pursue.

The Health of Aberdeen.

The zymotic diseases notified for the week are: scarlet fever, 14; typhoid fever, 8; whooping-cough, 31; erysipelas, 4; puerperal fever, 1; choleraic diarrhœa, 1; total, 59—being 22 cases fewer than in the preceding week.

Sept. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Tourist Association.

THE Presidents of the Royal College of Physicians and the Royal College of Surgeons of Ireland attended among the deputation introduced to his Excellency the Lord Lieutenant by the Lord Mayor of Dublin on the 7th inst. Many suggestions for the entertainment and accommodation of visitors to Ireland were made by the speakers on the occasion, while a novel proposal emanated from Sir Thornley Stoker, who called attention to the fact that Ireland is traversed almost from side to side by two large canals, and to the advisability of utilising these fine streams for the transit of house-boats.

The Will of the late Sir George Porter.

Probate of the will of the late Sir George Porter, LL.D., F.R.C.S. Irel., &c., who died on June 16th last, has been granted to his widow, Dame Julia Porter, and to his son, Sir William Porter, Bart., power being reserved to grant probate also to Mr. Charles Leeper. The personal estate was valued at £57,366. The testator bequeathed to Lady Porter £250 and the use of his house in Merrion-square, her yearly income to be made up from the trust-fund of her marriage settlement to £1050 for her life. There are, with other bequests, legacies of £500 each to the testator's friends Sir George Owens, M.D. Glasg., and Mr. B. Whitney; and a legacy of £100 to his nephew, Mr. Charles Leeper, in consideration of the executorship.

Fines for the Sale of Unsound Meat in Dublin.

The Dublin corporation has recently brought two summonses against the Jewish Meat and Provision Company of this city for the sale of unsafe meat. For the defence it was pleaded that sudden decomposition may have taken place in the meat after it was sold in consequence of lightning, which prevailed on that evening, and also owing to the unusually hot and moist condition of the atmosphere. It also transpired that the meat was killed by the above company with the greatest care—with greater care, in fact, than was used by butchers of the Christian persuasions. The practice was that the Rabbi or other ecclesiastical persons of importance examined every animal for soundness before it was killed, and ascertained that the process of killing, bleeding, &c. was done in the best possible way. The animal, after it was killed, was opened and the portion of the stomach known as the caul drawn out so that its contents could be examined. Particular portions of the animal were marked for those of the Jewish persuasion by means of a peculiar pencil which writes on fat. Subsequent evidence, including that of Mr. Purcell, L.R.C.S. Irel., proved, however, that the meat sold was in an unsafe condition. A fine of £5 in each case was imposed.

The Recent Report on the Belfast Workhouse.

At the meeting of the Belfast board of guardians held on Sept. 10th a report was presented by a sub-committee recommending that a special room should be allocated for the examination of patients on admission and that an observation ward should be set apart for those supposed to be suffering from lunacy until their condition should be finally determined. The sub-committee approved of a bath and lavatory being provided for the separation wards, and they recommend that a male nurse be appointed as soon as possible for the male lock ward. As to the resident medical staff, the sub-committee ~~are of opinion that~~ these officers should verify and sign the medical weekly return, the book being counter-signed by the visiting medical officers.

Hospital Saturday, Belfast.

The collection for the Belfast Royal Hospital was made on Sept. 14th, but, notwithstanding beautiful weather and every effort on the part of those helping, not more than £300 have been realised. In 1885, the first year of the collection, £500 were subscribed, and each year it grew less, until it reached its lowest water mark in 1892. Last year £400 were contributed. Many people think that until the hospital is put on the city rates it will not be in a permanently sound financial condition.

Queen's College, Belfast.

Rev. W. Nicholas, D.D., and Rev. Douglas Walmsley, B.A., have been appointed Deans of Residence of the College to fill up death vacancies.

Transfer of Lunatics from Asylum to Workhouse.

On Sept. 14th an inquest was held in the Belfast Union Hospital in reference to the death of a young woman who died in the lunatic department on the 12th inst. It would seem that the deceased was admitted to the Belfast Asylum in 1889, having been transferred from the Ballymena Workhouse. She was suffering from dementia, but was quiet in manner and was delicate in health. Owing to the overcrowded state of the asylum she was later transferred to the lunatic department of the Belfast Workhouse, this being done under an old arrangement, as now only patients belonging to the Belfast Union are sent to the workhouse from the asylum. When admitted to the lunatic department of the Belfast Union Hospital she was pregnant and was suffering from disease of the lungs. After being confined she was put in a bed in the lunatic ward, where she had been continuously since last March and where she died from phthisis. In his remarks to the jury the city coroner said that every lunatic should be removed from the workhouses of Ireland and placed in properly equipped asylums. In his opinion, the transfer of a delicate, pregnant woman like the deceased from a properly equipped asylum to a workhouse, which was never intended for the reception of the insane, would undoubtedly have a prejudicial effect upon her health. The jury returned the following verdict: "That the deceased died from consumption; that a Royal Commission to inquire, amongst other things, into the reception and treatment of lunatics in workhouses is imperatively needed; that, in the opinion of the jury, workhouses were unfitted and never intended for the treatment of the insane; and that the coroner be requested to forward a copy of the verdict and the depositions to the Chief Secretary of Ireland."

The Belfast Hospital for Sick Children.

The Belfast Hospital for Sick Children, which has been

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closed for several months, will be reopened on Sept. 23rd. In the interval the sanitary arrangements have been entirely altered, a new wing, properly isolated, having been built, in which on each floor there are bathrooms and closets. Formerly there was a laundry on the ground floor; it has been decided to remove it to the convalescent home in the country, and the space thus gained has been utilised in an extension of the extern rooms for the greatly increased out-patient work. The surgical theatre has been enlarged and improved in every respect in accordance with the demands of modern science. The hospital is now one of the most perfect in Belfast, and these new changes and improvements will bring it into line with the most modern institutions of the kind in the United Kingdom.

The Battle of the Clubs at Cork.

Mr. O'Neill, secretary to the Amalgamated Clubs, wrote a long letter to the local papers, in which he claimed that the late conference had resulted favourably for the clubs. For the purpose of proving his contention he published what purported to be the minutes of the proceedings. He tabulated the rules of the medical men, and opposite about half of them wrote the word "expunged." Now, taking the very first rule, I find it proposes that members should pay according to their income. With regard to that the club delegates suggested that it would be very difficult to devise a plan for ascertaining the incomes of members of any one club; but if the sliding scale were not insisted on each club would be willing to pay any sum the medical men were likely to ask. The medical delegates considered the proposition worth bringing under the notice of the profession, and Mr. O'Neill, in his minutes of the proceedings marks "expunged" opposite Rule 1. The supposed disappearance of Rule 1 forms part of what is represented as a win for the clubs. In this morning's papers the medical delegates publish the subjoined reply, which tends to demolish the pretensions of the clubs.

Cork, Sept. 16th, 1895.

SIR,—In his letter relative to the recent conference on the subject of medical clubs, Mr. O'Neill states that several of the rules adopted by the doctors were "expunged," but the Mayor can certify that we stated we were there simply to discuss the rules, and that they could be altered only by the general body of the profession. As a matter of fact, not a single rule has been expunged. We contended on behalf of the profession mainly for two points: (1) that the present ridiculously low rate of remuneration should be increased to a just and reasonable amount; and (2) that persons in receipt of over £200 a year should not be allowed to avail themselves of medical services at club rates. The delegates would be willing to agree to our first proposal, and with regard to the second they would be prepared to prevent the admission of new members whose incomes would exceed £200 a year. That looked very like conceding nearly all we asked, though interested parties endeavoured to make the public believe that our just demands were monstrous and unreasonable. No doubt the club delegates were anxious to retain existing members, no matter what their incomes may be, but we do not believe the profession at large would acquiesce in that arrangement, as we have since the conference ascertained that a very large number of club members, whose names are before us, are in receipt of incomes varying from £400 to £600, and even £800 a year.—We are your obedient servants,

NATHANIEL J. HOBART, M.D., | EDWARD MAGNER, M.D.,
EDWARD R. TOWNSEND, M.D., | JOSEPH GUISANI, M.D.,
HENRY CORBY, M.D., | PHILLIP LEE, L.K.Q.C.P.I.,
Medical delegates at the late conference.

P.S.—The absence of our honorary secretary prevented the publication of this letter at an earlier date.

I have every reason to believe the Cork medical men will soon enter on a still more active campaign against the clubs. At an early date they will have under consideration the propriety of forming new clubs to be governed entirely by the medical men themselves. They could then exclude those able to pay ordinary fees; and they would be in a better position to adopt a sliding scale of payment for members. Many members of the Cork clubs are dissatisfied with the present state of affairs, but they do not care to revolt openly and thereby lose the benefits accruing to them in their clubs. Let the Cork medical men offer them similar advantages in a new club and the desertions would be so great that the old clubs would be forced to surrender at discretion.

Sept. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Twenty-fifth Anniversary of "Rome the Capital."

ON Friday, the 20th inst., recurs the twenty-fifth anniversary of the fall of the temporal power, the triumphal entry of the troops of United Italy, and the transference of the capital of the kingdom from Florence to Rome. On the political aspects of the event I have, of course, nothing to say; but in so far as the healing art is concerned, first as to education, then as to practice, and finally as to the results manifested in the public health, the occasion is interesting enough to suggest a few comments. There is no doubt that the conversion of Rome from the capital of the Church into the capital of the "fifth great European Power" has given an impetus to the modern life in the city long immersed in mediæval tradition. The hospitals have become enlarged; their appointments, though still far short of an ideal standard, have been improved; their *personnel* has been increased, and the beginnings at least of a model institution of the kind for the rest of Italy have been made in the Policlinico. Concurrently with this the teaching in the University—theoretical, practical, and clinical—has taken a signal start for the better, thanks to the addition to its staff of such men as the late Professor Moleschott, whose agnosticism and thorough-going adhesion to the evolutionary principle had made him a "persona" far from "grata" to the old *régime*. Further, the necessity of making the new capital as healthy as the influx of population and the residence of royalty and Government demanded, has inspired a more exemplary "nettezza publica" (external tidiness) than prevailed previously, while it has led to the partial reclamation of the outlying Campagna, and the consequent diminution of the "intoxication tellurique" (to use Dr. Léon Colin's happy phrase), which is the proximal cause of malaria. All these are gratifying results of the revolution now being enthusiastically commemorated by "Young Italy"; but there is a reverse side to the picture. Only a quarter of a century divides the old from the new Rome, and there has hardly been time for the modern city to rise to an adequate appreciation and fulfilment of the duties it has assumed. The building operations have been conducted with more haste than prudence, and the interests of the speculator and jerry builder have overborne those of the sanitarian. The water-supply is neither as abundant nor so pure as it was before 1870, with the result that typhoid fever, till then unknown, is now all too familiar to the practising physician. The rapid increase of population has brought with it the "great sins of great cities," and the misery and deterioration of the lower orders is, as usual, manifested most painfully in the very young. Last Christmas his Excellency Dr. Baccelli, on an official visit to the new quarter at San Lorenzo, was shocked to witness the squalor, the indications of premature vice and crime, together with all the saddening prospects the spectacle implies, that met him at every turn. In conjunction with another statesman the ex-minister Finali has set himself at once to devise and carry out measures for the rescue and rehabilitation of the tender youth of the city, and his efforts have been seconded with a zeal and liberality that are of the best augury for his truly philanthropic and patriotic scheme. "We have made Italy, now we have to make Italians" is hardly less true to-day than when Dr. Azeglio uttered the memorable saying a generation ago, insomuch that the commemoration of the crowning act of the nation's unity, now in full progress, could not take a better form than a reinforcement of Dr. Baccelli's humanitarian endeavour and its extended application to all the cities and communes of the kingdom—to all the places, and their name is legion, in which Italy is already paying the penalty of increased responsibilities and hardness of living—a penalty seriously impairing her present and darkening her outlook for the future.

The Croce Rossa Italiana and the Autumn Manœuvres.

By common consent the intervention of the Italian Red Cross at the recent manœuvres was one of the most gratifying features of those exceptionally brilliant evolutions. Invited by the War Minister, the Central Association sent, at its own expense, a fully equipped hospital of 100 beds, which, under the direction of Captain Giacomo Crespi, M.D., the physician-in-chief, took up successive positions at Cittaducale, Madonna della Strada, and Aquila. During the sixteen days of its active service the hospital admitted 130 soldiers, the majority of whom suffered from medical rather than from surgical lesions. Every department of the hospital was brought into play, so that, besides the medico-chirurgical service proper, the pharmacy, the *contabilità* (or whole book-keeping function of the Red Cross), the stores of linen and other necessaries, the kitchen, and every detail apt to be put *en évidence* in a campaign, were all in full exercise from day

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to day. At Aquila His Majesty King Humbert paid the hospital a special visit. For more than an hour he made a minute inspection of every branch of the service, and on taking leave expressed his high satisfaction with the efficiency he had witnessed. His Excellency Signor Mocenni, the Minister of War, as well as the Director-General of the manœuvres, the foreign military representatives, and the general officers present at Aquila, also visited the hospital and put on record their sense of the completeness, promptitude, and effect manifested in the service as a whole. In fact, Count Della Somaglia, the president of the Italian Red Cross, received from the War Minister a telegram, which I am authorised to give textually: "The officers and *personnel* of the Red Cross were of signal service during the grand manœuvres, and to you I express my fullest sense of satisfaction. The scientific knowledge and practical skill of the effective *personnel* were alike admirable.—The War Minister, MOCENNI."

Sept. 17th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Dominion Medical Association.

WHAT the British Medical Association is to Great Britain the Dominion Medical Association is to the profession of this colony; and whilst its gatherings are not as large, perhaps, as those of the Ontario Association, which has met for some years past annually in Toronto, yet the influence of the former association must be of greater benefit to the profession at large. The interchange of ideas which happens at the annual gathering of representative men from the Atlantic to the Pacific will in the near future result in a levelling of those barriers erected by prejudicial legislation which prevent the interprovincial exchange of diplomas and act as a deterrent to the settlement of graduates of one province in any of the other geographical divisions of our Dominion—a fact which is to be greatly deplored when we have a population equal in number only to that of London and scattered over such a vast extent of country. It is, however, in regard to the effect of these annual meetings in various portions of Canada upon the raising of the professional standard and presenting to the medical world the crystals of our professional thought that I would refer, and to this end I take pleasure in presenting a brief account of the recent session held in the city of Kingston. This, the twenty-eighth annual convention, was presided over by Dr. W. Bayard, St. John's, New Brunswick, who delivered the Presidential address at the afternoon session, held on Aug. 28th. It comprised a review of the advancement of medicine in this country, and a demand that better recognition should be given by the public and the State to the members of our profession, that the salaries of those in State institutions should be commensurate with the duties, and that local boards of health should possess medical members. Speaking of the effects of alcohol, he affirmed that prohibition was not a success, and favoured the establishment by the Government of inebriate asylums, the maintenance being obtained from the revenue at present derived from the licence. Our much-lauded educational system was referred to, and the caution given that the same should not be pressed to the sacrifice of health, which, I fear, alas, is too often the tendency at present. In moving the adoption of the address Sir James Grant (Ottawa) claimed that the general standard of education in this country was too high for ordinary avocations, and he thought that common-sense was educated out of people. The Address in Surgery was delivered by Dr. J. H. Cameron, Professor of Clinical Surgery, Toronto, whilst that in Medicine was given by Dr. Farrell (Halifax, N.S.). Dr. Buller's (Montreal, P.Q.) paper on Removal of Membrana Tympani and Ossicles (illustrated) was a most interesting one. Dr. B. C. McKenzie's paper on Physical Training and Development as a Therapeutic Measure was discussed at some length by Drs. L. A. and R. H. Sayre (New York) and Sir W. Hingston and Dr. Roddick (Montreal), as also was the paper of Dr. A. Lapthorn Smith (Montreal), on What is the Best Treatment for Retroversion of the Uterus. Dr. A. J. McCosh (New York) discussed at some length the Operative Treatment of Injuries of the Head. Perhaps one of the most instructive features of the meeting was the skin [illegible] taken part in by Dr. L. Duncan Bulkeley and Dr. Robinson (New York), Dr. Graham (Toronto), and Dr. Shepard (Montreal). Of the business dealt with by the Association the most important was that relating to interprovincial registration. The report of the committee, as presented by Dr. Roddick (Montreal), was as follows:—

"The committee appointed at the last meeting of the association to look into the question of inter-provincial registration, composed of the following—Sir James Grant, Dr. Cameron, and Dr. Pyne (from Ontario); Sir William Hingston, Dr. Roddick, Dr. Marciel, Dr. Beausoliel, Dr. Cholette, and Dr. Parke (from Quebec); Dr. Christie and Dr. White (from New Brunswick); Dr. Farrell and Dr. Muir (from Nova Scotia); and Dr. Warburton (from Prince Edward Island)—would beg leave to express regret that by the system which at present obtains a graduate in medicine entitled to practise in one province is not free to exercise his functions in all the provinces of this large and sparsely settled Dominion; that this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners, a boon which the Council of the Medical Association of Great Britain (*sic*) has more than once signified its willingness to grant; with the end in view that it is, therefore, considered most desirable that a uniform standard of matriculation, a uniform standard of education, and a uniform standard of examination for the whole Dominion be established in order to effect this purpose."

Dr. James Thorburn (Toronto) was elected president for 1896. The Association was received by the citizens of Kingston in a most hospitable manner, the trip to the far-famed Thousand Islands being, perhaps, the most enjoyable feature of the entertainments.

New Official Medical Organ.

For some little time past the official journal of the Medical Councils of Ontario, British Columbia, and North-west Territory has been the *Ontario Medical Journal;* in July last it became absorbed by the *Dominion Medical Monthly*, the new journal being published under the two names jointly. There is little room for congratulation on the appearance, journalistic and otherwise, of this outcome of amalgamation.

Medical Council of Ontario.

The late meeting of the Council calls for little comment, except that the proceedings have been wordy, and therefore prolonged beyond their usual length. The Council, which for the past three years has not exacted the annual fee of two dollars from practitioners, has found itself compelled to enforce the payment this year and to call upon the members for the arrears of those years. This will, I fear, meet with opposition from many of the members. I cannot help feeling that the Council should impose a fee of sufficient amount upon first registration, and put an end to this vexatious system of requiring two dollars yearly.

Sept. 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical Practice in Victoria.

AT the last meeting of the Victorian Branch of the British Medical Association Dr. W. L. Mullen read a paper in which he reviewed the position of the profession in the Colony of Victoria. Up to about ten years ago the colony was a most excellent field for medical practice. A practitioner had simply to start in a suburban or country district and keep himself respectable, and successful practice came to him. It was quite a usual thing to make an income of £1500 per annum after a couple of years' practice. Now all is altered, and from a twofold cause—the general depression of trade and the fact that the rate of increase of medical practitioners is about ten times greater than the rate of increase of the population. During the last ten years there has been a steady diminution in the remuneration of medical work of all kinds. The rate allowed by lodges has been reduced, the salaries of resident medical officers in public institutions has been lowered almost to nothing, fees have fallen, and private practice has been diminished by the competition of the sixpenny dispensaries and the abuse of hospitals. These sixpenny dispensaries are comparatively a new institution in the colony, are largely on the increase, and are becoming a serious evil. They are the private property of the practitioner, who employs a paid agent to tout for patients and collect the fees. The members join when they like and leave when they like; they regard the medical man as a mere tradesman and as their paid servant, out of whom they must get as much as possible for their money. The medical man, on the other hand, gives as little as possible, and the practice is apt to be carried on in a perfunctory and even jeopardous manner. The lodges also are introducing a system of combining in a district and employing a

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practitioner who is to be allowed lodge patients and nothing else at a fixed income. Dr. Mullen expresses the opinion that the downward tendency in the profession will continue, and hazards the guess that while individual excellence will enable a few men to maintain a high standard of remuneration, the average practitioner, after paying the expenses of carrying on his profession, cannot expect to have more than a taxable income of from £300 to £600 per annum for his private and family maintenance, and that the less amount will be the more general. It is desirable that these facts about medical practice in the colony should be well known in Great Britain, that practitioners there may know what to expect if they come here to further overcrowd the profession in a country where the ratio of medical men to population is as high, and the struggle for existence as keen, as anywhere in the world.

Irregular Medical Practice in New South Wales.

A somewhat remarkable communication was recently laid on the table of the Legislative Council of New South Wales, relating in much detail the methods adopted by certain quack establishments in Sidney. It appears that the business was really conducted by a layman, a shrewd American, who lived in luxury on the proceeds. With him was associated a medical man, who practically simply lent his name and saw a few patients. The greater part of the business was done by correspondence, the extent of which was such as to keep eleven clerks continuously employed in copying stereotyped letters, and the communication is evidently made by someone who has been a clerk in the establishment. The business was very extensively advertised and a book was also circulated. The advertisements and the book induced sufferers, real and imaginary, to write for further information and for cure for £1 as advertised, but in so doing they generally made confidential statements which they would not like made public, and which prevented exposure when they subsequently found they had been duped. They were then told by another stereotyped letter that their case was very serious and required prolonged treatment at exorbitant rates, and subsequently they received further stereotyped letters with directions for treatment and diet. The letters are all given in the communication, the whole of which is further evidence of the extreme gullibility of the public.

Snakebite.

The difference of opinion which exists in the colonies as to the efficacy of the various methods advocated for the treatment of snakebite probably arises from the want of scientific accuracy in observing and recording cases. A paper on this subject in the July number of the *Australasian Medical Gazette*, by Dr. W. C. C. Macdonald, shows very clearly how easily mistakes may be made. He points out that in very few of the recorded cases is the snake that is supposed to have bitten the patient scientifically identified, and yet harmless and venomous snakes are constantly confounded by the general public. Another important point absent from a large number of reports of cases is a description of the appearance of the bitten part, although Dr. Macdonald states that it has been abundantly proved in his own experience that a poisonous snake may inflict a bite from which no dangerous results will ensue. In order that it may inflict a fatal bite the snake must deliberately seize the part with both jaws and hold on for a definite period, and accordingly will leave marks of the teeth of the lower jaw. The part also presents a chewed appearance and is distinctly œdematous and often ecchymosed, while there is a continuous weeping from the fang punctures. Dr. Macdonald records several illustrative cases in support of his statements, and says that during the last eleven years he has seen over sixty cases of bites from various kinds of snakes, and of these only six died. Eight exhibited signs of poisoning but recovered; the rest were either incomplete bites or bites from non-venomous snakes. Three cases are recorded in detail when the snakes were fully identified, the marks of a complete bite characteristic, and the patients died in spite of repeated injections of strychnine. He concludes that strychnine is useless when a lethal dose of snake poison has been injected, and he has noticed nothing in its effects, such as strengthening of the pulse, that could not be produced by other and less dangerous stimulants. There is a distinct tolerance of strychnine by a snake-poisoned patient, and there is danger if a person has been bitten by a non-venomous snake, and is indiscriminately and largely dosed with strychnine, that dangerous and even fatal results might follow from the drug. Dr. Macdonald is of opinion that if ligature was promptly applied, other parts scarified and vigorously sucked, no symptoms dangerous to life will follow the bite of Australian snakes.

Deaths in the Profession.

By the death of Paul Howard MacGillivray, M.A., LL.D., M.R.C.S., F.L.S., the profession in Victoria has lost one of its most scientific members. He was the son of Dr. MacGillivray, at one time Professor of Natural History in Marischal College, Aberdeen, and afterwards Curator of the Museum of the Royal College of Surgeons, Edinburgh. He thus early acquired an interest in science, which he retained to the last, his researches on Polyzoa being well known. Force of circumstance drove him into the medical profession to earn his livelihood, and he has been associated with Bendigo as its leading surgeon for nearly forty years. He was a very modest, retiring man, most scrupulously honourable in all his actions, and enjoyed the complete confidence of his professional brethren. Besides his contributions to natural science he wrote many papers on medical subjects, and was among the first in Australia to study the subject of hydatid disease. In 1874 Mr. MacGillivray was elected President of the Medical Society of Victoria, and four years ago the University of Aberdeen conferred upon him the honorary degree of LL.D., a distinction his father had received fifty years before.

The death of Louis Ralston Huxtable, M.B. Edin., of College-street, Sydney, at the early age of thirty-nine, carries a sad shock to his many friends and admirers. Dr. Huxtable had just reached a high position in his profession. He was honorary physician to the Sydney Hospital, to the Sick Children's Hospital, and to the Walker Convalescent Home. For the last three years he had been honorary secretary to the New South Wales Branch of the British Medical Association, and was mainly instrumental in bringing about the arrangements for making the *Australasian Medical Gazette* the property and organ of the Branch. Dr. Huxtable was attacked by diphtheria, at first apparently not very severely. Antitoxin was injected, and he appeared to improve, but pneumonia set in and proved rapidly fatal. He will be much missed in Sydney. He was a man of charming manner and address, well read, both medically and generally, and he took a most enthusiastic interest in promoting the welfare of the profession.

Obituary.

JOHN MAKINSON FOX, M.R.C.S., L.S.A.

MUCH regret is felt at the death of Mr. John Makinson Fox, the late medical officer of health for Mid-Cheshire. He had been out of health for some time, and died a few days ago from pneumonia. He was in his sixty-fourth year, and had held his last appointment for nearly eighteen years. Previously to this he was medical officer for the Cockermouth combined sanitary district. He did much to improve the sanitary condition of Mid-Cheshire, where, indeed, much improvement was needed. New sewage schemes have been introduced, improved water-supplies obtained, and better provision made for the burial of the dead. He was a man of kindly, generous disposition, somewhat impulsive in speech and energetic in action, and earnest in his endeavours to promote public health. Having the gift of picturesque language, he often used it freely in condemnation of the sanitary misdeeds of neighbouring authorities, and especially in the case of Manchester and the Ship Canal. But notwithstanding all this and the slight dash of eccentricity which marked his numerous letters to the papers, he was much liked personally, and his influence was most beneficial to the district under his supervision, where his genial presence will be greatly missed. It may be added that he was a great lover and a good judge of pictures, and a musician of considerable attainments.

LITERARY INTELLIGENCE. — Messrs. Sampson Low, Marston, and Company will shortly publish the first and second volumes of the "Twentieth Century Practice," being an international encyclopædia of modern medical science by the leading authorities of Europe and America. This work will be completed in twenty volumes, and will be edited by Thomas L. Stedman, M.D., of New York City.

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Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE. The following candidates have passed the examination for degrees in Medicine and Surgery at the College of Medicine, Newcastle-upon-Tyne, being the first examination for the degree of Bachelor in Medicine:—

1. *Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.*—Andrew Adams Bolton and James William Hugh Boyd, College of Medicine, Newcastle-upon-Tyne; John Scott, Middlesex Hospital; and Reginald Percy Richardson, Westminster Hospital.
2. *Chemistry with Chemical Physics.*—Edwin Gilbert Emerson Arnold, M.R.C.S., L.R.C.P., St. Thomas's Hospital; Ernest Castleigh Bailey, King's College Hospital; and Thomas Streatfeild, M.R.C.S., L.R.C.P., University College Hospital, London.
3. *Chemistry with Chemical Physics, and Botany with Medical Botany.*—John Henry Martin, College of Medicine, Newcastle-upon-Tyne.

The following candidates have satisfied the examiners under the new regulations:—

1. *Elementary Anatomy and Biology, Chemistry, and Physics.*—*Honours, First Class:* James Milligan, College of Medicine, Newcastle-upon-Tyne. *Honours, Second Class:* Edward Gofton, James Muirhead, Norman Christian Bailes, Norcliffe Roberts, and Harold Ben Fawcus, College of Medicine, Newcastle-upon-Tyne; William Sisam, Mason College, Birmingham; and John Tyrer Johnson, College of Medicine, Newcastle-upon-Tyne. *Pass List:* George Oswald Morrell Dickenson, Richard Henderson Garbutt, William John Harrison, and Charles Thomas Holmes, College of Medicine, Newcastle upon-Tyne; and William Johnston Symes, Sheffield School of Medicine.
2. *—Elementary Anatomy and Biology.*—Laurence James Blandford and Clifford Harold Brookes, College of Medicine, Newcastle-upon-Tyne; Edleton Harvey Cooke, St. Thomas's Hospital; Joseph James French, Arthur Hines, Eliot Swainston, and Thomas Blandford Watson, College of Medicine, Newcastle-upon-Tyne.
3. *—Chemistry and Physics.*—John Rutherford Halliday, London Hospital; Ernest Inman, College of Medicine, Newcastle-upon-Tyne; Ralph Albert Rogers Lankester, University College, London; John Macfadyen, College of Medicine, Newcastle-upon-Tyne; Robert Fletcher Moorshead, Bristol Medical School; Archibald Cameron Ney, Guy Brougham Picton, John Ernest Sidgwick, and David Henderson Weir, College of Medicine, Newcastle-upon-Tyne.
4. *—Physics.*—Allan Mackie Garnock Walker, College of Medicine, Newcastle-upon-Tyne.
5. *—Elementary Anatomy, Chemistry, and Physics.*—Ralph Harry Vincent, St. Bartholomew's Hospital.

THE Chair of Pathology in the Faculty of the Jefferson Medical College in Philadelphia is vacant.

THE salary of Mr. Stanley Kirton as medical officer for Leigh has recently been raised by the guardians of the Rochford Union from £15 to £25 a year. He has also received the Local Government Board's award for successful vaccination.

THE NANSEN EXPEDITION.—A feeling of hopeful expectancy has been aroused, especially among those interested in Arctic exploration, by the intelligence that Dr. Nansen's vessel, the *Fram*, may perhaps be making her way back to civilisation. The news comes from a Danish trading station in Greenland, where it has been reported that a three-masted ship corresponding to her description was seen by Eskimos last July firmly embedded in drift ice and somewhat to the southward of 66° N. latitude. Dr. Nansen's brother has thereupon published a letter stating that the explorer, when setting out in July, 1893, was of opinion that he could not return in less than three years. As this limit approaches, the public anxiety with regard to the fate of the expedition will not be confined to Norway, but will be general throughout Europe and America.

BEQUESTS TO HOSPITALS.—The late Mr. Thomas Chatfield Clarke, President of the Surveyors' Institute, has bequeathed £200 to the University College Hospital, London, and £100 to the Royal Isle of Wight Infirmary, Ryde, Isle of Wight.—The late Mr. John Alexander, of the firm of Messrs. Wm. Baird and Co., has bequeathed £30,000 to Coatbridge for the purpose of erecting a hospital there.—Mr. D. Sheriff Jackson, formerly of Bowden, has bequeathed £5000 to the Hospital for Incurables, Mauldeth Hall, Manchester.—Mr. Joseph Huntley, late of Kendrick-road, Reading, has bequeathed £500 to the Hospital, Reading, and £200 each to the Reading Dispensary, the London Temperance Hospital, and the North-Eastern Hospital for Sick Children, London.—The late Sir Joseph D. Weston of Clifton-road, Bristol, has bequeathed £500 each to the Bristol Royal Infirmary and the Bristol General Hospital, £250 to the Children's Hospital, St. Michael's-hill, Bristol, and £50 to the Bristol Eye Hospital.

THE PECULIAR PEOPLE.—Eccentric beliefs and observances have a remarkable faculty of survival even when they are confined to isolated individuals. If they happen to be such that their votaries may now and then take concerted action and make public display of their fatuity the unreasoning sympathies of sensation-seekers are easily enlisted in favour of a movement supported by the seeming force of numbers and enthusiasm. The strange sect which calls itself the Peculiar People realises these conditions to some extent, and has just been acquiring a transient local prominence in connexion with its annual harvest thanksgiving celebrations. These visionaries, who affect certain peculiarities of costume and demeanour, are found chiefly in the east of London and in the county of Essex, and are known to the general public mainly by their objection to medical treatment in sickness and by their implicit confidence in "faith-healing," aided by the "laying on of hands." The thanksgiving ceremonies have been well attended by excursionists, whose presence has enabled the proceedings to be carried out on an extensive scale by "Elder" Tansley's party at Chelmsford and "Bishop" Harrod's adherents at Southend. The observances and even the prejudices of a pietist community deserve respect when they are inoffensive and have the additional merit of sincerity, but it is impossible to avoid condemning a system which inflicts needless hardships on helpless sufferers and endangers a crowded neighbourhood by performing fanciful exercises over infectious cases which ought to be treated in an infectious hospital.

THE BRITISH ASSOCIATION.—A paper on the National Value of Organised Labour and Coöperation amongst Women was read on Tuesday, at Ipswich, before the Economic Section of the British Association, by Mrs. Bedford Fenwick. She quoted statistics to show the large and increasing extent to which women are now engaged in every department of labour, and pointed out that hitherto they had not attempted to any marked degree to combine and coöperate amongst themselves. She showed that the results which had been achieved by the Royal British Nurses' Association illustrated how valuable such combinations amongst women would be, not only for the individual assistance of the workers, but also for the general improvement of their methods of technical education and work. She considered the non-formation or the non-success of women's societies was largely due to the want of a central and controlling organisation, and showed how such a body could assist in the development of many industries amongst women which are at present greatly neglected. She ascribed much of the present agricultural depression to the diminished part now taken by women in dairy farming, poultry rearing, and other farm employments, and showed that for such produce alone this country last month paid more than two millions sterling to foreign nations. She pointed out the incalculable value of the home work performed by women, and quoted figures and calculations to show that an improved knowledge of dietetic, domestic, and hygienic matters amongst the women of the industrial classes would effect a national economy of at least £50,000,000 sterling per annum. Mrs. Bedford Fenwick described the constitution of a national council of women which is now being formed for the United Kingdom, with similar objects to those which national councils of women have been organised to undertake in the United States and in other countries. The council is to be divided into four main divisions—industrial, social, political, and professional—each division being constituted of a number of sections, and each section being composed of representatives of societies engaged in its special department of work.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information, suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AIKEN, A., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Maguiresbridge Dispensary District of the Lisnaskea Union.

BATTLE, E. WHARMBY, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

COBY, G. C., M.R.C.S. Eng., has been appointed a Government Medical Officer and Vaccinator for the district of Bingara, New South Wales.

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CRAN, R. D., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

EMBLING, H.A., M.B., Ch.B. Melb., L.F.P.S. Glas., L.R.C.P. Edin., has been appointed Surgeon-Major on the Victorian Militia Medical Staff, Victoria, Australia.

FARMER, P.W., M.B. Melb., has been appointed Honorary Anæsthetist to the Melbourne Women's Hospital, Victoria, Australia.

HALL, J. P., M.B., Ch.B.Vict., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

HILLIER, R. J., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon to the West Ham Hospital, vice S. R. Blake, resigned.

HISLOP, PATRICK W., M.B., M.S. Edin., has been appointed a Public Vaccinator for the district of Geraldine, New Zealand.

HISLOP, WALTER, M.B. New Zeal., has been appointed a Public Vaccinator for the district of Lower Hutt, New Zealand.

HODGES, G., M.B., M.S. Edin., has been appointed a Public Vaccinator for the district of Manuherikia, New Zealand.

JAMIESON, SYDNEY, M.B., Ch.M. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Pathologist to the Hospital for Sick Children, Glebe, New South Wales.

KELLY, C. BRUCE, M.B. and M.C. Edin., has been appointed Senior House Surgeon to the Cumberland Infirmary, Carlisle.

KERING, J. D., M.D., M.Ch. Irel., has been appointed Medical Officer for the Treeton Sanitary District of the Rotherham Union.

LYNCH, A. F. A., M.B., Ch.B. Adel., has been appointed a Public Vaccinator for Moonta, South Australia.

MACDONNELL, L. G. A., M.B., B.Ch. Dubl., has been appointed Surgeon to the Hospital at Herberton, Queensland.

MCLEOD, C. G., M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Ophthalmic Surgeon, to the Hospital for Sick Children, Glebe, New South Wales.

MONK, H. G. H., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Leicester, vice Priestley, resigned.

MOORE, F. C., M.Sc., M.B., Ch.B. Vict., has been appointed House Surgeon to the Manchester Royal Infirmary.

MUIR, I. M. M., M.B., Ch.M. Glasg., has been appointed Health Officer for Wynyard, Tasmania.

NUNES H.F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Clun Sanitary District of the Clun Union.

PINNIFER, WALTER A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Brighton Provident Dispensary, vice Humphreys, resigned.

SAMSON, HENRY A., M.B., Ch.B. Melb., has been appointed Medical Superintendent at the Ballarat Lunatic Asylum, Victoria, Australia.

SCANLAN, CHAS. E. F., M.B., Ch.M. Glasg., has been appointed a Public Vaccinator for the District of Lower Hutt, New Zealand.

SCOTT, JOHN M., M.B. Melb., has been appointed a Health Officer for the Shire of Meredith, Victoria, Australia.

SHARMAN, MARK, M.B. Glasg., M.R.C.S. Eng., has been appointed Divisional Surgeon to the Herts County Constabulary.

SHARPLES, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Castleton District Council.

SHUTER, RICHARD E., M.B., Ch.B. Melb., has been appointed a Public Vaccinator at Port Augusta, South Australia.

SOUTHEY, A. J., M.R.C.S., has been appointed Medical Officer by the Slough Urban District Council.

STEEN, R. N., M.B. Lond., has been appointed House Physician to St. Mary's Hospital, W.

STEPHENS, SAML., M.R.C.S. Eng., has been appointed a Government Medical Officer and Vaccinator for the district of Walcha, New South Wales.

STEWART, JOHN, L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Health Officer for the Walhalla Shire, Victoria, Australia.

SWAINSON, J. A., B.A. Cantab., L.R.C.P., L.R.C.S. Edin., L.F.P.S.G., L.M., has been appointed House Surgeon to the Hulme Dispensary, Manchester.

TAGGART, J. SCOTT, M.B., Ch.B. Vict., has been appointed House Physician to the Manchester Royal Infirmary.

TUXFORD, A., M.D. Edin., has been appointed Medical Officer of Health for the Boston Rural and Urban Districts, and Port, vice Clegg.

WARRINGTON, R. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Manchester Royal Infirmary.

WESTBROOK, CHAS., M.D. St. And., L.R.C.P. Irel., has been appointed Deputy Coroner for the Retford District.

WHITTOW, JAS., M.D., L.M. Irel., L.R.C.S. Edin., has been appointed a Public Vaccinator for the district of Oamaru, Otago, New Zealand.

WOOLLRIGHT, A. PHILLIP, L.S.A. Lond., has been appointed Junior House Surgeon to the West Ham Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, London, S.W.—House Surgeon. Board, fuel, and lights provided.

BRIGHTON THROAT AND EAR HOSPITAL, Queen's-road, Brighton.—Non-resident House Surgeon. Salary at the rate of £52 per annum.

CARNARVONSHIRE JOINT SANITARY COMMITTEE.—Medical Officer of Health for five years. Salary £694 per annum.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Junior House Surgeon, unmarried. Honorarium, £40 per annum, with board, lodging, and washing.

COUNTY BOROUGH OF NEWPORT.—Medical Officer of Health for the Borough and the Port Sanitary District for five years. The salaries amount together to £350. Applications to the Town Clerk.

DURHAM COUNTY ASYLUM.—Junior Medical Officer. Salary £100 per annum, with board and lodging. Applications to the Superintendent, Winterton, Ferryhill.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £100 a year, with board and lodging. Applications to the Hon. Sec., 16, South Bailey, Durham.

ESSEX AND COLCHESTER HOSPITAL.—House Surgeon, single or widower without family. Salary, £80 per annum, with board and lodging in the hospital. Applications to the Secretary.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Assistant Resident Medical Officer. Salary £120 per annum.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Board, lodging, and washing provided.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence and laundry provided.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Resident Medical Officer (House Physician) for six months. Board, residence, and washing provided.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Two extra Honorary Physicians for the Dispensary. A Pathologist. Honorarium, £20 per annum. An Assistant House Surgeon. Salary, £30, with board and washing. Assistant (non-resident) at Dispensary. Honorarium, £20.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary, £80 per annum, with board, lodging, and washing.

Births, Marriages and Deaths.

BIRTHS.

ALSTON.—On Sept. 11th, at Ardmore, Isleworth, the residence of her father, the wife of W. Evelyn Alston, B.A., M.B., B.C. Cantab., of a daughter.

BATTISCOMBE.—On Sept. 15th, at Sandlings, St. Mary Cray, Kent, the wife of C. G. Battiscombe, M.B., C.M. Aberd., of a daughter.

CASE.—On Sept. 10th, at Denmark House, Caister-on-Sea, Norfolk, the wife of William Case, M.R.C.S.E., late of 34, Westbourne-road, London, N., of a son.

CATTELL.—On Sept. 17th, at Hereford-square, South Kensington, the wife of George Trew Cattell, L.R.C.P. Lond., M.R.C.S., of a daughter.

GOURLAY.—On Sept. 13th, at Kincraig, Southend-on-Sea, the wife of Frederick Gourlay, M.D. Edin., of a son.

LONG.—On Sept. 9th, at Greenodd, Ulverston, Lancashire, the wife of Frank T. Long, M.R.C.S., L.R.C.P., of a son.

MARSDEN.—On Sept. 16th, at Burscough-street, Ormskirk, the wife of H. H. Marsden, L.K.Q.C.P. Irel., M.R.C.S., of a daughter.

TATE.—On Aug. 24th, 1895, at Simla, the wife of Surgeon-Major Alan E. Tate, Army Medical Staff, of a son.

MARRIAGES.

BROOKS—CHURCHILL.—On Sept. 18th, at Central Hall, Wimbledon, Jabez Pratt Brooks, M.R.C.S., L.S.A., of Queen-street, Wolverhampton, second son of R. W. T. Brooks, M.R.C.S., L.S.A., of Tollington-park, London, to Edith, second daughter of John Churchill, of Westfield, The Downs, Wimbledon.

CARDEW—MOORE.—On Sept. 11th, at St. Margaret's, Lee, H. Boyd Cardew, M.R.C.S., L.R.C.P. Lond., elder son of Major-General H. Cardew, late R.A., of Lee Park, Blackheath, to Agnes, third daughter of Mr. T. Moore, F.R.C.S., of Lee-terrace, Blackheath.

COVEY—STANTON.—On Sept 18th, at Holy Trinity Church, Millbrook, Southampton, by the Rev. Studholme Wilson, Rector of the parish, assisted by the Rev. T. W. H. Jacob, Vicar of Shirley, Edward Alan Rustat, eldest son of Charles Edward Covey, Esq., of the Lindens, Alresford, Hants, to Milborough Christiana, only child of T. Harrison Stanton, Esq., of Newlands, Millbrook, Southampton, and of Philips Heath, Stockbridge, Hants.

DONALDSON—HARRISON.—On Sept. 17th, at St. Michael and All Angles', North Kensington, Tom Campbell Donaldson, M.D., of Harlington, Middlesex, to Kathleen Emma, elder daughter of H. A. Harrison, Esq., J. P., of Doghurst, Hounslow.

ELLIS—MANDERS.—On Sept. 11th, at St. Saviour's, Tor, Torquay, Surgeon-Major Philip Mackay Ellis, fourth son of the late John Ellis, of Chudleigh, to Gertrude Septima, third daughter of the late Major Manders, formerly of the 6th Dragoon Guards (Carabineers).

HARRIS—HOWE.—On Sept. 11th, at St. John's Church, Monkstown, by the Rev. S. Howe (brother of the bride), assisted by the Rev. H. Hawkins, William James Harris, M.B., M.A., F.R.C.S., of Shaftesbury, Dorset, to Kathleen Emily, eldest daughter of the late Lieut.-Colonel Wm. Howe, of Monkstown, County Cork

LUCAS—PELLY.—On Sept. 17th, at St. Mildred's, Lee, Kent, Richard Clement Lucas, B.S., M.B., F.R.C.S., of 50, Wimpole-street, W., and of Oaklands, Midhurst, Sussex, to Kathleen, younger daughter of the late Surgeon-General Saville M. Pelly, C.B.

SIMPSON—SHARPE.—On Sept. 11th, at St. John's, Richmond, Surrey, Alexander Simpson, M.D. Aberd., of Whittingham, Preston, to Alice, youngest daughter of the late John Sharpe, of Barnes, Surrey.

SPENCER—MYLIUS.—On Sept. 12th, at the parish church, Hampstead, Matthew Henry Spencer, M.A., M.D. Cantab., of Maxilla-gardens, North Kensington, W., to Augusta Fanny Mylius, younger daughter of the late Rev. Frederick Henry Mylius, Rector of Eldon, Warwickshire.

DEATHS.

FOX.—On Sept. 12th, of pneumonia, at his residence, The Grove, Lymm, Cheshire, John Makinson Fox, M.R.C.S., Medical Officer of Health for Mid Cheshire, aged sixty-three years.

WATERHOUSE.—On Sept. 18th, at Maltby Grange, near Rotherham, Yorks, Lucy Blanche, eldest daughter of John Hodgson Waterhouse, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

ANNOUNCEMENTS REGARDING MEDICAL MEN IN THE LAY PRESS.

OUR attention has been called by more than one correspondent to an announcement in the daily press of the return to London of a consulting physician (his full address being given) after the enjoyment of a holiday. It is also pointed out that in the same issue of a newspaper in which is the announcement in question the following notice appears: "All society and fashionable Paragraphs inserted in ———, except those relating to official incidents, will be charged at a minimum rate of one guinea for two lines; each succeeding line 10s. 6d. additional." We are not so uncharitable as to draw the same inference as does one correspondent, and prefer to look on the announcement as the cruel work of a perfervid and injudicious friend. But such paragraphs should be disclaimed; for if a medical man, be he a consultant or be he a general practitioner, permits his name thus to be published without protest, he serves, we venture to say, neither his own real interests nor those of the profession to which he belongs.

L. W. P. will find a list of the principal appointments held by medical men on page 20 of the Medical Directory. A letter to either of the Departments should bring him the information he requires.

FEES FOR NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—In a town in which the Notification of Diseases Act is in operation an out-door case of diphtheria is under the attendance of the house surgeon of the local infirmary. A consultation with one of the staff is requested and held. Subsequently, however, the case passes into the hands of another practitioner. All three medical men forward the usual certificate, but the local authorities have notified their intention to pay for one only. Can you refer to any legal decision bearing on such a case? I am, Sirs, yours truly,

Sept. 16th, 1895. Y. Z.

*** If our correspondent will refer to THE LANCET of May 4th, 1895, p. 1130, he will find the information he desires.—ED. L.

UNITED BROTHERS-IN-LAW AND MEDICAL ADVERTISEMENT.

ONE of the most curious customs of certain barbarous nations brought to light at the recent meeting of the British Association, and alluded to in another column, is known by the name of avoidance, and leads the mother-in-law and the son-in-law of a family to avoid each other. Very different is the case of the brothers-in-law in the paragraph below from the *Portsmouth Evening News*, which is so delicious in its mixture of family affection, church influence, and medical puffing that we give it in its entirety. We cannot say how far the dignity of Congregational churches will be advanced by such paragraphs, but they are certainly not in accordance with the dignity of the medical profession and call for Mr. Leadbeater's strong repudiation.

> "Dr. Thomas Leadbeater of Bethnal-green, who is about to take up his residence in East Southsea on account of the health of his family, is a brother-in-law of the Rev. J. Stockwell Watts, who has just accepted the pastorate of Victoria-road Congregational Church. The fact of their settling in Southsea at the same time is but a repetition of the previous coincidence of Dr. Leadbeater's commencing practice in Bethnal-green just at the time that Mr. Stockwell Watts entered upon his second pastorate in that district. Dr. Leadbeater, who had so successful a career at the London Hospital that he was pressed to become the house physician there, but declined, has since had considerable experience both as a private practitioner and at the North-West London Throat and Ear Hospital."

Messrs. Baillière, Tindall, and Cox.—With regard to the first part of their letter our correspondents are referred to THE LANCET of Aug. 24th, 1895, p. 510. The book has been received, and will be noticed in due time.

Naze.—Our correspondent's suggestion is, we think, unnecessary.

GUARDIANS AND MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—I shall be very glad of your opinion—or, if possible, an authoritative answer—to the following. About a fortnight ago I attended a man aged eighty-four years, a parish patient (I may say I am the district medical officer). The man was very ill, suffering from intestinal obstruction. He was living in one room by himself, with no one attending on him regularly. He had relatives (although he was a "parish" patient), who were fairly well-to-do, and who visited him during his illness, but stated that they could not attend to him. Under these circumstances I wrote an order to the overseers, stating that the man required a woman to go in and see after him. This order was not for a *nurse:* in the order I stated that a woman (named) had before "gone in and done for" him, and I recommended her re-engagement. The overseers (three) have lately been appointed, and for the first time. They refused to act on this order or recommendation; they waited five days, till the relieving officer visited the village, and then laid the matter before him. He told them that the only thing they could do was to order the man's removal to the union. As the patient was apparently dying this would have been impossible. Will you inform me whether the overseers are bound to act on my orders or not. One overseer tells me he will not act on my order in a like case should it occur again. I am perfectly willing to be held responsible by the guardians in a matter of this sort; but if overseers are to use their personal knowledge and feeling, it seems to me that it is useless for a medical officer to give any orders at all. The overseers based their reasons for refusal on the following grounds: (1) that they had no power to act in such a case, and (2) that the patient's relatives were able to pay for an attendant. I told the overseers that the second reason had nothing to do with themselves—that if the woman were supplied the guardians could afterwards order the relatives to refund the cost. The relieving officer lives five miles away, only visiting the village once a week. I may say that I intend writing to the guardians about the matter, but I would like to have your opinion before so doing. I am, Sirs, yours faithfully,

Sept. 14th, 1895. C. S. K.

*** It is at the discretion of the overseer (unless he gets an order from a justice of the peace) whether he acts or not, as in the absence of the relieving officer he may be held accountable for relief wrongly ordered. In the case under consideration the relieving officer ought to have been communicated with and an order for a nurse given or sent to him by the medical officer. We should not recommend writing to the guardians about the conduct of the overseer.—ED. L.

OBSTETRIC ENGAGEMENTS.

Vexed.—Our correspondent may be misinformed. He should assume the integrity of the engagement till the confinement happens. After that, and in the absence of any formal intimation to the contrary, he would have a claim for his fee.

Rheostat might obtain the desired information from one of the following firms.—Miller and Woods, Gray's-inn-road; Coxeter, Grafton-street, Gower-street; Schall, Wigmore-street.

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THE "REUNION" OF MEDICINE.

General Practitioner.—Our correspondent finds in the discussion on the Reunion of Christendom a suggestion that there is also schism in medicine needing to be healed. We recognise his liberal sentiment and we share it. But there are some reunions that would be greater evils than disunion. This is certainly so in Christendom, and not less clearly so in medicine. The homœopaths isolate themselves by adopting an exclusive theory of medicine, which, after a hundred years and in the broadest age of medicine, is as far off recognition as it ever was. It is permissible for a medical man to read homœopathic literature and attend homœopathic congresses, or to do anything he pleases to arrive at a knowledge of the system.

T. O. E.—The kind brevity of our correspondent's communication does slightly interfere with its clearness at one or two points; but we venture to make the following general answer to his inquiries. It is very awkward and, indeed, scarcely permissible during a vacancy and with an election pending to require radical alterations in the rules of an institution. Notice of such requirement should be given in the interval of elections and when no personal questions can be involved. The committee were at fault in not answering promptly A's inquiry. Still, we think it would have been better for A to have allowed the election to take its course. C acted with indecision, but with obvious sincerity. We think this answer covers all the inquiries of our correspondent.

Mr. P. E. Davies.—THE LANCET, Sept. 7th, 1895, p. 605. Univ. Brussels.

HUMANE BEARING-REIN.

To the Editors of THE LANCET.

SIRS,—As I have frequently noticed your expressions of opinion condemning the bearing-rein for horses, you will doubtless be glad to know that by a very simple modification of the old pattern perfect freedom of all neck movements of the horse has been obtained. This patent is one which has been used by me for some time, and consists partly of leather and partly of indiarubber, and gives sufficient support to keep the head up, at the same time allowing of all movements. For horses that cannot be driven without a bearing-rein this removes all objections. It can be obtained of the inventor, Mr. E. Pullen, Portland-road, Hove, Sussex. I am, Sirs, yours faithfully,

Sept. 18th, 1895. A HORSE'S FRIEND.

MEDICAL TESTIMONIALS OF QUACK REMEDIES.

IT seems incredible that registered medical men should give testimonials in favour of the wares of bone-setters and other quacks. The following cutting from the *Grimsby News* would seem to prove the contrary, but we are sure that Dr. Albert E. Curtis will be able to promptly repudiate the use of his name:—

> "Notice.—J. Bromfield, bone-setter, 54, Lister-street, Hull. The only manufacturer of 'Death to Suffering.' What the medical profession says: 'I have great pleasure in testifying to efficacious effect of "Death to Suffering." I have used it in several cases of chronic rheumatism and sprained joints with very great success, and I have no doubt that in cases of struma and other allied diseases it would be most beneficial; also for cyclists and athletes who are suffering from sprains and stiff joints.'—Dr. Albert E. Curtis, M.B., C.M., 95½, Waverley-street, Hull, Nov. 4th, 1893."

Horseflesh asks: "Could any reader of THE LANCET recommend a book on the more common defects in horses? Not one to do away with the services of the veterinary surgeon, but to enable one to pick out a horse that would be worth going before a veterinary surgeon."

PRACTICE IN SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—If any reader of THE LANCET would give some particulars about South African practice, and also say if there be a medical journal published there, and its name, he would much oblige,

Yours faithfully,

Sept. 18th, 1895. SCOT.

THE SURGICAL AID SOCIETY AND QUACK ADVERTISEMENTS.

A REMARKABLE advertisement is sent us from the advertising pages of the report of the Surgical Aid Society for 1894, setting forth the prodigious curative powers of "Odo-Magnetic Treatment," whatever that may be. Surely this is not a place for quack advertisements. We appeal to the Society and to its medical officers to refuse such means of adding to their funds.

Ahroustam.—If the person in question practises as an apothecary the Society of Apothecaries might prosecute, but if he does not assume any false title he is not committing any legal offence under the Medical Acts. He cannot, of course, if unqualified, recover for attendance.

MEDICAL ADVERTISING IN WEST HAM.

THE following is sent us as a specimen (alleged to be distributed wholesale) of medical advertising in West Ham. We appeal to Mr. Bringloe to consider whether such advertisements are likely to advance the respect of the public for the profession.

> "Dispensary, Clifton House, 90, Church-street, West Ham. Hours: Morning, 9 to 12; Evening, 6 to 9; Sundays, 9 to 12. Advice and Medicine, 6*d*. Visit (including Medicine), 1*s*. Midwifery and Vaccination. Dr. Bringloe, L.F.P.S.G., L.M."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 19th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 13	30·22	N.W.	57	53	101	65	51	...	Fine
,, 14	30·28	N.E.	52	50	82	67	50	...	Foggy
,, 15	30·29	W.	61	58	85	66	52	...	Bright
,, 16	30·31	S.W.	53	52	98	72	50	...	Foggy
,, 17	30·21	W.	54	53	103	73	52	...	Overcast
,, 18	30·06	S.W.	56	54	113	76	54	...	Cloudy
,, 19	30·11	S.W.	57	56	70	60	55	...	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Brighton Gazette, Halifax Guardian, Eastern Morning News, Dundee Courier, Midland Counties Express, Weekly Standard (Blackburn), Scotsman, Western Morning News, Kilburn Post, Bradford Observer, Walsall Advertiser, Northern Echo, Manchester Guardian, Irish Times, Bristol Mercury, City Press, Yorkshire Post, Brighton Herald, Leeds Mercury, Sanitary Record, The News, Liverpool Daily Post, Times of India, Builder, Pioneer Mail, Shipping Gazette, Architect, Galignani Messenger, Grimsby News, Bournemouth Visitors' Directory, Local Government Chronicle, Science Siftings, Mining Journal, Brixtonian, Reading Mercury, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Courrier de la Presse, Shrewsbury Chronicle, Hawick Express, Guy's Hospital Gazette, Local Government Journal, Surrey Advertiser, Montrose Review, Rochdale Observer, Rotherham Advertiser, Fife Herald, Craven Herald, South London Press, Swindon Advertiser, Le Temps, Somerset City Herald, Banffshire Advertiser, Grantham Journal, Citizen, Loughborough Examiner, Evening Telegraph (Dundee), &c., &c.*

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U.—The Unicorn, Lond.

W.—Dr. T. N. Wilson, Leicester; Mr. J. Walsh, Cromer; Mr. J. A. H. White, Darlington; Wayland, Lond.

Z.—Z., Lond.

Letters, each with enclosure, are also acknowledged from—

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E.—Eta, Lond.; Ergon, Lond.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials &c. sent to the Office in reply to advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

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A Clinical Lecture

ON

A CASE OF FOREIGN BODY IMPACTED FOR FORTY-SIX DAYS IN THE LEFT BRONCHUS; OPERATION; RECOVERY.[1]

BY JOHN H. MORGAN, F.R.C.S. ENG.,

SURGEON TO CHARING-CROSS HOSPITAL AND THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

GENTLEMEN,—Among the many casualties to which you may be summoned there is none which calls for more care, more thought or consideration, and often for more prompt and decided action, than the entrance of a foreign body into the air passages. Not only may the immediate consequences be dangerous and even fatal, but the subsequent and often remote contingencies may be of the gravest peril. The nature of the foreign body may have much to do with the results that follow its entrance into any part of the respiratory tract, and to enumerate a few of the many substances that have passed beyond the epiglottis and have been drawn downward in a sudden and ill-guarded inspiratory effort will be almost sufficient to illustrate some of the subsequent occurrences of such an accident. The more common amongst these are perhaps articles in the shape of food, which, being in the mouth, are drawn in by a strong and sudden inspiration while the epiglottis is off its guard, the glottis expanded and the larynx quiescent, such as portions of unmasticated food, plum and cherry stones, seeds, ears of grass, pieces of bone, &c. Teeth, artificial and natural, also have not infrequently been the cause of serious danger by becoming impacted in some portion of the tract, and other articles, such as shells, buttons, and pieces of money, which should not have been in the mouth at all, are usually drawn in during talking or laughing, or as the result of a sudden and unexpected blow or jerk which has caused the patient to gasp and thus draw the substance into the windpipe. Other articles, such as whistles, portions of trumpets, puff-darts, &c., have been drawn in by the inspiratory effort made preparatory to the expiratory one, which would produce sound from the former or effect the expulsion of the latter. Liquids, when bland and free from irritating properties, are often inhaled but are quickly and easily expelled; but blood or chloroform which may enter the trachea during operations may be followed by serious after results, the one by its coagulation in the bronchi and the other by its irritant properties. There are very many other articles which have been found to enter the air passages and give rise to trouble, but the enumeration that I have given will serve to illustrate what I wish you to regard. The consequences of such an accident will often call for such immediate action on your part that you have no time for other thought, but as often as not you may have to consider what will be the further changes in the nature of the substance or in what position it may possibly be arrested, either temporarily or permanently. For instance, portions of food, a pea, or a bean will be sure to swell, and thus become larger after a short sojourn in any part of the passage. On the other hand, a bullet or a shot, a bead or a coin, will not alter in consistence, but will by its weight fall to the lowest portion of the tube which its size will allow it to enter, and will not easily be induced to alter its position. Pieces of glass or china may by their angularity become fixed by penetrating to some extent the mucous membrane, or the point of a pin or needle or a puff-dart may pass through the trachea and cause ulceration of an important vessel. In many instances the foreign body, by completely obstructing the larynx or by setting up violent spasm, will cause almost immediate death; but in those cases where you have time to reflect you will have to consider, in the first place, whether there is a foreign body in the air passage at all, and, secondly, in what part of the tract it is lodged. With regard to the first question you must bear in mind that the substance may have entered the larynx and have been coughed up and ejected or even swallowed, although the irritation may continue and spasmodic cough may recur for some time afterwards. Again, it is not infrequent that substances, generally of the nature of food, so obstruct the pharynx or upper part of the œsophagus as to excite all the symptoms that would arise from their presence in the air passages, and the passing of a bougie down the œsophagus may be needed to determine this fact. Again, if the history is not distinct the symptoms may be due to an attack of acute laryngitis, or croup, or laryngismus, or the pressure of a tumour upon the recurrent laryngeal nerve. As regards the second question, you will be aided in your judgment of the probable situation in which the offending body may lie by an inspection of a duplicate. Thus, a pea or a cherry stone may by their lightness be carried up and down at each effort to cough, and at any moment may come into contact with the under surface of the vocal chords and excite a fatal spasm. Therefore, whenever possible obtain a duplicate, particularly if it should happen to be a gold coin, and consider the situation in which it is most likely to be arrested.

The symptoms which will make you suspect that there is really present in the air passages something in the nature of a foreign substance are violent and spasmodic cough, causing intense distress and a feeling of suffocation, more or less lividity of the face, and intense congestion of the veins of the neck. This may pass off and be succeeded by a period of ease of greater or less duration, to be succeeded again by the recurrent cough and dyspnœa. During this period you may have time to consider the positions in which the foreign body may most likely lie. In the larynx even large bodies, such as food or artificial teeth, may lie below the epiglottis, and after the first attack—which, however, is often fatal—may become impacted and allow time for further action. Smaller and lighter bodies may become fixed in the rima or ventricle of the larynx, where their pressure will generally be manifested by frequent attacks of spasm and by alteration of the voice, with a sense of discomfort and even of pain. Here the laryngoscope may afford you material aid. With the assistance of a solution of cocaine painted over the back of the tongue and pharynx a view may be obtained of the larynx, and the foreign body may be seen and in some instances extracted with proper forceps. But even if the body can be seen by this method it may often be necessary to perform tracheotomy, or even to divide the cricoid cartilage and extract the body either through the wound or through the mouth. Time, however, may not permit even of these deliberate proceedings, and to save life it may be necessary at once to perform laryngotomy and then to take measures for the removal of the irritant substance. When possible chloroform should be given on account of its allaying spasm and allowing of greater deliberation. But should the substance pass the vocal cords where will you expect that it may be arrested? This will depend greatly upon its nature. If it be heavy or of such a material that it swells by absorption of fluid it will sooner or later become fixed in some division of the bronchi, but if it be light it may lie for a time in the trachea, but shift its position by reason of coughing, and, coming in contact with the chords, will cause recurrent spasm and dyspnœa of a very serious nature. Here again tracheotomy is required at a very early period, and even if the substance cannot be extracted by forceps or expelled by the patient's own efforts, aided as these may be by inversion and succussion, there is no need to fear immediate danger, because, however severe the spasms, breathing can be safely carried on through the opening in the trachea. Sometimes from the nature of the substance it may become fixed in a part of the trachea, where it will rest for a long period without causing much distress. In one case that occurred at the Hospital for Sick Children a small piece of chicken bone forked at one end was found in the trachea below the vocal chords. In another child a piece of china was supposed to have been swallowed in August, 1894. Pain, cough, and vomiting of blood ensued immediately. She was taken to a hospital and an instrument passed, but nothing was found. She improved until several weeks later, when she was admitted to the Hospital for Sick Children on Nov. 2nd, and remained there for a month, but was readmitted a few days later on account of recurrence of a bad attack of dyspnœa. There was occasional stridor, but there were no obvious signs in the lungs. The history and the earlier symptoms pointed to the probability of something being impacted in the œsophagus, but upon examination by the laryngoscope it was thought that something could be seen posteriorly below the vocal

[1] This case was under the care of Dr. J. Mitchell Bruce and that of the lecturer.

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chords, and on Dec. 18th I performed a high tracheotomy, when a triangular shaped piece of glass of pink colour and with sharp edges was at once expelled through the opening. The wound was sutured, and the child made a rapid recovery. Probably the case of the celebrated engineer Brunel is familiar to most of you, since it appears in every text-book, and it illustrates the fact that a coin such as a half-sovereign may lie in the trachea, but need not necessarily obstruct entirely the passage of air into the bronchi, and may act as a sort of valve, but may easily shift its position. In his case tracheotomy undoubtedly saved life, but the coin was eventually ejected from the mouth, where its effect upon the vocal chords could not produce suffocation, by reason of the lower opening into the trachea. Now the case which has induced me to bring this subject before you is an instance of the progress of a foreign body still further into the air passage, and the notes which I shall read you will give you a very good account of the symptoms which indicate, and which follow, such an event as the complete obstruction of a large bronchus, in this instance the left, by an adventitious substance. You know that the right bronchus is somewhat the larger of the two and also that the septum at the subdivision of the trachea is slightly to the left of the median line, and thus is explained the fact that foreign bodies more frequently pass into the right than into the left division of the trachea.

A healthy girl aged eight years and nine months was admitted under the care of Dr. Mitchell Bruce on Sept. 25th, 1894 Three weeks previously, whilst sucking a plum-stone which she had previously cracked, a portion of the stone fell back and, as was supposed, was swallowed. Immediately she complained of pain in her neck, and she was given a crust of bread with a view of removing it. Next day she was seen by a medical man who gave her some medicine and stood her on her head in hope of dislodging the stone. This is not a form of treatment which I should advise you to follow in similar cases unless you are perfectly prepared with all the apparatus necessary for tracheotomy. At that time, and since, she is stated to have complained of pain on the right side of the heart. Poultices were applied and constantly renewed with a view to relieve the pain, and the child was kept in bed for three weeks, during which time she took very little food. She was unable to sit up, but slept well, except when the cough troubled her, which it usually did about 4 A.M. On admission she appeared fairly well nourished. The temperature was 99·6° F. She had slight paroxysms of coughing both day and night. The left side of the chest was flattened, chiefly over the second and fifth ribs, and the movements of this side of the chest were deficient, the interspaces being sucked in during inspiration. Vocal fremitus was greatly diminished, especially below the level of the third rib. The apex beat was felt in the fifth interspace half an inch external to the nipple. The whole of the left side of the chest was dull excepting over the left of the sternum, and this dulness extended over the whole of the left lung posteriorly. The right side was hyper-resonant. On auscultation some breath sounds were heard under the left clavicle which were lost about the third interspace, and some feeble breath sounds were audible behind in the supra-scapular region, below which all was dull. On Oct. 4th, after consultation, it was decided to attempt the removal of the foreign body by operation. The patient, after struggling violently without ill effect, was anæsthetised with chloroform. The colour and breathing were good. Mr. Waterhouse made an incision in the mid-line from the cricoid cartilage down almost to the interclavicular notch. The trachea was exposed and a scalpel passed through between the third and fourth rings from below upwards well below the level of the isthmus. No mucus escaped, but a small amount of blood which entered the opening was expelled. In spite of the inversion of the patient, with vigorous stimulus to the back, the obstructing body remained *in situ*. A bent wire, with looped extremity downwards, was passed down the left bronchus, but without at first discovering any obstacle to its further passage. A double looped strand of silver wire was then passed, with the result that the object sought was distinctly felt. On each of several attempts muco-purulent secretion was brought away on the instrument, and a small quantity was expelled through the opening after each trial. On attempting to pass the little finger the child became distressed, the veins of the neck becoming distended and turgescent. The child was allowed to partially recover consciousness and the laryngeal reflex was then excited with a feather. The breathing became very spasmodic and violent, but without the effect of expelling the foreign body. At no time during the operation was the child greatly distressed. A large oval tracheotomy tube was tied in with tapes, and horsehair stitches above and below drew the skin incision together. During the ensuing night the child was in some distress, but she was relieved on substituting a Parker's tube, which was removed at intervals, but did not become clogged with mucus. During the next few days there was a good deal of cough and mucous expectoration mixed with some greenish-yellow pus, but in no great quantity. I saw the child in consultation with Dr. Bruce and Mr. Waterhouse, and it was decided to defer further treatment until the signs of bronchitis had subsided. On Oct. 19th the child seemed in a favourable condition for further proceedings. Chloroform and afterwards ether were administered. Inversion was first tried and cough was then excited by a feather passed down the trachea, but no effect was produced upon the position of the foreign body. A long probe, slightly bent, was then passed down the left bronchus, and a hard substance was distinctly felt at a distance of about five inches and a half from the lower margin of the tracheotomy wound. The wound was then held open by retractors, and a long pair of forceps, curved for the last inch of their length, was passed down the left bronchus, but the contact of the retractors making it difficult to be sure of the causation of any foreign body these were removed, and on again carefully introducing the forceps the hard substance was felt, the forceps carefully opened and closed, with the result that the foreign body was at once withdrawn through the wound. This was found to be a part (nearly half) of an irregularly broken plum-stone, which had been impacted with its apex downwards, and had been seized by the edge of the broader broken surface. The wound was left with only a guard wetted with carbolic lotion. During the following night there was but little cough, but a considerable quantity of sero-sanguineous fluid escaped from the edges of the wound. This continued for a day or two, but gradually diminished and very shortly ceased and the wound closed. The temperature never rose above the normal.

From experiments kindly made by Dr. Batten, registrar to the Hospital for Sick Children, Great Ormond-street, on the cadaver of a child about the same age and height it appeared that the body must have lodged, just as described in the case reported by Dr. Cheadle and Mr. T. Smith,[2] at that portion of the left bronchus where it bifurcates into its two main divisions and below the branch which passes to the upper portion of the left lung, and the surgical aspects of this case are almost identical with the one described by them except for the very much longer period during which the lung had been obstructed. In their case the operation was performed on the eighteenth day and in the case now described on the forty-sixth day after impaction, the ages of the two children being nearly identical and their recovery being equally complete and satisfactory. This is by no means the least interesting feature of the case. How to explain the circumstance that a large proportion of the right lung can remain for so long a period inert and entirely or almost entirely deprived of all functional activity, and then resume its functions apparently without drawback, are questions which must be left for a physiologist to solve.

RUPTURES OF THE PANCREAS: THEIR RELATION TO PANCREATIC CYSTS, WITH SOME REMARKS UPON TREATMENT.[1]

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INJURIES of the pancreas are rare. The size, shape, and anatomical position of this organ are in the main responsible for the comparative immunity which it enjoys. Being from 8 in. to 9 in. long, 1 in. broad, and somewhat strap-shaped, it lies transversely across the posterior abdominal wall at

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxi.

[1] A paper read before the Medico-Chirurgical Society of Edinburgh on July 3rd, 1895.

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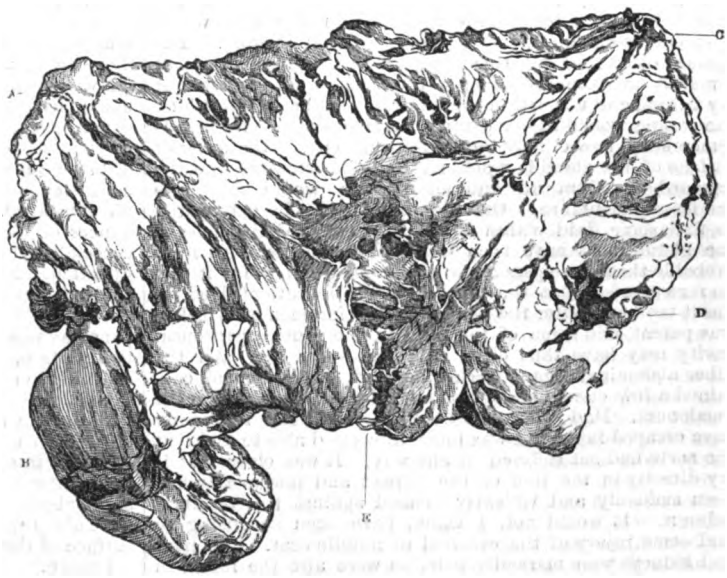
the level of the first lumbar vertebra, the tail being a little higher than the head. This corresponds pretty nearly to a transverse line drawn across the anterior abdominal wall about 3 in. above the umbilicus. It will thus be obvious that blows or injuries received in front must be directed over a very limited area indeed in order to reach it; and not only so, but their force must be expended more or less directly backwards and not obliquely upwards or downwards, and that, too, about the middle line, so as to crush the organ against the unyielding vertebral column. Not even all such blows will succeed in injuring the organ, for it is deeply placed, being protected in front by the anterior abdominal walls, the stomach, the lesser omental sac, and the ascending layer of the transverse mesocolon. Posteriorly it is also, though less effectually, protected by certain soft structures which to a certain extent act as buffers between it and the more rigid bony framework. These are from right to left the portal vein, the inferior vena cava, the two crura of the diaphragm on either side of the aorta, with the root of the superior mesenteric artery and the left suprarenal capsule and kidney. The bony framework of the chest completely protects it from violence directed from behind, and hence we find only instances of injury resulting from violence received in front. There is some reason to believe that it may be slightly injured in cases where the force has not been expended directly over it in the middle line, but towards the left side or even with a direction from below upwards; but in order to effect any serious laceration of the gland substance the violence must be inflicted not only in the middle line and directed backwards, but must be of very considerable severity. As the neighbouring organs—the liver, spleen, stomach (especially if full), and kidneys—are all more exposed, and thus more liable to suffer, it follows that such a rupture of the pancreas, uncomplicated with rupture in any other organ, is not likely to be met with. This is amply demonstrated by our experience of the cases which have unfortunately proved fatal. In these the injury to the gland substance has generally been great. Of the more fortunate cases we cannot speak so positively, as in the absence of an exploratory laparotomy we must remain more or less in the dark as to the precise nature of the lesions. I propose to consider the cases under two divisions: (1) those in which a fatal issue followed early upon the injury, and (2) the milder cases, in which the immediate results of the injury were apparently temporary or slight and quickly recovered from, and in which the main evidence of pancreatic involvement rests on the subsequent formation of a pancreatic cyst.

1. — CASES IN WHICH A FATAL ISSUE FOLLOWED EARLY UPON THE INJURY.

I know of only 9 cases altogether, of which 7 have been previously recorded. Of the other 2, one was received into the Royal Infirmary, Edinburgh, and the other, particulars of which have been kindly sent to me by Dr. Goldmann, into the Surgical Hospital at Freiburg in Baden. In only 2 of these 9 cases is it expressly mentioned that no other organ than the pancreas was injured. In the remaining 7 other serious injuries were present—viz., rupture of the lung in 1, of the spleen in another, of the duodenum in a third, and fracture of ribs, along with other internal injuries such as rupture of the liver, kidney, or spleen, in the other 4.

CASE 1. — A boy aged four years was playing one forenoon with some companions near his father's horse and cart in the infirmary grounds. In the temporary absence of the father they had been teasing the horse, when it suddenly kicked out, striking the lad violently in the pit of the stomach with its off hind foot. He fell forcibly against the wheel of the cart, but picked himself up, apparently more frightened than hurt, and with the help of his companions climbed up into the cart. His father returned shortly after and learned what had happened, but did not think seriously of it and kept the child with him until he went for his dinner. Shortly afterwards the boy was not looking well. He complained of a numbness in his left arm, which he was unable to move. His father, fearing that the arm was broken, carried him to the Royal Infirmary, Edinburgh, where he was admitted into Ward 9 under the care of Professor Annandale, to whose kindness I am indebted for permission to refer to the case. The left humerus was found to be fractured transversely in its lower third, but there were no signs of any other injury. The head, chest, and abdomen showed no bruises and pressure elicited no pain. Later in the afternoon the patient did not look so well. He was evidently suffering from shock and pain, and obscure symptoms of some abdominal mischief began to appear. His condition became more grave as the evening came on. The shock deepened towards collapse, and although it was fairly certain that there was a serious abdominal lesion the symptoms and signs were too indefinite and diffuse and the general condition too serious to render an exploratory laparotomy advisable. He gradually sank and died about ten hours from the time of receiving the blow.

Necropsy.—This was made by me about fourteen hours after death. The usual rigidity and lividity were observed. There was a bruised appearance around the lower part of the left upper arm, which showed the usual displacement of a fracture of the lower third of the humerus. There were no other marks of violence and no bruising or discolouration anywhere upon the body. On opening the abdomen a quantity of fluid, about a pint, was seen lying freely in the peritoneal cavity among the intestinal coils. It was clear and dark-brown in colour, and had a peculiarly pungent but not fetid odour. The general peritoneal surface showed a certain amount of injection and slight loss of gloss, but there was no hæmorrhage. On raising up the great omentum with the transverse colon nothing further was observed except the appearance of a very slight amount of yellowish fluid between the intestinal coils just below the transverse mesocolon. On gently displacing the more superficial coils it became more plentiful and was evidently specially located posteriorly in this position. This yellowish fluid had slightly granular, cheesy-looking material in it closely resembling the contents usually found in the stomach when it contains partially digested milk. It suggested a rupture of the duodenum in this position, and I presently found one close to the termination of the third part. The amount of the escaped contents showed that this part of the gut had been fairly full at the time of the injury. This would favour its rupture. Indeed, I think it may safely be said that subcutaneous rupture of the collapsed bowel really never occurs. I have seen it follow a perforating wound, but not a contusion. It will be remembered that this is one of the commonest sites of



Showing the rupture in the pancreas and its peritoneal covering. The parts are in the natural position, as seen from the front, looking slightly downwards. A, Splenic flexure of colon. B, Spleen. C, Hepatic flexure of colon. D, Points to a tear in the ascending layer of the transverse mesocolon in a line with K. E, Rupture in the pancreas.

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intestinal rupture, for here the gut is more or less fixed, and rests upon the vertebral column. The tear in the present case was through the whole wall for about two-thirds of its circumference, the peritoneal coat still being intact in the other third. There was another small tear about three-quarters of an inch long in the mesentery of the jejunum a short distance lower down. There was very little hæmorrhage. The margins of the peritoneum in the neighbourhood of the tears showed a little infiltration with blood-clot, and there were a few petechiæ in the transverse mesocolon, but nothing further. The transverse colon was then displaced downwards and the pancreas exposed. The ascending layer of the transverse mesocolon and the underlying pancreas were both found to be torn. The rupture in the gland was a little less extensive than that in the mesentery. It ran vertically from above downwards with a slight obliquity to the right, passing through its whole thickness at its upper border, but through a part only towards the lower border. The main duct and the splenic vessels were uninjured. The line of rupture was almost directly over the aorta and on being continued through the transverse mesocolon became continuous with that in the duodenum. This was probably the line of chief impact of the horse's hoof, the organs having been crushed between it and the vertebral column. Its position in the pancreas about the junction of the right with the middle third is well seen in the preceding engraving, which is from a photograph. The ruptured ends had separated a little from one another and were infiltrated to a slight degree only with blood. There was practically no blood in the lesser omental sac, which, except for the tear already mentioned in its posterior wall, presented a perfectly normal appearance. Blood had effused from the rupture, as the retro-peritoneal cellular tissues contained a certain quantity of diffusely spread blood-clot. It might have amounted altogether to about three ounces. It passed mainly to the left above the pancreas towards the spleen, reaching its hilum and infiltrating also a little downwards. It did not pass behind the pancreas except just at the tail, where it spread itself slightly over the suprarenal capsule. The amount of hæmorrhage thus appeared to be remarkably small for such an extensive injury to the gland, and, moreover, it lay behind and not within the lesser omental sac, into which the gaping wound in the gland directly opened. When it is remembered how closely the peritoneum covers the anterior surface of the gland it would naturally be expected that the hæmorrhage from an anterior rupture would flow into the lesser omental sac. On other grounds also I was prepared to find some fluid within this sac, as many of the ducts of the gland must have been torn across, and it is at least probable that some pancreatic juice was secreted, for it will be remembered that the unfortunate little patient lived for about ten hours after the accident. The foramen of Winslow was patent, and some of the fluid in the general peritoneal cavity may have thus come from the lesser sac. All the other abdominal organs were uninjured. The stomach contained a few ounces of material similar to that seen in the duodenum. Had it been distended it might not so readily have escaped injury. I was much interested also to find that the aorta had not suffered in any way. It was clear that it lay directly in the line of the impact and presumably had been suddenly and violently pressed against the vertebral column. It would not, I think, have been surprising to find some injury of the external or middle coat. The liver and kidneys were markedly pale, as were also the lungs, in part suggesting a large rather than a small hæmorrhage. This was certainly not present. The bowel contents only showed some blood-stained mucus for about eighteen inches below the site of rupture. The cranial sinuses were congested, but the brain and its membranes were healthy.

The special points of interest in the case are the nature of the injury, the comparative absence of serious signs for some time after its infliction, their subsequent rapid onset and gravity, the absence of any marks of violence upon the abdominal wall and of pain, the large amount of fluid in the peritoneal cavity, the severity of the rupture in the pancreas, and the smallness in amount and the anatomical position of the hæmorrhage. If the shock and collapse had been due to the injury acting directly upon the solar plexus or more indirectly through the nerves of the pancreas and peritoneum their onset would have been expected to have been practically immediate, and one is therefore led to suggest that they are referable rather to the changes occurring in the peritoneal cavity subsequently to the injury. The dark-coloured fluid, about one pint in amount, had probably not come from the ruptured gut, as it was different in character from that found in the neighbourhood of the tear. There remains then only the inflamed peritoneum or the torn pancreas to explain its presence. It is decidedly unusual to find such a large quantity of fluid associated with a simple early peritonitis, and it is thus quite as probable that the pancreas was responsible for some of it, at any rate. It is probable that pancreatic secretion has, under certain circumstances, a peculiarly irritating effect upon the peritoneum, and its gradual and steady escape into the general peritoneal cavity would largely explain the phenomena observed in the present case. The other points of interest will be considered in conjunction with the other cases.

CASE 2.[2]—A young man received a violent blow upon the abdomen from the fall of a heavy packing-case upon him. It is believed that the corner of the case struck him in the epigastric region. On his admission to hospital his chief symptoms pointed to abdominal hæmorrhage and intestinal obstruction. A tumour gradually formed in the mesogastrium resembling that formed by a pancreatic cyst. There were no marks of bruising externally upon the skin of the abdominal wall. The general condition of the patient was too grave to permit of laparotomy. He died a few hours after the accident. At the necropsy the pancreas was found to be transversely ruptured. Profuse hæmorrhage had occurred into the cavity of the lesser omentum and given rise to the pseudo tumour in the mesogastrium. The spleen was also lacerated. The other organs were uninjured.

CASE 3.[3]—A native of India, a male about fifty years of age, had been subjected to a somewhat curious assault. He was tied up in a sort of lithotomy position, his hands being first tied together, and his knees then forced within the area of the tied arms and secured there by a long lath passing from one side to the other through the space between the anterior aspect of the elbow and the posterior aspect of the knee. His assailant then beat him violently with a shoe on the exposed buttocks, genitals, and abdomen, and also kicked him once or twice. On being released he walked home, a distance of about one mile, supported between two persons. He was then admitted to hospital and died about eighteen hours afterwards. At the necropsy it was found that the pancreas was ruptured vertically from above downwards at its right extremity for about half its breadth. A small clot of blood was found near this, and the rest of the organ looked congested and showed extensive extravasation of blood into its substance. The abdominal cavity contained about six ounces of blood-stained fluid, and the peritoneum in places, especially the transverse mesocolon, showed considerable injection. No other lesion was found and there was no external sign of injury.

CASE 4.[4]—An adult was run over in the street. The pancreas was so crushed in its middle as to be divided into two parts opposite the spinal column. There was but little other sign of injury to the abdominal viscera.

CASE 5.[5]—A man thirty-three years of age was run over in the street by a light car going very rapidly at the time. He showed no external signs of injury. His symptoms pointed to severe internal hæmorrhage, and he died in less than two hours after the accident. The pancreas was literally smashed and embedded in coagulated blood. The spleen and kidney were also ruptured, and there was a slight tear in the under surface of the liver. Several ribs were broken.

CASE 6.[6]—An intoxicated woman was knocked down by a stage coach, which, however, did not pass over her, and she died a few hours afterwards from internal hæmorrhage. The pancreas was transversely torn across. There were other internal injuries, the liver being lacerated and several ribs broken.

CASE 7.[7]—In this case the pancreas and lung were both injured.

CASE 8.[8]—A woman was run over by a coach and died within a few hours. The pancreas was completely torn in two and embedded in a large mass of semi-fluid blood. Several ribs were fractured and the liver was ruptured.

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[2] Goldmann.
[3] Jaun: Indian Annals of Medical Science, vol. iii., 1855, p. 721.
[4] Wilks and Moxon: Pathological Anatomy, third edition, p. 491.
[5] Cooper: THE LANCET, Dec. 21st, 1839.
[6] Travers: THE LANCET, June 23rd, 1827.
[7] Wandelleben: General-Bericht des Königlich-Rheinischen Medicinischen Collegiums, 1842, Coblenz, 1845, SS. 120-123; and Wochenschrift für die Gesammte Heilkunde, Berlin, 1845, SS. 729-732.
[8] Störck: Annus Medicus, 1836, p. 244.

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CASE 9.[9]—A lad showed rupture of the pancreas and other severe injuries, which speedily proved fatal.

Edler,[10] the latest writer on this subject, could in 1887 find only 3 cases of this lesion—viz., those of Cooper, Travers, and Kuhlenkampff.[11] I have not followed him in including the last-named case, as it afforded no evidence that it was a case in point. Kuhlenkampff himself did not claim that the pancreas had been ruptured or lacerated. He believed that the severe blows which the patient had received upon the epigastric region had caused an inflammation of the pancreas, which, through resulting obstruction of the main duct, had given rise to the mesogastric cyst, which he successfully opened and drained. Senn,[12] writing a year earlier, mentioned 4 genuine cases—viz., those of Cooper, Travers, Störck, and Le Gros Clark. I have been able to add 7 cases to the 2 genuine ones of Edler and 5 to those of Senn; but even the increased knowledge thus afforded is still sufficiently meagre to make us exercise much caution in forming any general conclusions. In at least 3 of the cases the injury was caused by the patients being run over by a vehicle, and it is interesting to note that in almost the only surgical text-book in which I have found any reference to rupture of the pancreas, that of Jamain,[13] it is said that this very rare lesion is usually thus caused. A violent and sudden blow is responsible for 3 more cases.

Symptoms and signs.—Shock and collapse would seem to be the most prominent. They are usually brought about immediately by internal hæmorrhage, as in Cases 2, 5, 6, 8, and 9, but may be due to other and less obvious causes, as in Cases 1 and 3, where they developed only after a considerable interval. They are probably due more to the complications than to the pancreas. In no case have the symptoms pointed to the pancreas as the main seat of lesion. The absence of any bruising, ecchymosis, or discolouration of the skin of the abdomen, or any sign of external violence is important and not a little surprising. Its bearing upon medico-legal cases is obvious. Serious criminal assaults may be made, as in Case 3, without any outward or visible sign of injury. A similar absence is noted in Cases 1, 2, and 5, and I have several times observed it in other cases of ruptured viscera. It may almost be said to be the rule and not the exception. It may occur also in the thorax, as in the case[14] of a child run over by a cart, in which the lung was torn without any fracture of the ribs or injury to the wall of the thorax.

Diagnosis.—This is practically impossible without laparotomy. The nature of the violence, its exact site of impact and direction may make the lesion probable. It can only be verified by laparotomy. I have satisfied myself that upon the cadaver at all events the anterior surface of the pancreas can be thoroughly explored by the finger through a vertical incision about three inches long in the middle line anteriorly, or preferably a little to its left in the epigastric region. If an electric lamp be placed in the interior of a Fergusson's speculum both the pancreas and its covering peritoneum can be scrutinised.

Prognosis.—The foregoing cases were all rapidly fatal. The cause of death was internal hæmorrhage in at least five of the cases—viz., Cases 2, 5, 6, 8, and 9; but this result was in all probability more due to the complications than to the lesion in the pancreas. In Cases 1 and 3 the hæmorrhage was small in amount, and not one of the other parenchymatous organs was ruptured. It is then at least probable that the hæmorrhage from a rupture of the pancreas alone will not be severe unless the splenic artery or vein be ruptured. In themselves they need not be fatal.

Treatment.—It has already been shown that the lesion in the pancreas is rarely the only one present, and, further, that the rupture in the gland does not declare itself by any definite signs or symptoms. It follows, then, that ordinary expectant treatment (rest, ice, &c.) alone can be followed, except in the cases where an exploratory laparotomy is performed. If this be done and a rupture be discovered it should at once be treated. The hæmorrhage may be arrested by pressure and the ruptured ends brought close together by comparatively superficial sutures passing through little more than the peritoneal covering of the gland. This covering adheres so closely to the gland, without the intervention of any fatty or other tissue, that it is easy to bring the separated ends of the gland together by traction exerted alone upon the peritoneum. This procedure is, however, open to the objection that blood or pancreatic juice may collect between the ends and cause their separation again, and lead, perhaps, to cyst formation or other trouble. Senn,[15] from his experiments on animals, recommends that the ends of the ruptured gland be separately ligatured previously to such suturing. This has the advantage of effectually arresting the hæmorrhage and the outpouring of the pancreatic juices, and, further, the close approximation of the ends favours the rapid establishment of the nutrient vascular supply. He would first remove the necrosed portions of the gland. He found that ruptures treated in this way quickly healed and that there was no danger to be apprehended from the distal part of the gland, as all such physiologically separated portions of gland underwent simple atrophy and in no case led to cyst formations.

2. MILDER CASES.

It has already been seen that such evidence as can be brought forward tends to show that ruptures of the pancreas need not in themselves prove fatal, and it is quite conceivable that many such ruptures may occur, and probably have done so, in varying degree of severity in cases of abdominal injury which have been entirely recovered from. Perhaps large ruptures such as occurred in Case 1 may lead to such an extensive outpouring of pancreatic secretion, mixed with blood-clot and fragments of devitalised pancreatic tissue, that its escape through the foramen of Winslow into the general peritoneal cavity may set up a general chemical and perhaps also organismal peritonitis. Evidence on such a point is lacking, however, and it is more probable that the lesion in the gland is followed by inflammation which results in nothing more than a certain amount of cicatricial contraction, and the patient recovers entirely without the subsequent occurrence of any other trouble. Cases have been recorded in which even extensive cicatrisation of the gland existed without any suspicion of its presence during life. It is obvious, however, that other possibilities exist. There is room for other results between those two extremes. The lesion in the gland may be followed by an inflammation, not restricted to the gland itself, but spreading gradually to other tissues in its neighbourhood, and leading, perhaps long afterwards, to subsequent trouble. This supposition is further strengthened by the fact that many cases of injury received in the epigastric region have been followed, sometimes long afterwards, by the appearance of a cyst in this region, and the relation which the so-called *pancreatic cysts* bear to ruptures of the gland itself is a most interesting one. Increasing attention has been of late years paid to the subject of these cysts, and a traumatic origin has been assigned to a large proportion of the reported cases. These number, so far as I can find, altogether seventeen, and I have arranged them in chronological order in the table on the following page.

The history of the injury is most definite in these cases; moreover, the formation of the epigastric tumour followed sufficiently soon after it as in itself to be presumptive of the relationship being cause and effect. The earliest appeared ten days after and the latest eight years. In the latter it may reasonably be doubted if there was any connexion between them. It is in a measure, however, supported by two of the cases being delayed for three years and another for one year. In six the interval varied between two and four months, and in the other five between two and five weeks. It will be noticed that nine of them were more or less directly related to falls, six to blows upon the abdomen, and only two to being run over by a vehicle. It is a somewhat curious fact that all but one occurred in males, and this is probably to be accounted for by the greater liability of the male sex to injury. It might justly be brought forward, however, as an additional argument in favour of the causal nature of the injury. Granting, however, that the injury was the primary cause of the formation of the cyst, we have still to show that that injury involved the pancreas. The evidence

[9] Le Gros Clark: Lectures on the Principles of Surgical Diagnosis, 1870, p. 298.
[10] Die traumatischen Verletzungen der parenchymatösen Unterleibsorgane (Leber, Milz, Pancreas, Nieren), Archiv für Klinische Chirurgie, 1887.
[11] Ein Fall von Pancreasfistel. Berliner Klinische Wochenschrift, Feb. 13th, No. 7, 1882, p. 102.
[12] The International Journal of Medical Science, vol. xcii., 1886, p. 423.
[13] Manuel de Pathologie et de Chirurgie Clinique, 1870, second edition, tome iii., p. 493.
[14] Wilks and Moxon, loc. cit., p. 324.
[15] Loc. cit.

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on this point is fairly satisfactory in several of the cases, for the fluid obtained on aspiration or evacuation of the cysts, on being submitted to analysis, gave the reactions characteristic of the pancreatic juice. In other cases the contents failed to give these reactions, and this may point to an origin altogether independent of the pancreas. It is known, however, that great changes may occur in the composition of the contents of such cysts, especially if they are

Table showing the Lapse of Time between the Injury of the Pancreatic Gland and the Appearance of the Tumour.

No.	Year.	Sex.	Age.	Nature of injury.	Time elapsing between the injury and the appearance of tumour.	Reference.
1	1882	M.	39	A number of heavy blows upon the abdomen. Patient believed that they were received about the umbilicus in a direction from below upwards.	About two months.	Kuklenkampff: Berliner Klinische Wochenschrift, 1882, No. 7, S. 102.
2	1885	M.	19	Patient fell from waggon, striking the ground on the left side of the abdomen, a heavy keg falling at the same time upon his back.	About five weeks.	Senn: American Journal of the Medical Sciences, New Series, vol. xc., p. 18.
3	1887	M.	46	Thrown from a waggon.	About eight years.	Kuster: Deutsche Medicinische Wochenschrift, Leipzig, vol. xiii., 1887, p. 189.
4	1888	M.	8	A fall from a horse, bruising the abdomen.	About three weeks.	Fenger: Chicago Medical Journal, February, 1888).
5	1888	M.	40	A crush between two railway waggons.	About one year.	Steele: Ibid., April, 1888.
6	1888	M.	Young	Assault by roughs.	—	Treiberg Karkov: Inaugural Dissertation, 1888 (vide Annals of Surgery, November, 1888).
7	1890	M.	25	A fall upon the left side of abdomen.	About four weeks.	Karewsky: Ibid., No. 46, 1890.
8	1890	M.	58	An injury to the left costal margin.	About three months.	Ibid.
9	1890	M.	13	The hind wheel of a lorry carrying coal passed over the upper part of his abdomen.	About two months and a half.	Cathcart: Edinburgh Medical Journal, July, 1890, and Transactions of the Medico-Chirurgical Society, Edinburgh, 1889-90, p. 73.
10	1890	F.	25	A fall from a great height.	About three years.	Riegner: Berliner Klinische Wochenschrift, No. 42, 1890.
11	1891	M.	21	A kick in the abdomen	About three years.	Pitt and Jacobson: Transactions of the Royal Medical and Chirurgical Society, 1891, p 455.
12	1891	M.	50	In lifting a heavy weight he felt something give way in the epigastric region. Shortly afterwards he had a severe fall, which "knocked his breath out."	About three or four months after began to feel pain, and later a tumour appeared.	Richardson: Boston Medical and Surgical Journal, 1891, p. 111.
13	1892	M.	38	Horse threw and stamped upon him, striking him over the upper part of the abdomen on the left side.	About three weeks.	Littlewood: THE LANCET, April 16th, 1892, and the Transactions of the Royal Medical and Chirurgical Society, 1891-92, p. 25.
14	1892	M.	20	Knocked down by a horse at a race meeting.	About three months and a half.	Lloyd: Brit. Med. Jour., vol. ii., 1892, p. 1051.
15	1892	M.	27	Thrown upon the floor and kept there for a time.	About ten days. Patient said he noticed it at once.	Ibid.
16	1894	M.	2	Run over by the wheel of a cab.	About three weeks.	J. L. Thomas: THE LANCET, March 31st, 1894.
17	1894	M.	17	Crushed between a locomotive and a truck, the buffer striking his abdomen.	About three months and a half.	W. H. Brown: THE LANCET, Jan. 6th, 1894.

of long standing, and it may be that, the connexion with the pancreas having been cut off, the pancreatic character of the fluid will be gradually lost. We are thus led to look for evidence along other lines. The most conclusive of all—viz., that derived from post-mortem examination—is of very little avail here, as of the seventeen cases just quoted only one ended fatally. The others all recovered after the cyst had been incised and drained. The fatal one—viz., No. 14 of the table—was reported by Lloyd. An enormous encysted hæmatoma was found situated behind the stomach. It contained three or four pints of dark blood containing old coagula. The folds of the lesser omentum were so altered that it was hardly possible to say how they entered into the formation of the wall of the sac. No special examination of the pancreas for injury was made. This case affords us but little if any help, and we are therefore compelled to fall back upon the domain of hypothesis and conjecture in seeking for an explanation. Kuhlenkampff [16] suggested that the injury might cause an inflammation of the gland substance, which might lead to closure of the main duct and a consequent retention cyst. Senn [17] held the same view until he found from his experiments on animals that very little distension followed obliteration of the main duct, and that, in short, any part of the gland physiologically separated from the main exit duct underwent simple atrophy. He then suggested that these cysts might have more than one mode of origin and that the hæmorrhage into them might be variously explained. He gave three main hypotheses: (1) hæmorrhage into a pre-existing pancreatic cyst; (2) parenchymatous hæmorrhage producing a cyst, followed by hæmorrhage into the cyst wall; and (3) that the hæmorrhagic cyst may originate in a dilatation of one of the vessels of the pancreas. Now the first of these does not get over the difficulty of the first formation of the cyst, and the third, while it may be said to be possible, must be regarded as rare. The second view is at once the most obvious and probable. It

[16] Loc. cit.
[17] Loc. cit., vol. xc., 1885, p. 34.

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was further elaborated by Cathcart,[18] who puts it as follows: "The injury causes a laceration of the gland. This is followed by extravasation of blood, and with this is mixed the pancreatic secretion from the torn ducts. Not only is a constantly increasing fluid thus added to the original hæmatoma, but the collection of fluid probably becomes irritating in character. It will thus tend to excite the formation of a capsule around it, and by chemical irritation and tension would gradually increase in size." This view of the causation and mode of origin of these so-called pancreatic cysts is not only the most natural but also the most probable which has yet been propounded. It is so obvious that it has doubtless occurred independently to other observers. Indeed, it did so to myself, and I find that Jordan Lloyd[19] has had a similar experience. He says (apparently unaware of Senn and Cathcart having previously suggested it): "The secretions of the torn gland may be poured into the lesser omental sac with the blood, and that even if pure pancreatic juice be not irritating to the peritoneum a mixture of pancreatic juice and devitalised blood-clot may have a very different effect, and that chemical changes of a digestive kind may then be started, which may irritate the serous lining of the sac and cause it to pour out its secretions and thus gradually distend its cavity." Now, obvious and simple as this explanation is, it must be remembered that it is hypothetical and must be carefully tested before it can be accepted as being satisfactory. Before accepting it as being the mode of origin of these pancreatic cysts we must exclude the possibility of other and neighbouring structures acting as primary factors in their formation. This cannot be done, for it is found that many cases of similar cysts in this region arise apparently spontaneously. No connexion with the pancreas may be suspected until an analysis of the cyst contents suggests it. Such cases are much more numerous than those apparently of traumatic origin. Some of them may originate in retention cysts, as seemed to be the case in a woman aged thirty-five referred to by Sharkey.[20] A tumour said to have been in existence for from twelve to fifteen years was found in the left hypochondrium. It was remarkably mobile. On opening the abdomen it shot out of the wound, dragging with it the tail of the pancreas. On enucleating the cyst the pancreas bled very freely. It is at least improbable, however, that even the majority have a similar origin, and inquiry must be made if no other way is open which would still allow them to retain a connexion with the pancreas. Such a way is, perhaps, to be found in the spontaneous hæmorrhages which occasionally arise from the pancreas or suprarenal bodies. It is quite well known that hæmorrhage may take place spontaneously into and around the pancreas. It has been met with not infrequently in varying degrees of severity and standing. If recent the infiltrated parts have the dark colour of ordinary venous blood-clot, and if old they have a brown or slaty colour. Such hæmorrhages may even speedily prove fatal. Zenker[21] describes three such cases occurring in strong, healthy men and Draper[22] five somewhat similar cases. Challand,[23] Prince,[24] Gussenbauer,[25] and others have also discussed the subject. Minor cases are doubtless still more common and may result in the formation of a blood cyst. If the hæmorrhage ruptures any of the pancreatic ducts there may be a mixture of pancreatic juice as well, and hence the mode of origin of such cysts may come to closely simulate traumatic ones. Störck[26] and Parsons[27] each record a case which somewhat supports this contention. In both a sanguineous cyst connected with the pancreas was present, and the tissue of the gland was infiltrated with hæmorrhage that had taken place into its substance. The parenchymatous hæmorrhage may have been the first thing here, and may have led to the formation of the cyst, which increased by further hæmorrhage taking place from its wall. It is of course possible, though not so probable, that the cyst preceded the hæmorrhage. In some cases the hæmorrhage is more manifest in the neighbourhood of the pancreas than within the organ itself. Harris[28] mentions a case of sudden death in an alcoholic patient where the hæmorrhage was into the adjoining subjacent peritoneal tissue as well as into the pancreas; and Biggs[29] another case of a man who fell dead on coming out of a beer saloon in which he had taken a few glasses of beer. There was hæmorrhage around the pancreas and a number of minute hæmorrhages within it. I will not discuss the causes of such spontaneous hæmorrhages. The question is an obscure one. Signs of acute inflammation of the gland substance were found in some, while in others the gland was apparently quite healthy. It is not necessary, however, for the blood to come from the pancreas. It may come from the suprarenal. Virchow[30] describes a form of acute hæmorrhagic inflammation of the suprarenal capsules, and several cases of large spontaneous hæmorrhages into and around these organs have been put on record. Further, there is evidence that hæmorrhage may be found in the neighbourhood of the pancreas without having any apparent connexion with either of these glands. Rolleston[31] mentions the case of a man aged thirty in which hæmorrhage was found around the pancreas, the source of which could not be determined. It is apparent, then, that the first step in the formation of a cyst may arise in a variety of ways, and it is conceivable that such a cyst in the course of its gradual increase and extension may come to acquire a connexion with the pancreas, though it originally possessed none. Fischer[32] suggests "that a pancreatic cyst may originate as a blood effusion in the neighbourhood of the gland, it being supposed that the tension of the sanguineous effusion may cause atrophy of part of the gland substance and escape of fluid from opened ducts." He cites as a probable instance a case recorded by Merigot de Treigny,[33] where a sanguineous cyst was found adherent to the pancreas, which was atrophied at the position of contact. This anatomical connexion is certainly suggestive, but it is far from conclusive, as it is capable of explanation by other and perhaps more probable modes of origin.

So far these observations have been restricted to hæmorrhages from the region of the pancreas, but in considering the possibilities of cyst formation in this region other conditions of etiological importance should be remembered. Blood has not been present in all these cysts, even in all the traumatic ones, and as serous cysts arise in connexion with the spleen, liver, suprarenals, and even lesser omentum, it is obvious that this latter class must be taken into account when dealing with the origin of epigastric cysts. Hydronephrosis, echinococcus, retro-peritoneal dermoid cysts, or even ovarian cysts, have to be included also. The mere mentioning of most of these possible origins is all that is required for my present purpose. Their occurrence is well enough established, and the only one requiring further consideration is the lesser omentum. Its surface extent is the greatest of all the structures in the epigastric region, and if cysts can arise in it independently of any other structure it is at once obvious what a frequent source of origin it may become. It will facilitate this investigation if I first consider whether either traumatic or spontaneous cysts may arise from the peritoneum at a distance from the pancreas. I find that there is fair evidence on the subject. Godlee[34] has recorded three cases of cysts following upon injury whose origin was very possibly peritoneal. In the first, a girl aged four years, the cyst had formed on the right side of the abdomen about three weeks after she had been run over by a cab. He believed that this cyst was primarily renal, due possibly to a ruptured ureter. In the second, a man twenty-three years of age, the cyst formed on the left side and was aspirated about four weeks after the injury. In the third, a boy aged seven, the cyst formed first on the left side, and later, about eleven months after the accident, spread to the epigastric region. It was incised. These three patients recovered, and there was no special evidence, in the latter two at any rate, to connect them with any particular organ. Again, in the case recorded by Brown[35] there was reason to believe that a similar peritoneal cyst, separate from and independent of the pancreatic one,

[18] Transactions of the Medico-Chirurgical Society of Edinburgh, 1889-90, p. 80.
[19] Brit. Med. Jour., vol. ii. 1892, p. 1053.
[20] THE LANCET, Dec. 3rd, 1892.
[21] Hämorrhagie: Tageblatt der 47. Naturforscherversammlung. Breslau, 1874.
[22] Transactions of the Association of American Physicians, 1886, pp. 243-251.
[23] Bulletins de la Société Médicale de la Suisse Romande, 1877.
[24] Boston Medical and Surgical Journal, vol. cvii., 1882, p. 55.
[25] Wiener Medicinische Wochenschrift, No. 13, 1883. Medical Times, vol. i. 1883.
[26] Archives Générales de Paris, Mars et Juillet, 1836.
[27] Brit. Med. Jour., 1857.
[28] Boston Medical and Surgical Journal, 1889, vol. cxxi., p. 606.
[29] New York Medical Record, 1890, vol. xxxvii., p. 362.
[30] Die Krankheiten der Geschwülste, ii.
[31] Transactions of the Pathological Society of London, 1893, p. 74.
[32] Guy's Hospital Reports, 1892, p. 328.
[33] Bulletins de la Société Anatomique, Paris, 1885.
[34] Transactions of the Medical Society of London, 1887, p. 240.
[35] Vide No. 17 of the table.

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was present as the result of an earlier injury. The evidence in support of similar peritoneal cysts arising spontaneously is still more conclusive. Terrier[36] gives the case of a man aged thirty-four years who had suffered from attacks of colic and diarrhœa for about five months previously to the detection of a swelling in the hypogastric region. This was tapped and 450 grammes of blood-stained fluid withdrawn. The cyst refilled and formed a rounded swelling reaching from the pubis to the umbilicus and to within two fingers' breadth of the iliac spines on either side. Laparotomy was performed and the cyst removed; it was about the size of a fœtal head and was apparently connected with the mesentery. It contained what looked like pure blood and its walls were of some thickness and were coated internally with fibrin. The patient recovered. Frentzel[37] records another case in a woman aged twenty where the cyst, about the size of a child's head, was situated about the middle of the right side and was very movable. It was found to lie between the layers of the mesentery and to contain sero-sanguineous fluid. The patient recovered. Simon[38] found a cyst of the great omentum in a man who died from Asiatic cholera. It was adherent above to the greater curvature of the stomach. It had thin walls and contained granular, rust-coloured blood coagula. The arteries and veins of the omentum were normal. With the exception of a few small ulcers in the colon the organs of the body appeared to be healthy.

It thus, I think, becomes clear that both traumatic and spontaneous cysts may arise from the peritoneum, and hence many of those recorded as present in the mesogastric region may be fairly enough referred to the lesser omentum as their source of origin. Thus Sutherland[39] mentions the case of a girl aged eight who was run over by a cab. Three weeks later a swelling appeared in the epigastrium, which disappeared after aspiration about five weeks after the injury. Richet[40] relates a case in a man aged forty-two who had been knocked down by an omnibus and about six months later developed a cyst in the epigastric and left hypochondriac regions. He died from peritonitis ensuing after injection of the cyst, after aspiration, with a weak cauterising fluid. The lesser omentum was occupied by a cyst limited above by the liver, below by the pancreas, and in front chiefly by the small omentum, but partly by the stomach. All the surrounding organs were healthy. Rendu,[41] Gullois,[42] and Méry[43] have recorded somewhat similar traumatic cases, in none of which could any connexion with any of the surrounding organs be detected at the necropsy, or any satisfactory explanation of the origin of the cyst be given. I might in a like manner cite instances of similar cysts of a spontaneous origin. Pomier[44] opened and drained one in the left hypochondrium. It contained 1500 grammes of purely serous fluid. It is unnecessary to multiply instances, nor is it incumbent upon me at present to explain the origin of such cysts. Rouiller[45] suggests that a sclerosis of the peritoneum of alcoholic origin first causes hæmorrhage and then a cyst; and Fischer[46] that the lesion is nervous, probably having its origin in the solar plexus. The latter holds that the hæmorrhage is not really situated within the peritoneal cavity, but between the omental or mesenteric layers. Be this as it may, however, it is obvious that they come to simulate pancreatic cysts more closely than any others, and if the record of pancreatic cysts be scrutinised it will be seen that many of them, both traumatic and spontaneous, have no real right to their name, as they had probably no connexion with the pancreas. It is not generally appreciated how many the fallacies are. Not only must we exclude the cysts of the various surrounding organs—e.g., the spleen, kidney, supra-renal, and liver—but the great body of peritoneal or retro-peritoneal cysts have also to be taken into account before it can be asserted that any cyst is of pancreatic origin. Chemical analysis and microscopic examination will indeed afford assistance in many cases, and they are of the greatest value when they give positive evidence, but when they fail to do so, as is often the case, we are not entitled thereby to exclude a pancreatic origin, as the contents of the cysts may become much altered in the course of time. Indeed, in the absence of some such direct physiological or anatomical evidence, we have no right to either assert or deny a connexion with the pancreas. In any such case the possibilities are many, and we are not entitled to do more than suggest the likelihood of its being of pancreatic origin. Its greater frequency makes this source the most probable, but it would perhaps be better not to use the term "pancreatic" as descriptive of any such doubtful cyst. The term "epigastric" is fairly distinctive and has the advantage of in no way begging the question. For prognostic and therapeutical purposes a perfectly accurate diagnosis is not, after all, so much of a desideratum, as all cases, whether pancreatic or not, seem to be equally amenable to treatment.

Treatment.—Wherever there is a collection of fluid about whose boundaries and connexions there may be some doubt, the natural tendency is to evacuate the fluid with the least possible disturbance of parts. Hence it is seen that the first procedure adopted was an emptying of the cyst by means of aspiration. Experience has shown, however, that this is both ineffectual and dangerous, as the cyst gradually refills. Attempts to secure obliteration of the cyst by means of the injection of iodine, &c., have been somewhat disastrous. A fatal peritonitis has resulted more than once—indeed, the simple aspiration itself has been followed by somewhat similar serious consequences, brought about doubtless by the rupture of the cyst walls, when thin, and the sudden escape of the contents into the peritoneal cavity. Aspiration has thus been abandoned in favour of laparotomy, which is the favourite method of treatment at the present day. The cyst is brought forward to the anterior abdominal wall and is incised and emptied. Drainage is secured by means of a pancreatic fistula, which discharges for a variable time and then heals. It was the method followed in all the seventeen cases recorded in the foregoing table of traumatic pancreatic cysts, in all of which, except one, it was successful. It has been followed with like success in many other cases. Krecke[47] says that of twenty-seven cases treated by section and drainage all recovered; and of six cases treated by dissecting out the cyst three died. The advisability of trying to dissect out the cyst is very doubtful. Excision may be easy in some cases, but it will be difficult in most, and experience does not favour its recommendation. The method of anterior incision and drainage, notwithstanding its success, is not altogether perfect. It has actually failed to cure in a few cases, and other objections may be urged against it. It is much more suitable for the somewhat movable cysts which come forward to the anterior abdominal wall. These are generally broader anteriorly than posteriorly, and are thus readily opened from the front. It is not nearly so suitable for that other division which are somewhat sessile, broader posteriorly than anteriorly and much less movable. They are not easily reached by an anterior incision, and, moreover, it is by no means easy to bring the wall forward of such a cyst to the anterior incision and thus to secure its safe evacuation. In addition, I have to urge the obvious disadvantage of the anterior incision, alike for men and women, in so far as it interferes with the natural usefulness of the abdominal walls, and provides for a drainage of the most imperfect character, allowing of a cure only after a more or less protracted period of time. Further, the possibility of the pancreatic fistula becoming permanent must not be entirely denied. Senn, in his experiments, found that it never occurred, but actual experience in the human subject does not quite bear this out. Gould,[48] indeed, mentions a case in which not only did the pancreatic fistula remain permanent, but malignant disease appeared around it. It appears to me, therefore, not only reasonable, but most advisable, to seek for some other method of reaching these cysts free from these objections. Cathcart, Littlewood, and others have spoken of the ease with which a counter-opening could be made posteriorly in these cases, and it occurred to me that they might be primarily reached and drained by a posterior operation. I thereupon verified this suggestion many times upon the cadaver. I found it much easier than I expected to cut down upon the tail of the pancreas and lesser omental sac. A vertical incision about three inches long is made at the outer border of the left rectus, beginning above at the twelfth rib. After cutting through the skin

[36] Comptes Rendus de la Société de Chirurgie, 1890, p. 383.
[37] Deutsche Zeitschrift für Chirurgie, 1892, and La Semaine Médicale, May 25th, 1892.
[38] Bulletins de la Société Anatomique, 1858, p. 30.
[39] THE LANCET, Dec. 10th, 1892.
[40] L'Union Médicale, 1877, tome 44, p. 82.
[41] Bulletins de la Société Anatomique, 1880, p. 120.
[42] Ibid., 1889, p. 556.
[43] Ibid., 1885, p. 39.
[44] Nouvelles Archives d'Obstétrique et de Gynécologie, October, 1892.
[45] Les Kystes hématiques du Péritoine. Thèse de Paris, 1885.
[46] Loc. cit.
[47] Münchener Medicinische Wochenschrift, Nos. 25 and 26, 1892; and Epitome, Brit. Med. Jour., July 23rd, 1892.
[48] Discussion upon a paper by the late Mr. Hulke read at the Clinical Society of London on Nov. 25th, 1892. Vide THE LANCET, Dec. 3rd, 1892.

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and fascia the thin fibres of the latissimus dorsi are first recognised, and then the strong fascia at the outer border of the rectus. This is incised and the upper border of the quadratus lumborum is next seen running downwards and outwards. The finger is inserted above it and feels for the posterior surface of the kidney through the fat and cellular tissue. It then defines the position of the renal vessels. The tail of the pancreas and the postero-lateral wall of the lesser omental sac lie just above and inside them, and by inserting a probe I was able to enter the cavity of this sac, either through the mesocolon below the lower border of the pancreas or through the posterior peritoneum above this gland, at will, according to the obliquity upwards given to the probe. In no case was the suprarenal capsule or any other structure in the neighbourhood injured. When the lesser omental sac was distended with fluid fluctuation could be distinctly felt by the exploring finger working upwards above the renal vessels, and the fluid could be evacuated with ease by means of a drainage-tube made to enter the sac with the help of a director and a pair of dressing forceps. This procedure will be found to be quite as easy in cases of pancreatic cysts and probably of others in this neighbourhood. The cyst wall may be thick and thus a little difficult to penetrate, but that need not cause much trouble, while the long existent distension will have brought the cyst within more easy reach. It may even extend downwards below the line of the renal vessels, and thus be reached by the surgeon whether he goes above or below these structures. This method of reaching these cysts from behind was adopted by Mr. Cotterill with complete success in a case now under his care in the wards of the Royal Infirmary, Edinburgh. He entered the sac below the renal vessels. The patient is doing well. Others have adopted a posterior incision after an anterior one has failed. Thus Gould mentioned that in a case where the cyst was fixed and could not be brought to the surface, with a finger in the cyst he cut down behind below the twelfth rib and drained it posteriorly. The fistula rapidly closed up. A better proof could hardly be given of the advantages of the posterior incision. He would doubtless have easily reached the cyst had he tried the posterior incision at first. I would strongly advocate this method of procedure, not only because of its ease, but because of the advantages of a posterior over an anterior incision, and of the more perfect drainage and much more rapid convalescence and cure which it promises. Even if it were to fail to reach the cyst, it would in no way prejudice the success of an anterior exploration, and would, moreover, even in such a case, allow of the rapid establishment of posterior drainage.

Edinburgh.

A CASE OF ULCERATIVE ENDOCARDITIS ASSOCIATED WITH COARCTATION OF THE AORTA.

BY THOS. B. FLINT, L.R.C.P. LOND., M.R.C.S. ENG.,
SENIOR HOUSE PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

A MAN aged twenty-one came to the accident-room of the Manchester Royal Infirmary on May 20th, 1895, complaining of hæmoptysis, which had come on two days previously. The quantity of blood brought up was small. Phthisis was the first thing thought of. On examining his chest, however, no physical signs of that disease were manifest, but a double murmur heard best over the aortic area was discovered. Both systolic and diastolic murmurs were very loud and entirely replaced the heart sounds. On feeling the pulse it was found to be distinctly a "Corrigan's," and on rubbing the skin over the forehead capillary pulsation was well seen. He was admitted as an in-patient under the care of Dr. Steell. The next day a more detailed examination was made. The patient was a well-nourished man, but somewhat anæmic. On inspection it was noticed that there was marked pulsation in the supra-sternal notch and in the neck, especially the upper part. The apex beat was in the sixth left intercostal space and just outside the nipple line. On percussion the cardiac dulness extended three-quarters of an inch to the right of the mid-sternal line and four inches and a half to the left of it at a level of about one inch above the upper margin of the liver. Above, the dulness did not extend higher than the third rib. On auscultation the loud double murmur was heard as before in all four areas of the heart, replacing the sounds. When listening at the lower angle of the left scapula both murmurs could be plainly heard; but higher up, just below the scapular spine, the systolic murmur was alone heard and was remarkably loud. On looking more closely along the surface of this area where the murmur was heard the loudest it was noticed to be pulsating, and numerous tortuous arteries, some of considerable size, could be seen beating in it, and on laying the hand over it a slight thrill could be felt. The pulsating area occupied practically the subspinous fossa. On the right side a similar condition existed, but it was not so well defined as on the left. The pupils were equal, and both radial arteries gave the same tracing—a typical aortic regurgitation one. As regards the other organs, the lungs were apparently normal. The sputum was examined several times for tubercle bacilli with negative results. The liver was slightly enlarged and projected about a finger's breadth below the costal margin. The spleen was also enlarged. The urine was normal. As regards his previous history, the patient stated that he had never suffered from rheumatism or chorea, that his work was not heavy, that he had never noticed that he was short of breath, and had never had any swelling of the legs and feet. From the date of admission to the end of the second week of June the patient progressed very well. The pulse averaged about 100, the respiration was about 18 per minute, and the temperature in the morning averaged about 98·2°F. and in the evening about 100·2°. The hæmoptysis almost disappeared. During the third week of June, although the patient did not complain, it was noticed that he was getting paler and his appetite began to fail. The pulse averaged 120, the respiration 20, and the temperature in the morning 99° and in the evening 100°. On June 24th the patient complained of pain in his right side, and his temperature rose in the evening to 101·2°. The next day he coughed up a considerable quantity of blood from the lungs. He perspired profusely and vomited during the day about three pints of undigested food. There was some dulness at the base of the right lung. A distinct *bruit de galop* was heard for the first time over the cardiac region. The superficial arteries could be seen pulsating much more plainly than before, and the urine contained some albumin. He gradually became worse, his pulse-rate increasing to 132 per minute, his respiration to 54, and his temperature to 101°, and he died on the 29th from heart failure.

Necropsy.—The brain and spinal cord were not examined. The pericardium was considerably increased in extent and there was a slight increase in the amount of pericardial fluid. The heart was greatly enlarged downwards and outwards, giving to the organ almost a bovine character. The weight was 1 lb. 5 oz. The right auricle was slightly dilated. The tricuspid orifice was slightly dilated; the segments were normal. The right ventricle was dilated and greatly hypertrophied. The pulmonary artery was apparently normal. The left auricle was dilated and hypertrophied. The mitral orifice was dilated and admitted three fingers; the segments were healthy. The left ventricle was dilated and greatly hypertrophied. The aortic segments were almost completely destroyed by masses of recent ulcerative endocarditic vegetations. Immediately above the valves a diverticulum, fully one inch in depth, projected as a polypoid growth into the cavity of the right auricle. About one inch beyond the origin of the left subclavian artery—i.e., at the junction of the transverse and descending aortas—the aorta became extremely narrowed and only admitted a small probe. The contraction extended over a very inconsiderable space and was sharply defined both at its commencement and at its termination. The ductus arteriosus was obliterated and terminated at the concave portion of the aorta about one-sixteenth of an inch above its contraction. The descending thoracic and abdominal aortas were of about normal size, but the iliac and femoral vessels were smaller than usual. Coming off from the descending aorta immediately below the constriction there was an artery as large as the brachial; this proved to be the first aortic intercostal. The posterior scapular arteries were much enlarged and tortuous and anastomosed with the upper intercostal branches close to the spine. These vessels formed the pulsating area described above. The internal mammary arteries were also much enlarged. The liver was enlarged. The spleen wa

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enlarged considerably. The kidneys were healthy. The left lung was normal. The lower lobe of the right lung showed pneumonic consolidation and was in the stage of red hepatisation. There was a small amount of fluid in the right pleural cavity.

Remarks.—The condition of coarctation of the aorta, although rare, is by no means unique; I have, however, never seen a case recorded in which the patient was also the subject of ulcerative endocarditis. An interesting point in the case was the close resemblance it bore to pulmonary phthisis, the temperature, down in the morning and up in the evening, being very suggestive of this, but, of course, there was the presence of the valve lesion to account for it. The patient and his mother (a very intelligent woman) were certain that he had never had rheumatic fever or chorea, nor had he suffered from any other serious ailment previously. He had never undergone severe physical exertion, and his work had always been light. Then, again, the enlargement of the spleen is worthy of note, as is also the albuminuria which came on shortly before death. The temperature, too, was always more or less raised during the whole of his stay in hospital.

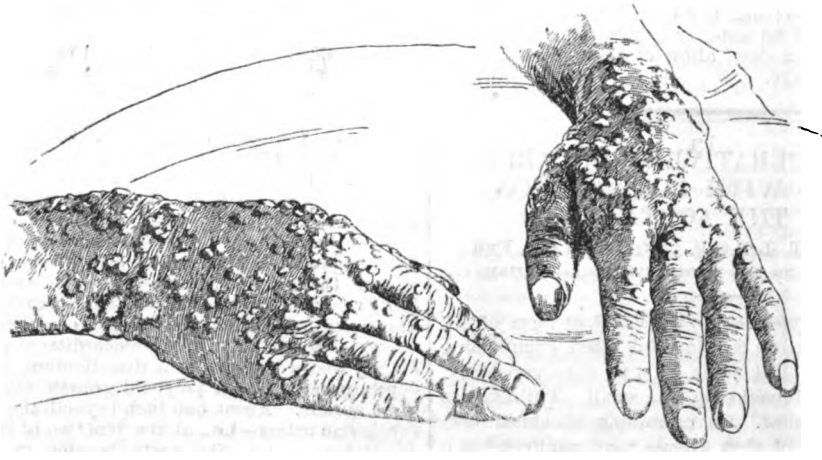
Manchester.

A RARE FORM OF SKIN DISEASE FOLLOWING THE EXTERNAL APPLICATION OF IODINE LINIMENT.

BY D. ROBERTSON DOBIE, M.D. EDIN.

IN THE LANCET of Sept. 29th, 1894, appeared two very interesting articles, the one upon an epidemic skin disease occurring in public institutions, and the other upon the treatment of small-pox, two very dissimilar subjects to allude to. I am induced from a study of those to think the following case will be of interest and importance on the one hand to medical practitioners who devote their particular attention to skin affections, and on the other hand to medical officers of health, who may at any moment be consulted as to the best means of checking the spread of disease amongst a community. Dr. Henderson and I were at first in a dilemma as to what was the nature of a most suspicious eruption which made its appearance in a case under treatment in the Coldstream Cottage Hospital. The following are the history and notes of the case, and I am of opinion that, although not by any means unique, it is of sufficient rarity to make it worth recording.

On Sept. 13th, 1894, I was summoned to visit a man aged twenty-four years who had been ill for about four days with headache, lassitude, and pain in the back. I found the patient with a high temperature and double pneumonia. I ordered his immediate removal to the Coldstream Cottage Hospital, where a more thorough and complete examination as to his condition was made. His previous history may be shortly noted. After his apprenticeship he enlisted and was sent to Egypt, and when abroad he became subject to epileptic fits and was discharged on that account. He came home and found employment in various ways, feeling well and able for any amount of work. Three weeks before the present illness he went to harvest work, and continued this employment four days, when he felt unwell. He worked when he felt able, and went to bed when he felt worse. He finally gave up and came home, but did not send for medical advice until the date of admission, when he was suffering from pneumonia and symptoms of advanced renal disease. On each succeeding day the temperature averaged from 98·4° to 99° F., with an evening rise not exceeding 100·8°. The urine was highly coloured with bile, and thickly charged with albumin, fully two-thirds of a test-tube quantity. The amount ranged from seventy to eighty ounces. The usual treatment necessary for such cases was carried out with great care and his condition every day carefully noted. The consolidation of the lung became most marked, and in every respect his condition might safely be said to be improving. It is unnecessary to go into every detail, but what I wish particularly to point out in the course of the treatment was the painting of the back with dilute iodine liniment, equal in strength to the Edinburgh tincture of iodine. This was applied morning and evening from Sept. 14th to the 18th. On the 19th the patient's face was completely covered with a papular, pustular, vesicular eruption; in some parts, more particularly in the region of the ear, a bullous eruption. These pustules all over the face were discrete and confluent, forming large encrusted sores, with swelling of the eyelids, lips, nose, and ears. A copious discharge from the nostrils accompanied this. The face was increased enormously in size. At the same time a perfectly different, purely papular eruption made its appearance upon the back of the hands, wrists, and forearms. The patient experienced severe smarting and heat in the face; in other respects there was no change in his condition. My colleague and myself were at first not a little alarmed at this sudden development, more particularly when we discovered, on making inquiries, that he had been sleeping during the time he was at the farm in a bed adjoining two strangers, labourers from the county of Durham. The period of incubation of small-pox would not tally with his account of the dates, and on consulting Dr. Radcliffe Crocker's able work on "Skin Diseases" and Plate 33 of the Sydenham Society "Atlas of Skin Diseases" I discovered



that we had a case of iodide eruption. The eruption on the face in the course of four days gradually died away, leaving healthy epidermis and no scars, the scabs peeling off rapidly. The papules on the hands continued very prominent. On careful examination it was easily seen that the papilloma was a distinct epithelial growth upwards. On puncture a clear viscid fluid escaped; no pus was found in any of them. There was a well-marked red ring round the base of each, and not one had the slightest appearance of subsiding. On Sept. 27th the patient complained to the nurse in attendance of headache and chilliness all over his body. His temperature was 99·4° at 8 o'clock in the morning. At 12 o'clock he was seized with sickness, nausea,

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and vomiting. A severe rigor set in, and the temperature had risen to 101°. The pulse was rapid and tumultuous. The patient became cyanosed. Respirations were rapid and stertorous. He became rapidly unconscious, with twitching of the hands and frothing at the mouth and nose. Profuse perspiration ushered in a violent convulsion. He had ten similar attacks following each other in rapid succession. These seizures were typical uræmic convulsions. Pilocarpine and venesection, baths, chloroform, &c., were all tried to alleviate his suffering and distress without success, and he died at 5.45 P.M. the same day.

Remarks.—The difficulty which surrounded the diagnosis of this most interesting case at a moment's notice will be evident at once, and several of my colleagues who were quite familiar with the early appearance of variola were startled at the eruption on the hands, wrists, and forearms, and admitted that it was an impossibility to distinguish the difference without minute examination and inspection of the fluid on puncture of the papule and a close analysis of the history of the case. There are several cases of a like nature recorded, after the internal administration of iodide of potassium, but I am unable to find any mention made of a typical, and what I should say in this case an aggravated, iodide rash, induced by the local application of the liniment to the skin of the back, which throughout remained in a healthy, unbroken condition. For a full description of the appearance and for the pathology and minute anatomy of the disease I beg to refer my readers to the account given at page 300 of Dr. Crocker's work on Skin Diseases, second edition.

Coldstream, N.B.

ROUGH NOTES ON REMEDIES.[1]

BY WILLIAM MURRAY, M.D. DURH., F.R.C.P. LOND.,

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No. IV.

MERCURY IN HEART DISEASE.

I HAVE been somewhat disappointed in the discussion at Edinburgh on cardiac stimulants, inasmuch as I see hardly any reference was made to the value of mercury in cases of heart disease. I fear that our views on this subject have not advanced of late, and the mind of the profession has not grasped the idea that mercury has a value in heart disease far beyond what may be termed its "alterative" action. The administration of this drug in cardiac dropsy and in all cases of passive congestion of the pulmonary and portal systems is as old as the hills, and we old-fashioned physicians know well enough that thirty or forty years ago no one thought of treating these conditions except by a mercurial pill followed by a saline or jalap purgative and a diuretic mixture containing digitalis. Then came the days when the diuretic mixture was changed for one of muriate or ammonio-citrate of iron with digitalis, and some of us will remember the remarkable papers of Dr. Handfield Jones on the value of this combination. Now we have come to the days of arsenic, strychnia, iodide of potassium, and a host of cardiac stimulants, together with rest and cardiac gymnastics. I expect that in all cases our remedies do but assist nature in bringing about healthy compensatory changes by preventing degeneration of the muscles and vessels of the heart and main bloodvessels. Repeated observation has convinced me that mercury possesses a value far beyond the supposed alterative nature of its action—not that it fails to relieve congested vessels by drainage or osmosis, for doubtless this lays the foundation of its further action on the heart itself, and it would fail to relieve the heart did it not eliminate biliary and other effete matter from the blood and tissues of the liver and portal system, for instance; but when due allowance has been made for these primary effects there remains strong evidence that it tells upon the heart itself. Its special benefits are exercised in cases of dilated and hypertrophied heart. By means of it the "thready," weak, rapid, and irregular pulse is made full, soft, regular, and slow, with manifest relief of such symptoms as dyspnœa, pectoral weight and tightness, and sensations of faintness. The "angina sine dolore" is often marvellously relieved and removed by two or three grains of blue pill three times a day, and the severe forms of "angina pectoris" not unfrequently disappear under its influence. While the nitrites, nitroglycerine, &c., afford temporary relief, this remedy is much more permanent in its effects. Nor need I say that to give digitalis a fair chance it is absolutely necessary to pave its way by preliminary doses of mercury and to foster its action by repeated doses. Many of the cases where digitalis, &c., fail, or seem to fail by supposed accumulation depend on this, that we are giving the digitalis without the blue pill or calomel, and it often falls to the lot of the consultant to make a great hit by inserting the mercurial into the previous treatment. Much more true is this of iron and digitalis combined. We see a patient with engorged vessels and labouring heart taking iron and digitalis much to the detriment and not to the benefit of the case—each dose is but adding fuel to the fire—energising the heart in its futile attempts to drive the blood through the engorged vascular system, and thus exhausting the organ in its hopeless struggle. We change all this by frequently repeated doses of mercury; we drain the portal system, we exosmose the water from the general vascular system, we suck up dropsical accumulations, and by pushing the drug we get hold of the heart itself and produce the slow, soft, regular, and effectual pulse, giving the digitalis or strophanthus a fair chance to come in as cardiac tonics; and at last we complete the circle by arriving at the point whence we departed with the patient in a very different condition, and we can give the iron and digitalis now with impunity—nay, with immense benefit. Let the following case speak for itself, and its quotation is the more apt as the patient came from being under the care of an eminent Edinburgh physician in the very condition I have described—viz., a dilated and hypertrophied heart goaded to excess in a useless effort by iron and digitalis.

A case of dilated and hypertrophied heart treated by 20,000 grains of blue pill; recovery from advanced cardiac dropsy followed by ten years of good health.—The patient, a hard-working man, was a Scotchman, and had all the talent, physique, and energy peculiar to his race. He gradually developed symptoms of valvular disease and dilated heart when about forty-eight years of age. He went to Edinburgh and was under treatment there for several weeks. At last he was sent home with the assurance that nothing more could be done for him. My friend, Dr. Wilson of Wallsend, was summoned to see him, and he called me in consultation on the case. We found the patient in the following condition. He was propped up in bed. His countenance was anxious, his eyes seemed to protrude from their sockets, and his face was bathed in perspiration, with a livid colour of the lips and skin. His breathing was shallow, frequent, and difficult, accompanied by a constant hacking and ineffectual cough. His pulse was hardly perceptible, irregular, and thready. The heart's action was tumultuous and irregular, the cardiac sounds were almost inaudible, and a distant murmur could be heard with both sounds at both the right and the left apex. No cardiac impulses could be felt except a wavy movement at the epigastrium. The liver was enlarged, and the abdominal cavity was distended with fluid, as were also the lower extremities and the scrotum. The pleural cavities were also occupied to a considerable extent by fluid effusion. We determined to abandon the usual cardiac stimulants and gave him two or three grains of blue pill thrice a day, and at the end of two days we gave him a smart purge of jalap. Greatly encouraged by the result, we pushed the blue pill (two to three grains three times a day) for a week or more, and during that time a steady relief of all the symptoms ensued. The countenance became placid, the tongue (before dry and brown) became moist, and the pulse more regular, full, and soft; the dropsical accumulations gradually receded, and the breathing resumed a normal character. Now was the time for digitalis—always best given on a falling tide in dropsy—and doubtless the patient owed much of his rapid recovery to the temporary and occasional use of that drug; but the staple of the treatment was the steady use of blue pill, now gradually diminished to two pills a day, and finally to a five-grain pill at bed time. To sum up the results, the man felt himself to be quite free from all his troubles in six weeks, at which date I met him in the Newcastle railway station and had the pleasure of presenting

[1] Nos. I., II., and III. of this series were published in THE LANCET of Feb. 25th and Nov. 4th, 1893, and Sept. 21st, 1895, respectively.

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my convalescent to an extra-mural teacher of eminence from Edinburgh. From this time the patient resumed his duties and became a useful and active member of society.

Now the point of interest in this case is this—and I want to emphasise it—that during the next ten years the patient stuck to his blue pill every night with few intermissions, and declared that whenever he did leave it off for a few nights his heart began to trouble him and his breathing became difficult. As will be seen from the post-mortem notes, this nightly dose was in some mysterious way enabling a heart, massive with disease, to discharge its duties in such a way as to make its owner feel quite well. During the ten or eleven years of his subsequent life, Dr. Wilson calculates, he took 20,000 grains of blue pill; it never salivated him, it neither purged nor nauseated him, and it never gave his breath a touch of fetor. At last, however, his old symptoms returned, the machinery was worn out, and he died chiefly from the pressure of abdominal fluid on his enormous heart. I regret that such a case should be so roughly handled, it deserves a more accurate and detailed description, and I trust Dr. Wilson will some day give his details of it. My son, Professor George Murray, and Dr. Wilson made a post-mortem examination, of which these are the notes:—"On opening the thorax the heart was seen to be enormously enlarged, and the space occupied by it measured eight inches across and eight inches from above downwards. The lungs were displaced backwards and compressed by the enlarged heart. Heart: The right auricle was very much dilated, almost to the size of a man's fist. The walls were thickened and the muscular tissue hypertrophied. The auriculo-ventricular orifice was very much increased in size and readily admitted eight fingers at once. The tricuspid valves were much thickened and opaque. The right ventricle was much dilated and the walls thin. The left auricle was much dilated, the walls thick, and the endocardium opaque. In one part of the wall of the auricle there were two bars of calcified muscular tissue united by a crossbar of the same substance. The auriculo-ventricular opening was much constricted and hardly admitted the tip of the index-finger. The mitral valves were adherent, so that there was only a small opening like a button-hole between them. The valves were thick and rigid, but not calcified. The left ventricle was dilated, but its capacity was only about one-half that of the right ventricle. The walls were not much increased in thickness. Abdomen: The peritoneal cavity contained a considerable amount of clear fluid. The spleen showed a dense white patch of scar tissue one-fourth of an inch deep in the centre—evidently the site of a very old infarction. The surface of the liver was nodular; on section it showed dense strands of connective tissue of advanced cirrhosis."

Remarks.—I need not say that to rescue a man from the jaws of death and give him ten or eleven years of fairly good health confers on any drug a reputation. Its potency is established. We therefore ask, How does it act? Is it a cardiac tonic, stimulant, alterative, or what? Or does it act on the secondary apparatus of the circulation and the blood itself by reducing the resistance of the vessels, diminishing the volume of blood, and altering its fibrinity so as to make it circulate more freely? I think it does all these things, and at the same time it soothes the heart by purifying the blood of effete accumulations.

Newcastle-on-Tyne.

THE PREPARATION OF ANTIRABIC SERUM AND THE METHOD OF DETERMINING ITS STRENGTH.

BY PROFESSOR GUY TIZZONI AND DR. EUGENE CENTANNI.

(Concluded from page 731.)

IV.—THE ANTIRABIC SERUM AS A PROTECTIVE.

BEARING in mind the more exact methods established for the standardising of the dose of the serum and of the virus, we have proceeded to test the power of our serum by various methods of experiment. We began by seeking to determine what dose of serum injected under the skin prior to infection would be capable of preventing the action of the virus. These experiments have no direct or important bearing upon practice, inasmuch as, rabies being a disease of rare occurrence, we cannot speak of its treatment in the healthy individual before there has been any contagion whatever. From the scientific side, however, these experiments are of very great importance, and constitute the starting-point of other researches and other tests of the efficacy of the serum; one knows, in fact, that the efficacy of the serum may vary according to the time which intervenes between its introduction and the moment of infection. We can inject the serum a long time before infection—weeks or months—with the aim of determining what is the duration of the immunity conferred by it—a question which has a certain importance, as we know that one of the points which we wish to establish between the immunity given by the serum and that given by means of vaccine is whether the first has a much shorter duration; we have, therefore, in the course of these experiments dwelt on the durations of the immunity, and shall deal with them in a separate paper. The serum can also be introduced a short time before infection; this is done very frequently and is adapted to solve certain important questions. We have carried out a more extended series of experiments of this kind in order to determine the following points. 1. The relation existing between the quantity of serum introduced prophylactically and that necessary to be introduced at various periods after the occurrence of infection. These doses are very different, and form an ascending series, starting from the moment at which the infection has taken place; in the various infections this rise in dose does not proceed with equal intensity, but the degree of this increase gives us an idea of the degree of infection, and hence of the greater or lesser difficulty of curing it, according to its intensity. As regards the curative use of the antirabic serum we shall see the importance of establishing the relation between the curative and the preventive doses. 2. The relation between the different methods of injection of the serum, with a view to hastening the absorption and lessening the loss of active material. One knows that serum may be introduced by way of the peritoneum as well as by way of the veins. We have adopted a new method, the immense advantage of which over the subcutaneous method will presently be seen. 3. A means of determining the dose necessary to counteract the infection made with the canine virus and one made with the fixed virus, and hence, indirectly, to return once more to the comparison of the two viruses. 4. A method of estimating the strength of the serum.

It has already been seen how by the method of subcutaneous injection we sought to determine the best type of vaccination. We have, however, abandoned this in our latest experiments in favour of more simple and exact methods. In the following table (Table XIII.) we have collected several groups of experiments made with serum upon sheep and after various kinds of vaccinations, the serum having the power of typical serum. This serum has been introduced twenty-four hours before infection, it being injected at one single time if a small quantity was being used, and at three or four times when the quantities were much larger. Only in the latter event did the animal suffer in any way from the injection, either from a little local œdema or from some diminution of the body weight. The infection was always made beneath the dura mater, the canine virus and the fixed virus being used. (See Table XIII.)

Passing in review the experiments made with the canine virus, we find that, in presence of an infecting unit introduced into the brain, our typical serum having the value of 1 to 25,000—that is, 0·04 c.cm. (corresponding to at least a drop or to three milligrammes dry product)—is sufficient to protect a rabbit of the weight of one kilogramme; against the fixed virus the dose must be raised considerably, this being safe up to 1 in 100, according to which a rabbit of the weight of one killogramme demands at least 10 c.cm. This dose is to that with the canine virus as 250 to 1, whence one sees the great increase of activity which the virus has undergone by repeated introductions into the rabbit—an increase which appears the greater if the limit of dilution of each of these is not considered and they are taken at equal volumes. And since the fixed virus at an equal volume contains 200 more infecting units than the canine virus of mean strength (the relation between the dilution 4 in 1000 and 1 in 50), so it may be deduced that the fixed virus is 50,000 times stronger than the canine, or at least, that to protect against the infection practised with a given

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weight of the one needs 50,000 times the dose which protects against an equal weight of the other. Of the other lessons which this table furnishes we shall speak later, when it will be possible to deduce them by comparison with data obtained by other methods of experiment.

V.—THE ANTIRABIC SERUM AS A CURATIVE AGENT.

From the preceding experiments it is evident that the antirabic serum, like any other protective serum, succeeded, not only in preventing the malady from invading the still intact organism, but also in cutting it short after the infection—it may be during the period of incubation, or even when the first rabid phenomena have been manifested. We were then limited to establishing the possibility of the fact, reserving to later researches the determination of the degree as we have already observed when treating of the rabbit, in the lesion of a large nervous trunk, and in the introduction of virus sufficiently concentrated, represents a form of infection certainly graver than the somewhat small bite usually met with in man. We draw particular attention to the table of the curative experiments at varying periods after infection. The serum used came from two sheep; that of one had the strength of the typical serum, that of the other had a power eight times less $\left(\frac{ST}{8}\right)$; but the calculations all referred to the typical serum. The infection was made in the usual manner—by way of the nerve with a dilution of 1 in 20, and by way of the brain with a dilution of 1 in 30, always injecting 0·13 gramme per kilogramme. Nothwithstanding that in

TABLE XIII.—*Infection with Virus "da strada."*

Source of the serum.	Number of register.	Weight of rabbit in kilos.	Infecting units injected under dura mater.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of Experiment.
SHEEP III., IV., AND V. First vaccination	19	2·060	2½	c.cm. 0·08	1 : 25,000	Died on the 20th day.
	18	1·520	2½	,, 0·15	1 : 10,090	Lived.
	32	1·500	1	,, 0·06	1 : 25,000	,,
	34	1·410	1	,, 0·057	1 : 25,000	,,
	35	1·560	½ (1 : 100)	,, 0·062	1 : 25,000	,,
	147	1·170	1	,, 0·33	1 : 3,600	,,
	148	1·210	1	,, 0·33	1 : 5,000	,,
	98	1·350	1	,, 0·500	1 : 270	,,
	99	1·370	2	,, 0·500	1 : 270	Died on the 20th day.
	100	1·390	1	,, 0·500	1 : 280	Lived.
SHEEP I. Fourth vaccination	40	1·700	2½	,, 0·007	1 : 25,000	,,
SHEEP I. Fourth vaccination	140	1·960	1	,, 0·008	1 : 25,000	,,
	141	1·730	1	,, 0·007	1 : 25,000	,,
	144	2·200	1	,, 0·200	1 : 1,100	,,
	145	2·140	1	,, 0·200	1 : 1,070	,,
	117	1·640	1	,, 0·300	1 : 330	,,
	118	1·500	1	,, 0·500	1 : 300	,,
	119	1·320	1	,, 0·510	1 : 360	,,
Infection with "Fixed" Virus.						
SHEEP III., IV., AND V. First vaccination	164	2·040	1	c.cm. 10·0	1 : 204	Lived.
	172	1·570	1	,, 10·0	1 : 157	,,
	163	2·360	1	,, 20·0	1 : 118	Died on the 44th day.
	173	1·620	1	,, 15·0	1 : 108	Lived.
	158	1·730	2	,, 18·0	1 : 96	Died on the 8th day.
SHEEP I. Fourth vaccination	181	1·670	1	,, 5·0	1 : 334	Lived.
	182	1·670	1	,, 10·0	1 : 167	Died on the 10th day.
	183	1·740	1	,, 20·0	1 : 87	Lived.
	162	1·130	1	,, 20·0	1 : 56	,,
SHEEP I. AND IV. Fifth and third vaccination	292	1·530	1	c.cm. 4·5	1 : 510	Died on the 7th day.
	291	1·380	1	,, 8·0	1 : 166	Died on the 10th day.
	294	1·500	1	,, 13·5	1 : 111	Lived.
	295	2·000	1	,, 18·0	1 : 111	,,
	290	1·600	1	,, 19·2	1 : 83	,,
	296	1·390	1	,, 16·8	1 : 83	,,
	297	1·620	1	,, 19·5	1 : 83	,,

of this action and the relation of the various quantities of serum which might safely act during the various periods of the disease. It is not necessary to demonstrate how much attention should be given to this part of the argument, since the antirabic treatment in man being necessarily undertaken after the smallest bite the means to cut short rabies after infection and with the least quantity of serum must crown all our researches. In making this series of experiments we have principally drawn attention to the demands which the serum must satisfy in its application to man. We were therefore confined to the employment of the canine virus as the material of infection; besides experiments with subdural infection we have carried out a considerable number with infection in the sciatic nerve, which, making the infection every care, as above stated, was taken, it must not be taken for granted that in any given series of animals the multiplication of the virus proceeds directly parallel in all, and that they must at the same period of incubation always neutralise equal doses of virus. One not infrequently encounters in some one animal a somewhat more rapid development of the disease, so that, for instance, what for one animal is the tenth day represents for another the twelfth or fourteenth. (See Table XIV.)

The results displayed in Table XIV. have a marvellous regularity; a more exact application of mathematics to the measurement of complete biological phenomena could not certainly be desired. If any doubt should remain as to the efficacy and proportion of the action of the serum

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this table would serve of itself alone to completely dispel it. It furnishes us with data of immense value for the application of the serum to man when bitten. We are able to establish a comparison between the preventive dose and the curative dose, and also between the curative doses themselves at various periods after the infection. We will first consider the experiments with infection in the sciatic nerve. The preventive dose established by us for the serum employed in Table XIII. is 1 in 25,000; now it is seen that no sooner do we pass from the preventive dose to the curative dose than a considerable difference arises. On the first day after the infection a dose of serum as much as five times greater is required, not, indeed, to save the animal, but merely to postpone its death. On the second day the insufficiency of that dose is made up for by another dose three times greater, and we see that to obtain positive results we must carry the dose of serum up to six times that of the protective dose. On the fourth day the dose is found to lie between five times (always insufficient—see Example 95—as in the preceding cases) and ten times (dose sufficient, see Example 96). The experiments on the eighth day are important as to number and constancy. From them it results that a dose only three times larger (Example 11) is inefficacious, and that a dose seven times larger gives an uncertain result, since in one case it is of value and in another not. The results, constantly positive, begin when we carry the dose to eight times that of the preventive (Example 110 *et seq.*). On the tenth day a dose forty-five times greater succeeds (Example 146), while on the eleventh day a dose twenty-five times greater (Example 137) is of no use, but should be a warning, as at the moment at which the injection was practised rabies, which in this animal appeared in an exceptionally rapid manner, had already developed. The following may, therefore, be taken as established, to be verified by other infections—viz., that there is an increase of the dose over the protective, but that such increase succeeds in less proportion than in the better known infections—e.g., tetanus and diphtheria. In fact, in rabies this increase for the first half of the period of incubation oscillates between six and eight times, whereas in tetanus, from the time of the infection up to the appearance of the first symptoms, a dose is required 1000 to 2000 times the strength of the protective, and in diphtheria 20 to 100 times. From what has been stated one may deduce how the dose differs during the period of incubation. While on the second day it is necessary to employ six times the protective dose, on the eighth day it suffices to push it simply to eight times; this is surprising, considering that in rabies one is not concerned with a pure intoxication by a fixed dose of poison, but with a virus which grows and spreads continually through the nervous system. From our own experiments and from those of other observers we know, in fact, that on the eighth day after infection in the sciatic nerve with the canine virus the lumbar marrow is already virulent, and it is admitted that a diffusion of the virus takes place even before the animal presents the symptoms of the disease. Adhering, nevertheless, to the often established fact of the constant relation of neutralisation between the virus and the serum, we must maintain that the multiplication of the virus during this period cannot be very considerable, and that when we undertake the treatment during the first half of the period of incubation we ought not to have to contend with very large quantities of virus; nevertheless, it cannot be too strongly recommended to commence in rabies, as in other infections, with the serum treatment as soon as possible after the disease has been contracted. After the eighth day it is perceived that the dose has to be raised much more rapidly, but that on the eleventh a multiple twenty-five times greater does not succeed. Further than that the table does not inform us. We have not deemed it necessary, while experimenting, to supply data relating to a more advanced period of the disease, since it was incumbent upon us to demonstrate the possibility of curing, safely and with moderate doses of serum, an attack of rabies at the beginning of the period of incubation. This disease presents, in contrast with other maladies, the peculiarity of following a course in which is marked out with precision the moment of contagion and the development after a long period of incubation. Hence it is possible to apply the treatment soon after contagion without expecting that the disease will be more severe on the appearance of the first morbid manifestations. We have not occupied ourselves with any other aspect of developed rabies in the preceding researches; they are only approximately of value for actual calculations, since we are not yet in possession of exact methods of administration. The serum had a power inferior to that actually calculated, and we injected the mean dose of 1 in 100 for the intra-nervous infection with canine virus on the appearance of decrease of weight and of the first signs

TABLE XIV.

Mode of infection.	Number of order.	Number of register.	Weight of rabbit in kilos.	Beginning of the treatment after infection.	Quantity of serum injected under the skin twenty-four hours before infection. Absolute.	Quantity of serum injected under the skin twenty-four hours before infection. Relative.	Result of experiment.
Infection in the sciatic nerve with canine virus, dilution 1 : 20.	1	84 a	1·850	1st day	c.cm. 1·15	1 : 1600	Died 20th day.
	2	85 a	1·550		,, 0·19	1 : 8000	Died 22nd day.
	3	86 a	1·570		,, 0·30	1 : 5330	Died 29th day.
	4	84	1·650	2nd day	c.cm. 0·31	1 : 5330	Died 15th day.
	5	85	1·600		,, 0·42	1 : 4000	Lived.
	6	86	1·870		,, 0·60	1 : 3200	,,
	7	95	1·820	4th day	c.cm. 0·37	1 : 5000	Died 25th day.
	8	96	2·000		,, 0.75	1 : 2660	Lived.
	9	11	2·000	8th day	c.cm. 0·25	1 : 8000	Died 31st day.
	10	10	1·800		,, 0·50	1 : 3600	Lived.
	11	108	1·810		,, 0·50	1 : 3600	Died 19th day.
	12	110	2·290		,, 1·0	1 : 3000	Lived.
	13	109	2·200		,, 1·0	1 : 2200	,,
	14	9	2·000		,, 1·0	1 : 2000	,,
	15	107	2·490		,, 1·5	1 : 1650	,,
	16	147	1·580		,, 1·0	1 : 1580	,,
	17	146	1·680	10th day	c.cm. 3·0	1 : 660	,,
	18	137	1·570	11th day	c.cm. 1·6	1 : 1000	Died 20th day.
Subdural infection, canine virus, dilution 1 : 50.	19	133	1·400	2nd day	c.cm. 0·5	1 : 2800	Lived.
	20	134	2·230		,, 1·0	1 : 2230	,,
	21	136	1·470	4th day	c.cm. 0·75	1 : 2000	Died 21st day.
	22	135	2·090		,, 1·5	1 : 1400	Lived.

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of paresis. From this we can argue that at the period stated successes can only be obtained with quantities of serum about 100 times greater than the protective dose. The curative experiments made upon animals by means of subdural infections, though less numerous, confirm those made with intra-nervous infection, and give an idea of the limits between which the facts vary in passing from one mode of infection to the other. We see, in fact, as on the second day of infection, that there is not any noteworthy difference, since a dose of 1 in 4000 is required where the infection is in the sciatic nerve (Example 85), whilst for the subdural infection one of 1 in 2800 is necessary, nor do we know whether that is the maximum. On the fourth day a noteworthy difference is noticeable, since a dose of 1 in 2000 (Example 136) is no longer sufficient, while for infection in the sciatic nerve this dose is of service, as also is a lower one, as we find a dose of 1 in 3000 still active on the eighth day. We ought, therefore, to admit that in the cerebral infection there is a more rapid multiplication of the virus, which agrees with what has been established as to the manner of propagation of the virus of rabies in the organism. And with regard to the treatment we are able to say that when begun immediately after infection an almost equal dose of serum suffices, whatever may have been the part of the nervous system in which the virus has been deposited; but for ever so little later the dose of the serum should always be increased the nearer the seat of the rabid inoculation is to the nerve centres.

Course of the malady in the cured animals.—The weight of the infected animal continues normally to increase up to beyond half of the period of incubation, when the decline commences, which becomes rapid towards the close. However, there are cases in which the decline of weight commences much sooner—i.e., a little after the infection—and proceeds without interruption up to the death of the animal. In the cured animals the beneficent effect of the serum does not fail to show itself by arresting this fall whenever it may begin. The customary result is not perceived at the moment, but soon afterwards the lowering is prolonged for one, or at most two days. After that the curve again rapidly ascends. We give two very instructive examples of the former and the latter behaviour of the weight: they are taken from two experiments given in Table XV. In Example 146 the line representing the weight is found still in the ascent, till the moment of the injection of the serum (tenth day), but soon, during the progress of the infection, a decline commences, which after two days is checked by the action of the antitoxin. Still more evident is the influence of the serum in Example 147. The line representing the weight at the moment of the injection of the serum (eighth day) was found to be constantly declining, but after having continued for one day it is suddenly interrupted in order to give place to a rapid rise. When the treatment is undertaken promptly, and when there has not yet appeared any evidence of rabies, the animal as a rule manifests no sign of the infection and continues to comport itself as a perfectly healthy animal. On some rare occasions, however, an interesting fact presents itself. During the period corresponding to the regular development of rabies loss of weight commences, as well as a stupidity which from the first makes us fear the loss of the animal. This period surmounted, the animal, without any other treatment, picks up again towards the twentieth to the twenty-fifth day, and continues to keep healthy. There are (residual?) forms of rabies analogous to those which are found in persons who have undergone Pasteur's treatment and to which Murri and Bordoni Uffreduzzi have recently called attention.

TABLE XV.

Source of the serum.	Number of register.	Infecting units mixed *in vitro* with 1 c.cm. of serum.	Neutralised infecting units injected into the rabbit.	Result of the experiment.
1st. SHEEP I. Third strengthening	159a	16	1	Lived.
	160a	16	1	,,
	169	1600	1	,,
	170	2400	1	Died on the 8th day.
	189	800	50	Lived.
2nd. SHEEP IV. AND V. First strengthening	208	800	1	,,
	209	1000	1	,,
	210	2400	1	Died on the 9th day.
3rd. SHEEP III. and V. Vaccination...	238	1000	100	Died on the 10th day.
	239	1000	100	Lived.
4th. SHEEP I. AND V. Second strengthening	256	200	5	,,
	257	400	5	,,
	268	480	5	,,
	264	800	5	,,
	269	800	5	,,
	285	800	5	,,
	265	1600	5	,,
	270	1600	5	,,
	271	1600	5	Died on the 16th day.
	284	1600	5	Lived.
	266	2400	5	,,
	275	3200	5	Died on the 12th day.

VI.—ON THE NEUTRALISING POWER IN VITRO OF THE ANTIRABIC SERUM.

That with a small quantity of serum we should be able to neutralise, by simple contact outside the organism, the action of comparatively large quantities of the canine or the fixed virus was a fact already established by our earlier researches and only needed an exact determination of the limits of time and of quantity within which we were able to obtain this special action of the serum; our observations had not enabled us to assume for them the scientific and practical value which we now know, as a result of our renewed researches, undoubtedly appertains to them. Over and above its scientific value we have attached importance to this fact in order to discover by means of it a method of determining the strength of the serum which would be most advantageous. The method of determining *in vitro* is, in fact, the most exact scientifically, and the most convenient practically. Scientifically, it gives the absolute quantity of the virus which the serum is capable of neutralising, since in the method *in vitro*, as Behring and Ehrlich have noted, the varying conditions of individual sensibility do not come into play, nor do those of absorption and elimination from the body of the material injected. The advantages in the determination of the power of the serum from a practical point of view are most remarkable. Above all, there is a saving of time, the operation being performed there and then without an interval of twenty-four hours between the injection of the serum and that of the virus. Particularly when the mixture is made by multiples we can as early as the fifth day argue from the weight of the animal what will be the issue of the experiment; on the eighth day an absolutely safe conclusion may be arrived at, because in the determination by multiples, on introducing a strong quantity of virus, if in the mixture there remains undecomposed even merely a trace for each unit, this, repeating itself for as many multiples as there are, becomes capable of rapidly causing death. Thus it becomes superfluous to subject the animals to examination for any length of time. The determination by multiples of the infecting unit presents also the advantage of diminishing some of the uncertainty in the results, provided large quantities of the virus have been introduced; on the other hand, all the causes of uncertainty which we met with when making use of a minimum of infection come to be lessened by reciprocal compensation in the case of multiples. A not insignificant advantage is the economy in the matter of serum, since, in operating with the fixed virus, twenty-six c.cm. of serum per cutem is needed for every animal, whereas by the determination *in vitro* small fractions of a c.cm. are sufficient. Henceforward, in the determination of the serum the method of direct mixture may now be almost exclusively adopted, using fixed virus and injecting the mixture under the cerebral dura mater. As the basis of our calculation we take the number of the infecting units which a c.cm. of serum is capable of neutralising. Practically, the mixture cannot be prepared by making an emulsion there and then of a small quantity of virus in the serum, because the smallest portion of this virus contains a great number of infecting units and would consequently demand a considerable quantity of serum. Instead, we mix the serum

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at a given dilution with the water of the virus itself. In the first experiments we used to mix a part of the serum with 10, 20, or 30 parts of emulsion of fixed virus, which represented 1 c.cm. of serum mixed with 800, 1600, or 2400 infecting units. In order to inject with the mixture an infecting unit of the virus it was necessary to very slightly increase the usual dose of emulsion employed, since the serum represented a very small proportion of the total volume. But in order to conduct the experiment with multiples—that is, to introduce such a quantity of the mixture as will contain more infecting units—one cannot sufficiently dilute the virus so as not to unduly increase the volume of the liquid by introducing it under the dura mater. We have, therefore, used the dilution of 1 in 50 to 200, regulating the quantity of the serum in accordance with this increase by mixing. In the last experiments with our typical serum made with the fixed virus, the unit of dilution of which is 1 in 5000, we have thought fit to make use of the dilution 1 in 1000 (five infecting units) mixed with serum ordinarily in the relation of 1 to 1, 1 to ½, 1 to ¼, and 1 to ⅛, which corresponds with 1 c.cm. of serum in contact with 400, 800, 1600, and 3200 infecting units; and by regularly injecting, along with the mixture, five infecting units we hope to combine with facility of preparation, on account of its simplicity, greater safety in the results, the multiple of least infection being employed. As to the period of contact, we, on principle, adopted a period of twenty-four hours at the temperature of the atmosphere; then, having ascertained that the action of the serum was independent of the time of contact—just as in the case of other infections—we injected the mixture a few minutes (five to ten) after it had been made. Before entering into this line of research we wished to ascertain whether our results might in any way be referred to an influence which the normal serum itself would exercise upon the virus of rabies. The experiments made on the serum of sheep, normal as to the identical conditions of dose and time observed in the case of the antirabic serum, have shown that of the animals thus treated one and all died.

In Table XVI. we report a series of trials *in vitro* of some samples of our normal serum. The experiments were practised with the serum of four groups of sheep, vaccinated and strengthened according to the plan described at the beginning of this article. The third column of the table indicates the proportion between the serum and the virus with which the mixture *in vitro* was made. In the fourth column, on the other hand, the portion of this mixture is given—that is, the neutralised infecting units which the animal received during the relative experiments. In all the four groups we note a uniformity of results, although the vaccinations were made at various times, and we treat of fresh sheep (Group 3); of sheep strengthened for the first time, giving the dose (Group 2); strengthened for the second time (Group 4); and strengthened for the third time (Group 1). These experiments, too, serve to confirm much of what is said in Part IV. of this article with regard to the question of the rise of the power of the blood under repeated vaccinations. In all the four serums it is seen that the neutralising power always oscillates between the same limits of 1 to 800 and 1 to 1600 (mean 1 to 1200)—that is, a c.cm. of serum is capable of destroying the action of 1200 infecting units, so that for our typical serum the protecting unit comes to correspond in the mean to 0·00083 c.cm. of serum. That is equivalent to saying that a c.cm. of our typical serum is able to preserve 1200 rabbits weighing one kilogramme each from infection by the fixed virus—a power which, referred to the body weight, as is done in the case of separate injection of virus and serum, attains to the figure of 1 to 1,200,000. The power very nearly approaches 1 to 1600, since in eight experiments (Nos. 169, 209, 238, 239, 265, 270, 271, and 284) death ensued only in two (Nos. 238 and 271), and in these not until the tenth and sixteenth days respectively. Above 1 to 1600 the positive results do not definitely cease, but continue gradually to diminish until in three experiments made with a strength of 1 to 2400 (Nos. 170, 210, and 266) we had only a single success. There are small oscillations due to differences in individual sensitiveness and in the graduation of the infection, as already many times mentioned. The table likewise furnishes us with information regarding the multiples. Although our experiments in this direction, especially in the case of the higher multiples, are not very numerous (we may possibly return to the subject), yet they elucidate as much as Behring and Ehrlich admit for tetanus and diphtheria—that is, that when the mixture of serum and virus is properly neutralised a considerable dose can be injected into the animal with impunity. We find that the relation of from 1 to 800 to 1 to 1600 is maintained when we inject five neutralised infecting units (Group 4). Example 189, for instance, shows that of the mixture 1 to 800 we can inject with impunity fifty fatal doses of virus; lastly, the experiments of Group 3, made with the infection of 100 neutralised infecting units, demonstrate that for the power of 1 to 1600 the result is uncertain (one favourable and one unfavourable)—results differing in no wise from those obtained when a single infecting unit or one of the lowest neutralised multiples of the same mixture is injected.

VII.—THE DIRECT PROTECTION OF THE NERVOUS SYSTEM.

In comparing the dose of the serum required to neutralise a determined quantity of fixed virus when the serum is injected under the skin with what occurs when the direct method is used we have been struck with the great difference observed in the two cases. By the direct method of contact *in vitro* the power of the serum appears to be immensely greater; the infecting unit of the fixed virus being taken as a base, we have seen that in order to neutralise it 10 c.cm. of our typical serum is required for the subcutaneous method, against only 0·00083 c.cm. for that by direct contact, and that the subcutaneous dose represents 12,000 times the dose where the direct contact method is used. We have asked ourselves, What can be the reason of this enormous difference, and by what means does the serum act in the two cases?—a question which has also been raised in the case of other infections and which has not been satisfactorily settled. Starting from certain considerations based upon the elective seat of action of the rabid virus, and guided by indications collected with regard to the localisation of immunity in this infection, we have been induced to inquire anew whether by injecting the serum directly into the nervous system, or under the skin, we could obtain by means of the same minimum doses as those employed when mixed with the virus the same effects as when this mixture was used. We have divided the experiments into four categories. In the first we have injected separately under the cerebral dura mater an infecting unit of virus and a protective unit of serum. In the second category, after a single infecting unit has been injected, we have injected further units of serum. In the third we have employed multiples—as many for the serum as for the virus. All the experiments of these first three categories have been made by injecting serum and virus separately after a lapse of time, but making use of the same trephine opening. In the fourth series, on the other hand, the serum and the virus were injected simultaneously, the one being introduced at a point of the nervous system far from that in which the injection of the other had been effected. For the injections of the virus we employed the path of the brain and of the sciatic nerve; the serum, on the other hand, has always been introduced under the cerebral dura mater. A rabbit of a mean weight of one kilogramme and a half supports the subdural infection of 0·5 c.cm. and also 1 c.cm. of serum at the same time without any morbid symptoms, and, if the operation is performed with care, without danger of reflux. The following table gives the relative results of these experiments. (See Table XVI.) The fact which indubitably results from the completion of these experiments is that antirabic serum injected directly into the central nervous system, separated from the virus, is capable of acting as effectually, in average dose, as when the mixture is made *in vitro*. We see, in fact, a single protective unit succeed—that is, 0·00083 c.cm. of serum (Examples 179 and 180); also the higher doses are employed against a multiple of infecting units; they have never been higher than those of 0·30040 c.cm., which are very far from as many as are required by the subcutaneous method against a single infecting unit or against a multiple. This fact induces us to believe that of the large quantity of serum injected under the skin only an imperceptible part may be utilised—viz., that which succeeds in coming into contact with the part sensible to the virus—in our case, the nervous system. The large residue must be lost not only because it is diffused in the whole organism, whilst the protective action must extend only over a small part of it, but also because a quantity is destroyed within the body and is eliminated by the organs of secretion. The serum injected under the skin diffuses itself in the entire organism

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by means of the circulation of the blood in the lymphatics, whilst when it is injected under the dura mater it comes into direct contact with all the elementary parts of the nervous system by the special lymphatic paths which we know to be directly in relation with the nervous elements and which act independently of the general circulation. This is an established fact. It remains to be seen whether this series of experiments can elucidate what is demanded from protective serum. Let us make a more minute examination of the table. The first three categories of experiments—A, B, C—are made by introducing the virus into the neck at the same spot at which the serum was introduced some time before. This fact would lead us to surmise that here also one has to deal with a direct action of contact such as takes place *in vitro*, inasmuch as the twenty-four hours allowed to pass between the injection of the serum and that of the virus (Examples 107, 176, 191)—and, much better, the three days (Example 180)—would allow sufficient to be retained, because the serum is diffused and enters into the circulation by means of the cerebro-spinal fluid. But here the experiments of category D, which are made by introducing the serum and virus at the opposite extremes of the nervous system—the virus in the sciatic nerve and the serum in the brain come to our aid. These experiments are very conclusive, and it must be admitted also very elegant. We have drawn special attention to them, as the whole series, except the experiment made with the minimum of serum (Example 288), were entirely successful, although the *animals* infected in the sciatic nerve with the fixed virus—numerically equal to the animals cured—all succumbed to rabies. Notwithstanding these results the objection of a direct action is not completely overcome, since the serum injected even into the furthest points can be conveyed by means of the lymphatic circulation into direct contact with the virus deposited at the point of infection. But if the serum deposited in the brain penetrate along the sciatic nerve the cerebro-spinal fluid must be diffused to all the nerves, central and peripheral. And in this case the smallest quantities of serum introduced ought to undergo such a dilution by coming into contact with the virus, which is in proportion infinitely less, as the contact experiments *in vitro* have demonstrated to be necessary for a complete neutralisation. Nor does it avail to object, as appears from the fourth column of the table, that when the serum and the virus are injected separately a single protective unit does not suffice to neutralise an infecting unit, but that it is necessary to introduce a multiple dose to at all compensate for the greater dilution which the serum must undergo before coming into contact at the infective centre. It results, in fact, from category A that a single protective unit suffices in two or three cases, and if in the categories B and D a multiple of the serum has been introduced this is always too weak to be able to act after so extended a diffusion, independently of the fact that perhaps those doses can be reduced still more considerably. We are, therefore, continuing to work at a fresh series of experiments made upon rabbits and dogs with the object of determining what is the least dose of serum introduced into the brain necessary to arrest the infection made in the sciatic nerve and in the eye, and we hope at the same time to establish the period after infection, and the dose of serum, at, and with, which it may be possible by this kind of treatment to cut short the course of the rabic attack. Meanwhile, however, the experiments which we have made up to the present give rise to the suspicion that the phenomena of neutralization *in vitro* of the virus by means of the serum may be only apparent, and that, on the other hand, the serum introduced with the mixture, acts on its own account on the part specifically sensible to the given virus, so hindering its cultivation. Consequently, the dose of the serum which in the mixture is held to be necessary to destroy the given quantity of the virus would not be able to sufficiently guard the sensitive tissues of the body against the quantity of the virus introduced with this mixture. Certainly the objection which a similar interpretation has met with in the analogous experiments for tetanus and diphtheria—that is, the great difference of the dose in which it acts in the body, and *in vitro*—cannot, in the light of our experiments, be raised in the case of rabies. We do not wish it to be believed that we insist on this argument for the sake of a theory; on the contrary, we are convinced that this point of view, besides illustrating more completely the conception of the new therapeutics by means of protective substances, opens up new paths of research and new applications to practice. To the general conception of specific immunity will have to be added in future that of elective immunity, general specific therapeutics will have to give place, wherever possible, to specific local therapeutics, the serums being introduced directly into those parts which are most favourable for their protective action against the invasion of the morbific agent. From this system of treatment two great advantages may be derived—viz., rapidity of action and the exhibition of small quantites of the remedy. In certain cases, when great quantities of virus are present the doses of serum required to neutralise it when introduced under the skin, would be so great that cure by this way is evidently impossible. In fact (Example 191), we have been able to save one animal by means of only 0·16 c.cm. of serum introduced into the brain, while if we had used 50 infecting units by the subcutaneous way we should not have been able to succeed with less than 500 cubic centimetres. The practical outcome is that in developed rabies, for which a large multiple of the least mortal dose has been given, the medulla must be protected against the progress of the disease, and for this purpose one cannot hesitate to have recourse to the

TABLE XVI.

Category of experiments.	Number of register.	Infecting and protective units injected.	Relation between infective units and protective units.	Length of time after the injection.	Place of infection, serum always subdural.	Result of experiment.
A unit of each of serum and of virus.	179	1 and 1	1 : 1	2 hours	Same spot of trephining.	Lived.
	185	1 and 1	1 : 1	24 hours		Died 9th day.
	180	1 and 1	1 : 1	3 days.		Lived.
A unit of virus and a multiple of serum.	168	1 and 130	1 : 130	Same sitting	Same opening of trephining.	Lived.
	167	1 and 130	1 : 130	24 hours		,,
	176	1 and 150	1 : 150	,,		,,
Multiples of serum and of virus.	188	100 and 500	1 : 5	3 days	Same spot of trephining.	Died 7th day.
	191	50 and 200	1 : 4	24 hours		Lived.
	192	50 and 100	1 : 2	,,		Died 7th day.
Serum and virus introduced in parts distant from the nervous system.	175	1 and 130	1 : 130	Same sitting.	Other hemisphere.	Lived.
	236	1 and 150	1 : 150		Sciatic nerve.	,,
	237	1 and 300	1 : 150		,,	,,
	252	2 and 360	1 : 180		,,	,,
	253	2 and 360	1 : 180		,,	,,
	280	5 and 360	1 : 72		,,	,,
	288	5 and 300	1 : 60		,,	Died 23rd day.
	190	10 and 400	1 : 40		,,	Lived.

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expedient of introducing serum directly under the dura mater by means of trephining.

VIII.—APPLICATION OF ANTIRABIC SERUM-THERAPY TO MAN.

The final aim of our researches on rabies scarcely needs repetition—it is that of substituting for Pasteur's vaccination method, in the case of a patient who has been bitten, the treatment with protective serum. In our preceding works we have been somewhat reserved on this point, wishing, on principle, to restrict the application of the serum to the more grave cases outside the range of an antirabic institute, we have done this simply from excess of prudence and out of respect for a method of cure of tried efficacy. But now, after our recent experimental results, which confirm, complete, and clear up in the most minute particulars earlier experiments, and after having taken a stronger serum and found a more exact method of determining its activity, there is no reason for such reserve, and we have no longer any doubt that the treatment by serum in rabies must be soon and completely substituted for Pasteurian vaccination.

1. *Experimental superiority of serum treatment over the vaccination of Pasteur.*—By means of a course of study continued in this laboratory without interruption for six years we have endeavoured to rest the serum treatment of rabies upon a larger and firmer experimental basis, convinced that the experiments of the laboratory would at last find their complete application in the practical field—as already we find those upon serum treatment in tetanus and diphtheria and those of the antirabic vaccination of Pasteur. Now if we compare our experiments and those which justify Pasteur to come to their application to man, we feel we are decidedly in a much stronger position—we are able easily to protect the rabbit, an animal excessively susceptible to rabies, and which we know can only be exceptionally protected by the vaccination method of Pasteur; we are able with a single injection, made twenty-four hours before the subdural infection, to preserve the rabbit from the virus of rabies "da strada," whilst we know that by Pasteur's method it is necesary to make many injections and to allow many days to pass from the beginning of the vaccination before the animal is able to bear the subdural infection. We are able to save the rabbit by a single subcutaneous injection—also after the subdural infection and in an advanced stage of the period of incubation—whilst by Pasteur's method one never succeeds under these conditions in saving the animal. We succeed with a single subcutaneous injection, made a little before trephining, in preserving the animal from subdural infection with virus of the greatest strength—with the fixed virus—which the Pasteur method never succeeds in doing. Now, if the applications of the Pasteur method which have been made upon man are only the logical consequences of experimental facts, it is natural that the same justification for application to man—and even greater justification—should be found in that method in which the experiments are very much more conclusive. Only in the presence of the Pasteur method we felt that we could ourselves make a grave objection, and that was regarding the duration of the immunity, which for the treatment with serum we know in general to be much less than the immunity determined by vaccination. However, such a question loses its importance from the practical point of view when it has been established that the action of the serum in the organism is that of neutralising the action of the virus, and that, taking care to introduce the dose of serum sufficient to exert this action, we prevent for ever the development of the disease.

2. *Practical advantages of serum treatment over the vaccination of Pasteur.*—Rabies is one of the few infections in which this question is of practical interest, because, given the special conditions of contagion and incubation, it becomes possible in it to apply a treatment of vaccination after the infection has taken place; on the other hand, in the greater number of infections in which one can only intervene in a case of developed malady this discussion would be out of place, because vaccination in such conditions, if it does not aggravate, is not the least help to it in any way. It is very true we have tried in developed rabies to have recourse to vaccination, trying to find a way in which the material can be caused to be rapidly absorbed. We would speak of the method of Murri, by means of injection of the emulsion of rabies into the veins. But the few experiments of this writer were made exclusively on persons placed previously under the care of Pasteur, and, as we have already said, demonstrate little as to healing taking place in similar conditions without treatment of any kind. Whilst, then, the trials made on man and animals not placed under any previous treatment without exception ended in failure, we are able to divide the advantages of serum-treatment over the vaccination of Pasteur into two categories—the first greater efficacy, the second greater convenience. The greater efficacy of the serum in comparison with vaccine arises, above all, out of the property of the serum of acting rapidly, since it, as the final product of the vaccination from which it proceeds, has no need of a long period of preparation within the patient. The utility of immediate action follows clearly, from what we have previously demonstrated, as to the strict proportion which exists between the quantity of the virus and that of the serum necessary to destroy its action. We must imagine that generally with the bite of a rabid animal there is introduced into the body, by means of the saliva, only a very small quantity of the virus, a quantity so trifling that in considering the small number of persons bitten by a rabid animal who contract the disease it must approach almost always to the least mortal dose. Now, knowing that during the period of incubation, and before there is any manifestation, a certain multiplication of the virus introduced takes place, it will be understood how the cure can be rapidly effected and how favourable results must be obtained. When we inject the serum under the skin the blood, within a few minutes, acquires a protective property. In vaccination, on the contrary, this formation of the protective product takes place very slowly, so that in our vaccination experiments—pushed on rapidly—of rabbits we were not able to make the trial infection until at least fifteen days from the beginning of the vaccination. This slowness of action is recognised in the method of Pasteur—in fact, with this method the result is not guaranteed, and in the statistics the deaths are not taken into consideration before fifteen days have passed after the treatment is exhausted, so that, calculating twenty to thirty days as the mean duration of the vaccination, we have to wait for a period of thirty-five to forty-five days before the cure can be declared efficacious. We have analysed, in the "Annals of the Pasteur Institute," the cases of death taking place in the Institute during and after treatment, and we have found that the greatest number were cases with a short incubation period (twenty to thirty days), which shows how in these conditions the Pasteur cure succeeds in being of little efficacy. Serum treatment ought also to have over vaccination a superiority with which the latter cannot compete when the cure has only been undertaken at an advanced period of the incubation, or when we are treating a deep bite made in the course of large nervous trunks and in the neighbourhood of the brain. In Russia, where serious wolf-bites are frequent, the mortality of the cured, notwithstanding the most intensive method, remains always considerable. Then, too, the advantages as regards convenience which our preparation has over the inoculation of Pasteur are not at all to be despised, because they, according to the last analysis, not only enhance the efficiency of the method, but allow of a rapid and general application. Our remedy consists of a solid material, preservable, not dangerous to handle, which can therefore be sent anywhere and can be applied by all medical men, just as can any other remedy, by subcutaneous injection. It is not needful to remember how, on the contrary, for the Pasteur vaccine special institutes are necessary, where the material is prepared day by day, and where the patient has to be taken directly, involving pecuniary considerations and the loss of most precious time. The complete absence of any virulent action whatever in our preparation not only assists its employment in practice by less expert hands, but overcomes the reluctance which many feel to having themselves injected under the skin with a great and increasing quantity of fixed virus, although the fear may be unfounded, the vaccination of Pasteur being discovered to be quite harmless. Our preparation gives the least local irritation, and by being easily soluble and assimilated the local symptoms of Pasteur's numerous and abundant injections are minimised—symptoms which, if not serious, are certainly very disagreeable. We do not wish to place the economic advantage in the last category. The charge for the Institute (60 and 100 lire per head), the maintenance for twenty to thirty days, the expenses of the journey, and the interruption of business constitute either an expense that the individual can ill afford or a burden on the community. The treatment by Pasteur's method, notwithstanding its indisputable efficacy, tends to

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become unpopular precisely according to the degree of these inconveniences. We have a clear proof here in Italy that, though institutes against rabies are established everywhere, there still appear in the bulletins of public health from seven to fourteen deaths from rabies a month—about 100, that is, per annum.

3. *Criteria for the dose and for the manner of application in man.*—The recent publications on serum treatment demonstrate how these data are completely established by experiments on animals. As to rabies, from this point of view we find ourselves in a more advantageous position, since the method of Pasteur already established constitutes for our method a good standard of comparison in man. For the application of the antirabic serum treatment in man we ought to start from the established fact that a given quantity of serum neutralises a given quantity of virus, and, making use of the experimental data, we should establish some proportional relations between the dose of the serum held to be efficacious in the rabbit and that which would serve for man. The first datum which is necessary for this determination is to know the quantity of virus which is found in man at the moment at which the treatment is applied. To judge by the small proportion of persons who, bitten by rabid dogs, are attacked by rabies and by the weak concentration in which the virus is found in the saliva, we must hold that the quantity of the virus deposited in the wound with the bite of the rabid animal approaches nearly always to the minimal lethal dose. And since rabies can be cured at the first moment of the period of incubation, and we know by our experiments that during the first half of this period a considerable multiplication of the virus does not take place, we should find ourselves at the moment of the application of the remedy in the presence of small quantities of the virus, which must vary between very narrow limits. On the other hand, in the infections in which treatment of the declared malady is only possible, as in tetanus and diphtheria, by reason of the conditions in which the infection and the multiplication of the virus take place, there must be some very marked differences in the quantity of the pathogenic principle to be neutralised by the serum. That for single cases must render necessary enormous doses of serum and reduce to much uncertainty the issue of the treatment. We will add here also that in rabies those objections cannot be raised with regard to serum treatment which justly are an obstacle in mixed infections, such as diphtheria, preventing a complete success of the treatment. The dose of the virus with which the infection is given in man can be compared with advantage to that introduced into the rabbit by the subdural and nervous infection, and the comparison results so much more favourably for man, inasmuch as he is not so susceptible to rabies as is the rabbit, nor is the virus deposited directly at the point of greatest sensibility, as in the nerve centres and the great trunks. And that in the rabbit, precisely in regard to this point, the question of protection may be more difficult, is demonstrated by repeated experiments made on applying to it the same series of vaccinations according to Pasteur which are made in man. Although the treatment may have been preventive, and followed by a long latent period before infection, yet such animals infected by the subdural method by the canine virus are saved in a very small proportion of cases. The experiments upon the rabbit relative to the dose of the serum (restricting ourselves always to the results comprised within the limits of absolute certainty) tell us that, as we have seen, for the canine virus the dose of our typical serum is of the strength of 1 in 25,000—that is, 0·04 c.cm. per kilogramme of the weight of the animal; but, passing to the curative dose against the virus, we have found that up to the fourth day after the infection it rose to 1 in 4000—that is, six times the preventive dose, corresponding to 0·30 c.cm. of typical serum per kilogramme. Applying this calculation to man, we find ourselves, let us repeat, in more favourable conditions; and, calculating upon a mean weight of the body of 70 kilogrammes, we find that the curative dose, after a sudden bite has taken place, corresponds to 20 c.cm. of our typical serum, being equal to from 2 to 5 grammes of the dried product. Now, wishing to render ourselves independent of variations of the activity of the serum, we shall adopt a standard of measurement—similar to that used in the case of diphtheria—viz., a protective unit; and we assert that in order to treat rabies a little while after the bite 25,000 protective units are necessary—that is to say, the dose of serum sufficient to neutralise the quantity of fixed virus capable of killing 25.000 units of the weight of one kilogramme. As to the manner of injecting the dose instead of introducing it all at one time, as we have done in animals, we think it may be more convenient to divide it, in the belief that the too sudden accumulation of a foreign material in the blood may favour elimination and hence the loss of active material. We advise, therefore, the division of the strongest dose into three injections—the first to be made at once, injecting half of the dose above determined, and the rest divided into two equal doses at intervals of three days, so that the whole treatment is completed in the course of a week. We should always keep before us the fact that the dose is relative to the period at which one begins the cure and to the power of the infection; therefore, the dose given is of value, as regards a bite of mean gravity, for treatment undertaken during the first four days after the infection, and we hold that, with the practical facilities which serum treatment offers in rabies, such a period of time ought never to be exceeded. From the fourth to the fifteenth day after the bite we advise that the dose of serum should be doubled, the same order in making the injection being still followed. We hold that this doubling of the dose is essential. We also hold that the dose should be a bold one in the case of more extensive and deeper bites, or such as are made in proximity to the nervous centres, especially those on the face.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

UNRUPTURED HYMEN AT FULL TERM OF PREGNANCY.

BY EDWIN T. ENSOR, M.D. NEW YORK.

THE following case, although not by any means unique, is, I think, sufficiently rare to make it worthy of record. All have heard and read of such, but in an experience of something like 4000 labours, extending over a good many years, I have never personally met with such a one before.

The patient was a woman about forty-two years of age who had been married ten months. Her husband, unmarried previously, was a very corpulent man, apparently of the age of forty-five. On examination I discovered the existence of a perfect hymen, which admitted the passage of the index-finger without difficulty, but not of the first and second fingers without risk of rupture. The presentation was normal, the head being in the first position: the membranes were intact. The labour was very slow. When the dilatation of the os was practically complete I ruptured the membranes, and twelve hours later delivered under chloroform, administered by my friend Dr. Bawden. The hymen was ruptured in the application of the forceps, but there was no perineal laceration, and the child, a well-developed female, was living. The total duration of the labour was forty-five hours. Both mother and infant are doing well.

Chesterton-road, W.

A CASE OF TREPHINING FOR INJURY TO THE HEAD PERFORMED AT SEA.

BY J. TERTIUS CLARKE, L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON TO THE BRITISH INDIA STEAM NAVIGATION COMPANY;
LATE HOUSE SURGEON, ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.

AS I have a very clear recollection of two cases of compound depressed fracture in which, I think, trephining was imperatively called for, but not done, both of the patients dying, and as in the following case the operation was performed under somewhat disadvantageous circumstances I hope that it may be of use to publish it. At 11.30 P.M. on June 24th, 1895, I was called to see an ag-wala, or native fireman, on whose head an iron ash-bucket, weighing about 25 lb., had just fallen from a height of about 20 ft. The man had not lost consciousness but had a curved scalp wound about three inches long, at the bottom of which was

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a depression in the bone about two inches long, with a fissure at each end extending beyond the angles of the wound. The length of the depression passed outwards and forwards, the inner end lying just to the right of the middle line and in front of the coronal suture, the anterior edge being depressed below the posterior. There were no spasms of any kind or symptoms of pressure, but I decided to elevate or remove the depressed fragment as soon as I could get things ready. Fortunately, an Indian medical man, Dr. Mittra, was on board, who kindly assisted me by giving chloroform. The wound was enlarged by half an inch in both directions laterally; and an incision an inch and a half long was made, passing forwards from the middle of the anterior edge so that two triangular flaps could be reflected and more room obtained. The bleeding was stopped, and a three-quarter inch trephine applied to the bone in front of the depressed portion; a disc was removed, and as I found that the bone was so tightly wedged that it could not be raised the trephine was reapplied, and a segment as large as three-fourths of the trephine area taken away. I then removed the remainder of the depressed portion with forceps and elevator. The dura mater I found to be intact. The oozing was stopped by hot-water not sterilised, the wound was dried and the flaps sutured, a small piece of tubing being left in; the dressing was iodoform, lint, and wool. I left no fragments of bone lying on the dura mater, as I was not at all sure—in fact, I was very anxious—about my antiseptics, a ship not being the best place for an operation. This had been performed on one of the hatches, my assistants being, of course, untrained; dirt was plentiful, the lights were indifferent oil lamps, the patient's head was less than two feet above the ledge on which I was standing, and the ship was rolling all the time. The man was left on the hatch on which the operation was done until the next morning, when he was removed to a cabin. He bore the operation well, although it took a considerable time chiefly on account of the conditions under which it was performed. His highest temperature was 100·4° F. at 11·30 A.M. of the next day, afterwards it did not rise above normal; his pulse was very slow, usually not over 50, and there was slight pain in the head. He slept well and took food well. On the 29th he was moved into Colombo Hospital in order to avoid a long voyage, and about a week or ten days after was sent up to Bombay by boat. The wound did not suppurate at all.

Colombo.

THE EFFECT OF THYROID EXTRACT IN MYXŒDEMA COMPLICATED BY ANGINA PECTORIS.

By H. C. L. MORRIS, M.D. BRUX.

A MAN aged forty-eight came under my care some months ago, having suffered from myxœdema and occasional attacks of angina pectoris for several years. The patient not having received any appreciable benefit from treatment, I determined to try thyroid extract, watching carefully the effect upon the heart. I began with half a tabloid (5 gr.) twice a day. On the fourth day he was seized with two most severe attacks of angina, lasting over an hour, and gave me much anxiety. I at once stopped the extract, but at the end of a few weeks, at his request, I made another trial, giving him the unusually small dose of 2½ gr. every second day. He experienced no discomfort until the twelfth day, when he again had a severe attack of angina pectoris, and I had again to discontinue the extract. Neither before nor since have his attacks been anything like so serious. The pathology of the case is puzzling, as Schäfer has recently pointed out that thyroid extract distinctly lowers the blood pressure. Perhaps the angina was produced by its action on the central nervous system.

Bognor.

A CASE OF CARBOLIC ACID POISONING; RECOVERY.

By RICHARD CATON, M.D. EDIN., F.R.C.P. LOND.,
PHYSICIAN, LIVERPOOL ROYAL INFIRMARY.

THE patient, a young woman aged seventeen years, was brought to the Liverpool Royal Infirmary at 1.22 P.M. on March 2nd, 1895. On admission she was comatose, with stertorous breathing, the breath smelling strongly of carbolic acid. Her conjunctival reflex was absent. The skin was dry and the tongue dry and brown, with fungiform and filiform papillæ very prominent. The pulse was thready and too frequent to count. On examination of her fauces a few greyish-white patches were to be seen, and one especially large white patch on the soft palate. There was considerable swelling of the faucial tissues. The pharynx would not admit of the introduction of the tip of the little finger. On removing the little finger after examination of the fauces it was found to be covered with blood. A hypodermic injection of twenty minims of brandy was given, and several attempts were made to pass a small, soft stomach tube, all of which were unsuccessful owing to the swelling of the faucial tissues above described. A hypodermic injection of one-tenth of a grain of apomorphine was then given. In twelve minutes the patient vomited a little undigested food, a trace of blood being present with it. The vomited matter smelt strongly of carbolic acid. She was then removed to the Clarence Ward and placed in a bed already prepared for her, with hot bottles, and a steam tent was fixed up around the bed. Hot fomentations were applied to her neck; on the application of these her pupils dilated widely. Three quarters of an hour after her admission she showed signs of returning consciousness. She now became very cyanosed and rather more collapsed, so I tried to stimulate her respiratory, cardiac, and vomiting centres by one-fiftieth of a grain of strychnine, given hypodermically. After the administration of this the cyanosis gradually disappeared and her respiration became more natural. During the whole of this time her tongue was held forward, as was also her jaw, and the fauces were repeatedly cleared of mucus. About three quarters of an hour after the hypodermic injection of strychnine she vomited several times. The vomited matter consisted of undigested food, mucus, and several small blood clots; it smelt strongly of carbolic acid. She now recovered consciousness and had small quantities of milk (one drachm at a time) by the mouth, which was swallowed with difficulty. In the evening she was put on a mixture containing carbonate of bismuth, bicarbonate of soda, carbonate of magnesia, and water. The pupils became normal. The respiration was 25 and regular in time and force. On March 3rd the respiration was 30 and the pulse 120. There was a blister filled with serum on the left thumb. The urine was almost black and of sp. gr. 1022; the reaction was very acid and it smelt strongly of phenol; it contained no albumin. With bromine water it gave a yellow precipitate; with perchloride of iron added drop by drop a violet colour was produced. On March 4th there was great tenderness on pressing over the region of the tonsil. The temperature was 100·2°F. There was great difficulty in swallowing, and carboluria still existed. For the first time albumin appeared in the urine. The respiration was 20 and the pulse 100. On the 6th there was still carboluria. There were a few moist sounds in the chest, with bronchitic expectoration. On the 7th the pulse was 80 and the respiration 20. There was no trace of carbolic acid and no albumin. The patient continued to improve and had her diet gradually increased from fish and chicken to an ordinary diet. The bowels were kept regular by enemata of one ounce of glycerine till March 16th, when she had half an ounce of castor oil when required. The patient left the infirmary on March 25th perfectly well. This case was reported by Dr. S. J. Ross, house physician, and was treated by him during the acute stage.

Liverpool.

A CASE OF BELLADONNA POISONING.

By W. T. MOULD, L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON-CAPTAIN, ARMY MEDICAL SERVICE.

ABOUT 2.45 P.M. on Aug. 4th, 1895, I was called to see an officer at his bungalow. I found him lying on his back and deeply comatose; the breathing was stertorous and the pulse full and bounding. There was spasmodic twitching of all the limbs and face, this being much more marked on the left than on the right side. The plantar reflex was exaggerated, but I could not elicit the knee-jerks, nor was there ankle-clonus. The pupils were widely dilated. The history was not very clear; his native servant had called in a brother officer to see him, as he said he was making "a noise and was convulsed." This officer then sent for me. On questioning the servant I found that about 1.30 P.M. he had taken a dose of medicine—I was at the time treating

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him for some diarrhœa of a dysenteric character. This medicine was a ten-grain Dover's powder, and the bearer had mixed it with belladonna liniment instead of water. The liniment had been ordered that morning for a contused shoulder and had not been used. I at once took the bottle with me and went to the hospital, on my way calling on Surgeon-Captain Healey for assistance, and as he had some hypodermic solution of morphia he at once went and injected a third of a grain. I found that nine or ten drachms of the liniment ordered that morning were missing. On returning with the stomach pump I found the patient in the same condition, but he struggled violently during the passage of the tube. About a pint of warm water was introduced and withdrawn from the stomach. The patient's struggles still continued and he retched violently so that the tube had to be taken out, when he vomited. After a short interval the tube was again passed, and as the struggling and retching were less the stomach was washed until it was quite clean. The first washings were brown and smelt strongly of the liniment, but later were quite clear and free from smell; they contained but little food as he had only had some toast and milk with limewater that day. At 6 P.M. another third of a grain of morphia was injected. The symptoms still persisted except that breathing was less stertorous and the twitchings had completely passed off. Between 8 and 9 P.M. he gradually roused and became noisy, and tried to get up to go to the bathroom to micturate, but on being given the utensil he was unable to relieve himself. From this time he was noisy and delirious, and at half-past nine I gave him some soup with a spoon, but he soon vomited it. He was still very anxious to pass water, and a catheter being used nearly a pint was drawn off. After this he slept quietly for two hours, when he awoke and answered questions after some hesitation, and took some milk. During the night he slept fairly well, but was constantly talking in his sleep and rousing and starting up. The next day he was well but for a dryness of the throat and paralysis of the pupils; these symptoms passed off in a day or two. He said that he noticed the medicine burnt his throat and stomach, and that it caused some colicky pains, but he remembered nothing between taking the medicine and the following morning.

I think the case worthy of record, considering the large amount (ten drachms) of such a strong preparation of belladonna being taken and treatment being successful, and also the fact that there was a considerable interval between the poisoning and the first use of morphia as an antidote, although with the poison he took a grain of opium, which probably retarded its action.

Lucknow.

NOTE ON A RARE CONDITION OF THE OMENTUM.

By H. M. N. MILTON, M.R.C.S. ENG.

I WISH to add another to the cases recorded by Dr. Greig Smith and Mr. Lawson Tait respectively in recent issues of THE LANCET.[1] The tumour, a simple ovarian cyst of long standing and containing some thirty pints of fluid, was attached at three places. At its anterior superior margin was a union three inches broad with the omentum, five or six of whose vessels "resembled fat, well developed earthworms." Three inches to the left of this was a firm adherence to the abdominal wall, some six square inches in area. This I tore through with my hand before emptying the cyst, and it was only after the removal of the latter that I found a very free hæmorrhage taking place. The whole area of the adhesion presented the appearance of a cavernous angioma, or perhaps more exactly of a placenta, and it was only possible to arrest the bleeding by the use of the actual cautery. This had to be very thoroughly applied, but seemed in no way to affect the patient's rapid recovery. The third point of attachment was formed by the pedicle, which, reduced to the size of a lead pencil, presented no visible vessels. This pedicle certainly had the appearance of having been twisted, and there is no doubt that practically the whole of the blood-supply of the tumour passed through the cirsoid aneurysm of the omentum and the nævus of the abdominal wall.

Cairo.

[1] THE LANCET Aug. 3rd and 10th, 1895.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

TWO SUCCESSFUL CASES OF LAPAROTOMY, ONE FOR DIFFUSE SEPTIC PERITONITIS OF FOUR DAYS' DURATION, AND THE OTHER FOR RUPTURED HYDATID CYST.

(Under the care of Mr. A. MARMADUKE SHEILD.)

THESE cases illustrate in a striking manner the success which may attend the prompt surgical treatment of two conditions which a few years ago were regarded as entirely "medical" and beyond the reach of help of any kind. The first case is a fairly typical one of acute perforative peritonitis, the lesion being, as usual at the age of this patient, in the vermiform appendix. We notice that Mr. Sheild attaches considerable importance to the method of flushing the peritoneum which he employed. In the second case the amount of shock and the subsequent local symptoms appear to have been out of proportion to the evidences of lesion found at the operation. The small amount of fluid in the peritoneum suggests that the shock was possibly due more to the alteration of tension in a large cyst, such as takes place when aspiration is performed, than to the effect of the fluid on the peritoneum. For the notes of these cases we are indebted to Mr. Gerald R. Baldwin.

CASE 1.—A youth aged seventeen years was admitted into St. George's Hospital on the afternoon of Aug. 10th under the care of Dr. Penrose. His bowels had been obstinately confined since Aug. 6th. On the morning of the 7th he had been suddenly seized with acute abdominal pain. On the 8th he began to vomit after all his food. On the morning of the same day he consulted a druggist, who prescribed purgatives, which considerably increased the pain. On the 10th the pain was much worse; the patient was continually vomiting and was utterly prostrated. A medical man who was called in to see him advised instant removal to a hospital. On admission the patient was collapsed, with feeble pulse and an anxious, drawn expression of countenance. His temperature was 101° F. The tongue was dry and brown. The abdomen was excessively rigid, but not much distended. It was generally tender all over, but no marked resistance was noticed in the right iliac fossa. Almost immediately after admission he was seen by Dr. Penrose and Mr. Sheild, who considered the case to be one of perforated vermiform appendix, with general peritonitis, and decided on immediate laparotomy. Accordingly the patient was at once taken to the operating theatre, and when fully anæsthetised Mr. Sheild opened the abdomen by a median incision, bubbles of gas and foul-smelling fluid escaping. The intestines were distended, congested, and covered by purulent lymph which extended even over the peritoneal surface of the diaphragm. Search in the region of the cæcum showed the mischief to have originated in ulceration and perforation of the vermiform appendix. This was ligatured near its base, the diseased portion being cut away with scissors. The peritoneal surface was thoroughly washed out with ordinary hot water poured in from large jugs. The intestines were drawn out on a towel and repeatedly washed. The abdominal wound was closed with silkworm gut sutures and antiseptic dressings applied. Next day the temperature was normal, all pain had ceased, and the patient's face was tranquil. The bowels had acted freely after a saline purge. The subsequent history was one of uninterrupted convalescence, as the temperature never rose above normal. The patient was allowed to get up on Aug. 24th and has made a perfect recovery.

Remarks by Mr. SHEILD.—Cases of recovery from diffuse suppurative peritonitis are still sufficiently rare to merit publication. The points of interest in this case are—(1) that the perforation had occurred four days prior to operation,

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and (2) that practically the whole abdominal cavity was inflamed and filled with offensive fluid and gas, while the intestines were covered with flakes of puriform, adherent lymph. The rapid and easy recovery from conditions which may well have seemed desperate may be attributed to the youth of the patient, and especially to the flushing with warm water poured from large jugs, which I regard as a useful method, by which proper cleansing can be carried out. The careful management of the anæsthetic (A.C.E. mixture with plenty of air) and rapidity in operating are matters of great consideration in cases like these. The publication of this case may, it is hoped, stimulate surgeons to deal with them, and it must ever be remembered that the sooner surgeons operate in perforative peritonitis the better are the patient's chances.

CASE 2.—A man aged thirty years was admitted to hospital under the care of Dr. H. D. Rolleston on Aug. 21st. On the morning of that day he had been seized with sudden and very acute abdominal pain, which was soon succeeded by vomiting and collapse. On admission he was intensely collapsed and almost pulseless. He complained of great abdominal pain and tenderness, most marked in the right hypochondrium, where there were resistance and dulness. The right rectus muscle was tensely contracted. He vomited copiously after admission, the vomited matter being clear and watery. He was seen in the evening by Dr. Rolleston and Mr. Sheild, who decided upon exploratory laparotomy. The patient being fully anæsthetised, the abdomen was opened by a median incision. The intestines, including the duodenum and stomach, were healthy. The abdominal cavity contained a quantity of clear fluid. After some search a large prominence was noticed on the lower surface of the liver. This was aspirated, clear hydatid fluid being drawn off. Incision showed the presence of a large hydatid cyst in the liver. The fluid being evacuated, the margins of the cyst were with great difficulty attached to the parietal peritoneum, which was depressed to meet it. A long tube was introduced and the abdominal wound closed. On the 22nd the patient was slightly jaundiced and had abdominal pain; the pulse was quick and the temperature 101° F. He was very violent and restless and tore at his dressings. He was treated with small doses of morphia. The discharge was profuse and bile-stained. On the 23rd he was better and less violent. In the night he struck his attendants and required forcible restraint. The patient had done well since the last note, although there was still profuse bile-stained discharge.

Remarks by Mr. SHEILD.—Rupture of a hydatid cyst into the peritoneal cavity is a well-recognised cause of sudden collapse and death. Such cases have occurred, even in old calcified hydatids, from slight blows upon the abdomen, as in sparring. The diagnosis is always dubious, and the accident a very fatal one The present case is important in many respects. It illustrates the value of abdominal section in dubious cases associated with grave abdominal symptoms. The small quantity of free fluid points to the fact that leakage, rather than extensive extravasation, had taken place. The opening of a deeply seated cyst, and attaching it to the peritoneum, which was drawn down to meet it, was a matter of considerable difficulty. This is one of the few published cases where abdominal section has been successfully performed for ruptured hydatid cyst. There is still profuse discharge of bile-stained fluid from the tube, but the patient is in a good condition, with every chance of recovery, and, whatever be the ultimate result, the operation seemed undoubtedly instrumental in rescuing him from impending death.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

FIVE CASES OF UMBILICAL HERNIA.

(Under the care of Mr. FREDERICK PAGE.)

THE results now obtained, under favourable conditions, by operation for the radical cure of umbilical hernia are well illustrated by this series of cases. It is possibly too early at present to speak of the cures as radical ones—time only will prove this; but the immense relief afforded to the patients for the time must be apparent to all readers. To operate on a case of strangulated umbilical hernia in a typical patient is a great tax on the skill and resource of any surgeon, and the difficulties such cases present are only appreciated by the experienced hospital surgeon. The patient is usually a bad subject for any operation—a big, fat woman of low vitality, suffering from chronic bronchitis and a weak heart, often a victim of chronic alcoholism, and exhausted with vomiting, pain, and loss of sleep. The hernia is usually large, with contents frequently firmly adherent to the thin sac and each other, and demands care and much patience in handling, so that the operation is of considerable duration. The mere administration of an anæsthetic to such people is fraught with danger, and when continued for an hour, or even two, adds greatly to the chances which militate against successful operation. We are strongly of opinion that in most of the cases of umbilical hernia it would be far better for the patients to undergo operation in the early stage of the condition than to run all the risks and discomforts of the mechanical treatment, with the occasional attacks of pain, obstruction, or incarceration to which they are liable. There are also always staring them in the face the risk of strangulation and the possibility of the need of an operation under unfavourable circumstances. In closing the opening in the linea alba in old-standing cases it is much more difficult to bring the edges together and keep them there than it is in the more recent ones; therefore the relapses after operation for strangulation will in proportion probably prove more frequent in this variety than in other forms of hernia or than will be the case after early operation for radical cure. For the notes of these cases we are indebted to Dr. S. Whillis, house surgeon to the Infirmary.

CASE 1.—A woman aged forty years, of the usual type, was admitted into the Royal Infirmary, Newcastle-on-Tyne, on March 30th, 1895, suffering from an umbilical hernia of eleven years' duration. It was the size of an adult head and quite reducible. The patient was much inconvenienced by its bulk. She had repeatedly suffered from incarceration of its contents. On April 3rd the sac and skin covering it were cut away, the opening into the abdominal cavity closed with quilted sutures of stout catgut, and the skin wound with fishing gut. No drainage-tube was used. The wound was dressed for the first time a week after operation, when the sutures were removed. Union took place by first intention without constitutional disturbance, and the patient left the Infirmary on April 23rd cured.

CASE 2.—A fat florid woman aged forty-nine years was admitted on April 20th, 1895, suffering from an umbilical irreducible hernia of eight years' duration. The tumour was at the time of operation as large as a full-sized football. The skin over it was discoloured and ulcerated. The woman was unable to get about and had suffered from repeated attacks of incarceration. On April 27th the operation for radical cure was performed, as described by Treves. The skin, sac, and omentum were removed. The umbilical opening was closed with quilted sutures of stout catgut, and the skin wound with silkworm gut. No drainage-tube was used. It was a long and severe operation, but healing took place by primary union without constitutional disturbance, and the patient was discharged on May 22nd cured.

CASE 3.—A woman aged fifty-two years was admitted on May 25th, 1895, suffering from a very large umbilical hernia. It was irreducible, and when she stood erect reached nearly to her knees. In the recumbent position the tumour was capable of being considerably reduced in size. Even then it remained a very large and formidable-looking tumour. The skin over it was extensively ulcerated, and below, where the hernia came into contact with the abdominal wall, there was considerable excoriation, as there was also in both groins. The ulcerated and excoriated skin emitted a foul-smelling odour. The woman was entirely incapacitated, and locomotion was almost impossible. She was very fat, and as she lay in bed the protrusion had to rest upon a pillow. She was kept in bed till the skin was rendered aseptic. On June 1st Treves operation was performed; the skin, sac, and adherent omentum were removed, weighing together nearly four pounds and a half. The opening into the abdomen was closed with thick catgut sutures, applied, not as in the other cases, vertically, but transversely. The skin wound was sutured in the same direction with fishing-gut sutures. No drainage-tube was used. The wound was dressed for the first time on June 8th, when the sutures were removed. Union took place by first intention without constitutional disturbance, but eighteen days after the operation a small abscess formed, probably from one of the buried catgut sutures. The patient was discharged on July 10th cured.

CASE 4.—A very big, fat woman aged forty-seven years

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was admitted on June 11th, 1895, with an enormous strangulated umbilical hernia. There was a spot of gangrene the size of a shilling on the upper part of the tumour. The pulse was quick and the patient's general condition was such as to render any operative interference extremely unpromising. However, the sac was opened and was found to contain the greater part of the omentum and of the transverse colon, the latter being gangrenous. In addition, there were some coils of small intestine easily reducible. The whole of the gangrenous gut was cut away, and the ends were united with Murphy's button. The omentum, sac, and skin (a huge mass) were then removed and the wound closed. The patient died eight hours after the operation. A post-mortem examination showed that there had been no bleeding and that the button was in good position.

CASE 5.—A woman aged forty-three years was admitted on June 23rd with a large irreducible umbilical hernia, which was operated upon on the 24th. In this case the umbilical opening was closed transversely with buried sutures of silkworm gut and the skin wound in the same direction with silkworm gut. No drainage was employed and the wound closed satisfactorily. The progress of the case was interrupted by the formation of an ischio-rectal abscess, and the patient was not discharged till Aug. 10th, when she left the infirmary quite well, suffering no inconvenience from the buried sutures.

Remarks by Mr. PAGE.—Before the days of antiseptic surgery an operation for radical cure would have been looked upon in all the above cases as out of the question. There would have been no chance of success. In the fourth case something had to be done, and I quite believe, had the operation which was performed been done earlier, it might have been successful. Great pains were taken before and at the time of operation to render the whole surface of the abdomen aseptic, a solution of bichloride of mercury being the germicide employed for the purpose. After the final cleansing of the skin no chemical was employed, boiled water only being used for washing and flushing the wound. This is the usual practice in my wards, and union by first intention is the rule. As to the prospect of permanent cure in these cases of large umbilical hernia, I think it is very good. Speaking from a considerable experience, I consider the prospect of permanent cure to be as good as, if not better than, in the very large inguinal herniæ. The opening in the very largest umbilical hernia is seldom more than three inches in diameter, and generally it is less, nothing in comparison with the wound made for the removal of a uterine fibroid or solid tumour of the ovary.

Reviews and Notices of Books.

Nature versus Natural Selection: an Essay on Organic Evolution. By CHARLES CLEMENT COE. London: Swan Sonnenschein and Co. 1895. pp. 591.

THE object the author has in view in this work is to show that whilst there is strong evidence in favour of organic evolution, natural selection has no place in nature. Natural selection is based on the analogy believed to exist between the process of artificial selection and a process supposed to take place in nature. In the latter case the "struggle for existence" is said to be the selecting power, and it acts by securing the survival of the fittest. This is accomplished by a process of selection from those variations, however small, which are necessarily associated with sexual reproduction, leading by degrees to the transmutation of species. In opposition to this the author believes that if such a selective action did exist, other factors of evolution would anticipate its action in the transmutation of species now going on, and, further, that there is no definite proof of its action in the earlier stages of organic evolution. In his discussion of the subject Mr. Coe submits the theory of the transmutation of species by means of natural selection to certain tests, and asks, in the first place, whether there is a general consensus amongst scientific men in regard to the precise meaning of the term natural selection, since some hold that organisms are constantly varying in all directions, whilst others think that they vary only from a central line, from which a few variants diverge on either side; and some again maintain that they vary to a considerable, others to only a slight, extent. These variants are no doubt due to certain as yet unknown causes, but their preservation is due, Mr. Coe appears to think, to chance. Now, in the vast proportion of instances any variation is swallowed up and extinguished in what Mr. Francis Galton terms the regression to mediocrity. Hence, if a new and permanent variety, which is a step towards a new species, is to arise, some special modification should appear simultaneously in many individuals in a certain area. Romanes thought there was no warrant for this; Wallace, however, with far larger experience, holds that there is good reason for accepting it. Mr. Coe takes exception to the term natural selection, and shows that in reality two events are included under this term—viz., the survival of the fittest alone and the survival of the fittest and some not the fittest, and considers that these two things require differentiation. He notes also that the degree and constancy of the struggle for existence are estimated differently by different observers. He makes a good point of the alternative use of the terms "natural selection" and "survival of the fittest" as used by Wallace and Darwin, so that when a difficulty presents itself one or the other term may be employed, as may be most convenient. The argument advanced in favour of the struggle for existence is discussed at some length—viz., that since animals increase in geometrical ratio, any one animal or plant, if unchecked, would speedily overrun the world, and he meets it with the objection that for this to occur so large a series of other "ifs" must be admitted in regard to soil, climate, and other conditions as to render such multiplication almost impossible, and he holds that the output of life has been greatly over-estimated. On the other hand, he brings evidence which casts a doubt upon the constancy and severity of the struggle for existence between animals and plants of nearly allied or identical species, and shows that such competition is largely modified by the coöperation which so frequently obtains amongst the members of the animal world. He further maintains that the circumstance of one plant or one animal displacing another—as, for example, the brown Norwegian rat exterminating the black English rat or the willow displacing the watercress in the New Zealand rivers—although it may be employed as an argument for the struggle for existence and for the selection of favoured species, yet it by no means proves natural selection or the transmutation of a species by the selection of favourable variations which arise in connexion with sexual reproduction. He lays great stress upon the differences that exist between artificial and natural selection, the process in the former being strictly controlled by man with some definite object or objects in view, as beauty, strength, fleetness, or mere monstrosity; whilst in nature not only is there mergence of special characters in the general type, but death is apt to supervene and prevent the perpetuation of the special form or type that may have appeared—"the principle of Utility dominates Natural Selection with an iron rule"—and he thinks Mr. Romanes' assertion rash, that the death which takes place in nature must act with so much greater vigilance than is exhibited by the cattle breeder or the pigeon fancier, "for this death is often indiscriminate, the conditions under which the test is applied are often such that it would be rash to say whether the survivors were the fittest or the most fortunate." The only answer to this criticism, which is sound enough, is that the time is infinite, and the number of generations enormous, whilst now and again exceptional circumstances may occur favouring the preservation of life, as, for example, the comparative absence of enemies to the rabbits in Australia, where a favourable form might arise and be perpetuated. On the other hand, such chance would be greatly diminished in a region

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such as that of the "tsetse" fly in the animals liable to be attacked by it. Then, again, the importance of the surrounding conditions or environment, admitted by Darwin in his later writings, is dwelt upon by Mr. Coe, especially in regard to colouration. Indeed, the chapter devoted to this subject and to instinct is one of the best in the book, the facts adduced and the argument founded upon them being well worthy of careful consideration by those who defend the doctrine of natural selection. Mr. Coe endeavours, and we think with much success, to show that under the expression "correlated variation," or the changes that take place in one part of the economy as the result of some alteration in another, a law or order of nature is implied which has or may have great influence in the permanent modification of the organism, and yet to which a proper value has not been assigned by the Darwinists. Mr. Coe makes a good point of the difficulties that surround the supposition of an animal or plant being thrown by the wind or waves on new and congenial soil, and so giving rise by successive modifications, under changed conditions, to a new species. When examined in detail such transportation is extremely difficult to conceive. It is not enough that one individual should be so transported, unless it were a pregnant female; and the necessity for appropriate food in the case of the animal, or of soil in the case of the plant, introduces almost insuperable obstacles to the survival of any given specimen. As has been well observed, even the potato has not become wild in any country, notwithstanding the large extent to which it is everywhere cultivated. Mr. Coe has brought together a large number of facts and has advanced some cogent reasoning in such a manner as not only to show that he has read and thought much upon the subject, but to demonstrate that whilst the theory of evolution by natural selection is supported by various facts, yet that it has weak points which it is well to expose, and which will require support and strengthening before that theory can meet with general acceptance at the hands of those best qualified to judge. He is very clever in pitting the statements of one observer against another, and in this way makes the Darwinists bear witness against themselves. The book as a whole is very interesting reading.

Archbold's Lunacy. Fourth edition. By S. G. LUSHINGTON, M.A., B.C.L. London: Shaw and Sons. 1895.

MORE than four years have elapsed since the previous edition of this well-known work, the editor having been unable to complete its revision owing to a serious personal accident. Since the third edition the Lunacy Act of 1891 (amending the Act of 1890) has been passed, and in the same year an important local Act for dealing with the management of the public asylums for the county and county boroughs of Lancashire. These, together with the Rules in Lunacy which were recast in 1892 and supplemented in 1893, have been incorporated in the work. Part I. consists of the Lunacy Acts 1890 and 1891, with notes and an introduction containing most of the principal provisions of the Acts and rules in a narrative form, together with the Lancashire Act and all the statutory rules and orders in force at the date of publication; but unfortunately this took place too early for the insertion of the new rules made by the Commissioners in Lunacy this year and their new regulation respecting mechanical restraint. As regards these two important matters the work under consideration is therefore unfortunately already out of date. Part II. contains all the statutes in force relating to criminal lunatics, preceded by an introduction defining what is meant by a "criminal lunatic," and giving an historical sketch of the law and a summary of the statutes now in force in a narrative form.

The appendix contains the Lunacy (vacating of seats) Act (1886) and the Idiots Act (1886). The notes appended to the clauses of the various Acts are very voluminous and contain most valuable information to those in search of explanation as to their meaning and cannot fail to be of use to any who are engaged in the treatment of persons of unsound mind. The times allowed for the due carrying out of the provisions of the Lunacy Acts, as, for example, "within," or "not more than," so many days or "clear" days are carefully computed and stated. As an instance, in Section 29 of the Lunacy Act (1890) the expression "not more than seven clear days," which often gives trouble to medical practitioners, is explained to mean seven days exclusive of the date of the medical examination and the date of presentation of the petition.

It is pointed out that Section 331 of the same Act is repealed by Section 2 of the Public Authorities Protection Act of 1893, and is replaced by Section 1 of that Act, by which an action brought by a person who has been detained as a lunatic against any person for anything done under the Act of 1890 must be commenced within six months (instead of twelve) after the act, neglect, or default complained of. The work is completed by a very comprehensive index.

A Manual of Botany. By REYNOLDS GREEN. Vol. I.: Morphology and Anatomy. London: J. & A. Churchill. 1895. Price 7*s.* 6*d.*

THIS work is based upon the manual of the late Professor Bentley, and is intended to take its place. For making the book of convenient size it is to be issued in two volumes, of which this one (the first volume) deals with the morphology and anatomy of plants, while the second one is to treat of their classification and physiology. The section on morphology is divided into chapters on the general morphology of plants, morphology of reproductive organs, and of the fruit and seed; and the anatomical section includes chapters on the cell tissues, tissue systems, and structures of stem, root, and leaf. The text is tersely written and teeming with facts, to the principal ones of which the attention is quickly drawn by the plentiful use of italics. The book is all through most liberally illustrated by clear diagrams, many of which are original. It will be found to be a useful volume for the general student as well as for those preparing for examinations.

OUR LIBRARY TABLE.

The Origin and Nature of Man. By S. B. G. MCKINNEY. London: Elliot Stock, 62, Paternoster-row, E.C. 1895.—The author of this small book says that the modern student is sometimes inclined to fancy that the last word has been said regarding the origin and nature of man, which, he goes on to show, is very far from being the case, and, we may add, is not at all likely to be the case. The author remarks that "a teacher does not deceive us when he says that protoplasm is the physical basis of life, for it is a fact that we know nothing of life, except as it is revealed by protoplasm. The unfounded and unscientific assumption comes in when it is added that the protoplasm is the formative power of living beings. The matter which is formed cannot be the formative power, and the teacher of physical science only refers to the material when he speaks of protoplasm." The book is of a metaphysical nature; it succeeds in showing the difficulty of the problems by which we are confronted and how inadequate is our knowledge to solve them; but we may fully admit all this and still point to the fruitful results which we have attained by scientific and inductive methods of inquiry and experiment. As members of the medical profession we have to deal with living beings, and, as everybody admits, life introduces an element which is unfathomable. We know a good deal of the anatomy and physiology of a cell; but, let the physicist condition his forces as he

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may, he cannot make a cell or explain the mystery of the powers and properties inherent in it. We know uncommonly little of the how and why of many things—indeed, even where life is not present.

Dialogues of the Day. Edited by OSWALD CRAWFURD, with numerous full-page illustrations. London: Chapman and Hall, Limited. 1895.—A revival has taken place of late of the method of conveying stories in the form of crisply written dialogue. "The Dolly Dialogues" afforded a very successful example of this style of literature. The author enjoyed some advantages over the writers of these dialogues in that he was able to sustain the reader's interest by maintaining a continuity in the arrangement of his incident and material, which he touched with a light hand and managed to set forth with vivacity and humour, and in a tone of banter or amusing cynicism and playful irony. The present book consists of short and light sketches illustrative of the manners and customs, the foibles and frivolities, and the situations presented in modern society, furnished by numerous contributors writing independently of one another. Speaking generally, they are neat and epigrammatic and interspersed with little touches of satire, pathos, or drollery, and tricks of mental surprise which stimulate the intellectual appetite and imagination by their suggestiveness—and this is just what they should be. The dialogues are of very unequal merit, some of them being comparatively poor in conception and construction, but none of them are absolutely dull, and several are excellent and pleasantly stimulating. They require to be taken in small quantities at a time, like a savoury at dinner, to appreciate their flavour, but in that way they will be found an agreeable and light mental diversion for those convalescing from sickness. It goes without saying that the dialogues from Anthony Hope's pen are smart and piquant, but there are others which are happily conceived and agreeably written, and exhibiting the necessary *verve* and vivacity to make them good reading. We may refer to those by Miss Violet Hunt, "The End of Beginning," for example; to the smartly-conceived incident in the deftly-handled contribution by S. Squire Sprigge, "An Unrehearsed Effect"; to "The Girls he left behind Him," by Mrs. Alfred Hunt; the "Choosing a Ball Dress," by Miss Clara Saville Clarke; "Cherchez l'Homme," by A. N. Stainer, and others, as the reader of the volume will discover for himself.

Bad Air and Bad Health. By HAROLD WAGER and AUBERON HERBERT. London and Edinburgh: Williams and Norgate. 1894.—This essay, which originally appeared in the *Contemporary Review*, and has been somewhat amplified in the present reprint, is, in the words of the opening sentence, "a warning against the careless way in which the mass of people, poor and rich, ignorant and learned, allow the air of their living-rooms to be in an impure condition." The subject is presented in a manner which may be easily understood by the general reader, and the arguments are in a great many places enforced by quotations from eminent physiologists and sanitarians—a token that the authors have confidence in medical science, although they emphatically express their opinion (p. 19) that "there must be no State power of any kind placed in the hands of the medical profession." Virulent organic effluvia are throughout assumed to be the principal cause of the unwholesomeness of rebreathed air, and the authors criticise at some length the conclusions of Dr. J. Haldane and Dr. J. Lorrain Smith, whose experiments (*Journal of Pathology*, October, 1892, February, 1893) seem to show that the organic matter of the breath is comparatively innocuous. The final summing-up is: "Live as much as you can with open windows, wearing whatever extra clothes are necessary." In several respects the arrangement and mechanical execution of the book are indifferent.

A Trip to Chicago: What I Saw, What I Heard, What I Thought. By MARTINDALE C. WARD, M.D. Aberd. Glasgow: Alex. Malcolm and Co., 34, Ann-street. 1895.—This is a highly entertaining account of a month's experience in the United States during the Chicago Exhibition of 1893, including a brief visit to Canada. The author writes well, observed much, and acknowledges that he thoroughly enjoyed himself; his book is full of engravings and information and does not contain a single dull paragraph. The sea journeys out and home were between Southampton and New York; the principal cities visited (other than New York) were Montreal, Toronto, Chicago, Pittsburg, Buffalo (on the way to Niagara Falls), Newark, Philadelphia, and Washington. Dr. Ward briefly mentions that he met several of his medical brethren, diverging, however, into a few details respecting Dr. Oronhyatekha, a Canadian Mohawk chief, who studied for some time at Oxford University and subsequently returned to Canada, where he graduated as M.D. and practised medicine for some years.

Wright's Improved Physicians' and Surgeons' and Consulting Visiting Lists. 1896. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited.—These lists are in two forms—one with so many pages assigned to a month, and another distinguished as the perpetual form. In the latter, pages for visits are put up in the *perpetual* form, the particulars of date to be filled in by the practitioner at the top of the page. There is a convenience in being saved the trouble of making out a fresh list every week as in other lists, but many prefer this to a list running on for a month or a longer time. The books are neatly bound in fine leather, and a great variety of useful tables, convenient for ready reference by the busy practitioner, are given at the beginning of either volume.

The Cause and Prevention of Cholera. By E. H. HANKIN, M.A., Chemical Examiner and Bacteriologist to the North-Western Provinces and Oudh, Fellow of St. John's College, Cambridge. Second edition. Agra: Printed at the *People's Herald* Press. 1895.—This is a second and enlarged edition of Mr. Hankin's little pamphlet. In a tract of this nature (mainly intended for the instruction and guidance of the natives of India) it is inevitable, as its author says, that some things should be stated dogmatically, but evidence in favour of each of the opinions he has expressed will be found in papers which he has already published or is about to publish. Mr. Hankin accepts the comma bacillus always associated with cholera as its cause, and he briefly tells us why and how it gets into water, and the conditions under which it grows and multiplies or dies therein. He deals with the disinfection of wells and with several of the native customs and habits in a useful and discriminating way, and touches upon the various methods in which the micro-organism may gain access to the body and how best to guard against it. The pamphlet is written in an eminently simple, clear, and practical style.

A CHOLERA HOSPITAL FOR CARDIFF. — Mr. Thompson, of the Local Government Board, held an inquiry at Cardiff last week in reference to the application of the town council for leave to borrow £2450, the cost of erecting a cholera hospital on the Flat Holm island in the Bristol Channel. The existing building is a shed capable of holding six beds, and three years ago, when cholera was prevalent on the Continent, a large marquee was erected to afford greater space. The expenses will be borne by Cardiff and Barry. The new building would comprise two six-bed wards and a nurse's room, with the requisite sanitary arrangements and a crematorium. A farmhouse exists on the island which would be used as an administrative block, and the small existing ward would be used in case of necessity as an isolation or auxiliary ward of the proposed new pavilion.

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Analytical Records
FROM
THE LANCET LABORATORY.

MARVINO GRAPE WINE.

(DOWDEN AND CO., LTD., ST. PAUL'S-LANE, BOURNEMOUTH; AND 8 AND 9, ST. MARTIN'S-LANE, LONDON, E.C.)

WE have no doubt of the genuineness and wholesomeness of this wine, despite its very moderate price. It is produced, it is said, from imported grapes, and can be sold at the rate of 12*s.* per dozen (quarts). It possesses a peculiar, somewhat aromatic flavour, is light in character, and well suited for use as an ordinary wine at mealtime. Analysis gave the following results: Alcohol, by weight, 10·92 per cent.; by volume, 13·52 per cent.; proof spirit, 23·70 per cent.; extractives, 2·32 per cent.; mineral matter, 0·17 per cent.; total acidity, reckoned as tartaric acid, 0·74 per cent.; and sugar, 0·28 per cent. As will be seen, it is commendably free from excess of sugary constituents and is not unduly acid. In short, its composition is analogous to that of a sound and genuine Burgundy of a mild and agreeable type.

PORTABLE SOUPS.

(THE PORTABLE FOOD COMPANY.)

These preparations are intended as portable rations for soldiers in the field or for travellers or explorers, where vegetables are scarce and transport difficult. We have received three kinds—(1) consolidated mulligatawny, (2) consolidated Scotch broth, and (3) consolidated pea-soup. Each is contained in a tin "cartridge" about two inches long by about an inch and a half wide, open at both ends. Prepared in the manner directed a really palatable soup is obtained, the appearance, taste, and composition of which are seemingly identical with freshly-prepared soups of every-day formula, except that they contain, of course, desiccated vegetables. They afford, therefore, a convenient and acceptable resource for food under the circumstances already indicated.

KOCIDE.

(THE KOCIDE CO., CLARENCE-ROAD, LEEDS.)

This is a brown powder possessing a disagreeable but not very powerful smell of tarry matters. It is for the most part insoluble in water, the insoluble portion serving probably as a suitable absorbent of the active agent, whatever that may be. It is acid in reaction and contains much sulphate; ether extracts a trifling amount of yellow oil, and on submitting the powder to dry distillation a small quantity of oil came over. In the case of good carbolic powders we should expect to expel under these circumstances at least 10 per cent. of tar acid. Kocide is claimed to be a powerful germicide, but we do not gather that any evidence based on bacteriological experiment has been obtained on this important point.

VARIOUS MEDICATED SOAPS.

(D. AND W. GIBBS, CITY SOAP WORKS, E.C., AND ABBEY CHEMICAL WORKS.)

According to a series of tests made in our laboratory these soaps may be commended, not only because of the excellent quality of the soap employed, but because also of the fact that they are reliable in regard to the various therapeutic agents contained in them. We have received ten in number, as follows:—1. Sulphur soap (10 per cent. sulph. præcipitat. B.P.). 2. White birch tar soap (10 per cent. pix liquida e betula alba). 3. Ichthyol and tar soap (3 per cent. ichthyol sulph. amm. and 5 per cent. pix. liq.). 4. Eucalyptol soap (5 per cent. ol. eucalypti rectif.). 5. Sulphur, camphor, and Balsam of Peru soap (5 per cent. sulph. precipitat. B.P., 5 per cent. spiritus camphoræ B.P., and 3 per cent. Balsam of Peru). 6. Corrosive sublimate soap (½ per cent. hydrarg. perchlor. B.P.). 7. Borax, naphthol, and sulphur (freckle) soap (5 per cent. natr. biborac., 2½ per cent. naphthol pur., and 10 per cent. sulph. præcipitat. B.P.). 8. Boracic acid (shampoo) soap (5 per cent. acid. boracic. B.P.). 9. Salicylic acid and sulphur soap (3 per cent. acid. salicyl. B.P. and 10 per cent. sulph. præcipitat. B.P.). 10. Carbolic acid ("surgeon's") soap (20 per cent. pure carbolic acid crystals). Careful search for excess of alkali was attended with negative results except a slight indication in No. 7, which contains biborate of soda. The composition of the corrosive sublimate soap (No. 6) is not so uniform as it might be, since patches of the perchloride occur across the surface. They become more obvious when they blacken by exposing the soap to the vapour of sulphide of ammonium. These soaps one and all, however, are without the slightest injurious action upon the skin, while doubtless they act effectually in accordance with their medicated composition.

AMMONOL.

(THE AMMONOL CHEMICAL CO., NEW YORK.)

Ammonol is the name given to ammoniated phenyl acetamide. The ammonia is evidently loosely combined, since a sample of the slightly yellowish amorphous powder which was submitted to us smelt strongly of ammonia. It accordingly behaves as a stimulant as well as an antipyretic and analgesic, thus differing from the almost numberless coal-tar derivatives and antipyretics with which modern pharmacology is deluged. Ammonol has been used chiefly in the relief of rheumatism and neuralgic pains, and in the treatment of the sequelæ of alcoholic excess. The presence of ammonia in a more or less free state gives it additional properties as an expectorant, diuretic, and a corrective of hyper-acidity. Ammonol is also prepared in the form of salicylate, bromide, and peptonate.

ADEPS LANÆ, N.W.K.; PURE NEUTRAL WOOL FAT.

(THOMAS CHRISTY AND CO., 25, LIME-STREET, E.C.)

There are certain important features about this particular preparation which render it of additional value as an emollient and basis for ointments. Adeps lanæ, N.W.K., is specially refined, and consists of pure neutral wool fat minus the harder fatty constituents. Its melting point is therefore lower, and the preparation is consequently more soft and supple, so that it will absorb water if required to the extent of three times its weight, and is readily absorbed by the skin; moreover, it is a non-rancifying fat and perfectly neutral in reaction.

DAVICINI'S PURE STERILISED MILK.

(C. S. COX AND CO., NEW YORK, AND 4, FENCHURCH-AVENUE, E.C.)

On analysis this milk proved to be only of moderate quality. Thus it contained 3 per cent. fat, 9·46 per cent. of non-fatty solids, and 0·7 per cent. of mineral matter. The method of sterilisation is undoubtedly satisfactory since the milk was in an excellent state of preservation, and its flavour was good and freer than is usually the case from "boiled" taste. The composition of this otherwise excellent milk would have been more satisfactory if the proportion of fat had been greater, the amount found being close on the line that separates a poor from a rich milk. Objectionable preservatives were absent.

WHOLE MEAL WHEAT FLOUR.

(R. VARNDELL, WAVERLEY MILLS, FARNHAM, SURREY.)

We have submitted this flour to examination and find, in accordance with the description, that it consists of finely ground whole meal with only a part of the bran present in a comminuted state. It contains an excellent proportion of albuminous principles, as can be easily ascertained by suspending the flour in water in a muslin bag, when the starch washes away, leaving the gluten and bran behind. It is evidently prepared from wheat of superior quality, its flavour is rich, and its aroma good.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 28, 1895.

THERE seems to be little fear that for some time to come those who are engaged in the working out of the details of new methods of treatment will, in spite of the fact that they are doing so much, find their occupation gone. Of this we have abundant evidence in the account of the Preparation of Antirabic Serum and the method of Determining its Strength by Professor TIZZONI and Dr. CENTANNI, the conclusion of which appears in our present issue. This investigation is of special interest since, should the efficacy of the serum treatment of rabies be proved, new factors become available for consideration and application to the method as a whole, and the scope of the application of the treatment will be enormously increased.

As early as 1889 BABES and LEPP appear to have indicated the possibility of obtaining some protection against rabies by injecting the blood of an animal inoculated against rabies (by PASTEUR'S method) into one previously or afterwards infected by the virus. Although much work has since been carried out on the same lines there was little practical outcome from it all until BEHRING, followed by ROUX and ABONSON, had worked out the method of treating diphtheria and tetanus by means of antitoxic serum. The experience gained by TIZZONI and his colleagues in the preparation and use of anti-tetanic serum has now, however, been applied to the treatment of rabies by a somewhat similar method; and if all the results recorded are confirmed by fuller and independent observations there can be little doubt that a great advance has been made in the treatment of hydrophobia. Instead of carrying out the greater part of the preparation of the antidote within the body of the patient by a process of "vaccination," TIZZONI and CENTANNI follow the usual plan of preparing this substance in an animal from which it is conveyed to the animal to be treated in the blood serum as a vehicle. In place of using PASTEUR'S method of protective "vaccination" for the animals from which the serum is to be obtained, they, by a process of peptic digestion, attenuate the virus to be used. What the exact action of this digestion may be is as yet somewhat doubtful; whether it diminishes the activity of the poison-secreting organisms, kills them, or "attenuates" the ferment produced by them is a subject for careful experiment. At all events, the activity of the virus is said to be so far modified that considerable doses may be injected at a comparatively early stage of the process, and animals that have been so injected withstand the action of the more virulent virus within a comparatively short period. This part of the process is carried out upon sheep, which may be "vaccinated" again and again. These animals always retain a certain immunity, which can be increased from time to time by fresh injections of virus, the activity of the serum corresponding to the amount and virulence of the virus injected. In these points the method of obtaining the serum is much like that by which the tetanus and diphtheria antitoxic serums are prepared. This serum, when mixed in definite quantity in a test-tube with a lethal dose of canine or fixed virus, and then injected into a rabbit, so neutralises the poison that neither is there any increase in quantity of the virus nor are the slightest signs of rabies developed, even though the animal be kept under observation for four or five months. More important still, when an inoculation with a lethal dose of the poison is made, a comparatively small quantity of the serum serves to neutralise its effect if injected at once, and even if delayed until the end of the first half of the incubation period the amount required to be given has only to be multiplied some six or eight times. In this respect the serum has great advantages over those used in the treatment of diphtheria, in which the dose has to be multiplied some 20 or 100 times, and of tetanus, in which the increase of the dose must amount to from 1000 to 2000 times in the later stages of the incubation period. Leaving out of consideration the prophylactic properties of this serum, which could only be of use in the case of those who are constantly in contact with dogs, the success of the experiments as regards early treatment is from a practical point of view of very great importance. It is possible, by drying, to prepare a "permanent" form of this serum which will, if kept from air and light, remain active for a long period. It is very portable, is readily dissolved, and may be used by anyone who is capable of sterilising a subcutaneous injecting needle and syringe. The treatment, therefore, can be commenced almost as soon as the patient has received the bite, as it is not necessary that he should leave his home or his own medical attendant, with the result—and we assume that these experiments are to be fully relied on—that the patient at once receives a quantity of the antitoxic material, which under the PASTEUR method could only be manufactured in the body of the patient himself, and then in quantities sufficient to neutralise the infective material, say, after the second half of the incubation period.

One other most important point brought out by these researches is that, just as in the case of tetanus poison, the virus has a distinctly selective action; it seems to exert its full effect on the central nervous system or on some parts of it. Bearing this fact in mind, and injecting the doses of serum in special positions, it is found that it is necessary to inject much smaller doses of the serum under the dura mater of the brain than if the injections are made into the substance of a nerve; whilst when the injection is made subcutaneously a still larger dose is necessary than when the serum is injected at either of the above sites. It is evident that the serum must act in one of two ways. It may act as a direct chemical antagoniser of the virus. The results of other experiments, however, appear to put this out of court, and there remains the theory that the serum so acts upon the nerve centres, probably the cells, that with its aid they are able to carry on their functions in the presence of even considerable quantities of virulent material. Where the serum is injected subcutaneously a large proportion of the active material is wasted in fortifying cells which do not really need to be protected, whilst the nerve cells only participate generally in the benefit conferred. When

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the serum is injected into the substance of a large nerve the protective agent at once finds its way into channels which communicate fairly directly with the cerebro-rachidian lymph system, so that a larger proportion of the active protective agent comes into direct contact with the central nervous system. When, further, a subdural injection of serum is made we have the most direct contact possible. Just those parts which are in need of strengthening are brought into contact with the protective material, and the best results are obtained. TIZZONI and CENTANNI claim that they have worked out all these different points and that their results are now beyond question. Allowing for some, or even a considerable, amount of bias in the matter, there would still remain evidence, we think, of sufficient value to encourage them and others to persevere in this work. At present cases come up for treatment which, from the severity of the wounds and the amount of virus left in them, we can never hope to cure by the PASTEUR method, valuable as that method is when the cases are brought under treatment sufficiently early, and when the patient does not succumb too rapidly to the virus left when the bite is made. Some of these cases, if the experimental results are accurately recorded, would undoubtedly yield to the serum treatment, especially as that treatment can be commenced with the least possible delay. One point more must always be remembered when reading this paper and in determining the value of the results obtained and recorded by the authors. BEHRING, in determining the strength of his antitoxic serum, is able to make artificial cultures of his poison-producing organisms, after which he has only to separate the poison from these organisms in order to obtain a poison of constant strength which has no power of reproducing itself. TIZZONI and CENTANNI, on the other hand, are handicapped by the impossibility of making artificial cultures of their rabic virus, whilst, unless the process of peptic digestion or some similar process is carried out before the virus is injected, this material remains capable of reproducing itself for some considerable time after the injection has been made. Altogether, the paper is full of suggestions. Much of the work has evidently been carefully done, and if we cannot accept all the conclusions arrived at it is because the statements are so far reaching and important that it would be unfair, even to the investigators, to accept them without very full and independent corroboration.

As we are at this period much concerned with educational regulations and meditating on the best use that medical students can make of their "hasting days" of opportunity the time is fit for giving a little attention to the arguments in favour of devoting six months of the fifth year to pupilage under a general practitioner. The first thing to be said in favour of this use of six months is that it is in accordance with the regulations of the General Medical Council. The following is the regulation which will be found on page 592 of the Students' Number of THE LANCET: "4. The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the medical authorities in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment or possessing such opportunities as shall be satisfactory to the medical authorities." This regulation deserves the serious attention of every student who has come to his fifth year and is within measurable distance of the personal responsibilities of private practice. It is one thing to act as a clinical clerk or a resident physician in a hospital, and have all one's work revised and checked by the physician or surgeon in charge, and quite another thing to have all the responsibility of diagnosis and treatment in one's own hands. Besides, the class of cases is different. Private practice varies much from hospital work, and it is no more possible to learn its nature and general management from hospital practice than it is to learn the details and requirements of hospital practice from the routine of general practice. We are without definite information as to whether much or little use is made of this half of the fifth year by medical students. But the whole regulation is so good and so well expresses the views of those who have studied the defects in our present system of medical education that we think it desirable to direct the attention of advanced students to its suggestions.

The great purpose which the Council had in framing the resolution was evidently to emphasise the fact that the main use of the fifth year was to concentrate all previous learning into practical channels and to bring the student into contact with actual living cases of disease. Work is to be exclusively clinical. The student is to get it where he can, in foreign hospitals or home ones, and in the practice of registered practitioners. There is one condition attached alike to hospitals and practitioners—that they shall be approved by the medical authorities to whom the candidate applies for a qualification. The condition is a reasonable one. The regulation is the only one of the regulations of the General Medical Council which explicitly recognises the registered practitioner, as such, as a coöperator in the great process of medical education. It is otherwise in the law. In the training of a solicitor articled pupilage is the principal part of education. In the process of medical education it used to be a prominent feature, but it is no longer so. This regulation is the only recognition by the Council of the principle that was carried far in the system of medical education that ruled up to forty years ago. But general practitioners should take note of the regulation and of the conditions it includes. It should be an object of ambition in every registered practitioner whose practice or whose appointments are favourable for the purpose to take pupils—i.e., advanced medical students—and initiate them in the art of seeing patients and detecting and curing their diseases.

The General Medical Council did well, we think, to leave to the examining bodies the recognition of the fitness of both hospitals and general practitioners as sources of medical instruction. But there is no reason to think that the medical authorities will be illiberal in recognising the claims of any medical man whose appointments or whose standing in the profession are

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such that he is likely to be able to give students opportunities of seeing common diseases in their continuity and of watching their treatment. Practitioners may well be willing to accept pupils who are of the standing implied in the regulation. They will become teachers of medicine in an important sense by so acting. They will derive benefit as well as confer it. They will learn from such pupils as well as teach them. They will keep in touch through them with the latest improvements in diagnosis and treatment, and so preserve that freshness of mind which is the mark of a good practitioner and the great condition for preserving interest in work that is otherwise apt to grow monotonous and mechanical. But it is the student himself who should be most benefited by this limited pupilage. Supposing him to choose his principal well, the advantage must be great in every aspect. Every detail of his principal's work will be a lesson to him: the method of seeing patients; the dispensing arrangements, supposing the practitioner to have such; the common diseases, which so largely constitute medical practice, and the ready means of recognising and relieving them; the detection and notification of infectious diseases; the personal knowledge of patients and their families, so different from the casual intercourse with unknown strangers in hospital practice; vaccinations; labours; clubs; private patients of every rank treated with equal consideration; and the social position and importance of his principal—all these will be lessons that will be eminently helpful to the student in the early days of his own practice. Even the errors of his principal will not be without their advantage to him. It remains with students themselves to use the facilities afforded by this regulation or to disregard them and to commence practice in that ignorance which has made many men, who would shine in the class-room and be able assistants in the operating theatre, feel awkward in the commonest emergencies. Hospital practice can only be learnt in hospitals, and private practice from a good registered practitioner, and six months are all too short for the latter lesson.

As the season draws near for sufferers from phthisis to go abroad for the winter it may not be inopportune for us to remind the profession, as we have often done before, of the responsibilities which the medical adviser has in this matter, and of the dangers which may attend advice given in any routine or offhand fashion or without adequate knowledge. Climatic treatment is a large subject which is beset with peculiar difficulties and needs special study if it is to be applied with discrimination and effect. It means much to the patient, is usually productive of decided benefit or injury, and the failures of such treatment often entail much misery on the patient and the patient's friends, and a corresponding amount of discredit upon the medical adviser. There are few catastrophes in practice more deplorable than to send a patient suffering from advanced or subacute phthisis on a long sea voyage or to some distant health resort only to perish miserably far from the comforts and consolations of home. Such a result may no doubt be in some cases unavoidable and may be reckoned among those "calamities of medicine" which we must all be prepared to face. But, on the other hand, there is no reason why a result of this kind should be anything but the rare exception if the medical adviser is thoroughly well posted in the principles which should regulate this department of practice. It is only fair to point out that the fault not uncommonly rests with the patient rather than with his adviser. Some patients go abroad without medical advice or in direct contravention of it, and it need hardly be said that it is most unjust to hold the profession responsible for the results which follow.

The first question which the practitioner has to consider in dealing with phthisical patients anxious to try a change of climate is whether any change is desirable or whether the patient should not rather remain at home. It is comparatively easy to define the cases in which the patient may be freely advised to try climatic change and those in which he must be dissuaded from what is a hopeless venture; the real difficulty is with the cases that are on the border-line. We may say with confidence that if the amount of disease is small, localised, and not progressive; if there are little or no wasting and fever; if the general health, and especially the integrity of the digestive system, is well maintained; if there are no complications; and if the patient is of a cheerful disposition and not averse to the prospect of foreign travel—then there can be little hesitation in advising climatic change, and the only question will be to decide what change would probably be most beneficial. On the other hand, if the damage to the lung is extensive and progressive, if there are much wasting and fever, if there are marked constitutional breakdown and serious complications, then climatic change must in the great majority of such cases be forbidden, or, if permitted at all, only to a limited extent and merely as a palliative measure. These principles are, we think, clear and do not require argument or proof. The difficulty, as we have said, is chiefly with the intermediate cases. What amount of pyrexia or wasting should be held to contra-indicate climatic change in a case otherwise calling for it? In a doubtful case shall we attach more weight to the nature of the local lesion or to the constitutional symptoms? How far shall we allow the family history to govern our decision, or the existence of special symptoms, such as hæmoptysis? We do not imagine that these questions can be answered very definitely, and much must always depend upon the practitioner's insight, common sense, and capacity for penetrating to the real nature of the case before him; but we may throw out a suggestion or two. The medical adviser called upon to deal with these cases will seldom regret relying to a considerable extent upon the thermometer. An evening temperature that is persistently above 100° F. should, as a rule, be held as a contra-indication for distant travel. Anything like severe pyrexia must be regarded as an absolute contra-indication. The practitioner should, also, attach much weight to the known history of the case, and should therefore be much on his guard with cases that he sees for the first time and of which he has no precise history. A case may present a very small local lesion, and yet the temperature or the general constitutional enfeeblement may point to the

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probability of a rapid progress of the disease, and hence to the futility of climatic change. Family history may also be important in this regard, but it is difficult to appraise it correctly. It is probable that its importance has been often over-rated. The stage of the disease is, in our judgment, of much less importance than the amount of lung involved and the type of the case. Thus, a case in the first stage with progressive lesion and much fever may be wholly unsuitable for climatic change, whereas a case with a single cavity, where the constitutional state is good, often does well. Much weight should be attached to the patient's capacity for taking and assimilating ample nourishment. The maintenance of nutrition is the keynote of the successful treatment of phthisis, and the prognosis may be allowed to be materially affected by the state of the digestive system. Hæmoptysis or night sweating may be proper grounds for delay, but do not in themselves constitute any contra-indication for climatic change. It is not true that patients are more prone to hæmorrhage at the high altitude stations or at sea than they are at home.

Every suitable opportunity should be taken of impressing upon patients that the proper time for climatic change is when the disease is threatening rather than actually declared. It is, we conceive, the simple fact, deplorable as it is, that at present in the vast majority of cases the proper time for applying climatic treatment with effect is allowed to pass, and that treatment is commonly reserved for a stage of the disease when its success is always precarious and its failures are many. On the other hand, its success in the early incipient stage of the malady is often great and brilliant. Early diagnosis is of supreme value in this matter and cannot be too earnestly insisted upon. We have not space in this article to enter upon the second part of the subject—viz., climatic change being deemed suitable, what shall be the nature of that change? This is a very large subject on which it would not be possible to say anything of value with sufficient brevity. The sea voyage, the high altitudes, and the dry inland plains like those of South Africa now divide the title of supremacy. They are all most useful in their place, and we are gradually learning to distinguish the cases most suitable to each.

Annotations.

"Ne quid nimis."

IS THE QUALITY OF BREAD DETERIORATING?

IF the only object of the Bakers' Exhibition held this week in the Agricultural Hall were to place before the public a good, honest loaf of bread, we should look upon it as an annual benefaction of no mean importance to the community. We have no desire to underrate the value of trade exhibitions; indeed, we do not doubt that they have a bracing effect upon business; moreover, traders are brought together who exchange ideas, and they may derive the advantage of seeing new machinery, appliances, and articles necessary for the advancement of their business. All this is right and proper in its way, but are the interests of the public equally studied? Methods may be improved so far as an increased economy to the manufacturer is concerned, but does the consumer really derive any benefit from this, or is the product any the better? In the case of bread, for example, we are not the last to appreciate the improvements effected in the details of its manufacture, as instanced in the introduction of ingenious machinery by which from beginning to end the loaf is untouched by human hand; but all this is no guarantee that the loaf has been made from honest materials. Machinery can incorporate very inferior wheaten flour or potato flour, alum, and indifferent and perhaps foul yeast into the composition of the dough with greater subtlety probably than human hands; it may even produce a more attractive loaf, an apparently larger or bulkier loaf, lighter in texture, with a tempting glaze, but this speaks nothing, or perhaps a good deal, of the quality or the nature of the interior. Is it not the experience of most bread-eaters—and who is not a bread-eater?—that the average bread supplied by the London baker, the tin and the cottage loaf, for example, bears no comparison in regard to flavour and nutritive qualities with the unpretending home-made bread made with flour the pedigree of which is known? And yet, given the same materials—flour of good quality, preferably English grown, pure yeast, and common salt—why cannot the baker produce with all the new and improved appliances at his disposal a loaf which shall possess that delicious wheaten and biscuit-like flavour of real home-made bread? It is a serious matter, because, doubtless, a very large proportion of the public do not eat bread in the quantity that they should because of the indifferent flavour and of the non-appetising character of the stuff largely sold in our bakers' shops. They lose, therefore, all the excellent dietetic advantages of one of our most complete foods. We fear the public are much to be blamed; they persistently demand a chalky white, anæmic loaf—one which has the aspect of offering a "lot for the money," but made, perhaps, from an inferior foreign flour employed to make the loaf larger. As long as this sort of demand continues there is no doubt that the supply will be equal to the occasion. The remedy, however, rests with the consumer; let him demand bread made with honest and the best materials, let him obtain a guarantee from his baker that it is made with superior and really nourishing wheat, and not with the poor stuff that is imported in large quantities from abroad. Then he may really enjoy his daily bread and return with delight to a source of sustenance which ministers to his bodily needs far more completely than any other food, because if the wheat from which it is derived is of good quality, of unimpoverished and unstunted growth, it repairs the bony structures, builds up the tissues, and supplies healthy and invigorating materials to the blood. Evidently Nature had an important object in view when she endowed wheat with an attractive flavour, and it is nothing short of an outrage to take this property away and to attenuate its nourishing qualities by sophistication or other detestable means. Last week we had occasion to comment upon the fraudulent practices which recent inquiry has shown to exist amongst the wholesale grocery trade; these are bad enough, but, at least, let us demand bread that is worthy of the name of the "staff of life."

THE SEXUAL NOVEL.

THERE has of late been a tendency for writers of fiction to produce works treating almost entirely of sexual subjects; in fact, the so-called "woman novel" is concerned with nothing else—unless, indeed, it be subjects that grow out of the original one, like hereditary syphilis. These books are generally bad, immoral, wrong-headed, and physiologically incorrect. One of the silliest of its class is "The Woman who Wouldn't." We received a copy of this work for review, and almost coincidently with it a little book called "Baby Buds." We give the authoress of the latter every credit for wishing to do her best

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of bread, for example, we are not the last to appreciate improvements effected in the details of its manufacture interested in the introduction of ingenious machinery which from beginning to end the loaf is untouched by human hand; but all this is no guarantee that the loaf has been made from honest materials. Master can incorporate very inferior wheaten flour or potato flour, and indifferent and perhaps foul yeast into the composition of the dough with greater subtlety probably than human hands; it may even produce a more attractive and apparently larger or bulkier loaf, lighter in texture with a tempting glaze, but this speaks nothing, or perhaps only, of the quality or the nature of the interior. How the experience of most bread-eaters—and who is not?—can testify—that the average bread supplied by the London baker is the tin and the cottage loaf, for example, bears no comparison in regard to flavour and nutritive qualities with the commonest home-made bread made with flour the pedigree of which is known? And yet, given the same materials—flour of good quality, preferably English grown, pure water and common salt—why cannot the baker produce with all the new and improved appliances at his disposal a loaf which shall possess that delicious wheaten and nutty flavour of real home-made bread? It is a serious matter, because, doubtless, a very large proportion of the public do not eat bread in the quantity that they should because of the indifferent flavour and the non-appetising character of the stuff largely sold at our bakers' shops. They lose, therefore, all the undoubted dietetic advantages of one of our most complete foods. We fear the public are much to be blamed; they persistently demand a chalky white, anæmic loaf—one which has the aspect of offering a "lot for the money," but made, perhaps from an inferior foreign flour employed to make the inferior As long as this sort of demand continues there is no hope that the supply will be equal to the occasion. The remedy, however, rests with the consumer; let him demand bread made with honest and the best materials, let him insist on a guarantee from his baker that it is made with sound and really nourishing wheat, and not with the poor stuff that is imported in large quantities from abroad. So he may really enjoy his daily bread and return with zest to a source of sustenance which ministers to his bodily needs far more completely than any other food, because the wheat from which it is derived is of good quality and impoverished and unstunted growth, it repairs the waste structures, builds up the tissues, and supplies healthy invigorating materials to the blood. Evidently Nature has an important object in view when she endowed wheat with an attractive flavour, and it is nothing short of an outrage to take this property away and to attenuate its nutritive qualities by sophistication or other detestable practices which recent inquiry has shown to exist among the wholesale grocery trade; these are bad enough, but at least, let us demand bread that is worthy of the name—the "staff of life."

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to explain to children a subject which needs no explanation, and about which they will learn quite soon enough; but we wish to point out that Opalia, the fatuous heroine of "The Woman who Wouldn't," is just the sort of character that would be produced by being nourished on "Baby Buds" in childhood. And what does the authoress of "Baby Buds" do? She is talking to a child aged four and trying to explain "where our new little baby came from." After a great deal of beating about the bush and talking about plants and pollen she says: "Mammals or birds have no need of bees or moths to transfer the pollen substance from the male to the female, for they can approach one another for that purpose. ..... Indeed, they do so approach at certain times that the ovules of the female may receive some of the pollen substance. How this fully comes about you can hardly understand until you are older." This, of course, is quite true; then what was the use of beginning, and to a child aged four, too? The "woman who wouldn't" married her Alan "only in church," as she explains, and on their wedding night she says, "I trust you so much that I want you to come to my room and help me to un——" dress, she was going to say. ..... Then she added "pack." Eventually, as might have been expected, her husband took up with another woman, and then the woman who wouldn't became the woman who would and did. It is undesirable that the writer of "Baby Buds"—evidently a well-meaning, refined, and delicate-minded woman—should try to explain matters to her children at such an early age; those of the age of twelve or thirteen may be told certain things. With regard to works of the class of "The Woman who Wouldn't" it is a pity for any writer to sit down and write outside of his or her environment. The stories in the Decameron, the various Contes, the Restoration comedies, and the Georgian novel are amusing and wholesome compared with many of our nineteenth century writings. But they were written in the thoughts and manners of the time, without any idea of advertisement. Their authors had no missions or high moral aims, and these works, "Pamela," "Joseph Andrews," "The Country Wife," and others, will live when the women who didn't and couldn't and wouldn't are totally forgotten.

SEATS FOR SHOP ASSISTANTS.

MANY years have elapsed since it was first proposed to provide seats for the use of shop assistants, and the proposal has not been made in vain. Its result, nevertheless, has been by no means equal to the reasonable expectations of its supporters. A number of large firms throughout the country have, it is true, afforded their employés this very moderate concession to the demands of health and convenience. It is probable, notwithstanding, that at least as many have made no such provision. Yet the project is in itself entirely reasonable. It is no measure of mere indulgence, but a serious answer to the constantly repeated warnings of experience. It has been proved over and over again that the still common practice which obliges young people to stand about hour by hour throughout weeks and months of a business life is injurious to health. No quadruped—certainly not the biped man—is capable of safely enduring such prolonged neglect of his physical necessities. The whole order of nature teaches the same lesson. Every organ and every tissue submits to regularity and by frequent rhythmic change alternates energy with rest. It is absurd to pretend that a like system of reliefs is incompatible with business. With method and practice any difficulty could be overcome and a habit be acquired which would directly promote alertness by preventing overstrain. Seats behind the counter are not merely the comfort and the privilege of assistants. They constitute an effectual safeguard of the interest of employers, since they secure these a service more spontaneous in proportion as it must in the very nature of things more capable. It is hardly necessary to draw a clinical diagram of the evil consequences of long-continued standing. Most educated persons know enough of the structure of their bodies to teach them much and to explain why strain of muscle, nerve and spine, varicosities, and other circulatory disorders form the constant sequel of fatigue thus wantonly courted. The opposition we have to contend with is only in part due to ignorance. It is partly also the result of thoughtless want of sympathy, and it is probable that even this difficulty has been exaggerated. The shopping public is less indifferent to the comfort of its helpers than has been supposed, and we are convinced that employers who would candidly trust its consideration and would treat their employés in the intervals of their service have no reason to fear the transference of their custom. As regards the kind of seat there may be wide differences of opinion, but we should suppose that some form of fixed support contrived with a little forethought in arrangement would be found to be the most useful and the least obstructive. We may refer to our readers' remembrance that in our issue of Aug. 2, 1880, we referred to a seat invented by Messrs. Colman of Glendenning of Norwich, and St. Martin's-le-Grand, London which was simple, inexpensive, and took up but little room. It would be interesting to know by how many firms some such seat has been adopted.

THE LONDON WATER-SUPPLY AND THE RECENT DROUGHT.

THE report of the official water examiner on the condition of the metropolitan water-supply during the month of June 1895, contains some observations of unusual interest in connexion with the scarcity of the East London supply. The Major-General A. de Courcy Scott—reverting to his report for the month of June, in which he stated that the East London Water Company had found it necessary to reduce the supply of water pumped into their district in consequence of the rapid depletion of the storage reservoirs which had been in progress—now reports that from July 15th the supply was still further restricted, the water having been shut off from all mains except those provided with fire-plugs during from twenty-four to twenty-two hours out of each twenty-four. The supply to three-fourths of the district was consequently received for only two or three hours daily. The remaining services being fitted with fire-plugs were kept charged under statutory obligation. In consequence of a large number of houses in the poorer districts not being provided with cisterns, the substitution of an intermittent supply of two or three hours duration for the constant supply, which had been universal, "resulted naturally in serious inconvenience and considerable danger to health owing chiefly to the impossibility of flushing the waterclosets and drains as required." The depletion of the company's storage reservoirs between May 27th and July 15th appears to have proceeded at the rate of about twelve million gallons per diem on the average. Calculations show that the East London Company "were taxing the resources of the river [Lea] to the utmost extent," bearing in mind the requirements of navigation, and it would appear from the reports that "the necessity for rigorous limitation of the quantity pumped into the district was imperative, and that the measures adopted were not more drastic than the occasion required." The gradual increase in the volume of the River Lea which ensued after a fall of rain at the end of the month, and later, has enabled the company to lengthen from time to time the period during which water is turned on, and it is stated that it now extends from about 6 A.M. to 8 P.M. Since sea

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have occurred during which the September flow of the Lea has been exceedingly small it would not be prudent, adds the official water examiner, to revert to a constant supply until a reasonable reserve of water has been accumulated in the reservoirs. It is perfectly clear from all this that when drought happens—this summer being, of course, somewhat exceptional—one portion of London at any rate, and a very densely populated portion, may at any moment reach the extent of its resources in regard to water-supply. There is no doubt that the position was at one time most serious, and the real and dreadful terrors of a water famine were imminent. In so vital a matter as this is the merest probabilities and possibilities must be taken into minute account and ample provision made against the very worst that may happen. The immediate question is not so much one of administration, but rather whether the present undertakings are capable of yielding an adequate, or rather a bountiful, supply in any hands whatsoever and under any strain of circumstances. The East London Company, it appears, had not the wherewithal to supply water owing to the unusual drought, and it is to this point that inquiry should be directed. In regard to quality the metropolitan water-supply during July was satisfactory, as is attested by Professors Frankland, Dewar, and Crookes.

THE FRENCH FORCE IN MADAGASCAR.

THE latest accounts from Madagascar regarding the health and sanitary condition of the French expeditionary force in that country appear to be most unsatisfactory. The troops in front occupying the uplands are comparatively healthy, but a large amount of sickness prevails among those in the rear on the lowlands. There are upwards of 3000 sick in the hospitals, and the mortality and invaliding rates have already been very high. In addition to the prevalence of active malarial disease, necessitating hospital treatment, those who have suffered from it and other climatic disorders become anæmic and enfeebled in health, and, as General Duchesne says, "drag along and languish without being able to recover." The only course left open, he adds, is to send them home as promptly as possible. "This is the advice of the Director of the Medical Service, and it is also mine." Unfortunately, however, this course has been attended, as might have been expected, with a very serious loss of life during the hot season in the Red Sea, on board the overcrowded troopships transporting the invalids to France. It is said that General Duchesne had orders not to send any soldiers home from Aug. 20th to the commencement of October. The road-making proved to have such a disastrous effect on the health of the troops that it has been discontinued. A strong feeling of dissatisfaction prevails in France at the amount of sickness and mortality that has occurred, owing, it is thought, to the grave mismanagement of the expedition. No proper arrangements were made for the landing and transport of stores, large quantities of which were consequently lost or had to be abandoned; the soldiers disembarked in the thick cloth uniforms they wore in Europe, and had to march inland heavily laden with their kits, haversacks, and cooking tins; the system of native carriers broke down from the carriers becoming disabled and sick or deserting; there was great difficulty in the matter of supplies; and the hospital service was quite inadequate to the strain imposed upon it. It is also stated that the force in the field was hampered by the action of the French War Office and other departments in connexion, for instance, with the utilisation of the hospitals and sanatoria at Réunion. A second hospital ship has, it is understood, been asked for. Be all this as it may, the descriptions given of the overcrowding of the hospitals and the insufficiency of military medical officers, nurses, and sick attendants disclose a sad state of affairs. One correspondent says that three of the field hospitals were crowded with sick. While they are only intended to accommodate 250 each, the hospital at Suberbieville contained 600 and that at Ankobaka had 1000 patients, the beds in the latter having been placed one above the other. The distance from Andriba to Antananarivo will, it is estimated, occupy fifteen or sixteen days' march, and provisions for twenty days are being accumulated at the former place. General Duchesne hopes to be, as he always anticipated, at Antananarivo at the end of the present month, and in that case we may soon expect to hear much better accounts of the expeditionary force. Of course, a large military expedition in an extremely hot, malarious, and difficult country, without roads or even paths, cannot be undertaken without grave risk to health, and under the very best organisation and arrangements there may be an unexpected amount of sickness with topographical obstacles and climatic difficulties to be overcome. We have served an apprenticeship in petty wars in hot and malarious climates, and have not invariably conducted some of our own little expeditions with such an amount of wisdom and foresight as to be entitled to cast a stone at our military neighbours; but we do not understand how it was that the French War Office failed to have more thoroughly "prospected" the country and made better arrangements for the exceptional character of the campaign than they seem to have done. The expedition to Madagascar seems to have been undertaken too hastily and before the necessary arrangements had been thoroughly thought out and completed, but there is, nevertheless, no adequate reason for the great revulsion of feeling from one of elation to one of extreme depression which is said to have taken place in France.

TWO DEATHS BY LIGHTNING.

DURING the August storms two deaths from lightning took place on the Sussex Downs. The first occurred during the violent storm on Aug. 10th near the village of Alfriston in the eastern part of the county. Here, as in the case recorded in THE LANCET of last week, a man and woman were walking together. They had been to show an acquaintance his way on the Downs, and although there was no thunder when they started they were caught in the heavy storm which followed. They were walking together arm-in-arm when a flash of lightning and a peal of thunder were stated by the woman to occur simultaneously. Her husband, a carter named Foord, said "Oh," and they both fell to the ground, linked as they were arm-in-arm. The woman appears to have lain unconscious for some time. Her own version is that when she "came to" she found she could not walk, so she crawled home for assistance. Her husband was afterwards brought home dead. The woman says that when she rolled over she noticed "sparks" come from under her, and for some days she was confined to her room by illness. The dead man was seen by Mr. Hugh Wallis on the spot where he fell. There was a discolouration on the left side of the head, and a good deal of blood flowed from the nostrils. There was no wound or abrasion. The hat, which was found some eight yards from the body, showed an irregular cut which had severed the band and completely penetrated the felt. A knife and key, with threepence in coppers, were found in the waistcoat pocket, but bore no marks to show that they had been in contact with the lightning. The grass at the spot where the body fell was scorched. A case which occurred later—on Aug. 22nd—is more clear. Three men were working a steam plough at Lancing, near Worthing, when a storm, which had appeared to be but trivial, suddenly increased in violence. The cultivator was making its last journey, a man named Ransom being in charge, when the two men with the engine were alarmed by a vivid flash, and shutting off the steam made for the nearest

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shelter, one of them shouting to Ransom to "clear out" too. One of the drivers said the flash seemed to strike his engine, causing a rattling sound, and then to run "right on to the top of Ransom." Both the drivers got safely to shelter and expected that Ransom had done the same, but the hovel in which they took refuge hid the machinery from sight. The storm lasted half an hour, when the men found Ransom dead, still on the seat of the cultivator, but in a lying position and, so they said, black in the face. Mr. C. M. Kempe found only a slight abrasion on the forehead, from which a little blood was flowing. There was no sign of blackening as from burning, and no fracture.

DIPHTHERIA IN LONDON.

THE deaths from diphtheria registered in London last week, were 37, being two below the corrected decennial average for the corresponding week of the years 1885–94, and fewer than the records of the three preceding weeks, and with one exception fewer than the weekly records for a long time past. The three preceding weeks had seen 40, 38, and 55 deaths respectively. The deaths occurring last week included 4 each belonging to St. Pancras and Greenwich, and 3 each to Mile End Old Town and Lambeth. All the deaths were in persons under twenty years of age, and the great majority in children under five years of age. The diminution in fatality last week was in no wise attended by any like falling off in amount of the disease, for both the fresh cases and the admissions to hospital showed an increase. Of the latter, there were 114 as compared with 86, 78, and 105 in the preceding weeks; and the patients remaining under treatment on Saturday last numbered 665, a total practically identical with the numbers for the last five weeks. In the Outer Ring of London there were 16 deaths registered from diphtheria, and of these 6 occurred in West Ham district and 3 in Hornsey subdistrict.

THE MODERN PRINCIPLES OF SEWAGE PURIFICATION.

SIR DOUGLAS GALTON in his presidential address at the recent meeting of the British Association at Ipswich, among other topics included in his analytical *résumé* of the progress of physical science in the interval between 1831 and the present time, adverted to the subject of sewage purification. Owing to the difficulties entailed in thickly settled districts and the extent of land required for the direct application of sewage to soil, and the large amount of sludge that had to be dealt with after the chemical treatment of sewage, it was long contended that the simplest plan was to turn the sewage into the sea, and this was accordingly done in localities where it could be carried out. It was not until the chemist called to his aid the biologist and came to the help of the engineer, says Sir Douglas Galton, that a scientific system of sewage purification was evolved. Dr. Frankland many years ago suggested the intermittent system of filtration, which Mr. Baldwin Latham was one of the first to adopt. But the valuable experiments made by the State Board of Health in Massachusetts more clearly explained how by this system micro-organisms might be utilised for the purpose. To effect this we require, says Sir Douglas Galton, in the first place, a filter about five feet thick of sand and gravel or of some material which affords numerous surfaces or open pores; and, secondly, that after a volume of sewage has passed through the filter an interval of time be allowed in which the air necessary to support the life of the micro-organisms is enabled to enter the pores of the filter. Thus, this system is dependent upon oxygen and time. Under such conditions the organisms necessary for purification are sure to establish themselves in the filter before it has been long in use. Temperature is a secondary consideration. Imperfect purification can invariably be traced either to a lack of oxygen in the pores of the filter, or to the sewage passing through so quickly that there is not sufficient time for the necessary processes to take place. And the power of any material to purify either sewage or water depends almost entirely upon its ability to hold a sufficient proportion of either sewage or water in contact with a proper amount of air.

PATHOLOGICAL ANATOMY OF MULTIPLE SCLEROSIS.

DR. O. HUBER has recorded in *Virchow's Archiv* the result of an examination of the central nervous system in a case of this strange and obscure disease. The examination seemed to indicate that the disease consists essentially in a parenchymatous degeneration of the nervous tissue. It was found that, in recently affected spots especially, there was widespread disappearance of the nerve fibres without any greater changes in the interstitial substance than could be accounted for by the changes secondary to the disappearance of the fibres, so that the sclerotic patches must, in this case at least, be regarded as due to the disappearance of the nerve fibres, with consequent proliferation of the interstitial substance. No explanation is furnished of the absence of secondary degeneration, which would naturally be expected to follow from the presence of the islands of sclerosis in the tracts of the spinal cord.

FORBIDDEN FRUIT.

A PECULIAR case of death occurred last week in the Royal Infirmary, Liverpool. The patient, a boy aged about fifteen years, had been operated on for radical cure of hernia by Mr. Rushton Parker and was going on well after the operation. His father, however, paid him a visit, and on leaving gave him some grapes unknown to the nurse and against the rules. In the night he was taken suddenly ill, and by the time the house surgeon reached him he was dead. A necropsy was made, and his larynx was found to be full of grape skins, which had caused death by asphyxia. It is strange that friends will be guilty of such mistaken kindness in serious cases, and seem to delight on visiting days to take for the patients fruit and sweetmeats which are injurious to those they are so anxious about. It is a well-known fact to hospital surgeons that their patients are frequently worse after a visiting day, although the greatest vigilance may be observed by the nurses in attendance.

HOW SCARLET FEVER IS SPREAD.

THE repeated failures of prosecutions under Section 126 of the Public Health Act, 1875, would seem to suggest that some modification of that section is desirable. As a rule such actions fail because the sanitary authority is unable to prove that the person suffering from the infectious disease, or being in charge of a person so suffering, was aware of the true nature of the disease; but recently a case tried at the Colchester Police-court was dismissed because the medical attendant who had notified that certain members of a family were suffering from scarlet fever failed to prove that they were so suffering when the notification was sent to the medical officer of health. The family resided in the parish of Coggeshall, in the Braintree rural district, and five of the children were in succession attacked with scarlet fever, the fact being duly notified by the medical attendant. When all were convalescent and four had finished "peeling" the whole family moved to West Mersea, a small watering-place on the Essex coast, in the Lexden and Winstree rural district. Neither the clothing of the patients nor the house in which they had resided had been disinfected. When Dr. Carr, the

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medical officer of health for the Braintree rural sanitary district, found that the family had gone to West Mersea, he advised the medical attendant to acquaint the medical officer of health for that district of the fact. This he did by sending five notifications to the effect that the children were suffering from scarlet fever. Dr. Cook, the medical officer in question, at once visited West Mersea and found the children coming up from the beach in the company of other children. He did not examine the patients, but reported the facts at the next meeting of his district council. A prosecution was ordered, and when the case was heard before the Colchester Bench Dr. Cook said that he could not assert of his own knowledge that the children were actually suffering from scarlet fever. The medical attendant said that as the children had practically finished "peeling" it was questionable whether there was any danger of infection, and that he notified the cases as a precautionary measure. The case was thereupon dismissed. As the medical man who notified did not attend the patients whilst at West Mersea, and expressed such grave doubt as to whether they were still suffering from an infectious disease, the validity of the notification is open to question. It would have been better had the notice of removal been sent by Dr. Carr in his capacity of medical officer of health. Under the circumstances the Lexden and Winstree district council had no option but to prosecute, and it is to be regretted that they failed to secure a conviction. If children who have suffered from scarlet fever can be removed with impunity to a watering-place before they have ceased to desquamate and before their clothing has been properly disinfected the risk of spreading the infection amongst the community is greatly increased, and either some better definition is required of the words "suffering from any dangerous infectious disease" or there should be some appeal allowed against a decision of this character. Possibly a prosecution under Subsection 3 of Section 126, which refers to the transmission of infected clothing without previous disinfection, would have been successful, as the evidence of the medical attendant could then have been dispensed with. Such a miscarriage of justice is to be deplored, but it can scarcely be wondered at, considering the nature of the evidence.

IS COLOUR-BLINDNESS A CASE OF ATAVISM?

A RECENT writer, M. Dubois, throws out a suggestion that will probably be new to most of our readers. It is recognised by astronomers that there are three classes of stars—first, the bluish-white stars, of which Sirius and Regulus are examples. More than half of all known stars belong to this class. In these stars combustion is at its maximum, and their atmosphere consists of super-heated hydrogen and certain metallic vapours. The second class, or yellow stars, has for typical representatives Capella and our own sun. They are less hot than the first class, and the hydrogen lines in their spectrum are not so conspicuous as in the case of the white stars. This class contains about 33·5 per cent. of all known stars. The third class are the red stars, and of these Betelgeux is the representative. They are in a later stage of cooling than the second class, and the violet rays are deficient. This class includes about 8 per cent. of known stars. From these known facts it is conjectured that colour-blindness (or insusceptibility to the red rays of light) may possibly be a case of atavism—a "negative inheritance from that time long ago when the eye of our ancestors was not yet sensitive to red rays, which were almost entirely wanting in the white stage of the sun." This is a startling theory, but it suggests a plausible explanation of what is such a mysterious fact—viz., that colour-blindness should so uniformly take the form of insusceptibility to the red rays. Atavism is without doubt a principle of wide application, and may be fairly relied upon to explain many apparently inexplicable facts. We will not venture to pronounce upon the correctness of its application in the present instance, but at least the theory is a bold and ingenious one, and, if accepted, would tend towards that unifying of knowledge which is the aim of science. Colour-blindness, regarded as an isolated phenomenon, is mysterious, but if it be a case of atavism it takes its place in the scheme of ordered knowledge.

RHEUMATISM AND APPENDICITIS.

DR. BEVERLEY ROBINSON of New York, in the *New York Medical Record* of Sept. 14th, argues in favour of an etiological connexion between rheumatism and appendicitis. He admits that he has seen no immediate relation between an attack of acute rheumatism and an attack of appendicitis, though others have reported such an experience. But he says: "When it comes to the milder and, according to some, perhaps less characteristic symptoms of rheumatism, these I have repeatedly observed in patients who have had one or more attacks of appendicitis," and "I have seen more than one patient who subsequent to attacks of appendicitis had decided articular manifestations, and during many years of this rheumatic localisation the appendicial region has remained entirely free from any inflammatory disease." Dr. Robinson is also thoroughly convinced of the frequent efficacy of salicin or salicylates to relieve pain and avoid suppuration, though he uses also local applications, rest in bed, light diet, and if necessary, but only on the failure of these means, morphia or codeia. The point is one of great scientific and practical interest, which we commend to the attention of our readers.

THE COST OF ISOLATION IN LONDON.

THE comments made by the coroner, Mr. W. E. Baxter, in a case at Mile End, where a scarlet-fever patient was sent back home by the Asylums Board officials on the ground that there were no vacant beds, raises a question of the utmost importance. Time was when there was difficulty in inducing parents and friends to allow their infectious sick to be removed to the Asylums Board hospitals, but that is now a thing of the past, and the demand now made on these establishments altogether exceeds the accommodation available, notwithstanding the fact that an enormous expense is constantly being incurred in the erection of new hospitals, some professedly temporarily and others admittedly permanent. In the case immediately under consideration it transpired that patients have had to wait five or seven days before their turn arrived for admission to hospital both during epidemics of diphtheria and prevalence of scarlet fever. Now, if all these cases needed removal from their homes in the interests of public health, and if in all cases adequate isolation could not be carried out where the patients sickened, then we must candidly admit that they ought to be isolated elsewhere. But we have no evidence that these facts do apply to all cases, and we know that a very heavy burden is gradually being placed upon the ratepayers in order to provide means of hospital isolation for infectious diseases. According to the recently issued report of the medical officer of the Local Government Board the following notifications were received in the administrative county of London in 1893: small-pox, 2948; scarlet fever, 37,974; diphtheria, 13,470; enteric fever, 3746; continued fever, 217. For how many of these cases, wellnigh reaching 60,000 in number, should the Metropolitan Asylums Board provide at the public cost? That is the real question which is raised; and if the Local Government Board deals with the representation of the coroner in the proper way, it will be to elicit, in the first instance, something of the circumstances of the

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persons and households which are in question as making demands on the Asylums Board to receive their sick. The public interests must stand first, but we need evidence to show what are the main public interests concerned.

THE UNITED STATES MAILS AND THE TRANSMISSION OF BACTERIOLOGICAL SPECIMENS.

BACTERIOLOGICAL examination is such an essential feature in the diagnosis of certain diseased conditions that those who place obstacles in the way of its performance are incurring a somewhat grave responsibility. We learn, however, from the last bulletin of the New Jersey State Board of Health that up to July 2nd the Postmaster-General had refused to modify the order of the United States Postal Department of June 1st, 1896, which excludes from the mails "disease germs, discharges of any kind from diseased persons, or other things of like character, no matter how securely put up." This position has apparently been maintained in spite of the fact that Dr. Henry Mitchell, secretary of the New Jersey State Board of Health, intimated to the Postmaster-General the proposal of the Board to establish a bacteriological laboratory, and submitted to him a specimen mailing package similar to those used in France. Furthermore, the New Jersey Medical Society has expressed its opinion that diseased tissues for bacteriological examination can be transported without endangering the health of persons handling the packages. The bulletin from which the above information is derived expresses an opinion that if all those engaged in bacteriological study would join in an effort to make the subject clear to the postal officials all would be well; but we should have thought that the opinion of the New Jersey Medical Society would be sufficient to effect the desired modification. Unfortunately, the Postmaster-General merely states that he does not "deem it expedient to modify the present rule," so that we are precluded from discussing the objections to the proposal.

THE FRENCH ARMY MEDICAL SERVICE.

EVER since 1882 the Service de Santé of the French Army has been practically autonomous, the command of all transport, as well as of the *personnel* derived from other branches and temporarily attached for duty, having been vested in medical officers by virtue of the law of March 16th in that year. It seems, however, that this condition of things is displeasing to the combatant arms, and, according to an article published in the *Bulletin Médical* of Aug. 4th by Dr. Noël, an organised attempt is being made to deprive the medical corps of all control over the men composing the detachments, who have been instructed to pay attention to orders from their own officers alone. The first outcome of this retrograde movement, we are told, is the issue of a circular from Artillery headquarters, laying down the mode of progression to be followed by ambulances. On no account are they to leave the public roads, and the pace they are driven at must never exceed a walk. Should a gutter intervene the utmost care must be exercised in crossing it. Dr. Noël is very indignant, and rightly so, we think, at this attack on the medical officer's prerogative. In Germany, Austria, and Russia, where the feudal spirit is rampant, where caste prejudice persists, and where the fighting element looks upon itself as something superior, such a state of affairs might be expected, but France has a right to demand a more enlightened procedure. As long as medical officers are held responsible for the successful administration of their service it is only just that they should be endowed with supreme authority therein, and also with means sufficient to enable them to accomplish their task. The new state of things is in flagrant contradiction to both the spirit and the letter of the law of 1882. It remains for the members of the Senate and Chamber to record their opinion of a measure whereby a permanent source of dissension is introduced into the medical service, which robs medical officers of all power of accomplishing the duty entrusted to them by their country, which, in fine, simply kills the medical service, while paving the way for disorders and disasters, should war break out, such as not even the terrible year 1870 could equal. There is one point in Dr. Noël's article to which many readers will take exception. Amongst the new armies of Italy, Switzerland, and Japan, where there are no superannuated prejudices to be overcome, and where consequently the medical departments are autonomous and successful, he places that of England.

HEALTH RESORTS AND INFECTIOUS DISEASE.

IN Dr. Niven's last quarterly return on the health of Manchester he points out that, although each autumn there is fresh evidence that children taken to "health resorts" frequently contract scarlet fever and other infectious diseases, it is astonishing that heads of families should continue to manifest so little solicitude as to the freedom from infection of the quarters which they select. Visitors are, he remarks, entitled to a guarantee that the seeds of infection shall not be present in apartments offered, and he reminds the people of Manchester that at seaside places where notification is in force visitors may obtain reliable information from the medical officer of health. In reference to this point it appears to us that in some large health resorts inquiries such as these by visitors entering the town might add very materially to the work of the sanitary department. To assist persons resident in Manchester in the selection of a holiday resort Dr. Niven has had the last quarterly return of the Registrar-General placed in the Public Health Office for reference, and he draws attention to the information contained in Table VIII. as to the infectious disease mortality in the principal watering-places of Great Britain during the quarter ended June 29th. We shall be much interested to hear what use has been made of the opportunities so offered by Dr. Niven.

THE DIFFUSION OF SMALL-POX.

THERE was a decided drop in the number of fresh cases of small-pox coming to light in the metropolis last week as compared with recent periods. In the four weeks ending Aug. 10th there had been a weekly average of over 70 notifications of the disease in London, followed by an average of 60 in the succeeding four weeks, this smaller average being mainly the result of the decrease in the last fortnight of the period. Indeed, in the four weeks ending on Saturday last the average number of cases each week was only just over 30, the attacks of last week having been but 21, a sensible decline taken in conjunction with previous weeks. Of the 523 notifications, as to the locale of which in the eight weeks ended Sept. 7th details are to hand, no fewer than 304 were in six sanitary areas situated in the east and south-east of London. The admissions to hospital last week were 23, against 36, 25, and 42 in previous weeks, and the patients remaining under treatment on Saturday last numbered 271, a total which has been steadily diminishing since it stood at 342 on Aug. 24th. Two deaths were registered, one being assigned to Shoreditch and the other to Greenwich, one being that of a vaccinated adult and the other that of an adult concerning whose vaccination no statement is forthcoming. Manchester had further experience of small-pox last week, one death being registered and 8 attacks being recorded. The disease had for some time been confined to the Openshaw district, but has now got beyond it. In the borough of Oldham the attacks in the

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fortnight ending Aug. 24th were 11, 1 less in the next two weeks, and only half that number in the fortnight ending last Saturday. The decrease is satisfactory. In Dublin the admissions to hospital in the second week of September were 9 in number, an increase over the numbers of several previous weeks. The death of an unvaccinated infant was registered. Three discharges took place and 18 patients remained under treatment, all the convalescent cases having been sent away from Kilmainham Small-pox Hospital.

SANITARY CONVENIENCES AT RAILWAY STATIONS.

THOSE who are accustomed to make long railway journeys must be frequently impressed, not to say disgusted, with the filthy condition of the sanitary conveniences at the railway stations in this country, and must be led to reflect as to whether such conveniences are ever visited by the sanitary inspectors of the districts in which they are situated. At the more important stations, where a small charge is made for the use of the closets, there is often little or nothing to be said against the accommodation; but in smaller stations, where apparently the cleansing of the closets is left to a porter, who has in addition numerous other duties to perform, the condition of affairs is such as to frequently preclude the use of the closet for the purposes for which it was intended. The position and construction of such closets render the presence of light impossible, and in consequence it is difficult without the aid of artificial illumination to properly estimate the filthy conditions which obtain. Further, owing to the absence of sunlight and ventilation, the drying process is much delayed, and for several hours after the floor has been cleaned it is undesirable to deposit thereon any small articles of luggage, while the want of a peg or nail for the suspension of such articles still further complicates matters. In some cases improvement is impossible short of entire reconstruction; but in numerous instances, which we have ourselves examined, the introduction of a window together with improved ventilation would bring about a very radical change. The flushing apparatus is frequently out of order, owing not so much to misuse as to defective construction; but this point could, of course, be easily remedied. When regard is had to the agency which badly flushed and filthy closets may play in the dissemination of enteric fever, it is obviously a matter of no inconsiderable importance that improvement in the direction indicated should be effected, and we venture, therefore, to commend the sanitary conveniences at railway stations to the combined attention of sanitary authorities and the railway companies.

DIPHTHERIA AND SCHOOLS.

THE village of Bedlinog, near Merthyr, having a population of about 1500, mostly colliers, has during the late spring and summer been visited by an epidemic of diphtheria, 78 cases having been notified between April and August, besides a few which appeared from time to time during the preceding winter months. The houses are for the most part well built of quarried stone and are dry and airy, the sewerage is good, and the water-supply is the same as that of Merthyr. In Powell-street, however, there is a row of damp, dilapidated wooden structures appropriately called the "huts." They are not connected with the public sewers, but have privies with cesspits in their backyards. In these, as might have been expected, the incidence of the disease was heaviest, and here occurred the first of the continuous series which constituted the epidemic, but the sporadic cases between December and March were all in other parts of the town. The connexion of the schools with the origin and spread of the infection was evident from the fact that 61 of the 78 cases were those of children attending school, the remaining 17, whether over or under school age, having in every instance been subsequent and secondary to the former, alike in the huts and elsewhere, while the conditions of the schools were amply sufficient to account for the outbreak. Though spacious and in other respects well arranged, the sanitary conveniences consisted of trough closets, automatically flushed and connected by glazed pipe drains, without traps, with two cesspits sunk in the pervious sandstone rock, with no steining or cement lining, into which the fluid part of the sewage percolated so freely that they never required emptying. In fact, it had not been deemed necessary to provide any aperture for access or ventilation, and as a consequence each periodical discharge of the flushing tank displaced an equal volume of foul air, which escaped by the sole exit—the open drain-pipe—into the closets. Though the conditions of the huts were such as would tend to intensify the disease when it broke out among them, this did not take place until April, and even then the first cases were those of scholars who were less exposed thereto than those children who never left their homes. This outbreak, whether it had its origin in the schools, or, as the medical officer of health is inclined to think, in the huts, suggests the grave question of the responsibility for the scandalous violation of the elements of sanitation in the former. In the first place, of course, the architect employed by the local School Board may have been to blame, but all plans have to be approved by the Education Department; and we may well ask how it came about that the authorities of the Department could pass or allow to be passed plans which provided for the saturation of the subsoil with sewage and involved the periodical discharge of volumes of foul gases into buildings attached to the schools.

AT the centenary of the London Missionary Society, to which we beg to offer our hearty congratulations, it is noticeable that speakers from every part of the field of operations make generous allusion to the part played by medical missionaries. This was especially so in the speeches referring to Madagascar by the Rev. James Richardson of Antananarivo, Madagascar, and the Rev. G. A. Shaw, F.Z.S., Farafangana, Madagascar. The founders of the society little thought in 1795 of this element in the work, which is destined to bear still more fruit.

THE work of reconstructing the premises of the General Medical Council—now the property of the Council itself—is proceeding as rapidly as possible. But it is, perhaps, a little sanguine to expect that it will be completed in time for the November meeting. The drainage is being placed on a much more satisfactory footing than before, and perhaps the necessity for this was not anticipated when the alterations were commenced. This and other causes may interfere, but every effort, we believe, is being made to realise the wishes of the Council.

ON Tuesday, Oct. 1st, Sir James Paget will present Dr. Hughlings Jackson with his portrait and a piece of plate. The testimonial, which has been widely subscribed for, will be given at 3 P.M. in the Library of the London Hospital Medical College, where also a replica of the portrait is to be placed.

WE regret to have to announce the death of Professor Bardeleben, which occurred on Sept. 29th at Berlin. We shall publish an account of his life and work in an early issue.

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REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD, 1893-94.[1]

[FIRST NOTICE.]

THE valuable collection of reports and scientific memoirs that is issued annually in the report of the medical officer to the Local Government Board has come to be regarded, and rightly so, as one of the most important publications of the year. There is always much that is instructive in the details of the carefully conducted investigations upon epidemic disease furnished by the medical inspectors, whilst the laboratory work of Dr. Klein and his colleagues which constitutes the section of the report entitled "Auxiliary Scientific Investigations" deals with the more recondite problems of etiology, to the solution of many of which these papers have largely contributed. The admitted value and excellence of the series of volumes which has thus accumulated makes the want of a good index to them more evident. It might perhaps be superfluous to have an index to each volume; but the publication from time to time of a general index would be a great boon to those who are engaged in preventive medicine. The present volume constitutes the supplement to the twenty-third annual report of the Local Government Board and deals with work prosecuted in the year 1893-94. The ably written report by Dr. Thorne Thorne summarises with precision and exactitude each of the several subjects treated in detail in the appendices. These embrace a variety of topics, such as enteric fever, diphtheria, epidemic skin disease, cholera, moorland waters in relation to lead poisoning, and furnish much information, some of which confirms and corroborates previously accepted ideas, whilst other portions open up new and suggestive lines of inquiry. In the present notice it will be sufficient to briefly indicate the outlines of these reports, which deserve to be studied in detail.

The customary statistics relating to vaccination in England and Wales appear in the forefront of the volume. They refer to the primary vaccinations amongst the 914,079 infants whose births were registered in 1891, and they show that there is a progressive increase in the numbers of those "unaccounted for." This class now form 13·4 per cent. of the total number of births, the percentage being 16·4 in the metropolis and 12·9 in the provinces. An explanation for this growing evasion of the vaccination laws may be in part explained by the decision taken by many boards of guardians to abstain from prosecution of defaulters pending the report of the Royal Commission. Thus year by year it is becoming more difficult to reinforce compulsory vaccination if, as may surely be anticipated, the commission reports in that sense. A glance at the statistics shows that the chief towns in which vaccination is most neglected, as denoted by the high percentage of children in the "unaccounted for" or "postponed" list, are—

	Per cent.		Per cent.
Gloucester	84·7	Barrow-on-Soar	78·1
Wellingboro'	83·2	Luton	77·1
Keighley	83·1	Blaby	76·7
Northampton	80·2	Halifax	74·9
Leicester	79·9	Kettering	73·6
Oldham...	78·7		

whilst at Saddleworth, Thrapston, Loughborough, Eastbourne, and Falmouth the figures stand at from 60 to 70 per cent. The singularly variable proportion of children certified as "insusceptible" to vaccination in different districts is, perhaps, explained by the fact cited by Dr. Thorne Thorne—that at the Lambs Conduit-street station there has not been a single failure of the vaccination to take out of 81,500 persons primarily vaccinated there during a series of years, for although a small percentage failed on the first attempt there was only one failure on the second, and that was removed by a third attempt. The inference that "insusceptibility" is coterminous with "inefficiency" seems obvious.

Amongst the reports of the medical inspectors selected for detailed publication are four of no slight importance dealing with the subject of "waterborne typhoid." The memorable epidemic of enteric fever at Worthing in the summer of 1893 was investigated by Dr. Theodore Thomson, whose report, fully illustrated by plans and maps, shows clearly that the outbreak in Worthing proper was related to the accidental inrush of water into a heading in course of excavation connected with one of the large wells in the chalk that formed the supply to this portion of the borough. The water thus introduced into the pure supply had penetrated through soil contaminated by leaking sewers. A fortnight after this occurrence enteric fever, which had not existed in the place during the past year, appeared, and this outbreak formed the starting-point of an epidemic lasting from May to November, with marked exacerbations in July following an abatement at the end of May and beginning of June. Altogether there were no fewer than 1257 attacks in "Worthing" alone in a population of 15,300. West Worthing and the neighbouring villages of West Tarring and Broadwater were also the seat of the disease; but only the last-named derived (in part) its water from the "Worthing" wells, the supply to West Worthing and West Tarring being distinct. Moreover, the outbreak in these districts was much later in its appearance and far less severe than in the "Worthing" division of the borough, and no clear connexion could be traced between the two. Dr. Maclean Wilson reports on an outbreak of enteric fever in Chester-le-Street between October, 1892, and March, 1893, when 58 cases and 4 deaths occurred in a population of 4864. In this limited area, where many dwellings were the reverse of sanitary, investigation showed that the cause of the outbreak was referable to contaminated water-supply. For with only two exceptions each of the invaded households received their water from the Chester-le-Street Company, which supplied about 650 out of 1100 houses, the remainder being supplied by the Consett Company. The water came from the Stanley Burn, which above the intake receives the sewage from several villages, and co-incidently with the outbreak in Chester-le-Street, four cases of enteric fever had occurred in some cottages which drained directly into a tributary of the Stanley Burn about three miles above the intake. It is further pointed out that the sand employed for the filtration of this water-supply is derived from the banks of the Wear at a point below its reception of the sewage of a large population. Dr. Bruce Low investigated the conditions associated with the prevalence of enteric fever in the Vale of Pickering and at Malton from November, 1892, to January, 1893. The villages especially implicated were Nunnington and Ness in the Kirkby Moorside rural district, and Butterwick and Brawby in the Malton rural district. Here again there was ample evidence of sewage contamination of the River Rye, for the disease only attacked those households which took their water-supply from this stream, whereas those taking water from wells escaped. This river in its course receives the sewage of villages, and particularly of the town of Helmsley, between which and Nunnington also were fields bordering on the river upon which was spread the "town manure," including night soil from Leeds. This interesting report further deals with Malton, where prevalences of fever and diarrhœa have been shown to supervene upon seasons of flood in the Derwent. The well that supplies the place is apt to be invaded by water from that river which is joined by the sewage-contaminated Rye four miles above Malton. Dr. Bruce Low also reports on enteric fever in Trentside villages, proving beyond question that this important river, which affords a water-supply for domestic services to a large rural population, is contaminated by sewage, especially from the towns of Gainsborough and Newark: thus, of 192 attacks of enteric fever in that district, no fewer than 167, or 86·9 per cent., occurred among a population of less than 6000 dwelling in villages, of which the main water-supply was drawn from the Trent or from canals similarly contaminated. The harmfulness of the Trent water was also proved in the case of Newark itself, where of 297 cases of enteric fever during three years and a half, 78·5 per cent. were among those who consumed Trent water, and 21·5 per cent. among those who took their water from local wells. It is satisfactory to learn that since then Newark has been provided with a constant supply from the new red sandstone. It is not surprising, in face of these facts of the use of contaminated rivers and the supineness of local authorities in dealing with the evil, to find Dr. Thorne Thorne give expression to the following forcible statements. He says (p. 14):—

"In my report on cholera in England during 1893 I pointed out that of the 64 localities in which cholera appeared in this country the disease was limited in 42, or

[1] Twenty-third Annual Report of the Local Government Board, 1893-94. Supplement containing the Report of the Medical Officer for 1893-94. London: Eyre and Spottiswoode. 1894. Price 13s. 4d.

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nearly 60 per cent. of the whole, to one single attack; and this was the case although as regards the majority of the attacks the disease must be looked upon as having been true cholera of the Asiatic type, whether it be judged by its clinical symptoms, by the outcome of bacteriological research, or by the heavy rate of mortality which it occasioned. Such a result, altogether unique in the history of cholera, was, I believe, largely due to the improved sanitary circumstances of England. But it is certain that if, in the cases of public water service I have been considering, the specific material which found access to the waters had been that of cholera instead of enteric fever, our cholera history for 1893 would have been the record of even greater disaster brought about in most of the cases by deliberate neglect. Even as the matter stands such instances of neglect remain a matter of reproach to our local sanitary administration."

CHOLERA.

THE latest official returns from St. Petersburg show that in the province of Volhynia there were 2497 cases of cholera and 944 deaths between Aug. 18th and 24th, and 3352 cases and 1190 deaths between Aug. 25th and 31st. In the province of Podolia 34 cases and 20 deaths occurred between Aug. 21st and 24th, and 67 cases and 25 deaths between Aug. 25th and 31st. The news of a sudden and severe outbreak of cholera in Algiers has since been contradicted by the British Consul-General at that place. It appears that there has been no such outbreak, and that Algiers is quite free from the disease.

At Constantinople, however, cases of cholera have been very frequent of late, but there are no official returns as to their number. In the neighbourhood of Broussa, also, cholera is stated to have been recently very prevalent and to have caused some anxiety to the sanitary authorities in Turkey.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6278 births and 4028 deaths were registered during the week ending Sept. 21st. The annual rate of mortality in these towns, which had been 19·9 and 19·3 per 1000 in the two preceding weeks, rose again last week to 19·8. In London the rate was 16·0 per 1000, while it averaged 22·6 in the thirty-two provincial towns. The lowest rates in these towns were 9·1 in Croydon, 12·3 in Plymouth, 14·8 in West Ham, 15·8 in Bristol, and 17·1 in Cardiff; the highest rates were 28·3 in Gateshead, 30·2 in Blackburn, 30·5 in Salford, 31·8 in Hull, and 32·9 in Sunderland. The 4028 deaths included 982 which were referred to the principal zymotic diseases, against 1071 and 991 in the two preceding weeks; of these, 689 resulted from diarrhœa, 71 from whooping-cough, 68 from "fever" (principally enteric), 65 from diphtheria, 57 from measles, 29 from scarlet fever, and 3 from small-pox. No deaths from any of these diseases were recorded in Croydon; in the other towns they caused the lowest death-rates in Huddersfield, Plymouth, Bristol, and Birkenhead, and the highest rates in Hull, Sunderland, Salford, Blackburn, and Burnley. The greatest mortality from measles occurred in Salford, Oldham, and Blackburn; from whooping-cough in Wolverhampton, Sunderland, and Gateshead; from "fever" in Swansea, Derby, Blackburn, and Sunderland; and from diarrhœa in Wolverhampton, Burnley, Preston, Hull, and Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 65 deaths from diphtheria included 37 in London, 4 in West Ham, and 4 in Burnley. Two fatal cases of small-pox were registered in London and 1 in Oldham, but not one in any other of the thirty-three towns. There were 271 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 21st inst., against 340, 328, and 307 at the end of the three preceding weeks; 23 new cases were admitted during the week, against 36, 25, and 42 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2732, against 2512, 2600, and 2674 on the three preceding Saturdays; 344 new cases were admitted during the week, against 264, 336, and 365 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 134 and 123 in the two preceding weeks, rose again last week to 141, but were 37 below the corrected average. The causes of 44, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Cardiff, Sheffield, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Bradford, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5 and 16·9 per 1000 in the two preceding weeks, rose again to 18 5 during the week ending Sept. 21st, but was 1·3 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·3 in Perth and 13·1 in Paisley to 21·1 in Dundee and 23·5 in Greenock. The 534 deaths in these towns included 57 which were referred to diarrhœa, 16 to "fever," 10 to whooping-cough, 4 to scarlet fever, 3 to measles, 3 to diphtheria, and not one to small-pox. In all, 93 deaths resulted from these principal zymotic diseases, against 105 and 90 in the three preceding weeks. These 93 deaths were equal to an annual rate of 3·2 per 1000, which was 1·6 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 78 to 61 in the three preceding weeks, further fell to 57 last week, of which 19 occurred in Glasgow, 17 in Dundee, and 13 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 and 9 in the two preceding weeks, further rose to 16 last week, and included 9 in Glasgow, 3 in Greenock, and 2 in Edinburgh. The 10 fatal cases of whooping-cough were within one of the number recorded in the preceding week, and included 6 in Glasgow and 2 in Aberdeen. The deaths from scarlet fever, which had been 8 and 4 in the two preceding weeks, were again 4 last week, of which 2 occurred in Glasgow, where the 3 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 56 and 52 in the two preceding weeks, rose again to 66 last week, but were 8 below the number in the corresponding week of last year. The causes of 29, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·2 and 25·4 per 1000 in the two preceding weeks, declined again to 22·1 during the week ending Sept. 21st. During the past twelve weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the rate during the same period being 18·7 in London and 16·6 in Edinburgh. The 148 deaths registered in Dublin during the week under notice showed a decline of 22 from the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 13 and 21 in the two preceding weeks; of these, 12 resulted from diarrhœa, 5 from "fever," 2 from scarlet fever, 1 from small-pox, 1 from whooping-cough, and not one either from measles or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 2·7 in London and 2·9 in Edinburgh. The fatal cases of diarrhœa, which had been 8 and 12 in the two preceding weeks, were again 12 last week. The deaths referred to different forms of "fever," which had been 1 and 4 in the two preceding weeks, further rose to 5 last week. The 2 fatal cases of scarlet fever exceeded the number recorded in any recent week. The 148 deaths in Dublin last week included 32 of infants under one year of age, and 25 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 47, or nearly a third, of the deaths occurred in public institutions. The causes of 19, or nearly 13 per cent., of the deaths in the city last week were not certified.

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THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-COLONEL MUIR has embarked for India in the *Britannia*. Surgeon-Majors Coates, Haslett, and Weston, and Surgeon-Lieutenant Anderson have also embarked for India in the *Malabar*. Surgeon-Captain Durant has proceeded in the *Britannia*. Surgeon-Lieutenant Evans has been transferred to Gosport, and Surgeon-Lieutenant Milner to Portsmouth.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel James McGann retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant E. Hindmarsh, Bihar Light Horse, having completed three years' service is promoted to the rank of Surgeon-Captain. The services of Surgeon-Captain H. Smith, Bengal Establishment, Medical Officer, Mushkaf-Bolan State Railway, are placed at the disposal of the Home Department. Surgeon-Major C. P. Lukis, Civil Surgeon, 2nd class, Fyzabad, to officiate as Civil Surgeon, 1st class, Agra, vice Surgeon-Lieutenant-Colonel Willcocks, granted privilege leave. Surgeon-Major J. F. Tuohy, Civil Surgeon, is transferred from Saharanpur to Bareilly. Surgeon-Captain H. W. Elphick, Civil Surgeon, from Muzaffarnagar to Saharanpur, and to hold Visiting Medical Charge of the Muzaffarnagar district in addition to his other duties.

NAVAL MEDICAL SERVICE.

Surgeon R. F. Bate to the *Briton*.

ARMY MEDICAL RESERVE OF OFFICERS.

The promotion to the rank of Surgeon-Major of Surgeon-Captain George Middlemiss, M.D., is antedated to Oct. 30th, 1894. The undermentioned Surgeon-Captains, 1st Banff Volunteer Artillery (Southern Division Royal Artillery), to be Surgeon-Majors:—William Fergusson, M.D., and William Lemmon Stewart, M.D. The undermentioned officers to be Surgeon-Captains:—Surgeon-Captain Francis William Grant, M.D., 1st Banff Volunteer Artillery (Southern Division Royal Artillery); Surgeon-Lieutenant William Beddie, M.B., 1st Banff Volunteer Artillery (Southern Division, Royal Artillery); and Surgeon-Captain Joseph Adams, M.B., 1st Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment). Surgeon-Lieutenant Alexander Barclay Lyon, M.B., 1st Banff Volunteer Artillery (Southern Division, Royal Artillery), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Cheshire and Carnarvonshire: Surgeon-Lieutenant R. L. Jones to be Surgeon-Captain. 3rd Durham (Western Division, Royal Artillery): Surgeon-Lieutenant F. W. Sinclair, M.B., to be Surgeon-Captain. *Rifle:* 3rd Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant W. J. M. Barry resigns his commission. *Memoranda:* 1st Argyll and Bute Volunteer Artillery: The undermentioned officers retire:—Honorary Assistant-Surgeon J. Mackenzie and Honorary Assistant-Surgeon J. MacGowan, M.D. 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Major R. Munro, M.D., retires, with permission to retain his rank, and to continue to wear the uniform of the Battalion on his retirement.

INDIAN SANITARY AND MEDICAL REPORTS.

The Army Sanitary Commission, in a recently published memorandum on the report of the Sanitary Commissioner with the Government of India for 1893, calls attention to the voluminous statistical tables embodied in these reports, and states that the elaborateness of detail with which they are prepared, although evidencing great care and industry on the part of the compilers, is nevertheless often a source of embarrassment to those desirous of ascertaining the recorded facts and of obtaining a history of the principal events of the year. The Commission makes numerous suggestions for curtailing and remodelling the tabular portion of the reports. Some years ago we adverted to this subject. Indian reports and Blue-books bristle with statistics and figures which tend to hide rather than elucidate and accentuate the points of real interest and requiring attention. Now that arrangements have been made by which the three Presidential armies have been replaced by four army corps the time seems to have come for reconsidering this matter and for seeing whether it cannot be put upon another and improved basis. The geographical areas into which the European and native armies have been grouped are to a large extent arbitrary and have little or no bearing on the study of epidemic disease. The medical history of corps and the sanitary and medical history of important stations should be recorded for several more or less obvious reasons. As the Sanitary Commission urges, the question as to the order in which stations could be best occupied by European regiments during their tour of Indian service might, for example, be settled on reliable data. We should like to hear, moreover, that something like a handbook or guide embodying all the more important sanitary, medical, topographical, and local points connected with every big military station had been compiled and was available for reference. Military and medical officers at the various commands or large military stations should have something of the sort to which they could refer and from which they could obtain all necessary information about the climate, the geographical features, water-supply, diseases, &c., of any given district or station.

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-first session of the Army Medical School will commence on Wednesday, Oct. 2nd. The session will be attended by twenty-eight surgeons on probation, ten for admission to the Army Medical Staff and eighteen for admission to the Indian Medical Service. The following are the lists of those about to join the school:—

ARMY MEDICAL STAFF.

F. S. Brereton.	M. L. M. Vaudin.
J. C. B. Statham.	W. A. Ward.
P. J. Probyn.	E. G. Forrest.
R. M. C. H. Cooper.	A. W. Hooper.
A. H. Waring.	E. C. Hayes.

INDIAN MEDICAL SERVICE.

W. W. Clemesha.	K. V. Kirkday.
A. W. R. Cochrane.	E. R. Rost.
V. E. H. Lindesay.	C. B. Harrison.
R. P. Wilson.	W. J. Niblock.
N. R. J. Rainier.	E. L. E. F. Payne.
E. L. Perry.	N. P. O'G. Lalor.
J. A. Black.	J. C. Robertson.
J. H. Symons.	C. D. Dawes.
C. R. Bakhla.	M. B. Pinehard.

The *Broad Arrow* says: "Enteric fever is causing havoc among our young officers at Bangalore. The recent death of Second Lieutenant MacTier, of the Dorsetshire Regiment, at the Station Hospital, where he was under treatment, brings the mortality up to three from this disease, while five deaths in all have occurred among the subalterns of the garrison. All officers who have been quartered at Bangalore are well aware that the drinking water for the cantonment is derived from a tank supplied by an open channel which passes through a native bazaar, kept clean by sweepers. Forming part of the wall of the supply channel is the main sewer from the same area. This sewer is so ingeniously arranged that when overcharged with storm water relief is obtained by discharge into the water-supply channel, and thus into the tank. These facts were laid before the Indian Medical Congress by the Sanitary Commissioner, Madras, in an instructive address on sanitation in India."

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*North-Eastern District: Artillery:* 2nd West Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Lieutenant-Colonel Isaac Mossop. 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant-Colonel Thomas Michael Dolan. 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Lieutenant Thomas Johnston, retired. *Western District: Rifle:* 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: Surgeon-Lieutenant-Colonel Philip Edward Hill.

CHRIST'S HOSPITAL.—Prizes of £50, £40, and £30 respectively are offered for the three best essays on the condition of Christ's Hospital and the means of surmounting its difficulties. Intending competitors should apply to Sir J. Causton and Sons, 9, Eastcheap, E.C., for a copy of "The Christ's Hospital Controversy" and for further particulars and suggestions. The essays must be delivered on or before Dec. 31st, 1895.

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Correspondence.

"Audi alteram partem."

THE THROAT HOSPITAL, GOLDEN SQUARE.

To the Editors of THE LANCET.

SIRS,—While we thought it expedient to announce publicly the severance of our connexion with the Throat Hospital, we did not think it necessary in the interests of the institution to state at the time our reasons for so doing. As, however, others think differently, we now ask you to publish the following statement. We are, Sirs, yours obediently,

SUTHERLAND,
R. COURTENAY WELCH,
GREVILLE MACDONALD.

Sept. 25th, 1895.

STATEMENT.

At the annual general meeting of the governors and subscribers of the Throat Hospital held on April 10th last, after Mr. Courtenay Welch and two others of the retiring members had been unanimously re-elected, four other gentlemen (Dr. Norris Wolfenden, a former member of the honorary medical staff of the hospital, Major Probyn, Mr. Allom, and Mr. Osborne) were, after opposition, elected to serve on the Committee of Management. A few days later it was discovered that among those who had voted in support of these gentlemen were several persons who, in order to obtain a colourable qualification to vote under By-law 16 ("No annual subscriber shall be entitled to vote until after the payment of his subscription for the second year"), had, a few days before the meeting, paid to the secretary a subscription with the request that one moiety should be entered as a subscription for 1894 and the remainder as for 1895, one of the four gentlemen thus elected having himself in this manner obtained his qualification to vote. Although some of these payments were made just before the monthly committee meeting of April 2nd, the secretary made no mention to the committee of this unusual procedure, nor did he at the annual general meeting, when the qualification of one voter was challenged, give any hint that anything irregular had taken place. At the next committee meeting, held on May 7th, Dr. MacDonald proposed and Mr. Welch seconded a resolution to the effect that a special general meeting of the governors and subscribers should be called to reconsider the opposed resolutions passed at the annual meeting. When this proposal was rejected, and the committee thus refused to allow the question to be reopened and the facts laid before the subscribers, Dr. MacDonald and Mr. Welch at once resigned. The Duke of Sutherland, at the earnest request of Mr. G. H. Pember, the new chairman, and of Dr. MacDonald, who, acting independently of each other, pointed out the irreparable injury which his Grace's resignation would inflict upon the hospital, consented to defer any definite step until it could be ascertained whether the four gentlemen, the validity of whose election had been called in question, would voluntarily retire. A deputation from the committee subsequently waited upon the president, but as the arrangement he had suggested was not carried out, he had no alternative but to resign.

"THE PICRIC ACID TEST FOR SUGAR IN THE URINE."

To the Editors of THE LANCET.

SIRS,—Having been much away from home during the last few weeks I have only just now seen Professor Campbell Black's letter on the above subject in your issue of Aug. 24th. The Professor states that the addition of picric acid and potash to urine containing sugar causes a reddish colouration in the cold, and that the same results occur in perfectly normal urine, the reaction being more marked in urine containing an abundance of uric acid. The facts are as thus stated, but I beg permission to give the explanation which your correspondent omits to give. The reddish colouration with picric acid and potash *at the ordinary temperature* in urine, whether normal or saccharine, is due entirely to kreatinin, the strongest solution of glucose having, when cold, no reducing action on picric acid and potash until after an interval of at least an hour. The more marked reaction in urine with an excess of uric acid is due to the associated excess of kreatinin, and not to uric acid, which has no reducing action upon picric acid, although it has upon Fehling's solution.

The Professor's statement that when urine containing sugar to which picric acid and potash have been added is boiled the fluid assumes "a claret colour, which passes on cooling to a deep port wine colour" suggests the question, How often has he used the test, the action of which he so inaccurately describes?

A first year's student may be taught in a quarter of an hour the strikingly different results of boiling for a minute a normal and a saccharine specimen of urine to which the picric acid test has been added. The former assumes a bright red colour, while urine containing sugar becomes so black that not a gleam of light appears through the middle of the test-tube. Has the learned Professor ever met with a sample of port wine as dark as this? If Professor Campbell Black had done me the honour to read carefully two papers of mine which have been published in THE LANCET, one on "Some Common Sources of Error in Testing for Sugar in the Urine,"[1] and the other on "The Absence of Sugar from Normal Urine proved by a New and Simple Method,"[2] he surely would not have asserted that the picric acid test "is eminently fallacious and should be discarded for either qualitative or quantitative analysis of sugar in the urine." In opposition to this condemnatory assertion I venture to predict that at no distant period every competent observer will acknowledge that as a qualitative and quantitative test for both albumin and sugar in the urine picric acid is the most valuable test agent that modern science has placed in the hands of the profession.

I am, Sirs, yours faithfully,

Savile-row, Sept. 23rd, 1895. GEORGE JOHNSON.

"PRESYSTOLIC APEX MURMURS."

To the Editors of THE LANCET

SIRS,—Having read with pleasure and instruction Dr. A. G. Phear's excellent paper on Presystolic Apex Murmur without Mitral Stenosis in THE LANCET of Sept. 21st, and appreciating his very cogent argument in favour of the theory he advances in explanation of the bruit under these circumstances, I desire to offer a remark upon one point to which he makes reference. The two factors, in his opinion, productive of the presystolic bruit are narrowing of the mitral orifice from any cause and the occurrence of sufficiently forcible auricular contraction to generate a fluid vein. Were we to accept this second factor as the efficient cause of the murmur the condition might more precisely be termed auricular systolic murmur—a term which, if my memory does not mislead me, has already been applied to it.

It has long appeared to me, however (and so long ago as 1878 I published the view), that the most potent cause of the mitral diastolic bruit, after the organic narrowing, actual or potential, necessary, is the condition of the left ventricle and the aspirative force of that cavity. As Dr. Phear remarks, the so-called presystolic bruit may occupy varying portions of the diastolic interval. It may in time be possible to associate more exactly the bruit of a certain phase of that interval with a special organic condition, but all we can at present say is that the bruit is not systolic, and is therefore diastolic, while a frequently associated phenomenon is the time, situation, and character of the thrill. The latter frequently so exactly corresponds in all its phases to the audible phenomenon that one may by palpation arrive at a diagnosis without the aid of the stethoscope. The conditions, moreover, with which the non-stenotic bruit in question is usually associated—namely, hypertrophy and dilatation of the left ventricle from aortic valvular disease or adherent pericardium—appear to me to strengthen my contention that it is the aspirative power of that cavity rather than the propulsive power of auricular systole which is operative in the production of at least the greater part of the mitral diastolic bruit. The fugitive character of that sound, moreover, seems to me to depend rather upon a variation in the force of valvular contraction, and its consequence ventricular diastole, than upon fluctuations in the power of auricular contraction.

A valuable aid to the diagnosis of apex diastolic bruit dependent upon non-stenotic conditions is, in my opinion, the too much discarded sphygmograph.

I am, Sirs, yours faithfully,

ALEXANDER MORISON, M.D.

Upper Berkeley-street, W., Sept. 23rd, 1895.

To the Editors of THE LANCET.

SIRS,—Referring to the subject of presystolic apex murmurs, can there be a thrill without a corresponding murmur? In Dr. A. G. Phear's interesting paper on Presystolic Apex Murmur without Mitral Stenosis I notice the record in Case 2 of the occurrence on one occasion of a thrill of presystolic rhythm confined to the region of the apex, unaccompanied by a corresponding presystolic murmur.

[1] THE LANCET, July 7th, 1894.
[2] THE LANCET, Jan. 12th, 1895.

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The observation raises a point important clinically. I suppose the prevailing view is that, whilst a murmur need not be felt as a thrill, a thrill will always be heard as a murmur. Is this prevailing view incorrect? So far as my own experience goes I should say that wherever I have felt a thrill I have heard a corresponding murmur; but my impression is that on more than one occasion I have felt some difficulty in assuring myself that the thrill felt and the murmur heard coincided accurately in point of time. Physically regarded, it is, I suppose, quite possible to conceive that the vibrations or ripples should be so coarse and infrequent as to be palpable and not audible; but in practical medicine is this the case? If it be the case the hand should, I think, take cognisance of the thrill as special in character—special by reason of its extreme coarse or undulatory character.

I am, Sirs, yours truly,

HARRINGTON SAINSBURY.

Welbeck-street, W., Sept. 23rd, 1895.

To the Editors of THE LANCET.

SIRS,—Dr. Phear, in his paper upon the occurrence of a presystolic murmur without mitral stenosis, mentions the presence of thickened and shortened chordæ tendineæ in his cases, and suggests that, although the mitral orifice was of normal size, a virtual stenosis may have been produced during diastole by the reaction of these shortened cords upon the edges of the mitral flaps. Although mitral stenosis may generally be said to be as much a disease of the chordæ tendineæ as of the flaps of the mitral valve, cases may undoubtedly occur in which some thickening and shortening of the chordæ tendineæ exist without any associated narrowing of the mitral orifice. Only to-day I made a post-mortem examination upon such a case. While, however, I believe in the possibility of such a lesion I do not think that this shortening of the chordæ tendineæ can easily produce the virtual narrowing of the mitral orifice that Dr. Phear supposes may be present during diastole. When the edges of the mitral flaps remain quite flexible it seems reasonable to conclude that the orifice will maintain its full circumference while blood is flowing from the auricle to the ventricle, since during the time the flow continues the pressure upon the auricular surface of the flaps must be greater than upon the ventricular. Dr. Phear states that artificial traction upon the musculi papillares will demonstrate how the flaps can be drawn down and the orifice narrowed. It is doubtless true that the mitral orifice can be narrowed by such traction, but the excess of tension is upon the ventricular edges of the flaps in such a case, and before this state of tension could be reached in the ventricle during diastole it seems to me that the flow of blood from the auricle would cease. Allowing, however, that such a condition could be present, it could only occur when the ventricle had become filled or nearly filled with blood—in other words, the virtual stenosis would occur towards the end of diastole and the murmur it occasioned be presystolic in time. But in one of Dr. Phear's cases the murmur was sometimes early diastolic in time. This murmur could hardly have been produced by a virtual stenosis of the character he suggests. In closing I may say that since reading Dr. Phear's paper I have examined the mitral orifice of the heart from the case of presystolic murmur occurring with disease of the aortic orifice recorded by me in THE LANCET. There can be no suspicion of shortened chordæ tendineæ being the cause of the murmur in that case. Not only do I not believe that the *veine fluide* theory will explain anomalous presystolic murmurs, but the true presystolic murmur is often of such peculiar character and so different from other murmurs that it seems possible that its true explanation has yet to be discovered.

I am, Sirs, yours truly,

Pembroke-road, Clifton, Sept. 24th, 1895. THEODORE FISHER.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—In your issue of Sept. 21st you quote from a letter of Dr. Waring with respect to hospital abuse at Brighton. Whilst fully endorsing your view as to the kindly spirit in which the letter is written, yet as regards the most important charity mentioned there are additional facts which may modify the judgment of many. 1. The Sussex County Hospital received during the first six months of this year 35·8 per cent. of its in-patients and 21 per cent. of its out-patients from the county, as opposed to Brighton and Hove. Hence the patients are drawn from a population of considerably over 150,000. 2. In the annual report for the year ending 1894 the following paragraph occurs: "A searching scrutiny was made this year by a subcommittee, which showed that 96 per cent. of the cases (out-patients) were entirely fit and proper subjects for gratuitous treatment, and though in the remaining 4 per cent. sufficient information could not be obtained, it was thought that even in these cases, were closer scrutiny possible, it might be shown that several could be received without any abuse of the charity." May I suggest that the primary cause of hospital abuse is the carelessness with which subscribers give their tickets.

I am, Sirs, yours faithfully,

ADOLPHUS J. RICHARDSON,
Assistant Physician to the Sussex County Hospital.

St. John's-terrace, West Brighton,
Sept. 24th, 1895.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—The note which you inserted immediately after my letter[1] calls attention to a fact with which I have long been acquainted and of which I venture to think a complete explanation can be given. I must, however, premise my remarks by calling attention to the fact that it is an error to suppose that I regarded death from electric shock as "simply a violent disturbance of the normal magnetic lines of flow through the body," although such disturbance must occur. What I said was "that it is impossible to separate the physics of the cause of death from electric shock from the physics which are continuously operating to maintain the phenomena of life." I then proceeded to show that the passage of the arterial blood over the nerves and other conductors of impressions, in proportion to the oxyhæmoglobin present, which is a highly magnetic substance, gives rise to currents of energy through the nerves which from their effects appear to be of the same character as the currents of energy obtained by passing an electric current through a nerve or muscle. This conclusion is in accordance with the generally received opinion that electricity and magnetism are manifestations of one and the same force. Thus, in the case of death from electric shock and in the process of life under normal conditions the active cause of the phenomena is found to be the same, the different result in each case being due to the different degree in which the force was present. My remarks about the magnetic lines of force through the body due to the magnetism of the earth do not materially affect this argument. They were intended to elucidate one of the causes of the magnetic energy possessed by the corpuscles of the arterial blood. Before passing on I may mention that I did not wish to imply that an electric charge might not enter the body at any point and in doing so by its disruptive effects be productive of such lesions as would necessarily prove fatal. My observations were directed more especially to showing the cause of the phenomena recorded by Dr. A. M. Bleile.

I now come to the explanation of the facts brought forward in your note. You say that "if death from electric shock were simply a violent disturbance of the normal magnetic lines of flow through the body, we should at least expect marked physiological effects in animals placed in strong magnetic fields of large electro-magnets, for under these conditions the lines of magnetic flow through the body are completely altered. No such effects, however, are manifest, the man or animal placed under such conditions being completely unconscious that anything abnormal is going on." I must in the first place direct attention to some well-known facts of magnetism and electricity. 1. Every form of matter has what may be called its own specific capacity for magnetic energy. In other words, every form of matter, when suspended in a magnetic field, assumes a definite axial inclination with reference to the poles of the magnet, which is peculiar to itself; and in accordance with its axial inclination any particular substance is termed magnetic or diamagnetic. 2. This magnetic capacity is most apparent in soft iron. In iron, therefore, we shall find the clearest

[1] THE LANCET, Sept. 14th, 1895.

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example of the effect produced upon a body by placing it in a magnetic field.

Now a bar of iron when brought under the influence of an electro-magnet becomes itself a magnet, possessing north and south poles and manifesting all the phenomena of magnetism. This manifestation of magnetism is generally believed to be due to a particular arrangement of the molecules of the bar of iron effected by the power of the magnet—an arrangement in which the axes and similar poles of the molecules are made to point in the same direction. In the case of steel it is thought that the molecules, after being once arranged with their poles all pointing north and south, retain that position owing to the material condition of the bar. Consequently, when soft iron, steel, or, indeed, any form of matter—magnetic or diamagnetic—is subjected to the influence of a magnet, the power of the magnet so far is of little consequence, and the only result that can occur as a direct effect of the magnetism is a change in the direction of the molecules, determined by their own individual character and in accordance with the force which is acting upon them. But, further, it is probable that the diamagnetic molecules in the living body are continuously rotating upon a definite axis, the axis of rotation in every case being determined by the relation which each form of matter has to the magnetic force. I venture to hold this opinion because a sphere of copper (which is one of the most diamagnetic forms of matter) will rotate upon its axis when suspended in a magnetic field;[2] and I have myself ascertained from experiment that the direction of the rotation depends upon the position of the magnetic poles in relation to the sphere, whilst the rapidity of the rotation is in proportion to the intensity of the magnetic field. From this fact in the case of copper I think we may not unjustly infer that other forms of diamagnetic matter, if subjected to the same conditions, would behave in a similar way; and if so, I think that we have in this fact a cause for those rotations under which inanimate matter is converted into living cells in the animal body through centripetal and centrifugal force, as described by Dr. Lionel Beale,[3] whilst the selective influence which each form of matter, through its specific constitution and magnetic capacity, exercises would determine the character of the matter which each molecular germ withdraws from the nutrient plasma flowing over it. The character of the matter abstracted being thus determined by the polarity of the matter composing the germ, the importation of other matter of any kind into the blood corpuscles or into any tissue of the body, which is inconsistent with perfect health, would be productive of modifications of motion and of function, the natural tendency of which would be to produce disorder, disease, and death. In fact, this theory says that all disorder or disease is as much the outcome of the introduction of material particles into the system which should be foreign to it as the natural body is the result of the particular mode in which certain forms of matter under the influence of an all-pervading force are converted into it. I cannot, therefore, perceive that there would be any modification of natural phenomena under the conditions to which you refer, other than those which are consistent with the maintenance of the phenomena of life in a state of perfect health. In fact, it is clear that, under the known relations which exist between matter and the magnetic force, the only influence which magnetism can exercise upon the living body is to render the polarity of every atom engaged in the maintenance of life more marked, and therefore more capable of maintaining those phenomena which are naturally evolved during life by the material elements. And if this be so, there is no reason why an animal or person placed in the field of a strong electro-magnet should be conscious of the changed conditions; for as we are not conscious of natural and healthy bodily processes, such as the passage of the blood through the arteries and veins, the digestion of food, and the formation of tissue, so are we conscious of influence from an external source, such as the electro-magnet in question, only to the extent to which natural functions of the body are affected or modified thereby. But when the body is subjected to the action of the electric force a totally different condition of things exists, and the resulting phenomena must vary with the extent of the shock, whether it be in the form of static or dynamic charge. And this leads me on to reply very briefly to the note of Dr. McClure which appeared in the last issue of THE LANCET.

In the first place I would remark that in discussing the nature of the conductive or the dielectric properties of matter a due recognition of the broad principle that all bodies are conductors of electricity will tend to render this rather abstruse subject somewhat more easy of comprehension. It is a fact that every form of matter has its own specific power of conducting a current; and some bodies transmit the force with such great resistance that Faraday gave them the name of dielectrics, for they appear to convey the force from molecule to molecule more by induction than by conduction. In these substances, therefore, in proportion to the greater resistance which they oppose to the passage of the current, the presence and force of the electric energy will be most clearly manifested by the production of heat and disruptive effects. In the animal body the blood is unquestionably the best conductor—i.e., it is the substance which most strongly attracts the charge of electricity and transmits it to the earth. In this respect it performs the function of an ordinary lightning conductor. But the other tissues, in proportion to their resistance, may be classified as dielectrics, for they tend to throw the energy outwards more or less at right angles to the direction of the current, and they are in such a degree liable to suffer from disruptive effects. Whilst thanking Dr. McClure for his criticism of my paper, I would add that I quite concur with him in his remark that in the proper understanding of these phenomena lies the solution of many physiological problems. But I go further than this, and express my conviction that this magneto-electric theory of life involves the principle by which almost *all* vital phenomena may be explained.

I am, Sirs, yours faithfully,

Reading, Sept. 21st, 1895. RICHARD C. SHEPPLE.

[2] I exhibited this experiment at a conversazione of the Royal Society in May, 1857, and subsequently before the Physical Society of London. Vide Protoplasm: or Matter and Life, by Lionel S. Beale, F.R.S., 2nd edition, p. 277, &c.

"DIPHTHERIA IN LONDON."

To the Editors of THE LANCET.

SIRS,—I should like to say a word with reference to the annotation under the above heading which appeared in THE LANCET of Sept. 21st. During some investigations into an outbreak of scarlet fever I came upon some conditions and usages of ordinary elementary school life which appeared to me to be likely to have a distinct, and apparently previously unrecognised, influence on the spread of such diseases as scarlet fever and diphtheria. I found that the slates and pencils were used by the children quite indiscriminately, and that when it was necessary to rub out sums, copies, &c. it was done by licking with the tongue and using saliva; and, moreover, that the slates were never washed. Taking into consideration the fact that the naso-pharyngeal secretion in scarlet fever and diphtheria carries infection long after the patient is apparently convalescent, it is easy to understand that the circumstances above mentioned would have a potent influence in spreading these diseases.

I am, Sirs, yours faithfully,

Halesowen, Sept. 21st, 1895. T. BRETT-YOUNG.

"THE MANCHESTER MEDICAL CRICKET CLUB."

To the Editors of THE LANCET.

SIRS,—There is a slight inaccuracy in the article on the above subject in the current number of THE LANCET. This has been the fourth season since the club was constituted, and for two seasons previously a few matches were played, which led to the formation of the club.

I am, Sirs, yours faithfully,

G. H. BROADBENT.

Ardwick-green, Manchester, Sept. 21st, 1895.

"THE GRIEVANCES OF THE TELEGRAPH SERVICE CLERKS."

To the Editors of THE LANCET.

SIRS,—I have no desire to extend any further what would doubtless be an unprofitable controversy concerning the authority of the figures I have drawn from the United Kingdom Postal and Telegraph Service Benevolent Society's reports with reference to the health and mortality of telegraph clerks. Suffice it to say that after thirteen years'

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graph clerks. Suffice it to say that after thirteen

service in the telegraph department I am convinced that the members of the society are a representative body. It will be for the statistics of the department to prove the accuracy or otherwise of my confident belief in the typical value of my figures. In the meantime it would, however, be well to draw your attention to the inaccuracy of your information concerning the "declaration of health" rule. This rule was certainly in force nine years ago when I became a member of the society, and to the best of my belief its origin was coeval with the society's. The point in my evidence which struck me as being most conclusive was that relating to the annual average sick absence. This, I believe, I proved by comparison to be greatly in excess of that of the general populace, and if consideration is had to the facts of initial health, low age, and free medical attendance it seems to me to point conclusively to some serious conditions prejudicial to health which are obviously and continuously undermining the constitution of the men. Thanking you for the space already allotted to this subject,

I am, Sirs, yours faithfully,

West Brompton, Sept. 18th, 1895. CHARLES H. GARLAND.

"COUNTRY PRACTITIONERS AND LOCUM-TENENTS."

To the Editors of THE LANCET.

SIRS,—I can sympathise with all your correspondent states in his letter to THE LANCET on the 31st ult. concerning locum-tenents. When practising at Storey's Gate, Westminster, some ten years since I employed some four or five of these gentlemen (at three guineas per week, with travelling expenses), and I am sorry to say that I was singularly unfortunate with each of them. Without entering fully into details I found one and all lazy, neglectful to the patients under their care, careless in their work, and generally given to the charms of Bacchus. One man robbed me of an account of about £8 which he received from a patient on my behalf, and bolted, after being in charge but a few days, leaving me to settle a bill at a hotel for bottled ale, spirits, and other luxuries, my holiday being necessarily abruptly brought to an end by these and other delinquencies of this worthless man, whom I have not seen since. For more than five years I adopted the work of a locum-tenent, and in *no* house was I so unlucky as to meet with "an untidy woman to come in occasionally during the day to see if I required anything," where the kitchen did duty for the consulting and sitting rooms, and the scullery for the kitchen, wherein the various meals also were prepared, as stated by "Locum-tenent" in THE LANCET of Sept. 14th. On the contrary, I found each of the residences well appointed, the board all that one could desire, the stipend liberal—my fees ranged from three to five guineas weekly, with railway and cab fares—and the arrangements for a stranger excellently planned. Indeed, I always felt "in clover." On retiring from this employment in 1877 I had a first-class connexion, representing my numerous principals time after time, and I had constant occupation, which I now and ever shall remember with very great pleasure.

I am, Sirs, yours faithfully,

J. FFRENCH BLAKE.

High-street, Putney, S.W., Sept. 14th, 1895.

GUARDIANS AND MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if you will kindly publish the following case in your correspondence columns and give me your opinion on the same, and I also hope I may be favoured with an expression of opinion by some Poor-law medical officers. The medical officer of a certain union receives an order from the relieving officer to attend a young man. He finds him suffering from influenza and sore-throat with great difficulty of swallowing. On Aug. 1st he gave the usual recommendation form for one pint of port wine; and on Aug. 5th another for two pounds of beef for beef-tea. After this an abscess formed at the root of one of the molar teeth and the jaws became fixed; with great difficulty the tooth was extracted, but the jaws remained fixed for many days. On the 18th a further supply of two pounds of beef is advised, and on the 23rd, he being obliged to live entirely on suction, a further supply of two pounds of beef and also two pounds of linseed meal for poulticing. The relieving officer allowed the linseed meal, but delayed the beef, on the ground, I believe, order of the 18th was not presented until the 20th an too soon to grant more: it was given the following 24th. The 24th was board day, and I attended as g and called attention to the fact. The same thi occurred before in the case of an old woman with b pneumonia for whom two pounds of beef and half a brandy were recommended. The beef was granted brandy refused because the relieving officer said the buy that themselves in the village. I must no that for many years I was medical officer union. Having resigned and having been elected gua supported the medical officer. I contended that i the province of the relieving officer to decide on the of beef required. I find an opinion expressed that the r officer was acting quite within his rights in refusi thought fit, and as this may be prejudicial in the want to get an opinion from THE LANCET. I know a officer can only recommend, but when once the prin relief is established as necessary the medical office judge of the quantity required and not the relieving As the law now stands it appears that a relieving off give an order to the medical officer and compel his ance, and at the same time control his medical extras I think, should be altered, and any recommendation medical officer should be carried out at once. The be reported at the next board meeting and the medica called upon to explain his action. I am bound t believe I had the sympathy of the board and of a of them, but as at least one influential member thinks I have not made out a case, and as his opin influence future cases, I am desirous of a good public

I am, Sirs, yours faithfully,

Sept. 17th, 1895. A GUAR

*** It ought to be widely known that a relievin has *no* absolute discretion in dealing with a case of necessity, and, therefore, if he refuses to carry out the recommendations for food and stimulants and the dies he can be held responsible—*vide* the case of Jeslin, in which Mr. Justice Hawkins made some ver and appropriate remarks on the conduct of the d relieving officer, whose conviction was confirmed. U present power of the relieving officer is curtailed ir to his carrying out the orders of the medical officer i right that the medical officer, on refusal of his o medical relief being given, should personally att next meeting of the board and lay his case before it public exposure would do much to remedy the unsatisfactory state of affairs.—ED. L.

THE DEARTH OF MAGISTRATES

To the Editors of THE LANCET.

SIRS,—Much inconvenience is caused in our neighb owing to the fewness of the local magistrates. To a tion of nearly 8000 we have three "resident" magi It sounds like a joke, but only one of the three reside place, and he is often away ill. Another lives abou and a half away, and the third lives in London, nea miles away. The last-named comes down near Saturday till Monday when his house is not let, and regular visit in addition for the shooting. It is imagine the result when it is necessary to ce lunatic. On one occasion I had a raving maniac with the police from morning till evening, when we the London magistrate on his way from the trai another occasion no magistrate could be obtained patient could not be certified at all. The last Gov was very busy in converting labouring men into magis why should this one not do something to remedy th evil by appointing men of education—such as prof men, gentlemen farmers, &c.—without regard to influence!

I am, Sirs, yours truly,

Sept. 21st, 1895. INCONVENIE

"ROUGH NOTES ON REMEDIES."

To the Editors of THE LANCET.

SIRS,—I am extremely glad to see some more "Rough Notes" by Dr. Murray of Newcastle-on-

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THE LANCET of Sept. 21st, and I am sure that we country practitioners value a practical paper such as he occasionally (I wish it were oftener) sends to THE LANCET far more than all the many learned and scientific papers so frequently to be read in its columns. Unless one has opportunities of keeping up one's scientific knowledge these latter are frequently "out of our depth," and it is the shorter and more practical articles that we instinctively turn to and read; for in our multifarious duties we have no time to speculate and theorise in matters of diagnosis &c., but must have our remedies ready in our minds, and they must be of a practical nature or our patients cannot understand them. I hope others of your readers will be induced to give us some notes on treatment in a short and concise form from time to time.

I am, Sirs, yours faithfully,

Sept. 21st, 1895. M.D.

THE FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.

(FROM A SPECIAL CORRESPONDENT.)

Introductory.

AURAL MEDICINE is one of the very youngest of the "specialties." Its tardy appearance on the professional field is, however, quite explicable; for one thing, the exceeding complexity of the organ of hearing, anatomically, physiologically, and pathologically considered, imposes greater difficulties on its investigators than any other of the "gateways of knowledge." It was not till late in the seventeenth century that we gained a first glimpse into its anatomy, Guichard du Verneu, demonstrator of anatomy at the Jardin des Plantes, having been the first to put the structure and mechanism of the ear in an intelligible light.[1] After this came Valsalva of Bologna, whose masterwork[2] marks a fresh advance in our knowledge of the anatomy, the physiology, and the pathology of the organ. But neither French nor Italian physicians improved much on the traditional treatment of injuries to the ear, the invention of the ear-mirror by Fabry and of an artificial ear-drum (made of a piece of sow's bladder stretched over a short tube) by Marcus Banzer remaining, both before and after them, the sole contribution to the remedial armoury. The first step towards a more accurate knowledge of the ailments of the inner ear was the invention of the catheterism of the Eustachian tube by Guzot, postmaster at Versailles, in 1724, and by Archibald Cleland in 1741, the former of whom introduced the instrument through the mouth, while the latter, to whom we also owe the artificial illumination of the tympanum, passed it through the nose. Notable progress in aural medicine, however, really begins with Jean Marie Gaspard Itard of Paris. He initiated the use of the catheterism of the ear-trumpet for the diagnosis and treatment of diseases of the tympanum, and this was utilised and followed up by Leon Delean, the inventor of the air-douche—a physician, by the way, who did much for the education of deaf-mutes. Later workers in the field were Karl Joseph Beck of Freiburg (1804–1844) and Wilhelm Kramer of Berlin (1801–1875), the founder of auscultation of the middle ear. The more recent work of Wilde, Toynbee, Tröltsch, De Rossi, and others belongs to contemporary history—familiar to the members of the last and greatest, because most systematic, association for the promotion of aural medicine, the International Congress of Otology. Of those members few have won a more honourable record than the comparatively young president of the fifth Congress, about to assemble in Florence, Dr. Vittorio Grazzi. Born at Sinalunga, near Siena, he entered on the study of medicine in the Sienese school, and obtained with unusual distinction his "Diploma di Laurea" (graduation in medicine) on July 22nd, 1872. His subsequent career has been one long march of honourable qualifications, certified by testimonials from masters in the science of the healing art such as Pacini, Paoli, Morelli, Ghinozzi, and others among his compatriots, and from Peter, Fauval, Ladreit de la Charrière, Gellè, Miot, Barker, Morell Mackenzie, and others abroad. In 1884 Dr. Grazzi obtained by examination the "Decreto della Libera Docenza in Otologia" in the Roman school, and thereafter received authorisation to give a free course of lectures in aural medicine in the Istituto di Studi Superiori at Florence. At the instance of Dr. Guido Baccelli, now Minister of Public Instruction, His Majesty King Humbert conferred on him the honour of Cavaliere of the Crown of Italy in 1884. Since then he has served on many commissions, educational and professional, and was a prominent member of the Organising Committee of the Otological Section of the Eleventh International Congress held in Rome in the spring of 1893. A more recent distinction is his appointment as Professor of Oto-Rhino-Laryngologia in the University of Pisa, a post he fills with yearly enhanced acceptance, and which, from being an occasional, has under his auspices become a permanent adjunct to the medical curriculum of that seat of learning.

Professor Grazzi's connexion with the Continental and the British School of Medicine is of long standing. In February, 1875, he obtained by examination the "Posti di Studio Biringacci" (travelling fellowship) of Siena, and also by examination the "Alunnato Jacchini" (a similar foundation) of Florence, enabling him to spend eight years at the leading cliniques of Europe. In the two scholastic years 1877–78 and 1878–79, during which Dr. Grazzi resided in Paris and London for the special study of otology and rhinolaryngology, he enjoyed an extraordinary money-grant from the Ministry of Public Instruction. The fruits of this comprehensive and accurate course of study he has given to the world in many publications, principally in his capacity as director of the "Bollettino delle Malattie dell' Orecchio, della Gola, e del Naso," his able and impartial editing of which obtained him gratifying recognition at more than one Congress, national and international. His "Manuale Completo d'Otologia: compilato per i Medici-Chirurghi e per gli Studenti" enjoys exceptional popularity in the Italian schools. He has also translated the American works on "Aural Diseases" by Dr. Buck and Dr. Lefferts of New York, and has long been the quasi-official *internuntius* between the Italian and the English-speaking world in the field of otology.

The general business of the Congress will be concentrated on the following "theses," each of which will form the subject of a "full-dress debate":—

1. The Cure of Intra-cranial Abscesses produced by Purulent Maladies of the Ear. Reporter: Dr. J. Barr of Glasgow.
2. The General Cure of Aural Disease. Reporter: Dr. Gellé of Paris.
3. The General Cure of Internal Otitides. Reporter: Professor Gradenigo of Turin.
4. The Present State of the Pathological Anatomy of the Labyrinth. Reporter: Professor A. Politzer of Vienna.
5. On the Physiology of the Middle Ear. Reporter: Dr. C. Secchi of Bologna.

Opening of the Congress.

The Aula Magna of the Istituto di Studi Superiori presented a brilliant and animated scene at ten this forenoon, as the President of the Congress, Dr. Grazzi, with Dr. Delstanche on his right and Professor Politzer on his left, took his place on the green daïs. Above him on either side were portraits of Sapolini and Moos, two of the *optimi meriti* of international otology. Nearly every European school was represented, though at the eleventh hour more than one British delegate failed to appear.

President Grazzi opened the proceedings by the announcement of congratulatory messages from the Court of the Quirinal and from other centres, political, educational, and social, all of them welcoming in the name of science and the healing art the distinguished participants, foreign and Italian, in the Fifth International Congress of Otology. The President then delivered his discourse introductory to the business of the Congress. He was listened to throughout with marked attention, and the salient points, easily discernible in the subjoined translation, touched a sympathetic chord in the distinguished auditory.

The President's Address.

"Following the example of my predecessors at Milan, at Bâle, and at Brussels, I, too, with your acquiescence, employ the French language in my inaugural discourse, regretting, however, that on such solemn occasions we no longer speak the language universally understood by our fathers. To few is it vouchsafed, as to His Excellency the Minister of Public Instruction, Dr. Baccelli, to combine in beautiful harmony

[1] Traité de l'Organe de l'Ouïe, Paris, 1683.
[2] De Aure Humana Tractatus, 1704.

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the study of biological science with the culture of the Roman Classics.

"Professor Voltolini of Breslau, unhappily lost to life and to science, when inaugurating the Second International Congress of Otology, which in September, 1880, met at Milan, remarked that it was not merely by chance that Italy had been chosen for the first assemblage of otologists in Europe. That honour, said our colleague, who, though a foreigner, had Italian blood in his veins—that honour our country owed to its having given birth to Corti, whose discoveries had revealed a new world in the organ of hearing and had wrought the resurrection of our specialty. So true is this that Kölliker wrote: 'Histological investigation of the cochlea begins with Corti, whose excellent monograph should serve as a starting-point for all observers.' The successive meetings of the International Congresses of Otology (begun in America in 1876) were held at Bâle in 1884 and at Brussels in 1888—the first under the presidency of the lamented Dr. Buckhardt of Merian, the second under that of my revered friend Dr. Charles Delstanche, whom all of us with equal pleasure and pride see among us to-day, and of whom Professor Gradenigo, the Turinese otologist, reviewing the proceedings of the Brussels Congress, said: 'To this Belgian, who speaks and writes our language like an Italian, and is, in fact, Italian by sentiment and aspiration, we sons of Italy owe a special debt of gratitude.' To him, therefore, and to another otologist of world-wide renown, Professor Politzer of Vienna, who, as a sympathetic admirer of Italy's artistic beauties, loves our land as if he had been born under its sky, we owe in great measure the high honour reserved for the fatherland of Eustachio, Valsalva, Morgagni, Scarpa, Corti, and Tafani—the honour of hospitably entertaining for the second time in fifteen years the otologists of all civilised nations. I welcome our able masters; I welcome all those who wished Florence to succeed Brussels in the series of International Congresses of Otology. And since to me, *in absentiâ*, was vouchsafed the pre-eminent and undeserved honour of being chosen President of the Organising Committee of this Congress, permit me to thank you to-day from the bottom of my heart.

"During the seven years that have elapsed since you entrusted me with this honourable charge I have ever recognised my inadequacy to its duties, and have often been anxious for the success of the Congress, knowing as I did what difficulties had to be overcome. This only serves this morning to enhance my joy in seeing that the result may be regarded as assured by the number and the distinction of the otologists who, from Europe and America, have come with their contributions to science, contributions the importance of which is *en évidence* in the programme. You know one of those difficulties, and it is a pleasure, on my part, to announce that in you I have found trusty coadjutors to surmount them. When, at Berlin, Rome was selected as the seat of the International Medical Congress, the otologists there assembled resolved to hold the fifth International Congress of Otology eight days before the great Medical Congress. However, as the time for the two meetings approached, some Italian otologists formed a committee amongst themselves, and proposed the suppression of the Florentine Congress and its absorption in the otological section of the Medical Congress at Rome. I kept aloof from these deliberations, not wishing the frustration of this new vote, which did honour to the city of my adoption, and not wishing, moreover, to put myself in antagonism to high-minded colleagues as if I were annoyed at losing the Presidency with which I had been honoured. Dr. Delstanche, who up to the nomination of the definitive president of the new meeting might be considered as still in office, shrunk from the responsibility of destroying the institution of International Congresses of Otology, whose importance and usefulness, scientific and practical, he had insisted on in the discourse with which he inaugurated the Brussels meeting, and he took the sense of all who had assisted at the last Congress and had voted for Florence as the seat of its successor. This *plébiscite* by a large majority resulted in the autonomy of the International Otological Congresses being maintained. Florence was acclaimed as the seat of the fifth of the series, its meeting, however, being postponed till this year so as not to clash with the great Medical Congress at Rome. Such, then, are the reasons why seven years divide the present meeting from the last held in Brussels, while the regular interval between each should be not greater than four years—a regulation observed from the first Congress at New York in 1876 to the fourth at Brussels in 1888. These facts I have recalled in justification of the long delay.

"The joy of seeing gathered together to-day for love of science and humanity the glorious phalanx of working otologists is embittered by sad memories. Here we no longer see colleagues who never failed our meetings till the inexorable shaft of fate had laid them low. Moos of Heidelberg, that genial veteran who at last year's Roman Congress held out to me a tremulous hand with the promise that he would be with us to-day, I leave to be appropriately eulogised by Professor Politzer of Vienna. But let me recall Sapolini of Milan, who believed in the triumphs of otology at a time when the bare mention of the specialty would raise a sardonic smile on medical lips. He died on June 2nd, 1893, after having been in the first International Medical Congresses the champion of an independent section of otology. He made the earliest proposal to that effect at the International Medical Congress in Florence and never tired of repeating it at subsequent Congresses till the medical world, convinced of the progress rapidly attained by otology, at last admitted him to be in the right. I do not speak of his masterly works on aural anatomy and pathology, but I cannot forget the influence he exerted on the happy issue of the Second International Congress of Otology, at which he worthily presided in his own Milan. I wished his likeness to be present with us, if only because the proposal made by him at Bâle and accepted at Brussels to discuss certain subjects previously chosen and studied by the 'reporters' having, to-day for the first time taken effect; we might all of us, if the experiment should turn out a useful one for our labours, remember with gratitude that we owed it to Dr. Sapolini.

"At the vigorous age of fifty years there also died in 1893 Dr. Longhi, one of the secretaries at the Milan Congress, to whose scientific merits should be added this—namely, his having been the first to propose a special asylum for the cure and instruction simultaneously of children suffering from acquired deafness and destined to remain or become mutes if medicine and charity withheld from them a beneficent hand. At this time, too, we have also to lament the loss of Tröltsch, justly styled the father of modern otology. Many of us unquestionably found in the works of the great aurist of Würzburg the first spark which kindled the love of this interesting specialty. Tröltsch, regretting that his advanced age and infirm health prevented his joining us at Brussels in 1888, wrote: 'I wish my colleagues to know, and I count on you, Dr. Delstanche, to inform them that I will follow at a distance with the greatest interest the works of this assemblage, and that my liveliest sympathies are engaged in their efforts.' I call to mind Joly of Lyons, who never failed our congresses till cut off, still young, from the affection of his friends. Familiar with our language, he was the *internuntius* whereby much of our Italian otology was conveyed to France. I cannot close this sad list without a tribute of regret for the two illustrious men who, labouring in a field different from ours, rendered signal service to otology—Helmholtz, who with his powerful genius threw a flood of light on the darkness of the physiology of the labyrinth; and my fellow-student and devoted friend, Alessandro Tafani, pupil and successor of the immortal anatomist, Pacini. Tafani in this school for many years studied in man and the lower animals the intricate structure of the ear, confirming, correcting, amplifying, and even unveiling new secrets in the fine maze of the acoustic organ. Devotion to study hastened undoubtedly the untimely end of the Florentine anatomist, from whose bright intellect humanity might have hoped for important revelations.

"Having completed my task, let me turn your thoughts to the business of our Congress. Otology has made immense strides in the second half of this century, and all of you, in greater or lesser proportion, some in science, some in practice, have contributed to these. Even when importance of any kind was denied to our specialty, it was admitted that otologists had conquered something in the field of aural semeiology and pathology; but all merit was withheld from them in the curative direction which is that which most nearly interests those who suffer, physically and morally, from defective hearing. But to-day, thanks to the progress of surgery, this disparaging assertion is no longer justified, and in otological cures we obtain results certainly not less gratifying than in any other branch of the healing art. The titles of many communications announced for the Congress pointedly reveal the contemporaneous tendencies of otology and, provided we stop short of exaggerating surgical cures, as Lange of Copenhagen justly observes, I believe this

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advance will raise our specialty still higher in professional estimation. If we shall have contributed to this end we shall be satisfied with our work; and in this hope, which I trust may become reality, I am happy, in the name of his Majesty Humbert I., King of Italy, to declare open the Fifth International Congress of Otology."

The President sat down amid a round of plaudits, and he was followed by other speakers, Dr. Delstanche of Brussels and Professor Politzer of Vienna, the latter pronouncing a highly finished *éloge* on Professor Salomon M. Moos, who, born in 1831 at Randegg and educated at Heidelburg, Prague, and Vienna, was a "magnifique modèle de toute une carrière de labours et d'efforts incessants, faits pour arriver aux sommités de connaissances scientifiques." A pupil of Henle, Hasse, Moleschott, and Chelius, he graduated at Heidelberg in 1856, when he defended his masterly thesis "Ueber den Einfluss der Pfortaderverschliessung auf die Zuckerbildung in der Leber." His "Klinik der Ohrenkrankheiten" (1876), his "Anatomie und Physiologie der Eustachi'schen Röhre (1875), and his "Meningitis Cerebro-spinalis Epidemica" (1881) are worthy of the catholic genius of the physician, who was the first by his translation of Toynbee's great treatise to familiarise Central Europe with the highest results of English otology. I have no space in which to do justice to Professor Politzer's *oraison funèbre*, for such it is, on Dr. Moos, and will simply refer the reader to its reproduction in the official "Atti," where it will be found to rank with Moleschott's monograph on Donders and Mosso's on Ludwig as a beautiful *immortelle* laid by a surviving brother on a colleague's tomb.

After this the "Bureau du Congrès" fixed the order in which the theses were to be taken, beginning with Dr. Gellé of Paris, who, at the sittings, resumed at 3.30 P.M., read a paper on the General Treatment of Maladies of the Ear. He introduced not a few important modifications in traditional practice, pointing out, *inter alia*, the use of massage in certain cases. Having exceeded nearly four times over the fifteen minutes' allowance, he found the audience indisposed to prolong the subject by criticism, and he was succeeded by Dr. Arslau of Padua with a Contribution to the Study of Adenoid Tumours. On this and the other papers that followed Dr. Gellé's, which latter deserves a more detailed notice, I shall have something to say next week.

Florence, Sept. 23rd.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 757.)

THE SITUATION AT PORTSMOUTH.

ONE of the great difficulties at Portsmouth is due to the fact, as already explained, that the Portsmouth Dockyard Medical Benefit Society admits infants and juveniles as well as adults at the uniform rate of ½*d.* per head per week. I have now before me the balance-sheet of this society for the year 1894. There are the medical fund, the management fund, and the reserve fund. The ½*d.* contributions for the year brought in £898 8*s.* 7*d.*, arrears paid during the year £22 3*s.* 8½*d.*, and £2 9*s.* 8½*d.* were transferred from the reserve fund, making a total of £923 2*s.* This was divided among the three medical officers of the society, the first medical officer receiving £381 11*s.* 11*d.*, the second £351 11*s.* 9½*d.*, and the third £189 18*s.* 3½*d.* The management fund amounted to £67 8*s.* 1½*d.*, and is raised by entrance fees and a subscription of 1½*d.* per quarter per member. Then there is a reserve fund, supported by the first month's contributions, to assist in paying medical officers for those members leaving the society when in arrears. This fund amounts actually to £120, and was increased during the year to the extent of £8 13*s.* 6*d.* These figures suggest the questions as to what was the amount of work done for these various sums paid to the medical officers, and how was the work done. The duties of the medical officers are defined in the book of rules as follows: "The medical officer shall be bound to supply all necessary medicines, leeches, dressings, bandages, splints, and whatever may be required for the proper treatment of the disease or hurt, and the due performance of his duties he by his agreement engages to perform; all splints, bandages, &c., supplied by the medical officer to be returned or paid for by the member, and that members are to find their own bottles, and in all cases when able to attend at the surgery; in the event of a change of medical officers one month's notice to be given by the party requiring the same; for such services he received 2*s.* 2*d.* per annum for each member in his district, payable quarterly. Any member requiring medical attendance and unable to attend the surgery, shall give proper notice in writing to the medical officer, with member's residence in full, which should if possible be before 10 A.M., who shall attend to the same without delay." Such is the actual phraseology of the rules. The medical officer who received for the year 1894 the sum of £381 11*s.* 11*d.* very obligingly went through his books, and ascertained that he had given 4650 consultations to the members of the society in his surgery, and had made 1958 visits. Dividing this total of 6608 consultations by the sum received, the fees paid amounted to 1*s.* 1½*d.* per consultation. From this must be deducted the cost of the medicines, etc., which in this case was estimated at about half the total sum. Now it should be observed that since this society was first founded the wages earned at the docks have increased to an extent of about 10*s.* a week, but it has never occurred to the workmen that they might have increased their medical fees in due proportion to the augmentation of wages they had secured. Nor has any attempt been made by the Dockyard Medical Benefit Society to establish a wage limit. On the contrary, the President of the Liberal Union, who is a member of the board of guardians, is employed in the dockyard and also keeps a newspaper shop, is a member of the Dockyard Medical Benefit Society. One of the medical officers of this society is also a member of the board of guardians and has to attend his colleague on the board for the munificent remuneration of one halfpenny per week.

The example of the Dockyard Society is unfortunately spreading. The Rechabites having decided to admit infants and juveniles, the six or seven medical men in their service recently sent in a joint protestation, stating that for juveniles the contributions should be augmented. Children, they urged, required more attendance and medicine than adults; that the proposed fee of 2*s.* 2*d.* per annum for children was insufficient and should be the same as for adults—namely, 4*s.* per annum. This request has been rejected, and the reason given for this refusal is that the average rate of sickness among members is much less than in similar societies which do not adopt the temperance pledge. I have not yet been able to obtain any statistics that prove this contention. On the other hand, I have met a medical officer in the service of the Rechabites who, on the contrary, considered them an unhealthy set of people. The fact that a man is a total abstainer sometimes means that his digestive faculties are so impaired that he could not drink even if he wished to drink. Others very wisely become total abstainers because their parents were excessive drinkers and they fear they may inherit the alcoholic taint. In a word, many persons are total abstainers precisely because their health is not all that could be desired. The Rechabites further give as a reason for refusing to grant the request of their medical officers that their members pass a medical examination before being admitted, and that this is not done by all societies; and, moreover, that "in one society at least in Portsmouth the whole of the family, adults as well as children, are received at the same rate—viz., ½*d.* per member per week." By this, of course, they mean the Dockyard Medical Benefit Society. Thus we have in this reply, written by the secretary of the Rechabites, documentary evidence of the evil wrought by the example of the Dockyard Society. They go on to say that cases of infectious disease are treated at the infectious hospital and accidents at the Landport Hospital, so that their medical officers have not to attend such cases. Having thus refused to make any extra allowance for juvenile branches the secretary of the Rechabites seeks to increase the duties of the medical officers, and this in a very objectionable manner. He adds that the Rechabites "would also respectfully ask their surgeons to request to see members' contribution cards when application is made for medical aid, as they would thereby protect themselves from imposition, and also assist the superintendent in reducing the amount of arrears, which would, of course, put the Tents in a better financial position." Thus the medical men are to act as detectives working on behalf of the collectors of subscriptions, a very unpleasant task which certainly forms no part of medical duties. In the face of this most unsatisfactory reply the medical officers in the service of the Rechabites seem disposed to resign their situations. In that case, the medical profession throughout Great Britain should be warned and made to understand that

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it would be a dishonourable act to accept any offer that may be made by the Rechabites of Portsmouth.

It is not only the Rechabites who are seeking to admit juveniles, but a very large lodge of the Oddfellows at Portsmouth have now notified their intention to admit infants, and this may also cause the resignation of the medical officers concerned. The medical officer who has received this notification has a very large club practice. He calculates that he is occupied three hours per day in his own surgery receiving club patients, and some of them are sufficiently well off to ride to his surgery on their bicycles. Then he has to see about ten club patients per day in their own homes. Altogether his club patients take up about five hours per day, and for this he receives just upon £1 per day. The dispenser he has to keep and the medicine he has to supply cost him about a third of this sum. Five hours per day at £1 equals 4*s.* per hour, and, deducting the cost of medicine, &c., we get a net profit of about 2*s.* 8*d.* per hour of professional work. The fee for each consultation, including medicine, amounts in this case to from 4*d.* to 5*d.* Nevertheless, the members of these clubs imagine that their medical officers are very well paid and rapidly accumulate fortunes. This is especially the case when the medical man keeps a carriage. They do not realise that a carriage costs 10*s.* a day, and that even at this price it is often about the cheapest way of getting over the twenty or more miles that have to be travelled in the course of the day so as to see all his patients. Then there is the terrible fact that the more thoroughly and conscientiously the medical man does his work the greater the number of patients who flock to his surgery; but, as the number of patients does not increase the amount of the fees, so there is every temptation to neglect the patients and not encourage their visits. It is, therefore, not merely the question of cheapness that members of benefit societies should consider, but rather the kind of attendance they receive. This, again, depends on the individual medical officer, who may or who may not do his very best without any thought of the remuneration he is likely to obtain. The one advantage of doing the work well is that the patients, if thoroughly satisfied, will very frequently continue to consult the club medical officer even if he resigns his position on the club, and then claims the usual fees. There is at least one medical man at Portsmouth who has found it to be no loss to resign his position as medical officer of the dockyard society. Many of his club patients continue to consult him. They are fewer in number, but as they pay proper fees his income does not suffer and he has much more leisure. Two or three families are often preferable to an entire lodge of a club. Also the presence of some ten to twenty club patients waiting to see their medical attendant has a deterrent effect on private practice. Ordinary patients do not like to be confused with club patients, and it is not always easy to sort these and place them in different waiting-rooms. Errors that give offence are often committed. Thus club practice has numerous inconveniences; nevertheless, there are many medical men who lack the courage to give up a small certainty and to incur some risk, even if it be but a slight risk, to secure a general all-round improvement for themselves and the whole of the profession.

Portsmouth, Sept. 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Case of Poisoning in Gorton-park.

YOUR correspondent, Dr. MacArthur, seems to think my notice of the case of supposed poisoning by henbane "not quite satisfactory." Any apparent scepticism was not as to the symptoms, for they were not described in the report, but, first, as to the occurrence of henbane in the park; and, secondly, as to the child being attracted by and eating sufficient of such a suspicious-looking plant to cause her death under the impression that it was "green sauce," which she said she had eaten. Dr. MacArthur kindly offers to show me the locality, and says that he can satisfy me that there is a poisonous flora, but he does not say that henbane grows there.

Bequests by the late Mr. D. S. Jackson.

This gentleman, formerly in business here, has left public bequests amounting to £38,000, to take effect after the death of his widow. Of this sum no less than £24,000 go to the benefit of animals. The Manchester Branch of the Royal Society for the Prevention of Cruelty to Animals gets £10,000; the Dublin Society £2000; the Manchester and Salford Cattle Trough Association and the similar London Society get £2000 each; the Battersea Home for Dogs, the Home of Rest for Horses, and the Anti-Vivisection Society, each £2000; while the Homes for Lost Dogs in Liverpool and Manchester get £1000 each. In addition, he left the following sums for the benefit of suffering humanity: £5000 to the Mauldeth Hospital for Incurables, and £2000 each to the Royal National Lifeboat Institution, the Boys' and Girls' Refuges, Henshaw's Blind Asylum, and the National Society for the Prevention of Cruelty to Children. Bequests for the maintenance of pet cats have been made by persons reputed to be eccentric; but Mr. Jackson was a clear-headed, sensible man, who, though always interested in the kind treatment and welfare of animals, was perfectly free from any manifestations of eccentricity, if I except, perhaps, his attitude on the question of vivisection, and this may be put down to want of knowledge. The idea that animals have any claim on our kindness, or that we have any duties towards them, is somewhat new, but is no doubt growing in this country, while it can scarcely be said to have entered the mind or touched the conscience in any other. It will readily be granted, moreover, that the humane treatment of domestic animals is abundantly repaid in the increased efficiency of their service.

Accidental Poisoning.

An excellent article appeared the other week in the *Manchester Guardian* on this subject. It was occasioned by the lamentable accident in Birmingham, where two people were poisoned by strychnine having been given for phenacetine, and draws attention to the "absurd" inadequacy of the Pharmacy Acts. The Registrar-General's returns show that in 1893 587 deaths occurred from the accidental swallowing of poisons and the accidental inhalation of poisonous fumes, of which over 500 belonged to the former category. In 1892 there were 620 cases of fatal poisoning, of which 514 were accidental, and of these 104, or 20·2 per cent., were caused by opium in some of its forms. In 1893 the deaths from this one cause were 93. Chloroform deaths average about 50 and those from carbolic acid about 24, but in this district they have been of late alarmingly frequent, while arsenic is credited with about 15. A long series of cases might be given showing the carelessness with which people treat poisons. "A thirsty policeman drank carbolic acid instead of beer, and about twenty other people—some drunk and some sober—came in this way to an untimely end within the space of eighteen months." Carbolic lotion has often been drunk instead of medicine, and so on almost indefinitely. At one time Burnett's disinfecting fluid, a solution of chloride of zinc, was not infrequently taken in mistake for fluid magnesia; and a lady is living not far from where this is written whose life was for a long time in the greatest peril, both at the time of the accident and subsequently from œsophageal stricture, produced by this cause. The article considers, and very properly, that greater difficulties should be experienced in the purchase of poisons and says that "restrictions should be placed on the sale of carbolic acid, for this is one of the poisons that people toy with most." It would be well if carbolic acid were prescribed less freely now that its place may generally be taken by disinfectants equally efficient and non-poisonous. Weed-killers and vermin-killers provide means for the easy distribution of arsenic and strychnine; and by calling at sundry druggists' shops and purchasing it in small quantities it would not be very difficult to obtain a quart of laudanum. If it is desirable to lessen the facilities for obtaining drink and so reduce the temptation to take it, the same reasoning may be used with equal, if not with greater, force in the case of poisons.

Corporation Show-rooms for Gas Stoves.

Yesterday a commodious building in Deansgate was opened by the Lord Mayor, which has been designed to give intending purchasers the opportunity of inspecting heating and cooking stoves of all makers, so as to encourage the use of gas, and thereby diminish the nuisance of coal smoke. The chairman of the gas committee said they wished to develop to the utmost the resources of the gasworks, in which about £4,000,000 of the ratepayers' money were invested. He wished to reduce the price of gas to 2*s.* per 1000 feet, and to increase the quantity supplied by the penny-in-the-slot meters

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from 25 ft. to 35 ft. Reduction in the price is necessary if gas is to be largely used for cooking, heating, and for gas engines.

Sept. 24th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Jarrow Cruelty Case.

AT the instance of the National Society for Prevention of Cruelty to Children Leonard George Peters, a registered medical practitioner, was, by the Jarrow magistrates, on Sept. 19th, convicted of gross cruelty to his children, aged respectively ten and five years and one year, and sentenced to three months' imprisonment in Durham gaol. The evidence showed that drink was at the bottom of the case, the wife and children both stating that Peters was kind to them when he was sober, but that he was very often drunk, and then behaved very cruelly to them all.

Newcastle-on-Tyne, Sept. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Plumbers' Congress.

THE sixth annual Congress in connexion with the National Registration of Plumbers was held in Dumfries last week. The delegates were received on the opening day in the town hall by the Provost. Amongst those present were Sir Stuart Knill (Master of the Worshipful Company of Plumbers), Sir James Crichton Browne, M.D., and Sir Mark J. Stewart, M.P., who took an active part in the proceedings and participated in a discussion bearing upon the plumbing work in houses. A resolution was submitted and agreed to, urging that in the employment of plumbers preference should be given to registered men. Another resolution which was adopted declared that plumbers, from their practical knowledge and training, were specially fitted for employment as sanitary inspectors. In connexion with the Congress an exhibition of plumber's work was held in the Drill-hall. Sir James Crichton Browne formally opened the exhibition, and in his opening address dwelt upon the intimate relationship of plumbing to the health of the community. In the registration movement he recognised an effort to revive the old feeling of trade credit which was fostered in the Middle Ages by the trade guilds, and he wished them success in their effort to unite old-fashioned morality with modern dexterity. Sir Stuart Knill also addressed the meeting and expressed the hope that we would see in this country a revival of that artistic plumbing of which specimens were to be seen particularly in Germany and Belgium.

The Public Health of Edinburgh.

During the month of August the death-rate in Edinburgh was rather above the average for that month. The reported cases of infectious disease included 197 cases of scarlet fever, 35 of typhoid fever, 21 of measles, and 14 of diphtheria. At the end of the month there were 261 cases in the City Hospital. It may be mentioned in this connexion that there appears to be a considerable number of cases of diarrhœa in the city. Some of them are dysenteric in character, and in some the diarrhœa is accompanied by vomiting. So far as can be ascertained the cases have been readily subdued by treatment.

Prosecutions in Edinburgh under the Pharmacy Act.

A number of prosecutions under the Pharmacy Act were heard last week in Edinburgh in the Sheriff Court. The prosecutions were at the instance of the Pharmaceutical Society of Scotland. The greater number were instituted against assistants in druggists' shops for selling poisons, they not being duly registered druggists. Fines of £5 or less were imposed. Complaints were also made against assistants of two of the leading surgical instrument makers for selling tablets containing bichloride of mercury. In these latter the accused pleaded guilty, but it was explained that the tablets were sold to surgeons for cleaning their instruments, and that it was thought that, as the tablets were a proprietary article, they did not come under the Pharmacy Act. Under the circumstances a fine of £1 was imposed, with £1 1*s.* for expenses. Complaints were also made against two dealers in photographic appliances for selling poisons, they not being qualified druggists; in these cases judgment has been deferred. In some of these prosecutions, as in the cases of the surgical instrument makers and the dealers in photographic appliances, the general feeling will certainly be that something approaching a wrong has been done to those prosecuted. It may be an infringement of the letter of an Act of Parliament for a surgical instrument maker to provide his customers with tablets for rendering his instruments aseptic, but most people will not be prepared to believe that the Act had any such object in view when it was drawn. The course taken by the Pharmaceutical Society in the matter seems to require an explanation, for meanwhile, although technically justified, it will be felt that their action has been ungenerous and unwise. In a case tried in Glasgow last week laudanum had been sold to a boy ten years of age whose mother subsequently poisoned herself, and the principal of the shop in which the sale took place admitted that it was a common practice to sell laudanum to young persons.

The Cost of Small-pox in Edinburgh.

At the meeting of the Edinburgh town council to-day the treasurer's committee recommended an assessment of 2*s.* 2*d.* per pound. The treasurer, in moving the adoption of this recommendation, pointed out that the increase of 1*d.* per pound over last year was brought about, not on account of the ordinary expenditure, but was entirely due to the small-pox epidemic of last year, which caused a deficit of £11,622.

The Proposed New City Hospital for Edinburgh.

At the meeting of the Edinburgh town council to-day the proposal of the health committee to purchase Colinton Mavis Farm for the price of £20,500 as a suitable site for the proposed new city hospital was submitted by the chairman of the committee and seconded by Sir James Russell. The report and the recommendation were agreed to. Attention was drawn to the presence of epidemic disease in some districts of the city, and one of the members thought that sufficient was not being done to prevent infectious disease from spreading. He thought that something should be done to bring them more into touch with the county authorities than was the case at present.

Poisoning by Benzine.

An unusual case of poisoning is reported from Falkirk. A woman who had become suddenly unconscious was found on examination to have swallowed a quantity of benzine. It is presumed that she swallowed this, mistaking it for a mixture she was in the habit of taking for a sore-throat.

Scottish Prison Statistics.

In their annual statement for 1894 the Prison Commissioners report that the number of prisoners committed to prison for that year was 52,658 persons. The increase, which makes the total greater than in any previous year, is largely due to an augmentation in the number of persons committed for drunkenness, and this is attributed to the prosperous state of the country and to the activity of the police. As bearing on this point it is noted that during the three months of severe weather in the early part of the present year the prison population fell to the lowest point on record. The returns also show an increase in the cases of sickness, which numbered 1221, and included 45 cases of influenza and 40 cases of delirium tremens. Twenty-three persons were released on medical grounds, and there were 51 cases of insanity. Of the latter, 40 were discovered to be insane when committed Concerning the department for criminal lunatics at Perth the Commissioners state that Dr. McNaughtan "continues to conduct it with our full approbation," and quote the Visiting Commissioners in Lunacy to the effect that "the state of the work, the condition of the inmates, and the management of the establishment continue to be very satisfactory."

New Fever Hospital for Stirlingshire.

The county council have approved of plans for the erection of a new hospital for infectious diseases near the village of Camelon. The estimated cost is £6450.

The New Asylum at Hawkhead.

The congested condition of their present asylum at Merryflatts has compelled the Govan authorities to push forward the completion of a portion of their new building, though the original plans are far from being realised. The

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completed portion has been sanctioned for use as a district asylum, and a number of patients have been transferred to it under the care of Mr. Watson.

Scottish Prison Medical Officers' Association.

An association of the medical officers of the Scottish Prison service has recently been formed. The first meeting took place in Glasgow last week.

A Strike of Butchers.

A rather curious struggle has recently been in progress at Motherwell. The butchers of the district decided to boycott the public slaughterhouse in order to compel the authorities to accede to their demand that the whole of a carcase in which tuberculosis is localised should not be destroyed, but only the diseased portion, the remainder being passed as fit for human food. The Commissioners, however, have stuck to their guns and the butchers are now giving up the struggle.

The Falls of Foyers.

The scheme of the British Aluminium Company, which involves the practical destruction of this magnificent waterfall, has excited considerable indignation. An attempt has been made to gain the help of the Government, but it seems that the Secretary for Scotland has no power to interfere. Mr. Ruskin has associated himself with the opposition which is now being organised by the National Trust for Places of Historic Interest or Natural Beauty, under the Presidency of the Duke of Westminster. Any of our English medical friends who desire to do so may join in the protest by writing to the Secretary to the National Trust, 1, Great College-street, Westminster, S.W.

Aberdeen University: the Inauguration of the Mitchell Tower and Students' Union.

The University Court at a meeting last week agreed, in deference to the wishes of Mr. C. B. Mitchell and Mrs. Mitchell, to proceed with the celebrations at the date originally fixed. They will therefore take place on Thursday and Friday, Oct. 24th and 25th, but the proceedings will be somewhat curtailed from the original plan. The order of events will be somewhat as follows. On Thursday the Mitchell Tower and Students' Union will be formally opened. The clock in the tower will strike and a response will be given by the city bells. The custody of the Union will be handed over to the President of the Students' Representative Council, and an address will probably be presented by the students to Mr. C. B. Mitchell. In the evening there will be a grand conversazione in the new buildings. On the Friday the new Graduates' Hall will be opened in the forenoon, and the honorary doctorates will be conferred. In the afternoon the Marquis of Huntly will deliver his rectorial address in the new hall, while in the evening the Lord Rector will be entertained to dinner by the University authorities. The proceedings will be wound up with a students' torchlight procession.

The Health of Aberdeen.

The zymotic diseases notified for last week were: scarlet fever, 24; whooping-cough, 26; erysipelas, 7—making a total of 57, which number is two cases fewer than last week, but there are noticeable a considerable increase of scarlet fever and a decrease of whooping-cough.

Sept. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Dublin Hospital for Infectious Disease.

AT a recent meeting of the guardians of the North Dublin Union a letter was read from the Local Government Board stating that they adhered to an opinion, expressed as far back as 1892, that it was desirable that the guardians of the Dublin unions should have suitably situated hospitals for the reception and treatment of dangerous infectious diseases under their own control and management. Mr. Stafford, the Local Government Board inspector, agreed that it would be best to have a single infectious disease hospital established in connexion with the two unions, but that additional Parliamentary powers would be required for that purpose. He also stated that Sir Charles Cameron was actually preparing a scheme for a joint hospital, to be under the management of a board which would probably consist of the guardians of the North and South Dublin unions, the corporation, and other sanitary authorities. As the scheme of the chief medical officer of health has been almost completed, and as all the sanitary authorities will soon be asked to meet and discuss the matter, the further consideration of the subject was postponed.

Irish Workhouse Reform.

The circular of the Local Government Board addressed to the boards of guardians of Ireland has already had the effect of strengthening the position of some of the medical officers in country districts and of inducing them to direct public attention to necessary reforms. At a recent meeting of the Castlerea board of guardians an order for provisional relief given by the medical officer to a family stricken down by fever of a malignant type was disallowed, the guardians refusing to pay the bill for the relief. Mr. Coen, L.R.C.S. Irel., J.P., &c., stated that he believed himself justified in giving the order as the family was destitute and stimulants were urgently required for the treatment of the disease. He is reported to have said, moreover, that "Mary Leonard aged thirteen years had, since the board's order, died for the want of stimulants." It appeared that the medical officer had notified the relieving official by message and telegram, and then had issued the order himself. As Mr. Coen remarked, "doctors should be allowed a certain amount of liberty in such cases, especially where the people are destitute and in urgent need of stimulant treatment." It is only right to say that ultimately the guardians agreed to pay the amount of the bill, while maintaining their opinion that it was unlawful for the medical officer to have given the order.

Westmorland Hospital, Dublin.

The Lords Justices have appointed Sir Charles Cameron to be a governor of the Westmorland Lock Hospital, in the room of Sir George Porter, deceased.

Board of Superintendence of Dublin Hospitals.

The Lords Justices have appointed Dr. Henry Fitzgibbon to be a member of the Board of Superintendence of the Dublin hospitals, in the room of Sir George Porter, deceased.

Compulsory Retirement of Professors appointed by the Crown.

Some time ago the question of compelling professors and presidents of the Queen's Colleges in Ireland to retire at a certain age was raised by the Order in Council of Aug. 15th, 1890, which placed them exactly in the position of Civil servants, who are compulsorily retired at the age of sixty-five years. Legal authorities differed as to whether this order could be made to apply to professors, and President Moffet of Galway, after having been compulsorily retired, was, on the advice of the English Lord Chancellor (Herschell), reinstated. After this the Treasury appointed a Committee (Lord Playfair, Lord Welby, and Sir Matthew White Ridley) to consider the advisability of fixing an age for the compulsory retirement of professors serving under the Crown. This committee, who took evidence during the past summer, have just reported that, in their opinion, the commission of 1880, upon the report of which to some extent the Order in Council of 1890 was based, did not intend that the limitations of age should apply to presidents and professors of colleges, who are appointed and serve under different conditions from those which prevail in the Civil Service. After pointing out that these presidents and professors are appointed at a maturer age, and have, by the nature of their employment at seats of learning less tendency than Civil servants to become inefficient at the age of sixty-five, and that the Queen's Colleges in Ireland are only to a small extent dependent upon votes in Parliament, being mainly supported out of the Consolidated Fund, and that, in consequence of this peculiarity, they are in more intimate connexion with the executive Government, with which the presidents are in frequent communication as to the working of the college and the efficiency of the professors, who are appointed by the Crown and by whom they can also be dismissed, and that the statutes which govern the colleges also emanate from the Crown and are not (as in other colleges) the product of academic autonomy, the committee are of opinion, taking all these circumstances into consideration, that there should be fixed rules as to superannuation of presidents and professors, and that they should be made by college statutes and not by an Order in Council. The committee recommend that when a professor reaches sixty-five years of age the president of the college should be bound to report to the Government the condition

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and efficiency of the teaching. If these are and continue to be satisfactory the professor need not be superannuated till he is seventy, but at this age his retirement should be absolute. As to presidents, they advise the age of seventy as the period of retirement, but in case the visitors of the college make a formal report that the college would suffer by the loss of the experience which the president has acquired the committee suggest that the Treasury, and not the Irish Office, should have power to keep him as president for a certain number of years not exceeding five, so that at the age of seventy-five the retirement of a president should be absolute. The committee believe, as the professors are not appointed till middle life, that the addition of seven years to their period of service in calculating the amount of their superannuation obviously tends to secure eminent specialists as candidates for office. The power of voluntary retirement at the age of sixty has also much to commend it in this sense. Such is the gist of the report presented to the Treasury by their committee.

New Infirmary for County Tyrone.

At a meeting held in Omagh on Sept. 20th, the Duke of Abercorn presiding, it was decided that a committee should be appointed to carry out the necessary conveyances for acquiring a site for the new Infirmary on a gentle eminence about a quarter of a mile from Omagh, recommended by the site sub-committee. It seems that up to the present the total sum subscribed is £3000, and it is expected that another £2000 will be raised by the sale of the old Infirmary. Plans for the erection of the new building were then considered and approved of, with the exception of some trivial alterations. The question of the formation of a ladies committee, as a large sum of money will still be needed, was left to the Duchess of Abercorn. The proposed situation of the new Infirmary is an admirable one for a hospital, being on the banks of the Camowen river in the centre of a beautiful and most healthy district.

The Consumption of Alcoholic Liquors in Irish Workhouses.

The Irish Association for the Prevention of Intemperance has issued a comparative statement of the expenditure in intoxicating drink in Irish workhouses during the year ending Dec. 31st, 1893. The expenditure in many local unions is not great. Belfast heads the list with an outlay of £598, North Dublin comes next with £497, then Limerick with £413, Cork £228, and Rathdown £254.

Outbreak of Typhus Fever at Ardboe.

Mr. Robert Burgess, dispensary officer for Coagh, has received a special vote of thanks from the Cookstown guardians for the energetic steps taken by him to check a serious outbreak of typhus fever in Ardboe, on the shores of Lough Neagh, county Tyrone.

The Duties of Medical Officers, Masters, and Matrons in Irish Workhouses.

At the present time the subject of the management of Irish workhouses and their attached infirmaries is attracting a good deal of attention in various parts of Ireland. As an instance of this, I may mention that at the last meeting of the Ballymena guardians the following queries were put before the board by Dr. W. R. Davison, medical officer of the workhouse: "Is it any part of the master's duty or the duty of the matron to transfer a patient from the infirmary to the asylum without a proper certificate from the medical man in charge? I take it that the wards set apart for the insane patients from Belfast are to all intents and purposes a part of the Belfast Asylum for the time being. Is it any part of the master's duty to complete a medical certificate in the case of an insane patient? Is it any part of the master's duty, or the duty of the matron, to say when a patient is fit to be removed from the infirmary, or how long a patient should be retained in, or when a patient should be treated in the infirmary?" Dr. Davison, who was present, said he made no charge at all against the master or matron, but there were certain duties belonging to each of them, and he wanted the matter decided. After discussion, it was decided to enter the word "No" at the end of each query in the medical officer's report, and that in the opinion of the guardians the medical man had preferred no charge.

The Battle of the Clubs at Cork.

It will be in the recollection of the readers of THE LANCET that some time ago all the Cork druggists, with one exception, refused to continue to supply the clubs at contract prices. This was what might have been expected, as for years past the druggists have felt aggrieved at being called on to sell their drugs to rich club patients at the reduced prices charged to the humbler classes. In the exigency of the situation the clubs were glad to find that even one druggist was willing to help them out of their difficulty, and accordingly all their prescriptions went to his establishment. But somehow the clubs and their druggist do not appear to be on harmonious terms, and an official of the clubs has written a letter to the other druggists asking them in peremptory terms whether they will be prepared to enter into contracts with the clubs as heretofore, and stating that if they should contumaciously refuse, the clubs will start an opposition druggist's shop in Cork. The druggists, I am sure, will treat this threat with the contempt it deserves. If the clubs seriously contemplate doing what they say, which I very much doubt, they might endeavour to do one of two things, either to bring in an outside druggist or to raise capital amongst themselves. With regard to the former I cannot see how any respectable firm would be so foolhardy as to open a branch in Cork; with the thorough conviction that by doing so they would for ever alienate the whole medical profession of Cork; and with regard to supplying capital, all I can say is if I wished to invest money I would prefer putting it into a mine in South Africa about which I knew absolutely nothing. The recalcitrant clubs are being cornered more and more every day, and the angry tone of their letter to the druggists is a fair indication that they feel they are playing a losing game. It has been the fixed policy of the profession not to enter into a newspaper correspondence with the club members, but I have reason to believe that the letter of the medical delegates, a copy of which you published last week, has produced a very marked effect on the general public. The charges of boycotting brought against the Cork hospitals by the President of the United Trades' Association have dissipated into thin air. A very forcible letter on the subject addressed to the Mayor by Mr. D. J. Forde, trustee and treasurer of the North Infirmary, has been published in the local papers. The following extract from Mr. Forde's letter is worth reproducing as illustrating the sentiments of the thoughtful public with regard to the President's action:—"In conclusion, I may say the trustees naturally feel much annoyed at the way this matter was brought forward and commented on, while a note of enquiry from the association or others, such as you have sent, would have at once elicited an answer from the trustees; but to be held up to public odium first, and the facts enquired into afterwards, seems discourteous and unreasonable."

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Remains of the Old Faculty of Medicine.

M. CORLIEU recently read a paper on the above subject before his colleagues of the Academy of Medicine. He tells us that up to the year 1409 the Faculty buildings consisted only of a miserable tenement situated in the Rue des Rats. This street, the possession of which was, judging by its name, disputed by the students and armies of rodents, still exists near the Place Maubert as the Rue de l'Hôtel Colbert. The members of the Faculty then held their meetings either in the space surrounding the principal baptismal font of Notre-Dame, or they paid so much rent for accommodation in the Convent of the Mathurins. In 1469 the Faculty bought a house in the Rue de la Bucherie, and thirty years later constructed a chapel close by. In 1567 a botanical garden was added. These premises included all the ground upon which now stand the houses numbered 13 and 15, Rue de la Bucherie at the angle of the Rue des Rats, the façade measuring thirty metres. No. 13 is now devoted to uses the very reverse of moral, while No. 15 is a public washhouse. In 1617 there was built in the garden an amphitheatre called "Riolan's Amphitheatre," because in its construction were employed the designs of the son of Riolan, the celebrated French anatomist, whose name, by the way, is still associated with the muscles inserted into the styloid process. Frequently recurring inundations, caused by overflow from the neighbouring Seine, having damaged the buildings, 20,000 livres, left for the purpose by Michel le Masle, were in 1678 devoted to the reconstruction of the entrance gate. In 1745 the renowned anatomist Winslow

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(who, born in Denmark in 1669, died at Paris in 1760) opened the new amphitheatre, built on the site of the old one. This amphitheatre, called the "Amphithéâtre de Winslow," still stands. It cost 52,016 livres 10 sous. Nowadays the remains of these ancient buildings are scarcely recognisable, being put, as they are, to less noble uses. The benches and professors' tribunes are now replaced by laundry utensils, the first floor has been converted into a cheap lodging-house, and the amphitheatre seems to frown sadly at this degradation. M. Corlieu terminates his most interesting communication by asking: "Par suite de quel contrat tacite Esculape a-t-il cédé une partie de son temple à Vénus?"

Treatment of Pneumonia by large doses of Digitalin.

M. Franc (Congrès Français de Médecine Interne held at Bordeaux) strongly recommends for the treatment of pneumonia the following plan of medication: the first day the administration of one or two milligrammes of crystallised digitalin, the solution used being Petit-Mialbe's 1 in 1000 solution; the second day one milligramme of the alkaloid is given, and if necessary the same dose is exhibited daily for a few more days. On the second or third day considerable improvement is stated to be observable, the disease appearing in some instances to be aborted. The happy effects of the digitalin are specially noticeable in infectious, adynamic types of pneumonia, where a manifest change for the better in the general condition is plainly observed on the second or third day in spite of the persistence of physical signs. It is claimed for the digitalin treatment that improvement is closely followed by rapid convalescence.

Sept. 24th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Celebration of the 20th.

As behoves a "carnival people"—the name given to them by a distinguished compatriot of their own—the Italians were quite equal to the festive commemoration of the "silver wedding" of Rome with the new kingdom. The preparations had been well matured, and the result from the holiday-making point of view was a brilliant success. Conspicuous among the events of the day was the speech of Signor Crispi at the unveiling of the monument to Garibaldi, a fine rhetorical effort and in all respects worthy of the statesman in whose hands the destinies of Italy are now placed. Apart from the political aspects of the occasion—with which I am not concerned—there were not a few incidents specially gratifying to the profession, and, indeed, to all who have at heart the well-being, moral and material, of the youngest of the Great Powers. Professor Todaro, who fills with such acceptance the chair of Anatomy in our University, was quite within the mark when, at the opening of the Concorso Ginnastico (athletic competition), he congratulated the Italian youth on the progress made in physical education—in all, to put it briefly, that is implied by the "mens sana in corpore sano." Then, again, the proceedings of the Congresso Nazionale delle Pubbliche Assistenze were worthy of its president, the great sanitary engineer of Spezia, Signor Carlo Verde; of its vice-president, his Excellency Dr. Guido Baccelli; and of the other office-bearers and participants: Dr. Panizza, assessor to the municipality in the Department of Public Hygiene; the Hon. Signor Silvestrelli, whose work in hospital rehabilitation is well known; Professor Aurelio Costanzo, and Major Lombardo, M.D. Certainly the sanitary regeneration of Italy is a question of prime importance for her present and still more for her future, and it is reassuring to find, among the duties she feels imposed on her in celebrating the twenty-fifth anniversary of the consummation of her unity, that that of ministering to the health conditions of her people is not relegated to an inferior post. *Au reste*, the day passed off without untoward incidents of any kind—none of the collisions and violent outbreaks which on similar occasions have filled the hospitals with cases of "cutting and wounding," or worse, having been reported at the "Consolazione" or "San Giacomo."

The Italian Society of Internal Medicine.

The Società Italiana di Medicina Interna will hold its annual meeting this year in Rome from the 14th to the 16th of October. The programme includes two full-dress debates, which, according to the secretary's circular now before me, will turn (1) on Sero-therapy and (2) on the Falling-off of Nutrition in the Human Economy. The first will be introduced by Dr. Pio Foà, Professor of Pathological Anatomy and Bacteriology in the University of Turin, and Dr. E. Maragliano, Professor of Clinical Medicine in the University of Genoa. In the second Dr. Enrico de Renzi, Professor of Clinical Medicine in the Neapolitan School, will lead off the debate. The other items of the agenda paper have much to attract the profession, and those representatives of British schools who may be in Rome about the middle of next month might do worse than look in on this annual field-day of their Italian brethren. All information as to reduction in railway fares and other facilities open to participants at the Congress may be had from the secretary, Professor Lucatello, 40, Via Galata, Genoa.

Baccelli and Virchow.

As I close this letter I am informed, from the Ministry of Public Instruction, that his Excellency Dr. Baccelli has received numerous telegrams from educational institutions and medical schools, Italian and European, participating in the commemoration of the 20th and auguring increased prosperity to the interests, moral and material, for which the absorption of Rome into the Italian kingdom constituted a new departure. The following, of which I give the *ipsissima verba*, comes from a source peculiarly welcome to young Italy in general and young medical Italy in particular:—"Caldissimi auguri di felicità e saluti.—VIRCHOW."

Sept. 21st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Reform of Medical Study.

THE various boards are just now deliberating on the reform of medical study. The present system is due to the late Professor Langer, who was medical adviser to the Ministry for the Home Department. According to these regulations a five years' course is necessary for obtaining a diploma, and during this time the student has to attend classes in anatomy and physiology (one half-year each), medicine and surgery (four half-years), obstetrics and ophthalmology (one half-year). With respect to the examinations, those in zoology, mineralogy, and botany may be passed at any time. After the close of the second year the student is admitted to the so-called first Rigorosum, consisting of practical examinations in anatomy and physiology, and theoretical examinations in anatomy, physiology, physics, and chemistry. The second and third examinations must not be passed before the close of the fifth year, after which time the student, on producing evidence of class attendance, is admitted to the final examinations. The second Rigorosum consists of a practical and a theoretical part, the former comprising the subjects of pathological anatomy and medicine, and the latter those of pathological anatomy, medicine, materia medica, and experimental pathology; there are also included two additional examiners in diseases of children and laryngology, who alternate. The third Rigorosum consists of practical and theoretical examinations in obstetrics, ophthalmology, and surgery, and a theoretical examination in forensic medicine. The lecturers on otology and syphilis alternate as additional examiners. After having passed these examinations, the Faculty grants to the student the degree of M.D. These regulations are obviously antiquated, their principal defect being that no attention is directed to matters of such great importance as public health and bacteriology, examinations in these subjects being open only to men who have already graduated and aspire to the position of a public official. It is now proposed that the examinations in zoology, mineralogy, and botany should be discontinued, but that a thorough knowledge of practical chemistry should be required, an innovation upon which much stress is laid by the boards, for chemistry daily produces new remedies (as many as 282 in the past year), and the practitioner ought to have an idea of their composition. The principal point, however, has reference to clinical instruction, because for a number of years complaints have been made of the imperfect practical knowledge of the students, an evil which is due to the spirit of centralisation prevalent in this country. According to this system, clinical teaching in medicine is limited to three

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clinics, and in surgery to two clinics. No wonder that the old amphitheatres of the General Hospital are overcrowded, and that a space hardly sufficient for 250 persons is occupied by 600 or 700. The boards, therefore, advocate that clinical instruction should be decentralised, that the chief physicians, extraordinary professors, and *docenten* should be allowed to read lectures, and that the students should have more frequent opportunities of seeing clinical cases. It is also recommended that slight operations should be entrusted to surgical students, a system which has already been adopted in the clinic of Professor Wölfler in Prague. An examination in bacteriology ought also to be combined with that in pathological anatomy, and the study of syphilis should be obligatory.

Medical Advertising.

In spite of the endeavours of the Medical Chamber the tribe of advertising practitioners still flourishes, and the newspapers are filled with the announcements of specialists who promise to credulous sufferers "a radical cure for all secret diseases, even the most inveterate, and restoration of lost or impaired sexual vigour." Some of these persons pay to newspapers £100 annually for the daily insertion of their advertisements, but their number has already decreased, and some of them have left Vienna for Budapest, where this abuse has not yet attracted much notice. Against those who continue such dishonourable practices the Medical Chamber will take the most energetic measures, and will specially direct its attention to the undue influence of the lay press in medical matters. This mischief has already advanced to such a degree in Vienna that the lay press has the power of making medical celebrities, and that systematically. Many a young member of the profession has become a person of note in consequence of the exertions of journalists with whom he is acquainted, and even leaders of our school lend themselves to interviews, the substance of which is printed next day for the pretended purpose of popularising medical science. Every day the newspapers mention the return of this or that practitioner after taking a holiday—a notice which is paid for like any other advertisement. It is singular that the Medical Chamber does not restrain a medical man from making such a personal announcement, provided that it is not repeated more than three times; it will act in the interest of the profession by abolishing this concession.

The School of Medicine, University of Vienna.

According to the prospectus for the coming winter session, which has just been issued, 260 classes and courses will be held by 29 ordinary professors, 38 extraordinary professors, and 85 *privat-docenten* and assistants. The details are shown in the following table:—

Subject.	Classes.	Ordinary professors.	Extraordinary professors.	Privat-docenten and assistants.
History of Medicine	2	1	—	—
Anatomy	10	2	2	1
Physiology	12	2	2	1
Pathology	17	2	4	4
Pharmacology	6	1	—	2
Medicine...	62	4	7	26
Surgery	49	2	9	14
Otology	11	2	1	3
Ophthalmology	23	2	2	6
Midwifery	32	4	5	15
Syphilis	18	2	2	9
Mental Diseases	8	2	2	2
Chemistry	9	3	2	1
Veterinary science	1	—	—	1
Totals...	260	29	38	85

Last summer session the school was attended by 2213 students, among whom there were 1480 ordinary, 351 extraordinary, and 382 occasional students.

Cholera in Galicia.

According to official returns 35 cases of cholera, with 20 deaths, occurred between Aug. 23rd and Sept. 20th. During the last week 22 cases, with 10 deaths, have been reported—3 in Berczovica, 14 in Tarnopol, 4 in Wertelka, and 1 in Obelnica; the disease is raging in the districts of Brody and Rohatyn, but in Tarnopol it is limited to the town-gate Podole, which is inhabited by the Jewish population. After the occurrence of a case the relatives sometimes leave their home and settle in other parts of the town, but as this practice throws difficulties in the way of sanitary control an enumeration of all the inhabitants of the above quarter has been ordered. Travellers coming from Russia are subjected to a sanitary inspection in the frontier towns of Brody, Podwoloczyska, or Stojanow, and soldiers who arrive at Vienna from Galicia have to remain five days under supervision.

Sept. 21st.

Obituary.

SURGEON-GENERAL JOHN IRVINE, M.D. ABERD.,

HONORARY PHYSICIAN TO THE QUEEN.

WE much regret to announce the death, on the 21st inst., at his residence, Longridge-road, South Kensington, of Surgeon-General J. Irvine, M.D., Honorary Physician to the Queen, late of the Army Medical Staff. Dr. Irvine entered the army as an assistant surgeon in 1849. He saw a good deal of active service during the Indian Mutiny, having been with Havelock's column in the Royal Artillery (Maude's division) and present in several actions. From November, 1857, to March, 1858, he was with General Outram's force, and was present at the siege and capture of Lucknow by Lord Clyde, the relief of which has just been celebrated by the annual anniversary dinner. He also received a medal and clasp for service in Burmah in 1886. The late officer acted as head of the sanitary branch of the Army Medical Department under the Director-Generalships of Sir William Muir and Sir T. Crawford; he went to Egypt as Principal Medical Officer of the force in 1883, and was present at Cairo during the last cholera epidemic in that country; he subsequently went to Madras as Principal Medical Officer of Her Majesty's forces in that Presidency, and retired from the service in 1888. Dr. Irvine was promoted to the rank of Deputy-Surgeon-General in 1876 and to that of Surgeon-General in 1883; and in 1885 he was appointed Honorary Physician to the Queen. The late Surgeon-General Irvine was a very popular officer, and his death will be much regretted by a wide circle of friends and acquaintances. He was sixty-seven years of age at the time of his death.

LEONARD WILLIAM BURTON, L.R.C.P. LOND., M.R.C.S. ENG.

ONE of the special risks attendant on medical practice has just been made apparent by the lamented death of Mr. L. W. Burton of Burton-on-Trent. This gentleman, who was a successful student at St. Thomas's Hospital and became qualified in 1886, had almost ever since been in practice with his uncle, Mr. Perks of Burton, where he made many friends and gained the confidence and esteem of his patients in all ranks of life. With a well-established position among the practitioners of the town and the additional opportunities for useful work afforded by his connexion with the Infirmary, where he was one of the assistant surgeons, everything seemed to indicate a prosperous career, but these expectations were not to be realised. While assisting at an operation on Aug. 21st he had the misfortune to wound his thumb, and septicæmia ensued, terminating fatally on Sept. 6th. The funeral took place on Sept. 9th in presence of a very large and sympathetic company, the officiating clergy being the Vicar of Burton and the Vicar of St. Paul's Church. Mr. Burton, who was only in his thirty-sixth year, has left many surviving relatives to deplore his untimely and tragic decease.

VACCINATION GRANT.—Mr. Fredk. W. Lewis, Public Vaccinator of the No. 1 District of the Llandovery Union, has received the Government grant for efficient vaccination for the eighth time.

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MEDICAL TRIAL.

SERIOUS CHARGE AGAINST A MEDICAL MAN.

MR. JOHN MINTER, the borough coroner for Folkestone, formally opened an inquiry on Thursday, Sept. 19th, touching the death of Gertrude Fanny Fletcher, who died in London on Sept 9th. Having briefly referred to the causes which led to the inquiry being held Mr. Minter adjourned the proceedings until Saturday, the 21st inst.

On Saturday, when the inquiry was resumed, Mr. Geoghegan and Mr. Bruce, instructed by Mr. Arthur Vernon, appeared for Dr. Wight, and Mr. Hempson, with Dr. A. G. Bateman, on behalf of the Medical Defence Union, watched the proceedings for Mr. Whitehead and Mr. Hannah. Mr. W. Lenn Walter, solicitor, represented Mr. Fletcher, the husband of the deceased.

The brother of the deceased woman having given evidence identifying the body,

Mary Anne Hawken was called and sworn. She said: I am a nurse in the habit of attending confinements. I am a widow, have had eleven children, and have had large experience in attending confinements. I was engaged to attend the deceased in her confinement. I took up my residence to attend her on Aug. 31st. On Saturday, Sept. 7th, Dr. Wight called in the forenoon part of the day. Mrs. Fletcher went to bed at night between six and seven. Dr. Wight was sent for later in the evening because she was rather worse and pains were coming on. Dr. Wight could not attend, and Mr. Whitehead came about eleven o'clock. He remained till about five o'clock in the morning. He examined the deceased and said her labour was very slow and he would send her a couple of pills to cause her to sleep. Mr. Whitehead came again next morning about ten and again examined the deceased. He said labour had just set in and that he would go round and see Dr. Wight and send him. Dr. Wight came between twelve and one, and he examined the deceased. He said when he left he would come in again in the afternoon. I examined the deceased myself, and in my judgment everything was right for an easy labour. At half-past four I sent for Dr. Wight. Dr. Wight arrived about six, accompanied by his son. He went into the bedroom where the deceased was, and sent me down to the drawing-room to his son for the chloroform. The son returned with me to the bedroom. Dr. Wight asked for two jugs of hot water. I left the room and returned with one. The chloroform had then been administered and Mrs. Fletcher had gone off. Dr. Wight attempted to use the forceps, inserted one blade and tried to insert the other. They continually came back. After some little time I said, "What is the matter with the instruments—won't they lock?" He made no answer. After a short time he tried to press the baby back into the body with his hand; I asked him what he was trying to do, and he replied that there was an obstruction between the baby's head and the bones, and part of the afterbirth was in the way. I said to him, "I can't make that out." He said that the child was so twisted that he wanted to get at the feet. I said, "That you will never do." He was about half an hour attempting to force the forceps. He again applied the instruments, after trying what he could do to turn the child. They did not lodge on that occasion. He then let go the instruments on to the bed. He tried to remove the obstruction with his hand. When he dropped the instruments he said to his son, "Go for Whitehead." He seemed to me to be very stupid, as though he had just recovered from a drinking bout. Mr. Whitehead came about ten minutes or a quarter of an hour after. When Mr. Whitehead arrived he said, "Well, nurse, what's the matter?" I said, "I don't know, doctor; something serious, I am afraid." Dr. Wight's son said to Mr. Whitehead, "She is strong. We had something to do to get her off. She has had six ounces of chloroform already." Mr. Whitehead examined the deceased in the ordinary way, and I saw two pieces of what I believed to be the neck of the womb protruding from the parts. Mr. Whitehead took them in his fingers and said, "What's this?" Dr. Wight said, "That has been the obstruction—part of the afterbirth between the baby's head and the bone." Mr. Whitehead said, "This is not a bit of the afterbirth," and he ran his fingers through them. They then both left the room and went into an adjoining room. They returned together in a few minutes. Mr. Hannah was sent for and arrived in about ten minutes. When he came Dr. Wight and Mr. Whitehead were present. I could not hear what Mr. Hannah said. I left the room for about ten minutes and on my return I went for a candle. Mr. Whitehead said, "Come, nurse, where's your scissors and thread?" The baby was born and on the bed. I took the baby up and Mr. Whitehead severed the cord. The afterbirth came in a very few minutes. The afterbirth, which I examined, was perfect. Mr. Whitehead gave me directions as to attending the deceased during the night, but nothing as to cleansing. I said to Mr. Whitehead, "I'll attend to Mrs. Fletcher." He replied, "Don't you do anything until Dr. Wight and myself come in the morning." He did not say why. I said, "I must do something in the way of changing her and cleaning up some of this. Don't you think I had better use a syringe?" He said she was to remain as she was until Dr. Wight or himself returned in the morning. Dr. Whitehead came on Monday morning about eight or nine o'clock. He examined the deceased and said I was not to cleanse her. He came again about five o'clock in the afternoon. Mr. Hannah came in on Monday about two o'clock. When Mr. Whitehead came in the afternoon he did not give me any directions. Dr. Griffith came just after midnight on Sunday night. When he arrived Mrs. Fletcher was very ill. She died on Monday night between eight and nine. Mr. Whitehead was in the room when she died. Just previous to her death I left her for a few moments to attend to the child. In my absence she got out of bed on to the floor. Mr. Whitehead was downstairs. He returned with Mr. Fletcher, and they took Mrs. Fletcher up and laid her on the bed. Mr. Whitehead said, "Oh, my God, that's her womb on the floor," and he put it back. She was quite cold below her knees at two o'clock. After she died I said to Mr. Whitehead, "This is a very serious case," and he said, "Now, nurse, now, nurse." Mr. Fletcher said, "Nurse is quite right." I said to Mr. Whitehead, "If I am not a witness against the man in this world I shall be in the next."

By Mr. Geoghegan: Dr. Wight appeared dazed and stupid, and this is my reason for thinking he was recovering from a drunken bout.

John Henry Fletcher, the husband of the deceased, in the course of his evidence, said he told Mr. Whitehead he did not like the appearance of Dr. Wight, and asked him to take the case up. Mr. Whitehead said he did not wish to take the case out of Dr. Wight's hands. He went to Mr. Hannah, and he declined on the same grounds. He then went to see Dr. Wight and told him he desired further advice. Dr. Wight mentioned the name of Dr. Griffith, and directed Mr. Fletcher to go to his surgery for the address. He requested an audience with Dr. Wight later through the speaking-tube. He declined to grant it; he said he had done with the case, or words to that effect. "You have got Whitehead—keep him." On the arrival of Dr. Griffith he told witness his wife was in a very critical state. After his wife's death he (Mr. Fletcher) desired to have her body examined before interment, and called on Dr. Wight and gave him notice of this intention. Dr. Wight said, in effect, that he did not hold himself responsible for the deceased's death. Dr. Wight said Mr. Whitehead had ruptured her. Dr. Wight said he should not come to Folkestone, and he knew of no one at Folkestone to represent him. He (Mr. Fletcher) went to the Inspector of Police for the district in London and made a communication to him of the circumstances previous to the body being conveyed to Folkestone.

By Mr. Geoghegan: Dr. Wight appeared in a dazed and confused condition.

In reply to questions by the jury Mr. Geoghegan said Dr. Wight was at home seriously ill, and had arranged with Mr. Whitehead to take his night work.

Mrs. Hawken, recalled, was asked by Mr. Hempson if Mr. Whitehead at any part of the case used the instruments. She replied, "He did not."

Florence Fletcher, sister of Mr. Fletcher, said she was with her sister-in-law on the Saturday, and was in the drawing-room when Dr. Wight and his son came.

By Mr. Geoghegan: Dr. Wight appeared to be dazed and stupid, and in my opinion he was the worse for drink.

Charles Capon, a chemist, and Nelson Perry, a bricklayer, gave evidence as to Dr. Wight appearing in a dazed and stupefied condition on Sunday night, Sept. 8th.

Mr. Henry E. Whitehead was called and detailed his connexion with the case. He gave evidence as to breaking the waters. "I simply broke the membranes," he said, "and did not rupture anything. I simply did what is done in every confinement." This was on Saturday.

By the Coroner: You heard the nurse's evidence.—Yes. Did you say when you took the pieces in your fingers, "What is this?"—I cannot remember. I cannot say whether her evidence is true or not. Dr. Wight was excited and nervous.

By Mr. Geoghegan: In the spring of this year Dr. Wight was laid up; he had a severe attack of influenza, followed by insomnia, and he had been taking large quantities of chloral and bromide. That would make a man in a dazed and stupid condition?—Yes. And he had asked you to take his night work?—We had a constant arrangement, not necessarily for night work. His articulation was thoroughly clear. He did not smell of drink. Anything of the nature of chloral or morphia would place a man in much the same position as one in drink.

By the Coroner: The chloral has a stupefying effect on a person. Do you think a man in that state ought to attend a confinement?

Mr. Geoghegan objected to the question. Witness was there to show that Dr. Wight was sober, but suffering from an illness that might be mistaken for drunkenness. Could a man in such a state distinguish from right and wrong?

The Witness: Chloral has a thoroughly deteriorating effect upon the brain.

Mr. Frederick Richard Hannah said he felt it his duty after making an examination to call the husband's attention to the serious and critical condition of his wife. The bowels protruded through a rent which was about two inches in length in the posterior wall of the vagina. The rent must have been caused by some violence.

By Mr. Geoghegan: I knew that Dr. Wight had been very ill and should not have been at work. A man suffering from an overdose of choral and bromide would show the same symptoms as he would in the case of alcohol.

Dr. W. S. A. Griffith said: I was called by Mr. Fletcher at midnight and arrived about 1 o'clock on Monday morning. Mr. Whitehead was there to meet me, and he explained to me the nature of the case, and asked my opinion as to what could be done. I examined Mrs. Fletcher and satisfied myself of the correctness of his statements. The bowels had been carefully replaced, and I advised that nothing further could be done unless she rallied. She was then in a very feeble condition. I was called again on Monday evening and arrived just after her death.

By Mr. Geoghegan: Lacerations of the same parts may occur spontaneously, but I do not think this was so in this case.

By the Coroner: Had the instruments been used skilfully the laceration should not have taken place. I should like to add that I am of opinion, from the medical evidence that has been given, that the child's head remaining high up so long made the laceration more easy than it would otherwise have been.

The proceedings were then adjourned till Tuesday, Sept. 24th, Mr. Geoghegan being again assisted by his junior, Mr. J. A. Bruce.

The evidence taken on the preceding Saturday being read, Mr. Whitehead desired to make a correction. He did not state that the womb had fallen on the floor. He did not pick up anything from the floor; but on putting Mrs. Fletcher back to bed he replaced a portion of the protruding bowel.

Mr. Dobbs, called, said that at the request of Mr. Fletcher he attended at Folkestone Cemetery and examined the body of Mrs. Fletcher, and saw some sewing of the body which he could not account for.

The Coroner stated that the sewing was done after death.

The Witness: In company with Dr. Barry I made a thorough post-mortem examination on Sept. 19th. I found the body in an advanced state of decomposition. The abdomen was considerably distended and there was bruising and laceration of the external genitals. The vulva was sewn up. The perineum was ruptured. Between the stitches there were small pieces of bowel protruding. That was externally. Internally all the organs were soft and decomposing. The cervix was swollen, congested, and ragged-looking. The posterior lip was almost completely torn off. The peritoneum called the retro-uterine pouch was torn squarely off the back of the uterus, making a lateral slit through which three fingers could be passed. Passing through this slit into the vagina was bowel to the length of 3 ft. 6 in. In the anterior wall of the rectum was a lacerated wound 6 in. long.

Mr. Barrett gave similar testimony. He said: The perineum was ruptured extensively, leaving only a ring formed by the sphincters.

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Behind the womb there was a slit in the peritoneum connecting with the vagina. The body of the uterus was large, soft, and flabby, about eight inches in length. Inside the surface was rough, and there were several small blood clots. The site where the placenta had been detached was easily discerned. The neck of the uterus was swollen and ragged-looking, the posterior lip having been almost completely torn off. At the back of the uterus above the cervix the peritoneum was torn off transversely. The anterior wall of the rectum was split up to the extent of about six inches. The body of the uterus was perfectly fixed with its ordinary ligaments in its natural position.

The Coroner intimated that this would finish the evidence, and remarked that he thought it fair to Mr. Wight not to call him as a witness. Mr. Geoghegan, however, decided that his client should be put into the witness-box, and he was examined by Mr. Bruce.

Dr. George Wight said: I attended Mrs. Fletcher on the Saturday, and I had seen twenty or thirty patients on that day, visiting them at their homes. On Sunday morning Mr. Whitehead came to me and made a report of the condition of the deceased. He said she was going on slowly, but that he had ruptured the membranes. On the afternoon of Sunday I went home at two o'clock, took a strong dose of chloral, and lay down on my bed. I had been ill since Feb. 22nd, suffering from the after-effects of influenza, insomnia, and loss of appetite. I had been twice away—once to Eastbourne and once to Brighton. When I attended Mrs. Fletcher I inserted the lower blade of the forceps and tried to put on the upper blade, but failed. In withdrawing it I think I must have ruptured the vagina. I had a previous attack of influenza in 1891. I have had it severely on two occasions. On Saturday and Sunday I was unable to take my usual food, chiefly living on milk. I have been in practice thirty years, and during that time I have attended about 5000 cases of confinement. This is the only case in which I have had unusual difficulty, although I have had difficult cases. I have never had a case before that required a judicial inquiry.

Did you use all competent skill on this occasion?—I did my best. I was suffering on the Saturday night from vertigo. I took a strong dose at 2 P.M. on Sunday of chloral bromide and digitalis.

By the Coroner: Will you tell the jury why you declined to go on with the case when Mr. Fletcher requested you on the Sunday?—I considered Mr. Whitehead had taken my place.

But you were engaged for the case?—Yes; but Mr. Fletcher preferred Mr. Whitehead. I greatly regretted that I did not attend.

By Mr. Geoghegan: I only had a little whisky and water since noon on Saturday.

Mr. Geoghegan then, by permission of the coroner, addressed the jury.

The Coroner, in a lengthy summing-up, took occasion to express his surprise that the inspector of police in London had not instituted inquiries, and also that the six or seven medical men in Folkestone who had been notified of the matter had not communicated with him.

The jury returned a verdict of "Manslaughter" against Dr. Wight, whom the coroner admitted to bail. Dr. Wight was on Wednesday, the 25th, formally charged at the Clerkenwell Police-court and remanded. The magistrate also admitted him to bail.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE. The following candidates have passed the examination for degrees in Medicine and Surgery at the College of Medicine, Newcastle-upon-Tyne, being the second examination for the degree of Bachelor in Medicine:—

Anatomy, Physiology, and Materia Medica.—First-class Honours: George Grey Turner, College of Medicine, Newcastle-upon-Tyne; Edwin Gilbert Emerson Arnold, M.R.C.S., L.R.C.P., St. Thomas's Hospital. *Second-class Honours:* Vincent Burrow, St. Mary's Hospital; Robert Fletcher Moorshead, Bristol Medical School; Thomas Streatfeild, M.R.C.S., L.R.C.P., University College Hospital, London; and Henry Coxon Coxon, College of Medicine, Newcastle-upon-Tyne. *Pass List:* Joseph Ellis Baker and Frank Antbony Cooke, College of Medicine, Newcastle-upon-Tyne; William Wilkie Deans, Yorkshire College, Leeds; Charles Edward Fenn, King's College; John Maxwell Gover and Charles Johnson, College of Medicine, Newcastle-upon-Tyne; Ralph Albert Rogers Lankester, University College Hospital, London; Walter Herbert Lister, William Byron Milbanke, and George Whitson Middlemiss, College of Medicine, Newcastle-upon-Tyne; Francis Pope, Mason College, Birmingham; Horace Clare Regnart, Guy's Hospital; and Bertram Crossfield Stevens, St. Thomas's Hospital.

PRESENTATION.—Mr. David S. Park, F.R.C.S., L.R.C.P. Edin., of Houghton-le-Spring, Durham, has been the recipient of a valuable scarf-pin from the members of the ambulance class in that town, in appreciation of his services to them.

SMALL-POX AT SHEPTON MALLET.—An outbreak of small-pox has occurred at Shepton Mallet workhouse. The medical officer of health (Mr. J. T. Hyatt) reported to the guardians at their last meeting that all the cases in the infectious hospital were progressing favourably. One fresh case had been admitted from outside the workhouse on Sept. 17th, and on the 21st the attendant had developed the disease. The total number of cases at present in the hospital was five. The inhabitants of West Shepton have sent a petition to the guardians complaining of the close proximity of the infectious hospital to the roadway and dwellings.

AT the Norwich Church Congress Canon Venables will preside over a meeting of the Funeral Reform Association on Monday, Oct. 7th, at 4 P.M., when papers will be read on Earth-to-Earth Burial, State-regulated and Free Burial, and Child Insurance. Tickets can be had on application to the Honorary Secretary, Westow Vicarage, York. The meeting is to be held at the Maid's Head Hotel.

THE JENNER RELICS.—A subscription has been opened in Bristol to provide for the purchase and retention in Bristol of the celebrated collection of relics belonging to Jenner in connexion with his introduction of vaccination, the idea of which he is said to have conceived in 1780. The collection at present belongs to Mr. Frederick Mockler of Wotton-under-Edge, and was exhibited by him at the Bristol Exhibition in 1893, and also more recently in London, where it attracted a considerable amount of attention. Earl Fitzhardinge heads the subscription list with £10 10*s*. This seems a very opportune time for purchasing this interesting collection, as the centenary of the discovery of vaccination is in 1896, and the Russian National Health Society has already announced its intention of celebrating the event.

A NEW HYDRAULIC STEAM LIFEBOAT.—It is a subject for general satisfaction that the service of steam power has at last been utilised with a fair promise of success in the navigation of coast lifeboats. A full description of the latest example of her class, the *President van Heel*, just built on the Thames, has been given in the daily press. It is therefore superfluous for us to quote in detail the evidences of persevering ingenuity and of adaptation displayed in her structure, which have so far been fully confirmed by her official trials. As yet the number of steam lifeboats belonging to this or other countries is very small. For obvious reasons the construction of a boat uniting in herself the qualities of strength and buoyance in the degree possessed by the type of craft used hitherto, but worked by steam, is a work of no ordinary difficulty. It is to be hoped that the seagoing efficiency apparent on a fair-weather trial will stand the severer test of storm experience. If so, we may congratulate ourselves upon a new departure of the most encouraging augury. No longer dependent upon the uncertain aid of steam tugs or the muscular power of human arms, however willing, the means of rescue at sea must become so much the more efficient and certain in their issue. To the rescued the consequent saving of time may make all the difference between illness or death and a rapid restoration of health and energy.

CASE OF SUICIDE AT THE MIDDLESEX HOSPITAL.—On Wednesday, Sept. 25th, at the coroner's court, Paddington, before Dr. Danford Thomas, an inquiry was held into the causes of the death of Alfred Brown, late porter of St. Saviour's Hospital, Osnaburgh-street, who committed suicide by jumping from the window of a ward on the third floor on Friday at Middlesex Hospital, where he was admitted last Thursday, Sept. 19th. He succumbed to his injuries on Saturday, Sept. 21st. Eliza Crofts, in charge of St. Saviour's Hospital, said the deceased was their porter. He seemed very steady, but had lately been low and unsettled. Dr. Wm. Wanklyn, the house physician, said the patient was admitted for general debility and muscular tremors. In his opinion he was suffering from an early stage of general paralysis of the insane. He saw him on the morning of the occurrence, but had not the slightest idea he would do anything, although he suspected something was wrong mentally. He saw him after the fall when he was quite sensible. He died of shock and collapse.—Ellen King, nurse in Forbes Ward, Middlesex Hospital, said she was in the ward a little after twelve, and had just been dressing the patient's foot. She went down the ward to take something away, and when she came back from the lavatory she saw him get out of bed and make for the window, which was half open. He put his foot on the chair, and opened the window wide. She ran up the ward, and got hold of his shoulder; he was half out, and in his nightshirt. She tried to hold him, but he got out head first, breaking the window. She put her arm out, and held him as long as she could; one of the patients helped her. Then he dropped fifty feet to the ground.—John Pullenger, porter at Middlesex Hospital, deposed to seeing the patient fall.—The Coroner having summed up, the jury returned a verdict of "Suicide while of unsound mind."—Dr. Wanklyn expressed his sympathy with the relatives on behalf of the Middlesex Hospital.

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FOOTBALL CASUALTIES.—During a game at Durham on the 14th inst. a Bede College student fractured his femur.—On Saturday last, in a match between the Preston North End and Celtic teams at Preston, the North End centre forward sustained a compound fracture of the kneecap, and was removed to the infirmary.

LITERARY INTELLIGENCE.—The coming publishing season promises to be a prolific one. Messrs. Baillière, Tindall, and Cox announce as ready on Oct. 1st a new Manual of "Physiology," by Professor Stewart, with coloured plates; a new edition of Peddie's "Physics"; new works by Dr. John F. H. Broadbent on "Adherent Pericardium," by Professor Max Knies on "The Relations of the Eye to Diseases of the Body," and by Dr. Sachs on "The Nervous Diseases of Children." They will also publish an authorised translation of Professor Haab's well-known "Atlas of Ophthalmoscopy," with sixty-four coloured plates, by Mr. Ernest Clarke, and a translation of Professor Kaposi's classic on "Diseases of the Skin."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BERESFORD, R., M.D. Glasg., L.R.C.P. Lond., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer by the Oswestry Rural District Council.

BRUNTON, T. L., M.D., C.M. Edin., B. and D.Sc., F.R.C.P. Lond., has been appointed Physician to the St. Bartholomew's Hospital.

CAINE, N., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Infirmary for Children, Liverpool.

COSENS, F.R.S., L.R.C.P. Lond., M.R.C.S., been appointed Medical Officer to the principal Lodge of Oddfellows in Dorchester.

FOX, J. A., L.R.C.P. Lond., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.S.A. Lond., has been appointed Medical Officer and Public Vaccinator for the No. 1 District and Workhouse, Penzance Union, vice A. W. T. Steer, resigned.

FREER, J. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Rugeley.

FYFFE, W. KINGTON, M.B., M.R.C.P., has been appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

GARRETT, J. H., M.D. Durh., B.S., D.P.H. Camb., has been reappointed Medical Officer of Health for the Borough of Cheltenham.

GIBVAN, DAVID W., M.B., M.S. Glasg., has been appointed Medical Officer for the Cardiff South District of the Cardiff Union.

HELBY, E. H., M.R.C.S., L.R.C.P., D.P.H., has been appointed Resident Medical Officer to the Croydon Borough Hospital.

HERRINGHAM, W. P., M.D. Oxon, F.R.C.P. Lond., M.R.C.S., has been appointed Assistant Physician to St. Bartholomew's Hospital.

HIGGINSON, GEO., B.A. Camb., L.S.A., has been appointed Medical Officer to the Workhouse and the No. 1 Sanitary District of the Church Stretton Union.

HOYLE, J., M.B., C.M. Edin., has been reappointed Medical Officer for the Soyland Urban District.

LEIGH, ALBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Malpas Sanitary District of the Whitchurch Union, Salop.

MCCOMBE, R., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Bassingbourne District of the Royston Union.

MACDONALD, JAS., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Carlisle Rural Sanitary District, vice Hall, deceased.

MCDOUGALL, ALEX. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Parish of Birmingham, vice Barber, resigned.

MONTSERRAT, K. W., M.B., C.M., has been appointed House Surgeon to the General Hospital, Great Yarmouth.

MOORE, T., M.R.C.S., L.M., has been appointed Medical Officer for the Hazel Grove, Handforth, and Brennington Districts of the Stockport Union.

NESBITT, R., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer of Health by the Sutton-in-Ashfield Urban District Council.

PARE, J. W., M.D., C.M. Edin., L.D.S., has been appointed Lecturer on Dental Anatomy and Physiology to the National Dental Hospital, vice Sidney Spokes, resigned.

REYNOLDS, H. D., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer for the Pembroke Urban District.

SANDFORD, H. V., L.R.C.P. Lond., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the combined Rural Districts of Bromyard, Hereford, Ledbury, Leominster, and Weobley.

SELLS, C. J., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Worplesdon, the Guildford Union.

SKIPWORTH, H., L.R.C.P., L.M. Irel., M.R.C.S., has been reappointed Medical Officer of Health for the Quorndon Urban Sanitary District.

SWAILES, THOS., M.D. St. And., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health, for South Crosland.

TYLECOTE, J. H. L., M.B., B.Ch. Vict., has been appointed House Surgeon to the Lancaster Infirmary.

WALKER, ALLAN, M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Weetslade Urban Sanitary District.

WARD, FRANCIS, M.B., C.M. Edin., has been appointed Second House Surgeon to the East Suffolk Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Assistant Physician, to see out-patients.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Assistant Resident Medical Officer. Salary £120 per annum.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer, for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

PARISH OF ST. MARY'S, Islington, N.—Resident Assistant Medical Officer and Dispenser at the Workhouse and Infirmary, St. John's-road, Upper Holloway. Salary £80 per annum, with rations, apartments, and washing, or allowance in lieu of same. Applications to the Clerk, Guardians' Offices, St. John's-road, Upper Holloway, N.

PETERBOROUGH INFIRMARY AND DISPENSARY.—A Physician, a Surgeon, and an Assistant Physician.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary, £80 per annum, with board, lodging, and washing.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

SWANSEA HOSPITAL.—House Physician, for one year. Salary £50 per annum, with board, lodging, and laundress.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon. Salary £50 per annum, with board, lodging on the premises, and washing. Applications to the Hon. Sec., 25, Lord-street, Liverpool.

Births, Marriages and Deaths.

BIRTHS.

ADDISON.—On Sept. 22nd, at Westbourne, Tenterden, Kent, the wife of W. B. Addison, B.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., of a son.

BENJAMIN.—On Sept. 17th, at The Old Hall, Dorrington, near Shrewsbury, the wife of J. K. Kinsman Benjamin, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

EMERSON.—On Sept. 23rd, at Melton House, Belgrave, Leicester, the wife of D. N. Bomford Emerson, M.B. Dubl., of a daughter.

HAMERTON.—On Sept. 4th, at Southampton-street, Covent-garden, the wife of G. A. Hamerton, F.R.C.S. Eng., of a son.

LANGRAN.—On Sept. 19th, at The Lawn, Axminster, Devon, the wife of W. Langran, L.R.C.P. Edin., of a daughter.

POWER.—On Sept. 22nd, at Hoe Park-terrace, Plymouth, the wife of Surgeon-Major E. R. Power, Army Medical Staff, of a daughter.

VERNON.—On Sept. 18th, at Drayton, Boscombe, the wife of Arthur Heygate Vernon, F.R.C.S., of a daughter.

MARRIAGES.

DIXON—NADIN.—On Sept. 18th, at St. James's, Barton-under-Needwood, Thomas Dixon, M.R.C.S., L.R.C.P., of Rocleshall, Staffs, to Emilie Maude Duclos, third daughter of the late N. Guy Nadin, of Stapenhill, near Burton-on-Trent.

ROWSE—HADDOW.—On Sept. 21st, at the Wesleyan Church, Barry-road, Camberwell, S.E., Edward Leopold Rowse, L.R.C.P. Lond., M.R.C.S., of Putney, to Elizabeth (Grace), second daughter of Nathaniel Haddow, of East Dulwich.

SPRIGGE—MOSS.—On Sept. 16th, at St. James's Cathedral, Toronto, Samuel Squire Sprigge, M.B., B.S. Cantab., eldest son of the late Squire Sprigge, of Watton, Norfolk, to Mary Ada Beatrice Moss, second daughter of Charles Moss, Q.C., of Toronto, Canada.

WEBB—CLARK.—On Sept. 25th, at the Parish Church, Cheadle, Cheshire, by the Rev. F. A. Macdona, M.A., rector, assisted by the Rev. S. Gauden, Rector of Coal Island, County Tyrone, Frank Webb, L.R.C.P., M.R.C.S., Newcastle, Staffordshire, son of James Webb, Brooklands, Cheadle, to Annie Louisa, second daughter of the late Ledlie Clark and Mrs. Clark, Park House, Cheadle, Cheshire.

DEATHS.

BAILLIE.—On Sept. 19th, at Gloucester-walk, Campden-hill, Kensington, W., George Baillie, M.D., of Holmwood, Uddingston, formerly Deputy-Inspector-General of Hospitals of H.M. Madras Medical Service, aged 70 years.

IRVINE.—On Sept. 21st, at Longridge-road, South Kensington, Surgeon-General John Irvine, M.D., Honorary Physician to the Queen.

STACEY.—On Aug. 21st, at Durban, Port Natal, William Henry Waterhouse Stacey, M.R.C.S. Eng., L.R.C.P. Edin., recently of Grimston, King's Lynn, in his 33rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 26th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 20	30·37	N.E.	55	52	106	67	48	...	Bright
,, 21	30·40	S.E.	55	52	102	65	49	...	Cloudy
,, 22	30·31	E.	61	57	109	71	48	...	Bright
,, 23	30·24	S.E.	53	52	96	75	51	...	Foggy
,, 24	30·21	S.E.	63	60	104	83	53	...	Hazy
,, 25	30·18	S.W.	65	63	118	82	62	...	Hazy
,, 26	30·28	S.E.	66	63	108	80	61	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

"COMMON-SENSE HOMŒOPATHY."

DR. J. M. MOORE has sent to the *St. Helens Newspaper and Advertiser* a copy of his book, showing that homœopathy is the only scientific treatment by drugs. The correspondent who sends us the cutting seems delighted with the compliment expressed in the review and with the system too. We must not blame him too severely. Homœopathy shows best in newspapers, like other vaunted systems.

Mr. Angus E. Kennedy.—Our correspondent is right. There is no way of preventing such gross quackery "while patients allow themselves to be so gulled." The number of fools, if not so great as in Mr. Carlyle's time, is still large.

MEDICAL EXAMINATIONS IN PARIS.

To the Editors of THE LANCET.

SIRS,—I wish to know what fees have to be paid by a medical student at Paris for examinations and what other charges are incurred, and whether it is compulsory to pass an examination in arts; if so, of what nature this examination is. I should feel very greatly obliged if you could either give me the information I seek or refer me to some one from whom I could obtain accurate information.

I am, Sirs, yours truly,

Sept. 24th, 1895. A STUDENT.

INDIAN MEDICAL SERVICE.

Rubicon.—We cannot within reasonable limits reply to all our correspondent's questions, but will do our best. The Indian Medical Department is a good service. Entrance into it is by competitive examination. The difficulty of securing an appointment will naturally depend upon the number of vacancies to be filled and the number of candidates competing for them at the time. The examination is a good one; but a properly educated man of average abilities would, we think, have a fair chance of success. It is, of course, impossible to say whether the climate would agree with him or not. An officer can with prudence live upon his pay. The depreciation of the rupee is owing to the present rate of exchange, and affects those who have to remit money home, not those who spend their pay in the country. Those who succeed in getting civil appointments and civil surgeoncies at Indian stations have good professional opportunities and advantages. Young officers have generally at first to do military duty for a time, and they can, if they like, remain in military employ. If our correspondent has no definite opening in this country, and desires to enter one of the services, we think the Indian Medical Service offers many advantages. For the terms and other particulars our correspondent is referred to the Students' Number of THE LANCET, published on Sept. 7th, and to the Military Secretary at the India Office, Whitehall.

G. P. K. G. writes: "In reply to the inquiry of 'Horseflesh,' made in THE LANCET of Sept. 21st, I do not think he could find a more useful work than that written by Captain M. Horace Hayes. It is entitled, 'Soundness and Age of Horses,' and is published by Messrs. W. Thacker and Co., 87, Newgate-street, E.C. The price of the volume is, I believe, 8*s.* 6*d.*"—*Mr. R. Emmett* (Portsmouth) strongly recommends "'Horses and Stables,' by Lieut.-General Sir F. FitzWygram, Bart., published by Messrs. Longmans, Green, and Co., price 5*s.*, as likely to suit the requirements of 'Horseflesh.'" Of this book also *Medicus*—who, by the way, gives its price as 2*s.* 6*d.*—avers: "It gives everything anyone wants to know on the subject."

Accounts.—We know of no legal sanction for such charges. A creditor can enforce payment of his debt when it is due. If he allows time to elapse before doing so, it is not the fault of the law.

Anxious should consult a qualified medical practitioner. This course should have been followed at first.

"UNITED BROTHERS-IN-LAW AND MEDICAL ADVERTISEMENT."

To the Editors of THE LANCET.

SIRS,—With regard to a newspaper paragraph referring to me which you reprint in last week's issue of THE LANCET kindly allow me to state: 1. That it appeared absolutely without my knowledge. I in no way knew of or connived at its production nor inspired either its matter or manner. 2. That on its being brought to me by a friend the next morning I immediately went to the editor of the paper, pointed out to him the impropriety, and asked him to insert a disclaimer stating that the paragraph was published without my knowlege or consent. He was quite courteous, but declined to do this, standing upon his right to publish news about anybody or anything at his own discretion in the interests of his paper and its readers. He also pointed out to me what was quite plain—that few would believe a disclaimer; most would look upon it as a manifest artifice and a finish to the advertisement. Now, unless I had sent a town crier round with his bell, I do not quite know how I could do more in this not very important matter. I sincerely hoped that the unpleasant incident was closed, and the paragraph and all its faults dead and forgotten, until I saw THE LANCET yesterday.

I am obliged to your correspondent whose zeal for the honour of the profession spotted the offence so promptly, and whose sole object was, I am sure, to afford me through you this opportunity of setting myself right with my brethren, and remain, Sirs,

Yours faithfully,

Beachfarm-rd., Southsea, Sept. 25th, 1895. THOS. H. LEADBEATER.

*** We do not see what more Mr. Leadbeater could have done and we have pleasure in publishing his letter.—ED. L.

DIPLOMAS IN PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—Can you kindly give me any information as to which is the best degree in public health or sanitary science for a would-be candidate for the post of medical officer of health to obtain before offering himself for election? The D.P.H. Camb., seems to be completely discounted by rural sanitary authorities, if one may judge by the treatment meted out to the deluded diplomates who travelled from the four quarters of the kingdom to the meeting of a certain rural district council. Eleven candidates were present, nine held the D.P.H. Camb., and a tenth had previous experience of the work, but the eleventh—unqualified in sanitation—was elected. How are the rejected ones to improve their chances for the future? I am, Sirs, yours obediently,

Sept. 25th, 1895. CANTAB.

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MEDICAL MEN AND ADVERTISING DENTISTS.

IT is very remarkable to see in the newspapers puffing testimonials to advertising dentists written by medical men. There are two such testimonials in the *Deal and Walmer and Sandwich Mercury*. How is the profession of dentistry to be raised if members of the profession of medicine sanction such a system of advertising as they would be ashamed to use in their own case?

U. C. H.—The usual charge for a practice or part of one is two years' purchase. Our correspondent can make the calculation for himself. His long services as an assistant may entitle him to special consideration.

T. B. G.—We never recommend individual practitioners. Our correspondent should consult his own medical man.

LAMP ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—At the present moment when inquiries are being made as to the cause of lamp accidents I think my experience may help a little. I have now been accustomed to the use of lamps for over thirty years and have never had any serious accident. I have used both cheap and dear lamps with equal results, but I am convinced that had I always used a cheap oil with a low flashing point I should have had more than one serious accident, consequently I am driven to the conclusion that the danger lies in the oil and not the lamp.

For the benefit of your readers I give notes of the following occurrences. A glass lamp was taken upstairs to warm a bedroom. After a time the house was found to be full of smoke. On investigation the wick of the lamp was found to have slipped down into the oil chamber, where it lay smouldering and sending out dense volumes of smoke. The lamp was carried into a bath-room and placed in a bath full of water. A large glass duplex lamp hanging in my surgery fell from its fastenings and was, of course, completely smashed. The lamp went out and no harm was done except a horrid mess. Going into my surgery one morning I found a lamp which was kept burning all night completely enveloped in flame, the oil-gas issuing from the union for screwing the burner on to the holder. I took a piece of flannel and wrapped it round the lamp, putting the flame out. My groom, who had charge of the lamps, told me he had once before found the lamp in flames and had put it into a bucket of water and at the same time gave me the key to the solution of the question, why no serious accident had resulted? He asked me why it was that when at home he happened to spill any oil if he applied a lighted match it at once caught fire and burnt away, but that if he did the same with my oil the oil put the match out. I told him I thought it was because he used the cheap oil with a low flashing point usually sold by oil carts, while I used a better oil with a high flashing point (of course I explained to him the meaning of the term), and I think your readers must come to the same conclusion.

I am, Sirs, yours truly,

Sept. 24th, 1895. H. J.

LAVAGE OF THE STOMACH AS A PRELIMINARY TO ANÆSTHESIA IN OPHTHALMIC OPERATIONS.

To the Editors of THE LANCET.

SIRS,—In the operations for the extraction of cataract where it is necessary to induce general anæsthesia, a certain risk of escape of the vitreous humour always accompanies the subsequent vomiting; and although in hospital practice it is easy to see that the patients are properly prepared for chloroform narcosis, the same does not always hold good in private practice, where from motives of mistaken kindness food is often surreptitiously given. In a case of cataract extraction, after the induction of anæsthesia, I washed out the stomach, and by that means removed a very good breakfast, and the anæsthesia passed off without any vomiting. A preliminary lavage would in any case remove the mucus which accumulates in the stomach in the early morning, and must contribute itself in no small way to produce vomiting. It is my intention in subsequent cases of a like nature to effect a preliminary lavage.

I am, Sirs, yours faithfully,

Concordia, Argentine Republic. S. L. WOOLMER.

THE LEGAL VALUE OF THE USUAL BOND.

To the Editors of THE LANCET.

SIRS,—I am informed that quite recently a judgment was given in a London court to the effect that the usual bond between principal and assistant not to practise was illegal and valueless, or to that effect. Will you kindly inform me in THE LANCET if this is correct, and if so, where I can see it or get a copy of it?

I am, Sirs, yours faithfully,

Sept. 16th, 1895. ENQUIRER.

*** The cases bearing on this point are very numerous—too numerous, indeed, to be cited here. The broad result is that such a bond, if the restriction be confined to a reasonably limited district, will be upheld; but if it be attempted by this means wholly to prevent the practitioner bound by it from practising at all, or to exclude him from an area extending beyond the reasonable requirements of the case, the agreement on this point will probably be set aside.—ED. L.

L. M.—If our correspondent will consult his own medical man he will no doubt obtain the information he seeks.

TOMATOES AND CANCER.

To the Editors of THE LANCET.

SIRS,—There is a very prevalent and firm belief, not by any means confined to the more ignorant classes, that tomatoes have a tendency to produce cancer. An authoritative statement in THE LANCET by some physician of eminence—or, if possible, by more than one—as to whether there is or is not a foundation for this belief, would, I venture to think, be of public utility. Possibly some of your readers may be able to trace its origin.

I am, Sirs, yours faithfully,

Sept. 23rd, 1895. J. F. C.

*** There is no evidence of such association.—ED. L.

DOES ILLNESS HAVE ANY BENEFICIAL EFFECT ON ITS SUBJECT?

To the Editors of THE LANCET.

SIRS,—I should be greatly obliged if any of your readers could give me instances (1) of an individual enjoying better health after an illness than before; and (2) of one disease diminishing the intensity of, or actually removing, another disease.

I am, Sirs, faithfully yours,

Devonshire-street, W., Sept. 24th, 1895. HARRY CAMPBELL.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Duncan and others. Papers:—Dr. T. G. Stevens and Dr. Griffith: Notes on the Variation in Height of the Fundus Uteri above the Symphysis during the Puerperium, the Conditions which influence this, and the Practical Conclusions which may be drawn from such Observations.—Dr. G. D. Robinson: On certain Micro-organisms of Obstetrical and Gynæcological interest.

During the week marked copies of the following newspapers have been received:—*Westmorland Gazette, New York Medical Review, Nottingham Guardian, Redditch Indicator, Grimsby News, Hawick Express, Western Weekly News, Shrewsbury Chronicle, Wolverhampton Chronicle, Sheffield Telegraph, Leamington Spa Courier, Worcestershire Echo, Hull Daily Mail, Norfolk Daily Standard, Eastern Morning News, Birmingham Gazette, Manchester Courier, Scotsman, Leicester Post, City Press, Sussex Daily News, Vegetarian, Freeman's Journal, Northern Echo, Newcastle Leader, Manchester Guardian, Brighton Gazette, Liverpool Daily Post, Leeds Mercury, Times of India, Builder, Yorkshire Post, Pioneer Mail, Architect, Bristol Mercury, Citizen, East Anglian Daily Times, Liverpool Courier, Newry Telegraph, Sanitary Record, Local Government Chronicle, St. Bartholomew's Hospital Journal, New York Times, West Middlesex Standard, Reading Mercury, Weekly Free Press and Aberdeen Herald, Mining Journal, Hertfordshire Mercury, Local Government Journal, Le Temps, Le Courrier de la Presse, Surrey Advertiser, Fife News, Northern Echo, Norfolk Standard, Lincolnshire Echo, South-Eastern Herald, Kenilworth Advertiser, Huddersfield Examiner, Evening Telegraph (Dundee), &c., &c.*

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Communications, Letters &c. have been received from—

A.—Sir Edwin Arnold, Lond.; Mr. C. E. Ady, Lond.; Mr. E. J. Ayres, Lond.; Andrea, Lond.; Anxious, Ashfield.

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HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
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An Address
ON
MEDICINE: ITS PAST AND ITS FUTURE.

Delivered at St. Thomas's Hospital on the occasion of the Distribution of Prizes to the Students in the Medical School on Oct. 2nd, 1895,

BY SIR EDWIN ARNOLD, M.A., K.C.I.E., C.S.I., &c.

GENTLEMEN,—The first impulse of a very busy man when he has been asked to deliver an address is undoubtedly to excuse himself as politely as he can. That impulse may be described as automatic and instinctive. I have read how in 1837 Dr. Marshall Hall discovered the reflex function of the spinal cord; how that, when an impression is conveyed along a sensitive nerve to one of the posterior columns of that cord, the resulting stimulus may be "reflected" or turned back through an anterior column and along a motor nerve, and may call muscles into activity without the intervention of volition or consciousness. This seems to me very precisely to define the instantaneous and almost unconscious negative which would leap to the lips of an overworked man of letters on ordinary occasions when his nervous system became suddenly stimulated by the demand for a discourse about some subject outside his usual studies. But when the honour fell unexpectedly upon me of being invited to distribute prizes here to-day to the students of the Medical School of St. Thomas's Hospital I could not consider the occasion ordinary. The profound respect which I feel for your noble profession; my true delight in its progress and advancing achievements; the firm hope I entertain of greater medical and surgical developments to come which will by-and-bye render human life more pleasant and more prolonged, my many friendships among the leading physicians and surgeons of the day, my own private gratitude to the skill and goodness of some among them, and my personal interest in your great and useful foundation of St. Thomas's Hospital—these, with other considerations, suppressed in me that "reflex" and automatic "No" which the shyness of the scholar's study and the dread of apparent presumption on his part must otherwise have enjoined. I felt that it would prove a real and memorable pleasure to me, as well as a singular honour, to speak as a man of books, philosophy, and politics to those who will be the surgeons and physicians of the coming century, if only that I might discharge my individual debt to their order, and might ever so imperfectly prove to them with how much warm sympathy their labours and successes are followed in the sphere of literature and journalism. It is thus and therefore, gentlemen, that I stand before you to-day.

The next step was to learn something as to the extent of the patience with which you are accustomed to permit outsiders to talk to you upon topics whereon the best of them can only possess an "intelligent ignorance." By the kindness of your chief officials I received several elucidatory documents on the matter, and among them an extremely interesting copy of the address delivered in this same place last year by my learned and witty antecessor, Dr. Merry, Rector of Lincoln College. After reading that admirable composition, which said so many things that I would have liked to say to-day, only more brilliantly, my emotions were very much the same as those of Michael Angelo when he was riding out of the gates of Florence with a written commission to construct the Basilica of St. Peter's at Rome. They say that he turned round upon the saddle of his mule and, gazing at the stately and beautiful Duomo rising into the Italian sky behind him, ejaculated mournfully, "Come te non voglio, meglio di te non posso" ("I will not build like you, yet better than you I can never build"). So I say of the reverend rector, who, being public orator for the University of Oxford, playfully regretted that he was not allowed to discourse to you in Latin. I fear it would only seem plagiarism if I also should sigh for permission to speak my mind on this high occasion in a poem or a leading article! He has further anticipated most of the neat classical things I might and would have cited about medicine out of Homer, Plato, and the ancients. He has recounted more than one of my own favourite stories about medical men, while in all he uttered upon the dignity of your calling, its duties, its difficulties, its moral and social exigencies, I should need to borrow from him his gravity, authority, and eminent academical standing to tread with safety in the footsteps of that most excellent lecturer of 1894.

Yet I will not yield to Dr. Merry or to anyone else in admiration of the magnificent record of medicine and surgery in England, or in heartfelt honour for those who have given their lives, and are here and elsewhere preparing to give them, to the pursuit of this, in my judgment, the best, the gentlest, the loftiest, and the purest of the secular crafts which men follow. You, gentlemen, begin by self-devotion and fearless defiance of risks which others dread and shun. Your original choice is brave, your early ambition honest, your first steps hard, your daily work, even if ever so little elevated by enthusiasm and faith, is work that brings help and hope to your fellows and constitutes you the common friends of all. And the really educated medical man who knows himself the accepted servant of science and nature, and the messenger, as far as can be, of Heaven's eternal pity, has moments, we all believe, of rich success and boundless recognition that make his fees the very smallest part of his after-payment in life.

Moreover, you are advancing, like true victors in a march of constantly augmenting conquests, over that strange fascinating waste of twilight and wondering exploration which is called "science." There have been times when it was not particularly honourable to be a medical man. The specimens of medical and surgical practitioners whom we find held up to ridicule in the pages of Molière or in the pictures of Hogarth deserved, as far as can be judged, the pillory of immortal scorn in which their ignorance and pretentiousness have been placed by the genius of satire. Yet there were not wanting, even in times of Thomas Diafoirus, serious and modest searchers after the secrets of healing—men imbued with the dignity and solemnity of their calling; and, indeed, I think we could fill up every single age, from Galen and Avicenna to Ambroise Paré and John Hunter, with the names of truly great practitioners. But your lot, gentlemen, is cast in an epoch of such acceleration of knowledge, such expansion of methods and resources, such ever-increasing power of doing solid good to your kind, that the old satires have all died away. The new age frankly honours and values your vocation, in discharging which you yourselves move forward by rules more and more exact and less empirical. Before an audience so specially intelligent as this it would be presumption for a non-professional man to speak with an air of information about the advance of your science. Nevertheless, a partial interest may attach to what someone from your outer world of patients thinks of your inner world and work as medical men. Living men of sixty years or so belong historically to the present happy reign, and within that reign we can recognise, though lacking your closer observation, what prodigious progress has been accomplished by medicine and surgery, and, I may add, in the science of sanitation. It was one of the surgeons of St. Thomas's Hospital, the illustrious John Simon, F.R.S., who may be said, in conjunction with Mr. Edwin Chadwick, to have actually invented public hygiene. These great benefactors and their able assistants had none of the knowledge which you all, in greater or less degree, now possess about bacilli and bacteria; but by improved drainage, purer water-supply, good paving and scavenging, removal of refuse, and prevention of overcrowding they succeeded in establishing such a difference between clean and unclean places that the way was paved for the fruitful discoveries which followed. Dr. Buchanan, inspecting for the Privy Council eight years after the new decencies began, found death-rates reduced by percentages ranging from 16 to 32. Dr. Snow in 1849 from the well in Golden-square, Dr. Budd in 1857 from typical typhoid fever cases, and Mr. Netten Radcliffe by the light of a limited outbreak at Theydon Bois, helped in establishing the truth that zymotic diseases have their special seeds and grow after their kind, which the experiments of Pasteur, Tyndall, and others came fully to confirm. Hence we outsiders have seen with wonder and with hope the present epoch spring up of the germ, the preventive inoculation, the serum injections and what not of rich research and promise. Nor can even persons only partially informed think of M. Pasteur's superb triumphs over anthrax, splenic fever, the silkworm disease, and perhaps we may add hydrophobia, without their minds passing to the quick genius with which Lister applied the generalisation of these facts to surgical lesions and, under his new system of antiseptic, vastly diminished the anxiety of the operator and the perils of his patient. In this connexion I mention before you for honour the name of

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my late illustrious friend, Professor Tyndall, since no one outside your own profession wrought more successfully or brilliantly to show the difference between airs and liquids, natural and sterilised. This delicate conflict against our infinitesimal enemies has been carried on with supreme ability by Klein and Koch and many another well-known living benefactor, although there is now I observe a kind of reaction in favour of some of these microscopic beings, since some seem friendly. "The most important fact," said Sir J. Russell Reynolds in his discourse this year before the British Medical Association, "with regard to recent microbiological research is the gradually increasing appreciation of the fact that these lower forms of life exert, not necessarily mischievous, but, indeed, benignant influences on the human body, and that although the mode of their operation is not fully explained they take part in healthy processes, assisting normal functions, nay, indeed, it would seem sometimes producing them and warding off the malign effects of other influences to which we are habitually exposed."

We know already that a man's well-being may depend almost as much upon his leucocytes as upon his domestic relations, or the state of his digestion, or the balance at his banker's. The antitoxin treatment of diphtheria, which was, on the whole, favourably reported on at the recent meeting of the British Medical Association, is another example of the novel and hopeful enterprises which are being pushed into the region of these micro-organisms. Yet it was only at the beginning of this reign that Schwann connected fermentation with the activity of the yeast cell, and not until 1860 that the Academy of Science gave its prize to M. Pasteur for the brilliant essay which swept away all lingering theories of spontaneous generation. And now you have at ever-extending command this vast new region of bacteriology, wherein sunshine and daylight and the wonderful natural forces of life and those that are friendly amongst the microbes fight on the side of your enlarging science and on our behalf against the "pestilence that slayeth in secret." A great authority has declared that "a day will come when in London, in Berlin, in Paris, man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, or of tuberculosis, any more than he dies in these cities to-day of the venom of snakes, or of the tooth of wolves." Perhaps even our invisible enemies contend amid themselves. I noticed with interest a remark of Sir William Broadbent at the meeting of the British Association, when he said: "One virus may be antagonistic to another; an attack of small-pox has often seemed to cure phthisis."

In connexion, moreover, with that promising subject of the antitoxins, such as those for diphtheria and tetanus, there is some promise, be it observed, of injections which will neutralise snake poison. Professor Calmette in France and Professor Fraser of Edinburgh, after patient experiment with snake venom, have apparently succeeded in rendering rabbits, and eventually horses, proof against doses of this 350 times stronger than an ordinarily lethal quantity. The details of the matter are most interesting, but too elaborate for statement here.

The amount of "antivenine" required to immunise a horse is considerable, and it took Professor Fraser some time before he could collect sufficient material to begin on. Having done so, however, he selected a healthy horse and injected it for over four months, by which time it was immune against any amount of venom. The serum obtained from it was then tried and found to be highly satisfactory. It can be desiccated and packed for transmission abroad in a form which will keep. One must have lived in India, where the recorded annual mortality from snake-bites is over 22,000, to appreciate the vast hopefulness of such a remedy against the deadly cobra and murderous krait. What would not be the gratitude and wonder of the Indian peasants if this antivenine should prove a success?

Has anybody given thought in the same connexion to what might be done to rescue the draught cattle and horses of South Africa from the tsetse fly? Whole belts of our growing empire there are cut off from trade by the poison of this tiny plague, which kills all horses, oxen, and donkeys that it stings, yet has no power whatever upon the zebras, buffaloes, and wild beasts of the Veldt. If the blood-serum of these naturally acclimatised and adapted creatures of the same genera, properly applied, could give immunity to South African caravans, millions of money might be saved to the colony.

It would be very presumptuous of me to speak, except from my point of view of a more or less intelligent ignorance, about your refinements in the use of the stethoscope and auscultation; your largely improved surgical and medical armoury; your specula, laryngoscopes, and hypodermic syringes; the tabloids and other highly convenient forms of modern medicines, exquisite appliances of the benign art unknown until later times. Possibly modern surgeons are even a little ahead of physicians in the exciting race, for while we see that the French medical officers cannot prevent the malarial plasmodium from prostrating half the Madagascar expeditionary force, I have read with admiration in a recent discourse of your distinguished chief, Sir William MacCormac, by way of illustration of the increasing effort of modern surgery to provide antiseptic protection in an effective form, that "during our last war in Egypt the organisation was so complete in this respect that not a single case of infective wound disease occurred during the whole campaign." Then, too, we outsiders have heard with wonder how you are coming to use animal extracts in medicine and how you think to reinforce failing human organs with the active principles derived from similar animal organs, as in the case of Dr. Ord's practice and Dr. Lauder Brunton's thymid tablets. If this can be done for myxœdema the jungle fables seem half justified which prescribe lion's flesh to render men brave and the eyes of lynxes to make them keen-sighted. It tends to explain a recipe which I once saw in an old black-letter book styled "Alexis hys Secrets." The prescription was for the prevention or cure of burns and scalds, and it commenced by the ordinance, "Tayke, and powder as small as ye may, a salamander."

But I need not dwell further upon these widening powers and expanding prospects of your noble profession when you can read in the eloquent address with which Sir J. Russell Reynolds opened the recent meeting of the British Medical Association the declaration and the comment which I shall take leave to cite. He began by observing that the great surgeon Sir William Fergusson, who presided over the last London meeting in 1873, might have paused, with all his dauntless courage, to perform an operation which either of his dressers of twenty years ago could be announced to do to-day, and would do without fear or dread, and that Edmund Alexander Parkes, who then delivered the Address in Medicine, would, if he could return to his old haunts, be entirely bewildered and amazed if he found his house physician feeding a patient on sweetbreads or injecting thyroid extract for the cure of myxœdema. And the President of the College went on to observe upon the far greater interest and earnestness which characterise the student of to-day as compared with his predecessor. "Much of this," as he said, "was due to the indulgence of a larger hope. Hidden as still are the great mysteries of life, there yet emerge certain definite facts to be grasped by the mind, to be seen and handled, not only imagined or asserted; and the place of these facts in the economy of Nature, their bearing upon others, and their relation to work yet to follow give a precision and confidence to study that is, comparatively speaking, of modern growth. There was plenty of assertion and show of knowledge in the past; but even the teachers did not believe the half of what they taught, nor comprehend the half of their sage pronouncings. Nature has, as it were, taken man more into her confidence and daily reveals so much, even while concealing more, that the learner stands firmly on the ground he has gained, instead of trembling on a quagmire the length, and breadth, and depth of which he could not see and did not dare much to imagine or investigate. He felt sure of little then but of his own and his teacher's ignorance, but now he grasps much that is ascertained truth and such as can be seen, shown, measured, and recorded with perfect accuracy."

But let me take permission to tell you that what fill my own heart most with thankfulness and cause me chiefly to congratulate you on these new days of therapeutic science are the benign, the blessed discovery and the now almost universal employment of anæsthetics. If you look into the history of that happy revolution you will be warned against depreciating fresh ideas by noticing how sadly slow men are to take the hints which Nature gives to them of her very choicest treasures of resource. *Why* did not anyone act upon what Sir Humphrey Davy had so long before learned and imparted about the properties of nitrous oxide? The key was already there, but not until many years afterwards did an almost casual hand (that of an American dentist) fit it

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into the golden door behind which sate waiting an Angel of pity kinder and more powerful than any Arabian fairy suddenly revealed in her divine beauty and bountifulness to any prince or magician of the "Thousand and One Nights." Is there anything in human history which more sternly teaches that man must win every boon of Nature by his own ceaseless striving than that this simple chemical and physiological secret of chloroform should have lurked so strangely long in its easy formula, undeciphered, through all those waiting generations when pain was an omnipresent tyrant whom science could not control, and the operating room a torture chamber dreaded almost as much by the surgeon as by the sufferer? Think of those gallant sailors of Nelson at Trafalgar, whose bleeding stumps, in the gloom of the orlop deck, were plunged into hot pitch to stay the hæmorrhage. One would almost expect that, for pity of such brave men and for the sake of the countless tender women and children who, age after age, so hopelessly endured, Telesphorus, the God of Healing, or Nature herself, would have burst their iron law of impassive silence, and, as Helen did in the "Odyssey" for the sorely tried Greeks, have poured this nepenthe into the bitter cup of mortal life. I can remember the poetess Eliza Cook, whom as a boy I knew, when chloroform was still unknown, writing how—

> "Lips that blench not in the reeling strife
> Turn silent and white from the surgeon's knife."

Not until 1847, although Davy had been so near the revelation in 1839, did the anæsthetic age commence, giving to your art a sure control of anguish; to its boldest practice confidence, quiet, and leisure; and to those who have to lie under that knife a sweet and complete oblivion. I have myself known what it is to pass, fearless of the kind steel, into that world of black velvet tranquility of which your magic drugs now keep the gate, and to awake as good as healed, grateful beyond words for the soft spell of enchanted peace and the sure and faithful skill. You will all agree, I am confident, with an extract which I have taken from the excellent paper upon "Medicine and Surgery" contributed to a work called the "Reign of Victoria" by Mr. Robert Brudenell Carter. He writes: "The use of anæsthetics has changed the whole aspect of surgery. Prior to 1847 operations were few in number and almost limited to the amputation of limbs, the removal of cancerous and other tumours, the resection of a few of the larger joints, cutting for stone, and the ligature of main arteries for aneurysm. The pain suffered by patients was so horrible as to tax severely the endurance of the bravest and strongest, and to depress seriously, and ofttimes beyond recall, the powers of life. Death from 'shock' was by no means uncommon, the patient sinking in a few hours from the actual suffering which he had undergone. The writer well remembers, as a medical student, turning sick and faint at the agonies which he was called upon to witness; and it was a point of honour in those days with operators to abbreviate such agonies as much as possible and to cultivate mere speed in operating, as the highest and most valuable form of dexterity. Nothing was attempted which could not be done quickly, and an amputation in the hands of a practised surgeon was forced to assume almost the appearance of a feat of legerdemain. For the separation of the lower limb above the knee—of course, not including dressing—twenty seconds have been known to suffice, while forty seconds was regarded as a period of time which no one was justified in exceeding. When anæsthetics were employed it came to surgeons as a kind of revelation that they need no longer be in a hurry.

Thus in 1847 Simpson and his coadjutors put into your hands a chain to bind at will the demon of pain, and in 1865 Lister at the Glasgow Infirmary by his antiseptic method inaugurated your grand conquest of pyæmia and septicæmia, and that ancient standing terror of the "hospital gangrene."

I will not venture to pass from such broad and common grounds of congratulation to speak before my present audience of the detailed triumphs of latter-day surgery; what you have lately learned in this your "Palace of pain" from the splendid successes of your chiefs, and will afterwards beneficently and boldly practise in regard to ovarian tumours, eye and throat diseases, and the rest. Moreover, while ordinary conquerors must reckon the dimensions of their victories by the numbers of the slaughtered, your glorious campaign computes the magnitude of its triumph by lives saved or prolonged, by pains and injuries abolished, and by the uses and pleasures of human existence restored. One of the high authorities already quoted has furnished a calculation of the salvage of life effected even during the early years of the present reign by the commencing improvements in preventive and curative medicine. In the five years from 1838 to 1842 London, with an average population of 1,840,865 persons, had an average annual mortality of 2557 in every 100,000. In the five years from 1880 to 1884 the average metropolitan population was 3,894,261, and the average annual death-rate 2101 in each 100,000. A calculation will show that these figures represent a saving or prolonging of lives during that lustrum to the number of 96,640. The mean annual death-rate has now been reduced to a point lower than shown in these. It was 22·16 per 1000 for England and Wales at the commencement of the reign, and it is to-day better than 19·0 per 1000, while in Her Majesty's army and navy the diminution of mortality apart from deaths from warfare has proved even more remarkable, and in India, where we used to lose 69 per 1000 yearly, this has been reduced to 16 per 1000.

I have met in this great hospital gentle and graceful presences which lead me to allude to one more great and happy change among many that has come upon your profession—I mean the education and employment of professional female nurses. A great physician once said in my hearing "that the three most sovereign medicines he knew were hot water, fresh air, and good nursing." In your fathers' day, gentlemen, we had no good nursing; we had Mrs. Gamp and Mrs. Betsy Prig, or else heavy-handed and heavy-footed male attendants, very different in mind and manner and influence from the lightly moving and softly speaking woman whose carefulness—intelligent, pitiful, but tranquil, trained, and governed—now smooths every sick-pillow and carries out faithfully and fearlessly the ordinances of the doctor. I do not know whether you, the surgeons and physicians, or we, your patients in *posse* or *esse*, are most to be felicitated upon this admirable revolution in the hospital ward and the sick-room. There is no doubt that it was primarily due to the example of that most compassionate and noble-hearted woman, Florence Nightingale, who went, at the head of a band of nurses, many of good birth, to the Crimean War, and by demonstrating there and afterwards the immense advantages of skilled and high-class nursing gave to her age the blessing of this modern system, and to her sex a new, a suitable, and a most honourable vocation. You have greeted the name of Miss Nightingale with instant and hearty applause. That generous tribute to her, who in her old age and retirement is even now the centre of so much silent national affection, encourages me to remember that I am, after all, poet by nature and lecturer only by accident, and that in those dark hours of the Crimean War I wrote certain verses, which are perhaps brief enough to be on this occasion acceptable. If I am so bold as to recall them from their unprinted oblivion it is because what they express of admiration and gratitude is applicable in a great degree to every good and dutiful nurse, here and elsewhere, who loyally discharges this new and most womanly function.

[The lecturer then recited the subjoined lines:]

> "If on this verse of mine
> Those eyes shall ever shine
> Whereto sore-wounded men have looked for life,
> Think not that, for a rhyme,
> Nor yet to suit the time,
> I name thy name, best victress in the strife;
> But let it serve to say
> That when we kneel to pray
> Prayers rise for thee thine ear can never know,
> And that thy gentle deed
> For Heaven and for our need
> Is in all hearts as deep as love can go.
>
> "'Tis good that thy name springs
> From two of earth's fair things—
> A stately city and a sweet-voiced bird.
> 'Tis well that in all homes
> Where thy kind story comes,
> And brave eyes fill, that pleasant sounds be heard.
> Oh, voice! in night of fear,
> Like night's bird's—sweet to hear;
> Oh, strong heart! set like city on a hill:
> Ah, watcher! worn and pale,
> Dear Florence Nightingale,
> We give thee thanks for thy good work and will.
> England is glad of thee;
> Christ, for thy charity,
> Take thee to joy when heart and hand are still."

This topic tempts me to glance at another closely connected with it, which has always had my earnest interest and support—I mean the movement so excellently instituted and so successfully carried out by my most noble friend the Marchioness of Dufferin and Ava for the supply of English

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female doctors to India. In that country, by reason of its peculiar institutions, we are secure from any controversial questions as to the fitness of women for your profession. The customs of the *purdah* absolutely forbid the high-caste Indian ladies to avail themselves of male European skill. I was dining once in Jeypore at the table of Surgeon-Major Hendley, the able and trusted friend of the Maharajah, when a message came that the chief queen had been taken ill, and begged the advice of the British hakeem. He went, and, on returning, told us that although for seventeen years a familiar visitor of the palace, and the private adviser in many matters of the Rajpoot Prince, he had been obliged to suffer his head to be enveloped in a silken bag, and so equipped had been led into the zenana, where he had felt the pulse of her Highness and had examined her with the stethoscope, without seeing an atom more of his patient than a glimpse of one jewelled slipper through the strings of the bag. Here is a medical and surgical field, therefore, wide and unfilled, which might absorb any amount of feminine ability and devotion—if only proper public support be given—and I ardently entreat your countenance and assistance for it in the course of that professional influence to which I well know many among you are destined to rise.

I shall also take courage, since your kind attentiveness proves you convinced of the sincerity of my interest in your profession, to touch upon yet another topic, bristling, I know, with dangers for outside observers. I have read, in one of the able disquisitions already quoted, a paragraph dwelling upon Harvey's grand discovery of the circulation of the blood, where, after mentioning that that splendid revelation was the result of experiments performed upon living animals, the talented writer—a great living practitioner—goes on to say: "The whole fabric of modern medicine, the whole difference between the prospects of a sick man to-day and his prospects 200 years ago, rests absolutely upon vivisection." I shall not venture, in presence of knowledge and experience so much vaster and riper than mine can be upon such a matter, to dispute or qualify that assertion; nor shall I as an individual take on myself to deny to conscientious science, as many persons deny whose motives and arguments I most deeply respect, the right claimed to pursue essential experiments at the cost of the pain and death of innocent creatures. If to give my own life under torture would certainly lead to the saving of very many other lives, I should hate and scorn myself if I had not the will so to die; and as between men and beasts I suppose it is true that we are "more than many sparrows." But my private feeling, founded upon an ever-growing sympathy for the lower animals, an ever-increasing wonder at their gifts and capacities, and an ever-deepening sense of our human responsibility to them, was expressed in a phrase which I know was extravagant, used by me to a famous contemporary surgeon who said: "What, Sir Edwin, may I not vivisect a cat to save the life of a bishop?" And I replied: "Yes, Sir Henry, on condition that you afterwards give the cat a public funeral in Westminster Abbey as a benefactor to the Church and to humanity." Of course that was paradox, but I am persuaded that all of you will understand me, and many will agree with me, when I declare that this solemn right to succour pain by inflicting pain has its best foundation upon an immense reluctance to adopt such a necessity, an anxious economy of anguish in the act; in fine, a feeling not of the heedless experimentalist but of the priest sacrificing victims for propitiation. I say again that I disclaim any pretention to teach mercy to you whose vocation has mercy for its watchword. I will not share with my age the fruit of patient physiological researches and then hastily reproach those who have laboriously acquired them for the general good. But as regards my own sentiments, that which chiefly led me to write "The Light of Asia" was the boundless and beautiful tenderness of the Buddhist religion towards the lower animals, whose lives are so mysteriously related to our own, whose lot is so largely at our disposal, and who are to us much as we human beings are to that invisible Almighty Power at the feet of which we have sometimes little cause to wonder when we ask in vain for pity and clemency. Therefore I will be bold enough to-day to put in this humble plea for the dumb martyrs of vivisection, that they may be as few as possible, as mercifully dealt with as possible, and that it be held by the inner *religio medici* which every true doctor cannot but possess and profess, that the meanest living thing so sentenced to suffer and to perish for mankind derives from its very doom a certain enhanced regard and a special consideration to which the conscience and honour of him who is a gentleman as well as a doctor will never be insensible.

But I am not here, as I before remarked, to inculcate reverence for all forms of existence and tenderness towards all suffering upon those whose glorious vocation it is to be merciful, sympathetic, and conscientious. Very quickly must the chivalrous aspect of a good doctor's life lay hold of him, as is sufficiently shown by a memorial which I have observed in your chapel. A tablet there records how your fellow-student in this medical school gave up his young life in the desire to save that of some obscure and humble patient. To my thinking no cathedral, no Chapel of St. George at Windsor or of Henry VII. at Westminster, no shrine or temple or sanctuary anywhere, can contain an epitaph more touching to peruse, more nobly commemorative of the dead, more splendidly honourable to the institution which trained him, and to-day trains, I doubt not, many like him. We have all of us lately read, too, of the heroism displayed by Surgeon-Captain Whitchurch in the fighting at Chitral on the Indian frontier, heroism justly rewarded by Her Majesty, and such as casts a lustre upon the whole profession. Well, gentlemen, having your walls enriched with such an example, and so many similar proofs existing of the chivalry of the profession, it is not possible, I think, that your studies and experiences should lead you permanently to the materialistic view of life. You know, or will know, far too much to believe that science can ever know all. While the wonderful advances which have been made in locating brain disease, and analysing and controlling the functions of muscle, organ, and nerve, appear to recommend now and again the easy theory that life, like heat, is only a "mode of motion," the perpetual mystery will still rebuke it of that bridge, never to be traversed by anatomist or metaphysician, whereby molecular movement and intellectual consciousness cross and recross in correlations. You will find yourselves admiring, emulating by your disdain of danger in face of duty, the illogical but magnificent transcendental philosophy of those your comrades, whose secret souls knew the immense wisdom of that verse, "He that seeketh to save his life shall lose it; and he who loseth his life, for my sake and the gospel's—the same shall save it." What gospel, gentlemen? Why, surely that which we have called, and may rightfully call, the *religio medici*; the good tidings to humanity of a science which, itself moving in the midst of constant personal peril, yet treats every human life as unspeakably precious; which succours and sustains all alike; which asks as little as the air we breathe, or the water we drink, whether we suffer by our own faults or otherwise, but always dispassionately pities and always impartially assists; which, all too grudgingly recognised by those who distribute the honours and emoluments of the State, and poorly recompensed, I fear, for the most part with the goods of this world, has generosities undreamed of towards the poor, maintains a professional honour rarely, if ever, stained, and shares with the faithful minister of religion and the honest lawyer the utter and ultimate confidences of those who have recourse to it. It is clear that the members of such a profession must in their farthest and deepest thinking be of the secret view that the diphtheritic bacillus or the foeman's bullet can do no final and far-reaching hurt to the real life of a good man. "If worms and maggots end us," wrote my old friend Walt Whitman, "then alarum, for we are betrayed." We are not betrayed! Nature—which seems to waste so many existences—like you, really disregards and neglects none; like you, she encourages and helps, by the instinct of self-preservation, every single life to live itself out unto the utmost, for reasons which we can partly divine when we see Sir Isaac Newton born a puny seven months' child, and Nelson's heroic spirit lodged in a feeble and diminutive body. I salute you, therefore, gentlemen of St. Thomas's Medical School, as the young reserves of that army whose victories are the triumphs of all mankind and whose enemies are all men's enemies. I know—I have paternal reason to know—that the labours of your educational preparation grow harder and harder and that a good doctor must nowadays be chemist, physiologist, botanist, mechanician, and many things besides. But be sure your credit augments with your pains and your acquirements, and deign to receive to-day in this address—the imperfections of which your indulgent courtesy must forgive—a proof of the sincere interest which Literature takes in your

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careers, and of the perfect goodwill with which it hears of all your successes and notes the new and nobler status of your great profession.

An Address
ON
OUR PROFESSION, OUR PATIENTS, OUR PUBLIC, AND OUR PRESS.

Delivered at Guy's Hospital on Oct. 1st, 1895,

BY G. H. DE'ATH, L.R.C.P. LOND, M.R.C.S. ENG.,
CORONER FOR THE WINSLOW DIVISION OF BUCKINGHAMSHIRE, MEDICAL OFFICER OF HEALTH OF THE BUCKINGHAM RURAL AND URBAN DISTRICTS, ETC.

GENTLEMEN,—It may seem to many, but I hope not to all, to be something like a waste of time to consider the relationships between the profession, the press, and the public. Public support is fascinating, but fickle. In times of war soldiers are the pets of the people (and, however strange it may sound, I include all classes in that term), but in times of peace "doctors" are the fashionable craze. Society, "forsaking even military men," throws her charms to great wealth, successful humbug, the drama, and the medical profession. We should warn ourselves against judging by appearances, especially those which are nearly always deceptive. Let me take a somewhat out-of-the-way instance to show what I mean. It is often said, "He does not know his own mind." Of course not. No one knows his own mind. It is one of life's purest pleasures to make its acquaintance. We know the existence of our own minds and we infer the existence of mind in others. It is, indeed, delightful to find out, by thinking, writing, or speaking, what is "in our minds." It is a useful habit to acquire because it cultivates the rarest and best characteristic of a medical man—namely, observation. I submit it is necessary for us to see where we are and to see what we are doing, but how rarely we do see. We look, but we do not see? We do not see our work, or ourselves, or how others see us. Again, look over a landscape of undulating country, with its varied forms of green, its play of colours lit with the great, grand, golden glory of the sun. What do we see? Is the beauty of nature only the expression of successful cruelty? Again, turn for a moment and ask yourselves if the apparent calm of humanity is only what covers, but does not really conceal, the constant—and may I add cruel—struggle for existence? Is it true nowadays, when every man poses as the friend of all men, that "man's inhumanity to man makes countless thousands mourn"? Now you will ask me, What are you driving at? Simply that we must beware of our relationship to the public and see to it that it is a true and honourable position for us to occupy; simply that we should learn, not merely to look, but to see men and women and all things as they actually are, and not only as they appear to be, for all "things are not what they seem," and no man and no thing is what he or it appears to be. So, indeed, and too often, the appearance of hypocrisy or of honesty in our lives resembles the appearance of nature where peace is but war, and beauty but hidden ugliness. We do not only require lucidity in our view of the outside world, but lucidity of expression in the use of medical terms. Surely we must learn to see men and their maladies as they are. We need not pretend that we do not value public esteem and confidence, but what steps do we take to deserve either when we hide our ignorance or our knowledge under loose terms? The fashion has not yet died out of labeling as "hysterical" any group of symptoms which are inexplicable on known physiological grounds, and this at a time when we do not know with certainty either the real effect of a poultice on the skin or the functions of the liver. The modern student, especially if recently qualified, regards as "neurotic" all the symptoms which do not come within the range either of his reason or his remedies. How do too many treat the conditions which they call "neurotic" or "hypochondriacal"—meaningless epithets that are used either with that haughtiness which is a proof of ignorance or with that pity which is only another form of the same narrow-minded contempt? First of all they deny the existence of the malady, then they say there is nothing the matter, and when the patient recovers under the treatment of a man who is a physician without being a fool they then sneer at the successful colleague as a man who humbugs his patients.

A section of the profession, notwithstanding all its post-prandial sentiment, is jealous of success. Surely it is utter nonsense, because it is absolutely unreasonable and deplorably unscientific, for a person to be ill and well in the ordinary senses of the terms, or that anyone (apart from the very definite condition of malingering) can "imagine himself ill." People who are ill are ill even if we do not understand the illness, and even if we cannot treat it. Let me give one more instance, because it is one which more obviously affects our relationship to the public and our patients. I refer to our unfortunate habit of separating "functional" from "organic" maladies. Function is the expression of organic change, and functional disorder is inconceivable without organic disturbance and change; and the latter is not the least, but the most, important factor, even if unrecognised, in those disturbances of health so stupidly called "only functional." It is more conceivable to think of organic change without functional disturbance than of functional disturbance without organic change. Why is all this? Why do we talk thus to the public and to our patients and to ourselves? Why do we rely on appearances and vague terms? Why do we thus lose, or deserve to lose, public confidence? Because in hospital life and training we fail to note the value of seeing life as it is, people as they are, or the true meaning of terms. In hospitals we learn about disease, but in practice we have to treat a person with an illness. Large numbers of cases (or diseases occurring in persons) pass under our observation in hospital life, but we only see the diseases, not the persons; not only that, but both the person and the malady are removed from the conditions which would otherwise act on both; and, in addition, the greater part of our hospital life is spent in studying just those maladies which, however important as types, are least often seen in general practice. In hospitals we see, or rather look at, others treating an illness in a person, but in practice we ourselves have to treat a person with an illness. We rarely in the hospital see those deviations from what we call health which we have to treat in general practice. Thus, before we get into practice we do not see our work as it really is, but only as it appears to be. Our teachers, to whom no one is or ought to be more grateful than I am, are men who are what they are because they have been successful in hospital practice or distinguished for successful industry, and these men pass, and perhaps rightly, from the hospital to Harley-street, but they see little or nothing of ordinary general practice or the "cases" which we as general practitioners have to treat. They teach hospitalism and practise it. Men who have, therefore, to deal with patients or the public—that is to say, start in practice—are lost to some extent, have no power (because they have not the knowledge which is power) to conduct a case, know not how to treat their patients or their patients' friends, and cannot even behave themselves in a sick-room—in fact, many men only go into a sick room for the first time after they are qualified. We must remember that the proper study for the medical man, at all events, is man. A hospital is no more and no less the place to learn the diseases of mankind, so far as the relationship between patients and medical men are concerned, than are zoological gardens the proper places in which to learn or to study the natural habits of animals. Much can be found out at either place, but as at zoological gardens we see animals under unusual or unnatural conditions, so in hospitals we see illnesses and people separated from the conditions by which they are both surrounded when we as medical men have to treat them. These considerations affect the public as a body and the public individually—as our patients, as we call them. I would speak of the latter first.

A patient expects that his medical man should be something more than a mere medicine man, that he should be more than a detective to discover some pathological flaw in his health, and something more than an accountant to bring out the balance of a diagnosis from the complicated accounts of his symptoms. The public also expect much, and perhaps too much, from its public professional men in the protection of health. To us, of course, health is only a relative term, but to the public it is an attainable reality. I have never seen a case of health, and I should like to see a really healthy man, woman, or child, and it is, by-the-bye, in the detection of the insignificant departures from an indefinite standard that the skill of the medical man lies. We do not treat the

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public fairly in the matter of health. For instance, we say "disinfect," but there is no reliable standard either of disinfection or a disinfectant. Again, people want to know what to do in cases of illness, emergencies, and during epidemics. What do we do? What does the profession do? It supplies the public with scientific beef-tea, not in tins, but in lectures; it attempts to boil down the hard bones of science to suit the digestion of the public intellect; it floods the press not only with watery but adulterated solutions of science, while essences of surgical treatment and tabloids of medical knowledge are manufactured wholesale for general consumption. We want to appear to know and to make others like unto us. This is what is called and appears as the popularisation of knowledge, but in reality it is the prostitution of science. No doubt a knowledge of the laws of health can be taught—the means by which homes should be kept clean and filth removed from the person and the house, the advantages of light, air, and the diet of children—but amateur medicine and surgery are less reliable than the professional articles. We think we are to teach our patients and the public what we know; if so, they must learn as we do. If our methods of teaching the public are right, then our own methods of learning are both wrong and useless. We allow the public to think we can dispense clinical therapeutics for them. People demand the knowledge how to treat illness, and we supply a lecture or a course of lectures. I have often protested, and I again beg to protest, against such "apparent teaching," against the policy of sprinkling the community, by means of a more or less oratorical pepper-box, with tit-bits of knowledge, whether pathological, physiological, obstetric, or hygienic. There are no such short cuts to knowledge. The appearance is not the reality, and as we learn so we should teach, and not otherwise. A desire to know is admirable, but the public are nowadays too inquisitive about illness. Our national manners show a deplorable lack of taste and good feeling in the presence of illness. If a man consults his lawyer he does not find all his friends asking him what is his business or why did he seek legal advice. Let such a man, however, consult his medical adviser, and at once all his friends and acquaintances—sometimes perhaps out of kindness, but more often out of curiosity, or, in the case of a celebrity, out of a feeling of snobbery—at once rush to know what his business was and why he sought medical advice. It is sad to have to add that even the medical man himself is asked concerning the case, and it is a shameful thing to have to admit that the information is often granted. The near relations of a patient may be told the nature of an illness, but without the express sanction of the patient or his closest relations no medical man has any right to make any sort of communication to anyone else—not even, I submit, to the medical press. The so-called upper classes, or certain sections, have, let us not forget, brought advertisement to an art. It is time we did something to protect the privacy of the home, especially of the sick-room. To publish clinical details, or to throw the sop of a temperature chart to the gossiping wolves, and to make the sick-room a market for advertising, are practices which are too disgusting and far too common. We all know the twaddle which is talked in the profession about advertising, especially by the sort of man who, swearing he would never advertise, advertised. Our medical press bids fair to become the mouthpiece of the would-be successful traders and of the professional Pecksniffs and Chadbands. For instance, the contribution of cases is intended to advance knowledge, not to puff practitioners. We must look up to our press, but it should represent all that is most dignified and all that is best. Look at the view which is taken by the medical press—and, of course, I am only speaking of some papers—on any subject of general interest, such as vaccination. The coarsest, the rudest, and the most insulting language is considered too good for those who, although supported by men of science and undoubted honour, feel a conscientious objection to compulsory vaccination. Dictation is not dignity, and the policy of kicking your opponents to death should hardly be the characteristic of the wonderful and advanced medical knowledge of the nineteenth century. We must bear in mind that the lay press is ever struggling to get personal details. It is, I submit, a national calamity to see the honour, purity, and responsibility of the press stained, and even in some instances washed away, by the muddy waters of competition. The necessity for paragraphs begets inaccuracy, and belief in the papers is becoming a sure sign of credulity. It is sad, indeed, to see the reckless manner in which that pompous person, "Our Own Correspondent," not only endangers the peace of nations by his highly-coloured and self-imagined crises, but violates the privacy of home life by the publication of details of illness which are generally inaccurate and always inexcusable.

We as a profession must not worship the golden calf of the "Press" too much. From what I see and hear in London, not only the press, but the profession is giving way before the rising and surging waves of competition. I may point out that, although some say competition creates commerce, yet others say it curses it. Must we, however, use such an argument? We must, I fear, if it is true that men who ought to know better and who occupy high positions are not ashamed to steal other men's patients, or to be consultants at one part of the day, physicians another, surgeons another, specialists another, general practitioners another, while all the day long they violate those rules of professional honour to which they do homage only with their lips and not with their lives. These are the men who undermine confidence with "all the kind mendacity of hints," or with a silence more suggestive than speech. When people ask for "another opinion," what they want oftentimes is a "different opinion," and they very often get it, for how many men allow themselves to be privately interviewed by friends and receive fees for such interviews when the conversation turns on "the recent consultation"? These are the men who undermine our press and our patients and force so many of the public to look upon us as money-grubbing humbugs; these are the men who get practice by a "swagger turn-out," by grand-looking houses startlingly painted, by large parties, by gorgeously dressed wives, or by pandering to the bare-faced snobbery of modern society. We must not imitate the methods by which sycophants succeed. We should value public confidence, but we should also deserve it; we should wish for respect, but we should not get it under false pretences. All the world is filled with loud praises as to the advancements in the prevention and treatment of suffering, but novelties are not necessarily improvements, as revolutions are not always reforms, or reforms always revolutions. The light which competition in the press throws into the privacy of the home also finds its way into the laboratory, and the discovery of yesterday is trumpeted as the mark of an epoch. We are thus apt to follow fashions and fads rather than facts. I well remember only about ten years ago, when I had the great privilege of being a student at Guy's Hospital (and I think every medical man should be a medical student all his life), that the profession was suffering from a very acute attack of the "spray." I know one distinguished surgeon who was almost "cut" by his colleagues for not using it. How different now! The profession is now suffering from convulsive attacks of bacteriology. When I left Guy's Hospital the spray ruled surgery, now we all worship germs. In the interests of truth we should appreciate and not exaggerate the relative value of all parts of science. I will only simply allude to "the importance of serum therapeutics," or of the policy of quieting the pathological Paul by extracts from the immunised Peter. Every problem is discussed in the press, and, owing to the habit of pseudo-philosophical generalisation from insignificant details which now characterises modern journalism, the public and our patients are misled.

In these days when the fierce light of publicity beats around a test-tube we must not so quickly take the public into our confidence, especially in the press. Our duty is to look for the truth, not to encourage competition. Our patients are led to think they know so much, and, therefore, when an illness arises they now make the diagnosis and decide on the treatment and the proper specialist to consult. The first question a lady asks when she hears her servant has got rheumatic fever is, "Can she take salicylate?" We know very little, but the public knows less. People now have one medical man for every organ, and I know a lady who consults one man for her eyes, another for her throat, another for her "chest," another for her menstrual troubles, and she herself decides "what is wrong," and then asks me to reconcile the contradictory pieces of advice which she gets from "her London doctors." The false relationships of our public, our press, and our patients to our profession are our own fault. Let us think less of our successes and more of our failures, less of the possible glory of the future and more of the darkness of the present, less of our "modern advances" and more of our modern helplessness, less of the possibilities of science and more of its simplest theories. Let us simply do what is right, and not

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ostentatiously act as if we knew so much more than we do. Our knowledge is vast, but our ignorance is vaster. Those who have to treat people who are "ill" should study those who are "well." We should value character more than a certificate, and a real success more than an apparent victory. We should be as men treating other men, not as hospitalised beings treating patients. In all our relationships we should remember that kindness, gentleness, and sympathy add to the true value of skill, and that, though the powers of the head are great, the powers of the heart are greater. We can do much by our abilities, but more by our affections, and, although we now have "to live in wearied hope," yet it is not the possible only, but the perfect, we should live for, ever bearing in mind that "greatness is to take the small things of life and walk grandly among them."

An Address
ON
THE EXAMINATION SYSTEM.

Delivered at the Opening of the Session of the Liverpool Medical College, on Tuesday, Oct. 1st.

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MY LORD DERBY, LADIES AND GENTLEMEN,—In searching round for some topic which should prove of general interest on the present occasion I have hit upon that of examinations. It is one which concerns us all. We have all of us been examined, most of us expect to be examined again, some of us are examiners now and others will be in the future, and, finally, a few of us are ex-examiners looking back upon our own careers and reflecting with much interest upon the whole machinery of modern education, of which examinations form such a prominent part. I am thinking not solely of our professional education, but am venturing for the moment to glance over a wider field. Examinations are the order of the day, and without much regard of sex or station in life we now see the youth of the whole community offer itself as so much subject-matter for the examiner's scrutiny. The motives for this vary in different cases. With many it is the necessity of obtaining a certificate or diploma essential to success in life, with others merely a desire to be honourably distinguished, and with yet others a conformity with custom and an unwillingness to be in any sense left behind. Various, however, as may have been the motives which have drawn students to the examination room, on one point there will have been uniformity, and it is most important. It is this, that the scope of the examination in prospect has been of all importance in determining that of the previous course of study. "This I shall want; that I shall not be asked," has been the ever-present thought in the selection of subjects for reading and thought. Whatever was deemed not likely to be asked for has been ruthlessly put aside, whatever its intrinsic interest. The demands of the examiner set the pace of study, and the breadth of the examination determines the narrowness, or otherwise, of the student's education. Such being the facts, and the probability being that they will increase in cogency as years go on, it is obviously of the utmost importance to the community that careful consideration should be given to the perfecting of our examination system. It may be a hindrance to the spread of knowledge and the development of the mental powers, or it may, if carefully managed, become a powerful aid to both.

The aim of sound education should be to convey to the coming generation as much as possible of the knowledge already acquired by its predecessors, and in doing this to still leave the faculties untrammelled and the memory not overburdened. The teacher, whilst seeking to create and to satisfy the appetite for knowledge, must above all things be on his guard lest his well-intentioned endeavours may repress it and cause disgust. I fear it is not very likely that pass or pluck examinations can ever be made to do much to foster the love of knowledge. Here and there it may by chance happen that a mind is led to see the attractiveness of some subject which would have escaped his attention had it not thus been forced upon him, just as a sportsman may see the beauty of a wild which he would never have visited but in pursuit of game. In the main, however, it is all the other way, and the fag of preparation and the innate dislike of giving reasons on compulsion create distaste rather than otherwise for the subjects concerned. Against this—it is to be feared the natural result of compulsory examinations—it is wise to take all possible precautions. Examinations should be made as little distasteful as possible. To this end it is essential, in the first place, that the element of uncertainty should as far as possible be eliminated. The candidate ought to feel throughout his studies that in presenting himself to an examiner he does that which is equivalent to placing himself on a weighing-machine, and that the verdict recorded will be in exact relation to his deserts. In proportion as the hope is indulged that success may be attained by good luck, will the thoroughness of study be neglected; and just as it may be possible to suspect that the mood of the examiner, the complexity of a question, or some other accidental circumstance may have influenced the result, will be the disappointment and vexation of a pluck. These considerations bring us at once face to face with details. It has been, I believe, the steady tendency of all examination boards to dispense with personal contact between the examiner and the examined, to trust more and more to written questions and answers. To take as instance our own College of Surgeons, the time is not so very long ago when Sir Astley Cooper and a few of his compeers met together after dinner and in a very short space of time, and with very little formality indeed, decided the fates of a batch of candidates. If a student were a man of gentlemanly bearing, if he had studied at the proper school and did not display gross ignorance, he was in no sort of danger. The examiner might ask his name and place of birth, and possibly send a kind message to his father or uncle. All this has been changed now, and so much for the better that a feeling akin to reluctance arises in asking you to entertain the question as to whether further improvements are possible. A large part of the examination is now in writing; it is divided into various departments and occupies probably as many quarters of an hour as the old one did minutes. To be personally known to an examiner is possibly now a disadvantage rather than otherwise, and the responsibility for the result is now shared by a dozen or more of conscientious men acting to a large extent in independence of each other, but never singly. Yet, in spite of these improvements, we still hear complaints—sometimes loud ones, and coming from those who have a right to make them—that the scales of the College do not always weigh correctly. A man may be rejected who was the pride of his teachers, and one may be passed whom they much mistrusted.

That I may avoid the ungracious position of appearing as the critic of a special institution, and at the same time that I may escape the necessity for repetition, I will now venture some general suggestions applicable to all examinations. The personal element, that of the examiner, should be eliminated as far as possible. To this end *vivâ-voce* examinations should as far as practicable be avoided. I have heard a self-confident examiner allege that he could tell better what was in a man in five minutes' conversation than by reading any number of his written papers, and I did not doubt that he thought so. This judgment of men, as it were, by personal inspection is often most fallacious, and should be permitted only with the utmost circumspection. Most certainly the impression so formed by any single examiner, or any two associated examiners, ought never to be permitted to override that of their colleagues. In other words, the result of the examination ought always to be determined by the sum of the marks gained, and no rejection should take place in consequence solely of the adverse vote of a single table. This applies to all departments of the examination, but with special emphasis to the *vivâ-voce*, in which no individual examiner ought to possess the power of rejection. A candidate may be at great disadvantage in the *vivâ-voce*, especially in the hands of an examiner who thinks it his duty to pin him to some subject in which he appears weak. The dawning perception of the possibility of rejection may deprive a good man of his resources, and ensure for him a wholly undeserved fate. Another great objection to *vivâ-voce* examination is that the decision must be recorded hurriedly, on the spur of the moment, and that there remain no data in evidence to which to recur. Few indeed are the subjects in which a candidate is not mos

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likely to do himself justice (whether to his advantage or otherwise) in a quiet half-hour with pens and ink. It by no means follows that the disuse of the *vivâ-voce* would throw us back wholly on set verbal questions. There remains the extensive field of objective examination. Under this head we have the identification of specimens and the use of the microscope and of chemical tests, and the diagnosis of disease in the living patient. This kind of examination it is which conduces most of all to sound, matter-of-fact, objective teaching. It is, perhaps, the most important of all modes, and is one which in the future is destined to receive more and more attention. Although it may be admitted that the diagnosis of disease in patients can never be suitably done excepting in the presence and under the supervision of an examiner, yet it is better that the latter should not interfere by question or suggestion, and that the candidate should be permitted at his leisure to write out the opinion which he has formed.

We come next to the consideration of papers and of paper setting. Here I have an innovation to suggest. It is that examiners should not be allowed to extemporise their questions, but should be furnished with lists of approved ones out of which to select. It is impossible to deny that of those now set many are ill expressed and some wholly unsuitable. It is no legitimate part of an examination to take the candidate by surprise or confound him with the unexpected. Nor should half of the time allowed be taken up in the effort to understand what the terms of the question are intended to mean. Yet obscurities of this kind are inevitable under the present scheme of question setting, which involves the preparation of them by men under much pressure of other engagements and with but little time at their disposal. Questions suitable for examination purposes should be devised at leisure and expressed in the clearest possible language. Under this plan each separate examination should have its own catechism of questions, to which the examiner should be restricted. Of this a revised edition should be published every five years. It should be a rule that a third of the questions selected should be of the objective kind and should necessitate the recognition or description of something. By this precaution the evils of cramming might be forestalled, for the crammer must perforce become the teacher of sound knowledge. One great collateral advantage of systematic and exclusively written examinations of the kind suggested would be that those conducted by different bodies might be brought more nearly into uniformity. The written answers should be preserved, and in the case of our own profession ought to be producible at any time on the demand of the General Medical Council. Nor would there be the necessity which is now supposed to exist for the employment of seniors in the profession as examiners. Younger men, having leisure and working under the supervision of an experienced chief, might do the work not only as well, but much better. It must be noted as a distinct drawback in our present system that those employed in it are men whose time and thoughts are very fully engaged in other matters, and who come to their examination work already wearied with that of the day. A never-failing answer to all projects of reform is that the time of the examiners must be considered, and proposals which would involve either extension of time or addition of work are sure to encounter determined opposition. The machinery of examinations will, however, never work satisfactorily until considerations of time and trouble are put wholly aside. Nothing is more essential to just conclusions than that the process should be conducted with leisurely quiet; nor, let me add, should it be in the hands of those who, in consequence of frequent changes and short periods of office, are more or less inexperienced. It is the fashion to hold that anyone who knows his subject can examine in it, but in truth it is not so, and the art of examining is one which, like other arts, needs to be learned. The man who has been some years at work makes, I feel sure, other things being equal, a far more trustworthy examiner than a novice. To some extent, especially in some departments, examining should be a profession in itself. I am aware that there are differences amongst those well entitled to their opinions as to the advantages of subdivision in examinations. It is sometimes sought to throw mild ridicule on divided examinations by speaking of them as "taking your dose in teaspoonfuls." It is thought that by allowing a man to come up in one subject at a time you encourage cramming and voluntary forgetting. I may confess that my own impressions are very strongly in favour of subdivision. In their favour it may, I think, be urged, in the first place, that a much more detailed and practical knowledge may be suitably exacted at a special examination than would be demanded at one which included a great variety of topics. If, for instance, a candidate were allowed to present himself whenever he liked for his examination in ophthalmic medicine and surgery, and to take that subject by itself, he would certainly get it up in a very different fashion from what would probably be the case if he were only going to encounter the risk of a stray question or two as part of an examination in general surgery. He would, in all probability, have attended as an eager and attentive learner at some special institution. Are we to believe that he would forget what he so learnt sooner than he does the scraps of book information with which but too often he is obliged to be content under our present system? He would know well that at such a special examination a much higher standard would be demanded. Having obtained his certificate for eye disease he would proceed with cheerfulness and with a less burdened mind to other subjects. Undoubtedly much will be forgotten. That is inevitable under every plan. It is not, however, so much the mere change of the attention from one topic to another which tends to obliterate knowledge as the fact that the thing had never been really learned at all. We all remember Dr. Johnson's retort to the man who pleaded that he had "forgotten his Greek." In support of the principle of divided examinations it may also be urged that it would permit of the restoration of certain subjects, such as botany and zoology, which have been for well-known reasons left aside, and even of the insertion of others. I am here possibly on delicate ground. Permit me to say, however, that I do most certainly hold that a medical man ought to be a well-educated gentleman, and that he ought not to wholly omit from his training at any rate an elementary knowledge of those branches of natural sciences which are cognate with his special calling. It is quite true that it is no longer necessary to have studied botany in order to prescribe drugs; but there are other and yet more cogent motives for its pursuit. As a branch of the great science of biology it presents us with lessons which are full of interest and instruction. The same is to be asserted of zoology, and with perhaps only little less cogency of geology, climatology, and some other topics. The attainment of knowledge in all these is not difficult if it be sought in the right way. To that end divided examinations—not perhaps compulsory, but resulting in certificates which should be contributory—would be of great assistance.

The advocates of inclusive or comprehensive final examination—and amongst these are, I believe, some of our leading authorities on education—urge with plausibility that they are better tests of a man's memory and mental powers. To some extent this may be admitted, but their superiority in this respect is probably very limited. By no means can it be alleged that those whose memories have sufficed to carry them through an examination in half-a-dozen different subjects on one and the same occasion will subsequently retain the knowledge which they then displayed. The diploma or certificate is, unfortunately, no talisman which will secure us against the treacherous influence of the world's pursuits in obliterating the record of the labours of our student days. Some confession of weakness on the part of the present system is, I think, to be found in the limitations which it has been found needful to impose upon the scope of these many-subject examinations. Students are informed beforehand that only such and such topics will be taken. This is, perhaps, not done so much in our medical examinations as in those of general education. Thus, in botany a candidate at South Kensington is informed that fourteen natural orders only will be questioned in, and that he need not know anything of Papaveraceæ, for example, and a host of others. At Cambridge he must add Papaveraceæ to his repertory, but may still leave aside almost all the rest. At most of our examinations the important sub-kingdom of Fungi may be left out of consideration altogether. I mention these merely as examples; the same principle will be found to pervade other departments, and the result is a sort of patchwork education, the incompleteness of which is much to be regretted. Our children are taught one reign in English history, for instance, or one short period in that of Greece or Rome, and do not obtain, as I think their forefathers did, a general, though it is to be admitted a superficial, view of the whole. Modern education, in its zeal to avoid the charge of being superficial, incurs, as it seems to me, that of being merely fragmentary. It aims at thoroughness, but is obliged

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at once to admit that it can attain it only in certain subjects, which, compared with the sum of human knowledge, are but few and small. Let those of us who advocate wide study, and as a consequence wide examinations, face at once this charge of encouraging a merely superficial acquaintance with things. There is much to be said in its favour. Excepting a very few of us, we are all mere smatterers as regards almost all that we think we know. It is not possible to be otherwise excepting at the cost of being wholly ignorant in many directions, and as regards fitness for the affairs of life, better by far a general acquaintance with all that is around us, though it be not very deep, than slices of profound knowledge placed sandwich-wise between thick layers of utter ignorance. In the medical profession more especially is this alternating method of education to be shunned. We cannot afford to allow attainments in one direction to counterbalance vacuity in another. Hence I think a very strong reason exists for allowing our students to subdivide their studies and take one at a time, with the understanding that they do that thing, for the time, well.

I must now, Mr. President and gentlemen, attempt a brief summary of what I fear has been a very discursive address, and then conclude. If I have given to any the impression that I am in favour of increased stringency or of increased leniency in medical examinations let me hasten to remove that idea. My plea has been rather that our examinations should become more and more an integral part of our educational system, and that by making them more exact and more definite we should enable them to better assist the labours both of teacher and student. The latter especially should be brought to feel that his examinations, so far from being sources of harass and worry, are really his best friends, in guiding his work and at the same time gauging his attainments. I have advocated frequent examination, but at the same time have urged that the student should be allowed to take one thing at a time, and thus, as it were, to have the pleasure of counting the milestones in his journey. With the hope of reducing to a minimum the uncertainties of examinations I have ventured to suggest some curtailment of the privileges of examiners, more especially that they should no longer be invited to exercise their ingenuity in devising extempore written questions, but should have supplied to them carefully prepared lists of suitable ones, which lists should also be accessible to the candidates. If on some matters I have ventured upon detail which may be thought better suited for a board of examiners than for the present audience my reply is clear. It is time that the public—in the case of our medical examinations I mean, of course, the professional public—should interest itself in this matter. It is one of the widest possible importance, and for reasons which need not now be mentioned it is one in which only reforms of a certain class should be looked for from within. No one conversant with human nature will expect from those actually holding office reforms which might be thought to reduce the dignity of that office. As to *vivâ-voce* examinations, I have suggested that they should give way to written ones. Surely we are behind the day when we keep up the custom of putting specimens into the hands of nervous students and demanding impromptu recognition, when with less expenditure of the examiner's time a quiet hour with half-a-dozen such preparations might be allowed. Who can doubt as to which would best test the pathological knowledge of the candidate? It is the same with the diagnosis of disease in patients.

Many of you listened not long ago, and I believe in this hall, to an address from one whose name stands, I may say without offence to any, as the foremost representative of surgery in Liverpool during the present generation—my friend Mr. Mitchell Banks. He took for his text "the Overcrowding of the Profession." I will not attempt to epitomise an address which was throughout racy with humour and yet solid with sense. With most of what Mr. Banks told you I thoroughly agree. More especially we are entirely at one in his conclusion, which was that the safety of the profession lies, not in new legislation of any kind, but in its own examinations. His chief proposal was to increase the stringency of the matriculation, and thus prevent at once the entrance of the illiterate. In what I have said to-day I have taken up the same idea, but have carried it a little further, suggesting that arrangements should be made throughout the whole course of study which should encourage the industrious and choke off the incompetent and idle. The key to the whole situation is in the hands of the examiner. Curricula of study are worthless without his aid, and certificates of study granted without examination are of no avail whatever. If our examinations were developed we might almost wholly dispense with both, and leave the student almost at his free will to choose and to change his places of study. Only make our examinations trustworthy and thorough and we need no other safeguards. Amongst those who hear me I doubt not there are representatives of different interests in this matter. The student has been much accustomed to regard the examiner as his enemy, and looks upon any suggestion which he thinks would make the test more stringent almost as unmitigated hardship. Paterfamilias, who has sons to pass, takes the same side with perhaps added warmth, on account of a keen recognition of the probable increase of cost. Striving practitioners who have neither sons nor nephews are, on the other hand, willing enough that the portals of the profession should be more strictly guarded. To one and all let me earnestly say that we are all in the same boat. The student of to-day will be the practitioner of to-morrow. It is possible that the supposed evils of overcrowding have been exaggerated, and I am sure that none of us would like to restrict, were it possible, the number of students to that of the supposed needs of the public for medical practitioners. We put a higher estimate on the value of medical training than would allow of our desiring any such protection. From men educated in the schools of medicine have sprung naturalists, men of science, explorers, and those foremost in every branch of knowledge. This has been our boast in the past, let us take care that we do nothing to frustrate it in the future. Let us put no artificial impediments in the way of entrance to our ranks. Let us, however, at the same time, by careful attention to the details of our examinations, make sure of this—that if we are to be overcrowded it shall be by well-educated gentlemen.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.,
DELIVERED AT THE
LONDON AND PROVINCIAL MEDICAL SCHOOLS
AT THE
Opening of the Session, 1895-96.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY ADDRESS BY MR. GEORGE D. POLLOCK.

THE following is an abstract of Mr. Pollock's remarks, delivered in the theatre of the hospital:—

"My first duty in appearing to-day in this theatre is to thank my old colleagues and the staff of the hospital and the medical school for the great honour conferred on me in entrusting to me the delivery of what is usually known as the introductory lecture at the commencement of the winter sessions—a duty which affords me much pleasure and satisfaction, for to this hospital and school I owe all my professional success and the association with many sincere and dear friends, some of whom are present on this occasion, but not a few, I regret to say, have passed away from us, leaving behind them the memory of good work done and of lives well spent for the benefit of their fellow men. It may interest you to learn something of the early life of our school and of the arrangements formerly provided for the teaching of anatomy and other subjects."

[Mr. Pollock then gave a short history of the hospital and continued:]

"When I entered here as student in 1837 there were two anatomical schools, with lectures on certain subjects not connected with the building. The lectures on chemistry were delivered at the Royal Institution in Albemarle-street by Brande and Faraday, and many a cold and wet walk have I had to get there at nine in the morning in winter. One anatomical school was in a narrow roadway which ran past the south side of the hospital to Tattersall's Yard, which then occupied a large space of ground in our rear, and upon part of which this theatre, with the museum and dissecting-room, now stand. This alteration was the result of the removal of Tattersall's stables, and for which we have to

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thank His Grace the Duke of Westminster, one of our vice-presidents and liberal supporters. The other dissecting-room was in Kinnerton-street, at the back of Wilton-place, and there the lectures on anatomy, physiology, and chemistry were conducted. For several years I lectured there on anatomy, often hurried to be in time, after a long attendance in the out-patient room. Not only in this respect are the arrangements for your instruction and comfort materially improved, you have now far greater facilities for clinical work and study. Clinical work being, after all is done and ended, the most important subject to devote your time to, you cannot give too much attention to the aspects of disease or disorders by the bedside with notebook in hand; or, if a fatal termination ensue, to follow the case to the post-mortem room and record there the havoc wrought by disease. Here you will find help and instruction from our curator in the examination of each subject. The study of disease by the bedside, and the investigation of its results when fatal, will lead you to high results only to be attained by persevering labour, amidst many difficulties and oft-repeated discouragements; by labour that chooses its localities as well as its object, and refuses to produce its fruits unless it be amidst the sufferings and sorrows and dangers attendant on sickness and death; by labour that sometimes seems hardly to have begun until we are called upon to follow it in the dead-house, amidst the perishing relics of our fellow-men. But see how morbid anatomy, itself a modern science, enables us to look back, as it were through an avenue, upon the countless paths through which death has made his approach; see how we can track him in his progress, and mark how, step by step, he has gained his territory, and at last has achieved his final victory. But each such victory, if only rightly used, weakens him, while it strengthens us. We learn his wiles, and, increasing our defence, may hope to keep him from life's citadel until at last those threescore years and ten be passed, beyond which life is too often only a prolonged sorrow, whilst death, it is our glorious privilege to know, is the opening of that bright world where disease and pain are no more.

"'Death is the crown of life;
Were death denied, poor man would live in vain;
Were death denied, to live would not be life;
Were death denied, e'en fools would wish to die.'"[1]

[Mr. Pollock then dwelt upon the advantages of holding the appointments of house physicians and house surgeons. He continued:]

"Let me advise you to devote yourselves chiefly during the first winter session to the study of anatomy and physiology. Steadily occupy your time in the dissecting room, and with the assistance of the demonstrations you should almost master your anatomy to such an extent the first winter as to render dissection almost unnecessary subsequently; at any rate, with some work on anatomy, with good illustrations, such as may be found in Quain, you should be able to perfect your knowledge of the human body without difficulty. But work, constant, steady work, is essential to the attainment of this thorough knowledge of the anatomy of man. The study of the structures of the human body, when compared with the varieties of similar tissues in comparative anatomy, is of such interest that it justifies me in commending it to you for your consideration as one of great interest and intellectual pleasure. Compare the muscular development of man with that of some of the lower forms of life; the smallest insect that flies or is seen to creep on the earth possesses muscles as beautifully constructed for movement as are ours for the various actions of our limbs in everyday life. For this a nervous system is provided to call them into motion. What must be the size of that brain or nerve tissues to give action to these muscles? We cannot but acknowledge the beauty, the wonderful structure, and the harmony in all that is the life of that insect, and bow with reverence to the wonderful power that called it into being."

[The lecturer then referred to the celebrated men who had been connected with St. George's Hospital, mentioning specially Baillie, Hunter, Brodie, and Cæsar Hawkins. Continuing, he said:]

"I was much struck by an observation of Mr. Balfour made not long since at a meeting of scientific men which bears strongly in support of what has just been referred to. '*Truth*, not *profit*,' he remarked, 'must necessarily be the motto of every body of scientific men who desire to be remembered by posterity in their discussions.' Gentlemen, your work must be stimulated by honest purposes and rightly directed ambition—ambition for success and a good name, ambition to succeed, if not to excel, in whatever department of your profession your future may be cast.

"'Hundreds before me vain ambition cry,
Thousands behind me common sense reply.'"

Let your ambition be tempered with common sense—rather a rare quality—backed by industry and supported by honest and right-minded conduct; and it is few, indeed, who need fail to gain that success which such conduct in most instances will not fail to secure. But bear in mind still more strongly that it is only too true, 'Ambition is a lottery in which there are many prizes, but in dissipation every man draws a blank.' Now in the practice of your profession there are many circumstances which help towards success. One not to be neglected is your personal conduct in your intercourse with your patients. Some men possess the happy gift of impressing favourably all with whom they come into contact. All do not inherit this valuable quality, but all may endeavour to acquire some portion of it. There can be no doubt that courteous and refined manners have as much influence in practice as great talent; especially is that success secure when the two are combined. Bear yourselves with consideration and kindness towards all with whom you have to deal. Ever remember that in sickness or weakness from disease a patient will appreciate sympathetic attention much more than one in health. A story once told me is perhaps as good an example of the benefits derived from amenity of manner as I can relate. A granduncle of mine who had amassed a large fortune was asked by my father what was the great secret of his success in life. He was a charming old man of most benevolent and lovable disposition. His reply was very simple, but much to the purpose: 'I have always found honey catch more flies than vinegar'—a hint that applies to your intercourse with patients equally to that of its adoption in any other call in life. The *suaviter in modo* is a motto ever to be remembered at the bedside of the sick and should always influence your conduct towards the invalid.

"'To catch Dame Fortune's golden smile assiduous wait upon her,
And gather gear by ev'ry wile that's justified by honour;
Not for to hide it in a hedge, not for a train attendant,
But for the glorious liberty of being independent.'

"Gentlemen, in the practice of your profession you will meet with a great variety of tempers, constitutions, and idiosyncrasies which will require all your care, much judgment, and not infrequently much caution to deal with. Of temper and constitution you will judge best how to manage by careful and judicious observation as cases present themselves to you. But of idiosyncrasies I must say something more.

[Mr. Pollock then referred to the importance of taking note of the idiosyncrasies of patients' foods and drugs, giving several instances, among others that of a gentleman who could not eat gooseberries without their producing an eczematous eruption on some part of the body. When dining with a fashionable party, soon after the champagne had been handed round, the gentlemen observed to a friend sitting next to him—and from whom Mr. Pollock had heard the facts—that the wine was not champagne, but gooseberry wine, and pulling up his shirt sleeve showed him the specific eczematous rash appearing. Mr. Pollock continued:]

"Lord Byron, in his reported conversations with the Countess of Blessington, remarked to her that 'medical men do not sufficiently attend to idiosyncrasies on which so much depends; and often hurry to the grave one patient by a treatment that has succeeded in another. The moment they ascertain a disease to be the same as one they have known they conclude the same remedies that cured the first must remove those of the second, not making allowance for the peculiarities of temperament, habits, and disposition, which last has a great influence in maladies.' These remarks are simple exaggerations of feeling and fact. Byron was not one enamoured of the medical profession more than he was of professors of divinity, but he was an acute observer, and it was interesting to me to read his views respecting idiosyncrasies. He judged rightly, very rightly, of their importance in connexion with the practice of medicine. Observe, gentlemen, that he makes use of the word 'cure' to denote 'treatment'—a word too frequently used without reflection by the world generally, and quite inapplicable to the circumstances of our successful attendance on the sick.

[1] Young, Narcissa, p. 526.

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The empiric proclaims that the administration of certain drugs, or a combination of them, is essentially a 'cure' of such and such a complaint; but the rightly thinking and experienced medical man will tell you to bear in mind that 'cure' is not a term to be used by the educated practitioner. What can or do we 'cure' in disorders or disease? Nothing, I fear. We treat, and watch with care, 'all the ills that flesh is heir to.' By judicious treatment we may sometimes shorten an attack of illness, and probably do so in many cases of sickness; but the mysteries and course of disease are influenced much more by causes over many of which we have absolutely no control. Take, for instance, the eruptive diseases of childhood or mature life. Do we by treatment cut short the progress of scarlet fever or typhoid fever, or other disorders which need not be enumerated? The late Dr. Wilson, physician to this hospital, a great scholar and a man of great observation and reflection, was ever strongly opposed to the use of the word. It was he who first impressed me with the importance of discarding it as incorrect in all our views with respect to the action of medicines. Patients, he would observe, may recover. 'Recover' under treatment, but we do not 'cure' them. 'Some credit must be given to Nature for her assistance in the recovery.' 'Cure' is the motto of the empiric.

"There is another point of practical importance, gentlemen, to which I particularly wish to direct your attention. You will have to listen to many a tale or history of a case from a patient, or one who in practice may require your coöperation. Listen to all that may be told you with attention and consideration. But, whatever you are told, be sure to satisfy yourselves that you have facts, and not mere statements, to guide your decision, and upon which you have to form your diagnosis and decide your treatment. Take nothing for granted. Take every precaution to establish in your minds the absolute truth of all related to you, and seek for yourselves the symptoms to establish that truth. I heard it once said, and it has remained engrafted in my mind, 'that in medicine, as in most other callings, taking a thing for granted without satisfactory evidence was often the cause of more mistakes than ignorance.'

"Gentlemen, I trust you will not overlook the difficulty there is in giving even the semblance of novelty to thoughts in such a lecture as this—thoughts which have found expression a thousand times by others gone before me on similar occasions to this. My object has been governed by the desire to point out to you certain things which I believe to be true, to be useful, and of universal application; and if anything I have said shall assist in giving a nobler idea of life and its responsibilities to any of you who are now entering on the study of medicine, the purpose I have had in view will be more than amply rewarded. The medical man is often the friend—not infrequently the confidential adviser—of many a patient, quite independently of his professional relations. In this we find how highly the man may be appreciated, not infrequently greatly beloved, and many a time gratefully remembered. When in sickness the patient lies weary and tossing in his bed his mind may be much troubled by some hidden sorrow. The still small voice of conscience may be whispering something in his ear which adds to his unrest and general distress. He may need much mental as well as physical comfort. I do not wish to trespass in any degree on the province of the chaplain; but if, in the distress of mind, added to the sufferings of disease, his confidence in your sympathy and kindness of heart should induce him to refer to his mental trouble you have the opportunity of giving a word of comfort spoken in season.

"Gentlemen, my best wishes attend you, and my sincere hope is that your future will be blessed with health, happiness, and prosperity."

ST. MARY'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. A. P. LAURIE.

A PAPER was read by Dr. A. P. Laurie on "The Medical Profession and Unhealthy Trades," of which the following is an abstract:—

"In standing before you to-day I must plead complete ignorance of what is customary in opening addresses of this kind, as it has never been my fate to be present on such an occasion, and I have gleaned very little information as to what is expected or what is the nature of the subject usually dealt with. I must confess to having felt somewhat attracted to a discourse on my own department of chemistry and to the expression of views on the reform and development of the teaching of that science in medical schools, where it seems to me less might be asked of the student in knowledge of detail, and more time might be devoted to training by a careful experimental course in the scientific method of thought, thus helping to that scientific habit of mind which would be invaluable to him in his future career. Tempting as this educational question is, and important as the right using of the time devoted to pure science must be, I have decided to leave the subject alone, as I have too recently become a teacher of medical students to indulge fitly in criticisms of our present method of instruction. There is, however, a department of work which falls to many of our students to perform in after life, and which I have had the opportunity of examining into somewhat closely, and on which, therefore, I feel that I have some right to speak. I refer to their duties as certifying surgeons in connexion with the administration of the Factory Acts. It is being more and more widely recognised that we look to our medical men to prevent as much as to cure disease, and though we have not adopted the supposed Chinese method of only paying them while we are well, yet we call upon them as officers of public health, and in various other ways, to protect us from ill-health and to devise means by which disease may be warded off, so that research into preventive medicine and into the questions arising from the difficulties of keeping large and crowded populations in a healthy state are of growing importance. The administration of the various sanitary laws is largely in the hands of the medical profession, and to them is entrusted the guarding of our population from the introduction of foreign plagues like cholera, and from the spreading of diseases that are always with us. Furthermore, all the questions involved in raising and keeping a vigorous and healthy people are in their hands for solution, so that they might well be named the guardians of the public health. And if it is the duty of our navy to protect our shores from foreign foes, to the medical profession is entrusted the far more difficult task of waging an internecine civil war against intestine enemies. Among the many problems of healthy living to which our complex civilisation has given rise few are more interesting or worthy of study than those associated with the growth and development of our industrial system. The necessity for the rapid and continuous production of enormous quantities of articles of commerce has given rise to innumerable difficulties in connexion with the health of those employed in such productions. The insidious effects of long and persistent exposure to influences which for a short period would probably do little harm are pressing themselves on the attention of our medical men and our legislators. For example, the occasional handling of white lead or breathing of a vitiated or dust-laden atmosphere is harmless enough, but prolonged exposure to the same conditions produces terrible results. Attempts, therefore, have been made to meet these evils by special regulations and Acts of Parliament dealing with unhealthy trades, and the Home Office, with its zealous army of inspectors, does what it can to impose these regulations for the preservation of health on the workshop. But though much has been done in this direction much more must be done before results sufficient to satisfy the conscience of the nation shall have been obtained. Few realise who have not investigated them how difficult are the problems involved in this question or how intricate the whole subject is, and yet it is one which has received comparatively little attention from the medical profession. It was my good fortune to be appointed a member of the Home Office Committee which inquired two years ago into the results produced on the health of the operatives by pottery manufacture, and I was specially struck by the fact that most of the local medical men of the district who came before us as witnesses had so little information to give us. Evidently their attention had never been specially turned to the question, and they had missed the opportunity afforded them of making a most interesting series of investigations. There are, of course, many noble exceptions. The name of Dr. Arlidge will always be remembered as a pioneer in this department, and the researches of Dr. Oliver into the poisoning in white lead manufacture have pointed the road to be followed by others; but in spite of these men little has yet been done in the way of scientific inquiry, with the view of remedying the evils produced under modern conditions of industry. In too many of our industries the life of the worker is one long tragedy of physical suffering, and no thoughtful

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man can study the physical state of the population in many of our manufacturing centres without dreading that in the struggle for commercial supremacy we are sacrificing the health and vigour of our people and are obtaining riches at the price of racial degeneration. Some may reply, Surely our factory legislation has already dealt with these problems, and the necessary steps have already been taken to ward off such dangers. It is true that much has been done, and the laws protecting the labour of women and children and the regulations requiring cleanliness and ventilation have been of incalculable benefit to the industrial population; but the questions which now arise are more difficult and do not the less press for a solution. The whole of the problems involved in the handling of poisonous substances, and in the breathing of a dust-laden and vitiated atmosphere, and in the working in excessively high temperatures, are still in most cases awaiting solution. It is true that the Home Office has made vigorous efforts to deal with some of them by special inquiry and special rules; but, speaking as a member of one of these committees of inquiry, I do not fear to say that the result of that inquiry was to my mind merely to state clearly the problems awaiting solution in that particular industry, but not to solve them, and to prove that it was only by systematic research by trained experts on the spot that permanent and satisfactory results can be hoped for. What, then, is the present state of affairs?"

[Dr. Laurie then proceeded to give a brief historical *résumé* of our factory legislation, adopting as a starting-point the great Consolidating Act of 1878. He continued:]

"This brief historical survey is, I think, sufficient to show that the Home Office has been rapidly acquiring very heavy responsibilities and complex duties with reference to protecting the health of the workers, and that these duties are of a kind which it is surely obvious cannot be satisfactorily fulfilled by the ordinary staff of inspectors. The public are too apt to assume that when special rules have been drawn up the work is completed, while it would be more correct to say it is only then begun. Special rules have not been found adequate to remove those evils in the past and are not likely to prove adequate in the future; they merely form a basis for further inquiry and research. And surely the great advance which has been made as the result of the inquiries of four or five expert committees shows how much might be hoped for from the employment of continuous expert assistance in the future. Let us now look briefly at the reports of some of those committees and see what light they throw on the question. These reports are worthy of study by all medical men interested in public health questions, and contain a great deal of interesting information, but it is impossible to read them and not feel that the information obtained is inevitably imperfect and the proposed remedial measures of a tentative character. In fact, in the report by the Potteries Committee this is brought out very clearly by the committee themselves. They ask 'to be empowered to continue their investigations as to the composition of glazes and colours with a view of finding out how far it is practicable to make a glaze that shall be harmless to those employed and at the same time shall not injure the ware.' In another paragraph they say: 'Further information is also required as to the temperature of potters' workshops and of stoves at the time of drawing the ware.' Further on, speaking of the same subject, they say: 'We have already in Rule 7 attempted to deal with the temperature of workshops, but do not consider the rule in its present shape as final,' and so on. Similarly the reports of the other committees are full of suggestions as to modifications of machinery and processes which would result in far more benefit than the special rules, and which, when adopted by manufacturers, should be carefully watched and reported on from time to time with a view, if successful, to their ultimate universal adoption. Now, zealous and efficient as the factory inspectors are, they cannot be expected, overburdened already by the increasing number of duties they have to perform, to be able to observe what the effects of the special rules are on the health of the operatives, or to discover which are of value or what modifications are necessary, for, apart from the fact that they are already overworked, such observations require a medical training. As an example of a case where scientific observation is required let me take the Cotton Cloth Act requiring the regulation of the temperature and humidity of the air in the weaving sheds. This Act, as I have already stated, has produced a complete revolution in the methods of ventilating the weaving sheds, and gives the opportunity of studying on an enormous scale the results of artificial ventilation on the health of thousands of people, and the value of the new methods as compared with the old. A careful recording of this experiment would be of the utmost importance in guiding us in the ventilation of factories and schoolrooms, and yet, as far as I am aware, no one is watching and recording the results, or, if it is being done, some private enthusiast is engaged in the work, and the Home Office, having instituted this interesting alteration on the air supplied to thousands of operatives, with a magnificent carelessness, does not even watch and record the results of its own experiment. The same criticism applies to the special rules which have been applied to other trades, for they all involve regulations introduced to affect the health conditions under which the operative works, and yet no observations by experts are being made to see if they effect their purpose. We have, therefore, most valuable experiments being made upon this most important subject without any proper record or criticism of the results. But we can go further than this. Questions are arising and will arise in connexion with these special rules and the various modifications of manufacturing processes which are always taking place which the Factory Department of the Home Office, having no experts to apply to, are incapable of solving. I know of one case where a manufacturer applied to the local inspector to be relieved from certain special rules because of certain modifications in processes of manufacture, and the question was referred by the inspector to the Factory Department, referred by the head of the department to the Home Secretary, and by the Home Secretary to the local inspector, and by the local inspector to the manufacturer, who, being the only expert in the whole chain, gave judgment on his own application. What, then, you will ask, is required to enable the department to deal with these questions of increasing difficulty, and to advance further in its battle with disease and death? There are two proposals which I should like to suggest, and which are, I think, worthy of consideration, proposals dealing with the central and the local organisation respectively. In the first place, to deal with the local organisation there is a body of men to whom I referred in the beginning, the certifying surgeons, of which sufficient use is not being made. Let me begin by briefly stating the present position and duties of the certifying surgeon. He is appointed by the Factory Inspector of the district and has two duties to perform. In the first place he has to examine all children and young persons in his district who are about to be employed in factories, and without his certificate of fitness they cannot be employed. For this duty he receives from 2*s.* 6*d.* to 7*s.* 6*d.* for each visit, and 6*d.* for each child examined over five in number, when the examination is made at the factory, and 6*d.* for each child when at some place appointed by him. This is done only in cases when the number of children is under five. In the second place, accidents must be notified to him, when he must go and make an inquiry, and has a right of entry into the factory for this purpose. A special fee is paid for this also. Now, is it not possible to extend the powers and duties of the certifying surgeon, and, if I may make a further suggestion, his pay? Would it not be possible to use him to make continuous observations on the health of the operatives and the effects of new regulations and report to the Home Office on the same, and would not the money so expended be well spent, and is it not worthy of consideration whether the status and method of payment of the certifying surgeon could not be improved? I know of one certifying surgeon who has received exactly 2*s.* 6*d.* in fees in three years, in return for which he had to fill up innumerable forms and reports to the Home Office. This can hardly be regarded as a lucrative appointment. In fact, we have here an expert staff already in touch with our factory system, and responsible for the fitness of the operatives at the beginning of their career, which might, if properly encouraged, supply us with invaluable information; and, furthermore, in the Factory Act of 1895 a clause has been introduced giving power to the Home Secretary to call on the certifying surgeon to make special inquiries, which opens the door to my proposal. But it is not only locally that the expert is required; the work done by the temporary expert committees appointed by Mr. Asquith has shown the value of expert advice. Why should not the Home Office have an expert consultation committee attached to the factory department, consisting of medical men, manufacturers, men of science, and engineers, who should have power to inquire into and report on and advise on questions affecting the health of the operatives?

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In this way much useful work could be done. So far I have only treated of this matter from the point of view of the operative, but I am sure the manufacturer would also welcome my proposal. He, too often, feels that he is subjected to vexatious regulations, involving trouble and expense, but which do not go to the root of the matter, by a department which, though well-meaning, is ignorant; and, while willing to submit to such regulations when evidently leading to improvement in the health of his work-people, he is irritated by restrictions which he knows to be useless. Such an expert committee would give him more confidence in the factory department and make him submit to their conditions with better grace. It is, therefore, in this direction that I venture to think the next step in advance is to be made, and, in conclusion, I would wish to press upon our future medical men the importance of these questions. Noble as the work of curing disease undoubtedly is, that of preventing disease is nobler, and there are many thousands in our great manufacturing cities the victims of our industrial conditions, living lives of hopeless ill-health, that are looking for deliverance—a deliverance which is only to be obtained for them by men who combine the calm, clear intellect of the man of science, with a burning compassion for the sufferings of their fellows, a combination of qualities which is to be found most frequently in the medical profession."

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY DR. JULIUS MICKLE.

THE address was chiefly devoted to discussing the manner in which the knowledge of a simple external object is obtained, and in drawing therefrom conclusions as to the only proper, natural, and fitting methods of medical study.

In the first place, it was shown that in the mental development of children the acquirement of a knowledge of a simple object is a gradual affair, and only succeeding after many attempts. That, simple as it may appear, is only arrived at gradually and after failure of the earliest attempts, so that only little by little is the knowing achieved; and any very early error must be corrected by subsequent experience; so that there is a process of learning, and of overcoming difficulties, in order to know the simplest object. Applying this to medical study, it was pointed out that if the natural and fitting method be followed the process must be gradual, that it must begin with the most simple, which must be thoroughly mastered before the study of the more complex is undertaken. In the second place, in knowing a simple object, of a certain class, there must be a synthesis of the evidence derived from certain senses concerned, and a conjunction of that of the several senses coöperating in the process. The importance of the sensations of sight, of touch, and of those attending movement was indicated, and the inextricable manner in which the feelings of movement are bound up with the visual and tactile sensations was insisted upon. The importance of the movements of the eye and hand in vision and in active touch was referred to, and the sensations derived from other senses—such as hearing, taste, and smell—were shown to have their part in the process of perception of the particular object which was used in illustration of this part of the address. In the application of this to medical studies, it was maintained that in them it is necessary as far as possible to use all the activities of the mind and to use them in coöperation. The importance of great width of culture in medicine was asserted, and the characters were mentioned which any sound specialism must possess, and especially that it must be built on the firm foundation of a wide and complete study of medical and other science. In relation to this, and as examples to follow, were mentioned the wide bases on which were built the medical acquirements of two eminent members of the profession recently lost by death—one Mr. Hulke, who, having a profound knowledge of general surgery, was also an expert in ophthalmic science, was of great repute in palæontology, and of very considerable attainments as a linguist. The other was the late Dr. Bristowe, who, to a profound knowledge of general medicine, had added a special knowledge of pathology, and of diseases of the nervous system, abdomen, and skin. In the third place, for accurate knowledge of the simple object it was shown that there is a process of search for accuracy, a process (so to speak) of working towards truthfulness, so as to secure a truthful mental representation of the object, and to correct any error of sense by the truthful evidence of other senses. And, moreover, that what is true with regard to these simple products of mental activity is true also of the outcomes of all the higher and the highest activities of mind and their collateral results, and therefore involves the accuracy of the highest thoughts or ideas. This proved the necessity of using in medical research and study the utmost fidelity, the honest intention of truthfulness to nature, and the necessity of correcting any error that may arise by the critical operation of other forms of mental action. And, in regard to this part of the subject, the predominant importance of making medical study as faithful as possible to nature was urged, as well as that in medical research and study there should be a perfectly unbiased, fair, consistent, judicial frame of mind, employing in its service all the modes of mental action, and honestly seeking to attain that which is true; that, in a word, medical study should be an honest, consistent, persistent search for truth, and made with all the powers of the student and practitioner.

Other topics relating to the main one were also touched upon.

ST. BARTHOLOMEW'S HOSPITAL.

INTRODUCTORY REMARKS TO THE COURSE OF MEDICINE BY SIR DYCE DUCKWORTH.

"IN beginning to-day the course of systematic lectures on the Practice of Physic, I have little to add to the introductory remarks I ventured to offer to those who sat where you now do at this time last year. I then counselled the importance of systematic prelections in opposition to a modern, and still prevailing, opinion that the day for such a method of teaching had passed by, and that the best training in medicine was only to be gained by an expansion of the tutorial system and by assiduity at the bedside of patients. I entirely accept both of the latter methods, and we afford you in this school the largest measure of each of them. But I no less strongly insist on the great value to you of a diligent attendance on systematic lectures in medicine, surgery, and midwifery, in addition to your tutorial and bedside work. You need all of these. Our systematic courses are now shortened and disencumbered of much that was imported into them in my student days, and I venture to believe that you may gather much from the experience of your senior teachers, which, be it remembered, reposes on a larger basis of observation than can be had from even the fullest hospital opportunities. I may here and now tell you of the activity that is on all hands prevalent in research bearing on practical medicine. Almost every problem is the subject of careful inquiry, and these pursuits are followed with a remarkable degree of industry by an army of trained investigators. We note the patient scientific research student, working often with no other prospect than that of the hope of discovering the secrets of Nature, not seeking mere results, but for the precious kernel of truth. And in labours such as these how little do we think of the failures and disappointments that always befall honest investigators—almost heartbreaking when the expenditure of time and effort is considered. We seldom, indeed, hear of these, but now and then we have the curtain lifted and the light let in with startling effulgence. A line of thought such as this leads me at this moment to recall to you the glorious life-work of that splendid French *savant* so lately taken to his rest amidst the regrets and affection of his compatriots and of scientific men the world over. The life of Louis Pasteur was in every sense a full one. Though not a member of our profession, he probably did more for practical medicine and surgery than all the physicians of this century. This is not the time, nor am I the person, to descant at length on the triumphs of his patience, perseverance, and genius. You are familiar already with many of them. Unselfish, modest, unspoiled by success, fearless, simple, a fervid patriot, a true Christian—such was this great and good man. What a career is his to contemplate in these days of indecent pushing and self-advertisement, what a magnificent lesson does his life afford to those who labour for the truth's sake, and what a moral loftiness it sets before all of us. Think of the aspersions and calumny often cast upon him, and how he bore with the taunts and puling nonsense that were hurled at him by silly sciolists. Like the waves beating on the rocks, like the idle wind, to him all these. He went on his way with the one great aim to seek God's truth, to help his suffering fellow-creatures,

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and to show to his generation and to all who shall follow him how the secrets of Nature are alone to be wrested from her and placed amongst the eternal certainties. We cannot yet tell all we owe to the labours of Pasteur, but we feel sure that no man ever did more to help us as physicians and surgeons, and we cannot doubt that many generations in the days to come will rise up and bless his name. 'Exstinctus amabitur idem.'"

THE PHARMACEUTICAL SOCIETY.

INTRODUCTORY ADDRESS BY PROFESSOR FREDERICK T. ROBERTS, M.D., F.R.C.P.

THE address was delivered before the society by the lecturer on Wednesday, Oct. 2nd, 1895.

After some introductory remarks Professor Roberts drew attention briefly to the history of the Pharmaceutical Society and School of Pharmacy, and eulogised the founders of the institution, as well as its professors and teachers from its establishment until the present time. Addressing the students, the lecturer then proceeded to lay before them certain thoughts which had suggested themselves to him, and which, he trusted, might not be without some influence for good. He continued:—

"First, entertain and cherish constantly a high conception and standard in relation to the nature of your calling, its purposes and aims, its possible achievements, and its social status. It is of no use attempting to conceal or deny the facts that in past times the business of a 'chemist and druggist' was generally but a 'paltry trade,' and that the apprentice who was supposed to be learning pharmacy was often nothing but a 'shop-boy employed to fetch and carry.' Indeed, I very much fear that such a description will still apply not uncommonly. This ought not to be, and pharmaceutical chemists as a body should do their utmost to make it impossible for such a state of things any longer to exist. But obviously if pharmacy is to reach and retain its proper and legitimate status, those who are engaged in its practice must be adequately instructed and trained. I cannot now enter into any discussion as to what should be the exact scope and extent of the instruction and training, or the range and degree of severity of the examinations, especially as I understand that on these points there are differences of opinion even amongst those who have the interests of pharmacy at heart. I venture to affirm, however, that the higher you aim, within due and well-understood limits, whether in regard to general culture, instruction in your own special subjects, scientific and practical training, or qualifying examinations, the better will it be for pharmacists as a body as well as for the community at large. Of course, the fact must be fully recognised that the pharmaceutical chemist cannot ignore the business aspect of his vocation, but I really cannot conceive of anyone, because he is an 'educated pharmacist,' being ashamed of his business. And here let me say that, speaking personally, I certainly do not claim any abstract social superiority for the vocation of the medical practitioner over that of the pharmacist, or that there is any line of demarcation between them. Their relative position must very much depend on individual attainments, character, and actions; and in my opinion the educated pharmacist may fairly regard himself as a 'professional man' if he acts accordingly, and 'carries out everything in a true professional spirit.'

"I now proceed to deal with another point which experience has taught me that it is desirable and necessary to urge and impress again and again upon students, especially upon those who are beginning their career. It is that you should conscientiously realise your responsibilities and fully appreciate your opportunities, taking the utmost advantage of the excellent means of instruction and training, both scientific and practical, which are now at your command. Certainly your advantages here are great, and I strongly advise you to live up to them. To pass your necessary examinations is the lowest point that you can possibly aim at, but you may go as far beyond as your ambition prompts or your opportunities permit."

[Professor Roberts then proceeded to refer to certain practical questions bearing upon the relations existing between the medical profession and that of pharmacy. He affirmed that there is certainly no inherent antagonism between the medical man and the pharmaceutical chemist in any sense whatever, as a superficial glance at much that is going on might lead one to suppose. On the contrary, there should be nothing approaching want of harmony or discord between them, and they ought to work together earnestly and cordially for the common good. He then continued:]

"Assuming, then, that we are well-disposed towards each other, I, as a member of the medical profession, claim from you pharmacists protection against certain dangers and evils with which we are really impotent to deal. In the first place we look to you to guarantee, within reasonable limits, that we are supplied with efficient, active, pure, and unadulterated drugs. Moreover, I cannot refrain from saying a few words about what I may term 'irresponsible pharmacy,' upon which I very much wish that the Pharmaceutical Society could exercise some check. Pharmacy is really in a somewhat curious state just now, and the number and variety of preparations and compounds one sees advertised for every kind of complaint, each vying with the other in brag and boastfulness, are positively most confusing and overwhelming. Up to a certain point of course this is very pleasant and helpful, but there are limits. Amongst other matters, I affirm that it is decidedly wrong that so many drugs, some of them very powerful and even dangerous, are now supplied freely to the public at large in the form of tabloids, capsules, and the like, which they can consume or use in other ways to any extent at their own discretion, and altogether apart from medical supervision. Again, I must enter my emphatic protest against the extreme haste which is exhibited to flood the market with all kinds of new drugs and special remedies, in endless variety of preparations and methods of administration, either before they have been fairly studied or tested at all, or only in a most superficial and inadequate manner."

[Professor Roberts then said that in order to maintain cordial and friendly relations between medical men and pharmacists he presumed it would be generally agreed that it is most desirable that they should keep to their respective spheres as strictly as possible. He discussed the question of dispensing by general practitioners and regretted that for obvious reasons this long-established custom could not in the meantime be changed. He then proceeded:]

"There is another aspect of affairs which I feel bound to notice, though I may be venturing on delicate ground. I allude to the 'prescribing chemist.' Whether I give offence or not, I must unhesitatingly and emphatically declare that for him there is no excuse whatever. He has never been educated or trained in any sense for the position which he assumes, and is certain to do infinite harm in a variety of ways. Therefore I earnestly exhort you, whom I am now addressing as students, from the very outset steadfastly to resist every temptation to resort to such a practice, and not to be led under any circumstances into what is an unfair and illegal competition with the medical profession. I feel ashamed to acknowledge that there are practices prevalent amongst a certain class of qualified medical men which are not one whit better than those of the 'prescribing chemist.' The running of 'cheap dispensaries,' where 'advice and medicine' are supplied to all comers without the slightest pretension to 'clinical investigation,' and, as a rule, at a figure that I feel sure would make you blush if I mentioned it; and the extensive employment by medical men of 'unqualified assistants,' who are absolutely ignorant and incapable, and not a few of whom are but the wreck of immoral and degraded lives, are standing blots upon our profession, and it is a scandal that it is possible for such practices to continue.

"It is pleasant to pass from controversial questions, and to consider for a moment that of coöperation, which in these days is such an attractive word. Taking a comprehensive glance at the existing state of things, and looking forward into the future, one cannot fail to see many directions along which the authorities who guide the affairs of the medical profession and the Pharmaceutical Society, as well as the general body of members of the respective branches, may and ought to work together on legitimate and rational lines. I believe that we all desire a higher standard of education, and that true knowledge and culture may be more widely disseminated among our ranks. What will be the actual course of events in the future it is difficult or even impossible to foretell. The administration of internal organs or their products in different forms; the introduction of serum-therapeutics, with the injection of antitoxins and the like; the development of physical methods of treatment; and other modern therapeutic novelties, are unquestionably revolutionising our ideas about treatment in many respects.

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For some notions and expectations still widely entertained there is no foundation whatever, and amongst them I confidently affirm is that of the cure of pulmonary phthisis by subcutaneous injections of various kinds. I thought that this craze had received a salutary check, but I see it has recently broken out again violently in a new place. Apart from other aspects of the matter, it is a cruel thing to hold out such illusory hopes to those suffering from this terrible disease, for which so much can really be done by rational methods."

[Professor Roberts then addressed a few words of general exhortation and encouragement to the students, and concluded as follows:]

"And now, in closing, let me offer my cordial congratulations to the successful winners of prizes and distinctions who have come before us to-day, and my no less cordial encouragement to those who for the present have not achieved all that they aimed at or desired. May you all work on loyally, steadfastly, hopefully, and cheerfully, conscientiously striving to fit yourselves for the important public duties that lie before you in the future, so that, whatever position you may in the course of events be called upon to occupy, you may be enabled, not only as accomplished and successful pharmacists, but as men and women of 'high personal character, moral rectitude, and fine sense of honour,' faithfully to serve your day and generation, and to contribute your due share to the well-being and progress of humanity."

LONDON SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY MISS ELLABY, M.D. PARIS.

MISS ELLABY began by reminding the students of the legend of the House of Busyraine, comparing the treasure of knowledge to Love's Prisoner well guarded within the house by three iron doors, for which each one must find the key for himself. She continued:

"Over each door was an inscription; over the first, 'Be Bolde'; over the second, 'Be Bolde, be Bolde, and everywhere be Bolde'; but over the third came a sudden check—'Be not too Bolde.' In the search after medical knowledge students would do well to adopt these mottoes as emblems of the courage, tempered by wisdom, required to seize and to put to its best use this treasure when found. But 'life is short, art is long,' &c., says Hippocrates, so in addition we need haste, but with the same check—not too great haste. *Festina lente*—make haste slowly. This triple armour—Courage, Wisdom, Speed—will prove all-sufficient for any battle. The study of medicine should be, like all other kinds of education, 'brave and preventive.' For this we need the all-round development of our whole nature, which will give us the power to grasp all details of a question, and to approach it from a higher level; in this way our judgment will be divested of every personal element, and we shall be enabled to act without vacillation or delay. Very close to this comes the question of our relation with other people or our manners. These should be the 'happy way of doing things,' and this 'happy way,' if we have it, helps us on to cultivate and to possess a real sympathy with others—one of the keys by which to unlock the secrets in nature. This sympathy will also make us tolerant and large-minded enough to appreciate other people's opinions and judgments even when they differ from our own. On the importance of health, especially in connexion with the bugbear of over-work, I fear 'others' follies teach us not,' and we must each fight our own battles: provided only that the experience gained does not come too late, and that our precious Pegasus of health is inside the stable and not outside when at last we proceed to shut the door. I will refer to one point only, and that is the temptation, which I think besets every earnest student at the outset, to spend too many hours consecutively at work. The attempt to accumulate many facts is only satisfying for the moment, for facts must soak into the mental soil, and not lie upon it. The object of our study is the cultivation of our reason as well as of our understanding; we should not, therefore, overload our minds with facts, but regard them as a means to an end, and not the end itself. Above all, do not grudge the time spent in recreation and outside your work, for it is then that our fuller and larger views of life come to us. I do not think the advice the Emperor Alexander gave to the Poles, 'Above all, no dreams,' good for general application, for in the somewhat prosaic details of our daily life they come as a help, and not as a hindrance, if we keep them in a right proportion to work or action. So I would say again, Do not overcrowd the day with work, but give yourselves time for recreation, thought, and meditation, and even for dreaming—have, in fact, the leisure that the busiest people often possess, which is much more the habit of an open mind than the actual amount of spare time to be disposed of. In your career there will be valuable opportunities, which will be very much what you choose to make them. It has been said that the tragedy of all souls lies in the gulf which separates our ambition from its realisation, and we, who look back, find that the saddest elements there are our wasted opportunities. Do not let them slip, but seize them at the right moment; for 'Occasion,' says Bacon, 'turns a Bald Noddle after she hath presented her locks in front, and no hold taken ..... there is surely no greater wisdom than well to time the Beginnings and Onsets of things.' It is perhaps too fatalistic to say that 'character is destiny,' but it is nevertheless true that our destiny is very much what our character makes it. We must lean on ourselves, turn our talents to account in every particular, and be, as Goethe says, 'not the creatures but the architects of circumstances.' You are all to be members of a very noble profession, and you have each one a fine career open before you. It is not in the power of everyone to be a genius or to make a mark in the world, but it does rest with each one of us to make, as Jean Paul Richter says, 'as much of ourselves as could be made out of the stuff.' This is only to be done by steady all-round work and patient, humble searching after truth. In this way we can all endeavour to contribute our mite, not only to the use but also to the beauty of life, for 'all things are for the sake of the good, and it is the cause of everything beautiful.' I will, conclude with the words of one of our greatest philosophers specially applicable perhaps to the student in medicine: 'And, generally, it is good to commit the Beginnings of all great actions to Argos, with his hundred eyes; and the Ends to Briareus, with his hundred hands: First to watch, and then to Speed. For the helmet of Pluto, which maketh the Politicke Man goe invisible, is, Secresy in the Counsell, and Celerity in the Execution.'"

YORKSHIRE COLLEGE, LEEDS.

INTRODUCTORY ADDRESS BY DR. D. J. LEECH.

THE lecturer, who is Professor of Materia Medica and Therapeutics at the Owens College, Manchester, chose for his subject "Our Forefathers." The address was delivered at the opening of the Medical Department of Yorkshire College, Leeds, on Oct. 1st. After some introductory remarks he continued as follows:—

"Mr. Herbert Spencer in an article in the June number of the *Contemporary Review* claims for the medical profession a sacerdotal origin. He points out that the union of the functions of physician and priest is a normal trait in early societies, the priest being the recognised physician in some, whilst in others the physician has assumed to a considerable extent the functions of the priest. Even the medicinal effects wrought by plants were, he thinks, originally attributed to the spirits dwelling in them, and the medicine men of uncivilised peoples have always combated disease by driving out evil spirits as well as by natural remedies. He considers, however, that the physician originates rather from the priest properly so called, who deals with ghosts, not antagonistically, but sympathetically, than from the native medicine man. The priestly caste, he says, in an early state of civilisation develops culture, and from part of this culture having its origin in previous stages comes greater knowledge of medicinal agents, which gradually cease to be considered as acting supernaturally. Mr. Spencer, then, seems to be of opinion that treatment by remedial agents owes its introduction to ideas concerning the supernatural, that the priesthood added to medical knowledge thus initiated, and that medicine and the medical profession of the present time have originated from the basis thus established by them. This view, I think, is open to many objections. Doubtless, a very close connexion has existed from very early times between medical treatment and the belief in the efficacy of supernatural means for the cure of disease; but it seems to me there is no evidence that the initiation of the treatment of disease by remedial agents has developed from ideas relating to the part which gods and supernatural agencies play in the production and cure of disease.

"The origin of the treatment of disease by remedial agents was the subject of speculation in very early times. It has been thought by some to have sprung from the same

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instincts which seem to lead animals under certain conditions to eat when ill substances they usually avoid; others—e.g., Schmiedeberg—have suggested that man has imitated the habits of animals in this matter. In the treatise of ancient medicine included in the works bearing the name of Hippocrates, and which Littré believes were written by the Father of Medicine himself, the belief is expressed that medical treatment arose from observations on the different influences of foods and their properties in health and disease. In connexion with this view it is interesting to note that in the earliest works relating to treatment dietetic substances play a leading part in remedial agents. The oldest document bearing on medical matters we possess was discovered in 1889 at Kahun, near the pyramid of Illahun, in the ruins of an ancient town which has been apparently inhabited by the builders of the pyramid. It dates from the Twelfth Dynasty—2700—2500 B.C., more than 1000 years before the Exodus. It consists of instructions for midwives and includes prescriptions for treatment. Into these, articles of diet largely enter—namely, beer, cow's milk, oil, dates, and other fruits, herbs, sweet beer, honey, onions, &c. In the prescriptions of the medical papyrus obtained by Ebers at Thebes, and usually bearing his name, the same feature is well marked. This most ancient of pharmacopœias was found between the legs of a mummy. There is a general consensus of opinion that it was compiled about 1500 B.C., though some of its contents date from an earlier period. It consists of formulæ for the treatment of a large number of ailments, both external and internal, some very simple, consisting of one or two ingredients only; others more complex, containing twelve to fifteen drugs, and directions more or less precise are given for their preparation and use. Most of the drugs are derived from indigenous plants, but a few minerals, such as alum, salt, nitre, and sulphate of copper, are also found in them. Some of the ingredients cannot be recognised.

"In the prescriptions of the papyrus of Ebers dietetic substances largely predominate; honey, milk, bread paste, several cereals, fruits, such as figs, plums, grapes, melons, and dates, and like substances are found in a very large proportion of the prescriptions, and that they were not used simply for flavouring purposes seems evident from the fact that many of the medicines are entirely composed of them. It is probable, too, that in addition to the large number of substances in this pharmacopœia which we recognise as foods many of the other components which we look upon as drugs were used in ancient times for culinary purposes. Maspero points out that in the time of the Pharaohs castor oil was probably taken regularly in food; indeed, it is yet a favourite condiment amongst the Egyptian fellaheen, who flavour their salads with it. He thinks that the Egyptians 'began by eating every kind of food which the country produced. Many of these, when their therapeutic virtues had been learned by experience, were gradually banished as articles of food and their use was restricted to medicine; others fell into disuse and only appeared at sacrifices and funeral feasts.'

"In the drugs used by savage tribes foods and substances capable of being used as such predominate as they did in Egypt of old, and, as was the case in Egypt, active poisons are comparatively rarely used as medicines. As medical knowledge has advanced, foods have been for the most part replaced in the treatment of disease by more active agents, but they have not yet entirely disappeared. The lettuce and pearl barley, with its preparation decoctum hordei, are to be found in the list of remedial agents in the present edition of the British Pharmacopœia, and constitute a connecting link between the medicine of the present day and its origin in the dim past. It is not difficult to account for the prevalence of foods and the absence of active poisons in primitive medicine. The favourable changes in certain forms of disease which follow vomiting or excessive action of the bowels, skin, and kidneys must have attracted the attention of man in the earliest stage of his development. In his search for food he would note in the first place the substances which, when taken, cause death soon, and these he would entirely discard. His attention would also be drawn to certain animal, vegetable, and mineral products giving rise to vomiting, purgation, diaphoresis, or diuresis, and even the most untutored mind would infer that advantages might follow their administration in the diseases where emesis or an increase of the secretions had been found beneficial. The character of the earlier formularies and of those of uncivilised people points to an origin of medicinal treatment from observation, and it is from this treatment that has sprung the medicine of to-day. That arising from superstitious ideas has been gradually discarded.

"By what class of people was the treatment of disease introduced? Who were the earliest forefathers of the medical profession? Mr. Spencer says the priests, giving as a reason for his view the close connexion of the function of the priest and physician in early societies. As we go back into Egyptian medical history we do not find evidence of a greater influence of the priesthood in medicine, but rather the reverse. In Greek literature the earliest allusion to the healing art is found in Homer, who represents it as derived from the gods indeed, but in the hands, not of priests, but of warriors, and, to a certain extent, of women. The only two physicians named in the Greek army are Machaon and Podalirius, who were also warriors and led thirty ships to the siege of Troy. Their father, Esculapius, is represented as a chieftain to whom Chiron taught the healing art as he did to Achilles. There is no allusion to temples open for the sick or to priestly medicine. How early a distinct medical class was developed out of the primitive system of medical practice which the Homeric poems delineate is not known. Pythagoras (580–510 B.C.) and other philosophers mixed up a little practical medicine with their speculative doctrines. At the end of the sixth century we hear of a famous Greek physician, Democedes, curing the King of Persia when the Egyptian physicians failed, and at the end of the fifth a Greek, Ktesias, was physician to the Persian Court, and Hippocrates wrote his famous works. In almost all, if not in all, countries there are practitioners of medicine. Jagor, however, could find none amongst some of the tribes on the Philippine Islands, and von Rosenberg denies their existence in a tribe on the south-west coast of New Guinea; but it is quite possible that in both cases they were overlooked. Statements with regard to the absence of medicine men and the use of drugs in wild tribes must be accepted with reserve unless the reporter has lived with them. In the Andaman Islands there seems hardly any indication of a medical class, and often medical treatment is undertaken by the wife of the household. Amongst the old Peruvians, too, the old women acted, at least in the case of the common people, as their medical attendants, and in South Australia—in smaller ailments, at least—each one is his own physician; but these are exceptions. Almost everywhere we find medicine men. Sometimes, as in New Guinea, they are hardly differentiated from the other people. In most tribes, however, they form a distinct class, and often they hold a high position. Amongst the Dakota Indians they have the highest respect paid them, and they are the most influential people in the aboriginal tribes in Victoria and amongst the Ipurian Indians. In Samoa, however, they seem to occupy the highest position of all; in one place, at least, Turner found that an old medicine man was looked upon as the incarnation of a god. But this is no evidence that they are necessarily connected with the priesthood, although they deal largely with the supernatural.

"From what we can learn of the past, and what we can observe among uncivilised people of the present day, it seems probable that a knowledge of the influence of drugs on external or internal ailments has tended everywhere to accumulate in the hands of certain individuals—usually, perhaps, in those of the chief of the tribe, sometimes in those of his wife, but not infrequently other members became the special depositories of medical knowledge. Schmiedeberg suggests that such knowledge would first accumulate amongst herdsmen. Eventually differentiation of function occurred. Doubtless this was a gradual process and was accomplished in many ways. At times it may be that the priesthood took part in it, but there is no evidence that this was always or even often the case."

[Dr. Leech then dwelt on the connexion between medicine and the supernatural and traced the progress made by the healing art from the time of Hippocrates. He continued:]

"I think I have shown that the practice of medicine has arisen from observation and not superstition, but whether I have or not you who are entering the profession may rest assured that careful observation is the corner-stone of medical work. Above all things cultivate exactness in your observations. It is through want of exactness that more advance has not been made in medicine. Not a tithe of the drugs which have burdened the pharmacopœias of all ages,

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including the present, would have been found in them if observation had been exact as to the value of remedies. Always keep in mind the well-known aphorism of Hippocrates: 'Experience is deceptive.' Mistrust your own observations at first and do not on too slight grounds assume they are correct. Confirm them by repetition. In much of your work in your student career you will find good opportunities for exercising yourself in exactness, and in none more so than when you are taking notes in the hospital wards. It is then that you have for the first time the opportunity of making observations in practical medicine for yourselves. Make good use of it. It is carelessness in observation in the wards which often leads to unsatisfactory results at a later period. I have told you to mistrust your own observations—equally mistrust those of others. Above all things beware of accepting hypotheses as facts. Many so-called laws are really only what are called working hypotheses—that is, theories which are put forth as possible truths, to be used in a tentative manner as guides to further experiments. Reasoning based on them has no firm foundation, yet they are often used.

"Although observation is such an important matter in medicine, yet for its progress much more is wanted. It is probable that the healing art had been cultivated, and with some care too, in Egypt for at least 3000 years before the Papyrus Ebers was compiled. But although this book contains much that is true and useful it indicates that but a slight advance in real knowledge had been made. This arose partly from the imperfect observations, but partly from the fact that the art of healing cannot advance far by simple observation of what does good in individual ailments—a knowledge of many collateral subjects is essential. You will not gain by devoting your attention as exclusively as you can do to what may be called the practical details of medicine, surgery, and midwifery. Physiology, chemistry, and pathology are not subjects merely to be slipped through with the idea that they are of no active service. The harder you work at them, and the more full your knowledge of them, the easier will you find what are often called the more advanced subjects, and the better medical men will you make. Neither as students in after life try to limit your acquisition of knowledge simply to the methods of cure, for if you do you will limit your knowledge of the methods of cure. Physics, chemistry, anatomy, and physiology will all stand you in good stead in the practical work of your profession. For the advancement of medicine they are absolutely essential. Do not treat these subjects as if they were to be acquired for examination simply, and to be forgotten as soon as possible. In your medical work, gentlemen, remember the injunctions of Hippocrates to watch the course of nature and bear in mind the necessity of always trying to find out the natural course of disease, that you may be the better able to treat it. How much misery would have been prevented if medical men of old had known that many conditions which they thought required the most energetic treatment would get well if left alone.

"Finally, gentlemen, remember the teaching of Hippocrates with regard to conduct: 400 years B.C. it was considered essential that a medical man should pass his life in purity and holiness; that he should respect the confidence of his patients, and that he should be careful of their feelings; that he should be ever on his guard lest what he prescribed should do harm; and that he should avoid all kinds of charlatanism. These and many other injunctions should press on you, living in the nineteenth century, even more strongly than on those who lived before our present era. Let me strongly urge you never to forget the teaching in this respect of the great Father of Medicine."

MASON COLLEGE, BIRMINGHAM.

INTRODUCTORY ADDRESS BY PROFESSOR PERCY FRANKLAND.

AN address was delivered at the opening of the Medical Session at Mason College, Birmingham, on Oct. 1st, by Professor Percy Frankland, F.R.S., on Pasteur and his Work: the Debt of Medicine to Chemistry—of which the following is an abstract:—

It may be said without exaggeration that there is no scientific name which is so universally known and in so many different connexions as is that of Pasteur. The chemist, physicist, biologist, and medical man each view Louis Pasteur as the author of some of the most important, novel, and fruitful departures in their several branches of knowledge, whilst in the worlds of industry and agriculture his influence has also been deeply felt and gratefully acknowledged. The first subject of research taken up by Pasteur at the early age of twenty-five was of such an abstract character that if his career had terminated with its completion the general world would have never known his name, and yet the initiated few would have been able to recognise one of the shrewdest scientific observers of this or any age. His strict mathematical and chemical training led Pasteur to be fascinated with the wonderful geometrical forms which are assumed by solids in what is generally called the crystalline state, and the particular phenomenon which attracted his attention was the existence of two tartaric acids apparently identical in chemical composition, in chemical properties, and in crystalline form, and, in fact, in all respects excepting alone that the solution of one had no effect on polarised light, whilst the solution of the other turned the plane of polarisation to the right. Submitting these crystals to the most searching scrutiny, Pasteur found that there were some minute faces on the crystals of the active tartrate which were absent from the crystals of the inactive tartrate, and such importance did he attribute to these little faces that he recognised that their presence relegated the substance possessing them to an entirely different class from that to which belonged the substance not possessing them. The crystals of the inactive tartaric acid which were destitute of these little surfaces he found were symmetrical, whilst the crystals of the optically active tartaric acid he found were unsymmetrical, or "dissymmetric," as he called it. His speculations, subsequently developed by Wislicenus, Le Bel, and Van't Hoff, led to the foundation of that most fascinating and fertile field of chemical science now known as stereo-chemistry, and prepared the way for some of the greatest achievements of modern chemistry, such as the artificial production of the natural sugars. Pasteur's genius was, however, not long to be retained in the exclusive service of abstract science. In the course of his experiments on the different kinds of tartaric acid he was led to try the effect of submitting them to fermentation processes, and he found that the two oppositely active tartaric acids are physiologically utterly distinct, one of them being capable of undergoing fermentation by means of bacteria, whilst the other remained untouched. This striking phenomenon has been largely utilised by later investigators for the preparation of new optically active chemical compounds. Pasteur was thus drawn by accident, as it were, from the inanimate world of pure chemistry into the vortex of the world of life, and it was to the study of vital phenomena that practically the whole of his genius and energies was subsequently devoted. The frontier line which Pasteur crossed from the domain of chemistry into that of biology was at the time very ill defined. The phenomena of fermentation which he had attacked were not generally regarded as vital phenomena at all, and it required years of patient labour before Pasteur was able to convince the scientific world of the truth of his statement that fermentation processes were the work of living microscopic organisms, and that each fermentation process was the work of distinct organisms. Knowledge and appreciation of these classical researches have meant wealth to the brewer, the distiller, and the wine-grower; and it is hardly an exaggeration to say that the brewer of to-day is able to stand the relentless taxation of the late Chancellor of the Exchequer as much through the labours of Pasteur, and those who have succeeded him, as through the unquenchable thirst of the British proletariat. Extensive as were Pasteur's researches in the domain of fermentation, there were processes which time did not permit him to investigate before he was hurried on into other fields of scientific interest and practical utility. His intuition, however, led him to recognise as a fermentation process the transformation known as nitrification, consisting in the conversion of ammonia into salts of nitric acid, which takes place on such an extensive scale in all the fertile soils of the earth. This process, from being regarded as a case of simple chemical oxidation, is now recognised as dependent upon the action of bacterial life, and the particular bacteria responsible for this action, after long eluding the search of the investigator, have during the last few years been isolated and described. In the course of these researches the astounding fact has been brought to light that in these nitrifying bacteria we have living cells which are capable of flourishing and multiplying in the entire absence of organic matter

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Even still more important revelations in vegetable physiology have resulted from the careful study of bacteria in recent years, for it has been shown that certain green plants obtain the nitrogen which they require for their nutrition from atmospheric nitrogen by means of certain bacteria which infest their roots. These bacteria produce nodular excrescences on the roots, but when they are carefully excluded these root nodules do not make their appearance and the assimilation of free nitrogen ceases also. The lecturer then referred to the recent important researches of Winogradsky of St. Petersburg on this subject, which have shown that under suitable conditions certain bacteria can take up this free nitrogen without the presence of the green plant at all. The intimate contact in which Pasteur had lived with the microscopic forms of life during his researches on fermentation—the great importance of which was recognised by the French Academy already in 1859, when they awarded him the prize for experimental physiology—naturally led him to take a deep interest in the controversy which was then raging on the spontaneous generation of life. Into this contest he plunged, despite the urgent protestations of many of his scientific friends, who feared that nothing would come of his venture but the loss of valuable time. It is now, however, admitted on all sides that the settlement of this question of such transcendent importance was finally accomplished by Pasteur through experiments as remarkable for their extreme simplicity as for their clinching force.

Professor Percy Frankland then reviewed Pasteur's connexion with the foundation and development of the infant science of bacteriology and his contributions to our knowledge of infectious diseases. Soon after he had commenced to study the bacteria of particular diseases he was impressed by the fact that often in the course of cultivation in artificial media outside the body their virulence became diminished to such an extent that they ceased to be fatal on inoculation into susceptible animals; but the most important discovery in this connexion was that the animals inoculated with such enfeebled or attenuated cultures were found to have become protected from the disease, even when subsequently inoculated with most virulent cultures of the same organism. This discovery at once enlarged the scope of Pasteur's investigations, which now included not merely the study of infectious diseases and their exciting causes, but embraced also the artificial protection of the individual against their attack. The most varied methods were devised and elaborated for attenuating viruses of different kinds, and multitudes of domestic animals were protected from some of the most destructive plagues with which they are afflicted. Pasteur next proceeded to grapple with a disease affecting both man and animals—viz., hydrophobia. This problem was surrounded with special difficulties, over which, however, the genius of Pasteur triumphed, and the attenuated virus of hydrophobia was successfully prepared and by several different methods. As a testimony to the faith which experience has built up in the efficacy of the treatment, we find centres for carrying it on in almost every civilised country in the world, whilst at the Institut Pasteur in Paris it is carried out on an enormous scale.

The great problem of securing immunity from disease, which thus occupied the later years of Pasteur's activity, has, however, now entered upon an entirely new phase. For, whilst Pasteur's methods depended essentially upon submitting the individual to be protected to the attack of the disease-producing organism itself in a weakened condition, the new methods of conferring immunity do not involve any contact whatever between the individual and the virus in any shape or form. The initial step in this new method of treatment was the discovery that the artificial cultures of pathogenic bacteria may be entirely freed from the micro-organisms and yet produce their characteristic poisonous effects; the symptoms of a particular infectious disease can be obtained through the injection of the toxic or poisonous products elaborated outside the body by the particular micro-organism associated with that disease. By this discovery the toxines of diphtheria and of several other diseases have been rendered as specific poisons as are laudanum or the extract of nux vomica. It was further found that animals can be gradually accustomed to these specific toxines, and the question then arose as to how such animals which had undergone this gradual habituation to a particular toxine would behave on being subsequently inoculated with the disease-producing organism itself. It was found that such animals were able to withstand or were protected from the attacks of such virulent bacteria. This important step we owe to the labours of Salmon, Roux, Chamberland, and other investigators. The next step was the discovery that the blood of an animal thus artificially protected from a particular disease contained materials which can be transferred to other animals and which protect them also from the same disease. This astounding property of the blood serum of artificially immunised animals was first discovered by Richet and Héricourt, but to Behring and Kitasato is due the credit of having first shown in the case of diphtheria and tetanus that by means of such serum animals may be cured even after the disease has been actually contracted, provided the injection of the antitoxic serum is not postponed until too advanced a stage of the malady has been reached. Again, to Behring is due the merit of having extended these benefits in connexion with diphtheria to man himself. The lecturer then referred to a diagram showing the diphtheria death-rates per million living in the principal cities of the United Kingdom during the years 1883–92 and 1893 respectively. In commenting upon these statistics it was pointed out how in London the figures had risen from 300 in 1883–92 to 760 in 1893, whilst in West Ham, virtually a part of London, an increase from 250 to 420 deaths from diphtheria had also been recorded. As indicating the value, so far ascertained, of the serum treatment of diphtheria he quoted Kossel's recent figures giving the mortality from diphtheria in Germany before the introduction of the new treatment as 34·7 per cent. and since its application as 11·1 per cent. A fact of great importance to be observed in this new treatment of diphtheria is the circumstance that its efficiency is greatly dependent upon the time which elapses between the first manifestation of the disease and the application of the curative serum. The shorter the period which intervenes the better are the results obtained, and this condition applies equally to the treatment of other diseases, such as tetanus, by means of antitoxic serum, whilst it has also been established as a cardinal principle by Pasteur in his treatment of hydrophobia. So great is the demand for the therapeutic serum for diphtheria that its production is already a commercial undertaking of some magnitude in Germany, where coal-tar colour manufacturers with their numerous staffs of skilled chemists have still further enlarged their works by undertaking the elaboration of diphtheria antitoxic serum on a most extensive scale. The possibilities of securing protection by means of the serum of immunised animals extend even beyond the boundaries of infectious disease, for Calmette in France and Fraser in Edinburgh have been able to gradually accustom animals to larger and larger doses of snake venom, and have found the blood serum of such animals endowed with the power of protecting other animals into which the venom is injected. When we remember, said the lecturer, that 20,000 of our Indian fellow-subjects perish annually from snake-bites, and that the new method of treatment extends the prospect of saving many if not all of these, it is obvious that we are here again face to face with a subject of stupendous importance, and which affects us above all the other nations of Europe. In conclusion, Professor Percy Frankland pointed out the widespread influence which Pasteur had exercised upon the progress of science during the latter half of the present century, and that this extraordinary influence, wrought in so many different departments of science, must be attributed in the first instance to the possession of a singularly active, clear, and original mind, matured under the strict discipline of an arly training in mathematics and the exact sciences, which enabled him to submit biological phenomena to a rigid, logical, and uncompromising criticism such as they had never previously received. But even this rare combination of natural and educational endowments would have availed but little had there not been united to them an almost superhuman industry, an almost limitless capacity for work. It would be difficult also to find a better illustration of the manner in which one science can benefit from contact with another than that which is furnished by the results which have attended the digression of the specially trained chemist into the fields of biology and medicine. To Louis Pasteur belongs the glory of having set in motion that great medical revolution which has been well sketched by a modern French writer. "When man learnt how to protect himself from the wild beasts he made the first step in civilisation. To-day man is learning how to defend himself from microbes; it is a step of equal importance. A day will come

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when in Berlin, in London, in Paris, man will not die of diphtheria, of typhoid fever, of scarlet fever, of cholera, or of tuberculosis any more than he dies in these cities to-day of the venom of snakes or of the tooth of wolves."

SPASMUS NUTANS, OR THE NODDING SPASM.

BY GEORGE DICKSON, M.D. EDIN.,
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THE following is a typical case of a somewhat rare disease — viz., spasmus nutans. The name "spasmus nutans" is somewhat misleading. Probably "spasmus oscillans" would be at once more descriptive and less confusing.

The patient, a boy aged one year, came under my care at Craiglockhart Poorhouse Hospital on Dec. 11th, 1893. No history was obtainable. On examination the child was found to be pale, but well nourished. There was only a slight appearance of rickets. There were two upper and two lower incisor teeth. The head was noticed to be constantly held inclined to the right side when the child was sitting up. In addition it shook from side to side in a way such as expresses dissent. The greatest excursion of the lateral movements was to the left, and there was a slight downward inclination, also to the left. The movements were not constant, but were induced or increased by excitement of any kind or by engaging the child's attention. Restraint of the movements caused marked discomfort. They entirely ceased during sleep and when the child was laid on his back. A day or two after admission horizontal nystagmus of the left eye was noticed. It also was only occasional, and was increased or induced by attempts at fixation, and markedly so by restraining the head movements. There was no impairment of vision or ocular movement, and the fundus oculi was healthy. The right pupil, however, was somewhat larger than the left. When looking at objects the child threw back his head, and, still keeping it inclined to one side, of necessity squinted at the object looked at instead of directing his gaze straight towards it. On Dec. 23rd the patient remained *in statu quo*. On Jan. 26th, 1894, the movements returned more markedly, and two teeth were observed to be cutting through the gums. On Jan. 29th there was slight return of nystagmus in the left eye, and slight nystagmus also of the right eye. About the middle of February another tooth cut through the gums and the nystagmus disappeared, the movements at the same time becoming less marked. On April 3rd the child to all appearance was quite well. In this case no treatment was adopted but the administration of cod-liver oil and attention to diet.

Since the above case came under my notice I have, through the kindness of Dr. John Thomson of Edinburgh, seen three others, and have been able from the books to collect full notes of twenty-three more, making twenty-seven in all. The literature on the subject is somewhat scanty. To Henoch of Berlin belongs the credit of having first drawn attention to the subject. In his text-book on Diseases of Children he gives in the first edition two cases and in the second edition four cases. In THE LANCET[1] Dr. Stephen Mackenzie gives two cases (Harveian Society Reports). In St. Bartholomew's Hospital Reports[2] two cases are recorded by Dr. Gee. In the Ophthalmic Society Reports[3] Mr. Nettleship records what appears to be an example of spasmus nutans. In THE LANCET[4] Dr. Hughlings Jackson mentions the affection in his address on the Relation of Ophthalmology to General Medicine, and suggests that it is akin to canine chorea. In the *Ophthalmic Review*[5] a case is quoted from Dr. Gordon Norrie of Copenhagen. The fullest account of the disease, however, will be found in THE LANCET,[6] in which the late Dr. Hadden gave full notes of five cases and an analysis of twelve. In St. Thomas's Hospital Reports for 1892 Dr. Hadden recorded nine other cases. Kassowitz, in an untranslated paper,[7] mentions spasmus nutans, classifying it among the nervous symptoms of rickets. The following five symptoms of the disease may be noticed: (1) head movements; (2) nystagmus; (3) petit mal; (4) strabismus; and (5) a peculiar way of looking at objects. The first two are by far the most constant. Both movements and nystagmus are present in about 90 per cent. of the cases, but at certain stages, or even throughout its entire course, the affection may be represented by only one of these. During incidence one—most frequently nystagmus—appears before the other, and during subsidence the nystagmus generally persists longest. The head movements are most commonly a combination of shaking and nodding. Pure lateral movement is very uncommon, and pure nodding extremely rare. In frequency the movements are about 20 per minute. They cease during sleep and when the child is placed on his back. They are increased or, if absent, excited by engaging the child's attention. They are not increased or induced by covering the eyes. Whether moving or not, the head is generally held inclined to one side, and there is generally greater excursion of the movement to one or other side. Restraint of the movements causes marked uneasiness. The nystagmus may be monocular or binocular, most commonly the latter. The nystagmic movements are very rapid, about 200 per minute. They are increased or induced by engaging the attention, and markedly so by laying the child on his back or by fixing the head. The nystagmus is only occasional, like the head movements. In direction it is most frequently horizontal, and only occasionally rotatory or vertical. Nystagmus of the eyelids sometimes occurs, and hippus has been noticed. With regard to petit mal, Dr. Hadden first drew attention to this fairly constant symptom. The child is simply observed to look vacant for a few seconds, and occasionally the head or the eyes, or both, deviate to one or other side. Strabismus is not nearly so common as the other symptoms. It may be constantly present or only occasionally. In some cases it is only noticed during an attack of petit mal. A peculiar way of looking at objects is nearly always observable. Dr. Hadden has happily described it as "looking out of the corners of the eyes." It is probably due to the head being held, when looking at objects, in that position in which its movements can best be restrained. The pupils are generally normal, but hippus has been noticed, and occasionally temporary inequality of the pupils has been observed. The fundus oculi is always normal and the vision perfect. The general health is nearly always good. The diagnosis is comparatively easy. Eclampsia nutans—the salaam convulsion—is only confusing in name. In this the whole upper part of the body participates in a forward movement which is distinctly paroxysmal. The movements of spasmodic torticollis resemble slightly those of spasmus nutans. Cases represented by nystagmus alone might be mistaken for other forms of nystagmus until the eyes were examined and no ocular defect discovered. The prognosis is always favourable. In any given case it would be safe to say that recovery will take place before the child is two years of age, and that in all probability it will take place very much earlier. It is not the forerunner of epilepsy, and the after intelligence of the child is in no way impaired. As to treatment, the affection has a natural tendency to recover without drugs. Bromides are recommended by Dr. Hadden, Dr. Thomson has found benefit from antipyrin, and Kassowitz recommends anti-rachitic treatment (phosphorus).

Remarks.—In considering the etiology of spasmus nutans it is evident that, while sex has probably no influence, age is a factor of the first importance. A comparison of the cases shows that 50 per cent. occurred between six and twelve months; 15 per cent. were under six and 15 per cent. over twelve months of age. The youngest was that recorded by Norrie, where the disease was noticed shortly after birth. Although Kassowitz looks upon the affection as due to rickets, this occurs in such a small proportion of the cases that it cannot be looked upon as more than an occasional predisposing cause. Convulsions, either as a personal or family tendency, are somewhat uncommon. Falls on the head are recorded in six or seven of the cases, the affection being noticed immediately afterwards. Dr. Hadden suggests that they may be more the result than the cause, being actually attacks of petit mal. It is possible also that anxious mothers, looking out after a fall for consequent mischief, have their attention first drawn to symptoms already existent. Dentition is,

[1] THE LANCET, May 1st, 1886.
[2] St. Bartholomew's Hospital Reports, vol. xxii., 1886, p. 96.
[3] Ophthalmic Society's Reports, 1887, p. 76.
[4] THE LANCET, Oct. 26th, 1889.
[5] The Ophthalmic Review, 1888, p. 355.
[6] THE LANCET, June 14th, 21st, and 28th, 1890.
[7] Wiener Medicinische Wochenschrift, 1893, U. 321.

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without doubt, an important causative factor. The disease is one peculiar to the dentition period. Moreover, Dr. Thomson had a case where the symptoms began at three months, dentition also beginning at this abnormally early period. That it is not the only etiological factor involved is shown by the fact that the disease may appear when dentition is not active—e.g., two cases under one month. The nystagmus which occurs in coal-miners presents a somewhat curious analogy to spasmus nutans. In miner's nystagmus head movements occasionally occur in bad cases, and attacks of petit mal have been recorded.[8] The occurrence together of head and eye movements would point to a very intimate connexion between the cerebral centres presiding over these movements. This is further suggested by the close inter-relation which subsists between the two in a state of health, and by the compensatory action of either in certain paralytic conditions of the other—e.g., ophthalmoplegia externa. Moreover, it is well known that there is a special frontal centre presiding over the combined movement of head and eyes. In this connexion it is interesting to observe the almost invariable correspondence in direction of head-and-eye movements in spasmus nutans. Out of seventeen cases that can be compared this correspondence was present in fifteen. This includes one case where the nystagmus was vertical in one eye and horizontal in the other, the head movements being combined nodding and shaking, and a still more interesting and suggestive case where the nystagmus was generally horizontal, occasionally rotatory or vertical, and in which the head movements were usually shaking, but occasionally nodding. The disease is probably due to an instability of the ultimate elements of the brain substance in the region of the centre involved. This instability further evidences itself by the frequent occurrence of petit mal. Dentition must be looked upon as by far the commonest exciting cause, but it is probable that any other reflex irritation would—other things being equal—produce the same effect. In one of my cases, where there was no appearance of dentition, a probable reflex cause was a large irritable patch of eczema capitis, the cure of which was followed by subsidence of the symptoms. It must be remembered that about this period the whole nervous system is in a state of great irritability and instability, and it is scarcely surprising that the highly complicated mechanism involved in what are the first attempts at coördinated action tends to get out of gear from trivial causes.

I have to acknowledge my indebtedness to Dr. Edward Carmichael, visiting medical officer to the Edinburgh City Poorhouse, for much kindness in supplying me with literature and many valuable suggestions.

LAPAROTOMY IN TUBERCULOUS PERITONITIS.

BY GEORGE E. WHERRY, F.R.C.S. ENG.,
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LAPAROTOMY and douching of the peritoneal cavity are proceedings too often described as "heroic," and are either never tried at all or only used as a last resource. One of the most striking cases of recovery I ever witnessed was that of a patient sent to Addenbrooke's Hospital under my care as suffering from obstruction of the bowel, vomiting and complete constipation being the prominent symptoms. It was judged to be a case of tuberculous peritonitis with many adhesions. The greatest success followed an operation in which purulent lymph and fluid were washed out of the abdominal cavity by free warm douches. There were many adhesions found, but no constricting band. A case quoted by Mr. Knaggs is similar.[1] As a more deliberate proceeding, and before the patient is in immediate danger, the operation may prove of great advantage. The following case is an example in which there existed disease in the chest, as well as most serious tuberculous peritonitis, with an unusual amount of fluid in the peritoneal cavity. Abdominal incision and washing out the peritoneal cavity gave excellent results.

A young woman aged nineteen years was sent for treatment under my care in Addenbrooke's Hospital by Mr. De Lisle in January, 1895, when it was noted that she had a good family history and had a healthy past life, not often ailing except for amenorrhœa and anæmia. During the past six months she had been invalided, and for the last three months had had a dry cough, with pain in the right side, which lasted three weeks and was followed by shortness of breath. The abdomen had gradually been growing bigger during about nine months. There was no blood spitting or night sweats. She was a fair girl with good teeth, but had been losing flesh lately. In the chest there were exaggerated breathing sounds on the left side. The right side was dull throughout, and breathing was diminished. There was no pectoriloquy. At the apex there was an occasional crepitus or crackle due to friction. There was no cough or expectoration. The abdomen was distended, bulging in the flanks. The dulness in the flanks extended half-way to the umbilicus, which varied with the position of the patient. There was a fluid thrill. No tumour was felt and no friction was audible. Pain and tenderness were very slight. The bowels were regular. The catamenia were absent. The specific gravity of the urine was 1020, acid; it contained phosphates, with distinct albumin. At the end of January Dr. Latham kindly consulted with me about her condition. The lung signs were most serious, and the circumference of the abdomen at the umbilicus was thirty-five inches. The patient grew decidedly worse, the abdomen painfully tense, and on Feb. 12th an operation was performed under an anæsthetic. Through a median abdominal incision (three inches) fifteen pints of fluid were evacuated. There was no evident pus or lymph; the whole of the peritoneal lining of the abdomen and bowels within sight or touch was thickly studded with tubercles varying in size from a pin's head to a pea. The right ovary felt like a nutmeg grater; no smooth surface could be found anywhere in the abdominal or pelvic cavity. Warm boric douching was used, and the wound was closed with sutures and covered as after ovariotomy. It was examined on the twelfth day and found to be healed, the patient's condition having already improved. The temperature, which had been usually up to 100° F. in the evening, became uniformly normal from the date of the operation. A certain amount of fluid collected again, but the patient improved so far that she could leave the hospital on March 23rd. Mr. De Lisle wrote to me on June 29th as follows: "I have delayed answering your letter, waiting to see what the result of time, following your directions, would be in the case of the patient upon whom you operated. I am extremely pleased to be able to tell you that the result is eminently satisfactory. Up to May the fluid in the abdominal cavity did not seem to lessen, and I was afraid I should have to send her back to you. With the advent of the fine warm weather early in May a marked improvement took place; the fluid seemed rapidly to disappear, sweating ceased, the cough lessened, and she began to gain flesh and strength. She is now her normal size, has no cough, has walked as much as ten miles in a day, and has gained weight. In fact, she describes herself as feeling 'quite well.'" On Sept. 3rd her progress to recovery was complete. She was 10 st. 3 lb. in weight, there being no active lung symptoms. The size of the abdomen was normal. She did her work, walked, danced, and led the ordinary healthy life of a girl of her age full of vitality.

Mr. Holmes[2] gives the experience of St. George's Hospital in seven years as three operations of laparotomy for tuberculous peritonitis and two deaths. The fatal cases were complicated in one instance by a band constricting the bowels and in the other by pneumonia. There was in the case I have just related an improvement in the general health after my operation which permitted an arrest of activity in the abdominal disease. We must not expect that patients will be cured when all the cavities of the body are full of tubercle, but every chance should be given to surgical procedure as a most powerful remedial agent in tuberculous peritonitis. It will be, perhaps, found that a case with a large quantity of fluid is most suitable for laparotomy; but this may be only because the fluid collects more in the earlier stage of the disease and adhesions mat together the bowels in more advanced cases. By laparotomy the fluid is thoroughly drawn off, and the tension is relieved, and whether douching is more than accessory to drainage it is difficult to say. Certainly tapping the abdomen alone makes

[8] Oglesby: Brain, 1881, p. 160.
[1] Transactions of the Clinical Society of London, vol. xxi.
[2] Brit. Med. Jour., July 6th, 1895.

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no such favourable impression on the disorder. Improvement in the general health may be expected to follow an operation, and so give a chance for the cure of other foci of tuberculous disease.

Cambridge.

A CASE OF IDIOPATHIC TETANUS FOLLOWING INFLUENZA; RECOVERY.

BY JAMES MILNER, L.R.C.P. EDIN., M.R.C.S. ENG.

FROM the fact that the percentage of recoveries from tetanus—either traumatic or idiopathic—is not large, and also from the existence of an unusual probable causation, the following case may be considered of some interest.

During the height of the influenza epidemic I was called, on the evening of Feb. 25th of this year, to see a man aged thirty-five years, with the usual symptoms of influenza, who had been complaining for several days. Upon asking the patient to protrude his tongue I noticed at the time—though I did not then put the correct interpretation upon the fact—that he opened his mouth with difficulty and did not separate his teeth more than just enough to show the tip of his tongue. Although he complained of stiffness of the jaws and neck, influenza seemed to be a sufficient explanation, and tetanus did not occur to me until I saw the patient by daylight on the following day (Feb. 26th), when the presence of a "risus" and the patient's statement that he had "striking" pains in his back and legs led me up to a suspicion of the true nature of the case, which became a certainty when upon the patient attempting to comply with my request that he should separate the teeth as far as possible a well-marked tetanic spasm took place. The case ran the usual course. The jaws became tightly closed, so that only fluids could be administered. The spasms increased in frequency and violence, although fortunately they were never of long duration, the most severe one witnessed by me not lasting more than sixty or seventy seconds in its full intensity. The abdominal surface was as hard as a board. The legs were rigid, and the arms slightly so, the right much more than the left, which was only very slightly affected. By March 1st the spasms had attained their full intensity, and remained extremely severe until the 10th, after which date they gradually declined. The complications (which gave no anxiety) were: (1) retention of urine on two or three occasions, but not so urgent or prolonged as to demand catheterism; (2) some redness and tenderness of the heels, evidently from pressure; and (3) a vesicular eruption confined to the back and sides of the neck. This latter I could not satisfactorily account for. There was at the same time a papular bromide rash over other parts of the body, but this very closely aggregated vesicular eruption (which here and there became pustular) was confined to the back and sides of the neck. The only sequela was an attack of subacute synovitis—probably rheumatic—in both knee-joints, which somewhat retarded recovery, but which fortunately did not appear until almost all tetanic spasm had departed. Briefly, the treatment consisted in the administration of bromide of potassium and morphia in quantities large enough to keep the spasms within tolerable limit, and in maintaining the strength as well as possible by suitable nourishment. The largest amount of bromide given was 180 grains (in divided doses), and of morphia 3 grains in a single dose at bed-time. These were the largest amounts of the drugs given in any one period of twenty-four hours, and only when the frequency and severity of the spasms had overcome smaller doses. As the violence of the spasms abated, the medicines were gradually diminished until March 24th, after which date all bromide was stopped, and salicylate of soda with ammonia was given for the rheumatism. An occasional opium pill had still to be administered at bed-time for the pain of the latter complaint, but nothing more was required for the tetanic spasm. On May 1st the patient was of course suffering from debility, and a joint ached occasionally; but he could walk a couple of miles without undue fatigue.

Remarks.—I have not seen influenza mentioned as a cause of tetanus, but from the absence—to my mind—of any other explanation I cannot help thinking that it was the etiological factor in this case. The weather had been unusually cold, but the low temperature had been continuous, and this is, I believe, acknowledged not to be nearly so potent in the causation of tetanus as sudden vaiations of temperature. The man had certainly been exposed to cold and damp, but so he had during the whole of his life, and he had never before been ill for a single day. There was no history of any injury, and a close search revealed no wound or even scratch of any kind.

Shipdham, Norfolk.

THE PREVENTION OF PUERPERAL FEVER.

BY J. MCNAMARA, M.D., B.CH., B.A.O. R.U.I.

I INCLUDE under the heading "puerperal fever" diseases of the puerperium which are represented in ordinary surgery by (1) pyæmia, (2) septic infection, and (3) septic intoxication. Septic intoxication in the puerperal state can generally be arrested by judicious douching, but the treatment of septic infection and pyæmia is all but hopeless. It is not, however, with the treatment of these grave conditions that I am now concerned, but with their prevention. This is a subject on which very little that is novel can be said. It is a subject which has been discussed again and again in the pages of the medical press, and my only excuse for bringing it forward once more is that, although puerperal fever is a preventable disease, it is not at all an uncommon one. In other words, every year and every month, through ignorance or through negligence, patients are invalided who should be well, or lives are lost which should be saved—a fact which, I venture to say, registrars and coroners might well take cognisance of in the interest of the community. "Whatever indulgence," said Oliver Wendell Holmes, "may be granted to those who have heretofore been the ignorant cause of so much misery, the time has come when the existence of a private pestilence in the sphere of a single physician (and, I would add, of a single midwife) should be looked upon not as a misfortune but a crime; and in the knowledge of such occurrences the duties of the practitioner to his profession should give way to his paramount obligations to society." If anyone should think that these words of the genial and kindly Holmes are characterised by undue asperity, I would ask him to place his own wife or his own daughter in the position of the patient and then picture to himself the ignorant or the negligent attendant hovering round the bedside with "death in his finger-nails."

To prove the value of the following plan for preventing puerperal fever I need only mention that in the course of some 300 deliveries in which I adopted this plan not one mother has died, not one has developed a septic symptom. Results like these are, I believe, unknown except in antiseptic midwifery. The first thing then, is to provide a supply of powders or tabloids, each containing ten grains of corrosive sublimate with ten grains of ammonium chloride. One of these powders or tabloids when added to a pint of water will make a solution of corrosive sublimate of about 1 in 1000. If the powders be used it will be found that in most of the ordinary waters which (like the London water) contain lime salts, the corrosive sublimate gets decomposed, the mercury is liberated, and the solution becomes opalescent. To prevent this the addition to the solution of a pinch of tartaric acid will suffice. Before examining the patient internally the hands should be well washed with soap and warm water and then kept in the corrosive sublimate solution for at least two or three minutes. It is commonly advised to make vigorous use of the nail-brush before washing the hands, but the average nail-brush in the average house is, I believe, more septic than most hands. I think, therefore, that the judicious use of a clean pocket-knife, followed by washing and disinfecting in the sublimate solution, more advisable. The hands should be left at least two or three minutes in the solution. It is true that a solution of corrosive sublimate of the strength of 1 in 1000 is capable in about fifteen seconds of killing or of rendering harmless the most virulent of the organisms which cause puerperal fever, but it is well to allow time for the solution to reach at least the superficial parts of the hair follicles and gland orifices of the skin. In making the internal examination the hands should be introduced directly from the solution without previous drying in probably septic towels. If a lubricant be required

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carbolic oil (1 in 8) will give every satisfaction. The glycerine solution of corrosive sublimate, which has been frequently recommended as a lubricant, I find useless when the hands are wet, for the glycerine so mixes with the water as to lose its lubricating power. So much then for the hands, and now as regards the vulva. The vulva, from its warmth and from its moisture with organic fluids, is a veritable culture ground for micro-organisms. It should, therefore, be disinfected by being well mopped with the corrosive sublimate solution whenever it is necessary to introduce any instrument or the whole hand or more than one finger. I say more than one finger, for when, as in the ordinary examination, it is only necessary to introduce the index-finger, this can be so shielded by the other fingers as to be prevented from rubbing against the parts, and so saved from the danger of introducing septic matter. In ordinary cases, therefore, although it may be advisable, it is not necessary to disinfect the vulva. As regards the instruments, when these are needed I find that the best and most convenient way of disinfecting them is by boiling. There is no difficulty about this. An ordinary kettle or an ordinary pot, filled with water and boiling on a fire, is all that is required. Take, for instance, the forceps, which is the instrument most commonly required; the handle half can be first dipped into the kettle or pot and left to boil for four or five minutes; then, by holding a clean napkin in the hand, the instrument can be inverted and the blade half left to boil for four or five minutes more. Then the instrument can be removed, placed on a clean napkin, and when sufficiently cool lubricated on its convex surface with carbolic oil. While the instruments are being boiled the vulva can be disinfected. If a little of the corrosive sublimate solution be preserved and subsequently diluted to about 1 in 5000, it will be found of the highest value for cleansing the infant's eyes and thus warding off the danger of purulent ophthalmia.

I have now dealt with the hands, the vulva, and the instruments, and it only remains to say a few words on the advisableness of douching after delivery. When the whole hand or any instrument has been introduced into the uterus, or if during the week after delivery there should be any serious rise of temperature, I believe douching with a solution of corrosive sublimate (1 in 5000) advisable. In other cases I think douching should be dispensed with. Routine douching after delivery I believe to be bad practice. It is a little operation which has certain dangers and inconveniences of its own, and why should these be incurred when the patient is going on all right and when there is no reason to fear that she may not continue so? But whenever douching after delivery is thought advisable the medical man should do it himself and not leave it to a nurse, who will probably fail to introduce the tube into the uterus.

I will conclude by apologising for the small and apparently trivial details I have given. Although small, they are details on which momentous issues—issues of life and death—depend, and their adoption will, I am convinced, save others, as they have saved me, from that most painful of spectacles, that saddest of tragedies—the death of the patient through the fault of the attendant.

Milson-road, W.

DIFFICULTIES WITH THE ELECTRIC LIGHT IN BRISTOL.—Some inconvenience has been caused in Bristol by the uncertain character of the electric light and by its liability to sudden extinction at inconvenient times. On the afternoon of Sept. 23rd, whilst a cable was being tested, smoke issued from the manhole leading to a sub-station chamber under the pavement, and on the cover being removed flame and dense smoke arose, apparently due to the overheating of metal in contact with creasoted wood. The light was, however, supplied in the evening as usual.

PROSECUTION UNDER THE PUBLIC HEALTH ACT.—At the petty sessions held at Thorpe on Sept. 23rd a woman was fined the mitigated penalty of £3 for having on Aug. 9th removed her daughter aged thirteen years, who was suffering from diphtheria, from Clacton to Colchester by railway, the alternative in default of distress being twenty-one days' imprisonment. The defendant, who is in humble circumstances, argued that the illness was quinsy and not diphtheria; but Mr. T. G. Wakeling of Clacton, who had been in attendance on the case, and Dr. J. W. Cook, medical officer of health of Clacton, proved that the patient suffered from diphtheria, and that they had warned both her employer and the defendant that she was not to be removed.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

A CASE OF DOUBLE PHLEGMASIA ALBA DOLENS IN A YOUNG VIRGIN, HEALTHY EXCEPT FOR SLIGHT ANÆMIA.

(Under the care of Dr. HERMAN.)

CASES of extensive thrombosis are not frequently seen in the wards of our hospitals, and the description of the following case will be read with profit by many engaged in the study of medicine. It is difficult to account for the occurrence of such an extensive clotting as was undoubtedly present here, where but for a slight amount of anæmia the patient was apparently in good health. Dr. Vaquez[1] of Paris believed that "white leg" is but the second stage of a complication of infectious nature. The first stage, from a clinical point of view, is characterised by pain, elevation of temperature, and transitory œdema, the latter being especially prominent in cases in which the pain is so acute as to be called neuralgic; from a pathological standpoint, by the formation of a thrombus in the vein; and from a bacteriological standpoint, by the detection of the infectious agent, which most often is the staphylococcus. We think it is rare to meet with thrombosis of veins of obscure origin in young women who do not present evidences of anæmia. For the notes of the case we are indebted to Mr. W. Penberthy, resident accoucheur.

A young woman aged twenty, single, was admitted into the London Hospital, under the care of Dr. Herman, on Nov. 1st, 1891, complaining of pain and swelling of the left thigh, leg, and foot. She stated that she had menstruated regularly every month, having last been unwell three weeks before admission; until now she had always had good health. A fortnight before admission she was attacked by pain in the back and extending down the back of the left thigh. This pain was so severe that she had to go to bed. A week before admission the pain ceased, but the limb began to swell rapidly, attaining its maximum size in twenty-four hours. On Nov. 2nd the left thigh was greatly swollen, measuring 26½ in. round at its upper part, the right at the same level measuring 20½ in.; the leg and foot were also swollen, but not so much in proportion as the thigh. The limb was hot and tender to the touch. No thrombosed veins could be distinguished. There was no pitting on pressure of the thigh, nor did serum exude on pricking it, but the foot both pitted and exuded serum when pricked. The left labium was also swollen, and there was some tenderness on pressure over the left iliac region, though nothing abnormal could be felt. The patient was a well-nourished, healthy-looking girl, slightly anæmic. The heart and lungs were sound. The urine was acid and contained no albumin or sugar. The temperature was 102° F. The blood contained 50 per cent. red corpuscles and 46 per cent. hæmoglobin; the white corpuscles were in about the normal proportion. Under treatment the condition at once began to improve, the limb becoming less painful and tender, pitting on pressure, and gradually diminishing in size. On the 10th the temperature became normal. The left limb went on uninterruptedly to recovery. On the 15th the temperature rose to 100°, and to a degree higher the next day, when it was noticed that the right thigh was beginning to swell. On the morning of the 17th the circumference of the right thigh was 26 in. at the place where it had previously measured 20½ in. Subsequently followed swelling of the right labium, leg, and foot, and tenderness on pressure over the right iliac region, and after a few days gradual diminution of the symptoms set in. No distinct thickening of superficial veins could be felt. On Dec. 16th Dr. Herman made a vaginal examination, and found the

[1] Sajous: Annual of the Universal Medical Sciences, vol. iii. 1893, p. 14.

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uterus movable but not enlarged; there was no parametric swelling, and nothing abnormal could be detected. There was nothing in the condition of the genital organs to suggest the slightest doubt of the patient's virginity. Dr. Stephen Mackenzie saw the patient with Dr. Herman, but found no disease other than that which has been described. The patient was discharged on Jan. 4th, 1892. She returned on Feb. 9th because the swelling of the legs had recurred, though not to the same extent as before. She was admitted and remained in the hospital till May 7th. The œdema went away, and the legs ceased to ache when the patient was recumbent, but they never returned to what had been their size before the illness; some solid œdema remained. Elastic bandaging was used, but the greatest effect on the pain and swelling seemed to be obtained by enveloping the limb in Scott's dressing. In spite of all treatment the legs remained much thicker than before the illness, and the patient could not stand or walk long without their aching and becoming œdematous.

Remarks by Dr. HERMAN.—The above case is published because it is one of extreme rarity, which, by its exceptional features, negatives some ill-founded theories as to the nature of the disease. Every student knows that phlegmasia alba dolens is usually a puerperal disease. But it is not common even after parturition; and not every case of swelling of the leg or legs in puerperal women presents the non-pitting œdema and other characteristic features of phlegmasia dolens. Some think that it is due to septic poisoning or to some blood poison gaining access by means of injury to the genital canal during delivery. This view I do not think in accordance with facts. Next in frequency to the puerperal state as recognised causes of white leg come the cachexias associated with advanced cancerous or tuberculous disease. In this case all the characteristic features of phlegmasia alba dolens were well marked, although the patient was a young virgin, healthy in every respect except for a slight degree of anæmia; there had been no opportunity for septic or any other wound infection.

ANCOATS HOSPITAL, MANCHESTER.

TWO CASES OF RECTAL CARCINOMA; PRELIMINARY COLOTOMY IN ONE; EXCISION; RECOVERY.

(Under the care of Mr. E. STANMORE BISHOP.)

DURING the last twelve months three cases of rectal stricture have been treated in Mr. Bishop's wards: one, a case of simple stricture, by dilatation; the other two (due to carcinoma) in the one case by partial and in the other by total excision of the rectum. All three cases ended in recovery. The two latter are given in detail. They represent two of the modern methods of operation for cancer of the rectum. In both recovery followed, and it is probable that the result attained in these cases is more frequent than it was a few years ago. Some published statistics[1] on this subject are of interest. It appears that during thirteen years there were 109 cases of cancer of the rectum operated on in the wards under the care of Czerny. In ten cases death followed the operation. Of the remaining patients 21 per cent. lived two years, 15 per cent. three years, 13 per cent. four years, and 8 per cent. five years, while four others were living more than six, eight, eleven, and thirteen years after the operation. Forty patients had survived the usual three years' limit. Thirty-six cases were subjected to the sacral operation, and the rest to the perineal method. The second patient was unusually young for the presence of cancer, but in this situation it has occasionally manifested itself at a very early age. There was recently a case of advanced carcinoma of the rectum under treatment in one of the London hospitals in a girl aged fifteen years.

CASE 1.—A man aged fifty-eight years was admitted to the hospital on Aug. 18th, 1894. Nine months previously he had been admitted with a rectal polypus diagnosed as adenoma springing from the anterior wall about two inches above the anus. It was sessile. The rectum was dilated, and the polypus with its base was excised by an incision semi-circularly in front of the anus, the mucous membrane being separated and drawn down. In view of the close connexion between simple adenoma and malignant adeno-carcinoma in this region the patient had been placed under Dr. Carne Ross's treatment, and three months later examination showed an apparently perfect result, everything being smooth and flexible. He returned to work on May 1st, 1894. On re-entering the hospital he stated that he had been quite well and working until five or six weeks before, when he noticed that he was passing blood with his fæces, and that during the last three weeks there had been discharges of blood and mucus apart from defecation. There was no pain, but very frequent action of the bowel. On examination per rectum a hard mass was felt anteriorly, blocking the rectum and bleeding when touched. The surface was rugged. It extended for about one inch in a vertical direction about two inches above the anus, but its upper extremity was within reach of the finger. Below and above it the mucous membrane was smooth and elastic. On Aug. 21st the rectum was split posteriorly by an incision reaching to the tip of the coccyx. The growth was then removed by scissors and the wound was packed with gauze around a large rubber tube. This was changed on the fourth day. On Sept. 8th the wound was granulating well. There were incontinence of fæces and some diarrhœa. On the 14th all had healed. The mucous membrane was smooth as far as the finger could reach, except for a slight puckering in front and to the left side. He was again placed under Dr. Carne Ross's treatment. On Oct. 2nd the line of internal scar, though smooth, presented three nodules, which felt hard. There was no bleeding on examination. Defecation was easy, but there was still some incontinence of fæces, and the bowels were loose. The temperature reached 99·6° F. on the evening of the day after operation, but fell to normal the next day and continued so throughout. On Jan. 13th, 1895, the patient, who, feeling very well, had neglected to follow out Dr. Ross's treatment, returned, having noticed blood in his stools. On examination a hard patch was felt on the left side, about three inches from the anus, one inch and a half wide and one inch in vertical measurement, movable, bleeding on touch, and ulcerated on the surface. On the 15th, the sphincter being dilated, the mass was removed with scissors, together with a wide margin of healthy mucous membrane. Its base was not adherent and came away easily. There was very free hæmorrhage, and also there was some collapse during the operation, so forceps were left on all visible bleeding points, and the cavity left was plugged with gauze. He required the catheter for thirty-six hours, when the bladder acted naturally. There was some bloody oozing. The forceps and plugs were removed in forty-eight hours. The temperature reached 101° on the 16th. After this boracic irrigation was practised daily. On the 31st several large furuncles showed on the hip and thigh. These were incised, and the temperature, which had risen to 103·4°, fell to normal. On Feb. 10th the cavity had filled up and healed. The finger only felt a smooth ring of cicatrisation on the line of removal. There was no thickening or hardness anywhere. He was discharged well on Feb. 22nd. On Aug. 17th his wife reported that he was again at work, feeling well and gaining flesh. The incontinence of fæces was much less.

CASE 2.—A young man aged twenty years was admitted to the hospital on Nov. 30th, 1894. He had been sent to hospital twice complaining of the passage per rectum of blood and mucus, and of frequent and imperative defecation. He said that after a short preliminary rumbling in the abdomen the bowels would act very suddenly, expelling blood and mucus. Up to February, 1894, he had been perfectly well. His mother was living, aged fifty-two, as well as his father, aged fifty. One sister was dead, from a cause unknown. Two sisters and one brother were living and well. There was no family history of syphilis or carcinoma, and no personal history or evidence of syphilis. He had been treated for the latter. On examination per rectum there was found, one and a half inches from the anus, a stricture fully one inch long, hard, gristly, with nodulated opening, and admitting the little finger with difficulty. The lower segment of the rectum was healthy. He had passed blood last on Nov. 28th. On Dec. 3rd it was noted that the bowels had been moved daily since admission, without blood, the stools being of the thickness of the little finger and broken. On the 14th the rectum was dilated under chloroform. The stricture showed a reddened, nodular, crescentic rim projecting into the lumen of the gut. A small piece was removed for examination and under the microscope showed the structure of an adeno-carcinoma. On the 21st inguinal colotomy was performed. As there was much abdominal distension

[1] Lövinsohn: Sajous' Annual of the Universal Medical Sciences, 1894, vol. iii., E 10.

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the gut was immediately opened and a large rubber tube passed upwards, which was stitched to the small opening made in the bowel. There was a large passage through this of thin fæces, followed by subsidence of the abdomen. On the 23rd the tube was removed and the surplus gut cut away. The edges were stitched to the skin by continuous silk sutures and painted with Whitehead's solution of iodoform. There was some passage of fæces per anum. He slept well and took milk diet freely. On the night of the 28th the temperature was 103·4° F. and 100·4° on the following morning. An ulcer had formed at the upper end of the colotomy wound and was touched with nitrate of silver. The temperature became normal on Dec. 31st and had remained so up to Jan. 8th, 1895, on which day Kraske's operation for excision of the rectum was performed. The rectal growth had greatly extended, and had so blocked the lumen of the gut that the finger could not now be passed. The coccyx and about an inch and a half of the left half of the sacrum were removed—in all, about three inches of bone. There was great difficulty in dissecting the mass free in front from the bladder and behind from the sacrum, to both of which it was closely adherent. When loose all round it was clamped above by two large pairs of angled forceps and cut away below. This was done partly because the patient was by this time suffering greatly from shock, and partly because the separation had to be carried so high that it was doubtful whether hæmorrhage could be sufficiently quickly controlled by any other means. The anus and healthy mucous membrane below had previously been separated, with the idea of uniting them to the upper part of the rectum after removal of the diseased portion, but the amount removed—about five inches—rendered this impossible. During the dissection the peritoneum was opened and closed by a stitch. The large cavity produced, the size of a child's head, was packed with iodoform gauze. The temperature rose on the 9th to 100·6°, on the 10th to 101·4°, and reached 102° on the evening of the 14th, after which it slowly fell. The forceps were removed on the 10th. On the 17th the cavity was found to be covered with pinkish granulations. There was much difficulty in keeping the wound free from fæces, although the inguinal opening acted well, and the upper end of the lower segment of the bowel was plugged with gauze. The patient looked hectic, but was taking food well. The sister of the ward, Sister Robinson, deserves great credit for the care she took to ensure the thorough cleanliness of the wound, which necessitated frequent irrigation and most constant attention. On Feb. 3rd the patient was much emaciated, but the cavity was contracting well and now measured 5 in. by 3 in. and in parts by 1½ in. The surfaces and edges were lined by healthy granulations. The fæces still passed through the wound in diminishing quantities. It was dressed with boric glyceride. Urination had never given any trouble. On the 17th the sacral wound was found to be steadily contracting. The hip on the left side appeared to have fallen in slightly. Fæces still passed in spite of the gauze plug. On the 24th the fæces had ceased to pass through the sacral wound, which felt perfectly smooth and was closing up rapidly. The patient was greatly emaciated. There was no enlargement of the liver or the spleen. On March 12th the patient's weight was 8st. 6½lb., and on the 23rd 9st. 1lb. On the latter date the wound was one inch long and looked perfectly healthy. There was much prolapse of the mucous membrane in the colotomy opening. On the 29th, as the patient was greatly improved in condition, the mucous membrane of the bowel was divided transversely a little below the centre of the colotomy wound, stripped up from the interior of the lower segment for nearly three inches, and removed. The muscular wall of the gut was then stitched together with silkworm gut, and the remaining mucous membrane was united to the skin around, a small drainage-tube being left. There was some pain for two hours, followed by "jumping" pains at intervals for two days. The drainage-tube was removed on April 1st. The temperature had risen to 102° on March 30th. On April 4th there was no pain, except some aching on movement. There was no pain on defecation. The temperature had come down steadily to normal since March 30th. A small slough and three stitches were removed. On the 28th the patient was found to have steadily improved. The posterior wound was quite dry but not yet closed. The colotomy wound had almost healed. His weight was 9st. 6½lb., and on May 1st it was 9st. 6½lb. The finger when passed per anum touched a pinhole opening by the side of the sacrum. There was no cavity beyond. The surface was puckered but smooth. The mucous membrane of the colotomy wound still prolapsed a little. The bowels acted well, but there was no control over their action. The patient was very useful in the ward. On Aug. 23rd there was no sign of recurrence. All had soundly healed.

Reviews and Notices of Books.

Surgical Pathology and Therapeutics. By JOHN COLLINS WARREN, M.D., Professor of Surgery in Harvard University. London: F. J. Rebman and Co. 1895. pp. 832. Price 42*s*.

FEW indications show more clearly the immense advances in pathology made within the last few years than the space assigned to bacteria in the ordinary text-books. Up to a comparatively recent date treatises on surgical pathology devoted only a few pages to the consideration of micro-organisms and their effects upon the body. The space thus employed has steadily increased, and now in many works the chapters devoted to these subjects form no inconsiderable portion of the whole volume. Dr. Warren gives two chapters (seventy-eight pages in all) to bacteriology. In the first he describes bacteria in general, and in the second he considers those which are of special importance to the surgeon. Descriptions are given of the various methods employed for studying bacteria, and coloured illustrations of tube-cultures and coverslip preparations accompany the accounts of the several micro-organisms. Succeeding chapters are devoted to simple and infective inflammation and the process of repair. The question of the possibility of pus arising apart from the influence of bacteria is discussed, and the conclusion arrived at is that though it is possible for pus to arise without bacteria, such an occurrence is extremely rare. Chapters follow on the ordinary "surgical" diseases, and in one respect this book differs from the majority of works on this subject. Usually the question of treatment is left out of consideration in treatises on surgical pathology, but Dr. Warren has attempted, as he tells us in the preface, to associate pathological conditions as closely as possible with the symptoms and treatment. Certainly there are advantages in considering the pathology and treatment together, for all modern treatment depends on our knowledge of the pathology. The work is well up to date. As a proof of this we may instance the description of the employment of tetanus antitoxin and the discussion as to the presence of micro-organisms in carcinoma. Very few errors seem to be present. It is, however, certainly a mistake to connect rachitis by derivation with ῥάχις; and on page 599, by a misprint, gluten appears to be a constituent of bone. We must praise the illustrations, some of which are in colours and many tinted, though often the tinting is more ornamental than useful. The printing and paper are excellent, and a good index is supplied. The whole work has been very carefully written and is a worthy representative of American pathology.

The Anatomy of the Nasal Cavity and its Accessory Sinuses: an Atlas for Practitioners and Students. By Dr. A. ONODI, Lecturer on Rhino-Laryngology in the University of Budapest; translated from the second edition by ST. CLAIR THOMSON, M.D., M.R.C.P. Lond., F.R.C.S. Eng. 1895. London: H. K. Lewis.

IN 1893 Dr. Onodi of Budapest published an atlas of twelve plates prepared from a series of sections showing the topographical relations of the nasal cavity and its accessory sinuses, especially with regard to the neighbouring organs, such as the eye and the ear. In the next year another

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edition was called for, and four new plates were added. It is this second edition which has been translated by Dr. St. Clair Thomson. We may at once say that the engravings are most accurate and reach a high standard of excellence. They show sagittal, coronal, and horizontal sections and give a thorough idea of the anatomy of the nose, and the explanation of the individual plates is quite adequate. In a general introduction an account is given of the nasal walls and cavities, which is very clear and accurate, except that in describing the outer wall the lacrymal bone is omitted, although it is figured in the first plate. Although intended for practitioners and students, most of the sections really illustrate important relations which must always be present to operators, whether general surgeons or specialists, who have to deal with diseases of the nose and to whom an accurate knowledge of its topograpical anatomy is imperative.

La Pratique des Opérations Nouvelles en Chirurgie. Par A. GUILLEMAIN, Prosecteur à la Faculté de Médecine de Paris. Paris: Baillière et Fils. 1895. pp. 334.

IT is always a difficult matter for a text-book on general surgery to keep up with the rapid advance of the science. It is more than difficult—it is impossible. The successive editions of a text-book can appear only at distant intervals, and, moreover, it often happens that even while the book is in the press some part of it is out of date. The little volume before us supplies a decided want. It affords us that information about recent advances in operative surgery for which we might search in vain in any treatise on surgery published before the present year. We know of no such book in English. The work deals with the surgery of all parts of the body, but as greater activity has been manifested recently in abdominal operations, naturally these receive rather more attention than might otherwise be accorded to them. In this connexion we may mention that a good account is given of Murphy's button. The descriptions given are sufficiently explicit to enable a surgeon to perform the operations, but from the size of the book the accounts must be necessarily brief. Numerous references are given to papers and articles, but, as we might expect, they are for the most part French. Many illustrations are present and assist the text.

Poisons: their Effects and Detection. By ALEXANDER WYNTER BLYTH, M.R.C.S., F.I.C., F.C.S., Barrister-at-Law. Third Edition, revised and enlarged, with tables and illustrations. London: Charles Griffin and Co., Ltd. 1895.

A REVISED and enlarged edition of Mr. Wynter Blyth's "Poisons" might have been easily anticipated as soon as it was known what a valuable contribution on the subject he had placed at the disposal of the toxicologist and others some years ago. We are glad to find that the same general plan of the original has been preserved in the present edition; but, of course, to be in accordance with the enormous developments which recent investigation has been productive of, and of the ever-widening field which the constant addition of new toxic substances is opening to view, a great part of it has been re-written, enlarged, and corrected. Not less during the same period has been the advance in analytical methods of detecting poisons; old processes have consequently made way for new and—as experience has shown—more accurate ones. We like the plan and arrangement of this work, and the classification adopted makes the task of reference light. The introductory chapter on "The Old Poison Lore" is full of interesting historical reading, and is followed by a short but very instructive section on the connexion existing between the chemical structure of the molecule of organic substances and physiological effects; but the results obtained are, as it is observed, "too fragmentary to justify any great generalisation." In the succeeding chapter on life tests we venture to think that an error of judgment has been made. The author has purposely omitted to describe, as was the case in former editions, the manner of applying life tests because "the Vivisection Act effectually precludes the use of life tests in England save in licensed institutions." Nevertheless, a description of biological methods might have been retained, we think, for the benefit of those authorised to experiment upon animals for this purpose, while students and others should, at any rate, be acquainted with the way these things are done if they are not permitted to do them. This observation is also surely justified, since the effect of injecting animals with various poisons is fully described elsewhere, under the heading of "Action upon Animals," in the sections in which the poisons are separately discussed. The chapter on the cadaveric alkaloids or ptomaines or toxines is short, and they are, perhaps, not treated at that length which the increasing importance of the part these bodies are taking in disease and as poisonous agencies occurring sometimes in food, &c., demands. It is, however, thoroughly practical, and the work is essentially one for the searching analyst.

In regard to those ptomaines in particular which are said to have been isolated and crystallised from the urine of patients suffering from various diseases we must express ourselves in full accord with the author's remarks when he says that "to specifically declare that a few milligrammes of a substance is a new body requires immense experience and great skill, and even when those qualifications are present this is too often impossible, and, this being so, the long list of named ptomaines, such as erysipeline, varioline, and others, must have their existence more fully confirmed by more than one observer before they can be accepted as separate entities." The processes that have been described for the isolation of these products have appeared to us to offer no great difficulty of manipulation or experiment, and we wonder that other observers have not been induced to repeat the experiments, with a view of confirming or disproving the results affirmed to have been obtained. It is hardly necessary to speak in terms of praise of Mr. Wynter Blyth's work, as we know it is valued and largely trusted. We welcome the fact that it has recently been harmonised with modern advance. The excellent practical directions laid down are doubtless largely dictated by the result of experience and if carefully and intelligibly followed should leave no uneasy doubt in the analyst's mind as to whether he has missed what he is searching for, or whether or not to accept the indications of negative reactions. As a practical guide to the detection of poisons we know no better work of reference.

LIBRARY TABLE.

The Brewing of Non-Excisable Beers. By. J. POCOCK. Bangor. 1895.—The aim of this little work is to point out the principles upon which all non-excisable fermented beverages should be made, and to impart to those who do not know a knowledge of the processes which otherwise they blindly superintend. In this the author has succeeded fairly well; he has written some intelligible chapters on fermentation, the selection of yeast, the use of preservatives, &c., each of which should amply repay the perusal of the aspiring non-excisable brewer. We commend this little book because its object is to rescue an important branch of manufacture from the practice of haphazard processes, and to place the general production of non-excisable and wholesome beverages upon a more scientific and satisfactory basis.

Chemical Laboratory Labels. Part 2. Compiled by W. H. SYMONS, F.I.C. Published by A. Gallenkamp and Co.,

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2, 4, and 6, Cross-street, Finsbury, London. 1894.—We have received a copy of Part 2 of this really useful collection of labels for the laboratory. The nomenclature is "up to date," and the addition of the formula and formula weight of the substance indicated is an obviously convenient one. The labels include a table of atomic weights and a print of Lothar Meyer's grouping of the elements, which, when fixed on a bottle or cylinder of such a diameter that both ends will meet, exhibits the elements periodically arranged on a spiral.

Introduction to the Study of Biology. By B. LINDSAY. London: Swan Sonnenschein and Co. 1895. 6s.—As an introduction to the study of zoology this book will doubtless soon become popular among students commencing the science, as it is especially written with a desire to meet the difficulties and requirements of beginners. The first part of the book deals with the general principles of biology. In an elementary work of this kind it would, of course, be impossible to go very far into such extensive questions as embryology, distribution of animal life, origin of species, and so on; but the author has succeeded in making an interesting and readable sketch of these principles, after the perusal of which those requiring deeper knowledge will the more easily understand larger works. The second part of the book is systematic, and consists of a classification of the animal kingdom, with the salient features of the different classes clearly pointed out and illustrated by numerous diagrams. There is a chapter which advises the student concerning his practical work, and also points out the chief standard works. Last, but not least, there is a glossary of the scientific words used in the book in which their derivations and meanings are fully given.

The Origin of Plant Structures by Self-adaptation to the Environment. By the Rev. GEORGE HENSLOW, M.A., F.L.S., F.G.S. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1895.—The author considers that the origin of species depends chiefly on the environment and much less on natural selection than supposed by Darwin. The answer to the question, "What, if any, aid does natural selection supply in the origin of species?" depends upon the question as to whether the environment induces indiscriminate or, as Darwin called them, "indefinite" variations, and the author's reply is that a new environment does not, in any sense of the term, "select" at all, but *itself induces a plant to form definite*, and not indefinite, variations in nature; and, lastly, that definite variations are *always* in the direction of adaptation to the environment itself. The author then gives a concise epitome of the facts by which he hopes to make clear that the origin of species in plants is solely due to the direct action of the environment, and that Darwin, although fully recognising this principle, thought it to be exceptional, instead of its being the rule, in nature. The introductory chapter deals very fully with all the above-mentioned views, and contains a great deal of information bearing on the subject derived from many sources. The peculiarities of desert plants, alpine and arctic, maritime and saline, and phanerogamous aquatic plants are then successively and fully dealt with, and there are chapters on the origin of subterranean structures (roots and stems), peculiarities of climbing stems, and form and structure of leaves. With regard to the relations between roots and stems the author emphasises the fact that as a rule their differences are due to the direct results of the aerial and subterranean conditions of their normal existence, and experiments prove that when normally aerial stems are made to grow underground the new growth *at once* begins to assume the characters of normally subterranean stems such as rhizomes, and that both are in many ways comparable to roots. The conclusion therefore drawn is that it is the aërial and subterranean environments which act directly upon the responsive power of the organ, which then develops the structure appropriate for each medium respectively. Many interesting facts and theories are given about climbing plants, and the book altogether is most interesting and will be an addition to the International Scientific Series with which it is associated.

The Playground of Europe. By LESLIE STEPHEN. New edition. London: Longmans, Green, and Co. 1894. Price 6s.—The hazardous joys of Alpine climbing have seldom had a more competent exponent than the author of this entertaining work. In the vivacity and charm of his literary style he is excelled by few, and it is now more than thirty years since he made himself a name among the adventurous athletes who delight in scaling the mountain peaks of Switzerland and Savoy. "Excelsior" is the appropriate though quaintly expressed maxim of these enthusiasts. They have no mind to linger long in peaceful valleys or by the lake sides, but seek enjoyment rather in climbing precipices 1000 feet high or in tempting fate, tied three or four together to a rope, in situations inaccessible to a chamois. Such lovers of nature in her wilder aspects will not fail to relish the scene depicted in the frontispiece—an incident in the author's ascent of the Rothhorn in 1864, which he describes at page 110 as "the nastiest piece of climbing I had ever accomplished." It is not everyone who can attain either membership of the Alpine Club or Mr. Leslie Stephen's eminence in the higher departments of literary work; but to all admirers of perilous exploits among some of the grandest scenery in the world this record of his mountaineering achievements will be welcome.

Brain: a Journal of Neurology. London: Macmillan and Co. Summer and Autumn Numbers. 1895.—This last double number of *Brain* is one of very great interest. Amongst the original articles there is the address of Sir William Broadbent, as President of the Neurological Society, on the subject of "Brain Origin," while numerous papers of considerable scientific and clinical interest are contributed by Dr. Waller, Professor Wright, Dr. Michell Clarke, and others, together with an interesting discussion of the late Dr. Hack Tuke's important paper on Imperative Ideas. There is also a critical digest of recent psycho-physical literature and several reviews and abstracts. With such contents it is evident that this important publication at least keeps up its reputation. But we may suggest that it would conduce to the comfort and convenience of readers if the numbers were issued separately in their respective quarters, rather than that two should be issued together. The double number before us is a book of 287 pages.

NEW INFIRMARY AT SOUTHPORT.—On Thursday, the 26th ult., Southport began a series of celebrations which extended over the rest of the week by the public opening of the new infirmary. On the next day a marine drive and a bridge crossing the channel between the two marine lakes were dedicated to the public, and Saturday was given up to a brass band contest—a species of entertainment popular in Lancashire. In addition to the gift of five acres of land, valued at £5000, by the beneficiaries of the Scarisbrick Trustees, £25,800 have been sent on the infirmary. The building is of brick and stone and the front aspect is that of a quadrangle, with the men's wards on one side, the women's wards on the other, the administrative block in the centre, while behind are the children's ward, the laundry, and other buildings. There will be beds for sixty patients, and the nursing staff and servants will number about thirty. The extensive area round the hospital is laid out as pleasure grounds. The opening ceremony was performed by Alderman Dr. Wood, who is now mayor of Southport for the fourth time. He gave an interesting sketch of the growth from very small beginnings of the provision made for the sick in Southport. The Strangers' Charity was founded in 1806, and for fifteen or sixteen years the work was carried on in one or two hired rooms. "That," said Dr. Wood, "was the germ from which had sprung the convalescent hospital, the dispensary, and the infirmary."

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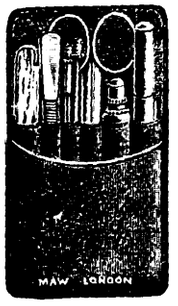
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building is of brick and stone and the front
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New Inventions.

A NEW FORM OF POCKET CASE.

MESSRS. MAW, SON, AND THOMPSON, of Aldersgate-street, have made for me a small "compactum" waistcoat pocket case, which I have kept in constant use for the last five or six years. It contains a clinical thermometer, which is thus saved from many dangers, a knife with Syme's and Paget's blades, scissors, a combination of probe director and grooved needle, dissecting or dressing forceps, and a caustic holder. There is, besides, a pouch at the back for needles, sutures, &c. This forms an armamentarium sufficient for the ordinary round of visits. The case lies flat, and without the slightest inconvenience, in the upper waistcoat pocket and takes the place of the weighty and inconvenient so-called pocket case. The dimensions are 4½ in. by 2⅝ in., the weight when filled is 2½ oz. and the price 30*s*.



Finsbury-circus, E.C. S. H. APPLEFORD.

THE CERES AUTOMATIC LETTER AND CARD FILES.

ALTHOUGH this system cannot, perhaps, be properly described as a *new* invention, having now been before the public some time, yet at any period one is always ready to welcome an improvement in the manner of conducting any of the varied and complex duties which combine to make up the day's work of the average business man, not the least formidable task in which is the (generally unsatisfactory) "putting away" of the large amount of correspondence &c. with which the majority of us are inflicted. To be in possession of the means to place one's hands almost instantaneously on a letter (or, for the matter of that, on anything that can be written, or printed, or pasted on a piece of paper or on a card) is a consummation many have at all times devoutly (or otherwise) wished for, but have dismissed as chimerical. Last January we expressed approval, at first sight, of the plan adopted by Mr. Bowater Vernon for keeping correspondence and papers in order by means of the Ceres Letter and Card Files. We have now tried the practical working of both the letter filing arrangement and the card system, and the result is that we can emphatically endorse all that has been said in their favour. For simplicity in use and ready adaptability to varying needs and requirements of work Mr. Vernon has devised a plan which will be difficult to rival. The plan of using cards or slips of paper is an outcome of the card catalogues now so familiar in our public libraries, with the important advantage of an automatically self-fixing support holding the cards or slips in position, and thereby dispensing with the troublesome and annoying necessity of threading them on, and unthreading them from, a rod, as is the case generally. The slip trays (which can be had for a few shillings each) should be welcomed by students and others for notes of reading or research, loose slips being much more handy than note-books for varying arrangement and classification. The new revised catalogue just to hand is more than an ordinary trade list, and it abounds in useful hints and suggestions for keeping letters, papers, &c., and for applying the card or loose sheet system to all manner of requirements. The files and cards can be seen at the offices of Messrs. Dawson and Sons, Bream's-buildings, Chancery-lane, W.C.

A NEW CATCH FOR FORCEPS.

I HAVE devised a catch, which Messrs. Mayer and Meltzer have made for me, for uterine and other forceps. From the figure it will be seen that the ordinary ring handle for the thumb is replaced by a catch curving down
may engage with any of a series of notches cu
of the lower handle. The advantages of
embodying this feature may be summe
(1) economy of size and weight, the handles o
half the space of those of ordinary fashion
locking mechanism; (2) firmness of the catch,
slip; (3) increased view while operating, th
out of the line of vision; and (4) cleanliness,
factory method of disarticulating the blades be
to facilitate cleaning. The Mop Forceps hol
firmly without tearing, thus doing away wit
detached fragments of sponge being left in t
cavity. This instrument also makes a useful
The Vulsellum Forceps take a firm grip o
being especially made for pulling down the
operation can be commenced by the introduc
gusson's speculum, through which the forceps m
The speculum can then be withdrawn without
vulsellum and a Sims's speculum introduce
The Intra-uterine Forceps are for applying m
the uterine cavity. The ends are well rounded
is graduated, so that the instrument can be us
sound. The Pressure Forceps meet the exi
operation requiring the presence in the abdo
wound of several pairs of forceps, which, if t
ordinary form, is very embarrassing; but if t
after this model (see illustration) both the



manipulations of the operator are impeded i
degree. Moreover, the reliable nature of the
of great value, as it is so constructed that it is
it to slip. The above are a few of the many fo
to which I have thought the catch applicable.
can be made according to individual requireme

D. LLOYD ROBERTS, M
St. John-street, Manchester.

CHOLERA.

ACCORDING to the latest accounts from
the number of cholera cases has sensibly dimi
The disease only exists in a sporadic form,
one case on the average occurring daily, and
believed, no ground for apprehending any
appears that, as regards the recent outbreak
Honolulu, the disease made its appearance on
between that date and Sept. 5th there were 39
deaths. No Europeans had been attacked.
received at San Francisco on Sept. 27th state t
86 cases and 40 deaths have occurred at Hon
among the victims were three whites. The
disease is said to be subsiding.

The Spanish Government has received official
cholera is spreading in Morocco.

The reported prevalence of cholera at Sal
seem to have had any foundation beyond the
cases of diarrhœa or so-called English choler
not at all uncommon in this country at thi
occurred there. The officials of the Local Gov
have not received any intimation of the exis
cholera at Salford, and the report is discredite

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THE LANCET.

LONDON: SATURDAY, OCTOBER 5, 1895.

IN the case of the researches of no man of the present century is it easier to gauge the enormous importance and the immense practical bearing that they have had than in that of LOUIS PASTEUR. The pertinacity with which he has adhered to the special detail at which he was for the time working, the faculty of demonstrating in the most clear but simple fashion such point, and the power of fitting these details when demonstrated into one harmonious whole to form a coign of vantage from which to attack other problems have always made PASTEUR'S work interesting, nay, even fascinating, to every educated mind; whilst the intensely practical character of many of his researches has gained the respect of those who can see good in no investigation on which £ *s. d.* is not written. PASTEUR, therefore, has received a meed of honour and reward even during his lifetime such as falls to the lot of few, even distinguished, men; but it may confidently be predicted that as his work is more fully appreciated, ridiculous as such a statement may seem at this time, and as its bearing on the study of the many still unsolved problems of disease is recognised, his reputation as an investigator will grow, and PASTEUR will stand out as an intellectual giant head and shoulders above his fellows. His early physical and chemical training developed in him an accuracy and a wealth of experimental resource without which little of his great work could ever have been accomplished; and his experiments on the tartrates and paratartrates, commenced when he was a young man, little as they seemed to bear on his after-work, really formed the basis on which most of his biological experiments rested. He was struck by the fact that during the process of fermentation of ordinary dextro-tartrate of ammonia in a solution containing organic matter a distinct micro-organism made its appearance. Then, too, he had been able to break up paratartaric acid by the addition of green mould, in the presence of inorganic crystalline salts such as phosphates and salts of ammonia only; this was accompanied by the disappearance of the dextro-tartaric acid and an increase in the number of fungi and bacteria in the fluid. Out of these experiments arose the controversy that raged round the subject of abiogenesis, and this was settled beyond dispute by experiments perfected by PASTEUR, although he followed the lines of those instituted by SPALLANZANI and SCHULZE, when he showed that bacteria and fungi, though developing most readily in those solutions which contained organic matter, were, nevertheless, capable of growing and multiplying in fluids in which no organic matter was present, so that the theory that they were developed from the running together of albuminoid molecules was once and for all time laid to rest. He further showed that fluids containing organised nitrogenous matter might remain unchanged for an indefinite length of time, even under conditions which, on the old theory of biogenesis, should be most favourable to the development of organised living cells, if care were taken to previously destroy any living organisms which might be already present and to prevent the entrance of such organisms from without. From this point the transition was comparatively easy to the position that fermentation and putrefactive changes, which only supervened when certain kinds of micro-organisms were allowed to gain access to fluids containing nutritive materials, were really the result of the action during their life-history of such micro-organisms. His researches on fermentation in connexion with French wines and his experiments with the mycoderma aceti soon convinced him that special kinds of fermentation were set up, given certain media, by different kinds of micro-organisms, each form having its own special fungus or bacterium.

The next step was the differentiation of a special etiological factor in the pathogeny of the silkworm disease, which at one time threatened to ruin the silk industry of France. He traced the "spot" disease or "pébrine" to the nosema bombycis, which had previously been described by NAEGELI as small, glistening, oval corpuscles which lead a parasitic life in the silkworm at its various stages; and by appropriate treatment—the destruction of all silkworm eggs that were suspected of being unhealthy—he was able to assist the silk-growers almost to stamp out this disease. He went beyond this, however, for he showed how certain chains of micrococci in the alimentary canal of the silkworm gave rise to another disease characterised by a peculiar lethargy. By these two sets of experiments he laid the foundation of the germ theory of disease, which has since borne such abundant fruit in the regions of practical and preventive medicine. He demonstrated the fact that certain specific organisms endowed with definite morphological and physiological characters are capable, by their presence and by the action of their products, of giving rise to specific infective disease; he pointed out the special *rôle* played by certain definite organisms in the production of different kinds of fermentation, putrefaction, and disease; and, in fact, on his observations and ingenious experiments as a basis built up a theory of a living contagium or rather brought it from a condition of chaos to a position protected from assault by a fortification of scientific proof. Instead of assigning to micro-organisms a general and common action in the initiation of the above processes he allotted to each one its own special part.

Such specific micro-organismal action having been traced in one or two instances, it was a comparatively shor step to the demonstration of an organised and living contagium in other specific infective diseases, and anthrax, fow cholera, and a number of similar diseases were in turn studied and with similar results. His next most important investigations were connected with the production of immunity by means of slight attacks of a disease set up by the use of a modified virus. His experiments on anthrax and fowl cholera may now be looked upon as classical, and there can be no doubt that, without his discovery of the action of specific organisms in the production of the several diseases with

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which they are associated, the theory of toxines and antitoxins, which promises to play such an important part in the treatment of disease, could never have been advanced, or if advanced could never have been proved.

PASTEUR'S work in connexion with hydrophobia marked another great advance on any of his previous work, in so far as he was able to prove that not only could disease processes be prevented by "vaccination" prior to the injection of the *materies morbi*, but that the progress of the disease might be cut short or aborted even when the vaccination was carried on only after the virus had been introduced into the body. Much is written about the want of success in a certain proportion of the cases that have come under PASTEUR'S method of treatment for rabies; but anyone who will dispassionately and without bias examine the statistics of the results obtained in the various antirabic institutes, and compare these with the statistics of the cases that have not been so treated, cannot fail to be impressed by the enormous difference in the mortality under the two sets of conditions. Without vaccination the antitoxic serum method of treatment could never have existed, and it may be confidently anticipated that in all those diseases in which there is a localised formation of a poison, which in turn appears to act specially upon certain tissues, an antitoxic method of treatment may ultimately be obtained. It will, however, be a long time before it is fully recognised how great has been PASTEUR'S influence on this work, not only during the time that he was actively engaged in experiment, but also through the counsel and criticism which he bestowed on the work of his pupils and colleagues during the later years of his life. PASTEUR was always the head of the Pasteur Institute. Although he has not published a line since Dec. 27th, 1886—when he wrote his famous letter upon hydrophobia, which appeared in the first pages of the Annales de l'Institut Pasteur—his mind and hand may be traced, directly or indirectly, in every page of the nine volumes in which are recorded the work carried on in this Institute; moreover Listerism is the outcome of the application by a great surgeon to his own work of some of the principles which PASTEUR enunciated, as a result of which surgery has been raised from the level of a mere handicraft to the dignity of a science. PASTEUR was a man of a century. He had a great mind and an infinite capacity for detail; he had great tenacity of purpose, though his horizon was limited by no narrowness of vision. That he was a true Frenchman goes without saying, but his discoveries belong to the world. No man has contributed so greatly to our knowledge of the fundamental principles that govern the course of disease processes, and few have had so little to retract of what they have published. Such a result could only be the outcome of accurate working, clear thinking, and lucid exposition. It is interesting to note of such a man that his religion, his simplicity, and his affection for his parents and for his family were maintained unaltered in their purity through all changes and controversies. His was not the wisdom of the agnostic, but the faith of a clear-sighted man who, interpreting much through his grand intellect, was still conscious of a world beyond that which he had probed deeper, perhaps, than any of his fellows. France may well mourn the loss of such a man; and all men, irrespectively of nationality, who have a love for truth and an admiration of directness of purpose and keenness of intellect must mourn with her.

ONE of the greatest triumphs which medicine has achieved during the last few years is in the successful employment of the natural secretions of the animal body in the treatment of disease. Such therapeutic methods are the more to be valued since they are founded on a rational rather than an empirical basis. Nothing can be more satisfactory to a scientific physician than to control a disease by supplying to the body a substance the deficiency of which has caused the morbid process in question. The greatest success in this line of treatment has been in cases of myxœdema. This disease was first described as cretinism in adult women by Sir WILLIAM GULL, and the name which it now bears was given to it by Dr. ORD on account of the excess of mucin in the skin, which he found in several cases. Further experiments on monkeys by Professor KOCHER and others abroad and by Mr. VICTOR HORSLEY in England showed that all the symptoms of myxœdema were produced by removal or atrophy of the thyroid gland, and attempts were thereupon made to counteract these symptoms by the grafting of healthy thyroid on to that which had been removed or atrophied. As might have been expected, the practical difficulties attendant on this operation were found to be insuperable, but the principle was established, and from that time forward the methods of artificially supplying the organism with the products elaborated in the thyroid gland passed through rapid stages of simplification till they reached the compressed forms which are now so familiar to everyone. The success met with in cases of myxœdema prompted an investigation into the action of thyroid juice on other diseases, and the condition known as exophthalmic goitre, or Graves' disease, was naturally among the first of those to which attention was directed. This disease and myxœdema are in some respects the antithesis of each other. The enlarged thyroid gland of Graves' disease is one of its most conspicuous features, while the almost invariable tendency of such patients to have the emotional part of their nature unduly developed contrasts remarkably with the mental dulness and apathy of myxœdema. Over-secretion of the thyroid gland, therefore, at once suggested itself as the starting-point of Graves' disease, but this plausible theory has not yet received any decided clinical verification, although some cases have been relieved by the extirpation of the gland. It is possible that in the enlargement of the gland the secretion may undergo some subtle chemical change which, though its nature is at present unknown, may ultimately be counteracted by some simple means. Thyroid feeding in myxœdema has long since passed beyond the stage of experiment and inference, and has come to be recognised as a remedy of unquestionable efficacy. It has been used experimentally in many other diseases, and has met with some considerable success in certain affections of the skin, but here we are unable to follow the therapeutical methods by which a cure is effected, and, moreover, it is doubtful if its action is sufficiently reliable. The direct relation of the thyroid gland to myxœdema and its undoubted therapeutic efficacy

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when administered in cases of that disease opened up the way to the investigation of the action of the other so-called ductless glands, and an extensive knowledge of their actions is being obtained. Professor SCHAFER in his Address in Physiology at the recent meeting of the British Medical Association gave a full account of our present knowledge of this subject, much of it being the result of his own indefatigable work. To all appearance the use of "internal secretions" has a great future before it in the treatment of disease. The extension of our therapeutic resources due to this discovery, together with the introduction of antitoxic serum, mark an important stage in the advance of medicine as a healing art.

THE First of October, as Sir JAMES PAGET said, is a New Year's Day to the medical student, and, if he takes careful note of the counsel of his wisest advisers as given to him in the opening lectures and in other ways, he may make the day to be "the fair beginning of a time." In the introductory addresses there is a variety which may satisfy all tastes. Possibly there are one or two that will confirm the cynics in our profession in their disrespect for such occasions. In these the speakers seem to flounder about from one thing they have heard to another, without point, without connexion, and without dignity. But these are the exceptions, and the first-year student, or the fifth-year student for that matter, must be "wise in his own conceit" who can scan the introductories of the year without feeling that they abound in inspiration and in instruction which will serve them in quiet moments of duty, of temptation, and of difficulty. We should be prepared to judge students and to forecast their future success very much by their reception of such truths as find expression at the opening of sessions. Much has been said of late as to the need for more explicit ethical teaching in our medical schools. It exists already, and is most pronounced on the opening days of the session, when the many-sided relations of the profession are demonstrated, and the claims of the public, of patients, of the poor, of the lower animals, and of fellow practitioners are all insisted on; when all mean devices for getting practice are denounced, and when all careless and slipshod work, all defect of sympathy, and all "doing" that falls short of what Sir JAMES PAGET called "doing one's best" is pronounced to be unworthy of the profession to the practice of which the new students and the old students alike aspire.

It is difficult to single out individual addresses for special notice. Each mind, according to its bent, will make its own selection, and what will strike one as interesting will appear to another to be either forced or commonplace. We shall endeavour rather to emphasise subjects than individuals in what little we have to say. We may make one exception in the case of Sir EDWIN ARNOLD. When a distinguished layman, representative of literature in its widest and highest forms and in its most useful and varied applications, does the profession the honour of undertaking the opening of a great medical school and gives us his views of the profession to which he does *not* belong, when he magnifies every virtue of the profession and summons all his powers of euphemism not to suggest any possible thought of fault in its methods, it is both just and pleasant to give much heed to what he says. He gives us the great advantage of "seeing ourselves as others see us." In this aspect all will study with rare interest the picture drawn by Sir EDWIN ARNOLD of what is, in his judgment, "the best, the gentlest, the loftiest, and the purest of the secular crafts which men follow." If this be a true judgment of our craft, what more of ethic is needed by the student who enters on it than the call to prepare for it, to live up to it, and to watch day by day the men who best exemplify it? The old satirists of medicine have had their chance and they have used it. But they would find little in medicine now on which to feed their "immortal scorn," and our present danger is lest we be too much elated with the tribute of outsiders who see the drift of the great movements which have revolutionised medicine, and who are too generous and too much outside the profession to see its remaining faults. He will be a dull student who can read this great panegyric of our art without emotion and without the desire to distinguish himself by advancing the growth of some branch of "the great tree which is set for the healing of the nations," whether it be in the slums of our own European cities or in the Zenanas of the East, which Sir EDWIN ARNOLD so vividly presents to us as spheres for medical women. We cannot forbear one allusion to his plea for consideration for the lower animals in the matter of vivisection. Our own views on this subject have never varied, and they do not differ from his. We should be ready to exclude from the profession the man who wantonly and in the name of medical science inflicted unnecessary cruelty on the meanest animal. While recognising that man is "of more value than many sparrows," or even many dogs and many horses, we recognise the solidarity of all living things and the obligation of the greater to the less; and we feel sure that the profession will join with us in thanking Sir EDWIN ARNOLD for his exquisite gentleness in dealing with this great theme, and his generous recognition of the humanity of those who exist to diminish suffering and to prolong life. The relations of pharmacists and medical practitioners were handled admirably and courageously by Dr. FREDERICK ROBERTS in his address to the Pharmaceutical Society. At Owens College Dr. LEECH vindicated the ethics and methods of HIPPOCRATES as good for all time and at the root of all good conduct and practice. HIPPOCRATES is, after all, the Father of Medicine, and we may well be content to forget some of our "forefathers" in favour of him. Another great function of our profession was the theme of attention at St. Mary's Hospital in the address of Dr. A. P. LAURIE, whose public duties have led him to consider the bearing of various industries on the health of the people. Some of these, if not checked, threaten racial degeneration. The insidious dangers of lead and phosphorus and other poisons, of breathing an atmosphere of dust, and of working at high temperatures still confront those who have to protect the health of British workmen, and in regard to these subjects Home Secretaries must be guided by medical men. Dr. LAURIE suggests that far higher duties and far higher pay must be forthcoming

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for surgeons under the Factory Acts than any yet contemplated.

We have come to the end of our space. But we have said enough, we trust, to lead our readers to study the addresses and to realise for themselves their responsibilities as students and practitioners of an art of which so much is expected and to which such great honours are already paid.

Annotations.

"Ne quid nimis."

PRESENTATION TO DR. HUGHLINGS JACKSON.

THE opening day of the medical session of 1895 will be memorable in the history of the London Hospital Medical School. The occasion was made one of exceptional interest by the presentation of his portrait to Dr. Hughlings Jackson, together with a silver ewer and stand. The presentation was subscribed for by Dr. Jackson's medical and surgical colleagues on the staff of the London Hospital and numerous friends both at home and abroad, "in recognition of their esteem and admiration of his great services to the London Hospital and Medical College, his distinguished position in the profession, and the advances he has effected in medical science by his laborious investigation and profound insight into diseases of the nervous system." Another portrait by the same artist was presented to the medical school of the hospital. Dr. Hughlings Jackson is one of the least demonstrative members of the profession, but this quality only increases the singular interest and, we may add, the affection with which he is regarded, not only by his colleagues, but by the profession in every part of the United Kingdom and of the world. The authorities of the Medical School were fortunate in getting Sir James Paget to preside and to make the presentation. The catholic nature of the occasion was shown by the presence of Professor Burdon Sanderson, Sir Spencer Wells, Sir William Broadbent, Dr. Barlow, Dr. Buzzard, and others. Sir James Paget spoke, as almost only he could speak, in regard to the professional history of Dr. Hughlings Jackson and the character and significance of his work. It was his rare satisfaction to be able to revert to the fact that among the generations of students whom he had taught were the names of Dr. Hughlings Jackson and Mr. Jonathan Hutchinson, the latter of whom was unfortunately and unavoidably absent. He dwelt on the constant effort of Dr. Hughlings Jackson to bring all clinical facts and all scientific ones into harmony for the practical good of the patient, and touched with special emphasis on his fruitful researches into the localisation of brain function, which had given lucidity to physiology and guidance to surgery. Dr. Hughlings Jackson's reply was characteristic in the extreme and was of much scientific and biographical interest. He said that some of his most important observations were made in the out-patient department. He was careful to say how much the pleasure of the occasion was enhanced to him by the presence of Sir James Paget and the numerous friends by whom he was surrounded. His colleagues, through Dr. Stephen Mackenzie and others, gave very eloquent expression to the sentiments with which Dr. Hughlings Jackson was regarded by them and to the hope that for years yet to come they would be able to have his opinion and his help as consulting physician to the hospital. It is worth recording that Mr. Hutchinson once told Dr. Mackenzie that the greatest work he had ever done was to discover Dr. Hughlings Jackson. The proceedings were made still more interesting by the presentation of prizes to the successful students by Sir James Paget, and to the nurses of the hospital by Mrs. Hale, the wife of the chairman of the hospital. In this part of his duties Sir James Paget gave very explicit expression to his opinion that the existence of a medical school in connexion with a hospital is a great advantage to the work of the hospital—a great security for better clinical work and better care of the patients. No Government inspection could be so good as the daily criticism of observant and intelligent students. Taken altogether, the school of the London Hospital may be congratulated on the opening day of the session in its happy combination of a well-earned tribute to a leader in medicine of whom we are all proud, and in its encouragement to students, who will not soon forget either their prizes or the words of dignified wisdom with which they were presented. The lay authorities of the hospital were represented by the chairman (Mr. John Hampton Hale) and the treasurer (Mr. J. H. Buxton).

PRECEPTS FOR CYCLISTS.

CYCLING seems to be quite as popular in France as it is with us, and yet there are medical authorities amongst our neighbours who condemn the practice because, in their opinion, it is liable to be attended by cardiac or circulatory troubles. It is true that in this country similar allegations have been made; but, so far as we are aware, the charge has never been seriously maintained, and no well-authenticated cases of disease arising from the use of the cycle have been placed on record. On the whole, it may safely be said that self-propulsion on two or three wheels is about as salutary a form of out-door exercise as could well be devised, provided always that the injurious and hideous bent posture affected by "scorchers" be rigorously condemned and avoided. It must not, however, be inferred from this ability on the part of the Anglo-Saxon race to indulge in cycling, with not only impunity but benefit, that the rule is likewise applicable to the members of other nationalities. All English schoolboys are accustomed to out-door sports of a more or less violent character from their earliest youth—cricket, football, tennis, and other athletic games of various kinds are as much part and parcel of the curriculum in our schools nowadays as the Latin grammar, if not more so; and thus it comes to pass that very few adults arrive at maturity with their organs and muscles uninured to intermittent extra calls, in every shape and form, upon their powers of endurance. Our rising generation enters upon life physically prepared for any emergency, and thanks to this early training it is that cycling may be regarded as practically harmless, even though its votaries should postpone their initiation until comparatively late in life. Now, although in Great Britain there may be no medical objections to cycling when judiciously carried out, there are certain attendant circumstances involved in the practice abroad which demand consideration. Generally speaking, it may be said that in the matter of physical exercise the system of education usually adopted on the Continent is totally different from ours. Sports and pastimes are but little encouraged in foreign *lycées*, and such as do exist are for the most part sedentary performances scarcely deserving to be classed as trials of strength and stamina. The youths consequently grow up unfitted to withstand the severe strain of cycling, and the circulatory apparatus is naturally the first portion of their economy to give way under the unwonted exertion. The foregoing remarks were suggested by some "precepts for cyclists" that have been drawn up by M. Rocheblanc for the benefit of his fellow countrymen. It is not likely that, so far as the male sex is concerned, the recommendations will be adopted on this side of the Channel, but their reproduction may be advantageous to the

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ladies who have taken up cycling with such marvellous energy. Girls do not serve the same apprenticeship to rough games that boys do, and therefore the French physician's warnings are more pertinent to their case. 1. No one should become an habitual cyclist without medical authorisation. Before committing himself to an opinion the medical man consulted will do well to examine the beginner on dismounting from the machine as well as beforehand; there are certain cardiac defects which only become recognisable when the subject is under the influence of excitement or fatigue. 2. A cyclist should at first be content with a moderate pace, not exceeding twelve kilometres per hour (about seven miles and a half). A higher rate of speed should only be indulged in after the rider has gone through a regular course of training. If a break in the practice occurs, lasting even a few days, the cyclist should recommence at the slower rate. 3. The temptation to go quickly must be controlled as far as possible. A bicycle travels well-nigh of its own accord, and it is very hard to resist the "delirium of speed." With a light machine on a good road, and helped ever so little by the breeze, an amateur, even when only half trained, can easily achieve his twenty-five kilometres within the hour (fifteen miles and a half). This is too much, seeing that when doing from fourteen to sixteen kilometres the rider's pulse rises to 150.

WEATHER AND HEALTH.

FOR once the lacking arrears of an uncertain summer have been paid in full measure and with almost unbroken regularity. Now there are signs of a change, though whether this will endure in its present phase or will itself give place to another season of late but continuous warmth it is impossible to predict. The past month has not, on the whole, been an unhealthy one as regards the more usual causes of dangerous illness. Diarrhœa alone of the series occupies a pre-eminent position, and it has been by far the most frequent cause of mortality. This circumstance is not in itself remarkable, since we are accustomed to regard the months of early autumn as peculiarly liable to the prevalence of this disorder. The recent season of unusual heat has added a fresh testimony to the truth of this observation. It has also shown that, as in former years, excessive solar temperature only tends to emphasise that testimony. There are obvious reasons which account for this effect. The more rapid evaporation of subsoil water with its contained impurities, the increased rapidity of putrefaction in many articles of diet and in decaying waste matter, whether animal or vegetable, and the like processes in drains and in badly ventilated living rooms have each their share in the work of causation. Accordingly, there is no occasion for surprise that the recent sultry month has been marked by a much more than ordinary prevalence of enteric disorders. A rise in the mortality from diphtheria is accounted for on the same grounds. Summer heat brings with it another danger, and this, too, has been somewhat more than usually active during the past fortnight—namely, the liability to chill. We are all familiar with dilemmas as to the amount of clothing suitable to a climate which is out of season, and therefore daily liable to variation. We have all felt the inconvenience of exertion in such weather as that of last September, and some have doubtless also realised the treacherous after-chill which readily follows the slightest exposure while overheated. There should, therefore, be no difficulty in accounting for an increased mortality from diseases of the respiratory organs during our autumnal summer. With the beginning of another month comes a change of weather, a cooler and in so far a truer season, although attended with damp morning mists. Somewhat sudden in its arrival, it may, if not watched and provided against, surprise some who are still uncertain whether to break definitely with the genial warmth which is still so recent. Such persons, especially if not young, will, if wise, incline to the side of caution. The airy liberty of widely opened doors and windows, the remembered comfort of light clothing, and the quiet and freedom of cool evening rambles are no longer to be reckoned among guaranteed methods of recreation. September established a record of exceptional warmth. October, though not yet to be described perhaps as "chill," rather suggests a belief that it will before long exhibit its usual characteristics.

DEATHS UNDER CHLOROFORM.

WE are indebted to Mr. E. V. R. Fooks, the acting medical superintendent of the St. Saviour's Union Infirmary, East Dulwich, for the particulars of the following case. The patient, a girl aged fourteen years, was admitted into the infirmary on June 5th suffering from tuberculous glands in her neck. The glands had suppurated and formed an abscess, leaving an intractable sinus. On Sept. 11th it was decided to scrape the sinus. Chloroform was given, being dropped upon lint in small quantities. Before administration the patient was examined and pronounced to be free from organic disease. The anæsthetic was commenced at 11.35 A.M., and within a few minutes, when two drachms had been given, struggling took place, and some cyanosis soon appeared about the lips. The chloroform was withdrawn at once. The respirations were, it is stated, still going on, but the pulse weakened and became imperceptible. The pupils reacted to light up to the time that cyanosis appeared; they then became widely dilated. Strychnine was hypodermically injected, inversion (Nélaton's method) was practised, and as soon as natural breathing ceased artificial respiration was commenced and continued for one hour and twenty minutes. "The battery was applied over the vagus and præcordial region." The operation was not commenced. Death took place twenty-five minutes from the time the chloroform was first given. At the necropsy it was found that there was dilatation of the right ventricle by fluid blood and some congestion of the cerebral vessels was noticed. The chloroform was administered by the medical superintendent. Death would appear to have been caused by an overdose being inhaled during the stage of struggling, and was probably caused by respiratory rather than by cardiac failure, although respiratory movements are noticed as having occurred even after the pulse had failed. There was evidently some obstruction to the passage of the venous blood through the lungs, and this would rapidly bring about cardiac failure. Whether electrical stimulation over the vagus and præcordium is likely to help the heart's action in these cases is at present open to doubt. The inhibition of the heart has been held by some authorities to be protective by lessening the flow of chloroform-laden blood to the nerve centres. This, however, must be an undesirable thing in one cyanosed by chloroform. Certainly stimulation of the vagus would be likely to produce this cardiac inhibition. Stimulation of the phrenics is of less questionable value whenever it is possible to limit the spread of the current and protect the vagus from this overflow current. Other deaths under chloroform have recently occurred. In one the patient was a female infant aged fourteen months who was taken to the London Hospital. The child was found on admission to be in a very grave condition. There was an enormous swelling under the jaw on the right side of the neck, which affected the breathing. Fluctuation was felt, and the tumour was diagnosed as a case of tuberculous glands which had suppurated. The infant took a "few whiffs" of chloroform, and the abscess was punctured. On the completion of the little operation the

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child was placed in bed and died very soon afterwards. The surgeon in charge informs us that the death was not due to shock from the operation, although possibly in the weak state in which the infant was the shock may have accelerated the fatal result. Probably the same may be said of the chloroform. The case is clearly one of death *under* chloroform rather than *from* chloroform. A very similar case is reported from University College Hospital. A girl aged seventeen months was admitted on Sept. 18th suffering from a large abscess in the right lumbar region. Although fairly developed she was pale, and had bronchitis and a temperature of 100·4° F. On Sept. 20th the abscess—perinephritic in nature—was opened. Chloroform was given by a house physician from lint, some three drachms being used in about ten minutes. As soon as the child was fairly under the abscess was incised and much pus evacuated. Simultaneously the respiration stopped, but the pulse was perceptible for some minutes afterwards. There was some difficulty at first in getting air to enter the chest, so a tube was passed down the trachea. The usual measures for resuscitation were adopted. The necropsy showed all the organs to be pale; no venous engorgement was seen. This again seems to be a death due to operative measures reacting on a weakly patient. A verdict of "Death by Misadventure" was returned by a coroner's jury at Newport, Monmouthshire, last week, at an inquest held on a patient who had died in the Newport Infirmary. The deceased had recently received an injury to his finger, which necessitated the amputation of a portion of it. A few days later it was requisite to perform another operation higher up. Chloroform was administered in the presence of four members of the profession, but shortly after the anæsthetic was commenced the respiration ceased and the patient died before the operation was attempted.

ALCOHOL IN IRISH WORKHOUSES.

WE are indebted to the Irish Association for the Prevention of Intemperance for a return of the amounts of alcoholic beverages consumed in the various workhouses in Ireland during 1891 and 1893. The return shows a total decrease in the expenditure on spirits, wine, and malt liquors during the latter period of 3*d*. per head of the inmates. When we come to an analysis, however, the progress of retrenchment is not so clearly seen. Out of 159 unions three are consistently abstinent and spend nothing on alcohol, seventy-three have a diminished liquor bill, while in eighty-three the consumption has increased. The sums expended in different cases vary in the most eccentric manner from 1*d*., 3*d*., or 6*d*. to 15*s*. 7*d*. per head. It is remarkable, also, that the highest figures have been reached by the smaller establishments, the palm for expensiveness being borne by Carrickmacross with 124 inmates, while Belfast with 3106 pays but 3*s*. 10*d*. per head for alcohol. Cork, North and South Dublin, and Limerick, which also provide for many poor, tell the same frugal story. On the other hand, some of the smallest unions are the most economical: Stranorlar, which has 66 occupants, is totally abstinent; and Westport has 168, and spends 1*d*. on each. A somewhat larger institution, that of Newry, houses 213 persons, and allows nothing for alcoholic liquors. Thus, if opinions respecting the necessity of supplying stimulants to Irish workhouses do not quite correspond in number to their official guardians, they do traverse a long and costly scale between the emphatic *nay* and the equally positive *yea*. In discussing this question we are by no means disposed to accept without reserve the authority of mere statistics. Some latitude must in reason be allowed for explanation, and it may be that necessities of illness have had something to do with the origin of otherwise remarkable differences of expenditure quoted in the report under consideration. Alcohol as a drug has its legitimate place in medical treatment, and this fact is not affected by the social standing of those who require it. To admit this, however, implies no sanction of its routine or general use. Weakness, illness, or old age may each constitute an occasion for its employment, but only under the prudent supervision of medical authority. It would be interesting to learn whether this authority has been invariably consulted in providing stimulants for the use of inmates in Irish workhouses, and, if so, whether its influence has been exerted in each instance with due vigilance and exactitude. If the requirements of weak and sick persons are sufficient to explain the increased outlay on alcohol where this has been incurred, we have nothing further to say; but we fail to see that the ratepayer need go beyond this point in the exercise of his parochial duty. The report before us will have done good service if it leads to such an inquiry as will furnish an explanation of the costly discrepancies in expenditure to which it directs attention. Such an investigation would certainly seem to be called for in the public interest.

UNUSUAL PROCEDURE AT AN INQUEST.

AT an inquest on Sept. 24th, 1895, held by Dr. Eugene Yarrow, deputy-coroner for North-East London, the jury, seventeen in number, could not agree, twelve being in favour of a verdict of accidental death, and five, including the foreman, being of opinion that there was negligence. The coroner decided to take the finding of the twelve. The question has been raised whether the verdict was not illegally received, inasmuch as the foreman's signature was not attached. From the fact that the foreman has the oath administered to him primarily and separately, it seems reasonable to infer that the Legislature intended the verdict of his fellow jurors to be delivered through him. At the same time the jury need not consist of more than twelve, and consequently it is arguable that if that number return the same finding the section of the statute is satisfied. Considering the uncertainty attaching to the intentions of the Act, it would be well if a case were stated for the opinion of a superior court. Should the proceedings be declared null and void a fresh jury would have to be empanelled, and as the inquest has to be taken *super visum corporis*, exhumation would be necessary, a circumstance at once objectionable and vexatious.

THE DISPENSING OF PHYSICIANS' PRESCRIPTIONS.

ACCURACY in dispensing is obviously one of the most important factors connected with the treatment of disease; but although this is so it must, we fear, be admitted that the quantitative analysis of medicines made up from physicians' prescriptions is not as yet carried out on a scale in any degree proportionate to the importance of the subject. It is for this reason more particularly that we welcome a report of Dr. Bernard Dyer, the county analyst of Leicestershire, which he has recently made to that county council upon the quantitative analysis of thirty-nine samples of medicine obtained by submitting to druggists in the county prescriptions for a tonic containing iron and quinine. Dr. Dyer reports with pleasure that of the thirty-nine samples analysed thirty-six were both accurately dispensed and properly labeled. In regard to the remaining three samples, it appeared that in one the mixture, although dispensed in accordance with the prescription, was inaccurately labeled and the patient was directed to take two teaspoonfuls for a dose instead of two tablespoonfuls, as ordered; in the second case the mixture was slightly too strong; and in the third the amount of quinine was two and a half times in excess of that prescribed. In none of these cases does there seem to have been any attempt to defraud the public in the sense of depriving the patient of the full

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benefit anticipated by the prescription; but unfortunately, in the matter of some drugs, though not in the case of those specifically referred to here, sins of commission might have been far more disastrous than sins of omission, and an increase of strength to the extent of two and a half times that ordered might lead to a fatal result. In the making up of prescriptions absolute accuracy alone is allowable. We trust that Dr. Dyer will continue his investigations in this direction, and we would suggest the desirability of paying attention to pills, powders, capsules, &c., which would seem from careless mixing to be peculiarly liable to quantitative variations. In cases where undue parsimony in the execution of prescriptions is suspected it is to the more expensive drugs that attention should be directed, whereas in the matter of carelessness the nature of the drug is obviously immaterial.

THE FIFTH YEAR'S CURRICULUM.

WE are glad to learn that some of the special hospitals are altering their arrangements in order to meet the needs of the fifth year's curriculum. At the Brompton Hospital the facilities for the study of diseases of the chest are to be increased by the formation of two new appointments. Clinical clerks are to be allotted to each in-patient physician and clinical assistants to the out-patient physicians. In addition, all students who enter (at a small fee) for the practice of the hospital will be enabled to make use of the vast amount of material (whether clinical, pathological, or bacteriological) that such a hospital affords. A course of lectures on the principal diseases of the thoracic organs is to be delivered each session, open to students of the hospital and to all qualified medical practitioners on presentation of their cards. The opening lecture will be given by Dr. Douglas Powell on Wednesday, Oct. 9th, at 4 P.M., on Angina Pectoris. Full information can be obtained either from the secretary of the hospital or from the deans of the medical schools of the metropolitan hospitals.

THE INCREASING PREVALENCE OF RABIES.

FOR some time rabies has been on the increase in the United Kingdom, and more especially in Ireland and England. In the northern and midland counties, particularly Cheshire and Lancashire, it is never absent, and reports of deaths from hydrophobia due to the bites of rabid dogs are frequent in these regions. But, as on many previous occasions, the malady has been extending southwards in England; and, as has been predicted over and over again for the last quarter of a century, the prevalence of the scourge in the midlands always leads to an extension in other directions, chiefly towards the south. In the London district an increase in the number of cases of rabies has been noted for some time, and precautionary measures must soon be adopted if a serious outbreak of the disease is to be averted. In Surrey the county council has issued a dog-muzzling order, and if this is energetically carried into operation it is possible that the lives of people and animals may thereby be saved. At any rate, a cause of dread to the inhabitants of the county may be obviated by this procedure. But, as usual when muzzling of dogs has to be resorted to for the prevention and suppression of rabies, there is an outcry against the measure, generally from those who know nothing of the nature of the disease or of the measures required to deal with it. In a Surrey newspaper, for instance, there is a letter declaiming against the employment of this measure, and showing a great amount of ignorance of everything pertaining to the subject—ignorance which is unpardonable, considering the amount of information everywhere accessible, when it is remembered that the writer is opposing a measure which is intended to protect human beings and animals from a most agonising death, and that he ignores the experience gained through many years' use of the muzzle, not only in this country, but in France, Germany, Austria, Belgium, Denmark, and elsewhere. The writer does not believe in the existence of rabies, and confesses himself more ready to give credence to the appearance of ghosts than of mad dogs; though on this point his credulity leads him into a contradiction, as he confesses that dogs may become rabid by the use of the muzzle, but says that if they are treated as they should be they will not do so. The writer would seem to be one of those individuals who, destitute of knowledge of contagious diseases, are moved through pseudo-sentimentality to oppose any steps for the alleviation or eradication of one of the most terrible diseases that can afflict man or beast, and who are not ashamed to air their ignorance in the public press or on the anti-hygienic platform. Surely at the present day educated men ought to know that rabies cannot be produced by muzzling or anything else, save by the bite of a rabid animal or by the introduction of its virus into the blood of a healthy one. It is a specific disease, and can only be imparted by a diseased creature which has received the infection from one already infected. The nonsensical objections to the muzzle come from people who are unaware of the evidence upon which its utility is based, and of the opinions of men who have made a special study of the disorder. The muzzle, if properly constructed and fitted, is no more annoying to dogs than is the bit in the mouth of the horse. The compulsory wearing of muzzles is a measure calculated to benefit the canine species as much as other animals, or man himself, and facts testify that whenever and wherever this measure has been adopted the disease has soon disappeared. It is the unmuzzled wandering dog that disseminates the disease. The only objection to muzzling should be that it is not made universal during the prevalence of rabies.

SHOULD THE HEART BE EXAMINED BEFORE CHLOROFORM IS GIVEN TO A PATIENT?

THIS important question was debated at some length between the coroner and some medical men at a recent inquest. A patient aged forty years was admitted into the infirmary to undergo an operation for cancer of the penis. Upon admission he was examined by the assistant house surgeon, who pronounced his heart and lungs to be normal. The man was very nervous about the anæsthetic and expressed himself as being so. He placed himself on the operating table, and chloroform was given "in the usual way," by which we presume the Scotch or open method is meant. The patient took it well at first, but shortly a surgeon who was standing by felt the pulse and remarked that it was extremely feeble. We may presume that the respirations were up to this point not affected; they are said to have become short after this. The patient was at this time beginning to go under, but was not fully anæsthetised. Restoratives were tried, but no rally occurred. In answer to the coroner and a juryman, the chloroformist admitted that he had not examined the heart and deemed so doing quite unnecessary. "The worse the heart the greater the need of chloroform." The man was said to die from shock, but it was added, "I do not suppose he would have died from shock had chloroform not been administered"; and further we are told that "every day they were giving chloroform to people with all sorts of heart disease. That it was wrong to do so was an exploded idea with the profession, although it remained to some extent with the general public." These statements are too sweeping to be passed by without comment. That each medical man has a right to his opinion all will readily admit; but no one is justified in saddling the profession at large with his views or even those of his school. Upon the question of examining a

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patient before taking an anæsthetic, it is clearly the duty of the person with whom the responsibility of the case rests to satisfy himself as to his patient's general fitness, and to select with the utmost care the anæsthetic which will be best for the particular case. It is also advisable that this should be done any day before the operation rather than immediately before the administration, provided always that the patient has been sufficiently under observation for the chloroformist to be sure that no acute intercurrent illness has appeared in the interval between the examination and the administration. This wise course seems to have been adopted in the present case. When, however, we weigh the other points in the evidence we do not find ourselves in accord with those who gave it. That "a weak heart needs an anæsthetic" we allow, but we can neither admit nor believe for one moment that the profession considers that "the worse the heart the greater the need of chloroform." Undoubtedly the clinical experience of the past thirty years or more has shown that deaths from heart failure or "shock" of the kind described in the report before us are most rare under ether, if they ever occur, where it is properly given; while under chloroform they are unfortunately by no means uncommon. We do not for one moment suppose that the greatest care and acumen were not shown in the case under discussion, nor do we doubt that there were good reasons for selecting chloroform for the operation; but we cannot but take exception to the statements reported to have been made, not on the authority of one surgeon, however eminent, but as *ex cathedrâ* and representing the opinions of the medical profession at large.

COUNTY COUNCILS AND LOCAL SANITARY AUTHORITIES.

AN inquiry of considerable interest from the point of view of sanitary administration was held recently by Dr. Sweeting at Auckland Workhouse on the part of the Local Government Board. The Durham county council had apparently complained to the Board that the rural district council of Auckland was not, in certain specified parishes, doing its duty in the matter of scavenging, and the question arose as to whether the district council should not be compelled to carry out its obligations in this respect. There was a large attendance of interested persons at the inquiry, and Dr. Eustace Hill, the county medical officer of health, took a prominent part in the proceedings, producing much evidence in support of the county council's contention. The accusation was, however, denied by the district council, whose representative argued that the action of the council had been "hasty and uncalled for," and that the service of many notices was in itself evidence of activity. Dr. Hill, however, rightly observed that activity by no means implied efficiency, and that the enforcement of the notices was the essential point. As, too, the county council had waited for three years before lodging the complaint it could hardly be accused of precipitate action. The evidence of the district council's medical officers of health seems to have been on the whole decidedly favourable to the county council's position, but numerous parish councils in the district opposed the application that the duty of scavenging should be imposed upon the district council. There seems, however, to have been an almost universal consensus of opinion that the condition as regards West Auckland was very bad. The district councillors contended that the council had but recently been formed, and that time had not yet been afforded them of putting their house in order; it was obvious, too, it was urged, that those who lived in the villages complained of were better judges of the necessity of reform or alteration than periodical visitors, &c. With these arguments we are not altogether unfamiliar. The prospective formation of district councils was the excuse for delay and neglect on the part of the old local bodies, and the recent election of the district councils will be made to serve a somewhat similar purpose for months to come. When, however, it is remembered that in many instances the personal constitution of the two bodies differs but slightly, the argument loses some of its force. Doubtless this matter will be well sifted by the Medical Department of the Local Government Board, and the evidence which has been adduced will, we imagine, render the scavenging, at least in the worst villages, compulsory on the district council.

LONDON POST-GRADUATE COURSE.

THE first lecture of the winter term will be given on Monday next, Oct. 7th. The following hospitals and institutions have arranged a scheme of work:—The Hospital for Sick Children, Great Ormond-street (Children's Diseases); the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury (Nervous Diseases); the Royal London Ophthalmic Hospital, Blomfield-street, Moorfields (Diseases of the Eye); Bethlem Royal Hospital for Lunatics (Diseases of the Mind); London Throat Hospital (Diseases of the Nose, Ear, and Throat); Bacteriological Laboratory, King's College (Bacteriology); and the Central London Sick Asylum, Cleveland-street (General Medicine and Surgery). Practitioners can suit their own convenience as to the number of courses they take. The diary is so arranged that none of the hours for lectures clash one with the other, and time is allowed for hospital practice. All information can be obtained from Dr. Fletcher Little, the Secretary, 32, Harley-street, W.

THE EAST LONDON WATER INQUIRY.

THE proceedings of the Local Government Board inquiry into the alleged inadequacy of the water-supply of the East London Company during the recent summer months were commenced at the Hackney town-hall on Tuesday last, the Local Government Board being represented by the departmental inspectors Colonel W. M. Ducat, R.E., and Dr. F. W. Barry. Public interest in the subject appears to have flagged somewhat since the time when meetings were held at which resolutions were passed calling upon the Local Government Board to investigate the matter, for the proceedings closed at an early hour owing to the non-attendance of witnesses. The evidence, however, so far taken, has been chiefly given by medical officers of health whose duties are in the districts involved and by residents in Hackney. Mr. Balfour Browne opened the case for the local authorities by defining the scope and character of the inquiry, and by explaining that it was taken under the Water Acts and the Public Health (London) Act at the instance of delegates from the vestries affected. There was no doubt, he said, of the scarcity of the supply, and he would call witnesses to prove its extent. They would then await with interest the company's explanation. Already, however, the company had attributed their neglect to provide additional storage reservoirs to the opposition of the county council, who rejoined that their opposition was directed against other provisions, and that if new storage reservoirs were required the company might have provided them without any Bill by sacrificing some of its large profits. Several medical witnesses then proceeded to describe the great privation they had suffered and the prejudicial effects upon health owing to an insufficiency of supply for sanitary purposes. Another witness, a midwife, said she had attended a confinement on Aug. 10th when there was practically no water at all to be had. She had not enough on

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one occasion to wash her hands with. Laundresses testified to the supply having become so short that their business had come to a standstill. Others stated that while there was a scarcity of water in the residences of the neighbourhood of Hackney, there was plenty of water supplied all the time at a certain cow-yard. The inquiry was adjourned soon after three o'clock, the cross-examination of the medical and sanitary witnesses being reserved until Wednesday, when they were examined chiefly on the question of the abolition of cisterns and as to whether the scarcity of the supply had any substantial effect upon the health returns.

THE MEDICAL OFFICER TO THE ARCHBISHOP'S ASSYRIAN MISSION.

WE referred some little time ago in our columns to the need which existed for a medical officer for this mission, and are glad to be able to say that Mr. H. H. Tidswell, formerly house surgeon at St. George's Hospital, left England on Thursday, the 3rd, for Urmi, in Persia, to take up the necessary duties. An attempt will be made to establish a small hospital, which is estimated to cost about £400. Any person desirous to subscribe may communicate with the Rev. R. M. Blakiston, 7, Dean's-yard, Westminster.

ELECTION OF THE MELBOURNE HOSPITAL STAFF.

THE *Age* devotes nearly a column to an account of the election of the honorary staff of the Melbourne Hospital, as if it were a municipal or parliamentary one. The election recurs every four years. We do not admire the system, and doubt very much whether it is calculated to secure the best men. Be this as it may, the exhibition of all the arts of electioneering over the choice of scientific officers is unseemly. But it is provoked by this method, where thirty-one medical men seem to have competed for eighteen appointments, and those who had been in office were threatened with displacement. Fortunately, the good sense of the constituency prevailed over the vices of the method, and the old staff, with one exception, were re-elected. A reasonable term of service should be granted to officers when once elected.

THE MALARIA PARASITE.

WE adverted not long ago to a telegraphic announcement which appeared in the *Times* to the effect that Surgeon-Lieutenant-Colonel Lawrie, as the result of his investigations, had arrived at the conclusion that there is no parasite in the blood in malaria—a conclusion, it need scarcely be added, at variance with the researches of Laveran, Marchiafava, and quite a number of independent observers in this country, America, and elsewhere. We learn that Surgeon-Lieutenant-Colonel Lawrie was assisted in his work by Surgeon-Captain P. Hehir of the Indian Medical Service, by Mr. Martyn Jordan, and by Dr. Conolly from Melbourne, who was temporarily present at Hyderabad. The investigations were begun on June 8th and were continued daily until Aug. 15th last, being, it is stated, conducted both with fresh blood and with stained preparations, on the methods and according to the formulæ usually followed. As many as 116 cases were investigated. We have not yet seen any copy of the report on the subject, and our information, which is therefore necessarily incomplete, is drawn from an article which was recently published in the *Times of India*. The results of the inquiry are that the investigators allege they have established that the microscope is misleading and useless in the diagnosis of malaria, and that there is no parasite in the blood in that disease. "There is nothing in pure blood but hæmocytes and leucocytes—red corpuscles and white cells." The so-called parasite of malaria is nothing more than the blue-stained nucleus of the leucocyte—the white cell. It is stated, further, that the appearances which Laveran and others have pronounced to be malarial parasites are to be found in the blood in health and disease. The full report on the subject will be awaited with curiosity and will no doubt receive a very critical consideration when it appears.

THE LATE SIR THOMAS LONGMORE, C.B.

NOT only members of the military medical services of this country but also medical officers of other countries will hear with extreme regret of the death of Surgeon-General Sir Thomas Longmore, for so many years the well-known Professor of Military Surgery at the Army Medical School, Netley. We can only refer very briefly now to the lamentable occurrence, reserving for another opportunity the publication of a memoir of Sir Thomas Longmore's life and work. The deceased officer had not only a record of distinguished service in the field, having served throughout the Crimean campaign and in Bengal during the Indian Mutiny, but he was conspicuous for his scientific labours in military surgery and in other directions appertaining to military service and war. His work on "Gunshot Injuries" has been long regarded as the standard one on the subject, and it was only the other day, as it were, that a new edition—rendered necessary by the vast and revolutionary changes which have taken place in the art of war—was published. His "Treatise on the Transport of Sick and Wounded Troops" and his "Optical Manual" are recognised handbooks. He was highly esteemed for his personal qualities and character as well as for his scientific attainments, and his sudden death at Swanage on the 1st inst. will be regarded as a distinct loss by the Army Medical Service and by his many friends.

MEDICINE AND MISSIONARIES.

IT was only fitting that the London Missionary Society, which celebrated its centenary in London last week, should devote an afternoon to a discussion on medical work and its place in the missionary scheme. But while the value of their work is acknowledged by all who are in a position to know, it is to be deeply regretted that medical missionaries are not supplied with the necessary means to enable them to carry on their work in a proper manner. Too often they are sent out with a totally inadequate supply of drugs and instruments, and, more regrettable still, the want of proper hospital accommodation often makes their work abortive. This is especially the case where surgical operations are necessary. Something has been done by medical men themselves to remedy this state of things, and the Medical Missionary Society in connexion with St. Bartholomew's Hospital, which was started with the object of keeping those students who leave the institution for the mission field in touch with their hospital, collects funds and gives grants to enable the missionary to equip himself in a more thorough manner than the funds from the various missionary societies will allow. We recently heard of a case where a medical missionary not only practised his profession and attended to the spiritual needs of his patients, but was actually obliged to collect funds from the natives to enable him to carry on his work.

TRUSTWORTHY OINTMENT BASES FOR ANTISEPTIC USE.

AN important contribution relating to the actual disinfectant or antiseptic value of ointments has recently been published by Dr. Breslauer. Several well-known ointment bases containing various antiseptics were employed in experiments and their efficacy adjudged by their effects upon the bacillus prodigiosus and the staphylococcus pyogenes aureus. It was found that the latter organism survived

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immersion in ordinary carbolised oil (5 per cent. carbolic acid) for three days, in carbolised vaselin only one day, in fat four hours, in lanolin thirty minutes, and in unguentum leniens twenty minutes. Similar results were obtained in experiments with other organisms as well as with other antiseptic agents. Unguentum benzoatum and unguentum precipitatum proved to be powerfully antiseptic, while unguentum zinci exerted no germicidal action whatever. It would thus appear that the only trustworthy ointment bases for antiseptic purposes are those which contain or which will absorb water, as does lanolin or cold cream. It is desirable, of course, also, that the oil or fat employed should be free from any tendency to become rancid, since it is known that zinc ointment in cases where the fatty vehicle has become rancid has proved a dangerous application to open sores, possibly because of the presence of staphylococcus pyogenes aureus. The interesting results which Dr. Breslauer has obtained suggest that the oleaginous particles of certain bases serve as an effective barrier between the active antiseptic agent and the organism. This explanation is the more probable since the best germicidal effects were obtained when fats or oils containing moisture were employed; besides which, experiments have been set on foot which have shown, in the case of carbolised oil, for example, that the oil remained intact and had not volatilised or undergone any change.

SUCCESSFUL REMOVAL OF A CEREBRAL TUMOUR.

THERE is, we believe, an impression abroad that cerebral surgery has undergone an eclipse, and, while it is true that our hopes and expectations with reference to it are less sanguine than they were a few years ago, yet much is still being done, and in not a few instances the operations are crowned with a success which is in the highest degree gratifying. In the last number of the *Neurologisches Centralblatt* an abstract of a case published by Dr. Gajkiewicz is given, and it is especially interesting and important, because apparently the tumour removed was a syphilitic one. The patient had no obvious signs of syphilis, but complained of constant severe pain in the right temporal region, increased by pressure or tapping. Ten years before he had received an injury to the right frontal region, and two months before an injury to the right temporal region, which had apparently been the starting-point of the present pain. He had typical attacks of left-sided Jacksonian epilepsy, with subsequent weakness of that side of the body. The fits always commenced in the upper extremity, and were frequently ushered in and accompanied by a feeling of pain, heat, and burning. The optic discs were a little obscured and the veins very large. There were enlarged glands in the neck, and a few months before there had been a swelling on the skull which had spontaneously disappeared. Energetic antisyphilitic treatment produced only temporary improvement, which was followed by an increase in the intensity of the symptoms. The attacks became more frequent and more severe, and were often accompanied by loss of consciousness. Trephining was performed over the right hemisphere at a point corresponding to the centre for the upper limb and face. A tumour was removed, which microscopic examination showed to be gummatous. After this, as many of the slighter symptoms still persisted, antisyphilitic treatment was again pushed and the patient completely recovered from all his symptoms.

THE "SOUGHS" OF DERBYSHIRE.

NOW that the cry for more and better water is being raised in all the larger towns Dr. Barwise's report on the "soughs" or old drains of the disused lead mines in the Peak district, though of specially local interest, is suggestive of the probable existence of untried sources of like extent in other parts of the mountain limestone. At present these soughs have not been impounded and appropriated for the supply of towns while still uncontaminated by sewage and factory wastes, but are allowed to run off into the Derwent and other rivers, though they might be utilised with the minimum of expense, yielding enormous volumes of water at altitudes rendering pumping unnecessary. The "Magpie Level," which empties into the Wye near Bakewell, yields 9,000,000 gallons daily, and the "Hill Car Sough" pours 6,000,000 gallons into the Derwent near Rowsley. The "Merebrook Sough" discharges 13,000,000 gallons a day into this river near Ambergate, and the "Wakebridge Sough" close by 4,000,000 gallons, though this last is almost a thermal spring, having a temperature of 62° F. These four alone would afford an ample supply for a population of over a million persons, and would be a special boon to the rural district authorities, to whom costly waterworks are an impossibility. Though derived from worked-out lead mines, the waters are entirely free from that metal, probably because the lead which remains is in an insoluble form, at any rate in waters of such hardness; whereas the peaty waters of the Yorkshire moors are notorious for their solvent action on lead pipes. In these soughs there are wells already sunk, but, as geologists know well, the mountain limestone everywhere contains vast subterranean reservoirs of splendid water, which have only to be found and tapped to yield rich supplies distributable by gravitation. It was one of these which flooded the Severn Tunnel when in course of construction, and which has ever since been allowed to run to waste into the tidal river. Mountain and moorland districts, while providing excellent collecting areas, are for the most part so remote from the great centres of population that the low price at which the land or water rights can be secured is counterbalanced by the cost of conveyance through conduits of perhaps a hundred miles in length; and to neglect natural sources of water of undoubted purity, while vainly attempting to purify that taken from sewage-polluted rivers, is culpable and utterly unreasonable.

THE town council at their last meeting elected to the post of medical officer of health and public analyst for the borough of Leicester, in place of Mr. Joseph Priestley, B.A., M.D., D.P.H. (now medical officer of health of Lambeth), Mr. H. G. H. Monk, M.R.C.S., L.S.A., D.P.H., Mr. Monk is at present medical officer of health and public analyst of Scarborough, a position he has held for the last three years, and he was formerly assistant to Dr. Thursfield, medical officer of health of Shropshire county.

THE Abernethian Society of St. Bartholomew's Hospital will open its 101st session on Thursday, Oct. 10th, when Dr. Church will deliver the introductory address at 8 P.M in the Anatomical Theatre. The subject will be the Rise of Physiology in England and its Effect on the Practice of Medicine.

THE annual dinner of past and present students of Charing-cross Hospital will be held in King's Hall, Holborn Restaurant (Newton-street entrance), on Wednesday, Oct. 23rd, at 6.30 for 7 P.M., when Mr. C. Jerome Woollett, M.B. Lond., F.R.C.S. Eng., will take the chair.

THE President will not deliver the Presidential Address at the first meeting of the Pathological Society on Oct. 15th. He proposes to deliver his address next year, when the society will celebrate its fiftieth anniversary.

AT a recent meeting of the trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

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OPENING OF THE MEDICAL SCHOOLS.

MOST of the London medical schools, whether the formal introductory address to students has fallen into desuetude or no, have inaugurated their winter session with a dinner, attended by the past and present students, or by some other social gathering. We give a brief account of the proceedings.

ST. GEORGE'S HOSPITAL.

The annual dinner of the St. George's Hospital Medical School took place at the Whitehall Rooms, Hôtel Métropole, on Oct. 1st. Mr. George Pollock (the orator of the day), Mr. Holmes (the treasurer of the hospital), Dr. Howship Dickinson, a large number of the medical staff, and several influential governors were present, together with a large and representative gathering of past and present students. Dr. Blandford was in the chair, and conducted the proceedings with great tact and eloquence. The usual patriotic toasts and those of "The Governors," "The Medical School," "Past and Present Students," &c., were received with enthusiasm. Dr. Dickinson spoke of the immense amount of work done by the school for the hospital, and suggested that at least the governors should give it house-room in return. Mr. Holmes said that the relations of the governors and the school were of the utmost cordiality, and referred the previous speaker to the quarterly court. He then spoke of his delight in being able to serve the hospital as treasurer now that he was no longer on the active staff. Mr. Warrington Haward dwelt on the admirable and unostentatious work done by the resident hospital staff, and pointed out that often enough the conducting of a serious case to a successful issue was really due more to the assiduous care of the house surgeon and nurses, than to the efforts of the surgeon in charge whose name figured above the bed. Dr. Isambard Owen, the dean of the school, spoke of the flourishing state of that institution. The examination results were highly satisfactory, and the athletic record deserved great praise. The present entry was very large, and might even break the record. It was stated that the Directory of St. George's Hospital men was ready, and would shortly be published. In looking up the lists of past house surgeons for publication the first name found was that of John Hunter. A most enjoyable and enthusiastic evening was brought to a close by a musical sketch, admirably given by Mr. Mercer Adam, a sometime student.

LONDON HOSPITAL.

The Old Students' Annual Dinner was held on Oct. 1st at the Criterion Restaurant instead of, as in former years, in the library of the London Hospital Medical College. About 130 attended the dinner. In the unavoidable absence of Mr. Couper, who was to have presided, the chair was taken by Dr. Stephen Mackenzie. In proposing the toast of the evening, he mentioned the fact that the present session was the 111th anniversary of the opening of the London Hospital Medical School. He briefly traced the progress of the medical school as evidenced by the successive occasions on which it had been found necessary to enlarge the college buildings, especially in 1854, 1871, 1879, and 1885. Quite recently the physiological laboratory had been doubled in size. He referred at some length to the question of medical education in London, and advocated the endowment of medical teaching. Mr. Treves followed with an amusing speech, in which he ridiculed the notion that the opening of the winter session could be properly marked by so frivolous a process as eating, and humorously suggested that the occasion would be more fittingly celebrated by a procession of the staff, students, and nurses, in fancy dress, along the Mile End-road. Old London Hospital men who were unable to be present at the dinner will be glad to know that the entry for the summer session was greater than on any previous occasion and that for the present session very much greater than at the corresponding period last year.

ST. BARTHOLOMEW'S HOSPITAL.

The annual old students' dinner was held on Oct. 1st in the great hall of the hospital, the number of guests being about 125. The chair was taken by Mr. Howard Marsh. After the usual loyal toasts the chairman proposed "The Health of the Hospital and School" in an amusing speech, in which he compared the hospital routine of the present day with that of the Middle Ages. Dr. Hensley also, in responding to the toast of his health, afforded the company an intellectual treat. Among the guests present were Sir James Paget, Sir George Humphry, Professor Burdon Sanderson, Professor Clifford Allbutt, the Dean of Christchurch, the Master of Downing, Dr. Rutherford, headmaster of Westminster School, and Sir Trevor Lawrence. Several of these also spoke.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

The introductory lecture was given at 4 P.M. by Dr. Monckton Copeman, which was followed by a report from the dean, Mr. Spencer. Owing to the enforced absence of Viscount Peel, the prizes were distributed by Dr. Potter, who concluded with a few happy remarks to the students. The annual dinner of the medical school took place at the Café Monico on Tuesday, Oct. 1st. The chair was taken by Dr. de Havilland Hall, physician to the hospital. As usual, most of the members of the staff were present, and the House Committee was represented by Mr. G. G. Tremlett, who with Mr. W. G. Spencer, the dean of the medical school, responded to the toast of "The Medical School and Hospital," which was proposed by the chairman. The other toasts were "Royalty," "The Old Students," and "The Chairman." The proceedings were enlivened by the strains of a string band, and the result was a most satisfactory evening's entertainment.

UNIVERSITY COLLEGE HOSPITAL.

The annual dinner of the past and present students of this hospital was held at the Hôtel Métropole on Tuesday, Oct. 1st, Sir Richard Quain, F.R.S., being in the chair. The gathering was a very successful one. The President of the General Medical Council was supported by the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England, and it is a remarkable coincidence that all three Presidents were either connected with University College Hospital in the past or are at the present time. The chairman, in giving the toast of the evening, remarked that he had entered as a student when the hospital had only been three years in existence, and gave some interesting reminiscences of a number of distinguished men who had been connected with it. He said that University College had exercised an important influence on medical education generally, for not only had its methods of teaching been largely imitated, but at the present time no less than thirty-six former alumni of University College were teachers in other metropolitan medical schools.

MIDDLESEX HOSPITAL.

The annual festival was held on Oct. 1st at the Café Royal and was a great success. There was a very large attendance of old and present students and Dr. Cecil Y. Biss was in the chair. After the customary toasts of "The Queen and Royal Family" and "The Services" Dr. Biss proposed the toast "The Middlesex Hospital and Medical School." He alluded to the necessity of a close connexion between these two elements and felt sure that under the present circumstances the sympathies of the two were becoming closely bound up in each other. He alluded to the energies of the chairmen of the hospital, mentioning the names of Mr. Ross, Lord Sandhurst, and the present chairman, Sir Ralph Thompson. Some allusion was also made to the great loss which the hospital has sustained in the death of Mr. Hulke, and also to another gap which will soon occur by the contemplated retirement of Mr. Lawson. Dr. Biss, however, expressed his full belief in the future prosperity of Middlesex Hospital, and mentioned some of the great improvements which have lately taken place, among which may be mentioned the new operating theatre, the new convalescent home, and the erection of new cancer wards. Sir Ralph Thompson, in reply, fully endorsed Dr. Biss's remarks, and expressed his great desire to see a close bond of sympathy between the lay and medical workers of the hospital. He also referred to the efficient working of the hospital, for which much credit was due to Mr. Farden, Mr. Melhado, and Miss Thorold. Mr. Pearce Gould also replied to the chairman's toast, and referred to the many improvements in medical teaching which have taken place in the last few years, and regretted that the scheme for a new University for London had not made more definite progress. "The Past and Present Students" was ably proposed by Mr. Lowne. Dr. Newman, in reply for the past students, expressed his great satisfaction at seeing so many old students there, and expressed the confidence he

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felt in recommending fresh students to go under the care of the present staff. Mr. Braine Hartnell, for the present students, gave a good account of the state of the school both in games and work. In thanking the staff for all their help and kindness, he ventured to suggest the hope that they would see their way to abolish the fee which is now paid on holding resident appointments, which he thought fell as a burden on many students. In alluding to the games he gave a brief account of the past doings, and expressed a belief and hope that the athletic side of the school was constantly improving. Dr. Duncan proposed "The Visitors," coupled with the name of Mr. Ganz, who has been such a regular visitor to the Middlesex Hospital dinners for so many years. Mr. Ganz expressed his thanks for himself and the other visitors, and said what a great pleasure these meetings gave him, and that he always was very pleased to come. Dr. Douglas Powell proposed the health of the chairman, and alluded to the long connexion and valuable services which Dr. Biss has rendered to the Middlesex Hospital. This toast, the last of the evening, was enthusiastically responded to and a very pleasant evening was terminated. Much of the success of the evening was due to the charming music rendered at intervals by Mr. Bernard Law, Signor Giuseppe Maggi, Mr. Irving, Mr. Myler, and Mr. Wilhelm Ganz.

KING'S COLLEGE HOSPITAL.

The annual dinner of the old students of King's College Hospital was held at Limmer's Hotel on Tuesday, Oct. 1st, and formed a pleasant inaugural meeting for the commencement of the session. Dr. Robert Shingleton Smith of Bristol occupied the chair, and he was supported by a very large and representative gathering of old students of all ages. In proposing the toast of the evening, "Success to King's College Hospital and its Medical School," Dr. Shingleton Smith said that it was most satisfactory to look around and consider the great distances men did not mind travelling to attend these dinners. There were representatives from Yorkshire, from Exeter, from Bristol, from Birmingham, and from Tredegar; they came not only to meet old friends, but to hear their accounts of others who might not be present, and to rejoice in their successes and in the lustre they conferred upon King's College even when shining from a distance. As recent causes of congratulation he instanced the election of Mr. Christopher Heath as President of the Royal College of Surgeons of England, of Dr. Brodie as Lecturer on Physiology at St. Thomas's Hospital, and of Sir Joseph Lister as President of the British Association for the next annual meeting. In felicitous terms he mentioned the use of the College buildings for the recent meeting of the British Medical Association, the large hall having been used for the reception-room. After many reminiscences of his own student days he concluded by referring to the King's College Hospital Reports, which already included subscribers from India, China, Australia, and Hawaii. Deputy-Surgeon-General Jessop responded to the toast of "The Army, Navy, and Reserve Forces," and speeches were also made by the Rev. Dr. Wace, Dr. Lionel Beale, Dr. Allfrey of St. Leonards, Mr. Richardson Cross of Bristol, Dr. Playfair, and Dr. Curnow. During the evening Mr. Percy L. Webster and Mr. A. Schartau contributed a selection of songs which were much appreciated.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

At 3 P.M. on Wednesday, Oct. 2nd, there was a large gathering in the Governors' Hall of those interested in the school and hospital, when the prizes and certificates of the past year were distributed by Sir Edwin Arnold, K.C.S.I. After the distribution of the prizes Sir Edwin Arnold gave a brilliant address, which was much appreciated, and which is published in another column of our present issue. The annual dinner of old and present students was held in the evening, at 7 P.M., at the Whitehall Rooms of the Hôtel Métropole. Dr. Payne was in the chair, and about 140 persons were present, including guests. The speeches were good and the toast list not too long. After the usual loyal toast, Dr. T. B. Crosby proposed "St. Thomas's Hospital and Medical School (past and present)," which was acknowledged by the Treasurer of the Hospital (Mr. Wainewright), the Dean of the Medical School, Mr. Makins, and Mr. George Rice Ord. Dr. W. M. Ord proposed "The Chairman," a toast heartily received, and Dr. Payne replied. Mr. W. H. C. Staveley proposed "The Hon. Secretaries," and Dr. Toller and Mr. Abbott replied. The dinner was a great success, and the arrangements reflect great credit on the secretaries.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

The dinner of the past and present students was held at the King's Hall, Holborn Restaurant, on Oct. 1st. Mr. Malcolm Morris presided. Among those present were Sir William Broadbent, Mr. Norton, Dr. Cheadle, Mr. Edmund Owen, Dr. McCall Anderson, General Shaw Stewart, R.E., Colonel Bird, Mr. Page, Dr. Lees, Mr. Critchett, Mr. Silcock, Dr. Phillips, Major Hanbury White, R.E., Dr. Danford Thomas, Mr. John Moore, J.P., Dr. Luff, Surgeon-General Jeffcoat, Mr. Hetherington, Dr. Franklin Parsons, Mr. Havell, Dr. Walter, F.R.S., Dr. Symes Thompson, Dr. Handfield Jones, Surgeon-Major Hayes, Surgeon-Captain G. E. Hale, &c. The chairman proposed "The Navy, Army, and Reserve Forces," and the toast was responded to by Fleet-Surgeon T. J. Preston, R.N., Brigade-Surgeon-Lieutenant-Colonel Myers, and Surgeon-Lieutenant-Colonel Norton. The chairman, in proposing the toast of the evening, gave an amusing sketch of an interview between an old student of thirty years ago and one of the present time, showing the vast change in the class of men who now enter the profession. St. Mary's had increased in numbers, and this was due to the energy of the Dean (Mr. Field). The Dean replied and Dr. Wills responded for the "Past" and Mr. Thorne for the "Present Students." The staff was represented by Sir William Broadbent, who proposed the chairman's health. A delightful evening was brought to a close by an excellent selection of music and songs by Messrs. Schartau, Fell, Appleby, Bradford, and J. E. Lane, and a ventriloquial sketch by Mr. F. Russell.

ROYAL VETERINARY COLLEGE.

Professor Penberthy, who delivered the introductory address at the Royal Veterinary College, said the systematic teaching of veterinary science in Great Britain dated from the foundation of the college in 1791 by Vial de St. Bel, a French veterinary surgeon. In its infancy the interests of the school were fostered and its honour added to by the cöoperation of the most eminent medical men. Justifiable pride mingled with grateful sentiment while acknowledging the indebtedness of the college and profession to the early examining committee, whose roll was adorned by such names as Astley Cooper, Blizzard, Horne, J. Abernethy, Brodie, C. Bell, J. H. Green, and Coleman. Referring to the bearing of veterinary science on the welfare of the general community, Professor Penberthy remarked that before the establishment of a State veterinary department and the adoption of the teachings of veterinary science, an invasion of cattle plague reduced the financial resources of the country to the extent of millions of pounds. An incursion of sheep-pox was scarcely less costly. Foot-and-mouth disease in some years affected nearly 700,000 animals. Pleuro-pneumonia for a long time cost the country little short of £50,000 annually. Those affections were now regarded as exotic, but kept from our shores only by strict adherence to the teachings of veterinary science. If the protection provided by veterinary knowledge were withdrawn, the flickering light of agriculture, the leading industry of this country, could scarce escape extinction. Under the watchful care of a veterinary department, the supply of cheap animal food was assured to the people without danger of special loss to one part of the community from the invasion of imported contagious disease, for until within a few years of the formation of the Department the law prohibited the importation of live stock. Under all these circumstances it was a cause for wonder that the act of any Government should appear to hold its worth so cheap as to extirpate the word veterinary, which has described the Department for thirty years, and to render it appparently subordinate and declining in value. By increased knowledge of animals and their diseases, by use of anæsthetics and improved methods in surgery, animal suffering had been materially lessened and animal service increased.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

The opening of the session took place in Newcastle-upon-Tyne on Tuesday, Oct. 1st. The meeting was presided over by the President of the College of Medicine, and there was a large attendance of the public interested in the college. The Warden of the University (the Very Reverend Dr. Kitchin, Dean of Durham) distributed the prizes and scholarships to the successful students. The Mayor, Sheriff, and other members

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of the corporation were present, and among the guests were the heads of houses and other dons from Durham, the Principal of the Durham College of Science, the High Sheriff of Durham, the Nestor of the Profession in Newcastle, Dr. Embleton, the Mayor of Durham, Dr. Jepson, and many other well-known and prominent citizens. The students were, as usual, very much in evidence, but on the whole the proceedings passed off unusually quietly. The President, Professor Philipson, after welcoming the warden on his first appearance at an opening of the College of Medicine, alluded to the new charter enabling the University to grant degrees in medicine and in all the other faculties, with the exception of Divinity, to women, and to hold convocations in Newcastle. He announced that the first convocation would be held in the examination hall of the College of Medicine in April next.

On Tuesday evening, at the Hôtel Métropole, Newcastle-upon-Tyne, some eighty old students of the University of Durham College of Medicine dined together. Professor Arnison, who, with the exception of Mr. J. A. Angus, was the oldest student present, presided, and a very pleasant evening was spent. Much credit is due to Dr. W. D. Arnison and to Mr. Walter Ridley, the secretaries of the dinner committee, for the admirable way in which the arrangements were carried out, and it is hoped the dinner will become an annual one.

LIVERPOOL UNIVERSITY COLLEGE.

The opening of the winter session of the Medical Faculty of the Liverpool University College took place on the 1st inst., under most favourable auspices. Lord Derby, the President of the College, presided, and was supported on the platform by the Lord Mayor of Liverpool (Mr. W. H. Watts), Mr. Edward Lawrence, chairman of the council, the professors of the College, and leading citizens. There was also in addition to the students a large attendance of ladies and gentlemen. Professor Paterson, the Dean of the Medical Faculty, presented his report, which indicated considerable activity in the growth of the Faculty during the last twelve months. The number of students attending classes in the winter session, excluding those taking out hospital practice alone, was 146. During the winter session the new entries were 56, and during the summer session the numbers were 127, including six new entries and seven new entries for special courses. The two facts noticeable on making up this summary were that the numbers in the school generally were practically stationary, the number of diploma students was diminishing, while the number of university and dental students was increasing. In this connexion it might be added that a very desirable addition to the attractions of the school would be the establishment of a hall of residence within easy reach of the college. Summarising the results of professional examinations, 118 students had passed examinations—108 medical, 10 dental. Lord Derby then distributed the medals and prizes awarded by the Medical Faculty.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual Calendar has just been published by the Council of the College. It shows that there are 1160 Fellows on the roll of the College (against 1144 last year), of whom 947 obtained the Fellowship by examination, 16 were elected as Members of twenty years' standing under Section 5 of cap. 15 Vict., and 2 are *ad eundem* Fellows. There are 16,816 Members and 645 Licentiates in Midwifery. The Licentiates in Dental Surgery are stated to number 1007. The holders of the diploma of Public Health number 215.

During the past collegiate year 577 candidates presented themselves for examination in Elementary Anatomy, of whom 473 passed and 104 were referred; 82 candidates presented themselves in Elementary Physiology, 55 of whom passed and 27 were referred; 488 candidates presented themselves in Elementary Biology, of whom 327 passed and 161 were referred. The examiners are appointed in conjunction with the Royal College of Physicians of London, under the scheme for an Examining Board in England. The fees paid by candidates for these examinations amount to £2991 3*s.* 9*d.*, the examiners receiving in fees £431 5*s.* Of 609 candidates who presented themselves in Chemistry, 355 passed and 254 were referred; in Materia Medica, of 258 candidates 178 passed and 80 were referred; in Practical Pharmacy, of 226 candidates 181 passed and 45 were referred. The examiners in Chemistry, Materia Medica, and Practical Pharmacy are elected by the Royal College of Physicians of London.

The examiners in Anatomy and Physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians of London; they have conducted the Primary Examination under the old regulations as well as the Second Examination of the Examining Board in England; 811 candidates presented themselves for examination in Anatomy, of whom 433 passed and 378 were referred; 803 presented themselves in Physiology, 454 of whom passed and 349 were referred. The fees paid by candidates for examination amounted to £3726 9*s.*, the examiners receiving £1329 2*s.*

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow, elected annually by the Council, held two meetings for the examination of 171 candidates, of whom only 63 passed, whilst 108 were referred. The fees received amounted to £1050, of which the Board received £684.

The Court of Examiners, ten in number, are elected by the Council from the Fellows of the College only, for a period of five years. They conduct the Third or Final Examination in Surgery of the Examining Board in England as well as the Second or Final Examination for the diploma of Fellow. During the past collegiate year the Court held two examinations for the Fellowship and four for the Membership; at the former there were 79 candidates, 45 of whom passed, 4 were referred for one year, and 30 for six months. For the Membership 937 candidates presented themselves in Surgery, of whom 579 passed and 378 were referred. The fees paid by candidates amounted to £10,142 3*s.*, and the fees paid to the Court of Examiners and the examiners in Midwifery amounted to £5697 13*s.* The examiners in Medicine under the scheme are elected by the Royal College of Physicians of London. Of 905 candidates examined, 521 passed and 384 were referred. The examiners in Midwifery are appointed in conjunction with the Royal College of Physicians of London, and have examined 824 canddates, of whom 558 passed and 266 were referred.

The Board of Examiners in Dental Surgery have held two meetings for the examination of 121 candidates, 84 of whom received the diploma and 37 were referred. The fees paid by candidates amounted to £882, the Board receiving £512 8*s.*

The examiners in Public Health, appointed in conjunction with the Royal College of Physicians of London, examined 53 candidates in Part I., 35 of whom passed and 18 were referred; in Part II., out of 46 candidates 26 received the diploma and 20 were referred. The fees received for both parts amounted to £234 13*s.* 6*d.*, the examiners receiving £186.

With regard to the finances of the College, it appears that the income from all sources amounted to £28,490 8*s.*, the largest item being derived from the fees paid by candidates for the diplomas of the College—viz., £18,791 15*s.* 9*d.*—the next largest item being from dividends on the Erasmus Wilson bequest, £4813 16*s.* 1*d.*; rents from chambers adjoining the College produce, £750; investments, £750 2*s.* 8*d.*; hire of rooms and sale of questions at Examination Hall, £680 17*s.* 3*d.*; fees retained for referred candidates, £334; from trust funds, £279 9*s.* 5*d.*; incidental receipts, sale of calendars, &c., £14 1*s.*; sinking fund, £2 5*s.* 11*d.*; Goldsmiths' Company Research grant, £500; balance at bankers, 1894, £1578 0*s.* 2*d.*

The expenses for the year amount to £27,760 11*s.* 3*d.* (leaving a balance at the bankers of £729 16*s.* 9*d.*), the largest item being for fees to examiners, £8840 8*s.*; expenses of examinations (Fellowship and dental only), £342 7*s.* 1*d.*; half expenses examination hall, £4519 9*s.* 5*d.*; half expenses, research laboratories, £825 18*s.* 11*d.*; rates, taxes, and insurance, £1540 12*s.* 10*d.*; extraordinary expenses, £298 1*s.* 10*d.*; alterations and repairs, £669 5*s.* 8*d.*; fees to Council, £240 9*s.*; salaries, wages, and pensions in the three departments (museum, library, and College), £4693 6*s.* 2*d.*; lectures, catalogues, specimens, &c., for museum, £673 11*s.* 9*d.*; purchase of books, &c., for library, £653 9*s.* 4*d.*; trust funds, £302 3*s.* 10*d.*; fees returned to candidates, £556 10*s.*; purchase of stock, £2150 15*s.* 7*d.*; expenses, Metropolitan Asylums Board (repayable) £186 5*s.* 9*d.*; miscellaneous items—i.e., fuel, light, printing, stationery, &c.—£1267 17*s.* 11*d.*

From the librarian's report it appears that the supply of new books has been well kept up during the present year.

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The donations include the MS. material for a Greek medical lexicon prepared by the late Dr. Greenhill (presented by Miss Greenhill), a collection of pamphlets from Sir Henry Acland, several old books from Mr. Alfred Kisch, and a MS. report of John Hunter's lectures from Mr. C. Leeson Prince. The copper and steel plates used for printing Mr. Joseph Swan's book on the "Nervous System" have been presented by Mrs. J. V. Machin of Gateford Hill, Worksop. Exchanges have been made with the British Medical Association and the Medical Society of Victoria. Amongst the old books purchased may be mentioned a copy of the rare (1672) "Treatise of Wounds" by Richard Wiseman. The collection of portraits has received a valuable addition from Mr. Jabez Hogg in the shape of a series of daguerreotypes of eminent physicians and surgeons taken by him nearly fifty years ago. Mr. Hogg has also presented a portrait in oil of a surgeon (name unknown), dated 1677, and several volumes of interesting pamphlets. Including journals and Transactions the total number of volumes in the library is about 48,000.

Amongst the additions to the Museum may be mentioned a sarcoma of the patella; a roll of hair weighing five pounds successfully removed by operation from the stomach; and an enlarged spleen in a child, which weighed one-sixth of the whole body's weight. Mr. Willoughby presented a humerus taken from an Egyptian skeleton dated about 4000 B.C., and in addition to its antiquity it is of interest as showing an old injury to the head of the bone which must have produced considerable deformity of the limb. An important addition to the Museum is that of 205 skulls and crania, with 40 models, purchased from the Anthropological Society.

The Secretary's report deals with the following subjects: an abstract of the work done by the Council and committees; the work of the Committee of Management of the two Royal Colleges; particulars concerning the Research Laboratories on the Victoria Embankment; reports of meetings of Fellows and Members; results of elections &c.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE fifty-fourth annual meeting of the Medico-Psychological Association of Great Britain and Ireland was held on July 25th and 26th, under the presidency of Dr. D. Nicolson, at the rooms of the Association, 11, Chandos-street, Cavendish-square. The proceedings commenced at eleven o'clock on the first day with the election of officers and the transaction of general business. Dr. H. Rayner was elected Editor of the *Journal of Mental Science* in place of the late Dr. Hack Tuke, and it was decided that the Association should be incorporated. In the afternoon the President took the chair and after presenting an illustrated memorial and silver bowl to Dr. J. H. Paul, who had been treasurer of the Association for thirty-one years, delivered an address on Crime, Criminals, and Criminal Lunatics. His remarks on crime, interesting in themselves, were rendered still more so by a number of statistical tables. He did not believe that men who became criminals were born so and could not help themselves. From his experience as a prison medical officer many years ago he was of opinion that, though there were a certain number of weak-minded criminals who in the face of temptation were unable to resist it and thereby became criminal, yet in the large majority of cases criminality shows itself as a positive propensity to evil-doing. Cases like these are not unintelligent and are quite capable of balancing motives, but deliberately, and in spite of their consciousness of its risk, prefer crime to an honest livelihood. He agreed with a large part of the phraseology and descriptions which Lombroso and others had given, but these descriptions applied to a minority of criminals only. He objected to a description which was applicable to the few being held up to the world as a description applicable to the characteristics of the whole body. He denied that there was such a thing as a criminal neurosis or instinctive criminality that belongs to a group of persons who make themselves amenable to the law. — Sir Edmund du Cane, Dr. Orange, Dr. Clouston, and Mr. Conolly Norman discussed the views set forth in the address, and the President replied.

Dr. Rivers then read a paper on Experimental Psychology in relation to Insanity, illustrated by an apparatus for measuring choice time. He mentioned that Professor Kräpellin of Heidelberg and his pupils had for some time been working on the application of methods of measuring mental capacity in cases of insanity, and the method he would show would be one of those which Professor Kräpellin used. His methods, to a great extent, resolved themselves into time measurement. The means of measuring work done is to a great extent to measure the time which it takes and the amount of work which can be done in a certain time. Another branch of Professor Kräpellin's work is the investigation of abnormal influences, such as drugs, overwork, and excessive fatigue, on normal people. These abnormal influences are not only recognised causes of insanity, but some of them, such as alcohol, produce conditions identical with those in many forms of insanity. In investigating the effects of these abnormal conditions we are investigating artificial insanities in their earliest stages at a time when they do not come under the notice of the physician. With the assistance of one of the members Dr. Rivers then proceeded to demonstrate the method of measuring choice time which he had described.—The President, Dr. H. Rayner, Dr. Percy Smith, Dr. D. Yellowlees, and Dr. A. R. Urquhart discussed the paper, and Dr. Rivers replied.

On July 26th Dr. Clouston and Dr. Batty Tuke opened a discussion on Rest and Exercise in the Treatment of Insanity. Dr. Clouston was strongly in favour of exercise, as it produced sleep, calmed maniacal and melancholic excitement, and improved the working of the secretory and excretory glandular system. In addition, it promoted healthy metabolism and nutrition, and stimulated the blood-forming glands and apparatus by the circulation of an increased amount of oxygen in the blood. Rest, in the sense of staying in bed for twenty-four hours, he had seen do harm, and was applicable as a therapeutic agent only in cases of extreme neurasthenia, in exhausted conditions such as the puerperal state, and in those suffering from bodily diseases and who are clearly exhausted from over-exertion. Muscular exercise produced brain rest and was the most efficient way of obtaining it. By putting the muscles into exercise we act by way of a derivative from the excited cortex and secure brain rest in a physiological fashion.—Dr. Batty Tuke maintained that in cases of insanity from over-exertion there was hyperæmia of the brain cortex, and that the congestion is properly and rightly treated by rest. He referred to the condition of the brain cells found in the honey-bee in the evening after a hard day's work contrasted with the conditions which are seen in the morning, and maintained that what is wanted in the treatment of the insane is to give rest so that the congestion may be diminished and the cell be renourished and able to return to its original condition. He quoted statistics of forty cases of incipient insanity, half of whom recovered within three weeks and the rest within six weeks under his treatment.—The President, Dr. Rayner, Dr. Blandford, Dr. Rivers, Dr. Cooke, Dr. Drapes, Dr. Yellowlees, Dr. Andriezen, Dr. Urquhart, Dr. Savage, Mr. Conolly Norman, and Dr. Robertson discussed the papers, the conclusion being come to that the means of treatment are to be used with reference to the individual patient, and Dr. Clouston replied.

Dr. Turnbull read a paper entitled "Some Remarks on the Forcible Feeding of the Insane." He was of opinion that it was a mistake to wait until the patient became exhausted, and thought the best apparatus for feeding was the œsophageal tube. Considering the comparatively slight risk entailed, it should be oftener resorted to for the sake of the patient. No form of feeding, however, was absolutely safe unless due precaution was taken. — The President, Dr. Briscoe, Dr. Drapes, Dr. Clouston, Dr. Yellowlees, Dr. Macdonald, Dr. Merson, Dr. Robertson, Dr. Urquhart, Dr. Cooke, Dr. Carlyle Johnstone, Mr. Hayes Newington, Dr. Finegan, Dr. Outterson Wood, Dr. Tuke, Dr. A. S. Newington, Dr. Gramshaw, and Dr. Soutar discussed the paper, and Dr. Turnbull replied.

Dr. W. F. Robertson read a paper on the Pathology of Milkiness, Thickening, and Opacity of the Pia-Arachnoid in the Insane, and exhibited numerous microscopical specimens as an illustration to the paper.

Dr. G. E. Shuttleworth contributed a paper on Provision for Pauper Idiots and Imbeciles. He referred to the want of accommodation for this class of cases and mentioned that, besides the rate-supported institution at Darenth, there were in England only five other training schools, which were all kept up by voluntary contributions. A block for idiots has been erected at the Northampton Asylum, and similar blocks were

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contemplated at two other asylums, but further accommodation was urgently needed. He advocated the erection of institutions, if necessary by a combination of counties, or the erection of separate blocks in connexion with the existing county or borough asylums.—Dr. Fletcher Beach made some remarks on the paper.

Dr. Clouston read for Dr. L. C. Bruce a paper on Thyroid Feeding. Dr. Bruce advocated its use in (1) cases of melancholia whose improvement had been arrested; (2) cases of mania showing signs of dementia; and (3) cases of stupor at an early stage, in which the effect was to wake them up. The treatment had also been tried on general paralytics and on patients suffering from dementia of forty years' duration. Five-grain tabloids were used, but the heart's action had to be watched and the patient kept in bed all the time in case of heart failure.—Dr. Fletcher Beach made some remarks on this paper.

Dr. Dawson brought forward a paper on a very rare case of Ecchymosis following Insane Excitement, which was discussed by the President, Dr. A. R. Urquhart, and Dr. T. W. McDowall.

On the evening of July 26th the annual dinner took place at the Whitehall Rooms, Hôtel Métropole, Dr. D. Nicolson, president, being in the chair. The loyal toasts having been duly honoured, the President proposed "The Navy, Army, and Auxiliary Forces," to which Major Macbean (in the absence of Sir Frederick Middleton) and Dr. J. H. Paul, ex-treasurer, responded. To the toast of "The Legal Administration," proposed by Dr. Yellowlees, Sir John Bridge, Mr. Kenelm Digby, and Dr. F. Needham replied. The toast of "The Medico-Psychological Association" was proposed by the Right Hon. the Speaker of the House of Commons, who remarked that in the course of the present century enormous steps had been taken in the humane treatment of lunatics. He was glad to hear that the Association had specially taken in hand the training and education of competent nurses and attendants on the insane. He was also glad to hear that the Association was flourishing, that its membership was steadily increasing, and that its members were to be found throughout the whole of their vast empire. The President, in responding, remarked that with regard to the future he was glad to say they had had during their meetings an illustration of the capacity of the rising members of their specialty for taking up the work that had been handed to them. Other toasts followed.

On Saturday, July 27th, the President invited the members to Broadmoor, where the wards and manner of treatment of the patients were fully described. On the following Monday the members paid a visit to the Holloway Sanatorium on the invitation of Dr. Rees Philipps, some of the members afterwards paying a visit to Windsor. Dr. and Mrs. J. Chambers gave a garden-party at the Priory, Roehampton, on Tuesday, July 30th, thus closing a very interesting and successful meeting.

HABITUAL DRUNKARDS AND THEIR RETREATS.

THE fifteenth report of the Inspector of Retreats under the Inebriates Acts of 1879 and 1880 is before us and merits the serious attention of our readers. Such legislation originated with the profession, and if it is ever to be amended and put into an adequate and effective form it will largely be on the evidence and representation of medical men. The actual report before us is satisfactory as far as it goes, or can go, but like its predecessors it only suffices to show that we have touched the mere fringe of the subject and that our legislators have yet to accomplish anything worthy of the name of legislation for the recovery of persistent drunkards, who often have in them the materials of most capable and genial citizens. The existence of such persons is only too palpable, and yet there are greater numbers than would appear to the cursory observer. It is a lucky family that cannot count within its blood relationship an incorrigible and persistent drunkard who destroys his own health, loses his employment, and squanders the property which has been acquired, sometimes by his own industry and more often by that of his relatives, possibly his parents, and sometimes his wife. The reports of a scientific or even a rough investigation by competent persons into the habits of persistent drunkards would astonish the public and remove what little reluctance may still remain to deal effectively with them. Not only the number of such persons, but their prodigious powers of consumption, would surprise the uninitiated. A bottle of brandy a day or as much whisky, or two, or even, as in one case, four, may be consumed or procured for consumption, and such a system, with more or less interruption, may go on for years without let or hindrance from legislation, though, of course, it is as distinctly poisonous and suicidal in its effect as overdoses of arsenic or of phosphorus.

The contribution of our legislators to the correction of this evil so far consists in the Acts regulating retreats and the admission of patients into them. The feature of this legislation is that if habitual drunkards consent to their own treatment in these institutions before two magistrates they can be detained for a period not exceeding twelve months. There are nine such retreats, a new one having been licensed last year—Capel Lodge, licensed to Dr. Edward Norton for eight male patients, and situated between Folkestone and Dover. The others are situated at Chiswick, Folkestone, Fallowfield (Manchester), Kingswood Park, Dalrymple Home, Rickmansworth, and Westgate-on-Sea. Early in the present year Amesbury House, Amesbury, was licensed to Mr. J. J. Bancroft for the reception of three patients, two male and one female. In the nine retreats in the year 1894 the admissions during the year were 133, 4 more than in the previous year. With 87 remaining over from the previous year this makes a total of 220. Only one death occurred in the institutions from pericarditis—that of a woman shortly after her admission. The report of the inspector consists almost entirely of the reports sent to him by the licensees of the retreats. It is disappointing not to have some independent criticism by the inspector of the retreats himself. But this is conspicuous by its absence. The details given by the licensees are very much to the same effect as in previous years and go to show that the principle of these retreats is a sound one, and is really curative in a large proportion of the cases, the principle consisting in the detention of the patient for a considerable time—twelve months if possible—under conditions in which immediate and continuous abstention from alcohol is practicable, accompanied with other conditions of a regular and cheerful life. One of the most interesting reports is that of the licensee of Fallowfield, Manchester, an institution meant for women. The testimony here is explicit on two important points. The first is that habitual drunkenness in women is by no means a hopeless disease, as it is apt to be considered. It is reported that 25 per cent. of the cases give evidence of permanent recovery. When it is considered that the patients do not go into the retreat till, for the most part, they are in an advanced and otherwise hopeless stage of alcoholism, the proportion is a very creditable one. Four women who left in 1891 (the first year) still remain steadfast abstainers and are doing well in their several stations of life. Six who left in 1892 have stood firm, and nine who left in 1893. The other point testified to in this report is that no harm, but good, is done by the sudden and complete disuse of alcohol in such cases. The report of the Dalrymple Home is, as usual, one of the most instructive of the series. Since the opening 377 cases have been discharged, of which 177 have been under the Act and 200 private cases. The accommodation is far short of the demand, so that for every applicant admitted ten or fifteen have been refused either for want of accommodation in the retreat or of means in the patient. The occupation of patients is given. It is no matter for surprise that "gentlemen of no occupation" supply the largest number of the cases—85 out of 377. Merchants seem to supply the next largest number (41); clerks, 39; medical practitioners, 28, and medical students, 5; solicitors, 18. It is important to notice that in a large proportion of cases some other habit affecting the nervous system is associated with that of alcoholism. In 321 it was the use of tobacco, in 4 chloral and tobacco, in 4 morphia, in 2 morphia and cocaine, in 6 opium or chlorodyne and tobacco, and in 1 sulphonal. In 39 there was no other associated habit. It is gratifying to notice that in this retreat reports are received from old patients (number not stated) who after periods of from seven to ten years continue to be abstainers. The Kingswood Park report states that 42 per cent. of the patients discharged are doing well. The period for which these successful cases were detained lasted from six to twelve months, and their average age was forty-one years.

The unanimous burden of the reports is that there is

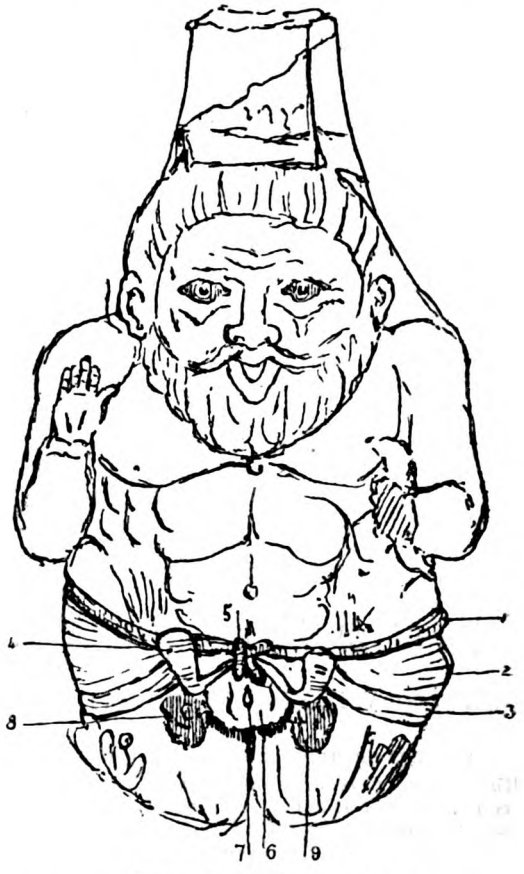
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need of more retreats, especially for the poor, and that little more good can be expected from the retreat system until an amendment of the law, applying the compulsory principle to persistent drunkards, is procured. On this subject the medical profession is unanimous. A Bill is already being promoted on these lines in Vienna, and our readers will remember that a similar Bill passed a second reading in the House of Lords before the recent change of Ministry, and in spite of somewhat strong speeches against it by the present Lord Chancellor and Lord Salisbury. These statesmen are now in positions of great power and can indefinitely defer the much-needed legislation in the name of personal freedom. We do not doubt that they will see that this is no question of party politics, but one concerned with disease and urgent at that. Their opposition was directed against the methods of procuring the detention of persons rather than against the principle itself. They will have public and professional concurrence in any means for protecting the just liberty of the subject, but this can scarcely imply a right to the habitual use of such quantities of alcohol as are inconsistent with the safety of a man's family or the retention of his health or of his property. The very fact that we love freedom beyond other nations should make us the more anxious not to desecrate the word by applying it to the most enslaving of vices.

A PREHISTORIC TRUSS.

DR. F. PONCET, late Principal Medical Officer of the French army in Tunis, is the fortunate possessor of a very remarkable statuette or votive image, which was recently found at Soussa, and has made it the subject of an illustrated descriptive article in our contemporary *Le Progrès Médical* of June 1st, 1895, from which we condense the following particulars. The figure, which is composed of terra cotta, measures about four inches in height by two and a half in width, and has been pronounced by M. Maspero and other Egyptologists to be an example of the Egyptian deity Bès or Bizou, whose effigies are so common on the banks of the Nile. It was found by a gentleman named Gouvet while exploring the confines of an ancient Phœnician cemetery, and is supposed to date back to about the year 900 B.C. Not only is this treasure-trove admirable as a work of art and wonderful as a relic of antiquity, it is likewise extremely interesting and valuable from a surgical point of view on account of the accurate representation it affords of two varieties of hernia—the femoral and the scrotal—as well as of a most ingenious and effective truss for use in the inguinal form of the disorder. In spite of the fact that rupture is a very common affection, being present, according to Malgaigne, in about 3½ per cent. of the entire population, there is little if anything known regarding the employment of trusses or other kindred appliances in ancient times, when, owing to the universal predilection in favour of active exercise, the incidence of the complaint must have been at least as frequent as it is at the present day. Celsus, it is true, does mention a kind of bandage for the retention of infantile hernia, and Constantine the African, who flourished at Carthage about A.D. 1100, is said to have made use of metallic instruments for adults; but with these exceptions the records of the past are completely silent on the subject. It has, nevertheless, now become evident from Dr. Poncet's manikin that the physicians of prehistoric times were quite conversant with rupture in most of its forms, and were able to palliate it by means of suitable mechanical contrivances.

As a general rule Bizou is represented as a squat figure, enormously muscular, with a gigantic head and a protruding tongue; his clothing consisting of a panther-skin cloak, fastened in front by the paws, and a cincture composed of two serpents. In the Soussa image, however, the snaky girdle gives place to a most skilfully-fashioned truss consisting of a couple of belts connected to each other by a pliable fascia, and encircling the figure above and below the great trochanters which serve to keep the entire apparatus in position. The belts are clasped at the back and do not run horizontally, but are both more or less curved, especially the lower, which forms an arch in front until it meets the other just above the pubes. Attached to the upper belt, which is evidently intended to be made of some rigid material, are two V-shaped plugs covering the inguinal canals on either side, with their broadened limbs, and then bending upwards to be joined to each other by means of a knotted tape. The great advantages connected with this apparatus are the ability to dispense with a perineal band, and the power possessed by the wearer of tightening or slackening the belts according to the condition of his abdomen. The chief disadvantages are its cumbersomeness and the difficulty that would be experienced by stout persons in adjusting it. Altogether the little figure is a perfect museum of hernial pathology; for, besides the inguinal bandage, it exhibits two multilobar crural ruptures escaping through the orifices of the cribriform fascia, and an enormous scrotal tumour wherein the penis is completely engulfed, with nothing visible but the meatus urinarius, just as, according to Sir Astley Cooper, was the case with the historian Gibbon.



SKETCH OF THE STATUETTE.[1]

1. Upper belt. 2. Material, intermediary fascia. 3. Lower belt. 4. Oblique metallic knob, terminating in a stem forming an arch. 5. Bow-knot. 6. Scrotum. 7. Urethral orifice. 8 and 9. Crural herniæ.

VACCINATION PROSECUTIONS AND THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

SOME few years ago, when the Report of the Royal Commission on Vaccination was expected to be issued in a few months, the Wigan board of guardians agreed not to institute proceedings against defaulters till the report was received. Since then vaccination in the borough of Wigan has been practically in abeyance, much to the gratification of anti-vaccinationists. Now

[1] We are indebted to the Editor of *Le Progrès Médical* for permission to reproduce this sketch.

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the town is suffering from a smart epidemic of small-pox, and although there have been only one or two deaths there have been upwards of sixty cases since the first attack on May 22nd last. The sanitary officers are doing their best to cope with the outbreak, yet no notices are placarded or additional facilities made for revaccination, and the only preventive (vaccination) is not enforced. The guardians, however, seem to have awakened from their lethargy and by a resolution of the board on Aug. 23rd gave instructions to Mr. Halliwell, the vaccination officer, to take proceedings against defaulters of children registered between Jan. 1st and March 31st last. Some 150 summons were issued a fortnight since, and this threw consternation in the ranks of the anti-vaccinationists, who at once held meetings and decided to defend the cases, which were adjourned. In the meantime they held a public meeting, when the usual stock arguments were forthcoming, and the usual intemperate language against the authorities was employed, although the cases were still *sub judice*. The cases were tried last week, and at the commencement of the proceedings Mr. Duxbury said that a fortnight ago, when the cases were adjourned, a suggestion was made that the consideration of the whole question should be left in abeyance until they had received the report of the Royal Commission, which had been sitting for six or seven years. He said they had every reasonable anticipation of receiving this report in the next few months. The chairman (Mr. Marshall) said they had been waiting six years for the report. The cases were then heard; some were dismissed, but the majority were fined 1*s.* and costs. The ratepayers are complaining bitterly of their heavy rates and of the cost of maintaining their excellent sanatorium for infectious diseases. Even this little epidemic will cost something and add to its maintenance account, whereas if vaccination had been proceeded with as heretofore the epidemic would probably have been limited, because the origin of the epidemic was due to a person who lived a nomadic life.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Warwickshire County Sanitary District.—For the last six years Dr. Bostock Hill has presented to the Warwickshire County Council a summary of the annual reports of the district medical officers of health, and that for 1894 is now before us. The estimated population of the administrative county is 317,952, and during 1894 there has been a decided increase in the urban districts as against a decrease in the rural. The death-rate in the rural districts was—as in 1893—higher than in the urban districts, a peculiarity explained by the urban nature of the rural districts. The general death-rate of the county was but 14·07 per 1000, the lowest recorded since the presentation of Dr. Hill's reports. The death-rate of the county was from typhoid fever 0·05, from diphtheria 0·08, and from scarlet fever 0·05 per 1000 of the population, all of which rates were below the average for the last six years. The "infantile" mortality rate was also the lowest recorded during the same period, and some of the low rates indicate, Dr. Hill thinks, that slowly, but surely, a better knowledge is being brought to bear as to the requirements of early infant life. Two urban and one rural districts are still recalcitrant in the matter of notification. Dr. Hill regrets that very little information is given in the district reports as to the condition of vaccination, and he is evidently in favour of vaccination being in the hands of sanitary authorities. The weekly return of infectious disease made by the Warrington County Council seem to be much appreciated in the county, and the city of Coventry has applied to be furnished with copies. The County Council should, Dr. Hill remarks, approach the Corporation of Birmingham with a view of exchanging notification returns with them. The fact of Birmingham possessing a population nearly twice as great as that of the rest of the county renders it, he observes, of great importance to ascertain the origin and spread of infection in that city.

Bolton Urban Sanitary District.—The general death-rate of Bolton (population 118,303) for 1894 was 18·7 per 1000, as against 23·9 for 1893, and Dr. Frederick Adams furnishes in his report a table showing the death-rate of the district per 1000 of the population since the year 1851. The gradually diminishing rate shown from decade to decade should certainly be a great encouragement to the sanitary authority of Bolton to proceed with reform. The rates for the four decades comprised between 1851-90 were as follows:—30·7, 27·5, 23·8, and 21·8, while the rate for the four years 1891-4 was 21·7.

South Shields Urban Sanitary Authority.—Dr. W. H. Turnbull in his annual report for 1894 draws the attention of the sanitary authority to the fact that there are over 120 seamen's lodging-houses in South Shields, and he points out that the staff of the health department available for the systematic inspection of these premises, consisting as it does of only two inspectors, is quite inadequate. Dr. Turnbull observes that it is somewhat remarkable that although the population of the borough has nearly doubled itself during the last twenty years and increased enormously in commercial prosperity, the sanitary staff should have remained practically *in statu quo*. Dr. Turnbull considers that in South Shields there should be one inspector to every 10,000 of the population.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6273 births and 4269 deaths were registered during the week ending Sept. 28th. The annual rate of mortality in these towns, which had been 19·3 and 19·8 per 1000 in the two preceding weeks, further rose last week to 21·0. In London the rate was 18·2 per 1000, while it averaged 23·0 in the thirty-two provincial towns. The lowest rates in these towns were 14·7 in Huddersfield, 15·0 in Croydon, 16·1 in Leicester and in Portsmouth, and 16·5 in Bristol; the highest rates were 29·4 in Blackburn, 29·5 in Sunderland, 29·7 in Bolton, 29·9 in Manchester, and 30·5 in Gateshead. The 4269 deaths included 923 which referred to the principal zymotic diseases, against 990 and 981 in the two preceding weeks; of these, 604 resulted from diarrhœa, 81 from diphtheria, 69 from whooping-cough, 60 from measles, 57 from "fever" (principally enteric), 50 from scarlet fever, and 2 from small-pox. The lowest death-rates from these diseases were recorded in Croydon, Plymouth, Norwich, Derby, and Halifax; and the highest rates in Bolton, Burnley, Blackburn, Hull, Sunderland, and Gateshead. The greatest mortality from measles occurred in West Ham and Blackburn; from scarlet fever in Huddersfield; from whooping-cough in Gateshead, Wolverhampton, Bradford, and Bolton; from "fever" in Bolton and Sunderland; and from diarrhœa in Cardiff, Nottingham, Burnley, Bolton, Blackburn, and Hull. The 81 deaths from diphtheria included 56 in London, 8 in West Ham, and 3 in Birmingham. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 234 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Sept. 28th, against 328, 307, and 271 at the end of the three preceding weeks; 21 new cases were admitted during the week, against 25, 42, and 23 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2087, against 2600, 2674, and 2732 on the three preceding Saturdays; 339 new cases were admitted during the week, against 336, 365, and 344 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 123 and 141 in the two preceding weeks, further rose to 173 last week, but were 37 below the corrected average. The causes of 54, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Oldham, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Wolverhampton, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·9 and 19·5 per 1000 in the two preceding weeks, declined again to 17·5 during the week ending

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Sept. 28th, and was 3·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·2 in Aberdeen and 13·5 in Leith to 19·4 in Glasgow and 20·5 in Dundee. The 506 deaths in these towns included 48 which were referred to diarrhœa, 9 to whooping-cough, 6 to measles, 6 to "fever," 5 to diphtheria, 5 to scarlet fever, and not one to small-pox. In all, 79 deaths resulted from these principal zymotic diseases, against 90 and 93 in the two preceding weeks. These 79 deaths were equal to an annual rate of 2·7 per 1000, which was 1·8 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined in the four preceding weeks from 78 to 57, further fell to 48 last week, of which 19 occurred in Glasgow, 10 in Dundee, and 6 in Edinburgh. The 9 deaths from whooping-cough were within one of the number in the preceding week, and included 2 each in Glasgow, Dundee, Leith, and Greenock. The deaths referred to different forms of "fever," which had increased from 4 to 16 in the three preceding weeks, declined to 6 last week, of which 4 occurred in Glasgow. The 5 fatal cases of scarlet fever slightly exceeded the numbers recorded in recent weeks, and included 3 in Glasgow. The deaths from diphtheria, which had been 5 and 3 in the two preceding weeks, rose again to 5 last week, of which 3 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in London, which had been 52 and 66 in the two preceding weeks, further rose to 82 last week, and exceeded by 14 the number in the corresponding week of last year. The causes of 28, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·4 and 22·1 per 1000 in the two preceding weeks, rose again to 24·8 during the week ending Sept. 28th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 23·4 per 1000, the rate during the same period being 18·6 in London and 16·5 in Edinburgh. The 166 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the preceding week, and included 24 which were referred to the principal zymotic diseases, against 21 in each of the two preceding weeks; of these, 13 resulted from diarrhœa, 4 from whooping-cough, 2 from small-pox, 2 from scarlet fever, 2 from "fever," 1 from measles, and not one from diphtheria. These 24 deaths were equal to an annual rate of 3·6 per 1000, the zymotic death-rate during the same period being 3·0 in London and 2·1 in Edinburgh. The fatal cases of diarrhœa, which had been 12 in each of the two preceding weeks, were 13 last week. The 4 deaths referred to whooping-cough exceeded the number in any recent week. The fatal cases of "fever," which had been 4 and 5 in the two preceding weeks, declined to 2 last week. The 2 fatal cases of scarlet fever corresponded with the number in the previous week. The 166 deaths in Dublin last week included 42 of infants under one year of age, and 35 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those recorded in the preceding week. Two inquest cases and 4 deaths from violence were registered; and 48, or nearly a fourth, of the deaths occurred in public institutions. The causes of 15, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MACNAMARA, lately commanding the Depôt, Medical Staff Corps at Aldershot, has embarked for a tour of service in Egypt, and Surgeon-Lieutenant-Colonel Allin will succeed him. Surgeon-Captain Kennedy has embarked for Egypt.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major J. Maitland. M.D., is appointed to act as Senior Medical Officer, General Hospital, Madras, during the absence of Brigade-Surgeon-Lieutenant-Colonel W. Price, M.D., on leave. Surgeon-Major J. Smyth, M.D., is appointed to act as Surgeon, General Hospital, Madras, during the employment of Surgeon-Major J. Maitland on other duty. Surgeon-Major M. O'Dwyer, Civil Surgeon, is appointed to officiate as deputy Sanitary Commissioner, Punjab, as a temporary arrangement, vice Surgeon-Captain H. J. Dyson, whose services have been placed at the disposal of the Government of India. Surgeon-Captain R. Bird, Resident Surgeon, Medical College Hospital, is appointed to act as Professor of Anatomy, Medical College, Calcutta, in addition to his own duties, until further orders. The undermentioned officers retire from the service:—Surgeon-Lieutenant-Colonel J. A. Laing, Madras Establishment; Surgeon-Lieutenant-Colonel E. B. Ruttledge, Bengal Establishment, Civil Surgeon, North-West Provinces and Oudh.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeons: John Hunter to the *Edgar*, and A. W. May to the *Benbow*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Richard C. M. Pooley, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers. Surgeon-Lieutenant Henry D. Brook to be Surgeon-Captain. Surgeon-Lieutenant Hamilton Chambers Reid, M.B., Glasgow Companies Volunteer Medical Staff Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Royal Engineers: 2nd West Riding of Yorkshire (Leeds): The services of Surgeon-Lieutenant C. Malcolm are dispensed with. 3rd Volunteer Battalion the Manchester Regiment: Surgeon-Lieutenant J. W. Talent, M.B., resigns his commission.

THE MADAGASCAR CAMPAIGN.

The latest intelligence from Madagascar is somewhat better. The general commanding telegraphed to the French War Office from Andriba on the 27th ult. that the Voyron detachment had crossed the Ankaraka Mountains and had been joined by General Metzinger's detachment and were marching against Babay. The Hovas have so far offered little or no resistance, and the health and spirits of the troops composing the advancing French force are reported to be excellent. It is expected, however, that the Hovas will offer some opposition to the French at Babay, which is only about thirty kilometres from Antananarivo. The flying column amounts to an effective total of 5000 men with twenty-two days' supplies. So far for the force in the uplands; but there is no further intelligence regarding the troops on the seaboard in the lowlands. There will probably be a good deal of sickness and inefficiency among the troops in the field during the rainy season, and it is important that Antananarivo should soon be reached. General Zurlinden reports that since the arrival in France of the first batch of sick troops from Madagascar there have only been nine deaths, and that since the arrival of the *Concordia* there have been none. There are 400 invalids from Madagascar in hospital at Marseilles, but only three of them are in a critical condition. General Zurlinden, the French Minister of War, paid a long visit to the military hospital at Marseilles on the 30th ult. and made many inquiries of the patients as to their state of health and their impressions about Madagascar and the campaign. Pitiable accounts are given by the French soldiers and marines who have just arrived at Marseilles in the mail steamer *Australien* of the sanitary condition of the troops in Madagascar. It is the old story of want of preparation and foresight, defective transport and supplies, overworked and overweighted troops, and inadequate hospital accommodation with insufficient medical and nursing staff.

DEATHS IN THE SERVICES.

Surgeon-General Sir Thomas Longmore, C.B. (retired), at Swanage, on Tuesday last, in his seventy-ninth year. He was educated at Guy's Hospital, became Surgeon in the Army in 1854, Deputy-Inspector-General in 1858, and Inspector-General in 1872. He served throughout the Crimean campaign in 1854–55, and in Bengal during the Sepoy Mutiny. He was Professor of Military Surgery at the Army Medical School, Netley, from 1860 to 1891. He held the appointment of honorary surgeon to the Queen and was a Knight of the Legion of Honour.

Surgeon-General Hampden Hugh Massy, C.B. (retired), at his residence, Bournemouth, on the 27th ult., aged seventy-five. The late officer had seen a great deal of service in the Crimea, was head of the sanitary branch of the medical department under Sir Galbraith Logan, became Deputy-Surgeon-General at Bangalore, Madras, and subsequently Principal Medical Officer at Netley.

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M. HAFFKINE.

We are very sorry to learn that M. Haffkine is compelled to leave India owing to impaired health, attributable to the effects of an attack of climatic fever contracted in Assam. By his exhibition of self-sacrifice and enthusiasm in prosecuting the work he had undertaken in India M. Haffkine is well entitled to the esteem in which he is evidently held in that country. He has been indefatigable in his labours, has spent a large sum of money, and has sacrificed his time, and now his health, in the cause he had at heart. We sincerely join with his many friends in wishing him a speedy restoration to health.

MEDICAL REFORM IN INDIA.

We learn from the Anglo-Indian papers that a movement has been started among the native medical element in Bombay for the separation of the civil and military medical services, with reconstitution of the civil branch and the advancement and recognition of its subordinate grades. A committee has been formed for the purpose, and a preliminary meeting held for settling the outlines of a programme of medical reform in India, and for the organisation of local committees at different centres in India and the formation of a fund are contemplated.

TYPHOID FEVER AT POONA.

There has been a considerable amount of enteric fever at Poona of late, and some fatal cases have occurred among the officers at that station.

The Surgeon-Major-Generalship at Gibraltar has been transferred to Devonport, and the medical charge at Gibraltar will be held by a Surgeon-Colonel.

Correspondence.

"Audi alteram partem."

"MERCURY IN HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—I have been much interested in reading Dr. W. Murray's article under the above heading in THE LANCET of Sept. 28th. I concur fully in his opinion of its great value in all cases of heart disease where passive congestion and œdema are present. I well remember a remark of Dr. Stone, at St. Thomas's Hospital, concerning the value of the well-known pill containing equal parts of squill, digitalis, and blue pill. "Both Dr. Murchison and I," said he, "highly appreciate this prescription. But he will only allow any potency to the digitalis there is in it and forgets all about the blue pill, whereas I, perhaps, am liable to think too little of the digitalis and place all my trust in the mercury." My own experience leads me also to think far more highly of mercury (or calomel) in the treatment of passive cardiac congestion than of digitalis. Dr. Murray believes it has a peculiar tonic action on the heart itself. Though not denying such action, I do not see that it is necessary to explain the efficacy of the drug in these cases. Water-logged tissues can only exhibit a feeble vitality. The water-logged lungs, liver, kidneys, pancreas, intestinal and lymphatic glands can, therefore, but feebly perform their nutritive functions. Food will thus be imperfectly assimilated and effete material imperfectly removed. The circulation of the resulting poisonous matters in the body will still further paralyse all its functions, including that of the already weak heart, and, what is of still greater importance in this respect, nature's endeavour to prevent the circulation of these poisons, by constricting the peripheral arterioles, will double and treble the heart's labour. Common-sense reasoning would urge us not to drive the heart, but rather to relieve it of all unnecessary labour. This is what mercury does by its unique power of stimulating all glandular organs. It urges them to healthy metabolism, notwithstanding their œdematous condition. Hence the ptomaines vanish and with them the constriction of the arterioles, freeing the heart of half its labour. It is thus I would explain the excellent action of mercury in the case so well detailed by Dr. Murray, and also in one I have recorded on page 389 of "Essays in Heart and Lung Disease," which is briefly this: "A man with double aortic disease had orthopnœa and ascites, as well as general œdema. He was given cardiac tonics for three days with no relief, the urine remaining at twenty ounces. I then gave him a third of a grain of calomel every two hours; the urine at once rose to over 100 ounces, and in ten days the œdema and orthopnœa were quite gone, the heart was calm, and the pulse, which had been small and hard, was large and duly soft."

I am, Sirs, yours truly,

Birmingham, Sept. 28th, 1895. ARTHUR FOXWELL.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait, in his letter in THE LANCET of Sept. 21st, speaks of the "bagatelle risk of 1·6 per cent. mortality." Does he remember the mortality of about 15 per cent. in an institution in this town for the establishment of which he is responsible? Mr. Tait writes as though abdominal sections were resorted to chiefly for the removal of pus. It has been observed here by myself and others that ovaries and tubes said to be diseased have after removal proved to be not only free from pus, but from any sign of disease sufficient to justify the operation.

I am, Sirs, yours faithfully,

Southampton, Sept. 28th, 1895. J. F. BULLAR.

"A RARE FORM OF SKIN DISEASE FOLLOWING THE EXTERNAL APPLICATION OF IODINE LINIMENT."

To the Editors of THE LANCET.

SIRS,—Perhaps you will permit me to draw attention to a few points in connexion with Dr. Dobie's interesting case published in THE LANCET of Sept. 28th. In 1890 I pointed out that many drugs and specific poisons had the power, when introduced into the system, of irritating any or all of the channels of excretion. In this way we get dermatitis, bronchitis, dyspepsia, diarrhœa, nephritis, and so on in connexion with gout, ptomaines, exanthems (such as scarlet fever), and various drugs. Iodine is one of the drugs that seems to be capable of inflaming any of the excretory outlets. Its excretion, when not carried out by the kidneys, gives rise to the interesting group of symptoms known as "iodism." It has, moreover, actually been detected in the pustules of some forms of iodine rash. For some years I have been on the look-out for iodism where there was distinct evidence of kidney inadequacy. In Dr. Dobie's case there were albuminuria and signs of advanced kidney disease. My suggestion is that the iodine was absorbed into the circulation by the skin, that it was not excreted by the usual channel, the kidney, and that the severe general subsequent dermatitis was due to an attempt of the skin to throw off the irritant iodine; that the rash was, in fact, caused by excretory irritation.

I am, Sirs, yours faithfully,

Pump-court, Temple, E.C., Sept. 28th, 1895. DAVID WALSH.

"THE FIFTH YEAR OF MEDICAL STUDY AND PUPILAGE."

To the Editors of THE LANCET.

SIRS,—With regard to devoting six months of the last year of pupilage in the practice of a general practitioner, alluded to in your most interesting leading article in THE LANCET of Sept. 28th, is there anything to prevent the pupil, after he has qualified, returning to the scene of his last days of pupilage, taking advantage of the six months' introduction he has had to the patients of the general practitioner, and commencing a practice on his own account?

I am, Sirs, yours truly,

Park-street, Windsor, Sept. 27th, 1895. W. B. HOLDERNESS.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—The committee of management of the Sussex County Hospital have noticed with much concern a paragraph in THE LANCET of Sept. 21st, founded on a letter in a local newspaper, on alleged abuse of the charity by patients able to pay for medical attendance. Such a statement in the leading medical journal, if allowed to go

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unquestioned, would be more than likely to act prejudicially to the interests of the hospital, and though the committee would have welcomed the opportunity of reply previous to this publication they now hasten to lay before the Editors the following facts, which they trust may receive their attention, and should such commend itself to them induce some favourable notice in the next issue of THE LANCET. Before proceeding further the committee would point out a misleading statement in the letter above alluded to. The writer states: "The patients are drawn from a population of 150,000," though he goes on to mention: "Some of the patients are from other parts of Sussex;" as a matter of fact the Sussex County Hospital is for "the sick and lame poor of all nations," and from the figures of the first six months of the current year it is shown that 35·8 per cent. of the in-, and 21 per cent. of the out-patients were derived from places quite outside the towns of Brighton and Hove. The possibility of such abuse has from time to time received anxious considerations by the managing governors, and last year a subcommittee endeavoured in the most painstaking way to elicit the actual state of affairs in respect to this matter. The correspondent, quoted in THE LANCET, gives as an instance of abuse a supposititious case of hospital treatment of a child of a workman in receipt of 35*s.* or £2 a week, and yet there may be circumstances—to wit, a large family, other home sicknesses, operations, special treatment or nursing required, &c.—which may make the case, not only deserving of such treatment, but one that no hospital could refuse. The subcommittee, wishing to start on some definite principle, primarily laid down a scale as to what should under ordinary circumstances constitute a claim for admittance—say, a weekly income of £1 or less for single men, £1 2*s.* 6*d.* for married men, and an extra 2*s.* 6*d.* each for every child not earning a livelihood. As the circumstances, &c., of in-patients can during their residence in hospital be looked into, and their numbers are comparatively smaller, the inquiry was confined to the out-patient department. Several weeks letters of recommendation were carefully scrutinised, those not fully filled in were sent back for further particulars, and in certain cases were referred to the honorary medical officers in charge of the cases for their opinions as to the nature of the complaints and their claim for hospital treatment. In addition to this, the subcommittee took 100 letters pertaining to out-patients from Brighton and Hove, and personal inquiries were made into these through the Charity Organisation Society, clergymen of their parishes, their own houses, and other channels as to the verity of particulars given, and the justice of giving gratuitous treatment. To enter into the very many other particulars of this inquiry would extend this letter to inordinate dimensions, and the committee of management, therefore, merely quote the final result as given in their last annual report: "A searching scrutiny was made this year by a subcommittee, which showed that 96 per cent. of the cases were entirely fit and proper subjects for gratuitous treatment, and though in the remaining 4 per cent. sufficient evidence could not be obtained, it was thought that even in these cases, were closer scrutiny possible, it might be shown that several could be received without any abuse of the charity." It may here be mentioned that in the early part of 1894 an urgent appeal accompanied the annual report, urging all subscribers to exercise a closer supervision over all letters of recommendation granted by them Were this alleged abuse merely applicable to the charities quoted by the aforementioned writer of the letter, such would be of much greater weight, but it equally applies to all hospitals in the kingdom, and was prominently brought out as regards London in the inquiries made by the Lords' Committee. As regards the Sussex County Hospital, the facts herein narrated show how alive the managing governors are to check any such abuses, but the difficulty is very great, and the inquiries, both in reference to the patients themselves and the subscribers who recommend them, require delicacy and tact. Instead of dissolving the subcommittee at the end of the inquiry, it was considered that it would be politic and useful to keep it on in permanence for any further matters that might occur in reference to the same subject, and the committee can only say that if anyone will acquaint them with any case of abuse or suggest any practical remedies, such will receive their earnest attention and grateful thanks.

I am, Sirs, yours faithfully,

Brighton, Sept. 28th, 1895. W. H. ORTON, M.A., Secretary.

*** We are happy to give insertion to the above letter and are satisfied that the committee of the Sussex County Hospital are anxious to restrict the use of that institution to fit cases. We agree that even with 40*s.* wage there may be elements of sickness or misfortune in a family entitling it to consideration, but these cases are rare; and we are still of opinion that the committee will best command the respect of their supporters by keeping a very strict eye on persons abounding in every community who take as a charity that for which they should pay.—ED. L.

"RETURN" CASES OF SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 22nd last you published an article by Dr. A. K. Chalmers in reference to the reappearance of scarlet fever in a household shortly after the return of one of the inmates from hospital. *Apropos* of this subject the following case will be interesting. A child returned home on Aug. 31st last, after a residence of nine weeks and three days in a scarlet fever hospital. The nightgown and one or two small articles were returned to the mother, with a form stating that the said things had been properly disinfected and were free from risk of causing infection. This was on Saturday. On the Monday a sister of the patient wore the nightgown that had been returned from the hospital two days before. On the Wednesday night, forty-eight hours later, she was seized with sickness. On Thursday morning I was called to see her. On Friday morning the rash had appeared. I certified it as scarlet fever, and the child was removed to the hospital, where she died. I am not aware of any scarlet fever cases at all close by; the child that had come back was quite free from desquamation; it was holiday time, so school had nothing to do with it. There remains only the possibility of infection through the nightgown brought from the hospital. *Post hoc* is not always *propter hoc*, but in this case there is no doubt whatever in my mind that that is how the disease was produced. There can be no question that disinfection is thoroughly and efficiently carried out. Whence, then, the failure? I venture to suggest that the air in and immediately around a fever hospital is so full of germs that drying linen becomes reinfected. If so, either all articles must be destroyed, or disinfected elsewhere than at the hospital, and must be returned direct to the patients' homes without being taken again to the hospital. This is the second occasion within a few months in which the return of one of my patients from hospital has been signalised by a second outbreak in the same house. In both cases the homes and infected articles were disinfected on the removal of the first patient, and remained free from suspicion until the return of that patient. The importance of this subject justifies wide discussion.

I am, Sirs, yours faithfully,

Herne Hill, S.E., Sept. 28th, 1895. E. PAGET THURSTAN, M.D.

"THE EFFECT OF THYROID EXTRACT IN MYXŒDEMA COMPLICATED BY ANGINA PECTORIS."

To the Editors of THE LANCET.

SIRS,—May I point out regarding Dr. H. C. L. Morris's interesting note in THE LANCET of Sept. 28th on the above subject that the pathology of his patient's case is probably neither difficult nor puzzling, and that there is no need to invoke the aid of the nervous system? For many years I have been pointing out[1] that the high blood pressure which is the cause of the angina is nearly always the result of excess of uric acid in the blood. I have also pointed out[2] that extract of thyroid gland is practically equivalent to uric acid as regards both its physiological and pathological effects. Given these two points, the pathology of this case is simple enough—the uric acid or similar xanthin compounds contained in the thyroid extract entered the blood, raised the pressure, and made the angina worse. But, as Dr. Morris points out, Professor Schäfer has recently shown that thyroid extract lowers blood pressure, and it is quite true that it shares this effect with uric acid and the whole of the xanthin group. But it is also true that this primary fall of blood pressure is followed later by an equally constant and fully equivalent rise, and it is during this secondary rise of blood

[1] Uric Acid, second edition, pp. 111 and 139.
[2] Ibid., p. 74.

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pressure that the angina occurs. This is probably so even in Dr. Morris's own case, as he tells us, with reference to the second attack, that he gave "two grains and a half every second day," and that "he experienced no discomfort until the twelfth day." Now, if the thyroid was given, as seems probable from the context, on the first, third, fifth, and uneven days, then there was none given on the even days, and the attack occurred on the even day, the twelfth—i.e., the dose given on the eleventh caused a fall of blood pressure on that day followed by a rise next day, and this rise was increased by a certain amount of uric acid or xanthin which had accumulated during the previous administrations from the first to the eleventh day, some fifteen grains in all. My writings on angina have been quoted by others as explaining their cases, notably by Professor T. J. Mays,[3] who also points out the very interesting fact that the attack of angina may, just like the attack of headache or epilepsy, be preceded by feelings of exaltation and well-being. In other words, there is a fluctuation in the excretion of uric acid: with its diminished presence in the blood and minus excretion in the urine go relaxed arterioles, low blood pressure, and mental brightness or well-being; with its natural and corresponding fluctuation in the opposite direction there is excess of uric acid in the blood and urine, and with that go contracted arterioles, high blood pressure, and the headache, the fit, or the angina. The parallel between these diseases is therefore absolute and depends on community of causation; neither of them is directly due to the nervous system, but only to the effects of the altered circulation upon it. I have heard of at least one case of epilepsy in which the administration of thyroid extract for some other trouble seemed to increase the fits or bring them on when otherwise absent, and I can answer for it that it has the same effect in headache. I also hope to publish shortly a case of epilepsy in which it rather appears that by controlling the daily introduction of uric acid I was able to control to some extent the frequency of the fits.

I am, Sirs, yours faithfully,

Brook-street, W., Sept. 30th, 1895. ALEXANDER HAIG.

"HOW SCARLET FEVER IS SPREAD."

To the Editors of THE LANCET.

SIRS,—I am obliged for your annotation in THE LANCET of Sept. 28th under the above heading relating to a case of mine in the Lexden and Winstree district, which you have described very fairly, but not so strongly as the case really stood. The family in question had been ill for weeks at Coggeshall, and after some of them had recovered—and, I may say, all were convalescent—they were removed to a lodging-house at West Mersea, which was not away from other houses of the like character, as the medical attendant told me in his letter he understood to be the case, but right in the middle of the village and between two such houses. This removal occurred on Aug. 14th, and on the morning of the 20th I had a letter from the medical attendant enclosing five notifications, each of which related to a member of this family. Each certificate stated that the individual "is suffering from scarlet fever." Our case was exposure on the public road and the beach between these dates. One would have thought the offence was very clearly put before the magistrates, yet the majority decided to dismiss the case. It is hard enough to have to take the trouble to get such cases up, which one simply does for the public safety, and I can assure you the work entailed is far from being inconsiderable; but it is most annoying to get beaten in such a straight-running case and then to be jeered at by the father of the family when you meet him in the street. I send you a copy of the *Clacton News*, giving a report of a case prosecuted at Thorpe bench last Monday for the conveyance of a girl suffering from diphtheria by rail and carrier's van from Clacton-on-Sea to Sibton Street in Suffolk. This case had a very different ending, a fine of £3 having been inflicted, although on account of the woman's poverty the costs were remitted by the magistrates. It is high time that such ignorant and obstinate individuals were shown that they must obey the law, and not break it as it suits them at the time. I serve three most painstaking authorities, and I feel sure either of them would be ready to enter a prosecution in any case where the public safety was endangered.

I remain, Sirs, yours faithfully,

Colchester, Sept. 30th, 1895. JOHN W. COOK, M.D. ABERD.

[3] International Clinics, second series, vol. vi.

"PRESYSTOLIC APEX MURMUR WITHOUT MITRAL STENOSIS."

To the Editors of THE LANCET.

SIRS,—Dr. Phear's interesting paper having raised in the columns of THE LANCET the question of the nature of presystolic murmurs, I am induced to lay before you a view of the question which has not yet, I believe, received attention. From the observations of Dr. Phear and others, it is quite clear that constriction of the mitral orifice is not an essential element in the production of such murmurs; nor is this surprising, for it is well made out that a very slight irregularity in the blood passages will give rise to these phenomena. I believe we can go a step further. It is an established fact that some kinds of irregularities in the flow of the blood (dependent, no doubt, upon irregular action of the propelling mechanism), without any definite or at least permanent change in the blood passages, are capable of causing murmurs—the so-called hæmic murmurs. These are usually coincident with the ventricular systole, but there is no reason why such murmurs should not be produced wherever there is a flow of blood. Now there is such a flow into the ventricle during ventricular diastole, and a pretty sharp one too. The *bruit de diable*, resembling the presystolic murmur in its rumbling character, is produced by the mere venous flow of blood. Two cases that have come under my notice lately have led me to believe that hæmic presystolic murmurs do occur. In both of these a pure presystolic murmur was noticed on admission to the out-patients' department of the Victoria-park Chest Hospital, but could not be demonstrated a few weeks afterwards. The patients were not anæmic and no thrill was felt. I am inclined to think that, if those presystolic murmurs which are not accompanied by much distress were followed up, some, though perhaps not a very large percentage, of them would be found to disappear, and should be rightly placed in the category of hæmic murmurs.

I am, Sirs, yours faithfully,

London, Oct. 1st, 1895. T. GLOVER LYON.

PREMATURE INTERMENT.

To the Editors of THE LANCET.

SIRS,—It is worthy of remark, in connexion with a question which is at present exciting some discussion, that a greater prominence has not been given to the loss of electro-muscular excitability as a sign of death. Forty years ago the subject was investigated by Crimotel, twenty years later by Rosenthal, and more recently by Onimus. It seems safe to say that in no disease, certainly in none of those conditions usually enumerated as likely to be mistaken for death, is galvanic and faradaic excitability abolished in every muscle of the body. On the other hand, electro-muscular contractility disappears in all the muscles within a few hours after death (generally ninety minutes to three hours according to Rosenthal), its persistence varying to some extent with the particular muscle examined,[1] and with the mode of death[2]. Therefore, if electro-muscular contractility be present in any muscle it means life or death only a few hours before. It is clear that no interment or post-mortem examination ought to take place so long as there is any flicker of electric excitability. To me it seems almost equally obvious that in all doubtful cases, sometimes in sudden death and often to allay the anxiety of friends, this test ought to be applied, and applied by one who is accustomed to handle electric currents for purposes of diagnosis.

I am, Sirs, yours faithfully,

Brighton, Oct. 1st, 1895. W. S. HEDLEY.

"DEATH FROM VEGETABLE POISONING."

To the Editors of THE LANCET.

SIRS,—Your Manchester correspondent declares that "any apparent scepticism was not as to the symptoms, for

[1] Onimus, experimenting on a guillotined criminal, found that two and a half hours after death electro-muscular contractility disappeared in the tongue, diaphragm, and muscles of the face. In the limbs the extensors died before the flexors. The muscles of the back were contractile up to five or six hours after death and the abdominal muscles longer still. Beard and Rockwell, eighth edition, p. 152.

[2] Disappears more rapidly after death from chronic than from acute disease; more rapidly in wasted than in well-nourished muscles.—Rosenthal.

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they were not described in the report." Here he is right, but the scepticism, which was real as well as apparent, referred to the want of a description of the symptoms; and to the great majority of persons of ordinary education this, together with the whole tenor of the article, conveys the innuendo that there were no symptoms to describe or that they would not bear out the conclusion come to. Your correspondent admits "apparent scepticism" firstly as to the occurrence of henbane in the park. I beg to meet this and to answer the last sentence in the article of last week by saying that henbane does grow in the park. The second cause of "apparent scepticism" being founded on an error—viz., that the deceased said she ate green sauce (she did not say this)—therefore falls to the ground.

I am, Sirs, your obedient servant,

Gorton, Manchester, Sept. 30th, 1895. B. W. MACARTHUR.

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY, BUDAPEST, 1894.

To the Editors of THE LANCET.

SIRS,—I take the liberty of asking you kindly to grant space in your valuable paper for the following statements. We are now sending out to the members of the Congress the first volume of the Transactions of the Congress. Members who have not previously sent in their addresses, or who may have since changed their domicile, are respectfully requested to send in correct addresses so as to avoid delay in sending out the other volumes. Non-members of the Congress may obtain the Transactions by sending in a subscription of ten florins, Austrian money, together with two florins for postage; the amount to be sent in to the Director of the St. Rochus Hospital at Budapest. All other communications should be addressed to the editor as given below.

I am, Sirs, yours obediently,

SIGISMUND DE GERLOIRY, M.D.,
Editor of the Transactions of the Congress.

St. Rochus Hospital, Budapest, September, 1895.

"GUARDIANS AND MEDICAL OFFICERS."

To the Editors of THE LANCET.

SIRS,—As medical officer to, I believe, the largest and most populous district in the metropolis—the number of patients in my register reaching to about 2200 annually and having the attention of three relieving officers—I can speak with some experience regarding these officers and their ways. In the first place I must traverse your dictum that a relieving officer has *no absolute* discretion in dealing with an urgent case; probably he has no *practical* discretion in the actual working of the Act, as, according to the Consolidated Local Government Board Act, a medical officer might recommend this, that, or the other, but the relieving officer has absolute discretion to do just as he pleases. Of course, he takes all responsibility, should he refuse to accede to the recommendation of a medical officer and death resulted. I consider this a great flaw in the Act, conferring great power and discretion on the relieving officer, who is least able to bear it. Our board sent out instructions some two years since that a medical officer in recommending relief should state not only what food was necessary, but the actual quantity of each foodstuff. This was found to be a complete dead letter. I found that the relieving officer gave out just what he had in stock, and, as regards quantity, he had to supply not only the patient, but the wants of the family, so that my quantities were of no avail. As regards stimulants, our board are very particular, and I can say, having been in office now about nine years, that no stimulant has ever been given as out-relief.

I am, Sirs, yours truly,

September 28th, 1895. DISTRICT MEDICAL OFFICER.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—I am unable to see what advantage or profit can be gained from the letters of Dr. Shettle under the above heading. Vague speculations as to the influence of the earth's magnetism upon the phenomena of life are unnecessary and tedious. If Dr. Shettle has performed any experiments or collected any new facts respecting the physiology of death from electric shock, by all means let us have them, and let them be as briefly stated as possible. For my part I am entirely sceptical as to the production of electrical currents in the body by the flow of blood across the magnetic lines of force which traverse the body, and it does not even seem to me to be worth while discussing in detail many points raised by Dr. Shettle, where, in my opinion, either his premisses or his reasoning are unsound.

I am, Sirs, yours obediently,

Sept. 29th, 1895. A PRACTICAL MAN.

ERRATUM.—In Dr. Alexander Morison's letter on non-stenotic mitral bruit in THE LANCET of Sept. 28th "valvular contraction" is printed instead of *ventricular* contraction.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 815.)

MEDICAL AID COMPANIES AT EASTBOURNE.

THE situation at Eastbourne differs fundamentally from what I have seen and described at Portsmouth. In the latter town a union of medical men has been formed to resist the encroachments of the friendly societies who seek to form lodges of children and females. At Eastbourne the question of the friendly societies has not yet been taken in hand, and for the moment the struggle is directed against the National Medical Aid Company, Limited. The method of action at Eastbourne is also totally different. For many years two assurance companies which deal mainly with the poor have done an extensive business in this town. The one is the Liverpool Victoria Legal Friendly Society and the other the Prudential Assurance Company. To secure life assurances the former of these companies became intimately associated with the National Medical Aid Company, Limited. It employs a considerable number of canvassers, and it would seem that these men find it easier to persuade people to insure against sickness than to insure their lives. The canvassers, therefore, very often open the negotiations by pointing out the advantage of paying 1*d.* per week to the National Medical Aid Company so as to secure the services of the medical men employed by that company. Then when this point has met with approval the canvasser explains that such medical insurance cannot be obtained unless the person in question also insures his life and that the life insurance is granted by the Liverpool Victoria Legal Friendly Society. This method of canvassing for life insurances proved so successful that the Prudential Assurance Company was compelled to adopt similar means. Thus the two great assurance companies which do the most business with the poorer classes of Eastbourne became, practically speaking, medical aid societies. This gave rise to serious grievances and abuses.

Early this year a private meeting was held. Some of the younger members of the profession, who suffered considerably from this state of affairs, approached the Eastbourne Medical Society. This is a purely scientific body constituted for social purposes, and not especially with a view to defending the material interests of the profession. Nevertheless, Dr. Muir Smith was allowed to read, last April, a paper to this medical society setting forth the abuses that had arisen. A resolution was carried to the effect that the medical profession should themselves organise a medical aid society, which would do the work that had previously been done in a manner contrary to the ethics of the profession and for the sole purpose of promoting the interests of commercial assurance companies. For this purpose the resolution carried at the meeting of the Eastbourne Medical Society urged that a charitable institution, an endowed provident dispensary which exists at Eastbourne, should be asked to take the matter in hand. The Provident Dispensary was requested to coöperate and reorganise on the lines approved by the general body of the profession at Eastbourne. These negotiations were not, however, successful. It was stated that the fact that the dispensary in question had endowments made it difficult to alter its rules and methods of working. One of the great objects held in view was that

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the number of medical men giving medical aid should not be limited. The National Medical Aid Company at Eastbourne employed three medical officers and was willing to guarantee a minimum income. This is undoubtedly a great temptation for the young practitioner who has no opening and no private means to live upon while he creates a practice. Now, however, it can no longer be said that these assurance and medical aid companies are the only road to a poor practice. The association which the medical men themselves have formed opens its arms to all new-comers if they are fully qualified. This association was organised when the negotiations with the existing dispensary fell through. It is called "The Eastbourne Provident Medical Association" and was finally constituted in August. It began work at the commencement of September this year. The object of the association, as officially stated in its rules, is to establish a self-supporting society to enable such persons within the borough of Eastbourne as cannot pay for medical attendance at the usual rates to secure for themselves and their families the advantages of medical attendance, advice, and medicine during illness. Thus, it will be seen, the object is the same as that professed by the medical aid companies, but the management is entirely in the hands of the medical profession, and there can be no further question of utilising medical aid as a means of inducing people to insure their lives for the benefit of some financial speculation.

The Eastbourne Provident Medical Association is managed by a general committee consisting of all the acting medical staff and of a consulting medical staff of two representatives deputed by the Eastbourne Medical Society who are not on the medical staff of the association. This latter clause was inserted so that there should be some outside control, but of a purely professional kind and appointed by members of the profession not financially interested. The honorary secretary and the honorary treasurer are also medical men, but are not members of the staff. The association was fortunate in securing Mr. J. H. Ewart, the present President of the Eastbourne Medical Society, as its chairman of committee and treasurer. The post of honorary secretary is held by Dr. A. Harper. Both these gentlemen have the right to speak and vote at the meetings of the managing committee. Seven members, including the officials, form a quorum. For ordinary routine work there is a subcommittee consisting of the secretary, the treasurer, and three committeemen, three in this case forming a quorum. The first thing to be done was to appoint one or more collectors at a weekly salary and a commission. These collectors have to go round to all the members, collecting the weekly or monthly subscriptions paid to obtain medical aid, keep account of the same, and pay the money received to the treasurer once a week. The treasurer has to check the collectors' books; and every quarter, after deducting what is required to pay the working expenses, he divides the rest among the acting medical staff proportionately to the number of members on their respective lists. Thus each medical officer is paid exactly in proportion to the number of persons under his care, and he receives all the subscriptions these persons have paid except what is deducted to cover the working expenses. This completely puts an end to the exploiting and sweating of medical men. The pay may not be high; but, such as it is, no one makes any profit out of it save the medical man himself. Also the public—that is, the subscribing members—will not be urged by canvassers or collectors to seek the services of one medical man instead of another. One of the rules stipulates that "no orders or communications shall be given to the collectors except through the honorary secretary." Then, while no particular men are to be especially recommended by the collectors, the association, as already mentioned, is open to all comers. This is the rule, and, as important principles are involved, it is worth quoting the text of the rule word for word:—"Any duly qualified and registered practitioner resident in Eastbourne (not practising as a homœopath) may become a member of the staff, subject only to his appointment being approved by the committee. All members of the staff must also sign an undertaking (*a*) not to conduct clubs of their own at all (other than friendly societies registered under the Act), unless it be at rates *higher* than those of the Eastbourne Provident Medical Association; (*b*) to have no professional intercourse whatsoever with any medical man who associates himself with any of the companies known as medical aid societies or with similar institutions so long as the methods adopted by these societies include (1) canvassing for members in the interest of individual practitioners; (2) the virtual sweating of their medical officers by the inadequate remuneration offered for the work done."

The latter part of the above rule has also formed the text of a general declaration which has been presented to all the practitioners at Eastbourne. Thirty-eight medical men have signed this pledge. Only one has failed to do so, and he is not hostile to the object held in view, but objects to anything that may be considered like a trades-union. The medical profession at Eastbourne, it must be acknowledged, have acted with great public spirit, and the feeling of professional solidarity has been strong among them. At the same time it would be a mistake to imagine that a similar high and honourable spirit prevails among the medical men of every town in England. It would not be so easy to secure everywhere the same unity of action. There is at Eastbourne an exceptionally large proportion of active medical men who possess private means, and who can therefore afford to enter upon a struggle with the medical aid companies. Then there are various local social reasons which tend to give a high tone to the members of the profession who practise at Eastbourne. Thus, the above pledge was not only readily signed, but has been honourably observed.

The primary object in this movement has not been to improve the financial situation of the medical men, but to combat that system of canvassing which built up a private practice in a manner opposed to all professional rules. The canvasser, to secure his commission and to promote the interests of the assurance company he represented, would try to persuade persons to leave their medical man and to accept instead the services of the practitioner who was the servant of the association or company for which he worked. In thus touting it was not to the canvassers a matter of professional etiquette—it was merely a matter of business; their only object was to obtain customers and to gain commissions. They used the medical man as an article of trade, as a sort of decoy duck so as to obtain subscribers to their assurance companies. The methods, the arguments, and the language employed by these canvassers was altogether derogatory to the dignity of the profession. It was intolerable that medical men should be thus utilised as a bait for the running of commercial companies. The question of inadequate remuneration was altogether a secondary consideration. The National Medical Aid Company, Limited, used to collect a penny per week from adults and a halfpenny per week from juveniles; but on a joint protest being made by its medical officers in 1893 the subscription was raised to a penny for juveniles. From this sum 15 per cent. was deducted for working expenses and the rest given to the medical officers. But the company also charged and kept for itself 4*d*. for entrance fee, 2*d*. for first card, and 1*d*. for other cards. It further enforced the renewal of cards when they were soiled. Still, the general impression is that it is not from these small sums or from the 15 per cent. deducted from the subscriptions that the main profits are made. The chief object is to induce people to insure their lives or join a burial fund; and the fact that so many persons thus insured ultimately let their policies lapse adds immensely to the profits of the undertaking.

It must also be noted that to the canvasser for a company the question of wage limit is of no importance whatsoever; on the contrary, far from desiring that only poor people should subscribe for medical benefits, the canvasser prefers those who are comfortably situated, for they are more likely to pay large premiums for life insurance. Thus, the material interests as well as the dignity of the medical profession were compromised. Such are some of the principal reasons which have led to the formation of the Eastbourne Provident Medical Association. Having decided upon this course of action, the three medical officers in the service of the National Medical Aid Company, Limited, gave a three months' notice of their intention to quit. They employed the interval in explaining to their patients the motive of their resignation and that they would secure the same advantages by joining the new association which the profession had themselves formed. There seems to be but little doubt that the great majority of the members will follow their medical men and join the new association the latter have organised. Then all those practitioners who had private, medical, or slate clubs of their own have brought over all their members to the new association. This was the more easy to do as in most instances it did not involve more than a change of name. The members

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pay about the same subscription and are attended by the same medical man. There are already nine practitioners on the medical staff of the Eastbourne Provident Medical Association, and this is a great practical advantage. No benefit club, no medical aid company, could possibly offer its members so large a choice of medical men in so small a town as Eastbourne. As a rule, members joining such organisations have no choice at all, but must accept the services of the medical officer of their society who resides in their district. For these and other reasons the propaganda in favour of the new association was so successful that the three medical officers in the service of the National Medical Aid Company were not required to serve the full three months of their notice. They were set free at the end of the second month, for fear, perhaps, that they would persuade all the members subscribing to the company to subscribe in future to the association founded and managed by the medical men themselves. The National Medical Aid Company, driven into a corner by the resignation of its fully qualified medical officers, has had to import medical assistance. No sooner had the gentleman selected arrived at Eastbourne than a courteous appeal was addressed to him not to place himself in opposition to the interests and the unanimous opinion of the medical profession at Eastbourne. He, however, replied that it was for him a question of £ *s.* *d.*, and that if he refused the post there were many others quite willing to take it. He is alone to do the work of the three medical officers who resigned, but there is not so much to do, for so many of the members of the National Medical Aid Company have now left that organisation to join the Eastbourne Provident Medical Association. Consequently the presence of this gentleman at Eastbourne does not cause much apprehension. Still, the question remains as to what is to be done with the practitioners who in such struggles serve medical aid companies, who take sides against the interests of, and help to thwart the efforts made to maintain the dignity of, the profession

With regard to the Prudential Assurance Company there have been no difficulties at Eastbourne. This company does a very large insurance business with the poorer sections of the Eastbourne population and never desired to complicate this business with the giving of medical aid. The competition, however, of the Liverpool Victoria Legal Friendly Society compelled it to add medical aid to the ordinary inducements offered to its customers. For this purpose the Prudential Assurance Company asked two or three medical men to allow it to use their names. The agents of the Prudential Company were, nevertheless, strictly enjoined not to canvass for medical men and were given no incentive to do so. If a person who was urged to insure his life, on his own accord asked to be also insured against sickness, the agent mentioned the names of the medical men, but not otherwise. The agent received no commission if the medical insurance was effected; it only enabled him to offer the same advantages as the rival life insurance company. The arrangement, also, is a purely local affair and not a general custom with the Prudential Assurance Company. If, though not in any way urged to do so, the subscriber to a life insurance also desired medical aid he had to present himself to one of the medical men suggested by the agent, who examined the person and imposed his own wage limit. The medical man then sent his own collector for the weekly or monthly payments, paid his own expenses of collecting, and kept all that remained for himself. Under these circumstances the Prudential Assurance Company has no objection to the formation of the Eastbourne Provident Medical Association; on the contrary, all its members that desire medical aid have been transferred to this association. The Prudential Assurance Company is working in harmony with the medical profession and advises all its customers to join the organisation formed by them. Though this is of no direct financial advantage to the Prudential Assurance Company it enables the company to attend strictly to its own business instead of dabbling with medical aid; and to those of its customers who want medical aid the company can offer a choice of nine medical men of good reputation, while its rivals can now only command the services of one single practitioner.

The Eastbourne Provident Medical Association has boldly grappled with the vexed question of the wage limit. First, it stipulates in its rules that no person can become a member who is in receipt of parochial relief. All applicants must be examined and declared to be in good health by one of the medical officers, and persons of indifferent health can only be admitted at special rates to be determined by the committee. Then the rules explain that, "although a most desirable matter, it is very difficult in practice to adopt a hard-and-fast wage limit, and therefore it would appear that the best way of preventing abuse of the association by persons who are too comfortably off will be by leaving absolute discretion in the hands of the committee to consider the case of every applicant on its own merits."

The fact is that at Eastbourne, more especially, a hard-and-fast rule would not be fair. Living is very dear at Eastbourne, and rents are particularly high. The average rent of a workman's cottage is 8*s.* a week; no cottage can be found under 6*s.*, and many working men have to pay more than 10*s.* a week for rent. Provisions generally are dearer than in large manufacturing towns, and great distress prevails in the winter, for most of the artisans at Eastbourne depend on the building trades. Even the lodging-house keepers are often in sore difficulties, for they have enormous expenses, and they are not always certain of letting their apartments. Thus, there are several good reasons for admitting a high wage limit, and the matter is left in a measure to the discretion of the committee. Nevertheless, there must be a general rule, and the Eastbourne Provident Medical Association has not hesitated, in spite of the above difficulties, to establish such a rule. It is, therefore, stipulated as a general principle that for families, if the combined incomes of the parents do not exceed 35*s.* a week, the payment shall be 2*d.* per week for each person above fourteen years of age, and 1*d.* a week for each child under that age. If the combined incomes do not exceed 25*s.* the charge shall be 1*d.* a week for parents and children alike. It is expected that the whole of the family will be entered on the lists, exception being made, however, in the case of any members who may already be members of a registered friendly society. In large families not more than six children will be charged for. When children reach their fifteenth year they can continue their membership by paying the subscription charged for adults. Domestic servants are not admitted as members, but a member who subsequently becomes a domestic servant does not forfeit the privileges of membership. For single persons the wage limit is fixed at 20*s.* per week. The committee reserve the power of giving a quarter's notice and then removing from the books the name of any person who is ascertained to be in receipt of such an income as to render him or her unsuitable for membership. Such persons may, however, give explanations to the committee in self-defence. A charge of 2*d.* is made for cards of membership, the payments must be made in advance, a member more than a month in arrears loses his rights, and his name is effaced from the books if two months in arrears. Those who desire readmission must pay all the arrears due or such part as the committee may require. With regard to confinements, the rule is that the member shall employ the medical man on whose list she is inscribed, but if she prefers to employ some other medical man she must forfeit her right to the former's professional services for a period of six weeks. The fee for confinement is fixed at 15*s.*, payable at any date previously to the confinement. The same charge is made for premature confinements. For vaccinations only calf lymph is employed, and this at the bare cost of the lymph. Special rates, which have not yet been fixed, will be charged for fractures, dislocations, and major surgical operations. Members on joining select the medical man they prefer, but they must give a quarter's notice if they wish to change. Finally, it is stipulated that an annual meeting of all the local members of the profession shall be held to hear the report of the Eastbourne Provident Medical Association. The committee may by a two-thirds majority alter the rules if all the members have a clear twenty-eight days' notice of such proposed alteration.

Such, then, are the rules of this benefit society which the medical men have themselves organised. They have sought to solve the problem by taking the whole matter into their own hands, and the experiment will certainly be watched with keen interest by the whole medical profession.

Eastbourne, September.

SKETCHES FROM RHENISH WATERING-PLACES.

(BY OUR BERLIN CORRESPONDENT.)

THE number of watering-places and health resorts on the Rhine and in its vicinity is so great that a medical man who can spare but little time for the purpose will find it nearly

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impossible to visit them all. Some selection being therefore essential, I first directed my steps to Homburg. It is hardly necessary to describe this place to English readers, as perhaps no other foreign watering-place is so well-known in England, neither has any other acquired such a specially English character as Homburg. On arriving at the station after half an hour's journey from Frankfort the English visitor is surprised to hear the drivers of the public vehicles receive strangers whom they suppose to be of British origin with the words, "Carriage, Sir," or something equivalent which they might have learned from the cabmen at Charing-cross or Victoria Stations. On passing through the town one might almost think that English is the vernacular, such advertisements as "Furnished rooms to let," "German rusks," "English perfumery store," &c., being everywhere visible. The people thronging the streets are like those to be seen in a fashionable English resort patronised by seekers after health or amusement, so much so that were it not for the soldiers of the garrison and some other types who prove that one is in Germany, one would seem to be in Bath or Bournemouth. I, indeed, often expected to meet at the next corner either a party of the Salvation Army, or minstrels with blackened faces, or some other of the street scenes peculiar to English towns. Homburg owes its popularity in England to two causes: the first is that the frequent and prolonged visits of the Prince of Wales have made it fashionable for the higher classes and their imitators to go there. With real pride the head waiter on the Kursaal terrace told us that he was expecting to have His Royal Highness and seven English dukes at dinner that evening, of course not mentioning the crowd of earls, viscounts, and other aristocrats of less degree. It is really a very pleasant spectacle to see the Kursaal terrace on a lovely summer evening, crowded with distinguished-looking people, all in evening dress, taking a short after-dinner walk or listening to the musical performance of the admirable Kursaal band. The other cause of Homburg's celebrity—a more valid one and of more medical interest—is its fresh and bracing air, which attracts people in search of a comfortable and charming summer resort, and the multiplicity of its springs and other therapeutical arrangements which appeal to patients suffering from chronic catarrh of the stomach, bowels, or biliary organs, as well as to the gouty and the anæmic. In addition to the natural saline and ferruginous waters, all kinds of artificial baths are supplied in a new establishment built close to the springs. The baths are heated by pipes placed underneath in order to avoid undue loss of carbonic acid. An inhalation-room is connected with the bathing establishment, whilst hydropathic and electrical treatment and massage are performed in special departments. No medical man visiting Homburg should omit a trip to the Falkenstein Institute for Phthisical Patients. This hospital is situated near Cronberg, the residence of the Empress Frederick, about five miles from Homburg, and was one of the first where the open-air treatment of the phthisical was used. It is built on the southern side of the Taunus mountains and is protected from the cold northern winds by these mountains, which ascend gently from the valley of the river Main and form a vast amphitheatre around Falkenstein, Cronberg, and the adjacent places. This sheltered situation makes Falkenstein comparatively warm in winter, and the patients can leave their rooms nearly all the year round. As Falkenstein is about 400 metres (1300 feet) above the level of the sea the air is not so relaxing as might have been supposed from the nearly total absence of atmospheric currents. The patients live partly in a kind of central building, which also contains the dining-hall, reading-room, billiard-room, &c.; all well ventilated and heated by hot water, and partly in cottages built in the large park belonging to the establishment. The advanced cases rest nearly all day on couches in the park, whilst the more vigorous are allowed to walk in the surrounding forests. There are three resident physicians in the hospital, and consultants from Frankfort attend the patients when required. The physicians of the hospital principally insist upon a liberal diet, with plenty of milk, whilst medicine is hardly ever prescribed. The institution is patronised by many Germans and foreigners, but the medical men told me that English visitors are very rare, and they would be glad if the profession in England would devote some attention to this establishment. Prominent among its advantages is the circumstance that patients there are under constant medical supervision, and therefore cannot behave in the inconsiderate fashion not unknown in Davos and other places where hotel life is the recognised system. The Falkenstein institution was founded by a citizen of Frankfort, and its regulations were based upon the principles laid down by the late Dr. Brehmer of Görbersdorf. The charges for board and residence, although moderate, are much too high for the poorer classes; but the proprietors do not intend to make money by their enterprise, and, according to the rules of the company the profits, when they have reached a certain amount, are to be employed in the construction of a free hospital for indigent patients.

Travellers from Homburg to Wiesbaden must proceed to Frankfort and start from its central station, one of the largest and certainly, from an architectural point of view, the finest in existence. Only a short journey has to be made, passing through Höchst, the seat of the great "Farbwerke," a very extensive manufactory of chemical products, which supplies nearly the whole world with drugs and chemicals such as antipyrin, phenacetin, carbolic acid, aniline colours, &c., including Professor Behring's antitoxin for diphtheria; the forest of high chimneys belonging to this vast establishment is visible from the railway. We then pass through Castel, opposite to the town of Mayence with its hundred towers on the other side of the Rhine, and in forty minutes from Frankfort come to Wiesbaden. On first arriving there the traveller can scarcely believe himself to be in a health resort, all the appearances being those of a considerable town with long and busy streets and a puffing steam-tram. But on coming nearer to the visitors' quarter, with its beautiful and well-shaded park, its fine kurhaus, and the Kochbrunnen, where crowds of patients are assembled to take the waters, the scene is totally changed. Wiesbaden, indeed, unites the advantages of a thriving town of about 80,000 inhabitants with the requirements of a highly fashionable health resort. It is, therefore, not only a place where people go for the benefit of their health, but has also for a long time been a favourite residential locality for retired military officers, civilian officials, and business men, who appreciate its genial climate with its additional attractions of theatres, concerts, and other amusements; while they can live there as comfortably as in Berlin or Frankfort and at much less expense than in those towns. In summer the temperature is rather high, but, nevertheless, we saw a number of patients; the principal seasons are, of course, the spring and autumn, when all the hotels and boarding-houses are overcrowded; but even during winter there are many patients, as the climate permits them to enjoy the fresh air during a great part of the day. Wiesbaden is the paradise of the rheumatic. They can take hot alkaline baths without going out of doors, as nearly all the hotels are connected with bathing establishments; there are also excellent arrangements for massage, hydropathic treatment, and other therapeutic expedients necessary for this class of sufferers.

A short distance from Wiesbaden is Rüdesheim, celebrated not only for its wine, one of the best produced in this fertile country, but also for the national monument, a gigantic statue of Germania, erected on the top of the Niederwald mountain as a memorial of the revival of the German Empire, and visible from the train as it crosses the Rhine for Bingerbrück. From this station Kreuznach is reached by rail in a very short time. Kreuznach is widely known on account of its saline springs containing iodine and bromine, and also on account of its mother liquor, which is obtained by partial evaporation of the water and is exported to every part of the world. The brine works are situated about twenty minutes from the town, and many children, especially such as are tuberculous, may be seen sitting or playing in the large open halls of the brine works where they are sent to get the benefit of the salt-laden air. As in Wiesbaden, the hotels here have their own bathing arrangements. Kreuznach, too, like every watering-place of the better class in Germany, has its Kurhaus; the population is almost cosmopolitan and the whole place has a fashionable aspect. Those who wish to use the same springs as at Kreuznach, but desire a quieter locality may stay at Münster-am-Stein, a little place about half an hour's drive from Kreuznach, where there are very large brine works and wells of an identical kind. The efficacy of the water is, of course, the same, whilst everything is more simple and less expensive than in Kreuznach. But what makes Münster preferable is the circumstance that not only are the environs much more attractive, but the brine works are in the town and not outside it as at Kreuznach. These two sister towns are very

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hostile to each other, and it is really comical to see Kreuznach insinuating that Münster has falsified the analysis of its spring, and Münster asserting that the so-called Kreuznach mother-liquor comes mostly from its own brine works. These local quarrels often find expression in the advertisement columns of the German medical and lay press, to the great amusement of their readers. The Rhine steamer brings us from Bingerbrück, on the most beautiful part of the Rhine, to Niederlahnstein, where we again take the railway for Ems. Considerations of space compel me to abstain from a more detailed description of this watering-place, with its alkaline saline springs, used from remote antiquity for catarrhal affections of the air passages, the respiratory and digestive organs. I must confine myself to the statement that in respect of hygienic and therapeutic arrangements Ems is one of the best appointed places, that the inhalation-rooms which are of so great importance in laryngeal cases are first rate, and that the town itself, nicely situated on both sides of the river Lahn, is very attractive and clean looking. Ems, indeed, needs not to be recommended to the profession, as patients from nearly every part of Europe are sent there by their medical advisers. Here we terminated our inspection of the health resorts, and in the character of ordinary tourists went on over Coblenz and the Moselle valley to ancient Trier, once a residence of Roman emperors.

THE FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.

(FROM A SPECIAL CORRESPONDENT.)

(Continued from p. 814.)

TUESDAY, Sept. 24th, at 9 A.M., found the Congress steadily at work, overtaking in the order officially settled for each sitting the several communications and memoirs on the agenda paper. The attendance was good, and Professor Politzer, as president for the forenoon, maintained the business at a high level of efficiency and dispatch.

Anything like a detailed account of each paper as it was read and discussed would be impossible within the limits of a letter. To say nothing of the fact that the successive "conferenzieri," as Italians style the authors of such communications, got through their matter with a rapid elocution not always easy to follow, the few remarks interjected at the close by a specially interested auditor did not always reach the point of serious criticism, such as could give rise to really fruitful discussion. Indeed, the majority of the "Congressisti" seemed to content themselves with "general impressions," awaiting the opportunity of mastering the views and counter-views advanced when the officially edited "Atti" would be in their hands. In these circumstances all that even the "special correspondent" can do is to report the proceedings in swallow fashion—"skimming and dipping."

An exceptionally interesting and instructive thesis was that of Professor Gradenigo of Turin on the General Treatment of Internal Otitis, which formed, indeed, the main feature of the forenoon sitting. In the afternoon Dr. Gellé presided, when Dr. Corradi of Verona read his communication on Traumatic Perforation of the Tympanum, on which, again, an interesting discussion arose, the chief interlocutors being Professor Politzer and Dr. Gellé. He was followed by Dr. Ferreri of Rome, whose carefully elaborated exposition of Senile Alterations in the Middle Ear was listened to with marked attention and criticised by Professors Politzer and Gradenigo and by Dr. Gellé. Matter of somewhat inferior interest ensued until Dr. Delstanche of Brussels brought back the attention of the audience to a high pitch by his eminently lucid and practical paper on the Employment of Liquid Vaseline in the Treatment of Affections of the Middle Ear. The author's great experience and successful practice lent particular weight to his views, which were confirmed by some of his critics, while others asked for further information as to the mode of injecting the vaseline, as to the quality of the liquid (whether sterilised or not), the necessity or otherwise of adding iodoform, and a number of similar points. The sitting lost none of its animation when the next memoir—the concluding one for the day—was introduced by Dr. Macnaughton Jones. His subject was "Turbinal Hypertrophy," or, to give it the full title it bore in French, "Hypertrophie Turbinale et ses Relations à la Surdité, spécialement à l'égard de l'Opération de la Turbinotomie." Dr. Macnaughton Jones gave a masterly review of the subject as dealt with by previous otologists, and summed up his own conclusions as follows: 1. Turbinal hypertrophy must be regarded as a serious complication of deafness and the cognate aural affections; in those cases in which it precedes the aural symptoms we may justly regard it as being their principal cause. 2. In all cases in which this hypertrophic change is discovered active therapeutic measures, of which galvano-cauterisation is the chief, ought to be put in practice to reduce it. 3. Deviation, or distortion, or morbid growth of the septum is rarely, perhaps never, the cause of deafness, and they become so only in cases in which they complicate the turbinal hypertrophy. 4. In all cases in which we find that the occlusion of a nostril is in part due to the deviation of the septum or to a growth that deviation must be rectified. 5. Turbinotomy is indicated and ought to be reserved for those cases in which, whether in consequence of the bulk or of the nature of the growth, it is vain to expect improvement from any other treatment. This may present itself in a comparatively very small proportion of aural cases. Dr. Macnaughton Jones was so thoroughly master of his ground, shown in his preliminary digest of received, and especially of contemporary, opinion that his highly appreciated paper was exempt from criticism, leaving him nothing to acknowledge but the applause of the sitting, which thereafter rose for the day.

As on the 23rd, so also to-day (Tuesday), the evening closed with an entertainment, which in the latter case took the form of a brilliant banquet given by the President and Madame Grazzi to the Congressisti and their ladies. The guests numbered more than eighty, and enjoyed the evening as thoroughly as excellent *cuisine*, exhilarating music, and an all-embracing geniality entitled them to do. The after-dinner oratory was of a highly successful order, begun by Dr. Grazzi in French, and continued in the same language by Dr. Delstanche, till Professor Politzer set a laudable example by addressing the company in Tuscan of the purest quality. Others emulated the Austrian consultant, but the majority of the after-speakers relapsed into their native tongues, of which we had nearly every specimen, from the English of London, Edinburgh, and Pittsburg to the German of Breslau and the Spanish of Madrid. The speakers vied with each other in their acknowledgments of the hospitality of their reception in the Tuscan capital, and particularly of the grace and tact with which Madame Grazzi did the honours of the Palazzo Peruzzi. After dinner the evening closed agreeably in patrolling the magnificent suite of rooms in that historic palace, admiring the frescoes of the artist whose name it bears, and joining in pleasant comparisons of the impressions already formed of the "City of Flowers."

The sittings of Wednesday, Sept. 25th, were chiefly noteworthy for Dr. T. Barr's paper on the Treatment of Intracranial Abscess consequent on Maladies of the Ear; Professor Gradenigo's contribution to the Endo-cranial Surgery of Otitic Complications; Dr. St. Clair Thomson's observations no Antisepsis and Intra-nasal Medication; and, above all, for Professor Politzer's original and epoch-making memoir on the Present State of the Pathological Anatomy of the Labyrinth. Of Dr. Barr's paper I will only say that owing to his regretted absence through illness it was entrusted to the competent charge of Dr. Urban Pritchard, and that it aroused and maintained the interest of a crowded sitting to the close. Professor Politzer's memoir I need not attempt even to summarise, as its publication, with the cordial consent of the author, has been reserved for THE LANCET. Suffice it to say that as its appearance on the agenda paper proved the chief attraction of the Congress—many otologists having come from a great distance on purpose to hear it—so it amply rewarded the close attention it commanded from the audience, whom it kept in keenest interest until its author, amid successive rounds of applause, resumed his seat. From labour to refreshment marked the next stage of the Congress, which was entertained by the Commune at afternoon tea in the magnificent *salons* of the Palazzo Vecchio, where the ever courteous and kindly President, Dr. Grazzi, presented the Congressisti and their

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ladies to the Cavaliere Artimini, who, in the absence of the Syndic, "did the honours."

Next day (Sept. 26th) brought the business of the Congress to a close, the feature of the forenoon sitting being Professor Politzer's demonstration of the Anatomy of the Ear, illustrated by beautiful preparations, osteological and other, which, as they passed from hand to hand, evoked audible murmurs of admiration. The papers read maintained the high standard, scientific and clinical, of the majority of those sent in, among them being that of the President, Dr. Grazzi, on a Case of Complete Deafness consequent on an Acute Meningitis "par Diplococcus de Fränkel," in illustration of which the patient (a female child) was exhibited to the audience; that of Dr. D'Aquanno (Palermo) "Sur la Paracusie de Willis"; and that of Dr. Secchi (Bologna) on the Physiology of the Middle Ear. Another feature of this sitting, as of previous ones, was the exhibition of otological instruments and appliances. Dr. Macnaughton Jones had interested the Congress by his auto-insufflating aural bag for respired air and vapours, his magnifying aural speculum, pliable nasal bougies and dilators, his turbinotome and scale with rule for operation on the mastoid, antrum, tempero-sphenoidal lobe, and cerebellum; and on Thursday morning Professor Gradenigo exhibited an original and ingenious "diapason," ably criticised by Dr. Dundas Grant. Mr. Cresswell Baber followed with a demonstration of new additions to the "armamentarium otologicum," which was generally admired. Detailed notice of these I need not attempt, any more than even an enumeration of the concluding papers, interesting though some of them were. In the afternoon the Congress adjourned to the *aula magna*, where President Grazzi formally closed its labours with cordial congratulations to its members and office-bearers on the results. Other speakers followed, among them Professor Politzer, who eloquently thanked the secretaries for their assistance, and with a parting word from the Cavaliere Artimini, representing the Syndic, the fifth International Congress of Otology was an event of the past.

In the afternoon a trip to Fiesole was greatly enjoyed by the "emancipated" Congressisti and their ladies, who found much to admire in the Cathedral, the Etruscan Museum, the finely preserved ancient theatre, the baths and Cyclopean walls still in process of excavation, and, above, all in the magnificent panorama of the Apennines. The noble hexameters of Gray,

"O Fæsulæ, amœna
Frigoribus juga," &c.,

recurred to more than one enraptured Congressista, and may be thus rendered:

"Oh hills of summer coolness, Fæsulæ,
The zephyr's haunt! By Pallas' boon you shine,
Ensilvered with her own gray-glistening tree,
The jewel of Etruscan Apennine!
No more from Arno shall the joy be mine
Your villas and verandahs to admire
Around your forehead circling, line on line,
To see your dome outsoar the cypress-spire,
And roof o'er rustic roof hang higher still and higher."

At 8 P.M. the Congressisti and their ladies, with other guests, to the number of 150, sat down in the Politeama to a sumptuous banquet, at which Dr. Grazzi presided. The evening was a highly agreeable one, the speech of the occasion among many effective ones being Professor Politzer's who interwove with it a eulogy of Florence, in which he revealed a wonderful knowledge and appreciation of the past glories and present attractions of "Our Lady of Flowers." By 10.30 P.M. the company separated with cordial anticipations of such another successful reunion in London, the next seat of the Congress in 1899.

Florence, Sept. 27th.

THE MEETING OF THE ASSOCIATION OF GERMAN NATURALISTS AND MEDICAL MEN.

HELD IN LÜBECK FROM SEPT. 16TH TO 21ST.

(FROM OUR BERLIN CORRESPONDENT.)

THIS purely scientific association is one of the oldest in Germany, and it now assembles for the sixty-seventh time. Till 1888 it was not an association properly so called; medical men and naturalists met every year at some town which had been selected at the previous meeting. There was no permanent committee, but a president, secretaries, treasurer, &c. were elected for each session, and their office only lasted till its close, the preparatory business being done by medical men and naturalists of the locality selected. Every member of the medical profession or recognised naturalist could become a member, the membership of course holding good during the respective session only. This was the state of matters till 1888, when a change became necessary because the association, having by that time funds in hand and a library supplied by donations, required a more permanent administration. At the Cologne meeting of 1888, therefore, by-laws and rules were passed by which the formerly free association was changed into a regular society. A permanent committee was elected and the condition of membership modified. A medical man or naturalist desiring to become a member was to be elected by the committee, and his membership then was a perpetual one. Besides the ordinary members, other medical men and naturalists were admitted to the meetings as participating members, "Theilnehmer," but they had no right to read papers or to take part in the debates, and their membership terminated at the end of the congressional sessions. The scientific business of the society is carried on partly in three general sittings, when papers of a more general interest are read by leading men, and partly in the special sections, the number of which this year was no less than thirty three.

The First General Meeting, on Sept. 16th.

The Mayor, in the name of the senate and the presidents of the medical and of the naturalists' societies of Lübeck, welcomed the association. The President, Professor Wislicenus (Leipzig), expressed thanks for the hearty reception and then gave an account of the society's affairs.

Professor Klebs read a paper on Some Problems concerning the Physiology of Generation. He said that whilst the structure even of the most complicated organs is completely investigated the function of many of them is still little known. The problem of generation, for instance, is still unsolved. It is very important to know if generation can be influenced by external conditions. The general opinion is that the generative power is essential to the nature of the beings and therefore withdrawn from our researches; this opinion is totally wrong. There are two modes of generation in plants and animals—the sexual and the asexual. The experiments of Professor Klebs prove that asexual generation, which exists in the algæ, the ferns, the fungi, and in the lower plants, is strictly dependent upon external influence, upon light, temperature, organic and inorganic stuffs. The physiologist may, by his knowledge of the respective agents, compel plants or animals to generate or prevent them from generating. But also the formation of sexual organs may be accelerated or suppressed according to the will of the physiologist. All conditions which tend to suppress the growing of the lower plants accelerate their sexual generation; generation and growth are adversaries, of which one only can prevail in the organism and requires the whole power supplied by the nutrition. Full light is favourable to the formation of the sexual organs, whilst in softened light the nutritive and growing power prevails, the generative organs degenerating to sterility. In looking upon the fact that in the more highly organised animals sexual generation is exclusively present, one becomes induced to ask why this complicated mode has taken the place of the more simple and effectual asexual one. Some zoologists are of opinion that sexual generation is a primary function of the organism. They found their rather mystic opinion, among other arguments, upon the fact that infusoria generate only for a short time in an asexual way, and that they degenerate if they are not from time to time sexually impregnated. But many lower plants, when their sexual generation is artificially suppressed, may be kept fresh and continue to grow. Many other organisms, such as bacteria, fungi, &c., have exclusively asexual generation. Also the sexual generation can be suppressed by artificial agents, such as acids, and stimulated by other means. The physiologist is able to make plants and animals to a certain degree grow and generate as he likes, and no mystical power exists which may determinate these functions.

After Professor Klebs's rather theoretical paper Professor Behring rose to deliver a very practical speech on the Results and the Objects of Serotherapy. The celebrated discoverer of the diphtheria antitoxin began by pointing out the great value of statistics in determining the efficacy of a new remedy. Alluding to the antitoxin debate in the Berlin

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Medical Society,[1] he remarked that the time was passed when medical men ought to use expressions like "genius epidemicus" and attribute to it the degree of mortality. He stated that vaccination had succeeded in compelling the genius to withdraw, and that the genius epidemicus of small-pox epidemicus of malaria must in a large proportion of cases leave the victim when quinine is used. To prove that antitoxin had the same effect on the diphtheria genius was the purpose of his speech. In the above-mentioned debate one of the principal arguments of Professor Behring's adversaries had been the alleged fact that, whilst formerly grave cases of diphtheria only were treated in hospitals, since the antitoxin period a greater number of mild cases were received. This argument could easily be rebutted by statistics, these showing that in 1893–94 55·9 per cent. and in 1894–95 52·9 per cent. only of all diphtheria cases were treated in hospitals. The total hospital mortality was 21·1 per cent. and that of home patients 26·8 per cent. In the four years preceding the antitoxin period there were in Berlin 15,958 cases with a mortality of 5617, or 35·2 per cent. The year 1894–95 showed a widely spread epidemic in Berlin, not less than 5578 cases having been registered by the health officer, a fact not very favourable to the statement of a mild genius epidemicus. If the mortality had been the same as in the other years 1963 patients would have died, whereas last year's mortality was only 1056 patients; in the antitoxin era, therefore, 907 lives were saved. A most striking result, too, was afforded by the comparison of two hospitals, one having used and the other having abstained from employing antitoxin. In the Charité Hospital in the first class there were 299 patients with 53 deaths, or 16·7 per cent.; in the Bethania Hospital, where antitoxin was excluded, there were 249 patients with 112 deaths, or 43 per cent. This exclusion of antitoxin Professor Behring sarcastically declared to be of great value to the statistics, but not so in the interests of the patients of the Bethania Hospital. A collective investigation of home-treated cases showed a mortality of 7 to 8 per cent. only—i.e., half the number of hospital cases. There were also numerous other interesting statistical tables reported by Professor Behring, which I must abstain from mentioning. If in the future the quantity of the remedy injected was sufficiently great, and mild and grave cases were both treated by antitoxin, the statistics surely would be still better. An early application, too, must be regarded as a matter of extreme importance, and, as it was proved by Escherich's and Bose's communications, that in that case tracheotomy might be avoided. The mortality of this terrible illness, Professor Behring was sure, could be made to fall to 5 per cent., but if only 75 per cent. of deaths were avoided 45,000 lives would be yearly saved in Germany. Even now, when the application of antitoxin is still in its infancy, the mortality had fallen to 75 per cent. of the former amount, so that 15,000 people had escaped from death. The immunising effect was not yet so obvious as the curative one, because the number of cases reported was still too small; but up to the present no case had occurred where real harm had been done by the prophylactic injection. After having shortly spoken of the anti-tetanic and the anti-choleraic serum, Professor Behring closed by saying that everything which he and others had done in this direction was based upon the immortal researches of Professor Koch.

The Second General Meeting, on Sept. 18th.

Professor Riedel (Jena) first read a paper on Surgical Operations on the Skull. As, of course, the audience was not composed of medical men only, he dealt with the subject in a somewhat popular manner; therefore, a short account will be sufficient. He mentioned that trephining was long ago performed by the Incas, the ancient inhabitants of Mexico, and also by the Romans, as the discoveries of Pompeii and Herculaneum proved. To-day we trephine for fractures, for hæmorrhage from the meningeal arteries, and for cysts, suppuration, and tumours. In the last case the principal obstacle is the difficulty of diagnosis and localisation. Of 100 tumours six only are found and operated on; in three of those death occurs from the operation, so that 3 per cent. only have a favourable issue. Another drawback is that often a great deal of the brain must be removed owing to the operation. The results of trephining for injury are better. Suppuration often arises from apparently insignificant causes, and Professor Riedel mentioned a case where a cerebral abscess followed a slight wound received in a student's duel where the necessary antiseptic precautions had been neglected.

After Professor Riedel, Professor Victor Meyer (Heidelberg) read a paper on the Problems of Atomicity.

(To be continued.)

[1] THE LANCET, Jan. 19th, 1895.

THE IRISH WORKHOUSE INFIRMARIES.

(BY OUR DUBLIN CORRESPONDENT.)

MANY allusions have been made in THE LANCET during the last four months to the unsatisfactory condition of some of the workhouse hospitals of Ireland. It will be remembered that early in June a circular was addressed by the Irish Medical Association to the medical officers of all the Poor-law infirmaries, the replies to which disclosed the absolute necessity for a widespread reform in the management and nursing arrangements of many of these institutions. On June 25th an influential deputation, organised by the Irish Medical Association, and consisting of its chairman and secretary, the President and Vice-President of the Royal Colleges of Physicians and Surgeons, the President of the Royal Academy of Medicine, &c., waited upon the Local Government Board and made some suggestions the outcome of which was a circular letter from the Board directing the attention of the Poor-law guardians to "the alleged insufficiency of the nursing and requesting that the medical officer of each workhouse might be called upon to furnish a report on this most important matter." Many irregularities and defects in the nursing and administration of the Poor-law infirmaries have since been brought to light.

The South Dublin Union Infirmary has been looked upon as a model institution, but Mr. Lenehan, one of the guardians, recently made the suggestion that trained nurses should be employed to see after the patients there. His statement, and the comments of the *Irish Figaro* on the matter, had the effect of calling forth a letter addressed to that journal by Sir Robert Sexton, the Protestant and Conservative chairman of the board of guardians, in which strong testimony was made to the improvement in moral tone, in regularity, cleanliness, &c., which had followed the introduction of the members of a community of nuns—the sisters of mercy—as nurses to the institution.

In the meantime an investigation was held at Athlone by one of the Local Government Board medical inspectors as to the condition of the union infirmary there, in reference more especially to the nursing arrangements, and a correspondence took place between the Local Government Board and the board of guardians, in which the former threatened to dismiss the board of guardians unless their requirements as to the nursing were carried out. The guardians wished to appoint as nurse in the infirmary a nun belonging to a religious community of ladies, while the Board refused to sanction the appointment on the ground that the lady was not a trained hospital nurse. The guardians then suggested that she should be duly trained in a Dublin hospital, to which the Board assented. According to the local papers the Roman Catholic Bishop of the diocese now intervened and refused to permit this arrangement, giving as a reason that it was against the rules of the religious order to which the lady belonged for her "to undergo training in the manner required." The guardians then declared that they would adhere to their appointment of the lady mentioned, notwithstanding the threat of the superior court to dissolve them. That threat has been promptly transmuted into action. The guardians have been dismissed by a sealed order, dated Sept. 21st, and two paid guardians, at an annual salary of £250 each, appointed in their place. The above is a plain statement of the condition of affairs at the Athlone Union, the situation not being caused by any difficulty from want of funds. Mr. Gerald Balfour, the Chief Secretary for Ireland, not long since stated in the House of Commons, and doubtless with perfect accuracy, that the shortcomings in some of the union workhouses in the West of Ireland were really caused by the poverty of the districts. This excuse does not apply to the board of guardians at Athlone, for it has transpired that the union there is in an excellent financial position, and, according to the statement of the

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late chairman of the dissolved board, has at present a balance of over £2000 to its credit.

A leading article of a somewhat unwise and intemperate character appeared in the *Freeman's Journal* of Saturday last headed "Intolerant Bureaucrats," in which the action of the Local Government Board in this matter is attributed to religious bigotry. According to the report in that journal the Roman Catholic Bishop stated that "the nurse (who had been at the Athlone Infirmary for five years) had actually been trained for five years. They, the nurses" (he is said to have stated) "have undergone training at least as good as they could undergo in any Dublin hospital." Now it seems unnecessary to say that nurses in Dublin, as in London and elsewhere, are now obliged to undergo a course of study and training of at least two years' duration in a duly recognised clinical or teaching hospital in which classes of students of medicine are also trained or taught. The probationer nurses are taught not only the mere technique of nursing the sick, but also the principles which underlie it. They are obliged to learn the elements of anatomy, physiology, medicine, and surgery in order that they may be qualified, not alone to strictly carry out, but also to fully understand and appreciate the directions of a medical man in charge of a patient. Their experience and training in a teaching hospital places them accordingly in a distinctly different position from that of the ordinary lay nurse, for they are taught what they should do in cases of difficulty and emergency in the absence of any medical man and during the time that must often intervene before his arrival. The very fact that the most intelligent probationer nurse cannot be made proficient in her course in a less time than two years or more shows that her task is not an easy one. No certificate of training and no authentic diploma or authoritative statement of the person being "a trained nurse" is given in Dublin or in London, or elsewhere in England, under less stringent conditions.

The whole matter is a most important one and has begun to excite great interest in Ireland, not alone among the members of the medical profession, but also among the educated general public. When it is remembered that in no fewer than sixty-seven of the union infirmaries throughout this country the nursing is controlled or carried out by nuns, who, while their unselfish devotion to works of charity is universally recognised, have not received what is understood as hospital training, the importance and possibly far reaching effect of the recent action of the Local Government Board in dissolving the Athlone guardians will be recognised.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Epidemic of Scarlet Fever.

THE increase in the number of scarlet fever cases in the city is a source of much anxiety to the Health Committee. At present there are 457 cases under treatment at the Borough Hospital. It is alleged that some of the cases are sent out too soon, and thus become centres for the further spread of the disease. The difficulties of the committee are being met by utilising the new small-pox hospital at Yardley, where it is proposed to send a number of the scarlet fever patients forthwith. Fortunately, there is not a single case of small-pox in the hospital for the reception of such cases. The medical officer of health, Dr. Hill, believes that the increase is periodic, being due to the accumulation of susceptible material. This is hardly a satisfactory explanation of the present rapid increase. It fails to bring consolation to the sufferers or to the authorities in dealing with so severe an outbreak as the present one.

Periodical Collections for Local Charities.

The committee recently met to make the necessary arrangements for the collections to be made on Hospital Sunday, Oct. 27th. The chairman, Alderman Johnson, stated that this was the thirty-seventh occasion on which the appeal would be made. At the first collection, in 1859, it was pointed out that the sum raised was £5200; this has been the average sum, with little alteration, ever since. With regard to Hospital Saturday, the first collection, in 1873, realised £4705; this has gone on steadily increasing, until last year it reached the large sum of £13,000. Three reasons were adduced to show why the Hospital Sunday collections had not increased in the same proportion: (1) those who furnished the largest contributions on Hospital Sunday were the people who were the regular subscribers to the charities throughout the year; (2) since the movement was founded the number of medical charities had been doubled, and they required support from the very class of people from whom they expected large contributions on Hospital Sunday; and (3) that the resources of the great almsgiving classes were not now what they were in 1859. Profits from trade had decreased, interest from investments was less, and it required an effort on the part of the classes who supported Hospital Sunday to keep up the level of their contributions.

The Lunacy Act.

At the Police-court, on Sept. 30th, Mr. F. R. A. Evans, a surgeon, was summoned for a number of offences under this Act in the alleged wrong treatment of a patient under his care. After evidence had been given the defendant was committed for trial at the Quarter Sessions, bail being allowed, the defendant in £50 and a security of £25.

Medical Men, Coroners, and Death Certificates.

The death of the Rev. Prebendary Finch Smith at Lichfield was the subject of an inquest, at which the deputy coroner, Mr. H. H. Jordan, made some strong remarks. It seems that Prebendary Finch Smith, who was eighty years of age, fell downstairs a few days previously, sustaining an injury to his side, from which he never rallied. A certificate of death was given by his medical attendant. A verdict of "Accidental death" was recorded. The deputy coroner observed "that he felt bound to express his regret that the doctor was not better up in the law than to have given a certificate of death in case of an accident, and that the Deputy Registrar of Births and Deaths had not been better coached in his work than to have accepted such certificate and registered it. Luckily the inspector of police heard of the accident and duly reported it, otherwise there might have been great trouble and annoyance caused to the family." The medical attendant justified his action by the authority of the British Medical Association, to which the deputy coroner took exception as not being a legal authority. It seems that some friction of the same kind had previously existed, hence the disposition to lay down the strict interpretation of the law in its present form in terms which, however much to be criticised, are still the legal ones.

Ambulance Instruction in the Police Force.

The chairman of the Watch Committee recently distributed a number of certificates in these classes and made a presentation to Dr. Holdsworth and Mr. Morrison, divisional surgeons, for the assistance they had rendered in the principles and practice of the work. The assembly was well attended.

The late Dr. Wesley Hayes Thompson of Cradley.

The death of Dr. Thompson at the comparatively early age of forty-five cast a gloom over the district, in which he held an extensive practice. Essentially a self-educated man, he became an apprentice of Dr. Morrow of Cradley Heath, and afterwards went to Anderson's College, Glasgow. In 1871 he took the L.R.C.P. and L.R.C.S. of Edinburgh, and in 1889 the M.D. of Durham. An active and intelligent worker, he soon rose into a prominent position and laboured unceasingly in a large club and colliery practice. His upright conduct and his unassuming manners gained him respect and confidence. He was an earnest advocate of temperance and a devoted member of the Wesleyan body. Some two years ago his health began to fail, and malignant abdominal disease was suspected. Gradually his strength failed, and he passed away on Sept. 26th, leaving a name widely honoured and deservedly esteemed. Mrs. Thompson and seven children mourn their loss, receiving wide and universal sympathy in the district in which Dr. Thompson was born and in which he did so much good and faithful work.

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BRISTOL ROYAL INFIRMARY.—At the half-yearly meeting of the Bristol Royal Infirmary held last week the chairman stated that increased subscriptions were urgently needed as the annual income still fell far short of what was required. A timely and anonymous gift of £1000 had been recently received, but what was wanted was an increase in the regular annual contributions.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Inauguration of the New Waterworks for Edinburgh.

FROM time to time the question of an additional water-supply for Edinburgh and district has been referred to in THE LANCET. It has been spoken of for some years, and some persons were most anxious to have the work commenced long ago. Fortunately more prudent counsels asserted themselves, for it has been found that some of the proposed schemes were unsuitable or extremely costly. Now all parties have agreed upon the Tala scheme, the Tala being one of the head waters of the Tweed, and on Saturday last the inauguration of the works connected with this important scheme took place with becoming pomp and suitable ritual. The Lord Provost of Edinburgh, his lady, and the members of the Water Trust were the more prominent actors, but several Members of Parliament and others participated in the proceedings. The religious part of the service was conducted by Mr. S. R. Crockett with impressive solemnity.

The Prosecutions under the Pharmacy Act in Edinburgh.

Last week mention was made of these prosecutions. The acting Sheriff-Substitute has given his decision in two more of the cases. In the case of a photographic chemist the Sheriff, after referring to a circular issued by the respondent announcing that he did not sell poisons unless in wholesale quantities and after reviewing the evidence, held the charge not proven. A further charge of having used and exhibited the name and title of chemist was also found not proven, the Sheriff saying that he did not think the use of the term "photographic chemist" represented him as a chemist in the sense intended by the Act. In the case of one of the scientific instrument makers and technical chemists, the Sheriff found that the sale was a retail transaction, and inflicted a nominal fine of 1*s.* with 2 guineas costs; the second charge was found not proven. Notice of appeal was given on behalf of the Pharmaceutical Society.

Scottish Association for the Medical Education of Women Edinburgh.

The Medical College for Women under the auspices of this society is so prosperous that the quarters they have hitherto occupied in Chambers-street have been found to be too cramped. The association has had the matter under consideration for some time, and when the opportunity offered of obtaining accommodation in Minto House they seized it. The secretary's office is to remain for the present at the old address, but the practical anatomy and other classes are to be held in Minto House. It is understood that the Edinburgh University approves of this change of quarters.

Medical Appointments and Resignations.

The following appointments are intimated at the Western Infirmary, Glasgow: Wm. McLennan, M.B., to be physician to the dispensary; James Carslaw, M.A., M.B., and Hugh Galt, M.B., to be extra-physicians to the dispensary. At the September meeting of the Greenock Parish Council, Wm. S. Cook, B.Sc., M.B., was appointed Assistant Medical Officer to the poorhouse, vice Dr. Holmes, resigned. The Paisley Parish Council have appointed T. Neil Robertson, M.B., C.M., to be resident medical officer at Riccartsbar Asylum, vice Dr. M'Coll, resigned. Dr. Thos. Easton, who has been acting as interim medical officer for the burgh of Stranraer, has sent in his resignation to the town council, as the authorities have neglected to adopt some of his recommendations for dealing with the outbreak of diphtheria from which the town is at present suffering.

Honours to Medical Men.

Dr. John A. Jamieson, Brodick, has been sworn in as an Honorary Sheriff-Substitute for the Island of Arran. Dr. A. Robertson-Fullarton of Kilmichael and Whitefarland, Arran, has been gazetted a Deputy-Lieutenant of the County of Bute.

Fifeshire Medical Association.

The fourteenth annual general meeting of this association was held in Kirkcaldy on Sept. 27th. The President, Dr. Sutherland Mackay, medical officer of health of Kirkcaldy, read a paper on "The Black Death of the Fourteenth Century."

New Infirmary at Helensburgh.

The new building, which has been erected at a cost of about £5000, was formally opened on Sept. 27th by Mr. Alexander Wylie, M.P. for Dumbartonshire. The proceedings attracted much interest in the town, and were witnessed by the majority of the local medical men and leading citizens. Helensburgh is certainly to be congratulated upon the enterprise and public spirit of which the new infirmary is the expression. Until recently there was in the town but a single hospital; in this ordinary medical and surgical cases were treated together with patients suffering from infectious diseases. This unsatisfactory state of matters has now been remedied, and in future the older building, which has been considerably improved, will be used exclusively for the reception of infectious cases.

Glasgow University: Anatomy Fees.

The changes in the arrangements of the Scottish Universities resulting from the action of the Universities Commission have, as was to be expected, not produced universal satisfaction. One of the latest grounds of complaint is in connexion with the fees to be paid for the study of practical anatomy. Under the old system—when fees were paid directly to the Professors—it was the custom of the Professor of Anatomy to allow any student who had paid in fees up to a certain sum to have access to the dissecting-room at any subsequent part of his course. But under the new regulations—each Professor receiving a certain fixed income, and the fees being collected by the University Court—this privilege has been withdrawn, and no student has now the right to make use of the dissecting-room unless he has paid a fee for practical anatomy for the session in which he wishes to study dissections. It is pointed out that such an arrangement will discourage the study of practical anatomy, and will tend to limit men to the minimum of dissection demanded by the Examining Board. It also has the effect of keeping students who have passed their examinations in anatomy away from the dissecting-room, to which it is surely desirable the student should make an occasional visit, during the whole of his medical course. The University Court it is to be hoped will reconsider the matter.

Infectious Diseases (Notification) Act.

The public is only slowly becoming aware of the responsibility imposed upon its members by this Act. Though every possible step has been taken to make its demands known, numbers of parents seem to be quite unaware of its existence. The county council of Renfrew has recently entered upon an "educating" crusade, and by securing the infliction of fines upon parents who neglect to notify the existence of measles in their families are probably adopting the most certain method to enforce a knowledge of the Act and its provisions upon others similarly situated.

Aberdeen University.

The list of honorary degrees to be conferred by the senatus at the inaugural celebrations this month has just been published. Two members of the medical profession are to receive the degree of LL.D. One of these is George Skene Keith, M.A., M.D., who is a graduate in arts of Aberdeen, and studied medicine at Aberdeen, Edinburgh, Pesth, and Paris. He was assistant, and for five years colleague, to the great Sir J. Y. Simpson, and for thirty years afterwards (till 1880) practised his profession in Edinburgh. The second is Sir James Reid, Physician-in-ordinary to the Queen. Sir James Reid graduated M.A. at Aberdeen in 1869, with honours in natural science, being also the Natural Science Prizeman and Town Council Gold Medallist. He then studied medicine at Aberdeen and graduated M.B., C.M., with highest honours in 1872, and subsequently took his M.D. in 1875. He studied at Vienna for two years and then entered on the practice of his profession at Ellon in conjunction with his father. In 1881 he was appointed resident physician to Her Majesty, in 1887 he became physician extraordinary, and in 1889 physician in ordinary. He became a Member of the Royal College of Physicians of London in 1887 and a Fellow in 1892. He was created a Companion of the Bath in 1889, and in June last he was made a Knight Commander of the Order; he also possesses the Red Eagle of Germany (Third Class) and the Saxe-Ernestine Order of Coburg-Gotha (First Class). Among the other recipients of the degree of LL.D. are the Duke of Richmond and Gordon, the Earl of Erroll, the Earl of Southesk, Sir J. Forbes Clark of Lilliepronie, Lord Provost Stuart, &c.—

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The preliminary examinations for Arts and Medicine are in full swing this week. There are thirty candidates for the Medical preliminary and 220 for the Arts preliminary, a falling off of about twenty since last year. Greek is as popular as ever, but then it still counts more than modern languages for the Bursary competition, which is decided by the same papers as the preliminary examination.—Dean of Guild Walker has presented to the Senatus "Minstrel" Beattie's violoncello, which belonged to the late Mr. James Walker.—The bust of the late Professor Minto is now finished, and will shortly be added to the collection in Marischal College.

The Health of Aberdeen.

The zymotic diseases notified last week were: Measles, 2; scarlet fever, 21; whooping-cough, 25; erysipelas, 3; total, 51; being 6 cases fewer than the preceding week.

Oct. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Nursing in Government Prison Hospitals.

AN inquest was held in the Mountjoy Prison, Dublin, on Sept. 30th, on the body of a convict who had died there rather suddenly from asphyxia caused by some inflammatory disease of the throat. The coroner made some strong comments on the system of nursing at the institution; and the jury added a rider to the verdict "that the nursing system in the prison hospital was defective and ought at once to be improved."

Death under Chloroform.

A death under chloroform has recently occurred at the Coombe Lying-in Hospital, Dublin. The patient, a woman aged forty-eight years, was about to undergo an operation at the hands of Dr. F. Kidd, the master of the hospital, and chloroform was being administered by one of his assistants when a sort of spasm occurred and the woman ceased to breathe. The chloroform, of which less than a drachm had been administered, was stopped at once and every effort made to restore the patient, but without avail. At the inquest, which was held on Sept. 27th, evidence was given by Mr. Kenny, who had made a post-mortem examination, that "the heart was small, flat, and flabby." The jury found "that the deceased died from cardiac syncope while under the influence of chloroform; that the chloroform was administered with all proper precautions and skill; and that no blame was attachable to any official of the hospital."

Outbreak of Typhus Fever near Stewartstown.

A serious outbreak of typhus fever, a disease formerly very common in Ireland, is reported to have occurred among the poor fisher and farmer class on the shores of Lough Neagh, seven miles from Stewartstown in county Tyrone. These people live in small, badly ventilated, and overcrowded houses, and fifteen have been removed to Cookstown Infirmary. All the patients, except two whom the dispensary medical officer did not think it was necessary to compel to enter the fever hospital, have gone there. All the clothes of the patients are to be burned.

The Duties of Medical Officers, Masters, and Matrons in Irish Workhouses.

With reference to the duties of medical officers, masters, and matrons in Irish workhouses, which was raised at a late meeting of the Ballymena board of guardians by their medical officer, Dr. Davison,[1] the matter was again referred to by the master of that union at the weekly meeting on Sept. 28th, and it was decided to ask the Local Government Board to hold a sworn inquiry into the whole subject.

The Kilrea Dispensary.

The Ballymoney guardians recommended recently that the salary of Dr. Lennox, medical officer of the Kilrea dispensary, should be increased by £15 per annum, but after some correspondence the Local Government Board would only sanction an addition of £10, a decision which the guardians regard as very strange.

The Queen's College, Cork.

The annual report of the President, which has been just issued, gives some interesting details with regard to the College. The President states that the total number of students attending the College during the session 1894–5 was 222, the lowest number reached since the year 1876. I find the President of the Belfast Queen's College also reports a diminution in the attendance, which he says was the smallest for twenty years. No doubt the same influences affected both Colleges. The religious denominations of the Cork students were as follows: Roman Catholics, 137; Church of Ireland, 59; Presbyterians, 11; Wesleyans, 12; and other denominations, 5. From the opening of the College in 1849 to the year 1860 the Roman Catholic students slightly exceeded the number of Protestants, but from 1861 to 1872 the Protestants were in a majority except in one or two years. From that year forward, however, the Roman Catholic students have outnumbered, sometimes by more than two to one, all the other denominations. Since 1882 the number of Protestant students has fallen steadily, being now little more than one-half of the number of thirteen years ago. As the medical school forms an important part of the College it would be interesting to analyse the various causes that have produced the results tabulated by the President, but in notes such as these it would be utterly impossible to discuss the subject at all adequately.

Hospital Saturday at Cork.

Last Saturday was Hospital Saturday in Cork, and the weather was all that could be desired. The fair lady collectors, bearing their tinkling tambourines, were bedecked with bewitching summer costumes, and all seemed to augur well for a successful collection, but I regret to say that the street receipts were less than those of last year by about £120. The mayor, who takes a lively interest in the city charities, was much disappointed and publicly stated that the recent "unwarrantable attack on the city hospitals" was one of the most potent influences which militated against the collection. If the mayor's opinion be correct the champion of the Cork clubs can hardly congratulate himself on being instrumental in procuring the diminution of the resources for relieving human suffering and misery. However, I think it only fair to say that in my opinion the mayor attaches an undue amount of importance to the influence possessed by the gentleman to whom he refers, and as an indication in that direction I would mention that the contribution to the Hospital Saturday Fund from the working men of one of the largest firms in the city has been this year almost identically the same as it was last year. Furthermore, it is well known that the committee of management, rightly or wrongly, requested the lady collectors not to press the public, and it was a matter of general comment that the ladies, acting on the instruction they had received, did not exhibit at all the same zeal as had characterised their efforts on previous occasions. The Cork amusement committee gave important aid by providing a very varied entertainment during the afternoon. Amongst the items were musical drill by a detachment of the Royal Irish Fusiliers, and a tug-of-war between sailors from H.M.S. *Warspite* and members of the city police force, in which the constabulary men were the victors.

The Sanitary Condition of Cork.

The Public Health Committee recently appointed a sub-committee to make a general inspection of the city, and as a result of their investigations they have already recommended that in one district several of the houses be closed and demolished, and in the case of other houses that the overcrowding be reduced by permitting only two families to occupy each house. The step taken by the Health Committee is a very important one, and I have no doubt personal inspection by our city fathers will impress them far more than any number of official reports with regard to the absolute necessity for providing decent sanitary habitations for the poor of the city. The medical superintendent officer of health reports that the death-rate for the four weeks ending Aug. 24th was only 15·87 per 1000, the infectious death-rate being 2·06 per 1000. The birth-rate was higher and the death-rate lower than for the corresponding month of last year.

[1] THE LANCET, Sept. 28th, 1895.

INCREASE IN THE SALARY OF A MEDICAL OFFICER. At the last weekly meeting of the Barton Regis (Bristol) board of guardians it was stated that the Local Government Board had approved of the resolution of the guardians to increase the salary of Mr. D. E. Bernard, M.R.C.S., L.R.C.P. Edin., the medical officer to the workhouse, by £25.

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RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in the Ukraine.

ACCORDING to the latest bulletin from the government of Volhynia the cholera epidemic shows no signs of abating, but, on the contrary, is rapidly increasing, both in that province and in the adjoining one of Podolia. It would, perhaps, be more strictly true to say that the epidemic *was* increasing when the last bulletin was published, now thirteen days ago, and that of its behaviour at the present moment there is no means of judging in the absence of a later announcement. The following are the returns for the periods named:—

—	Cases.	Deaths.
IN VOLHYNIA:		
Between July 23rd and July 29th	1004	322
Between July 30th and Aug. 5th	2025	718
Between Aug. 6th and Aug. 12th	2497	944
Between Aug. 13th and Aug. 19th	3352	1190
IN PODOLIA:		
Between Aug. 9th and Aug. 12th	34	20
Between Aug. 13th and Aug. 19th	67	25

At present cholera is confined to these two governments in European Russia, but it is probably from these border provinces that the infection has spread into Galicia. The disease has for more than a month been present in Tarnopol, and it is also reported from Brody and Rohatyn. In the *starostwo* of Tarnopol the earliest cases occurred at the beginning of August; up to the 11th there were 4 cases with 1 death; in the week ending Aug. 19th there were 6 cases and 3 deaths; in the following week, 17 cases and 9 deaths; and in the week ending Sept. 2nd (14th), 18 cases and 8 deaths. In the far east cholera appears to be diminishing rather than spreading, to judge by the returns from Chi-fu, on the Gulf of Pechili. The Russian Consul in that port telegraphs that in the three weeks between Aug. 13th and Sept. 3rd the deaths from cholera in Chi-fu numbered respectively 20, 14, and 12, adding in his last telegram that the disease had then "lost its epidemic character." Nevertheless, the Russian Government has ordered special precautions to be taken on the Amur and Ussuri rivers to prevent the introduction of cholera infection to the Maritime (Primorskaia) province and the provinces of Amur and Transbaikal.

A Conference on Syphilis.

The Medical Department is making arrangements to hold a conference of representatives of various public health bodies and institutions to consider the question of the spread of syphilis and the best means of combating it. The conference will meet in November, 1896. According to the programme of the conference, which has already been distributed to the local governmental authorities, the discussions will range themselves under the following heads: (1) syphilis in village communities; (2) in towns; (3) in the army and navy; (4) the medical *personnel* required; and (5) the control of prostitutes. The representatives of the St. Petersburg Army Medical Academy at the conference will be Professors Tarnofski, Lebedef, Shideofski, and Sirotinin.

The Serum Treatment of Syphilis.

On the subject of syphilis Dr. Viéviorovski published in a recent number of the *Vratch* (No. 34) a preliminary note on the treatment of five cases of syphilis by the injection of serum from the blood of patients in the tertiary stage of the same disease. The results were very satisfactory. There was subjective improvement in all the patients; there was also an unusually rapid healing of primary sores; roseola and mucous and hypertrophic papules in the mouth and round the anus disappeared after from two to four injections. The continuance of the treatment after the disappearance of symptoms did not, however, prevent their recurrence; and it was noted that in such cases a second course of injections was not followed by such rapid improvement as the first course. The number of injections given in each case was from twenty to twenty-three, an average of 10 c.cm. of serum being given in each injection. The experiments were carried out in the Military Hospital in Moscow. Full details are promised in a later communication.

The New Pirogoff Museum.

The foundation-stone of the new Pirogoff Museum of Anatomy and Surgery was laid on Thursday last. The construction of such a museum was suggested by Professor Ratimof, who is now President of the Pirogoff Chirurgical Society. The scheme was well seconded; the Government provided 30,000 roubles towards the purchase and reconstruction of a building to contain the museum, and a sum of 60,000 roubles bequeathed to the society by the late Countess Musin-Pushkin, to be expended on some memorial to the great Russian surgeon, has been put aside as an endowment of the new museum. The society has purchased a building, used as a Government store since the time of the Empress Anna, appropriately situated on the banks of the Neva not far from the Army Medical Academy and the large military hospital named after Sir James Wylie. The museum will be arranged on the lines of the Hunter collection in Lincoln's-inn-fields and that of Dupuytren in Paris. A curious incident occurred during the digging operations in connexion with the reconstruction of the building. A large quantity of human bones were found in the earth underneath the foundations. One theory in explanation of their presence is that the ground was formerly used as a cemetery; a second suggestion is that the bones are the remains of the innumerable victims who died by the axe or the halter in Peter the Great's time. Both suggestions require confirmation; there is said to be some reason for believing that the bones were deposited after the building, which dates from 1732, was constructed.

St. Petersburg, Sept. 16th (28th).

THE DIFFUSION OF SMALL-POX.—The diminution of small-pox notifications in London recorded in our last issue has continued during the week ended with last Saturday, the actual cases and admissions to hospital, as well as the number of patients remaining under treatment, being below the totals of the preceding week. Last week 21 patients were removed to the hospitals of the Metropolitan Asylums Board or to the Highgate Small-pox Hospital, against 25, 42, and 23 in the three previous weeks, and on Saturday last the number of patients still under isolation treatment had fallen to 234—a total which has been steadily diminishing for many weeks past. There were again 2 deaths from the disease registered in London last week, 1 belonging to Hackney and the other to Lambeth, both in unvaccinated infants. Some small amount of the disease has recently been recorded in the south-western counties, where active steps are being taken to prevent its spreading. A few cases occurred in Lancashire last week, of which 4 were in Manchester, but no death was reported. In Dublin during the week ended Sept. 21st 5 cases were admitted to hospital, comparing with 4 and 9 in the two preceding weeks. The number of patients remaining under treatment was 22, as compared with 15, 13, and 18 on the three previous Saturdays. There was only 1 death, the patient being a child five years of age who had no medical attendance, and was stated to have been vaccinated in infancy.

PRELIMINARY TRAINING FOR NURSE PROBATIONERS.—A new departure in the training of nurses has been undertaken by the authorities of the London Hospital, and was brought under the notice of our readers in THE LANCET of May 11th last. A suitable building, called Tredegar House, has been acquired in the Bow-road, at some distance from the hospital, as a residence and preliminary training home for twenty young women desirous of becoming probationers. These pupil-probationers will receive instruction in the household duties, such as sweeping, dusting, &c., which they will subsequently have to perform in the wards, and they are expected to become proficient in sick-room cookery, bandaging, and such details of practical nursing as can be conveniently taught. They will also attend lectures and classes in elementary physiology, anatomy, and hygiene. After six weeks' preliminary training the pupils who are deemed suitable will be transferred to the hospital for a month's trial, and the three years' engagement to the hospital will count from the commencement of work in the wards.

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Obituary.

LOUIS PASTEUR.

OUR PARIS CORRESPONDENT writes:—The daily papers will have already informed the readers of THE LANCET of the death of Louis Pasteur. These same lay journals will, moreover, have supplied them with details of his private life and scientific career which I may, unconsciously, repeat in this notice. But the Paris representative of an organ like THE LANCET cannot be silent on such a momentous and painful occasion, and I therefore proceed to communicate to its readers the impressions reflected in my mind by the disappearance of this great man. Pasteur died at 5 P.M. on Saturday, Sept. 28th, at Garches, in that part of the domain of Villeneuve-l'Étang placed at his disposal for the study of rabies by the municipality of Paris. The house occupied by M. Pasteur and his family is extremely modest in extent and in style. It formerly sheltered the piquet of the Cent Gardes attached to the Imperial château of Garches. The château itself was destroyed after the Franco-Prussian War, but the floor beneath that in which M. Pasteur breathed his last is still occupied by horses—not, indeed, troop horses, as in old times, but horses vaccinated against diphtheria, and supplying the precious fluid antitoxin. In 1868 M. Pasteur had an attack of cerebral hæmorrhage which left behind it permanent hemiplegia of the left side. It is a remarkable circumstance that such a grave pathological occurrence did not incapacitate him from pursuing his onward scientific path. I am sorry to say that ill-health was coincident in its onset with the virulent attacks made on him by one of our own body—the late Professor Peter—when in 1886 his earliest anti-rabic discoveries were communicated to the scientific world. The annoyance caused by these attacks brought on insomnia and palpitations, culminating in a condition of heart failure, which necessitated a sojourn during the winter of 1887 in M. Bischoffsheim's villa at Bordighiera. An earthquake compelled a premature return to Paris, symptoms of heart failure reappeared occasionally, and albuminuria was superadded. Several times, especially in 1892, disquieting attacks of uræmia were a source of anxiety to his *entourage*. On Nov. 1st of last year a fresh attack kept him in bed for several months at his residence in the Institut Pasteur. The healthy surroundings of Garches contributed greatly to re-establish his strength, but the remarkable heat of the summer of the present year proved too much for him, and uræmic symptoms reappeared. The treatment prescribed by his medical attendants, Drs. Chantemesse and Metchnikof, had the desired effect until Wednesday, Sept. 18th, when a recurrence of uræmia occurred. Temporary improvement was followed on Sunday, the 22nd, by a relapse. His pupils of the Pasteur Institute nursed him in relays, but on the morning of Thursday, the 26th, the situation became so alarming that messages were despatched to his intimate friends, who — Professor Granche amongst the number — hastened to his bedside. Dr. Roux, who was in the department of Charente, reached Garches on Saturday morning, when the illustrious sufferer was almost comatose and a prey to intense uræmic dyspnœa. About 5 P.M. he died, surrounded by his devoted wife, his daughter (Mme. Vallery-Radot) and her husband, his nephew (Maurice Loir) and his mother (M. Pasteur's sister), Drs. Chantemesse and Metchnikof, and M. Nocard. He had not spoken a word since 4 A.M., when, Mme. Pasteur and his daughter asking if he felt any pain, he feebly answered "Oui." This was the last word he uttered. All being over, his devoted pupils, Drs. Chantemesse and Metchnikof, performed his last toilette on earth, Mme. Pasteur placed a scarf around his neck, the arms were crossed over the breast, and a crucifix fixed between his hands. M. Pasteur's nephew, Maurice Loir, was authorised to make a sketch in crayons of the body, but no photograph was allowed to be taken. The Curé de Garches and a Dominican Father visited the deceased on the day of his death. It is said that M. Pasteur was quite cognisant for a long time before the fatal *dénouement* of the danger he was in. Some time ago, embracing his little grandchildren, he suddenly broke down, and, in explanation of his emotion, said, "C'est parce que je vais vous quitter, mes enfants." His only son, M. Jean-Baptiste Pasteur, First Secretary at the French Embassy at Madrid, reached Garches two hours too late to see his father alive. The Ministry *au complet* inscribed their names on Sunday in the register installed at the entrance of the park of Villeneuve l'Étang, as also did numerous deputies and senators as well as members of the Institut. M. Poincaré, Minister of Public Instruction, announced to the widow and son of the deceased the intention of the Government to sanction a national funeral and interment in the Panthéon. Mme. Pasteur, while agreeing to a State ceremony, informed the Minister that her illustrious husband had always expressed a desire to be buried close to his laboratory in the Rue Dutot (Institut Pasteur). After the departure of the Ministers the *chefs de service* of the Institut Pasteur proceeded to embalm the body, and, Mme. Pasteur having been induced to take needed rest, the body was watched by Drs. Roux, Duclaux, and Prevot.



LOUIS PASTEUR.

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Born at Dôle (Jura), his father being a poor working tanner, Louis Pasteur owes his pre-eminence entirely to his own intelligence and pertinacity. Even when Louis was only two years old his father entertained hopes of future greatness for him. M. Pasteur was fond of recalling an oft-repeated desire thus expressed by his father: "Ah! si tu pouvais devenir un jour professeur, et professeur au collège d'Arbois, je serais l'homme le plus heureux de la terre." What would the good tanner have said if he had known that, fifty-eight years later, in the presence of his son now covered with glory, a tablet would be placed on the walls of the modest house in the Rue des Tanneurs bearing the following inscription in letters of gold:—

Ici est né Louis Pasteur
le 27 Décembre, 1822.

In 1825 the family left Dôle for Arbois, a small town (in the same department) of (now) 5000 inhabitants. Here, in the small tannery bought by his father, Louis passed his early years. In due course he was sent as a day-scholar to the *collège communal*. He, the youngest of all the scholars, was so proud to pass the portals of this institution that he arrived with an armful of huge dictionaries of which he was in no need whatever. His father utilised his short leisure in helping Louis with his lessons.

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The little one was, it appears, not always over-anxious to join his father on these occasions, preferring to engage in fishing or in taking a pastel drawing of a neighbour's lineaments. A dozen of these portraits still exist in different houses at Arbois, and their excellence is so striking for a boy aged thirteen that a short time ago an old *Arboisienne* exclaimed: "Quel dommage qu'il se soit enfoncé dans un tas de chimie; il a manqué sa vocation, il serait arrivé à se faire une réputation de peintre." But Louis soon showed the grit lying hidden in his character, and when, applying himself seriously to work, he easily distanced all his companions the principal of the college uttered a prophecy destined to be amply realised: "Il ira loin." The Arbois College being minus a *Professeur de philosophie* young Pasteur left for Besançon, where, after one year's study, he took his degree of *Bachelier ès Lettres*, and was immediately appointed an assistant master. His leisure time was devoted to attending lectures on higher mathematics in view of admission to the examination in science at the École Normale of Paris. His bent towards the study of chemistry was at this period of his existence but too evident from the embarrassing questions he was wont to put before the entire class to his old professor, Darlay, who, poor man, was at last constrained to say that it was for him to ask Pasteur for information instead of the reverse. At the examination for admission into the École Normale, Pasteur was No. 14 on the list. Although admissible, being dissatisfied with his place on the list he resumed his preparation, with the result that the following year he was classed fourth. Now, with Dumas at the Sorbonne and Balard (the discoverer of bromine) at the École Normale, he could give free play to his chemical curiosity. Chemical manipulations were all he cared for, all he thought about, and when his comrades would employ their spare moments in recreation he would shut himself in with his beloved flasks and crucibles in order to satisfy that craving for light that was destined to lead him to such marvellous and beneficent discoveries. Now came his first discovery. His delight was so overpowering that he rushed out of the laboratory, and meeting the *préparateur* of the physics lectures he fell on his neck, exclaiming: "Mon cher Monsieur Bertrand, je viens de faire une grande découverte. J'ai séparé le paratartrate double de soude et d'ammoniaque en deux sels de dissymétrie inverse et d'action inverse sur le plan de polarisation. Le sel droit est de tout point identique au tartrate droit. J'en suis si heureux que j'éprouve un tremblement nerveux qui m'empêche de remettre de nouveau l'œil à l'appareil de polarisation. Allons au Luxembourg, je vous expliquerai cela." This discovery created a profound sensation at the Académie des Sciences. Biot, appointed by his colleagues, amongst whom were numbered Arago, Dumas, and Sénarmont, exacted of Pasteur the verification of every point in his discovery. In September, 1846, he was appointed *agrégé des sciences physiques*, but he continued his connexion with the École Normale until 1848 in the capacity of *préparateur* in chemistry. In 1847 he took his degree of D.Sc., and the following year he undertook the duties of Professor of Physics at the Dijon Lycée. Three months later, however, he was called to the temporary occupation of the chair of Chemistry at the Faculty of Sciences of Strassburg, his appointment being rendered definitive in 1852. Towards the end of 1854 Pasteur, as Dean, was entrusted with the organisation of the newly created Faculty of Sciences of Lille. In 1857 he returned to Paris as the scientific director of his old school, the École Normale. He had then been married for seven years, having espoused during the tenure of the professorship of chemistry at Strassburg the daughter of M. Laurent, the Rector of the Strassburg Academy. In 1852 their only son, Jean-Baptiste, was born. The other children, four daughters, were all born in the Rue d'Ulm, Paris, where Pasteur laboured until the Institut Pasteur was built. Three daughters are dead, the surviving one being the above-mentioned Madame Vallery-Radot. In December, 1862, M. Pasteur was appointed Professor of Geology, Chemistry, and Physics at the École des Beaux Arts, and also member of the Institute. A few years later he became the permanent secretary of the Institute; this post he retained until 1889, when he assumed the direction of the Institut Pasteur. In 1881 he was elected an Immortal, taking the *fauteuil* of Littré at the Académie Française. Amongst the other honours accorded to him may be mentioned the Rumford Medal, conferred in 1856 by our Royal Society for his researches on the polarisation of light with hemihedrism of crystals. The Jecker Prize was awarded him in 1861 for his chemical labours. In April, 1874, at the instance of a commission entrusted with the examination of his works, the Minister of Public Instruction proposed to the National Assembly that a national life pension of 20,000 francs (£800) a year should be given him. This was adopted. Since 1881 M. Pasteur was Grand Cross of the Legion of Honour. On Dec. 27th, 1892, on the occasion of his seventieth birthday, an immense ovation awaited him at the Sorbonne, the late regretted President Carnot, all the Ministers and ambassadors, the members of the French Institute, and delegates from every known university and scientific society in the world being present to salute him. Pasteur entered the crowded amphitheatre leaning on the arm of M. Carnot, and I remember that on that occasion I sent THE LANCET a *résumé* of the admirable speech made by M. Dupuy, then Minister of Public Instruction. Sir Joseph Lister—that practical mind which, with the instinct of genius, first realised the vast importance of Pasteur's bacteriological discoveries and deductions—then delivered a speech which I transcribe *in extenso*:—

"Vraiment," dit-il, "il n'existe dans le monde entier aucun individuel auquel doivent plus qu'à vous les sciences médicales. Vos recherches sur les fermentations ont jeté un rayon puissant qui a illuminé les ténèbres funestes de la chirurgie et a changé le traitement des plaies d'une affaire d'empirisme incertain et trop souvent désastreux en un art scientifique sûrement bienfaisant. Grâce à vous, la chirurgie a subi une révolution complète qui l'a dépouillée de ses erreurs et a élargi presque sans limite son pouvoir efficace. La médecine ne doit pas moins que la chirurgie à vos études profondes et philosophiques. Vous avez levé le voile qui avait couvert pendant des siècles les maladies infectieuses. Vous avez démontré leur nature microbienne; grâce à votre initiative, et dans beaucoup de cas à vos propres travaux spéciaux, il y a déjà une foule de ces desordres pernicieux dont nous connaissons complètement les causes. Cette connaissance a déjà perfectionné d'une façon surprenante le diagnostic de ces fléaux du genre humain et a indiqué la route qu'il faut suivre pour leur traitement prophylactique et curatif. L'originalité de vos travaux sur la rage était si frappante que, à part quelques ignorants, tout le monde reconnait maintenant la grandeur de ce que vous avez achevé contre cette maladie terrible. Vous avez fourni un diagnostic qui dissipe à coup sûr les angoisses d'incertitudes qui hantaient autrefois celui qui avait été mordu par un chien sain soupçonné de la rage. Rien que cela aurait suffi pour vous assurer la gratitude éternelle de l'humanite. Mais par votre système merveilleux d'inoculations antirabiques vous avez su poursuivre le poison après son entrée dans le système et l'y vaincre."

M. Pasteur's emotion was so great that the reply he had prepared had to be read by his son. After a touching reference to his master, Claude Bernard, his discourse ended with the following profession of faith:—

"Je crois invinciblement que la science et la paix triompheront de l'ignorance et de la guerre; que les peuples s'entendront non pour détruire mais pour édifier, et que l'avenir appartiendra à ceux qui auront le plus fait pour l'humanité souffrante. Jeunes gens, jeunes gens, confiez-vous à ces méthodes sûres, puissantes, dont nous ne connaissons encore que les premiers secrets. Et tous, quelle que soit votre carrière, ne vous laissez pas atteindre par le scepticisme dénigrant et stérile, ne vous laissez pas décourager par les tristesses de certaines heures qui passent sur une nation. Vivez dans la paix sereine des laboratoires et des bibliothèques. Dites-vous d'abord: Qu'ai-je fait pour mon instruction? Puis, à mesure que vous avancerez: Qu'ai-je fait pour mon pays? jusqu'au moment où vous aurez peut-être cet immense bonheur de penser que vous avez contribué en quelque chose au progrès et au bien de l'humanité. Mais, que les efforts soient plus ou moins favorisés par la vie, il faut, quand on approche du grand but, être en droit de se dire: 'J'ai fait ce que j'ai pu.'"

M. Pasteur's last official speech was delivered on the occasion of the visit made on Oct. 24th, 1894, to the Institut Pasteur by President Casimir-Perier for the purpose of handing to Dr. Roux the insignia of Commander of the Legion of Honour. Some days before the Kiel *fêtes* Pasteur, who had been approached with the view of his acceptance of the Prussian order "Pour le Mérite," and who had refused the proffered honour, wrote to the Comte Féry d'Esclands in connexion with a proposed patriotic manifestation at the Pasteur Institute in these terms:—

"CHER MONSIEUR FÉRY D'ESCLANDS,—Je suis extrêmement touché des sentiments que vous avez exprimés; mais laissez, je vous prie, à ce que j'ai fait en toute simplicité, un caractère très simple. Je ne veux ni manifestation ni souscription.—Veuillez agreer, &c.,

"L. PASTEUR."

It is, perhaps, not generally known that, in consequence of the bombardment in 1871 of the Museum and the Jardin des Plantes by the Prussians, M. Pasteur returned the diploma of membership awarded by the Bonn University. It is said, on the authority of the *Figaro*, that the astounding reply ran as follows: "L'Université de Bonn adresse à M. Pasteur l'expression de son plus profond mépris." The funeral of M. Pasteur is fixed for Saturday next. A service will be held at Notre-Dame by special permission of Cardinal Richard, the Archbishop. The body will probably remain.

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in the Cathedral mortuary until its transference to its last resting-place, the Pasteur Institute, on Oct. 23rd, which is the centenary of the foundation of the Institut de France. On Saturday only one speech will be delivered—that by M. Poincaré, Minister of Public Instruction, as representing the Government. The body will be brought to-day (Oct. 1st) to the Institut Pasteur, where the flag flies half-mast high, and the Administration des Pompes-Funèbres has already begun to hang draperies on the deceased's house situated in the grounds. Permission to bury a body in a private house has not until now been given for the last twenty-five years. Telegrams of condolence continue to pour into Garches, the senders belonging to all classes of society. Yesterday the public was allowed to defile before the remains, and a touching visit was paid to the *chambre mortuaire* by the *personnel* of the Institut Pasteur. I thought that the foregoing lengthy personal details might be deemed worthy of perusal by the readers of THE LANCET. I can only conclude by giving expression to a belief shared by everyone who has studied his life-work—viz., that in Louis Pasteur humanity has lost its greatest benefactor.

The death of Louis Pasteur has removed from among us one of the most remarkable figures in the scientific world, an enthusiast in the pursuit of truth for its own sake, who yet received his meed of honour at home and abroad, and was not without more substantial rewards. His career affords a striking illustration of the influence of apparently trifling incidents in directing the future course of a great man's life, and of the far-reaching results that may proceed from the discoveries of science even when the immediate success aimed at has been achieved, results beside which the latter sinks into insignificance. Little did he think that his researches, undertaken at the instance and for the benefit of brewers and wine-growers, would suggest the antiseptic and aseptic methods of treatment which, perfected by Lister and Semmelweiss, have been the means of saving thousands of lives annually and of rendering practicable and safe many operations which had previously been utterly unjustifiable, or that his investigations into the diseases of silkworms would, after restoring prosperity to his country, not only give a new and fruitful direction to his own biological studies, but lead to results in the hands of others trained in pathological methods which have within a quarter of a century revolutionised the whole science of communicable disease, opened up boundless fields of research, and give promise in the future of methods of prevention and cure in the strictest sense of the word which scarcely a dozen years ago would have appeared as the wildest of dreams. Yet so it has been with all he undertook; the successes he achieved, and the conclusions at which he arrived, have suggested to others lines of research and fields of discovery the borders only of which have as yet been explored and our knowledge of which is being extended every year, nay, almost every month, until the mind is lost in the contemplation of what may yet be revealed. About the year 1847 an incident, trivial in itself, turned his attention from pure and chemical physics to those biological studies on which his fame was to be built. A German firm of manufacturing chemists having observed the proneness to fermentation of solutions of impure commercial tartrate of lime, Pasteur, experimenting on pure ammonium tartrate, found that the addition of a small quantity of albumin to a solution of the salt was followed by fermentation, accompanied by the appearances of minute cells, which he showed to be the cause of the change. Thenceforth he devoted his energies almost exclusively to the study of fermentation. Caignard de la Tour had some years previously proved the torula to be a living organism, and the efficient cause of alcoholic fermentation in beer, and Schwann had shown all putrefaction to be caused in like manner by microscopic fungoid organisms. These discoveries were extended by Pasteur, who studied the phenomena of fermentation, alcoholic, butyric, acetic, and lactic, under all possible conditions of temperature and in the presence and the absence of air. He showed that each was due to a specific organism, and that different organisms were concerned in the alcoholic fermentation of wine, and of beer, and of beer brewed in the English and the German methods, as well as in the irregular and by-fermentations to which all, especially British beers, are liable. He distinguished between aerobes and anaerobes, or those which thrive best in the presence or absence respectively of air. Apparently spontaneous fermentations were, he maintained, set up, as was putrefaction, by germs floating in the air, almost ubiquitous though far more sparsely distributed in the higher regions of the atmosphere, but even there occurring in "clouds," so that fermentable liquids might be exposed at different times with different results. These views were warmly opposed by Pouchet, who adhered to the old notion of the spontaneous generation of the lowest forms of life from dead organic matter, abiogenesis as he called it; but Pasteur, supported by Professor Tyndall in this country, successfully exposed the omissions of necessary precautions which falsified Pouchet's observations. Access of air was in itself insufficient to set up fermentation if the germs it contained were destroyed by heat or caustic solutions, or even arrested by a layer of cotton-wool previously sterilised by baking. The juice taken from the interior of the grapes would not ferment if it were not allowed to come in contact with the skins to which the germs adhered, nor would the "must" from grapes crushed with their skins if they had been enveloped in sterilised wool throughout the whole period of their growth and when gathered were taken away from the vineyard, a fact of which he gave a public demonstration. The same he showed to be true of putrefaction, and thus laid the basis of the possibilities of antiseptic surgery. In 1865 he was invited by his old friend and former teacher, Dumas, to turn his attention to the prevention of the pébrine, a parasitic disease of the silkworm, the ravages of which had in twelve years reduced the annual revenue to the State from 130,000,000 to 8,000,000 francs, and threatened the utter destruction of an important industry, the prize of half a million francs offered by the Government having failed to elicit any efficient remedy. In 1859 Vittadiani and Cornalia had proved the connexion of the disease with the mobile corpuscles that previous observers had detected in the tissues of the worm and in the eggs, and shown how the infected eggs might be distinguished from the healthy. Pasteur soon found that the parasites once introduced persisted in every succeeding phase of the animal's development and were perpetuated through subsequent generations; that the worms by wounding others with the claws of their anterior limbs infected, or were infected by, one another; that the disease was spread without actual contact by their excreta and by dust diffused in the air; and that the only hope lay in rearing a fresh strain from healthy and, if need be, imported eggs, all infected worms and things capable of retaining infection having been meanwhile destroyed. Acting on this advice the growers succeeded in banishing the plague, and in a few years prosperity was restored. From this time to the end of his career Pasteur devoted his energies to the study of the communicable diseases of the higher animals, as anthrax, swine fever, the so-called fowl cholera, and others—identifying and cultivating artificially the specific microbes of each. Anthrax, charbon, or splenic fever as it is variously called, constantly present in Russia and Asia Minor, extended its ravages from time to time to other countries, and attacking cattle, sheep, and occasionally man, especially persons who inoculated themselves in the handling of hides or wool. He found that by cultivating the microbes in artificial media under conditions more or less unfavourable their virulence could be progressively reduced, and that inoculations with these "attenuated" cultures, while rarely inducing more than a slight febrile disturbance, conferred on the animal an immunity from subsequent infection, scarcely less than that which was enjoyed by the few that survived attacks of the natural disease. In his admiration of Jenner, whose follower he claimed to be, he called his operations "vaccinations" and the attenuated virus "vaccines," though differing in some essential points, and far more closely resembling the former practice of inoculation and open to like objections and dangers. We readily admit that thousands of cattle were thus rendered insusceptible, but from the impossibility of attaining uniformity in the strength of the fluids the inoculations frequently caused the death of the animals to be protected, or failed to give the desired immunity, and the practice has fallen very generally into disuse. Pasteur's last work was the search after a means for preventing the development of hydrophobia in man through the bite of rabid dogs or other animals. Here no microbe has as yet been discovered, and he thus laboured under the difficulty of not knowing the nature of the poison with which he had to deal. Since, however, it had an especial affinity for and was concentrated in the nervous centres he was under the necessity of employing extracts or

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emulsions of nerve substances as he otherwise would have used culture fluids. His procedure consists in subdural inoculation of rabbits, in whom the disease always assumes the paralytic and painless type. The cords of these animals, after having been subjected to certain treatment, are used for the inoculation of others until a virus is obtained of the desired strength. In man the subcutaneous method is employed by means of a series of inoculations commencing with the weakest fluid and ending with one which, if it had been used at first, would have inevitably proved fatal. For this Pasteur has been attacked and vilified, and his statistics impunged by a certain class of humanitarians and by the anti-vivisectionists; but neither prejudice nor incredulity can disprove the fact that, with a few unavoidable failures due to easily recognised circumstances, numbers of dogs have been rendered absolutely resistant and insusceptible, and that the percentage of persons bitten, often severely, by dogs and wolves as to whose rabid state no doubt could be entertained, in whom no symptoms of hydrophobia have supervened vastly exceeds that which might have been expected under any other conditions or treatment. We should be the last to disparage the immediate results of Pasteur's discoveries, but perhaps their greatest value has been, and will ever be, found in the indications they have afforded to other investigators for opening up new fields and following further lines of research. Lister's antiseptic surgery and Koch's pure cultures are already old, but Behring's antitoxins possess incalculable advantages over attenuated toxines in culture fluids of indeterminate strength, and Tizzoni appears to have succeeded in substituting a similar product for the antirabic inoculations of Pasteur. Though his patriotism led him to refuse or return every honour proffered by the German Government and universities, it must be said that to his credit the preparation of Behring's diphtheritic antitoxin was promptly taken up at the Pasteur Institute by himself and his colleague, Dr. Roux.

Pasteur's engrossing subject of study, however, was undoubtedly chemistry, and by his death chemical science has lost one of its most ardent and successful students. Just three years after joining the École Normale he was appointed Assistant Professor of Physical Science, and in another two years he took his degree as Doctor. Later he filled the chair of Professor of Physics at Dijon, which, however, was resigned after a few months for the chair of Chemistry at Strassburg. Still another appointment he held—at Lille—before he returned to the École Normale as Director of Scientific Studies. In the meantime he had been conducting his famous bio-chemical researches and making experimental study of the phenomena of fermentation. It was at this time that Pasteur proved the presence of germs in the air by an original and ingenious experiment. He placed gun-cotton, which has the texture and appearance of ordinary cotton-wool, in a glass tube through which air was drawn for some time. The plug of gun-cotton was then withdrawn and dissolved in a mixture of ether and alcohol. A residue was thus obtained which proved to contain the seeds of organic life, as was revealed by microscopical examination and by their capacity to develop into organisms, moulds, &c. under suitable conditions. Subsequently Pasteur confirmed the correctness of the observations made previously by Latour, Schwann, and Kützing that yeast consists of low organisms which are self-propagating. The great Liebig, it is interesting to recall, opposed this vitalistic theory; he did not dispute the organised nature of yeast, but would not acknowledge that the latter itself gave rise to fermentation through its life processes. He assumed, on the other hand, the presence in yeast of an albuminous ferment which on the death of the former brought about the decomposition of the sugar into alcohol and carbonic acid. Pasteur showed that this change was not so simple as was represented in the mere splitting up of sugar into alcohol and carbonic acid, but that there were other important substances produced, as, for example, succinic acid and glycerine. This interesting formation by low organisms of an organic acid from a carbohydrate was doubtless the sign-post which led Pasteur to the investigation of the optical properties of tartaric and racemic acids. His beautiful researches on these substances have proved to be of the utmost importance, since they established the relations existing between optical activity and crystalline form, and have thrown considerable light upon the architecture of molecules. It was the foundation of stereo-chemistry or of the chemistry which treats of the position of the atoms in a molecule. When we reflect that it is the position of the atoms in the molecule which determines the properties of the substance the importance of this discovery is clear, but probably not yet appreciated to the full, inasmuch as a more extended knowledge of the constitution, and therefore of the properties, of bodies is calculated to place pharmacology and therapeutics on a sounder and more satisfactory basis. Pasteur showed that racemic acid was the double inactive form of tartaric acid, and is simply composed of equal quantities of dextro- (turning the plane of polarised light to the right hand) and of lævo- (polarising to the left hand) tartaric acid. Thus racemic acid is inactive by external compensation. By methods which are now well known Pasteur proved this by separating racemic acid into two tartaric acids optically opposite in character. Moreover, racemic acid is recovered when a solution of equal quantities of the oppositely active modification is carefully evaporated to dryness. The components of racemic acid could also be obtained, Pasteur found, by the selective action of living organisms (Penicillium glaucum). Pasteur suggested as a possible cause of these optical differences a screw-formed arrangement of the molecules. Our knowledge on these matters has since advanced by leaps and bounds, and this memorable discovery of Pasteur has since opened an almost limitless field of exploration for the chemist. Putting on one side, however, the question as to how far these researches may prove to be of direct benefit to mankind, there remains yet to be mentioned the untold good which followed the practical application of many of Pasteur's discoveries. Of national importance, for example, was the success with which he combated the "diseases"—for so he accounted them—of wine, beer, and vinegar. By the application of his studies on fermentation he was able—to take one example—to restore to his country an annual loss of wine represented by one-fourth of the total quantity produced, or amounting in value to some five millions sterling. For this and similarly great benefits conferred upon national industries he was awarded 12,000 francs by the Society of Encouragement of Paris, and an annuity of the same value by the National Assembly of France, which was supplemented further by a full retiring pension from his professorship at the Sorbonne in 1875—a post he had occupied since 1867—thus enabling him to carry on his scientific and experimental studies without the hindrances of professorial engagements. Space precludes us from enumerating several other splendid examples of the outcome of his chemical and bio-chemical researches which became of more than national importance. We may be content with mentioning his discovery of a remedy for the parasitic disease of silkworms, by which one of the most important industries of France was saved from, as it had been again and again threatened with, complete ruin; his success in the treatment of "cholera" among poultry and goitre among cattle; and, lastly, the measures which he suggested, and which were attended with excellent results, for the prevention of the ravages of the phylloxera, the worst enemy of the vineyards. Chemistry has indeed lost a faithful student and the community at large a noble servant whose keen scientific insight was devoted almost entirely to their interests and well-being.

Sir Joseph Lister has favoured us with the following remarks, which will be read with interest:—"It would be impossible in the short time at my disposal to refer even cursorily to the brilliant and far-reaching discoveries of Pasteur, which have revolutionised both medicine and surgery. I must content myself with a few words regarding his personal characteristics. His acuteness as an investigator in seizing upon essential points and his wonderful lucidity of judgment were only equalled by the patience with which he pursued what he termed *la méthode expérimentale;* and his enthusiasm was always tempered by dispassionate caution. In doing battle with the fallacious doctrine of spontaneous generation he was a keen controversialist, but his utterances were always characterised by transparent truthfulness. His rare modesty and entire freedom from affectation made intercourse with him easy and delightful. Anyone who reads the account he gave in the *Comptes Rendus* of the case of the little boy on whom he first ventured to employ antirabic injections in the human subject will see clear indications of another feature of his character—loving tenderness of heart. His splendid early work in physics and chemistry proved, indeed, how dearly he loved pure science for its own sake; yet it was undoubtedly the great joy of his later

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researches that they directly promoted the good of mankind. In Pasteur the world has lost a personality as beautiful as it was great."

PROFESSOR ADOLF VON BARDELEBEN.

THE medical faculty of Berlin has lost one of its oldest and most popular members. On Sept. 25th there died Professor Adolf von Bardeleben, Ordinary Professor of Surgery, chief surgeon of the Charité, and hospital and general surgeon of the army medical staff. Although he had reached an age when the majority of medical men retire from work, he performed his manifold and responsible functions till his death; and whoever had met him in the hospital wards, in the lecture-room, or at the committee meeting of the German Surgical Association might well have believed that he would continue to do so for a long time. Bardeleben's surgical career extended over more than half a century: he began his work at the time when anæsthetics were first used, and closed it when surgery dares successfully to attack every organ of the human body. Although not personally connected with any striking inventions or methods, he was always ready to avail himself of new methods in surgery. When more than fifty years old, at a period of life when a change of habits is seldom seen in medical men, he, with the late Professor Volkmann, made the antiseptic method first known to the profession of his country, and in spite of the scepticism which Sir Joseph Lister's work met with in the beginning he was one of his most ardent champions in Germany. He had to contend against the administration of his hospital, who believed the new method to be too expensive; and he is said to have made personal pecuniary sacrifices in order to supply the necessary dressing materials for his patients. He substituted in Lister's dressing chloride of zinc for carbolic acid, and employed cheap gauze instead of the rather expensive mull. At last, within a few years he saw the great invention of Lister introduced wherever surgical work was done. The number of his literary publications was but small; he did not care to make a monograph of every uncommon case or to publish every little modification in operations as a new method—to be called, of course, after him. His principal work was the translation of Vidal's Surgical Handbook, which he revised with every new edition, so that it became the standard work on German surgery for more than thirty years. There were, indeed, few men more able to perform such a work than Bardeleben; he not only was fully acquainted with modern surgery, but he also had an intimate knowledge of the history of our science. He had read the works of the old surgeons, and in his lectures liked to cite passages from them in order to show his pupils the enormous progress of medicine. The extent of his knowledge may be illustrated by the fact that he once acted as Lecturer on Zoology in the place of his friend the late Professor Vogt, who had been elected member of the Parliament of Frankfort. We have called him one of the most popular medical professors, and indeed there are few in Berlin who were so universally liked. Although the construction of his hospital did not in any way meet the demands of modern surgical education he had a numerous and most attentive audience overcrowding the small lecture-room to which he was limited. The morning visits especially were attentively followed by the students, as he was one of the few professors in Berlin who liked to be accompanied by his pupils in the hospital wards and to demonstrate the cases. But he was not only venerated by the students, but also by the patients, with whom he was exceedingly gentle and sympathetic. Being in a position which would have allowed him to be merely an indifferent spectator of the struggle for life of his less favoured *confrères*, he nevertheless took part in every effort to improve the social condition of the profession, and till his death he was the Chairman of the Practitioners' Union of his quarter.

Professor Bardeleben was born in 1819 in Frankfort-on-the-Oder, where his father was a lawyer, and having studied in Berlin and Heidelberg he became qualified in 1842. He was elected assistant to Professor Nägeles' gynæcological clinic, and afterwards became Prosector and Teacher of Anatomy. He continued anatomical study, and from Heidelberg went to Giessen, where he began his surgical work. When still a rather young man he was elected Ordinary Professor of Surgery at the University of Greifswald, where he lived from 1848 to 1868. In 1868 he went to Berlin as successor to the late Professor Züngken. He took part in the wars of 1866 and 1870. He received the first class of the Iron Cross for his services, a distinction which was conferred on only six or seven medical men. After the war he was made Surgeon-General of the army medical staff and the high military rank of General-Major was granted him. Several times he was Dean of the Faculty and Rector of the University. He was one of the founders of the German Surgical Association, and for many years one of the presidents of the Berlin Medical Society. He attended the meetings very punctually and regularly, but seldom took part in the discussions. Especially he seemed to dislike polemical debates, and it was an interesting sight to see the dignified and venerable old man looking down with Olympian tranquillity and a sarcastic smile on some dispute for priority. The sorrow at his unexpected death is deep and general in Berlin.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Geo. K. Smith, formerly Assistant Professor of Surgery in Long Island College Hospital, Brooklyn.—Dr. Rand, a well-known surgeon, also of Brooklyn, New York.—Dr. A. Tebaldi, Professor of Clinical Psychiatrics in the University of Padua.—Dr. J. Vamvas, Professor of Hygiene in the University of Athens.

Medical News.

DURHAM UNIVERSITY.—At a convocation held at Durham on Saturday, Sept. 28th, the following degrees in Medicine and Surgery were conferred by the warden, Dean Kitchin:—

M.D. (ad eundem).—W. Ewart, Calus College, Cambridge.
M.D. (Practitioners).—B. Duke, E. Duke, R. Hartley, G. H. Hetherington, J. E. Richards, H. A. Smith, W. Sykes, W. F. Thomas, W. P. Turner, and J. F. Woods.
M.D.—J. H. Baker, J. Braithwaite, T. Beattie, W. A. Dow, J. W. H. Eyre, W. E. Harker, R. L. Meade King, G. Metcalfe, F. B. Rutter, F. Syrett, and L. C. Thorne Thorne.
M.B.—O. Bevan, W. Turnbull, N. C. Gwynn, J. G. Grace, L. G. Fraser, H. L. Hatch, J. R. Adamson, A. Baker, S. Barker, W. T. Carpenter, H. Crichton, R. C. de Lacey, W. G. Fell, L. Fothergill, H. H. Gourleck, G. W. Harbottle, A. H. Hobbs, J. T. Manford, C. M. O'Brien, J. H. Rowell, F. R. Sutton, C. Stewart, F. L. Walker, and W. J. Rowland.
B.S.—J. R. Adamson, A. Baker, S. Barker, O. Beven, H. Crichton, R. C. de Lacey, L. G. Fraser, W. G. Fell, N. C. Gwynn, G. W. Harbottle, H. L. Hatch, A. H. Hobbs, E. R. Kendall, J. T. Manford, C. Meaden, W. H. Rowell, F. R. Sutton, C. Stewart, W. Turnbull, F. S. Walker, and J. J. Grace.
B. Hy.—R. Green.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. A. Barth of Marburg has been appointed Extraordinary Professor of Otology, Rhinology, and Laryngology.—*Budapest:* The chair of Pathological Anatomy has been divided between Drs. Pertik and Genersich. Drs. Feuer, Szili, and St. Csapodi have been promoted to Extraordinary Professorships of Ophthalmology.—*Cracow:* Drs. H. Jordan and Anton Mars have been promoted to Ordinary Professorships of Midwifery and Gynæcology.—*Göttingen:* Dr. A. Cramer has been recognised as *privat-docent* in Psychiatrics.—*Gratz:* Drs. Ebner and Bleichsteiner have been granted the honorary title of Extraordinary Professor.—*Innsbrück:* Dr. F. Dimmer of Vienna has been appointed to the chair of Ophthalmology in succession to Dr. Czermak. Dr. A. Beck of Cracow has been appointed Extraordinary Professor of Physiology.—*Marburg:* Dr. T. Axenfeld has been recognised as *privat-docent* in Ophthalmology.—*Prague* (German University): Dr. J. V. Rohon has been appointed Extraordinary Professor of Histology.—*Vienna:* Drs. A. Klein, T. Mannaberg, and F. Obermayer have been recognised as *privat-docenten* in Internal Medicine, and Dr. R. Braun von Fernwald as *privat-docent* in Midwifery and Gynæcology.—*Würzburg:* Dr. Riese has been recognised as *privat-docent* in Surgery.

FOOTBALL CASUALTY.—On Saturday last, while playing a match at Cardiff between the Cardiff and Barnstaple teams, the Cardiff International half-back sustained a fracture of his jaw.

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MEDICAL MAGISTRATE.—Mr. John C. Baird, M.B., Ch.B. Melb., of Healesville, Victoria, has been made a Justice of the Peace for Victoria, Australia.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The First Entrance Scholarship in Natural Science, of the value of £150, has been awarded to Mr. Frank B. Skerrett; the second, of the value of £60, being divided between Messrs. Walter B. Fry, George W. Hare, and Alfred B. Lindsey, bracketed equal. The Entrance Scholarship, value £50, for students from the Universities, has been awarded to Mr. Percy W. G. Sargent, B.A., of St. John's College, Cambridge.

WE regret to learn that Mr. A. S. Ivens, medical officer of health of Walton-on-Naze, has been seriously indisposed and compelled to leave home for the sake of rest and change. The urban district council, on Sept. 26th, elected Mr. W. E. Dawson, of Walton-on-Naze, to be acting medical officer of health during Mr. Ivens's absence. Mr. Dawson, who is a member of the district council, in acknowledging the appointment, said that he was willing to undertake the duty without emolument as an act of friendship to Mr. Ivens.

NORTH-WESTERN POOR-LAW CONFERENCE.—At the twenty-first annual meeting of the North-Western Poor-law Conference opened at Ulverston, Lancashire, on Sept. 27th, under the presidency of Sir John Hibbert, papers were read by Mr. Moore (Burnley) on Sanitation in Relation to Poor-law Administration, and by Dr. J. Milson Rhodes of Chorlton, Manchester, on Classification of Paupers by Workhouses. Dr. Rhodes said that at the passing of the Act in 1834 small administrative areas were created in order that the friends of inmates might visit the workhouses without difficulty or expense, but that by reason of the modern facilities for travelling many of the advantages of larger areas were now attainable by voluntary combinations among the existing areas. The benefits of large administrative areas were apparent to the early Poor-law reformers, and Mr. Day, an assistant commissioner, half a century ago strongly advocated the classification of paupers in a combined system of workhouses rather than in the separate wards of a single building, for in the latter case there is no guarantee for the permanence of the system, and classification soon drifts into non-classification. Enlargement of the present Poor-law areas would entail serious difficulties, and in many cases the amalgamation of two or even three unions would fail to yield satisfactory results; but voluntary combination (not amalgamation) of boards of guardians for the purpose of dealing with certain classes of paupers is an easy resource, the practicability of which has been proved by various metropolitan establishments for pauper children and for imbeciles, and by the arrangements for tramps and test cases at Liverpool and West Derby. In this way, also, satisfactory provision could be made for the sick by the employment of an adequate staff of trained nurses, whereas, under the existing system, in some of the smaller workhouses there is only one nurse, in others there is no nurse, and only last year Dr. Rhodes visited a workhouse where the method of classification was so faulty that male lunatics were placed in the male venereal wards. Recognising the advantages of large administrative areas, the Garstang, Preston, and Fylde district councils have just resolved on a scheme, not of amalgamation, but of combination, for the purpose of providing hospital accommodation for the infectious cases, especially small-pox, arising in a tract of country twenty miles square. For the accommodation of idiot children combination should be on a much larger scale, preferably by the conjoint action of Lancashire and Yorkshire. In the workhouses of the county palatine there are 2296 lunatics and probably about 600 sane epileptics, but these two classes ought to be kept apart, many of the latter being able to work, though unable to find employment on account of their infirmity. Vagrancy has not been in the least diminished by the system of two days' detention, and is not likely to be reduced except by the progress of education or by some modification of the colony system, for which some of the country workhouses, situated where land is cheap, might be made available by means of combination. After a discussion the principle advocated by Dr. Rhodes was recommended for the consideration of boards of guardians, especially with reference to imbeciles and epileptics.—On Sept. 28th Mrs. Pankhurst (Chorlton) read a paper on the Duties of Boards of Guardians in Times of Exceptional Distress. Sir Walter Foster, M.P., and the President joined in the subsequent discussion and the proceedings terminated.

UNIVERSITY COLLEGE, LONDON: SESSION 1895-96.—Medical Entrance Exhibitions; 131 guineas, Thomas C. Savage; 55 guineas, H. W. Reynolds; 55 guineas, William Reith Scroggie.

LITERARY INTELLIGENCE.—The Roxburghe Press is about to issue the *Nursing World and Hospital Record*, a journal for trained nurses, who, it is calculated, number nearly 30,000 in this country alone. The *Nursing World* is a development and entire re-organisation of the journal known for the last five years as the *Popular Medical Monthly*, and will be conducted in a broad spirit and without being the organ of a section or clique. It will contain many new and interesting features and a number of articles from the pens of well-known and competent writers. Its price will be one penny.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—The winter work of this school commenced on Monday last at the headquarters of the London Rifle Brigade, Bunhill-row, E.C., when two large companies paraded for instruction under Surgeon-Major H. F. Stokes, senior medical officer instructor. The present classes will conclude with the official inspection on Dec. 9th. It is notified for general information that no more men can be taken in either class after Oct. 7th. Among the officers who have recently joined for a course of instruction are Surgeon-Major T. F. Fleetwood, F.R.C.S., Victorian Military Forces, South Australia, and Surgeon-Captain J. H. Cox, Cape Town Volunteer Medical Staff Corps.

WE are sorry to announce that Mr. Trimmer, the Secretary of the Royal College of Surgeons, was knocked down and hurt as he was leaving the College on Wednesday evening. A thief made a snatch at his chain and succeeded in getting off with it and with a bunch of seals which were attached. Mr. Trimmer endeavoured to follow the thief, but was at once thrown on his head by a confederate. His face was badly cut, but he managed to reach the College; he was at once taken to King's College Hospital, where his injuries were carefully attended to. Mr. Trimmer was able to return to his home later in the evening, and on inquiry at the College we are pleased to hear that he is not seriously injured.

GUY'S HOSPITAL ENTRANCE SCHOLARSHIPS.—An Entrance Scholarship in Arts of the value of £100 was awarded to Mr. G. Lewin, who was educated at the City of London School; and the Second Entrance Scholarship in Arts of the value of £50 was awarded to Mr. F. G. Gibson, who was educated at Canterbury College, New Zealand. Certificates of Honour were obtained by the following:—Mr. M. Feldman, Jews' College; Mr. F. S. S. George, Dulwich College; Mr. H. F. Hatfield, Dulwich College; Mr. H. D. Kempthorne, St. John's Foundation School, Leatherhead. The Entrance Scholarship in Arts of the value of £30 for dental students was awarded to Mr. H. A. G. Butler, Douglas School, Cheltenham. The Entrance Scholarship in Science of the value of £150 was awarded to Mr. P. W. L. Camps, and the Second Entrance Scholarship in Science of the value of £60 was awarded to Mr. S. Hodgson. Certificates were awarded to Mr. E. A. Miller and Mr. D. Forsyth.

DIPHTHERIA IN LONDON.—The satisfaction which was felt at the diminished number of deaths from diphtheria in London in the third week of September has been more than counterbalanced by the excessive number chronicled last week. The totals of registered deaths in the first three weeks of last month were 38, 55, and 37 respectively, the latter being even below the corrected decennial average for the particular week; but last week they rose to 56, being 12 in excess of the average, and the highest figure since the week ended Aug. 3rd, when the deaths were one more. Of the 56 deaths, 7 are credited to Camberwell, 5 each to St. Pancras, Islington, Bethnal-green, and Lambeth sanitary area. They all occurred in persons under twenty years of age, 37 being in children under five years of age. But high as were the deaths from this disease in London proper, there were in addition 17 deaths registered in the outer ring of the metropolis, as many as 11 of these being located in the West Ham, and other 4 in the Edmonton registration districts. The attacks in London were also very numerous last week, and the admissions to hospital identical with those of the preceding week—namely, 114. The cases remaining under treatment in hospitals on Saturday last numbered 673, a total which has not been equalled since Aug. 10th, when it stood at 689. The problem of diphtheria in our towns is evidently becoming more complex.

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PRESENTATION TO SIR PETER EADE, M.D. Lond.—On Sept. 25th the corporation of Norwich presented the Mayor, Sir Peter Eade, with the honorary freedom of the city in recognition of the eminent services which he has rendered to Norwich. The Deputy Mayor, who presided, said that the Mayor was now holding office for the third time, the previous occasions having been in 1883–84 and 1893–94, and that he has zealously maintained the dignity of his civic position, a task in which he has been ably supported by Lady Eade. In admitting him to the freedom of the city his fellow citizens have bestowed on him the highest honour at their disposal, and a distinction reserved for exceptional cases. A handsome and elaborate silver casket containing a richly illuminated scroll was then handed to the Mayor, who signed the roll and made the customary declaration. Sir Peter Eade, after warmly thanking the corporation for the honour which they had done him, said that he was not one of those who thought that a professional man should keep aloof from any duties lying outside his special province. On the contrary, he considered that it was beneficial, even from a professional point of view, to engage in pursuits which ensured a diversity of mental occupation. He reminded the company that in Norwich very few medical men had been mayors, though some had been sheriffs. In the last hundred years, excluding himself, there had been only three medical mayors—namely, Dr. Rigby, Mr. J. Goodwin Johnson, and Mr. Nichols. In the evening another ceremony took place in the picture gallery of the Castle Museum, where Lord Walsingham, in the presence of a large and distinguished company, presented Sir Peter Eade with his portrait.

BOOKS ETC. RECEIVED.

ALLENSON, H. R., Paternoster-row, London.
Fred. C. Roberts of Tientsin; for Christ and China. By Mrs. Bryson. With an introduction by the Rev. F. B. Meyer, B.A. 1895. pp. 222. Price 3s. 6d.

BENEDICT, A. J., AND CO., Fulham-road, South Kensington, S.W.
Physicians' Monthly, Quarterly, and Yearly Register.

BLACK, A. & C., London.
Pies for a Simpler Life. By G. S. Keith, M.D., F.R.C.P.E. 1895. pp. 149. Price 3s. 6d.

BLAKISTON, P., SON AND CO., Walnut-street, Philadelphia.
Examination of Water for Sanitary and Technical Purposes. By Henry Leffmann, A.M., M.D., Ph.D. Third edition. Illustrated. 1895. pp. 154.

CHURCHILL, J. & A., New Burlington-street, London, W.
Clinical Lectures on Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.S. 1895. pp. 279.
Elements of Human Physiology. By E. H. Starling, M.D. Lond., M.R.C.P. Second Edition. 1895. pp. 454.
A Manual of the Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P. Fourth Edition. 1895. pp. 958.

COCKS, ROBT., AND CO., New Burlington-street, London, W.
The Human Voice, its Mechanism and Phenomena. By Anatole Piltau. No. 9. Price 5s., net.

LEWIS, H. K., Gower-street, London, W.C.
Elements of Practical Medicine. By A. H. Carter, M.D. Lond. Seventh Edition. 1895. pp. 552. Price 10s.
Dental Materia Medica and Therapeutics. By James Stocken, L.D.S. Eng. Fourth Edition. Revised by Leslie M. Stocken, L.R.C.P., M.R.C.S., L.D.S., and J. O. Butcher, L.D.S. Eng. 1895. pp. 155. Price 4s.

LIPPINCOTT, J. B., Co., Henrietta-street, Covent-garden, London.
Elements of Modern Chemistry. By Charles A. Wurtz. Fifth American edition. Revised by W. H. Greene, M.D., and H. F. Keller, Ph.D. (Strasburg). Illustrated. 1895. pp. 806.

LONGMANS, GREEN, AND CO., London.
Pioneer Work in Opening the Medical Profession to Women. By Dr. Elizabeth Blackwell. 1895. pp. 265. Price 6s.
Climbing in the British Isles—Wales and Ireland. By W. P. Haskett Smith and H. C. Hart. Illustrated. 1895. pp. 197. Price 3s. 6d.

MACMILLAN AND CO., London.
Modern Developments of Harvey's Work: The Harveian Oration, 1894. By T. Lauder Brunton, M.D., F.R.S. 1894. Price 2s.

PENTLAND, YOUNG J., Edinburgh.
Functional and Organic Diseases of the Stomach. By Sidney Martin, M.D., F.R.S., F.R.C.P. Illustrated. 1895. pp. 505.

SIMPKIN, MARSHALL, HAMILTON, AND CO., Stationers' Hall-court, London.
Sons of the Fire: a Novel. By the author of "Lady Audley's Secret," &c. In three volumes. Vols. i., ii., and iii.

SMITH, ELDER, AND CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. 44. Paston—Percy. 1895.

THE ROBERT CLARKE COMPANY, Cincinnati.
Some Physiological Factors of the Neuroses of Children. By B. K. Rachford, M.D. 1895. pp. 122.

St. John Ambulance Association Official Drill Manual for the members of the St. John Ambulance Brigade (published at the head offices, St. John's Gate, Clerkenwell, London, E.C.); price 6d.—Notes, Autobiographical and otherwise; by Doctor Parish; being some of the experiences of the first ten years of his professional career (The Savoy Press, Savoy House, Strand, London); price 1s.—Studien über Malaria; von Prof. Dr. G. Baccelli in Rom; autorisirte deutsche Ausgabe (Williams and Norgate, Henrietta-street, Covent-garden, London).—Illustrated Modern Art and Literature; vol. i., No. 10 (Modern Art Publishing Company, 68, Fleet-street, London, E.C.); price 1s.—Notes from Spa Practice; by Samuel Hyde, M.D. (reprint from Medical Magazine, vol. iv., March-April, 1895).—The British Gynæcological Journal; edited by L. Napier, M.D., F.R.S. Edin.; Parts 40, 41, and 42 (J. Bale and Sons, Great Titchfield-street, London, W.) price 3s. 6d. each.—Monatshefte für Praktische Dermatologie, unter Mitwirkung von P. Taenzer in Bremen, von P. G. Unna; Zwanzigster Band; 1895; Januar bis Juni; mit Sieben Tafeln (Leopold Voss, Hamburg und Leipzig, 1895).—Magazines, &c., for October: The Strand Magazine, The Picture Magazine, Illustrated English Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Pall Mall Magazine, Westminster Review, Contemporary Review, Chapman's Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AITKEN, C. CRAWFORD, M.B., C.M. Edin., has been appointed Junior House Surgeon to the Cumberland Infirmary.

ASPINALL, J., M.R.C.S., has been appointed Medical Officer of Health for the Smallthorne Urban Sanitary District, vice Walker.

BEALE, P. T. B., F.R.C.S. Eng., has been appointed Demonstrator of Histology and reappointed Lecturer on Elementary Biology in King's College, London.

BRODRICK, C. C., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Tavistock Rural Sanitary District.

BIERNACKI, JOHN, M.B., C.M. Glasg., L.R.C.P. Edin., &c., has been appointed Medical Superintendent of the West Ham Fever Hospital.

COLEY, J. G. E., M.B., B.Ch. Oxon., L.R.C.P. Lond., F.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the Malton and Morton Rural Sanitary Districts.

COLLINS, A. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Yapton District of the Westhampnett Union.

DOCKRAY, JOHN S., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Manchester Southern and Maternity Hospitals.

DOW, JAS. W., M.D., Ch.M. Toronto, has been appointed Health Officer for the Shire of Rosedale, Victoria, Australia.

EASBY, W., M.D., has been appointed Medical Officer of Health for the Peterborough Rural District Council, vice W. E. Paley, deceased.

FLETCHER, JAMES, M.B., C.M. Aberd., has been appointed Resident Physician to the Aberdeen City Hospital.

FLINT, T. B., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed House Surgeon to the Clinical Hospital, Manchester.

GIDLEY, G. G., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for the Tiverton Union.

HOGGAN, BERTRAM B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator at Romsey, Victoria, Australia.

HOLTON, F. W. P., M.R.C.S., has been appointed Medical Officer for the Tenth Sanitary District of the West Ham Union.

HOPE, GEO. J. B., M.A., M.B., C.M., has been appointed Medical Officer of Health to Scarborough Rural District Council, vice Cuff, resigned.

JOHNSTON, J. W., M.D., M.S. Edin., has been appointed Medical Officer for the Workhouse and the First Sanitary District of the Fordingbridge Union.

KENDALL, B. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wendron Sanitary District of the Helston Union, vice Seville, resigned.

LAWSON, T. C., M.R.C.S., has been appointed Medical Officer for the Stogursey Sanitary District of the Williton Union.

MCCORMACK, CHARLES VINCENT, L.R.C.P. Lond., M.R.C.S. Lond., has been appointed Superintendent of the Corporation Hospital, Bootle, Lancashire.

MACDONALD, D. S., M.B., Ch.M. Edin., has been appointed City Health Officer for Rockhampton, Queensland.

MCBREARTY, JAS., L.F.P.S. Glasg., has been appointed Surgeon-Captain to the Greymouth Naval Artillery Volunteers, New Zealand.

MCCAW, HUGH, M.B., Ch.M. Glasg., has been appointed Public Vaccinator for the District of East Taieri, New Zealand.

MAIN, HARRY F., M.B., Ch.B. Melb., has been appointed Medical Officer for the Kyneton Hospital, Victoria, Australia.

PEEBLES, F. M., M.B. Melb., has been appointed Honorary Medical Officer to the Bendigo Hospital, Victoria, Australia, vice MacGillivray.

ROMER, FRANK, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Malmesbury Union, vice A. E. Clarke, resigned.

ROSS, JOHN, M.B., Ch.M. Edin., has been appointed a Public Vaccinator for the District of Waipawa, New Zealand.

RICHARDS, WM. H., L.S.A., has been appointed District Medical Officer for the Cardiff Union.

SEYLER, C. A., has been appointed Analyst for the County of Glamorgan, vice Morgan.

SHOWMAN, LOUIS F., L.R.C.P., L.R.C.S., L.M. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Wirrimbirchip Shire, Victoria, Australia.

SKINNER, E. W., M.D., C.M. Edin., has been reappointed Medical Officer of Health to the Rye Rural District Council.

STEVENS, F. J., M.R.C.S., D.P.H., R.C.P.S. Eng., has been appointed Medical Officer of Health for the Parish of Camberwell.

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TOOTH, H. H., M.D. Cantab., F.R.C.P., M. Lond., M.R.C.S., has been appointed Assistant Physician to St. Bartholomew's Hospital.
WOOLLEY, GEO. T., M.R.C.S. Eng., has been appointed Consulting Surgeon to the Maldon Hospital, Victoria, Australia.
YELF, R. R. B., M.B., C.M. Edin., has been appointed Medical Officer for the Moreton Sanitary District of the Shipston-on-Stour Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser for three years. Salary £50 per annum, with board, apartments, and laundress.
EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Assistant Physician, to see out-patients.
EAST SUSSEX COUNTY COUNCIL.—Consulting Medical Officer for one year. Honorarium of 100 guineas and travelling expenses.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.
HOSPITAL FOR WOMEN (the Loudon School of Gynæcology), Soho-square, W.—Clinical Assistants.
LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.
MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer at Bowden, Cheshire. Salary £60 per annum, with board, apartments, and washing.
METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon.
MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer, for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.
NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer, unmarried. Salary £110 per annum, with £10 annual increase to £160, with board (no liquors), lodging, and washing.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments and board.
SHEFFIELD ROYAL HOSPITAL.—House Physician, for one year, unmarried. Board (exclusive of wine and beer) and lodging, an an honorarium of 25 guineas. Also Junior Assistant House Surgeon, unmarried. Salary 60 guineas per annum, with board (exclusive of wine and beer) and lodging.
SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.
SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10.
SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer. Unmarried. Salary £30 per annum, with board, washing, and residence in the hospital.
SWANSEA HOSPITAL.—House Physician, for one year. Salary £60 per annum, with board, lodging, and laundress.
THE RURAL DISTRICTS OF BUNTINGFORD, HADHAM, HERTFORD, STANSTED, AND WARE, AND THE URBAN DISTRICTS OF BISHOPS STORTFORD, HERTFORD, HODDESDEN, AND WARE.—Medical Officer of Health for the above districts. Salary £600 per annum, including travelling and all other expenses. Applications to the Clerk of the Joint Committee, Council Offices, Baldock-street, Ware, Herts.
WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon. Salary £50 per annum, with board, lodging on the premises, and washing.

Births, Marriages and Deaths.

BIRTHS.

SMELT.—On Sept. 29th, at 371, Holloway-road, N., the wife of C. A. Casterton Smelt, M.B., C.M., of a son.
THOMSON.—On Sept. 25th, at 243, Queen's-road, New Cross-gate, S.E., the wife of David Thomson, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glas., of a daughter.
WHITAKER.—On Sept. 28th, at Cove House, Sandycove, county Dublin, the wife of J. Minchin Whitaker, L.R.C.S. & P. Edin., of a son.

MARRIAGES.

ASHWELL—LYON.—On Sept. 25th, at Pontefract Parish Church, Herbert George Ashwell, M.R.C.S., &c., of Nottingham, to Elizabeth Beatrice Lyon, eldest daughter of Mr. J. G. Lyon, J.P., of Carleton Close, Pontefract.
BALLANCE—MAUNSELL.—On Sept. 25th, at All Saints', Raheny, county Dublin, H. Stanley Ballance, M.D., B.S. Lond., of 4, Royal-terrace, Weston-super-Mare, to Kathleen Isabella, daughter of John Maunsell, Esq., Edenmore, Raheny.

DEATHS.

BELLOT.—On Sept. 24th, at his residence, Moreton Lodge, Leamington, William Henry Bellot, M.D. Erlangen, F.R.C.S. Eng., aged 84.
DAVISON.—On Sept. 12th, at Holloway-road, James Campbell Davison, M.D. Brux., F.R.C.S., L.R.C.P. Edin., Belgian Distinguished Service Order, aged 55.
HEATON.—On Sept. 30th, at Hastings, Alan Baldwin Heaton, M.B., of St. James's-street, S.W., in his 27th year.
MASSY.—On Sept. 27th, at Northwood Lodge, Bournemouth, Surgeon-General Hampden Hugh Massy, C.B., aged 75.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 3rd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 27	30·21	S.E.	66	63	109	82	62	...	Hazy
,, 28	30·26	E.	64	62	120	80	60	...	Hazy
,, 29	30·26	E.	70	65	113	77	59	...	Fine
,, 30	30·06	S.E.	59	58	104	77	57	...	Foggy
Oct. 1	29·79	S.E.	64	61	116	76	59	...	Cloudy
,, 2	29·44	N.W.	55	53	101	64	55	0·22	Cloudy
,, 3	29·52	W.	49	46	80	59	42	...	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).
TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).
WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).
THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).
FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).
SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).
At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-sq., W.).—5 P.M. Cases will be shewn by Dr. Leonard Roper and Mr. Charters J. Symonds. Pathological Specimens by Dr. Felix Semon and Dr. Scanes Spicer.
SOUTH-WEST LONDON MEDICAL SOCIETY (Workhouse Infirmary, St. John's Hill, New Wandsworth).—8 P.M. Dr. J. B. Neal will show several cases of interest from the Infirmary.
HUNTERIAN SOCIETY.—8.30 P.M. Address by the President (Mr. Charters J. Symonds). Mr. F. Rowland Humphreys: The Infectious Nature of Rheumatism.
THURSDAY.—BRITISH GYNÆCOLOGICAL SOCIETY.—Specimens by Dr. R. H. Hodgson (Multilocular Ovarian Tumour undergoing Fatty Degeneration) and Dr. Collins of Cardiff. Paper by Mr. Bowreman Jessett: A New Method of performing Abdominal Hysterectomy, with five successful cases.
FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Introductory Address by the President. Papers:—Mr. Arbuthnot Lane: Three cases of Excision of the Temporo-maxillary Articulation in Children.—Sir Dyce Duckworth: Case of Sudden Death due to Cardiac Syphiloma.—Mr. Barker: Traumatic Derangement of the Knee-joint due apparently to Fracture of the Spine of the Tibia; Exploratory Arthrotomy.—Dr. Radcliffe Crocker: Impetigo Contagiosa Gyrata.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Clinical Examination of the Eye.—London Throat Hospital, Great Portland-street, W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.
TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Acute Mania.
WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Choroidal Affections, with Illustrative Cases.
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Paget: Surgical Cases.
THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., The Medical Registrar: Pathological Demonstration.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Gowers: Clinical Lecture.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.
FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.
SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Hysterical and Delirious Mania.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Psoriasis and Seborrhœic Dermatitis.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

MEDICAL MEN AND INTEREST IN COMPANIES FOR THE SALE OF MEDICAL FOOD.

MR. WM. COLEMAN persists in sending round the profession from time to time offers of debentures in his company, which is constituted for the sale of a compound of extract of meat and malt wine. Our object now is not so much to discuss the merits of this preparation, but to dissuade all medical men from becoming shareholders in a company for its sale. Such a position is inconsistent with their duty and their dignity as medical men.

MESSRS. MABIE, TODD, AND BAIRD of Cheapside have sent us one of their Swan Fountain Pens—in case, probably, we had never heard of them. But we have, and use them constantly, and would not be without them. They are a revelation to anyone who has hitherto had to put up with a steel pen.

Nemo.—We believe that almost any London hospital will receive a probationer under the circumstances mentioned.

THE PERCUTEUR IN APHONIA.

To the Editors of THE LANCET.

SIRS,—The occasional instantaneous action of the percuteur was well illustrated in a recent case. On Sept. 22nd a woman aged twenty-three years was brought by a friend to ask for a ticket to attend the throat hospital, as she had for three weeks been unable to speak above a whisper. The percuteur was applied for one minute over the thyroid cartilages, and at once she could speak in a loud voice, much to her own and her companion's astonishment. The improved condition has continued up to the present date.

I am, Sirs, yours faithfully,

Oct. 1st, 1895. RICHARD NEALE, M.D. Lond.

Mr. W. Garland Soper desires to know any references to any opinions, fact, or figures with respect to the desirability or otherwise of muzzling dogs. Our correspondent's attention may be directed to an annotation in our present issue.

B.—Our correspondent had better apply direct at the offices of any of the great liners—P. & O., Orient, Cunard, &c. Most of them, we believe, require candidates to serve for at least a year.

AN UNQUALIFIED PRACTITIONER AT PENARTH.

UNQUALIFIED practice is the concern of the public. Life is sacrificed to it, and coroners' inquests have to be held. A case in point has just occurred at Penarth. A child four weeks old was ill with convulsions, and the parents called in a person described in the report of the inquest as "Doctor Graves." This gentleman has no qualification. So complete is the impression he produces of being a proper medical man that one of the jurors said that he had lived in Penarth all his life and never knew till then that Graves was not a qualified medical man. The people who sent for him on this occasion thought so too. Yet the jury added to their verdict of "Death from natural causes" "that the nurse was to blame for not calling in a properly qualified man." This seems scarcely fair till the law is so amended that such deception as is practised on a community shall be much more severely punished than it is. If we are not misinformed, this individual has been already successfully prosecuted three times, twice under the Apothecaries' Act and once under the Medical Act.

House Surgeon.—The police are not bound to take cognisance of the facts reported to them, and consequently not bound to watch an alleged suicidal patient whilst in the hospital. At the same time we hold that they would act more in the interests of justice if they did so. Quite recently a case occurred in a London hospital in which, although it was clearly established that the patient had attempted to take his own life, the local police decided not to charge him, on condition that his friends undertook to take care of him. In this we maintain they were in the wrong. The surgeon in charge of the case advised that the Chief Commissioner of Police should be informed of the fact, thus freeing the hospital from any further responsibility.

Gadus (?).—Supposing the relations between A. and C. to be of the normal friendly character which obtains between medical neighbours, the work done by C. should be considered as done by A. and for A., leaving to A. the fees for it and the collection of them.

M.B., C.M.—None but *legally* qualified medical practitioners can give certificates of the cause of death.

AN ALLEGED FLAGRANT BREACH OF ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—I shall be glad of your opinion upon the conduct of a practitioner under the following circumstances. I saw a patient, employed in the Post Office, suffering from rheumatic fever and gave him a certificate to that effect. Some days afterwards a medical man employed by the Post Office was sent down to see the case. Without calling upon me at all he visited my patient and told him he was suffering from *rheumatism*, but not *rheumatic fever*. Will you kindly say: 1. Whether it is correct for a medical man to call upon another's patient without consulting him? 2. Whether it is correct for a medical man in any case, and especially under the above circumstances, to contradict another's diagnosis to the patient in the absence of the other practitioner, even though he deem the diagnosis a mistake? 3. What can be the difference between acute rheumatism and rheumatic fever (there is no doubt whatever about the acuteness of the disease—temperature 104°, &c.)? 4. After the lapse of a week, is the diagnosis of a casual visitor more likely to be correct than that of the regular medical attendant, who has seen the case from the commencement?

I am, Sirs, yours faithfully,

Sept. 24th, 1895. W. J. R.

*** 1. It is not right or usual for a medical man, whatever his official position, to visit another's patient without consulting him.—2. It is especially wrong to contradict the diagnosis of another practitioner in his absence and without giving him the chance of justifying it.—3. Acute rheumatism and rheumatic fever are synonymous terms, and rheumatism with a temperature of 104° F. is properly certified as rheumatic fever. We would venture to suggest that our correspondent may have been misinformed to some extent. He should see the medical officer of the Post Office, of whom he seems to have just right to complain.—ED. L.

H. B.—It is not necessary in all cases to have a post-mortem examination. If the medical man does not feel justified in giving an opinion as to the cause of death, of course he is not bound to do so. The entire responsibility rests with the coroner.

Dr. Edwin A. Starling is thanked for his courteous letter. We fear, however, that we shall not be able to carry out his suggestion.

HOMES FOR CHRONIC MELANCHOLIACS.

To the Editors of THE LANCET.

SIRS,—I should be exceedingly obliged if any reader of THE LANCET could tell me of an institution where a lady suffering from chronic melancholia could be admitted on the payment of not more than £40 per annum.

I am, Sirs, yours faithfully,

Sept. 28th, 1895. G. P.

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"PRACTICE IN SOUTH AFRICA."

To the Editors of THE LANCET.

SIRS,—Recent residence and practice in South Africa qualifies me to answer "Scot's" queries contained in THE LANCET of Sept. 21st. South African medical practice may be divided into three classes: (1) in towns; (2) in country villages; and (3) in native districts.

In towns.—I can confidently say that every town is adequately supplied with able medical men, and that in Cape Town and Johannesburg at least the supply largely exceeds the demand. Vacancies arising are filled up by practitioners from the country, as a rule. Fees are certainly higher than at home, but living is proportionately dearer. I would strongly dissuade any stranger from attempting to start practice in a South African town unless prepared to struggle and wait as he would at home.

In country villages.—The bulk of the profession is engaged in this kind of practice, which still is very profitable in certain parts. The villages vary from merely half-a-dozen tin shanties (forming a centre for a scattered farming population) to places of 3000 to 5000 inhabitants. Living is decidedly poor, and the accommodation, society, and practice in places are decidedly rough. In Cape Colony there are few places unsupplied with medical men; but in the Orange Free State and Transvaal there are still hamlets and districts where practice and a handsome income are to be had by simply setting up. South African country people, particularly the Boers, welcome a new medical man in a way that astonishes one accustomed to the difficulties of European practice. The old-established "district surgeon" frequently sees a goodly slice of his practice taken off by the arrival of a young practitioner, "fresh from Europe with all the latest treatments," and a such-like flourish of trumpets. Fees are high in these places, especially for medicine, and country journeys are paid for at the rate of £1 an hour. Living, on the whole, costs about the same as at home; but luxuries are very dear, and much that is regarded as a necessity at home becomes a luxury in South Africa. It must be remembered that the Boers are accustomed to receiving quite twelve months' credit from their medical men; but they are good, although slow, payers. I can again confidently state that a steady practitioner, who does not mind a roughish and isolated life, will easily find a living, and in certain districts a really handsome income, from one of these rural practices. It must be remembered also that the unwritten Cape language—a mere *patois*—must be mastered during the first few months, and, further, that South Africa sends home a yearly increasing number of able students, who, when qualified, have naturally better chances in the country than a foreigner—English, Scotch, or other.

In native districts.—These are carried on under Government appointments, and are, I believe, not profitable or enjoyable, except for those desiring sport, to study the natives, or botany, zoology, &c. There is not such keen competition for these appointments as for those in more civilised districts. The future of Mashonaland and Matabeleland is still so doubtful (despite the accounts of Stock Exchange speculators), and the cost of getting there so great, that it would be unwise of any man to go there, unless to one of the district surgeoncies—obtained, like everything else in South Africa, through influence.

Cape Colony demands a fee of £5 for registration, and an annual £5 licence to dispense; the Orange Free State requires £20 a year for licence to practise, and the Transvaal more, I believe. It is cheaper and better to take out a good supply of drugs with one, and subsequently to import direct. Indiarubber goods do not last long on the inland plains up country. It is necessary to be provided with a few letters of introduction and enough capital to live and travel until an opening is found and the practice becomes productive. For many reasons it is very indiscreet to purchase a South African practice either through a London agent or in the country; as a rule, it is money thrown away. There is a South African medical journal published monthly in Cape Town. The *Cape Argus* weekly edition (London Office: 164, Fenchurch-street) often contains advertisements of openings and practices or medical men wanted. The profession is well protected against quackery, &c., in the Colony and Free State, but not in the Transvaal; and I may say, in conclusion, that the same qualifications lead to success in a colony as in the old country, only perhaps a little colonial "bounce" is required in addition, and is acquired as quickly as the language.

I am, Sirs, your obedient servant,

Sept. 28th, 1895. M.D.

APPOINTMENT OF HOUSE SURGEON TO THE NORTH CAMBS. HOSPITAL, WISBEACH.

To the Editors of THE LANCET.

SIRS,—We were informed by letter that we were *the three* selected candidates for the above appointment out of eighteen applicants, and invited to attend the committee meeting on Oct. 1st. We naturally thought one of us would be elected. But no; for, curiously enough, after being detained about an hour and a half we were informed that a gentleman whom to our knowledge we never saw was elected. We were consoled for our disappointment by being informed by an elderly gentleman that we were too young for the post. Our ages, respectively, were thirty-nine, thirty-five, and thirty-one years. We should like to know at what age a man—having held hospital posts, as we all had—becomes capable of carrying out the duties of house surgeon to an institution containing twenty-four beds. It seems to us very unfair to make a selection of the candidates and then to appoint a gentleman who to our knowledge was not selected at all.—We enclose our cards and beg to remain,

Yours truly,

Oct. 2nd, 1895. J. S. B., D. S., AND E. B.

"THE CORPORATION DOCTOR."

To the Editors of THE LANCET.

SIRS,—Surely it is time that the voice of the General Medical Council was heard, and an authoritative judgment delivered in the case of the "corporation doctor." His action either is or is not distinctly unprofessional. If it is the former, then it ought not to be left to isolated practitioners to show resentment at his proceedings by refusing to meet him in consultation. If the latter, then the members of the profession who refuse to meet him simply because he is a "corporation doctor" ought to be made to understand that the position they take up is wrong. I understand that, in addition to being tabooed by the established practitioners in the district in which he settles, he is also debarred from the British Medical Association. If this is the case, surely the General Medical Council ought to nip the mischief in the bud, on whichever side it is springing up, and its action should be such as to leave no possible doubt of the light in which it means to regard the "corporation doctor" and the manner in which it means to treat him. Isolated members of the profession can do nothing. It requires a central authority to take the matter up and deal with it both quickly and strictly, or else the country practitioners will be compelled either to go to the wall or join the ranks of the "corporation doctor."

I beg to remain, Sirs, yours faithfully,

Sept. 29th, 1895. INDIGNANT.

"WANTED, SUGGESTIONS FOR TREATMENT."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 17th suggestions are asked for by "M.D." as to how to deal with a case of obstinate constipation. A measure which I have never known to fail to give relief, if persevered with sufficiently long and carried out properly, is deep kneading of the abdomen, together with movements calculated to strengthen and to give tone to the abdominal muscles. This should be carried out at least once daily, and on an empty stomach.

I am, Sirs, yours truly,

Eastbourne, Sept. 28th, 1895. O. H.

A QUERY.

To the Editors of THE LANCET.

SIRS,—I shall esteem it a great favour if you will kindly insert the following query in THE LANCET. The point in question is one of considerable interest to me. Is there any truth in the common belief that drowned bodies of men float face downwards, while those of women float face upwards? If so, what is the explanation? I can find no mention of the matter in any of the books to which I am able to refer, but am assured by numerous seafaring friends, from experience in the Hooghly and elsewhere, that the facts are as stated.

I am, Sirs, yours faithfully,

Sept. 30th, 1895. TEIGNMOUTH.

Mr. Sinclair Thompson (Bideford).—We certainly should not advise any English masseuse to start work in Constantinople, unless she were previously assured of the support of the English medical men. It must be remembered that massage is extensively practised in the East by Orientals of both sexes, and, in addition, there are in Constantinople some European masseuses. Native patients in the harems could, of course, be obtained all the year round, but European visitors can only be counted on during the spring months. For further information our correspondent should apply to the Physician to the English Embassy at Constantinople.

Mr. William Duncan.—Such advertisements are unseemly and unusual. We cannot give an opinion on their legality. Our correspondent tells us nothing of the circumstances.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Blackburn Standard, Dundee Advertiser, Midland Free Press, Manchester Guardian, Hackney Mercury, North Middlesex Chronicle, Liverpool Courier, Montreal Herald, Birmingham Post, Cheshire Observer, Newcastle Leader, Bridge of Allan Reporter, Falkirk Herald, Leicester Advertiser, Loughborough Monitor, Carnarvon Herald, Sheffield Independent, Northern Whig, Belfast News Letter, The Sun, Builder, Times of India, Manchester Courier, Glasgow Evening News, Birmingham Argus, Redditch Indicator, Evening Telegraph (Dundee), Freeman's Journal, Pioneer Mail, Architect, Scotsman, Citizen, Brighton Gazette, Leeds Mercury, Bristol Mercury, Sanitary Record, City Press, Liverpool Daily Post, Newry Telegraph, Yorkshire Post, Evening Mail (Jersey), Mining Journal, Le Courrier de la Presse, Local Government Chronicle, Hertfordshire Mercury, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Reading Mercury, Lymington Chronicle, Eastern Daily Press (Norwich), Surrey Advertiser, Cork Daily Herald, Walton News, Guy's Hospital Gazette, Brighton Examiner, Australian Medical Gazette, Deal, Walmer, and Sandwich Mercury, Newcastle Daily Chronicle, East Essex Advertiser, Eastern Morning News, East Dorset Herald, Grantham Journal, Public Health, Sheffield Daily Telegraph, &c., &c.*

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Z.—Dr. Theodore Zangger, Zurich.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. H. L. Allott, Barnsley; Dr. E. Allen, Hawes; Messrs. Allen and Hanburys, Lond.; H. R. Allen National Surgical Institute, Indianapolis, U.S.A.; Assistant, Lond.; A. Z., Lond.; Audacia, Lond.
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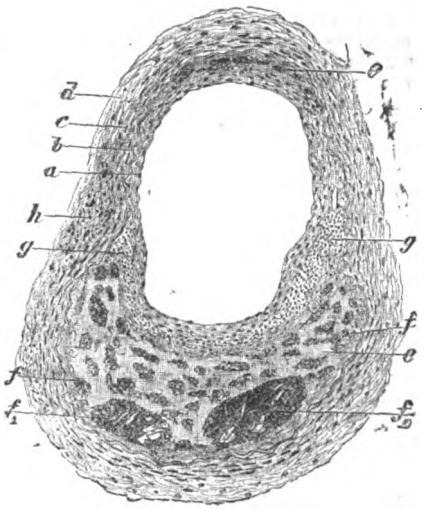
A Lecture
ON
ATHEROMA AND SOME OF ITS CONSEQUENCES, WITH THEIR TREATMENT.

Delivered before the Cardiff Medical Society on Feb. 21st, 1895,

By T. LAUDER BRUNTON, M.D., F.R.S.,
PHYSICIAN TO, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS AT, ST. BARTHOLOMEW'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—When I was asked to address this society I was told that a subject of practical interest would be best appreciated, and I have accordingly chosen one which is not only of interest to us as medical men, but either is now or will be by-and-by of interest to us personally, for if we live long enough few of us are likely to escape atheroma and its consequences. It is a trite proverb that "the strength of a chain is that of its weakest link," and the same idea has been applied to man in the saying that "a man is as old as his vessels." In this phrase we have, in the first place, an acknowledgment that the different parts of a man do not all age at the same rate, but that some grow feeble and old before the rest; and, secondly, that the vessels are especially apt to grow old early, and upon their strength or feebleness the fate of the whole organism hangs. Nor is it only in the relative ageing of the vessels as compared with other tissues that a difference is to be remarked, for it occurs also in different parts of the vascular system. Sometimes it is the aorta which becomes affected, while the smaller arteries remain comparatively free. At other times it is the small arteries which become affected, while the aorta remains healthy. Consequently, the symptoms which result from atheromatous disease of the vascular system may differ much, but there are two great groups which come prominently forward—namely, those in which the symptoms are cardiac and those in which they are cerebral. The cardiac affections are chiefly connected with atheroma of the aorta. The cerebral symptoms, although usually associated with atheroma of the vessels in the brain, may also be due to alterations in the aorta and in the heart itself. The atheromatous process is so common in old age that it is usually regarded as a necessary concomitant of advancing years. It has been compared by Virchow to chronic arthritis of the joints and has been called by him "arteritis deformans," while he calls the joint affection "arthritis deformans." But while a certain amount of atheroma is almost invariably associated with advancing years, the arteries may become atheromatous at an earlier age in consequence of disordered nervous supply or disordered tissue change and elimination. Thus it has been found experimentally by Lewaschew[1] that irritation of nerves leads to changes in the vessels which they supply, the vasa vasorum being at first dilated and afterwards the middle coat becoming displaced by connective tissue, so that the internal coat and adventitia become blended. Clinical observation also shows very strikingly how mental worry affects the vessels and how frequently in elderly people it is followed by vascular changes. Altered nutrition also affects the vessels enormously, and, although atheroma may occur to a very great extent apart from syphilis, yet this disease certainly leads very frequently to endarteritis and vascular degeneration, with weakening of the large vessels or occlusion of the smaller. Endarteritis has also been produced experimentally by lesion of the kidneys, leading to their contraction, and the atheroma which is so frequently found along with contracted kidney may, as I hope to show, be actually dependent to a certain extent on that condition. The process of atheroma is thus described by Ziegler:[2] "The intima is generally the most affected, while the media is often unaltered and the adventitia only slightly infiltrated. In other cases the adventitia may be somewhat thickened and the media atrophied. The change in the intima consists of more or less extensive but generally unilateral thickening. At the points where the altered passes into the unaltered tissue the thickening is made up of fibrous tissue more or less notably infiltrated with leucocytes. The same is true of the innermost layers of the altered intima; but the deeper layers in contact with the elastic bounding membrane consist of pale indistinctly fibrillated tissue, which is devoid of nuclei and almost entirely necrosed; they contain numerous aggregations of granular detritus. The granular masses consist partly of albumin, partly of fat, and older foci of softening nearly always contain tablets of cholesterin. Atheroma thus appears to be essentially a necrosis with granular and fatty disintegration of the thickened intima. The atheromatous ulcer is produced by the advance of the disintegrating process towards the lumen of the vessel and rupture of the innermost layers of the intima. We may conceive how readily such a rupture might occur if we note that on the post-mortem table very slight

FIG. 1.



After Ziegler. Section of an atheromatous cerebral artery. *a*, Intima considerably thickened. *b*, Bounding elastic lamella of intima. *c*, Media. *d*, Adventitia. *e*, Necrosed denucleated tissue with masses of fatty detritus. *f* and *f*, Detritus with cholesterin tablets. *g*, Infiltrated leucocytes in the intima. *h*, Infiltrated leucocytes in the adventitia.

pressure on an atheromatous patch often suffices to break in the surface layer and convert the patch into a cavity." Sometimes the atheromatous patch, either while whole or after undergoing ulceration, may become more or less calcified, and the sharp points of the calcareous plates may not only make their presence evident to the auscultator's ear by giving rise to a sharp whizzing murmur over the aorta, but may lead to the production of fibrinous clots by a process analogous to that of whipping blood after it has been shed. Along with atheroma it may be advisable to take endarteritis obliterans, which is practically atheroma in the smaller vessels, and consists, like it, in a thickening of the internal coat, though possibly with less deposit between the internal and middle coats than what we find in atheroma of the larger arteries. I shall therefore class it along with atheroma and use this term as more convenient when talking both of the affections of the large and of the minute arteries.

The consequences of atheroma will differ according to the size of the artery affected and the extent and nature of the affection. Atheroma of the aorta may not only weaken the coats of the vessel and give rise to the formation of aneurysm, but may affect both the heart and nerve centres in other ways. Atheromatous thickening close to the aortic orifice will tend to lessen the calibre of the coronary arteries and at the same time render them rigid and unyielding. Should an atheromatous mass undergo softening, so that an ulcer forms in the interior of the aorta, numerous granules will be discharged into the blood and will be carried to various organs and there cause embolic infarcts,[3] arresting more or less completely the circulation in the vessel beyond the part where their course is arrested. Similar consequences may

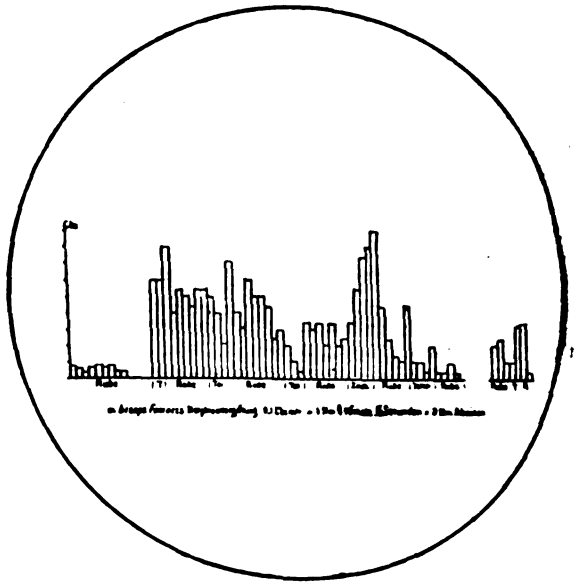
[1] Virchow's Archiv, vol. xcii., p. 152.
[2] Pathological Anatomy, &c. Translated by Donald Macalister, M.D. Part II., sections i. to viii., p. 71.
[3] Ziegler: Op. cit., p. 73.

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arise from atheroma of medium-sized vessels, and when very small vessels are affected their lumen may be completely obstructed by the gradual thickening of their walls, instead of by sudden arrest of the circulation by an infarct. Yet in these vessels, though the circulation has been gradually diminishing, its final arrest may be comparatively rapid, because of the formation of a thrombus at a point where the lumen of the artery has already been diminished. No organ of the body is free from the risk of vascular obstruction, but the two organs in which the symptoms are most marked and important are the heart and the brain, and the symptoms may, therefore, be divided into two great classes of cardiac and mental. All the symptoms may again be subdivided, according to their severity, into functional and organic. The term "functional" is in some respects objectionable, for it is very unlikely that any change in the function of an organ takes place without definite organic change, either physical or chemical, in the organ itself. Yet the term may be employed to indicate those slight alterations in function to which, on account of our imperfect knowledge, we are unable to assign an organic cause, but in which the cardiac disturbance is such as to indicate disordered innervation or weakness of the muscular fibre, or both conditions together. The actual weakness makes itself felt in ready exhaustion and shortness of breath on exertion, while the disordered innervation evidences itself in irregular action, discomfort or a feeling of constriction on the chest, or various degrees of pain up to the most severe. The discomfort or pain is generally increased by exercise, and consequently the patient is induced or compelled to give up the active employments or exercise to which he has been accustomed. Emotion has a similar effect to exercise, and the patient is apt to feel a great dislike to anything that calls for mental strain. The condition he suffers from is undoubtedly a complex one, for though the mental faculties are those which are called into play by emotion, yet the effect of arterial degeneration upon them is probably due to an alteration in the heart as well as the brain.

Whenever any organ is called upon for increased exertion, whether it be a muscle, a gland, or the brain itself, an increased supply of arterial blood appears to be necessary, and in a healthy organism this increased supply is always provided to the organ by dilatation of the arteries which supply it. As Bernard has well shown, the artery of a secreting gland dilates, the capillaries enlarge, and the blood gushes through them into the veins. In a contracting muscle the vessels also dilate, and although the current of blood during the actual contraction may be increased or diminished, yet the vessels of the muscles always dilate, and a full stream of blood passes through it either during the contraction itself or after the contraction is over. (Fig. 2.) A similar dilatation of the bloodvessels of the brain has been shown by Mosso, who found that even such a slight exertion as doing a sum in arithmetic would make itself evident in the circulation of the rest of the body by the withdrawal of blood to the brain in order to maintain its activity. (Fig. 3.) But when the vessels become atheromatous and rigid they can no longer dilate and supply an increased amount of blood to an organ when the necessity for it arises. The first organ to be supplied from the arterial system is the heart itself, and we find that an individual may complain of symptoms known only to himself, and which probably indicate commencing atheroma, when to all appearance he is perfectly sound and when his friends very often say they never saw him looking fitter in his life. It has seemed to me that one of the first signs is that the patients complain that they "have lost their nerve" for all ordinary work. They are perfectly fit for all ordinary occupations or businesses, for they can hunt or shoot, but when any call is made upon them for extraordinary exertion they feel themselves unequal to it. When hunting they no longer like to take a big jump, not that they feel physically unable for it, but they have a sort of indefinite fear of it, or, as they say, they "funk" it. They do not like any business question which involves sudden decision, and they may even go so far as to dislike meeting with strangers and having to talk to them on account of the extra exertion involved. Yet there may be no outward indication of all this, and the patient may be able quite successfully to conceal his feelings from everybody else. It is at present almost impossible to say how much of these feelings are really due to commencing [illegible] and rigidity of vessels and how far they may be [illegible] tissue change, and more especially by the imperfect removal of uric acid and other products of tissue waste and their consequent accumulation in the blood or organs, as mentioned by my friend Dr. Mitchell Bruce in his admirable description of the gouty heart.[a] Nor will it be easy to decide such a question, for the same treatment that would be likely to remove the uric acid and other waste products will be likely to improve the condition of the vessels and to restore the patient, at least for a time, to comparative health. If the coronary arteries are more severely implicated the effect of imperfect nutrition of the

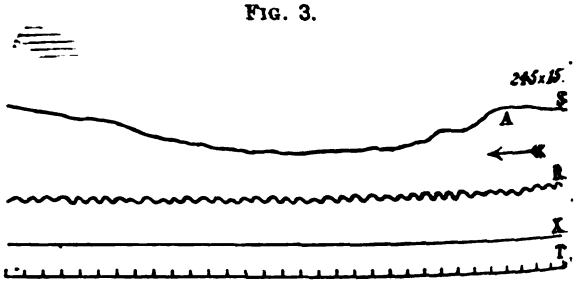
FIG. 2.



After Ludwig and Sadler. The marks along the base line indicate seconds; the height above the base line indicates the amount of blood flowing from the veins of the biceps of a dog during tetanus (T or tet), during rest (Ruhe), or during simple contraction (Zuck).

heart itself will become still more evident, its impulse will tend to become feeble, its sounds indefinite, the pulse feeble, irregular, or intermittent, the breath shorter, and the discomfort or pain on exertion more pronounced. There may be ringing in the ears, giddiness, and occasional fits of faintness or complete loss of consciousness. Here, again, it is difficult to assign an exact cause for such nervous symptoms. One is apt to say loosely that they are "due to a little weakness of the circulation," without attempting to formulate definitely

FIG. 3.



To show the contraction of the vessels produced during the process of multiplying 245 by 15. S, Volume of left arm. A marks the point at which the calculation was commenced; after this point the pressure falls. B, Respiratory movement of chest. X, Abscissa. T, Time line; every upright marks an interval of five seconds.

the nature of this weakness. They may possibly be sometimes due to ptomaines or leucomaines, or they may be caused by minute hæmorrhages in the nervous centres from the bursting of capillary aneurysms, but the transitory nature of the symptoms seems to indicate that frequently they are more likely due to minute embolisms than to hæmorrhages.

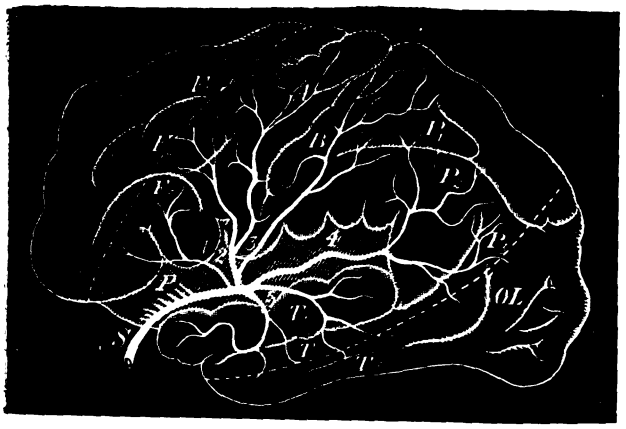
When we look at the excavated surface of an atheromatous

[a] Practitioner, January, 1885.

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ulcer in the aorta we cannot help speculating as to where all the stuff which formerly filled it has gone, and, knowing as we do that embolisms are most likely to find a lodgment in the brain, we can hardly help trying to connect the various slight nervous symptoms which are so frequent in atheroma with the atheroma itself and with minute scattered plugs in the cerebral vessels arising from it. A glance at Fig. 4, which shows the distribution of vessels in the brain,

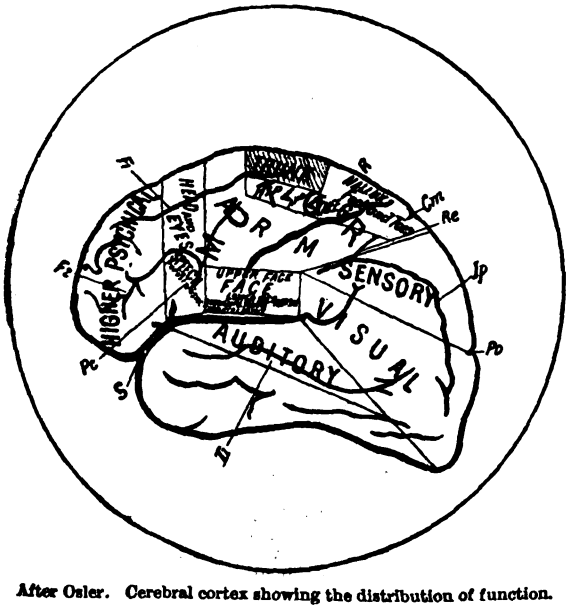
FIG. 4.



After Ross. Distribution of the arteries in the brain.

and Fig. 5, which indicates the distribution of function in the cerebral cortex, will readily show how easily minute particles, by obstructing small vessels in different parts of the brain, may give rise to symptoms of the most various sorts—sensory, motor, and intellectual. The mental symptoms may be very slight indeed, and their presence may only be ascertained when certain things have to be done. Thus, a patient of mine, a strong, very energetic man aged

FIG. 5.



After Osler. Cerebral cortex showing the distribution of function.

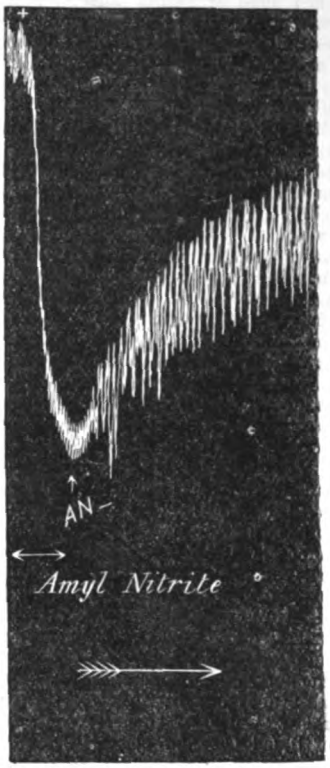
sixty-five, had a kind of fainting fit which left him a little stupid for a day or two. On returning to work he was perfectly well in every respect but one. He could conduct all his business, which was a large one, arrange every detail with one exception, for though he could write the correct sums and names on his cheques and sign them perfectly he could not put in the proper figures. Men with atheromatous vessels may go on for a number of years and no accident may befall them, but if the atheroma is well marked I think it is right that both they and their friends should know that the man is rather unsafe, and that he may, without much apparent warning, do a foolish thing. It is in such cases that we hear the story that "Mr. So-and-so lost his money, and this preyed so much upon his mind that he went off his head." If the case had been correctly read it would probably have been that the man had atheromatous disease, leading either to embolism or to hæmorrhage in some part of his brain, which gave rise to no motor symptoms, but so disordered his higher faculties that he committed some folly, in consequence of which he lost his fortune. The process of cerebral degeneration, of which this was the first proof, then went on until it became evident to everyone. It is strongly advisable for men aged sixty and upwards who are engaged in business and have atheromatous arteries to guard themselves against the chance of doing anything foolish, and if they are in partnership the question will arise how far the partner ought to be informed of the possibility of such an occurrence in order to safeguard his own interests as well as the patient's.

In cases of severe affection of the coronary arteries the chief risk is angina pectoris, although it is quite possible that sudden death may occur in such cases without any pain at all, and a patient may go to bed perfectly well and happy and be found dead in the morning. The pain of angina pectoris is in all probability due to weakness of the heart in proportion to the resistance it has to overcome and may be removed either by increasing the power of the heart or lessening the resistance. In most cases it is necessary to lessen the resistance in order to obtain rapid relief. This is effected by dilating the vessels by the aid of nitrite of amyl[5] or other nitrites, such as that of butyl, nitro-glycerine,[6] nitrite of soda, or hydroxylamine.[7] All these have practically the same action in causing dilatation of the arterioles. All these substances act in much the same way and dilate the peripheral arterioles so that they present less resistance to the flow of blood through them. The pressure falls, and the heart, having little resistance in front of it, is able to empty itself easily and thoroughly. This is readily seen from the tracings (Figs. 6 and 7), in which, as the pressure falls, the oscillations due to each beat of the heart become very much more marked than before. The nitrite of amyl (Fig. 6) and nitrite of iso-butyl (Fig. 7) are the quickest to act, and thus they afford relief more quickly than the others; but nitrite of soda appears to have a more prolonged action, and so does nitro-glycerine, which, being on the whole the most convenient, has become more used than any of the others. The last substance that I have tried for the relief of angina pectoris is hydrochlorate of hydroxylamine.[8] (Fig. 8.) It seems to have a more permanent action than any of the others, but it tends to irritate the stomach, and the trials I have made of it have not yet shown it to possess such advantages over the others as are likely to make it displace them, yet at the same time it is a remedy worthy of a wider trial. But all these remedies are merely palliative; they tend to avert a fatal termination, but they do not have much effect upon the vascular condition of the heart and vessels which give rise to the pain. The drug which has hitherto appeared to be most successful, not only in relieving the pain of an aneurysm, but also in averting the occurrence of spasms of angina pectoris, has been iodide of potassium in large doses of from ten to thirty grains three times a day. The beneficial effect of iodide of potassium in cases of cardiac or vascular disease due to atheroma, as well as in rheumatic affections of the joints, affords further confirmation of the likeness which Virchow has pointed out between "arteritis deformans" and "arthritis deformans." But we know only too well that in cases of arthritis deformans, more commonly known under the name of rheumatic gout, iodide of potassium may be administered in large doses until both patient and medical man are sick of the remedy and hopeless of cure. In such cases a visit to Bath, Buxton, Harrogate, or Aix may afford in a short time relief which has been sought for in vain by months of treatment at home. A course of baths, a course of water-drinking, and more especially massage of the joints, clear away the chronic thickening, remove pain, and restore flexibility to the joints. The mere use of an abundance of water as a beverage at home may, if continued for a sufficiently long

[5] THE LANCET, July 27th, 1867.
[6] St. Bartholomew's Hospital Reports, 1876, p. 144.
[7] Royal Society's Proceedings, 1889, vol. xlv., p. 362.
[8] St. Bartholomew's Hospital Reports, vol. xxx., p. 189.

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FIG. 6.



Tracing showing the action of amyl nitrite on the blood pressure. The point where the administration was begun is marked by a cross; the point where it was discontinued by a small arrow. The horizontal double-headed arrow indicates the zero point of pressure; the single-headed arrow indicates the direction in which the tracing is to be read.

FIG. 7.



Tracing showing the action of isobutyl nitrite on the blood pressure. The indications on the tracing are the same as in Fig. 6.

time, prove successful as a remedy. I saw a very instructive case of this a short time ago. A patient suffered from a rheumatic affection of his thumbs which rendered the metacarpo-phalangeal joints quite stiff, so that the thumbs stuck out rigidly from the hand. He went to Buxton, improved somewhat, though not greatly. After his return home he drank a pint of hot water every night and morning steadily. For months no improvement was manifested, but at the end of a year the joints became supple and are now as limber and useful as they ever were in his life. This patient's case, I think, teaches us very strongly the necessity of long-continued treatment and of not giving up in despair because no improvement is manifested even after it has been continued for months.

The kidneys are the natural emunctories of the body, and through them the products of tissue waste ought to be eliminated. But some of these products, such as uric acid and urate of soda, are very sparingly soluble, and if little water be drunk they may remain embedded in the tissues instead of being eliminated. Many patients, and especially those having a gouty tendency, hardly ever touch water pure and simple. They may take a little in the form of soup, tea, or coffee, but their chief drink

FIG. 8.



Action of hydroxylamine hydrochlorate on blood pressure.

with their meals is wine, and between meals they do not drink at all. In the treatment of atheroma, then, as well as of rheumatic joints, I regard the administration of hot water as a most useful agent, and one which ought to be continued for months or years together. But when we look at an atheromatous artery the condition seems quite as unpromising and as unlikely or even more unlikely to yield to treatment than that of a deformed joint. It is quite natural that one should be sceptical as to the advantages to be derived from the use of hot water in either the one or the other, yet the case of the man I have just mentioned may make us hopeful in regard to atheroma as well as to arthritis. His cure was, however, a very slow one, and not to be compared in rapidity with those which are of everyday occurrence at Bath and Aix. There can be little or no doubt that at these places the use of massage in affections of the joints greatly contributes to the rapidity of the cure. Is it possible, then, to exercise anything like massage upon the heart and vessels? Before answering this question it may be well to consider what massage really is. Under the name are included kneading, stroking, and tapping with various degrees of force. The main object of the procedure is to imitate artificially the arrangement which exists naturally in all organs of the body for getting rid of waste products from the organs in which they are produced, and for increasing the supply of fresh

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blood to these organs. As Claude Bernard has well put it, all the cells of which our bodies are composed live in a liquid medium—viz., the tissue juice in which they are all bathed. This tissue juice fills up the interstices between the cells. It derives fresh nutriment and oxygen from the blood in the capillaries. These it yields up to the tissues and receives from them in return their waste products, which it sends out partly through the veins and partly through the lymphatics. In some cases the lymph spaces appear to communicate directly with the lymphatics, while in others they appear to communicate only indirectly, no definite opening being visible through which the tissue juice can flow into the lymphatics, but yet it may pass readily into them even although it has to traverse endothelial cells. The effect of alternate pressure on a flow of lymph has been made a special study by Ludwig and his scholars. Muscular exercise, for example, is found greatly to increase the flow of lymph, and the mechanism by which this is effected appears to be the following. Each muscle is surrounded by a strong fascia consisting of two layers. Between each there exists a lymph space. When a muscle is relaxed and elongated its transverse diameter becomes less—or, in other words, it shrinks away from its sheath and thus tends to drag the internal layer away from the outer. (Fig. 9, A.) It thus

FIG. 9.

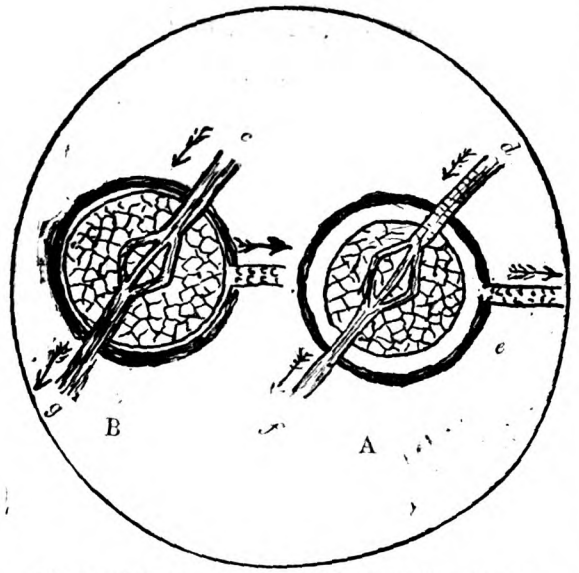


Diagram of transverse section of voluntary muscle to show the pumping action exerted on the muscle, juice and waste products during action. The bloodvessels cross diagonally. To the left (B) the muscle is contracted and presses the two layers of the fascia together so as to drive the muscle juice out into the lymphatics. To the right (A) the muscle is relaxed and tends to draw the layers of fascia apart and suck the juice out of the muscle into the lymph space. *c*, Artery. *d*, Artery. *e*, Lymphatics. *f*, Vein. *g*, Vein.

tends to create a vacuum between the two layers of the fascia, and into this the tissue juice of the muscle is drawn. When a muscle again contracts and shortens it becomes at the same time thicker, and pushes the internal layer of the fascia against the external. (Fig. 9, B.) The fluid is thus driven out of the lymph space onwards into the lymphatics, and its return is prevented by the numerous valves with which these lymphatics are furnished. Each time that a muscle contracts it drives the fluid onwards; each time that it relaxes it sucks its tissue juice and products of waste into the lymph spaces, and thus the more it acts, up to a certain point, the more thoroughly are its waste products eliminated. The result of such action is well seen in an old cab horse on a frosty morning. For the first half-mile or so the poor creature seems as if it could hardly put one foot before the other, then its pace quickens, and after it has gone some distance its legs are supple and its pace is rapid. A similar condition is noticed in muscular rheumatism in man, where the slightest movement causes pain at first; but, after a little exercise, the waste products being pumped out, the muscle recovers its normal condition, the pain is eased, and its function becomes normal. At the same time that the action of the muscle thus pumps away its waste products, provision is made for a fresh supply of nutriment, and as the muscle contracts its arteries dilate and a free flow of blood occurs through them. Sometimes the mechanical obstruction presented to the flow of blood by the contracting muscle may retard the circulation during the actual contraction, but after it is over the circulation through the muscle is greatly increased. (Fig. 2.) In glands the increased flow of blood in itself and the dilatation of the vessels in the gland will tend to press out the lymph, for the gland is almost always enclosed in a firm fibrous capsule.

The peritoneum, pleura, and pericardium are all lymph spaces, and the manner in which fluid is absorbed from the peritoneal cavity by the central tendon of the diaphragm and from the thorax by the costal pleura has been beautifully shown by Ludwig and his scholars, although von Recklinghausen was the first to observe the absorptive power of the diaphragm. The more the diaphragm acts the more quickly is fluid absorbed by it from the peritoneal cavity, and the more the thoracic walls act the more quickly is liquid pumped from the pleural cavity. The mere act of respiration tends to pump out the lymph from the peritoneum and pleura, and thus to maintain perfect nutrition in these important cavities. In the pericardium a pumping action is

FIG. 10.



Diagram of a transverse section of the thorax during inspiration and cardiac systole. It shows the tendency to the formation of a vacuum in the pleural and pericardial cavities.

kept up both by the respiration and by the pulsations of the heart itself. We may understand this more easily if we look at the diagrams of Figs. 10 and 11. In Fig. 10 I have tried to represent the condition of inspiration and cardiac systole. In inspiration the chest walls expand and tend to cause a cavity between the two layers of the pleura. The suction action which they thus exert is evident, not only from the entrance of air into the lung through the normal air passages, but from the way in which air will rush in when any opening has been made into the thorax between the ribs. This suction action is not only exerted upon the lungs, but upon the pericardium, which it tends to withdraw from the heart. If at the same time the heart is contracting it tends to create a cavity in the pericardium, and thus suction is exerted upon the pericardium and upon the heart itself, which will not only tend to draw fluid into the pericardial space, but also fresh tissue juice into the substance of the heart. In Fig. 11 I have tried to represent very diagrammatically the condition during expiration and during cardiac diastole. The chest wall, sinking down upon the distended lung, will tend to press any fluid in the pleural cavity into the lymphatics of the chest wall and will also tend, along with the diastolic expansion of the heart, to press fluid out of the pericardium into its lymphatics, and out of the muscular substance of the heart into its lymphatic

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vessels. In this way we can see that the movements of respiration, as well as those of the heart itself, constitute a kind of massage to the lungs, thoracic walls, pericardium, and heart—a fact which was clearly pointed out some years ago by my friend, Professor Hugo Kronecker. Nor is this all,

FIG. 11

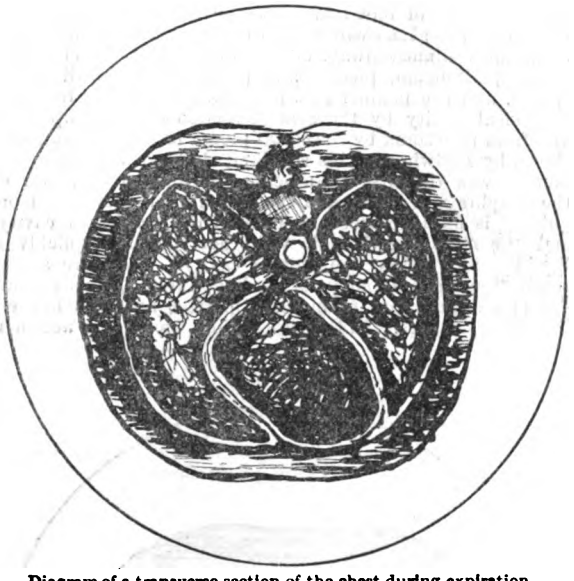


Diagram of a transverse section of the chest during expiration and cardiac diastole, showing the pressure of the walls of the pleural and pericardial cavities against each other.

for the walls of the arteries are themselves likewise subject to a kind of massage by the alternate systole and diastole of the heart (Fig. 12), and this fact is of great importance. Between the intima and media, and probably in the media itself, there are lymphatic spaces, and in the adventitia there are distinct lymphatic vessels. Encased, as many of the

FIG. 12.

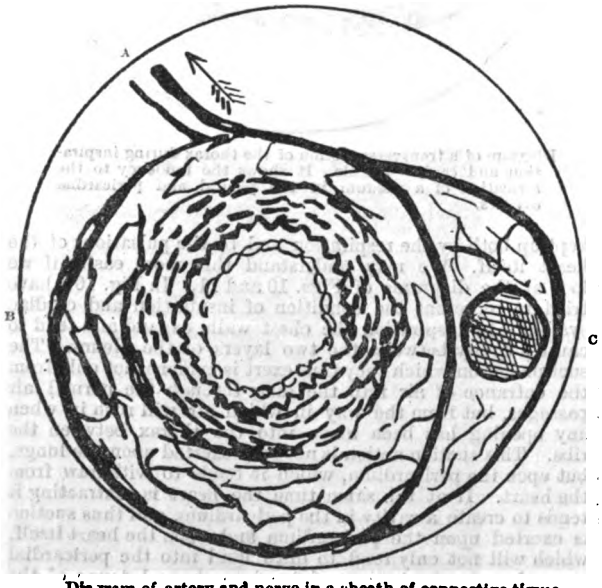


Diagram of artery and nerve in a sheath of connective tissue. A, Lymphatics. B, Sheath. C, Nerve.

arteries are, in a strong fibrous sheath, their alternate distension and relaxation at each pulsation will tend alternately to drive the internal layer against the middle and the middle against the outer, so that any fluid lying between them will be driven onwards into the lymphatics with each systole of the heart, and during the diastole the arterial coats will tend to separate from one another and thus draw in fresh supplies of tissue juice from the vasa vasorum. The mechanism by which the nutrition of the arteries is maintained is thus seen to be very much like that of the muscles. In some animals, instead of there being merely lymph spaces or small lymphatic vessels between the artery and its coat, a regular lymphatic vessel is seen to surround the artery, which forms, as it were, the core of the lymphatic. This condition is seen in the aorta of the tortoise, and it occurs also in the vessels of the brain. Nor is the utility of the massage action exercised by the alternate dilatation and contraction of the artery confined to the nutrition of the artery itself, for not infrequently we find that a nerve trunk—e.g., the vagus—runs along with the artery enclosed in a common sheath of unyielding connective tissue. The contraction and dilatation of the vessel will exert a kind of massage upon the accompanying nerve, similar to its action on the arterial walls, and will thus tend to maintain the nutrition of the nerve as well as of the artery.

It is well known that without exercise we cannot have the muscles in first-rate order, and the same thing is universally acknowledged in regard to the heart. No athlete would think of running a race without previous training—a training which is even more necessary for his circulation and consequent wind and endurance than for the muscles of his limbs. It is obvious that if the respirations be shallow and few, and if the beats of the heart be feeble and imperfect, the thoracic organs, and more especially the heart and arteries,

FIG. 13.

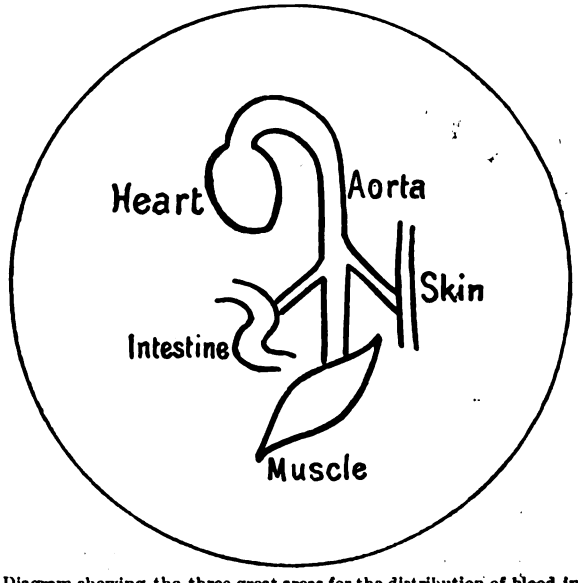


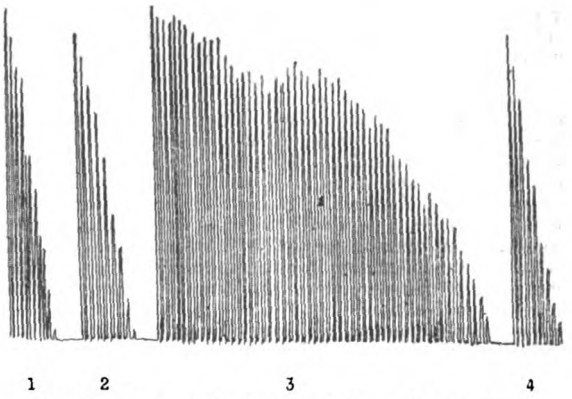
Diagram showing the three great areas for the distribution of blood in the body—viz., the muscles, the intestine, and the skin.

will suffer in their nutrition. The removal of waste from them will be less perfect, and they will be liable, not only to the accumulation of such forms of tissue waste as will render them functionally feeble or irritable, but also to the distinct organic changes which we know as atheroma. Feeble action of the heart, although in some respects it may be a safeguard against rupture of weak or brittle arteries, is in itself a distinct evil, as lessening the nutrition both of the organ itself, of the arteries which convey the blood, and of the tissues which they should nourish. How, then, is the nutrition of the heart to be improved and its power increased? As I have already said, if the difference between systole and diastole is great, the removal of waste products will be more perfect, and this difference may be increased by causing the circulation to become more rapid, lessening the resistance in the arteries so that they present no obstruction to the heart's emptying itself, and allowing the blood to pour rapidly through the venous system back into the heart so that it is thoroughly filled during diastole. There are three large systems, or vascular districts as we may term them, in the body. The first is the skin, the second the intestines, and the third the muscles. (Fig. 13.) It is exceedingly curious to note how little

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the enormous vascular district of the muscles is taken into account even in recent works on physiology, and how all the variations in blood pressure are referred to contraction of vessels either in the skin or in the intestines. And yet the vessels of the muscles are as important as both the other two taken together. When the vessels of the muscles dilate during exercise they allow the blood to flow rapidly through, but during the muscular contractions the flow may first be interrupted mechanically, and the general blood pressure may rise. (Cf. Fig. 2.) This rise, slight though it may be, is sufficient in some cases of weak heart to produce intense pain and danger, so that a man suffering from angina pectoris is obliged to desist from attempting to walk up even a slight incline. Yet if he can continue the muscular exercise the pain passes off and he gets freedom of action resembling that commonly known as "second wind," a condition which is probably also connected with the circulation through the muscle. In such cases some good results on the circulation may be obtained without any risk by substituting massage of the muscles for actual exercise. My friend Dr. Tunnicliffe and I have made some experiments on the effect of massage on muscles. The effect of massage upon muscle is simply to imitate artificially the process by which waste products are naturally removed from it. Instead of the muscle contracting and driving on its tissue juice containing the waste products into the lymphatics by pressing the inner layer of the fascia against the outer, the muscle is kneaded so as to express its juice, and this is then rubbed onwards into the lymphatics by upward pressure and stroking. The kneading and stroking are the two most efficient movements in massage, but they may be assisted by tapping with more or less force, for this movement appears to excite reflexly an increased circulation both in the skin and in the muscles themselves. By means of these three movements combined the waste products are readily removed from the muscle, while at the same time no fresh ones are produced by

FIG. 14.



After Maggiora and Vinaj. Blät. f. Klin.: Hydrotherapie, 1892, p. 6. 1, The fatigue curve of the left hand raising a weight of 3 kilogrammes every two seconds. 2, The fatigue curve of the right hand. 3, The fatigue curve of the left hand after five minutes' massage. 4, That of the right hand without massage.

renewed muscular contractions, as they are in ordinary exercise. The flow of blood through a muscle is enormously accelerated, and its contractile power correspondingly increased. Even when a muscle has been so much fatigued

FIG. 15.

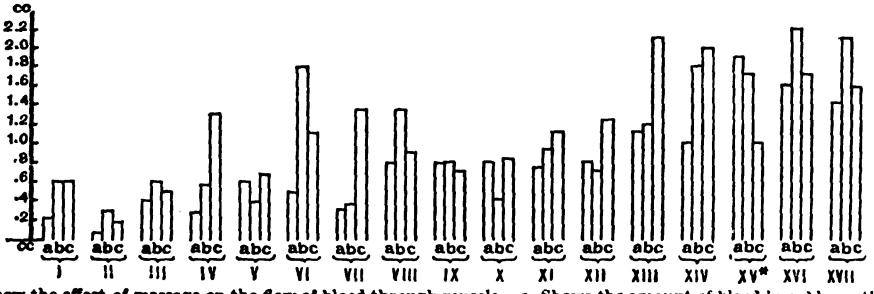
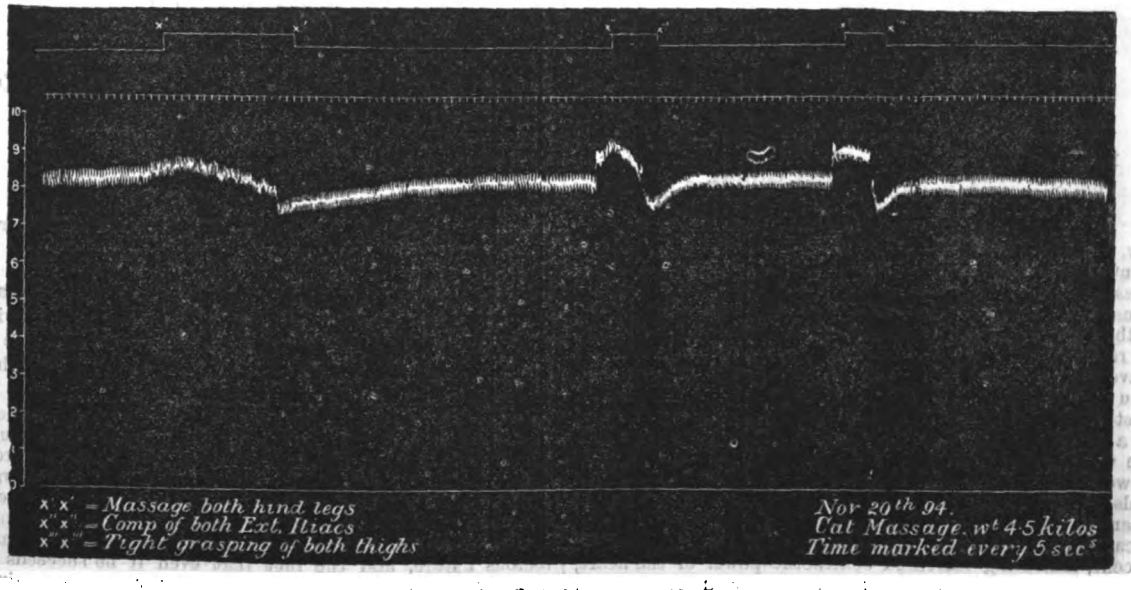


Diagram to show the effect of massage on the flow of blood through muscle. a, Shows the amount of blood in cubic centimetres which flowed from a muscular vein when it was simply opened. b, During massage. c, After massage.

FIG. 16.



Tracing showing the effect of massage on blood pressure.

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that it can hardly contract any more its contractile power is restored by massage, as is evident from the tracings (Fig. 14). These are made by bending the finger with a weight attached to it until it is so exhausted as to be unable to contract any more. The movements are recorded by a point upon a blackened cylinder. From the tracings it is evident that a few minutes' massage increases the power and endurance of exhausted muscles up to or even beyond their normal. On comparing the effect of massage of muscles on the circulation through them, as observed by Dr. Tunnicliffe and myself, with the results obtained by Ludwig and Sadler after stimulation of the motor nerves of muscles, it will be found that they are very similar. The effect of massage when seen in actual experiments is even more striking than as it appears in the diagrams. To say that the flow of blood through a muscle is increased threefold by massage means a good deal, but it hardly suggests to one the tremendous gush with which the blood does flow through the muscle (Fig. 15). By the use of massage, then, the circulation is quickened, the resistance is diminished (Fig. 16), the filling of the blood during diastole increased, and thus the pumping of waste products out of the heart itself is more thoroughly effected. At the same time there can be little doubt that a similar increase of blood-supply to the heart itself takes place even if the coronary arteries are contracted; and as it is called upon to make no extra exertion, but, on the contrary, to work against less pressure than before, we may expect it to become better nourished and better able for the work. But simple massage will not increase the thoracic movements, and these, as I have mentioned, are important adjuncts. Therefore it is that, if the patient be strong enough, carefully graduated movements may be added to massage or replace it entirely. For these movements will increase the flow of blood through the muscles and have all the other useful actions I have mentioned as resulting from massage. Massage in the treatment of heart disease is, I believe, first mentioned by Harvey, but its employment was first reduced to a system in Sweden by Ling and others. The Swedish cure attracted but little attention in this country or on the Continent until the system of treatment by baths and movements was taken up by the brothers Schott of Nauheim, and the great success which has attended the use of this method seems likely to lead to its general adoption and recognition. The method consists chiefly in the use of graduated movements, which are made at first against very slight resistance, the resistance being increased as the patient is able to bear it, until at last the patient may be obliged to use a considerable amount of muscular effort. Under this treatment dilated hearts become rapidly smaller, at least up to a certain point, as is shown by the accompanying figure (Fig. 17), which I owe to the kindness of

FIG. 17.

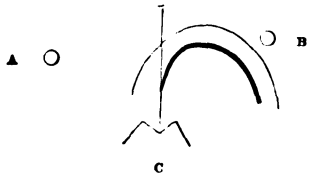
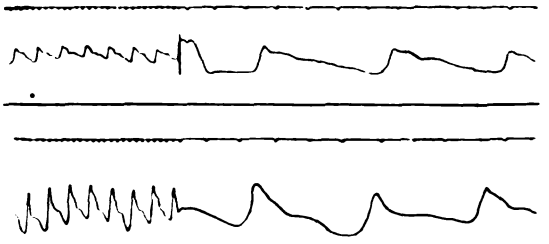


Diagram of the cardiac dulness before and after a bath. A similar effect is produced by gymnastic exercises. The thin line shows the graduated dulness before and the thick one after. A, Nipple. B, Nipple. C, Ensiform cartilage.

Dr. Schott. But it is evident that the alternate expansion and contraction of the arteries may be very slight, and their self-massage, as we may term it, very imperfect if the arterial tension be high, as we often find in gouty patients, even although the heart may be strong. Can anything be done to remedy this condition permanently? I believe it can. I have only begun to use the treatment, and I can only give you at present one example; but from it you will see that a systematic course of exercises has brought about in the case of a gouty man the precise alteration in the pulse for which we would seek—a diminution in the resistance and a more powerful action of the heart (Fig. 18)—so that instead of a pulse tracing with a slow ascent, indicating feebleness of the heart, in proportion to the resistance, and a slow descent, indicating contracted arterioles, we get a rapid and much larger ascent, indicating increased contractile power of the heart, and a quicker fall, showing less resistance in the arteries. Such a case as this makes one hopeful that, unpromising as arteritis deformans is in regard to treatment, we may yet have such power to cure it as we have in the case of arthritis deformans. I should not have ventured to bring before you a plan of treatment based upon one case alone were it not that this, although the only one that I have, is simply one of many that have been recorded. Nor does it seem much to claim for the plan of treatment, for it is a fact that many, perhaps most, people in civilised countries either cannot or will not take enough exercise, or exercise of the right sort, and it is an exceedingly common thing to hear a man's friends remark that if he would take more exercise he would be perfectly well. But a mere walk along the flat cannot be regarded as exercise for many people. It may be all that they are able to take on account of the weakness of their muscles or the flabbiness of their heart, but it is insufficient to produce the cardiac, vascular, and

FIG. 18.



Pulse tracing showing the effect of massage and graduated movements. Each tracing is taken partly with a slow and partly with a quick movement of the sphygmograph. The upper shows high tension and a feeble heart; the lower shows less tension and a stronger heart. These tracings I owe to the kindness of Dr. Gustav Hamel, to whose treatment I had recommended the patient.

respiratory self-massage of which I have spoken, and if the patient tries to do more he may overstrain himself and do more harm than good. The whole essence of the treatment which I have been advising for atheroma and its consequences may be shortly summed up in a few words—namely, water drinking and graduated exercise, passive and active. Simple as these remedies are, they are, I believe, the most potent of all in improving, or even, perhaps, removing completely, a condition which is of the utmost gravity from its relation both to the heart and the brain. It is, indeed, natural to expect that they should be powerful curative agents, for they are neither more nor less than the means by which Nature itself keeps up the healthy nutrition of every organ in the body, where the utmost pains seem to have been expended upon mechanisms whereby not only fresh nutriment should be supplied, but waste products should be removed with greater or less speed, according to the greater or less functional activity of each organ.

A CASE ILLUSTRATING A VERY EFFECTUAL METHOD OF TREATING EXTENSIVE MALIGNANT DISEASE OF THE BREAST.

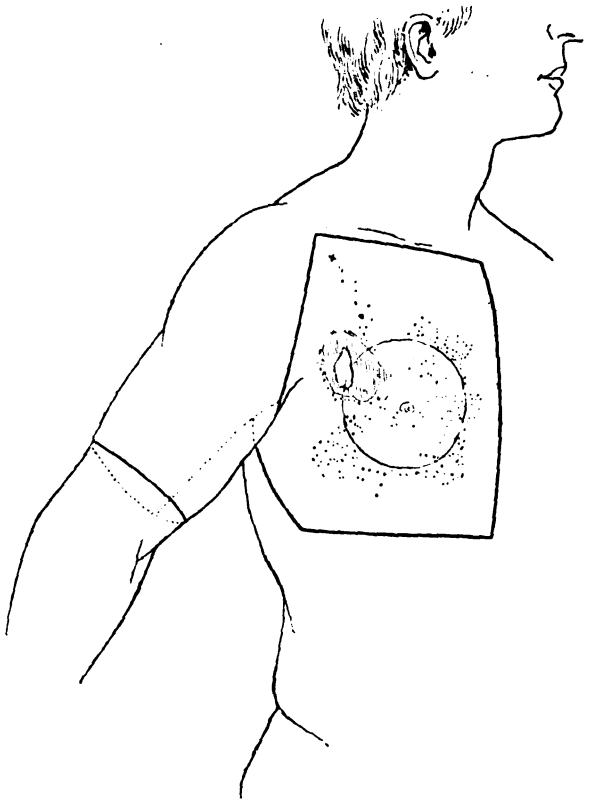
BY W. ARBUTHNOT LANE, M.S., F.R.C.S. ENG.,
ASSISTANT SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

THERE are many cases of extensive cancer of the breast and of the superjacent surrounding skin, associated with infection of the axillary glands and possibly also of those in the subclavian triangle, in which the surgeon must feel that if he could make a clean sweep of the whole disease he would be able to offer his patient a fair chance of subsequent freedom from recurrence, and in the immediate future much certain relief from pain and mental distress. The great difficulty he has to meet is the covering of a large and raw square surface whose sides may vary in length between eight and twelve inches. He also recognises the risks of septic infection associated with such a large wound, its painful and tedious nature, and the fact that even if he succeeds in grafting such a large area the resulting scar is necessarily a

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most unsatisfactory one. Since I adopted the operative measures described in the Clinical Society's Transactions,[1] in a paper entitled "A more efficient Mode of treating Cancer of the Breast"—namely, removing the pectorals, carefully dissecting away every particle of glandular and areolar tissue from the axilla, and also, if necessary, dividing the clavicle and clearing out the subclavian triangle—I have found myself very well repaid for the extra time and trouble such an operation demands, and the very slight added risk from hæmorrhage and a certain limitation of movement resulting from the removal of the pectorals more than compensated for by the subsequent increased duration of the patient's life. One comes across cases, however, in which the skin is so extensively infected that this last operation is unsatisfactory owing to the large raw surface which is necessarily left. In such cases I would urge what at first sight appears to be a heroic measure—namely, amputation of the arm at the shoulder in order to obtain enough skin to cover the raw surface and to give a nice soft covering to the part. The patient will certainly die if she is not operated on, and in all human probability the arm will shortly become a source of distress to the sufferer owing to interference with the venous channels; therefore, it is no great deprivation to remove it. Besides, it diminishes the risk of the operation, it ensures immediate union, and within a very few days the patient is enabled to get about and enjoy an active existence. Perhaps I cannot do better than illustrate the method I here advocate by means of the report of a case.

A woman aged twenty-nine years, single, of a remarkably youthful appearance, was admitted under my care into Guy's Hospital on Sept. 9th, 1895, suffering from carcinoma of the right breast, which she had observed for the first time five months before. The mass was large and involved almost the entire breast. The skin was adherent over it and was ulcerated over a space as large as a five-shilling piece. All about the ulcer and for an area around the breast the skin presented minute nodules of infection. There were enlarged glands in the axilla, and in the subcutaneous tissue over the coracoid process a gland could be felt. It had apparently been infected from some cutaneous nodules just below it. Nothing could be felt in the liver, and the patient's general health and weight were as good as ever they were. The advantage of removing the arm, the possible benefit she would derive from it, and the risks she ran were fully explained to her, and she insisted on undergoing the operation. An incision was made along the length of the clavicle to the middle line, and the middle third or more of the clavicle was exposed and removed. The subclavian artery and vein were tied at the margin of the scalenus anticus, and all the areolar tissue and glands in the subclavian triangle carefully dissected out. There was no obvious infection of these glands, but beneath the clavicle the upper limit of the enlarged axillary glands was defined and the glands were turned downwards. Great care was taken not to injure the supra-scapular or other vessels crossing the subclavian triangle. From the inner limit of the horizontal incision another was carried down vertically along the middle line for about nine inches. It lay well outside the limit of skin infection. From its lower end another incision was carried backwards to the posterior fold of the axilla at what seemed a safe distance from the growth, and then it was run upwards along the posterior fold to the axilla, when it ran across the arm to the outer end of the clavicle. A vertical incision was made from the upper limit of the posterior axillary fold to the elbow, where it was crossed by a circular incision. The skin and subcutaneous tissue were dissected up off the deep fascia as far as the deltoid, out of which a large and sufficient flap was cut to ensure as much vascularity of the flap as possible. The inner part of the deltoid was removed and the limb disarticulated. The skin and all the subjacent soft parts were dissected off the sternum, clavicle, ribs, cartilages, intercostal muscles, serratus magnus, and posterior wall of the axilla, and the great square flap, which measured more than nine inches along each side, was fitted accurately and comfortably into the large exposed raw area. The part that corresponded to the circular incision around the arm was united to the edge of the median or sternal incision, while the edges of the vertical incision in the arm were connected to the upper and lower horizontal incisions in the thorax. Very little blood was lost during the operation. The growth was found to involve the greater pectoral, but the most careful subsequent examination of the parts excised showed that the primary growth, the skin, and glands were very freely removed. The patient ran the usual course of an aseptic wound, experiencing no discomfort or pain in the part. The illustration represents diagrammatically the condition of



The above illustration shows the positions of the incisions, with the ulcerated surface in the right and upper part of the breast. The cross indicates the position of the gland in the subcutaneous tissue, and the dots show the approximate distribution of the points of infection of the skin by growth.

the patient before the operation, and it shows very well the outline of the skin incisions in the chest and arm. Of course, the area of the surface covered by the skin of the arm after healing had taken place was considerably smaller than when the operation was done, owing to a certain amount of shrinkage of the loose flap.

I would just point out that the removal of a considerable portion of the clavicle enabled me not only to remove all glandular and areolar tissue beneath and about it and to tie the vessels securely and with a minimum loss of time, but it also allowed the scapula to fall into such a position as to give a greater length of flap and a less strain upon it than if the clavicle were left intact. Every operating surgeon of large experience is confronted too often with the results of very imperfect removal of the diseased structures, so much so that he sometimes cannot but think that the operator was influenced by a desire not so much to effect the thorough removal of the affected parts as to obtain a rapid recovery. It would seem obvious that such a course is not likely to reflect much credit on surgeons, and especially on operations for cancer of the breast.

St. Thomas's-street, S.E.

[1] Transactions of the Clinical Society of London, vol. xxvii.

LONDON HOSPITAL MEDICAL COLLEGE.—The Entrance Scholarships at this college have been awarded as follows:—Price Scholarship in Science, £120, Mr. H. Balean. Science Scholarships, £60 and £35, Mr. O. Eichholz and Mr. A. B. Soltau. Price Scholarship in Anatomy and Physiology, for university students, £60, Mr. R. C. Wall and Mr. J. H. Evans.

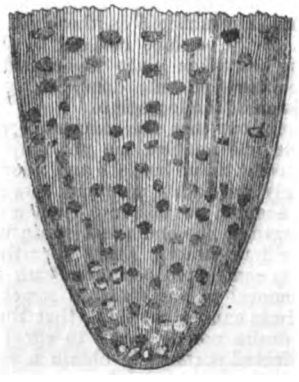
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SORE-THROATS IN INFLUENZA; THE TONGUE AS AN AID TO DIAGNOSIS; THE DIFFICULTIES OF DIFFERENTIAL DIAGNOSIS.

BY JOHN TERRY, M.R.C.S. ENG., L.R.C.P. LOND.,
RESIDENT MEDICAL OFFICER, ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.

SOME months ago a letter of mine on "Sore-throats in Influenza" was published in THE LANCET.[1] The epidemic was then at its height, and I made a few remarks on the condition of the tonsils, uvula, pharynx, larynx, and tongue. In answer to some questions I asked I received numerous replies, most of them verifying my notes in every detail, and I wish especially to thank Dr. G. B. Barron, Mr. J. H. Caird, Mr. P. M. Davidson, Dr. E. J. McC. Morris, and others for their courtesy. Since then I have studied carefully a great many cases, both in the acute febrile stage and in a sort of subacute and chronic stage. I should now like to say a few words on the condition of the tongue in each of these stages, as I feel certain that if any of the conditions to be described are present in any case we may safely diagnose influenza, whatever else there may be in addition. The symptoms such as headache, feverishness, and pains in the back and limbs are so well known that of them I shall say nothing. Everyone must have known how difficult it is sometimes to diagnose for certain an ordinary case of influenza even during a recognised epidemic; it is more especially difficult to do so when the case occurs previously to or at the end of a general outbreak. True it is that the blood or sputum may be examined for the influenza bacillus; but it is not absolutely certain that the specific bacillus has been found, and even if it is granted that the bacillus described by Pfeiffer and Kitasato is the true influenza bacillus it is not everyone who has the time or the means at his disposal to make a bacteriological examination. If the condition of the tongue immediately to be described is fairly constant, and I believe it is, I think we have an important aid to the diagnosis of influenza. In the early acute stage of the disease the tongue is covered as a rule with whitish or greyish fur; this layer may be so thin that the pink substance of the tongue shows through it; or it may be absent, the tongue being clean, but often fissured. The characteristic feature, however, is the presence of dark purplish-red spots or elevations scattered all over the tongue, being most

FIG. 1.

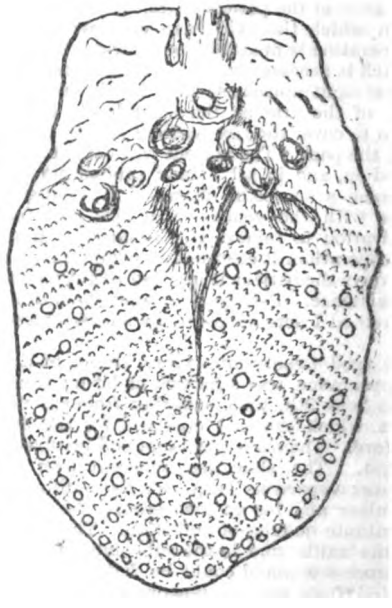


numerous on the anterior half of the dorsum and on the tip and edges; they are rather larger than an ordinary pin's head and are probably enlarged fungiform papillæ. At the back of the tongue, in the region of the circumvallate papillæ, there are several largish elevations varying in size from that of a pin's head to a split pea or even larger; they are fleshy in colour and somewhat resemble mucous condylomata. (Figs. 1 and 2.) When the tongue is coated with white fur the red elevated papillæ produce an appearance most characteristic—a white strawberry tongue; when there is no fur the appearance is more like a red strawberry.

[1] THE LANCET, March 9th, 1895.

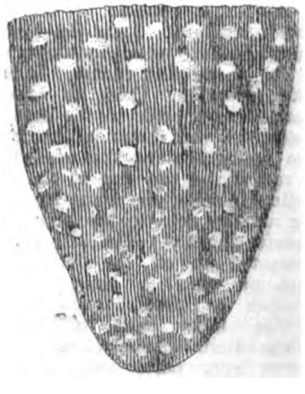
At a rather later stage the red spots or elevations have turned into pinkish-white jelly-like vesicles; on pricking them, however, no fluid escapes. In the chronic cases—i.e., those cases in which the patients have got over the acute febrile stage, but are still weak and ill, or those where there has been a relapse (which often occurs if the patient resumes his work too soon)—the tongue still shows quite characteristic signs; it is generally of a deep-red or purplish colour, is fairly clean or is sometimes slightly covered with a greyish or brownish

FIG. 2.



fur; the purple spots or pinkish-white jelly-like vesicles are no longer to be seen, their place being occupied by translucent white vesicles which are rather larger than those of the earlier stages. The elevations on the posterior third of the tongue are now white or greyish-white in colour. (Figs. 2 and 3.) I must point out that the order of the changes in the tongue as here described is not constant; the purplish spots may remain spots all through, or the jelly-like vesicles may persist throughout, and so on, but in a majority of cases the description holds good. In every case of influenza, however, one or

FIG. 3.



other of the conditions of the tongue is present. Besides these changes in the tongue, small whitish vesicles may be seen on the mucous membrane of the lips, cheeks, hard and soft palate, and on the pharynx; on the palate and pharynx they are sometimes much elongated and then look like small slugs; this latter condition, however, is not common. The throat is usually found to be dry and red, the pharynx is much congested and sometimes slightly ulcerated, and the veins on it stand out prominently, often presenting little varicosities. In the late stages the tonsils may

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still be enlarged and red, but tonsillitis, which is often markedly follicular in the earlier stages, is now much less frequent; often, indeed, the tonsils and uvula have shrivelled up to very small dimensions. As the patient gets better the spots or vesicles become less and less pronounced, and finally, when he is well, completely disappear. The spots may, as before said, last some weeks, although the patient expresses himself as feeling quite well, but I do not consider that the influenza has departed until the tongue is quite clear.

I shall not here describe any of the sequelæ or usual complications of influenza, as they are so fully gone into in the various excellent books and pamphlets which have of late been written on this subject. But I must draw attention to one complication which I believe is not at all infrequent and yet, as far as I can ascertain, has not been heretofore described, at least in connexion with influenza. I refer to the development of a "membrane" on various mucous surfaces of the mouth and throat; any part may become affected, but the chief sites are on one or both tonsils, the uvula, the hard or soft palate, and on the pharynx or even the larynx. This "membrane" may be either diphtheritic or non-diphtheritic. Whichever it is, the micro-organism finds the congested or ulcerated mucous membrane caused by influenza a suitable soil for its further growth and development. The "membrane" formed in either case is physically almost the same; and the importance of recognising that the diphtheria bacillus is not the only one that can lodge in the mouth or throat and form a "membrane" there is enormous. Within the last fifteen months I have had under my care some forty-five cases with a "membrane" on some part of the throat or mouth; to look at, they resembled exactly cases of diphtheria, but beyond the "membrane" there was no other sign or symptom of it. In nearly all the cases the symptoms resembled a sharp attack of influenza with complications, but there was no rapid exhaustion with quick feeble pulse, no albuminuria, and no post-paralysis, and with proper treatment the patients got quite well in from about one to three or four weeks. The "membrane" after being pulled off or coughed up in no case returned, a superficial ulcer being left, which, although painful on swallowing or gargling, healed up rapidly. I may add that nearly every one of these cases presented what I have called "the influenza tongue." It may be urged that a bacteriological examination will settle the question; this, as matters are now, I very much doubt. On several occasions I have sent specimens of "membrane" and discharges from the throat to London to be examined. One case only of these was undoubted diphtheria, for there were rapid exhaustion, a quick, feeble pulse, albuminuria, and post-paralysis; but no diphtheria bacilli were found, although the membrane sent up to be examined was a large fresh piece untouched by medicines, gargles, or paints. Other cases—some apparently of ordinary follicular tonsillitis, and some of ulcerated tonsils without membrane and others with, but with no other sign of diphtheria—were said to be "swarming with the diphtheria bacillus." I believe the fallacy of examination is due to the fact that inoculation on animals is seldom done because of its expense, the time required, or the difficulty in obtaining a vivisection licence; hence one has to rely upon the appearance of the colonies and upon the microscopical examination of the bacilli found therein; surely this must be almost useless. One report says: "There is a good deal of irregular growth present, but not characteristic of diphtheria"; and the microscope showed "the presence of numbers of a short, thick bacillus closely resembling the 'short variety' of the bacillus diphtheriæ." Another states: "It is quite possible that the bacilli may be the 'pseudo-diphtheritic bacilli.'" In a third case (that of a man aged thirty years whose hard and soft palate, both tonsils, uvula, and pharynx were covered with patches of thick, white membrane, and which was diagnosed by several medical men as diphtheria) the report was: "Unable to detect any bacillus diphtheriæ either in the membrane, on the cotton-wool, or in the culture tube." In another case in which the patient got perfectly well in a week the report was: "The culture shows numerous whitish-grey colonies of growth very characteristic of diphtheria; the culture shows also certain other colonies"; and by the microscope were seen "first, the bacillus diphtheriæ of 'medium length'; secondly, groups of staphylococci." I quote these reports, not in any way doubting that the true diphtheria bacillus has been found, but to show that examination by culture and by the microscope without other confirmatory tests—e.g., inoculation—is almost if not quite useless, or at any rate very misleading.

In conclusion I wish to lay stress on the following points. 1. That the condition of tongue as described is an almost infallible sign of influenza and that there must be very few cases in which, in one form or other, it does not occur. Although in the last fifteen months I have seen over 1500 cases, I have not met one which did not show some of the appearances described. 2. That however simple a case of influenza may appear to be, it must be treated with great care, especially with regard to the purity of the air; for in crowded hospitals or in badly ventilated houses or in houses connected with or near bad drains or cesspools the congested or ulcerated mucous membrane of the mouth or throat may easily take up one or more of the numerous micro-organisms, causing follicular or simple tonsillitis, simple membranous inflammation, or diphtheria, as the case may be. 3. That the simple (non-diphtheritic) membranous inflammation, although having nothing in common with diphtheria, is highly infectious; and, though as a rule admitting of easy cure, in weakly adults or in children the disease may be extremely serious or even fatal. Since writing the above I have read an article in THE LANCET[2] by Dr. Thresh; I can corroborate fully nearly all his statements, and with him I agree that it is high time that we adopted some other name for those cases of membranous inflammation which are without any doubt, in my opinion, not diphtheria.

Guildford.

THREE CASES OF PAROSMIA; CAUSES, TREATMENT, &c.

BY HERBERT TILLEY, M.D. LOND.,
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SUBJECTIVE sensations of smell of sufficient intensity to cause the patient to seek medical relief for the symptom alone being a comparatively rare disorder where the mental and general conditions are otherwise normal, the following three cases which have recently come under my notice may be of interest. The main features in all of them are the intensity of the unpleasant sensation and the absence in the nasal cavities of any visible pathological lesion.

CASE 1.—A man aged thirty-eight years came to me on May 6th, 1895, complaining of a "strong smell of ammonia," which he first noticed on recovering from a severe attack of influenza last February. The symptoms continued with varying intensity till May, and during that time he had been treated with nerve tonics and changes of air and surroundings, but without any effect. The unpleasant sensation was so strong that he left his business and avoided all his friends, as he was sure they were inconvenienced by it. He had never had any nasal trouble. Examination showed the nasal cavities to be perfectly healthy in every respect. I prescribed nerve tonics for him for a fortnight, but without any result, and then ordered him to use a solution of strychnia (ten mimims to one drachm daily) as an intra-nasal spray. This proved permanently efficient in the course of a week.

CASE 2.—A man aged thirty-six years applied to me at the London Ear and Throat Hospital, complaining of a smell of "tallow candles" in his nose which had lasted eighteen months. He could not account for its presence, as he was otherwise in perfect health. He is one of a number of shop assistants, and, although none of his companions have ever complained of him, yet he is sure they notice the smell and avoid him. On examination the nasal cavities were found to be perfectly healthy and his breath in no way offensive. The treatment was similar to that employed in Case 1, but the relief was not complete, nor was it made so by the exhibition of stimulant snuffs and lotions.

CASE 3.—A woman aged forty-six years applied to me in June, 1895, on account of a "foul smell" in the nose, which led her to give up a valuable situation. Her medical attendant had treated her for "ozena," and a rhinologist had told her that her symptoms were due to "decayed bone in the nose." The trouble had been going on for twelve months and latterly getting worse. As in the preceding cases, no one had ever mentioned an offensive smell as accompanying

[2] THE LANCET, Aug. 17th, 1895.

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her, but she held to the belief that her friends avoided her on account of it. An examination showed that the nasal mucous membranes were normal excepting for a slight enlargement of the posterior extremity of the left inferior turbinate. On no occasion have I been able to detect any exposed bone, though I have searched for it with the smallest blunt probe, nor at any time has her breath been offensive. Besides this symptom, the patient has been the subject of various other climacteric troubles—e.g., heat flushes, occipital headache, giddiness, tinnitus, &c. The treatment has been mainly directed to her general condition by her medical attendant, and with the improvement of this her sensation of a bad smell has, *pari passu*, diminished; when the constitutional troubles are very slight the latter practically ceases. Only on one or two occasions, and as a placebo, have I prescribed an intra-nasal alkaline douche.

Remarks.—The first and third of these cases are interesting from an etiological point of view. The first is undoubtedly a post-influenzal neurosis, and similar cases have hitherto been described. The result of treatment would seem to point to the distribution of the olfactory nerves as the seat of the lesion rather than the olfactory bulb or a higher centre. The origin in the second case is obscure and the treatment less satisfactory than in either of the other cases. The last is undoubtedly a climacteric neurosis and reminds one of the various pharyngeal and laryngeal paræsthesiæ so commonly observed in females at this time of life. That such is the case is evident from the way in which the symptom has diminished and practically disappeared under treatment directed to the general condition of the patient, and the importance of recognising such cases is considerable when the possibilities of unnecessary local treatment are borne in mind.

Welbeck-street, W.

THE QUESTION OF LATENT HYPERMETROPIA IN THE VISUAL EXAMINATION OF CANDIDATES FOR THE PUBLIC SERVICES.[1]

BY W. M. BEAUMONT, M.R.C.S. ENG.,
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IN Sir Thomas Longmore's "Optical Manual" it is laid down that "candidates for commissions in the Royal Navy are not considered eligible who are subjects of any degrees of myopia or hypermetropia";[2] and this is corroborated in the "Regulations as to the Defects of Vision which disqualify Candidates for Admission into the Civil or Military Government Services," edited by Mr. Macnamara, in which it is stated that a candidate's eyes must be emmetropic. There would appear, then, to be no question that theoretically lads who are hypermetropic are ineligible for the navy; and yet it does not do to accept this ruling too absolutely. A boy is brought to a surgeon and reads the far and near types at the regulation distance, his colour sense is good, and there is no strabismus, but nevertheless he has two or three dioptres of hypermetropia. He is not emmetropic—*ergo*, he is not eligible for the Royal Navy. The parents are informed of the decision arrived at, but they resolve to send him up for examination; he passes the vision tests with flying colours, and the surgeon who gave a pessimistic opinion is discredited. On asking the lad what manner of examination it was which he underwent it will be found that it merely consisted of a vision-testing process, and that no attempt was made to discover any latent hypermetropia. How, then, can the statement that the eyes must be emmetropic be reconciled with the fact that no investigation is made to find out the nature of the static refraction? The explanation is, I believe—and I have substantial grounds for the belief—that in all visual examinations for the public services it is customary to consider V= $\frac{6}{6}$ equivalent to emmetropia. The extraordinary error is made of looking upon Snellen's type as a test of emmetropia. Perfect distant vision and emmetropia are considered synonymous, whilst latent hypermetropia is a condition of refraction unrecognised in every examination for which these regulations have been devised. As a consequence, a candidate with six or eight dioptres of latent hypermetropia will pass, where another with two dioptres of hypermetropia, one of which is manifest, will be unerringly rejected. It may be asked, What evidence is there that latent hypermetropia is not taken into account?—and in reply I would submit that, although the regulations for the navy are most emphatic that a candidate shall be disqualified unless both eyes are emmetropic,[3] yet in another part of the same regulations it is stated[4] that "if the individual can distinctly see the letters of the line D = 6 at 20 ft. without glasses, and with each eye, he will pass, as far as his sight is concerned, the examination for the army, navy, or any other service, provided his colour sight is good and that he does not squint." Nothing can be clearer than this—it is a naval eleventh commandment that you may be guilty of as many dioptres of hypermetropia as you please, but do not let them be manifest. If further evidence were required to show that latent hypermetropia is disregarded in the visual tests of the navy it would be found in a consideration of the well-known fact that emmetropia is a decidedly unusual condition of refraction. In an examination of the refraction of infants Ely found that 69 per cent. were hypermetropic.[5] Hansen found 94·4 per cent. of hypermetropia in school children between the ages of ten and fifteen years. Dürr in Hanover found 59·6 per cent. of hypermetropia, 32·2 per cent. of myopia, and only 8 per cent. of emmetropia between the ages of ten and twenty years. But, as the eye does not attain its complete development until about the age of sixteen years,[6] some allowance may be made for hypermetropia in the examination of boys for the navy. In 4000 eyes reported on by Miles[7] 3045 were hypermetropic, 787 were myopic, and in 106 there was mixed astigmatism. A rigid adherence to an emmetropic standard for any public service must infallibly break down from lack of suitable candidates. Mr. Work Dodd[8] in some recent statistics gives 2 as the percentage of emmetropia in persons who made no complaint of their sight, but as these statistics are founded upon a small total number of cases it would probably be safer to take a somewhat higher proportion of emmetropia. But even if it be allowed that 20 per cent. of the would-be candidates are emmetropic it must be remembered that 80 per cent. of the boys who would otherwise become naval cadets are prevented by their hypermetropia; and if 80 per cent. are prevented by this cause how many of the remaining 20 per cent. are prevented by myopia and how many by other physical defects? At the present time no adverse opinion should be given of the chances of a candidate passing the vision tests of the Royal Navy on account of hypermetropia. It is well to remember that as long as the defect is latent it cannot be seen. Perfection in the abstract is an excellent ideal, but emmetropia as a *sine quâ non* for service in the navy is an impossible standard, and it should be acknowledged that certain degrees of hypermetropia are admissible. A vision standard of $\frac{6}{6}$, without reference to the refraction, is unfair to the candidates, because whilst it stamps them as fit for service on entering it leaves it doubtful whether a little later in life they will be compulsorily resigned on account of hypermetropia; and as this defect can always be readily discovered in childhood there is no reason why more definite rules should not be made. Certainly facultative hypermetropia should not be permitted to masquerade in the guise of emmetropia, and it should be clearly laid down what amount of error is admissible. The only question really is what that amount should be. For some of the public services regulations are already in existence. In the Indian Departments of Public Works, Forests, Survey, &c., the limit is four dioptres of hypermetropia, for the Indian Medical Service it is not more than five dioptres, and for the Indian Marine not more than one dioptre. In several of the Continental armies "neither officers nor recruits are rejected with hypermetropia equal to six dioptres, but they are allowed to wear glasses."[9] In the resolution adopted by the International

[1] A paper read at the annual meeting of the British Medical Association held in London in July, 1895.
[2] The Optical Manual, by Surgeon-General Longmore, C.B.; third edition, 1885, p. 159.
[3] Regulations as to Defects of Vision which disqualify Candidates for Admission into the Civil or Military Government Services, 1895, p. 17.
[4] Op. cit., p. 16.
[5] H. D. Noyes: Diseases of the Eye, 1890, p. 81.
[6] Galezowski and Kopff: Hygiène de la Vue, 1888, p. 80.
[7] Archives of Ophthalmology, 1895, vol. xxiv., p. 418.
[8] Transactions of the Ophthalmological Society, vol. xiii., p. 208.
[9] Op. cit., p. 26.

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Medical Congress held in London in 1881 hypermetropia was considered sufficient to exclude a man from being a sailor if before the age of eighteen he had one dioptre of manifest hypermetropia.[10] In the British navy it is the rule, I believe, that officers are allowed to wear glasses after they have attained a certain rank, and there seems to be no satisfactory reason why this rule should not be considerably extended. If a hypermetropic officer can only read ⅞ with glasses it should be not only allowable but compulsory that he should correct his refraction, and then the exact number of dioptres of his hypermetropia is of little consequence.

Bath.

REMARKS ON THE HISTORY AND DISCIPLINE OF ENGLISH PRISONS IN SOME OF THEIR MEDICAL ASPECTS.

BY R. M. GOVER, M.D. ST. AND., F.R.C.P. LOND.,
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IN the winter of 1773-74 John Howard made that celebrated journey which has been so graphically described by the late Dr. W. A. Guy,[1] and from which journey may be said to have originated the great prison reforms that have been in progress in England during the past 100 years. From the late autumn of 1773 to the spring of 1774, says Dr. Guy, there might have been seen, now at one country town, now at another, first of the midland districts of England, then of parts more remote, a gentleman on horseback, followed by his groom. It was not a time of the year when men take pleasure trips, and it was obvious that the gentleman had some serious business in hand, for he alighted at the county and borough gaols and spent some time there. Thence he would make his way to an inn, order the usual dinner for the good of the house, spread his note-book before the fire, and make a frugal meal of tea, bread, and (if he could get it) fruit. This gentleman was no other than John Howard, the lately appointed High Sheriff of the County of Bedford, the model landlord of Cardington, and he was travelling about in search of a precedent. He would find, if he could, one case at least in which the justices of the peace paid the gaoler of a prison a fixed salary. Had he succeeded he would have gone back to Bedford, near which town he lived, and would have strengthened the hands of the justices with a precedent, without which they had told him they could not act. But happily Howard failed. He could find no single instance in which a gaoler was paid a fixed salary. In lieu of salary the gaoler was allowed to charge certain fees, and these fees had to be paid by every prisoner, whatever the way in which he became such, and be paid before he could be permitted to leave the prison. He might be a poor debtor; he might be innocent of the crime with which he was charged and have been acquitted; or the grand jury might not have found a true bill against him; he might be a petty offender committed for some small theft, or a pressed man with home ties and duties, innocent of everything but not having a stomach to fight; or a man of violence—a highwayman, a burglar, a murderer; or a treacherous, fraudulent scoundrel, a forger, a receiver of stolen goods, a monster, a chronic fraud, or, perhaps, a raving madman. Whatever he was he must pay the gaoler's fees or remain in prison. The consequence was that innocent men by the thousand were kept locked up in prison—many for years or for life; many to die there, victims of gaol fever, confluent small-pox, and the other fatal maladies which spring out of the want of the prime necessaries of life—food, water, fuel, clothing, air, and exercise; some to be lashed into madness and some to lapse into fatuity. Howard could find no precedent for a better system of payment, but the winter's journey was not made in vain. He collected a mass of facts that at once led to great amendment of the law, and struck the death blow to the grossest and most nauseous tyranny that was ever suffered to reign in the midst of a free people. The winter's journey was not only no pleasure trip, but was one surrounded by incidents of danger and disgust as perilous as they were repulsive. When Howard went to his inn after the work of the day he used to spread his notebook before the fire. This he did that he might drive off the foul air it had absorbed in the prison. So foul was this air that many gaolers and even surgeons to gaols made excuses and would not go with Howard into the felons' wards. But nothing could appal him or turn him aside from the path of duty that he had chosen. This journey in search of a precedent, which revealed to Howard in all its revolting details the inner prison life of England, was the first step taken towards prison reform. Dr. Guy states that when, on the motion of Mr. Whitbread, Howard was summoned to lay his facts and figures before the Committee of the House of Commons, he left the House no alternative but immediate action. Two Acts were passed, the one abolishing the obnoxious payment of gaolers by fees, the other for preserving the health of the prisoners and preventing the "gaol distemper." In 1778 the Penitentiary Act was passed. This Act, which was permissive, provided for the placing of prisoners in cells alone, and it gradually came to be adopted in some of the county and borough prisons. But the cost of construction and the prejudice against separation created by the reports as to the results of the "solitary" system in America retarded the progress of a great reform. In 1784 rules were drawn up for the treatment and classification of prisoners, and in 1791 the Courts of Quarter Sessions became in some degree responsible for the periodical visitation and inspection of county and borough prisons.[2]

In the last decade of the last century the virulent gaol fever seems to have disappeared from prisons, though it is certain that a fever in no way distinguishable from gaol fever existed on board H.M.S. *Colossus* in 1796. This ship took on board, in the autumn of the year, a crew composed entirely of raw landsmen, the worst, according to Dr. Trotter, the fleet medical officer, that ever entered a man of war, of whom a great part had been discharged from gaols; and three or four times during the fitting of the ship fever broke out, one man falling ill, and then all the members of his mess. The disease made its appearance again during the cruise off the coast of Holland. Dr. Guy remarks that we owe to Dr. Trotter one of the most striking illustrations of the fact that a fever in all respects similar to the fever that formerly prevailed in prisons will break out on board ship when unwholesome conditions prevail, as starvation and cold, a scanty supply of impure water, deprivation and pollution of air, exclusion of light, idleness, filth, listlessness and grief. The French fleet which encountered ours on the glorious June 1st, 1794, was placed under the serious disadvantage of having such a fever on board all its vessels, while Dr. Trotter had "organised victory" by causing Lord Howe's fleet to go into action without a sick sailor on board. Slow but sure progress continued to be made in English prisons, and in 1818 there were few prisons without a chaplain. But even at this date no systematic employment had been found for the inmates of prisons; idleness prevailed in many county and borough gaols, and overcrowding was excessive. Nevertheless, the conditions were not such as to generate gaol fever. In 1835 and 1839 Acts were passed which further improved the administration of prisons, and inspection by Government officers was provided for; but it was not until 1865 that the provision of a separate cell for each male prisoner became compulsory. Even now legislation remained in great measure a dead letter owing to the fact that administration remained in the hands of independent local authorities, who failed to provide the requisite buildings, and were without experience save such as was gained by each in its own small area. The last great step in the direction of reform was taken in 1878, when the local prisons were transferred to the Government, and uniformity of administration for the first time became possible. There were then 113 local prisons in England and Wales; and such has been the effect of consolidation and concentration of authority that the number has been reduced to fifty-seven, with great and good results, the least of which is a large annual saving in the cost of management. Prisoners before trial are kept apart as far as possible from those undergoing sentence, they wear their own clothing (if it is not "utterly vile," as is often the case), they may provide their own diet, and may communicate freely with their friends. After sentence the prisoner becomes amenable to the progressive

[10] Transactions of the Ophthalmological Society, vol. ii., p. 195.

[1] John Howard's Winter Journey. By William A. Guy, M.B., F.R.C.P., F.R.S., &c. De la Rue and Co. 1882.

[2] The excellent and entertaining work by Major Arthur Griffiths, entitled "Secrets of the Prison House" (Chapman and Hall, 1894), contains most valuable information as to the history and management of prisons in this country.

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stage system, and may raise himself by degrees to the fourth or highest stage, each promotion being attended with the acquisition of some privilege, as, for example, a larger supply of books and more frequent communication with friends and relatives. During all this time, and, in fact, during the whole period of his sentence in a local prison, the prisoner sleeps, takes his meals, and (usually) works in a separate cell. He is subjected to what is termed "separate confinement." This term is apt to convey to persons not familiar with the subject an erroneous impression of the conditions under which a prisoner is placed when undergoing confinement in a local prison. Although he is separated from other prisoners he is not left in solitude. He is visited frequently by various officers, he is well cared for, and his existence is rendered very endurable. Unless it be for idleness or misconduct he is not subjected to any depressing punishment. As I have previously remarked,[3] "instances are not wanting to show that separate or even solitary confinement for long periods is consistent with perfect mental and bodily health. The monks of the Grande Chartreuse live alone, each in his own 'cellule.' They remain silent for years, and hear nothing but the sound of their fellow monks' voices at the chapel services, yet visitors never fail to be struck with their healthy and contented appearance. Their food is simple but nutritious, and they are well provided with employment, so that their condition of life may be fairly compared with that of prisoners undergoing separate confinement at the present time in this country." It was not until the completion of Pentonville Prison that separate confinement was carried out continuously on a large scale and in a systematic manner, the results being recorded in detail in reports accessible to the public. Pentonville Prison was opened in December, 1842, and the Commissioners appointed for the government of the prison made favourable reports as to the condition of the prisoners from year to year until 1853, when the then new established convict system was in full operation, and the prison came under the control of the Directors of Convict Prisons. The deterrent and reformatory effects of imprisonment were attained without injury either to the bodily or mental health of the prisoners. There was but little sickness among them, cases of insanity originating in the prison occurred but seldom, and deaths were few. It appears evident from the minute detail into which the Commissioners enter in their reports, and from many of the expressions employed, that they were apprehensive of evil or misfortune of some kind, but these apprehensions were not justified by the result. In consequence of the success of the system of discipline carried out at Pentonville Prison a large prison after the same model was erected at Wakefield, and separate confinement was carried out there, with even fewer mental cases than occurred to Pentonville Prison. The same system in all its main features has been carried out, and continues to be carried out up at this day, in that and other local prisons without the occurrence of any cases of mental or bodily affection that can be reasonably ascribed to the influence of separate confinement.

In the consideration of the question as to what amount of separate confinement may be borne with safety the experience of the present Board of Commissioners during the last seventeen years appears to me to be of much greater importance than any recorded experience of former times. "The conditions forty or fifty years back" (I quote the memorandum to which I have already referred) "were not those of to-day. Sanitary science has advanced, construction has improved, the causes of disease are better understood, discipline and diet have been modified and changed, and experience has ripened. That experience shows that separate confinement under present conditions is not injurious to the mental or bodily health, and may be continued indefinitely." Separate confinement (using the term in its technical prison sense) lends itself well to any modifications that may be deemed necessary, in the case either of individuals or bodies of prisoners, and is compatible with the carrying out of industrial labour in workshops or with outdoor labour of any kind available. At whatever work the prisoner might be employed he would still sleep and take his meals in his own cell, which he would, in fact, occupy in the evening and at all times when not at work or at exercise or at the chapel services. The medical aspects of prison discipline as now conducted in this country have some of them been presented in my annual notes appended to the Reports of the Commissioners and Directors, and are all of them full of interest. It is not my object to enter into elaborate particulars in this short paper, which deals only with generalities, but there are one or two points to which I may call attention without entering into any tedious statistical or technical detail. Fever of any kind is now of rare occurrence in the prisons of this country, and when it does occur is usually imported, while diseases indicative of defective sanitary arrangements, as erysipelas, are conspicuous by their absence, notwithstanding that many of the inmates of prisons are drawn from quarters where infectious diseases are rife. The average daily population of the local prisons of England and Wales for the six years commencing April 1st, 1888. was 14,119. The mean annual death-rate for this period was 7·6, and the mean annual rate (per 1000 of the population) of releases on medical grounds was 4·5. Reckoning, however, the releases on medical grounds as deaths, and adding them to the actual deaths, the mortality was 12·0 per 1000 per annum for the period of six years. To count all the releases on medical grounds as deaths is, however, unfair to the prisons, seeing that prisoners are frequently released for diseases that may not be fatal, as chronic abscess, debility, abdominal tumour, cataract, paralysis, bronchitis, and so forth. A deduction of at least 25 per cent. for these cases should be made before the influence of releases on medical grounds on the death-rate can be accurately estimated. Making that deduction, the death-rate per 1000 per annum for the six years ending March 31st, 1894, may be fairly represented by the figure 10·9.[4] It may be doubted whether by any future efforts the ratio can be reduced materially below that point.

The number of cases of insanity proportionally to the population of the local prisons of England and Wales will appear very high or very low, according to circumstances and the way in which the matter is presented. If all persons remanded to prison for medical observation, and reported to the police authorities to be insane, are credited to the prisons, the number will appear to be very large; and if to these are added those who are found to be insane within a very short period of reception, as well as those found insane on arraignment or on trial, the number can be made to rise to the extravagant figure of 200 or more per 10,000. But if only those insane prisoners are taken into account who have been sufficiently long in confinement to render it possible that the insanity may have originated and developed in prison, the number will be very small. Everything depends upon the statistical method employed. It does not, of course, follow that a prisoner is sane when he is admitted into prison because no symptoms of insanity happen to be manifest at that particular moment. The Rev. W. D. Morrison, in his evidence before the late Departmental Committee,[5] mentions the case of a man who was six months or more in Wakefield Prison before it was discovered that he was insane. The Rev. Mr. Morrison says: "I was convinced that he was insane, but the doctor could not find any trace of it, and I could not find any definite trace of it for some time, but one day he was talking to me, and he said, 'I am the man that tried to shoot the Duke of Edinburgh at Melbourne.' That was his delusion, that he was the man that tried to shoot the Duke of Edinburgh at Melbourne, and that is how it came to be found out." And yet, according to the method of the Rev. Mr. Morrison himself, this case would have gone to swell the number of cases in which insanity arose in prison, and were (in his opinion) probably caused by prison treatment. The evidence of Mr. Stone, the chairman of the Visiting Committee of Birmingham Prison, before the late Departmental Committee, is probably as conclusive as a formidable array of statistics, and is decidedly more racy and interesting. I may premise that the prison at Birmingham may be taken as a representative prison, and that there is no reason to suppose that it differs in the smallest particular from other local prisons in respect of discipline and management.

"Q. 2681.—The Chairman (Mr. Herbert Gladstone): You say that you think that insanity in the Birmingham Prison is very rare?—Very rare indeed. Our returns of insanity are about 0·02. We have a mere nothing of it.

"2682.—And those cases that you have come in you do not think have been affected by prison?—Sometimes it is the

[illegible] Separate Confinement, p. 49 of the Report of [illegible] Prisons for the year 1887–88.

[4] See Appendix No. 21, p. 88, of Seventeenth Report of Commissioners of Prisons.

[5] See Question 3018, p. 105.

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result of delirium tremens; that is really in the system before they come in.

"2683.—You have no reason to think that the prison discipline acts upon them?—No; I have very carefully watched them, and I have had a large mass of figures got out to produce to you if you want them, but it is not 1 per cent., it is not a quarter of 1 per cent., and we have 8000 prisoners who went through the gaol last year."

Before concluding this brief paper it may perhaps be interesting and instructive to glance back along the century now about to expire and to compare the English prisons of 100 years ago with those of the present day. In 1795 convicts were herded together in hulks, in which no attempt was made to check the evils of association, and "vice, profanity, and demoralisation" ran riot. Great evils—among them the indiscriminate crowding together of prisoners—were still prevalent in the county and borough prisons, but the reports of John Howard had begun to alarm the national conscience, and justices were beginning to visit and inspect these prisons at periodical intervals. There were nearly 600 prisons in the United Kingdom. In many of them no attempts were made to divide the males from the females, gaol fever was still prevalent, and horrible scenes of wickedness were occasionally enacted. John Howard had made his final journey through Holland, Germany, Prussia, and Livonia to Russia and Lesser Tartary, and had been laid to rest at Cherson, in Russia, where his remains have lain undisturbed to the present day; he had travelled 60,000 miles, and it is believed that he spent from first to last £30,000 of his own money in the prosecution of his self-imposed duties. If he could now revisit this country he would find that each inmate of the local prisons has a cell of a capacity of about 800 cubic feet to himself, and that this cell, which is in the cleanest condition possible, is furnished with special arrangements for the withdrawal of used-up air and the supply of fresh air. He would observe that the furnishing of the cell, though not luxurious, is sufficient for the needs of the prisoner; and he would also observe that the prisoner is supplied with the necessary utensils, with good food, with abundance of water, with books, and with a bell-pull by means of which he can draw the attention of the officer of the ward. He would find that the food is sufficient and well prepared, that a well-arranged hospital is provided for the care and treatment of the sick, and that on the expiration of his sentence Discharged Prisoners' Aid Societies are ready to take him in hand and to assist him in making a fresh start in life. Although the prison system of the present day in this country, like other human institutions, may not be perfect, it may be questioned whether the next hundred years will witness evolutionary changes comparable to those that have taken place in British and Irish prisons since 1795. The next great step would seem to be the recognition by society of its duties in the direction of the prevention of crime, and the discharge of its duties in such a manner as to convert the possible criminal into a useful member of the commonwealth. Whether the somewhat pessimistic doctrines of the criminal anthropologist be accepted as the basis of action, or the more hopeful view of those who regard a proclivity to the commission of crime as the natural outcome, in the majority of cases, of unfavourable surroundings from infancy upwards, there can be no doubt that the criminal elements in society may be largely reduced by such social reforms as the prevention of overcrowding, by attention to the details of sanitation, by judicious education, and by such training as will tend to eradicate habits of idleness. A distinctive feature in the character of the habitual criminal is a distaste for regular labour. The changes that are destined to take place in prison administration, and the measure in which society will interfere to prevent the genesis of the criminal during the next century, cannot, perhaps, be even roughly indicated, but it cannot be doubted that the good work initiated by John Howard will be continued in such manner and with such effect that some, at least, of the criminal classes will lose their characteristics as criminals, and will be finally absorbed into other classes of the social organisation.

St. Quintin-avenue, W.

MR. GEORGE MÜLLER, of Ashley Down Orphan Houses, Bristol, reached his ninetieth birthday a few days ago, and has received numerous presents and congratulations from friends in all parts of the country.

CASE OF HÆMATOCELE SUPERVENING ON AN ABORTION.

BY J. O'REILLY, M.B. DUBL., M.CH.,
SURGEON-LIEUTENANT-COLONEL, ARMY MEDICAL STAFF.

THE subject of this case was a woman about twenty-eight years of age, strong and healthy. She had been married four months and was about three months advanced in pregnancy. She had just returned from a long journey from a distant part of Germany, and had experienced a very rough passage across the channel. On Oct. 8th, 1894, the day after her return to Guildford, severe intermittent pains in the lower part of the abdomen set in. On being called to see her I found the uterus firmly contracted and all the symptoms pointing to an impending abortion. During the next two days there were frequent uterine pains. Perfect rest in bed was enjoined and opiates administered. About 8 A.M. on the morning of the 11th I received an urgent summons to see her, and I asked my friend Mr. Sells of Guildford to accompany me. On our arrival we found that an abortion had taken place and that an immense quantity of blood had been lost. A large chamber utensil was full of clots. The umbilical cord—untied—had slipped up into the vagina. I gave chloroform, and Mr. Sells removed a large number of blood-clots from the vagina, and eventually, but with great difficulty, managed to extract the placenta. The patient was quite blanched from loss of blood, complained of severe abdominal pain, and was in a state of almost total collapse. Ergot and opium were administered freely. Soon after the removal of the placenta the uterus contracted firmly, and no more blood was lost per vaginam. About an hour afterwards, however, the symptoms of shock became more pronounced, and on an examination of the abdomen being made a large mass was found occupying the site of the uterus. It was at first thought that the latter might be distended with clots, and it was accordingly washed out with warm boric solution. Nothing, however, came away. This was puzzling. A closer examination of the lower part of the abdomen revealed a large smooth elastic swelling in the hypogastric region, and on introducing the finger into the vagina a tumour could be distinctly felt pressing on this canal. Mr. Sells and I then came to the conclusion that this could be nothing else than a hæmatocele, due probably to an effusion of blood from some ruptured vessel into the sub-peritoneal tissue around the uterus. A smaller swelling was discovered to the left of the central one—apparently a smaller hæmatocele due to an effusion of blood in the course of the broad ligament. Nothing could be done except to keep the patient perfectly quiet in bed, support her strength, and administer opiates to relieve the pain and restlessness. She remained in an alarmingly weak state for some days, and suffered from profuse perspirations—generally in the early morning—and from frequent attacks of distressing vomiting. The temperature varied from 100° to 102° F., and the pulse was very weak and rapid. The smaller swelling cleared up in about a month. Shortly before this disappeared another appeared in the right iliac region and was attended with a good deal of abdominal tenderness and pain and distressing tympanites. The temperature rose to nearly 104°. This was probably an attack of pelvic cellulitis with subacute peritonitis, and it subsided in about a week under the free administration of opium and hot fomentations. The further history of the case—a dreadfully harassing and trying one to the patient and to her attendants—may be briefly summarised. The prominent symptoms were frequent profuse sweats, distressing irritability of the stomach, obstinate constipation, occasional attacks of severe abdominal pain, and constant tympanites. The temperature generally varied between 100° and 103°, though sometimes touching 104°, and the pulse was always very rapid—115 to 130—and occasionally of a running character difficult to count. The irritability of the stomach was so great that it was with extreme difficulty she kept down any nourishment. She became reduced to an alarming state of exhaustion and emaciation, and it was only after trying many kinds of food and stimulant that we succeeded in finding some that could be retained. These were the only things she could retain, and they enabled her to bear up successfully against her wasting illness. About the beginning of December the tumour, which had never

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shown the slightest sign of any diminution in size, showed signs of enlargement, and indications were soon apparent that matter was forming and was making its way towards the surface. Soon a good deal of inflammatory thickening and hardness was observable all round the tumour, and it became completely and securely encysted. The pain in it now became agonising. Frequent and strong hypodermic injections of morphia were required. I may here remark that all through this trying case opium was our sheet-anchor. The quantity of it that the patient took by the mouth, by means of suppositories, and by hypodermic injections of morphia was enormous. For three months she was more or less continually under its influence. On Dec. 17th the abscess pointed externally at a spot two inches and a half below and slightly to the left of the umbilicus. The abscess wall could be made out to be adherent to the skin of the abdomen over an area equal to that of a florin. Chloroform having been administered a small incision with a scalpel was made through the skin in the centre of this area. This incision was carefully enlarged with a bistoury on a director, and the lips of the incision were then separated by the blades of a dressing forceps. About a pint of the most terribly fetid dark pus mixed with broken-down blood-clots was evacuated. A drainage-tube was inserted, the wound was dressed twice daily, and for several days the discharge was most copious and offensive, saturating the dressings and causing, by its intolerable odour, great distress to the patient. When the quantity had lessened somewhat the abscess cavity was syringed out twice daily with strong boric solution. This acted excellently. A few hours after the abscess was opened the temperature sank to normal and never afterwards rose above it. Convalescence was uninterrupted. In about six weeks the wound had completely closed. The patient is now in excellent health. The menses—which had been completely suppressed during her long illness—reappeared about the beginning of March.

Guildford.

MODIFICATION OF THE DISTAL LIGATURE FOR ANEURYSMAL DILATATION; A SUGGESTION.

BY PATRICK J. HAYES, M.D. R.U.I., F.R.C.S. EDIN.,
SURGEON TO THE MATER MISERICORDIÆ HOSPITAL, DUBLIN.

THE majority of hospital surgeons from time to time encounter cases of aneurysm where, the possibility of dealing with the proximal portion of the diseased artery being out of the question, the problem of inducing coagulation within the sac, either by the Brasdor-Wardrop application of ligatures on its distal side or the extremely hazardous introduction through the sac wall of foreign agents, must be considered. I have occasionally observed notable delay with regard to evidence of improvement after distal ligature, and in the case of a thin-walled aneurysm such retardation may entail rupture of the tense, frail wall where otherwise cure would have been the result of operation. It occurs to my mind that thrombosis can be caused to extend from a distal point rapidly and safely to even a deeply situated aneurysm by such a measure as the following.

The surgeon selects a favourable site for ligaturing the vessel or vessels on the distal side of the aneurysm, and in the event of there being two trunks for ligation he determines which is to be doubly ligatured and divided. Rough measurement of the distance between the aneurysm and the point for double ligature, with division of the artery, is now to be made and a piece of sterilised catgut is to be cut, its length being sufficiently in excess of the measured interval. The arterial trunk having been exposed, a double aseptic silk ligature is passed beneath it and the loop divided so as to leave cords with a space of, say, half an inch between them. The more distal ligature is now to be knotted and its ends removed, but the proximal ligature is to be only loosely tied with a single knot, which will serve merely to moderately compress the arterial walls. It will afford additional help and security if the artery needle be maintained in position beneath the vessel up to the time for tightening the proximal ligature. The next and distinctive step is this:—A small opening is to be made into the lumen of the artery, midway between the ligatures, and through the aperture a slender cannula, occupied by nearly half the length of aseptic catgut already referred to, is to be introduced and directed towards the proximal or aneurysmal portion of the vessel, until it will have passed just within the part lightly compressed by the proximal ligature. The catgut is now to be gently pushed on through the cannula until the surgeon estimates that its free end will have reached, or perhaps entered, the aneurysmal dilatation. The cannula is then to be withdrawn and the proximal ligature to be firmly tied on the artery corresponding to the distal end of the intra-arterial cord of catgut. Subsequently the artery and free part of the catgut are to be cut across at the site of aperture midway between the ligatures. The object attainable by introducing into the lumen of the vessel a bougie of catgut long enough to reach the sac can be readily understood. The foreign substance must soon become enveloped in a coating of fibrin, and, as it were, act as a gubernaculum for extension of the coagulating process within the aneurysm. At the same time, the sac wall will not have been injured or weakened by any needle puncture, whilst risk of distant embolism will have been guarded against by the previous ligation of the trunk or trunks on the distal side. The question of danger from hæmorrhage during puncture of the artery can easily be answered. The finger and artery needle, supplying points of pressure and counter-pressure, will afford absolute security whilst the opening is being made and the introduction of the cannula being effected. The cannula is well filled by the catgut, so that when the proximal ligature is tightened on its tip little, if any, blood can escape through the instrument. Once a sufficient length of catgut has been introduced the tip of the cannula is withdrawn and the encircling ligature made perfectly tight on the artery containing the clot-determining catgut.

It seems rational to infer that aneurysms, otherwise beyond the reach of surgical treatment, may, with at least comparative safety, have conducted to them thrombi capable of inducing cure by coagulation. Moreover, the catgut, being adapted for solution and absorption under the agency of leucocytes, will, after having effected its purpose, gradually disappear, and with it, in all probability, redundant blood-clot occupying the arterial lumen.

Dublin.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ERYTHEMATOUS RASH AFTER OPERATION DUE TO THE ENEMA, NOT TO THE ANÆSTHETIC.

BY H. BELLAMY GARDNER,
ASSISTANT ANÆSTHETIST TO CHARING-CROSS HOSPITAL.

AMONG surgeons of the day there is a very generally prevailing impression that the appearance upon a patient of a red rash after any surgical procedure may be due to the anæsthetic which has been employed. I should like to bring forward a few observations which will tend to relieve the anæsthetic from this accusation. I have now full notes of nine cases of this erythema, occurring chiefly among gynæcological patients, in two London hospitals. The rash is red, raised, almost papular in appearance, arising first about thirty hours after operation on the skin of the thighs and buttocks, then upon the chest, wrists, cheeks, elbows, forearms, and back, preceded and accompanied by a feeling of heat and irritation of the affected part, without pyrexia, lasting two and a half to three days, and fading off subsequently without desquamation. Six of these patients had enemata of hard yellow soap and warm water five hours before operation, when gas and ether were administered to produce anæsthesia. One patient, a child, was prepared in the same way and had chloroform as an anæsthetic. Two patients had exactly similar enemata with an exactly similar erythematous rash without the administration of an anæsthetic at all. In one of the first six cases the rash became intensified by a second enema given the next day. In another the woman stated she had had an exactly similar rash after an enema four months previously without any use of anæsthetics. The child had a slight recurrent rash after a second enema when the first rash had disappeared. Experience of anæsthetics shows that a transitory flush upon the

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throat, neck, and chest during the early stages of administration, which disappears entirely in a few minutes, is all that can be regarded as directly due to this source. Four communications[1] have appeared in the London medical journals citing twelve cases in all of erythema after an enema; six of these had no anæsthetic and one was just about to have chloroform when the rash was discovered. Various explanations of the rash have been offered, but as my cases all had the particular kind of soap mentioned, and no rash resulted after the use of soft soap enemata in 400 other cases, I cannot seriously doubt that the kind of soap used is the main factor in producing the rash. On analysis the hard soap only contained a trace of iron, and was very slightly alkaline in reaction.

CASE OF EMBOLISM OF THE CENTRAL ARTERY OF THE RETINA.

BY E. C. LONG, L.R.C.P. LOND., M.R.C.S. ENG.,
PRINCIPAL MEDICAL OFFICER, BASUTOLAND.

THE patient was a well-developed Basuto aged twenty-two years, employed by the Government as a post-rider. There was no history of syphilis in his family, and he had four brothers and two sisters all living and healthy. He had never been ill as far as he could remember. On June 10th he returned from his usual post journey, and that evening complained of headache and noticed that his body was covered by an eruption. Chicken-pox was epidemic in the camp at this period. The following morning on waking he found he was quite blind in the right eye, and presented himself for treatment at the Government Hospital. The eye appeared normal, but ophthalmoscopic examination showed embolism of the right central artery. Retinoscopy showed both eyes to be hypermetropic to the extent of 2·75 D. Three days afterwards the white haze which at the first had obscured the vessels round the centre of the disc had moved outwards, leaving the vessels in the centre well defined. The veins appeared much larger towards the periphery and the cherry spot smaller, and the white haze round it had also extended in an outward direction, while the whole fundus appeared paler. Some of the scabs of the varicellar eruption were falling off and a few fresh vesicles were seen. After this the haze gradually cleared and on July 4th the following note was made: "Edges of disc well defined. It is much whiter and along the course of the arteries is a bright white line. The fovea presents a mottled appearance of red on a white ground, the white being highly refracting and having an almost metallic appearance. The patient continues quite blind in the affected eye."

The case seems interesting from the fact of its occurring in a young subject suffering from such a simple malady as chicken-pox. Careful examination failed to detect any evidence of either cardiac or renal trouble. The only point in connexion with a possible cause of which I can think is that the evening before the embolism occurred the patient rode some thirty miles with his post, the temperature being some six degrees below freezing.

REMOVAL OF A LARGE INSECT FROM THE HUMAN EAR.

BY EDWARD ARMITAGE, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H. CAMB.,
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CASES of insects having found their way into the human ear are frequently cited, but, so far as I am aware, few authenticated cases are to be met with in the medical journals. The following case seems to me to be worthy of notice on account of the large size of the insect in comparison with the dimensions of the passage in which it was embedded.

On the morning of July 1st, 1895, I was summoned to my office to see a Portuguese aged thirty-four, who complained that an insect was lodged in his ear and requested me to remove it. The patient was a man of unemotional appearance and phlegmatic temperament, but he seemed to be suffering considerably. On drawing the auricle backwards and looking into the meatus, without the aid of a speculum I could not perceive anything; but after syringing with warm water for a few minutes I noticed the wing-sheaths of an insect appear. Using a pair of forceps I extracted a cockchafer. The insect was nine-twelfths of an inch long and five-twelfths of an inch broad at the junction of the head with the thorax. The long antennæ measured eight-twelfths of an inch. The creature was firmly fixed in the osseous meatus and required some force to remove it. Attached to it were particles of cerumen. The patient stated that he was awakened at 1 A.M. by a disagreeable sensation in his ear, and that in endeavouring to remove the cause he had pulled off portions of the wing-sheaths. The total length of the insect from the point of the head to the termination of the wing-sheaths was probably one inch. Subsequent examination with the aural speculum showed one of the legs fixed to the tympanic membrane, but he would not undergo further treatment for its removal, expressing himself as perfectly satisfied with what had been already done. Afterwards he experienced a "rushing noise" in the ear for about three hours, and then his aural sensations became normal.

[1] THE LANCET, Dec. 15th, 1888 (Dr. G. H. Burford); and Brit. Med. Jour., June 2nd, 1894 (Dr. C. W. Suckling); March 2nd, 1895 (Dr. G. H. Hale); and March 30th, 1895 (Mr. Kinsey-Morgan).

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

TWO CASES OF FIBRO-ANGEIOMA OF THE NASO-PHARYNX TREATED BY OPERATION; REMARKS.

(Under the care of Mr. ANTHONY BOWLBY.)

CASE 1. *Fibro-angeioma of naso-pharynx; excision of upper jaw and removal of growth after ligature of the external carotid artery.*—A man aged twenty-one years attended the department for diseases of the throat at St. Bartholomew's Hospital on March 9th, 1894, on account of severe epistaxis. The history he gave was that five years previously he first had severe bleeding from the nose, and that since that time he had never been able to breathe through the nostrils; even before this time, however, he had suffered from occasional epistaxis and continued to do so subsequently. Four months before admission he consulted a medical man in Dantzig, who told him he had polypi and removed something from his left nostril, an operation which was followed by epistaxis for three weeks. Soon after this the patient came to England and was admitted as an in-patient at the Central London Throat Hospital, where more growth was removed from the nose, with considerable loss of blood. Since this time hæmorrhage from the left nostril had been almost continuous. An examination of the patient showed that he had evidently lost much blood, for, although a thickly built, swarthy man, his lips were pale, his pupils dilated, and his pulse rapid and feeble. He was bleeding from the left nostril only, and on mopping away the blood there could be seen a growth which occupied the whole of the nasal cavity on this side. After plugging the nostril an examination of the throat showed that very little blood was running down the pharynx, but that the soft palate was bulged and moved very little on phonation or deglutition. With the finger a large growth could be felt blocking the whole of the naso-pharynx and attached to the posterior pharyngeal wall. The nose itself was not much deformed, but was distinctly broadened at its base. The patient was put to bed, kept quite quiet for several days, and fed well; the bleeding from the nose was stopped after twelve hours by careful plugging, and the general condition improved quickly. Further examination now showed that

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the growth in the left nostril was not nearly so red and semi-translucent as a mucous polypus and that the right nostril had no growth in its lower and anterior parts, but was quite blocked posteriorly. It was considered that the growth was a fibro-sarcoma of the naso-pharynx, and at a consultation on March 15th it was decided to remove a small portion of the tumour for microscopical examination, and not to attempt its extirpation except by completely exposing its attachments. The removal of a portion through the left nostril was followed by most profuse hæmorrhage, which was with difficulty arrested by plugging, and continued slightly for four days. A microscopical examination of the tissue thus obtained showed that the stroma was entirely fibrous, without any appearance of sarcoma, and that the greater part of the section was composed of innumerable small bloodvessels and cavernous spaces with practically no muscular tissue in their walls. After a further delay of a week for rest in bed and more feeding an operation was performed, with the kind assistance of Mr. Lockwood, on March 30th. The left external carotid was first ligatured in the neck by the usual incision, and this wound was at once closed. The upper lip was then split in the middle line and an incision was carried along the left side of the nose to the inner angle of the orbit, and when the soft parts had been reflected the nasal process of the superior maxilla was divided and the nostril explored. As the growth was found to have no intra-nasal attachment the left superior maxilla was next excised and the tumour exposed. Bleeding was arrested by sponge pressure, and then an attempt was made to avulse the growth with strong forceps. It was, however, so firmly fixed that no efforts could dislodge it. It was finally separated from the pharynx with a raspatory and torn away from the base of the skull, bringing away with it a small piece of bone from this region. The removal of the tumour was followed by a gush of blood, which was quickly stopped by sponge pressure and did not recur; in a few minutes the wound was quite dry. The skin flap was readjusted and the pharynx and nostrils plugged with iodoform gauze. After the operation the patient was much collapsed, but with the use of brandy, beef-tea enemata, and injections of strychnia he rallied in a few hours and made an uninterrupted recovery, both the facial incision and that for the ligature of the carotid healing by first intention. Six months later he continued well, and, having been fitted with a false palate and teeth, showed but little deformity. The nostrils remained clear, and there was no growth in the pharynx. He was again examined fourteen months after the operation, when the pharynx was found to be quite healthy.

CASE 2. *Pulsating fibro-angeioma of naso-pharynx; removal of tumour after resection of the hard palate and division of the soft palate.*—The patient was a healthy young man aged nineteen years who was sent by Mr. Trotter of Brandon on June 19th, 1894. His history was that for eighteen months past he had been quite unable to breathe through either nostril, and felt as if there was a swelling in the back of his throat. For a year he had noticed some watery discharge from the nostrils, but had never suffered from epistaxis. Nine weeks before he came under notice he became an in-patient at Addenbrooke Hospital, and on three or four occasions was treated by the application of the galvano-cautery and electrolysis. On admission he presented the usual appearances of nasal obstruction, the mouth being habitually open and the nostrils collapsed; the nose was not materially altered in shape. By anterior rhinoscopy it could be seen that the posterior nares were occluded by a red mass, which felt very firm when touched with a probe, and bulged into the nostrils. When the mouth was widely opened the palate was seen to be pushed down and almost motionless, and when the head was thrown back the rounded outline of a tumour was exposed. The hard palate was also depressed so that its arch was almost flattened out posteriorly. Examination with the finger showed that the soft palate was firm and resistant and that the hard palate was elastic and capable of being slightly bulged by firm pressure. On passing the finger behind the soft palate a firm rounded tumour could be felt occupying the entire pharynx and fixed both to the palate and to the posterior wall of the pharynx; it did not bleed on being touched. Mr. Thomas Smith saw the patient with Mr. Bowlby and agreed that it was a growth which [illegible] for its safe removal, and [illegible] might be done it [illegible] by dividing [illegible] much bone as it might be necessary to remove. The operation was performed on July 3rd, with the assistance of the house surgeons, Mr. Rudolph Smith and Mr. E. Cross. Tracheotomy was done, the cricoid ring was plugged with sponge, and a Durham's tube was inserted. The soft palate was next split in the middle, and the growth, which was found to be adherent to it, was very cautiously detached; the soft palate was then cut away from its bony attachments, and the muco-periosteum of the hard palate was turned back so as to expose the palatine arch as far forward as the teeth. The detached soft palate and the muco-periosteum were then held aside by five long silk sutures passed on each side of the incision. When this had been done it was found that the hard palate had been almost quite thinned away by the pressure of the growth on its posterior part, and the thinned bone in this region was next easily removed with bone scissors, so as to make a gap about three-quarters of an inch wide. The central part of the hard palate anterior to this was then removed with a chisel and mallet as far forward as a point immediately behind the incisor teeth, a triangular portion of bone with the apex forward being then taken away. When this had been done an excellent view of the tumour was obtained. It was red, covered with mucous membrane, and pulsated very obviously. When compressed with a sponge it collapsed to about one half of its size, and when pressure was removed it enlarged to its former bulk with a series of pulsations like an aneurysm. It was evident that it contained large cavities full of blood, and after some deliberation as to the best mode of removing it Mr. Bowlby avulsed it with a large, curved, steel elevator passed behind the mass; its removal required considerable force, but the toughness of the growth prevented its tearing, and the whole tumour came away in one piece. The anticipated rush of blood, which was considerable, was arrested by plugging the pharynx with sponges, and on the removal of the latter after a few minutes the bleeding was seen to have almost stopped. It was then found that the tumour had been attached to the base of the skull and the posterior wall of the pharynx. The whole of the incision in the soft palate was now sutured, and the muco-periosteum was also sutured across the clefts in the bone. The naso-pharynx was plugged with iodoform gauze, and the tracheotomy tube was left in. Two days later, as there had been no bleeding, the tube was removed and the plugs were changed. The patient suffered comparatively little from shock and made an uninterrupted recovery. The palate healed completely, and the stitches were removed three weeks after the operation. Three months later the patient came to show himself, when it was found that bone had been reproduced along the entire cleft and that the soft palate moved freely on respiration and phonation. The voice also was clear and strong, and nasal respiration was free. A year after the operation Mr. Bowlby saw him again and found no sign of new growth, and in September, 1895, Mr. Trotter wrote in reply to inquiries that the patient remained quite well. An examination of the tumour showed that its cut section was white and fibrous. It contained one large blood cyst, as big as the end of the index-finger, and lined by a smooth membrane, as well as several smaller ones. Its size after removal was not as much as half its size when in the pharynx. Microscopically examined, the tumour was seen to be composed of dense fibrous tissue, embedded in which were innumerable vessels and many irregular cavernous spaces, which only differed from those of erectile tissue in not containing any muscular tissue in their walls.

Remarks by Mr. BOWLBY.—There are two points of interest in these cases which are of some importance surgically and which are worthy of a brief consideration: first, the nature of the tumours; and, secondly, the operations undertaken for their removal. With regard to the first point, it is my opinion that most of the sessile tumours of the naso-pharynx which occur in young male adults are angeiomatous rather than sarcomatous. It is true that they are very commonly spoken of as fibro-sarcomata, but from what I have myself seen of that growth I am sure that structurally they do not merit the term. The tumours in question are composed of very dense fibrous tissue containing practically no cell elements and not resembling sarcoma either to the naked eye or under the microscope. It is true that they are somewhat prone to local recurrence, but I think that this is often due to the fact that, owing to their wide attachment and the situation in which [illegible] portions are liable to be left at the time of [illegible] angeiomatous element is, I think, an [illegible] factor in the

growths, though it is seldom so largely developed as in Case 2; and it is rare to find tumours in any situation in which pulsation is so marked as it was in this case. The reason that the angeiomatous nature of these growths is often overlooked is that after removal there are not only no obvious vessels to be seen on a freshly cut surface, but that on microscopical examination also the vascular spaces appear as mere slits in the section, there being as a rule no definite vessel wall forming the channel for the blood.

Secondly, with regard to the operation by which these tumours may be removed, it must be conceded that no single operation is satisfactory for all cases. There is, however, one thing essential whatever method is adopted—namely, that the growth be completely exposed before any attempt is made to remove it. It is further important, in view of the nature of the tumour, that when so exposed it should be torn away from its attachments as rapidly as possible, and that it should not be cut into or removed piecemeal. These precautions are necessary on account of the great vascularity of the growths in question, for hæmorrhage is much greater than in cases of sarcomatous or epitheliomatous tumours, and the danger of a sudden and profuse hæmorrhage is a very real one if these precautions be neglected. In Case 1 the risk of operation was increased by the loss of blood previously, and it was on this account that the external carotid was ligatured, with the result that much less blood was lost in the facial incisions and in clearing the bone than is commonly the case. It was also with a view of getting the operation completed as quickly as possible that the whole maxillary bone was removed at once. But in the second case the patient was young and vigorous and quite able to stand the more prolonged operation which was decided on. The operation performed in Case 2 may be described as a modification of that of Nélaton, from which it differs, however, in the section of the bone, the treatment of the soft palate at the time of operation, and in the restoration of the palate by suture. This restoration of the palate was recommended by Sédillot, but the operation itself does not appear to have been actually performed by this surgeon. In the case of my own the complete retraction of the soft palate and of the muco-periosteum of the hard palate enabled as much bone to be removed as was required to expose the whole of the pharyngeal vault and the tumour which occupied it, so that when this had been done there was as much room as could be desired for the actual removal of the growth. I am, however, convinced from cases I have seen that the splitting of the soft palate does not give sufficient room; whilst, on the other hand, I feel sure that when the growth is limited to the naso-pharynx the operation practised in Case 2 gives quite as much room as can be desired and is not open to the objection of causing subsequent deformity such as results from osteoplastic section or excision of the upper jaw. I was much indebted to Mr. Smith in Case 2 for his advice both before and during the operation.

BRADFORD INFIRMARY.

PERFORATING GASTRIC ULCER; RESECTION OF THE STOMACH; DEATH AFTER ELEVEN DAYS.

(Under the care of Mr. W. H. HORROCKS.)

A MARRIED woman aged thirty-three years was admitted to the Bradford Infirmary on Dec. 30th, 1894, with symptoms pointing to perforation of the stomach consequent on gastric ulcer. For several years she had been under medical treatment at intervals for gastric troubles, vomiting, and pain after food. Blood had never been seen in the vomit. For the past few months the symptoms had been less severe. Early on the day of admission she drank some hot tea. This was immediately followed by acute epigastric pain, faintness, and profuse sweating. As the pain continued to be very severe she was seen about four hours afterwards by her medical attendant, Mr. Mercer. Considering the previous history and the onset of the acute symptoms, Mr. Mercer strongly suspected perforation and asked Mr. Horrocks to see the patient with a view to laparotomy being performed. When seen ten hours after the first symptoms she was lying in bed with the knees slightly raised. Her expression did not indicate severe pain unless an effort was made to turn, when acute pain was shown by the facial aspect. The pulse was 98, good, regular, but somewhat quicker than it had been at the previous visit. There was a marked cardiac, basic bruit, apparently hæmic in nature. She complained of persistent burning pain referred to the tip of the tenth left rib. The abdomen was not distended, but the muscular walls were tense, so that deep palpation met with resistance. There was no localised tenderness in the epigastrium. An impaired percussion note was elicited in the epigastric and left hypochondriac regions. There was no diminution of the liver dulness. The patient had not vomited since the beginning of the attack. As the symptoms and signs were strongly suggestive of perforation she was removed to the Bradford Infirmary for an exploratory abdominal section to be performed. The operation, which lasted one hour, was performed fourteen hours after the onset of the acute symptoms. Ether having been administered, a median incision five inches long was made above the umbilicus. On opening the peritoneum some bubbles of gas escaped. There was no distension of the intestine or fluid in the peritoneal cavity. The stomach was drawn to the surface, and on its anterior aspect near the cardiac end a small opening the size of a crowquill was seen. Through this the mucous contents of the stomach escaped. The perforated part was drawn into the opening and the abdominal cavity packed with folds of Gamgee tissue. The edges of the opening in the stomach were pared with a knife and an attempt made to bring the edges together with catgut sutures. The stitches cut through the softened tissues, so a fusiform piece of the stomach wall, including the original opening, was removed with scissors. The margins of the enlarged opening were readily brought together by a continuous catgut suture. The serous layer was then inverted and a second row of continuous fine silk sutures applied. Finally, the omentum was turned up to cover the anterior surface of the stomach and fixed in position by a few silk sutures. The pads were removed and the peritoneum thoroughly cleansed by sponging. Two long glass drainage-tubes were inserted, the lower ends dipping into the pouches above the right and left kidneys. The abdominal wall was brought together with silkworm gut sutures. On the following day the patient had recovered fairly well from the shock of the operation. She had vomited once during the night, but the vomit contained no blood. A considerable amount of bloody serum was pipetted from the glass drainage-tubes. On the second day after the operation, as these caused considerable discomfort, they were replaced by rubber tubes. The rectal feeding, which had been effectual since the operation, was discontinued, as the enemata were not retained. Small quantities of food and stimulant were given by the mouth and retained. From this time the condition of the patient varied from day to day. There was no abdominal pain or distension; food was taken without discomfort, and the bowels were moved naturally. The tongue, which had remained red at the tip and margin, became drier and more thickly furred. A small stitch abscess formed at the upper part of the wound. The patient gradually became weaker, the symptoms of general peritonitis became more defined, and she died rather suddenly on Jan. 11th, 1895, the eleventh day after the operation. At the post-mortem examination the abdomen was found to be distended with sero-purulent fluid, which was localised by adhesions below the left arch of the diaphragm and in the pelvis. The small intestines were injected and glued together by flakes of plastic lymph. The stomach, which was covered in front by the adherent omentum, was considerably narrowed where the portion had been excised. The mucous membrane was in good apposition, and the peritoneal surfaces firmly adherent, no leakage having occurred. One of the inner row of stitches was seen in the stomach. The outer row was quite concealed by plastic lymph. Near the pyloric end the mucous membrane was thinned over an oval area with a raised margin, showing a second cicatrised ulcer.

Remarks by Mr. HORROCKS.—The previous history of epigastric pain and vomiting occurring in an anæmic woman was strongly suggestive of gastric ulcer even when blood had not been detected in the vomit. Perforation of the ulcerated stomach wall was indicated by the severe and sudden symptoms following the ingestion of the hot fluid. This was confirmed by the persistent localised pain, increased by any movement, by the constant contraction of the abdominal muscles ("guard action"), and the slow but steady increase in the pulse-rate. The natural position of the liver dulness is explained by the fact that the escaped air and mucous fluid were localised in the hypochondriac region and not generalised in the abdominal cavity. It was suggested before the operation that the case was one of acute gastric ulcer without perforation. This idea seemed negatived

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by the severe character of the onset, the general hypochondriac dulness, and the acute pain, which was not localised over the stomach, but generalised over the region. The great increase of pain caused by twisting the trunk could hardly be caused by gastric ulcer. The amount of stomach wall removed depends on the size of the ulcer. It would probably expedite matters if the perforation was enlarged sufficiently to admit the tip of the finger. Flushing the peritoneal cavity with hot sterilised water seemed contra-indicated in this case, as the extravasation was not considerable in amount and was quite localised. It seemed reasonable to suppose that the peritonitis would remain localised if provision was made for the escape of the serous secretion. The time required for further section of the abdominal wall, flushing of the peritoneal pouches, and the insertion of a pelvic drainage-tube would have greatly increased the shock of the operation. As events proved, the peritonitis set up by the extravasated contents of the stomach was not localised by plastic lymph, so that the more severe procedure would probably have been better.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Height of the Fundus Uteri above the Symphysis during the Puerperium.—Micro-organisms of Obstetrical and Gynæcological Interest.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 2nd, Dr. F. H. CHAMPNEYS, President, being in the chair.

Dr. W. S. A. GRIFFITH and Dr. T. G. STEVENS contributed a paper entitled "Notes on the Variation in Height of the Fundus Uteri above the Symphysis during the Puerperium, the Conditions which influence this, and the Practical Conclusions which may be drawn from such Observations." It demonstrated the importance of recording by measurement "charts of involution" during the puerperium. It was for the most part drawn up by Dr. Stevens, and was the result of observations by Dr. Griffith and Dr. Stevens at Queen Charlotte's Lying-in Hospital. The method of measurement was first described, with the precautions necessary to avoid errors, and the method of recording the measurements on the ordinary temperature charts. The measurement is the height of the middle of the fundus above the symphysis. The sources of error are: (1) distension of the bladder; (2) distension of the rectum; (3) distension of the small intestines; (4) prolapse of the uterus; (5) abnormally high uterus; (6) unusual bulk of uterine muscle; (7) retroversion of the uterus; and (8) excessive lateral obliquity of the uterus. The pathological conditions which interfere with the involution of the uterus, and therefore with the descent of the fundus, are: (1) retention of portions of placenta and membranes and of blood-clots and lochia; and (2) putrid decomposition within the uterus. (There have been no septic cases to study.) Charts illustrating normal involution and its variations and pathological conditions were given, and their value in indicating, even before any rise in temperature, putrid decomposition was demonstrated. Reference was made to the works of Serdukoff[1] and Barbour.[2]—Dr. MCCANN wished to mention as a source of error in such measurements as those made by Dr. Griffith and Dr. Stevens marked anteversion of the uterus. With regard to the influence of suckling he had found that in women who had no milk involution was rapid, while in those who had milk and nursed their children involution was rapid for the first few days, the rapidity diminishing later, probably owing to the stimulus from the breasts decreasing. The effect of prematurity of labour as a cause of delayed involution was noted, and prolonged labour delayed involution for the first days. It was important to determine on what day the uterus became a pelvic organ, for on this rested to a large extent our opinion as to when a puerperal woman should assume the erect posture. Text-books stated that a patient ought not to leave her bed before the tenth day. Dr. McCann thought that a more scientific method was to investigate the position of the uterus before giving an opinion. He gave some statistics showing the days on which the uterus became pelvic in primiparæ and multiparæ respectively.—Dr. STEVENS said, in reply, that with regard to Dr. McCann's query as to extreme anteversion being a source of error in measuring the uterus, the dorsal position assumed for measuring purposes would tend to correct that displacement unless the anteversion were so extreme as to make the fundus lie entirely behind the symphysis pubis.—Remarks were made by Dr. GRIGG and Dr. GRIFFITH.

Dr. G. D. ROBINSON read a paper on Certain Micro-organisms of Obstetrical and Gynæcological Interest. He pointed out that in fatal cases of puerperal sepsis the streptococcus pyogenes is constantly found in the blood and tissues, and mentioned some of the circumstances which cause increase or diminution of virulence in this organism. Normally, after labour the uterine cavity was known to contain no microbe; but in cases of puerperal sepsis many micro-organisms of different sorts were found both in the uterine cavity and in the substance of the decidua. Of these only the streptococcus pyogenes appeared to be able to pass through the uterine walls along the veins and lymphatics, and so to cause a general infection. This microbe might in these cases cause death without producing any obvious lesion, and three cases were cited in the paper. Much more frequently the streptococcus set up suppuration in various tissues. Sometimes this microbe produced false membranes on the peritoneum or genital tract, with or without suppuration. Two cases were cited. Lately in some cases of phlegmasia dolens the streptococcus pyogenes had been found in the clots plugging the veins of the uterine walls and broad ligaments (more rarely in the clots in the iliac veins) and even infiltrating the vein wall itself. The supposed connexion of the bacillus coli communis with various inflammations (usually suppurative) was next pointed out, and a case was quoted in which a woman four months pregnant had intestinal obstruction from retroversion of a gravid uterus. Abortion occurred four days after reposition, and was followed in a few hours by fever and diarrhœa, which continued until the death of the patient five days later. During life pure cultures of the bacillus coli communis were obtained from the uterine discharge, and after death these were obtained also from the uterine cavity, peritoneum, and blood of the heart. Attention was next drawn to the gonococcus, its appearance as seen in gonorrhœal pus or in pus culture, its relation to gonorrhœal discharges, and the situations in which it had been found.—The PRESIDENT said that the paper was valuable as a summary of the present state of knowledge of a subject which most obstetricians have to take second-hand. One fact, with regard to the comparative impermeability of the decidua to micro-organisms, struck him as being important practically. It might not always be safe to curette the uterus when its contents were septic. In one such case within his own knowledge infection seemed to follow curetting, and a fatal result ensued.—Dr. C. H. ROBERTS asked Dr. Robinson if he knew the exact clinical appearance in the cases of white leg referred to in the paper, for the term "white leg" was made to include many forms. Dr. Roberts believed that the definite white brawny legs, with a very early onset of symptoms, and often with distinctive pelvic signs (parametritis &c.), were generally septic, while the commoner thrombotic leg came on generally later—viz., about the tenth to the twelfth day. He believed that high temperature did not necessarily mean sepsis. He also asked Dr. Robinson if anything was known of cultivations of the micro-organisms found in the brawny legs, and whether the streptococcus pyogenes was invariably found. He suggested that the bacillus coli communis was the cause of some cases of suppuration in ovarian tumours and extra-uterine sacs, which, on account of some reason for lowered vitality, became permeable to these organisms. If the streptococcus pyogenes were the only organism which had the power of penetrating the deeper layers of the uterus and the lymphatics, he thought that the early removal of the superficial layers by curetting should be attempted, combined with the antiseptic treatment of the uterine cavity.—Remarks were made by Dr. GRIGG and Dr. MCCANN.—Dr. ROBINSON, in reply, said he was unable to give any information as to the colour of the skin in the fatal cases of phlegmasia dolens, as this point had not been noted in the report. He thought that culture experiments made during life would be of no value, since it had been demonstrated that the secondary clots in the affected limbs rarely contained streptococci even in those fatal cases of the disease in which numerous

[1] Edinburgh Medical Journal, May, 1875, p. 965.
[2] The Anatomy of Labour, 1889.

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organisms were found in the primary clots and walls of the vessels. He had experienced the usual difficulty in separating the gonococcus from other microbes. According to his experience, the best method of doing this was by making plate cultures with a mixture of blood serum (human, ox, or horse) and agar-agar in the manner recommended by Wertheim and others.

Dr. WILLIAM DUNCAN showed specimens of Ruptured Tubal Gestation and Double Pyosalpinx complicating Pregnancy.

The PRESIDENT announced that the next meeting of the society would be made special, for the purpose of considering some recommendations of the Council regarding the society's laws.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

President's Address.

A MEETING of this society was held on Oct. 4th, Mr. A. SYMONS ECCLES, M.B., President, being in the chair.

Mr. KEETLEY moved a vote of condolence with Mme. Pasteur.

The PRESIDENT gave an address on the Advantages of Oxidation. It was remarked that a large portion of the oxidation processes occurred in the muscular system, and mention was made of the series of changes taking place in an active muscle, the sense of weariness being attributable to the accumulation of incompletely oxidised products. The grave consequences of partial arrest of oxidation processes were alluded to and stress laid on the presence in the system of leucomaines as a result, leading in some cases to a morbid condition which might best be termed "leucomainæmia." Reference was made to the work of Bouchard and others, and it was pointed out that in chlorosis, gout, &c. there was evidence of insufficient oxidation with excess in the urine of leucomaines and other products of incomplete oxidation. The train of symptoms generalised under the term "neurasthenia" were attributed to suboxidation. The method of von Poehl for the detection of leucomaines in the urine was described. It was shown that in melancholia &c. the symptoms varied *pari passu* with the amount of precipitate by von Poehl's process. The parallelism between the prodromata of acute fever and some of the symptoms of functional neuroses was attributed to like causes being in operation, though not of common origin. Comparison was drawn between symptoms of cinchonism and those of coprostasis, the poisons in both interfering with the oxidation process. It was suggested that much of the value of animal extracts might be assigned to their potency as oxidising agents. The value of exercise and other therapeutic means for promoting oxidation was detailed and illustrated by the narration of cases.

Dr. LAUDER BRUNTON laid stress on the value of apparently theoretical observations, and pointed out that many of Pasteur's most practical results arose therefrom.

Dr. CAMPBELL POPE made some remarks and the PRESIDENT briefly replied.

KIDDERMINSTER MEDICAL SOCIETY.

So-called Hermaphrodite — Exhibition of Cases and Specimens.—Intestinal Obstruction.—Osteotomy.

A MEETING of this society was held on Tuesday, Sept. 17th, Mr. D. CORBETT being in the chair.

Mr. J. L. STRETTON read notes of a case of So-called Hermaphrodite. A man aged sixty-seven years was born in a small village and pronounced a female; he was brought up accordingly and still believes that he is a woman. The condition of the genitals is one of hypospadias, the under part of the urethra being absent from the orifice to the junction of the penis and scrotum, where the outlet is now situated, otherwise he is quite naturally formed and but for regular shaving would have a well-marked beard and moustache. He asserts that he has never experienced any sexual appetite, and that he has lived alone in a hovel and worked in the fields. He is at present an inmate of one of the female wards of the Kidderminster Workhouse by direction of the guardians and the local inspector, who still maintain that he is a woman, and the Local Government Board see no reason to interfere.

Mr. P. E. DAVIES exhibited the Kidneys from a case of Purpura, which showed numerous hæmorrhages. The boy, who was aged five years, was admitted into the Children's Hospital in a very exhausted condition and rapidly became comatose, dying twenty-four hours later. The urine was normal, and the necropsy showed no change in the brain.—Mr. W. MOORE remarked on the rarity of coma in this disease, and Mr. KITSON mentioned that several cases of purpura had recently occurred in the same locality as this one, two of them in the same house.

Mr. J. L. STRETTON read notes of a case of Intestinal Obstruction in a youth aged seventeen years. There was no history of any definite diseases, no traumatism, and no history of rupture. He had had pain off and on about his "stomach" since childhood. Last Easter he had a severe attack of abdominal pain and sickness, but no obstruction, and the vomit was not fæcal. He was laid up for six weeks and has remained well until the present attack. On Aug. 28th he was attacked with severe pain while at the watercloset; he passed a hard-formed motion, the pain continued, and he vomited. The following day the vomit was fæcal. His medical man treated him with hot fomentations and injections, with no effect. The patient lies on his back with the knees drawn up, the breath has a fæcal odour, and the pulse is 84. The tongue is furred and moist. The abdomen does not move on respiration, it is slightly distended, and there are no signs of hernia. There is a feeling of resistance about the right iliac region, and it is dull on percussion. Mr. J. L. Stretton opened the abdomen in the middle line; no fluid escaped, and on introducing the hand a band was at once felt and divided. There were several hard lumps in the large intestine, near the seat of obstruction, and the bowel was glued to the anterior abdominal wall by recent adhesions. Owing to the state of the patient the operation could not be prolonged. He was comfortable on the following day, and the vomiting ceased, but he became more collapsed and died in the evening after a severe attack of vomiting. No fæces or flatus had passed. The necropsy twelve hours after death showed that the abdominal wound appeared to be healthy, and that there had been no recent peritonitis. The root of the band was about the diameter of the little finger; it had extended from midway above the transverse colon (attached to its mesentery), across it, bending it down, and was attached to the mesentery of the ileum near the cæcum. There were several recent adhesions between the colon and the abdominal wall. The obstruction had been relieved by the operation. The case was of interest on account of the extreme rarity of the condition. Treves speaks of it as a pathological curiosity.

Dr. EVANS showed a girl aged fourteen years, from whose right leg the whole length of the diaphysis of the tibia had spontaneously exfoliated; it was only held *in situ* by a small band of granulation tissue and was easily removed. She has made an excellent recovery and has a useful limb, new bone being formed. A water-colour drawing of the condition was exhibited.

Mr. J. L. STRETTON read a paper on Osteotomy, with notes of one hundred and eight operations.

YARROW HOME FOR CONVALESCENT CHILDREN, BROADSTAIRS.—We understand that this home, the formal opening of which lately took place, is now in perfect working order and gradually filling up. The trustees are prepared to receive applications for admission of children, which should be addressed to the Secretary of the home at the London office, 73A, Queen Victoria-street, E.C. It should be understood that the institution is intended to benefit the children of middle-class or professional persons in adverse circumstances. The limits of age for boys is from four to fourteen and for girls from four to sixteen.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—St. Bartholomew's Hospital is specially rich in endowed scholarships, and five of these are awarded to students just entering upon their medical studies. The competition, which was held on Sept. 25th and following days, has resulted in the following awards:—1. Scholarship of £75 in Biology and Physiology for students under twenty-five years of age: C. S. Myers, B.A., Caius College, Cambridge. 2. Scholarship of £75 in Chemistry and Physics for students under twenty-five years of age: J. S. Williamson, 3. Scholarship of £150 in Biology, Chemistry, and Physics for students under twenty years of age: R. C. Bowden and R. H. Paramore (*æquales*). 4. Preliminary Scientific Exhibition of £50 in Biology, Chemistry, and Physics for students under twenty years of age: J. C. M. Bailey. 5. The Jeaffreson Exhibition of £20 in Classics and Mathematics: H. A. Kellona-Knight.

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Reviews and Notices of Books.

The Cell: Outlines of General Anatomy and Physiology. By Dr. OSCAR HERTWIG, Professor in the University of Berlin. Translated by M. CAMPBELL, and edited by HENRY JOHNSTONE CAMPBELL, M.D. Lond., Demonstrator of Physiology in Guy's Hospital. With 168 Illustrations. London: Swan Sonnenschein and Co. 1895. Pp. 368.

THE immense progress that has been made during the last half-century in our knowledge of histology, and the vast importance of the cell in every department of biology and in every function of life, render it extremely desirable that a full and comprehensive account of the nature of these elementary units of the plant and animal bodies, embodying the results of the most recent researches, should be given from time to time by a competent writer. In Germany this has been frequently and well done, as by Schleiden, Schwann, Kölliker, von Mohl, Virchow, and many others; but in this country we can only point to the writings of Beale, Huxley, Cleland, and Turner for such a comprehensive account, and we are greatly indebted to Mr. Henry Johnstone Campbell for having translated so ably the admirably written work of Dr. Oscar Hertwig, which may be regarded as representing the present standpoint of our knowledge respecting the structures and functions of the cell. The author commences with a short history of the cell and of the protoplasmic theory, in which he points out the modifications that have taken place in our definition of the word "cell." Grew and Malpighi were the first who noticed the cubical or polygonal spaces in plants; Schleiden dwelt upon the importance in plant cells of the nucleus, a structure that had previously been discovered by Robert Brown in his researches on orchids; whilst Schwann, with much labour, extended to animal structures the same conceptions that had already been generally accepted in regard to plants. By these well-known writers and teachers the cell was defined as a small vesicle with a firm membrane enclosing fluid contents and a nucleus. The study of the vegetable cell by von Mohl led him to lay much stress upon the slimy contents of cells, to which he first applied the term "protoplasm," though the word itself had been coined by Purkinje, and he observed the spontaneous movements which it was capable of performing. By degrees, with the more precise methods of microscopical observation, it was noticed by many investigators, but especially by Bischoff and Kölliker, that animal cells were very commonly unprovided with a membrane, and that which the older observers regarded as the most essential part of the cell — the cell membrane—was really of minor importance. Schultze and de Bary next proved that the protoplasm of plants and animals and the sarcode of the lowest organisms are identical; and thus the modern definition of a cell has come to be that it is "a little mass of protoplasm which contains in its interior a specially formed portion — the nucleus."

In the next chapter Dr. Hertwig describes the chemico-physical and morphological characters of the cell as above defined. Our chemical knowledge of protoplasm is very unsatisfactory; indeed, it is not to be regarded as a chemical, but as a morphological, conception. It is probably composed of a large number of different chemical substances united in the form of minute particles into a highly complex structure. It is alkaline, contains a large percentage of water, and the elements carbon, hydrogen, oxygen, nitrogen, and sulphur, with many salts. Examined with very high powers of the microscope, it presents certain appearances of structure. But these are so obscure that there is great difference of opinion in regard to their nature—some, as Frommann and Klein, holding to a framework theory, seeing a network of fibrils in the interstices of which fluid is contained; others, as Bütschli, having adopted a foam or honeycomb theory, comparing it to an emulsion; others, again, as Flemming, maintain a "filament" theory, in which the substance of protoplasm is regarded as composed of a thread substance — mitoine — and an interfilamentous substance—paramitoine; and, lastly, a "granuls" theory is held by Altmann, the granula being exceedingly minute creatures or bioplasts swimming in a gelatinous or "intergranula" substance.

The vital properties of the cell are considered under the respective headings of the Phenomena of Movement; the Phenomena of Irritability; Metabolism and Formative Activity; and Reproduction. The several kinds of movement are true protoplasmic movements; ciliary or flagellar movements; the movements of the pulsating vacuole; and the passive movements and changes of shape that the cell exhibits. In regard to the contractile vacuoles Dr. Hertwig agrees with Schwalbe and Engelmann that they possess contractile walls, though they are not clearly defined from the rest of the protoplasm. But he differs from Bütschli—who thinks that they only represent a drop of water in the protoplasm—in believing that they have a definite existence, in proof of which he points to their constancy, to the presence of radiating canals, and to other circumstances. The phenomena of irritability include those of muscular movement, in speaking of which the author remarks that, whilst the earlier natural philosophers held that it was the expression of a special vital force only seen in organised nature, modern science has discarded the theory of vitalism, considering it to be a very complicated chemico-physical phenomenon, differing only in degree from other chemico-physical phenomena of inanimate nature—that is to say, "the external stimuli come into contact with a substance very complex in structure, an organism which is an exceedingly complicated material system, and in consequence they give rise to a series of very complex phenomena." He adds, however, a word of warning that we should not fall into the very common mistake of trying to explain vital processes "as being due directly to mechanical causes" in consequence of their analogy to many phenomena seen in inanimate objects.

A very good section is devoted to the internal plasmic products of cells under the heading of Morphology of Metabolism. It includes the consideration of cell-sap, fat, glycogen, starch, mucin and albuminates, crystals and crystalloids, and, amongst others, bodies named trophoplasts. These last occur as constantly as the nucleus and possess great functional independence. They are of great importance in the nutrition of plants, for the whole process of assimilation and the formation of starch take place in them. They are small ovoid bodies composed of a substance similar to, but differing from, protoplasm. They are easily destroyed by water, but may be fixed by iodine or by strong picric acid. They often exist in great numbers in a cell and may actually change their form. Through their agency and derived from them the starch and chlorophyll granules are formed. Recent researches have shown that chlorophyll granules are capable of undergoing great changes in shape, offering to direct sunlight a small surface and to diffused daylight a large surface. Another remarkable internal plasmic product is the nematocyst, a weapon of attack possessed by the Cœlenterata, as many bathers during the summer season of this year found to their cost. The external plasmic products are cell membranes, cuticular formations, and intercellular substances, to each of which a few paragraphs embodying the results of the most recent investigations are given. The latter part of the book is occupied with the consideration of the phenomena of Reproduction. The concluding chapter is devoted to

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the question of Heredity and the Relation of the Cell to the Elemental Germ.

There is an excellent bibliography appended to each chapter, and there is a good index. The book is very well got up, and the illustrations are numerous, well selected, accurate, and excellently printed. It occupies a space in literature which much needed to be filled.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D. St. And., F.R.C.P. Lond., Professor of Medical Jurisprudence and Toxicology in Owens College, Manchester; Examiner in Forensic Medicine in the University of London and in the Victoria University; and Physician to the Salford Royal Hospital. London: Charles Griffin and Co. 1893. Pp. 639.

WE regret that through inadvertence the above important work by Professor Dixon Mann has not previously received editorial review at our hands. From the important medico-legal posts held by the author he has unusual opportunities for acquiring practical experience of his special subject and of ascertaining the wants of students and practitioners. On looking through the pages of his book the reader will recognise the lucid manner in which the facts are stated and the ready way in which the deductions are drawn and formulated. Chapter I. deals with the coroner's and magistrates' court and with assizes. The procedure in the coroner's court is on the whole well discussed, but we fail to notice any mention of the following facts: that the coroner has magisterial functions which enable him (1) to commit for murder or manslaughter; (2) to order an exhumation of a body on his own initiative; and (3) to take hearsay evidence which would not be admissible before a magistrate or at an assize court. The counsel to medical witnesses for their guidance in courts of law is admirably expressed. The chapter on Cadaveric Rigidity is clearly discussed, and due attention has been given to the chemical changes in muscle incidental to their stiffened condition.

Speaking of the guaiacum test for blood, the author does not explicitly state the necessary check experiment when filtering paper is used to demonstrate the stain. Some varieties of this paper give a distinct blue reaction with the reagents alone, consequently the latter should be used with and without the object to be tested. Regarding the carbon-monoxide-hæmoglobin spectrum we do not find mention of the fact that it may be readily observed after a considerable lapse of time. In one case it was unimpaired at the end of two months. Criminal responsibility in its relation to insanity is dealt with in a masterly fashion. Space does not permit a lengthy review of each section of Professor Mann's work, but we may say generally that the arrangement of the subjects is good. The diction leaves nothing to be desired. The author marshals his facts in simple but imposing order and draws his deductions with singular skill. The letterpress is bold and distinct. An increase in the number of illustrations is, perhaps, desirable. We can strongly recommend the work to students and practitioners of medicine.

The Human Flower: a Simple Statement of the Physiology of Birth and the Relations of the Sexes. By ELLIS ETHELMER. Third Edition, further enlarged and revised. Mrs. Wostenholme Elmy, Buxton House, Congleton. 1895.

WE are told in the introduction addressed to parents that the purpose of this small treatise is "to give in plain and inoffensive terms a short and simple account of the circumstances attendant upon the birth of human beings into the world." In the opinion of the author, it is so written that it may be "fittingly placed in the hands of sons or daughters at an age when their growing intelligence seeks to know the origin of their being." In order to meet the various ages of readers the first two chapters (says the author) are written "in as simple words as are consistent with accuracy"; and personally the author assures us that he (or perhaps we should say "she") "would not hesitate to entrust the book to a child of however tender years." We live in an age when there is a tendency to regard almost everything as a matter of opinion; and, in the author's opinion, it is a desirable thing to set boys and girls to read such a book as the one before us, in which the male and female organs of generation and their uses are systematically described. We cannot ourselves agree with the author in this matter. There is, no doubt, as is said here, a strong analogy between the reproductive process in plants and animals, or, to be more precise, between the reproductive process in plants and in man. But there is a considerable difference between studying that process in the vegetable kingdom and studying it in man with, as we have said, a precise description of the structure and functions of the organs of generation in man. We can see no objection to the study of botany among young people, girls or boys, and we should think that the analogy between the reproductive process in plants and in the animal kingdom would suggest itself to their minds quite sufficiently. The author, we think, rather loses sight of the enormous differences between plants and human beings, and makes too little allowance for the part played in mankind by the emotions. We can easily imagine that a great deal of harm might result from a boy being set to read the description given of the generative apparatus in the female, and similarly from a young girl being made to read the description of the corresponding organs in the male. Curiosity, and the desire to test the accuracy of the description, might easily occasion much harm—far more, it seems to us, than any good that the knowledge in question would be likely to do to its possessor. We do, in fact, agree with the advice here quoted from Ruskin as to the education of a girl, which appears to us to be the exact opposite of the definite and precise teaching recommended by the author. "Let her *loose* [the italics are ours] in the library, I say, as you would a fawn in a field. It knows the bad weeds twenty times better than you, and the good ones, too, and will eat some bitter and prickly ones, good for it, which you had not the slightest thought were good."

Annals of Ophthalmology and Otology. Vol. IV. January, 1895. No. 1. St. Louis, Missouri: James Parker.

THIS number contains an account of various methods of treating corneal opacities by Dr. David Dennis of Erie, Pennsylvania. He obtained great success by carrying out a plan devised by Dr. Alleman which consists in attaching to the negative pole of a battery, with a current of one-quarter to half a milliampère, a small silver electrode with concave contact surface, in which, for the sake of surer contact, a globule of mercury is made to adhere. The time of contact was about one minute. In one instance the current was alone employed; in others pressure inunctions and yellow oxide of mercury, and in another pressure inunctions alone. Dr. J. Thorington has some sensibly written observations on Skiascopy. Dr. Joseph Willetts discusses the cause of the halo or rainbow symptom in glaucoma, which he attributes to stasis and œdema of the cornea. Dr. John Ball contributes an article on the treatment of traumatic cataract attended by rapid swelling of the lens. He advocates the removal of the lens through a section made with Graefe's knife in the sclero-corneal junction, extending from one-third to two-fifths of the corneal circumference, without iridectomy, and careful removal of the softened lens substance. Mr. Charles Prentice solves a problem in cemented bifocal lenses by the prism diopter. A case of retinitis pigmentosa is reported by Dr. Dunbar Roy of Atlanta, Georgia; one of

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fibroma of eyelids by Dr. George Goode of Cincinnati; one of embolism of the inferior branch of the central retinal artery by the same author; one of detachment of the retina by William E. Bruner of Cleveland, Ohio; and there is a paper on the ripening of immature cataract by direct trituration by Dr. Bourne Bettman of Chicago. In the department of otology Dr. Walter Park of Harrisburg, Pennsylvania, describes an interesting case of acute purulent inflammation of the middle ear with two attacks of double optic neuritis, no mastoid complications, frequent delirium, two operations, and recovery; Dr. H. A. Alderton of Brooklyn, New York, gives a careful study of the influence of affections of the upper air tract upon the ear, with numerous statistics; Dr. Otto Koerner of Frankfort-on-Maine contributes the details of a case of tuberculosis of the temporal bone with extension to the adjoining brain; and Dr. Walter Park of Harrisburg, Pennsylvania, has devised a new and more convenient instrument than a Politzer air-bag.

Medical Electricity. By H. LEWIS JONES, M.A., M.D., Medical Officer in charge of the Electrical Department in St. Bartholomew's Hospital. Being the Second Edition of *Medical Electricity*, by W. E. STEAVENSON, M.D., and H. LEWIS JONES, M.D. London: H. K. Lewis. 1895. Price 10*s.* 6*d.*

WE gladly welcome the second edition of this valuable work. Electricity is becoming day by day more generally recognised by members of the medical profession to be an agent of great value for diagnostic as well as therapeutic purposes. Many, however, who are anxious to use it are somewhat hazy as to the various methods of electrification, as to the results they expect or wish for, and as to the management and care of sources of electricity, such as batteries or induction machines, and to all such this book will be of great use. In this second edition the general plan of the first has been adhered to, but some of the early chapters have been simplified, notably by the omission of many recondite mathematical formulæ. The various sources from which electricity can be obtained for medical purposes are very fully set forth. We are glad to see that Dr. Lewis Jones has avoided using the eponymous words galvanism, faradaism, &c., substituting the far better titles currents from cells or from the induction coil. One specially valuable feature in this edition, which was not present in the first, is the set of illustrations representing the appearances in paralysis of various muscles. We may refer especially to Figs. 71 and 72, representing paralysis of the trapezius and serratus magnus respectively. The chapter on Electrolysis and its various applications is very clear and practical, especially with regard to the treatment of nævi. We have no hesitation in recommending this work as most valuable to the busy practitioner: it does not pretend to take the place of the large treatises of Erb and Beard and Rockwell, but as a practical handbook it will be found exceedingly useful.

The Science and Art of Bread-making. By WILLIAM JAGO, F.I.C., F.C.S. London: Simpkin Marshall and Co., Limited. 1895.

IT is only within the last twenty years that the operations concerned in the making of bread have been studied and understood—since, in fact, modern experimental enquiry threw light upon the nature of fermentation, of the action of yeast, and the functions of bacteria. Not the least important aspect of the application of scientific methods is that *pari passu* with the advance of knowledge on the points of manufacture the necessity of cleanliness came to be understood, as well as of the adoption of rigid sanitary principles. The worth of a book of the kind before us is therefore strikingly manifest, and those engaged in the industrial operations with which it most exhaustively and thoroughly deals, and who are interested in the scientific aspect of the question, owe Mr. Jago a tribute of praise and gratitude. It is written within the reach—of the baker's man, we had almost said—but certainly of the master baker, who, if he be not acquainted with the elementary truths of chemistry, and especially those concerned in bread-making, is presented with them in a way which, if he have any intelligence at all, he will easily and eagerly grasp. Thus from introductory principles and a description of the principal chemical elements and their compounds, inorganic and organic, he is brought to understand the composition of wheat and wheat flour, the carbohydrates, the proteids, enzymes, yeast fermentation, &c., until in the sixteenth chapter the subject nearest his interest—bread-making—is admirably treated. This chapter deals specially with matters of primary importance to the practical baker. This is evident when we find it is divided into headings as follows: various bread-making methods, a review of panning fermentation, sour bread, faults in bread, leavened bread, baking powders, flour blending, &c. More or less technical are the chapters which follow on special breads and bread-making processes, bakehouse designs, the machine bakery and its management, till a description of analytical apparatus essential to the examination and valuation of bread leads up to the commercial testing of wheats and flours, and excellent and clearly written chapters on the determination of mineral and fatty matters, of soluble extracts, acidity, proteids, the estimation of carbohydrates, and so forth.

The analysis of bread in particular is summed up in Chapter XXV., and the methods for the detection of adulteration—which happily there is reason to believe is rarely practised now—are given in Chapter XXVI. In the directions for the estimation of sugar the author has probably inadvertently omitted to mention the Pavy modification of Fehling's method, which offers very distinct advantages, since when the reaction is complete the solution becomes clear and colourless, while with the Fehling solution it is difficult to tell the precise point when the whole of the copper is precipitated owing, as not infrequently happens, to the suboxide not separating readily. In some experiments on the effect of "alumed" bread upon digestion the author shows that alum retards proteid digestion to about half the rate which obtains in its absence, and that the use of "alumed" baking powder is as injurious as that of alum alone, so that the evil of a definition which in the Food and Drugs Act does not condemn, according to a notorious and recent decision in the High Courts, the use of alum in baking powder, because it cannot be regarded as a food, is accentuated.

We congratulate the bread-making industry on possessing such a valuable work of reference. The interest of the subject is, however, not theirs alone, and it is evident, from the stock of valuable material with which, as we have indicated, it exhaustively and admirably deals, that analysts, sanitarians, medical men, and others will also gather distinct profit from a perusal of its pages.

CHOLERA.

THE official returns from St. Petersburg show that 51 cases and 19 deaths from cholera occurred in the province of Podolia, and 7827 cases and 3085 deaths in the province of Volhynia during the first fortnight of September. The district of Berditcheff in the government of Kieff is also officially declared to be infected.

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Analytical Records
FROM
THE LANCET LABORATORY.

LIEBIG'S EXTRACT OF MEAT COMPANY'S BEEF PEPTONE (EXTRACTUM CARNIS).

(LIEBIG'S EXTRACT OF MEAT COMPANY, 6, FENCHURCH-AVENUE, E.C.)

WE have submitted this meat preparation to a somewhat extended analysis with most excellent results. As will be seen from the figures given below, it presents remarkable dietetic advantages, containing not only the vital principles of beef in a very highly concentrated form, but in an easily assimilable condition. In short, it is a peptonised meat compound in which the nourishing nitrogenous constituents of meat, as albumin, fibrin, &c., have been reduced to a readily digestible state, while the important stimulating principles (chiefly crystalline bases) have also been retained. Its composition, according to our analysis, is as follows: water, 28·02 per cent.; peptoniferous matters, 45·28 per cent. (consisting practically of equal amounts of albumose and true peptone); gelatine, 3·65 per cent.; albumin (coagulated on boiling and on slightly acidifying with acetic acid), 2·00 per cent.; crystalline meat bases, 11·98 per cent.; mineral matter, 9·07 per cent., containing 1·40 parts common salt, 0·07 part phosphate of lime, and 7·60 parts of phosphate of potassium. The total nitrogen amounted to 9·30 per cent. This analysis illustrates the importance of ascertaining in what form the proteids exist in preparations offered as nutrients. A meat preparation may appear to possess, so far as regards its total nitrogen, a high food value, but it might consist chiefly of gelatine, which bears no comparison, of course, in regard to food value with a similar proportion of albumose or peptone containing the same amount of nitrogen. The fact that the above preparation, for example, contains 9·30 per cent. of nitrogen conveys nothing as to its really nutritive character, but when the proteid matters are separated and estimated by chemical methods its worth as a nutrient becomes at once evident. This important aid to the differentiation of the kinds of proteids in peptonised preparations is largely due to the classic and well-known researches of Kühne and Chittenden and others. If reference be made to the above analysis it will be seen, not only what a powerful food this Liebig's new beef peptone is, but that the proteids have been so prepared as to be present under the best conditions for assimilation in the alimentary tract. Quite one half of the extract, in fact, consists of the products of peptonic digestion, while albumin, coagulable on boiling, which, together with water and salts, is able alone to support the vital processes, occurs in important quantity. The presence of a notable proportion of soluble phosphatic constituents is calculated to further add to the beneficial influence of this preparation upon nutrition. It is quite free from the unpleasant taste and odour which have hitherto largely detracted from the administration of peptonised meat compounds by the mouth, and contains no objectionable preservatives. Its composition is founded on an excellent physiological basis, indicating it to possess to an eminent degree all the requirements of a nitrogenous food, which, offering no difficulty to the digestive functions, must contribute very effectively as a nutrient in the repair and maintenance of the body tissues. The presence of a noteworthy proportion of crystalline meat bases adds to its value as a restorative and stimulant.

JEREZCONA WINE.

(HERTZ AND COLLINGWOOD, 4, SUSSEX-PLACE, LEADENHALL-STREET, E.C.)

As might be gathered from the name of this wine, it consists of a well-known mature sherry (of the famous Xeres district) in which the active constituents of cinchona bark are skilfully dissolved. It presents, therefore, real bitter and tonic properties in an agreeable form. That the wine is old and ripe is evident to the palate, the taste being, however, pleasantly and delicately bitter. A definite quantity of the alkaloids of cinchona bark was obtained on alkalising the wine and extracting with ether. These occur combined as hydrobromate, so as to minimise the disagreeable effects produced by ordinary cinchona preparations. The composition of the Jerezcona, apart from its medicinal characters, is indicated in the following analysis. Alcohol, by weight, 14·64 per cent.; by volume, 18·03 per cent.; proof spirit, 31·61 per cent.; extractives, 6·72 per cent.; mineral matters, 0·52 per cent. It is an obvious advance on the usual type of bitters.

1. GOLD PREPARATIONS (LIQ. AURI BROM. ARSENATIS, ETC.). 2. TANNOPUMILINE.

(ARTHUR AND CO., 69, BERNERS-STREET, OXFORD-STREET, W.)

Gold preparations have lately been advanced as remedial agents of distinct value. The bromide of gold, for instance, has been observed to exert a more powerful action on the psychomotor centres than the corresponding potassium salt, although the former contains nearly a fifth less bromine. Excellent results, it is stated, have also followed the use of bromide of gold in scleroses, and still more recently a solution of gold tribromide and of oxybromide of arsenic have been administered with marked benefit in locomotor ataxy. Specimens of "Liq. auri brom. arsenatis," as well as of "Liq. auri brom. arsen. mercuratis," have recently been submitted to us by the above chemists. The former is a combination of tribromide of gold ($AuBr_3$) with oxybromide of arsenic (AsOBr), and the latter contains in addition oxybromide of mercury (3 HgO, $HgBr_2$)—a combination which is said to be a specific for syphilitic tendency, producing, however, less salivation than the simpler mercurial salts. The care needed in order to get stable solutions of gold compounds is well known, and those before us are highly satisfactory in this respect, containing no excess of objectionable menstruum. The pure tribromide has been used, as our readers are aware, in epilepsy.

Tannopumiline is an interesting and apparently true compound of digallic acid with the terpene of the essential oil of pumilio pine. It has been found valuable in the treatment of perspiration of the feet and in dermatitis, for which affections it is declared to be superior to boracic acid and allied remedies. It is employed as a paint for chilblains, chapped hands, &c.; it dries rapidly and leaves a thin protective film. As might be expected, tannopumiline is not miscible with water. We can confidently commend the above preparations, not only on account of their novelty, but because they are prepared with care, are pure, and therefore admirably adapted for the purposes for which they are designed.

THE Canadian Medical Association has appointed the following gentlemen as officers for 1895-96:—President: James Thorburn, Toronto. Vice-Presidents: Prince Edward Island—James Warburton, Charlottetown; Nova Scotia—Wm. Tobin, Halifax; New Brunswick—W. W. White, St. John; Quebec—Hon. D. Marcil, Quebec; Ontario—Fife Fowler, Kingston; Manitoba—H. H. Chown, Winnipeg; North-West Territory—G. Brett, Banff; and British Columbia—R. E. McKechnie, Nanaimo. General Secretary: F. N. G. Starr, Toronto. Local Secretaries: Prince Edward Island—H. D. Johnson, Charlottetown; Nova Scotia—G. C. Jones, Halifax; New Brunswick—Wm. Christie, St. John; Quebec—J. G. McCarthy, Montreal; Ontario—John H. Mathieson, St. Mary's; Manitoba—W. J. Neilson, Winnipeg; North-West Territory—Geo. Macdonald, Calgary; and British Columbia—W. A. Richardson, Victoria. Treasurer: H. B. Small, Ottawa. The meeting in 1896 will be held in Montreal.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 12, 1895.

THE general practitioners of the country will be deeply interested in the series of articles which we are publishing headed "The Battle of the Clubs," giving details of a contest which must be fought out, and which, it will be seen, is not confined to our own country. Some time since we gave an account of a similar conflict in Germany. The present series of papers includes our special commissioner's description of a very interesting dispute between the Syndicate of Friendly Societies in Brussels and the medical profession, in the ranks of which there is great unanimity. Syndicates are the order of the day—"the individual withers and the world is more and more." We are of the number who believe greatly in individualism. Every member of the profession is placed occasionally in a position either to honour or to discredit the profession. It is the interest of the profession to have each member so conscious of this responsibility that under no circumstances shall he forget what he owes to the body corporate and to its traditions. He may temporarily suffer, or seem to suffer, in his individual capacity; but in the long run he is certain to gain. This is the point at which individualism and the *esprit de corps* meet, correcting each other's faults and coöperating in great lines of conduct which make ultimately for the good of all concerned. The charge of trades-unionism is one that need not weigh heavily on a body of men like the medical profession. We have never pretended as a profession not to have rules and traditions in which the individual was to be subordinate to the whole. If these rules and traditions have mainly and honourably had reference to questions of conduct they have not excluded questions of charge. Even honoraria are regulated by these same rules and traditions. It would be a grievous surrender of the interests of consulting practice if its junior members were to initiate consultation fees of less than the traditional minimum, which was supposed to be the least on which the dignity of the consultant class could be maintained. But he is almost more culpable who, in the sphere of general practice and for mere selfish reasons, takes an opportunity of profiting by the ungenerous demands of clubs or of private patients to reduce the modest remuneration of those who conduct general practice in its most arduous and exacting forms. No dread of the unreasonable charge of trades-unionism can excuse members of the profession for so acting or exempt them from the duty of denouncing those who so act. It is the privilege of the public and of its poorest members to have, not only medical advice, but the combined action of the profession in earnest consultation when urgency so requires. But there is a corresponding obligation on the part of the public and of those who administer great clubs for medical purposes to realise their obligations to the profession as a whole and to remember that they do not discharge these by beating down to the lowest terms and by "sweating" its youngest and its neediest members.

The articles recording the "Battle of the Clubs" which we are publishing from week to week afford us justification for thinking that the clubs and some of the public who have no claim to cheap attendance are dealing with medical men in a way that is ungenerous and unjust, and for approving of the conduct of the profession in various places when they stigmatise as opportunists those who try to supplant their brethren who are vindicating the just claims of medical service. The shabbiness of clubs is the more unreasonable because it coincides on the one hand with a great improvement in the wages of working men, and on the other with a considerable addition to the cost and length of medical education. The story is practically the same in every place where the state of matters has so far been disclosed—Cork, Brussels, Portsmouth, and Eastbourne. At Brussels there are about 450 medical men in practice, and 430 of them have joined what is called the Medical Syndicate. They have made it clear that their object is not so much to increase their rate of pay, but absolutely to refuse to attend rich men on the same terms as the labouring classes. Acting under the direction of this syndicate, twenty medical men in the service of the united clubs—the "Fédération des Mutualistes"—with exemplary discipline, resigned their posts, but in conformity with the requirements of the same authority continued to attend on grounds of humanity patients who were under treatment when the movement commenced. Eleven medical men took their place, only four of whom have proved effective. One of these was appointed chief medical officer at a high salary. The Medical Syndicate felt bound to disclaim him, and they did so with such completeness and effect that he apologised for his conduct and joined the Medical Syndicate. Our special commissioner wisely points out that in all these disputes it is necessary to appeal from the executive cliques by which the clubs are governed—often composed of the very classes objected to in clubs by the medical profession—to the whole constituency of the clubs—in other words, to public opinion. Working men are not naturally mean or likely to refuse their sympathy to those who are following their own example and making a united stand for proper terms. In his admirable account of the "Battle of the Clubs" at Portsmouth our special commissioner indicates with much clearness the injury to medical practice involved in the wide extension of the club system and in the coincident growth of a spirit of parsimony which, as we have said, is not natural to the mechanics of this country and which is especially unworthy of men whose weekly wages have increased of late years by 10*s.* a week. Formerly clubs were only meant for the accommodation of the bread-winner of the family, who was both willing and able to pay reasonable bills to his medical man for attending his wife and children. This was a far more satisfactory arrangement, not only for the medical man but for the people, who had thus the sense of privacy and independence in their medical relations. But now the demand is that the wives and children shall be attended on

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club terms; and at Portsmouth there is a rate of pay which is simply disgraceful. The Portsmouth Dockyard Medical Benefit Society admits infants and juveniles as well as adults at the uniform rate of ½*d*. per week! For this sum, not only the actual attendance of a fully qualified medical man is expected, but all necessary medicines, leeches, dressings, bandages, splints, &c. This seems to us the most discreditable instance of sweating yet disclosed either by the General Medical Council's investigations or those of our commissioner. And unfortunately it is sought to raise it into a model to be imitated by other societies, including the Rechabites, who actually use their temperance as an argument for imposing similar or worse terms on their medical officer. The medical profession must consult its own dignity in regard to such facts. The mere publicity of them should be enough to bring about a reform. If not, the medical men of Portsmouth, who have formed themselves into a union, will have the sympathy of the profession in their claims for the establishment of a reasonable wage limit in clubs and for a more adequate recognition of the value of medical service generally.

The profession at Eastbourne, according to our commissioner, is acting with great ability and public spirit in fighting two medical aid associations which carry on the double business of insurance against sickness and insurance against death. It is found that assurance companies which aim at life insurance on a small scale find it much more easy to procure business when they can include a provision for sickness. Accordingly the profession at Eastbourne has had to encounter two big assurance companies—the Liverpool Victoria Legal Friendly Society and the Prudential Assurance Company—both acting virtually as medical aid associations, both resorting to canvassing, the canvassers being careless as to the exclusion of unfit persons and rather preferring those who can pay larger premiums for life insurance. The result has been a most creditable unanimity of the profession and the creation of the Eastbourne Provident Medical Association, formed by the profession itself and to which all its members are admissible. The staff of the Provident Association consists of nine medical men, while three medical officers of the Prudential Assurance Company have abandoned their connexion with that body and have brought over most of the members to the medical association of the profession. The Prudential office itself seeks to persuade its clients to join the Eastbourne Provident Medical Aid Association. The three officers of the National Medical Aid Company, working with the Liverpool Victoria Legal Friendly Society, have resigned their office and explained to their patients the advantages of joining the Eastbourne Provident Association. Practically the Eastbourne medical men have been rewarded for their firmness and union by victory all along the line. Let these examples of combined action be laid to heart in other places. Our commissioner will continue his researches, and we shall be glad, indeed, if the important articles which he is writing should help to place the claims of the profession in a clearer light before the working classes. We will try to think that he is in error in attributing to them the hardness and ungenerousness which they are so ready to attribute to employers of labour. The medical profession has, and must ever have, strong claims on their respect. It will not act harshly or hastily. But it is determined to act firmly and with self-respect.

AN able writer in one of the monthly magazines draws attention to what he calls the "gaps in evolution." The chief points insisted upon are the absence of any evolutionary doctrine to account for the origin of life, for the mode in which variations arise, for the first beginnings of mind, and for the fact that the actual transition of one species into another has never been proved. We are far from denying that these are weighty points, well worthy of the attention which evolutionists have been the first to bestow upon them, but we demur to the apparent conclusion of the reviewer that they are sufficient to warrant the rejection of evolution as a working hypothesis of the probable method of cosmic development. It is easy to show that there are *lacunæ* in the evolutionary theory which we cannot at present fill up, that much remains unexplained, perhaps inexplicable, and that evolution is still far from precise and complete demonstration. It is not so easy to point to facts that are in any way destructive of the evolutionary hypothesis, or to suggest any alternative doctrine which is not beset with even greater difficulties. Evolution leaves much unexplained—that is admitted; but we question whether there is any single fact in physics or biology which can be definitely regarded as fatally opposed to evolutionary theory, if we were able to take a sufficiently accurate and comprehensive view of all the facts of the case. Let us look at the difficulties suggested by the reviewer. Evolution throws no light on the origin of life. Scientific men hold as certain the axiom *omne vivum ex vivo*. Life as we know it always arises from antecedent life, and to allege that while this is so now, there may have been a time in the history of this planet when the living arose from the not living, is to advance a violent hypothesis contrary to all scientific analogy, and only intended to get rid of a glaring difficulty. We fully admit the force of this reasoning. The various hypotheses—such as the possibility that life might have been introduced to this planet by a meteorite or the like—that have been advanced to meet the difficulty have always struck us as singularly weak. We think it better to admit that the origin of life is from the scientific point of view an insoluble mystery—as insoluble as the origin of matter or of force; but we fail to understand how the admission of this difficulty is fatal to evolution. If evolution cannot explain the origin of life, what theory can? Is the doctrine of special creation, or whatever be the competing theory with evolution, in any better position? The assumption that life never began, but is eternal, is beset with greater difficulties than any that encompass evolution. Life as we know it always arises from antecedent life—in other words, we have no *scientific* ground for believing in life without origin and without cause. Such a doctrine is, we need not say, quite tenable by the theologian, but he cannot justify it on scientific grounds, and if he is wise he will not try to do so. The origin of life remains a mystery, but if the evolutionist is dumb before that mystery his antagonist is dumb too, and deludes himself with a mere play of words in lieu of an explanation.

Again, it is argued that the mode in which variations

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arise—their apparently lawless and arbitrary character—is fatal to any orderly and satisfactory doctrine of evolution. Nature seizes on beneficial variations and perpetuates them, while she suppresses those variations that are harmful; but whence arise the variations? This objection does not strike us as very formidable. Granted that we cannot satisfactorily account for individual variations, it seems by no means impossible to conceive a satisfactory theory of the general method of variation. Atavism probably accounts for a great deal. We must take a comprehensive view of the evolutionary series, remembering that qualities, physical or mental, may remain latent for one or more generations, reappearing later in the stream of descent, and that therefore we have no right to be surprised at some characteristic arising that is not obviously derivable from the immediate ancestors. What is apparently inexplicable might be capable of an easy and obvious explanation if we could take a sufficiently comprehensive view of the facts. How naturally and easily some of the most mysterious phenomena of variation—such as reversion—fall into the ordered scheme of evolution when once we have got the proper clue. Thus it happens that facts, apparently most difficult of reconciliation with evolution, become, with fuller knowledge, the strongest proofs of the general accuracy of the theory. We need not dwell on the objection that there is no positive proof of the actual transition of one species into another. It may be fairly held that such proof is, *ex hypothesi*, impossible. The immense time probably required to effect specific changes and the almost inconceivable complexity of the phenomena render any precise demonstration impossible. All that the evolutionist may be fairly expected to show is that there are facts and analogies to prove that such a transition is possible, that it would account for a multitude of facts at present inexplicable, and that the distribution of species on the globe has undergone wide changes within geological times. All this has, we think, been fully effected. Whatever changes may pass over the doctrine of evolution—and we are probably still far from finality—DARWIN'S epoch-making work has destroyed for all time the old ideas on the permanence of species. Let us glance at the last objection—viz., that evolution throws no light on the origin of mind. We grant this most fully; but again we must insist that no other doctrine is a whit better off, and that the origin of mind, like the origin of life or the origin of matter, remains an insoluble mystery. There seems in the minds of many thinkers an idea that evolution is bound to hold the development of the living from the not living and the conscious from the unconscious. This is a radical error. The evolutionist, as such, has no opinion as to what was the original something from which all things have been developed. His concern is strictly with processes rather than origins. He is quite free to believe in an Eternal Mind or an Eternal Matter, or in both; but such beliefs are quite outside the range of science. They belong to theology, with which we have here nothing to do.

Opponents of evolution may fairly be asked not to confine their attention to admitted difficulties or to mysteries which are just as mysterious to the non-evolutionist as to the evolutionist, but to consider calmly the flood of light which the evolutionary hypothesis has cast upon the whole field of biology, to have regard to the immense mass of fact of which evolution affords at least a tenable and conceivable explanation, to consider the indirect evidence in its favour afforded by such phenomena as those of embryology, and to say whether it is not beyond comparison the most far-reaching and fruitful hypothesis ever conceived by science.

Two recent cases have directed popular attention to one of the most mysterious results of altered cerebral function—an absolute loss of that which is called "memory." The symptom is so striking, so conspicuous, and so simple, that it is natural for it to attract attention, and natural, also, that it should seem to be, in some way, susceptible of explanation. But, in truth, it is one of the derangements which bring into prominence the cerebral function of which we know perhaps less than we do of any other. There are two elements of the process which is included in the term "memory." They are generally confused, although one is often distinguished as "recollection." That which we call "recollection" is the voluntary use of memory; and it is the power of the will over memory, and not memory itself, which is lost in such cases as those which have recently attracted attention, and of which instances are familiar enough in medical science.

The physical basis of memory rests on the fact that every functional state of the brain leaves behind it a residual condition, in consequence of which that precise condition, in the same degree and the same combination, is more readily reproduced. The tendency for the state to occur again is the greater the more frequently it has previously occurred. It is this law which of course underlies all physical education, as well as all memory, commonly so termed. The occurrence of special nerve processes in association with each other leaves behind a tendency for the recurrence of the association, so that one "idea" causes the revival of another. The physiologist and the physician are mainly concerned only with the physical processes in the brain which correspond to and accompany the mental processes, with which they, as physicians or "physical physiologists" have less to do. But with these is combined the influence of revival of past activity, which is itself subject to the determining power which we call the "will." This association has baffled, and must apparently for ever baffle, our scrutiny. It is far beyond the range through which science can penetrate. We know of its workings by subjective facts on the one hand, and on the other by its effects. Among these effects is the susceptibility of the renewal of past brain processes to the will. We can voluntarily recall the impressions of the past, we can induce the same combinations of nerve action, but how we know not. True failure of "memory" can only be assumed in the cases in which there is a general depreciation of the cerebral functions. In consequence of impaired nutrition of the brain, the functional states do not leave the due residual effect which facilitates their revival. The change may be compared to the difference in the depth and in the permanence of the furrow in soils of different cohesion when the ploughshare cuts into them. On sand, for instance, as a much-quoted phrase reminds us, the ploughshare, instead of leaving a permanent furrow along which it can, if necessary, easily

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glide again, makes only a slight depression, almost at once filled up by the non-coherent particles from the crests. Such failure of memory is seen in old age, in general degenerations of the brain tissue, and also, in a striking way, in some cases of cerebral anæmia. In profound deficiency of the blood, qualitative or quantitative, the state of the brain may be such that no mental impression leaves an enduring trace such as can permit its reproduction. In such conditions there is a true failure of memory. But we cannot assume that this is the case when there is only a simple loss of the power to revive past impressions by the will, such as occurs as the result of sudden local disease, or sudden injury. A severe concussion may be followed by a period during which there is unconscioness, and afterwards by a return of an apparently normal mental state. Everything up to the moment of the accident may be recollected, but everything afterwards may be an absolute blank. Even if the sufferer soon regains consciousness and appears to be in normal mental vigour, the residual states left by his mental processes are not within the power of will to recall. Such sudden change, probably in some cases at least a sudden local lesion, limits the power of the will in a curious way. The will can induce the revival only of those processes which occurred a long time previous to the alteration. It is a well-known fact that the earlier in life cerebral processes occur the more easily are they revived. After middle life the difference in the intensity of the residual states, or perhaps some difference in their relation to the mysterious influence of the will, makes them so much less amenable that such a sudden alteration, as may be caused by a local lesion, will withdraw them from the influence of volition. This can scarcely be spoken of as true loss of memory: it is loss of voluntary recollection, and that is all we can say.

Strange, indeed, is the apparent slightness of the cerebral influence which like a gearing apparatus keeps within the power of the will these residual states. Who does not know how a vivid dream may be recalled by some chance incident, revealing that an apparently dreamless night was filled with activity. In the curious brain state which follows a slight epileptic fit, in the state of "automatism," as it is termed, residual states must be produced as definite and as deep as any which occur in normal conditions, but they are beyond the power of the will and of any association to reproduce them. In a case recorded by Dr. GOWERS a carman drove his van across London, steering his way with precision through the crowded streets, and then suddenly found himself six miles distant from his destination. During the hour which had elapsed innumerable incidents must have left impressions deep enough to have enabled them to be reproduced at once by a voluntary effort, were it not for the sudden breaks in the continuity of consciousness which occurred—first, when he, as the saying is, "lost himself," and secondly, when he "came to himself." Rarely, in some like state at a subsequent period, the connexion with the past may be re-established. As a rule, in this morbid state, the missing link in the mechanism of voluntary recollection is never re-established. But it is otherwise when there is a sudden loss of the power of the will over the residual states produced under normal conditions, but which have been separated from volition by some sudden change. In such cases as those which have been discussed so much of late in the daily press, the residual states are there, and, at some link in the chain of association which exists between them, a renewal of the lost influence may occur, and may then quickly spread through the whole series; the memory may suddenly give signs, quickly increasing, of returning susceptibility to the will, which we call the power of recollection—a word which seems so simple, and yet denotes the greatest mystery of brain and mind.

Annotations.

"Ne quid nimis."

THE EAST LONDON WATER INQUIRY.

THE proceedings of this inquiry terminated last Saturday, when Mr. Pember, Q.C., addressed the Commissioners on behalf of the water company, and Mr. Balfour Browne, Q.C., replied on behalf of the East-end vestries. On the whole, the evidence contains but few facts that were not previously known or had not been published in the daily press. The position is much the same as it was. Briefly summarised it is as follows. Consequently on a severe and unusually prolonged drought the East London Water Company's storage reservoirs were reduced to such a serious extent that the company was compelled to limit the output of water. Had they not done so it is probable that the reservoirs would have run quite dry, and they were abstracting as much as could be taken from the River Lea without seriously affecting navigation. The result of this intermittent supply was to deprive all those consumers who were not provided with cisterns or other means of storage of a supply of water for the greater part of the day. It was stated that little or no inconvenience was experienced by those consumers who had cisterns in their houses, and that a 50-gallon cistern would have filled at the worst time of the drought in a quarter of an hour. The situation is much simplified by the admission of the company's own officials of two things—firstly, scarcity of water through an unusually dry season (which they, however, claim would not have happened if the London County Council had not blocked their proposals to extend their storage capacity some years ago); and, secondly, that if cisterns had not been abolished there would have been little inconvenience from the constant supply being made intermittent. In short, the causes which were responsible for the scarcity of water, both at the source of supply and at the house of the consumer, were one and the same—inadequate means of storage. The shortness of supply being due to the mains having been made defective by frost, as alleged by the County Council's engineer, seems improbable. One of two courses, it seems to us, therefore, is open to London if her inhabitants are to possess an adequate supply of water in the future under any abnormal circumstances whatever. That the present arrangements are not adequate under a stress of conditions has been demonstrated pretty clearly, but this could be remedied by increased provision for storage in the case of present resources and the existing system of supply. The alternate course is to draw water from other sources, which, as in the case of Wales, could be relied upon to serve a supply at all times without stint and certainly without the possibility of taint. The adoption of the former course, however, at its best can only be considered as so much temporary patchwork of a serious defect, while the latter would undoubtedly solve

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the difficulty most satisfactorily if we exclude the question of the enormous cost which it must needs involve. We can easily imagine that this will be the substance of the report of the Commissioners of the recent inquiry, who, however, have not yet finished their task, inasmuch as they are making arrangements to visit the company's works and to inspect the private fittings in the consumers' houses during the present week. Their report will be awaited with unusual interest.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL SERVICES IN INDIA.

WE have received a number of communications from medical officers and members of the medical profession practising in India, as well as cuttings from various journals published in that country, regarding the action taken in the Public Health Section of the British Medical Association at their late meeting in respect more especially of the Indian Medical Service and the alleged utter inadequacy of the present sanitary administration of the Government of India. These communications emanate from officers and others of different ranks in various parts of India, and also in this country, and are of various lengths; but they all agree in protesting, more or less strongly and indignantly, against the statements which have been put forward, and in alleging that the picture which has been drawn, instead of being an accurate representation of the facts, is rather a caricature, unjust alike to the Indian Government and its medical services and to the profession generally in India. We have deemed it best, on the whole, and after careful consideration, not to publish the letters addressed to us. In the first place THE LANCET is in no way responsible for the repudiated statements; and in the second place we have made it a general rule not to publish contributions attacking other journals or affecting individuals connected with them for various reasons, the principal one being that their publication in THE LANCET might give rise to misconstruction and be attributed perhaps to an antagonistic spirit or to some unworthy motive or other. Moreover, on the present occasion the length of some of the communications, and the references to statements that have appeared elsewhere, introduce difficulties of a prohibitive kind. We have been led to make the foregoing remarks by way of apology for what might otherwise seem an apparent want of courtesy to various contributors for whom we entertain the highest respect. If we may be allowed to offer a suggestion as to the proper course to be adopted, it would be that our correspondents should address their communications or representations on the subject to the President of the British Medical Association.

THE DANGERS OF CYCLING.

THERE can be no manner of doubt that cycle riding has become popular with all classes, and, practised with moderation and within certain limits, no form of exercise can be more helpful in promoting a healthy balance of mind and body. The passion for propelling the body on wheels dates from the second decade of the present century, when the beaux of the West-end developed a predilection for dangling their legs from the hobby-horse. In 1846 a machine was constructed on which the rider balanced himself with his feet removed from the ground, and the "bone-shaker," the "ordinary," and its modified form the "Kangaroo" followed. But from no point of view were any of these machines satisfactory. It was not until the year 1885 that a really satisfactory machine, constructed upon rational principles, was introduced, and became the model upon which the most popular machines have since been [illegible]. Many improvements have, however, been made upon the old model, and wheeling has become popular with both sexes, with old and young, with the rich and, we may even add, the poor. Another cause of its popularity is, perhaps, the patronage given to cycling by many of the Royal family. In the popularity of the exercise, however, there lies a danger, and many of the accidents that occur might easily be avoided if the exercise were not indulged in so recklessly. Within the last few days there has been a series of deaths consequent upon cycle riding. In one case a child aged eleven years fell from a machine which he had hired and which he was incompetent to ride; in another case a man who had passed middle age collided with a van and fell under the wheels of the vehicle; and a minister and a well-known entomologist in America lost their lives from bicycle falls. With regard to children who hire bicycles the person who lets them out for hire should be held responsible if an accident occurs. We have often wondered that accidents from this cause do not happen more frequently. In poor neighbourhoods, especially on Saturday afternoons and Sunday mornings, lads of quite a tender age can be seen executing the most intricate and complicated patterns in the streets and roads, showing their utter inability to manage their machines. In the case of those of maturer years the responsibility rests with themselves, and those who have passed the prime of life should avoid as far as possible any endeavour to thread the intricate maze of vehicles in the main streets of our large cities; for, apart from the danger of loss of presence of mind, or of "side slip" when riding a "pneumatic" on slippery roads—a prolific source of accidents—the nervous strain which is set up is not at all conducive to health.

SMOKING IN COAL MINES.

THE evil wrought by want of thought, though not less injurious, may sometimes be more excusable than that which is done of set purpose. Not always, however, for there are instances in which the very omission implies a defect of will which is in a manner wilful. Among these may be reckoned such an example of heedless perversity as that which cost the lives of thirteen colliers last April in the Quarter Colliery, Stirlingshire. The cause of this catastrophe, as explained in the Board of Trade report, was the careless rather than thoughtless habit still prevalent among miners of smoking while underground. There could not have been here a question of ignorance. Working miners in our day are fully conscious of the grave risk incurred—nay, invited—by this mischievous custom. It is certainly no apology to plead the force of temptation. Men in other callings are constantly compelled by reasons of policy, which are far less cogent than the known claim of duty in respect of a neighbour's life, to smoke at set times and places, and at no other. It implies no hardship that the pit-worker should be made to do likewise. Neither does the alleged greater safety of Scotch mines, inasmuch as they are less liable to the explosion of firedamp, constitute a valid excuse. Gas, as is now well known, is not the only explosive medium. The mixture of air and finely divided coal dust suspended in it, which exists in every mine, provides in full measure the factors necessary to the production of this dangerous atmosphere. The best subterranean ventilation, the greatest skill in lamp construction, will do little to secure the workman's safety unless he be himself sufficiently alive to his own and his neighbour's danger to subordinate a desire the indulgence of which is criminal to the clearly recognised claims of mutual duty. Smoking underground is no more permissible than smoking near a powder magazine or a store of dynamite. The offence is in every case identical. Prevention, it is evident, is the sole remedy for its ruinous consequences, and this fact ought to be kept in view throughout the whole course of the miner's education and employment.

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Even boyhood and school time are not too early to sow the seeds of precaution. Unions and like agencies at a later stage must use their influence to the same purpose and must at every possible occasion insist on the duty of abstinence from smoking, and, if needful, institute penalties. A daily search at the pit-mouth, and the temporary suspension of delinquents if detected smuggling matches or smoking materials, would be entirely reasonable deterrent measures. It must be evident that the danger to be met in this case is vital. Its prevention is of much deeper interest to the men than to any master, and any concession to personal liberty or option in regard to such a matter would be as idle as pernicious.

THE BATTLE OF THE CLUBS AT PORTSMOUTH.

IN an article by our special commissioner, published on Sept. 21st, mention was made of a branch of the Oddfellows Society which was proposing to admit to insurance benefits children of both sexes from the age of three months. We have received information that the proposition has been carried, and that the remuneration proposed is 2*s.* 6*d.* per annum for infants from three months to three years, and 2*s.* from three years to eighteen years in the case of boys, and to fifteen years in the case of girls. The medical officer attached to this body has accordingly resigned, owing to the increase of work without adequate remuneration which these conditions would impose upon him. Now, every member of the profession practising in the borough of Portsmouth has signed a pledge that he will not take any appointment to a friendly society vacated by reason of an increase of duties placed upon the medical officer. So it is evident that the offending society will get no local man to take the post, and we would earnestly adjure any member of the profession throughout the country who might be tempted to apply for the vacant post through seeing it advertised not to do so. The cry for "a living wage" and "a fair day's wage for a fair day's work" is all very well; but if it is to be carried out it must apply to all workers without exception. We should like to see any builder or plumber undertake to keep an ordinary house in repair for 2*s.* 6*d.* a year, finding his own tools and materials; and a baby is even more likely to go wrong than a modern house.

THE DAIRY SHOW.

AMONG the many exhibitions and shows which take place at the Royal Agricultural Hall, Islington, the Dairy Show, held under the auspices of the British Dairy Farmers' Association, of which the Prince of Wales is patron and the Earl of Derby president, is one of the most useful. Economical methods of preparing dairy produce are eminently desirable, both from the point of view of the consumer and the producer, and the ever-increasing number of exhibits at this Show is evidence that energy in this direction is not wanting. The exhibition of table poultry, showing the most improved methods of trussing, boning, and scraping for the market, gives evidence of attention to cleanliness as well as expedition, and the improvements in butter making are interesting to everyone. Among the new inventions exhibited is the Thistle Mechanical Milking Machine, by which a number of cows can be milked simultaneously. The apparatus consists of a rubber cup applied to each teat, from which the milk is drawn by a pump having an intermittent action imitating as far as possible that of a calf's mouth. The Radiator Butter-Maker, a combined skimmer and churn for producing Pasteurised butter automatically direct from the milk, is another novelty which will attract some attention, as will also the calf-rearing appliance and the various separators, coolers, &c., used in the economy of the dairy. Quite a new feature in the Show is the introduction of plans and models of dairies. The proper construction of buildings in which articles of food are prepared is as important as the quality of the articles themselves, and ventilation, drainage, and cleanliness are points which have too long been neglected. Some very good plans and models are shown, but there is considerable room for improvement; and it is to be hoped that the valuable prizes offered on this occasion by Sir James Blyth will stimulate designers to further endeavours in the sanitary construction of dairies. The Dairy Show, which closes to-day (Friday), is perhaps one of the most successful that has been held since the inception of these exhibitions nineteen years ago.

INTEMPERATE TEMPERANCE.

MR. JOSEPH MALINS of Birmingham has done his best to give an air of fanaticism to the recent National Temperance Congress at Chester. The Mayor of Chester had invited upwards of a thousand people to an "At home" to meet the Bishop of London and Sir Benjamin Ward Richardson. Not one-half of the guests were teetotalers. But the Mayor of Chester so far regarded the feelings of his principal guests as to supply abundance of non-alcoholic drinks. The only alcohol given was in the form of claret cup. But this was too much for Mr. Malins, and he condemned it at a public meeting, saying he hoped it would be the last time such an error of judgment should occur. Mr. Malins evidently thinks it his duty to judge the world, and feels himself quite equal to the function. A wiser and more gracious man would have thanked the Mayor for meeting them half-way and wished him God-speed the other half. This intemperance of teetotalers is hindering the temperance of the nation.

"VICARIOUS PHILANTHROPY."

SIR HENRY H. HOWORTH'S letters to the daily press are often interesting, though rarely dealing with questions of a medical character. But in his letter on the above subject he permits himself a reference to what he calls the "failure" of the movement for a memorial to Sir Andrew Clark, and especially to a letter from Mr. Gladstone to the *Weekly Sun* recommending an application to every medical man in Great Britain for a small subscription. Sir Henry Howorth protests against the incessant appeal for subscriptions to reward or glorify obscure people. He admits that Sir Andrew Clark was not an obscure person, but "he was certainly not a dramatic personage nor a particularly notable figure in the history of medicine." "To appeal to poverty-stricken medical men for a memorial to a successful physician, who left a great fortune and lived on velvet, is an example," says Sir Henry Howorth, "of the pernicious habit I am referring to." This is not a fair description of Sir Andrew Clark. He did not "live on velvet," whatever that may mean, and he was one of the hardest-working, most public-spirited, and effective physicians of recent years, in spite of the fact that he did not add so strikingly as some physicians to our knowledge, either of pathology or therapeutics. There is some reason in Sir Henry Howorth's protest, and even in its application to the methods advocated for the promotion of the memorial to Sir Andrew Clark. Mr. Gladstone's address at the beginning of the movement was one of the most gracious tributes to the profession, as well as to one of its leading members, which has ever been uttered, and the profession will not cease to be grateful to Mr. Gladstone, who spoke when he was not well enough to stand. But we agree with Sir Henry Howorth that the personal application to each member of the profession would be a mistake. The very beauty of such memorials is that they be unforced and spontaneous. We deny, however, that the memorial has been a failure. Mr. Gladstone's speech remains, and a sum of over £3000 has been raised from cheerful

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givers. The mistake was in linking such an object to ordinary and prosaic purposes, and in associating too extensively with one institution, however deserving, a movement which should have been broad in its basis and in its application as Sir Andrew Clark himself was broad. It is perhaps now too late to give breadth to the movement. But we deny that it has been a failure. In this age of incessant and multifarious demands £3000 is not a mean sum to raise for such a purpose.

SYPHILITIC HÆMATOMA.

IN the *Deutsche Medicinische Wochenschrift* Dr. Hahn has published the particulars of a case of this rare affection of the dura mater. The patient was a man aged thirty-six, who had had syphilis about ten years before the onset of his nervous symptoms. These began with attacks of giddiness and severe headache, while his character underwent a great change. He finally had an attack of giddiness with loss of consciousness, and on the following day it was noticed that there was slight left ptosis, deviation of the tongue to the left on protrusion, deficient movements of the palate, indistinct articulation, and exaggerated reflexes. A few days later the following symptoms were also observed—viz., weakness of the right hand, diminution in the reflexes (especially of the knee-jerk on the right side), slight sensory disturbance, and impairment of hearing. He died about two weeks later comatose, having had previously some irregularity of breathing. At the necropsy it was found that over the whole of the left hemisphere, between the dura mater and pia mater, there was a thick layer of blood-clot; while on the right the dura mater was smooth, the pia mater being thickened and the convolutions flattened. At the base the pia mater was thickened, as well as in the Sylvian fissure, while the basilar and the carotid arteries were atheromatous. The left third nerve was flattened and apparently destroyed.

"THE GRIMSBY CHOLERA SCARE"—SO CALLED.

THE town council of Grimsby have decided, notwithstanding numerous protests to the contrary, to appoint a committee "to ascertain, if possible, who was responsible for the publication of the recent unfortunate scare in Grimsby"; and it is clear that the resolution is largely aimed at the medical profession and the press. The action is particularly ill-advised, for no one who knows the details of the Grimsby cholera outbreak in 1893 can do otherwise than feel that, had the town council been more open in admitting the existence of a disease which they could not distinguish from cholera, and which so alarmed those who knew the secret that they had the dead buried in lime, it would have been much better for Grimsby and for the country as a whole. When, after the visit of one of the inspectors of the Local Government Board, cholera was announced, it was too late to stamp it out. Then, as regards this year's experience, it is possibly permissible to say that there has been no cholera in Grimsby; but it is equally certain that clinically it was as impossible to distinguish the cases from cholera as it was during the early stages of true cholera in 1893. And, in view of the cesspits along the lines of the drains, by which soakage of filth into the soil in 1893 was not only favoured but practically ensured, there were many who quite anticipated a recurrence of cholera in that town. Were it not for the fact that much reliance is now being placed on the bacteriological test, no one would have doubted that there was a recrudescence of cholera in Grimsby on a small scale this year; and even some who esteem the bacteriological test most highly would by no means set aside the clinical history and the general antecedents merely [illegible] the disease Koch's comma bacillus did not happen to be found. We cannot but think that Grimsby got off very easily, by reason of the judgment as to the nature of their cases being determined almost solely, if not quite so, on the bacteriological basis. One thing, however, is certain—namely, that in view of the past history of Grimsby, and the chances of a recrudescence during the late exceptional season, the medical profession and the medical officer of health would have been very remiss if they had ignored the clinical indications of the fatal choleraic disease with which Grimsby was visited. And the town council would probably have been the first to blame them if, by chance, the bacteriological report had turned out otherwise or if the disease had continued to spread. One member of the town council urged that the rumour of last autumn had a commercial aspect. We cannot help thinking that the commercial aspect has had much more to do with the attempt to keep things quiet than it has with notifications and reports to the central government. There was everything this year to justify the notification of cases of cholera, and the occurrence of the rapidly fatal attacks in adults which took place in Grimsby amounted to "an outbreak of a dangerous disorder," such as every medical officer of health is bound to report to the Local Government Board.

"THE OLD MISSIONARY."

WE need make no apology for calling our readers' attention to a charming little work with the above title by Sir William W. Hunter. The old missionary was a medical missionary as well as a very wise and benevolent gentleman of large views and simple tastes, the pathos and unostentatious heroism of whose life consisted, to our minds, in its fruitless toil to attain the objects he had at heart, and in the sense of solitariness which falls to the lot of so many earnest and unassuming men of elevated character. There are many other interesting persons besides the old missionary in the book, and these, as well as the scenes of their labours, must have had some basis of real existence in the experience of their delineator. Those who know India and Indian life, its sorrows and joys, will have their associations touched and their memories awakened by the author's truthful description of scenes and his tender references to the little incidents of European life in India—mostly sad, but with a charm of their own withal, which none of us can, and most of us would not care to, obliterate altogether even if we could.

SANITARY EDUCATION.

IT is a healthy sign that workmen whose business it is to construct our dwellings are themselves beginning to see that it is not only to the advantage of the public in general that the work should be done in a way which sanitary science directs, but that it is to their own advantage that a stop should be put to all those practices which may be summed up in the phrase "jerry built." Among the first to have seen this is the master plumber, who, however willing he may be to do his work in a manner satisfactory to himself and to the public, is often handicapped by the fact that materials bought in the cheapest market are frequently supplied to him by the builder or the architect; and, however skilful the workman may be, the nature of the materials supplied preclude him from doing good work. It is he, however, who generally gets the blame if anything goes wrong; and we are glad to note that the National Association of Master Plumbers, which is making great progress throughout the country, has just formed a metropolitan branch of this association. Among the objects of the association are the raising of the status of the plumbing trade in the country, the prevention of contract work being done at unremunerative prices, and the confining [illegible]

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work to plumbers. This last object is a very desirable one, for year by year our knowledge of sanitary principles is widened and the difficulty of the workman to keep pace with it increased. In London not a little has been done by the Sanitary Institute in this connexion, and the sanitary lectures delivered in various parts of the country are generally well appreciated by those whom they are intended to benefit. At Birmingham at the present time Dr. Bostock Hill is delivering a series of lectures on sanitary science at the Birmingham Municipal Technical School designed to impart a practical knowledge of the scientific principles of hygiene to sanitary engineers, builders, plumbers, and others engaged in house construction. Then again, besides the technical lectures for craftsmen, the numerous polytechnic and other institutes give courses of lectures on health science of a more popular character. These, however, which do not receive the attention they deserve, form an important factor in familiarising the general public with the principles of hygiene; and it is the education of the general public in these matters which, after all, must have the greatest influence in bringing about that hygienic millennium which is the ideal of every sanitarian.

RETIRED ARMY MEDICAL OFFICERS.

DEATH has been busy of late in the retired ranks of the Army Medical Department. Surgeon-General J. Irvine, Honorary Physician to the Queen, an officer who had seen much service during the Indian Mutiny, passed away on the 21st ult. at his residence at South Kensington, at the age of sixty-seven, just before the occasion of the commemoration of the thirty-eighth anniversary of the relief of Lucknow, in which he took part. Surgeon-General H. H. Massy, C.B., who died at Bournemouth on the 27th ult., at the age of seventy-five, had served in the Sutlej campaign, in the Crimean war, at the battles of the Alma, Balaclava, Inkerman, and Tchernaya, and other actions, and subsequently in the Indian Mutiny; and last in the list, but by no means least, Surgeon-General Sir Thomas Longmore, C.B., an obituary notice of whom will be found on another page, died on the 1st inst. at the age of seventy-nine. He served throughout the Crimean campaign, from its commencement until the termination of the siege of Sebastopol, without being absent from duty a single day, and subsequently in Bengal during the Mutiny. The services of these three medical officers make up altogether a very distinguished record.

THE "IONA" DISASTER.

BEFORE the sad impression created by the lamentable occurrence on board the steamer *Iona* altogether passes away, it may be well to make a few remarks on the subject and on the finding of the coroner's jury, which, we may add, does not strike us as by any means exemplifying the wisdom of the wise. We must say, in justice to the captain, that our study of the evidence leads us to infer that he acted promptly and judiciously and did his best under the unfortunate circumstances. As to the alleged anxiety which was said to have been evinced about the safety of the ship, the captain and crew of the *Iona* would simply have been culpably negligent if they had not at once concentrated their efforts in trying to secure this, for it meant the safety of everybody on board. The loss of life was bad enough as it was; but if the fire had spread, and it was rapidly spreading, the lives of all on board would most probably have been sacrificed. The great thing to be avoided, as everyone knows, on the occasion of a fire is panic, and the ringing of an alarm bell is, we should think, about the best possible way of creating it. It must be remembered, too, that a ship is, after all, a ship and not really a big floating hotel; but even were it a house on shore we should like to know whether a bedroom is usually provided with separate means of ingress and egress, as it was suggested should in future be the case with cabins in passenger ships. It seems that the passengers were warned in time for them to have escaped, but they were unfortunately not sufficiently impressed with the urgency of the danger and lost time in staying, poor creatures, to dress themselves. Even the heroic stewardess, whose life was sacrificed, did not appear to have realised the pressing urgency that existed. The jury were unanimously of opinion that the fire originated in the lamp-room, and they were probably right; but it was, after all, a matter of conjecture and opinion only. One of the main points connected with fires on shipboard that has to be guarded against is, as we have said, panic. The establishment of a system of "fire quarters" and periodical drill in connexion therewith will do much in this respect. A fire drill teaches all how to act, where to go, and what to do should the necessity really arise.

SCHOOL BOOKS AND INFECTIOUS DISEASE.

WE have from time to time referred to the risks that may be incurred by the reissue at a public library of books returned from infected houses, and it is certain that at the present time there are many medical officers of health who are taking steps towards the mitigation of these risks by notification to the librarian of the infected houses and by a disinfection of the infected books. Dr. Niven of Manchester, in his annual report for 1894, draws attention to the fact that in many schools the books used by the children are collected together into one room at the end of the day and redistributed indiscriminately on the following day without regard to the possible conveyance of infection by such means. It follows from this that a child with the initial symptoms of diphtheria or scarlet fever may have used a book on one day which on the day following may be used by a healthy child. This is certainly a risk which school managers will do well to consider, as also is the question of the separation of children's overclothing in the lobby. It would be well, too, in the same sense, to have regard to the redistribution of slates and pencils, and to the use of towels in the lavatories.

HYPNOTIC FRAUDS AND PUBLIC CREDULITY.

IT is characteristic of conspiracy that it tends to spontaneous disruption. Whether we deal with great or small combinations of this kind, with the quasi-sublime or with the ridiculous in imposture, the result is the same. A quarrel or a bribe may at any time introduce the thin end of the wedge, and the further work of cleavage is only a question of time. It is usually to the public advantage when offenders thus break with each other, and a degree of satisfaction on the part of outsiders is at such times only natural. Sometimes, however, this feeling is tempered by a touch of pity, as in a case recently examined in the Southport police-court. A youth eighteen years of age was charged with sleeping out of doors. He defended himself on the plea that his master, a professional hypnotist, had refused to pay him his wages. Some remarkable statements which followed throw a light on the kind of relations which exist between the hypnotist magician and his media. According to his own admissions the sufferings of this unfortunate "subject" were not imaginary. The art of the master juggler did not extend to the abolition of sensation. A pretended trance in which he lay for three days with his mouth stitched up was to the boy a period of wakeful and doubtless of painful sensibility, and we may safely conclude that certain injuries inflicted upon him at other times were likewise unrelieved by the anæsthesia of suggestion. The folly of

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enduring—the morbid and culpable folly of encouraging—these miserable impostures ought to require no demonstration. Their exposure in this instance will, it is to be hoped, have some influence in weaning the minds of a credulous public from the attraction of a species of fraud to which it is far too ready to expose itself. We will not deny the strict justice of leaving the knave and his willing dupes in cases of this kind to live on one another and to find each other out. Still, this admission does not absolve us, as humane beings, of a certain social responsibility in the matter. Where the effect of the imposture implies no great personal detriment it may be allowed to work its own cure. Where, on the other hand, persons like the youth above mentioned are comparatively incapable of self-defence and are liable to somewhat serious injury, it will be generally admitted that some form of official supervision, and even at times of interference, is called for.

TYPHOID FEVER IN SUNDERLAND.

MR. T. W. THOMPSON, Inspector of the Local Government Board, has opened an inquiry into the sanitary condition of Sunderland, with especial reference to the fatal prevalence of typhoid fever. This is now on the decline, but the number of cases has been considerable. In the week ending Aug. 10th there were 14 cases; the 17th, 10; the 24th, 13; the 31st, 57; Sept. 7th, 104; the 14th, 105; the 21st, 95; the 28th, 70. The mortality of the town has placed it very unfavourably in the list of the large towns of England. The Mayor in his remarks on the occasion of Mr. Thompson's first visit seemed to find comfort in saying that the high death-rate of the borough was chiefly due to the great mortality from diarrhœa among children under three. But to the initiated this is as little creditable as the recurring epidemic of typhoid fever, and indeed has much the same significance. There is much difference of opinion as to the exact causes of the epidemic, the prevailing one attributing it to the ashpit system for the removal of refuse which is common. Mr. Thompson is making preparations for a very thorough investigation, the impartiality of which will go far to adjust the acute differences which divide the council on the subject, owners of property blaming parents and tenants for negligence and carelessness, others throwing the onus on the owners of property, which, it is contended, is fundamentally defective in a sanitary respect.

MORBID ANATOMY OF INFANTILE PARALYSIS.

IN the recently published number of *Brain* a full description is given by Dr. Trevelyan of the condition of the different structures of the spinal cord in a case of this disease, in which death occurred from independent causes eleven months after the onset of the paralysis. The patient was a girl six years of age who was suddenly seized with fever, nausea, and vomiting. Paralysis was observed on the second day and involved all four extremities. The sphincters were also affected at first. The arms began to recover three weeks after the onset of the attack, and the ultimate condition was one of almost complete paraplegia affecting the lower limbs, while the right arm also was weak. The knee-jerks were absent and there was a loss of faradaic reaction in the affected muscles, but little, if any, wasting. The condition of the spinal cord was especially observed. The ganglion cells were very much altered. The processes had disappeared and the cells themselves had become more or less formless masses. The nucleus and nucleolus seemed often to persist after the body of the cell had disappeared. Groups of minute but perfectly formed ganglion cells were seen here and there, chiefly in the parts corresponding to the lateral horns. The nerve fibrils were very much changed in the grey matter. Often they had entirely disappeared; where present they were mostly reduced to fine lines and they were frequently distinctly varicose. The fibres in the anterior roots as they passed through the white matter seemed to be fewer in number and thinner than normal. In only a few specimens did they seem to be degenerated. There were overgrowth and infiltration of the neuroglia, and in many parts of the grey matter of the cervical and lumbar enlargements translucent areas were visible, the result of destruction of nerve fibrils and ganglion cells, and with a high power enormous spider cells were visible in these translucent patches. The central canal was pervious throughout the cord. In many parts of the cord a greatly increased vascularity was evident, and advanced perivascular changes could be made out, often in the areas in which the central and peripheral vessels met. No distinct disease of the walls of vessels was made out. There was considerable cell infiltration in most parts of the cord. This was most distinct in the mid-cervical region. This cell infiltration was of two kinds, general and patchy, the patchy infiltration being frequently perivascular. The cells in this infiltration were also of two kinds, round and with processes; and there was a third kind of infiltration of large irregular cells without distinct processes in the area around the central canal and apparently derived from the cells lining the canal. The changes in the white matter were similar in kind but of much less intensity, and these changes extended throughout the whole length of the cord. From the study of this case—a case observed pathologically at an extremely interesting period, viz., after the intensely acute processes had subsided and before the cicatricial condition was established—Dr. Trevelyan is inclined to support the view identified chiefly with the names of Siemerling and Goldscheider, that this disease is of vascular and interstitial origin—i.e., that the changes in the ganglion cells are secondary to the changes in the vessels and interstitial tissue. As regards the ultimate origin of this disease, although no proof has yet been offered, there are strong reasons for supposing it to be infective.

THE HEALTH OF CORNWALL.

A CORRESPONDENT has lately directed attention to some very obvious sanitary defects in the north part of Cornwall. We have pleasure in acknowledging the publicity which has been given by our local contemporaries to his criticisms and sincerely wish that they may be the starting-point of more attention to questions of sanitation in this interesting county. The report of the Sanitary Committee of the County Council for August is before us and is not inconsistent in its general drift with the suggestions of our correspondent. The chairman, Mr. Silvanus Trevail, complains of delay on the part of the medical officers of health in sending in their reports, which may be taken as a sign that they are pressed by the duties of general practice, which, with their want of power and independence, makes them more indifferent in reporting what they see. There is a rise in the death-rate of August as compared with July; but as it is "only 13·49" the chairman thinks it very satisfactory and encouraging. It does not strike us as a very low death-rate for midsummer and a sparsely populated county. Some of the largest London parishes could boast as low a mortality. The zymotic death-rate has increased from 0·8 for July to 1·3 per 1000 for August, chiefly due to infantile diarrhœa. Diphtheria and croup have an increase from 10 cases and 1 death to 15 cases and 2 deaths. Scarlet fever has risen from 60 cases to 76, and shows an increase of 2 deaths. Typhoid fever has a decrease of 8 cases, but an increase of 3 deaths. Besides, we have no returns from several important districts, as Launceston (rural) St. Colomb, West Penwith, and Phillack, which have not even adopted the Notification Acts. Of thirty-six sanitary districts only two have isolation hospitals. The

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chairman very properly points out the prevalence of scarlet fever at Camborne and Paul. At both places there was the same prevalence last year, and grave defects in the sanitary condition of each place were then pointed out. They remain absolutely the same, and the sanitary authorities seem in no way anxious "to make the necessary expenditure for the eradication of filth and disease." Cornwall is a county that, with a little intelligence on sanitary matters, would lend itself to ideal sanitary results. The farmer should be a perfect scavenger in his own interest. But landlords should be made to do their share of duty. The present sanitary condition seems to us "neither satisfactory nor encouraging."

ST. WINIFRIDE'S WELL.

FAITH-HEALING and miraculous cures are always interesting, and, whether supernatural or no, the fact of the cure remains. Our views on the subject were set forth recently in a leading article, but we are led to mention the subject again owing to our having received a paper by Dr. J. Johnston of Bolton. Dr. Johnston took a bicycle tour through North Wales and visited the famous holy well of St. Winifride. He tells us that numbers of crutches and the like, left by those who came halting and went away cured, are hung up in the chapel, and records of other cases are displayed on the walls. That such cures do take place is indisputable; as to the means there may be a difference of opinion. Our readers may remember some cases recorded by Professor George Buchanan of Glasgow,[1] when tumours spontaneously disappeared without any miraculous intervention, and though we should be the last to deny the powers of faith we can only assert that spontaneous "cure" of certain diseases is not unknown in the annals of science.

THE STRENGTHENING OF OUR DEFENCES.

EVERY week gives fresh *raison d'être* to our defence associations and makes us wish to see them in the strongest possible form for work and action, not only in a strictly defensive way, but in an aggressive spirit. The profession needs organisation for such purposes more than has yet been realised. The very best legal assistance should be within the means of such associations for the prosecution of certain cases before the law courts. The means of taking and procuring evidence for the presentation of cases before the General Medical Council is also an urgent desideratum. To these ends it seems to us that the first step is the consolidation of existing associations. The time for this seems to be ripe. There never was a period when so many medical men felt the necessity of membership of such societies. With such favouring circumstances and arguments the profession looks anxiously for the amalgamation of the Medical Defence Union and the London and Counties Medical Protection Society which, at present, greatly waste their resources and their strength in acting separately.

THE RETENTION OF DEAD BODIES IN HOUSES.

A propos of the late state of the weather a leading article in one of the daily papers refers to the retention of the dead in houses, and advocates removal to well-regulated mortuaries. The article is practically a review of another article in the *Free Review*, entitled "Living with the Dead." The assertion made by this latter writer, that it is usual to keep the dead a week or even five days, is, as our daily contemporary contends, an exaggeration, since in Liverpool most funerals take place not later than the fourth day, and many burials occur even sooner than this. Still, in such weather as we have had lately the retention of a body under certain circumstances for so short a period as twelve hours must be attended with much discomfort to the inhabitants of dwellings which contain no extra room for such a contingency. Not only is removal to a mortuary imperatively called for, but the speedy inclosure of the body in a coffin filled with coarsely powdered charcoal is greatly to be desired. As is well known, burial within twenty-four hours is absolutely enforced in many parts of the colonies and of the European continent. There are grave objections, sentimental and otherwise, to such a course being adopted in this country even in the hottest weather. But most medical men can remember cases where the inclosure of a body in the coffin has been rendered very desirable within a few hours after death, and where burial itself was equally demanded on the third or even the second day after death. It is much to be lamented that the study of disinfectants continues to be so neglected by undertakers and others with whom rests the care of the dead.

[1] THE LANCET, Nov. 7th, 1885.

MEDICAL REGISTRATION.

WE would remind our medical brethren of the imperative necessity both of promptly notifying any changes in their postal addresses to the branch registrar by whom they were originally registered, and also of answering at once any letter of inquiry that may be received from the registrar. Neglect of these precautions may result in the removal of names from the Register in consequence merely of the registered addresses being inaccurate. It should also be widely known that the General Medical Council may censure practitioners who employ unqualified assistants without exercising due personal supervision and control over them, and that several practitioners have been removed from the Register for permitting unqualified persons to practise under cover of their name and registered qualifications.

ARTIFICIAL DILATATION OF THE CERVIX IN PUERPERAL ECLAMPSIA.

THE October number of the *Revue Obstétricale Internationale* contains a report of an interesting case of puerperal eclampsia by Mdlle. de Moerloose of Brussels. The patient was a primipara, eight months' pregnant, who was admitted to hospital in a state of coma after having had six fits. There was marked general œdema, and the urine was highly albuminous. The os uteri admitted the tip of the finger, and there was no indication that labour was in progress. Chloral by the rectum, inhalations of chloroform, and morphine hypodermically were tried, but apparently without effect, as violent convulsions continued to occur at short intervals. Mdlle. de Moerloose therefore dilated the cervix with the fingers. Beginning with one finger, she was soon able to insert two fingers, and so on, till the os uteri was the size of a five-franc piece. The dilatation was done very gradually, the pressure with the fingers being made for a quarter of a hour, with intervals of the same time between each manipulation. No convulsions occurred while the dilatation was being effected. The membranes were then ruptured, and the head made to engage by pressure on the fundus. Delivery was completed with the forceps. The patient had two fits the same night, and two more on the day after delivery; she remained in a state of profound coma for several days, taking no nourishment except a little milk. The albuminuria did not commence to lessen till the eighth day. The patient was sufficiently well to leave the hospital on the fifteenth day. Mdlle. de Moerloose reports the case because she thinks that obstetricians are perhaps too much opposed to artificial dilatation of the cervix in similar cases. She does not mean that such a measure should be adopted as a matter of routine in each case, but considers that when drugs fail to produce an improvement in an hour, when the tissues are soft and dilatable, and the patient is evidently in a serious condition, digital dilatation

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of the cervix in the manner above described offers the best chance of a favourable termination.

MEDICAL officers of both our own and of Continental armies will hear with great regret of the death, at an advanced age, of the eminent French surgeon, Baron Larrey, the son of the great military surgeon who accompanied the First Napoleon in all his brilliant campaigns and was present at his great battles. The late Baron Larrey had also seen a great deal of service in the field—from the siege of Antwerp in 1832 to the battle of Solferino—and was most deservedly popular and highly esteemed in and out of France for his great surgical talents and his eminent courtesy and kindness to all. Baron Larrey was a member of the French Institute and the Academy of Medicine. We hope in an early issue to publish a more extended notice of his work.

ON Tuesday, Oct. 22nd, the Royal Medical and Chirurgical Society will resume its meetings, and the first of the season promises a discussion of exceptional interest and value both to physicians and surgeons. Dr. Frederic Hewitt and Mr. Marmaduke Sheild have written a joint paper on Posture in its relation to Surgical Operations under Anæsthetics. This is one of those subjects which, as a rule, is only dealt with incidentally and in relation to particular cases, and it cannot fail to be of great service to operators to have the whole subject treated comprehensively and exhaustively. The paper will be illustrated by diagrams and drawings.

THE latest addition to the roll of gallant actions performed by medical men is that of Dr. Charles Toller of Ilfracombe, who, during the recent heavy gale which raged on our west coast and at the imminent risk of his life, descended by means of a rope a cliff on the Lee Bay Rocks, which are 150 feet in height, in order to apply restoratives to an apparently drowned person. Strenuous efforts were made by Dr. Toller to restore animation, and the patient partially rallied, but expired a few minutes before being landed at Ilfracombe in the lifeboat which had been sent to the rescue.

THE Lettsomian Lectures of the Medical Society of London will be delivered on Feb. 3rd and 17th and March 2nd, 1896, by W. Watson Cheyne, F.R.C.S., F.R.S., who has chosen for his subject, "The Objects and Limits of Operations for Cancer." The annual oration will be delivered on May 18th, 1895, by W. H. Allchin, M.D., F.R.C.P. The opening meeting of the society will be held on Monday next, when Sir James Crichton Browne, the President, will deliver his address.

THE sixty-fifth session of the Harveian Society of London will commence on Thursday, Oct. 17th, at 8.30 P.M., at the Stafford Rooms, Tichborne-street, Edgware-road, when Dr. Symes Thompson will read a paper on "The Climate of Egypt." All members of the profession are cordially invited to attend. The Harveian Lectures for 1895 will be delivered by Dr. M. Handfield-Jones in December.

THE annual grant amounting to £1700, of which King's College, London, was deprived by the late Government, is to be restored to the College next year by the present one, the restitution being accompanied by no stipulations as regards tests.

THE delivery of the Bradshaw Lecture at the Royal College of Physicians by Dr. Bradbury on some New Vasodilators, which was announced for Nov. 7th, has been postponed to Tuesday, Nov. 12th, at 5 P.M.

Pharmacology and Therapeutics.

BIBORATE OF SODA IN EPILEPSY.

SINCE Dr. Gowers first introduced this drug as a remedy in certain cases of epilepsy various observers have from time to time published observations on its effects. Amongst these are Stewart Lockie, Risien Russell, James Taylor, and Alexander in this country, Folsom and Jones in the United States, and Mairet, Féré, and others in France. The last-mentioned observer has recently published in the *Revue de Médecine* an account of an extensive series of observations of the effects of borax in epilepsy, the result of which is to show that, while in certain cases benefit is conferred by the use of the drug, in most cases the disadvantages are such as to more than counterbalance the slight benefits. Altogether 122 cases were treated, and of these 87 derived practically no benefit; but in some cases benefit was experienced. In 6 of these cases the benefit was doubtful on account of the short duration of the trial; in 7 patients amelioration was followed by relapse; and in 11 cases improvement resulted from the use of borax, but not so marked as the improvement following the use of bromides. The third chief group consisted of 11 cases in which undoubted, and in some cases remarkable, benefit resulted from the use of borax, all the more noteworthy because of the absence of benefit from bromide in large doses in some of those same cases. Full details of the treatment and its effect in these cases are given, and the tolerance of large doses of the drug in certain cases is striking. Dr. Féré next considers the various drawbacks to the treatment under the name of "borism." Intestinal troubles he found to be most troublesome—nausea, vomiting, and anorexia; but in certain cases the administration of borax in glycerine instead of in water obviated this drawback. Dryness of the skin and redness and inflammation of the mucous membranes were also produced. Dryness of the hair also followed, and in some cases loss of hair resulted, but only temporarily. The most frequent form of skin eruption was a kind of eczema answering to the description in most particulars of seborrhœic eczema; in other cases the eruption consisted of reddish patches which desquamated; while in still another class the eruption was papular and accompanied by prurigo of varying intensity. This also was sometimes followed by desquamation. In some cases a condition of great weakness succeeded prolonged treatment, this being the result, apparently, partly of the toxic effect of the drug and partly of the anorexia which followed its use. These different effects, it may be mentioned, have for the most part been mentioned by other observers, but another much more serious result is alluded to in this paper as following the use of borax in certain cases. This is an effect upon the kidneys, giving rise to the presence of albumin in the urine, and as a rule accompanied by œdema of the face and extremities, so that in all cases in which borax is given in anything like full doses it is essential that a careful watch should be kept upon the state of the urine. In one of the cases under Dr. Féré's observation uræmia and hyperpyrexia developed, and the patient died. The kidneys were found to be inflamed. The general facts in the paper indicate that, while borax is not as a rule to be compared to the bromides in regard to its efficacy in the treatment of epilepsy, still there are cases which, while intractable by the bromides, are very remarkably benefited by borax, but that the drug whenever it is given in large doses has certain disadvantages and even dangers which should be carefully guarded against.

THE USE OF COMPOUNDS OF BISMUTH AND NAPHTHOL AS INTESTINAL ANTISEPTICS.

Dr. Chaumier recommends these compounds as possessing to a large extent the antiseptic powers of β-naphthol, but not having the burning taste or other unpleasant properties of the latter. The naphtholate of bismuth is conveniently prescribed, and is in the form of a powder which is decomposed in the digestive tracts into naphthol and an oxide of bismuth. Dr. Chaumier has chiefly used these combinations in the diarrhœas of children and adults and also in diarrhœa due to tubercle and typhoid fever with successful results.

THE ACTION OF SALOPHENE IN CASES OF ACUTE ARTICULAR RHEUMATISM, CHOREA, AND NEURALGIA.

Dr. Augustin Huot of Paris has written a pamphlet on the action of this drug, which gives good results in the above

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classes of disease without the drawbacks which often attend the use of salicylates. Chemically this drug is a salicylic ether of acetyl-paramido-phenol; it is insoluble in cold water and slightly soluble in hot, but is freely dissolved by alcohol and ether, and is easily decomposed in an alkaline medium. Salophene is not decomposed in the stomach, but is slowly decomposed by the intestinal secretions into its more elementary constituents, salicylic acid and acetyl-paramido-phenol; and the drug owes its antipyretic, analgesic, and antirheumatic properties to the salicylic acid chiefly, but also to the aniline bases, but without the toxic properties of the latter. Elimination takes place chiefly by the urine, and to some extent by the fæces. After quoting many cases in which the use of this drug produced beneficial effects, Dr. Huot concludes that salophene possesses the remedial properties of salicylate of soda and has not the inconveniences of the latter. It is well tolerated and does not irritate the stomach or the nervous system. It may be given in the powdered form, in cachets, or any other convenient manner, and an average dose would be from three to four grammes in twenty-four hours.

THE LIFE AND WORKS OF LOUIS PASTEUR, BY SIR JAMES PAGET.

UNDER the general heading "Scientific Worthies" and the sub-heading "Louis Pasteur" the following article originally appeared in *Nature* on March 26th, 1891. Having regard to the recent lamented death of M. Pasteur and to the fact that the particular number in question of *Nature* is now out of print, we have thought that it would be desirable and interesting to reproduce the article. Those members of our profession who have already read it will doubtless be glad of an opportunity of again perusing it, whilst those whose attention it has perhaps escaped will be glad to possess an estimate of the work of the great French chemist, who has now gone to his rest, from the pen of a great English surgeon who is happily still living. Although published in 1891 the article is practically up to date, for since that time no more research work has been undertaken by M. Pasteur himself. For permission to reprint the article we are indebted to its author, Sir James Paget, and to Messrs. Macmillan and Co., the proprietors of *Nature*.

Louis Pasteur was born on Dec. 27th, 1822, at Dôle, where his father, an old soldier who had been decorated on the field of battle, worked hard as a tanner. He was an earnest, industrious, and thoughtful man, fond of reading, and very desirous that his son should be well educated and should gain renown in some branch of learning. Father and mother, alike in their enthusiasm and ambition, devoted themselves to their son—they would "make a man of him," they said. In 1825 they removed to Arbois, and as soon as he was old enough to be admitted as a day-boy Pasteur began his studies in the Communal College, and there, after the first year or two, he worked hard and gained distinction. Thence he proceeded to Besançon, and thence, after a year's successful study, to the École Normale in Paris, to which, after gaining a high place in the entrance examination, he was admitted in 1843. His devotion to chemistry had begun while he was a pupil of Professor Darlay at Besançon, and now he studied it under Dumas at the Sorbonne and Balard at the École Normale. His love of science became intense: he spent every day in attendance on the lectures, in reading, and in practical work in both chemistry and physics.

Among the teachers in the École by whom he was most encouraged was M. Delafosse, who was especially studying molecular physics, and it was after a conversation with him that Pasteur was guided to the careful study of crystals and to the inquiry which led him to his first important discovery. It was known that the tartrate and the paratartrate of soda and ammonia, though exactly isomeric, similar in their atomic composition, specific gravity, and crystalline form, yet differed, not only in many of their chemical relations, but, as Biot had shown, in the fact that a watery solution of the tartrate deflected the plane of polarised light, and that of the paratartrate did not. Pasteur could not believe that bodies apparently identical in atomic composition and construction could thus differ in their relations to light. He had already observed a dissimilarity between the crystals of the tartaric and of the paratartaric acids, in that the latter were and the former were not symmetrical, and he found the same difference between the crystals of their salts. Now, by a laborious study and repeated measurements of the crystals of these and other similar compounds, he showed that in the paratartaric (now called racemic) acid there are two distinct forms of tartaric acid, of which the one (dextro-tartaric) is identical with the ordinary tartaric and, like it, in solution deflects light to the right, the other (lævo-tartaric) deflects it to the left. The two in combination, as they occur in the ordinary paratartaric acid, neutralise one another in their influences on polarised light and do not deflect it in either direction. Similarly, he next found that the crystals of the two acids and of their respective salts are different in their forms; those of the dextro-tartaric and its salts are similar to those of the ordinary tartaric and its salts in their dissymmetry; those of the lævo-tartaric are also dyssymmetrical, but in the opposite direction; those of the two combined in the paratartaric and its salts are symmetrical. Thus was explained the seeming anomaly of so distinct a difference between bodies exactly isomeric. A great problem was solved, and it was among its results that gradually the way was made clearer by which the synthesis of organic alkaloids and of sugars has been achieved.

These researches had occupied six years, and Pasteur had gained by them an early high renown, and he hoped that by continuing to work on the same lines he might obtain results yet more important, especially in the contrast of the symmetrical forms of crystals derived from the chemistry of dead substances and the dissymmetrical of those derived from the chemistry of living bodies. He had invented instruments and methods for experiments. But it chanced that at this period of his work he was, in 1854, appointed Dean of the Faculty of Sciences at Lille, and, though he gave up crystallography with great regret, he determined to investigate and teach a subject of more direct utility. The chief industry of the town was in the manufacture of alcohol from beetroot and corn, and he decided to teach the scientific methods of improving it, and to promote the scientific brewing of beer that might compete with those of Germany and Austria. Hence fermentation became his chief study, and in this was the beginning of the researches which led to the most important of his discoveries. But although it may have seemed like entering on a new subject, the change was an illustration of the regular sequence that may be observed in the order of all Pasteur's work, for among the facts which had most influence on the course of his investigations was one which he had observed in his study of the tartaric salts. He had traced the fermentation of the ordinary right tartrate of ammonia in a solution containing albuminous matter and had observed the coincident appearance of a distinct microorganism. Then he had shown the breaking up of the composition of the paratartaric acid by a similar process of fermentation by putting a minute portion of green mould into water containing phosphate of potassium and ammonia, but no albuminous matter. Here also there was an abundant formation of organisms, and with this the gradual disappearance of the dextro-tartaric acid, of which, as other experiments showed, the carbon was taken for the sustenance and growth of the organism of the mould. In both cases the fermentation had seemed due to the action of a living organism. Pasteur's belief that these and all processes of fermentation were primarily and essentially due to the presence and action of minute living organisms in the variously fermentescible fluids led him to study them with the combined chemical and microscopical research which no one before him had ever used with the same constancy or the same skill. It was, indeed, a combination of methods of research which had hardly ever before been used. There were excellent chemists and there were excellent microscopists, but they usually worked apart and hardly helped one another. Pasteur—well instructed in exact methods of research, and both chemist and microscopist—attained results far beyond what any before him had reached. It was no easy thing for him to justify the study of fermentation on the lines suggested by what was called the vitalistic or germ theory when the hypothesis of "spontaneous generation" was held by many, and when the whole process of fermentation seemed so well explained by the chemical theory of Berzelius or by that of communicated molecular motion held by Liebig and others who agreed with him in thinking that the organisms in fermenting liquids might be considered as

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accidental, except in so far as they might supply organic matter to the liquid. But Pasteur did more than justify the germ theory, for he proved its truth by a multitude of facts previously unobserved and from which he constructed general principles of which both the scientific value and the practical utility are now beyond estimate.

It is not possible to describe in detail or in chronological order the course and methods of Pasteur's researches on the various fermentations and on processes closely allied to them. Only their chief results can here be told; only the things which he discovered or which, since he studied them, have been deemed not merely probable, but sure. Thus he proved the constant presence of living micro-organisms, not only in yeast, in which Cagniard-Latour, and Schwann especially, had studied them, but in all the fermenting substances that he examined; he proved the certain and complete prevention of fermentation, putrefaction, and other similar processes in many substances, however naturally subject to them, by the exclusion of all micro-organisms and their germs or by their destruction if present; and he proved the constant presence of various micro-organisms and their germs in the air and water, in the earth, in dust and dirt of every kind—their abundance "everywhere." By the proof of these things the evidence became complete that fermentations and similar processes are primarily and essentially due to the action of organisms living in the fermenting substance. But, more than this, it was ascertained that each method of fermentation—vinous, lactic, acetic, putrefactive, or whatever it may be—is due to a distinct specific micro-organism appropriate to that method, and by its own vital processes initiating the changes which lead to the formation of the "specific products" of the fermentation, the alcohol, the vinegar, the virus, or whatever else. For each specific micro-organism has to live on the constituents of an appropriate fermentescible fluid which it decomposes, assimilating to itself such elementary substances as it needs for its own maintenance and increase, and leaving the rest to combine in the forming of the "specific products." Further, and most importantly, it was made certain by Pasteur's investigations that, by various appropriate methods of "cultivation" which he invented, the individuals of each species of ferment may be separated from others with which they are mingled, and that, thus separated, the individuals of each species may by means of a "pure cultivation" be multiplied indefinitely, as, especially, in the production of "pure yeast." And in certain instances it was shown that the active power of micro-organisms may, by cultivation, be so "attenuated" that they will produce only comparatively slight changes in substances which, in their natural state, they potently affect.

The most direct applications of the results of Pasteur's studies of fermentation were, naturally, made in the manufacture of wine and vinegar, and, at a later time, of beer. The "diseases," as they were fairly called, of these fermented liquors, the "thickness," "ropiness," "sourness," and others, could be traced to the disturbing influences of various other micro-organisms mingled with those of pure yeast, the true alcoholic ferment, and each producing an injurious method of fermentation. This being made sure, the prevention of the diseases became possible by the exclusion or destruction of every organism other than than the true one; and of this one the proper cultivation could insure the sufficient production. The methods of thus preventing or arresting the diseases have become too various to be described here. Among them is that of heating wines and beers sufficiently to destroy all the germs remaining in them; and the uses of this, which has been specially called Pasteurisation, and of many others, have made brewing and wine-making nearly secure against the great losses to which, before Pasteur's time, they were always liable from the disturbances of their fermentations.

The utility of the proof that fermentations, including the putrefactive, are absolutely dependent on the action of living micro-organisms was speedily shown in the prevention or remedy of diseases far more important than those of wine and beer. The discovery of the causes and processes of what were justly called the "diseases" of fermented liquids enlarged the whole range of a great section of pathology, showing, as it soon did, so intimate relations between contagious diseases and disordered fermentations that it became safe to apply the facts found in the more simple to the study and treatment of the most complex. The study of the diseases of fermented liquids led straightway to the practice of antiseptic surgery. Its first practical application in medicine was in 1862, when Pasteur, who had proved the existence of a living organism in fermenting ammoniacal urine from a diseased bladder, recommended the washing of such bladders with a solution of boracic acid, now a well known "germicide." This was done successfully by M. Guyon, and the practice is still commonly followed.

For the treatment of wounds and of parts exposed by wounds, the whole subject of the complete exclusion of micro-organisms, and of their destruction if present, was, in and after 1865, studied with especial care by Sir Joseph Lister, and the results obtained by him and others following his example were so convincing that the antiseptic practice, which many justly call Listerism, is followed everywhere by every surgeon of repute. The methods of excluding micro-organisms from all wounds, the antiseptic substances employed, the modes of applying them are more than need be told, and they increase every year; but they have all the same design—the complete exclusion or destruction of all living germs and micro-organisms capable of exciting putrefaction or any other fermentation in parts exposed by wounds, their exclusion from air, water, sponges, surgical instruments, dressings, and everything that can come in contact with such parts. And the system is not nearly limited to the treatment of wounds. In various methods and degrees it is applied in the construction of hospitals and infirmaries, in the prevention of the spread of infection and of every form of blood-poisoning. In is impossible to estimate the number of the thousands of lives that are thus annually saved by practices which are the direct consequences of Pasteur's observations on the action of living ferments and of Lister's application of them. In the practice of surgery alone they are by far the most important of the means by which the risks of death or serious illness after wounds are reduced to less than half of what they were thirty years ago, and of the means by which a large number of operations, such as, at that time, would have been so dangerous that no prudent surgeon would have performed them, are now safely done.

In antiseptic practice and in the manufactures connected with fermentation, the design is to exclude or destroy all micro-organisms. Many kinds might be harmless, but at present there are no ready and sure means of excluding only those from which mischief might arise, and, therefore, in the schemes for complete exclusion, no account is taken of the great general principle established by Pasteur, that each method of fermentation is due to the action of one special living organism. This in relation to contagious diseases would now have become one of the chief subjects of his study. But again he was obliged to change the subject of his work, for in 1865 he was urged by Dumas, and was forced to consent, to undertake the investigation of a disease of silkworms in the south of France. Since 1849 this disease, called *pébrine*, had been ruinously prevalent. In 1865 the loss due to it was estimated at four millions sterling, and it had spread to many other countries from which silkworms' eggs had been brought to France. M. Quatrefages had reported to the Academy that, among the results of many previous inquiries, especially by Italian naturalists, minute "corpuscles" had been found in the bodies of diseased silkworms and in the moths and their eggs. Pasteur, of course, suspected that these were disease-giving organisms, and directed his chief studies to them, though not without making a careful investigation of the whole disease, a task in which he proved himself to be not only a chemist and a microscopist, but an excellent clinical observer. He soon found that among several diseases of silkworms the two most important were *pébrine*, which was specially called *the* silkworm disease and was the most destructive, and another, often very prevalent, called *flacherie*. He found "corpuscles" in both, and he confirmed and widely extended the observations of those who had already studied them. But the most important facts, both for the prevention of the *pébrine* and for general pathology, were those by which he showed that it was not only contagious but hereditary. The proof of its being contagious was chiefly seen, as by others, in the inoculations of silkworms through accidental wounds, and in the consequences of their feeding on mulberry-leaves on which the disease germs had been deposited. Many of the worms thus or in any other way infected soon died; in many the material for their silk was spoiled; in others the disease continued, after their spinning, in their chrysalides and in the moths developed from them. These moths laid diseased eggs, and of these were born diseased worms which died young or, at the most, were spoiled for the production of silk, and so long as they lived were sources of contagion. Thus the disease passed on by inheritance from year to year.

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The germs in eggs laid by diseased moths survived, but those left on leaves, or in the dust, or in the bodies of dead moths, soon perished; only in the diseased and living eggs was the contagion maintained. These things were proved by repeated experiments and by observations by Pasteur in his own breeding-chamber, year after year, and they made him believe that the disease might be put an end to by the destruction of all diseased eggs. To this end he invented the plan which has been universally adopted, and has restored a source of wealth to the silk districts. Each female moth, when ready to lay eggs, is placed on a separate piece of linen on which it may lay them all. After it has laid them and has died it is dried and then pounded in water, and the water is examined microscopically. If "corpuscles" are found in it, the whole of the eggs of this moth, and the linen on which they were laid, are burnt; if no corpuscles are found, the eggs are kept, to be in due time hatched, and they yield healthy silkworms.

Pasteur continued these studies for four years, going every year for several months to a little house near Alais, in which he watched every step in the life of the silkworms bred and fed by himself and others. His other investigations had thus been in no small degree interrupted; but worse interruption came in October, 1868, when, as it seemed from overwork, he had a paralytic stroke. For a time his life was in great peril, but, happily, he recovered, and without mental impairment, though with permanent partial loss of power on his left side. For nearly two years he could do very little beyond directing experiments for repeating and testing his researches at Alais in 1869, and in Austria in 1870. Then came the French-German war, the misery of which, added to that of his paralysis, made him utterly unfit for work. At the end of the war he returned to work, and, after careful researches on the diseases of beer similar to those by which he had studied the diseases of wines, he gave himself especially to the study of the "virulent diseases" of animals—the diseases which might reasonably be suspected to be due to different kinds of "virus" derived from different species of micro-organisms. The suspicion was already justified by what he had observed in the diseases of wine and beer and by some more direct facts, for, in 1850, Rayer and Davaine had found organisms in the blood of animals with anthrax; and, in 1865, Davaine, stirred by Pasteur's recent demonstrations of organisms much like these as agents in the butyric fermentation, had gathered evidence of the absolute dependence of anthrax on the presence of these organisms in the blood. But his observations were disputed and his conclusions were not accepted till Pasteur proved that they were correct, and then extended his researches over a far wider range of subjects. The objects of research in this wider range included, indeed, only a small proportion of the diseases connected with micro-organisms, but in a few years it was made certain that some, and probable that all, of the diseases usually classed as virulent, contagious, or specific, are due to distinct living micro-organisms, and to the products of the changes which are initiated by them in the blood or other fluids or substances in which they live. Thus, that which had often been an ingenious hypothesis of a *contagium animatum* became an accepted general law; diseases that had been called virulent were now more often called parasitic; and it may justly be said that Pasteur's researches were the efficient beginning of the vast science of bacteriology—vast alike in natural history and in pathology and in its intimate relations with organic chemistry.

Besides ascertaining the micro-organisms appropriate to several diseases, Pasteur, still working on the lines which he had followed in his studies of fermentation and of the diseases of beer and wine, found various means of "cultivating" the germs, separating them, multiplying them, and then testing their different influences on different animals, or on the same animals in different conditions, or after various changes induced in themselves. Among these changes the most important and most fruitful in its further study were the various means of "attenuation" by which the virulence of disease-producing micro-organisms can gradually be so diminished that at last they can, without harm, be inoculated or injected into an animal which they would have rapidly killed if similarly inserted in their natural state. And some of these injections were shown to be better than harmless, for, by conveying the disease in a very mild form, they rendered the animal for some considerable time insusceptible of that same disease in a more severe form; they conferred an immunity similar to that given by mild attacks of the contagious fevers which, as it is commonly and often truly said, "can be had only once." Or, as Pasteur held, the inoculation with the attenuated virus was similar to vaccination, which gives protection from small-pox by producing similar disease in a milder form. Hence began the practice of "protective inoculation" for many diseases besides small-pox.

In studying the methods of attenuation Pasteur found many facts which are not only valuable in bacteriology, but are likely to help to the knowledge of important principles in general pathology. To cite only a few examples—he found marked differences among the micro-organisms of different ferments in their degrees of dependence on air. The great majority need oxygen for the maintenance of life, but unlike these, which he named aërobic, were some anaërobic, the first examples ever known of organisms capable of living without oxygen. He showed that the bacilli of anthrax, being aërobic, soon perish and disappear in the blood of the animals that have died of the diseases due to them, and that in the same blood the anaërobic septic bacilli needing no oxygen now appear and multiply. In anthrax, also, he showed that the attenuation may best be attained by keeping the cultivated bacilli at a high temperature (about 42° C.) for a certain number of days, regulated according to daily tests of the reduction of their virulence. In the end they become incapable of killing even mice, and are protective for sheep and cattle and other animals, which in their natural intensity they would rarely fail to kill. In chicken-cholera, the disease for which the first experiments in protective inoculation were made, he showed that the due attenuation can be obtained by a series of successive cultivations of the micro-organisms in pure air, provided that intervals of several days or weeks are allowed between each two of the cultivations in the series. In experiments on the transmission of the virus of a disease of one species through a succession of animals of another species he showed that the virulence of the bacilli of swine-erysipelas was increased by transmission through pigeons, but diminished by transmission through rabbits. And as to the varying susceptibility of the same animal under different conditions, a fact so commonly observed in man, he showed that chickens, which are ordinarily insusceptible of anthrax, could be made susceptible by lowering their temperature. They became again insusceptible when their natural temperature was restored, and when apparently dying of anthrax in the cold they recovered if warmed.

It was a step far beyond what had been obtained by protective inoculations when Pasteur invented and proved the utility of his treatment of rabies. Here he proved that when a virus has been inoculated or in any way so inserted that it may justly be deemed sure to destroy life, this result may, at least in the case of rabies, be prevented by a daily or otherwise gradual series of inoculations, beginning with the same virus very attenuated and diminishing the degree of attenuation till it is used in such intensity as, without the previous graduated inoculations, would certainly have been fatal. The results of the treatment of rabies on this principle are well known; its success is certain and is enough to justify the hope that by similar treatment, whether with virus simply attenuated or with some "lymph" derived from a cultivated virus or from the chemical products of its action on the liquids in which it has grown, other specific diseases may be similarly controlled. This is especially probable for those in which, as in rabies, there is a clear interval between the entrance of the virus and the first outbreak of the disease; and it is becoming very probable that tuberculosis will be one of these. But it would be useless to imagine the probabilities of what will now follow from the researches that have already followed the discoveries of Pasteur.

It hardly need be said that this summary of Pasteur's life and works, and of the chief results to which they have led, can give no fair estimate of the number and the variety of his experiments and observations. Only a complete personal study of his published works, and especially of those in the *Comptes Rendus de l'Académie des Sciences*, can give this. Yet even a mere summary may indicate the most notable points that may be studied in his scientific character. Of his charming personal character there is no need to speak here. Clearly, he had a native fitness and love for the study of natural science, and these were well educated and have been manifest in his whole life. But with this loving devotion to science he has shown not only a very rare power both of thinking and of observing, but that spirit of enterprise which stirs to constant activity in the search after truth, especially by way of experiment. With the power of accurately thinking what is likely to be true, he shows a happily adjusted ingenuity in the invention of experiments

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for tests of thoughts, and the habit of doubting the value of any scientific thought, even of his own, which does not bear experimental tests. Especially, the thoughts of what may be true in biology seem to have been submitted, if possible, to tests as strict as those that may be used in chemistry and physics; and they appear to have been repeated and varied with admirable patience and perseverance whenever any doubt of previous conclusions was felt by himself or reasonably expressed by others. He has practised what he urged on his younger colleagues at the opening of the Pasteur Institute: "N'avancez rien qui ne puisse être prouvé d'une façon simple et décisive." Besides, with all his mental power and caution, we can see, in the course and results of Pasteur's work, the evidence of rare courage and strong will, and of singular skill in the use of the best means of scientific investigation. He has been chemist, microscopist, and naturalist, and has applied all the knowledge thus gained to the practical study of pathology. It is not strange that he has attained the results of which the best, and only the best, have here been told.

The honours that have been bestowed on Pasteur need not be mentioned. His chief reward may be in the happiness of seeing some of the results of his life-long work; and, indeed, very few scientific men have lived to see their work bear such good and abundant fruit. No field of biological study has in the last twenty years been so effectually studied as that which he opened, and in which he showed the right methods of research. Now, wherever biology is largely taught, the bacteriological laboratory has its place with the chemical and the physiological; and, for a memorial of the gratitude not only of France, but of many other nations, there is in Paris the Pasteur Institute, which was constructed at a cost of more than £100,000, and was opened in 1889. Here he may not only see the daily use of his treatment for the prevention of rabies, but may observe and still take his part in the extension of the vast range of knowledge in which there has been constant increase ever since the first sure steps were made by his discoveries.

Park-square-west, N.W. JAMES PAGET.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Glamorganshire County Sanitary District.—Dr. William Williams, the county medical officer of health, has recently made a valuable addition to the public health literature of his county in the shape of a little volume entitled "A Sanitary Survey of Glamorganshire." It formed the subject for Dr. Williams' thesis for the degree of Doctor of Medicine at Oxford University, and it is a contribution which should be of valuable assistance to the members of the Glamorganshire County Council, as also to those of the local authorities throughout the county. In the introduction of the volume there is a letter from Sir Henry Acland to Dr. Williams, which forms in itself a dissertation on public health questions. Sir Henry Acland refers to the wide range of knowledge which the medical officer of health of the present day is expected to possess; in reference to this point he observes: "Many live who can hardly believe that such modern officers are members of the same profession as some of the old but wise and kindly practitioners of fifty years ago." Dr. Williams' little volume contains a sanitary district diagram of the county to which it relates, a provision that certainly much facilitates the reading and understanding of a medical officer's report. In Part I. of the volume an account is given of the physical features of the county, of its industries, surface geology, and water-supply. Part II. treats of the health history and vital statistics of the county, and in this part there is an instructive *résumé* of all the inspections in various parts of the county which have been from time to time made by the inspectors of the Local Government Board. Part III. treats of the sanitary condition of the various districts in the administrative county; and it is here that Dr. Williams gives a complete account of each district, together with such recommendations and advice as the circumstances of each case render desirable. In Dr. Williams' annual report for 1894, which has also just reached us, the Sanitary Committee of the County Council is urged to be more energetic in the matter of such powers as have been conferred upon them by the Rivers' Pollution Prevention Acts and the Housing of the Working Classes Act. During 1894 the birth-rate of the rural districts of the county was higher than that of the urban, indicating, Dr. Williams observes, that some of the rural districts are so only in name. The general death-rate of the county was 16·9 per 1000, the rates varying from 8·6 to 22·1. The infantile mortality was a high one—168·1 per 1000 births compared with 155·1 in the preceding year. There were 1726 cases of scarlet fever notified during the year, but out of this number it is astonishing to learn that only 2 were removed to an isolation hospital. Dr. Williams observes that the working classes in the county act on the belief that, as children are bound sooner or later to contract scarlet fever, it is therefore their duty in the presence of a mild type of the disease to give their children an opportunity of contracting it; in fact, one of the local medical officers reports that in his district parents under this mistaken sense of duty have taken their children into infected houses. It would be well, if possible, for the district medical officers of health to impress upon the public the obvious advantages from the point of view of survival of postponing the attacks until a late age period. Five cases of typhus fever were reported from Merthyr; the first 2 were hop-pickers returned from Herefordshire, and the remaining 3 (the attendants) contracted the disease from them.

Reading Urban Sanitary District.—During 1894 the Reading Sanitary Committee requested from Mr. Alfred Ashby, the medical officer of health, a report upon the desirability or otherwise of adding phthisis to the list of notifiable diseases. Mr. Ashby points out in his report that to regard phthisis as infectious in the same sense as small-pox, scarlet fever, &c., is to overstate the case, and he calls attention to the enormous factor which the personal equation may be held to play in the question. In other words, he insists upon the importance of improving the environment of the individual by the admission of sunlight and fresh air. It would, he remarks, be quite out of the question to separate phthisical persons from their families and to confine them in isolation hospitals for months and even years. In short, he discountenances notification and advises the distribution of leaflets. In this direction he thinks that probably as much might be done without as with notification, since medical practitioners could distribute such leaflets to the patients under their care. The disinfection of rooms, &c., in which a death from phthisis has taken place is also advised. The important subject of providing a satisfactory isolation hospital at Reading still appears to be, if not in actual abeyance, in a state akin to it. The council, it would seem, appoint committees to consider the matter, but exhibit a tendency to reject their recommendations.

"SMALL-POX IN BRISTOL DURING THE YEAR 1893-94."

Under this title Dr. D. S. Davies, with the aid of Dr. Heaven and Dr. Dowson, assistant medical officers of health for the city, has issued a very instructive report. After referring to the history of small-pox in Bristol since the year 1856 and to the mortality which it occasioned, a short account is given of the tramp epidemic of 1893, and then follows a full consideration of the 1893-94 epidemic. To cope with the epidemic required all the resources at the command of the sanitary authority, and although no cases from Bristol were refused isolation owing to lack of accommodation it is frankly admitted that at a critical point of the epidemic there was but one vacant bed. The tables in the report relate to 360 cases which occurred during the 1893-94 outbreak. At all ages under ten years the protective value of vaccination was well exemplified, and at that age period there were among the vaccinated not only no deaths but no serious cases. Out of the 360 attacks, 36, or 10 per cent., proved fatal, and of these 6 were children, all unvaccinated, under ten years of age. The figures in the following age groups show, as usual, the gradually decreasing power of the primary vaccination as age advances, and the results both as regards severity and fatality are, speaking generally, in accordance with those again and again observed. In commenting upon the degree of protection afforded by vaccination, the authors of the report refer to and deplore the growing tendency among some medical practitioners to produce but one small scar—a practice which not only confers a false sense of security

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upon the subject, but tends to the disrepute of vaccination. Dr. Davies and his colleagues record a fatal case of small-pox in a vaccinated child aged thirteen, the only death they have met with in a vaccinated person under fifteen years of age in the course of two epidemics comprising 687 cases, 96 of which were in children under fifteen. There is also recorded an interesting instance of a child born in the small-pox hospital during the early convalescence of the mother from a discrete attack; the child remained in hospital with the mother for twenty-one days, but was susceptible neither to small-pox nor to vaccination. Passing to a consideration of the behaviour of the vaccinated and unvaccinated exposed to the infection of small-pox in invaded houses we find some interesting figures. At ages below ten, the vaccinated had a twenty-three-fold immunity from attack and a complete security against death as compared with a mortality among the unvaccinated of 11·5 per cent. At ages above ten the vaccinated had a three-fold immunity from attack and a ten-fold immunity against death as compared with the unvaccinated. As an instance of the protective value of vaccination performed after exposure to small-pox, it may be mentioned that of 59 unvaccinated persons exposed to the disease, 23 were vaccinated on or before the fifth day of exposure, 3 seven days after exposure, and 1 not until after the eighth day; in the last 4 cases, as the writers observe, no protection could probably be claimed from vaccination. Of the total 27 none contracted small-pox, whereas of the remaining 32 unvaccinated persons more than half developed the disease. The value of re-vaccination is shown by the figures that follow. Out of 1341 persons remaining in the invaded houses 468 were successfully revaccinated, and 8 only—all of whom showed that they had been infected before revaccination—contracted small-pox. The attack-rate among the 859 once vaccinated was 5 per cent. In the remaining 14 the attempted revaccination was unsuccessful, and of these, 3 developed small-pox and 1 died. Among the hospital staff of 62 persons there were 3 cases of small-pox; of these one was that of a person not revaccinated and another a case in which revaccination had been performed fourteen years previously; both recovered. The third case was that of a washerwoman at the small-pox hospital, who had been vaccinated twenty years previously, and who had passed through several epidemics with impunity. She was unfortunately not included in the revaccinated list, and she died from hæmorrhagic small-pox. This sad result illustrates, the writers of the report point out, the necessity for the repetition of vaccination, especially in persons hourly exposed to contagion. As bearing upon this question may be related the fact that during the Bristol epidemic of 1893–94 there were 7 cases of small-pox in those who had been previously attacked by the disease, the shortest interval between the attacks being twenty-five years and the longest sixty-nine years; none were fatal.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5930 births and 3949 deaths were registered during the week ending Oct. 5th. The annual rate of mortality in these towns, which had increased from 19·3 to 21·0 per 1000 in the three preceding weeks, declined again last week to 19·4. In London the rate was 15·9 per 1000, while it averaged 21·9 in the thirty-two provincial towns. The lowest rates in these towns were 13·2 in Croydon, 14·2 in Huddersfield, 14·4 in Brighton, and 14·6 in Derby; the highest rates were 26·6 in Liverpool, 28·8 in Sunderland, 30·3 in Salford, 32·3 in Bolton, and 37·2 in Blackburn. The 3949 deaths included 871 which were referred to the principal zymotic diseases, against 981 and 923 in the two preceding weeks; of these, 565 resulted from diarrhœa, 71 from diphtheria, 65 from "fever" (principally enteric), 64 from measles, 56 from whooping-cough, 48 from scarlet fever, and 2 from small-pox. The lowest death-rates from these diseases were recorded in Norwich, Croydon, Derby, and London, and the highest rates in Sunderland, Oldham, Salford, Bolton, and Blackburn. The greatest mortality from measles occurred in Oldham, Salford, and Blackburn; from scarlet fever in Gateshead and Wolverhampton; from whooping-cough in Bradford, Bolton, Wolverhampton, and Gateshead; from "fever" in Leicester and Sunderland; and from diarrhœa in Salford, Oldham, Burnley, Bolton, and Blackburn. The 71 deaths from diphtheria included 44 in London, 4 in West Ham, 4 in Salford, and 3 each in Birmingham, Liverpool, and Manchester. One fatal case of small-pox was registered in London and 1 in Oldham, but not one in any other of the thirty-three large towns. There were 198 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 5th inst., against 307, 271, and 234 at the end of the three preceding weeks; 17 new cases were admitted during the week, against 42, 23, and 21 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2802, against 2674, 2732, and 2807 on the three preceding Saturdays; 252 new cases were admitted during the week, against 365, 344, and 339 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the three preceding weeks from 123 to 173, declined again last week to 158, and were 79 below the corrected average. The causes of 30, or 0·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Salford, Sheffield, Newcastle-upon-Tyne, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight principal Scotch towns, which had been 18·5 and 17·5 per 1000 in the two preceding weeks, rose again to 18·3 during the week ending Oct. 5th, but was 1·1 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·5 in Edinburgh and 17·5 in Dundee to 20·6 in Perth and 21·1 in Paisley. The 527 deaths in these towns included 62 which were referred to diarrhœa, 17 to whooping-cough, 8 to "fever," 4 to scarlet fever, 3 to measles, 2 to diphtheria, and not one to small-pox. In all, 96 deaths resulted from these principal zymotic diseases, against 93 and 79 in the two preceding weeks. These 96 deaths were equal to an annual rate of 3·3 per 1000, which was 0·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 78 to 48 in the five preceding weeks, rose again to 62 last week, of which 27 occurred in Glasgow, 9 in Edinburgh, and 7 in Dundee. The deaths from whooping-cough, which had declined from 15 to 9 in the four preceding weeks, rose again to 17 last week, and included 10 in Glasgow and 4 in Aberdeen. The deaths referred to different forms of "fever," which had been 10 and 6 in the two preceding weeks, increased to 8 last week, of which 3 occurred in Glasgow and 2 in Dundee. The 4 fatal cases of scarlet fever were within one of the number in the preceding week, and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 66 and 82 in the two preceding weeks, further rose to 98 last week, and exceeded by 35 the number in the corresponding period of last year. The causes of 49, or more than 9 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·1 and 24·8 per 1000 in the two preceding weeks, declined again to 21·3 during the week ending Oct. 5th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·4 per 1000, the rate during the same period being 18·6 in London and 16·5 in Edinburgh. The 143 deaths registered in Dublin during the week under notice showed a decline of 23 from the number in the preceding week, and included 12 which were referred to the principal zymotic diseases, against 21 and 24 in the two preceding weeks; of these, 8 resulted from diarrhœa, 2 from scarlet fever, 1 from small-pox, 1 from whooping-cough, and not one either from measles, diphtheria, or "fever." These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 2·6 in London and 1·9 in Edinburgh. The deaths referred to diarrhœa, which had been 12 and 13 in the two preceding weeks, declined to 8 last week. The fatal cases of scarlet

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—SEPTEMBER, 1895.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	4,392,346	117	2096	1052	—	377	9	14	505	5	4175	12·4	11	117	76	185	77	—	67	1	449	983	2·9	5393	16·0	162
West Districts.																										
Paddington	122,756	1	27	28	—	9	—	1	10	—	76	8·1	—	—	1	3	3	—	—	—	10	17	1·8	110	11·7	131
Kensington	167,671	1	58	38	—	5	1	—	22	—	125	9·7	—	4	2	6	4	—	2	1	7	26	2·0	175	13·6	172
Hammersmith	108,429	1	43	13	—	6	1	—	6	—	69	8·3	—	2	1	3	—	—	1	—	14	21	2·5	116	13·9	154
Fulham	117,746	1	18	28	—	5	—	—	7	—	59	6·5	—	2	1	7	5	—	—	—	22	37	4·1	136	15·1	191
Chelsea	99,930	—	47	17	—	6	—	1	8	—	79	10·3	—	—	—	2	3	—	2	—	12	19	2·5	109	14·2	193
St. George Hanover-square	74,037	2	27	10	—	4	—	—	4	—	47	8·3	1	—	1	1	1	—	2	—	6	12	2·1	70	12·3	147
Westminster	54,003	—	18	6	—	1	—	—	4	—	29	7·0	—	1	—	—	—	—	—	—	8	9	2·2	80	19·3	208
St. James Westminster	23,149	—	5	3	—	2	—	—	1	—	11	6·2	—	—	—	1	—	—	2	—	1	4	2·3	35	19·7	188
North Districts.																										
Marylebone	137,392	1	70	28	—	16	1	2	24	1	143	13·6	—	2	1	1	3	—	3	—	14	24	2·3	166	15·7	132
Hampstead	77,592	—	34	7	—	7	—	—	4	—	52	8·7	—	—	1	—	—	—	1	—	7	9	1·5	73	12·3	196
St. Pancras	233,543	1	132	78	—	18	1	—	35	—	265	14·8	—	16	5	15	1	—	4	—	24	65	3·6	322	18·0	152
Islington	335,929	9	165	55	—	25	—	—	32	—	286	11·1	1	3	6	10	1	—	—	—	21	42	1·6	332	12·9	116
Stoke Newington	35,234	—	10	6	—	6	—	—	1	—	23	8·5	—	1	—	1	—	—	—	—	1	3	1·1	33	12·2	133
Hackney	215,623	4	88	59	—	41	—	—	29	1	222	13·4	1	6	5	8	2	—	8	—	24	54	3·3	222	13·4	146
Central Districts.																										
St. Giles	37,654	—	19	6	—	2	—	—	8	—	35	12·1	—	—	—	1	—	—	—	—	6	7	2·4	50	17·3	141
St. Martin-in-the-Fields	13,536	—	5	1	—	—	—	—	—	—	6	5·8	—	—	—	—	—	—	1	—	—	1	1·0	13	12·5	143
Strand	22,586	—	18	4	—	2	—	—	6	—	30	17·3	—	—	2	1	—	—	—	—	3	6	3·5	19	11·0	122
Holborn	32,188	—	23	9	—	1	—	—	7	—	40	16·2	—	2	—	—	1	—	—	—	1	4	1·6	59	23·9	254
Clerkenwell	65,036	—	45	13	—	6	—	1	5	—	70	14·0	—	4	2	4	—	—	1	—	3	14	2·8	88	17·6	175
St. Luke	40,763	—	32	8	—	2	—	—	12	—	54	17·3	—	9	—	2	1	—	—	—	5	17	5·4	80	25·6	183
City of London	33,824	1	23	2	—	2	—	—	1	—	29	11·2	—	1	—	1	—	—	—	—	3	5	1·9	43	16·6	23
East Districts.																										
Shoreditch	122,932	4	65	25	—	15	—	—	7	—	116	12·3	1	5	4	3	8	—	2	—	14	37	3·9	202	21·4	170
Bethnal Green	130,061	23	123	60	—	22	—	1	25	—	254	25·5	—	5	4	10	3	—	3	—	15	40	4·0	176	17·6	165
Whitechapel	75,820	11	89	19	—	3	—	—	6	—	128	22·0	1	7	6	4	2	—	—	—	11	31	5·3	123	21·2	222
St. George-in-the-East	45,227	2	44	30	—	4	—	—	5	—	85	24·5	—	2	2	9	—	—	1	—	7	21	6·1	88	25·4	190
Limehouse	56,886	3	39	19	—	7	—	1	10	—	79	18·1	—	6	1	2	—	—	1	—	8	18	4·1	86	19·7	153
Mile End Old Town	108,443	2	91	55	—	13	—	—	25	—	186	22·4	—	8	3	14	1	—	4	—	7	37	4·4	168	20·2	171
Poplar	171,230	4	96	65	—	36	2	1	21	—	225	17·1	—	1	4	9	5	—	5	—	22	46	3·5	258	19·6	184
South Districts.																										
St. Saviour Southwark	28,570	—	16	11	—	2	—	—	2	—	31	15·2	—	1	—	2	1	—	—	—	5	9	4·4	43	21·1	206
St. George Southwark	60,168	—	20	17	—	4	—	—	8	—	49	10·6	—	2	1	5	2	—	3	—	8	21	4·5	97	21·0	218
Newington	119,358	—	35	18	—	7	—	1	15	—	76	8·3	—	5	3	1	5	—	1	—	12	27	2·9	178	19·4	169
St. Olave Southwark	13,065	—	—	3	—	—	—	—	—	—	3	3·0	—	—	—	—	1	—	—	—	—	1	1·0	10	10·0	37
Bermondsey	83,861	1	23	9	—	6	—	—	4	—	43	6·7	—	2	1	3	2	—	1	—	13	22	3·4	120	18·7	171
Rotherhithe	40,713	—	20	13	—	5	—	—	8	—	46	14·7	—	1	—	1	—	—	3	—	2	7	2·2	50	16·0	108
Lambeth	284,883	11	161	65	—	14	1	—	35	2	289	13·2	2	6	7	16	9	—	2	—	25	67	3·1	356	16·3	155
Battersea	165,130	8	70	23	—	13	—	—	16	—	130	10·3	—	4	3	4	2	—	2	—	13	28	2·2	187	14·8	144
Wandsworth	185,966	6	60	12	—	8	—	—	20	—	106	7·4	—	2	2	—	2	—	1	—	18	25	1·8	184	11·5	182
Camberwell	262,737	13	90	81	—	37	1	1	27	1	251	12·9	2	6	3	15	1	—	8	—	24	59	3·0	301	16·5	184
Greenwich	175,183	3	70	88	—	10	—	3	27	—	201	15·0	1	—	3	15	5	—	—	—	19	43	3·2	220	16·4	145
Lewisham (excluding Penge)	82,410	—	32	8	—	—	—	1	8	—	49	7·8	—	—	1	—	—	—	1	—	7	9	1·4	77	12·2	178
Woolwich	42,768	—	17	1	—	2	—	—	1	—	21	6·4	—	1	—	1	1	—	2	—	10	15	4·6	48	14·6	157
Lee	38,832	—	11	2	—	—	—	—	5	—	18	6·0	—	—	—	1	—	—	—	—	5	6	2·0	34	11·4	164
Plumstead	61,494	4	17	9	—	3	1	—	5	—	39	8·3	1	—	—	3	2	—	—	—	12	18	3·8	76	16·1	212
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 27 cases of membranous croup.

† Including deaths from membranous croup.

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fever, which had been 2 in each of the two preceding weeks, were again 2 last week. The mortality from small-pox and from whooping-cough showed a decline from that recorded in the previous week. The 143 deaths in Dublin last week included 28 of infants under one year of age, and 28 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from those recorded in the preceding week. Eight inquest cases and 7 deaths from violence were registered; and 38, or more than a fourth, of the deaths occurred in public institutions. The causes of 6, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during September in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 12·4 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 8·4, 11·6, and 9·9 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Fulham, St. James Westminster, St. Martin-in-the-Fields, St. Olave Southwark, Woolwich, and Lee; while they showed the largest excess in Strand, St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar. The prevalence of small-pox in London showed a marked decline during September, 117 cases being notified during the month, including 23 in Bethnal Green, 13 in Camberwell, 11 in Whitechapel, 11 in Lambeth, 9 in Islington, and 8 in Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 227 small-pox patients at the end of September, against 33, 232, and 331 at the end of the three preceding months; the weekly admissions averaged 27, against 10, 49, and 57 in the three preceding months. The prevalence of scarlet fever in London showed a marked increase during September; this disease was proportionally most prevalent in Strand, Holborn, Clerkenwell, St. Luke, City of London, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, and Mile End Old Town sanitary areas. The Metropolitan Asylum Hospitals contained 2745 scarlet fever patients at the end of September, against 1845, 2340, and 2435 at the end of the three preceding months; the weekly admissions averaged 333, against 229, 263, and 292 in the three preceding months. The prevalence of diphtheria in London also showed a considerable increase during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in St. Pancras, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Camberwell. There were 664 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of September, against 633, 680, and 666 at the end of the three preceding months; the weekly admissions averaged 101, against 109, 103, and 80 in the three preceding months. The prevalence of enteric fever in London showed a marked increase during September; this disease was proportionally most prevalent in Marylebone, Stoke Newington, Hackney, Shoreditch, Bethnal Green, Limehouse, Mile End Old Town, Poplar, and Camberwell sanitary areas. Erysipelas was proportionally most prevalent in St. Giles, Strand, St. Luke, and Mile End Old Town sanitary areas. The 14 cases of puerperal fever notified during September included 3 in Greenwich and 2 in Marylebone sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Sept. 28th, the deaths of 5393 persons belonging to London were registered, equal to an annual rate of 16·0 per 1000 of the population, against 14·9, 21·0, and 16·9 in the three preceding months. The lowest death-rates during September in the various sanitary areas were 11·0 in Strand, 11·4 in Lee, 11·5 in Wandsworth, 11·7 in Paddington, 12·2 in Stoke Newington and in Lewisham, and 12·3 in St. George Hanover-square and in Hampstead; the highest rates were 20·2 in Mile End Old Town, 21·0 in St. George Southwark, 21·1 in St. Saviour Southwark, 21·2 in Whitechapel, 21·4 in Shoreditch, 23·9 in Holborn, 25·4 in St. George-in-the-East, and 25·6 in St. Luke. During the four weeks of September 983 deaths were referred to the principal zymotic diseases in London; of these, 449 resulted from diarrhœa, 185 from diphtheria, 117 from measles, 77 from whooping-cough, 76 from scarlet fever, 67 from enteric fever, 11 from small-pox, and 1 from an ill-defined form of continued fever. These 983 deaths were equal to an annual rate of 2·9 per 1000; the lowest zymotic death-rates were recorded in Hampstead, Stoke Newington, St. Martin-in-the-Fields, Holborn, St. Olave Southwark, and Lewisham; and the highest rates in St. Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Woolwich sanitary areas. Eleven fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being only 3; of these 11 fatal cases 2 belonged to Lambeth and 2 to Camberwell sanitary areas. The 117 deaths referred to measles were 46 above the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in St. Pancras, Clerkenwell, St. Luke, Whitechapel, Limehouse, and Mile End Old Town. The 76 fatal cases of scarlet fever were 21 below the corrected average number; this disease showed the highest proportional fatality in Shoreditch, Bethnal green, and Whitechapel sanitary areas. The 185 deaths referred to diphtheria were 40 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in St. Pancras, Clerkenwell, Bethnal Green, St. George-in-the-East, Mile End Old Town, St. George Southwark, Lambeth, and Greenwich. The 77 fatal cases of whooping-cough were 47 below the corrected average; this disease showed the highest proportional fatality in Fulham, Shoreditch, and Newington sanitary areas. The 67 deaths referred to enteric fever slightly exceeded the corrected average number; among the various sanitary areas the highest proportional fatality of "fever" was recorded in Hackney, Mild End Old Town, St. George Southwark, Rotherhithe, and Woolwich. The 449 fatal cases of diarrhœa were 77 above the corrected average; this disease was proportionally most fatal in St. Giles, Whitechapel, St. George-in-the-East, Limehouse, St. Saviour Southwark, Bermondsey, Woolwich, and Plumstead sanitary areas. In conclusion, it may be stated that the mortality in London during September from these principal zymotic diseases was rather more than 12 per cent. above the average.

Infant mortality in London during September, measured by the proportion of deaths under one year of age to registered births, was equal to 162 per 1000, and slightly exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, Islington, Strand, London City, St. Olave Southwark, and Rotherhithe; and the highest rates in Westminster, Holborn, Whitechapel, St. Saviour Southwark, St. George Southwark, and Plumstead.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR-GENERAL LEWER has arrived in England from Gibraltar on retirement and will be succeeded by Surgeon-Colonel Catherwood. Surgeon-Captain Holt has been transferred from Aldershot to Sheerness. Surgeon-Major Inman has arrived from Barbados on leave. Surgeon-Captain Fletcher has arrived at Gibraltar. Surgeon-Lieutenants Smith, Blackham, and Fairrie have been posted to Aldershot; Surgeon-Lieutenants Forrest and Fawsett to Portsmouth; Surgeon-Lieutenants Greech and Grattan to Ireland; Surgeon-Lieutenant Profeit to Edinburgh, and Surgeon-Lieutenant Gunter to Shorncliffe.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant C. B. Prall, 36th Sikhs, is appointed to officiate as Civil Surgeon of Peshawar, in addition to his other duties, vice Surgeon-Major B. Doyle, on leave. Surgeon-Major J. W. Clarkson is appointed to act as Sanitary Commissioner for the Government of Bombay during the absence on leave of Brigade-Surgeon-Lieutenant-Colonel C. W. MacRury. Surgeon-Major C. G. W. Lowdell is appointed to act as Deputy Sanitary Commissioner for the Western Registration District, in

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addition to his own duties, from the date of Surgeon-Major J. W. Clarkson giving over charge. The services of Surgeon-Captain W. D. Sutherland and Surgeon-Captain H. E. Banatvala, which were placed temporarily at the disposal of the Chief Commissioner of the Central Provinces under the Home Department Notifications, are placed permanently at the disposal of the Chief Commissioner.

ARMY MEDICAL RESERVE OF OFFICERS.

The undermentioned Surgeon-Lieutenant-Colonels having exceeded the limit of age laid down in Article 663, Royal Warrant July 6th, 1895, cease to be Officers of the Army Medical Reserve of Officers:—Alexander R. Mackenzie, M.D., Thomas F. Greenwood, and Henry F. Holland, M.D., The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—John M. H. Martin, M.D., F.R.C.S. Eng., and David Todd.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel T. F. Greenwood, 4th Battalion the Sherwood Foresters (Derbyshire Regiment), retires, with permission to retain his rank, and to wear the prescribed uniform on his retirement.

NAVAL MEDICAL SERVICE.

Staff-Surgeon John Anderson McAdam is promoted to the rank of Fleet-Surgeon.

The following appointments are notified:—Surgeons: S. H. Youel to the *Champion*, and T. C. Hickey to the *Repulse*.

VOLUNTEER CORPS.

Royal Engineers: 2nd West Riding of Yorkshire (Leeds): Surgeon-Captain C. Richardson to be Surgeon-Major. The Severn Division: Surgeon-Lieutenant W. L. Edwards to be Surgeon-Captain. *Rifle:* 4th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Lieutenant W. G. Marshall, M.B., resigns his commission. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Surgeon-Lieutenant W. de Watteville, M.B., to be Surgeon-Captain.

THE FRENCH IN MADAGASCAR.

It does not yet seem to be absolutely certain that the news of the capture of the capital of Madagascar and the flight of the Queen from Antananarivo is reliable. The French people have every reason, however, to hope and believe that General Duchesne's force has by this time reached and captured Antananarivo. The expedition was dispatched in the spring of this year and consisted of 15,000 men. The troops disembarked at Tamatave, a port on the north-east coast. The losses from fighting have been insignificant, the Hova army having offered little or no opposition to the French. Sickness arising from the bad climate on the coast, the difficulties of the march, the employment of troops in road-making, and the want of proper arrangements have been the principal causes of the grave losses that have attended the expedition. Antananarivo is some 4000 feet above the sea level, has a population of 100,000, and is a fairly well built city. It is said to be, and owing to its elevation most probably is, healthy. The sanitary state of General Duchesne's advanced force in the uplands is reported to be excellent. The French have no doubt had to encounter very serious obstacles and topographical as well as climatic difficulties. Once the troops get into quarters in the capital and are protected during the rainy season we may confidently expect better accounts. The invaliding arrangements do not seem to have been good, the losses on shipboard during the transit of the troops from Madagascar to France having been serious.

VOLUNTEER MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel M. Baines, V.D., writes to us suggesting that, in the event of a commission being appointed to consider the various questions raised by the commanding officers of the Volunteer force, a request should be made for a small annual grant for the stretcher bearer section of each regiment. Ambulance work is not only important in times of war, but a knowledge of it even in times of peace is of considerable value, and the small grant suggested—namely, 7*s*. per efficient bearer—is insignificant when compared with the important *rôle* which stretcher bearers would play in case of war. The grant would be expended in providing all ambulance requisites and appliances necessary for the proper and satisfactory teaching of the various classes.

THE CAMPAIGN IN CUBA.

According to a Central News telegram there is a good deal of sickness among the Spanish troops in Cuba. Yellow fever is stated to be increasingly prevalent. Five hundred men have succumbed to that disease since March last, and there are 1000 patients in the various local hospitals.

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Supplemental Fund, held on the 8th inst., Inspector-General T. Russel Pickthorn in the chair, the sum of £48 was distributed among the several applicants.

CADET BATTALIONS.

1st Cadet Battalion the Norfolk Regiment: Acting Surgeon H. W. Crosse, M.B., resigns his appointment.

Correspondence.

"Audi alteram partem."

"'RETURN' CASES OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—The origin of so-called "return cases" of scarlet fever, an instance of which forms the subject of a letter from Dr. Paget Thurstan in your last issue, is a matter of practical importance to the community apart from its purely scientific interest. In ascribing the source of infection to the nightgown which was handed to the mother on the return of the child after nine weeks' detention in hospital Dr. Thurstan appears to claim an explanation which the facts of the case hardly warrant. While expressing his belief that disinfection of the nightgown had been thoroughly and efficiently carried out, Dr. Thurstan inclines to the view that the linen had again become infected by its having been dried in an atmosphere charged with infection owing to its immediate proximity to the fever hospital. The explanation is, in view of collateral evidence, difficult to accept; for if the air in the drying-ground were infectious to this degree it would go hard with the inhabitants of the neighbouring tenements of which the backyards, in respect of one large fever hospital, abut on the hospital premises. The yards referred to not only serve as the playground of the numerous young children living in these houses, but in them on washing day is invariably to be seen the household linen hanging out to dry. The distance separating the yards from the windows of the scarlet fever wards is only five or six yards—an interval considerably less than that which intervenes between the wards and the laundry drying-ground in most fever hospitals. Contrary, however, to what might be expected if the validity of Dr. Thurstan's belief be accepted, the incidence of scarlet fever amongst the inhabitants of these houses is no greater than it is in the parish at large. The experience derived from all fever hospitals goes to show that the infection of scarlet fever is incapable of transmission for any distance in the open, and there is little doubt that its rapid loss of virulence is to be ascribed to the destructive influence of light and air.

If we assume the infection of a "return case" to have been derived from the previous one, and are content to put aside the chance of coincidence in respect of an external source, there are certainly two modes of infection which, in most cases, are deserving of careful consideration. First, there is the possibility of some infected article having accidentally escaped disinfection at the hands of the sanitary officials, however careful they may have been in the discharge of their duties. On receipt of the news that the child is to be discharged from the hospital this article of clothing, book, or toy is forthwith brought out of the cupboard or drawer in which it has been lying and may then for the first time be in a position to infect some other member of the household. It is true that this channel of infection may be accountable for but few of the "return cases," but that it may be a practical factor is strongly suggested by the not very infrequent instances in which a second case arises within a few days of the *expected* return of the first, although the patient, owing to some cause or other, may have had to be detained for a further period in hospital and have not been sent home until a later date—in fact, not until after the second case has arisen. We never hear of this being quoted as a "return case" however. Even if it is possible to eliminate

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this source of infection with certainty in Dr. Thurstan's case, there yet remains another very important one—viz., the patient himself, and it is quite possible that he may be the direct source of infection, coming, as he does, straight home from the ward of a fever hospital. The infectivity of scarlet fever desquamation is generally accepted, and also the danger attaching to the slightest discharge from either the ears or nose, which, in the opinion of those best qualified to form an opinion, is a far more fertile source of infection than the later desquamation. The belief is slowly gaining ground that even a healthy person, after a prolonged residence in a scarlet fever ward, is capable of imparting contagion by means of his breath for several days at least after passing out of his infected environment.

Until the day comes when a sterilisation of the respiratory passages of a living person becomes a practical possibility it is to be feared that "return cases" will from time to time occur. The remedy would seem to lie in a further isolation of the child for several days after his return home; but to provide the accommodation necessary to carry this out on a rational basis in respect to every patient before his discharge from the public fever hospitals would entail too heavy a burden upon the ratepayer.—I am, Sirs, yours truly,

F. FOORD CAIGER.

Fever Hospital, Stockwell, S.W., Oct. 8th, 1895.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait would, I am sure, not wilfully mislead your readers, but his memory has been so inaccurate in reference to a case in which he mentions my name that I hope you will allow me to correct his statement. In a letter published in your columns on Sept. 21st he says: "We had under our joint care a lady who had a bleeding myoma and immense wealth. I had recommended removal of the appendages, a course not approved of by Sir William Priestley and not favoured by the patient and her friends, and therefore not pressed by me. The result was she remained under my care (occasionally when death from hæmorrhage was imminent joined by Sir William), and in bed most of the time, for about thirteen years, when the climacteric relieved her from the severe symptoms at the age of sixty-three or four. During that time her illness cost thousands of pounds, a proportionate share of which fell to the lot of Sir William Priestley and myself. If I had operated on her—with a bagatelle risk of 1·6 per cent. mortality—I should have had probably 150 guineas and Sir William Priestley about as much more at the end of a successful case (and I do not think a fatality would have altered the amount), or somewhere about a fifth of what we actually did get." The facts are these. 1. I met in January, 1881, Mr. Lawson Tait and the patient's medical man in the country to see a lady who had a moderate-sized myoma, and whom I had twice before seen in London. The patient was then fifty-three years of age, and, although still suffering from hæmorrhage, did not seem to me so much worse as to demand an operation. 2. In January, 1884, three years later, she came to London and then assured me that she had quite recovered some time before. The pain and hæmorrhage had ceased, and the myoma had almost disappeared. The patient was then fifty-six years of age and going about as usual. She is now sixty-seven and in good health. 3. I only saw the patient professionally once after my consultation with Mr. Tait, and this was alone in London. I received the ordinary fees for my visits, and, therefore, if thousands of pounds were expended in medical attendance they did not come to me.

I am, Sirs, yours sincerely,

WILLIAM O. PRIESTLEY.

Hertford-street, Mayfair, Oct. 5th, 1895.

To the Editors of THE LANCET.

SIRS,—The exceeding rancour with which Mr. John Frederick Bullar persecutes his next-door neighbour at Southampton confuses his mental perception. The mortality percentage I estimated for my case is obtained from a long series of similar cases (removal of the appendages for myoma), published in 1890, for of that series it would have formed one if operative measures had been adopted. Its mortality has nothing to do with the 15 per cent. of deaths in a series of cases of all kinds in the earliest practice of Mr. Bullar's neighbour. Again, Mr. Bullar forgets that removal of the appendages in these cases reveals no disease whatever in them in the great majority of cases, so that if he does know of such innocent appendages having been removed in Southampton, is he sure that there was no disease in the uterus for which the operation was done? On these three points Mr. Bullar has blundered; and, as he was one of my pupils, it is a great blow to my vanity that he attacks the doctrines of his master with paper clubs, doctrines of which at one time he knew so much and of which he was so proud.

I am, Sirs, yours faithfully,

7, Crescent, Birmingham, Oct. 7th, 1895. LAWSON TAIT.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—With all due regard to the invaluable space in your columns I will ask you to allow me to briefly reply to the correspondents who have written refuting my statements on the abuse of hospitals at Brighton. According to both Dr. A. J. Richardson and the secretary of the Sussex County Hospital, 4 per cent. of the cases which were treated were not entitled to charity. This makes a total of 408 in one year for one hospital alone, which at the same ratio for all the other hospitals would amount to a considerable figure and give a living to three or four medical men. I quite admit that the hospitals most abused are those which are devoted to the treatment of special diseases. No one knows the extent of that abuse better than the general practitioner, and no investigation could be complete that does not include their evidence. In my original letter I stated that over one-third of the women who gave birth in 1894 were attended by one charity alone, and that does not include those attended in the union, or the others by the society for helping women in their first fall. Is it possible for so many women to be paupers? I do think that the Lying-in Institution should give some explanation, and I should like also to hear the opinion of the resident medical officers who have been attached to that charity. One of the midwives made a statement a short time ago that in her experience at least half the applicants were in a position to pay for private medical attendance. In your excellent leading article of Jan. 26th of this year you assert what is beyond dispute—namely, that if this gigantic system of abuse was stopped there would be ample means to meet the needs of the deserving poor. Though the wealth of the nation on the whole is progressing, and the position of the working man greatly improved, the increased figures of out-door and in-door attendances at our hospitals would, if the cases were all deserving of charity, go to prove that pauperism is in the ascendency. This matter may not affect those medical men who have been many years in practice in the town, but what about the young men struggling for a living in the paths of an honourable profession—have they not to be considered? I trust that our hospitals will go on extending their inestimable blessing to the poor in the hour of their sickness or injury, but let us at the same time face a great evil and see that charity is not misapplied. I am, Sirs, yours truly,

Hove, Oct. 7th, 1895. FRANCIS J. A. WARING.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—I have read with great interest Dr. Richard C. Shettle's second letter in THE LANCET of Sept. 28th upon "The Physiology of Death by Electric Shock." There is one point, however, which is not quite clear to me, and upon which I should like to ask for information. After very clearly describing the theory according to which "it is probable that the diamagnetic molecules in the living body are continuously rotating upon a definite axis, the axis of rotation in every case being determined by the relation which each form of matter has to the magnetic force," Dr. Shettle goes on to say: "In fact, it is clear that, under the known relations which exist between matter and the magnetic force, the only influence which magnetism can exercise upon the living body is to render the polarity of every atom engaged in the maintenance of life more marked, and therefore more capable of maintaining the phenomena which are naturally

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evolved during life by the material elements." I venture to think that this can only be true as long as the living body is so placed in the magnetic field that the polarity induced by the latter coincides with the normal polarity of the molecules composing the former, and that, supposing Dr. Shettle's theory to be correct, it would be quite possible so to place the living body in relation to the magnetic field that the polarity induced by the one would be in direct opposition to that inherent in the other. Dr. Shettle considers, if I have followed his reasoning correctly, that this antagonism can result only in the deviation of the molecular axes from their original direction, much in the same way that a suspended magnetic needle is deflected upon the approach of a magnet, and that such deviation would have no appreciable effect upon the organism. Now, granting for a moment that no more complex result might be expected from the opposition of similar magnetic poles, is it reasonable to suppose that such a radical change of direction as the one under consideration could take place without causing some very distinct modification of the natural functions of the body? The fact that no such modification actually occurs when the living body is introduced into the most powerful magnetic field—no matter in what position the one may be placed in relation to the other—would appear, I think, to tell very strongly against the validity of Dr. Shettle's theory. I make these suggestions with the utmost reserve and solely with the object of obtaining information upon a subject in which I am much interested. At the same time, I am fully aware that the apparent difficulty may be owing entirely to my own imperfect knowledge and consequent failure to grasp the facts under consideration with the necessary clearness.

I am, Sirs, yours faithfully,

Hornsey, Oct. 5th, 1895. W. B. FOTHERINGHAM.

"PRECEPTS FOR CYCLISTS."

To the Editors of THE LANCET.

SIRS,—In the annotation on the above subject contained in the last issue of THE LANCET you unreservedly condemn the inclined posture adopted by the conventional "scorcher" on the ground of its being detrimental to health. Speaking as a cyclist of many years' experience, I have never been able to understand why this particular position should be condemned on hygienic grounds. I readily admit that it is ungraceful in the extreme, but it is certainly an error to suppose that it "rounds" the shoulders. On the contrary, the shoulders are held stiffly back in order to obtain a firm grip for the extraordinary muscles of respiration, and the bend is a hinge movement at the axis of the hip-joint and not a forward curvature of the spinal column. The error has probably arisen from the fact that this position throws into prominence any existing tendency to "round shoulders," in the causation of which it takes, however, no part. From a physiological point of view the "forward bend" is the best, in that it enables the rider greedy of speed to develop a maximum degree of effort with a minimum of distress. The truth of this statement is evidenced by the fact that all of us intuitively follow the "scorcher's" example under strain, as when climbing a hill or facing a head wind.

I am, Sirs, yours faithfully,

Oct. 7th, 1895. ALFRED S. GUBB, M.D. Paris.

"SKETCHES FROM RHENISH WATERING-PLACES."

To the Editors of THE LANCET.

SIRS,—Your Berlin correspondent omits to mention one of the most charming of the health resorts of the Rheingau. Having spent a month there this summer, I may perhaps be allowed to give your readers a brief account of Schlangenbad It is seven miles from Wiesbaden, four from Schwalbach, both of which are reached by carriage, and four from Eltville, where all the Rhine boats stop. There is now a steam tramway between Eltville and Schlangenbad, so that it is reached with the least possible trouble. The village lies in the forests of the Taunus, the surroundings are beautiful, walks through the woods having been carefully laid out in every direction, to Rauenthal (one mile and a half), Georgenborn (the same distance), and many other picturesque villages. There are a pretty little Kursaal, seven "Kurhäuser," several good hotels, and the expenses are very moderate. The baths are delicious; the chemical composition and medicinal properties of the waters have been fully described by the resident physician, Dr. Baumann. They seem specially suited to cases of neurasthenia or irritable nervous conditions, which respond very quickly to Schlangenbad treatment. It may have been the property of the baths or the early hours, regular life, and the restfulness of the sheltered walks, but more probably the result of all these factors, that produced such a rapid improvement in the neurotic patients that were sent there. Eczema and other skin affections were quickly cured by the baths. As far as I was able to judge these two classes of patients got the greatest advantage from Schlangenbad. For medical men and their families it is a charming pleasure resort, and easily reached. They are admitted free to the baths and are exempt from Kur tax. Shooting (stag, partridge, &c.) can easily be obtained in the neighbourhood; also good music, pleasant society, absolute rest if desired, or excursions in all directions, good food, and capital accommodation. What more could be desired either for summer holiday or health resort? All these advantages, and more, can be obtained in Schlangenbad. I am, Sirs, yours truly,

West Brighton, Oct. 7th, 1884. W. G. THISTLE.

ADVERTISING IN HIGH PLACES.

To the Editors of THE LANCET.

SIRS,—I see by the daily press that Dr. —— and also Dr. —— have returned to their respective homes after a brief holiday. As the leading men of the profession persist in setting such a noble example of professional etiquette to their humbler brethren, I intend in future to make a black list of these advertising gentlemen for my private use only, and to refrain from sending any of my patients to them when I desire the advice of a consultant. I think that if other general practitioners would do the same it might influence these gentlemen to some extent in self-advertisement. I am, Sirs, your obedient servant,

Oct. 8th, 1895. M.R.C.S.

HOTELS AND INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—I venture to ask you for the following information. Should a patient fall ill with diphtheria in a large and crowded London hotel, would he, after the case had been duly notified to the authorities, be compelled to leave the hotel at a few hours' notice and to be taken to the fever wards of a hospital? Would the patient or his family, if they refused to leave the hotel, be liable to be sued before court for damages caused to the hotel (in guests leaving &c.)? I have been placed in a very anxious position by a case of this kind happening to an English patient of mine at a Zürich hotel, and should be very glad to know how the authorities act in England under the same circumstances.

I am, Sirs, yours faithfully,

Oct. 1st, 1895. TURICENSIS.

*** There is no universal rule in England. Many provincial towns have no infectious hospitals to which such cases could be removed either compulsorily or voluntarily. And even where such hospitals exist, including the metropolis, there is no power of compulsory removal unless a magistrate's order for such removal is procured. The magistrate can issue this order on one or other of three conditions: 1. That the patient is "without proper lodging and accommodation." 2. That the patient is in a room occupied by members of more than one family. 3. That the patient is on board a ship. The first condition would be the one affecting a hotel, but the legal interpretation placed on it varies very much, some saying that the question of proper lodging, &c., must be decided on grounds of protecting the public; others, with probably more correctness, declaring that in view of the second condition it is the propriety of the lodging *qua* the patient that is in question, except where the room holds persons of another family. But, as a matter of fact, such cases are very generally, though not always, removed from hotels into hospital; for the London Fever Hospital has private rooms, which go far to remove the objection of the better classes to isolation in hospital.—ED. L.

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AURI SACRA FAMES.

To the Editors of THE LANCET.

SIRS,—On returning to town after the vacation I met with a remarkable incident which seems to me to claim attention. The Royal Colleges of Physicians and Surgeons most liberally placed free of cost the Examination Halls on the Embankment at the disposal of the British Medical Association for the meetings of sections for reading and discussing scientific subjects. I hear, for I was not present, that almost the entire ground floor of this large building was occupied as a vast advertising ground for all kinds of drugs, instruments, &c.—so vast that the advertisers paid £1200 or £1500 to the Association. Of course, the Colleges are not responsible for this proceeding; their assent was not asked, and they have not received, and could not accept, any of the proceeds. The Colleges will no doubt take some notice of the matter when they meet. In the meantime allow me to suggest that the money thus obtained by the British Medical Association should be devoted to scientific purposes or given to some of the medical charities; at least, it cannot pass without question into the coffers of the Association.

I am, Sirs, yours obediently,

Oct. 5th, 1895. MEDICUS.

THE DRAINAGE OF PORTSMOUTH.

(FROM OUR SPECIAL CORRESPONDENT.)

MANY years have now passed since a general scheme for the drainage of Portsmouth was planned and carried out. This was done in 1866, and since that date the population of the town has greatly increased and sanitary science has made considerable progress. It is not probable that in these days the plans for draining Portsmouth which were accepted some thirty years ago would meet with approval. Judged in the light of modern science, extraordinary blunders were committed. The drainage scheme consisted of a high and a low level system. Both had their outfall in front of Fort Cumberland into the Langston Channel, where the sewage is rapidly carried out to Spithead. The high level system discharged by gravitation at the ebbing tide, and the sewage in the low level system had to be pumped up into the high level outfall. Both systems meet at a point to the east of the town called Highland Cottage and thence travel on to the pumping station, the low level main drain being five feet under the high level sewer. But even with the aid of the pumping the gradients are absurdly insufficient. It will scarcely be credited, but for a distance of 6685 feet the fall is barely equal to six inches in a mile; yet so as to secure even this mere semblance of gravitation there are parts of the main sewers which are only just under the surface of the streets. From 1866 to 1881 no less than 20,550 houses were connected with these sewers, and their inefficiency soon became manifest. A great portion of the main sewers were converted into sewage reservoirs. Here the sewage stagnated and formed deposits pending the time when the tide would be favourable to its discharge into the sea. Thus there was no constant flow in the sewers, and when heavy rains fell the sewers overflowed and flooded the basements of the houses. Then the sewers, already too small for the rapidly increasing population, became choked up by the sand and the deposits of all sorts which must naturally accumulate when sewage is allowed to stagnate. If to this is added the fact that improvement was necessary with respect to the scavenging or cleansing of the sewers by work of hand, it will be seen that the state of affairs would become absolutely intolerable. In 1881 the local authority were obliged to advertise for schemes likely to effect an improvement. Finally a proposal to build reservoirs was made by Sir Frederick Bramwell and adopted. Just by the outfall and in front of Fort Cumberland reservoirs that will hold 4,500,000 gallons have been constructed. As these discharge twice a day this means a total amount of 9,000,000 gallons of sewage that can be dealt with in the twenty-four hours before the sewers themselves become a reservoir for the holding of stagnant sewage. Under these circumstances the flow of the sewage should not be interrupted. Nevertheless, though these reservoirs have considerably improved matters, the drainage is still unsatisfactory. The gradients remain altogether insufficient and therefore the sewers are very far from being self-cleansing. Then some of the sewers were built of such porous material that a very large quantity of sea water percolates through their walls. With spring tides the low level sewers, that are little better than mere sieves, have brought down to the pumping station 3,000,000 gallons of sea water. The town has been put to the expense of raising this enormous volume of sea water, not a drop of which ought to have gained admittance to the sewers. When the cost in the wear and tear of expensive machinery and the consumption of valuable fuel which the raising of 3,000,000 gallons of water involves are considered it will be realised what an extravagant waste is thus occasioned.

Owing to the presence of a large quantity of sea water in the sewers and the increase of population and the area drained, there is, especially during heavy rains, more sewage than the reservoirs can hold. Consequently, of two evils one must occur: either the sewers must again become reservoirs holding stagnant sewage or else some of the sewage must be discharged into the sea at unsuitable periods of the tide. But even if this difficulty at the outfall did not exist, still the drainage would not be properly effected, because the sewers are too small for the large volume of water which now reaches them during heavy rains. The gradients being so slight, the sewage cannot flow with sufficient rapidity to the outfall to relieve the more distant portions of the town. Therefore the sewers will be found to be quite full in one part of the town, while nearer to the outfall they are only two-thirds full. Last autumn a number of cellars were flooded in the town and this at a time when the main sewer near the outfall was only two-thirds full. Then at one place where the main sewer receives sewage from three local collectors the main sewer is so small that it can only hold half the amount of sewage which the three collectors are capable of delivering. It is as if one tried to empty two pints into a one-pint measure. Under the stress of these circumstances, and at the suggestion of the borough engineer, Mr. Philip Munch, a sum of £30,000 has been voted and is now being expended so as to deal separately with the rain water. Some eight or nine years ago a separate system was instituted in the Stamshaw district. This was a newly created quarter covering some thirty acres of ground adjoining the Landport district. The method adopted is to drain the rain water from the streets and from the front roofs and fronts of the houses into a separate sewer which has its outfall at the nearest convenient point, either in the harbour or in the sea. The water from the backs of the houses and the backyards, which is likely to be fouler, together with the domestic drainage or sewage proper, will continue to flow into the old sewers. Only the cleanest portion of the rain water will reach the supplementary or separate sewers that are in course of construction. It is confidently expected that this rain water will be clean enough not to cause any nuisance in the harbour or on the beach. An outfall at Flathouse will discharge into the harbour the drainage of eighty acres of roadways and frontage. The drainage from ninety acres of frontage and roads will fall into the Camber, and thence will flow to the harbour mouth. Forty more acres of Portsea and forty acres of the old town of Portsmouth will also be thus drained into the Camber. The distances being short the difficulty of obtaining proper levels is not great. Where the natural levels are insufficient a gradient for such short distances can be created by digging deeper in the roadways. Catch-pits are contrived to prevent sand and grit from entering these sewers. In the districts where the system has been already applied it has worked well and caused no inconvenience. When thus in part relieved from the pressure of rain water it is anticipated that the old drainage system of Portsmouth will work much better, and that the distress caused by the flooding of cellars and basements by sewage will be avoided. Nevertheless, the drainage of the town can never be satisfactory so long as the sewers are not self-cleansing; nor can they become so while the gradients are too slight to admit of a rapid flow of the sewage. There is but one way of draining a flat town, and that is by raising the sewage frequently and at short intervals. There must be, not one pumping station, but many pumping or raising stations. Then, if the pumping stations are near enough, a gradient may be created by digging down to these various elevating stations. It is most unfortunate that so important a town as Portsmouth should have been drained, and this at a great expense, in a manner that was not in keeping with these fundamental principles, for it seems as if the work will sooner or latter have to be done all over again.

Portsmouth.

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THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 877.*)

"SWEATING" MEDICAL MEN AT LINCOLN.

A MEDICAL SOCIETY was formed at Lincoln in the year 1863. This society met once in the winter. Scientific papers were read, and then the members had supper with the president. In the summer the members met again, went to the country, and had a picnic. This was very pleasant, but it scarcely constituted a bond of union of sufficient strength to resist the encroachments of the formidable benefit societies that flourish at Lincoln. Now, however, the medical society meets once a month, and not only are scientific papers read, but professional interests are discussed. The subject of the benefit clubs has been for some time a matter frequently mentioned; but as some of the members of the Medical Society are sometimes called in to consult with the benefit club medical officers they did not altogether approve of the energetic manner in which these institutions were attacked. Nevertheless, as the grievance became more and more evident, the necessity of taking action was ultimately acknowledged. On Feb. 27th last Dr. Mounsey called attention to the fact that many opulent tradesmen were obtaining medical aid from the benefit clubs, and it was decided to hold a general meeting of the whole of the profession in and about Lincoln on March 8th. At this meeting a resolution was adopted and sent to the British Medical Association; and a petition signed by all present was sent to the General Medical Council. Twenty-five Lincoln practitioners and nine practitioners from the surrounding districts signed this petition. It was worded as follows and sets forth briefly the grievances of the Lincoln practitioners, whose signatures follow:—

"To the General Council of Medical Education and Registration.

"GENTLEMEN,—We, the undersigned general practitioners of the city of Lincoln and neighbourhood, humbly beg to call the attention of the General Medical Council to the following facts, viz.:—

"1. That there are in Lincoln two medical aid associations called the United Friendly Societies and the Manchester Unity of Oddfellows, employing respectively three and two qualified practitioners at fixed salaries.

"2. That these medical officers do not receive the full amount paid by the members for medical attendance.

"3. That these associations canvass for members.

"4. That a large number of leading tradesmen and well-to-do men of independent means avail themselves of the advantages of these institutions at the low rates of 3*s.* 6*d.* per annum per member, with an addition of 8*s.* per annum for wife and any number of children under the age of sixteen.

"5. That the number of these institutions is on the increase, and obtains not only in this city but in the clubs in the neighbouring villages.

"We submit that this state of matters is calculated to degrade the medical profession, and we humbly pray that your honourable Council will frame measures to check these abuses.

(Signed)

"G. Mitchinson,	John T. Collier,
J. G. Watkins,	Fred. S. Gurney,
W. A. Carline,	Fred. S. Lambert,
Leslie H. Revill,	E. Mansel Sympson,
A. P. Russell,	Horace Rainbird,
Wm. H. B. Brook,	Albert Louis Peacock,
W. J. Cant,	F. J. Mason,
T. H. White,	A. E. Boot,
C. Harrison,	Godfrey F. R. Lowe,
J. H. Pim,	Arthur H. Lowe,
G. H. Mounsey,	G. Parson Forney,
F. C. P. Howes,	S. R. Deane,
Charles G. Dalton,	Osborne Johnson,
F. Bastow Cooper,	Henry Johnson,
Wm. Swan,	J. D. Cambell,
Edward C. Palmer,	C. Brook,
George S. Boulton,	G. M. Lowe."

In answer to the above petition the officials of the General Medical Council sent three copies of the minutes of evidence taken on the question when the Council held an inquiry on this subject some three years ago. In this connexion it is important to bear in mind that, when the various benefit societies federated together to form the Lincoln United Friendly Societies Dispensary, they requested the General Medical Council to send a representative to see that the new system of medical aid should be organised on proper lines. The position here at Lincoln is altogether different from what I have described as existing at Portsmouth and at Eastbourne. At Lincoln five medical men are employed exclusively by the Manchester Unity of Oddfellows and by the United Friendly Societies Dispensary. These medical men receive a fixed salary and are not allowed to have any private practice. Now when this system was first instituted the representative of the General Medical Council especially stipulated, and it was agreed, that no profit should be made out of the work of the medical men employed by these benefit societies. It is, however, easy to prove, from published balance sheets, that this condition has not been observed and that profits have been made out of the medical men. It was understood that the managing committees were to work for nothing, or, in any case, were not to pay themselves out of the fees given for medical aid. The General Medical Council should know that this rule, which they themselves established, has not been observed. Facts and figures bearing on this point were published by the *Lincolnshire Echo* of Feb. 15th, 1895, which quotes the THE LANCET on this subject. Then I find in the sixteenth annual report of the Friendly Societies' Medical Alliance that, in the year 1894, the Manchester Unity of Oddfellows had 4889 members in Lincoln who, between them, had in the course of the year 24,173 medical consultations, 31,431 prescriptions, and 6934 medical visits. There were 58 deaths. The subscriptions paid for medical aid amounted to £989, though the amount received by the medical men was only £381. The dispensers were paid £116, cab fares absorbed £65, drugs £161, and £32 were paid to the secretary, treasurer, and committeemen. This equals a total expenditure of £758 and leaves a balance on the receipts of £231. The two medical men in the service of this society naturally expected that this sum would be divided between them, since it was stipulated that no profit should be made out of the medical men. This, however, has not been done. The Manchester Unity of Oddfellows has simply pocketed a large proportion of the money made by the medical men in its service. This profit has been literally sweated out of the two medical officers. These officers had given, in the course of the year, 31,107 consultations and visits, and they have received for this enormous amount of work £384. These show that they have been attending patients for an average fee of a fraction under 3*d.* per visit or consultation. By paying them only £384 the society has made a profit of £231. The profits sweated out of the medical officers amount to nearly two-thirds of the sum it paid them. The sweating Jew tailors in the East-end of London do not make as much out of their victims, and yet it was agreed with the representative of the General Medical Council that no profit should be made out of the medical men. Further, it should be noted that I have reckoned in this calculation the £32 given to the secretary, treasurer, and committee as legitimate working expenses, though it had been understood that the committees should work for nothing.

The United Friendly Societies Dispensary employs three medical officers. They had in 1894, children included, 4396 members. The medical officers gave 16,763 consultations, 27,255 prescriptions, and 7815 visits. There were 40 deaths. The receipts amounted to £917; the salaries to the three medical men were £478, £57 were paid to the dispenser, £48 were spent in cab fares, £186 in drugs, and £14 in fees to the secretary, treasurer, and committee. Thus the total expenditure was £783, and as the receipts are set down at £917 it would seem that the net profits amounted to £134. To produce this profit the medical men in the service of this society have had to give consultations and advice at an all-round average of a fraction above 4½*d.* per visit or consultation. It is surely time that some authoritative expression of opinion should be obtained as to this sweating of profits out of the underpaid labour of medical men. It may well be asked how the dignity of the profession can be maintained under such conditions. At the other towns I have visited the average amount received per consultation was as low, in some instances, as 4*d.*, but the remuneration, such as it was, all went to the medical officer, and the society did not make a profit out of it. Also the medical officer derived indirect advantages—his club work brought him private practice which paid much better; while here at Lincoln the five club medical officers are by their contract debarred from accepting private practice. Further, if the number of members increases their work increases in due proportion, but their salaries do not increase, nor do they enjoy any measure of independence. They are the paid servants of a society represented by a committee, and are ever at the beck and call, not of one master, but of a whole committee. If any member thinks he has been neglected the medical officer has to appear before this committee, and a body of tradesmen and workmen

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sits in judgment upon him and decides whether he has treated a medical case with proper discernment and attention. How can such a committee express an opinion on such a subject? Many a practitioner, after a little experience of this sort of work, has thrown up the post in disgust; but there are others who are not in a position to venture on following this good example.

If the medical officers are poorly paid, the sum allowed for drugs is not more liberal. On a previous occasion THE LANCET pointed out that the £161 paid by the Manchester Unity at Lincoln for 31,431 prescriptions meant an average of a fraction over a penny per bottle for medicine, and expressed the opinion that this seemed "hardly compatible with power and effect in dealing with the varied and often dangerous phases of disease." Thereupon Mr. William Coulson, secretary of the Lincoln Oddfellows' Medical Institution, wrote to the *Lincolnshire Echo* that drugs of the very best quality only were purchased from one of the best wholesale houses in the country. He added that the medical officers' instructions from the committee were not to spare expense, but to provide the patients with the medicaments they required. This does not, however, do away with the fact that many patients are treated with a few stock prescriptions which are kept ready made up and which usually contain cheap and ordinary remedies. It could not be otherwise. Even if money was forthcoming for special prescriptions there would not be time to write out a prescription, and still less time to have it made up. There are often sixty, and sometimes eighty, patients waiting for advice at these dispensaries. There may be two medical men to receive them, but often there is only one medical man present. Indeed, I was assured that one of the medical officers had said that he had seen sixty patients in an hour. The more carefully this matter is studied the more evident it will become that the grievances are not only on the side of the medical men. Reform is urgently needed, not only in defence of the reputation and material interests of the medical profession, but also for the sake of the members, especially the poorer members, of the benefit societies themselves.

Lincoln, Oct. 7th.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Museum.

THE subject of a grant to the museum was resumed at the last meeting of the City Council. It may be remembered that several years ago the Natural History Museum, as it was called, obtained an asylum at Owens College at considerable cost to the College, and that the Corporation was memorialised several months ago for a grant in aid of its maintenance. The Free Libraries Committee recommended a grant of £400 a year if the county councils of Lancashire and Cheshire and some of the local district councils would give £800. An amendment was moved, and has been accepted by the committee, that this condition should not be attached to the grant. It was discouraging to observe the narrow and short-sighted view taken by several members of the council as to the value of such an institution to the people of Manchester and the district round, illustrating, as the museum does, every branch of natural history in its widest sense. One who had been a city father for ten years had only known of the museum in connexion with Owens College since the question was introduced. Another said "there were museums enough in Manchester," though as to where they would be found he did not enlighten the council, but he showed his special fitness to give an opinion by saying "he had never been in the museum at all." It will scarcely be believed but this gentleman has had all the advantage he could derive from an average middle-class education. It was said, moreover, "the museum was not one that would attract the masses of people; it was merely a museum for students." No doubt the masses might be more attracted by steam-organs and merry-go-rounds, but they are provided elsewhere. Then, too, the raising of the rates that would be caused by this £400 divided among 500,000 people, and the grave prospect of "setting a dangerous precedent," were duly held forth *in terrorem*. And so this humiliating discussion proceeded. Alderman Thompson said truly "there was nothing more painful than this exhibition of utter indifference on the part of the council to higher education." He showed that the museum was really for the public, and was not required for the students of the College. "The medical men did not need it because they had a museum of their own, and the arts people did not need it, neither did the electricians nor the chemists, because they also had museums of their own." He contrasted Liverpool with Manchester greatly to the disadvantage of the latter, showing that the former gave grants to various departments of higher education of £1800 a year, while "the Owens College authorities were taunted because they asked for a miserable £400 a year." The discussion was again adjourned for a fortnight.

Gift to the Free Library.

It must not be supposed from the above-mentioned discussion in the City Council that Manchester has no regard for science or literature. The late Mr. Alexander Ireland, who died some short time since, was a great lover of literature and had a wide acquaintance with the literary men of the last generation. He had a special fondness for the works of Hazlitt, Leigh Hunt, Lamb, Carlyle, and Emerson, and with most of these authors he was on terms of personal friendship. He was a diligent collector, and left at his death 360 volumes of their writings, with various manuscripts, including the original one of Mrs. Ireland's life of Mrs. Carlyle. They were bought by Mr. T. R. Wilkinson, who has generously presented them to the Free Library. In his letter to the chairman of the committee he says: "I wish to present this collection, with the book-case which holds it, to my native city; and I venture to express the hope that it may be kept together in the city library as a memorial of our late dear old friend and citizen, Alexander Ireland."

Manufacture of Explosives.

The City Council was somewhat exercised at its last meeting as to the proposed establishment of an explosives factory in Ardwick, a densely populated part of Manchester. An application for a licence led to a local inquiry, when it was decided that such a licence ought not to be granted. The tradesmen, shopkeepers, and property owners believed that a great danger would be caused by the carrying on of such a manufacture in their midst. The applicants appealed to the Home Secretary, who came to the decision, "in accordance with the opinion of his technical advisers," that there would be no risk of explosion, "but at the worst of conflagration," "with the variety and quantity of nitro-cotton to which, by the draft licence, Messrs. Moseley are limited." The Watch Committee protested, and justified their objections to the licence by the general alarm and by the depreciation in the value of the surrounding property. It was moved and carried that the Home Secretary should be further communicated with. The insurance offices are evidently not of the opinion of the "technical advisers," for it is said that notices have been sent to the neighbouring business men and property owners of an increase of 50 per cent., and in one case of 100 per cent., in their insurance premiums. It seems rather hard for the neighbourhood to be exposed to increased risk of fire, and so to increased risk of life, even if the technical advisers think they will not be blown up. But in yesterday's papers Messrs. Moseley say that the preparation they make and use of collodion cotton is not explosive, and is only in a slight and slow degree inflammable. The material to be manufactured is called pegamoid, and is said to be of almost universal application in connexion with the textile fabrics. They say that Colonel Majendie, the Chief Inspector, came down and saw the buildings, the mode of manufacture, and the article pegamoid in its various preliminary states and in its finished condition. Shortly afterwards they heard the licence was confirmed, so that presumably he was satisfied. But this morning's papers contain letters from important firms which seem to show there are just grounds for alarm. It seems that permission has been obtained to store 800 lb. of gun-cotton, and if the "small fires" which Messrs. Moseley admitted at the public inquiry had happened should again occur the people of Ardwick may be excused for feeling some anxiety. There is a feeling in the council that the Home Office should not have thus over-ridden the action of the Watch Committee.

Medical Dinner.

The annual dinner of the Owens College and the Manchester Royal Infirmary was held on Thursday last at the Queen's Hotel, under the presidency of Mr. G. W. Mould. The Lord Mayor of Manchester and the Mayor of Salford,

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Mr. E. S. Heywood (chairman of the Infirmary Board), Alderman J. Thompson (treasurer of the Owens College), Mr. J. W. Maclure, M.P., and Dr. Robert Maguire, an old Manchester student, were among the guests. In proposing the toast of "The Lord Mayor and Corporation of Manchester and the Mayor and Corporation of Salford," Mr. Mould took occasion to remark how greatly the health and happiness of the community depended on those important sanitary measures, provident and protective, which were so ably devised and carried out by our local legislators. The toast of "The Manchester Medical School" was responded to by Professor Young, the Dean, who referred to the unrivalled facilities for work given by the new buildings and to the very large entry of medical students this session. Mr. Thomas Jones, professor in surgery, in speaking to the toast of "The Manchester Royal Infirmary," contrasted the present building with the modern palatial structures found in almost all other large towns, as, e.g., Liverpool and Derby, and suggested that the enterprise which produced the Ship Canal and brought water from Thirlmere should give to Manchester a building worthy of the city. Dr. Little proposed "Our Guests," which was responded to by Mr. Maclure and Dr. Robert Maguire. The health of "The President" was proposed with much grace and feeling by Mr. E. S. Heywood, and was most enthusiastically received. Mr. Mould's reply was followed by some music, and a very pleasant evening came to a close.

A Police-constable and First Aid.

Mr. Gilbert has said, "A policeman's lot is not a happy one," so that one is glad to record anything that may tend to lighten it. An inquest was held on Friday last, at the Eccles and Patricroft Hospital, on the body of a man who had been run over after falling from a lorry. He was seriously injured about the left thigh, and Police-constable Crawford, who was near at hand, promptly rendered first aid by stopping the bleeding, and then removed him in the mail-coach from Manchester, which was passing at the time, to the hospital, where amputation was found to be necessary. But the man sank and died next morning. The jury returned a verdict of "Accidental death," and added that they desired to express their high appreciation of the prompt and skilful first aid rendered by Police-constable Crawford, "by means of which the deceased's life was probably prolonged until efficient medical aid could be procured." They further recommended his action to the notice of the Chief Constable.

Manchester Sewage.

The Mersey and Irwell joint committee yesterday granted a further period of six months to Manchester for the completion of her sewage scheme. From a statement made by the city surveyor it seems that "the amount actually paid up to the 19th ult. by the Corporation was £556,540 17*s.* 3*d.* The total estimated cost of the existing works was £700,000, and, roughly speaking, there was about £100,000 worth of work in course of construction." If no difficulties were met with it would take at least twelve months to complete the work. A portion of the sewage is treated at the filter beds at Davyhulme, and Sir H. Roscoe said the effluent was of an exceptionally good character, for not only was the whole of the polluting organic matter destroyed, "but the water contained what was always looked upon as a sign of purity, a certain amount of free oxygen." Formerly the sewage had flowed continuously on to the filter beds, but now after some hours the flow was stopped and the air allowed to percolate through the mass. "This appeared to be essential to get the right action of the nitrogenous microbes, which really did the work." There is also in operation a costly and elaborate plant for the chemical treatment of the sewage and for sludge pressing, and additional land has been reserved for future tank extension if the present tank capacity should be found insufficient. At present thirty acres are devoted to the filter beds—not enough to deal with the whole of the sewage; but the Local Government Board has sanctioned the sum of £25,000 for the construction of the first section of artificial filters on sixty additional acres, which, according to the experts, will be sufficient. The construction of two experimental filters has been sanctioned in order to have a practical demonstration of the treatment of the Manchester sewage on the system proposed by the London County Council. The London sewage reaches the works at Barking in a putrid condition, and it is a question not yet decided as to whether the system is equally applicable to the sewage of Manchester, which enters the works in a practically fresh state.

Oct. 8th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Royal Infirmary, Newcastle-on-Tyne: the Site Question.

THE town council has decided, and almost unanimously, to refuse the request of the governors of the infirmary for an extension of their present site, on the grounds that the accommodation for the pigs and sheep would be curtailed. Many people in Newcastle are of opinion that the cattle market should be removed from the centre of the town, but the present members of the town council evidently do not think that it would be advantageous. Not so very long ago a bull in one of the main thoroughfares of the town gored a boy, tearing out parts of three or four ribs, opening up his pericardium and exposing his heart. In another instance a bull thrust his horn into the knee-joint of a lad and tore it open, necessitating amputation of the limb. Both these cases were treated in the infirmary, but very little was heard of them or of other severe and sometimes fatal accidents due to the driving of cattle through the main thoroughfares of the city. No doubt if the mayor or other prominent citizen had been the unfortunate victim a good deal would have been heard of the inconvenience and danger of continuing to hold a large cattle market in the very centre of a populous city. In its annotation upon the action of the town council the *Newcastle Daily Journal* writes: "We agree with Mr. Alderman Richardson and Alderman Stevens that the tone and attitude of the council towards the infirmary are much less sympathetic than they ought to be. It may be quite true that the council is not officially concerned in finding a new site for the infirmary, but morally there is no higher responsibility devolving upon it than to assist an institution like this in performing its invaluable functions in an efficient manner. The finances of the institution are not in a condition to allow of an expensive site being acquired, and unless the corporation grant its assistance the work of the infirmary must be crippled." The city council always expresses its anxiety to help the infirmary in its present strait; hitherto the outcome of its desire to assist has been that it has refused every application made to it, and last week it determined not to appoint any member of its body to form a joint committee with representatives from the infirmary committee to confer together as to the best method of procuring a new or an enlarged site, on the ground that it was no part of the town council's duty to provide, or to assist in providing, a site for the infirmary. This is a very different spirit to that which animated the town council 150 years ago; then a site was given to the infirmary by the corporation. The position the town council is now taking up is not, to say the least of it, a sympathetic one.

Destruction by Fire of the Old Mansion House, Newcastle-on-Tyne.

During the evening of Sunday, Oct. 6th—the anniversary, curiously enough, of the great fire in the same locality thirty-one years ago—the old Mansion House was found to be on fire. It was in use as a storage for oil, and in it were 1000 barrels of oil. Fortunately, with the exception of some timber in immediate proximity which was burnt, no damage, beyond the destruction of the building and its contents, was done. The old Mansion House, including a valuable collection of City plate and an extensive cellar of wine, was sold by auction in the year 1837. The ancient building was a quay-side feature, and is immortalised in John Shield's well-known song of "My Lord Size."

Newcastle-on-Tyne.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Lunacy in Scotland.

THE recent report of Mr. Carswell, certifying physician under the Barony Parish Council, Glasgow, contains further evidence in support of the statement that lunacy is not increasing in Scotland out of proportion to the growth of the population. The Barony parish includes a very extensive area, and the social condition of those inhabiting it is marked by great steadiness; indeed, it was selected some little time ago by Sir Arthur Mitchell as the district most suitable for the purpose of conducting an exhaustive inquiry into the alleged increase of insanity. Mr. Carswell's statistics show that though the number of certified lunatics has

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risen from 135 in 1890 to 148 in 1895, the corresponding proportions per 100,000 of population are 44·7 and 45·1. The conclusions are practically identical with those arrived at by Sir Arthur Mitchell, whose inquiry embraced the ten years from 1883 to 1892. There are two reasons which combine to explain the increased number of pauper lunatics. In the first place it is shown that the lunatics do not as a rule recover to such an extent as to justify their discharge, whilst under the present system of treatment their lives are prolonged.

Glasgow Medico-Chirurgical Society.

The first meeting of this society for the session 1895–6 was held on the 4th inst., the President, Dr. W. L. Reid, being in the chair. It was decided to record an expression of regret at the death of Dr. J. H. Carslaw, who had reported the proceedings of the society in the *Glasgow Medical Journal* during the last four sessions. Dr. C. O. Hawthorne showed—(1) a brain with a recent hæmorrhage into the pons and cerebellum; (2) a female patient aged eleven years with considerable enlargement of the spleen, the history showing recurrent attacks of purpura, but none of the incidents usually associated with splenic enlargement; and (3) a man in whom the left brachial artery divided some distance above the level of the elbow-joint, the ulnar artery from this abnormally high origin passing in front of the muscles arising from the internal condyle and the fascia of the forearm. Dr. Hinshelwood read a paper on Word Blindness and Visual Memory, in which he narrated two cases he had seen, there being in one patient blindness to letters but not to figures, whilst the other suffered from object blindness.

Resignation of a Medical Officer.

Mr. W. A. Algie, Portpatrick, has intimated to the parish council his resignation as medical officer of the parish.

Home for Infirm Children, Glasgow.

In the annual report of the medical officer, Mr. Wilson Bruce, it is stated that the children admitted during the past year have on the whole been more acutely ill than in previous years, and that the deaths have consequently been more numerous; at times, too, there has been great pressure on the accommodation provided. A considerable piece of ground adjacent to the home has recently been purchased by the directors, and it is intended in December next to hold a bazaar with a view to improve the financial position of the home.

Faculty of Physicians and Surgeons, Glasgow.

At a meeting of the Faculty on the 7th inst. Mr. John Brown, M.D., and Mr. John M. Munro Kerr, M.B., having passed the necessary examinations and been elected, were admitted Fellows of the Faculty.

The Pollution of the Gareloch.

The Dumbarton county council some months ago appointed Mr. F. C. Buchanan, convener of the Public Health Committee, and Dr. John C. McVail as a sub-committee to report upon the condition of the foreshores of the Gareloch, one of the most picturesque of the lochs communicating with the estuary of the Clyde. These gentlemen have just issued an elaborate report, in which they find that the insanitary state of the foreshore is due to—(1) drainage from the dwelling-houses on the shores of the loch and (2) pollution by vessels anchored in, or plying on, the loch. They express the opinion that some remedy must speedily be found if the district is to maintain its position as a residential neighbourhood and favourite summer resort, and recommend that the Secretary for Scotland should be petitioned either to declare the loch a stream under the Rivers Pollution Act or to sanction by-laws giving the local authority power to prevent the deposit of solid refuse on the foreshore and the introduction of untreated sewage into the loch. This report has been adopted by the county council.

Aberdeen District Nursing Association Bazaar.

The total receipts at this two days' bazaar amounted (including £404 10*s.* 6*d.* of donations) to £1506 11*s.* 6*d.* Lady Gordon Cathcart opened the bazaar on the first day. On the second day Lady Kintore performed this function, being introduced by Dr. Angus Fraser, President of the Association. A vote of thanks was passed to Dr. Fraser. The Marchioness of Lorne sent a number of valuable gifts. In one of the two drawings—that for a picture of a Surrey landscape—Dr. Marshall, North Queensferry, was the winner.

Oct. 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Dublin Hospital for Infectious Disease.

AT a meeting of the guardians of the Rathdown Union on the 2nd inst., Viscount Powerscourt, K.P., in the chair, a letter was read from the Public Health Committee, Dublin, requesting the guardians to send a deputation to the conference which is to be held in the office of the committee at Cort's-hill, on Thursday next, Oct. 10th, "to consider the advisability of erecting a hospital in some rural district for the purpose of isolation in cases of infectious disease." A deputation, consisting of five of the guardians with their medical officer, Dr. Hamilton, was appointed to attend the conference. The necessity for the proposed hospital is now fully recognised, for, although the fever hospital at Cork-street was of immense service to the inhabitants of Dublin during the recent epidemic of small-pox, the undesirability of having an institution situated in a crowded part of the town for isolation of infectious disease is shown by the facts which have recently transpired, from which it would appear that, notwithstanding every precaution, the area of the city surrounding that hospital suffered more severely from the disease than elsewhere.

The Children's Hospital, Temple-street, Dublin.

The Medical Board at their last meeting appointed Mr. Herbert Mooney, M.B., F.R.C.S.I., to be ophthalmic surgeon to the institution.

A New Dublin Dispensary.

At a meeting of the guardians of the South Dublin Union on the 3rd inst. a letter was read from the Local Government Board in reference to the proposed erection of a new dispensary at Castle-street, which stated that the building, as shown by the plans, was of too elaborate a character for the requirements of the district. Its cost, as was noted, would probably amount to £4000, which would entail an annual payment of over £200 on the district. The Local Government Board requested the guardians to reconsider their proposed plans, and apparently with good reasons, for many complaints have been made of late years by the highly-taxed citizens of South Dublin, while it is notorious that many of them have ceased to rent houses in the city and removed to the adjoining townships. The consideration of the letter was adjourned until the next board meeting.

The Amalgamation of Irish Poor-law Unions.

At the present time in Ireland the whole question of the Poor-law management is causing very great discussion. In THE LANCET attention has been already drawn to the union infirmaries, but another point is cropping up and is being ventilated in the public press and boards of guardians, and that is the amalgamation of the Poor-law unions. There can be no doubt that the amalgamation of neighbouring unions would cut down very much present expenses, a matter of no small moment just now in a country like Ireland, where agricultural depression is making the rural lot of the taxpayers a very heavy one. In favour of this policy of amalgamation it may be pointed out that the number of inmates in many of the provincial unions is much smaller than the number for which the workhouses were originally built. Thus, as pointed out by a writer in the *Freeman's Journal*, there were at the commencement of the year (September, 1893, to September, 1894) in the Lisburn Union 144 inmates in a workhouse originally built for 800; 230 in Armagh, which was built for 1000 inmates; and 382 in Tralee, which can accommodate 1000. Again, the question of expenditure for the indoor maintenance of the residents and the cost of salaries and rations bears a curious relationship. Thus in Ulster the indoor maintenance is £65,851, while the salaries and rations of officers cost £32,919; in Munster the relationship is £120,464 to £46,742; in Leinster, £131,469 to £46,823, while in Connaught it is £34,736 to £17,973; in other words, the total sum spent in Ireland on the salaries and rations of officers in the four provinces is £144,457, while that spent on indoor maintenance is £356,520, or, to put it another way, the cost of the salaries is about 40 per cent. of the actual cost of indoor relief. It is evident, therefore, that if there was amalgamation of two adjacent unions which are now not at all full, probably in many cases without any enlargement of the existing buildings one of

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these workhouses would accommodate all the inmates, and there would be an immense saving in the expense of salaries. At present if a union desires amalgamation with a neighbouring one the guardians apply to the Local Government Board, who send down an inspector to take evidence, which he lays before the Local Government Board, who have the power to issue an order for the amalgamation of the two unions if they think it desirable. Of course, to this system of amalgamation of unions there are the obvious objections that those in the employment of the unions must be thrown out of work, and undoubtedly this would have to be met by the consideration of vested interests. But one thing is evident—a complete change will have to be made in the present Poor-law system in Ireland, and if Mr. Gerald Balfour grants a commission to consider the matter the subject of the amalgamation of unions will undoubtedly be thoroughly considered. In the cities such as Dublin and Belfast the workhouses are much more crowded (indeed, some would say overcrowded) than in the provincial districts.

The Report of the Treasury Committee on the Retirement of Professors of the Irish Queen's Colleges.

Some of the evidence given before the committee recently inquiring into the question of the retirement of Queen's College professors is of considerable importance to the medical profession. It may not be generally known that medical professors who engage in private practice are not entitled to pensions, on the ground that they do not devote the whole of their time to the College, though, as one witness pointed out, the council of the College can and does call on them to give all the time to their professorial work which the interests of the College may require. Emphasis was also laid on the fact that the practical experience gained by those professors whilst engaged in their private practice is a very distinct advantage to the College, as it enables them all the more readily to keep pace with the advance of medical science; and it was very aptly suggested that the clinical hospital is to the medical professor what the laboratory or museum is to the Arts professor. It is very gratifying to find that the three presidents and the professors representing the three colleges were all unanimous in urging that justice should be done to the medical professors in the matter of pensions. This is all the more remarkable as none of the witnesses are directly connected with the medical faculties of the colleges. The evidence of Dr. Moffatt, President of the Galway College, was particularly valuable. After expressing his own opinion very forcibly he mentioned that the Rev. Osborne Gordon of Oxford, Mr. Herbert Murray of the Treasury, and Professor Allman, the Professor of Natural History at Edinburgh, were members of a Commission issued in the year 1876 to enquire into the condition and working of the Queen's Colleges and he gave the following extract from their report strongly urging that medical professors of the colleges ought to be entitled to pensions: "In an earlier portion of this report we stated that we saw no reason for increasing the stipends of the legal and medical professors, but that we thought it advisable that a claim to a retiring allowance should be admitted, as in the case of the Scotch Universities, irrespective of the question whether or not the whole time of the professors was given to the public. We are aware of the sound rule which has been established in the Civil Service under which a pension-right only accrues in those cases in which the public have a claim to the whole time of the servant; but we think that the essence of that rule lies in the fact that the public gains by the energies of its servants being centred on their public duties, while a liberal provision is made for retirement on the approach of age or on the failure of the faculties. But in the case of the professors of law and medicine the reverse is the case. The public is the direct loser if their activity is limited to their college life, and professional practice—the larger the better—is actually essential to sound and efficient teaching. It is also an objection to the present system that in Ireland, especially in the west—where the emoluments of a practice are comparatively small and where the salary of a chair is therefore of greater importance—the temptation of a pension in the future might possibly outweigh the immediate advantages of a practice, and that thus the restriction which is nominally imposed in the public interest might induce a professor to impair his efficiency as a teacher by abandoning the practice of his profession. At the same time, one of the main objects for which retiring allowances are granted seems to be overlooked, inasmuch as retirement in consequence of impaired efficiency never is and never will be enforced in the absence of pensions; professors past their work are continued in office and the public in consequence continue to pay full salary for inadequate and inefficient service. On these grounds we are of opinion that the rule which renders engagement in professional practice incompatible with a claim to a retiring allowance should be reconsidered in the case of the Queen's College professors, and that, as is the case in the Scotch universities, they should after reasonable service and under proper conditions be entitled to pension whether engaged in professional practice or not."

Oct. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Funeral of Monsieur Pasteur.

LAST week I gave your readers full particulars of the life and career of the great man who has been removed from our midst; to-day I must say a few words about the national demonstration of sorrow on the occasion of the removal of his remains from the Institute that bears his honoured name to the metropolitan Cathedral of Notre Dame. It may be said that one national funeral in Paris resembles another, but, with the exception of Victor Hugo, no personage in this country who was neither a soldier nor a statesman has been so honoured as was Louis Pasteur on Saturday last. Thousands of citizens of all grades of society visited the Institute to take a last look at the venerated features of him whom they acknowledged to have been the greatest known benefactor of suffering humanity. I will not attempt to describe the progress of the procession, but some idea of the proportions and importance of the cavalcade may be gathered from the fact that the magnificent funeral car, drawn by six horses, was escorted by no less a force than two infantry divisions, two regiments of artillery, and an entire cavalry brigade, under the command of General Saussier, Governor of Paris, and Generals Madelor and de Saint-Julien. At 10.15 A.M. the body was placed in the car, while on the coffin were placed the cocked-hat, coat, and sword of the deceased Academician. Headed by the band of the Garde Républicaine, playing Chopin's funeral march, the immense body of mourners wended their way to the Cathedral, General Saussier and his staff, followed by the First Infantry Division, taking precedence. Among the mourners were representatives of musical and gymnastic societies, syndicates, vast brewing interests, agricultural societies, humane societies, and numerous municipalities, including that of Paris, Dôle (his native place), and Arbois; deputations from the École Normale, École de Physique et de Chimie, École des Beaux-Arts, École Commerciale, &c.; students from Norway, the University of Salamanca, the Collège de l'Arc (Dôle), and from Russia; members of the Association Générale des Étudiants de Paris, in their Tam-o'-Shanters; the *internes des hôpitaux;* deputations from the Academy of Medicine of Medellin (Columbia), the Pasteur Institute of Havana, the Edinburgh University, and the Medical Society of London; and representatives of numerous learned French societies, including several Faculties of Medicine and the Professors of the Alfort Veterinary School. Wreaths of all sizes were carried in profusion, the names visible on them being, amongst others, Laboratoire Municipal, Préfecture de la Seine, Préfecture de Police, Conseil Municipal, &c. The hearse was loaded with floral tributes emanating from the Institut Pasteur ("A son chef"), the Duke of Orleans, the Laboratory of Experimental Pathology of the Paris Faculty, the Berliner Medicinische Gesellschaft ("ihrem grossen Ehrenmitglied Louis Pasteur"), the Experimental Institute of St. Petersburg, the University of Liége, the Pasteur Pavilion of the Cochin Hospital (Paris), the Association of Foreign Students of Paris, Portugal *reconnaissant*, the Toulouse Medical Faculty, the Service de la Diphtérie à l'Hôpital des Enfants Malades (Paris), the Distillers of France, &c. Then followed three immense wreaths, the first of natural flowers, bearing the inscription "A Louis Pasteur—le Roi de Portugal," the second composed of everlastings from the École Polytechnique (accompanied by a delegation of students in uniform), and the third of orchids and foliage, "A Pasteur—le Gouvernement de la République." The pall-bearers were M. Poincaré (Minister of Public Instruction), M. Bertrand (Permanent Secretary of the Academy of Sciences), M. Perrot (Director of the École

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Normale), M. Brouardel (Dean of the Paris Faculty of Medicine), M. Boissier (Permanent Secretary of the Académie Française), and M. Bergeron (Permanent Secretary of the Paris Academy of Medicine). The Royal College of Physicians of London were represented by their treasurer, Sir Dyce Duckworth. Then followed the deceased's son and son-in-law and other relatives, Madame Pasteur having proceeded directly to the Cathedral. After the family walked Commandant Bourgois, representing the President of the Republic (who awaited in person the arrival of the procession at Notre Dame), the President of the Council, the Foreign Minister, the Minister of the Interior, the Minister of War and of Marine—in fact, all the Ministers excepting one absent from Paris. The Corps Diplomatique, the two Houses of Parliament, the Legion of Honour, the Institut de France, officers of all arms, the Conseil d'Etat, Cour de Cassation, Cour d'Appel, clergy of all recognised denominations, &c., all were represented. Twelve mourning coaches and about a hundred private carriages followed, the enormous procession being closed by the Second Infantry Division, the cavalry, the artillery, a half-squadron of the Mounted Republican Guard, and a platoon of police. The entire distance covered by the procession was lined by troops, and the attitude of the immense crowds looking on was respectful in the extreme, every man uncovering and many women making the sign of the cross as the hearse passed. The *catafalque* upon which the remains were placed in the choir of Notre Dame was the same as was used at the funeral of the murdered President Carnot. The President of the Republic was seated in the prechoir, the officiating clergy being the Cardinal-Archbishop of Paris, the Archbishop of Sens, and the Archpriest of Notre Dame. Behind the President were the Grand Duke Constantine, Prince Nicholas of Greece, the Ministers, &c. The mass over, the coffin was transported to a *catafalque* erected in the square in front of the church and facing the Hôtel Dieu. Here, in the presence of the President and the family, M. Poincaré delivered a speech reviewing the scientific career of the illustrious dead. The following extracts from the Minister's admirable discourse merit transcription:—

"Les phrases les plus émues ne sont qu'un éloge bien médiocre devant la pieuse douleur que cette perte irréparable a provoquée dans la France entière et qui a rassemblé aujourd'hui, sur le passage de ce funèbre cortège, vieillesse et enfance, richesse et pauvreté, bonheur et infortune, toute une humanité respectueuse, unie dans l'égalité du regret. La science ne se lassera point, messieurs, d'admirer dans le génie de Pasteur la force combinée d'une imagination créatrice et de la plus rigoureuse méthode expérimentale. Il a des inspirations subites qui le portent vers des découvertes inattendues; il a des instincts divinatoires qui le poussent dans des routes inexplorées; il a de ces fougues de pensée qui devancent la constatation des vérités, la préparent, la font plus rapide et plus sûre. Mais, lorsque s'est posé devant lui, dans une de ces illuminations géniales, un problème scientifique, il ne le tient pour résolu qu'après avoir questionné la nature, après avoir groupé ou éliminé les faits, après les avoir définitivement condamnés à répondre. Il se garde de faire peser sur la sincérité de ses observations le poids d'aucun préjugé philosophique. 'La méthode expérimentale,' proclamait-il dans son discours de réception à l'Académie, 'doit être dégagée de toute spéculation métaphysique,' et, après avoir revendiqué pour sa conscience le droit d'affirmer hautement ses convictions spiritualistes et religieuses, il réclamait, non moins énergiquement, pour la science toutes les prérogatives de la liberté. Et c'est effectivement la libre curiosité de son esprit chercheur, aiguillonnée par cette puissance inventrice et secondée par cette scrupuleuse recherche des réalités objectives, qui l'a guidé dans la longue et brillante évolution de ses travaux scientifiques.

* * * * * *

"C'était la reconnaissance du peuple, des pauvres, des humbles, qui montait déjà vers Pasteur vivant, telle qu'elle s'incline aujourd'hui, émue et attendrie, devant ses dépouilles mortelles, telle qu'elle survivra, éternelle et immuable, à travers les générations futures. 'Heureux,' disait Pasteur, 'heureux celui qui porte en lui un idéal et qui lui obéit.' Il a obéi toute sa vie à l'idéal le plus pur, à un idéal supérieur de science, de vertu, de charité. Toutes ses pensées et toutes ses actions se sont éclairées au reflet de cette lumière intérieure: il a été grand par le sentiment comme il a été grand par l'intelligence, et l'avenir le rangera dans la radieuse lignée des apôtres du bien et de la vérité. Adieu, cher et illustre maître! La science, que vous avez si grandement servie, la science immortelle et souveraine, par vous devenue plus souveraine encore, transmettra aux âges les plus lointains l'ineffaçable empreinte de votre génie. La France, que vous avez tant aimée, gardera fièrement comme un bien national, comme une consolation, comme une espérance, votre souvenir vénéré. L'humanité, que vous avez secourue, environnera votre gloire d'un culte unanime et impérissable, où elle verra se fondre toutes les rivalités, et où elle conservera, vivante et forte, la foi commune dans le progrès infini."

The troops defile before the *catafalque*, which the men salute, the President takes his departure, and then the coffin is carried under the porch of Notre Dame, where it is awaited by the Archpriest and clergy. Thus was brought to a conclusion a ceremony which will live long in the memory of all who were privileged to be present. Its imposing character is a proof that the public is not unmindful of the efforts patiently made in laboratories to combat disease; and it is an encouraging sign of the times that the remains of one who, by the creation of his method, has not only achieved great sanitary triumphs, but has paved the way for further and almost undreamed-of successes, should be conducted to his resting-place with honours hitherto reserved for great soldiers or statesmen.

Oct. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Congress of Internal Medicine.

THIS Italian counterpart to the British Medical Association, which was to have met here from the 14th to the 16th inst., has had to make an alteration in its programme and will not meet till the 22nd inst. No harm will be done by this postponement of a week. On the contrary, the President, his Excellency Dr. Guido Baccelli, will be in better condition for the duties than he would have been on the days originally appointed. He has been ill from the effects of over-work and, though now convalescent, will gain much by another six or seven days of much-needed repose. No other alteration will take place in the programme, the main features of which, as already stated, will be the report on Serotherapy, introduced by Professors Foà and Marigliano, and that on Decline (*rallentamento*) in Nutrition, introduced by Professors De Renzi and Reale. This Congress will differentiate itself from its predecessors by a modification on previous programmes. The "Congressisti" will, for the first time, be invited to hear in the great hospital of the Santo Spirito three clinical lectures from three of the most eminent teachers and consultants in the Italian schools—to wit, Professor Achille De Giovanni of the University of Padua, where he holds the chair of Clinical Medicine; Professor Pietro Grocco, who fills the corresponding post in the Istituto di Studi Superiori of Florence; and Dr. Alberto Riva, Professor of Clinical Medicine in the University of Parma. These highly accomplished and experienced physicians have consented with alacrity to initiate this novel feature in Italian Congresses of Internal Medicine and will have the gratification of finding themselves once more face to face with many old pupils or with colleagues from other provinces of Italy by whom they have been called in consultation.

Singular Case of Homicidal Mania.

The fiendish performances of "Jack the Ripper" have had their analogue in Italy, which country need be under no apprehension of losing its prominence in *reati di sangue*. As that murderer chose unfortunate women for his victims, so his Italian prototype selected little children as the objects of his lethal propensity. His *modus operandi* was strangulation, and, having perpetrated the deed, he buried the corpses secretly. For a considerable time he pursued his *métier* with impunity, until he had thus disposed of five "bambini" at least. Arrested and put upon his trial, he was condemned to twenty years of *casa di forze* (close confinement with hard labour), but, having just "served his time" (always in Italy considerably short of the nominal term), he has announced his intention of returning to the scene of his crimes, his native Incisa, in Piedmont. At this the families of that town and neighbourhood have risen in alarm, the mothers being especially vociferous in their protest. To prevent disturbances the local authorities have taken precautions, and a strong police force is already on the spot. But what surprised the medical world is the ill-judged action of the civil magistrates in allowing this murderer to be at large. A more typical case of homicidal mania, confirmed by every anthropometric and psychological test, has seldom come before the profession, and his having been confined in an ordinary prison and not in one specially appointed for criminal lunatics is cited as another illustration of that perverse adhesion to juridical prejudice which evokes such indignant remonstrances from Professor Lombroso and his school. According to a medical correspondent the man's head is of the most misshapen, cretinoid formation, while his whole symptomatology, during trial and in confinement, relegated him to the class called "degenerati" in Italian criminal anthropology. The popular excitement, this time at least, is too openly and passionately on the side of medico-psychology

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to pass unnoticed by the authorities, civil and legal; and as I write provisions are on foot to prevent the man's reinstalling himself, unwatched or uncontrolled, in the neighbourhood he has saddened and sullied by his "slaughter of the innocents."

The Red Cross on the Red Sea.

In supplement to a previous reference to this medico-military enterprise I may add that there has set out for Massowah a new detachment of the Croce Rossa Italiana to reinforce the hospital of fifty beds now serving on the heights of Asmara. Some novel features have been introduced in the transport of this convoy. The small, but active and strong, Abyssinian mules have been turned to effective account, and also the hardy mountaineer population. The whole assortment of therapeutic and surgical appliances, linen, and such like is contained in impermeable sacks, while the materia medica and pharmaceutical gear, the *armamentarium chirurgicum*, and medical "comforts" are packed in small chests. The ambulance is further provided with a light, but strong and steady, operating-table, a tent, eight mountain *barelle* (transport seats), water barrels, &c. The Central Committee has prepared two such supplementary ambulances, aided by a handsome subvention from the Regional Committee of the Red Cross at Turin. One of these is, as I have said, on its way to the Erithrea (Red Sea Colony); the other remains here in reserve. The Sottotenente Medico (medical sub-lieutenant) of the Red Cross, Dr. Spinedi, is in charge of the convoy just started, with an efficient staff of *infermieri* (hospital attendants) under him.

Tourists and the Winter Season.

The Italian winter cities are preparing for the influx of the travelling world, the inhabitants of which are now showing an attention to "nettezza publica" (external tidiness) which they deny themselves until their English-speaking *clientèle* is expected. The great heat is now succeeded by delicious autumnal weather, and those who are fortunate enough to be now in Rome are revelling in the "Ottobrate" (October outings) so dear to native and foreigner alike and so brilliantly described in Cardinal Wiseman's "Fabiola." Rumour is busy with the names of distinguished visitors from the British Isles and has already made free with the plans of Her Most Gracious Majesty Queen Victoria. Naples, it says, is the probable scene of Her Majesty's vernal *villeggiatura*, and the public are gravely assured that the Queen will not be deterred from the Neapolitan Riviera by any fear of an eruption of Mount Vesuvius! The report, I need hardly say, is more than premature and seems to be little else than a revival of a similar one for which there was much more to be said just two years ago. Then there was no doubt that King Humbert had placed at Her Majesty's disposal the Palazza Reale at Capo di Monte, a magnificent mansion commanding an extensive view of Naples and surrounded by a park three miles in circumference, artistically laid out with delightful drives. The plan was that the Queen would first proceed to the Villa Fabricotti, near Florence, and after a sojourn there go by sea to Naples. This latter detail of her journey was *motivé* by the necessity of her avoiding Rome, where the difficulty felt by all Royal "arrivals" as to whether the Court of the Vatican or that of the Quirinal should receive their first visit is peculiarly real in Her Majesty's case—Leo XIII. being a personal friend of fifty years' standing, while Humbert I., though undoubtedly King of United Italy, is not acknowledged as such by His Holiness. No finer residence in Italy could be found for Her Majesty than Capo di Monte, its site between mountain and sea giving it a twofold advantage as to air, while in the first weeks of April, the time usually fixed for the Queen's sojourn, the easterly winds are followed by milder breezes, combining invigorating freshness with the warmth of a sub-tropical spring. But, as I have said, nothing is officially known as to Her Majesty's visiting Naples, any more than as to her coming to Florence, where the choice of a villa and the necessary preliminaries to a Royal sojourn are generally known months before they are put in requisition. In the case of Mr. Gladstone—another personage with whose winter movements report is busy—I believe the Riviera and Italy divide the preference of his advisers, it being still a question whether Cannes or Biarritz should come before Florence or Naples, or *vice versâ*. Next month, I understand, the final decision will be taken.

Oct. 6th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Municipal Elections.

THE strong anti-Jewish party in Vienna is jubilant in consequence of the elections having raised its leader, the famous Dr. Lueger, to the dignity of Mayor. The turmoil which has agitated a large part of the population of Vienna for the last two months has resulted in forty-six Liberals and ninety-two Antisemites being returned; there was no struggle for principles, but only for personal interests. Among those who have not been re-elected is that excellent hygienist, Professor Max Gruber, who was the representative of the Ninth District, the Vienna Quartier Latin. His opinion is that medicine ought to have no politics, and he therefore would not join either party. The municipality loses in him one of its best members and an authority on all questions of hygiene. Being a member of the Council of Hygiene his opinion on matters of public health is valued everywhere. Two physicians have been elected, Dr. Krenn and Dr. Rader, both of whom are uncompromising Antisemites; they will not, however, make up for the absence of Professor Gruber.

Charge against the Managers of a Hospital.

In Austria-Hungary there are a few hospitals under the care of the Brethren of Mercy (Barmherzige Brüder) which are conducted in an excellent manner, and in the Vienna hospital of this order the friars, who are duly qualified physicians, fulfil their difficult duties without deriving any personal advantage therefrom. The friars who conduct the hospital in Agram (Croatia) have, however, now been charged with neglect of cleanliness and with such parsimony that the patients do not receive a sufficiency of bread and meat. The linen is changed but twice a month, the mattresses, palliasses, and quilts are torn, and the kitchen utensils are in a bad condition, the glaze of the pans and the tinning of the copper vessels being worn off. There is so much overcrowding that the beds are placed in contact with each other and the patients cannot leave their beds without stepping across their neighbours'; some even lie on the floor or in the corridors. The nurses receive very low wages (12*s.* a month) and are thoroughly incompetent. The drinking-water is taken from the pipes in the waterclosets, and the hospital by no means satisfies modern requirements, the rooms being low, narrow, ill-lighted, and badly ventilated. Even the medicines are impure, and the patients' mixtures sometimes either consist only of water or else contain but a trifling quantity of the essential ingredient. This charge has not failed to cause a great sensation among the profession. It remains to be seen if it can be substantiated.

The Production of Antitoxin in Austria.

Up to July 1st camphorated serum has been supplied free of cost, its quantity amounting to 2130 bottles, containing 29,200 c.c. Since that time the gratis supply has been discontinued, and the price of a dose has been fixed at 2*s.* 5*d.*, each dose possessing a definite and experimentally ascertained curative power (100 units at least). The establishment is now capable of producing 1000 doses monthly. A dose of from 10 to 15 c.c. is sufficient in slight cases, but severe ones require a repetition of the treatment. The establishment directs the injection of the entire contents of a bottle, but when the serum is employed as a prophylactic from 2 c.c. to 3 c.c. are sufficient. The injection may be made on the anterior or inferior thoracic and abdominal regions or on the legs. The serum must not be exposed to light or heat.

Replantation and Transplantation of Teeth.

An interesting paper on this subject was read by Dr. Benedikt at a meeting of the Army Medical Staff at Budapest. He said that Ambrose Paré was the first who performed replantation of teeth, and was followed by Dupont and Pomaret, the latter of whom recorded a case where a tooth which had been extracted by mistake was replaced and eventually adhered. Weld has performed eighty replantations, among which two have failed, and he also proved by experiments on dogs that absolute integrity of the periosteum is one of the most important conditions of a permanent adhesion of the tooth. By replantation Dr. Benedikt means an operation by which a tooth is inserted into living tissue, with which it must enter into nutritive communication. He distinguishes between replantation and transplantation, the latter consisting in the transference of a

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tooth from one person to another. In his experiments he appeals to Professor Scheff, who extracted teeth of dogs under anæsthetics and with antiseptic precautions, the teeth being placed in a solution of sublimate. The wound was then disinfected, the bleeding was arrested, the coagulum was removed from the alveolus, and the tooth which was to be replanted was pressed into the cavity. After two days a reddish border was to be seen, and the tooth could be moved backwards and forwards, but after two weeks it was securely fixed. According to Dr. Benedikt the indications for the above operation are loosening of the teeth, caries, and inflammation of the periosteum surrounding the root. A tooth which has been removed from its socket by mistake on the part of the dentist or by violence should be replanted. In the case of toothache from caries where it is impossible to apply any remedy to the painful place the tooth may be extracted, filled with stopping after removal, and then replaced. Dr. Benedikt proposes that the tooth should be carefully extracted, avoiding injury to the socket or the surrounding gum, for a fracture of the alveolus would render subsequent union impossible. The root is then to be trimmed as far as it is rough and eroded, and the tooth is to be replaced after the removal of the pulp and the disinfection of both tooth and alveolus with sublimate. The operation is followed by no great pain and by only a trifling inflammation of the gums.

A Plea for Venesection.

Venesection is not in favour in Austria. Practitioners of the modern school have never seen it performed during their student years, and there are only a few old surgeons who regard it as a powerful means of combating all feverish processes. It must, therefore, appear strange that one of the most eminent Austrian physicians, Professor Jaksch, advocated the use of venesection at a meeting of the Medical Society of Prague, pointing out that its great therapeutical value consists in the immediate decrease of the blood pressure and in the diminution of the number of substances which carry oxygen. It may be employed in pneumonia, but only as a last resource, when the system is overcharged with carbonic acid. From 200 c.c. to 300 c.c. of blood may be withdrawn, and then a sterilised solution of common salt such as is used in physiological experiments is to be injected subcutaneously. The success of this treatment is manifested by the disappearance of cyanosis. Phlebotomy may also be resorted to in uræmia, provided that the patient's blood is normal as regards red corpuscles. Cupping may be employed to relieve the symptoms of carbonic acid poisoning and the pain of pneumonia, being less injurious than narcotics. It will sometimes calm the severe pain of pleurisy, and has also been known to effect improvement in cases of cyanosis and dyspnœa caused by emphysema and heart disease.

Cholera in Galicia.

During the week between Sept. 24th and 30th 18 cases of cholera and 12 deaths have been reported, making a total of 94 cases with 57 deaths (60·6 per cent.) since the commencement of the outbreak.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Cholera among the Hawaiians.

THE present epidemic of cholera in the Sandwich Islands is traced to a vessel from Kobe, Japan. Five hundred and thirty-eight Chinese were landed on Quarantine Islet on Aug. 9th from the steamer *Belgic*. They were from Hong-Kong, but the vessel had taken freight at Kobe and Yokohama, the former being a place where much cholera existed. Three deaths occurred on the passage, the alleged causes being pneumonia and heart disease. After landing there were 4 cases resembling cholera, and 3 were fatal. Thorough disinfection and isolation were used, and, no more cases occurring, in due time the 535 Chinese were transported to their destination on country plantations. Meantime, the disease had appeared in aggravated form on shore. It has now been gradually increasing for more than two weeks, but solely among natives. It is stated that the probable reason is that, while others have been protected by the thorough disinfecting and general sanitation employed, the natives have, perhaps in every case, been infected by eating raw fish, crabs, or sea-moss from the harbour and shoals adjacent — food which other people dislike, but which Hawaiians crave for. In several cases the victims were known shortly before being attacked to have eaten heartily of raw fish. The first cases on shore appeared after a native feast where the above-named foods were supplied. It is quite probable that the crabs had penetrated graves of Chinese cholera victims in quarantine who has been buried in the shallow sands, and had afterwards crossed a half-mile of shoal water and been captured by fishing women and eaten raw. It is evident that the disease crossed that strait in some way to the nearest land. A majority of the victims are stricken down with great suddenness and live from three to eighteen hours. Seven-eighths of the cases are fatal. Up to Sept. 5th there have been 34 cases and 29 deaths in a population of about 5000 natives and 15,000 of other races within city limits. Why is the fatality of the attacks so extreme? In general, it may be replied, the Hawaiian dies easily. He has weak resisting power against disease; he succumbs where most men would recover. This is characteristic of the race, as abundant missionary and medical experience testifies. It is largely due to lack of mental courage; pain and violent sickness terrify him; he readily becomes hopeless and gives up; his friends and his medicine-man tell him that an evil god has grappled with his vitals; he feels the demon at work within him, and he yields to terror and dies. This is the history of a large proportion of deaths among the Hawaiians. Another reason for the great mortality of this disease is that in most of the cases no proper medical aid is received until too late. The natives will not report a case of cholera until the patient is beyond relief. Since a cholera hospital was opened and patients removed to it an absolute aversion has seized upon them. The majority of the natives have always been afraid to go to the Queen's Hospital, for they wholly distrust the white "doctor," because they have been taught belief in, and fear of, the minor gods and demons, and licensed medicine-men have held classes for instruction in incantations and demon lore. The fees of these medicine-men being at stake the sick have been taught to have nothing to do with the white "doctor." It is a popular belief that the medical men give poison to their patients in the hospital. Many are received into the hospital when it is too late to help them, and some are already dead before they are reached by the medical man.

Serum Treatment of Tuberculosis.

Mr. Paquin, Professor of Bacteriology in the Missouri State University, argues that as the horse is immune against tuberculosis, its blood serum ought to work beneficently in patients suffering from this disease. He has been using injections in fifty cases and thinks he has proved its value. He claims that the blood of the horse can be used direct, as it is naturally immune and needs no artificial immunisation. He injects the serum under the skin.

Enforcement of the American Sabbath.

The recent efforts of the police of New York to enforce the excise laws requiring the closing of liquor saloons on the Sabbath has aroused the opposition of the German population. New York has over 9000 licensed liquor saloons, and although the law requires that they shall not sell any intoxicating liquors on Sunday the police have been very lax in the enforcement of this provision. Under the reform administration the law has been rigidly enforced, followed by a great reduction of crime and an improvement in the public health. The agitation of the question of the justice of that feature of the excise law which closes the "poor man's club" on Sunday, as the advocates of the saloon call these low resorts, comes before a general election, and is, of course, eagerly seized upon by the politicians. The result of a popular vote can scarcely be doubted when the vast German and Irish voting population is considered, whose vote will be cast solidly for what they term "personal liberty." There is, however, a large reserved vote which rarely appears at popular elections, but which may be induced to come out to meet the emergency. The power that moves this conservative vote emanates from the pulpit and the religious press, both of which are entering into the canvass with unusual vigour, determined to preserve the "American Sabbath."

Sept. 26th.

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Obituary.

SURGEON-GENERAL SIR THOMAS LONGMORE, KNT., C.B., F.R.C.S. ENG.

IN our last issue we only had time to make a brief announcement of the sudden death of Sir Thomas Longmore, the news of which reached us last week. It is now our task—painful yet full of interest—to lay before our readers the information which we have been able to gather concerning his life and work.

Sir Thomas Longmore was born at Southwark, in London, on Oct. 10th, 1816, so that at the time of his death he was within a few days of completing his seventy-ninth year. He was the eldest son of Mr. Thomas Longmore, a surgeon in the Royal Navy, who on retirement was appointed to the medical charge of Rockingham House, and of Maria, a daughter of Mr. John Elcum. He received his education at the Merchant Taylors' School and at Guy's Hospital, and in 1841 he was duly enrolled as a Member of the Royal College of Surgeons of England. At his hospital he soon made himself felt as an industrious student; he acted there as dresser to Mr. Bransby Cooper, and afterwards assisted him in his private practice and in writing Sir Astley Cooper's life. He also spent considerable time in arranging and cataloguing after the great surgeon's death the collection of specimens made by Sir Astley Cooper before the museum was purchased by the Royal College of Surgeons of England. On Feb. 3rd, 1843, he was gazetted to an assistant surgeoncy in the 19th Regiment of Foot. He joined the depôt at Dover, afterwards moving with it to Jersey and to Ireland. Early in 1845 he proceeded to the headquarters of the regiment in the Ionian Islands, and served with it there, in the West Indies, and in North America until its return to England in 1851. March 3rd, 1854, saw him gazetted as a regimental surgeon. He subsequently served with his regiment in the Light Division of the Eastern Army, and he was on duty from the date of its first taking the field, throughout the Crimean campaign of 1854-55, until the termination of the siege of Sebastopol, without being absent from his post for a single day. He, however, suffered not a little from the effects of frostbite during those never-to-be-forgotten winters, and to the day of his death carried the memory of hardships heroically and patiently borne, the results of which were, moreover, observable in his gait. He was present at the affair of Buljanac on Sept. 19th, at the battles of Alma and Inkerman, the battle of Balaklava, at the famous sortie on Oct. 26th, and at the assaults of the Redan on June 18th and Sept. 8th. For his services he received the medal with three clasps, the Turkish medal, and was made a Knight of the Fourth Class of the Legion of Honour. On the declaration of peace Mr. Longmore returned to England. He then very wisely improved his professional position by passing the examination for the diploma of the Fellowship of the Royal College of Surgeons of England. But he was not long allowed to remain in this country, for on the outbreak of the Sepoy Mutiny he was ordered with a detachment of his regiment to India, and during the years 1857, 1858, and 1859 served with the army in Bengal, at first as a regimental officer, but afterwards as Deputy-Inspector of Hospitals, the promotion to which rank, on Dec. 31st, 1858, was a further reward for his active services in the East. He thus attained administrative rank in less than sixteen years from the day on which he obtained his first commission. In January, 1859, he received the appointment of Sanitary Officer to the British Forces in Bengal, but in the following July, on the reduction of the establishment, he was ordered home and posted as Principal Medical Officer of the camp at Colchester.

During the Crimean War his skill as an operator had attracted considerable attention, and when, in 1860, Sidney Herbert founded the Medical School, for the better instruction of the medical officers of the army, the professorship of Military Surgery was offered to him and accepted on the advice and at the express desire of Dr. Alexander, the then Director-General. Endowed with excellent qualifications for the post, he filled it with much usefulness, dignity, and honour, and continued to hold it for nearly thirty-one years, until the termination of the summer session of 1891, when it became clear to him that he must seek the quiet and repose which age demands. After occupying the chair of Military Surgery for twelve years, on Oct. 19th, 1872, he was promoted to the rank of Inspector-(Surgeon) General, and in the same year he was appointed to be a member of the Committee on Field Hospital Equipment. Fourteen years later, on Oct. 10th, 1876, he was placed on the retired list, with permission to hold his chair of Military Surgery. On eight occasions he was called on to deliver the introductory addresses at the commencements of sessions of the School, and it fell to his lot to inaugurate the first sessions both at Chatham in October, 1860, and at Netley in May, 1863. In October, 1873, he took for his subject that of Hospital Arrangements in the Field, and the most effective means of affording surgical help to wounded soldiers on battlefields in European warfare. On a similar occasion, in April, 1878, he delivered an oration on the Existing State of our Naval, Indian, and Army Medical Services. In October, 1880, he dealt with the Antiseptic Treatment of Wounds in Military Practice in the Field, and at the opening of the winter session of 1886 he chose for the subject of his address Gentleness in Surgical Practice. His position as the acknowledged chief of the military surgeons of this country, at a time when the working of the Army Medical School and the organisation of our Medical Service were being studied by the chief Continental Governments, naturally brought his name frequently into great prominence and added not a few well-earned honours to the laurels which he had already won. Thus, from the date of his election in 1866, onward for many years he was "correspondant étranger" of the Société Impériale de Chirurgie de Paris; in 1877 he was elected "membre associé étranger" of the Société de Chirurgie de Paris; in 1884 he was made a corresponding member of the Academy of Medicine of France; and on March 27th, 1888, he was elected "associé étranger" of that institution. We have already mentioned that in 1857 he was made a Knight



SURGEON-GENERAL SIR T. LONGMORE, KNT., C.B.

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of the Legion of Honour; in 1879, by the decree of the President of the Republic, he was promoted to the grade of "officier" of the Legion. On March 13th, 1867, he was nominated a Companion of the Military Division of the Order of the Bath, and on Sept. 16th of the following year was gazetted Honorary Surgeon to Her Majesty. On the death of Inspector-General Charles Whyte he was appointed (Jan. 3rd, 1881) to receive the "distinguished service reward" thereby rendered vacant. He received the honour of knighthood at Osborne in 1886. At the annual assembly of the Order of St. John of Jerusalem in 1874 he read a paper which was the starting-point of the St. John ambulance classes. He was among the earliest of those selected as associates of the Order, and he was a life member of the Ambulance Association, in the workings of which he ever took a lively interest. He was also a Fellow of the Royal Medical and Chirurgical Society and of other learned bodies, and was for many years consulting surgeon to the Southampton Free Eye and Ear Hospital.

Sir Thomas Longmore frequently had the honour of being sent as a representative of the British Government to foreign countries. As early as 1864 he was deputed to attend the Congress at Geneva since known as the "Geneva Convention of 1864." In 1867 he was sent to Paris to take part in the International Conferences of the Societies for Aid to Wounded Soldiers in time of War. In 1869 he was at Berlin, as the British Government delegate, to take part in an International Conference on Aid to Sick and Wounded in War. In 1873 he was sent by the War Secretary to Vienna to report on the field hospital equipment collected at the "Sanitäts-Pavillon" of the World-Exhibition in that city. In 1876, at Brussels, he was president of a committee ordered to report on the appliances for aid to sick and wounded in war exhibited in the Sanitary Exhibition there. At Paris, in 1878, he represented the Government in an International Congress to consider the Medical Arrangements of Armies in the Field. At the International Medical Congress held in London in 1881 he was President of the Section of Military Surgery and Medicine, and in his address gave a sketch of the existing arrangements for ensuring systematic help and skilled attention to the wounded in case of England becoming involved in war (published in the Transactions of the Congress and in THE LANCET of Aug. 6th, 1881). In September, 1884, he again represented the Government at Geneva at the Conference of the Societies for Aid to Sick and Wounded in War; and in the autumn of 1887 he was sent to Carlsruhe to be present at the International Red Cross meeting in that city. In the June of the latter year the annual meeting of the Southern Branch of the British Medical Association was held at Netley, and Sir Thomas Longmore, as the President, delivered the annual address. In 1888 he was invited to act at Antwerp as British representative and member of the international jury for assessing the prizes offered by the Empress Augusta of Germany for the best forms for a movable hut-hospital. His report on the exhibition and the proceedings of the jury are printed in Vol. XXVI. of the Army Medical Reports. In October, 1889, he was sent by the Secretary of State for War to Paris to take part in the fourth session of the French Surgical Congress; he was elected one of the vice-presidents, and subsequently (1890) published a report on the proceedings, with observations on the Military Medical Schools of France. Of these conferences his reports may be found in the Army Medical Department Reports and in the special Transactions of the Congresses. The work which he did so well in the Army Medical School is shadowed forth in his writings. Although not a brilliant or voluble lecturer, he was most painstaking, precise, and conscientious. Those who listened to his discourses during the many years in which he held his chair, carried away with them the impression of the thoroughness with which his lectures were prepared and of the pains and trouble he took to make even the smallest point intelligible to them. When delivering his last address on July 17th, 1891, after announcing his coming retirement in terms of characteristic modesty and expressing that high sense of public duty which marked his whole career, he epitomised the changes and vicissitudes incidental to a growing and developing Service. No man could speak on such a subject with greater authority, for his one aim in life was to be, as far as may be, and not merely to be considered, a perfect soldier-surgeon. Entering the army as a regimental officer, he saw the regimental system abolished, the germ of a new, separate, and independent medical department planted in its stead, and he long and carefully watched its growth and development. We can echo the remark which Dr. R. Farquharson made (speaking of Sir Thomas Longmore's retirement, after distributing the prizes at the termination of the summer session of the Army Medical School, 1891), when addressing the young officers, that "they would know better some day than they did now that the progress of military surgery for the last thirty years was more intimately associated with the name of Longmore than with any other."

The career of Sir Thomas Longmore as a writer commenced about the year 1859, when he published a "Synopsis of Sixteen Cases of Heat Apoplexy" which occurred in Her Majesty's 19th Regiment at Barrackpore; it appeared in THE LANCET of March 26th of that year. He wrote a description of two additional cases in the sixth volume of the "Indian Annals of Medical Science." These papers were followed by a "Report on Gunshot and Sabre Wounds of Invalids sent to Fort Pitt during the years 1860 and 1861," which consisted of thirty pages and which he extracted from the Statistical, Sanitary, and Medical reports of the Army Medical Department; it was issued in the October of 1863. His first important literary work, however, was "The Illustrated Optical Manual," published in 1863, the earlier editions of which were intended exclusively for military practice. This manual reached a fourth edition in 1888, when it was issued as a text-book for civil as well as for military surgeons. Following these efforts there came from his pen these papers and books: "Remarks on the recently proposed American Plan of treating Gunshot Wounds of the Chest by Hermetically Sealing" (THE LANCET, Jan. 2nd, 1864); "A Note on some of the Injuries sustained by the late President of the United States" (President Lincoln) in THE LANCET of June 17th, 1865; a Catalogue of the Museum of Military Surgery at Netley (1867); a paper on "Amputation at the Knee-joint in Military Practice" (*Brit. Med. Jour.*, Jan. 5th, 1867); "A Treatise on the Transport of Sick and Wounded Troops" (1869), which he dedicated to his esteemed colleagues at Netley, to whose affectionate care he was so greatly indebted for recovery from a severe illness, and which was rightly described at the time of publication as "the most careful and thorough work on the transport of sick and wounded troops which has been published in any country"—a second edition of this work was brought out in the year 1893, edited by Surgeon-Captain W. A. Morris; "Remarks on the Instruments designed for Exploring Gunshot Wounds with a view to detect bullets or other foreign bodies suspected to be lodged in them" (*Brit. Med. Jour.*, Dec. 23rd and 30th, 1871); "Ambulances and Ambulance Service" (1875); "The Appliances for Aid to the Sick and Wounded in War, exhibited at Brussels in 1876"; "Instruction on the Examination of Recruits" (1882); "The Sanitary Contrasts of the British and French Armies during the Crimean War," published in 1883, in which he brought to notice the special circumstances which exercised so disastrous an influence on our army in the Crimea, and the measures which were adopted to restore its health; "On Field Dressings for Use in Time of War" (1887); an essay "On Gunshot Injuries" in the successive editions of "Holmes' System of Surgery"—in the third edition (1883) it extended to rather more than 100 pages (this essay had been previously reprinted both in the United and Confederate States, and was officially distributed during the Civil War); "The New Military Weapons and Explosives" (*Brit. Med. Jour.*, March 5th, 1892), being some observations which he forwarded to Geneva in support of a proposal to consider, at the approaching International Congress of Red Cross Societies at Rome, whether any modifications of existing field hospital arrangements were required owing to the general adoption of the new weapons and explosives in armies; and a biographical study of Richard Wiseman, Sergeant-Surgeon to Charles II., published in 1891. His *magnum opus* was entitled "Gunshot Injuries: their History, Characteristic Features, Complications, and General Treatment," the first edition of which he produced in 1877. It is the book which, next to Parkes' "Manual of Hygiene," is best known to the officers of the military medical services. A second edition, necessitated by the changes in the firearms and projectiles of all the leading armies, has just been issued from the press. It consists of nearly 800 pages, and occupied his attention to within a few weeks of his death. Sir Thomas Longmore has in this new edition endeavoured to bring his work up to date; on it he laboured but too well and

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too continuously for his own welfare; we know that he spared neither time nor trouble on the endeavour, and we feel sure it will be widely appreciated. We have already briefly stated that Sir Thomas Longmore was a member of several learned societies. As a Fellow of the Royal Medical and Chirurgical Society he was a frequent attendant at the meetings, and read the following papers, which can be found in the Transactions: "Remarks on Two Cases of Kelis" (1863); "On the Classification and Tabulation of Injuries and Surgical Operations in Time of War" (1871); and "Remarks upon Osteo-myelitis consequent on Gunshot Wounds of the Upper and Lower Extremities, and especially upon the treatment of stumps affected with Osteo-myelitis after amputation necessitated by such injuries" (1865). To the Army Medical Department Reports he was also a frequent contributor. Among his papers may be mentioned "Remarks on some of the Prussian Arrangements for the Transport of Wounded in Time of War" (1870); the report of a case of "Transfixion of the Right Side of the Chest and Right Lung by a Lance, with Recovery" (1871); the Reports on Invalids admitted into the Royal Victoria Hospital, Netley, for wounds and injuries received in New Zealand and in Egypt during the campaigns of 1865 and 1882 (Army Medical Department Reports, 1866, 1883); a Description of a preparation of the upper part of a femur after gunshot fracture, sent to Netley for preservation in the Museum (1884); and a "Report on the Competitive Exhibition of Movable Hut-hospitals at Antwerp in September, 1885." In these reports also appeared the introductory address he delivered at Fort Pitt on the opening of the Army Medical School; a Lecture on the relations of the Army Medical Department and its officers to other departments of the army; Notes on the examination of visual fitness of recruits; a Summary of the numbers, classes, and results of the gunshot and sabre wounds inflicted during the Mutiny; Remarks on hand-wheel litters; and a description of the water-colour drawings executed by Sir Charles Bell illustrative of wounds received at Waterloo. Though his writings are thus shown to be almost exclusively confined to military and medical professional subjects, yet in his account of Wiseman he has given us a glimpse of his keen appreciation of the work of the historian and biographer, and allowed the outside world to know something of that inner nature, so well known to his friends, which was devoted to a wider literature.

On Feb. 11th, 1862, he married at East Claydon, Bucks, Mary Rosalie Helen, second daughter of the late Captain W. S. Moorsom, of the 52nd Regiment, by whom he had issue four sons and three daughters. It is not for us here to say much of his private life or of the charm of the home circle, of which he was ever the centre and figurehead: we have been writing of the man as we knew him in his official capacity. As, however, we have been admitted to see something of his home life, and have enjoyed the privilege of spending pleasant hours with him since his retirement, we may, perhaps, be permitted to touch on the singular charm of character and mind which he possessed and which endeared him to all hearts. Many of his younger friends were wont to wend their steps towards his home when in want of human sympathy and of the sound and ripe advice which were ever at their service. Passing from the environment of our age—of rush and callous cynicism—we have felt, when nearing the threshold of "The Paddock," as if we were breathing a purer air and entering an area of calm judgment and repose. Not a few of us have, we think, returned from visiting him braced with a better courage to fight life's battle, and some, when passing down the drive from his home, carried to higher realms of thought, have heard an echo of the late Laureate's lyre—

> "A second voice was at mine ear,
> A little whisper silver-clear,
> A murmur, 'Be of better cheer.'"

In the drawing-room of this home, of which he was the light and life for over twenty-five years, hangs the replica of the portrait the original of which, painted by George Reid of Edinburgh and exhibited at the Royal Academy in 1887, now occupies an honourable position in the ante-room of the officers' mess at Netley. It was presented to the Army Medical Department by Sir Thomas Longmore's comrades of the Military Medical Departments as a testimonial in recognition of his great services. Both the portrait and the replica, which latter was presented to Lady Longmore, are excellent likenesses. He is represented, in undress uniform, in the act of delivering a lecture; the artist has been singularly happy in catching that expression of earnest thoroughness which was usual to him on such occasions. His death was terribly sudden, though to those who knew him well it did not come as a surprise, for during the last few years he had many times suffered from attacks of cardiac weakness associated with faintness and other warning signs. On the morning of Monday, Sept. 30th, he was apparently in his usual health, and at a quarter past seven o'clock said farewell to his son-in-law who had been staying with him; before 8 o'clock he was no more. Though his call came thus suddenly his friends well knew that he was ready, and that, inspired with a holier and sublimer faith than the great Roman orator possessed, he could with a more joyful anticipation exclaim: "O præclarum diem, cum ad illum divinum animarum concilium cœtumque proficisci." From Swanage, Dorset, where, as had been his custom for many years, he had been spending a few weeks, his body, enclosed in a coffin of unpolished oak, was brought to Hamble, the village where he resided during his early Netley days, on the evening of Oct. 2nd, and at three o'clock on the following afternoon it was consigned to a grave on the north side of the churchyard, in the presence of his widow and family and a large gathering of friends. Among the latter were included the present staff of the Army Medical School and the military medical staff of the Royal Victoria Hospital, headed by Sir William Mackinnon, K.C.B., the Director-General. His old friend, the Rev. T. L. O. Davies, Vicar of Woolston, and the Rev. J. J. Curling, Vicar of Hamble, read the impressive service.

Our duty is all but finished; we have endeavoured to tell of the work of Sir Thomas Longmore, of the work of a man who ever trod strictly in the straight path, who did justice, and loved mercy. Of him we may truly say that no man rendered greater services to his Department, nor strove more in his generation to advance its interests, to promote scientific progress, and to raise to a high standard professional military education. In conclusion, we feel we cannot do better than quote the words which Sir William Mackinnon made use of at the meeting of the Senate of the Army Medical School, held in July, 1891, when giving expression to the unanimous feeling of regret felt on Sir Thomas Longmore's retirement from public life; he said that Sir Thomas Longmore "had not only raised the reputation of the Army Medical School as well as the Medical Service of the army generally by his great works on military surgery and ambulance transport and by his many admirable works and reports, but had achieved through the medium of these a reputation throughout Europe and America which reflected infinite credit upon the Service of which he was so bright an ornament."

WILLIAM HENRY BELLOT, M.D. ERLANGEN, L.R.C.P. EDIN., F.R.C.S. ENG.

WE regret to have to record the decease of a venerable and highly respected member of our profession, Dr. Bellot of Leamington, who passed away on Sept. 24th at the advanced age of eighty-four years. He was the son of a Manchester surgeon and became a Licentiate of the Society of Apothecaries in 1833. In the following year the Royal College of Surgeons of England admitted him as a Member and conferred the Fellowship on him in 1852. For many years he practised in Stockport in association with his uncle, Mr. Bellot, and married the daughter of Mr. Killer, an old-established practitioner in the town. In addition to many other public appointments he was staff surgeon to the Cheshire militia and honorary surgeon to the Stockport Infirmary. In 1860 he took the diploma of L.R.C.P. Edin., and graduated as M.D. of the University of Erlangen in 1862. About thirty years ago Dr. Bellot took up his residence in Leamington, where he gave much of his attention to the affairs of the public institutions of the town, and up to the time of his death was on the committee of the Warneford Hospital. He has left a widow and family.

A MEETING of the South-Western Division of the Medico-Psychological Association will be held at Wonford House, Exeter, on Tuesday, Oct. 15th. Dr. Deas will provide light luncheon between 1.30 and 2.30 P.M. Wonford House is fifteen minutes' drive from Queen-street Station, and twenty minutes' from St. David's. Dr. Deas will open a discussion on the Uses and Limitation of Mechanical Restraint as a Means of Treatment; Dr. Mac-Donald will read a paper on Nursing; and Dr. Morton will read Notes on three cases of Spontaneous Gangrene.

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Medical News.

UNIVERSITY OF CAMBRIDGE: EXAMINATION IN SANITARY SCIENCE.—The following candidates have satisfied the examiners in both parts of the examination:—

Robert Frederick Carse, Christopher Childs, Thomas Dunlop, John Galletly, James John Gorham, Charles Robert Mortimer Green, Patrick Gill Griffith, Charles Williams Hayward, Ernest Hill, Kate Marion Hunter, Arthur Jervis, David Clark Muir, George Newman, William James Potts, John Thomson Prangnell, and Malcolm Alexander McIntyre Sinclair.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated on Monday, the 7th inst.:—

Anatomy and Physiology.—Alfred Holroyd, Yorkshire College, Leeds; Guy Harle Irvine, Frederick Arthur Coates, Edgar Steele Edwards, and James Williamson Wallace, University College, Bristol; Saville Bentley, Firth College, Sheffield; Arthur Myddleton Dodd and Alfred Johnson, University College, Liverpool; Frank Edward Wayte and William Taylor Jackson, Owens College, Manchester; James Henry Mort, Cambridge University and Owens College, Manchester; Geoffrey Orr Fern Sealy, Grant Medical College, Bombay; Edward Hugh Musgrove, University College of South Wales, Cardiff; Joseph Longheed Baskin, Queen's College, Cork; and Willoughby Arthur Blackstone, University College, London.

Anatomy only.—George Whittenburg White, Firth College, Sheffield; Edgar Ashby, Guy's Hospital; and George Beley, St. Thomas's Hospital.

Physiology only.—William Stanley Boothman, Owens College, Manchester; George Lionel Wright, University College, Bristol; Charles Braginton Salway, St. Thomas's Hospital; Arthur Bradshaw Passmore, Guy's Hospital and Durham University; Edward Thomas McDonnell, Queen's College, Belfast, and Mr. Cooke's School of Anatomy and Physiology; and Martin Clover, University College, London.

Seventeen gentlemen were referred in both subjects, four in Anatomy only, and one in Physiology only.

Tuesday, the 8th inst.:—

Anatomy and Physiology.—Cecil Francis Watson, Harry Stanley Turner, Robert John Pritchard, and Edward Cecil Davies, Guy's Hospital; Francis Lionel Rae, Cambridge University and Guy's Hospital; Henry Herbert Elworthy and Charles Stanley Cato, Westminster Hospital; John Maltby Edwards, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology; Horace Sampson Roch, King's College Hospital; Charles Edward Evans, University College, London; Samuel Hey, Cambridge University and St. Bartholomew's Hospital; William Inglis Bradley, McGill College, Montreal, Canada; George Young, London Hospital and Trinity College, Dublin; Alfred Reginald Key, Isaac Llywelyn Morris, and Francis Graham Richards, St. Bartholomew's Hospital.

Anatomy only.—John Edmund Francis and John William Cheese, University College, London.

Physiology only.—Guy Berners Nicholson, Cambridge University and St. Bartholomew's Hospital; Edwin Fryer, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Sixteen gentlemen were referred in both subjects, two in Anatomy only, and two in Physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the under-mentioned subjects (September, 1895):—

Surgery.—Butcher, F., Royal Free Hospital; Garrow, A. E., McGill University; Jones, R., St. Mary's Hospital; Preston, C. C., Manchester; Renshaw, C. A. K., Cambridge and Manchester.

Medicine, Forensic Medicine, and Midwifery.—Breton, L. M., St. Thomas's Hospital; Butcher, F., Royal Free Hospital; Cryer, J., Manchester; Garrow, A. E., McGill University; Old, J. E. S., London Hospital; von Humpe, E. T. V., Royal Free Hospital.

Medicine and Forensic Medicine.—Abbott, T. B., Leeds; Downes, G., Dublin.

Medicine.—Sims, E. E., Leeds and Glasgow.

Forensic Medicine.—Grace, A. H., Bristol; Hilton, A., Manchester; Holst, M. K. S., Royal Free Hospital; Young, T. W. H., Toronto.

Midwifery.—Goulden, R., Manchester; Wallis, P. E., University College.

To Messrs. Abbott, Breton, Butcher, Cryer, Downes, Garrow, Old, and Sims was granted the diploma of the Society entitling them to practise medicine, surgery, and midwifery.

Primary Examination. Part II.

Anatomy and Physiology.—J. W. Cheese, University College; L. D. B. Cogan, Guy's Hospital; G. S. Foulds, Manchester and Edinburgh; E. Fryer, Guy's Hospital; C. E. Hogan, St. Bartholomew's Hospital; D. V. Lowndes, London Hospital; B. S. O. Maunsell, St. Bartholomew's Hospital; H. E. Miller, Guy's Hospital; and C. E. White, Edinburgh.

Anatomy.—S. E. Bhagtani, King's College Hospital; H. Charles, Middlesex Hospital; J. C. S. Dunn, St. Bartholomew's Hospital; G. W. Dutton, Middlesex Hospital; J. Elul, Edinburgh; B. Hogan, London Hospital; A. E. Hoare, St. Thomas's Hospital; R. O. Jones, Guy's Hospital; E. F. Lamport, Royal Free Hospital; and H. W. B. Walling, Guy's Hospital.

Physiology.—F. G. Aldrich, Charing-cross Hospital; H. J. de Saram, Middlesex Hospital; A. H. FitzGibbon, St. Bartholomew's Hospital; W. M. Hocken, Liverpool and Edinburgh; H. G. Lewer, Edinburgh; E. P. Marett, St. Thomas's Hospital; W. P. E. Newth, St. Thomas's Hospital; and J. Scarr, Manchester.

Biology.—E. Yoxall, Birmingham.

Chemistry.—R. Brookes, Westminster Hospital; C. H. Thomas, London Hospital; and A. H. Wilson, Birmingham.

Materia Medica and Pharmacy.—F. E. T. Evans, Royal Free Hospital and E. C. Scarlett, Royal Free Hospital.

Materia Medica.—H. Greenwood, London Hospital.

THE LONDON HOSPITAL MEDICAL SCHOOL.—The Price Scholarship in Science, value £120, has been gained by Mr. H. Balean; Science Scholarships of £60 and £35 respectively by Mr. O. Eichholz and Mr. A. B. Soltau. Price Scholarship in Anatomy and Physiology for university students has been awarded to Mr. R. C. Wall and Mr. J. H. Evans jointly.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held at the Miller Hospital, Greenwich, on Oct. 4th, when the following officers were appointed for the ensuing year:—President: Ernest Clarke, M.D., B.S. Lond., F.R.C.S. Vice-Presidents: Peter Cooper, M.R.C.S., L.R.C.P.; and Frank Tayler, B.A., M.B. Lond. Council: A. Stewart Brown, F.R.C.S. Edin.; Morgan Dockrell, M.A., B.Ch., M.D. Dub.; George Herschell, M.D. Lond.; Arbuthnot Lane, M.S. Lond., F.R.C.S.; Clarke Morris, M.R.C.S.; C. J. Parke, M.R.C.S.; and Septimus Sunderland, M.D. Brux. Treasurer: Prior Purvis, M.D. Lond. Secretary: E. H. Ezard, M.D., C.M., D.Sc. Edin. Librarian: J. P. Henry, B.A., M.D., B.Ch. Dub. The Purvis Oration was delivered by Professor Curnow, M.D., who chose for his subject, Medical Examinations and Medical Education.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Thursday, Oct. 3rd, the President (Dr. Uhthoff) in the chair. Messrs. John Bradbury Winter and John Francis Atkins were elected members of the society. Dr. A. J. Richardson showed a child from the Sussex County Hospital suffering from infantile palsy in both legs with double talipes equino-varus. Dr. Richardson also showed photographs of a case of Sciopody in a girl aged ten, who was under his care. Mr. Sanderson showed a patient for whom nine months ago he had removed the breast for scirrhus, as well as the lymphatics of the axilla and of the posterior triangle, and he strongly recommended this extension of the operation in all cases. Dr. Uhthoff gave an account of a very rapid case of diabetes in a girl aged seventeen, who passed quickly into diabetic coma, fatal in six hours. Dr. Maynard read notes of an unusual case of intestinal obstruction in which dilatation of the stomach had existed for a long time. Colotomy had been followed by complete relief from all the symptoms of dilatation.

THE CHURCH SOCIETY FOR THE PROMOTION OF KINDNESS TO ANIMALS AND THE CHURCH SANITARY ASSOCIATION.—At the annual meetings of the Church Society for the Promotion of Kindness to Animals and the Church Sanitary Association, which were held jointly in the Church House, Westminster, under the presidency of the Dean of Rochester, Dr. Sykes, medical officer of health for St. Pancras, read a paper on Public Slaughter-houses and the Proper Inspection of Meat. In the course of the proceedings it was mentioned that the societies had memorialised the London County Council, the Board of Agriculture, and the Local Government Board for amended legislation in respect of public slaughter-houses. Dr. Norman Kerr said that their object was to carry to every parsonage in the land the conviction that it was the duty of the clergy to make use of the Church's machinery in every parish to secure improved sanitation and the greatest possible immunity from infectious disease. The Rev. Septimus Buss, Vicar of Shoreditch, remarked that the question of the clergy dealing with the public health had been a matter of discussion. The opinion of the Church Sanitary Association was that, while it was the first duty of the clergy to press upon the people the acceptance of the Gospel, it was right that they should also deal with those things which concern the welfare of the body. The Dean of Rochester, in the course of a long address, described a visit which he had recently made to an establishment in Chicago, the largest of its kind in existence, where 8000 pigs and 3000 cattle were slaughtered daily. Everything was done as humanely as possible, and he did not believe that any more pain was inflicted than was absolutely necessary. In his concluding remarks Dean Hole strongly advocated the adoption of smoke-consuming furnaces, and complained that Rochester, which twenty years ago was one of the prettiest cities in the kingdom, now suffered very much from the unwholesome and offensive emanations of the cement factories.

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BRISTOL UNIVERSITY COLLEGE.—The winter session commenced on Oct. 2nd, when the opening address was delivered by Sir C. M. Kennedy, K.C.M.G., C.B., late of the Foreign Office and Vice-President of the Society of Arts of London. Sir C. Kennedy has joined the staff of the College as lecturer upon international law, and his address was entitled "Diplomacy and International Law."

FOOTBALL CASUALTIES.—On Saturday last one of the backs in the Grantham Rovers' team, while playing a match at Grantham between the Grantham Rovers and Wellingborough teams, fractured his right leg below the knee, and was conveyed to the hospital. On the same day a young man, during a game at Farnworth, sustained injuries to the abdomen, from which he died on Tuesday last.

MRS. SAXTON, of the Elms, Shrewsbury, has given a sum of money to the Salop Infirmary from the funds of the Gwyn Trust. The interest of this money is to be devoted to the maintenance in perpetuity of two beds in the children's ward, over each of which an inscription will be placed stating the endowment to have been furnished by Mrs. Saxton in memory of her parents.

THE SIXTH INTERNATIONAL CONGRESS OF OTOLOGY.—The Sixth International Congress of Otology will meet in 1899, as already stated, in London, and its organising committee is thus constituted: Dr. C. A. Ballance, Dr. A. E. Cumberbatch, Sir W. Dalby, Mr. G. P. Field, Dr. J. Dundas Grant, Mr. T. Mark Hovell, Dr. U. Pritchard (President), Dr. W. Laidlaw Purves, and Dr. St. Clair Thomson, all of London; Mr. Cresswell Baber, Brighton; Dr. T. Barr, Glasgow; Dr. A. Bronner, Bradford; Dr. J. W. Browne, Belfast; Dr. C. E. Fitzgerald, Dublin; Dr. P. McBride, Edinburgh; Dr. F. M. Pierce, Manchester; and Mr. G. Stone, Liverpool.

THE GUILD OF ST. LUKE, EVANGELIST AND PHYSICIAN.—The thirty-first anniversary of this Guild will be celebrated next week. On the Feast of St. Luke Evensong will be sung at St. Paul's Cathedral, when the Bishop of St. Andrews will be the preacher. The music will be rendered by the London Gregorian Choral Association, and the offerings will be for the expenses of the services and the Medical Missionary Fund. On the following day there will be a corporate Communion of the Guild at the Church of St. Thomas, Regent-street, at 8 A.M., and there will be celebrations for the intention of the Guild in some 600 churches throughout England and Wales, Scotland, and America. On Saturday, Oct. 19th, the annual general chapter will be held at the Holborn Restaurant at 6 P.M., when the report of the council will be presented, the Provost's address delivered, and the officers elected for the ensuing year.

DIPHTHERIA IN LONDON.—Last week diphtheria in London was not quite so fatal in form as in the week preceding, so far as London proper was concerned at all events; but it is now exhibiting a phase which is by no means of a satisfactory character, inasmuch as the disease is assuming a fatal tendency in the suburbs above its recent records. In the West Ham registration district it has for a long time shown a disposition to remain epidemic, and during last week it was widespread in East and West Ham, not being confined to Plaistow, as has been its wont for the most part. The deaths in the whole district last week numbered 10; and in addition to these there were 4 registered in the northern union of Edmonton, some of them in the suburb of Hornsey, and others as far out as Cheshunt; while on the west the suburban locality of Willesden was fatally invaded, 4 deaths being recorded there in the week. In all there were 31 registered deaths from the disease in the outer ring of the metropolis, only 13 short of the number for the whole county of London. The 44 registered deaths in the county were a fall from 56, and only 2 in excess of the corrected decennial average for the corresponding week of the years 1885-94. They all occurred in young persons under the age of twenty years, and 5 belonged to St. Pancras, 4 to Hackney, and 3 each to Kensington, Bethnal-green, Limehouse, Poplar, and Greenwich sanitary areas. The admitted cases to hospital were 90 in number, a smaller total than in many weeks past, former recent totals being 105, 114, and 114. The patients remaining in hospital—namely, 672—were much the same as for some weeks successively, but the attacks show no such diminution as the admissions and deaths seemed to warrant last week.

SOCIETY OF ANÆSTHETISTS.—The third annual meeting of this society will be held at Limmer's Hotel, Conduit-street, W., on Thursday next, Oct. 17th, at 7 P.M., to receive the reports of the council and treasurer and to elect the officers and council for the ensuing year.

ROYAL BRITISH NURSES' ASSOCIATION.—A donation of £100 has been made by an anonymous donor to the funds of this association. We are asked to state that the gift is most gratefully acknowledged by the treasurer on behalf of Her Royal Highness the President and the Executive Committee.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—*University Scholarships:* R. R. Wade, B.A., Exeter College, Oxford, £52 10*s.*; G. S. Keeling, B.A., Caius College, Cambridge, £52 10*s.* *Natural Science Scholarships:* W. H. Willcox, £105; H. Lovell-Keays, £52 10*s.*; E. W. Holyoak, £52 10*s.*; A. F. Hayden, £52 10*s.*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BIRD, F. D., M.B., Ch.M. Melb., M.R.C.S. Eng., has been appointed Medical Officer to the Melbourne Hospital, Victoria, Australia.

BOWE, ARTHUR, L.R.C.P., L.M. Edin., M.R.C.S. Eng., has been reappointed Health Officer for the Shire of Ararat, Victoria, Australia.

BOYD, W. R., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed Physician to Out-patients, the Melbourne Hospital, Victoria, Australia.

CANE, LEONARD, M.D. Lond., B.S., has been appointed Physician to Peterborough Infirmary, vice Paley, deceased.

COLLIER, THOS., M.R.C.S., L.M., has been reappointed Medical Officer of Health for the Ripon Rural Sanitary District.

DAISH, W. C., M.D. Melb., Ch.B., has been appointed Physician to Out-patients, the Melbourne Hospital, Victoria, Australia.

DONOVAN, P. H., M.B., B.S. Irel., has been appointed Health Officer for the Rosedale Shire, Rosedale and Denison Ridings, Victoria, Australia, vice Cookson, resigned.

ELLIS, W. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Tollerton Sanitary District of the Easingwold Union.

FITZGERALD, T. N., L.R.C.S. Irel., has been appointed Medical Officer to the Melbourne Hospital, Victoria, Australia.

GARLAND, E. C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Yeovil.

HAMILTON, A. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Shire of Mansfield, Victoria, Australia, vice Reynolds, resigned.

HILL, CHARLES ALEX., M.B., B.A., B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Obstetric Assistant at St. George's Hospital.

HOWARD, G. J., M.D., Ch.B. Melb., has been appointed Physician to Out-patients, the Melbourne Hospital, Victoria, Australia.

HOWARD-JONES, J., D.Sc. Pub. Health, M.B., C.M. Edin., has been appointed Medical Officer of Health, Medical Officer to the Port Sanitary Authority, &c., for Newport (Mon.).

KNIGHT, HENRY, M.R.C.S., L.R.C.P., has been appointed House Surgeon at the West London Hospital.

LANGLANDS, F. H., M.B., Ch.B. Melb., F.R.C.S. Eng., has been appointed Surgeon to Out-patients, the Melbourne Hospital, Victoria, Australia.

LAWRENCE, H. F., L.R.C.P., L.R.C.S., M.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Physician to Out-patients, the Melbourne Hospital, Victoria, Australia.

MACINERNEY, J. R., M.D. Durh., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Physician to the Melbourne Hospital, Victoria, Australia.

MERSON, A. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for Aberdour and District.

MILNER, CYRIL W., M.R.C.S., L.R.C.P., has been appointed Assistant Resident Medical Officer to the Nottingham General Dispensary.

MOLONEY, P., M.B. Melb., has been appointed Physician to the Melbourne Hospital, Victoria, Australia.

MOORE, WM., M.D., Ch.M. Melb., has been appointed Surgeon to Out-patients, the Melbourne Hospital, Victoria, Australia.

NIHILL, J. E., M.D. Durh., M.R.C.S. Eng., has been appointed Physician to Out-patients, the Melbourne Hospital, Victoria, Australia.

NOYES, A. W. F., M.R.C.S. Eng., has been appointed Surgeon to Out-patients, the Melbourne Hospital, Victoria, Australia.

PAYNE, G. S., M.R.C.S., has been appointed Medical Officer of Health for Thorney.

RENNIE, G. C., M.B., Ch.M. Melb., has been appointed Surgeon to Out-patients, the Melbourne Hospital, Victoria, Australia.

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ROBERTSON, J. A., M.D., C.M. Glasg., has been reappointed Medical Officer for the Stilton Sanitary District of the Peterborough Union.

RYAN, C. S., M.B., Ch.M. Edin., has been appointed Medical Officer to the Melbourne Hospital, Victoria, Australia.

SPRINGTHORPE, J. W., M.D., Ch.B. Melb., M.R.C.P. Lond., has been appointed Physician to the Melbourne Hospital, Victoria, Australia.

STANLEY, H., M.B., B.S. Camb., has been appointed Medical Officer for the Sellindge Sanitary District of the Elham Union.

STEELE, W. C., M.B., C.M. Glasg., has been appointed Medical Officer for the Seventh Sanitary District of the Tendring Union, vice Potter, resigned.

STEPHENS, WILLIAM J., M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer to the Nottingham General Dispensary, vice H. E. Belcher, resigned.

STIRLING, R. A., M.B., Ch.B. Melb., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer to the Melbourne Hospital, Victoria, Australia.

SYKES, Dr. J. F. J., Medical Officer of Health, St. Pancras, has been appointed Lecturer on Public Health at Guy's Hospital Medical School.

SYME, G. A., M.B., Ch.M. Melb., F.R.C.S. Eng., has been appointed Surgeon to Out-patients, the Melbourne Hospital, Victoria, Australia.

TAYLOR, H., M.B. Lond., M.R.C.S., has been appointed House Surgeon to the North Cambridgeshire Hospital.

THOMAS, P. M., M.D. Cleveland, has been appointed Medical Officer for the Conwyl Sanitary District of the Carmarthen Union.

THOMSON, ST. CLAIR, M.D., F.R.C.S., has been appointed an Assistant Surgeon to the Royal Ear Hospital, Frith-street, Soho-square.

THRESH, J. C., M.B., B.S. Univ. Vict., D.P.H. Camb., has been appointed Medical Officer of Health for the County of Essex.

WATKINS, J. W., M.D. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Newton-in-Makerfield Urban District.

WILKIN, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Risbridge Union.

WILLIAMS, J., M.D., L.M. Edin., M.R.C.S. Eng., has been appointed Physician to the Melbourne Hospital, Victoria, Australia.

WILSON, J. H., M.D., B.S. Durh., has been appointed Medical Officer for the Standish Sanitary District of the Wigan Union.

WINN, JOHN, L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer of Health for Clayton-le-Fylde.

WORSLEY, H., M.R.C.S., has been appointed Medical Officer of Health for the Church Urban Sanitary District, vice Loynd.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, S.W.—Surgeon to out-patients.

BOROUGH OF SCARBOROUGH.—Medical Officer of Health for the District of the Borough for one year. Salary for first year £325, for the second year £350, and for the third and each following year £375. The Officer will also be required to act as Public Analyst at a further salary of £25 per annum. Applications to the Town Clerk, Town Hall, Scarborough.

BRISTOL EYE HOSPITAL, Lower Maudlin-street.—Third Honorary Assistant Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser for three years. Salary £50 per annum, with board, apartments, and laundress.

EAST RIDING LUNATIC ASYLUM, Beverley.—Assistant Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and washing.

EAST SUSSEX COUNTY COUNCIL.—Consulting Medical Officer for one year. Honorarium of 100 guineas and travelling expenses.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £80 per annum, with board, &c. Also Junior House Surgeon. Salary £70 per annum, with board, &c.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, unmarried, at the Western Hospital for Fever patients, Seagrave-road, Fulham, S.W. Salary £160 per annum for the first year, £180 for the second year, and £200 for the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk House, Norfolk-street, Strand, W.C.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum for the senior post.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon for six months. Salary at the rate of £120 per annum, with rooms, fire, and light.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

ROYAL BERKS HOSPITAL, Reading.—Consulting Dentist.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments and board.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, Bloomfield-street, E.C.—Assistant Surgeon.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 a year to £130, with furnished rooms, coal and gas, and an extra allowance of £25 for travelling expenses. Applications to the Hon. Sec., The Firs, Norton, Stourbridge.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, W.—Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum, with furnished apartments, attendance, coal, and light.

THE RURAL DISTRICTS OF BUNTINGFORD, HADHAM, HERTFORD, STANSTED, AND WARE, AND THE URBAN DISTRICTS OF BISHOP'S STORTFORD, HERTFORD, HODDESDEN, AND WARE.—Medical Officer of Health for the above districts. Salary £600 per annum, including travelling and all other expenses. Applications to the Clerk of the Joint Committee, Council Offices, Baldock-street, Ware, Herts.

WOOLWICH UNION.—Dispenser of Medicines at the Woolwich Dispensary. Salary £90 per annum, with unfurnished apartments, gas, water, and coal. Application to the Clerk, Union Offices, Woolwich.

Births, Marriages and Deaths.

BIRTHS.

BARTON.—On Oct. 3rd, at Cloghan Castle, Banagher, King's County, the wife of James Kingston Barton, M.R.C.P. Lond., of Courtfield-road S.W., of a son.

BREESE.—On Oct. 8th, at Kennington Park-road, the wife of F. Breese, L.D.S. Eng., of a son.

BRYDEN.—On Oct. 5th, at Harmer-street, Milton-next-Gravesend, the wife of Richard J. Bryden, M.R.C.S. Eng., L.S.A. Lond., of a son.

BULLOCK.—On Oct. 3rd, at Ladbroke-grove, London, W., the wife of J. Ernest Bullock, M.D. Brux., of a daughter.

DOUGLAS.—On Sept. 20th, at Sanchez, Santo Domingo, the wife of Robert Douglas, M.B., C.M., of a son.

FITCH.—On Oct. 4th, at Church Gate House, Chaddesley Corbett, Kidderminster, the wife of Dennis Fitch, M.R.C.S., of a daughter.

HUDSON.—On Oct. 6th., at Vine House, Cobham, Surrey, the wife of Arthur B. Hudson, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

JONES.—On Sept. 14, at Shahjehanpur, India, the wife of Surgeon-Major J. M. Jones, A.M.S., of a son.

LANGFORD-JONES.—On the 6th ult., at Tan-y-graig, Bangor, the wife of Alderman R. Langford-Jones, M.R.C.S. Lond., Mayor of Bangor, of a daughter.

MICHAEL.—On Oct. 1st, at Harold-terrace, Dover, the wife of Surgeon-Major H. J. Michael, Army Medical Staff, of a daughter.

MARRIAGES.

ATTLEE—STUART.—On Oct. 9th, at St. Saviour's, Clapham, by the Rev. H. Hughes, assisted by the Rev. D. H. Davys, John Attlee, M.D. Cantab., of 58, Brook-street, W., son of John Attlee, of Rose Hill, Dorking, to Edith Mary, elder daughter of John Stuart, of "The Hollies," Clapham Common, and of Stonehurst, Ardingly, Sussex.

BENNETT—GWYNNE.—On Oct. 5th, at St. Paul's Church, Avenue-road, N.W., Arthur George Bennett, M.R.C.S., L.R.C.P. Lond., third son of the Rev. J. W. Bennett, M.A., Vicar of St. Paul's, to Agnes, eldest daughter of the late Henry Anderson Gwynne, of Hanwell, Middlesex.

CAMPBELL—HEDLEY.—On Oct. 1st, at St. Peter's Notting-hill, W., Surgeon-Lieutenant John Hay Campbell, M.R.C.S., L.R.C.P., Army Medical Staff, youngest son of the late Major-General Thos. Hay Campbell, R.A., to Clara Edith Hedley, third daughter of the late James Hedley, Esq., Richmond, near York.

JACKSON—FLETCHER.—On Oct. 2nd, at the old parish church, Hampstead, John Archibald Jackson, M.D. Glasg., L.S.Sc., of Carntyne, Hexham, to Florence Mary, eldest daughter of Thos. Gerrard Fletcher, of Ash Mount, Hampstead.

RING—KEMPTON.—On Oct. 2nd, at the Parish Church, St. Peter's, Broadstairs, John Ring., M.D. St. And., of Kilburn, to Alice Caroline, only surviving child of the late Henry J. R. Kempton, of Kilburn, and Cavendish-place, W.

WILKS—KITTO.—On Oct. 3rd, at St. George's Bloomsbury, Joseph Henry Wilks, M.A., M.B. Cantab., eldest son of Edward John Wilks, of Rutland Park, Sheffield, to Amy Kate Margaret, second daughter of the late Richard Luke Middleton Kitto, of Preston Lodge, Prestonpans.

WOOD—MOTUM.—On Oct. 1st, at S. James's Church, Benwell, Charles R. Wood, M.A., M.B., B.S., M.R.C.S., L.R.C.P., second son of W. O. Wood, of South Hetton, Sunderland, to Amy, second daughter of Hill Motum, of Scawby House, Newcastle-on-Tyne.

DEATHS.

ARGLES.—Oct. 8th, at Budleigh Salterton, Julia Catherine, the dearly loved and loving wife of Frank Argles, Wanstead. Friends will please accept this, the only intimation. No flowers, by request.

THOMSON.—At Johannesburg, South Africa, William Sinclair Thomson, M.D., formerly of Palace-court, London, aged 50. (By cablegram.)

WILLIAMS.—On Oct. 3rd, at his father's residence, the Chalet, Portinscale-road, Putney, Alfred John Williams, M.R.C.S., L.R.C.P. Lond., of West-hill, Wandsworth.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 10th, 1895.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct.	4	29·36	W.	53	50	101	61	48	0·16	Cloudy
"	5	29·80	S.W.	51	49	87	61	43	0·11	Cloudy
"	6	29·69	W.	56	56	66	59	51	1·49	Raining
"	7	29·74	W.	50	49	101	61	46	0·08	Fine
"	8	29·35	S.	54	53	74	56	50	0·15	Raining
"	9	29·07	N.	54	53	70	56	52	0·35	Overcast
"	10	29·60	N.W.	50	48	66	52	46	0·03	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting. 8.30 P.M. Ordinary Meeting. Opening Address by the President (Sir J. Crichton-Browne): The Generalisation of Specialism.—Mr. C. B. Lockwood: The Operation for the Radical Cure of Hydrocele by Excision of the Sac (illustrated with a series of cases).

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—Papers:—Dr. Ord and Dr. Plowright: Spontaneous Disruption of Calculi.—Mr. D'Arcy Power: Primary Sarcoma of Vagina of Child.—Dr. Wm. Collier: Multiple Polypi of Stomach and Intestines.—Mr. Jackson Clarke: Tertiary Syphilitic Lesions in Lymphatic Glands.—Dr. Herbert Snow: The Non-existence of Round-celled Sarcoma as a Distinct Class of New Growth. Card Specimens:—Dr. Kanthack: (1) Dissecting Aneurysm; (2) Cylindroma of Large Intestine; (3) Diffuse Primary Sarcoma of Liver.—Mr. Targett: Old Injury of Humerus from an Egyptian Mummy.

WEDNESDAY.—NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Meeting.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Prof. J. B. Farmer: On the Division of the Chromosomes in the First Mitosis of the Pollen-Mother-Cell of Lilium.—Mr. G. Massel: New and Critical Fungi.—Mr. F. J. Reid: A Fluorescent Bacillus.

THURSDAY.—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—Card Specimens at 8 P.M.:—Mr. Ernest Clarke: (1) Rare Form of Nystagmus; (2) Orbital Tumour.—Dr. Mott and Mr. Treacher Collins: Case of Exophthalmos associated with Trigeminal Hemianalgesia.—Mr. Lawford: Retinitis Circinata. 8.30 P.M. Introductory Address by the President. Papers:—Mr. Treacher Collins: Four cases of Bilateral Glioma of the Retina cured by Enucleation of both Eyes.—Mr. Devereux Marshall: Detachment of the Choroid.—Mr. Kenneth Scott: Keratitis occurring in Leprosy.

HARVEIAN SOCIETY.—8.30 P.M. Dr. E. Symes Thompson: On the Climate of Egypt.

FRIDAY.—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION. Cases by Dr. Geo. Stoker, Dr. Ed. Law, Dr. Wm. Hill, and Dr. Dundas Grant. Paper by Mr. R. Lake on a case of Keratosis Obturans. Discussion on the Treatment of Ménière's Symptoms. President's Inaugural Address.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Dr. E. Law: Examination of the Throat and Nose

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Melancholia.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Abraham: Dermatological Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. C. A. Ballance: Selected Surgical Cases—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Ormerod: Ataxia.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Patrick Manson: Sprue.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Hypochondriasis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Diseases of Sebaceous Glands.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE HYGIENIC ASPECT OF WOOD PAVEMENT.

M.R.C.S.—If our correspondent will refer to THE LANCET for Aug. 24th, 1895, p. 474, he will find a report of Mr. Wynter Blyth concerned with the question he asks. From this it would appear that asphalte is the most satisfactory form of paving from a health point of view. Wood pavement undoubtedly does get saturated with ammoniacal products, and gives off offensive smells in hot weather, but we do not think that it is worse in this respect than macadam, which is the other alternative to asphalte.

W. J.—There is much variety in the scale of payment of locum-tenents. They are certainly of very variable value. Some are very dear at three guineas a week, and some are worth five. Much, too, depends on the value of the work which they have to do. The fee to be charged by a principal for his assistant sent to be in the house of a patient night and day must be determined by the principal himself, after reckoning the inconvenience and cost he has sustained and the extra remuneration due to the assistant for such unusual work.

Bene.—We consider it decidedly a breach of professional ethics for a medical man to let his rooms to an unregistered dentist and to refer patients to him.

"PRACTICE IN SOUTH AFRICA."

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly advise a medical man as to the drugs, clothing, &c., to take to South Africa? and also any other information will be appreciated.—I am, Sirs, yours faithfully,

Oct. 9th, 1895. SURGEON.

*** Our correspondent is referred to THE LANCET, Oct. 5th, 1895, p. 835, where, in a letter signed "M. D.," he will find a large amount of useful information as to the questions he asks. With regard to clothing, South Africa is a large district and varies in climate in different parts so that we can hardly advise on this matter without a little more detailed information as to what part our correspondent is going to.—ED. L.

C. B. (Darton).—There is no usual custom. The delay in payment is not, in all probability, the clerk's fault, for he is only the paid servant, and the date of disbursements may be regulated by the date at which his accounts are audited—a date not under his own control. This, at any rate, was the explanation received by another correspondent who made a similar complaint to us. But the fact that the clerk cannot pay does not excuse the want of courtesy in withholding an answer, and our correspondent is advised to write to the chairman directly, and ask that his communication may be attended to.

Dr. Yarrow's communication will receive attention.

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IMAGINATION.

A PROVINCIAL journal lately had an account of an inquest upon a child who died in a parish in Norfolk. The report stated that the child died on her return from school, a doctor having been sent for, that a post-mortem examination was made, and a *whole apple* discovered in the child's stomach. Apples, of course, vary in size as much as lumps of chalk, but still we fancy no child could swallow a whole apple unless he or she had a distensible head like a snake. But the facts are as follows: The child was taken ill on a Wednesday and died on the Thursday, no medical man having been sent for. At the post-mortem some pieces of egg, bread, and fragments of apples were found. The cause of death was diarrhœa, a complaint which has been very prevalent of late in the district. We are sorry to spoil a good story, but the fervid imagination of the lay reporter is apt to lead him astray.

Octogenarian.—The connexion between prurigo, a not uncommon source of trouble to persons of advanced age, and emotional or mental trouble is very well known, and continued mental depression would certainly render the neurosis more obstinate to treatment.

Mintern.—We do not, under the circumstances detailed, consider the charge exorbitant.

DROWNING FOLK-LORE.

To the Editors of THE LANCET.

SIRS,—Replying to your correspondent's query in THE LANCET of Oct. 5th, 1895, I beg to say that by searching the up-to-date indices of *Notes and Queries* "Teignmouth" will find a mass of references and information. Sir Walter Scott, Sir Thomas Brown, Miss Braddon (in her novel "Joshua Haggard"), Tylor ("Primitive Culture," vol. i., pp. 97-100), and Edgar Allan Poe ("Essays of Mystery and Imagination") also have referred to this subject. The most damaging and dangerous are the cruel superstitions *re* (1) the bad luck supposed to follow those who rescue the drowning or touch drowned corpses; (2) the landing of, or throwing up of, drowned corpses upon banks, piers, &c., absurdly alleged to injure the local fisheries by frightening the fish away from the district; (3) the ridiculous belief that the rescuer of the drowning is afterwards legally bound to maintain the person or persons whom he has rescued from the waters; and (4) various other superstitions which tend to frighten and hinder the ignorant from attempting to rescue the drowning.—I am, Sirs, yours truly,

Brighton, Oct. 5th, 1895. J. LAWRENCE-HAMILTON, M.R.C.S.

To the Editors of THE LANCET.

SIRS,—In answer to "Teignmouth's" query as to the position of the drowned bodies of the different sexes, I can assure him that the belief is held widely in nautical circles. I have confirmed it in my own experience on more than one occasion. Sailors explain the male position from the relaxed limbs, and the female from the larger mammæ and more prominent abdomen reducing the specific gravity, the larger and heavier thighs and buttocks placing the centre of gravity more posteriorly. This is, I think, reasonable, but I also believe the shape of the female thorax to be an important factor.

I am, Sirs, yours faithfully,

Harrogate, Oct. 5th, 1895. V. BATESON.

To the Editors of THE LANCET.

SIRS,—"Teignmouth" will find the following passage in Dixon Mann's "Forensic Medicine," pages 53 and 54: "Dead bodies usually float with the head and extremities below the water level; the bodies of men in the prone posture, those of women—on account of the adipose tissue of the breasts and abdomen—in the recumbent posture. In the one case the back, and in the other the abdomen, is at or above the water level." I am, Sirs, yours truly,

Oct. 5th, 1895. F. A.

To the Editors of THE LANCET.

SIRS,—In answer to "Teignmouth" I venture to suggest that the bodies of drowned women float face upwards because of the buoyant adipose tissue of the mammary region. May not the face downward position be determined in men by their predominant supply of gluteal fat? I am, Sirs, yours faithfully,

Wilton, Wilts, Oct. 5th, 1895. WM. WOODWARD.

I. C.—1. The fact that our correspondent actually was in charge of the practice for a period is proof that an arrangement of some sort was made, and therefore payment of some sort would be due for service done, unless that arrangement was broken through by the employé.—2. We do not think that "usual custom" is sufficiently strong in this case to make our correspondent consider himself entitled legally to any particular rate of payment, but the sum he has mentioned is a fair one.—3. We cannot give the desired definition; but it does not appear to us that any slight upon the social position of the locum-tenent was intended by the employer. We conceive the practitioner's attitude to be based on the idea that as the locum-tenent threw up his position his employer was absolved of all liability towards him. This is not quite tenable from the statement placed before us; but anything more decided than that cannot be laid down from facts supplied by one side only. Cannot a mutual friend or the agent who introduced the parties to each other be constituted amicable arbitrator?

Ballynafeigh.—We do not see that the evidence was required.

SNAKE VENOM AND ITS ANTIDOTE.

APROPOS of this subject and of the experiments of Professors Calmette and Fraser, a correspondent calls attention to the fact that one of the first communications, if not the first, published on the subject appeared in THE LANCET in 1884—Feb. 23rd and March 8th, pages 371 and 456 respectively—from a correspondent writing under the *nom de plume* of "Incognito."

J. L. A. H.—We agree with our correspondent. The subject is one upon which we have often spoken, and shall continue to speak.

Mr. Chas. H. Callanan's communication is receiving our attention.

Mr. Robert Martin is thanked for his letter.

A FEMALE MEMBER OF THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—There is a tradition to which I have seen an occasional reference in English books that there was, one or two generations ago, in the British Army, a medical officer who attained high rank as such, and who was found to be, post mortem, of the female sex. The name ascribed to this person in the references which have fallen under my eye is sometimes James Barry, sometimes —— Macleod. Will you please inform me whether this story rests upon any credible foundation or is the mere figment of an idle brain?

Your obedient servant,

GEORGE A. BRIGHT, M.D., U.S. Navy.

U.S. Naval Hospital, Washington, D.C., Sept. 30th, 1895.

*** We can recall the following instances of concealment of sex in the Services—first, that of Mary Anne Talbot, the female sailor, and she did not belong to the medical department. She was, indeed, a very disreputable though courageous adventuress, and fought as a soldier under the Duke of York in Flanders, and as a sailor under Earl Howe of June 1st memory. She was an inmate at different times of Haslar Hospital and two or three metropolitan hospitals without revealing her sex. Then there was Christiana Davis (born 1667, died 1739), who fought in the Marlborough wars. She was wounded and in hospital several times without her sex being discovered. Mary Read and Ann Bonney fought as pirates about 170 years ago, and though their exploits may be mythical their real existence is undoubted. Probably some of our readers can inform us and our correspondent with certainty about James Barry. We have read many allusions to her, but none in any reliable quarter.—ED. L.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Where can I see carried out or obtain the best information on the following subjects: (1) massage, (2) medical electricity, and (3) the Weir Mitchell treatment? I am, Sirs, yours truly,

Oct. 7th, 1895. POST-GRADUATE.

*** Our correspondent will obtain the information he seeks in the following works:—1. "Massage," by Dr. J. Symons Eccles.—2. "Medical Electricity," by Dr. Lewis Jones.—3. "Fat and Blood," by Dr. Weir Mitchell.—ED. L.

"HOMES FOR CHRONIC MELANCHOLIACS."

To the Editors of THE LANCET.

SIRS,—In reply to G. P.'s letter in THE LANCET of Oct. 5th, I think he will find what he requires at the Home for Invalid Ladies, Burntwood-lane, Tooting, S.W.—I am, Sirs, yours faithfully,

Sydenham, Oct. 8th, 1895. G. FORBES GAITSKELL, M.R.C.S.E., &c.

ERRATUM.—In the annotation headed "Deaths under Chloroform" in our issue of last week occur the words, "The chloroform was administered by the medical superintendent" (of the St. Saviour's Union Infirmary, East Dulwich). Dr. Elwin Hunt, the medical superintendent, writes to us that he was away for his holiday, so could not have administered the anæsthetic.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Galloway Gazette, Ayrshire Post, Midland Free Press, Daily Chronicle, Scotsman, Times of India, Folkestone Express, Cheshire Observer, Liverpool Courier, Birmingham Gazette, Pioneer Mail, Yorkshire Herald, Glasgow Evening News, Newcastle Daily Leader, Brighton Gazette, Builder, Western Express, Architect, Yorkshire Post, Sanitary Record, Bristol Mercury, Durham City Advertiser, Liverpool Daily Post, Hampshire Herald, Leeds Mercury, Weekly Mercury (Plymouth), North British Advertiser, New Zealand Times, Liverpool Journal of Commerce, Local Government Chronicle, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Reading Mercury, City Press, Coventry Herald, Weekly Dispatch, Surrey Advertiser, Cape Times, Glasgow Herald, Kendal Mercury, Elgin Courant, West Middlesex Standard, Citizen, Eastern Morning News, The Realm, Indian Daily News, Oswestry Advertiser, Batley Reporter, Fife Free Press, Hampshire Advertiser, Loughton Monitor, Australian Medical Journal, Derbyshire Times, Eastern Daily Press, Science Siftings, Shrewsbury Chronicle, Essex County Standard, &c., &c.*

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An Introductory Lecture

ON

THE FOUNDATIONS OF MEDICAL SCIENCE.

Delivered at King's College Medical School on Oct. 4th, 1895,

BY LIONEL S. BEALE, M.B., F.R.C.P. LOND., F.R.S.,

JOINT PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE IN KING'S COLLEGE, LONDON, AND PHYSICIAN TO THE HOSPITAL.

GENTLEMEN, — The extraordinary advance which has characterised nearly every department of science during the past fifty years can hardly be said to have helped the solution of that most important of all problems, the very foundation of natural science—the nature of life. To us engaged in the study of disease and the relief of suffering it is—and from more than one point of view—a fundamental question, one which from the earliest times has been regarded by the medical profession with the keenest interest. Time after time scientific enthusiasts have announced in the most confident terms, and for more than forty years the public have been assured again and again, that at last the mystery had been solved or was so near solution that it might be considered as practically settled. Among scientific workers and thinkers, however, the divergence of opinion as to the real nature of life has been, and is, so great that we are still uncertain how any living thing is formed, how it grows, what is the exact nature of many diseases, and in what manner the action of many of our medicines is to be correctly explained; while, notwithstanding great progress in investigation, many morbid changes and phenomena connected with the healing of wounds and the repair of injuries have yet to be cleared up before we shall be able to say that the nature of vital processes is understood. The very foundations—the first principles of all living nature, the exact differences between the living and the non-living state—have still to be established. Even the broad differences between a particle of matter which is actually living and one that has just ceased to live have not been ascertained, and our physiology, pathology, and medical science rest upon no certain basis. Mental operations have received various explanations, but not one that has been offered adequately accounts for the facts, while vague and uncertain data and conflicting interpretations of facts form the foundations upon which uncertain and perpetually changing philosophy has been constructed. So strong, however, is the conviction of some with regard to the truth of the physical doctrine of life and the generalisation that the living and non-living are one, that not a few would modify our systems of government and education in order to bring them into accordance with certain fanciful speculations upon the religion, morality, and civilisation of the future when physical doctrines shall be universally accepted and taught.

So determined has been and is the set of opinion against the idea of the operation in living beings of anything in its nature distinct from physical or chemical change that I have long hesitated to press a contrary view, notwithstanding that facts and arguments in all departments of living nature give to it very strong support; while, on the other hand, the favourite doctrines still taught are contrary to all living nature, and to make them popular it has been necessary to invent a new nature—a nature which from the first has been shown to be impossible. Lately, however, a change has come over men's views. Not a few have begun to doubt whether the purely physical doctrine of life is supported by facts, and at last the distinguished President of the Chemical Section at the Ipswich meeting of the British Association has dared, not only to express his doubts concerning the purely physical doctrine of life, but has gone so far as to plead "for a little more vitality." I heartily join in his plea, and have for many years hoped that ere long we should be permitted to admit the operation of a vital, constructing, arranging, guiding, and regulating power working in everything that has life. I have endeavoured to show exactly where this power operates and upon what, and have drawn attention to the fact that the living matter or "bioplasm" possesses very similar powers in all living things, from the lowest to the highest. For the most part the plea has been in vain, and overwhelming authority has declared for the opposite view, and that those who differ, being weakest, are to go to the wall.

This question of the nature of life forces itself upon our consideration in all our deeper medical and physiological inquiries and in all attempts to decide upon the foundations of natural knowledge. Not only are intellect, thought, and the countless workings of the mind inexplicable upon physical doctrines, but the movements and growth of the very simplest living forms are due to far more than is comprised in purely physical and chemical changes. Is not life-power the real, directing, controlling, regulating, and selecting agency in every form of the living? How can we accept the proposition that from non-living atoms and their properties is somehow evolved a power which determines the arrangement of these very atoms, which places them in already determined positions, that tears them away from one another and then brings them within the sphere of their influence so that new and totally different substances result? Could watches and engines make themselves, and multiply, regulate, and direct, set themselves in motion, and stop when they willed to do so, some comparison might be made between machines and living matter. I feel sure that all intelligent persons will agree with me in thinking that the time has arrived when this matter should be thoroughly reconsidered. The influence of vitality upon matter as a guiding and directing agency—as a power by which the elements of matter may be torn away from one another, rearranged, and caused to recombine in a way unknown to physics and chemistry—has yet to be recognised, and, if possible, investigated. That this power is transmitted from living particles to lifeless ones, which then live, is certain; equally certain is it that all living matter is clear, transparent, structureless, and as colourless as pure water. These are the characters of the simple substance in which vital changes are effected without machinery and without any apparatus. This living matter or bioplasm is, I believe, the foundation of all living nature, the seat of all vital phenomena in health and disease, and the only substance in nature possessing powers correctly termed vital. Is there not evidence that in every kind of living matter the elements of the substance that lives may be separated and rearranged in an order determined beforehand, and in such a manner that definite compounds result, and structures evidently designed for definite purposes are formed to do certain work? Have any such phenomena been explained by physics and chemistry? Consider whether any machine has been constructed that can perform work and be kept for any length of time in working order without the designing, regulating, managing power of the living mind. Where is the laboratory that performs chemical operations without the chemist? And where is the matter that can be subjected to analytical and synthetical operations without the intervention of some living agency? And yet it has been affirmed again and again that the living cell is a lifeless laboratory, where work of the most complex kind is carried out without any designing, directing, or controlling agency whatever. It is often assumed that substances of chemical simplicity are more easily changed in vital action than bodies of great complexity of composition; but as far as we have evidence complexity and simplicity of composition are equally overcome by living power. The change seems to be carried out in all cases in the most perfect manner, and very quickly. The view of the building up from simple to complex is not justified. The atoms seem to take up their appointed positions and relations as if impelled by irresistible power, and according to the same principles in every case, from the lowest to the highest organisms.

The members of the profession and all students are to be congratulated upon the addition, during the past three years, of a new subject to those which have long formed the basis of medical education. The careful study of elementary biology must now be taken up by every medical student in the early part of his course. He has to work with the microscope and to become familiar with the use of instruments for delicate research which were not known to the advanced investigators of fifty years ago. Every student acquires real knowledge of the minute structure of the body, and may form his own conception of the general nature of the wonderful changes characteristic of living things, from the lowest organisms to man himself. I hope you have all

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seen what happens when a particle of living matter, say, of an amœba, exhibits what we call vital movements, and have observed portions moving away from the general mass. Such portions, becoming detached, begin a new and independent life, taking up nutriment on their own account, and growing like the parent organism from which they have been detached, or have detached themselves, and at length increase and multiply and at last die, like all other things that live. Some have affirmed that this living matter is "like" a mixture of oil and mucilage, but those who have studied practical elementary biology will not be misled by such a "likeness." Would that people generally could also study some of these simple living organisms and learn the differences between that which lives and assimilates, and grows and dies, and that which does not live. No one who had thought over what he had seen would be persuaded to assent to the proposition that the clear structureless living matter should be regarded as a form of machine, molecular or otherwise. When you examined this living matter under a high power I am sure you must have felt astonished that any one could speak of such a thing as a mechanism or as a laboratory. The moving projections or diverticula just alluded to, like those of leucocytes and pus and mucus corpuscles, are well deserving of your further attentive study. Watch carefully the movements and notice how very clear and transparent is the moving matter. In some you cannot discern a single granule even with the aid of the highest powers, and I think when you do see granules and carefully study their movements you will agree with me in the conclusion that it is not in these visible granules that the moving power resides, but that the visible particles are moved by the clear, soft, structureless substance of which the diverticula consist. The process of growth may continue by the taking up of non-living matter by the transparent, moving, living substance and the communication to it of amœba life, through generations. The process has proceeded possibly for thousands (?) of years, but whether an atom of the matter of the parental organism remains, except for a very short time as a constituent part of the detached descendant, seems to rest upon too fanciful a basis to entitle the living changing matter to be regarded as *immortal*. Think over what you have seen and consider how the wonderful movements are occasioned, how the living matter communicates its powers to the non-living and grows and multiplies. Can it be merely chemical change or mechanical action that produces the result? When and what is the machinery said to be present, and how is any "molecular mechanism" to be demonstrated in such transparent substance? *Authority* alone steps forward and insists upon laws and properties and tendencies, declares to us what we are to believe, and prophecies what our successors will discern in the future.

Before the year 1860, after having carried on observations upon the tissues of plants and animals in many departments of living nature, and from the earliest period of development to the fully formed state and into old age, under the highest magnifying powers (from 700 to more than 2000 diameters) and with great advantages as regards the preparation of specimens, I was led to draw a distinction in each tissue, organ, or organism between the living growing formative matter and that which had been formed and could not reproduce itself or give rise to more formed matter. I was gradually led to the general conclusion that every form of the living growing matter was absolutely distinct from every kind of the resulting formed matter produced by it, and, further, that the influence upon the non-living pabulum was peculiar and belonged to all living matter, but to this only, and that it was not comparable with, or allied to, any other known property, power, or action of matter. These conclusions were illustrated in detail and were published in 1861. The preparations were shown to my class of physiology in this College and during lectures at the Royal College of Physicians of London, and further discussed in memoirs published in the Transactions of the Royal Microscopical Society, and in several works published at that time and since. It seemed to me that there were no indications whatever of the faintest analogy between the two kingdoms of nature—the living and the non-living,—no indications of any gradation from matter in the non-living state to that of life, while all living matter, from the very lowest to the very highest, exhibited certain common characters, being always colourless, structureless, capable of independent movement as a whole or in part, capable of growth, with a power of selecting certain substances and rejecting others, having structural formative power and powers of effecting chemical change, rendering it certain that the origin of matter so endowed was not direct from the non-living, and that this doctrine sooner or later would have to be abandoned. The warmest advocates of the latter view have never given adequate reasons for the faith they professed, or answered the many objections advanced against the conclusions they accepted and taught. All the particles of living matter actively concerned in the formation of tissues and organs, easily seen under a power of 200 diameters, are less, and most of them considerably less, than the $\frac{1}{1000}$th part of an inch in diameter. In the absence of such living particles nothing can be formed or secreted. If we are to form any accurate conception of the actual phenomena which occur when some of the matter of these minute living particles is resolved into tissue or secretion, it is necessary to study the matter very attentively with the aid of the highest powers, and then we can expect only to learn some of the broader changes which occur. The actual conversion probably occurs in particles of matter far more minute than can be discerned with the highest powers at our disposal. Most important facts, however, have been demonstrated with reference to the movements of many of these bioplasts. Where fibrous or other tissues are formed which are to be laid down in parallel lines the fibre is as it were spun off as the particle of living matter (bioplast) moves upwards or downwards along the tissue already formed, and thus fibre after fibre is added to those already existing. In some tissues the bioplast moves round and round the cell cavity, thus forming concentric fibres or layers. Such bioplasts, evenly distributed through all the tissues and organs of the body, even in the solid bone, take part in the formation of the tissue around, may exist through life, and change very slowly in health, most of them getting smaller as age advances. These are instrumental in establishing the passage of fluid to and fro in the interstices of the tissue. By this continual flow the integrity of the tissue is preserved, and the occurrence of degenerations prevented or postponed. Anything favouring the passage of more nutrient fluid than the very small quantity required by these slowly living particles favours their enlargement—they live too fast. They increase in size, and this change is constant in every form of inflammation and fever. With the enlargement there is invariably rise in temperature of the surrounding part and of the blood as it traverses the nearest capillaries. When this change, as in fever, affects the bioplasts of many tissues of the body and is widely distributed the temperature of the whole volume of blood is, as we know, raised several degrees, but falls with the diminution of the febrile symptoms, as the bioplasts return to their ordinary condition. If in ordinary inflammation the process continues and increases, the bioplasts give off diverticula which may be detached, and at last "pus corpuscles" result, and the adjacent structures are destroyed. In all pathological changes these bioplasts take part. The health of the body depends upon the normal state of the bioplasts, and movement and changes continue while life lasts. Their life is destroyed by many poisons, notably by hydrocyanic acid, the proportion of 1 in 100,000 in the blood being probably sufficient to destroy the life of adjacent bioplasts in a few seconds. You must have seen multitudes of these bioplasts disseminated through the tissues which you have examined, and have, no doubt, studied their arrangement in different tissues and organs, though, perhaps, from their being perfectly colourless you may not have regarded them as the most necessary part of the organism. Without them no tissue or organ could have been formed, could have preserved its integrity, or, in case of injury, could have been repaired. They are the life of the body, and without them nothing can live; they constitute the living part of the body—that is, the matter that dies. In cases of fever and inflammation, and in various conditions in which there is increased flow and facilitated access to the bioplasm of nutrient matter in any tissue or organ, one sees, after the altered state has lasted for a short time, arising here and there in various parts of the bioplasm minute dots, which gradually become large enough to be seen easily, and are known as nuclei. If the process continues some of them become much larger, and in them new points appear (nucleoli). This is an example of true evolution, as the bodies in question are new centres of living matter, which arise in already existing and perfectly structureless bioplasm.

Not only as long as life lasts is the substance of which living matter is composed in constant movement and portions caused to change in position, but the very elements of the matter, however strongly they may have been united in the

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non-living condition, are caused to separate, and not only are they rearranged, but they are rearranged in a definite and predetermined manner which differs in different organisms and in different tissues and organs of the same organism. Such movements, of course, can only be represented to the mind, since the movement spoken of and the affected particles themselves are far beyond the present range of our vision, assisted as it may be to the utmost with the aid of very high magnifying powers. The movements we are considering in very minute particles of living matter take a general direction from centre to circumference, and the places of those which have taken a centrifugal course are taken up by the pabulum, the flow of which is centripetal. It is, in fact, in these centres, far removed from our powers of vision, that life power seems to be communicated to the matter, and here the non-living matter begins to live. Life causes elements, however strongly combined, to separate, and overcomes the physical and chemical attractions of elements in combination. Life is able to raise particles above one another in a manner not explained. Of the rearrangement of the component atoms of matter, and of the alteration of their relation to one another during the living state, there can be no doubt, but how this is effected has not yet been ascertained. This rearrangement is different in the different kinds of living matter, and results in the production of certain special substances, constant as regards living matter of the same kind under the accustomed natural conditions. So far, observation and experiment have proved that this wonderful power has been directly derived from pre-existing living matter and may be transmitted to succeeding particles of matter without loss, but in certain instances with some modification, temporary or permanent.

It seems to me that as soon as you realise the appearance and movements of this living matter and the broad facts connected with it, its powers of selection, of growth, of chemical analysis, of direction, and rearrangement of elements, you will naturally require the strongest evidence before you accept from authority, however distinguished, the purely mechanical or chemical view. In the physical and chemical world there is nothing to approach it or that will in any way compare with living power. Every chemist must, indeed, long to discover the secret of the wonderful analytical and synthetical operations of living matter working without apparatus or chemicals, silently, perfectly, and continuously, in darkness as well as in light, in what we call cold as well as in heat, in winter as well as in summer. Is it not wrong in the face of what we know and have known for many years on the part of any authority to persist in the effort to make people believe that there is no mystery whatever, nothing to be discovered as regards these wonderful operations of nature which proceed in all living—that they belong to the physical category, and that, in fact, we are on the eve of the complete solution of the vital problem and of the demonsrration of the manner in which life works? In truth, we are farther off than ever from this discovery, because we are daily becoming better acquainted with the increasing number of facts as well as the difficulty of investigating them, which separate the knowledge we long for from the knowledge we possess. Is it right, in the face of such utterly inexplicable endowments of living matter, to suggest that they can be in any way dependent upon or derived from the properties of the matter, which for the time is the seat of operation of the endowment, or even to hint that our present scientific knowledge justifies the belief that they will receive a purely physical explanation? In the whole range of knowledge can one fact be pointed out which is allied to, or comparable with, or can be properly placed in the category to which these vital characteristics belong? Is there one of the remarkable powers of living matter which has yet received anything approaching an adequate explanation? Is there anything in the non-living world in any way comparable with the ordinary changes which have taken place in every living particle that has ever existed?

If any apology is due from me for troubling you with all these details, I am sure you will pardon me for desiring that I should give a brief account of them in the college in which I have been brought up and in which much of the actual work upon which my views rest was done. But there is another reason why I particularly wish to call attention to this view of vital action at this time. With reference to the powers of living matter, there is nothing more interesting and important than its chemical influence. One is amazed at the wonderful changes effected in composition brought about while matter is in this living state, and the extraordinary rearrangements silently and invisibly effected in the position and relation of the atoms of the living substance. I am particularly gratified at being able to say that this matter is at last being seriously considered and is receiving the attention it has long deserved. A distinguished chemist has recently expressed himself in favour of "vitality" and pleads for "a little more vitality in the chemical functions of living organisms." This is the first time I have seen anything so encouraging from the chemical side, and I hope Professor Meldola's remarks will be widely read by all interested in physiology and medicine. In his opening address as President of the Chemical Section at the Ipswich meeting of the British Association, which was published in *Nature* of Sept. 12th, 1895, p. 483, you will find some very pertinent remarks on the chemistry of living things, well worthy of the attention and criticism of those who still advocate physical and chemical theories of life. Professor Meldola freely acknowledges "that we have not yet solved the enigma of life," and suggests that physiologists have been led "to undervalue the importance of their *prime agent*" and pleads for "more vitality." Professor Meldola, in fact, without committing himself to vital power, certainly goes much farther in this direction than any other distinguished chemist has hitherto ventured. He considers that there is a great difference between laboratory and natural processes, and speaks of "the mystery that still surrounds the chemistry of the living organism."

The tendency of these views is very different from that of any of the doctrines hitherto advocated by chemists, and I venture to commend this part of the learned Professor's address to the careful notice of all interested in the advance of physiology and medical science. The President of the Section of Chemistry further observes that "everything must pass through the vital mill." In other words, everything formed in every living organism must pass through the state of living matter or bioplasm before it can be converted into the particular predetermined chemical substance. The phrase "vital mill" is, however, objectionable, as no mill is alive, and nothing living has the machinery of a mill. In the vital substance the atoms are made to take their places for the formation of special compounds without friction, without machinery, without reagents, without apparatus. The principles upon which the changes are carried out are totally different from those which obtain under any other circumstances known. If vitality, for which I have been pleading for more than thirty years, be granted, we shall be much nearer the explanation of vital phenomena than is supposed. The observations of the President of the new Botanical Section, Professor Thiselton Dyer, Director of Kew, upon this subject are very satisfactory to me, for many years ago I also drew attention to the contrast between the way in which chemical changes were effected in living matter and in the laboratory. The President says: "The plant produces a profusion of substances apparently [why "apparently"?] with great facility which the chemist can only build up in the most circuitous way." I am delighted to find that at last this important question has a chance of being considered from this point of view, and that at last we may hope for a "little more vitality" to assist us in our consideration of the real nature of vital phenomena.

So far, then, we seem to have arrived at this—that the matter of the body actually living can be distinguished from the material which is formed by changes occurring in any portion in which vital phenomena have ceased. For instance, in a growing "cell" of epithelium the central part is structureless and is alive, and its particles can grow and multiply. The outer part has structure, but no longer manifests vital phenomena. It cannot produce matter like itself, or grow, or select nutriment, or exhibit spontaneous movements. Just at the point where the formed material and the living matter touch, particles of the latter from time to time cease to exhibit vital changes, and the resulting products become formed material which is added to that already produced. Such changes occur everywhere in living organisms, from the first to the last moment of existence, whether "high" or "low," "simple" or "complex." *Vital change* is one thing, physical and chemical change another, and no particle of matter is the seat of these two classes of changes at the same moment. But there are other wonderful powers associated with the living condition, known to all but understood by no one, some of which I shall now briefly refer to. With regard to the marvellous power which a speck of living matter may transmit without loss to descendants

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during centuries, only think of this: the oldest variety of pigeon, bred for many generations without loss, and perhaps with improvement, of its remarkable characteristics—and bear in mind not only as regards colour, form, and number of feathers, but widely diverging from its original progenitors as to the size and characters of bones, muscles, nerves, and other tissues; as to habits, manner, and disposition, as to powers of flight—in fact, as to many particulars which would lead us to regard it as a true species far removed from the rock pigeon—in short, having little in common with that species—nevertheless carries, apparently fixed and unalterable in its organisation, not a new tendency, but an inalienable compulsion if left to nature for its offspring to revert to the ancestral characteristics; not immediately, but after a few generations its descendants exhibit the original specific characters, having lost all traces of the variety which but a few (often only three or four) generations before might have been regarded as a definite species of pigeon. And, further, think of this—that every rock pigeon, generation after generation, has possessed deeply ingrained, as it were, in its organisation the power of transmitting to descendants the capacity of giving origin to any or several varieties of pigeon that are known, and perhaps to many more varieties not dreamt of, and at the same time to every variety the power of reversion to the original species, if only each individual is allowed to choose its mate as in a natural state. Consider the constancy and, on the other hand, the wonderful plasticity of the organisation of this familiar but remarkable bird. Contemplate the wonderful power of change from, and the more wonderful power of reversion to, the original type transmitted through generation after generation and retained through centuries, the only medium being a speck of matter so minute that it would not be indicated by a very delicate balance, and tell me whether you think it probable that the powers referred to are due to the original material properties of the fragment of matter concerned or whether this acts only as a carrier of the marvellous power belonging to the living world only and originating in the infinite. Never before the present time was there any possibility of approaching the thorough investigation of the important question of life. Our much wider range of knowledge concerning the structure and action of many living organisms widely separated from one another has, in fact, enabled us to consider the question from many new points of view; and, although the issue between contending parties is perhaps more pronounced than ever, the probability of arriving at the truth has immeasurably increased, if, indeed, it has not already reached something approaching certainty. It is curious that, although knowledge of minute structure and of the actual phenomena characteristic of living matter has been widely spread, the important question of the nature of life and its resemblance to, and differences from, all physical and chemical actions known has only been very imperfectly debated. One would think that the inquiry lay far away from the paths familiar to most educated persons, but the most important points bearing upon the inquiry can now be made intelligible to educated minds without much difficulty, so that many thoughtful persons may be able to form a judgment of their own, at least concerning the direction in which the truth will probably be discovered.

Among the broad and well-known facts, then, not to be explained by the physical view of vital action is the vast subject of heredity so remarkable in every department of nature, both for the long periods of time of its continuous operation and for the magnitude and enormous importance of the results when considered in connexion with the very minute quantity of matter concerned. Is the transmission of characteristics of minute structural details of extraordinary constancy handed down from generation to generation for hundreds or thousands of years by the very minute particle of matter which we know to be concerned in the process to be attributed to the physical properties and chemical composition of the matter involved or to vital power communicated to this from the immediate predecessor? Of all vital attributes this is the most remarkable, and while some facts of living nature impress us with change and modification in descent, others astonish us with the extraordinary constancy of the transmitted characters. It is also certain that many of the most striking divergencies known to us are evanescent, and after a few generations ancestral characteristics reappear in all their intensity.

Our attention has been frequently and most forcibly directed to the fact of the likeness between very numerous distinct species of organisms, and especially in the case of man and higher vertebrata, during the latter portion of the developmental process, but little stress has been laid on the much more striking fact of the much closer resemblance during the early and earliest changes—the far more remarkable fact that at first, when the most striking phenomena of all life are actively proceeding, and the changes afterwards so prominent are commencing or being prepared for, no difference has yet been demonstrated between the particles of living matter instrumental in the production of living organisms eventually far removed from one another in all points. This fact has hardly been noticed, and yet who shall declare that there is really no difference or that there is anything approaching similarity or identity between the clear, transparent, structureless specks of living matter that represent the early stage of being, say, of mouse and elephant, of man and monkey, and as the changes proceed and growth goes on who will now dare to assert that they are to be accounted for by physics and chemistry only, or that there is no evidence of the constant activity and directing power of another factor—no less than the most tremendous power above all else in living nature—life?

We have passed through a very widespread effort to convince us that our present knowledge of the facts of nature justifies all who allow their minds to be influenced by reason in abandoning their belief, not only in Christianity, but in the existence of infinite power. Moreover, this effort is not the work of a fanatical party determined to conquer or to die, but rather of men of exceptional intelligence as well as of power of leading other minds. Some of them regretfully acknowledge the decision at which reason has compelled them to arrive; but, having been guided by facts and reason alone, they accept, though with reluctance, the only conclusions which in their view the understanding can now accept. It is this supposed claim upon predominant reason—this positive declaration said to be enforced by facts of observation and experiment—that has influenced many and has led people to conclude that the old views can no longer be sustained and that our present intellectual position is absolutely different from any that has preceded. It is, therefore, urged that the opposition to religion at this time rests upon facts and arguments which have never, and, indeed, could not by any possibility have been, advanced before. In short, it is maintained that in consequence of new scientific knowledge the data upon which the truth of the religious ideas of the past was supposed to rest have been shown to be erroneous. He who believes in scientific truth must, if he acts according to the dictates of reason, abandon his old faith. This idea that the more recent discoveries in science have rendered impossible the acceptance of the religious doctrines formerly generally believed has undoubtedly gained many converts. The notion that it has been proved beyond doubt that the living and non-living are governed by the same laws, and that very long ago the living came direct from the non-living—in short, that the living and the non-living are one—has been widely accepted. Even those in doubt have been much influenced by the constant repetition of the statement that ere long all the phenomena of life will certainly be shown to be due to physical and chemical action only, and the dictum of Strauss, supported by Haeckel, that faith with its miracle has perished, must satisfy all whose judgment is swayed by reason alone. This notion that science must ere long somehow take the place of religion, though seldom expressed, has unquestionably influenced the views of some intelligent persons on the question of religious education, and it is more than probable that much of the recent opposition to religious teaching, culminating in the arbitrary withdrawal of the Government grant of £1700 a year which had been awarded to our college for five years, and of such vital consequence to our struggling institution, is also due in some measure to the change in general opinion in the direction indicated. It is sad, indeed, that some who have long been proclaiming freedom should have taken part in an effort to damage the interests of a college which has gained very high distinction by the original research and teaching of a distinguished scientific staff over a period of sixty years.[1]

We have now followed the phenomena common and peculiar to all living to the seat of their activity in living matter. In centres far more central than our present means of investigation will permit us to penetrate living particles communicate, and without loss, their marvellous powers to

[1] The grant has been restored since this was written.

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some of the recently selected molecules of the non-living pabulum. It would seem that now for a time the ordinary properties of matter are held in suspense or are overcome. Here occur analytical operations of the most stupendous kind, which are carried out very quickly and in the quietest manner, without apparatus or reagents, and without resort to a high temperature. The matter which is the seat of these phenomena is as clear as water, structureless, and composed of very few elements which, if the matter dies, easily take the form of an albuminous substance with fatty matter and salts. During the living state the atoms of the matter, if there be atoms, may be torn from one another and made to take up new and definite relations, so that by synthesis there arise new substances with new properties, perhaps exhibiting structure and capable of performing purposive action of the most striking and at present inexplicable kind—motion, heat, light, electricity, being manifest in certain cases among other phenomena, while there are present no arrangements, conditions, or apparatus such as would enable us to develop these independently of the living. Here, then, as it seems to me, will be found the foundation not only of the principles of physiological, pathological, and medical science, but of that of the whole living world as distinguished from the lifeless cosmos. Here we must look for the initiation of all the changes characteristic of the living state. Account must also be taken of these peculiarly vital phenomena in discussions concerning consciousness, thought, and will, and the life that has been, is, and is to be. And may we not even hope that by further and deeper study of the phenomena of living matter under the new advantages of demonstration which we enjoy, and which are constantly progressing, some further light may be thrown by the increased skill of investigators of vital phenomena even upon the nature and relationship of material atoms in that boundless world of the non-living which ever has been and must be regarded alike by learned and unlearned with wonder and admiration?

An Address

ON

SEPTIC AND AUTO-INTOXICATIONS AS CAUSES OF DISEASE.

Delivered before the Wrexham Medical Society on May 10th, 1895,

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GENTLEMEN,—During the last seven or eight years I have observed, and have drawn the attention of others to, a number of cases strikingly illustrative of the importance of the application of antiseptic methods in medical as distinguished from surgical diseases. These cases were all of them severe and for a time obscure; and the circumstance that similar ones that have recently come under my observation had baffled the researches of some most highly trained and skilful minds makes me hope that good may result from continuing to direct attention to the subject. I am the more encouraged in this hope from the fact that testimony has been sent to me from several different quarters of good having been done by the publication of the previous reports. When, therefore, the request was conveyed to me that I would address you I determined after a little consideration once more to revert to the subject. Reports of the earlier of the cases to which I have alluded were published in inaugural addresses which it was my duty to deliver as President of the Liverpool Medical Institution during the sessions 1888–9 and 1889–90, the titles of these addresses being "The Principle of Disinfection in Medicine" and "Illustrations of the Operations of Ferments in Disease." A further series of great interest, owing to the intensity, and in two instances to the long duration, of the disease, was published in an address given to the Birkenhead Medical Society on March 9th, 1894, and those now to be related will serve to continue that series and to illustrate further the principle of action on which their successful treatment was founded. That principle, briefly stated, is to thoroughly explore every accessible portion of mucous membrane or skin in all obscure febrile disorders, and, if any breach of surface is discovered, to heal it. Frequently the only proceeding necessary in order to bring about this healing process is completely to cleanse the ulcer or abrasion. If this can be effected by irrigation with water or salt and water nothing more need be done. Generally, however, it will be advisable to employ one or other of the more active disinfectants, and sometimes, as in the case to be brought before you presently, to remove a bit of necrosing bone or a fragment of slough which is keeping up irritation.

I wish particularly to draw attention to the fact, so well known to every one of us and which should convince us of the importance and soundness of this principle, that fever of a hectic type, leading ultimately to death from exhaustion, is every day being caused by the absorption into the system of our patients of toxines manufactured by crowds of bacilli tuberculosis, lodged on pulmonary ulcers. We know that these bacilli do not penetrate far into the tissues as they need oxygen for their development, and that if we could only get at their hiding-places we should be able soon to make short work of them and to put a stop to the febrile process. It is the inaccessibility of their places of concealment alone that enables them for the most part to defy us. But we know also that every now and then pulmonary ulcers which have served as nests for the breeding of these bacilli become healed, and that directly the healing has been completed the patients have begun to amend and have ultimately recovered. There can be no mistake whatever about such cases and about the sequence of events and its causes. The fact of the presence of crowds of bacilli in blood-stained expectoration may have been demonstrated microscopically; hectic fever and wasting may have existed for some time; the death sentence even may have been pronounced, and yet the patient may have recovered. But before he can have recovered the bacilli must have disappeared and the preliminary ulcer have healed. Such cases are, alas, but rare in any individual man's experience, but they are numerous enough in the history of modern medicine to make the fact secure. Yet it is singular that with such a fact before us we seem slow to believe that ulcers in other parts quite within the reach of a diligent searcher can serve as the lurking places of various kinds of microbes, where they may manufacture disease-producing poisons of a virulent kind for a long time together, until they are found out and dislodged, when the poison-making process is at once stopped and the patient gets well. The lesson I am most desirous of driving home, then, is that in every case of acute or chronic fever of an unusual character that may not be fairly judged to be caused by one of the recognised fever-producing diseases every accessible portion of the organism should be thoroughly explored, and if any ulcer is discovered that should be healed. I am persuaded that if this were done there would be fewer cases of what is called inexplicable temperatures, and I could not help wondering, and in the light of one of the cases which I shall now bring under your notice and of the comments made on it as well as of others which I have reported, whether all those cases alluded to in the discussion on that subject at the meeting of the British Medical Association of last year were, after all, quite so inexplicable as they were thought and stated to be. A fact to be particularly borne in mind is that the abraded surface need not be a large one. An ulcer of a very small superficial extent is quite large enough to serve as an open door for the introduction of sufficient toxic material to cause serious symptoms, and in all probability the toxines are the chemical products of active microbic life on the site of the ulcer. Nor need there be much pus formation. Here again the ideas derived from our observation of pulmonary disease of a tuberculous type probably constantly mislead us. The intensity of fever is so commonly proportioned to the amount of purulent expectoration in cases of phthisis that we are apt to think that the one cannot occur without the other. The fact is, however, that there can be much pus without fever and much fever without pus. Pus has but to slowly accumulate even to a large amount out of reach of atmospheric air and there may be no obvious rise of temperature, as is seen in what were formerly termed by surgeons "cold abscesses." I make this remark for a reason which will be apparent when I relate one of the most remarkable of these cases, to which I will now ask your attention. I ought, however, to preface

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the narrative with one further remark. It relates to the frequency with which such ulcers occur in the nasal passages and in the associated neighbouring parts. This should excite no surprise, but is, indeed, just what we might have anticipated. The dark and sinuous passages caused by the turbinated bones in the middle and posterior nares form admirable lurking-places for bacilli, difficult of detection and still more difficult sometimes of irrigation, yet affording all the most favourable conditions, such as moisture, warmth, and free admission of air, for their development.

On the afternoon of May 3rd, 1894, I was requested to see a patient, a medical man, residing at Liverpool, in consultation with Dr. George Wilkinson, who had been attending him for some days. I found him very much depressed and anxious about his condition. He was complaining of severe headache, which was aggravated by light, of feverishness, and of feeling generally very ill. The temperature was 104·4° F. and the pulse quick. The history given was that he had been well up to April 28th, on which day he became unwell, had a chilly sensation and much nausea. On the following day he was said to have felt well until the evening, when headache, especially around the left orbit, distressed him. He awoke at 2 A.M. on May 1st, the pain being then very severe; he vomited, and was restless till the morning was somewhat advanced. He then felt better, but the temperature was found to be 101·8° and by the evening 102°. He passed the day fairly well and was said to be better on the morning of the 2nd, when the temperature had fallen to 99°. As the day wore on he again became worse. The headache returned with much throbbing, and the temperature rose to 103°. During the night he was restless, and in the morning the temperature was still 103°, and as he felt no better I saw him in the afternoon with Dr. Wilkinson. My attention was attracted to a moderate injection of the left eyeball, and on pressing over this and the bridge of the nose I gave pain. On examining the nostril itself as well as the pain and restlessness of the patient permitted I found it also red and injected, and ascertained that inspissated blood-stained mucus had been discharged from it. Five grains of calomel were prescribed, a simple febrifuge mixture which Dr. Wilkinson had ordered was continued, and at my urgent desire it was agreed that boric acid should be used as a snuff several times daily, and some time after such use of it a warm solution of boric acid should be injected into the nostril. If inspissated mucus plugs the nostril, within three or four minutes of using a snuff of boric acid a free secretion is established which loosens and detaches it so that irrigation of the denuded membrane by any antiseptic solution can then be carried out. About two hours after my first visit I received an urgent request to see the patient again, as it was thought he was worse. I again met Dr. Wilkinson in consultation. Except that the temperature was slightly higher, and there appeared to be a little delirium, the patient's condition was as before, and as the local antisepsis had not yet been carried out we made no alteration, but agreed to act on our previously formed intention of seeing him again at one o'clock on the day following. At 10.30 on the following morning, however, I received a telephonic message to the effect that he was so much better that it was felt to be unnecessary to trouble us to call. I subsequently learnt that after using the snuff and irrigation he had a fair night; that on the following morning the temperature was 99°; that he felt much better all day; and that there was some discharge from the nostril. On the following day the improvement was more marked, the morning temperature being normal. The local applications were steadily persevered with and in a few days the patient became well, there being during those days only a very slight evening rise of temperature. After the recovery I was informed that two years previously he had had a severe attack of nasal catarrh, and that he was subject to colds in the head. My own opinion, which was shared by Dr. Wilkinson and the patient, was that the prompt relief was a consequence of the application of antiseptics to the nasal mucous membrane, where toxines were being manufactured and through which they were being absorbed in quantity sufficient to produce the fever and its associated symptoms.

On July 3rd, 1894, I was consulted by another medical practitioner, who practised in a healthy seaside town, under conditions apparently thoroughly favourable. The town was a favourite health resort, and his house, a very good one, was situated in one of its best parts. He was very anxious about his health. Every day about half an hour after breakfast he expectorated with some difficulty a little mucus, after which he was attacked by rigors that recurred daily and almost with the regularity of ague, to which he compared them. He had continued his professional work, though with much discomfort, while his axillary temperature was often as high as 103° F. The persistence of the condition led him to fear tuberculosis. I examined him with great care. The heart, lungs, and other organs were healthy to physical signs, and, indeed, the only discoverable lesion was a catarrhal condition of the mucous membrane of the left nostril. Under the belief that this lesion might be the cause of his feverishness I urged him to use freely and frequently a snuff composed of equal parts of boric acid and subnitrate of bismuth, and to gargle and, if necessary, to irrigate the nostril well with a strong solution of liquor sodæ chlorinatæ. A few months later I had occasion to go to his town to visit a patient with him, when, in reply to my inquiry, he told me that the fever disappeared at once on the employment of the local disinfectants and had never returned.

On April 9th, 1894, I saw another of my professional brethren in consultation with Dr. Twyford of St. Helens. In June, 1893, or ten months previously, he had had what was thought at the time to be typhoid fever, from which he had never recovered. Dr. Twyford was, however, of opinion that the illness, whatever it was from which he suffered in June, 1893, was the same as that from which he was suffering when I saw him. It was characterised by a rise of temperature every evening for many successive days, each rise being preceded by slight shivering and occasionally by a severe rigor. There had been such a rigor about ten days previously. He had lost three stones in weight. There was, however, this great peculiarity, that he would have at times several consecutive days free from fever, during which he would pick up strength and begin to put on flesh. At the time of my seeing him, which was at 3.30 P.M., his temperature was 101·4° F.; his pulse was 100; and his respiration 28 while in bed, to which he was then confined. He had been kept awake all the previous night by general pains. There were no cramps. The chest was well developed, the lungs and heart on physical examination were found to be healthy, the rapid respiration and quick pulse being possibly explicable by his condition of feverishness. What could be the cause of this long illness? The only discoverable signs were two or three slightly enlarged and tender glands behind the right sterno-mastoid (which, however, had not excited attention till pressure revealed the fact of tenderness) and some slight post-nasal discomfort which caused occasional hawking. In the hope that a lesion in the posterior nares in lymphatic connexion with the tender glands might be the cause of the illness I suggested the use of boric acid as a snuff and the irrigation of the nostrils with a warm solution of the same substance, and also that the nasal cavities should be thoroughly explored. The exploration was made shortly afterwards by a gentleman well skilled in such examinations, but as it was done at the patient's own house, with the disadvantage of defective illumination, nothing was then discovered. Being thus far disappointed in my expectation that a lesion would be detected at the back of the nostrils in lymphatic connexion with the irritated glands I subsequently wrote recommending that at any rate the glands themselves should be treated, while the antiseptic irrigation of the nostrils was persevered with. My advice was that a weak solution of carbolic acid should be injected into the loose cervical cellular tissue all around these glands. I had had injections of carbolic acid made into enlarged glands without any ill result beyond the pain at the moment, and even this can always be prevented by the previous application of a little ice and salt to the surface or by producing local cold in some other way. As I was unable, however, to promise that relief would follow it was not unreasonable that this treatment was declined. On July 12th, 1894, I received a letter from Dr. Twyford, from which I will quote a few lines: "He has now been ill for more than thirteen months, during eight of which he has been so ill as not to be able even to see a patient. Under these circumstances I advised him to go to London and see Dr. ——. I enclose you a copy of his letter." Two of the most distinguished metropolitan physicians were consulted. The conclusions come to were that there was nothing to justify the term leukæmia, there being no increase in the number of the white corpuscles; that there was no anæmia, the blood containing at least 90 per cent. of both corpuscles and hæmoglobin; that there seemed nothing in the past with which the pyrexia and

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general state could be associated; that the enlargement of the lymphatic glands was curious, but was less significant than it had been from its having lessened; and, finally, that it seemed either a case of one of the untypical forms of tuberculosis or of a chronic constitutional disease allied to lymphadenoma, of which there was at present no definite knowledge. The second gentleman concurred in the view expressed above, with the additional suggestion that the symptoms might be due to some toxic influence possibly left behind by drain poisoning, from which the patient feared that he had originally suffered. A sea voyage and prolonged rest were recommended, together with an alterative and tonic medicinal treatment. It was further concluded that any definitely unfavourable prognosis was unjustifiable, while at the same time the obscurity of the nature of the case precluded any very positive cheerfulness. I only became aware of these opinions some time after they were formed. This was about thirteen months after the commencement of the illness, and nearly three months after I had first seen the patient. The opinions were valuable as precluding any but a rare and obscure form of fever, but they did not seem to consider the possibility of such a cause as I had suggested and had tried by the application of local disinfectants to combat—viz., a lesion at or behind the posterior nares in lymphatic connexion with the enlarged cervical glands, and serving both as a manufactory of poisons and an open door through which they could be introduced into the system. Before long, however, a new fact was observed which gave additional significance to this suggestion and afforded hope, to me at any rate, of a speedy cure. The patient paid a visit to Aberdeen and submitted himself to the examination of Dr. MacKenzie Booth, who discovered and removed a small superficial lamina of necrosed bone beneath the mucous membrane of the posterior nares. Immediately after this there was a subsidence of the fever for over three weeks, an increase of nine pounds in weight, and a feeling of health such as had not been experienced at any time since the illness commenced. I did not see this piece of bone, as I was absent for a prolonged holiday, and only heard of the fact on my return. Unhappily, the intermission was not of very long duration. At the end of the three weeks or thereabouts the favourable anticipations which I had expressed on hearing of what had been done were falsified by a return of all the old symptoms. I still urged the employment of the local disinfectants, but there was apparently no advantageous result either from them or from general treatment of various kinds which I suggested as a supplement to this. Now, also, the lymphatic glands on both sides of the neck became greatly enlarged, indicating, as I thought, that the lesion may have extended across the middle line; and a further careful examination by Dr. Hunt, on this occasion at his own house and with good illumination, led to the discovery and loosening of another piece of necrosed bone close to the site of the previous piece. Though it could be felt with the probe to be loose it could not be detached. Before the patient had reached the bottom of the street, however, he coughed it out into his mouth, and at once sent it to Dr. Hunt, who brought it to me. It was a very small bit, but distinctly winged, showing that it extended on either side across the middle line; and thus the enlarged chain of lymphatic glands on *both* sides of the neck was easily understood. Now I fully believed and told him that the trouble was probably over, and that complete health would soon follow. In a letter received immediately after this he hopes sincerely that my "very favourable prognosis will turn out correct," and goes on to say: "Since I saw Dr. Hunt and had the piece of bone removed I have felt decidedly better." This was on Nov. 12th, 1894. Again, however, every one was doomed to be disappointed, the intermission was shorter than before, and the health seemed to become more seriously broken than ever; so much so that again and again the propriety of abandoning hope of ever being able to practise again was entertained. This, however, I strenuously and steadily opposed, insisting still on the likelihood of recovery. Previously to this date of Nov. 12th I had written to ask to be supplied with a little of the nasal secretion, for I felt that there was wanting one important link in the chain of evidence which, in my opinion, connected the symptoms with a lesion of a special kind at or behind the posterior nares—viz., a lesion which served as the breeding ground of poison-producing microbes. That link was the demonstration of the microbes themselves, and I hoped, if I could procure the nasal secretion, to be able to obtain a pure culture of these, and determine experimentally their fever-producing qualities. And this is the proper place to state that not once or twice, but over and over again, I had insisted on the following as the only adequate explanation of the variations of temperature which the patient exhibited. His charts were forwarded to me from time to time, and the explanation to which I have referred was that microbes were bred in the hitherto undiscovered and unremoved ulcerated surface; that they generated toxines, which, being introduced into the patient's system, poisoned him; that the toxines at length became strong enough and sufficient in amount to poison, or at least to lessen the activity of, themselves; and that during this period of suspended activity the febrile temperature declined, and some slight approach to restored energy was made. Please look at this temperature-chart.[1] It consists of a very long series of waves extending, as you see, over nearly two years, many of the fever periods lasting eight days, with intervals of entire or partial freedom from fever of four or five days. Did anyone ever see a fever chart of this character extending over such a length of time that was explicable on any other supposition? I show you here another, resembling it both in type and time of duration. It is that of a patient whose prolonged and nearly fatal illness was due to a local lesion in the posterior nares which disappeared when it was effectually treated. The case is one of the series to which I have alluded, and was published some months ago. In the present case I had not the advantage of observing the temperature till some time after my first visit to him, and hence on that occasion gave an alternative diagnosis either of poisoning through a local lesion or of an abnormal form of general tuberculosis, but as soon as I did see it my opinion was formed, and never for a moment varied. Still, the demonstration was not forthcoming, and I was disappointed to be informed in a letter of Nov. 6th that there was absolutely no nasal secretion to send me. As I have said, the fever returned some time after the removal of the second piece of bone, and after a period of considerable anxiety the suggestion was made that he should consult another gentleman in London eminent in the departments of laryngology and rhinology. I was not aware of this at the time, happening to be from Liverpool when he called. He saw the gentleman, and he in his turn recommended that Mr. Victor Horsley should be consulted with the view to a digital examination while the patient was under an anæsthetic and to a radical operation if necessary. The examination was made, an operation carried out, and on the following morning I received in Liverpool a letter containing the following very joyful announcement: "Dear Dr. Carter,—I hasten to let you know that Mr. Horsley operated on my husband this afternoon, and found a piece of dead bone with an ulcer behind, somewhere at the back of the posterior nares. The sphenoid was all right." The latter statement was made in consequence of a suggestion from the gentleman who had first been consulted that the symptoms were only explicable on the hypothesis of pus being pent up in the sphenoidal sinuses, which should therefore be opened and evacuated. This suggestion, when it was communicated to me, caused me so much alarm that I instantly wrote to the patient and expressed my very serious doubts as to the necessity of so formidable an operation, pointing out to him that he had never had cephalic symptoms, which I thought must certainly have been prominent if pus, as was suggested, had been pent up in the sphenoidal sinuses for a prolonged time; that the hypothesis was not necessary in order to account for his symptoms; and that no operation should be performed that was not absolutely necessary. After stating my objections to the necessity of such a hypothesis as had been framed I went on to say: "If, however, opening up the sinuses can be effected without any risk, and if thus all the parts can be more effectually antisepticised, I should say by all means have it done, for what you undoubtedly want is something that will put a stop to the necrotic process that is going on, as evidenced by the casting off of two bits of bone, and something that will purify and keep pure the parts from which these bits of bone are thrown off." The day after I wrote the letter from which I have now quoted the patient called upon me on his way up to London. The immediate result you have heard. It is a further proof, if proof were necessary, of the splendid practical surgical skill of Mr. Horsley, and of his combined boldness and conservatism. Opening into the sinuses was not

[1] The lecture was illustrated by the exhibition of temperature charts.

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necessary, and hence was not done. The exact nature and extent of the operation may possibly be some day recorded by Mr. Horsley himself. All that I am concerned about here is its splendid practical results. From the day of its performance (more than two months ago) to the present moment all fever has ceased. As soon as the necessary period of rest had passed and food could be taken the body weight increased for some weeks at the rate of half a pound a day, and the patient is now as well as he has ever been in his life, and for a considerable time has been able to resume without fatigue the duties of an arduous practice. The congratulations which for the third time I ventured to offer immediately after the operation have happily been justified by the result, and the whole case presents, I think, one of the most striking examples of a supposed inexplicable fever, proving to be both explicable and removable when a source of local septic infection was once got at and removed.

The last case that I shall bring to your notice differs from those previously narrated in the fact of its having arisen in the course of a surgical affection. On Feb. 15th, 1895, I was requested to see with my friend and colleague, Mr. Robert Jones, and Dr. Chisholm of Woolton, a man aged twenty-three years, a resident of that place. This patient had always been perfectly healthy up to about a year previously, when he met with a very severe accident, which, besides bruising him generally, caused compound fracture of the bones of the right leg. As the result of this he became subject to great, and what was feared would prove a permanent, deformity, a circumstance of such serious importance to a young man that the advice of Mr. Jones was sought as to whether anything could be done to remedy it. By a series of ingeniously devised and successfully executed operations this deformity was entirely overcome, and all that remained was a very extensive area denuded of skin, which it was proposed to fill up by grafting. For this purpose plastic operation was carried out on Feb. 3rd to supply the place of the destroyed skin. Everything that prudence could suggest seemed to have been devised to ensure the success of this. A room was specially selected on account of its cheerful aspect and freedom from every suspicion of sanitary defect. Two nurses of skill and experience in antiseptic surgery were engaged. For a day or two everything went well. The wound was from the first antisepticised. No hand was allowed to touch it except after thorough cleansing with disinfectant. The bowels were carefully attended to, and every hope entertained of success, when a slight feeling of malaise on the evening of the 3rd, accompanied by a moderate rise of temperature, began to excite uneasiness. The wound was examined and found to be sweet. Day by day, however, the symptoms were intensified. The temperature rose as high as 104·4° F., the rise being preceded by a feeling of shivering and occasionally by a somewhat severe rigor, and followed by profuse sweating. Emaciation set in and was progressing somewhat rapidly, in spite of a fair amount of judiciously selected nourishment, and the utmost anxiety was felt and expressed on all hands for his condition. Ten days after the commencement of these symptoms, which continued daily and increased rather than diminished in intensity as time went on, I was asked to see him. A very careful examination of all the large organs failed to detect anything that could throw light upon the condition. The heart, lungs, kidneys, and other abdominal organs seemed to be healthy. I examined the nose and could find no evidence of disease in it that might explain the symptoms. I then asked permission to examine the granulating surface. It was carefully exposed by removal of the antiseptic dressings and certainly at first sight looked very healthy. After a thorough cleansing of my hands in a weak solution of perchloride of mercury I went round its edge. On almost every portion of this there was the white film creeping in by which the gap was being filled in, and the skin to a gentle touch seemed firm and adherent. From one minute spot, however, the white film was absent, and here the skin, instead of adhering to the subjacent tissues, felt slightly loose. On pressing over this minute bit of skin a single drop of pus was squeezed out. A cleansed probe introduced at the spot penetrated for a few lines. I ventured to express the belief that absorption of septic material through this very small spot, that seemed to have escaped the reach of the antiseptics, was sufficient to account for all the symptoms, and with the view of putting this to the test we agreed to instruct the nurses to inject a weak solution of perchloride of mercury by means of a small syringe, whose fine nozzle was to be introduced under the skin at the point where it had admitted the probe, but to make no other alteration in treatment, which had consisted mainly of the administration of quinine. The moment this was done the temperature fell to normal and never again rose. The patient has for some time been at the seaside convalescent.

THE OPERATION FOR THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC, ILLUSTRATED BY A SERIES OF CASES.[1]

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I VENTURE to introduce this subject because it has not yet been discussed by the Medical Society of London, also because the operation for the cure of hydrocele by excision of the sac does not seem to be so well known as it undoubtedly deserves to be. During the last ten years (1885 to 1894 inclusive) one hundred and thirteen cases of hydrocele were treated by operation in the wards of St. Bartholomew's Hospital,[2] only thirteen of these are said to have been treated by incision and excision of the sac wall. Forty-eight of the remainder were injected with iodine; forty-five are said to have had radical cure done; and, lastly, seven were treated with setons. With the help of Mr. E. G. B. Adams, to whom I am under a great obligation, I have examined the notes of these cases. There is no doubt but that the forty-five who are said to have been treated by "radical cure" had the hydrocele injected with iodine, black wash, or carbolic acid, the last two being used in a very few instances. Hydrocele is such a common disease and causes so much mental and physical inconvenience that some good reason must exist to explain why only 110 cases passed through the wards of a great hospital in a decade. I myself am inclined to attribute it in a measure to the uncertainty of injection, and to the fact that besides being uncertain it is very painful. My own observations have long caused me to look askance at this procedure. That it often failed there could be no doubt, but I did not know in what proportion; that it was exceedingly painful was also evident; and that epididymitis and orchitis were not infrequent consequences could not be denied. Now, whatever the patients themselves might think, it seems evident that one would be chary in recommending an operation which, after much pain and discomfort, might not succeed, or which might leave the patient with an additional disease. With regard to the question of failure I was not astonished to read in Mr. Jacobson's recent work that he estimates the failures after injection at from 8 to 10 per cent.[3] The exhaustive labours of this writer and his temperate and judicial attitude give great weight to this statement.

With the help of Mr. Adams I have examined the notes of the cases of hydrocele in the wards of St. Bartholomew's Hospital during the last ten years. We have abstracted the notes of seventy-four patients who had been treated by injection, the total number of injections being ninety-three. In six of these the ultimate result was doubtful; they were not cured when last seen.[4] In twenty-four the injection had undoubtedly failed. The above seems a very high proportion of failures. It is to be remembered, however, that many of the cases may have been admitted into the hospital because they were known to be intractable. Nevertheless, they deepen my own distrust of the so-called cure by injection. The history of these twenty-four failures is remarkable: ten failed after one injection, eleven had two injections, one had three injections, and two had four. In those which had two, three, or four injections the result is in many cases unknown, but some were ultimately treated by excision of the sac. Of the two cases which were tapped four times, one, a

[1] Read before the Medical Society of London on Oct. 14th, 1895.
[2] St. Bartholomew's Hospital Reports, Statistical Tables, prepared by the Surgical Registrar. Three cases treated by seton are accidentally omitted in the year 1889.
[3] The Diseases of the Male Organs of Generation, p. 141. London, 1893.
[4] One has since written to say he considers himself well, the swelling having "gone right down." I am greatly obliged to Mr. Maxwell for much help in obtaining the addresses of these cases.

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medical man, tells me that he now, after much suffering, has a spermatocele; the other seems to have been cured by carbolic acid after three injections with iodine. The patient who was injected three times had a most remarkable career. His hydrocele, which is said to have followed a blow, was tapped, thrice injected with iodine, twice incised and drained, and, finally, laid open, painted with liquor iodi, and packed with iodoform gauze. There is reason to believe that this was successful. The case was described by Mr. Willett in the discussion before the Royal Medical and Chirurgical Society.[5] It may be noticed that excision of the parietal layer of the tunica vaginalis was not performed.

Out of the twenty-four operations which I have now done for the cure of passive hydrocele, two had previously been injected with iodine and relapsed. When the tunica vaginalis was opened no adhesions were found, but in one the testicle was chronically inflamed, although the injection had been done eighteen months before the operation, and the other has still a nodular condition of the testis and epididymis. These two cases of relapse are included in the twenty-four which have just been mentioned. Thus the chances of relapse after an attempt at cure by injection are very considerable; rather over 32 per cent. according to the statistics of St. Bartholomew's Hospital. Evidently the operation is not one to be recommended with confidence. With regard to the painfulness of it, I feel sure (in spite of the enthusiastic statements of some surgeons) that it is considerable. Putting aside what I myself have seen, it is clear from the notes that, although cocaine was freely used, pain which needed morphia for its alleviation was quite common and occasionally was so severe as to make the patient sick. It seems unreasonable to suppose that a violent irritant can be applied to the surface of a sensitive organ like the testicle without causing considerable pain. Two of the patients upon whom I operated for radical cure of hydrocele by excision of the sac had, as I have just said, previously been operated upon by the injection of iodine. They were most emphatic that the excision was much less painful, and was, indeed, comparatively comfortable compared with injection. Nor am I convinced that injection with carbolic acid has the advantages which some have claimed for it. I can only find that five patients were injected with carbolic acid in the wards of St. Bartholomew's Hospital in the ten years 1885 to 1894 inclusive. They received six injections. Two of these injections failed. In one case a second injection with carbolic acid seems to have succeeded, but it is said that the epididymis was much enlarged. In a second case an unsuccessful injection with carbolic acid was followed by an unsuccessful injection with iodine. Finally, the parietal layer of the tunica vaginalis was excised. The other three patients were probably cured by one injection with carbolic acid. One is said to have suffered pain. This might be expected. Experiments upon animals incline me to think that carbolic acid is a violent remedy, and no one can deny that the testicle is a sensitive organ.

I do not propose to discuss all the alternatives to injection. A case has been mentioned in which incision and drainage failed twice. A diverticulum of the tunica vaginalis may, it is said, have been the cause of these persistent failures. Setons were inserted seven times into the hydroceles of infants and young boys. One of these is known to have relapsed and had a seton inserted for the second time. Partial excision of the parietal layer of the tunica vaginalis has also been tried. In one of these it is said that "so much of the sac was removed that it was difficult to bring the remainder together." The wound was drained for fourteen days, but nevertheless, before the man left "a small fluid tumour had already returned." Incision of the tunica vaginalis and after-packing with lint and subsequent sepsis and suppuration is a repugnant procedure. Excision of the sac, on the other hand, may be rendered an aseptic process, and seems to me to afford an excellent prospect of success. It seems reasonable to suppose that the removal of about nine-tenths of the diseased secreting membrane, and the exposure of what is left to the loose cellular tissue of the scrotum, could hardly be followed by a reaccumulation of the hydrocele fluid. The results of the operation will, I think, go far to show that this assumption is correct. And here it is to be said that the title of this paper is not strictly applicable to the operation performed upon ordinary hydrocele of the tunica vaginalis. For the cure of these only the parietal layer of the tunica vaginalis has been excised (Fig. 1), but in encysted hydrocele the whole sac is cut away. I have now excised the whole of the parietal layer of the tunica vaginalis twenty-five times. All of these were done for the cure of hydrocele, with the exception of one which was done for hæmatocele. No attempt whatever was made to select the cases. The youngest was sixteen years old, the oldest sixty-eight. Some could hardly be considered good subjects for an operation. A man aged forty-one had been a heavy drinker. His face was covered with acne rosacea. He had a high-tension pulse and probably some aortic stenosis. His urine contained a trace of albumen. He took ether well and suffered no apparent harm from the operation. A man aged sixty-three who had acne admitted that he drank; another, who was a plumber, suffered from lead poisoning; several had chronic bronchitis. This is a very objectionable complication, on account of the anæsthetic. However, by choosing the warm months of the year for the operation and by skilful administration of the anæsthetic this complication need cause little anxiety. In several cases the hydrocele was accompanied by other affections. In one a hydrocele on the right side and a varicocele on the left were operated upon at the same time. In another both sides were operated upon at the same time, the hydrocele being double. In another case the presence of an acquired hernia upon the same side as the hydrocele made no difference. A man who had a hydrocele and organic strictures of the urethra was operated upon first for the cure of the hydrocele, and a week later for the cure of the strictures. The last operation was followed by orchitis. In one case the hydrocele was bilocular. The testicle was surrounded by an ordinary hydrocele of the tunica vaginalis. A second large sac, full of about half a pint of clear yellow fluid, lay above the head of the epididymis. Both sacs were treated in the usual manner, the upper one being entirely removed. The operation was performed for various reasons—in some because of the size and weight of the hydrocele; in others for pain and discomfort, especially whilst riding upon horseback. Some were done to enable the patients to enter the army or other public services. One was done to enable the patient to wear a truss for a hernia which was unsuitable for radical cure. Some were performed because the patients were weary of being tapped; one man had been tapped twenty-four times. One patient was alarmed because his hydrocele had been burst at football. This accident had not brought about a cure, as happened to a man I saw under Mr. Butlin's care, and of whom it is stated that his hydrocele had been burst by the wheel of a wagon passing over it. Another reason might, I think, influence the decision. At various times I have dissected a number of hydroceles. In the large ones of long duration the testicle had become flattened out and wasted, and apparently spoilt. In some of the operative cases [the gland was considerably altered, the epididymis having become separated from the body of the testis.

Before operating for the radical cure of hydrocele by excision of the sac it is, as a rule, advisable to tap once to ascertain the condition of the testis. It would be disappointing to find a gumma, or a mass of tubercle, or even a malignant growth. Inasmuch as the fluid in a hydrocele is quite thin, like water, a very small trochar and cannula suffice for the tapping. A cannula of 2 mm. diameter is quite large enough. The instrument usually figured in textbooks is a relic of mediæval surgery. Strange to say, one of those upon whom I intended to operate underwent spontaneous cure. A man aged sixty-five came in January, 1894, with a hydrocele of two years' duration. It had been tapped five times. He had bronchitis, so I tapped it again and told him to come in June to be cured. He returned in June with no trace of hydrocele, and said that after the tapping it had rapidly refilled and then got quickly well. He remains quite well of his hydrocele at this date (October, 1895). He attributed his cure to some spirits of camphor which he was taking. I also find it stated in the notes that a youth aged seventeen, who was under the care of Mr. Thomas Smith, had undergone spontaneous cure of his hydrocele. He had had it three years, and it had been injected once with iodine, but had relapsed. No reason could be assigned for the cure. This event is, of course, too rare to have any practical bearing upon the question of operation.

The operation of excision of the parietal layer of the tunica vaginalis is exceedingly simple. An incision is made the whole length of the long axis of the hydrocele The sac is exposed and separated from the scrotum until

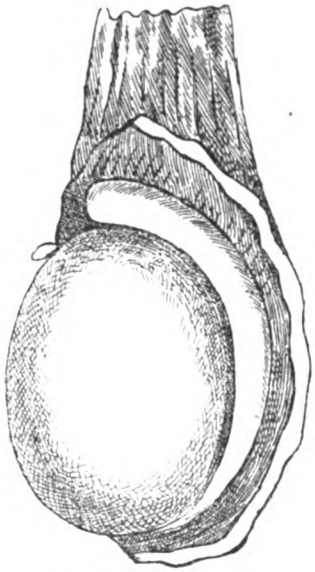
[5] THE LANCET, March 3rd, 1888.

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the spermatic vessels are almost in view. It matters little if the testicle is entirely withdrawn from the scrotum. A puncture is made to let out the hydrocele fluid. This small opening is enlarged to admit the finger to ascertain the position of the testicle, epididymis, and vas deferens. Occasionally the vas is upon the front of the sac, having been displaced. The testis, too, is sometimes in front, as in one of my cases. As a rule this point will have cleared up before the operation is begun; but when the sac is thick the shadow of the testis cannot be seen. The finger in the sac also makes out the exact limits of the epididymis and of the testicle. In big old hydroceles these organs are flattened out and sometimes pulled apart. In one of the cases upon which I operated this had happened, and the epididymis, separated from the testis, lay almost in front of the sac.

These points having been cleared up the whole of the parietal layer of the tunica vaginalis is cut away to within a quarter of an inch of the testicle and epididymis, so that these organs are left in the condition shown in the accompanying sketch. (Fig. 1.) Much misconception seems to

FIG. 1.



Showing how much of the tunica vaginalis is removed for the cure of hydrocele.

exist as to the quantity of tunica vaginalis which is taken away. I am continually asked whether the visceral layer is dissected off the testis and epididymis. Sometimes in very big hydroceles the tunica vaginalis runs up the front of the spermatic cord. This prolongation must be thoroughly removed. The arrest of hæmorrhage is of the utmost importance in this, as in other operations upon the scrotum. A hæmatoma easily forms in the scrotum and detracts considerably from the comfort of the patient and from the success of the operation. In one of my cases no vessel required ligature, but as a rule eight or twelve have to be secured with fine twisted silk. As a further provision against a hæmatoma a large drainage-tube (½ in. diameter) is laid along the depths of the wound and brought out at its upper angle. The rest of the skin incision is closed with fishing-gut sutures placed about a third of an inch apart. Trouble expended in obtaining accurate apposition of the wound is well repaid. The skin of the scrotum heals with great rapidity, and the union becomes quite strong in a week. It may be observed that no caustic is applied to the visceral layer of the tunica vaginalis, which is, of course, left behind. I do not think such applications are required, and they would increase the pain and also cause orchitis. As I have said, twenty-four hydroceles were treated in this way. In addition a hæmatocele was met with, and received the same treatment. After all the blood and clot had been taken away the whole of the parietal layer of the tunica vaginalis was excised. The after-treatment was the same as that of the hydrocele cases, and will be described presently. Repair was rapid, and the after-result left nothing to be desired.

It would not, in my opinion, be justifiable to perform these operations for the cure of hydrocele without stringent aseptic precautions. Inasmuch as surgeons differ as to what these should be perhaps I may be allowed to say very briefly what was done in all of these operations. The aseptic precautions pertain mainly to the preparation of the patient, of the surgeon and his assistant, and of the instruments and materials. The evening before the operation the patient is thoroughly shaved and has a hot bath with abundant soaping and scrubbing. The skin having been cleansed as far as can be done by soaping and scrubbing, it is further prepared for disinfection by extracting its fatty matter with ether or turpentine. It is disinfected by being washed for two minutes with a 1 in 500 solution of biniodide of mercury in rectified or methylated spirit. This is washed away with biniodide of mercury lotion (1 in 2000), and the skin is covered with a covering of carbolic gauze wet with the same lotion. It is, I think, advisable to add some glycerine to this lotion to help to keep the covering moist and assist the chemical to penetrate the skin. It is usual, also, to give a mild purge the night before the operation. These precautions are used for hospital patients; but for others less drastic measures usually suffice. The hands of the surgeon and of his assistants are apt to be a source of infection. After cutting the nails short, and scrubbing for three minutes with soap and hot water, we disinfect them by soaking for two minutes in the same solution of spirit and biniodide of mercury (1 in 500) as was used for the patient's skin. This has hardly any harmful effect even upon delicate skin. My hands are quite unable to bear the strong solutions of carbolic acid which some surgeons recommend. Very few instruments are required; a knife, a pair of scissors, a needle, and a few pairs of pressure forceps are all that is necessary. These, together with the drainage-tube, are sterilised by boiling for a quarter of an hour. Fine twisted silk (No. 0 size) is used to ligature bleeding vessels, and fishing gut for closing the incision. These are also sterilised by boiling, and together with the instruments are afterwards kept in freshly made carbolic solution (1 in 40). After the patient has been anæsthetised the field of operation is prepared by removing the protective dressing and thoroughly wrapping up the penis in carbolic gauze which has been soaked in binionide of mercury lotion (1 in 2000). This "phallic shield" is of the greatest importance in this and other operations about the genital organs, especially in operations for varicocele and for the radical cure of hernia. The area of operation is surrounded with towels sterilised by boiling or steaming for half an hour, and kept wet with 1 in 40 carbolic lotion. One of these towels is passed across the thighs and under the hydrocele to support it. Before making the incision the skin receives a final swabbing with spirit and biniodide, and is then sluiced with 1 in 2000 biniodide of mercury lotion, which is used throughout the operation. I use sponges prepared by the sulphurous acid method.[6] The wound is dressed as follows: After a thorough dusting with iodoform crystals the scrotum is covered with a layer of 5 per cent. carbolic gauze soaked in biniodide of mercury lotion (1 in 2000). This is covered with alembroth wool and an outside dressing applied. The outside dressing is the usual eight-fold layer of carbolic gauze with a covering of jaconet. It is accurately cut to pattern and fitted with great care. (Fig. 2.) It is triangular, with an aperture near the base for the penis to pass through. To the apex of the triangle two strong bands are fixed. When the dressing is in position these bands fix its apex against the perineum and are carried round the thighs to meet the pelvic band in front. This is a similar band of soft material which is fastened to the other angles of the dressing. They secure it firmly in position by being carried round the pelvis. The straps are best made of stout bandage or of webbing. After they have been pulled tight a little extra alembroth wool may be stuffed beneath the dressing to exclude air and make some pressure upon the scrotum. I have used this dressing now for a great number of cases of radical cure of hydrocele and varicocele, for castration, and other operations on the scrotum. I have no doubt but that other surgeons have bethought themselves of such a simple device. It is quite safe and very easy to adjust. The patients find it most comfortable, and are able to turn about in bed and if necessary get up with it on. It enables us to dispense with bandages, always

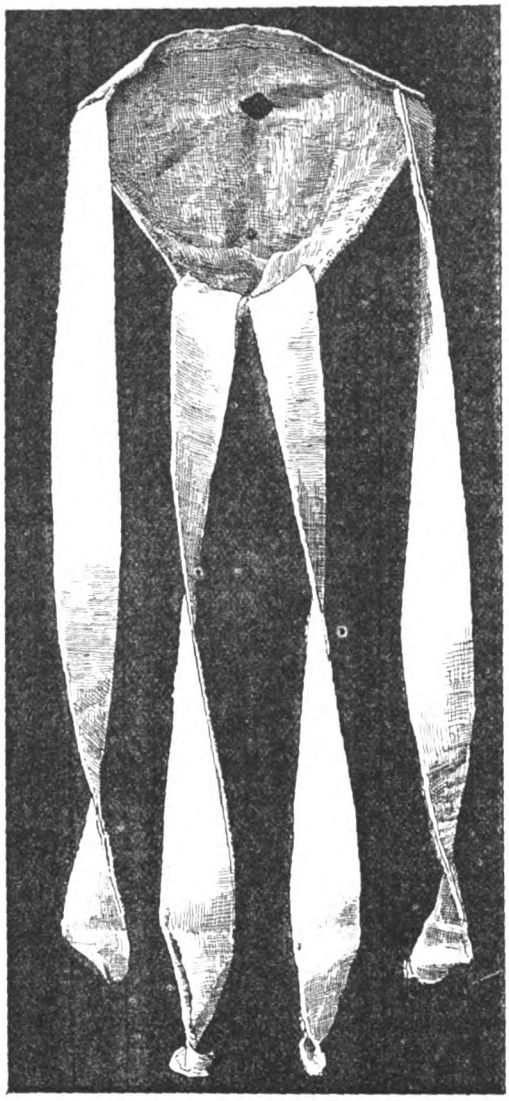
[6] Report upon Aseptic and Septic Surgical Cases, with special reference to the Disinfection of Skin, Sponges, and Towels. C. B. Lockwood. Brit. Med. Jour., Jan. 27th, 1894.

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difficult to apply in this region, and notoriously insecure. The after-treatment of these cases is simple and uniform. After the anæsthetic has passed off any light diet may be given, and the minor indulgences need not be stopped. The dressing is taken off at the end of forty-eight hours for the removal of the drainage-tube. This is done with the same precautions as those used for the operation. On the seventh or eighth day the dressing is finally removed and a suspensory bandage of linen applied. The patient now gets up to lie on a couch, and is able to begin work again within a fortnight.

The immediate results of excision of the parietal layer of the tunica vaginalis seem to leave little to be desired. The

FIG. 2.



Outside dressing used after operations upon the scrotum. From a photograph by Mr. Horder.

asepsis, which is so essential to safety, seems easy to secure. Only one of the cases had subacute suppuration, which was by no means severe. Owing to his physical conformation urine escaped several times into the dressing. We were aware of the likelihood of this accident and endeavoured to shut off the wound with iodoform, collodion, and so forth. The man, however, was negligent and unintelligent, and did little to aid our efforts. Seven months after the operation he was quite cured, and, except for the scar, it would be impossible to find anything abnormal.

A striking feature of these cases has been the absence of orchitis. The case which has just been mentioned is supposed to have had some orchitis, and a youth was found to have some orchitis at the operation; but I am not aware that any of the others had it. Indeed, the testicle seems to be surprisingly tolerant of any reasonable amount of handling. With the above exception the after-course of these twenty-five cases has been quite monotonous. The drainage-tube was withdrawn in from forty to forty-eight hours, and the stitches removed six days later. By this time the wound was healed and merely required protecting with a little wool. After the removal of the stitches the patient was provided with a linen suspender, and got up to lie upon a couch. He was usually fit for work within a fortnight. The patients themselves greatly appreciate the relief which the operation affords, and have been profuse in their expressions of gratitude.

I think the foregoing shows that when excision of the parietal tunica vaginalis is done with strict aseptic precautions the immediate results of the operation leave little to be desired. The greatest pains have also been taken to ascertain the after-results. It may be noted that we have to deal with twenty-three patients upon whom excision of the parietal layer of the tunica vaginalis had been practised twenty-four times, the hydrocele having been on both sides in one instance.

Everyone will acknowledge the extreme difficulty of tracing cases in London. I have, however, succeeded in following up sixteen of these patients. Fourteen have been seen by myself or other surgeons, and are all cured, including the case of double hydrocele. Two have written to say they are cured. One of these patients has been well for close upon two years, two over eighteen months, and none less than three months. To these may be added another case, that of a man upon whom my friend and colleague, Mr. Bowlby, performed exactly the same operation. It was done on Nov. 7th, 1894, and the patient is now quite well (Oct. 4th, 1895).[7] Thus I have not yet met with a relapse after complete aseptic excision of the parietal layer of the tunica vaginalis. I am fully aware that relapses have been described;[8] but it is probable that those cases were not operated upon in the same way as those dealt with in this communication.

Examination of cases which have been operated upon shows that the scar of the incision is hardly visible. The testicle slips about quite freely within the scrotum. The gland in most cases is larger than its fellow, but quite soft and painless. I have observed this slight enlargement in cases which have been cured by iodine. It has probably nothing to do with the operation, but is related in some way to the hydrocele.

It is not intended upon this occasion to touch upon the pathology of hydrocele. Doubtless more than one cause has to be considered. Dr. Kanthack, pathologist to St. Bartholomew's Hospital, kindly examined the tunica vaginalis removed from two cases of passive hydrocele. He found in the thickened membrane evidence of chronic inflammation. At my suggestion tubercle bacilli were sought for, but none were found. The mammillæ scattered over the thickened tunica vaginalis in cases of hydrocele are very suggestive of tubercle.

Inasmuch as they have the closest relationship to the cure of ordinary passive hydrocele, I propose to mention very briefly a case of operation for congenital hydrocele and another one in which there was hydrocele associated with hernia. The first was that of a youth who had a congenital hydrocele of the right side. The fluid in the sac could be reduced into the abdomen. An incision was made over the inguinal canal, and a long, narrow peritoneal tube was found leading into the general peritoneal cavity. This was separated from the spermatic cord and divided, and the stump fastened beneath the arching fibres of the internal oblique and transversalis.[9] The inguinal canal did not require repairing, but the external abdominal ring was closed to its proper size with the usual silk sutures. No drain was inserted, and the wound healed by first intention. It will have been noticed that the tunica vaginalis was not touched, but was left alone, as in an ordinary case of congenital hernia. I now regret that I did not excise the parietal

[7] The patient, together with fourteen others, was shown to the Medical Society at the meeting.

[8] Some remarks on the Radical Cure of Hydrocele, with Notes of Two Cases of Excision of the Tunica Vaginalis, followed by Recurrence of the Hydrocele. Henry Morris, Transactions of the Royal Medical and Chirurgical Society, Feb. 28th, 1888. For report vide THE LANCET, March 3rd, 1888.

[9] The Radical Cure of Femoral and Inguinal Hernia. By C. B. Lockwood. THE LANCET, Nov. 25th, 1893.

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layer, because five months after the operation there was some swelling about the testicle and perhaps a little fluid in the tunica vaginalis. The removal of the parietal layer of the tunica vaginalis in a case of this kind would be a very slight addition to the operation. In future I shall certainly take it away. Indeed, in another case of hydrocele which was associated with hernia this proceeding was adopted. The hydrocele seemed like one of the ordinary kind, but the cord was thickened, and it was thought that there was a narrow and patent processus vaginalis plugged with a strip of omentum. The operation which I usually perform for the radical cure of hernia was done.[10] The peritoneal canal was occluded and the inguinal canal repaired. The lower part of the sac was laid open and in great part removed. It was difficult to make out its exact relation to the testicle, but it closely enveloped it and was, I thought, composed of the upper but not the lower part of the tunica vaginalis. This wound was not drained, and healed by first intention. Mr. Withers informs me that the hydrocele is cured. It is hardly necessary to point out that the above was a chronic hydrocele of a hernial sac. I have many times met with acute hydrocele in strangulated hernia, but in these it seems unnecessary to excise any of the tunica vaginalis. I have never known the effusion to return and persist after it has been evacuated.

Encysted hydroceles of the spermatic cord are also most suitable for excision of the sac. Apart from cases of hernia, I have not myself had an opportunity of dissecting out the sac of an encysted hydrocele of the cord. It is, however, a simple and safe procedure and much to be preferred to injections. From the nature of the case a relapse could not occur. Two patients who were operated upon by other surgeons write to say they are cured.

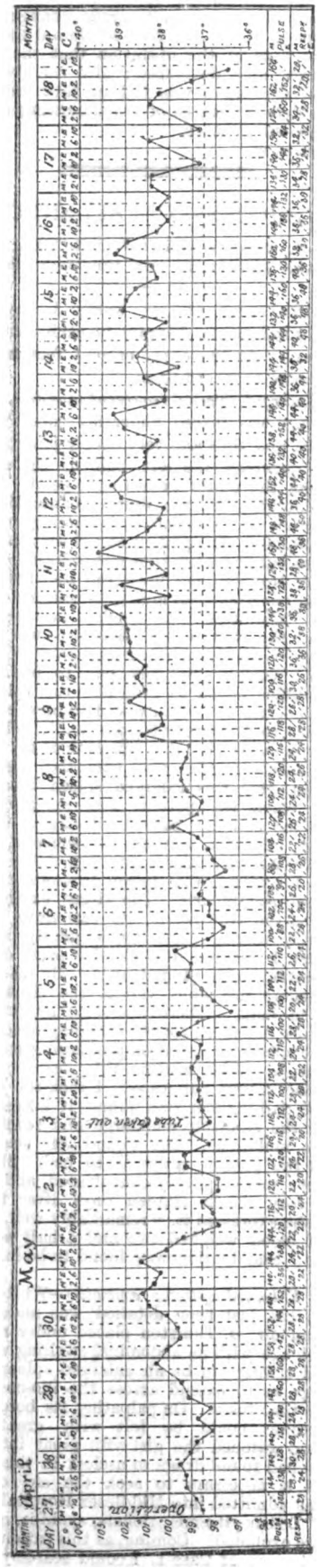
A CASE OF EXTRA-UTERINE FŒTATION; OPERATION NEAR FULL TERM; CHILD LIVING; DEATH OF MOTHER THREE WEEKS AFTER DELIVERY.

BY MONTAGU HANDFIELD-JONES, M.D. LOND.,
OBSTETRIC PHYSICIAN TO, AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN AT, ST. MARY'S HOSPITAL.

THE patient was a woman aged twenty-six years, married seven years previously, and had one child (a boy). This confinement took place twelve months after marriage, was quite normal, and the child, who was healthy, lived twelve months. There had been no miscarriage. Menstruation commenced at the age of thirteen, had always been regular, not very free in amount, and without pain. The patient had been quite well both before and since her confinement, and had menstruated regularly till the last week in August, 1891. She saw a little at the end of November, 1891, and again in December, 1891, about the time of her ordinary monthly periods; the flow was scanty, but there was no pain, except with the loss in November. On Nov. 24th, 1891, she commenced to vomit and was sick for two days. During this time she says that she had pain right across her stomach. She took to her bed and sent for Mr. Archer Wood of Dulwich. Mr. Wood found her markedly anæmic and very much prostrated. On examining the abdomen he found a hard, rounded lump rising above the right Poupart's ligament and apparently springing from out of the true pelvis. The patient complained of a few "pleuritic pains," but these ceased after a few days and improvement took place. A similar attack occurred a week later, and a third after another fortnight's interval, but these two were not so severe as the first attack. After these attacks there was no return of pain, but as the lump did not disappear the patient was not allowed to leave her bed. The lump was first noticed on the right side three days after the first attack of pain. On Dec. 15th Mr. Archer Wood asked me to see the patient in consultation. On this date she was feeling well, free from pain, and anxious to be allowed to leave her bed. There was a slight degree of anæmia. The breasts were suggestive of pregnancy. The abdomen was full, and above the right Poupart's ligament there was a [illegible] a rounded top, firm and solid to palpation, fixed in position, very little tender to the touch, and reaching half-way up to the level of the umbilicus. By vaginal examination the uterus was found pushed over to the left of the middle line and fixed; while to the right and behind there was a firm mass which depressed the vaginal roof on that side and was evidently continuous with the abdominal tumour. The diagnosis pointed clearly to an extra-uterine pregnancy on the right side, and the symptoms suggested the occurrence of rupture with a moderate out-pouring of blood. As the patient was so well it was decided to leave matters alone and watch the further progress of events, the patient meanwhile remaining absolutely in bed. About the middle of January, 1892, Mr. Archer Wood wrote to tell me that all was going on favourably, and that there had not been any further signs of bleeding, but he thought that the tumour was increasing in size. Under these conditions we decided to move the patient into St. Mary's Hospital, so that I might have her under close observation and be able to operate at once if need arose. On Feb. 3rd the patient was admitted to St. Mary's Hospital, and the following notes were taken. On inspection of the abdomen there was found a dome-shaped swelling in the right iliac region which reached above the umbilicus to the height of two inches. The skin was freely movable over the tumour and there was complete dulness on percussion. No movements or adventitious sounds could be detected. The following were the measurements: right anterior superior iliac spine to umbilicus, 5¼ in.; left ditto, 5½ in.; umbilicus to xiphoid cartilage, 5¾ in.; umbilicus to symphysis pubis, 6½ in.; left side (horizontal), spinal column to umbilicus, 12½ in.; right side, ditto, 13¼ in. (over the most prominent part of the tumour). On vaginal examination the body of the uterus was felt pushed over to the left side; the cervix pointed backwards and to the right. The body of the uterus was considerably enlarged, and the right fornix of the vagina was occupied by a hard swelling which seemed to be continuous with the abdominal tumour. The swelling in the right iliac region was not obviously distinct from the uterus. On Feb. 11th the patient said she had had no pain since admission. No movements had been felt, and no sounds had been heard over the tumour. On Feb. 19th the circumference of the body measured over the most prominent part of the tumour 30 in. The following were the measurements: left anterior superior spine to umbilicus, 6½ in.; right ditto, 5¾ in.; umbilicus to xiphoid cartilage, 6½ in.; umbilicus to symphysis pubis, 6¾ in. On the night of the 18th, about 12 o'clock, the patient was awakened by a sharp pain in her right side, which passed from behind forwards through the tumour. She went to sleep in an hour's time, but the pain awakened her at intervals for three or four hours. She did not feel at all sick and felt quite well again in the morning. On Feb. 23rd there was no return of pain. On the anterior abdominal wall on the left side, half-way between the anterior superior iliac spine and the umbilicus, fœtal movements were distinctly felt. On March 10th the measurement round the abdomen was 31½ in. On March 28th the patient said she felt movements every day, but had no pain. The tumour was steadily enlarging upwards and to the right. The urine was acid, contained no albumin, and the specific gravity was 1028. It deposited urates. The measurement around the abdomen equalled 32¼ in. On April 12th the patient was progressing favourably. The girth now equalled 33¾ in. So far no shreds of membrane or decidual cast had been expelled. As by the end of this month the patient would have reached about the 250th day of gestation, it had been decided to operate at that time and not go quite up to full term. On April 27th the abdomen of the patient closely resembled the appearance of an ordinary case of gravidity about the end of the eighth month, except that there was a marked bossing on the right side between the lower ribs and Poupart's ligament. Careful palpation led to the belief that the swelling was caused by the placenta, a view which was found to be correct at the operation. By combined abdominal and vaginal examination the child was felt to be lying obliquely to the vertical axis of the abdomen; the head resting on the brim of the pelvis towards the left side, the back of the fœtus directed forwards, and the breech high up to the right of the middle line. On percussion dulness was found nearly up to the xiphoid cartilage, extending outwards into the right flank, but good resonance was obtained on the left side of the abdomen. Rising about three inches above the level of the symphysis pubis there

[10] THE LANCET, Nov. 25th, 1893.

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was a rounded swelling which could be differentiated from the fœtal tumour and which was almost certainly the hypertrophied uterus. The vaginal conditions had not markedly changed since the last examination. On this date the patient was moved into the ovariotomy ward, and after chloroform had been administered by Mr. Henry Davis my colleagues Dr. Braxton Hicks and Dr. Gow kindly assisted me in the operation of removing the child by abdominal section. When the abdominal parietes had been divided by a long incision reaching from above the umbilicus to within two and a half inches of the symphysis, the following condition was revealed. Below was the hypertrophied body of the uterus rising some three inches above the brim of the pelvis; above this the smooth and convex surface of the fœtal membranes was seen, overlapping the membranes on the left side, and above were coils of intestine. Having picked the membranes about the centre of the exposed surface and incised them with scissors, several ounces of clear, watery fluid escaped, and then a second bag of membranes came into view. Manifestly the fluid which had escaped was situated between the chorion and amnion. The latter membrane was now incised and a sharp rush of clear amniotic fluid escaped. The fœtus was now lifted out of the abdomen, the cord rapidly tied, and the child handed over to an assistant; a sharp, lusty cry testified to its vitality and vigour. Dr. Braxton Hicks examined the placenta at this stage with me to decide the question of further treatment, but as blood began to well up rapidly from the deep part of the organ it was deemed unadvisable to attempt its removal. As far as we could ascertain the organ was attached low down in the pelvis on the right side over the right iliac fossa, and then spread up over the right flank till it was reflected by the diaphragm and ribs into the right abdominal wall. The umbilical cord was now cut short and dropped back into the sac of the membranes, the intestines were carefully sponged, and the cut edges of the membranes having been gathered up were sutured to the edges of the abdominal incision; finally, the abdominal wound was closed except for two inches at its lower part, where a rubber drainage-tube was passed down into the sac of the membranes. The wound was now dressed in the manner usual after an ovariotomy, and a many-tailed binder having been applied the patient was placed back in bed. The pulse was 140, the respiration 26, and the temperature 98·8° F. The patient had a rapid pulse an hour after the operation, but otherwise showed no marked symptom of shock. The infant was of the female sex, was well nourished, and weighed nearly seven pounds; there was a curious flattening of the left parietal bone, due apparently to pressure of the child's skull against the bony wall of the pelvis. At first the child was unable to take milk from the feeding bottle (owing apparently to some difficulty in sucking) and had to be fed by a catheter passed back through the nose; but in a few weeks' time this trouble had passed and the infant was brought up by hand in the ordinary way. When she left the hospital at the end of three months she was in all respects a well-nourished and well-developed child.

After-history.—The following notes taken by my clerk, Mr. Frank Easton, give a fair view of the patient's progress after the operation. On May 3rd she was very cheerful. The wound was dressed and the tube taken out. The discharge was less sanious and less copious. The temperature kept down and the pulse became slower, being 112, as against 140 just after the operation and 160 two days later. The child was jaundiced, but was getting on well; she was fed by the tube being passed into the stomach. On May 4th the stitches were removed. The bowels were freely relieved. The abdomen was much less distended and was soft and natural. On May 6th the patient slept well and took solid food with a good appetite. She was propped up in bed and did some wool-work. The pulse-rate was 88 in the evening. On May 8th the patient was not so well and was drowsy. The pulse was quicker and the tongue was furred. The cavity of the membranes had greatly shrunk and the anterior surface of the placenta bulged up into the abdominal opening. The discharge was perfectly sweet. On May 11th she was sick twice and still drowsy; some sloughs of membranes were removed through the abdominal wound. The temperature was 102°. The area of dulness over the placental site was diminishing. On May 12th the patient was worse; she disliked her food and looked sallow. From this date she slowly lost flesh and strength, drifted into a typhoid condition, and died on May 18th.

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Necropsy.—On opening the abdomen the fœtal membranes were found firmly adherent round the abdominal incision, entirely shutting off the peritoneal cavity. Some coils of intestine were adherent around the fœtal sac, but there was no sign of any general peritonitis. The uterus corresponded in size to a three months' gestation, was somewhat displaced to the left, and contained a well-marked decidual membrane, which was detached and loose in the lower zone, but adherent still above. The left ovary and tube were somewhat thickened and matted, but otherwise were normal. The right tube was much elongated and continuous at what was apparently its fimbriated end with the fœtal sac. The right ovary was represented by a small nodular mass situated at the lower part of the fœtal sac. The placenta spread upwards from the pelvis, and the side of the uterus was adherent over the whole right iliac fossa, then passed upwards over the region of the right kidney, and then passed forwards on to the right side of the abdominal wall. The aspect of the peritoneum at the site of attachment was so altered that it was difficult to trace its relations. Numerous vessels passed from the under surface of the placenta to join the neighbouring organs and tissues. The largest vascular connexion to the underlying tissues was a large vein which opened directly into the common iliac vein of that side, and which was necessarily torn across in peeling off the placenta. The placental tissue was healthy throughout, but at the spot where the mass had bulged into the abdominal wound a slough the size of a crown piece was being gradually thrown off. No pus was found anywhere, but low down in the right of the true pelvis, below the placental attachment, there existed a pocket of red grumous fluid amounting to about an ounce and a half, and formed apparently of blood undergoing retrograde change.

Remarks.—In the light of the post-mortem examination it is easy to trace the course and development of this case. Clearly an impregnated ovum became arrested in the ampulla of the right tube, or at all events in the outer part of this tube. As growth proceeded, the Fallopian tube became distended, and probably the membranes of the increasing ovum bulged out from the tube into the peritoneal cavity in the manner described by Mr. Bland Sutton and others. At the time when Mr. Archer Wood was called to see the patient a partial separation of some of the chorionic villi had taken place and internal hæmorrhage had resulted—or, in other words, a tubal miscarriage was threatened. The blood loss and separation were not, however, sufficient to kill the child or to destroy the vitality of the ovum, and so growth proceeded. The pain, marked anæmia, and prostration leave very little doubt as to the occurrence of the internal bleeding, and the recurrence in a slighter form of the accident at one week's and again at two weeks' interval renders the probability even greater. The further growth of the ovum dragging up and elongating the involved Fallopian tube and leading to the implication of other neighbouring organs and tissues is just what one might expect. It is interesting to note that, though a marked decidual membrane had been formed inside the uterus, this was retained throughout the pregnancy and was not thrown off in the early months in the usual way. There was little in the necropsy to explain the cause of death. No general peritonitis existed, no intestinal obstruction, and no collection of pus, and yet the clinical history and temperature chart suggest most strongly that the patient died from some form of blood poisoning. Bearing in mind the existence of a superficial slough on the part of the placenta which bulged into the abdominal wound and was most exposed to the action of microbes, it would seem probable that this was the source and supply of the septic material which poisoned and overpowered the feeble resisting powers of the woman. In all cases of extra-uterine fœtation advanced to nearly full term the most important and the most difficult question is the method of dealing with the placenta. The necropsy in this case showed most clearly that any attempt (either primary or secondary) to remove the afterbirth would have led to rupture of the large iliac vein and most certainly to a fatal hæmorrhage. The method which was adopted in the present instance must always expose the patient to the risk of septic poisoning, and I shall not again willingly resort to it. Should another similar case come under my care I shall tie and divide the cord close to the placenta, remove as much of the membranes as may be possible, and then close the abdominal incision entirely, leaving the placenta untouched. There would seem to be no reason why the latter organ, which has rested in the abdomen for some months in vital connexion with surrounding parts, should not continue its existence, gradually undergo retrograde change, and form a quiescent tumour of lowly organised fibroid tissue. It was interesting to note at the operation that the placenta was unusually large and developed; also to observe at the necropsy that the organ was full of dark fluid blood and that no considerable degree of blood-clotting had occurred in the large vascular spaces.

Cavendish-square, W.

THREE SUCCESSFUL SPLENECTOMIES.

BY J. BLAND SUTTON, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL.

WITHIN the space of six weeks I have performed splenectomy three times, happily in each instance with a successful issue. As the cases present features of clinical interest I venture to record them.

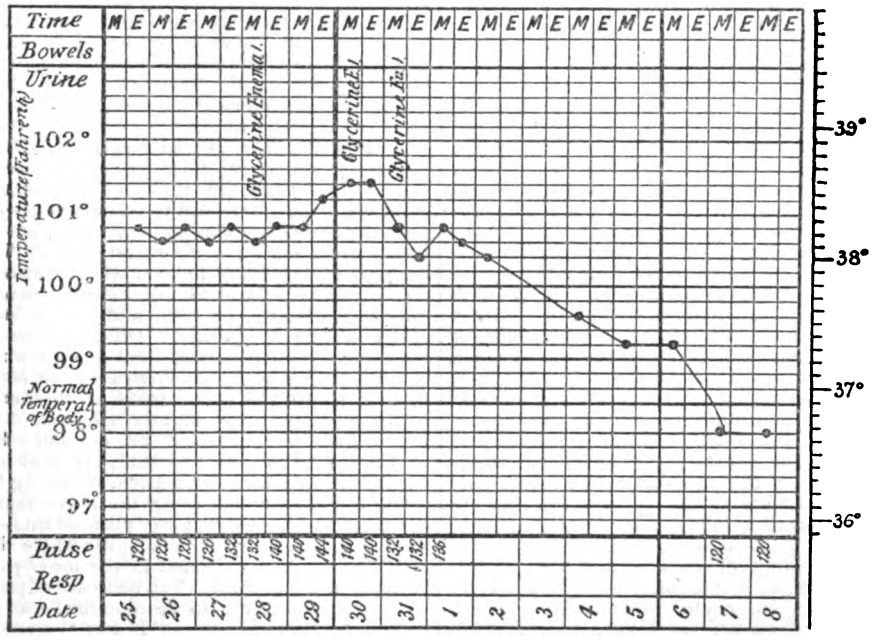
CASE 1. *Enlarged spleen; recurrent jaundice.*—A girl aged seventeen years was placed under my care by Mr. Arthur Wyborn. She was thin and very deeply jaundiced; a large, firm tumour occupied the left half of the abdomen and extended from the costal arch to the pelvis. This tumour exhibited no notches and was dumb to auscultation. There was amenorrhœa of three months' standing, but the pelvic organs were normal. The patient stated that since the age of five years a tumour had been known to exist in her "left side" and had never troubled her until the last two years, when she began to experience dragging sensations, accompanied by jaundice. The attacks of jaundice had now become so frequent and she felt so ill that she was incapable of following her vocation. On her admission to the Chelsea Hospital for Women she was put to bed. In a few days the jaundice began to fade and the spleen markedly decreased in size. Dr. Comyns Berkeley estimated the red corpuscles to be 4,500,000 per cubic millimetre, and the leucocytes were in the proportion of 1 to 122 of the red. Leucocythæmia was excluded, and I came to the conclusion that this enlarged spleen became engorged with blood when the patient was up and about, and its drag on the stomach caused kinking of the duodenum and common bile-duct, leading to recurrent jaundice and vomiting. In August, 1895, with the full consent of my colleagues, I exposed the spleen through an incision in the left linea semilunaris. The viscus extended from the diaphragm to the true pelvis, its extremity being in contact with the uterus. Dr. Giles gently supported the spleen whilst I secured the slender parts of the gastro-splenic omentum with plaited silk. By the time I was ready to secure the main vessels the viscus had greatly diminished in bulk. There was some anxiety in securing the suspensory ligament, for the dragging necessary to bring it within the sphere of operation produced great interference with respiration. With caution this was successfully overcome and the spleen cut away. I took the opportunity to examine the gall-bladder and found it larger and thicker than usual; the stomach was large and reached below the level of the umbilicus. The wound was secured in triple layers, and the patient returned to bed. She rapidly recovered from shock, quickly convalesced, and left the hospital with rosy cheeks sixteen days after the operation, feeling, as she expressed it, "remarkably well." The spleen, deprived of blood, weighed two and a half pounds, and on microscopical examination was found to be fairly normal in structure.

CASE 2. *Enlarged spleen; anæmia.*—Whilst the patient whose case has just been detailed was under observation, Mr. Trist and Mr. D. Thurston placed under my care a girl five years of age with an abdominal swelling which they regarded, and rightly, to be an enlarged spleen. The viscus was so large as to extend across the ilio-costal space and dip into the iliac fossa. On palpating its border the characteristic notches could be felt with great distinctness. Mr. Trist had watched the girl with great interest for many months and had found drugs so useless in this instance that he deemed it necessary to seek the aid of a surgeon. The girl was admitted into Middlesex Hospital and carefully watched. Leucocythæmia, rickets, syphilis, and lardaceous disease were excluded. Coming, as this patient did, "on the heels," as it were, of Case 1, I could scarcely fail to realise

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that I had really to deal with an early stage of the splenic enlargement which was found in that case. After very deliberate consideration and full explanations to the parents, with the assistance of Mr. Leopold Hudson, I deprived this patient of a spleen weighing ten ounces. She recovered in an extraordinary fashion and, thirteen days after the operation, was promenading the ward and appeared to be the most cheerful inmate of the institution. She is, as far as records show, the youngest child on whom splenectomy has been carried out.

CASE 3. *Wandering spleen.*—A thin, spare woman thirty-two years of age, the mother of five children, was placed under the care of Dr. Heywood Smith on account of a mobile tumour in the abdomen. The patient had been aware for ten years that she had a hard, movable body in her abdomen, but it had become larger and more troublesome during the last two years. Dr. Heywood Smith soon satisfied himself that the suspected tumour was a spleen, and kindly asked me to see the patient. At the consultation I found a fairly firm body, in shape like a parabolic mirror, with its convex surface in contact with the anterior wall of the abdomen, floating on the intestines. It could be pushed into the left hypochondrium or depressed into the hypogastrium; with a little manipulation it could be conveyed into the iliac, lumbar, or umbilical regions. It was clearly a wandering spleen, and is certainly the most prodigal abdominal viscus which has come under my notice. In September, with Dr. Heywood Smith's assistance, I removed this erring organ in the following manner:—When the patient was placed on the operating-table no tumour could be felt with certainty, but I perceived some resisting body when deep pressure was made in the hypogastric region. An incision was made in the left linea semilunaris, and on dipping my hand into the pelvis I recognised the spleen in the hollow of the sacrum and drew it forth. The pedicle, rounded, very thick, and hard, was transfixed and secured with four plaited silk ligatures. The detachment of the spleen was followed by an abundant flow of blood, and two forcible but narrow jets of arterial blood issued from the cut surface of the pedicle. The stump was retransfixed with three silk ligatures on the distal (spleen) side of the first row of sutures, and, as the open, everted mouths of two large arteries were visible on the face of the pedicle, for the security of the patient I ligatured them separately with silk. The pulsations of a large artery in the thick part of the pedicle were unpleasantly obvious as it was allowed to retreat into the abdomen. The wound was secured in triple layers and the patient returned to bed. During the four hours subsequent to the operation there were marked signs of shock, but no pain; convalescence was astonishingly rapid. The spleen weighed eighteen ounces; a splenculus occupied the hilus. Histologically it appeared normal.



The future course of these patients will be watched with great care, but I do not apprehend any evil results. More than three years ago I removed a wandering spleen from a woman twenty-two years of age; she is at the present time in good health, notwithstanding an attack of pleurisy six months ago. I have performed splenectomy four times, and in each case with a satisfactory result. In the early part of this year two other patients were placed under my care for the purpose of splenectomy, but I did not consider them suitable cases for so formidable an operation, for I am convinced that in order to meet with success in splenectomy it is necessary to very carefully select the cases.

Queen Anne-street, W.

HE PATHOLOGICAL CHANGES OF THE LABYRINTH.[1]

BY PROFESSOR POLITZER
(OF VIENNA).

IN seeking an explanation of the various troubles and defects of hearing it is requisite to trace out their causes or, in other words, to ascertain the pathological lesions that occasion them. This paper will, therefore, be devoted to: (1) a review of all the investigations upon these lesions in the labyrinth that have been made by many eminent observers; and (2) a statement of personal observations from my own studies in the field of pathological anatomy extending over many years.

Our knowledge of the pathological changes of the labyrinth barely extends beyond the second half of this century. The reason for this scientific hiatus depends mainly upon the imperfection of methods of microscopic examination, which were only successfully remedied about the period indicated, as witnessed by the discovery then made by the illustrious Italian Professor Corti of the histological structure of the cochlea, and the very striking and well-known researches subsequently undertaken by Böttcher, Moos, Steinbrügge, Habermann, and others. Nevertheless, many difficulties still exist, such as the impossibility of making post-mortem examinations at once, the meagreness of proofs of labyrinthine affections during life—conditions which hitherto have not enabled us to go beyond the gross anatomical facts of

[1] An address delivered at the Fifth International Congress of Otology, held at Florence from Sept. 23rd to 28th, 1895.

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labyrinthine pathology. The knowledge so acquired will not have its full value until we have succeeded in connecting it with the clinical phenomena produced by these anatomo-pathological states. Unfortunately, as yet there are only a few isolated instances in which anatomical facts have been connected with clinical observations made during life. The various pathological changes in the labyrinth comprise (1) hyperæmia; (2) hæmorrhagic extravasations into the labyrinth; and lastly (3) inflammations of the labyrinth, primary as well as secondary.

1. *Hyperæmia.*—Easy of recognition anatomically, hyperæmia is of special importance clinically, since it may give rise to subjective noises in the ears, vertigo, and disturbances of hearing. The highly interesting and exhaustive researches made by Dr. Eichler in Professor Ludwig's laboratory at Leipzig upon the vascular system of the labyrinth established the fact that the labyrinth is provided with a special system of vessels, of which the arterioles arise from the internal auditory artery and penetrate through many ramifications into the different parts of the labyrinth, where they break up into capillaries in the cochlea, the vestibule, and semicircular canals, and thence pass into venous capillaries which find an outlet into the venous system of the brain. This special labyrinthine vascular system has numerous anastomotic connexions with neighbouring parts, notably with the tympanic cavity. I was the first to ascertain, by means of microscopic sections treated with osmic acid, that the vessels of the mucosa of the tympanum pierce the bony part of the promontory and anastomose with the vessels of the lining membrane of the labyrinth—an anatomical fact confirmed in the course of pathological investigations. The secondary hyperæmia here meant is particularly that produced by various infective states, notably typhus fever and diphtheritic scarlet fever. But another common cause of hyperæmia is to be found in certain obstacles to the reflux of the venous blood of the labyrinth towards the cranial cavity, such as cerebral tumours and the pressure they exert on the cerebral veins, particularly tumours of the base of the skull growing into the internal auditory meatus and thus compressing both the internal artery and vein. States of labyrinthine hyperæmia are also due to the influence of sympathetic nerve action; the symptoms by which they are indicated—a rapid colouration followed by an equally rapid pallor of face, of external meatus, and of tympanum, tinnitus, and vertigo—admit of no doubt in this regard. There are some forms of hyperæmia which are merely transitory, supervening on acute inflammation of the tympanum or dependent on nervous influence, and which are not then followed by functional derangements. But permanent hyperæmia, caused by chronic inflammation of the tympanum or by arrest of circulation, gives rise to various disorders and persistent troubles. The changes resulting therefrom are enlargement of vessels, pigmentary exudation, and thickening of the membranous parts of the labyrinth and of its lining. This subject will again be referred to.

2. *Hæmorrhagic extravasations.*—Hyperæmia often eventuates in extravasations into the labyrinth, but the latter may be also produced apart from pre-existing congestion. They often occur in infectious diseases, as typhus fever, scarlet fever, diphtheria, small-pox, tuberculosis, chronic nephritis, diabetes, leukæmia, &c., as well as in disorders of circulation due to organic lesions of heart or lungs. In the last-named cases the hæmorrhages must be ascribed to defective circulation, whilst in infectious diseases they are due to changes induced by the action of the specific microbes, which cause diminution of the resistance of the vessel walls. In every case these extravasations take the form of circumscribed hæmorrhages or more extensive effusions of blood in different parts of the labyrinthine cavity. As Knapp and myself have ascertained from post-mortem examinations, these hæmorrhages are met with more commonly than is generally believed in chronic suppurations of the tympanum, especially in those which are complicated with caries, and their frequent presence demonstrates how numerous must be the anastomoses between the vessels of the tympanum and those of the labyrinth. The most interesting forms found by Moos, Steinbrügge, and myself in cases of hæmorrhagic perimeningitis, and of hæmatoma of the dura mater, and also in tuberculous meningitis, are found in part along the course of vessels or nerves and in part between the lamellæ of the bony spiral lamina and in the spiral ganglion, besides hæmorrhagic effusions in the trunk of the acoustic nerve and the formation of thrombi in the external auditory artery. The labyrinthine hæmorrhages which go by the name of "Ménière's disease" are confined to a single case examined post mortem by this observer: it was the case of a young girl who suffered during life with attacks of vertigo, nausea, and disturbance of coördination; but as no other parallel case has been since observed the anatomical basis of Ménière's disease is still lacking, and we ought not, therefore, to speak of a Ménière's "disease," but only of Ménière's "group of cerebral symptoms," which he was, however, the first to correlate with labyrinthine affections from the clinical point of view. It has not been demonstrated as yet that the labyrinthine symptoms frequently observed after the use of certain drugs, such as quinine and salicylic acid, &c., can be produced by hæmorrhages in the labyrinth; in this matter we have only presumptive evidence based on experiments on rabbits made by Fentner. Just as is the case with hyperæmia of long duration, so also do blood extravasations frequently produce pigmentary exudations in the labyrinth: hæmoglobin is then deposited on the membranous parts quite as much as on the walls of the labyrinth, in the form of irregular brown or blackish patches firmly adherent to the tissues of the organ. These pigmentary deposits no doubt irritate the extremities of the auditory nerve and consequently produce subjective tinnitus.

3. *Inflammations of the labyrinth.*—These are either primary or secondary; their pathological relations are more fully known than are those of the changes previously described. Yet in regard to primary forms of inflammation we know little except as to their issues, but not the changes which occur during their early stages. The pathological changes of secondary inflammations, concerning which we possess more precise ideas, result either from acute or chronic infectious diseases, or from a similar inflammation in the cavity of the tympanum. Other writers besides myself have been able to determine that the most marked of these changes are *especially manifested in the lower parts of the cochlea*, whilst the upper parts of this organ are found to be comparatively slightly affected. We are driven to hypothetical reasons to account for this state of things. The most probable is that of Steinbrügge, who thinks that an inflammation, spreading from the cranial cavity to the labyrinth along the nerve ramifications to the cochlea, first reaches the lower plane of this structure, just as in cases of cerebro-spinal meningitis where these lesions are at the very first manifested in the lower parts of the scala tympani of the cochlea. The first case of primary inflammation of the labyrinth to be described was brought by me before the Milan Congress. It was the case of a lad aged thirteen who had been deaf and dumb from the age of two and a half years owing to a labyrinthine otitis, and one could see in the preparation by aid of a lens the complete invasion of the labyrinth by osseous tissue, and the ossified cochlea, the outlines of which are clearly distinguished from the bone that surrounds it. The anatomical changes produced from infectious diseases arise from the invasion of the labyrinth by specific microbes or by purulent material. From these invasions there results an inflammation of the investment and membranous parts of the labyrinth, which leads either to destruction of tissue or to a proliferation of connective tissue that may fill the cavities of the organ entirely or partially and terminate in ossification. These changes are apparently more or less intense according to the more or less advanced degree of inflammation; slight thickenings (*gonflements*) of the labyrinthine lining, or else numerous filaments extend between the bony walls and membranous parts up to the point of completely filling all the cavities with osseous tissue. We owe to Moos the description of the anatomical changes that supervene on infectious diseases, such as scarlet fever, diphtheria, and measles, by the invasion of specific micro-organisms that takes place into the labyrinth through the lymphatic channels passing from the tympanum to this organ. The action of these micro-organisms results in the formation of connective tissues which subsequently ossify, besides necrosis with degeneration of such tissues, caused either by thrombosis of capillary vessels or by the direct action of the virus on the tissues themselves. The character of the grave changes thus produced is in general, except for a few modifications, the same as is found after *diphtheria*, which was the first to be specially studied by Moos. Although he did not happen to determine the presence of the specific microbe of diphtheria, he established in every case the fact of a secondary infection by streptococci, which he detected in nearly all the tissues—in the

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endo- and peri-lymphatic spaces just as freely as in the vestibular aqueduct, in the ramifications of the acoustic nerve, and in the bony cavities of the petrosa itself. The destructive changes occasioned by this invasion are the same as those just mentioned, and we cannot wonder at their extent knowing how destructive are the effects of the presence of streptococci *en masse*. The results of the infective labyrinthine affections developed during or after *measles* are very similar; they are also described by Moos, who attributes the destructive changes in the labyrinth ensuing on this disease to the same cause—viz., streptococcic invasion of the organ. The disintegrating action of this microbe is shown in fatty degeneration of the endothelia of the bloodvessels, leading to coagulation, thrombosis, and vascular engorgement, followed by colloid changes of the labyrinthine tissues, and other destructive lesions in the periosteum, the osseous parts of the cochlea, and the ramifications of the auditory nerve.

The changes following upon *cerebro-spinal meningitis* were studied by Heller, who was the first to prove that the deafness resulting from this affection was due to suppurative inflammation of the labyrinth. The aqueduct of this organ is the route for this invasion, which particularly involves the cochlea, this being in direct communication with the cerebro-spinal space, where the exudation is seated. These changes mainly consist in destruction and atrophy of the membranous parts of the labyrinth and of the ramifications of the auditory nerve, in partial or complete distortion of the organ of Corti, in atrophy of the cells of the spiral ganglion, and in the deposit of amorphous detritus mingled with a few cells; lastly, forming the remnant of the original inflammation, there is a new formation of connective tissue, which may undergo partial calcification. I myself have ascertained the frequency with which secondary affections ensue on chronic suppuration in the middle ear, which may occur either after the destruction of the labyrinthine fenestra by the spread of inflammation to the membranous parts of the labyrinth, or actually without any apparent lesion of the labyrinthine wall by the extension of the morbid process through bloodvessels and lymphatics by means of the anastomosis which exists between those of the tympanic cavity and of the labyrinth. As regards the first variety of these affections I may recall a case which I described at the Brussels Congress, in which the base of the stapes had been destroyed by granulations of connective tissue following suppuration, their growth extending nearly into the vestibule of the labyrinth, as shown in the preparation I exhibited. Subsequently I showed the second variety of these secondary inflammations in another preparation obtained from a deaf woman ninety-three years of age, in whom the external auditory meatus was filled with cholesteatomatous masses formed after suppuration. In the first preparation the outer wall of the vestibule of the labyrinth was found to be coated with tuberculous epithelioid granulations, which were also distributed over the lateral wall and the base of the utricle. In both cases marked labyrinthine symptoms were entirely absent. I have, moreover, discovered in a certain number of cases of chronic suppuration the residues of chronic inflammation in the cochlea in the form of proliferation of connective tissue with simultaneous partial ossification of this tissue, a change which is more frequently seated in the scala tympani. Another variety of exudation into the labyrinth (hitherto little known and first pointed out by me) is that which is brought about by the presence of some obstruction in the internal auditory meatus, causing compression of its bloodvessels, and thus producing exudation as the result of blood-stasis. I may cite as a conclusive instance on this point an observation I made in a woman aged sixty-three years, who was attacked with deafness of the left ear in the course of a cancerous affection of the side of the neck, where the disease had penetrated into the cranial cavity through the base of the skull. The malignant growth had advanced towards the left petrous bone, surrounding and compressing the carotid artery and jugular vein, and then sprouting into the interior of the internal auditory meatus. The exudation, which consisted of a mass of granular material, was in part situated on the cochlear lining and in part on the lamina spiralis. There was no appreciable change in the tympanic cavity and Eustachian tube.

The labyrinth may also be affected in cases of *leukæmia*, and pathological changes may then ensue in this organ which lead to total deafness. The first demonstration of this fact was made by me at the Brussels Congress in the case of a young man thirty-two years old who had long since been attacked with suppurative otitis media, and who had become deaf one year before his death. The preparations obtained from this case showed: (1) new formation of connective and osseous tissue in the scala tympani of the cochlea; (2) complete invasion of the semicircular canals by connective tissue; and (3) accumulation of lymphoid cells in these canals, in the vestibule, and the scala vestibuli of the cochlea. A similar case has been recorded by Gradenigo, who found extravasations of blood in the mucosa of the tympanic cavity, which had been previously attacked with suppurative inflammation, but no like change in the labyrinth; and then another also by Steinbrügge, who detected changes closely parallel to those which I had pointed out in the case of a young man twenty-three years of age who died from splenic and myelogenic leukæmia, and had been previously attacked with syphilis—namely, adhesions in the tympanic cavity, thickening of the membrane of the fenestra rotunda, invasion of the cochlea by blood extravasations, and nearly total ossification of the semicircular canals.

Affections of the same nature are also produced in the labyrinth as the result of *syphilis*. In this regard the best-known examples hitherto recorded are cases of hyperostosis of the temporal bone with contraction of the labyrinthine cavities and of the internal auditory meatus produced by chronic syphilis, and also, as I have already pointed out, an overgrowth of the labyrinthine capsule with stenosis of the fenestra ovalis, ending in ankylosis of the stapes; and, further, a case of acute suppurative inflammation observed by Schwarze in a syphilitic woman who died from acute purulent meningitis. Among rare anatomical changes ensuing on syphilis I have also noted atrophy and destruction of ganglionic cells in the spiral ganglion and similar lesions of the auditory nerve fibres in the cochlea. The former I observed and described in the case of a man fifty years of age, who had been deaf and syphilitic for ten years; whilst the latter were ascertained by Moos and Steinbrügge. Further, I am reminded by an interesting observation made by Kirchner concerning the pathological changes of the bloodvessels of the labyrinth after syphilis in a patient the subject of tertiary syphilis, consisting in a small-celled infiltration of the coats of the vessels identical with that described by Heubner in the cerebral vessels of syphilitic subjects. The concomitants of these changes appear in the shape of fatty degeneration and pigmentation of endothelial cells, proliferation of connective tissue, and obliteration of the vessels here and there. These changes as a whole present similar characters to those proceeding from chronic inflammation above mentioned. Thus in two cases of syphilis Moos found thickening of the periosteum of the vestibule, hypertrophy of the connective tissue attaching the membranous to the bony parts of the labyrinth, and in one of the cases he ascertained the presence of calcareous concretions in the lining of the vestibule. Gradenigo has shown that this connective tissue may in the later stages become ossified, a change which he thought was attributable to hereditary syphilis in a young tuberculous girl aged fifteen years.

Another class of labyrinthine affections is that arising from *tuberculosis*, although primary tuberculous disease has not yet been found. Such observations as have been made on these rare conditions are confined to subjects in whom the middle ear was invaded by tuberculosis, which had encroached upon the labyrinthine cavity and capsule. The features of this affection are denoted by the inflammation, as soon as the capsule has been perforated by ulceration, extending over the lining of the cavity and the membranous parts of the labyrinth, thereby producing, on the one hand, necrosis of tissues, and, on the other, a proliferation of newly formed connective tissue which partially fills the labyrinthine cavities.

In the list of these pathological changes of the labyrinth must also be reckoned *primary affections of the labyrinthine capsule*, to which I drew attention at the Rome Congress. I then demonstrated that in a large number of cases regarded as dry chronic catarrh of the middle ear osseous growths of new formation are met with in the capsule around the fenestra ovalis, these proliferations extending in the direction of the fenestra and leading to ankylosis of the stapes or complete occlusion of the fenestra. In an advanced stage of the disease the bony overgrowth comes to penetrate into the cavity of the labyrinth, notably into the scala tympani, subsequently leading to complete disorganisation of the membranous parts of the labyrinth and organ of Corti.

Finally, I have placed among similar affections which

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I have pointed out and described the *depression of Reissner's membrane*, resulting from increased extra-labyrinthine tension on the organ of Corti, as first referred to by Steinbrügge and later by myself and other writers, and I cited the case mentioned by Steinbrügge of a boy aged twelve years who died from a cerebral tumour, in which the increase of intra-cranial pressure was shown during life by the presence of optic neuritis, and another case described by Gomperz of a tuberculous subject who died from internal pachymeningitis and cerebral œdema, observing that in both cases the membrane of Reissner was found depressed to such an extent that only a mere slit existed between it and the membrane of Corti.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PROLONGED LABOUR.

BY R. D. RUDOLF, M.B., C.M. EDIN.,
LATE RESIDENT PHYSICIAN TO THE ROYAL INFIRMARY AND ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

ON April 4th, 1893, I was called to see, in consultation with a native medical man, a case of prolonged labour, which had only come under his notice that morning. The patient was a middle-aged Hindoo woman and a multipara. She had gone to full term. The history obtained from her relatives was that she had been in a state of labour for eight days, and that as the native midwives could not effect delivery they had brought her into the town of Sewan, a distance of thirteen miles. According to the apparently usual custom among the natives, she had been allowed neither food nor drink since labour began. The patient was found to be a well-nourished woman (although, according to her friends, she was much reduced) and rather above the average size. She lay on her back in a semi-conscious state, muttering occasionally to herself. The skin was cold and clammy, respiration hurried and shallow, and the pulse at the wrist scarcely to be felt and not countable. Auscultation over the heart showed that this organ was beating from 150 to 170 per minute. The tongue was dry and glazed. An intensely fetid discharge issued from the vagina. On examination per vaginam a face presentation with the chin towards the right sacro-iliac synchondrosis (first position) was made out low down in the vagina. The child had evidently been dead for some days. There was complete absence of pains, and the uterus appeared to be completely relaxed. On passing a catheter an enormous quantity of rather high-coloured clear urine came away. The native medical man had already attempted to apply a pair of short forceps without success. After some brandy had been given to the patient I adjusted a pair of Simpson's axis-traction forceps, and by easy stages, and without any great force being used, delivered the head, complete rotation forwards of the chin taking place. The patient became very collapsed, so a hypodermic injection of ether was given and the body was delivered without difficulty. The child was a large male and was very much decomposed, the face in particular being almost denuded of soft tissues. A drachm of extractum ergotæ liquidum was given by the mouth. In half an hour, no pains having appeared, I removed the placenta by introducing the hand into the uterine cavity. No hæmorrhage occurred, but a great deal of intensely fetid, reddish fluid came away. The uterus was then very thoroughly washed out with a corrosive sublimate solution (1 in 2000), and the external parts were cleansed with a strong solution of phenyle. Some milk and brandy were given and hot bottles placed around the patient. That evening (six hours later) the temperature was 97° F. and the collapse was still great, but the pulse was a shade stronger. Milk and brandy were given every half hour. Next morning the temperature had become normal and the pulse counted at the wrist was 115 to 120. The patient was much stronger and could talk sensibly. A douche of corrosive sublimate solution (1 in 3000) was used and the urine was drawn off with a catheter. That evening the temperature had risen to 100°, and five grains of quinine were given. Thence onwards the vagina was washed out twice daily with corrosive sublimate solution (1 in 3000) and the phenyle solution alternately. Fluid nourishment was continued at short intervals. On the second day the uterus was felt for the first time definitely contracted; on the third day the patient micturated and the bowels were moved naturally; and from that time forward she made an uninterrupted recovery and was sent home at her own request a week later. Several weeks afterwards she reported herself as quite recovered.

This case was undoubtedly one of uterine inertia in a previously healthy woman, and this state was brought on by the non-rotation forwards of the chin along with a distended bladder. It seems worthy of note on account of the complete recovery of the patient after such a prolonged labour, such extreme sepsis, and such great prostration. Also it is perhaps an interesting record of a far advanced stage of inertion such as would seldom or never be seen in a country such as England, where proper medical attendance would be sure to be availed of long before this state was reached.

Sewan, Sarun, Bengal.

THREE CASES OF CANCER OF THE GASTRO-INTESTINAL TRACT DEVELOPING DURING PREGNANCY.

BY JAMES OLIVER, M.D., F.R.S. EDIN.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE, LONDON.

WHEN the stomach becomes infected by cancer during pregnancy the resulting sickness is apt to be attributed to the molecular variations going on in the uterus. If, however, a patient who has borne two or more children and who has never experienced sickness during pregnancy complains of this symptom, and it is evident that the cause is neither uterine nor renal, then we should suspect organic disease of the stomach. In the ordinary course of events sickness, as I have elsewhere[1] remarked, is seldom observed during pregnancy when the tone of the uterus is more or less impaired.

CASE 1. *Cancer of the pylorus; sickness noted from the sixth week of pregnancy.*—The patient was a woman aged forty, who had been married five years and had had three children. The last child was born on March 2nd. At the time when the patient considered herself to have been pregnant for six weeks she began to complain of sickness, a symptom which she had complained of during the early months of her first pregnancy, but which was absent during her second. As the sickness persisted after the third confinement the patient presented herself at the hospital, and on examination I detected a small cake-like, movable, and slightly tender mass close to the umbilicus. Death occurred after the disease had probably been in existence about two years.

CASE 2. *Primary cancer of the stomach and secondary of the pelvic peritoneum; sickness noted from the seventh month of pregnancy.*—This patient, aged thirty, who had been married eight years and had had four children, was seen by me in consultation with Dr. H. P. Miller of Stoke Newington-road. Her last child was born on Aug. 26th. About the seventh month of pregnancy she began to complain of sickness, a symptom which she had never complained of during her former pregnancies. As the sickness persisted after parturition, and pain was experienced in the lower abdomen, Dr. Miller desired me to see the patient. The abdomen was slightly prominent in consequence of the inflation of the bowel, and with difficulty a small, hard, and nodular swelling was detected to the right of and above the umbilicus. Behind the uterus was felt a hard mass with a keel-like ridge, which pushed down the vaginal roof. The pelvic mass was not tender. Death occurred five months after the fourth confinement.

CASE 3. *Cancer of the sigmoid flexure developing during pregnancy.*—The patient was a woman aged twenty, who had been married eighteen months, and had had one child. The child was born two months before the patient came under my observation. Ever since the confinement a small swelling had been observed in the left half of the abdomen. The following were the physical signs. In the left iliac region, about one inch to the inner side of the superior spine of the ilium and extending from its level upwards for three

[1] Diseases Peculiar to Women, p. 24.

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inches, was a small, annular, hard, and fixed swelling, which was tender to the touch. The cervix uteri was central and the body of the uterus was felt in front lying on the pelvic floor. There was no deposit in the pelvis. Death occurred five months after parturition.

Gordon-square, W.C.

A CASE OF EMPYEMA OF THE ANTRUM OF HIGHMORE OF SEVEN YEARS' DURATION.

By GEORGE PINDER, M.D., B.C. CANTAB.,
LATE ASSISTANT HOUSE PHYSICIAN, GENERAL HOSPITAL, NOTTINGHAM.

A MAN aged thirty-four years sought advice for constant pain referred to the left temporal, mastoid, and occipital regions; he complained also of more or less constant nausea and of palpitation of the heart. A careful physical examination failed to elicit any positive evidence of organic disease, and inquiry was then directed towards a purulent discharge from the left nostril disregarded by the patient, since he had had it for quite seven years and "had got used to it." He explained that the discharge was due to an attack of influenza seven years previously, and that his club attendant had told him that "there was a piece of dead bone in his nose." On rhinoscopic examination the anterior portions of the septum and of the left inferior turbinal bone were seen to be studded with numerous small sessile vascular polypi, and pus was observed oozing from the situation of the middle meatus. The purulent discharge was constant and offensive; it varied much in amount and was not affected by the position of the head, save that at bedtime it "ran down the back of the throat." The left upper molars were carious but not painful. There was tenderness on pressure over the situation of the left infra-orbital nerve. Under ether the decayed teeth were extracted, and, in view of the long-standing nature of the case, two holes were drilled into the antrum, one in the situation of the second molar and the other through the canine fossa. A pyogenic membrane, forming a very complete cast of the antral cavity, was removed by syringing with an antiseptic solution, together with a quantity of pus and caseous material. The polypi were removed and their bases cauterised. The troublesome symptoms ceased almost immediately, and the patient is now, after some ten weeks' treatment, perfectly well. The only remarkable feature of the case, and its best apology for publication, is the extraordinary length of time the disease had existed unrecognised, the patient having been under almost constant medical care since the first appearance of the nasal discharge. It emphasises once more the importance of thorough intra-nasal examination in all cases of purulent nasal discharge.

Ramsey, Isle of Man.

ST. MARY'S HOSPITAL MEDICAL SCHOOL—REVISED LIST.—*University Scholarships:* R. R. Wade, B.A., of Exeter College, Oxon., £52 10*s.*; G. S. Keeling, B.A., Caius College, Cambridge, £52 10*s.*; A. Ferguson MacCallan, B.A., Christ's College, Cambridge, Exhibition of £26 5*s.* *Natural Science Scholarships:* W. H. Willcox, B.Sc., £105; E. W. Holyoak, £52 10*s.*; A. F. Hayden, £52 10*s.*; J. Tattersall, £52 10*s.*

THE NEW ASYLUM FOR WEST SUSSEX.—The violent opposition to the county council's scheme for erecting a new lunatic asylum for the administrative district of West Sussex has not been heard of lately, and meanwhile the new building is getting on apace. It stands about a mile from Chichester, and is built from the design of Sir Arthur Blomfield. The executive buildings stand in a block in the centre of a series of six blocks for the reception of the patients; the latter blocks are to be connected by underground corridors. The chapel is to cost £4000 out of £114,669, the amount of the contract. The total expenses will probably be nearer £200,000, but the original estimate was far in excess even of this figure. Water has been found at a depth of 400 ft., and a huge water tower some 100 ft. in height will serve the buildings. The asylum will accommodate 450 patients, and is capable of being extended to receive another 150. Up to the present time the asylum at Hayward's Heath, in East Sussex, has been the only one in the district, but for years patients have had to be drafted thence to Berrywood, Salisbury, and establishments at other places.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

MIDDLESEX HOSPITAL.

TWO CASES OF INGUINAL HERNIA PRESENTING UNUSUAL CHARACTERS.

(Under the care of Mr. HENRY MORRIS.)

THE rarity of the first of these cases is shown by the fact that the condition is not described in our text-books or in the special treatises on hernia to which we have been able to refer. Mr. William Anderson has described[1] a similar condition met with by him in three cases where he operated for left inguinal hernia. He speaks of it as "an anatomical variation which has not hitherto been recognised (except as a possibility by Joseph Maclure in his Surgical Anatomy) the absence of a sigmoid meso-colon in the iliac segment of the large intestine." He apparently apprehended some loss of vitality in the portion of bowel which he dissected up and returned, owing to the movement from its attachments, but all three cases recovered satisfactorily. The second case is also an unusual one, for although it is not uncommon to meet with ulceration of the bowel in a case of strangulated hernia, the destruction of tissue occurs at the

FIG. 1.

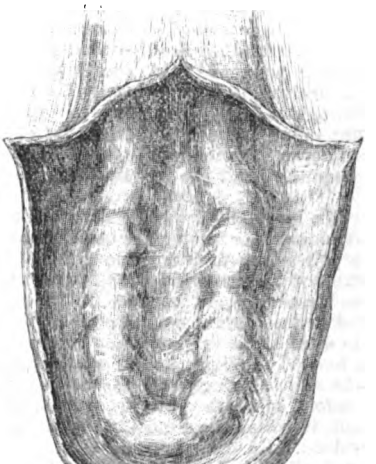


Diagram showing sac open and bowel behind posterior wall of sac—indeed, forming posterior wall of sac.

point of strangulation, usually the neck of the sac. Here the ulceration occurred at the fundus of the sac; and the escape of the contents of the intestine was limited by adhesions before the perforation was complete. The resection of the bowel was undertaken under favourable circumstances compared with most cases of operation for ulceration with perforation, the patient being in a condition to permit a prolonged operation and therefore of all necessary care in the suturing. It will be noticed that Mr. Morris resorted to the method of uniting the ends as the most reliable when he had the choice, and did not resort to the use of any of the artificial aids which are recommended by some surgeons. For the notes of the cases we are indebted to Mr. John Murray, surgical registrar.

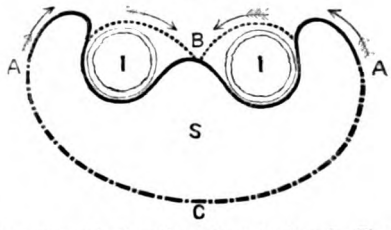
CASE 1. *Hernia of the sigmoid flexure into the scrotum; part of the sac used to give a complete covering of peritoneum to the bowel, the rest excised; inguinal canal closed*

[1] Medical Press and Circular, 1894, vol. ii., p. 621.

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by sutures; radical cure.—A man aged twenty-seven years was admitted to the Middlesex Hospital on Feb. 20th, 1893. He stated that he had had a swelling in his left inguinal region for six years, but he was unable to give a definite history as to its first appearance. On examination there was a large inguino-scrotal hernia on the left side, the greater part of which was reducible; the external ring was very patulous. On March 11th, under an anæsthetic, the sac was opened and found to be empty, and behind its posterior wall was a loop of the sigmoid flexure (Fig. 1) with its meso-sigmoid and appendices epiploicæ. The meso-sigmoid blended with the posterior part of the wall of the sac. The sac having been laid open, as shown in Fig. 1, was then dissected, together with the bowel, free of the connective tissue outside it; it was then divided near the bowel, as shown in Fig. 2

FIG. 2.



Shows arrangement of peritoneal sac to bowel. The dotted lines indicate the part of the sac entirely removed. The arrows pass from A, where the sac was cut away, to B, where the cut edge of the remainder of the sac was sutured round the gut.

at A, on each side, and the peritoneum was stitched back, as indicated by the arrows, to the point at B. The bowel thus isolated, and completely enveloped in peritoneum was returned into the abdomen, the rest of the sac was dissected up and ligatured at the neck, and excised: the inguinal canal was closed by three kangaroo-tendon sutures, which also transfixed the ligatured neck of the sac. A counter-opening was made in the lower part of the scrotum, and a drainage-tube was inserted. The superficial wound was sutured and dry dressings were applied. There was some slight suppuration at the lower part of the wound, and an abscess formed, which was opened. After this the wound healed soundly, and the patient was discharged well on May 10th.

Remarks by Mr. MORRIS.—I wish to draw attention, firstly, to the method adopted for freeing the bowel from the sac and utilising part of the sac to form a covering of peritoneum over the surface of the gut which was between the reflected surfaces of the meso-sigmoid; secondly, to the extreme rarity of the sigmoid flexure forming a hernial swelling. I have had to operate upon three or four cases in which the cæcum has formed a hernial swelling, and in which this portion of the gut had the same bearing to the sac as in this case; but I have never before, to my recollection, treated or seen a case like the present, in which the sigmoid flexure was the part of the bowel involved.

CASE 2. *Irreducible inguinal hernia; resection of intestine; castration; recovery.*—The patient, a healthy-looking man aged forty-three years, was admitted to the Middlesex Hospital on May 15th, 1894, with an irreducible inguinal hernia. He stated that he had had a rupture on the left side for twenty years and had been ordered a truss, which he had worn constantly. About five years previous to his admission—namely, in 1889—he noticed a swelling in the right groin, which gradually increased in size and descended into the scrotum. At first he could put it back, but for the last three years it had been irreducible. He had noticed a hard lump in the scrotum for some considerable time, but was unable to state definitely how long it had been present. At the time of his admission there was an inguino-scrotal hernia on the right side; it was partially reducible and resonant over the upper two-thirds, apparently consisting almost entirely of intestine. The skin of the scrotum was red and œdematous, and at the lower part of the hernial swelling, and obviously connected with it, there was a hard, tender, somewhat globular mass about the size of a tennis-ball. It was smooth on the surface and not adherent to the skin. On May 22nd an incision was made over the external abdominal ring; the hernial sac was exposed, the lower part of which was found to be incorporated with the hard mass above described. The sac was opened: it contained a loop of small intestine which was firmly adherent to the bottom of the sac. The adhesions were carefully separated, during which process some purulent fluid and also some fæcal matter from a small perforation in the intestine escaped. The wall of the bowel at the point of attachment was softened and ulcerated, and beyond this, for a distance of two inches on either side, it was ulcerated, infiltrated, and thickened, and had all the naked-eye appearances of an epithelioma of the gut. The loop of intestine was drawn down, and, sponges having been carefully packed all round, clamps were applied above and below the affected area, which was cut away together with a V-shaped piece of the mesentery. The cut edges of each layer of the mesentery were separately sutured with fine carbolised silk, and the ends of the intestine were then united by means of Lembert's sutures. After the bowel had been returned into the abdominal cavity an attempt was made to separate the sac and the mass connected with it from the testicle; this, however, proved to be impossible. Accordingly, the neck of the sac and the cord were separately ligatured and divided, the sac and the testicle being removed together. The wound was closed, a drainage-tube was inserted, and dry dressings were applied. The patient was very faint after the operation, which lasted two hours, but he soon rallied. Nothing was given by the mouth for the first twenty-four hours, after which a teaspoonful of milk every hour was ordered. On May 23rd the temperature was 100·6° F. and the pulse 104; he was very comfortable and free from pain. On the 24th the wound was dressed, and as there seemed to be some tension at the upper part two stitches were removed. The temperature gradually came down and on the 27th was 98·4°. His bowels acted naturally on the 28th, and on June 4th he was ordered solid food for the first time. Some slight suppuration occurred in the upper part of the wound, which delayed his convalescence, but the wound was soundly healed on June 29th, and he was sent to a convalescent home on July 3rd. The excised portion of intestine measured seven inches and was bent on itself so as to form a U the limbs of which were firmly adherent to each other. At the point of attachment, which was situated half an inch above the bend, there was an oval ulcerated area measuring two inches by one inch, in the centre of which there was a perforation opening into the upper part of the bowel large enough to admit a No. 2 catheter. On laying open the intestine the mucous membrane was perfectly healthy except at one spot where the perforation had occurred. The hernial sac was extremely thick, and attached to the lower part there was a hard indurated mass. In the centre of this there was a small cavity containing pus with a distinctly fæcal odour. This cavity communicated with the interior of the sac by a small opening.

ROYAL BERKSHIRE HOSPITAL, READING.

TWO CASES OF PERFORATED GASTRIC ULCER TREATED BY OPERATION; ONE RECOVERY.

(Under the care of Mr. WILLIAM J. MAURICE.)

THESE cases are very good examples of the symptoms produced by the perforation of a gastric ulcer and the method of operation which is required in order to save life when such an occurrence has taken place. There are one or two points in the treatment which these cases serve to emphasise: one is the great importance of early operation, and the other the inadvisability of giving opium, which serves to mask symptoms and produces an apparent improvement which may cause delay in operating. Mr. Maurice gives rather a high estimate of the cases of gastric ulcer which prove fatal by perforation, unless this disease is unusually prevalent in and around Reading. If the number of deaths from this cause was as large in proportion in other parts as it appears to have been there within the past twelvemonth, the profession would consider the question of operation before perforation much more seriously than it does at present. We congratulate Mr. Maurice on his success in the first of these cases.

CASE 1.—A young woman aged nineteen years was seized with sudden acute pain in the left hypochondrium and between the scapulæ at 3 P.M. on Feb. 15th, 1895. She was seen by Mr. A. C. Major, who diagnosed perforation of a gastric ulcer and sent her to the hospital, where she was received at 10.45 P.M. She was a rather anæmic girl, with a history of pain after food for some time past. She lay on her back with an anxious expression; her breathing was rather rapid

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and shallow; the pulse was 138, inclined to intermit, but of fair volume; and the temperature was 101·6° F. She had vomited, but was not collapsed. The abdominal wall was rigid, and liver dulness was absent. She was seen at midnight by Mr. W. J. Maurice, when her condition was not much changed, though she was stated to be looking distinctly worse. Under chloroform, nine hours after the first onset of symptoms, a three and a half inch incision was made in the middle line above the umbilicus down to the peritoneum, which bulged into the wound; gas escaped at once on the peritoneum being opened. The stomach was drawn out of the abdomen, and a small perforation was readily found on the anterior surface, near the cardiac end, and was secured by two rows of Lembert's sutures. The peritoneum was flushed with water at 110°, a good deal of lymph was removed with sponges, and the wound was closed. The stomach was then partially washed out, and one-sixth of a grain of morphia was injected hypodermically. The patient had a good night. She was fed by nutrient enemata at first, mouth feeding being begun on Feb. 18th, when also the bowels were opened by an enema of olive oil. From this time the progress was satisfactory, although the temperature did not become quite normal for nearly three weeks; there was also some suppuration of a rather superficial character. On March 1st she was suffering from thrombosis of the left saphena vein, which lasted for about ten days. She was put on a fish diet on March 15th and soon got strong and well. She was, however, detained in hospital till April 30th, waiting for admission to a convalescent home.

CASE 2.—A woman aged thirty years was seen in private by Mr. W. J. Maurice at 9 P.M. on March 2nd, 1895. She had been seised shortly before with sudden acute pain in the epigastrium, and more especially between the scapulæ, and had vomited. There was little or no tenderness; the abdominal muscles moved well; the temperature was 98·4° F.; the pulse was weak and rapid; and the liver dulness was normal. She preferred to lie on her left side with the legs fully extended. She was known to have suffered severely from gastric ulcer ten years before, and had been under treatment for dyspepsia recently from time to time. Perforation of a gastric ulcer was at once suspected. She was given one grain of opium pill and was seen again at 10.30 P.M. By this time, though she was still in pain, her pulse was slower and stronger, she had not vomited, and was quite warm. In the belief that she was really better, and that, after all, perforation had not actually occurred, a small injection of morphia was given, and she was left for the night. Next morning it was found that she had changed for the worse in every way. She had not slept, her pulse was very weak and rapid, and her abdomen was beginning to be distended. Unfortunately, from various circumstances, it was impossible to remove her to the hospital till the afternoon. At 4.30 P.M. (nineteen and a half hours after perforation) she was placed under chloroform; the abdominal muscles then moved well; liver dulness was present, but was somewhat diminished. The physical signs, in fact, were but slight. An incision was made in the middle line above the umbilicus; the peritoneum did not bulge, and no gas at first escaped on opening it. A coil of reddened, lymph-covered intestine was seen to be adherent to the stomach. An attempt was made to draw the stomach out of the wound, but it was found to be bound down by old adhesions; a large, thick-edged aperture was, however, discovered, from which food and gas escaped. It was hard to make out its exact anatomical situation, but it seemed to be on the lesser curvature midway between the cardiac and pyloric orifices; above and behind it there was what was taken to be the pancreas, with the gastro-hepatic omentum intervening; the pylorus was displaced downwards. The perforation was extremely hard to reach owing to the matting together of intestines round it; but it was eventually closed fairly satisfactorily with two rows of fine silk sutures, the second row being placed at right angles to the first. The peritoneum was flushed and sponged, and the wound was closed. The operation lasted one hour and a half. The patient had a very restless night, with much hiccough and coffee-ground vomiting. The whole of the next day she was as bad as she could be; the pulse was very feeble and running, and there was a good deal of abdominal distension. On the morning of March 5th she was better after a fair night; the bowels acted very freely and continued to do so constantly till the following day, when she had distinctly improved; there was less distension, the pulse and breathing were quieter, and she no longer passed motions under her. Feeding by the mouth was begun on March 7th, and all went well, with daily improvement, until 3 A.M. on March 11th, when she had a severe attack of vomiting. The pulse again became feeble and rapid, and in the evening she was drowsy and restless, with dusky appearance, though there was no further vomiting. She was given three grains of calomel and one grain of opium. The next two days were marked by increasing weakness with rapidity of pulse, but there was no pain or vomiting, and she rested and took nourishment fairly well. At 9 A.M. on the 14th, while her bed was being put straight, she was seized with sudden pallor and laboured breathing and died in half an hour, unexpectedly.

Necropsy.—The body was fairly nourished. The operation wound was four inches long in the middle line above the umbilicus; from it a small amount of blood-stained purulent fluid escaped. The abdominal wall around the wound was infiltrated with pus; just beneath the wound there was a collection of thick pus shut off from the general peritoneal cavity by adhesions between the small intestine and the abdominal parietes. The small intestines were darkly coloured, empty, and bound down everywhere by recent adhesions. There were occasional patches of lymph, but there was no pus in the general peritoneal cavity. The stomach was greatly dilated, hour-glass in shape, and full of dark, foul-smelling fluid. The lumen at the centre of constriction would only admit the forefinger with difficulty, but at the upper margin of this, just in front of the attachment of the lesser omentum, there was a large ulcer the size of a shilling, with thick, rounded edges. The stomach was adherent to the pancreas behind. So far as could be ascertained, the sutures had held securely. Some scar tissue was found stretching from the edge of the ulcer towards the pylorus. Near the cardiac end of the stomach there were numerous submucous hæmorrhages. The kidneys, spleen, liver, heart, and lungs were examined and found to be normal.

Remarks by Mr. MAURICE.—Perforation of a gastric ulcer is, here at any rate, a far more common affection than is generally supposed. I myself know of at least ten cases which have occurred in Reading within about twelve months. Of these ten cases seven have been operated upon, with three recoveries. Of my own three cases of operation one lived over a week,[1] a second lived nearly a fortnight, and a third recovered; both the fatal cases at one time promised to do well. A comparison of my cases leads me to attach most importance to the following points: 1. Early operation, which means prompt and accurate diagnosis. A single grain of opium may almost completely mask the symptoms. 2. The age of the patient and the degree of collapse. 3. The previous history; long-standing ulcer means matting of parts and also impaired nutrition. 4. The situation of the ulcer; most perforating ulcers are on the anterior wall, but near the lesser curvature they may be hard to get at. 5. A large perforation is more difficult to close than a small one, but more depends upon the extent of the ulcer and the condition of the surrounding tissues. Excision seems to be unnecessary, and would be quite impossible in a really difficult case. 6. Extensive escape of stomach contents, which means much shock at the time and probably extensive peritonitis afterwards. It is a singular fact that in my successful case, as in that of Mr. Walters and some others, recovery was delayed by thrombosis of the left saphena vein.

[1] Vide THE LANCET, June 2nd, 1894.

A FRENCH CONVALESCENT HOME AT BRIGHTON.—A convalescent home at Brighton in connexion with the French Hospital in London is in course of construction at the far end of the parade in Kemp Town. It is expected to be ready for occupation in about a year, and will contain about thirty beds for patients recovering from illness, as well as a certain amount of accommodation for infirm and aged persons. Baron de Courcel, the French Ambassador, laid the foundation-stone on Oct. 5th in presence of a distinguished company of French ladies and gentlemen. Sir William Mac Cormac, consulting surgeon to the French Hospital, also attended, and Dr. Achille Vintras, senior physician to the hospital, in returning thanks to the Ambassador after the ceremony, remarked on the benefits derived by convalescents from residence at the seaside.

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Medical Societies.

MEDICAL SOCIETY OF LONDON.

General Meeting.—President's Address.—Radical Cure of Hydrocele.

A GENERAL meeting of this society was held on Oct. 14th, the out-going President, Sir WILLIAM DALBY, being in the chair.

The report of the council was read; it showed the society to be in a flourishing condition. The vacancy in the office of treasurer caused by the decease of Mr. Durham was filled by the election of Mr. Goodsall. Votes of thanks to the President and to the retiring officers concluded the business of the general meeting.

Sir JAMES CRICHTON BROWNE, the incoming President, on taking the chair, thanked the Fellows for the honour they had done him in electing him to fill the office of President. He then delivered his inaugural address, taking for his subject the Generalisation of Specialism. The subject was handled by the President in his usual able fashion; it was rich in original thought, and an attempt to render its substance in abstract form would not do it justice. The following must therefore be considered as merely an indication of the leading topics dealt with. He alluded to the fact that the Medical Society had during the last few years included among its presidents representatives of several of the great specialities into which the profession in its ever-growing heterogeneity tended to divide. He thought this liberal spirit which characterised the policy of this most conservative of medical societies was one of its most admirable features, for it prevented that insulating of the specialities which was a danger both ethically and scientifically, and the impoverishment of professional thought which the withdrawal from its consideration of novel and minute observations must entail. He pointed out that specialism at the present time was inevitable, and no one could train his senses or muscles to consummate expertness in the use of all the now multitudinous instruments of research and treatment. The great thing was to keep the special departments in touch with the main body of the profession, to see that they were conducted on rational lines, and that the departments of practice detached by it did not become refuges for empirics or imperfectly equipped practitioners. He pleaded with specialists of all types and varieties to avail themselves of the advantages which the society offered. While himself proud of being a specialist, he was prouder still of belonging to a great and magnanimous profession, and, in respect of his speciality, he urged that it was hardly a speciality at all, or only in a very restricted sense. It was, indeed, almost coextensive with medical practice as a whole. He regretted that those who devoted themselves to medical psychology were often compelled to spread themselves far beyond medical practice, and to merge their professional capacity in non-scientific and comparatively menial avocations. He admitted, however, that the attempt to completely separate administration from treatment was not likely to prove successful on a large scale. He looked forward to the organisation of hospitals for the treatment of mental disease on the lines submitted to the London County Council by Mr. Brudenell Carter, where psychology could be studied and systematic investigation, teaching, and demonstration carried on. He insisted on the necessity for a just conception of the relation of body and mind, and he alluded *en passant* to the materialistic constructions placed on this relationship—convictions based on sensory stimulation being accorded more weight than was accorded to other classes of belief. He protested against the view that mind was to be regarded as simply a result of cerebral activity or chemical transformations in the nerve centres. The series of phenomena separating mind from matter stood apart: a neural process and a mental process had nothing in common, and the facts of consciousness were not explained by the facts of brain function; in fact, psychology was not merely a branch of mechanics, and mind could have no causal dependence on matter.

Mr. LOCKWOOD then read a paper on the Operation for the Radical Cure of Hydrocele by Excision of the Sac, which we print in full in this issue.—Mr. SWINFORD EDWARDS said that he had only excised the parietal tunic in relapsed cases. If the Edinburgh tincture of iron were used for injecting hydroceles relapses would not be so frequent, as that tincture was twice the strength of the English preparation. The treatment by injection could hardly be expected to succeed if there happened to be any chronic inflammation of the testis present or if the cyst happened to be multilocular. He related the case of a medical man who had cured himself of a hydrocele by the injection of corrosive sublimate of the strength of a grain to the ounce.—Mr. BRYANT said that he had recourse to the operation only after injection had failed to effect a cure. He was convinced that the failure to cure by injection of iodine was because too weak a solution was used. For the last twenty years he had used a mixture of equal parts of the liquor and the tincture, two or three drachms of which he injected into the sac; most of the cases so treated had proved successful. He thought that only the more severe cases should be treated by the operation which had been proposed. Some years ago he tried the effects of hot water as an injection, and he used it in four successive cases. In two of these the hydrocele was cured rapidly, though the injection caused subacute inflammation and a good deal of effusion, which was afterwards absorbed. These cases remained well when heard of long afterwards. The other two cases suppurated, though the water used had been boiled. In a few cases he used carbolic acid, with favourable results. In three cases he had excised the sac, cutting away a considerable portion of the tunic, swabbing out the cavity with chloride of zinc solution or carbolic acid, and then plugging with iodoform gauze. The cavity rapidly contracted without suppuration, and this was a simpler plan than Mr. Lockwood's, especially for elderly patients.—Mr. WALLIS stated that he had operated on seven cases, one of which had suppurated. His method was to scrape the testicle with a sharp spoon, pare away the parietal layer, and then suture the wound, using no drain.—Mr. BIDWELL said that in two cases treated by injection he had subsequently to excise, and then he found some adhesions. In the first case he used a drain, but this was followed by some orchitis, and so afterwards he completely closed the wound without drainage. After excision the patients left the hospital in about ten days, but in injection cases he had as a rule to detain his patients longer than that. In many cases there seemed to be some re-formation of serous membrane. — Mr. LOCKWOOD, in reply, said that the injection of iodine was distinctly a painful process, and one that he would object to undergo himself; besides, it might excite epididymitis or orchitis. In many of the cases he had related the patients had previously been injected with all kinds of fluids, including the Edinburgh tincture. All his cases save one were well within a week and left the hospital in a fortnight. He held that treatment by excision of the sac was simpler and less troublesome as well as less painful than treatment by injection. He admitted that erasion might be desirable in some cases, but none of the instances he related seemed to require it. He adopted drainage because it did no harm and was a wise precaution.

PATHOLOGICAL SOCIETY OF LONDON.

Spontaneous Disruption of Calculi.—Primary Sarcoma of Vagina of Child.—Multiple Polypi of Stomach and Intestines.—Tertiary Syphilitic Lesions in Lymphatic Glands.—Exhibition of Specimens.

THE first ordinary meeting of this society for the present session was held on Oct. 15th, the President, Mr. H. T. BUTLIN, being in the chair.

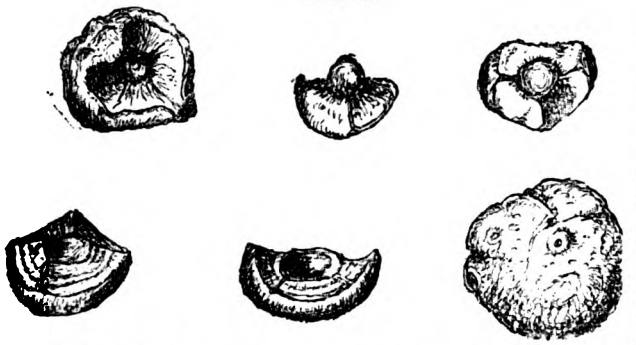
On taking the chair for the first time Mr. BUTLIN expressed his thanks to the society for his election. He announced his intention of postponing his address until next year when the society would celebrate its fiftieth anniversary.

Dr. PLOWRIGHT read a paper on the Spontaneous Fracture of Uric Acid Calculi. The subject of the communication was a man aged seventy-two years from whose bladder there were removed 236 fragments and six entire calculi in the process of spontaneous fracture. The base of the bladder was occupied by several sacculi or pockets about half an inch across, which contained the fragments, the calculi, and pus-laden urine. The sacculi were formed by hernia-like protrusions of the mucous membrane between the reticulated muscular fibres of the

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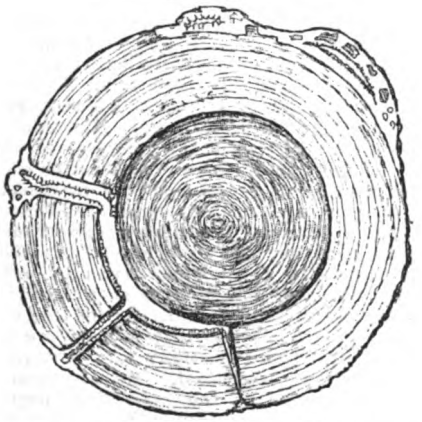
bladder, and were so placed as never to be emptied during life. The entire calculi were mapped out into segments by elevated ridges, and upon section each segment was seen to be lifted up, being separated from the nucleus of the calculus below and from the other segments by cracks or fissures sufficiently wide to admit the point of a pen-knife. (Fig. 1.) They were held together only by the ridges on the exterior of the calculus. These ridges consisted of uric acid

FIG. 1.



with a trace of ammonia. The same substance in the form of a greyish-white deposit covered not only the exterior of all the calculi and fragments, but extended into the interior of the fissures, covering their sides with a granular or nodular layer. (Fig. 3.) Towards the outer extremities of the fissures, opposite the one or two outer concentric laminæ of the calculus, it was deposited much more abundantly, so as to constitute an obtuse wedge when seen in section (Fig. 2),

FIG. 2.



by the increase of which the fissure was opened. The fragments were, as a rule, more or less wedge-shaped, but convex externally when they corresponded to the exterior of the calculus, and concave internally when they had been lifted away from the nucleus. In some cases only one or two segments had been lifted out from a calculus. (Fig. 2.)

FIG. 3.



On the surface of the calculi the deposit often formed blister-like elevations, which might be perforated in the centre like volcanic craters. On section the upper wall of the blisters was seen to consist not only of this whitish-grey deposit, but also of fragments of the outer concentric laminæ of the calculus that had been upheaved by and remained embedded in it, and which were easily recognisable by their yellow colour and striation. When pressure was applied to a calculus with sufficient force to crush it the fracture took place not only by a separation between the concentric laminæ, but also at right angles to them, along what might be called planes of radial cleavage. The tendency to radial fracture could often be observed in the sections of calculi in museums, but it was best shown in the structure of artificial calculi as pointed out by Rainey in his book on Molecular Coalescence. We might, therefore, regard a calculus as an assemblage of pyramids arranged with their bases externally. In the case under consideration the new deposit of uric acid on the exterior had taken place in such a manner as sometimes to force up the outer laminæ and sometimes to open the inter-pyramidal sutures. When once an opening had been made between two pyramids the fissure spread inwards, the deposit acting as a wedge, so that the calculus became split in exactly the same way as a log of wood would be. The transverse section of an endogenous trunk presented many similarities to the section of a calculus. The pith answered to the nucleus, the annular rings to the concentric laminæ, and the medullary rays to the planes of radial cleavage. If a wedge were driven a short distance into such a log of wood parallel to its length and then pressed forcibly sideways it would lift a segment out of the trunk. The fissure between the woody fibres passed first inwards towards the pith, but when the wedge was pressed sideways the fissure turned off sharply at right angles and travelled in the line of the annular rings for a certain distance, but if the sideway pressure of the wedge were continued the fissure would turn upwards in the direction of the medullary rays and a piece of wood would be prised out. The process was identical in these calculi, the lateral pressure being caused by the wedge-like deposit shown at Fig. 2. Rainey showed in the work above mentioned that when the artificial calculi formed by the action of potassium carbonate on solutions of gum arabic were placed in denser solutions of the colloid than that in which they were originally formed they tended to disintegrate. This was just what had happened in the present case. The lower parts of the calculi were continually immersed in the pus-laden urine of the pocket, while their upper portions were bathed in comparatively pure urine.—Dr. ORD said he thought that the calculi found in the vesical sacculi could scarcely have been dropped into them like letters into the post-box. He thought that the disintegration did not depend upon concussion or upon the action of alcoholic or other preservative. That the lesion was a spontaneous fracture or disruption was shown in that it was an unconformable addition to a regular stratified formation. This might come about either in an explosive way, as he had shown elsewhere, or by more subtle disintegration from outside—e.g., by a change in the colloid which surrounded the calculus; or yet again there might be a gradual erosion of the surface from molecular disintegration. He was unable fully to accept the wedge theory which had been propounded by Dr. Plowright.—Mr. REGINALD HARRISON quoted Bigelow as stating that the human bladder could break two or more stones as the human hand could break two or more walnuts. Though this might, perhaps, be true in a limited sense, explanation must be sought in other directions. In the case related the bladder seemed to have been converted into a number of test-tubes in which these processes had gone on.—Mr. W. G. SPENCER inquired as to the nature of the force which split calculi from the outside. The instances shown reminded him of the splits in a cliff into which earth had afterwards fallen. A more exact statement as to the chemical composition of the different layers was desirable. The blistering which had been observed on the surface of the calculi was probably the first stage in the downward degeneration of their organic constituents, the ultimate result of the degeneration being carbonic acid and water.—Mr. BUCKSTON BROWNE said he had met with about half a dozen instances of spontaneous fracture of calculi, and they had always been found in cases in which the bladder was sacculated or in which there existed a post-prostatic pouch. The stones found in the latter place were often of semilunar shape, like a French roll, and were composed of a number of calculi which had undergone spontaneous fracture, and then became cemented together and moulded into an accurate cast of the pouch. The discovery that spontaneous fracture had occurred would militate as a point in favour of lithotomy as against lithotrity.—Dr. PLOWRIGHT, in reply, said that the stones were not moulded into each sacculus, but five or six of them lay loose in each pouch. Though crystals as a rule were

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incapable of exerting any force, yet mortar and fine plaster could be split by crystallisation.

Mr. D'ARCY POWER showed a case of Primary Sarcoma of the Vagina associated with Multiple Polypi occurring in a child. The patient was aged two years and four months. She had suffered for fourteen months from a purulent vaginal discharge, and during the last five months from severe bearing-down pains. New growths had been observed in the vagina, and some of them had been removed by the practitioner who had charge of the case. The child was taken ill on May 20th, when she retched and had much abdominal pain. She had complete retention of urine for forty-eight hours, which was relieved by suprapubic puncture. She died with symptoms of uræmia on May 24th. Digital examination of the vagina during life showed that the entrance was blocked by greyish masses resembling œdematous granulation tissue, whilst the upper part of the vagina contained a tumour which was firmly adherent to its wall. It grew from the right side and from the posterior wall of the canal and extended as high as the finger could reach. The mass was cylindrical in shape and was very hard. An examination per rectum, however, showed that it infiltrated the recto-vaginal septum. The post-mortem examination showed that the vagina measured three and a half inches in length and two and a half inches in its transverse diameter. The mucous membrane was greatly congested. The middle and lower portions of its posterior wall were covered with pedunculated growths, some simple and gelatinous and others more solid and rounded. All the growths were covered with vaginal mucous membrane, and there was no ulceration except on the surface of those nearest the ostium vaginæ. A large mass of new growth entirely blocked the upper part of the vagina and was continuous with a perfectly circular tumour measuring two inches in its transverse diameter, which lay between the vagina and the rectum. Mr. Power said that the case was a rare one, but he had collected abstracts of twenty-five other cases which had been placed upon record by English and German surgeons. He deduced the following conclusions from a consideration of these cases. Primary sarcoma of the vagina in children was often associated with the presence of myxomatous polypi in the vagina. The polypi were recognised earlier than the sarcoma, for they grew nearer to the ostium vaginæ. The malignant growth was perhaps found more often upon the anterior than upon the posterior wall. It was therefore the rule for children affected with a vaginal sarcoma to suffer from retention of urine, whilst only exceptionally were the functions of the rectum interfered with. The growth did not disseminate, for the child generally died from the mechanical effects of the tumour before dissemination took place. The growth was generally a round or spindle celled sarcoma. The prognosis was in the highest degree unsatisfactory, as death had taken place in nearly every case. Operative treatment was most difficult even in the earliest stages, for the growth had a tendency to infiltrate the tissue between the bladder and vagina. The neck of the bladder was pressed upon, and the retention of urine could only be treated effectively by a suprapubic cystotomy.—The PRESIDENT remarked that in the case of sarcoma of the vagina which he had examined the bladder and urethra also contained growths, but there was no general dissemination. The structure in that case was a fibro-sarcoma.

Dr. WM. COLLIER showed a specimen of Multiple Polypi of the Stomach and Intestines from a young man aged twenty-one years, who was admitted to the Radcliffe Infirmary, Oxford, on June 28th last and died on July 12th. His illness commenced about twelve months previously with pain across the upper part of the abdomen and vomiting. The symptoms gradually increased in severity, and for some months before admission he had noticeably lost flesh and strength. The pain seemed not to be much affected by food, and on one or two occasions the vomit had been streaked with blood. When admitted the patient looked very pinched and ill. The tongue was covered with dark-brown fur. Nothing could be discovered on abdominal examination. While in the infirmary he vomited daily and often seemed to be in very severe abdominal pain; the bowels were constipated. He was at first fed on broth, milk puddings, bread-and-milk, and egg beaten up in milk; but on account of the pain a week after admission his diet was confined to four ounces of peptonised milk every second hour. On the evening of July 10th he was seized with pain of more than usual severity and the vomiting became more urgent. On the following morning his condition was evidently critical, the pain and vomiting had continued throughout the night, and the abdomen was becoming distended. A distinct tumour could be made out running obliquely downwards across the abdomen from right to left; it was dull on percussion. After consultation it was decided to open the abdomen and explore. On doing so a large intussusception was found and was without much difficulty reduced. In spite of this the patient's condition did not improve and about twenty hours later he died.

Mr. JACKSON CLARKE read a paper on Tertiary Syphilitic Lesions in Lymphatic Glands. He thought that tertiary syphilitic lesions were somewhat more common than was generally believed. He had recently observed an instance in an out-patient at the North-West London Hospital. A woman aged forty-two years attended for treatment from time to time for tertiary lesions of the skin, nasal fossæ, &c., and reappeared after an interval of unauthorised non-attendance in a condition of marked anæmia and complaining of lumps on the left side of the neck. These proved to be the deep cervical and axillary glands, which were as large as filberts and hard. At the time there were no active lesions elsewhere. The swellings rapidly subsided under iodide of potassium. He had only once observed gummata in lymphatic glands in the course of about 1000 necropsies. This was in the case of a man aged twenty-five years, who was admitted into St. Mary's Hospital, under the care of Sir William Broadbent, complaining of pain in the right side of the chest and in the right lumbar region. There were hæmaturia and slight fever. He had several attacks of pain in the right chest, accompanied by dyspnœa and collapse. He died in one of these attacks some days after admission. After death the right renal vein was found to be occluded by clot, the right kidney was enlarged, pale, and fibrosed, and it contained in the pelvis a circumscribed ulcer with raised edges. The right lung contained several infarcts. In the liver there were numerous gummata. The cervical glands, which had been noticed to be enlarged in life, were also found to contain gummata. In some cases there was a difficulty in distinguishing between syphilitic and tuberculous glands. As an instance Mr. Clarke mentioned the case of a child aged two years. When the patient first came under notice there was around the base of the glans penis a raised indurated sore. The history was that the child had been circumcised. All went well for four weeks, when the sore began to form. The lesion had been present for three weeks when the child was brought to the hospital. At this time there were, besides the sore, marked swelling of the inguinal glands, a general eruption of macules, papules, pustules, and some tense bullæ. There was also slight snuffling. The patient was treated with mercury for three weeks and the rash disappeared, but the inguinal glands continued to enlarge and began to soften. The glands were removed, and sections showed typical tuberculosis, with characteristic bacilli. In this case there might have been a mixed infection, but no exposure to syphilis could be traced.—The PRESIDENT said that these lesions were almost always overlooked. He had seen cases of cervical lymphadenitis in the out-patient department in which there was a history of syphilis and which were cured by the administration of iodide of potassium. Syphilitic glands were more indolent than tuberculous, were often doughy in places, and were more angular and less rounded. A mixed infection of tubercle and syphilis was not rare.

The following card specimens were shown:—

Dr. KANTHACK: (1) Dissecting Aneurysm; (2) Cylindroma of Large Intestine; and (3) Diffuse Primary Sarcoma of Liver.

Dr. VOELCKER: (1) Uterus Unicornis, with Congenital Malposition of the Right Kidney; (2) Epithelioma of Œsophagus invading the Trachea and Left Bronchus—Cystic Change in the Secondary Deposits in the Liver and Stomach; and (3) Ulceration of Large Intestine in a case of Enteric Fever.

Mr. TARGETT: Old Injury of Humerus from an Egyptian Mummy.

CLINICAL SOCIETY OF LONDON.

Cases of Excision of the Temporo-Maxillary Articulation in Children.—Sudden Death from Cardiac Syphiloma.—Traumatic Derangement of Knee-joint.

THE first ordinary meeting of this society for the present session took place on Oct. 11th, Mr. GODLEE, Vice-President, being in the chair.

Mr. ARBUTHNOT LANE read the notes of some cases of

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Bony Ankylosis of the Temporo-Maxillary Articulation in Children which had come under his care, and on which he had operated with success. The first was a boy aged nine, the duration of the ankylosis being less than three years; the second was a girl aged twelve, and the duration less than two and a half years; the third was a boy aged four, and the duration less than three years; and the fourth was a girl aged ten, and the duration less than three years. He had also operated on a fifth case, the particulars of which he did not refer to. All these were cases of complete bony ankylosis, and the results obtained were most satisfactory, the wounds healing immediately, and a perfectly new joint developing very rapidly. Mr. Lane found considerable difficulty in taking away a sufficient quantity of bone in these cases owing to the vertical shortening of the ramus, due to a more or less complete want of development of the head and neck of the jaw, the upper and posterior portion of the ramus in old-standing cases becoming very broad and thick, and uniting over a considerable area with the temporal bone. He considered that the occasional failure of this operation resulted from an insufficiently free removal of bone.—Mr. HOWARD MARSH said that it would be of advantage to have these patients shown at a clinical meeting; he himself had had no opportunity of treating such cases in children.—Mr. F. C. WALLIS said he had helped Mr. Bloxam to operate on a woman aged thirty who had ankylosis of both temporo-maxillary joints, with consequent mal-development of jaw. Six months after the operation very good movement was obtained.—Mr. TARGETT said that a boy had been under his care with unilateral ankylosis of the jaw; there had been no history of otorrhœa. He found that simple section of the jaw gave no good result, and he had to excavate away the head of the bone. Movement at the present time was good, and the incisor teeth could be separated to the extent of an inch.—Mr. A. E. J. BARKER said that he had operated on two cases. The first, a girl aged fifteen, fell over the banisters and struck the lower jaw, complete ankylosis resulting, and the incisor teeth could only be separated for an eighth of an inch. He made a horizontal incision over the neck of the bone, chiselled away the head, and hollowed out a glenoid cavity. The second case was that of a child aged eight, and there was a scar over the region of the joint after disease of the ear. The joint was completely ankylosed, and the same operation was done. The result was good, the separation between the incisors being now more than an inch. In the older days before aseptic surgery ankylosis frequently followed the operation, because suppuration was permitted to ensue.—Mr. LANE, in reply, said that two of the cases had already been shown at clinical meetings of the society, and of the remainder one lived at such a distance from London that it was impracticable to bring the patient up for exhibition.

Sir DYCE DUCKWORTH read a paper on a case of Sudden Death due to Cardiac Syphiloma. The patient, a strongly-built man aged thirty-five, was walking in the street carrying a little boy on Oct. 7th, 1894, when he suddenly fell down and expired. The body was carried to St. Bartholomew's Hospital, and was examined on Oct. 9th. A very meagre antecedent history was obtained, which threw no light on the nature of the case. There was evidence of old syphilitic disease on the tongue and on the glans penis. A small gumma was found in the left lung. The heart weighed twenty-two ounces, and had firm adhesions to the pericardium both at the apex and at the base. The right ventricle was hypertrophied and dilated. The valves were natural. The left ventricle was hypertrophied and dilated. There was a round depression in its wall above the apex the diameter of a shilling, covered by long adhesions. This was due to a thinning of the wall, with much endocardial thickening. A large aneurysmal pouch was found behind the posterior cusp of the mitral valve. This appeared from without as a tumour growing from the base of the heart, completely covering the left auricle. Its walls were half-an-inch thick, and the pericardium was closely adherent over it. On section, the muscle was found to be replaced by tough fibrous tissue, with foci of gelatinous matter. The endocardium was greatly thickened and fibrous. Microscopic examination proved it to be gummatous in nature, with patches of caseation. The smaller arteries showed signs of endarteritis. These appearances indicated plainly a recent gummatous growth at the base of the left ventricle, and a similar, but older, one near the apex of that cavity. The fact of sudden death as a frequent occurrence in cases of this nature was alluded to, and it was pointed out that these clinical features were but little known and necessarily but seldom recognised. The morbid anatomy was well understood. He had collected particulars of fourteen similar cases. Death occurred almost, if not quite, suddenly in eight of these cases. The disease was rare in women, only one of the fourteen cases having occurred in that sex. The mean age of all the patients was thirty-two. Many of the cases appeared to have been previously devoid of urgent symptoms. In some there had been pericardial pain. It was pointed out that graver symptoms were to be expected when fibrotic changes followed on the evolution of the gummatous growths and when they led to aneurysms of the ventricular walls. The valves were usually not involved, and hence murmurs were not to be met with, as in the case of rheumatic endocarditis. The ventricles and their septum were the common sites of these growths. Tendency to fatal and sudden syncope was probably explicable by the fact that endarteritis affected the coronary arteries in part, and possibly by the occurrence of embolisms from the softening contents of aneurysms into coronary arterial branches, the ventricular walls degenerating in consequence and becoming gradually intolerant of strain. The great object was to make an early diagnosis when possible, and to seek for syphilitic concomitants in cases where there were obvious cardiac symptoms, such as palpitation or infrequency of pulse, hypertrophy, dilatation, &c., and no signs of involvement of the valves. The treatment was to employ iodide of potassium in full doses.—Dr. SIDNEY PHILLIPS said that he had collected a large number of cases and specimens. Two years ago he made a post-mortem examination of a patient who died in his chair with a newspaper in his hand. He had previously suffered from an acute attack of pain in the chest. He inquired whether, in the case under discussion, there had been a history of previous symptoms. In cases of cardiac gumma the patients were often found dead, but in all the cases in which he had been able to make inquiry there had been previous symptoms. In the instance above referred to the gumma was found in the left ventricle and near the apex of the heart, and this was the usual position of the lesion in the cases which caused sudden death. Cardiac aneurysm was a common complication, and he related a case to illustrate this—that of a young soldier who had suffered from syphilis and had been under treatment for four years, then came under treatment with an anginal attack which proved fatal. Syphilitic general fibrosis gave rise usually to dilatation and pseudo-hypertrophy.—Dr. HALE WHITE said that cases of genuine gumma of the heart were found to be rare at Guy's Hospital, only occurring once in several years; but syphilitic fibrosis of the heart occurred once a year—that is, 1 in 500 necropsies. He thought perhaps that a syphilitic affection of the heart might be diagnosed, but it appeared to him impossible clinically to draw a distinction between syphilitic fibrosis and gumma; if it yielded to treatment it would probably be a gumma. Of nine cases, six died absolutely suddenly, two of them being out-patients for pain and shortness of breath, while the seventh, eighth, and ninth cases were sufficiently ill to be in hospital at the time of their death. A series of cases collected by Dr. Fagge twenty years ago gave practically the same results.—Sir DYCE DUCKWORTH, in reply, said that more facts in the clinical history of these cases were required. He had lately been treating a case of hypertrophy of the left ventricle with palpitation and a history of constitutional syphilis within the last two years. Under treatment the patient had lost most of his symptoms.

Mr. BARKER described a case of Traumatic Derangement of the Knee-joint due apparently to fracture of the spine of the tibia, for which an exploratory arthrotomy was done. The patient received the injury while in a mine in South Africa, and came home quite disabled. In walking the knee was very insecure and inclined to give way inwards, which movement was accompanied by a sharp audible snap. The head of the tibia could be slipped backwards on the femur either by active or passive movement, but could only be replaced by hard pressure forwards. The nature of the injury seemed to be obscure, but it appeared possible that the spine of the tibia was broken off or the posterior crucial ligament torn through. The patient being anxious for an exploratory operation and relief, which only was considered possible, Mr. Barker laid open the knee-joint by sawing across the patella, and found the crucial ligaments apparently intact. The spine of the tibia was found, however, to be marked at its base by a deep groove, into which the handle of a scalpel could be

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laid, and having the appearance as if it had resulted from imperfect union of a fracture of the process. Nothing further was done. The wound healed *per primam intentionem* and the limb was kept immobile for some months. When last seen, more than a year after operation, the patient had a useful limb, with none of the former abnormal movements. He was advised to be cautious in using it, however.—Mr. E. WILLETT asked what evidence was in existence that ligaments would contract when irritated.—Mr. GODLEE said that he had shown a specimen at the Pathological Society of the knee-joint of a boy whose leg had been crushed, and there was a large skin wound, necessitating amputation in the mid-thigh. On dissection of the knee-joint the spine of the tibia was found to be torn off. He had seen another case this year in a woman of small stature aged thirty, who had injured her knee in getting off a 'bus. There was no exaggeration of rotation of the tibia inwards or outwards, and she had been supplied with an apparatus for fixing the knee.—Mr. BARKER, in reply, held that if ligaments were irritated and the joint afterwards left at rest the ligament would shorten, as in stiff joints after inflammation, without intra-articular lesion.

HUNTERIAN SOCIETY.

President's Address.—The Infectiousness of Rheumatism.

THE first meeting of the winter session was held on Oct. 9th at the London Institution, the President, Mr. CHARTERS J. SYMONDS, being in the chair.

Mr. SYMONDS gave a short address on the Advisability or Justifiability of Explorative Abdominal Operations. His first postulate was that if we can feel sure that no serious additional risk is run by the patient through the operation, then it is not only advisable but practically imperative. This class of cases he illustrated by several examples of insuperable (by other means) obstruction. He next spoke of the possibility of serious risk brought on by operation, and this group he illustrated by a case of urgent symptoms induced by gut adherent to the abdominal parietes, in which rupture of the intestine during separation was unavoidable. A third group of abdominal operations he spoke of—viz., exploration with excision of a kidney—and laid down the inflexible rule that no nephrectomy should be done unless the other kidney had been definitely examined and found healthy. Lastly, he urged the great responsibility physicians now accepted if they waited till the bacillus coli communis had gained a firm footing in the tissues of the patient outside the lumen of the gut.

The PRESIDENT then called on Mr. F. R. Humphreys for his paper on the Infectiousness of Rheumatism.

Mr. HUMPHREYS referred to the recent lectures by Dr. Newsholme on the subject and to other writings. He then proceeded to give several illustrative cases in which skin affections, follicular tonsillitis of a somewhat special type, and acute rheumatism had seemed to him to definitely follow one another as if by infection, either in the same patient or in different members of the same household. He had taken careful notes of many such cases, and to him they seemed to point very strongly—though, he admitted, by no means conclusively—to the specific bacillary nature of true rheumatism.

Dr. SHADWELL gave illustrative cases in which he traced rheumatism to drain poisoning, and to the unwashed blankets in which a patient suffering from rheumatic fever had lain. He felt prepared to accept the infectious nature of the malady.

Mr. STEVENS hoped to see the specific bacillus found by scientific workers.

Dr. H. FOX thought it difficult to accept the bacillary theory, but drew attention to the relation or likeness of the tissues affected by rheumatism. His mind leaned more towards a nervous origin for the disease, quoting the historical case of the man who was cured of acute rheumatism by the shock of a railway accident.

Dr. LYON thought there was danger in accepting the bacillary view in that it might lead our minds too far from clinical causes—viz., lowering of the vital activity of the body with exposure—that, in fact, it might draw all attention to the seed, leaving the soil in a state of neglect.

Mr. J. T. FOX compared the possible bacillus to the malarial organism, and stated that, though malaria as a rule rendered the patient liable to future attacks, there was at least one variety that rendered the patient (he himself having experienced it) immune to future malarial paroxysms.

Mr. HUMPHREYS briefly replied, and mentioned a case in which from similar exposure to drain air the husband contracted typhoid fever and the wife acute rheumatism.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held at the Wandsworth and Clapham Union Infirmary on Oct. 9th, the President for the year, Dr. GILBERT RICHARDSON of Putney, being in the chair.

Mr. BREWARD NEAL, the medical superintendent of the infirmary, showed the following cases: 1. Sarcoma of the Axilla in a man aged forty-four years, following the removal of a warty growth from the wrist a year previously. 2. Progressive Muscular Atrophy in a man aged sixty-one years. 3. A case of old-standing Inguinal Hernia in which symptoms of strangulation came on half an hour after prolapse of the hernia. Failing reduction, and owing to the condition of the man (whose age was sixty-four years) becoming rapidly more urgent, operation was performed in two hours, with a successful result. 4. Chronic Rheumatoid Arthritis in a woman aged twenty-eight years, accompanied by vaginal discharge of a doubtful character. 5. A case of Foul Ulcer dependent upon Diseased Metatarsal Bone, which was successfully excised, leaving only a small sinus. 6. Two cases of Senile Scirrhus of the Breast.

At the conclusion of the evening a hearty vote of thanks was passed to Mr. Neal for his courtesy and hospitality.

READING PATHOLOGICAL SOCIETY.

Inaugural Address.

THE fifty-fourth annual meeting of this society was held in the library of the Royal Berks Hospital on Oct. 9th, the President, Mr. OLIVER C. MAURICE, being in the chair.

Dr. STEPHEN MACKENZIE, physician to the London Hospital, gave the inaugural address of the session, a most valuable discourse illustrated by numerous drawings, on the advantage to be derived from the Study of Dermatology. He said the study of diseases of the skin had not hitherto met with the attention the importance of the subject demanded, although every practitioner met with cases of which it was important he should have an accurate knowledge; besides which it afforded one of the best fields for educating the observant faculties and training the mind to discern the phenomena of disease and for watching the effects of remedies. Nowhere else, with the exception of the visible mucous membranes, could he observe the whole pathological processes so well. He described the skin physiologically and the influences affecting it, and then dealt most exhaustively with the many diseases to which the epidermis is liable and with their treatment. A few of his conclusions may be briefly stated, such as that many skin diseases generally believed to be constitutional were traceable to bacteria, and that very few skin diseases were directly traceable to dietetic causes, though improper diet might largely aggravate existing eruptions, so that the avoidance of alcohol, the regulation of the bowels, and the cure of anæmia were of infinitely more importance in treatment than diet; at the same time, the disease must be cured by external means. The golden rule by which to preserve a healthy skin, as well as to avoid various ills, was to observe regularity, moderation, and temperance in matters of eating and drinking, especially as regarded alcohol.

The lecturer was heartily thanked in the name of the society by Dr. Shettle for his most valuable address, the vote being carried by acclamation, and thanks to the President concluded the meeting. Later the annual dinner was held at the Queen's Hotel, Reading, under the presidency of Mr. O. C. Maurice.

WIGAN MEDICAL SOCIETY.

The Clinical Value of Inoculation Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis.

A MEETING of this society was held on Oct. 3rd, when a good number of members were present, and several visitors

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from Preston and St. Helens. Mr. WM. MITCHELL ROOCROFT, President, occupied the chair.

Dr. T. HARRIS read a paper on the Clinical Value of Inoculation Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis. He referred to the difficulty which existed in diagnosing between some cases of simple chronic pneumonia of a non-tuberculous nature and chronic tuberculous fibroid phthisis. He brought forward a series of cases which he had met with during the past two years where the sputum had been repeatedly examined by himself and other observers for tubercle bacilli with negative results, and the sputum from these cases he had inoculated into guinea-pigs without producing tuberculosis. He also referred to some cases where the expectoration was fetid and was due to bronchiectasis, and where tubercle bacilli were absent from the sputum. The sputum from these cases, which had also been inoculated into guinea-pigs, gave negative results. A third series of cases were those of repeated examinations of the sputum from cases which had failed for a long time to show tubercle bacilli, but where, after a number of examinations had been made, a few of the organisms were discovered. In all these latter cases the guinea-pigs which were inoculated with the expectoration became tuberculous. The experiments were considered of value as check experiments where repeated examinations of sputum from doubtful cases of pulmonary disease failed to show the presence of tubercle bacilli, and they also confirmed the view that chronic fibroid disease of the lung, usually left by an acute pneumonia, does exist and that such cases are of a non-tuberculous nature.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

President's Address on Otorrhœa.—Venesection in a case of Puerperal Eclampsia.—Exhibition of Cases and Specimens.

AT a meeting of this society held on Oct. 8th Dr. S. JOHNSTON, the retiring President, introduced Dr. Adolph Bronner as the President for the coming year.

Dr. ADOLPH BRONNER then delivered his presidential address on Otorrhœa, its Complications and their Treatment. Otorrhœa was the result of an inflammation of the mucous membrane of the middle ear caused by micro-organisms passing up the Eustachian tube from the pharynx; hence the importance of examining the throat in these cases. The difficulty of draining the tympanic cavity and the care to be used in syringing were next alluded to. In children otorrhœa is very common, 85 per cent. being the result of one investigation. The principal complications of otorrhœa are:—1. Granulations, which are to be touched with chromic acid or with ferric chloride. 2. In polypi the cold snare is generally used to remove these growths, attention being directed to the importance of dragging out the polypus by its roots. 3. Caries of the ossicles, removal of the ossicles being required in some cases. 4. Cases of disease of the attic, of the mastoid antrum, and of the mastoid cells were described. Clinical charts and pathological specimens were handed round illustrating the treatment of these complications. The different operations for mastoid diseases which are associated with the names of Swartze, Macewen, Koster, Bergmann, and Stacke were described. 5. The symptoms of brain abscess, either cerebral or cerebellar, were discussed, and Dr. Bronner detailed a case on which he had recently operated. The patient, aged thirty-three years, had been deaf on the left side for thirteen years. Eleven years ago she had two polypi removed, and since then had had a constant otorrhœa. When seen by Dr. Bronner the symptoms were earache, pain in the head, a small quantity of discharge from the left ear, mental confusion, slow pulse, and constipation. Dr. Bronner trephined one inch above the external auditory meatus, and with a trocar found pus. A drainage-tube which was inserted at the time of the operation came out on dressing the wound a few days afterwards and could not be replaced. In a few days pressure symptoms came on, necessitating drainage through the tegmen tympani. The patient then made an excellent recovery. 6. The symptoms of thrombosis of the lateral sinus are rigors, fever, vomiting, and œdema over the mastoid process, which is painful on percussion. The chief danger is pulmonary pyæmia. The treatment recommended was turning out the thrombus and plugging with boric acid. Some surgeons (Ballance and Lane) advocated tying the internal jugular vein in addition. 7. Many cases of local meningitis had been successfully treated by trephining and drainage. Cases were cited illustrating the different complications of middle-ear disease, and the instruments used in the operations arising therefrom were exhibited. The conclusions Dr. Bronner would direct attention to are: (1) the frequency of these diseases in infancy; (2) the necessity for operation; (3) the mastoid process should be carefully examined, and even if there be no external signs of disease the operation should be done if symptoms be present; and (4) the mastoid antrum should be opened before trephining.

Mr. MERCER read a paper on Venesection in a case of Puerperal Eclampsia. A patient in the eighth month of pregnancy was in convulsions; she was comatose and dropsical; the urine on boiling became solid. One-third of a grain of pilocarpin was given hypodermically, chloral and bromide were administered by the rectum, and a tent was introduced into the os uteri. Later chloroform was administered, and delivery was accomplished by the aid of forceps. After delivery the fits returned and were not controlled by treatment. Thirty ounces of blood were taken from the arm; the patient became conscious, had no more fits, and made an uninterrupted recovery.—The paper was discussed by Dr. A. Bronner, Dr. Goyder, Dr. Bell, and Dr. Gray, and Mr. Mercer replied.

Mr. WILMOT showed a man suffering from Lymphadenoma affecting the axillary, cervical, and inguinal glands.

Microscopical specimens were exhibited by Dr. MAJOR and Dr. CHAPMAN.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE annual general meeting of this society was held on Oct. 10th. Dr. JAMES DRUMMOND of South Shields, the newly elected President, was introduced to the chair.

Mr. WARDLE showed a patient on whom he had successfully operated for Diffuse Suppurative Peritonitis due to disease of the appendix. The abdomen was drained of two quarts of pus, and the appendix, though seen, was not removed on account of the critical condition of the patient. The drainage-tube was taken away at the end of forty-eight hours, and except for some fæcal discharge through the tube opening on the sixth day healing was uninterrupted. Mr. Wardle thought that in such cases the tube might be removed earlier than had been taught.

Mr. RUTHERFORD MORISON showed some cases of Syphilis, and Mr. PAGE a case in which Epithelioma of the Penis and Inguinal Glands had been mistaken for a syphilitic lesion.

Dr. D. DRUMMOND showed a man forty-eight years of age who had been troubled with a cough for two years. In the early stages of his illness all the signs and symptoms of tuberculous consolidation of the right apex were present, and the case was regarded as one of phthisis pulmonalis. During the last two months severe pain in the back, chest, and right arm had been the most prominent symptoms, and still more recently an enlarged gland was discovered under the left jaw. The gland was now very hard and fixed, and this, together with the severe pain and other signs of a growth in the anterior mediastinum, made the diagnosis of malignant disease of the lung easy, though the long history and the physical signs at first proved misleading.—Dr. DRUMMOND also showed a neurotic young man aged twenty-five years who had been lying in bed for five years and was reduced to the weight of 5 st. He was a very good example of the condition known as anorexia nervosa. The patient after a month of treatment has gained a stone in weight and is walking about. For the first fortnight of his stay in hospital, however, he did no good, and not until the nurse was forcibly impressed with the need of his getting well did any improvement result. The case illustrates two things—first, that a certain amount of compulsion must be used in such cases; and, secondly, that isolation was not essential.

Dr. HUME showed a boy aged fourteen years, together with a Tumour and his Upper Jaw, which he had excised. The history of the case was interesting, for four years before the patient received a blow on his left cheek which swelled immediately. The swelling soon became painless, but slowly

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increased, and was removed on Sept. 2nd by the ordinary operation for excision of the upper jaw. Microscopically the tumour was a myeloid sarcoma.—Dr. HUME also showed a man on whom he had successfully performed Nephrectomy for what he regarded as a rare condition. The man was twenty-nine years of age. Five years ago he had his leg amputated for accident, and retention of urine, which followed, necessitated the use of a catheter. The catheter caused cystitis, and from this time he had urinary distress. Pain in the right kidney with pus in the urine suggested calculus, and the kidney was examined by drawing it out to the loin through the ordinary lumbar incision and palpating it, but it was neither incised nor punctured. Dr. Hume thought the danger of wound infection from puncturing even a healthy kidney was to be remembered. No calculus was discovered and the kidney was returned. For some months the patient was no better and no worse. Then the pain became more severe, and at last a swelling was discovered in the loin, evidently an enlarged kidney. Nephrectomy was performed on July 15th, 1895, after which for a time the urine was free from pus, but then there was some return. The patient's general condition was much improved. On section the kidney was found to be enlarged and studded with abscesses, and looked as if it might be tuberculous. The microscopist reports, however, that it is an example of ascending septic nephritis.

Dr. WARDLE exhibited a very large Gall-stone removed by Cholecystotomy from a woman over seventy years old. There was a history of frequent "spasms," but except for the absence of jaundice all the evidence was in favour of gall-stones. After a very severe attack, threatening life, cholecystotomy was performed. The gall-bladder walls were very thin and were firmly adherent to the stones, which had to be dissected out. Death followed from senile heart.

Dr. HUME exhibited a Myoma from the anterior vaginal wall of a middle-aged unmarried woman. Hæmorrhage was severe and frequent attacks of retention of urine called for the use of the catheter. The urethra was so elongated and tortuous that considerable difficulty was experienced with the catheter, and on one occasion the bladder had to be aspirated. The growth projected from the vulva, protruded the urinary meatus, and filled the whole vagina. It was enucleated after division of the vaginal wall, and the bleeding, which was severe, was arrested by tamponning. Dr. Hume could find no such growth described as a fibro-myoma of the vaginal wall.—Dr. HUME also showed an Inverted Uterus removed by Vaginal Hysterectomy. The inversion followed confinement four years before. Packing with iodoform gauze and different forms of elastic pressure were ineffectually tried before hysterectomy was performed. The patient made a good recovery.

Dr. MURPHY showed a Tongue excised for Epithelioma from a woman. The sex of the patient was of interest.—Dr. MURPHY also showed a Pessary of Indiarubber, filthy and corrugated, which had lain for years in the vagina of a patient supposed to be suffering from cancer.—Dr. MURPHY likewise showed an Enlarged and Cystic Ovary and a Normal Ovary and Tubes which he had taken from a patient without a vagina and with a nodule only to represent the uterus, who had suffered severely from abdominal pains.

Dr. D. DRUMMOND showed Congenital Cystic Kidneys taken from an adult. The case was correctly interpreted during life from the presence of uræmia and of symmetrical swellings of long duration in the renal region. The specimens were beautiful examples of the condition.—Dr. DRUMMOND also showed an Aneurysm of the Aorta which had pressed upon and obstructed the right bronchus. He had shown the patient at a previous meeting, and now exhibited the specimen obtained post mortem, for in connexion with it he had observed what he ventured to call a new physical sign. The respiration was stertorous. Over the right lung inspiration was loud and accompanied by rhonchi, as over the left, but in the right lung expiratory sounds were absent. That this was due to pressure on the right bronchus the specimen exhibited made certain.

LITERARY INTELLIGENCE.—The Queen has been graciously pleased to accept the dedication of an Indian translation of Mr. Samuel Osborn's book, "First Aid to the Injured." This book now appears in six languages—English, French, German, Italian, Japanese, and Hindustani.

Reviews and Notices of Books.

Medical Gynæcology: a Treatise on the Diseases of Women from the Standpoint of the Physician. By ALEXANDER J. C. SKENE, M.D., Professor of Gynæcology in the Long Island College Hospital, Brooklyn, New York, &c. With Illustrations. Edinburgh and London: Young J. Pentland. 1895.

DR. SKENE tells us in the preface that the present work has had its origin in a consciousness on his part that the science and art of medicine and surgery should be above all party questions, and that those who place a just estimate on both branches of the healing art and employ them without predilection and prejudice are the most successful and reliable. He holds that unreasonable devotion to either medicine or surgery is wrong. No doubt, as he says, there have been some who have been inclined to push the surgical treatment of the diseases of women to extremes, to the neglect of medicine; and, on the other hand, physicians who have had too much confidence in medicine and have occasionally failed to do their patients full justice. We are quite in accord with Dr. Skene as regards his temperate and judicial views on this matter. They might be studied with advantage by those who have taken extreme views one way or the other on this question. The work is divided into three parts. Part I. has to do with the primary differentiation of sex, development and growth during early life, and the conditions favourable to the evolution of normal organisation. The main object of this part of the book has been to consider the various means that best conduce to the development of a vigorous constitution. Part II., which comprises the largest portion of the work, deals with the characteristics and diseases of the active period of life, and Part III. with the phenomena connected with the transition from middle life to old age, and the diseases more especially likely to occur at that period. There is a good deal of information on the uses of electricity in gynæcology, on massage, on diet in disease, and on mental therapeutics. There is a useful chapter on unnatural habits, in which the author describes (1) the Invalid Habit and (2) the Opium Habit. The former is well defined as a singular perversion of life, mental and physical, seen among women who insist upon being invalids while there is nothing discoverable the matter with them. He distinguishes between this condition and hysteria and neurasthenia, though we must admit the task of separating them clinically seems to us a matter of the utmost difficulty. Dr. Skene does not believe in massage and electricity for the cure of the "invalid habit." In his opinion, the only effectual treatment is by means of "the occupation and exercise cure"—in other words, by voluntary coöperation on the part of the patient. We think there is a great deal of truth in the views here expressed. As regards the opium habit, no doubt, as the author thinks, the foundation of it is often laid in the use of opium after operations. He has found opium of great use in controlling excessive sexual desire, it being in this respect far superior to the bromides. The opium habit in his experience has sometimes been found to induce amenorrhœa. In making a diagnosis of the opium habit Dr. Skene lays stress on the temperature: it rises when the opium is withdrawn—sometimes to as much as 103·5° F.—and falls when the opium is given again. With respect to the treatment of this habit, he thinks the gradual abandonment of the drug is the only rational and safe plan.

A noticeable feature of the book is that there are very few illustrations. We have read it with much interest, and consider that it contains a great deal of useful information on the more especially medical aspects of gynæcology.

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Fonti ed Estensione del Diritto Sanitario. Dal Professore CARLO RUATA. Città di Castello. 1894. (*Sources and Extension of Sanitary Law.* By Professor C. Ruata.)

THE able and energetic occupant of the chair of Materia Medica in the University of Perugia has contributed more than one substantial work to sanitary literature. His treatise on Public Hygiene, favourably reviewed in THE LANCET, was but the prelude to other achievements in the same field, the last of which, embodied in the publication before us, yields to none of its predecessors in scientific importance or expository skill.

Professor Ruata is deeply impressed with the saying of one of the founders of young Italy, Massimo D'Azeglio, the successor of Cavour, "L'Italia è fatta; facciamo gl' Italiani" (Italy is made; let us make Italians); and to the end thus indicated he seeks to lead up by infusing into his compatriots a more vital and more effective "sense of citizenship" than they seem to possess. He finds them, above all things, deficient in that "public consciousness" which inspires combined and consentaneous effort in face of the thousand-and-one maladies which decimate the people—that spirit of sacrifice which makes a man exert himself not so much for individual safety as for the common weal. He points, in proof of the lack of this spirit, to the mode in which zymotic disease is generated and diffused, and demonstrates, with detailed narrative and convincing logic, how Italy loses thousands of lives annually for want of that wise altruism which sees in the good of one's neighbour the conditions of personal salvation. The man who by culpable neglect, *a fortiori* by set purpose, contributes to the vitiation of the atmosphere, for example, sins against a hygienic right, that of respiring pure air, which is the appanage of the humblest as of the highest; so that it is the duty of the State to enforce observance of the law, protecting that right when neglected, and to punish its violator when caught in the act. Above and before all administrative or penal enactment, however, comes the education of the individual, firstly, in that knowledge which underlies all other, the knowledge (in the late Sir James Coxe's oft-quoted phrase) by which every citizen "becomes the intelligent custodian of his own health"; and, secondly, in that principle, expressed for all time by the great English poet, which makes "all men's good each man's rule." Very instructive as a vindication of these positions is Professor Ruata's account of the fearful ravages of small-pox in Sicily during the years 1888 and 1889—an object-lesson in public health which ought, in view of the perennial anti-vaccination conflict raging in Great Britain, to be made *publici juris* in an English translation. So also is his re-enforcement of a warning once and again given forth in our columns in the matter of serotherapy and diphtheria—a warning against the tendency of the most approved therapeutic measures to supersede sanitary effort. "Sanitary law," he says most aptly, "not only does not want deaths from diphtheria, but it does not want patients from the disease; it, therefore, distrusts those palliatives which serve to keep the population in that fatal lethargy in which it is always content to lie with regard to preventable maladies." Not less opportune, particularly in Southern Europe, is his exposition of how atmospheric and aqueous contamination is to be guarded against by the conversion of mediæval into modern cities, as in Turin, where the widening of streets and the knocking down of rookeries have lowered the mortality from 32 to 20 per 1000.

The whole treatise forms a vivid and impressive introduction to the study of sanitary law, on which, indeed, Professor Ruata delivered a memorable series of lectures before the Perugia School. For not a little of his detail or illustration he avows himself indebted to the "più autorevole giornale di medicina esistente" (the most authoritative of existing journals of medicine), as he is pleased to call THE LANCET. But neither that indebtedness on his part, nor the sense of compliment on our own, need affect our judgment of his treatise or our deliverance on its merits, worthy as these are of an author whose hygienic achievement has approved itself not only to Italian schools but to those in both hemispheres.

Le Moyen Age Médical: les Médecins au Moyen Age; les grandes Epidémies; Démonomanie; Sorcellerie; Spiritisme; la Médecine dans la Littérature du Moyen Age; Historiens; Poètes; Auteurs dramatiques. Par le Dr. EDMOND DUPOUY, Ancien Interne de Charenton et des Asiles d'Aliénés; Lauréat de la Société Médico-psychologique; Prix Esquirol et Prix Aubanel. Paris: Société d'Éditions Scientifiques, 4, Rue Antoine-Dubois. 1895.

THE first section of this interesting volume is devoted to "Les Médecins au Moyen Age," commencing at the fourth century of our era, when Western Europe, invaded by the barbarians, witnessed the flight of men of science and letters to that famed Alexandria which was for a certain time to become their home. Medicine, however, made but little progress in these early times, until in the year 805 the Emperor Charlemagne "decreed" that it should be added to the studies of the schools. The laws of Théodoric, observed up to the eleventh century, were not, however, calculated to make the science or practice of medicine popular. Amongst the curious laws of that period a surgeon was to receive "cinq sous pour l'opération de la cataracte grise." Reform, however, came at last, in 1206, by the foundation of the University of Paris, which comprised a Faculty of Medicine and numerous students, many of whom became men of mark. From that period progress became slow, but steady, up to the time of the foundation of the College of Surgeons of Paris in 1271. This part of the work contains many classical and interesting quotations. That professional services then as now were not always appreciated is proved by the following lines:—

"L'élève d'Hippocrate en sa pénible étude
Est trop souvent payé de noire ingratitude."

The remarks on Baths and Bathing are amusing and copious; there are also long extracts from the writings of Montaigne. The second section, "Les Grandes Épidémies," treats of La Peste, La Peste Noire, Le Mal des Ardents, Les Fièvres Éruptives au VIe Siècle, La Suette d'Angleterre, Le Scorbut, La Lèpre, and La Syphilis. Each of these subjects is treated at considerable length, occupying in all over seventy pages.

The third part is entitled "La Démonomanie au Moyen Age." Commencing with the appearance of the spirit of Æsculap counselling Galen to bleed for an attack of pleurisy, we pass to Soranus, who had recourse to magic chants as remedies; whilst later in the thirteenth century a *pater noster* and other prayers were recommended for fractures of the bones. The description of the Épidémie of Sorcellerie in Artois in 1459 is extremely interesting. This is followed by numerous examples of hallucinations, of intercourse with demons, and painful descriptions of the burning of thousands of the unfortunate victims of the fanaticism of the period. To the credit of the profession of these dark ages be it said that many of its most enlightened members vigorously opposed these brutalities.

"L'Hystéro-Démonomanie des Cloîtres" forms a separate chapter and is worthy of much attention. This is followed by an article of great interest on "Hystérie et Force psychique," which deserves to be studied.

It is not a little agreeable to pass from such serious subjects as are presented in the preceding portions of this work to the concluding part, entitled "La Médecine dans la Littérature du Moyen Age." In this part the author, considering that it is in the writings of the poets and dramatic authors of an epoch that the fullest appreciation of the medical ideas of that time are to be found, makes liberal illustrative quotations from the poems, plays, and farces of the Moyen Age. The work throughout forms a record of great value, and affords ample evidence of the varied and untiring research of the learned author.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1895.

THE humanity of the medical profession is not often called in question. When it is so we feel it our duty to look at the facts. A letter in the *Western Daily Mercury* headed "The Medical Profession and Humanity," and signed by HENRY IVEY of Broad Oak, furnishes such an occasion. Mr. IVEY permits himself to say or to imply that in three cases of accident in his own neighbourhood the attention of medical men to serious accidents was hesitating or slow, and that the consequences in two out of three cases were fatal. In the first case a boy was injured. The medical man applied to demurred to going to the accident on the ground that he was not the attendant of the employer. He went when it was shown that he attended the boy's family. In the second case a boy was torn with a threshing-machine and was bleeding. The first medical man applied to declined to go as the messenger could give no assurance as to the payment of the fee. A second was seen and required some responsible person to be found before he would attend. Delay was occasioned and the sufferer died. In the third case a party were travelling home at midnight in a trap when the shafts broke, and two persons were badly injured, of whom one died. One practitioner called (at midnight) declined to attend on the ground that he was not the family surgeon. Such is the burden of the statement of Mr. HENRY IVEY of Broad Oak. We have no right to question its accuracy, but we should remember that it is a one-sided statement, and it is very probable that if the medical version of these facts were given it would differ materially from the one before us.

It is no part of our inclination or of our duty to apologise for any want of humanity in medical men when it is really established. The broad reputation of the profession in this respect is too precious for us not to be jealous of any instance to the contrary that might seem to tarnish it. But it is our business to press two or three considerations—not for the first time—that seem to be overlooked by men like Mr. IVEY. They are apt to assume that all accidents are grave ones, and that the medical man who hesitates about rushing to them knows them to be such. This is a great mistake. Under the head of accidents medical men are summoned at all hours to incidents which are not grave and which can afford to wait for the regular attendant of the persons injured, whose presence is always an advantage to the patient. Accidents figure very largely in the eye of the public, but they do not figure so seriously in that of the profession. They are only a part of the great field of medical duty, and in rushing to them a medical man may be leaving more important duty. Mr. IVEY says: "Accidents suspend the common rules of life with all classes *save one*." This is as ungenerous as it is unjust. For all the centuries the public have left members of the medical profession to look after accidents with scarcely any provision for their being rewarded. Our profession has had to do all "the humanity." And it has done it so spontaneously, so uncalculatingly, that the public have come to think it is bound to do it, and to do it for nothing. It is an everyday experience that while there is a competition to rush for the medical man in cases of accident, there is a common consent of neglect to see that he is remunerated, and very often a repudiation of responsibility, more marked in those who have been most eager to demand his immediate attendance. It is really the public who are at fault in this matter. And if Mr. IVEY had taken occasion to read the public a lesson on this subject he would have been better advised than in lecturing members of the profession on what he is pleased to call their "caprice."

The Samaritan service that is rendered to the public by the profession in all its ranks is enormous. Medical men are never safe. We have known in the holiday season which has just closed and in other seasons the most striking instances of medical men, at great personal trouble to themselves, acting the part of the "good Samaritan." But this is nothing compared with the "good Samaritan" part played by the practitioner in a poor neighbourhood, who is at the mercy of every accident, many of which are occasioned in discreditable ways and happen when the public are in bed. Mr. IVEY himself has an inkling of the truth in this matter. "I do not say that in any case gentlemen of the faculty should be placed at the 'people's caprice' with no rights of their own to observe." But this is very much the contention of Mr. IVEY'S letter. In some other countries there is provision made at the public expense for services of emergency such as the profession is constantly called on to perform. Before medical men can be regarded as public servants it must be shown that the public have engaged them to act and have discharged their own duty. Meanwhile, without judging particular instances on imperfect data, we feel sure that medical men as a class will not be found wanting in those sentiments of humanity which have always been strong in the profession. There is something in the very nature of our duties which exposes us more than other men to unreasonable and untimely demands on our time and on our very health and life. The public have been somewhat demoralised by the ready way in which our help has been always given. This demoralisation must be checked, but in checking it the profession will not generally fall into any great error of selfishness.

IT was a favourite axiom of the late Sir ANDREW CLARK that chronic diseases — always excepting those which arise from external agencies or inherited defects— are in the main dependent upon violations of "physiological laws." That may have seemed a broad and sweeping statement, yet the more such diseases are studied the truer does the axiom appear. In itself, perhaps, the idea embodied in this phraseology had nothing especially novel or striking. Its merit lay rather in its application—an application which this sagacious and experienced physician never wearied of enforcing. "Return," he would say, "to the ways of physiological righteousness and you will be healed." The advice was easily given, but to follow it in its integrity must often have been exceedingly difficult to the patient

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Yet it was practical and rational, and were it not for the highly artificial manner in which lives are spent, or for the restricting influence of habits that have become a second nature, it might not have been so arduous to follow. The underlying principle seems to be this—that in diseases there is a disturbance of the physiological mechanism; the organism works with discomfort; and there is nothing for it but to alter the conditions if we wish to restore it to sounder action. The law may not have been consciously transgressed; on the contrary, from some defect in the natural interchanges between blood and tissue, in perverted metabolism, imperfect elimination, or what not, the apparatus itself may have got out of gear, and unless rectified the change, both functional and structural, may become permanent and dangerous to life itself.

The art of medicine consists, not in a direct attack upon the lesion or the forcible expulsion of peccant material, but rather in the rendering of aid to the natural forces, by whose operation alone can the restoration be effected and the disease, as we say, "cured." The time has long gone by when the former doctrine obtained and when the treatment of disease was dominated by fantastic notions upon the nature of morbid processes. Now, however, whether we admit it or not, we are in all our practice dominated by a strong belief in the all-sufficiency of the powers of nature to repair injury or restore function, provided that they are enabled to exert themselves. Nor does this apply to such obvious remedial measures as the enforcement of rest, the removal of noxious influences, or the reinforcement of vital power by careful dietetic rules. It embraces the whole sphere of therapeutics, for even the administration of drugs is, or should be, directed to the same end. If we cling to the alternative view that medicines act in some special manner, each one appropriate to a particular derangement, it is because of imperfection of knowledge and the thraldom of tradition. That diseases owning a specific origin from the introduction from without of a parasite or virus are to be successfully combated by specific drugs or antidotes, if only we could find them, cannot be gainsaid. But it is different with the large group of disorders due to defective mechanism, perverted secretion, or irregular metabolism. The initial factor in many such affections is often absolutely unknown; no doubt it has been some violation of physiological law—but how or in what direction it seems futile to inquire. The declared disease, that which we are called upon to treat, presents us with the pathological results of the vicious action, and the only hope for their removal rests in changing the whole nutritive conditions, and thus perchance restoring the normal physiological activities. There is a large class of maladies in which such efforts might at first sight seem doomed to failure. These are those which depend on tissue degeneration and the accumulation of its effete products. But when we reflect that life consists in an alternating cycle of degeneration and repair, we become aware that there are in the living organism itself the ways and means for removal of dead matter and the production of new living substance. There is no fixed limit to the recuperative powers, and all treatment must have for its aim their support and excitation.

This mode of viewing therapeutics is more hopeful than that which relegates degenerative changes, particularly those involving vitally important organs, to the class of irremediable affections. Much has been done by the recognition of this fact in the treatment of chronic heart disease, especially those forms in which there are muscular failure and degeneration. The extension of the same principle even to so admittedly hopeless a lesion as arterial atheroma was expounded in these columns last week by Dr. LAUDER BRUNTON with his customary lucidity and wealth of physiological examples. The means he suggests are simple, but they have a rational basis, and they are founded on the facts of physiology as well as on a firm faith in the *vis medicatrix naturæ*.

A CASE under the Lunacy Act of very considerable importance both to the profession and to the public was concluded at the Birmingham Quarter Sessions on the 11th inst., the prosecution having been undertaken at the instance of the Treasury. It was alleged that the defendant, a surgeon practising in Birmingham, had unlawfully taken charge of Mrs. JOHNSTON, a lunatic, and kept her at his residence, an unlicensed building, without an order from the judicial authorities. It was further alleged upon the indictment that the defendant had used unnecessary mechanical means of bodily restraint, and that he had not kept a record of such restraint as prescribed by the statutes. Mrs. JOHNSTON was the widow of a surgeon who left her a large income under certain restrictions. It was stated that, on becoming a lunatic, she was handed over to the defendant's care to prevent the trustees under the will retaining her income and using only such portions as were necessary for her maintenance. Her detention came to the knowledge of the lunacy authorities, and she was removed to the asylum, where she died within twelve days. The defendant disclaimed any intention to do wrong, though admitting technical offences. He declared that he was actuated by higher motives than gain, and that what he did was in the honest belief that it was the best thing for his patient. The Recorder, in summing up, said he could not see how there could possibly be any defence to the first and third counts, charging the defendant with detaining Mrs. JOHNSTON and not keeping a record; while the second count—that of using mechanical restraint—was the most serious. It was hard to think, he added, that the medical man was unaware of the fact that the woman had been out of her mind before and that her husband in his will had given directions as to her maintenance in the future should such symptoms again manifest themselves. The jury returned a verdict of "Guilty" on all three counts. The Recorder stated that he had great difficulty in arriving at a conclusion as to what punishment he should inflict to vindicate the law. He was willing to admit that the defendant acted upon an honest but ignorant belief, and therefore decided to impose a fine of £50.

The case is an important one because it illustrates in itself many of the points that arise day by day in

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connexion with the question as to what is the proper mode of providing for and treating insane persons who have independent incomes. It also demonstrates the difficulties which the law has to deal with in lunacy cases of the sort where any question of honest ignorance arises. The gravamen of the charge does not lie altogether in what was actually done by the defendant to his patient, for she no doubt required asylum treatment, and it is not beyond possibility that some amount of mechanical restraint might for a time be needed. To our thinking the most serious feature of this particular case, leaving out of the question the higher motives and honest beliefs of the defendant, rests upon the "ignorance" that was relied upon for the defence. If a medical man has not a knowledge of the law in a matter of the sort it is not to be expected that he would feel it to be his duty to make himself acquainted with the principles which govern the use of mechanical restraint or to see the necessity for recording the fact that it has been used. Without wishing to dwell at any length on this aspect of the case, we are anxious to point out that the treatment of single paying patients in private houses, whether of medical or lay members of the community, is not in itself either harmful or undesirable; and the law, accepting this view, makes the needful provision for it and has to see that the statutes and regulations for safeguarding the interests of the patients are duly carried out.

It is always a pity when public mistrust of the medical dealing with lunatics is accentuated by the avoidance of the necessary preliminaries, which are neither expensive nor complicated. When these preliminaries have been arranged and the patient certificated, the rules for after-guidance in the official treatment of the case are simple enough; and it seems to us that acquaintance with the requirements of the law is dearly purchased, as in the present instance, by the infliction of a fine or the possible risk of imprisonment. Ignorance of the law is the last thing that should be pleaded. Those who dislike wading through the technicalities of Acts of Parliament will find plenty of explanatory works which bring the requirements of the Lunacy Act of 1890 within easy grasp of the ordinary reader. One of the most recent and most complete of these books of reference is that published under the title of "The Insane and the Law,"[1] which will be found to be a most useful guide as to the detention, treatment, and other matters connected with the civil and criminal relationships of the insane. We may add in conclusion that an interesting discussion followed the reading by Dr. L. WEATHERLY of a paper on the Law in relation to Single Patients at the recent meeting of the British Medical Association.

[1] The Insane and the Law. By Percy Smith, M.D., F. Pitt-Lewis, Q.C., and A. J. Hawke. J. & A. Churchill. London: 1895.

PRESENTATION.—Mr. W. J. C. Keats, L.R.C.P. Lond., M.R.C.S., on his leaving, after four years' service, the female side of the Greenwich Union Infirmary and the Workhouse, to take the medical superintendence of the male side, has been presented by the sisters and nurses of the Infirmary with a dressing table set in silver and tortoiseshell, and by the nurses of the Workhouse with a handsome brass inkstand, as marks of their esteem.

Annotations.

"Ne quid nimis."

FIELD-MARSHAL LORD WOLSELEY AND THE ARMY MEDICAL STAFF.

WE are informed that at one of the last parades held by Field-Marshal Lord Wolseley in Dublin, observing that the men of the Medical Staff Corps attending the parade saluted on his arrival on the ground by "carrying swords," he immediately directed Major-General Montmorency (Viscount Frankfort de Montmorency) to bid the medical officer commanding to issue the order "return swords," and that when giving General Montmorency these instructions Lord Wolseley added that "these men have no right to draw their swords; they are not soldiers, but civil attendants on the sick." It is well known in Dublin military circles that the medical officer in command on the occasion has reported the circumstances of the case and requested written instructions as to whether in future, if such an order be again issued, he is to obey the General Officer Commanding or the Queen's Regulations, under the directions of which he was very properly acting at the parade. We do not doubt the nature of the answer which he will receive, but may be permitted to dwell a little upon the slight—for such it may be regarded—that the Commander-in-Chief-elect has put upon a branch of the service. Lord Wolseley is a most distinguished soldier, and the post to which he is to be called is one imperatively demanding wisdom and justice, and that his reputation for these qualities should be universally recognised. It is to these qualities we appeal when we ask him to reflect that the officers and men of the Medical Department of the Army have to endure the same perils and hardships which he, in common with the distinctly combatant branches, has endured. He must, we feel, certainly know how important well-directed medical aid is on the field of battle in these days of arms of precision, how great the necessity is to increase that feeling of *bonne camaraderie* which must exist between the different departments of an efficient army, and of what consequence it is to the welfare of our troops to procure the services of medical officers, not only competent in their art, but able, by general education and knowledge of the world, to fill efficiently the position of an officer in the army. It will be altogether impossible to obtain such men for the Army Medical Staff if the term "soldier" in its fullest sense does not include those representatives of medicine who risk their lives in their country's service as freely and as bravely as the officers of any other branch of the Service. The roll of the Victoria Cross bears eloquent testimony to this fact.

THE MIDWIVES QUESTION.

TWO cases have recently been reported which show the extraordinary carelessness and ignorance which occasionally prevail among the poor with regard to the great questions of life and death. In the one a woman aged thirty-two was taken in labour at 1 A.M. and gave birth to a stillborn child. At 1.30 A.M. a female friend came in, and at about 2 A.M. a midwife. "Nothing was done by either to alleviate the suffering of the woman and there was some delay in sending for a medical man." The medical man who gave evidence stated that he was called at about 5 A.M. and found the woman much collapsed from loss of blood; two hours later she died. At the inquest a verdict of death from natural causes accelerated by want of proper medical aid was returned, which verdict seems to us to be faulty. Post-partum hæmorrhage is decidedly unnatural. But let that pass; the point on which we wish to lay stress is the

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extraordinary indifference shown by the two women. There they sat for some three hours and did nothing, while the unfortunate woman's life was slowly ebbing away, and be it noted one of the women was a so-called midwife. In the other case the deceased was a child aged five weeks. A medical man had attended her, and told the parents to send for some medicine; this they neglected to do. The child died, and the parents thereupon asked the medical man for a certificate, which he very properly refused. Hence an inquest. The midwife admitted in this case that she had advised the mother to send for a clergyman to baptise the child before sending for medical aid. Further inquiries elicited the fact that the mother of the child was entitled to receive a sum of money upon the death of a baptised child, so that apparently pecuniary and not theological scruples were at the bottom of the midwife's directions, and certainly clubs founded on this basis seem to us to furnish a stronger argument against infant baptism than any Anabaptist ones. Anyway, cases like this would appear to strengthen the hands of those who object to infant insurance. The verdict in this case was the same as in the former, although given by a different jury. Neglect is common enough, but that it is natural we certainly doubt. One juryman remarked that all midwives ought to be certificated. Be this as it may, indifference such as is shown in the two instances on which we have commented is happily not common in any rank of life.

THE PROFESSOR, THE MAGISTRATE, AND THE LAW.

PROFESSOR RAY LANKESTER is a man of respectability and personal honour as distinguished as his learning; Mr. Newton is an upright judge; Constable Wise, 11 C R., and Constable Hutchins, 29 C R., are unimpeachable witnesses; and Inspector John Cox is another. We—at least, we hope it—are fair-minded. Having thus cleared the ground, we desire to comment briefly on the awkward dilemma which has brought these individuals, in themselves unexceptionable, into relations whose asperity has been so clear and unavoidable, and whose results must be to one—the one who went to the wall—as annoying as the mind can well imagine. Some of the facts in the dispute which recently took place between Professor Ray Lankester and certain of the C Division of Police are not denied. Professor Ray Lankester was standing still at a time when and in a place whence he was told to move on. He did not move on. Thereupon he was arrested. He says that he did not understand that he was being ordered about by the police, being a new hand in a fraças with the force, and that he waited to get a cab to come to him at the kerb. The police say that he refused to move in a disorderly manner, and incited six or eight other characters, professionally disorderly, to do the same. On being arrested Professor Ray Lankester, remembering who he was and what he had at stake, described the proceedings of the police as silly. The police hold that he confessed in those words to personal silliness, which is different and not borne out at all by the subsequent attitude of the arrested man. Before Mr. Newton the insinuation was made that Professor Ray Lankester was drunk. The case was adjourned for a week, during which time Mr. Newton suffered a good deal as he pondered it in its different bearings. Upon the resumption of the hearing Professor Ray Lankester proved by several witnesses that he was not drunk at the time, and could not have been, so the insinuation was withdrawn, and the magistrate was very severe with the prisoner's attorney for disproving it, forgetfully alleging that it had never been made save by that same attorney! Then Professor Ray Lankester told his story, to the truth of which he had no witnesses, the six or eight disorderly characters having been let go free by a gallant constabulary. The magistrate heard Constable Wise's story again, and Constable Hutchins's confirmation thereof, and gave judgment in accordance with their version of the story. "For," said Mr. Newton, "I have known the officers ever since I have been sitting at this court, and I have never heard their truthfulness questioned." So Professor Ray Lankester was bound over to keep the peace in the sum of £10, though, as he pointed out, his record was better than the constables', for he had been a respectable, sober, and honourable man in the eyes of other men for over thirty years, whereas the admirable *dossier* of the policemen only claimed to extend over twenty years. We tender our sympathies to Professor Ray Lankester, who, though not a member of our profession, is closely connected with medical work both by family ties and the nature of his well-known occupations.

ANALYSTS AND MILK ADULTERATION.

IT is a pity that something cannot be done to put an end to the farcical proceedings which occur over and over again in the police-courts in connexion with summonses for milk adulteration. It is wearisome to read almost every week that the public analyst certified to the effect that the milk was adulterated with a percentage—in cases of dispute generally small—of water, but that the officials at Somerset House, on the matter being referred to them, reported there was "no evidence of the presence of added water." The case is then usually dismissed, the authorities who undertook the prosecution having to pay the fee for the Somerset House certificate and the costs of the court. Such a case occurred last week, when Mr. Bevan, the analyst to the Middlesex County Council, certified of a certain milk that it contained 8 per cent. of added water. This analysis was confirmed by Dr. Stevenson and Mr. Hehner. The referees at Somerset House, however, could not regard the milk as adulterated. The summons was dismissed. These differences of opinion arose most probably from different views as to the standard normal quality of milk. Somerset House officials maintain one standard and public analysts another, and so long as this state of things continues so long will it be a farce and an incongruity to institute proceedings, or at least whilst there is a possibility of the results showing upon the standard of the public analyst that the milk is adulterated, and upon the standard of Somerset House that it is genuine but of poor quality. We assume that in these cases the analytical results are in agreement, and it is only their interpretation which gives rise to these differences of opinion. That the question is beset with some difficulty we are aware, but surely the public analysts and the Somerset House officials, being members of one profession, could meet together and discuss this subject quietly and in a purely scientific spirit, with the view of smoothing down the contentions which lead them to disagree, and which can only bring ridicule and contempt upon themselves and their work from a public ignorant of the real causes of the differences. The public analysts are, of course, in a large majority, and their opinions are entitled to be heard; and their action, contrary to that of Somerset House, has a tendency to raise and maintain the quality of our milk-supply rather than to countenance the selling of milk of a most enfeebled description. Somerset House officials argue that, when it is found that a cow yields milk of a very low quality, in the interests of justice they feel bound to adjudge all other samples by this genuine but poor and abnormal specimen. In taking this view, however, it is obvious that the lowering of the quality of our milk-supply is encouraged—that is to say, there would be nothing to prevent the watering down of a rich milk to this low standard, and in some

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cases the addition of water for this purpose might be considerable. Worse than that, the bulk of the milk might be increased, for aught that is known to the contrary, with a veritable solution of filthiness abounding in disease. We repeat that we trust that the analysts and Somerset House officials will be led to unite on this question, and will arrive at some amicable arrangement which shall be just to the public and to the seller, and bring no longer any discredit upon themselves and their profession, as in the ridiculous and unedifying spectacle which they present in those cases in which the "summons is dismissed" because one analyst says that the milk is adulterated and another that it is not. If this cannot be done, then we appeal strongly to the Food Products Adulteration Committee, whose labours will recommence next session, to suggest a way out of this absurd and grotesque position.

A CASE OF SYMPHYSIOTOMY.

THE current number of the *Revue Obstétricale Internationale* contains an interesting report on a case of symphysiotomy occurring in Professor Crouzat's clinique at Toulouse. The indications for the operation were those which we ourselves regard as the most important for undertaking the operation—namely, failure of the forceps to effect delivery, an absence of any great pelvic contraction, and the fact of the child being alive. In the case referred to, Tarnier's forceps was twice used, but the fœtal head could not be made to engage in the pelvis. Symphysiotomy was then performed by Professor Jeannel. The operation appears to have been an easy one, except for a little preliminary difficulty in arresting the hæmorrhage. The pubic bones were separated for six centimetres and a half. The child was then easily delivered with Tarnier's forceps. The patient made a good recovery, getting up thirty-five days after the operation. The event as regards the child, however, was unfavourable. It seems that somewhat extensive bruising of the head was caused during the attempts to effect delivery with the forceps. These injuries, in place of rapidly improving and disappearing within a short period after birth, as is generally the case, became the starting-point of a suppurative cellulitis, which proved fatal in fourteen days. The lesson of the case would seem to be that the unfavourable result to the child might have been avoided if the attempt to deliver with the forceps had been less vigorous, and if symphysiotomy had been resorted to earlier.

LONDON'S FUTURE WATER-SUPPLY.

AFTER all, Londoners may have reason to be thankful that they were within measurable distance of a water famine last summer and last winter, since it has brought the water question into extraordinary prominence, amounting to an enthusiasm which may perhaps cause our legislators to look elsewhere and seek a supply about the abundance and quality of which there shall not be the slightest doubt. The Welsh project is the one most favourably considered, and it is even urged that if London is apathetic much longer in the matter of securing a new water area there will be few watersheds left, as those which exist now are being rapidly secured and appropriated by provincial districts. A committee of the London County Council have already inspected the area involved in the scheme of Mr. Binnie, the County Council's engineer, to bring a supply of water to the metropolis from Wales. Their report was presented at a meeting of the Council last Tuesday. The committee were very much impressed with the scheme of reservoirs which appear to possess all the advantages of a pure and plentiful supply. On the former point, that of purity, the chemist has already reported, but it will be more satisfactory to have further information than that now possessed by the Council, and samples of the water for analysis will shortly be submitted, not only to the Council's chemist, but also to an independent chemist to be hereafter selected. With a view to proceeding as rapidly as possible with the surveys of the Usk and Llangorse areas, and completing the survey of the Upper Wye Valley, the committee, acting under the authority conferred by the Council's resolution of July 30th authorised the engineer to retain the services of Mr. R. Allen and Mr. Stillingfleet at salaries at the rate of £200 a year each, and to negotiate with Mr. Hassard, whose name has been for some years associated with a scheme of supply from Wales, for all his plans and sections derived from the information of the Ordnance sheets, especially those relating to Llangorse and the Upper Usk and part of the conduit to London. The assistants above mentioned are at work contouring the various reservoir sites and setting out the necessary railway diversions, and they have commenced with the catchwater conduits in the Usk Valley. It is pointed out that one of the advantages of the scheme is that it may be carried out by instalments, and that, assuming the present sources of supply to be maintained, a supplementary supply of purer and more wholesome water may be obtained from Wales sufficient for the requirements of London for forty years hence, at a cost little if at all exceeding that which would be incurred by the formation of reservoirs in the Thames Valley. At the same meeting of the Council on Tuesday last the Parliamentary Committee submitted a report stating that as eight Bills for the purchase of the water companys' undertakings had been suspended they had had to consider what course should be taken in regard to them. In the end they recommended that the Council "do invite Her Majesty's Government either to deal with the question themselves or to appoint a Royal Commission to do so." Mr. Stuart, M.P., moved as an amendment "That the Bills for the purchase of the London water companies be proceeded with." This amendment, however, was lost by a majority of one, the numbers being 54 against it and 53 in its favour. The London Water Bills are therefore abandoned for a time.

COGNAC v. CORN SPIRIT.

AT a recent meeting of the Académie de Médecine M. Daremberg endeavoured to prove that while both beverages are hurtful, if not poisonous, the higher-priced cognac brandies are relatively much less wholesome than (as one commentator puts it) the *eaux-de-vie* that are sold for two *sous* over "the zinc"—that is, retailed in the low drinking-establishments which are just as common in Paris as gin palaces are in London. Chemical analysis shows that what are generally esteemed as the best brands contain a far larger proportion of furfurol and amylic alcohol than do the cheaper spirits distilled from corn, and for this reason alone, even though there were no other, the use of cognac must be injurious to health. M. Daremberg, however, does not rely solely upon chemistry in support of his theory, but maintains that his thesis is sustained and confirmed by the results of his experiments on animals. Ten cubic centimetres of "authentic" cognac, costing sixty francs the bottle, when injected into a vein in a rabbit's ear caused instantaneous death, whereas a similar dose of promiscuously purchased *eau-de-vie* was not attended by immediately fatal effects. The opposition was represented chiefly by M. Laborde, who pleaded the extreme sensitiveness of rabbits to the action of alcohol, as well as the uncertainty attending intra-venous injections, which may kill the subject quite irrespectively of the nature of the fluid introduced. The speaker had, moreover, analysed cognac himself, and found it to contain little or no furfurol. In his opinion the alcohol of commerce must necessarily be more injurious than that derived solely from the grape. M. Magnan agreed with the originator of the discussion that all alcohols were poisons. He, too, had performed

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some experiments, but the subjects operated upon were dogs. Fifty grammes of wine alcohol caused depression and drunkenness, which disappeared in about five hours. Alcohol made from beetroot produced a comatose slumber with complete anæsthesia after from eight to ten minutes, this condition lasting twenty-four hours and the animal continuing out of sorts for several days. Alcohol extracted from maize gave similar results, with the addition during the coma stage of subsultus tendinum. No alteration of the consecutive phenomena was observable on repetition of the experiments after rectification of the three alcohols. On conclusion of the discussion the Academy decided to submit the question to a commission consisting of MM. Bergeron, Laborde, Lancereaux, Riche, Motet, and Magnan. The commentator already alluded to[1] terminates his annotation with the following sensible remarks: "When the best cognac is misused it becomes worthless. What should be avoided is the habitual consumption of eau-de-vie, the *petit verre* after each repast, even though it should be 'authentic' cognac. *Petits verres* soon accumulate in the organism; the hardest stone yields to the constant drop."

ISOLATION ON A BACTERIOLOGICAL BASIS.

MR. WYNTER BLYTH has just presented a special report to the Marylebone Sanitary Committee on the desirability of providing in the district facilities for the bacteriological examination of cases notified as diphtheria. The necessity of such a course is based in the main upon the fact that several urgent cases of diphtheria—presumably from Mr. Blyth's district—have recently been refused admission into the Metropolitan Asylums Board hospitals owing to the accommodation for diphtheria cases being exhausted. Mr. Blyth points out to the sanitary committee that in all probability a considerable number of cases notified as diphtheria are not really cases of this disease, and the only method at the present time of settling the diagnosis of doubtful cases is by means of a bacteriological examination. In this connexion he refers to the efforts of the city of New York in the United States, and of the Bristol Town Council in this country. We note in passing that Mr. Blyth observes that Bristol is the only "public body" in this country which has organised a systematic bacteriological examination of reputed diphtheria cases; but we feel sure that Mr. Blyth will forgive us for pointing out that both Dr. Thresh in Essex and Mr. Fosbroke in Worcestershire have done much in this direction. However, to revert to the main issue of Mr. Blyth's report, he proposes, with the coöperation of the medical practitioners in his district, to obtain a bacteriological examination of all cases notified as diphtheria, and by this selective process he anticipates being able to discriminate between patients whom it is desirable to isolate in hospital and those who may be otherwise dealt with. For instance, in cases where the clinical symptoms are not inconsistent with commonplace sore-throat, and a bacteriological examination does not support the diagnosis of diphtheria, there is, Mr. Blyth observes, no need for isolation either at home or in hospital. When, however, the symptoms strongly support a diagnosis of diphtheria, while the bacteriological examination gives no decided evidence, such cases will be regarded and treated as diphtheria. Mr. Blyth particularly observes that the proposed examinations are not for the purpose of disputing, revising, or correcting medical certificates, but simply with a view of an economical selection of cases for isolation during pressure upon the accommodation. There can, it seems to us, be no objection to a trial of the proposed method, but at the same time we should decline to concede to a general principle that isolation in the future is to be dependent upon the result of bacteriological examination. A single examination necessitates a delay of at least twenty-four hours, and a delay such as this in a disease like diphtheria may often be fraught with most serious consequences. Even under the circumstances above set forth, bacteriological selection, based on examination of a single sample, should be supplemented by a full consideration of the environment of individual cases. It is interesting to reflect whether from the standpoint of economy in hospital beds exceptional facilities for bacteriological examination may not bring to light cases which would otherwise have passed unrecognised, and so tend to increase the number of true diphtheria cases seeking admission. Under any circumstances, Mr. Blyth's proposal, if carried into effect, cannot fail to add something to the sum total of our knowledge of diphtheria. We should add that Mr. Blyth's scheme has been unanimously adopted by the sanitary committee, and that it will be discussed at the next meeting of the sanitary authority. Doubtless at this discussion the isolation accommodation of London will come in for a fair share of attention.

[1] Dr. E. Masse of Bordeaux.

THE HABIT OF DIRT-EATING IN CHILDREN.

A VERY interesting paper on this curious habit is contributed by Dr. John Thomson to the recent number of the Edinburgh Hospital Reports. He gives some account of the habit as observed by travellers in different parts of the world and by agriculturists among unhealthy young animals, especially lambs. Dr. Thomson finds it occurs in two classes: (1) in cases of ill-health from tuberculosis &c., anæmia being almost always a prominent symptom; and (2) in healthy children, the habit being formed in infancy and disappearing spontaneously when the children are about three years old. Dr. Thomson regards the habit in this latter class as analogous to thumb-sucking, perpetual rocking to and fro, or constant rolling in bed, in which some children find delight and which they lose when they pass out of infancy. In the cachectic cases it has been thought that the habit might be started by an instinctive craving for earthy salts, such as lime and iron, but the evidence is not conclusive. The materials selected in Dr. Thomson's cases seem to have been chiefly wall-plaster and cinders. One child varied this last pastime by pushing the hearth brush into the ashes and then licking the dust off it as a great delicacy. The habit, as is well known, is very common among idiots and imbeciles, but Dr. Thomson's cases were free from mental disorder. Even in the cases where spontaneous recovery did not occur a very short period of treatment in hospital, during which the patient was denied access to his wonted luxuries, was sufficient to break the habit. Dirt-eating may, however, lead to serious consequences when the material eaten—such as the soil—contains deleterious matter. This is seen among the native Egyptians, who, observing the marvellous fertilising power of Nile mud on their fields, imagine it must be equally nutritious for men and habitually eat it, with the result of infecting themselves with the ova of anchylostoma, bilharzia, and other parasites.

THE HEALTH OF ARMY HORSES.

THERE is nothing particularly noteworthy in the Annual Statistical and General Report of the Army Veterinary Department for the year ending March 31st, 1895, which has been recently issued. As in former reports, it deals only with the Government horses and mules in this country, Egypt, and South Africa, those in India being excluded. The strength for the year was 13,192 horses, 1915 chargers, and 178 mules. The inefficiency from disease and injurie was considerably higher than in the previous year—5·36 per cent.—being 67·35 as compared with 61·99. No reason is given for this increase. The mortality was also higher, being 2·37 of the average strength, whereas in 1893 it was

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2·09 per cent. Of the deaths 1·53 per cent. died and 0·84 per cent. were destroyed. The average number of days each horse was under veterinary treatment was twenty-one, the same as in the three previous years. There was a slight decrease in the cases of specific disease, though what is designated "epizootic fever" appears to have been rather prevalent, the percentage of admissions being 0·32 of the average strength of the army horses. The highly infectious malady of young horses popularly known as "strangles," which is a suppurative adenitis, was also more frequent than in the previous year; but no case of glanders was reported, this being the seventh year in which its absence from among army horses has been noted. This fact is sufficient proof that the disease can be eradicated and kept at bay, even without recourse being had to mallein. The admissions to veterinary treatment, as well as mortality, were greatest among young horses. The average age was nine years. A table is given showing the attendance at the classes in the Veterinary School at Aldershot, and also the results of the working of the Vaccine Institute at the same place. It appears that lymph for vaccinating purposes was prepared for 40,558 people during the year; and this, added to what remained on hand from the previous year, allowed material to be issued for 42,351 persons. The results obtained from the use of the lymph at home stations are reported as "excellent" and at foreign stations as "very good." The number of calves vaccinated during the year was 14, giving an average yield for 2897 persons from each calf; the greatest amount of lymph from one calf was sufficient for 3866 persons, and the smallest for 1200. The total working expenses of the Institute for the year, including cost of calves, instruments, &c., was only £72 11*s.* 9½*d.* Since the opening of the Institute in March, 1889, lymph has been prepared for 247,137 persons belonging to the British army at home and abroad at a very small cost, while regularity and certainty of issue, as well as careful preparation, were ensured. This result is highly creditable to those entrusted with the management of the establishment.

A PROPOSED SANATORIUM IN SOUTHERN ARABIA.

IN his interesting article on "The Land of Frankincense and Myrrh," in the current number of the *Nineteenth Century*, Mr. Theodore Bent suggests that the Gara Hills, situated not far from the coast of southern Arabia, would form an excellent health resort "for the inhabitants of the burnt-up centres of Arabian commerce, Aden and Muscat." These mountains are 3000 feet in height, and the ground right up to the summits is fertile and covered with grass. Clusters of sycamores give the undulating hills a park-like appearance. "Thus we wandered," he tells us, "with our strange escort for several days along the summit of the Gara Mountains, and from certain points we obtained most interesting *coups d'œil* over the whole of the frankincense country; it is just like an oasis by the sea, an undulating range of mountains, never more than 3000 feet high, separating the central desert of Nejd from the sea....To the east and west the arid barrenness of Arabia soon asserts itself, whereas the undulating Gara range, like the Cotswold, is fertile, and rounded with deep valleys running into it full of rich tropical vegetation." The travellers suffered some inconvenience from cold winds coming from the north, during the prevalence of which their native guides would not allow the camels to move. They found many pleasant wooded dells and running streams which would have been notable anywhere, but which were a marvel as occurring in sandy and barren Arabia. The neighbouring coast is almost uniformly barren and inhospitable, and there are no good harbours. "If ever this tract of country comes into the hands of a civilised nation it will be capable of great and useful development. Supposing the harbour was restored to receive ships of moderate size, the Gara Hills, rich in grass and vegetation, with an ample supply of water and regular rains, and, furthermore, with a most delicious and health-giving air, might be of inestimable value as a granary and health-resort." Aden is one of the most disagreeable and unhealthy of the dependencies of the British Crown, and the possibility of establishing a sanatorium within a few hundred miles of this important military and coaling station is worthy of consideration. Arabia is still to a large extent a *terra incognita*, the difficulties of exploration being even greater than in the case of Africa; but in these days no country is likely to remain permanently closed against the enterprising British explorer.

THE CORRELATION BETWEEN MEAT INSPECTION AND OCULAR CYSTICERCUS IN MAN.

IN the twenty-fifth *compte rendu* of his ophthalmological clinic Dr. Hirschberg gives fresh evidence of the happy influence of meat inspection on the prevalence of ocular cysticercus in mankind. It appears that from 1853 to 1866 Graefe had met with 90 cases of this affection among 80,000 patients suffering from diseases of the eye. From 1869 to 1885 Dr. Hirschberg examined the eyes of 60,000 people also affected with various eye diseases, and in 70 the cysticercus was discovered. From 1853 to 1885 this form of parasitism was met with in the proportion of 1 in every 1000 clinical cases, and in certain years (as in 1876) it was 1 in 420, 1 in 450 (in 1879), and 1 in 800 (in 1877). When the organisation of meat inspection was further perfected these proportions were considerably modified in the course of time, but not immediately. For instance, from 1883 to 1885 the cases of ocular cysticercus were still relatively numerous, but in the four following years (between 1886 and 1889) of 30,000 eye patients only one had this entozoon in the ocular cavity; and among 43,000 who came under his observation from 1890 to 1894 there were but two so affected, and they were strangers to the district. These figures demonstrate that a good system of meat inspection, in suppressing the issue of measly flesh as food for man, has at the same time almost completely abolished a rather frequent source of human ocular parasitism.

FRENCH CENTENARIANS.

OUR contemporary *Le Figaro* makes merry *more suo* regarding persons who have reached the age of 100 years, but at the same time contrives to convey a considerable amount of useful information. Until the last census, of which the results have only just been promulgated, it was impossible to determine accurately the number of patriarchs who had enjoyed the pleasures of life for a century and upwards. Once they have passed a certain limit old people get into the way of coquetting about their ages, just as though they were so many ripe dames anxious to post-date the period of their entry into the world, and until registration became firmly established a good deal of trickery in this respect used to be possible. This time, however, the exhibition of snowy locks was not looked upon as a sufficient proof of antiquity, and all aspirants to centennial honours were required to furnish substantial evidence in support of their claims. It seems that in France at the date of the census there were no fewer than 213 genuine centenarians, of whom 147 belonged to the female sex and only 66, or less than half, to the male. Thirty-three of the ladies, being celibate, were justly entitled to be called old maids, whereas the old bachelors only numbered 11. Widows and widowers accounted for 102 and 39 respectively, a discrepancy which *Le Figaro* makes use of as indicating the superior tenderness of the masculine heart, unable, like the turtle-dove, to survive

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the demise of its partner. Sixteen males and 11 females were still blessed with loving spouses, but we are not told whether in any case husband and wife had both reached their century. Finally, one lady is a divorcée, and apparently attained to that condition since she became a centenarian. "Never," exclaims the writer in a paroxysm of mock-heroic virtue—"never could a man be found sufficiently hard-hearted after 100 years to endeavour to strike a balance with his bride after that fashion."

MUNICIPAL CORPORATIONS AND MEDICAL CERTIFICATES.

WE see it announced that at the meeting of the Association of Municipal Corporations, now being held in London, among other resolutions to be considered is one for the abolition or reduction of payment to medical men for certificates issued under the Infectious Disease (Notification) Act, 1889. We are curious to hear on what grounds their resolution is going to be supported. Is it that the proposer finds the Act vicious in its working, and so the certificates unnecessary? If so, he will have some rather awkward evidence against him to surmount. Or is it that he thinks medical men should work for nothing? If so, he will have to give reasons for holding that our profession should be exempt from the business conditions universally prevailing.

THE NEW ENTRIES AT THE MEDICAL SCHOOLS.

OUR statistical returns of the students who have entered upon a course of medical study at the London and provincial medical schools are not yet complete and we must hold over our analysis of the figures for a future issue of THE LANCET. Up to the present time 187 new students have entered at St. Bartholomew's Hospital, 83 at Charing-cross Hospital, 55 at St. George's Hospital, 184 at Guy's Hospital, 112 at King's College, 138 at London Hospital, 158 at St. Mary's Hospital, and 203 at University College Hospital. At the provincial schools there have been 28 new entries at University College, Bristol; 91 at Mason College, Birmingham; 59 at University College, Cardiff; 17 at Yorkshire College, Leeds; and 16 at the Sheffield Medical College. It will be seen that the list is by no means complete, and the figures when analysed later will require considerable explanation.

TYPHOID FEVER BACILLI IN DRINKING-WATER.

IT is now generally admitted that drinking-water is often the vehicle of infection in typhoid fever. The exact conditions that befriend or antagonise the specific germ in water have naturally been made the object of study by many investigators. These studies, however, have led in many cases to results so conflicting, and have been based in general on methods and material so diverse, that the chief outcome has been confusion. A paper on this subject entitled "On some Conditions affecting the Behaviour of the Typhoid Bacillus in Water" appears in the *Philadelphia Medical News* of Sept. 28th from the pen of Dr. E. O. Jordan of Chicago. The nature of the experiments is carefully given. Without going further into detail we here give the general results arrived at by Dr. Jordan. 1. The age of the typhoid fever stock influences greatly the life of the bacilli introduced into water, a freshly isolated stock possessing distinctly greater vitality than one that has been under cultivation for some months. 2. The typhoid fever bacillus, when introduced with proper precautions into sterilised Lake Michigan water, does not multiply, but may, under certain conditions, maintain its vitality for upwards of ninety-three days. 3. The colon bacillus, on the contrary, under similar conditions, undergoes rapid multiplication and may remain alive for upwards of 262 days. 4. In redistilled water the typhoid fever bacillus perishes much more speedily than in the water of the lake. 5. The quantity of organic matter (peptone) in redistilled water influences fundamentally the life of the typhoid fever bacillus, so small an increment as 0·0126 organic nitrogen (part per 100,000) causing a perceptible lengthening of life. 6. In sterilised lake water the addition of a still smaller quantity of organic nitrogen—0·0012—affects the longevity of the typhoid fever bacilli introduced.

THE ADMINISTRATION OF THE FOOD AND DRUGS ACT AT BRISTOL.

AT the last meeting of the Bristol Town Council the following resolution was moved: "That the administration of Food and Drug Acts be entrusted to the Sanitary Committee." It was stated that at present this power is in the hands of the watch committee and police, and that Bristol was the only city in the kingdom where the Act was administered by the police, but that almost invariably it was in the hands of the health committee of the Corporation. It was admitted that the police and the chief constable were in favour of the transfer. A member of the council remarked that during his connexion with the watch committee he had never heard any member ask that any single article should be examined. The objection, according to one speaker, was that the sanitary committee was a spending committee, and that it would appoint paid inspectors to carry out the working of the Act. Unfortunately the resolution was defeated, and consequently the power is still in the hands of the police. Bristol should certainly follow the example of other towns, and place this authority in the hands of the sanitary committee, as this is the most suitable body to select articles which have to be examined and analysed.

THE WEATHER AND DISEASE.

POETS and writers in all ages have made reference to the effects which changes of the weather produce in the human organism, and the archives of folk-lore would furnish much evidence that these effects have not passed unnoticed by the proletariat. Unfortunately, however, the subject has been adulterated with a great deal of superstition, which has in a great measure tended to retard intelligent inquiry. That the various atmospheric changes should have some effect upon our bodies is easily understood, for we know that alteration in the surface temperature, a change in the blood pressure or in the air pressure of the lungs, may affect the nervous system, and all these changes may be brought about by some peculiarity of the natural phenomena which we call weather. In recent years the subject has attracted attention by those most competent to deal with the matter, and lately a meteorological station has been attached to the laboratories of the Public Health Department at Rome, where lectures are given to students on the application of meteorology to hygiene. At present our knowledge of the way in which the weather acts upon the body is very limited, and must remain so until a larger number of data are collected. An attempt to trace the relation between weather and disease has recently been made by a Fellow of the Royal Meteorological Society[1] by bringing together a number of statistics dealing with the phenomena of the weather and some well-known diseases, chiefly zymotic, presenting them by a graphic method in a systematic manner. Little attempt has been made to draw conclusions from these statistics, and until they have been digested by many minds perhaps the writer was wise in his omission. There are few people who could not give instances of the influence which the weather has upon them either mentally or

[1] Weather and Disease: a Curve History of their Variations in Recent Years. By Alex. B. MacDowall, M.A., F.R. Met.S. (The Graphotone Co., London, E.C. Price 2s. 6d.)

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physically, and there are many medical men (who in other directions have no opportunity for original research) who might do some useful work by recording the result of their observations on the subject, and thus add considerably to our knowledge of the *rôle* which is played by the weather in the causation or prevention of disease. On some constitutions the seasons have a marked influence. With many the spring, with its bright days and clear air, is felt to be the time of the year when they get the most enjoyment from life; while others, probably of a more sensitive temperament, experience the greatest sum of happiness and health when peaceful autumn wraps them in its serene atmosphere. On the other hand, winter or summer, as the case may be, produces in other temperaments the greatest consummation of healthy vitality. Certain changes in the weather, too, tend to increase or diminish the amount of energy that we put into our daily work, and it has been stated that in a large factory from 10 to 20 per cent. less work is done on dull days and days of threatening storm. The whole subject is one which, pursued in a proper scientific spirit, should be productive of useful results.

SOME EXPERIMENTS WITH TEA.

DR. MCKECHNIE of Talawakela, Colombo, has been making some investigations as regards the action of tea on the digestive organs. He publishes a short paper on the subject in the *Philadelphia Medical News* of July 27th. The trial experiments were carried on with test-tubes, a digestive fluid being prepared by making a glycerol extract of pepsin. The aliment employed consisted of beef fibre and egg albumen. Measured quantities of each were used, and to six test-tubes containing the meat fibre were added the glycerol extract and hydrochloric acid, and also a measured quantity of tea, different lengths of time being allowed for each infusion, varying from five to twenty minutes. A seventh tube was used to fix the time required for the digestion of the meat fibre alone, which proved to be about 110 minutes. With the tea added to the other test-tubes the time required for the digestion of an infusion of twenty minutes was the same as with one of five minutes—namely, 118·5 minutes. Another experiment was made on the same basis, but with the tannic acid precipitated by means of a gelatine solution. The result of this showed no appreciable difference in the time taken to digest that with tannic acid and that without tannic acid. The experiments were carried still further by means of a gastric fistula formed in a monkey's stomach. It was found on introducing the ingesta by the mouth that digestion was retarded about five minutes longer than when the ingesta and the tea were introduced through the mouth and the fistula respectively, thus showing that the tea exerted an inhibitory influence upon the salivary glands. When the tannic acid was precipitated and introduced in the same manner there was no difference in the time occupied in the digestion of the tea without tannic acid by the mouth as compared with that by the fistula, but there was an appreciable difference on the introduction of an infusion of twenty minutes without tannic acid as compared with an infusion of five minutes with the tannic acid removed. The peristaltic action was retarded, and the secretion of gastric juice diminished. Dr. McKechnie is of opinion that the tannic acid in the tea is not the injurious agent, but that the injury is caused by some of the less soluble extractive matters. From the results of his observations he is inclined to think that the action of tea is not so injurious as some writers think it to be. It greatly depends on the method of infusing whether its action is injurious or not. Long-infused teas seem to extract some substance, possibly an alkaloid, that has an inhibitory action on the nerves of the stomach. Dr. McKechnie also states that an infusion of tea of twenty minutes with the tannic acid precipitated has a similar bitter taste as the same tea with the tannic acid present, so that the bitterness in long-infused tea seems not to be due to the tannic acid, but to some other ingredient.

ALCOHOLIC NEURITIS IN OLD AGE.

IN the last number of *Brain* Dr. Maude publishes a brief account of a most interesting case. The patient, who was a robust country gentleman of sporting habits and used to an out-of-door life, had taken stimulants in considerable excess for at least twenty years. Even eighteen years ago no unusual daily allowance was half a gallon of beer, a bottle of sherry, and eight or ten liqueur glasses of "neat" whisky. His favourite drink was beer, and even in the summer of 1894, although over seventy-five years old, he would often consume two quarts of beer, a bottle of sherry, and half a bottle of whisky in a day. He had had no serious illnesses except broken bones from riding accidents and a fractured humerus at the age of seventy-three from a fall downstairs one evening after dinner. During the year 1894 his great muscular power became much impaired, and towards the end of the year he began to complain of severe darting pains in the left lower limb. A few weeks later the hands and feet began to swell rather suddenly, the skin became thin and glossy, while there were small ecchymoses over it. A similar condition was present on the insteps of both feet, while the calves and thighs were œdematous and the muscles shrunken. The knee-jerk could not be elicited, and the pupils were small and did not react to light. The heart sounds were somewhat feeble, but they were regular and there was no sign of dilatation. Without any previous marked change in his symptoms he died suddenly after a few minutes' dyspnœa about two months after the onset of the symptoms. Dr. Maude considers the case to have been one of peripheral neuritis, and directs attention to several interesting points, such as the advanced age of the patient, the excess of his alcoholic indulgence, and the absence of mental change; the fact also that he was essentially a beer-drinker is interesting, with reference especially to the views of the late Dr. James Ross as to the kind of alcoholic beverage most likely to produce neuritis.

LESIONS OF THE SPINAL CORD IN PERNICIOUS ANÆMIA.

A VALUABLE contribution to this subject appears in the *University Medical Magazine*, No. 7, 1895, by Dr. C. W. Burr. The study is based upon seven cases of pernicious anæmia, in addition to other cases of profound simple anæmia. Dr. Burr is of opinion that his cases prove that the coexistence of pernicious anæmia and certain lesions of the cord is not accidental. The cord was normal in only one of seven succcessive cases. The localisation of the lesion is fairly characteristic and constant. The cervical swelling is always the seat of the most marked alteration, and the lesion progressively decreases in intensity and extent at lower levels of the cord, till in the lumbar region there is either no disease at all or it is extremely slight. The only parts of the cord affected are the posterior columns, the lateral columns in or near the crossed pyramidal tracts, the direct pyramidal tracts, and (rarely) a band running forward along the circumference of the cord (direct cerebellar tracts). The grey matter is never affected seriously and rarely even slightly. The degeneration of the posterior peripheral roots, when present, is ordinarily so slight as to be of no importance. In the greater number of cases there is marked posterior degeneration with some, but much less marked, degeneration of the lateral columns in and around the crossed pyramidal tracts. The

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posterior columns may be affected alone, but the lateral never alone. Almost invariably there is a band of normal white tissue separating the diseased area in the posterior columns from the grey matter. Not very rarely there are two distinct areas of degeneration in the posterior columns in the cervical region — one in the postero-internal and the other in the postero-external column, the two being separated by a band of normal or almost normal white matter. In the lower dorsal and lumbar cord the most frequent seat is midway between the posterior median longitudinal fissure or septum and the posterior grey matter. Almost always there is normal white matter between the posterior horn and the diseased area in the lateral columns. The lesion is always symmetrical in the two halves of the cord, often absolutely so, but sometimes descending further on one side than on the other.

TYPHOID FEVER AT LUTON.

THE epidemic of typhoid fever now existing at Luton does not present the town in a very satisfactory light either as regards general hygiene or hospital accommodation. The cases have, with few exceptions, occurred in the east ward of the town, and so to a large extent have fallen under the direct superintendence of one medical officer who looks after the poor of this ward. Dr. McArthur, who is in charge of this ward, does not think the epidemic is in any way due to the water-supply, as some of the houses were supplied by the water company and others were not; but he thinks in many ways that the sanitation of this part of the town is in a very bad state, and under the circumstances it is hardly possible to think otherwise. Dr. McArthur has made several statements of the defects which he considers to exist in the sanitation and has asked for an investigation to be made by some impartial person which would satisfactorily clear up the subject. With regard to the hospital accommodation for infectious diseases it proves to be absurdly inadequate. There is a building which contains *one* ward and five beds in all, and this to serve a town of something like 30,000 people! And yet over £700 have been spent on it. The authorities are at present utilising hospital tents for the patients. The inadequacy of the accommodation has before been pointed out by people competent to judge; but now that its uselessness has been proved it is to be hoped that the sanitary officers will take some steps to get it altered. The best thing that could happen would be to have the whole matter sifted by a Local Government Board inquiry and so to ascertain the bare facts of the case. We fully agree with the opinions of the local press that the matter should not in any case be treated as a "scare" and then allowed to drop; where such a number of cases occur in a small area and where accommodation is so defective there must necessarily be defects which require the fullest and most impartial examination.

THE Paris correspondent of the *Times* announces that M. Duclaux has been unanimously chosen to succeed the late M. Pasteur as Director of the Pasteur Institute, while Dr. Roux is the subdirector. These are the appointments that were generally anticipated.

IT is now understood that the alterations in the premises of the General Medical Council cannot be completed in time for the November meeting, which will probably be held elsewhere.

THE first Hunterian Society's lecture will be delivered at the London Institution by Dr. Sims Woodhead. The title of the lecture will be "The Probable Limitations of Serum Therapy."

AT the opening meeting of the Session of the Clinical Society of London (Oct. 11th) the President, Dr. Buzzard, was unfortunately prevented from being present. Consequently his inaugural address will be delivered at the second meeting, which will be held on Friday, Oct. 25th, at 20, Hanover-square.

INOCULATIONS AGAINST CHOLERA IN INDIA.

THE results obtained from the inoculations performed in India either by M. Haffkine or by others according to his method are of interest and importance in several directions. The effect of the discovery of an inoculation protective against cholera would be far-reaching enough, and might in time effect as striking a reduction of the disease in countries where it is endemic as vaccination has done in the case of small-pox in Europe. And from the scientific standpoint, if inoculations after M. Haffkine's method should prove to be thus protective against cholera, we shall have found an infectious disease where the pathogenic organism, intensified to its maximum by progressive inoculation into lower animals, can give protection to man when inoculated in minimal doses. This experience would doubtless be applicable to other diseases; and the possibilities for preventive medicine suggested by the success of the method would be all the greater now that it has been shown that divers other organisms besides the cholera vibrio when injected into experimental animals after M. Haffkine's method can produce in them an immunity against subsequent fatal doses of the cholera vibrio.

It is well known that anti-cholera inoculation has been subjected to extensive trials in India, and a summary of the results obtained during the last two years is now published by Dr. Simpson, the health officer of Calcutta, in a recent document addressed to the chairman of the Calcutta corporation. These results may be classified as—(1) the experience of epidemics of cholera that have occurred in different parts of the country among communities containing inoculated persons; (2) the general experience of Calcutta; and (3) that of certain tea gardens in Assam. As regards the first of these, undoubtedly the most important was the epidemic of October, 1894, in the East Lancashire Regiment at Lucknow. In this regiment inoculated and uninoculated appear to have been under identical conditions in all respects. Out of 133 inoculated there were 18 cases of cholera and 13 deaths, while among 640 not inoculated there were 120 cases and 79 deaths; or, in other words, the attack-rate was over 15 per cent. for inoculated and over 18 per cent. for uninoculated, a difference which, having regard to the numbers concerned, cannot be said to be of much significance. In this instance the inoculations had been performed by M. Haffkine fourteen or fifteen months previously with, it has been explained, a weaker virus than it is now customary to use. It is noteworthy, however, that the case mortality was actually larger in the inoculated than in the uninoculated class—a fact which hardly suggests that even a partial protection was here exerted. Among the troops at Cawnpore 19 cases of cholera occurred among 797 uninoculated, and none among 75 inoculated thirteen months before; but, with this exception, the Lucknow epidemic has been the only outbreak of any magnitude available to test the behaviour of cholera in the cases of those who had been inoculated some time previously. The other outbreaks recorded by Dr. Simpson are those in which inoculation has been performed after cholera has actually made its appearance. In the Manchester Regiment at Dinapore 13 cases of cholera with 9 deaths occurred. A considerable number of men were then inoculated, in all 193, and among those there were no further attacks. Among 729 remaining uninoculated there were 6 attacks with 3 deaths. At the Gya Gaol inoculations were performed during the progress of an epidemic and after 6 cases and 5 deaths had occurred. Half the prisoners were inoculated, the remainder being left

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not inoculated. The incidence of the disease on the two groups was as follows:—

—	Not inoculated.		Inoculated.	
	Cases.	Deaths.	Cases.	Deaths.
During first five days after first inoculation...	7	5	5	4
During three days after second inoculation	5	3	3	1
After eight days from first inoculation	8	2	—	—
Totals	20	10	8	5

In these two instances some protection would appear to have been afforded, but it may be borne in mind that by the time the inoculations could have begun to exert a protective effect (admittedly five days or more) the disease was on the wane and was showing its decreased virulence by a diminished fatality.

A series of observations under somewhat different circumstances is recorded by Dr. Simpson for Calcutta. The number of natives inoculated in this city since 1893 has been over 4000, comprising Hindoos, Mohammedans, and a few Europeans, of all ages and both sexes. In certain houses where these inoculated people live cholera has since appeared at one or another time, and Dr. Simpson's plan has been to determine for each house so attacked the incidence on inoculated and uninoculated respectively. The disease invaded 36 houses containing between them 516 persons—181 inoculated and 335 not. Among the former 4 cases (all fatal) occurred, or 2·2 per cent.; among the latter 45 cases (with 35 deaths), or 13·4 per cent. Further, when those houses are deducted in which the inoculations had been performed less than eight days before cholera appeared we find a single attack only among 140 inoculated, while those among 265 inoculated were 39, or 14 per cent. Several noteworthy cases occur in the list. Thus: "In Rhamdone Dutt's house at Katalbagan Custee 6 persons out of 8 were inoculated in March, 1894, and fatal cholera entered the house in the following April and attacked *one of the two not inoculated*, leaving the 6 inoculated unaffected. In the house of Baboo Banikanta Mookerjee, Shibpore, 6 members of a family of 7 were inoculated in July, 1894. In March of 1895 *the only one not inoculated* was affected with cholera and died, the inoculated remaining quite well."

The test here applied is clearly less exact than that of the Lucknow outbreak, where the mode of living and the conditions of exposure may be assumed to have been fairly equal in all cases. Calcutta has been the home of sporadic cholera for generations; the opportunities of infection met with by the native population must be so many and diverse that it can hardly be assumed that in any given house affected all the inhabitants have been equally exposed to cholera infection; and, even so, other factors besides inoculation must almost certainly have been concerned with the escape of particular members of the household. Nevertheless, no great difference in exposure or susceptibility can be assumed when the totals of inoculated and uninoculated are taken, and the immunity of the former class, as far as these figures go, is sufficiently striking. One point may be commented on. If the effect of M. Haffkine's injections presents any analogy to the protection of vaccination against small-pox we should expect to find certain partly protected persons among the inoculated class in whom cholera manifests itself in a mild or modified form. The reverse has been the case, however, for of the 4 cases recorded in this class all were fatal.

In 42 inoculated cases the interval between the date of inoculation and the appearance of cholera in the house was a twelvemonth or more. One case of cholera occurred among these 42, while the 3 other inoculated persons affected were attacked, as we have seen, less than eight days after the operation. In this connexion the third series of observations recorded by Dr. Simpson may be referred to; they are the results obtained in certain tea gardens in Assam, where up to the present inoculations have been performed only with the preliminary "first vaccine" employed by M. Haffkine. Here, as in Calcutta, the incidence of sporadic cholera as it has affected inoculated and uninoculated has been observed. Collecting the cases which have occurred at one or another time in the last few months in seven of these gardens, Dr. Simpson gives us the following figures:—

Total of Uninoculated on all the Affected Gardens.[1]

			Percentage.	
In the whole population ...	5222	had 38 cases	0·73	19 deaths.
In the affected lines	374		10·16	
In the affected houses... ...	95		40·00	

Total of Inoculated on all the Affected Gardens.

			Percentage.	
In the whole population ...	2741	had 5 cases	0·18	3 deaths.
In the affected lines	369		1·36	
In the affected houses... ...	40		12·50	

It is clear that these several experiences in India, extensive as they are, have not yet been sufficient to settle the value of anti-cholera inoculation. On the one hand, the indications afforded by the Assam figures are that even the preliminary inoculations have considerable protective power, and by the Calcutta figures that the power of completed inoculation has held good for twelve months or more. On the other hand, there is the almost complete failure of any protection to the East Lancashire Regiment under circumstances better fitted for exact experiment. Clearly more facts are needed, and we are glad to see that Dr. Simpson proposes to proceed further with the arduous investigation he is now identified with. It may be assumed, we trust, that, in view of the important issues involved, the Calcutta corporation has by now sanctioned the very modest expenditure which Dr. Simpson asks for this purpose.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on the 10th inst., the President, Mr. Christopher Heath, being in the chair.

The best thanks of the Council were given to Mrs. Hulke for her presentation to the College of the Series of Drawings of Malignant and other Tumours collected by the late Mr. J. W. Hulke. Mr. Tweedy received a vote of thanks for his presentation to the Library of a manuscript by Archile de Verona, entitled "De Dolore Juncturarum."

The Draft Report, which is to be presented to the Fellows and Members at the meeting to be held on Nov. 7th next, was approved and adopted.

The following report from the Committee of Management was approved and adopted, viz.:—

1. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry and biology: (*a*) the University College of North Wales, Bangor; (*b*) Wyggeston School, Leicester; (*c*) Victoria Institute, Worcester (without biology).

2 That the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, be recognised as a place of study during the fifth year of the curriculum.

Mr. Christopher Heath was reappointed a member of the Committee of Management.

A report, dated the 4th inst., from the Laboratories Committee was approved and adopted; the report was as follows:—

1. *The Work in Diphtheria for the Metropolitan Asylums Board.*—(*a*) Examination of material for diagnosis. Since June 7th 4634 specimens have been examined and reported upon. The average number of specimens examined per diem has been 45. (*b*) The preparation of antitoxin serum. Since Sept. 1st the Director has supplied about 700 doses of antitoxin serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and he hopes to be able to meet all the demands of the hospitals, which are, however, somewhat greater than was anticipated.

2. *The Goldsmiths' Company's Grant for Researches on the Antitoxin Treatment of Diphtheria, &c.*—The Committee, on the recommendation of the Director, have granted £100 from this fund to Dr. Cartwright Wood, who is carrying on investigations as to improved means of treating the horses with a view to obtaining the serum in a shorter time than is possible by the methods hitherto in use.

Mr. Howse was re-elected a member of the Laboratories Committee.

The Royal College of Physicians of London was invited to appoint six delegates to confer with a like number appointed by the Royal College of Surgeons on the question of the examinations under the five years' curriculum.

[1] Exclusive of 19 cases, with 11 deaths, in recently arrived uninoculated coolies, and 11 cases, with 5 deaths, among old uninoculated coolies regarding which returns had not been received.

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CHOLERA.

THE most important item of news in regard to this disease is that which comes from Alexandria through Reuter's agency regarding a localised outbreak of cholera at Damietta. It appears that 16 cases and 9 deaths had occurred up to the 15th inst., but the disease is reported to be of mild type. The nature of the disease was, it is stated, conclusively proved by bacteriological examination. It will be remembered that it was at Damietta that cholera first appeared in the last epidemic in Egypt.

The official returns published at St. Petersburg on the 13th inst. show that for the fortnight ending Sept. 28th there occurred 4249 cases of cholera and 1701 deaths in the province of Volkymia. In the district of Berditcheff (Kieff) 57 cases and 21 deaths occurred, and in the province of Podolia 37 cases and 18 deaths. From Sept. 29th to the 5th inst. no further cases of cholera had been reported in Podolia. It may, we think, be assumed from the foregoing returns and the lateness of the season that there will soon be a still further decrease in the number of cases, and that we may hope to hear of the disappearance of the epidemic in Russia, or, at any rate, of such a reduction in the number of attacks as to render the publication of official returns no longer necessary.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6492 births and 4271 deaths were registered during the week ending Oct. 12th. The annual rate of mortality in these towns, which had been 21·0 and 19·4 per 1000 in the two preceding weeks, rose again last week to 21·0. In London the rate was 17·0 per 1000, while it averaged 23·9 in the thirty-two provincial towns. The lowest rates in these towns were 8·6 in Croydon, 13·4 in West Ham, 15·8 in Plymouth, and 16·7 in Bristol; the highest rates were 28·8 in Gateshead, 31·7 in Liverpool, 33·6 in Salford, 34·0 in Burnley, and 42·5 in Blackburn. The 4271 deaths included 895 which were referred to the principal zymotic diseases, against 920 and 871 in the two preceding weeks; of these, 533 resulted from diarrhœa, 94 from measles, 85 from diphtheria, 65 from "fever" (principally enteric), 60 from scarlet fever, 56 from whooping-cough, and 2 from small-pox. The lowest death-rates from these diseases were recorded in Plymouth, Croydon, Bristol, and Birkenhead; and the highest rates in Preston, Wolverhampton, Burnley, Salford, and Blackburn. The greatest mortality from measles occurred in Salford, Oldham, Wolverhampton, and Blackburn; from scarlet fever in Liverpool and Salford; from whooping-cough in Salford, Gateshead, and Bolton; from "fever" in Birkenhead and Sunderland; and from diarrhœa in Hull, Preston, Salford, Burnley, and Blackburn. The 85 deaths from diphtheria included 56 in London, 7 in West Ham, 6 in Birmingham, 4 in Liverpool, and 3 in Leeds. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 158 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 12th inst., against 271, 234, and 198 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 23, 21, and 17 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2827, against 2732, 2807, and 2802 on the three preceding Saturdays; 332 new cases were admitted during the week, against 344, 339, and 252 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 173 and 158 in the two preceding weeks, rose again to 175 last week, but were 92 below the corrected average. The causes of 55, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5 and 18·3 per 1000 in the two preceding weeks, rose again to 19·3 during the week ending Oct. 12th, but was 1·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·4 in Aberdeen and 15·7 in Leith to 26·0 in Greenock and 27·9 in Dundee. The 558 deaths in these towns included 58 which were referred to diarrhœa, 11 to whooping-cough, 8 to "fever," 7 to scarlet fever, 5 to measles, 5 to diphtheria, and not one to small-pox. In all, 94 deaths resulted from these principal zymotic diseases, against 79 and 96 in the two preceding weeks. These 94 deaths were equal to an annual rate of 3·3 per 1000, which was 1·1 below the mean rate last week from the same diseases in the thirty-three large English towns. The deaths from diarrhœa, which had been 48 and 62 in the two preceding weeks, declined again to 58 last week, of which 22 occurred in Glasgow, 11 in Edinburgh, 11 in Dundee, and 8 in Greenock. The 11 fatal cases of whooping-cough showed a decline of 6 from the number in the preceding week, and included 5 in Glasgow and 4 in Dundee. The deaths referred to different forms of "fever," which had been 16, 6, and 8 in the three preceding weeks, were again 8 last week, of which 2 occurred in Glasgow, 2 in Edinburgh, and 2 in Dundee. The fatal cases of scarlet fever, which had been 5 and 4 in the two preceding weeks, rose again to 7 last week, of which 3 occurred in Glasgow and 3 in Edinburgh. The deaths from diphtheria, which had been 5 and 2 in the two preceding weeks, rose again to 5 last week, and included 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 82 and 98 in the two preceding weeks, were 97 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 27, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 21·3 per 1000 in the two preceding weeks, rose again to 26·8 during the week ending Oct. 12th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·4 per 1000, the rate during the same period being 18·6 in London and 16·5 in Edinburgh. The 180 deaths registered in Dublin during the week under notice showed an increase of 37 upon the number in the preceding week, and included 29 which were referred to the principal zymotic diseases, against 24 and 12 in the two preceding weeks; of these, 17 resulted from diarrhœa, 6 from "fever," 3 from whooping-cough, 1 from small-pox, 1 from scarlet fever, and 1 from diphtheria. These 29 deaths were equal to an annual rate of 4·3 per 1000, the zymotic death-rate during the same period being 2·8 in London and 3·4 in Edinburgh. The fatal cases of diarrhœa, which had been 13 and 8 in the two preceding weeks, rose again to 17 last week. The 6 deaths referred to different forms of "fever," exceeded the number recorded in any week since December last. The mortality from whooping-cough also showed an increase, while that from scarlet fever showed a decline from that recorded in recent weeks. The 180 deaths in Dublin last week included 43 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those returned in the preceding week. Four inquest cases and 9 deaths from violence were registered; and 55, or more than a fourth, of the deaths occurred in public institutions. The causes of 19, or more than 15 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MATURIN has arrived fom Ceylon and will be succeeded by Brigade-Surgeon-Lieutenant-Colonel Duke. Brigade-Surgeon-Lieutenant-Colonel Williams has embarked for Jamaica. Surgeon-Major Peterkin and Surgeon-Major Rhodes have embarked for India in the *Dilwara*. Surgeon-Lieutenant-Colonel Bourke has been transferred from Cork to York. Surgeon-Captain

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Ritchie has arrived from Malta, and Surgeon-Captain Kennedy has arrived in that Command. Surgeon-Captain Lane has embarked for Singapore. Surgeon-Captain M. L. Hearn proceeds to Singapore for a four years' tour of duty in the Straits Settlements.

ARMY MEDICAL STAFF.

Surgeon-Major-General Robert Lewer is placed on retired pay. The under-mentioned surgeon-majors to be surgeon-lieutenant-colonels:—William M. James and Ernest H. Fenn, C.I.E. Surgeon-Captain Patrick B. Skerrett retires from the Service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel F. C. Barker is appointed to be Presidency Marine Surgeon, Second District, Bombay. Surgeon-Lieutenant-Colonel J. McCloghry to be Medical Officer to the Kathiawar Political Agency and in Charge of the West Hospital, Rajkete. Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel T. Maunsell, Principal Medical Officer, Rawalpindi District, appointed Principal Medical Officer, Chitral Relief Force. The following transfers of officers of the Army Medical Staff serving in the Bombay Command are ordered:—Brigade-Surgeon-Lieutenant-Colonel Saunderson from Quetta to Mhow District; Surgeon-Major MacNeece from Deesa District to Poona District; Surgeon-Major Gogging from Mhow District to Deesa District; Surgeon-Major Parker from Deesa District to Aden District; Surgeon-Major Banes from Poona District to Aden District; and Surgeon-Captain Parry from Poona District to Bombay District. Surgeon-Lieutenant Kilkelly is transferred from the Nagpore to the Poona District, and is appointed to the Officiating Medical Charge of the 28th Bombay Infantry. Brigade-Surgeon-Lieutenant-Colonel S. O'Brien Banks is promoted to Surgeon-Colonel in the Bombay Service.

NAVAL MEDICAL SERVICE.

Surgeon George T. Collingwood has been appointed to the *Pembroke*.

VOLUNTEER CORPS.

Artillery: 1st North Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Major T. R. Pearson, M.D., to be Surgeon-Lieutenant-Colonel. *Royal Engineers:* 1st Cheshire: Captain J. F. Blake-Campbell is appointed Surgeon-Lieutenant. *Rifle:* 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Captain J. Denholm, M.B., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement.

THE MADAGASCAR EXPEDITION.

The intelligence of the capture of the capital of Madagascar by General Duchesne's force, although incorrect as to the date and in other particulars, has since been officially corroborated, and the French Government is to be congratulated on the fact. Notwithstanding that there may have been mistakes in the campaign, and that the arrangements generally—and the sanitary arrangements in particular—were very far from perfect, the expedition was confessedly a very difficult one, and the operations are most creditable to the pluck and perseverance of the French army and the ability of its general. The history of the expedition, when it comes to be written, will be an interesting and instructive one. It is probable that a comparatively small force will now be kept in the country and at Antananarivo. We are glad to learn that active measures are being taken in France to secure the comfort and well-being of the invalid soldiers on their way home by giving a larger amount of accommodation to the sick and convalescents on board the transports, with plenty of fresh and wholesome food. The hospitals and sanatoria in Algiers are prepared for the reception of invalids. Telegraphic intelligence from Port Said reports the arrival there of the French troopship *Canton* on the 12th inst. with a number of sick troops from Madagascar. Over fifty men are reported to have succumbed during the voyage to Suez, and some have since died and been buried at Ismalia. The French Madagascan expedition will, we suspect, prove to have caused a very considerable expenditure of life and money.

THE CHITRAL DISPATCHES.

A telegram from Simla gives a nominal list of the officers mentioned in General Sir R. Low's dispatches for services in connexion with his force. We are glad to notice the names of several medical officers. Surgeon-Lieutenant Sutherland's services are mentioned for the action at Panjkova on April 13th; Surgeon-Colonel T. Maunsell, Surgeon-Colonel Thomson, Surgeon-Lieutenant-Colonels Donovan, O'Connor, and Simmons, and Surgeon-Major Coutts are also mentioned in the General's dispatches, and we congratulate these officers and the medical services on the part they took in the late expedition. The total casualties in General Low's column in the several actions in April last were: 2 officers killed and 13 wounded, 19 non-commissioned officers and men killed and 88 wounded, and 5 followers killed; total, 127.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General R. W. Cockerill (retired) on Oct. 8th. He served in the Crimea, and was present at Inkermann and at Sebastopol, where he was wounded (Crimean and Turkish medals). He served through the China campaign of 1857–59, receiving the Chinese medal for his services. In 1869 he was appointed to a professorship in the Madras General Hospital and Medical College. He retired in 1885.

Deputy-Inspector-General J. C. Messer (retired), R.N., on Oct. 9th, at his residence in Edinburgh. He was appointed surgeon in 1852, staff-surgeon in 1861, and fleet-surgeon in 1874. He served in the Baltic Expeditions of 1854-55 (Baltic medal) and retired in 1885.

THE ARMY MEDICAL SERVICE.

The *Pall Mall Gazette* of the 15th inst., under the head of "Service Notes," contains a very trenchant paragraph as to the contemplated reform and reorganisation of the Army Medical Department, which, it says, rumour has it, will be inaugurated under the new Commander-in-Chief. Our contemporary, while disclaiming all intention of reflecting "on the courage, skill, and devotion of our army doctors, of whom, as a whole, we may well be proud," goes on to add that the department is run from top to bottom on a muddle-headed want of system which calls for inquiry and remedy.

THE FRENCH MILITARY MEDICAL SERVICE.

A number of military surgeons were nominated in a recent gazette as commanders, officers, and knights of the Legion of Honour. It is announced that the autonomy given to the medical corps is about to be revised, and that an attempt will be made to modify or cancel the powers vested in medical officers by the law of March, 1882. But this, it is to be remarked, is only a rumour, to which we have already referred.

Correspondence.

"Audi alteram partem."

ELEMENTARY EXAMINATIONS IN ANATOMY.

To the Editors of THE LANCET.

SIRS,—Is the elementary examination in anatomy as at present conducted by the Royal College of Surgeons of England a desirable one? This is a question which is best answered by a study of the requirements of that examination. The student who presents himself for this examination is required to show a knowledge of osteology and to have spent six months in acquiring that knowledge. He is not required to know anything of the soft parts, nor is he supposed necessarily to have done any dissection; at all events, he is not required to present any certificate to the effect that he has dissected. He is, in short, required to have a knowledge of the bones of the body, and he is allowed six months to acquire that knowledge. Now what is the effect of this on the average student? He knows that any student of reasonable intelligence can get up the work for this examination in three months. His teacher is able by lecturing, say, three times a week to get over the ground covered by osteology in three months—by Christmas in a winter session—after which he perhaps lectures on the ligaments and muscles of the body and any other systems that time allows him. The student faithfully takes notes of the lectures on osteology, but does he trouble to read them? No. As he knows that anyone with any intelligence at all can acquire enough knowledge in three months to satisfy the

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examiners in this examination he leaves his reading for the latter three months of the winter session. He goes on attending the lectures on ligaments and muscles, &c. if he is compelled to do so, or until he thinks he has attended often enough to be "signed up," and then he disappears. He may, of course, attend regularly to the end; but in either case his mind and energies are directed towards "getting up" the work for the First Examination, and the lectures are absolutely wasted on him. He does not trouble himself about ligaments and muscles—"they are not wanted." The consequence is he spends six months in learning what he could learn in three. But this is not the worst of it; for all this time he has either not dissected or if he have he has not troubled to learn anything about his dissections because "it is not required." It is all very well to tell him that he will require a knowledge of the soft parts in his Second Examination, and that he will require a certificate to the effect that he has dissected for twelve months prior to that examination. "Sufficient unto the day ....." is his motto. He goes up for his "elementary" and passes it, and now is confronted with the "Second." He may not be able to dissect in the coming summer session, or, if able, counter attractions prove too strong for him, and he leaves his work till the next winter. He now finds he has twelve months' work to squeeze into a six months' session, and he soon realises the impossibility of it and in the end "funks" his examination. This funking in very many cases is the beginning of the end. When done for the first time it arouses some repentant feelings, but by repetition its terrors are lost and the erstwhile average student become the full-blown "chronic" who, after haunting the place for several years, either turns over a new leaf or gives up medicine altogether, either voluntarily or because he is compelled to by his friends or his teachers—in any event, after he has wasted many valuable years of his life. Of course, he is to blame, but not entirely. He at first got up the work prescribed and passed the examination, but he stopped there; to him a bird in the hand was worth two in the bush. Having passed this examination, he found it of little help to him towards the "Second." He knows nothing beyond the bones and the attachments of muscles to them. He may never have seen the muscles themselves, but has crammed up the areas occupied by their attachments from plates. Instead of his work being now in considerable part a revisal, it is all new to him. The elementary examination is a snare, and in its present form is superfluous.

Can it be remedied in any way? I think so. There is an examination which resembles it in being an elementary one and in being held by a Conjoint Board. I allude to the First Examination of the Scottish Conjoint Board. In this examination a student is required to show a knowledge of the bones and ligaments of the body and the soft parts of both extremities. Having passed this examination the student is a long way on to his "Second," at all events much of his work is revisal, and revisal is always easier than the acquiring of new knowledge. Much as we in England are in the habit of sneering at this examination it is, nevertheless, infinitely better calculated to benefit the student, to satisfy the teacher, than is the miserable fiasco called an examination which is so often held in England.

In this letter I have confined my remarks to the elementary examination; if I am permitted I shall in the near future have some remarks to make on the Second Examination.

I am, Sirs, yours truly,
EDWARD FAWCETT,
Professor of Anatomy, University College, Bristol.

THE PRESENCE OF THE DIPHTHERIA BACILLUS ON HEALTHY SURFACES.

To the Editors of THE LANCET.

SIRS,—A boy fourteen years of age had diphtheria when at school early in June—that is to say, four months ago. He was brought to me on Oct. 14th, and I sent a specimen of mucus from his throat to be examined at the British Institute of Preventive Medicine; this I did, using a perfectly new camel's-hair throat brush for the purpose. From the society's report I learn that the diphtheria bacillus has been isolated from the specimen. The boy is apparently in perfect health, and his throat to the naked eye appears perfectly normal. I am informed that the throat had been thoroughly brushed with glycerinum acidi carbolici and with sulphurous acid up to three weeks ago.

I am, Sirs, yours truly,
J. W. ASTLEY COOPER, L.R.C.S., L.R.C.P., &c.
Lower Sherringham, Norfolk, Oct. 14th, 1895.

To the Editors of THE LANCET.

SIRS,—Mr. John Terry's communication on "Sore-throats in Influenza" which appeared in THE LANCET of Oct. 12th contains many points of interest and exhibits much praiseworthy and industrious investigation. I venture, however, to think that most medical men will agree with me that the "enlargement of the papillæ," the "deep-red colour," and the "strawberry tongue" may be found in many vascular conditions of the mucous membrane of the mouth—e.g., stomatitis, follicular tonsillitis &c.—and quite apart from influenza. Then again the membrane of which he speaks is certainly, in my experience (and I have seen a good deal of influenza), no common accompaniment of that complaint, and is, I would suggest, of a distinctly diphtheritic type, due possibly to some local cause. I quite agree with Mr. Terry that the ulcerated and congested condition of the throat so often present in influenza affords a highly suitable soil for the growth and development of the diphtheritic membrane, and for its frequently accompanying bacillus, but the last word as to the *rôle* played by the Pfeiffer-Kitasato bacillus has not yet been uttered, and those who rely exclusively on microscopic tests rather than on clinical observation simply court disaster. There is no question that the diphtheria bacillus has often been found on perfectly healthy mucous membrane and has often been absent, or at any rate undetected, in many cases of unmistakable diphtheria. I unhesitatingly endorse all that Mr. Terry has said as to the misleading results of bacteriological examination of suspicious false membrane, though I can hardly coincide with his opinion that it "has nothing in common with diphtheria." For my own part, I now always look askance at every case of low type inflammation of the throat or tonsils as containing the possibilities of diphtheria, and I have repeatedly watched the gradual evolution of apparently simple catarrhal tonsillitis into malignant diphtheria, followed by paralysis or death. I have often, especially in schools, watched with painful interest this gradual evolution from simple to malignant sore-throats, where each successive case has afforded the required soil for gradually maturing the poison until it reaches its fullest virulence as undoubted diphtheria. As to the occasional symptoms of influenza, they are so numerous and protean as almost to defy enumeration, depending as they do on the particular tract on which the virus expends its force, whether that be the mucous membrane of the throat, nose, bronchial passages, lungs, or bowels; but for the purpose of diagnosis certain symptoms may be relied on as never absent—viz., sudden attack, severe nervous prostration, pain, usually severe, in the head and limbs, and copious perspiration. It is by these never-failing symptoms one should be guided rather than by the variable appearance of the tongue. I may mention, in passing, that the last epidemic has been specially prolific in cases of faucial inflammation and ulceration, often mistaken for tonsillitis. There is a growing tendency, which cannot be too carefully guarded against, to allow bacteriological examination to usurp the place of careful clinical observation and study of symptoms. It should be remembered that bacteriology is the handmaiden, not the mistress, of medicine.

I am, Sirs, yours faithfully,
CHAS. EGERTON FITZ-GERALD, M.D.St.And.
Folkestone, Oct. 14th, 1895.

SPASMUS NUTANS AND HELMINTHIASIS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 5th Dr. George Dickson, describing a case of spasmus nutans which occurred in his practice at Edinburgh, gave a full account of the ordinary features of this complaint and made the following remark: "Dentition must be looked upon as by far the commonest existing cause, but it is probable that any other reflex irritation would—other things being equal—produce the same effect." Will you allow me to inform Dr. Dickson and the other readers of THE LANCET that I have lately seen a case of spasmus nutans which was coincident with tænia nana,

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and which I have reason to refer to this intestinal helminthiasis? The full account of the case is given in the *Bullettino 3° della Società Medica Pisana*. But it is well to bear in mind that only microscopical examination of the fæces can establish such coincidence of tænia nana with spasmus nutans or other disorders. I take, also, this opportunity of stating that I have recently examined a tænia which was passed by a child in the neighbourhood of Pisa, and which presents the characteristics of tænia flavopunctata (Weinland), of which till now only four examples occurring in man were known. I will give very soon a full account of it, but I wish to remark here that the eggs of tænia flavopunctata differ from those of tænia nana in being larger (being about 75 millimetres in diameter, whilst those of tænia nana rarely reach 50 millimetres in length), and that whilst the eggs of tænia flavopunctata have a striated outer shell, those of tænia nana possess an unstriated shell. The two large tæniæ of man (tænia solium and tænia mediocanellata) possess each a striated shell, but this striated shell is not the very outer shell of the same egg; the embryonic shell which is seen free in the fæces, being deprived of the outer shell of the egg, but having a diameter of no more than between 33 and 36 millimetres, cannot be confounded with the larger egg of tænia flavopunctata.

I am, Sirs, very truly yours,

Via San Lorenzo, Pisa, Oct. 9th, 1895. P. SONSINO.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—May I remind your readers that the profession in this district have been fighting the medical aid question since August, 1893, when the following resolution was unanimously adopted at a meeting held in my house? A copy was published in THE LANCET with appended signatures. The resolution was as follows: "That in consequence of the abuses brought to light by the inquiry into medical aid associations by the General Medical Council we have decided that we cannot in any way countenance these bodies, and we therefore refuse to recognise their medical officers professionally, in consultation or otherwise, until such abuses are removed." It was further resolved to endeavour to secure the coöperation of the profession in neighbouring towns and to get the matter brought before the British Medical Association meeting with a view to the expulsion of these men. This was entrusted to Dr. Leslie Phillips of the Medical Defence Union. It was also resolved to secure the coöperation of dentists, druggists, instrument makers, and medical agents. The local dentists gave us their support, as did a considerable number of medical agents. It was distinctly understood that no patient should suffer for want of attention as any of us would assume the charge of medical aid association patients, and, if necessary, give them gratuitous attention. That local combination can do much to hinder such abuses there can be no doubt, and I rejoice to see that other localities are following in our wake, but I venture to think that the time has arrived when something more general is necessary. To instance this locality, when those of us who were constantly called in consultation refused there was no lack of material from neighbouring places, and the larger the places and the more prominent the consultant the more ready he appears to be to join these men in their cases, and often to inconvenience himself to aid them in their difficulties. The height of absurdity seemed to be reached when one of the medical aid association officers was summoned for an error in the diagnosis of a case of small-pox; although he appealed to me most urgently to give evidence on his behalf I resolutely refused; but he was defended by the Medical Defence Union and a prominent consultant—a personal friend of my own—from a large town in the district was present to give evidence upon his behalf. Of course I felt obliged to resign my membership in the Medical Defence Union and to avoid meeting my friend in future, as it was generally understood that such consultants should be eschewed. I fear it will be only by such means that they will be forced to take action, but the body of the profession have it in their power thus to force them to assist in a necessary reform to remove an evil whose gigantic abuses should have roused them to vie with each other as to who should be the pioneer in such a movement.

To my mind there is no doubt that medical aid associations will ere long cease to exist, and if they have been the means of ascertaining who are the men in the profession willing to support them they will have been of use. I trust, too, that it will be the means of reforming the club system as a whole, for, being entirely independent of such practice myself, I can see that in many, including registered, societies similar abuses exist to a more or less extent, and it is the duty of all men holding such appointments to insist upon the removal of all these, so that medical officers of the medical aid associations cannot meet them with a *tu quoque* argument. I am thankful that the cause has such a powerful advocate as THE LANCET, and I can assure you that we in Kidderminster are determined to use every endeavour to safeguard the honour of the profession against such practice.

I am, Sirs, yours faithfully,

J. LIONEL STRETTON,
Secretary, Kidderminster Medical Society, &c.

Kidderminster, Oct. 14th, 1895.

To The Editor "THE LANCET."

DEAR SIR,—I am in receipt of Copy LANCET you sent me on Saturday last and note your article on this Society. And am much supprised at the one sided and untrue statement by your Special Correspondant. I think it would have been only Common Courtsey for him to have seen me and had his figures confirmed before rushing into print. In the first place he states we sweated our Doctors out of a profit of £231 during 1894, whereas our Balance on the year after paying salaries and expenses was only £40 (as per printed report enclosed), and out of this amount we increased our Junior Medical officers salary £25, then, again, he states the Committee get paid this is another false statement. The Committee work for nothing, and again he states he was told the medical officers had to Consult with 60 patients per hour, we I am astonished how any sane man should write down a statement of that discription, for he must know that it would be impossiable to get the patients in and out of the room in that time if he divides his figures by 8 or 10 he would be nearer the mark. With regard to stock mixtures, we do not use them. You will, therefore, see we are not such terriable sweaters as your Correspondant would try to make us out to be in his unfair statement. I must again express my supprise that a paper of such high standing as the LANCET should be a party to such a partial statement when you could of been supplied with facts for the asking.

Yours faithfully,

WM. COULSON, Secretary.

Lincoln Oddfellows' Medical Institute, 12, North Parade, Lincoln, Oct. 14th, 1895.

*** We have examined the printed report sent to us with the above, and we find in it confirmation of our Special Commissioner's statement, and contradiction of Mr. Coulson's indignant letter. The balance of the Lincoln Oddfellows' Medical Institution for the year ending Dec. 31st, 1894, was not £40 but over £200. Our Special Commissioner was informed that on *one* occasion sixty patients had to be seen in an hour, and this is perfectly credible. With regard to payments to the committee, our Special Commissioner was referring to the payments which have been made to the secretary, the sub-secretaries, the treasurer, and the auditors. He should not have alluded to these persons as the committee, but the report shows them to have received the sum that he mentions—and more. Does Mr. Coulson say seriously that a dispensary at which over 30,000 prescriptions have been made up in the course of a twelvemonth is unprovided with stock mixtures? There is no harm in stock mixtures if they are made of good ingredients and are kept in sufficient variety and are renewed with sufficient frequency.—ED. L.

"UNUSUAL PROCEDURE AT AN INQUEST."

To the Editors of THE LANCET.

SIRS,—I am a little surprised that you should have followed the lay press in the misconception that the authority possessed by the foreman of a coroner's jury exceeds in any degree that of his brother jurymen or that the legislature recognises any distinction of one juryman from another.

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The statutes under which coroners' juries are called upon to serve are the Juries Acts, 1825 and 1870, and the Coroners Act, 1887, and certainly in neither of these is mention made of such a person as a foreman, and I am unaware of the recognition of such a one in any statute. There cannot, therefore, be any statutory obligations to administer the oath primarily and separately, as stated in your annotation on the matter, to a person unknown to the law. Section 3 (1) Coroners' Act, 1887, provides that the coroner shall issue his warrant for summoning not less than twelve or more than twenty-three good and lawful men to inquire as jurors touching the death, &c. And Sub-section 3 provides, "When not *less than twelve* jurors are assembled they shall be sworn by or before the coroner diligently to inquire," &c. Further, Section 4 (5) provides: "In case *twelve at least* of the jury do not agree on a verdict the coroner may adjourn the inquest to the next session of Oyer and Terminer and Gaol Delivery held for the county or place in which the inquest is held, and if after the jury have heard the charge of the judge or commissioner holding such sessions twelve of them fail to agree on a verdict, the jury may be discharged by such judge or commissioner without giving a verdict."

I think the above extracts support me in the view I have always taken, that the foreman of a jury is chosen by his fellows rather as a matter of convenience, in order that their opinions may be canvassed by him, and through him their conclusions be conveyed to the coroner. In other words, he is simply chosen as their spokesman. Under the heading "Jury," Number, Sidney Taylor, on the Law of Coroners, says: "Not less than twelve nor more than twenty-three. As a verdict cannot be given by less than twelve, it is as well to have thirteen or fourteen in all cases, and even more where there is any probability of an adjournment, so that the death or illness of one or two of the jurymen may not bring the jury under twelve." The same authority, under "Swearing," &c., says: "Not less than twelve having been assembled, a foreman should be appointed. This is generally done by the jury selecting one of their number, but the coroner will make his own appointment if the jury do not agree. The jury should then be sworn in the form provided in the schedule to the Coroners' Act, 1887. This *need not be supervisum corporis* or all at the same time. ..... Some coroners swear first the foreman and then the rest, *but nothing is gained thereby*, and it is more convenient either to swear all at once on several Testaments or to swear half first and then to swear the remainder" acording to a short form given. It is the practice of some at least of the metropolitan coroners to adopt the plan of swearing the jury all together on several Testaments, and in cases where the jury do not without undue delay select one of their number as foreman to nominate the first on the list to so act, a plan adopted in other courts and for which further support is found in "Jervis on Coroners," p. 17, as follows: "The oath should be first administered to the foreman, who may be the first juryman called or may be nominated by his fellows."

I think it reasonable to assume that the Legislature contemplated, *inter alia*, the possibility of absence of unanimity arising in coroners' juries, hence the number to serve not being limited to twelve, as is the case of other common law juries. In the particular instance out of which the question here discussed arose I pointed out to the foreman that while I regretted he was amongst the dissentients he might have been the only one to disagree, and then how manifestly unfair would it have been not only to the other members of the jury, but also to an accused person, if undue weight were to be given to the opinion of one member; and may I not reasonably add that if one member of a coroner's jury had the power to veto the conclusions arrived at by the other members, a door might thereby be opened to the perpetration of injustice and corruption in their worst forms.

I am, Sirs, yours truly,

G. E. YARROW,

Deputy Coroner for North-East London.

Duncan-terrace, N., Oct. 9th, 1895.

"ADVERTISING IN HIGH PLACES."

To the Editors of THE LANCET.

SIRS,—Has not your correspondent "M.R.C.S." overlooked your headline "Audi alteram partem"? I should have been glad of the opinion of the best authority in some urgent cases, but have been deterred from seeking the same, as in a recent case, by the almost certain fact that during August and September one's patient would no doubt see a reliable substitute, but not Dr. or Mr. ——. I cannot help thinking that a list of probable dates of absence from home of eminent physicians and surgeons in THE LANCET or other professional paper would be of service to others as well as to,

Yours faithfully,

B. FARADAY GILES, M.D. Durh.

Hornsey, N. Oct. 14th, 1895.

AN EARLY METHOD OF INTESTINAL APPROXIMATION.

To the Editors of THE LANCET.

SIRS,—A few days ago, while looking up a subject in South's "Translation of Chelins's System of Surgery," published in 1847, I found on p. 464 of vol. i. the following words: "In complete division of the intestine Denans introduces into the upper and lower end of the gut a silver or zinc ring, thrusting it in inwards about two lines from each end; he then brings the two ends together over a third ring, of which the two springs retain the external rings. The included ends of the intestines mortify, and the rings thereby becoming unfastened are discharged by stool after they have united the serous surfaces in contact. This experiment in the dog has most successful results."

Chelins gives as his reference "Recueil de la Société Royale de Médecine de Marseille, 1826." The resemblance which the above-mentioned instrument must have borne to the modern Murphy's button is, indeed, remarkable, for while its mechanical details were evidently strikingly similar its mode of action must have been precisely the same. Truly there is nothing new under the sun.

I am, Sirs, yours truly,

Birmingham, Oct. 15th, 1895. LEONARD GAMGEE.

DENTAL QUACKERY AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—As an old reader of your valuable journal, may I respectfully ask the General Medical Council if the time has now arrived for vigorous action against breaches of the memorandum issued a long time ago to registered dental practitioners with regard to the employment of unregistered persons to perform operations in dental surgery? It is notorious that with very few exceptions that memorandum has been and is now wilfully ignored. How farcical is this state of affairs, and what a greater farce is the present Dental Act. I would also like to ask if the great army of dental quacks (companies and individuals) now practising dental surgery and administering anæsthetics *ad lib.* cannot be convicted under the Medical Act. In the face of the grossest ignorance and assumption on the part of unregistered persons, it is surely time for amending the Dental and Medical Acts. I am, Sirs, your obedient servant,

Oct. 15th, 1895. INQUIRER.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—The letter of your correspondent, Mr. Blake, in THE LANCET of the 14th ult., gives the two common objections to specialists, each of which is opposed to the other. He remarks that "any good all-round physician or surgeon" would be much preferred to a specialist, though he adduces no reason for this statement; and, a little later, "were the specialist to strictly adhere to the particular branch which he has chosen ..... he would be held in higher estimation" &c. According to the first statement the more varied (all-round) his practice the better a consultant would be, and to the latter the more limited. No doubt there is some truth in both, but the practical issue would be that a specialist should first be a good "all-round" practitioner, and then, having a predilection for some branch and giving special attention to it, he would gradually become more and more a true specialist, though it is probably advisable that even a specialist should have some general work. Every practitioner is probably at heart a specialist, and takes more interest in, and devotes more attention to, certain diseases than others. And it

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would be to the interest of the profession to develop this tendency, for work done *con amore* is almost always well done. Medical science is much too large for the ordinary, or more than ordinary, individual to grasp, and one instinctively turns to those having special knowledge and experience in cases of difficulty. The general practitioner himself when ailing is one of the first to seek the aid of the specialist.

It should be, and no doubt is, a great relief to the practitioner to find his clients acknowledging the impossibility of one man being able to deal adequately with every variety of disease and recognising that limited branches can be better practised by those who give them particular attention. In the country the specialist cannot exist, but the advantage of a town (if it be an advantage) is that special ability in particular departments can be obtained. The general practitioner has a fancied grievance against the specialist in that he thinks he takes a good deal of the former's work. In these days of competition and bad trade this is a serious matter, but on consideration it will, I think, be found groundless. In the first place, if the specialist were not what he is he would be a general practitioner and compete directly for all medical work; and, secondly, cases of special difficulty or duration will probably not increase the reputation of the general practitioner, who will gain rather than lose by consulting a specialist. The patients of the general man may certainly of their own accord consult the specialist for slighter causes and oftener than the practitioner would like. But they still remain his patients, while he is saved the labour of keeping up with medical knowledge in that department. The majority of diseases must, however, be treated by the general practitioner. The consulting physician or surgeon objects to specialism with more reason, yet even in his case similar arguments apply and will probably lead to all physicians and surgeons in large cities becoming specialists more or less. Already in London many leading medical men are consulted for their special rather than their general knowledge, and no mention of names is needful to show that they are sought after for their special knowledge of nervous, heart or chest diseases, of uterine or urinary affections, and even of such limited departments as hysteria, gout, or diabetes. These physicians and surgeons have the advantage of being general in name but special in practice—i.e., private practice. Specialisms make advance possible and life endurable; they relieve the general practitioner of a troublesome class of cases, and, instead of narrowing a man's views, wider them. My own experience has been that general men treat cases conventionally, the special man on their merits.

In answer to "A General Practitioner," I neither attempt to justify dishonesty nor to deny his particular facts; what I do deny is that they are peculiar to specialists or prevalent among them, as he would lead others to infer. I have heard of quite as much dishonesty in connexion with a hospital surgeon (general) and a leading man in the profession.

I am, Sirs, yours faithfully,

Oct. 2nd, 1895. A SPECIALIST.

REGISTERED SLAUGHTER-HOUSES.

To the Editors of THE LANCET.

SIRS,—In 1877 the township of W—— was constituted a local government district and a local board was elected. Slaughter-houses then in use were registered under Section 127 of the Town Improvement Clauses Act, 1847, which Act is incorporated with the Public Health Act of 1875 (Section 169). Two of the registered slaughter-houses have proved to be in undesirable situations, even when in good order and properly kept, and when neglected become nuisances. Can the registration be revoked, or is there no other remedy than dealing with them from time to time under Section 91 of the Public Health Act of 1875?

I am, Sirs, your obedient servant,

M.O.H.

GLASGOW EASTERN MEDICAL SOCIETY, SESSION 1895-96.—The opening meeting of this society was held on the 9th inst., when the following gentlemen were appointed office-bearers for the ensuing year:—President: Wm. Patrick, M.D. Vice-President: Alex. Patterson, M.D., F.F.P.S.G. Treasurer; Thos. McMurray, M.B. Secretary: Jas. Craig, L.R.C.P. Eng. Editorial Secretary: D. Couper, M.D. Extra Councillors: Geo. Mather, M.D., F.F.P.S.G., Wm. Findlay, M.D., Wm. Carr, M.B., Robt. McC. Service, M.B., Alexander Munro, M.B., and Jas. Dunlop, M.B.

THE MEETING OF THE ASSOCIATION OF GERMAN NATURALISTS AND MEDICAL MEN.

(FROM OUR BERLIN CORRESPONDENT.)

(Continued from p. 881.)

THE GENERAL MEETINGS.

THE last paper read at the second general meeting was a highly metaphysical one on the Neo-Vitalistic Theory, by the well-known biologist Professor RINDFLEISCH. He said that biology has of late withdrawn from mere materialism, and that its recent mode of contemplating nature, although the ancient "vital power" of the vitalistic theory has been abandoned, may with good reason be termed Neo-Vitalism. The mechanical theory has not succeeded either in clearly defining force and matter or in explaining their mutual relations. We cannot form a conception either of force without matter or of matter without force, but we do not know how they are connected together; the recognition of force as an essential quality of matter does not imply a comprehension of its nature. It is reasonable to suppose that the principle which moves the whole world is present also in any of its parts, but it is obvious that inorganic bodies do not really move of themselves without receiving impulses from outside. We must, therefore, confine our attention to animated nature. Even if we could succeed in measuring or counting the atoms concerned in every vital phenomenon we would still fail to understand the vital process itself. We must cast off the tyranny of materialism, which would make us believe that animate and inanimate objects are of identical composition and therefore of the same value for the purposes of investigation. What do we mean by the expression "life"? If we throw a stone into the air it will fall at a spot which may be determined beforehand by calculations based on the strength of our arm, the weight of the stone, &c. If we throw a bird into the air it also will come back to some part of the earth, but it can choose the place where it will alight and is independent of the impulse given to it at the moment of release. We regard the power of spontaneous movement as the characteristic sign of life, and the same principle exists even in the minutest parts of animated nature. A drop of blood from a living frog examined under the microscope at first shows a movement of the blood corpuscles, which in course of time ceases, but on warming the object it can be seen that the leucocytes change their form, and that little protuberances, like feet, emerge from the substance of the leucocytes and move actively on the glass. The movement becomes quicker and quicker and suddenly stops when the temperature exceeds a certain degree, beginning again when the source of warmth is removed and the temperature has again reached the proper point. If we compare these changes with the simple extension of an inorganic substance, a piece of copper for instance, we cannot but conclude that the living substance is able to transmute forces impressed from outside in a way which appears to us to be the result of individual selection. Not in the sense, of course, of an emancipation from the laws of nature; on the contrary, this selective power is a quality of animated matter which admits of at least a plausible explanation. We may suppose that the vital selection results from a preliminary transmutation of external impulses into tension. In this way even the strongest impulses are stopped, and if afterwards the cell or the animal makes movements they appear to the spectator to be spontaneous, although they result only from transmutation of accumulated force. Protoplasm consists of colloid substance the molecules of which by mutual attraction and by keeping their position with respect to each other are also elastic, and in this way that accumulation of tension becomes possible which is necessary for the explanation of self-determination. The distance of the molecules corresponds to the degree of tension. According to physical laws, warmth, electricity, chemical agents, &c., must influence the distance of the component molecules, and by augmenting or diminishing their potential energy may produce effects which appear as extension and contraction of the swollen colloid. But even if biology were able to give a description of all the transformations produced in a body by an external influence till an apparently spontaneous movement originates, if even we could see the atoms at work, we should not have got a knowledge of the essential underlying

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principle unless some one could tell us what an atom really is. Meanwhile we may contemplate such phenomena of vital self-determination as are most like their prototype, the spontaneously moving matter. Such phenomena exist in our own body; each movement of our muscles is connected with a perception of it, which also has the important office of regulating that movement; each perception is connected with an action of the central nervous system, by which it is transmitted to the peripheral parts of the body. In all operations of the will, the intellect, and the sentient faculty there are a receptive action and a directive action, both so closely united that they seem to form one function of the mind—namely, self-consciousness—which, of course, appears to us as inseparable from self-determination. In proportion as the former increases in the more highly organised animals, so does the latter become further developed, until in man it presents itself as the essential characteristic of the genus.

The other papers read in the general meetings were by Professor ASTWALT (Leipzig) on the Mechanical Theory of the World, by Professor CREDNER on the Origin of the Baltic Sea, and by Professor VICTOR MEYER on the Problems of Atomology.

THE SECTIONS.

The following is an abstract of the proceedings in the sections.

Surgery.

Dr. HOFFA read a paper on the Treatment of Deformities arising from Hip-joint Disease. He said that as long as mobility exists these deformities are not to be treated by cutting operations, but by extension, by splints, or by Dollinger's method. If there is complete ankylosis osteotomy must be performed, but as the operations now in use shorten the thigh Dr. Hoffa has devised a new method, to which he has given the name of "oblique subtrochanteric osteotomy." He begins by separating the muscles and tendons from the trochanter to the external side of the femur, and then with a chisel severs the bone in an oblique direction. The limb is then extended so that the lower portion of the bone slides down along the upper portion, both osseous surfaces being maintained in contact. If the resistance of the muscles is too strong tenotomy must be performed before applying the extension.

Dr. LANDERER described a New Method of treating Tuberculosis by the Internal Administration of Cinnamic Acid. Experiments on animals prove that by this treatment the bacilli after the fourth month lose their virulence, and that fibroid tissue grows through the tubercles. Of 45 cases of simple chronic pulmonary phthisis without cavities treated by cinnamic acid all but 2 showed an improvement; their weight increased, their cough ceased, and the bacilli disappeared from the expectoration. Among 190 patients suffering from external tuberculosis the disease was in 155 cases situated in the bones and joints. Of these 6 died, 2 were not benefited, 8 were improved, 127 recovered, 2 would have to undergo amputation, and 10 were still under treatment.—Professor BERGMANN and Professor KÖNIG thought that tuberculosis could hardly be cured in this simple way.

Dr. NITZE gave an account of an Intra-vesical Operation for Tumours of the Bladder. His instrument consists of a sling connected with the ordinary cystoscope which may be easily introduced through the normal urethra. The surgeon in this way may remove the tumour under direct ocular inspection. After the operation the pieces of the tumour are voided with the urine. Tumours of the size of a pigeon's egg may be extirpated in this way, the bleeding being only very slight. The tumour is sometimes removed entire, sometimes in repeated sittings, and its base is energetically cauterised with the galvano-cautery. No anæsthetic is required, cocaine being sufficient. There have been 21 satisfactory cases.

Medicine.

Dr. MARTIUS discussed the Indications for Irrigation of the Stomach. They are of two kinds—positive, where the omission of irrigation would be a grave default; and relative, where the physician may use his discretion. Among the conditions belonging to the first category are acute poisoning, stagnation of the contents of the stomach from pyloric stenosis, and all cases of ileus. Under the second heading may be included carcinoma, acute and chronic catarrh, and functional abnormalities, such as hyper-secretion. In gastric neurasthenia Dr. Martius has sometimes obtained good results from irrigation.—Dr. MINKOWSKI said that he had performed irrigation for hæmorrhage from gastric ulcer, of course introducing a very smooth tube. Irrigation ought always to be done in the evening, so that the stomach may rest during the night.—Dr. LEO and Dr. RUMPF advised irrigation for the gastro-enteritis of infants

Dr. QUINCKE gave an account of the results of Puncture of the Spinal Canal, an operation which was described in THE LANCET of April 20th, 1895. He now uses an apparatus by which the pressure of fluid contained in the spinal canal may be measured. The effects are negative when the pus is too thick to flow through the cannula or when the needle has been improperly introduced. The best results were obtained in cases of serous and sero-purulent meningitis.—Dr. ZIEMSSEN confirmed the statements of Dr. Quincke, especially in cases of epidemic cerebro-spinal meningitis.—Dr. LENHARTZ said that his results had not been altogether favourable, and in several cases no fluid could be obtained although the operation was efficiently performed. In one case where eighty cubic centimetres of fluid were evacuated there was no obvious effect on the sensorium, and in another instance the patient became worse after the operation.

Dr. POSNER read a paper on the Etiology of Nephritis, in which he stated that he had made experiments on animals in order to ascertain if the bacteria in the bowels can produce nephritis by entering the circulation. Glomerulitis and epithelial necrosis follow ligature of the ileum. If matter containing the bacterium coli is injected into a bloodvessel, real nephritis ensues. Bacterium coli introduced into the healthy kidney itself is very soon excreted, but if the kidney had been previously impaired by injections of alcohol many bacillary emboli are found. Dr. Posner came to the conclusion that nephritis may arise from infection by enteric bacteria.

Obstetrics and Gynæcology.

Dr. LEOPOLD discussed the question, Is Digital Examination necessary during Confinements? He said that the position of the fœtus and the progress of the labour can be ascertained by abdominal palpation merely, and that digital examination should only be resorted to when there are abnormal symptoms. It is unnecessary when there are no abnormalities in the labour or in the condition of the mother, and the great majority of confinements should therefore be conducted without it.—Dr. FEHLING advised his audience to abstain entirely from digital examination and recommended that midwives should learn to disinfect their hands properly so as to avoid the communication of infection to lying-in women.

Dr. PROCHOWNIK described the Treatment of Ectopic Pregnancy by Injections of Morphia and gave particulars of four cases in which he had used injections of from 0·03 to 0·04 gramme of morphia into the fœtal membranes by way of the vagina. Three of the cases recovered without incident; in the fourth, which was complicated with gonorrhœa, an abscess formed and opened into the rectum. In one case the injection was made through the abdominal walls and the bowel, which was adherent to the fœtal membranes, was perforated. Although the fœtal sac became filled with pus the patient recovered after the operation. Injections of morphia ought not to be performed after the third month, and they are useless when once abortion has begun. Injection through the vagina is preferable to an abdominal operation except in cases of acute perimetritis or gonorrhœa.—Dr. FEHLING was of opinion that ectopic pregnancy may be compared to a malignant growth and therefore requires operation.

Dr. FEHLING read a paper on the Treatment of Prolapse of the Uterus. He recommended that as a precaution women ought to stay in bed a somewhat long time after confinement. In slight cases pessaries ought to be tried first, and in elderly women, where operation is contraindicated, a bandage should be applied, but in all other cases operative measures are advisable. To avoid relapses the old vagino-perineal plastic operation ought to be combined with Olshausen's ventro-fixation or Dührssen's vagino-fixation. Total removal of the uterus is followed by only 7 per cent. of relapses, but it mutilates the woman and is attended by a mortality of 10 per cent.; it ought, therefore, to be reserved for aged patients and cases of exceptional severity.

Physical and metaphysical questions were predominant in this year's proceedings, whilst practical medicine was almost exclusively confined to the sections. It is said that the committee is preparing to make a change in the arrangement of the annual programme by allowing only two general

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meetings and by extending the work of the special sections. No doubt the organisation of the association is once more in need of reform. The next meeting will be held at Frankfort.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Opening of the Medical Institution: Winter Session.

THE first meeting of the Liverpool Medical Institution for the present session took place on the 10th inst. Mr. Chauncy Puzey, the President, gave a very interesting address to the 140 members present. He began by paying a graceful tribute to Sir Joseph Lister, alluding to his retirement from active duties at King's College Hospital, and to the presentation to him of his portrait by his colleagues and past pupils. Mr. Puzey then referred to the time, now thirty years ago, when Sir Joseph (then Mr.) Lister began his experiments with carbolic acid in the treatment of abscesses and compound fractures with a view to diminish the terrible pest of pyæmia, at that time the great enemy of successful surgery. Mr. Puzey next alluded to the coincidence that just at that time he came to Liverpool as junior house surgeon to what he called the old Royal Infirmary, but which it would be more correct to style the second infirmary. The first one, the real old infirmary, must ever be memorable to surgeons as the scene of Park's great triumph in conservative surgery. The contrast between the surgical treatment of those days and of the present, the successful results of present-day surgery and our indebtedness to Sir Joseph Lister were next noticed, and as he had had the opportunity of trying or watching their results Mr. Puzey decided to give a slight sketch of the earlier history of the antiseptic movement, which might be described as terminating with the decline and fall of the carbolic spray. When he came to the second infirmary, which, completed in 1824, was, as he observed, new compared with Guy's Hospital, he was struck with the comparative freshness of the atmosphere of the wards, and subsequently with the smaller rate of mortality after major operations; but the mortality, especially from pyæmia, was such as would now be considered terrible. Primary union after amputations was so rare as to be considered remarkable, and suppuration was always present in such operations as the removal of tumours or ligature of the larger arteries. After remarking on the different condition of affairs at the present time, Mr. Puzey passed on to detail Lister's work as described by himself, as practised at first, and as practised now. He alluded to the late Mr. William Jackson Cleaver of Sheffield as having been house surgeon at the Liverpool Infirmary rather more than twenty years ago, of his having been Lister's house surgeon at the Edinburgh Royal Infirmary, and of his having been successful in his attempt to do away with pyæmia. Allusion was also made to Mr. H. D. Farnell, now of Eastbourne, senior house surgeon at the Northern Hospital when Mr. Puzey was surgeon, and who practised the Listerian method with great success. After giving further proofs of the great results following the antiseptic treatment Mr. Puzey concluded as follows: "For the present, gentlemen, we can look forward with pleasurable anticipation to the time next year when we shall have him in this city as the President of the British Association. Then I am certain that from no section of our citizens will he receive a more hearty welcome than from the members of the Liverpool Medical Institution."

The late M. Pasteur.

Mr. Puzey made the following graceful allusion to the late M. Pasteur: "Pasteur has been taken away from the scenes of his useful work; but while the whole civilised world has heard of his departure with respectful regret, his own country has accorded him the honour of a State funeral—as usual, in such matters, setting an example in its tribute to the memory of great scientists and professional men which our own country might do well to follow."

Bequests to Liverpool Hospitals.

The following institutions will benefit to the amount given against each by the will of the late Mr. Bernard Vincent Hall of Liverpool: the Royal Infirmary, £5000; Northern Hospital, £2500; Royal Southern Hospital, £2500, and the Ladies' Charity and Lying-in Hospital, £1000.

The Northern Hospital and Cases of Abdominal Surgery.

Within a period of nine days three persons have been admitted into the Northern Hospital suffering from severe abdominal wounds. The first was a man aged thirty-four who was stabbed while trying to separate a husband and wife. He was admitted on the 5th inst. under the care of Mr. Arthur Wilson suffering from a wound one and a half inch long a little below and to the right of the umbilicus. About three inches of small intestines were protruding, but there was no injury to them or to the omentum. The intestines were thoroughly washed and returned, and the patient is now doing well. The second case was that of a man aged twenty-eight, who was admitted on the 9th inst. also under Mr. Wilson. He had jumped or been pushed through a window fifteen feet from the ground. When admitted, after being three-quarters of an hour on the pavement, the ascending and transverse colon with about three feet of small intestines were found protruding through an incision about three inches long in the right hypochondrium. An incision was found about half an inch long in the transverse colon, from which fæces were passing. All the intestines and omentum which protruded were black and dirty. The wound was sutured, the bruised omentum removed, everything well washed and flushed, and then returned. The patient succumbed on the evening of the fourth day. The third patient, a woman aged thirty, was admitted on the 14th inst. under Mr. Puzey with a small transverse wound through which several coils of bowel were protruding. Two wounds, one dividing half and the other the whole circumference of the gut, were closed with Lembert's suture. On pulling out more gut a portion was found transfixed in three places within about three or four inches, the mesentery also being badly cut, while several arteries were spouting. The whole of this piece was excised and the ends approximated by means of Murphy's button. On enlarging the wound upwards and downwards to return the intestine it was found that the abdominal cavity contained a quantity of blood, while the pelvis was full of clot. On flushing this away the finger passed into a cut in the fundus of the uterus; the abdominal wound was extended downwards, and the wound in the uterus (through which protruded the cut cord of a fœtus in a very early stage) was closed by deep suture. The "toilet of the peritoneum was made" and the abdominal wound was closed in the usual way. Twelve hours later the woman was rallying well.

Annual Dinner of the Medical Institution.

The annual dinner in connexion with the Medical Institution was held at the Adelphi Hotel on the 5th inst. Over 100 members and guests were present. Advantage was taken of the circumstance that Jan. 13th last was the "silver wedding" of Hospital Sunday in Liverpool to make special allusion to the clergy and ministers in connexion with the medical charities. The Rev. J. Bell Cox and the Rev. John Watson, both prominent members of the Hospital Sunday Committee, the latter being also Honorary Secretary, responded.

Oct. 15th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Extension of the Manchester Royal Infirmary.

THE report of the sub-committee was presented yesterday to the grand committee appointed in March last to consider the question of the increased accommodation long required by the infirmary. The problem was how to provide 120 more beds on the present site without materially encroaching on the unoccupied space. The sub-committee was not unanimous, and a minority report was also presented. Schemes for providing this accommodation by lateral extension of the present building and by adding another storey had already been considered and rejected. The possibility of obtaining this accommodation by altering the internal arrangements, by removing the nurses from the home within the grounds, and by removing also the out-patient department and the laundry, were considered, and the conclusion arrived at was that, "as it was opposed to all modern experience to locate the nurses' home elsewhere than within the precincts," it should not be removed, and that the removal of the laundry and the out-patient department would not give the needed accommodation. The decision

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of the sub-committee was that "only by rebuilding would it be possible adequately to provide, in a fit and proper way, the requirements of an infirmary brought up to date scientifically with every latest improvement, and otherwise worthy of the city of Manchester." The pavilion plan was unanimously considered to be the most suitable, and competent authority stated that there would be no difficulty in constructing a pavilion hospital fulfilling all the conditions required. "They would, however, ask to be allowed respectfully to suggest that their decision be accepted with as little delay as possible by the grand committee, and be immediately thereafter submitted to the trustees for ratification." The chief points in the minority report were as follows: "They do not see the necessity of building an entirely new hospital," believing that everything required can be provided by a modification of the existing building. They are of opinion that the cost of a new building cannot be less than, and will probably exceed, £200,000. They consider that by adding a storey (a plan already rejected), and by making minor alterations, all the "reasonable" accommodation required could be obtained for £40,000 or £50,000. The two reports having been read, resolutions were adopted to the following effect: That the signatories of the majority report be requested to obtain full plans and elevations, and evidence from experts in hospital buildings and others as to the practicability and efficiency of such plans, and an approximate estimate of costs; that a further sub-committee be appointed to obtain the opinion of experts and others as to the building of a new supplementary hospital elsewhere to provide the additional accommodation required, with estimates of costs &c., and to report as to the alterations required in the present building "to bring it up to date and to make it as efficient as possible according to modern ideas"; that the signatories of the minority report be asked to give full details of this scheme, prepare plans, &c., with all the powers given to those who signed the majority report.

Oct. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scarlet Fever in Edinburgh.

THERE is a considerable epidemic of scarlet fever in Edinburgh. In the City Hospital there are 359 patients, the hospital being so crowded that accommodation has to be made elsewhere for some cases, and there is a probability that the disused hospital in the Canongate may have to be reopened. The extent to which the City Hospital is used is noteworthy, for it shows the confidence the public have in it now as compared with the feeling when it was first opened. In this connexion it may be stated that the ground purchased as a site for the new City Hospital has been examined by a body of officials, and the part upon which the building is to be erected has been determined.

Milk-supply and Infectious Diseases.

At a meeting of the Edinburgh Town Council a question was asked by one of the members as to the powers they possessed to examine all cows whose milk is sent into the city. The question was asked in view of the connexion which had been sometimes proved to exist between the milk supply and epidemics of infectious diseases. The town clerk, in reply to the question, stated that the magistrates and council had ample power to appoint a qualified veterinary surgeon to inspect and examine all cows in byres outside the city whose milk was sold within the city.

Edinburgh Royal Infirmary.

The beginning of October marks the opening of the winter's work in the Royal Infirmary. At this date the resident physicians and surgeons are changed. On Tuesday the clinics were begun, and all the wards are now in charge of their respective senior physicians. Dr. Ernest E. Maddox has been appointed an assistant ophthalmic surgeon, and Dr. George Mackay has been made a full ophthalmic surgeon.

Fever Hospital in Hawick.

The corporation of Hawick have wisely determined to try to arrange terms with the district committee with a view to the provision of a joint hospital for infectious diseases for the town and district. It is thought that only ten or twelve beds will be necessary.

Opening of St. Andrews University.

The winter session of the United College was opened by an address by Principal Donaldson. He said that the administration of the financial affairs of the University was at a dead-lock, and as that was due to legislation and the difficulty of interpreting it, it was the duty of the Legislature to intervene and find a way out of the dead-lock. Regarding external organisation and appliances there was nothing but prosperity and success to report. Within seven or eight years five new buildings had been erected at a cost of £20,000. One of the new buildings was to be specially devoted to women students, and to bear the name "University Hall." Seven scholarships had been instituted, each of the annual value of £100. He said that when all the scholarships were arranged they would have the largest number of scholarships and the most complete distribution of them of any university in Scotland.

Glasgow Southern Medical Society.

At a meeting of this society on the 3rd inst. the following gentlemen were elected office-bearers for session 1895-6: President, Alexander Rankin, M.D.; Vice-President, David Tindal, M.D.; Treasurer, J. C. Edmiston, M.D.; Secretary, T. W. Jenkins, M.D., 1, Newark Drive, Pollokshields; Editorial Secretary, J. G. Wilson, M.B.; Seal-keeper, David Couper, M.D.; Governor of Victoria Infirmary, James Dunlop, M.D.; Court Medical, John Brown, M.D., A. Napier, M.D., J. Lindsay Steven, M.D., T. Lapraik, M.D., and T. Walls White, M.D.; Extra Members of Council, C. E. Robertson, M.B., T. Richmond, L.R.C.P., and G. W. Thomson, M.D.

Royal Hospital for Sick Children, Glasgow.

The directors of the hospital have made the following appointments: Walter K. Hunter, M.B., and Alice J. McLaren, M.D., B.S., to be extra-physicians to the dispensary; L. R. Sutherland, M.B., to be pathologist; Jno. F. Barr, M.B., assistant house surgeon; and Samuel English, M.B., clinical assistant at the dispensary.

The Health of Dr. J. B. Russell of Glasgow.

Though Dr. Russell has been able for a time to return to his duties as medical officer of health it has been deemed advisable that he should not undertake the heavy work of the winter. He has therefore obtained six months' leave of absence from the town council and intends to winter either the south of England or the Channel Islands.

Hospital for Infectious Diseases for Dumbartonshire.

The Dumbartonshire County Council has for some time been endeavouring to find a site in the western division of the county suitable for the erection of a hospital for the reception of infectious cases. Recently there has been an outbreak of scarlet fever in the Vale of Leven, and this appears to have brought matters to an issue, for the council has now purchased a piece of ground situated midway between Renton and Alexandria, and here intends to erect a hospital adequate to the requirements of the district.

Measles Epidemic at West Calder.

Owing to a severe outbreak of measles at West Calder the public school has been closed by order of the school board. The epidemic has spread rapidly and nearly 400 cases have been notified.

Medical Appointments.

Mr. Alfred Young, M.B., has been appointed surgeon to the Central Dispensary, Glasgow, and Mr. Jas. Connal, M.B., has joined the staff of the Grove-street Dispensary, Glasgow.

Veteran Volunteers.

An anniversary of considerable interest was celebrated at the Royal Cottage, Loch Katrine, on the 12th inst. On Oct. 14th, 1859, the Queen formally opened the Loch Katrine water-supply of Glasgow, and on that occasion Her Majesty saw for the first time a body of her citizen soldiers under arms, her guard of honour being supplied by the then recently enrolled Glasgow companies. It has been the custom year after year for the surviving members to celebrate the anniversary, and this year it was decided to meet at Loch Katrine for the thirty-sixth anniversary. No less than thirty-four members of the Old Guard spent the day together in the Trossachs, and in the afternoon dined together in the Royal Cottage. The chair was taken by Brigade-Surgeon Dr. James Dunlop, and amongst the other "veterans present were Surgeon-Lieutenant-Colonel

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J. G. Cumming, M.D., and Alex. Patterson, M.D. After dinner a telegram was despatched to Her Majesty respectfully expressing the feeling of loyalty which still keeps the Old Guard together.

Aberdeen University: the Inaugural Celebrations.

All the arrangements for these celebrations, which will take place next week, are nearly completed. The new clock and bell have been safely located in the Mitchell Tower, the organ is nearly finished, and the rest of the work is being pushed on apace. An interesting part of the proceedings will be the presentation to Mr. C. W. Mitchell, together with an address, of a gold medal commemorative of his father's large share in this big extension scheme. The medal will cost about £100, and replicas in bronze may be had for 7*s.* 6*d.* Mr. Mitchell will also receive an address from the students acknowledging the special interest that Dr. Mitchell took in the students, as shown by the magnificent Union erected at his expense. A large number of graduates have intimated their wish to be present, and there is every prospect of the celebration being a success. The University Court have now decided to proceed with the north tower, terminating the north wing. Some weeks ago it seemed likely that this part of the scheme would have to be deferred for lack of funds. The tower is to be a square one, 32 ft. wide on each face, and with a total height of 120 ft., and its design will harmonise well with the Mitchell Tower and the rest of the buildings. It will accommodate on the ground floor the sacrist's house, on the second floor will be the Faculty and University Court-room, and on the third floor will be provision for the Secretary of the University Court.

The Health of Aberdeen.

The zymotic diseases notified last week were—scarlet fever, 21; whooping-cough, 40; erysipelas, 8; puerperal fever, 1; membranous croup, 1; total, 71, being 27 cases more than the former week, due to a considerable increase in scarlet fever and whooping-cough.

Oct. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Pathological Institute for Dublin.

THE usual addresses inaugurating the commencement of the medical session were delivered at the Meath and St. Vincent's Hospitals on the 12th and 15th inst. Mr. E. Lennon, physician to the Meath Hospital, devoted a large portion of his address to a matter which has been more than once alluded to in the pages of THE LANCET—that is, to the necessity which exists in Dublin for a pathological and bacteriological institute. It was suggested that such an institution might be established in connexion with the Royal Academy of Medicine and based upon the lines of that already founded by the Royal Colleges of Physicians of London and Surgeons of England. The President of the Royal College of Physicians, who occupied the chair, said, in proposing a vote of thanks to the lecturer, that, while admitting the great importance of the matter, it would be a mistake to underrate the difficulties as to its accomplishment, more especially those of a pecuniary nature. The President of the Royal College of Surgeons, in seconding the vote, expressed himself as even less sanguine as to the success of the proposal made by Mr. Lennon. Sir William Stokes, on the other hand, said that he did not take such a dismal view as to the difficulty and want of unanimity in carrying out the project of the lecturer, which if successful would be of the greatest benefit not merely to the cause of science, but to the cause of humanity as well. He believed that when the lecturer's words were thought over, and his suggestions contemplated, the feasibility of the plan would not appear, as it did to their chairman, of a very Utopian character. He believed that with an earnest effort of the profession generally this great philanthropic purpose might be accomplished.

County Monaghan Infirmary.

I understand that the governors of the Monaghan and Cavan Lunatic Asylum have agreed to purchase the old Monaghan Infirmary premises and grounds at a cost of £1000.

Omagh District Asylum.

Owing to the overcrowded state of this asylum the governors have been considering the advisability of building a new wing, and at their meeting on Oct. 10th a communication was read from the Board of Control in Dublin sanctioning a loan of £35,000 for the purpose of carrying out the necessary changes in the way of alterations and additions to the institution. It is expected that the building will be completed and ready for occupation at the end of March, 1898.

New Mortuary in Belfast.

The Corporation of Belfast have just erected a new mortuary to replace the old morgue in Victoria Square. The new building is situated at the end of the Sand Quay on the river Lagan, a site obtained by the Corporation by their Act of 1878, when they purchased the rights of the foreshore from the late Marquis of Donegall. The mortuary is entered from the Laganbank-road, but the plans have been so drawn that none of the windows look on to that thoroughfare. There is a yard one side of which forms by a wall the boundary next the river, and a door placed in this wall provides a means of receiving bodies which may be discovered in the Lagan river, and by this means they will not need to be conveyed through the city. There is a house near the entrance gates for the van, which also affords space for the storing of coffins. To the right of this is the building proper, in which there is a waiting-room for jurors and an attendance-room, two mortuaries (one for infectious the other for non-infectious cases), a post-mortem room, and a dead-house, with lavatories for the use of medical men and others engaged. All the floors are of Limmer asphalt on cement concrete, and the walls are lined with white, glazed tiles. All the rooms are well heated and ventilated and supplied with water, the pipes being exposed on the face of the wall to permit ready access in case of leakages or gas escapes. The post-mortem room is fitted with Jennings's patent revolving dissecting-table and two Jennings's patent lavatory basins with hot and cold water, all the taps and wastes being operated by the foot, so that, without the hands being used at all, the water can be turned on or off. The shelves in the room are of plate-glass on enamelled iron trestles, and the benches on the mortuaries are of slate. The windows are of plate-glass, and are so arranged that, if deemed advisable, a body can be viewed by a jury without the latter entering the actual apartment in which it lies. The whole building has been designed by Mr. J. C. Bretland, the borough surveyor, upon whom it reflects the utmost credit, being now the best mortuary in any city in Ireland or, indeed, the United Kingdom. The medical members of the Belfast corporation, Alderman Graham, M.D., and Councillors O'Neill, M.D., and Bigger, M.D., have greatly helped the surveyor by valuable hints.

The Outbreak of Typhus Fever at Ardboe, county Tyrone.

At a weekly meeting of the Cookstown guardians, held on Oct. 12th, it was reported that all the cases from Ardboe were in hospital except one, and those were convalescent. Eight hospital patients were confined to bed. On that morning a man had been brought in, but as the assistant nurse was suffering from the disease and no other nurse available it was only possible to bring him by getting his wife to accompany him in the ambulance. The medical officer was empowered to get a nurse from the Belfast union if required, and to have the ambulance properly ventilated. Mr. Burgess and the relieving officer have attended in all the houses where there had been typhus fever and burned the bedding, and payment has been made for the things destroyed. As showing the terror existing in one district Mr. Burgess and the relieving officer, assisted by two boys who were only just recovering from the fever, had to coffin a man and bury him themselves; no one could be got to assist except the driver of the hearse and of the car. The medical officer was obliged to change all his clothes after being at Ardboe as there were no means of disinfection.

The Duties of Medical Officers, Masters, and Matrons in Irish Workhouses.

The Local Government Board have declined to hold a sworn inquiry in reference to this point as requested by the Ballymena board of guardians.[1] The inspector had an interview with the officers concerned. The master, the Local Government Board think, had exceeded his duty in transferring the lunatic to the lunatic wards without consulting the medical officer, and they do not think the

[1] THE LANCET, Oct. 5th, 1895.

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master should dispute the authority of the medical officer in questions affecting the classification of sick inmates.

Belfast Lunatic Asylum.

The overcrowded state of this asylum is becoming a very serious question for the governors to deal with. There are 286 cases now resident beyond the normal accommodation, and while the female division accommodates 180 cases, there are now 277 resident. The matter has been left in the hands of the accommodation committee; some think room could be had at the workhouse, others at the model farm or at the superintendent's house. At the meeting of the governors held on Oct. 14th a resolution was passed urging the Board of Control in Dublin to expedite matters in reference to the preliminary arrangements, submitting suggestions and recommendations to architects for their competitive plans for the new asylum at Purdysburn. A deputation from the Board of Control, it is expected, will shortly visit Belfast to discuss details with the governors of the Belfast Asylum.

The Guardians of the Cork Union and the Establishment of a Pasteur Institute for the Treatment of Hydrophobia.

The Cork guardians have from time to time sent patients bitten by rabid dogs to the Pasteur Institute in Paris, and they have been considering whether they ought not to urge the Government to establish a similar institution in London. At their last meeting Mr. Harding, dispensary medical officer of Ballincollig, presented a lengthy report on the subject of Pasteur's treatment, in which he urged that it was a success. Dr. Magner, one of the guardians, on the other hand, expressed grave doubts as to whether any definite conclusion could be arrived at. At the last meeting of the guardians Mr. Harding presented a further report, accompanied by letters he had procured from about a dozen of the profession in the city. These gentlemen generally endorsed Mr. Harding's views, though one or two expressed their opinions rather guardedly. Dr. Magner pointed out that Mr. Harding had not sought the opinion of the medical officers of the city dispensaries, under whose care persons suffering from dog bites frequently came in the first instance, and he added that those gentlemen's opinions would not correspond with Mr. Harding's. He also pointed out that some of the statistics on the subject were somewhat misleading. The discussion was a very interesting, academic one, very suitable for a medical society or the pages of THE LANCET, but I fear a little bewildering to the average rural guardian. The guardians finally passed a resolution asking the Government to take steps for the establishment of an institute in London, but at the instance of Dr. Magner they added that they would not approve of the rates of the Cork Union being requisitioned for the purpose.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Baron Larrey.

THE above-named surgeon, who died last week in his eighty-seventh year, at Bièvres, near Versailles, was principally known to the world as the son of his father, the great surgeon of Napoleon the First's campaigns. His father's influence procured him admission, at an early age, into the medical department of the army. We then find him a *Chirurgien-élève* in 1828, *Sous-aide* in 1829, *Aide-major* in 1832, and *Chirurgien-major* in 1841. Graduating as an M.D. in Paris in 1832—the year of the cholera epidemic—he was placed in charge of the cholera wards at the Pitié Hospital. But he soon resumed active regimental service, and we next find him—now an *Aide-major* (assistant surgeon)—at the Siege of Antwerp. Here he earned his first decoration—that of Chevalier of the Order of Leopold. In 1835 he successfully competed for the post of Professeur-agrégé (de Chirurgie) of the Paris Faculty. In 1841 he was appointed to the chair of Surgical Pathology at the Army Medical School of Val-de-Grâce. Nine years later he exchanged the chair for that of Clinical Surgery. No sooner were the Bonapartes restored to power than he was appointed Surgeon-in-Ordinary to the Emperor, but it appears that the confidence reposed in his illustrious father by Napoléon le Grand was not inherited by him, for the great Emperor's nephew had hardly ever recourse to his services. He acted during the Italian campaign of 1859 as *médecin en chef* of the army, and he then distinguished himself by—what was at that time an innovation—organising the transport of the wounded by rail. In 1867 he was promoted to be *Inspecteur du Service de Santé Militaire*, and was at the same time decorated with the *plaque* of Commander of the Legion of Honour. Since 1850 he had been a member of the Academy of Medicine, and later he was admitted to the membership of the Société de Chirurgie. Of both corporations he had acted as President. Finally, in 1867, he became a *membre libre* of the Académie des Sciences. He wrote a number of interesting works, which, with about 100 contributions to journals, constitute the sum total of his professional life-work. At the fall of the Empire he retired from the army, but he represented for several years at the Chambre des Députés the *arrondissement* of Bagnères de Bigorre as a Bonapartist. In his old age he occupied himself in relating, in his book entitled "Madame Mère" (Napoleon I.'s mother), the doings at the Imperial Court. The work is said to have fallen flat, the craze now raging for the anecdotal history of the Napoleonic era being then unknown. The halo surrounding his name procured him quite exceptional consideration at the learned societies of which he was a member. His attendance at the Academy of Medicine was, up to quite a recent date, most regular, and great respect was paid to his utterances. His venerable and picturesque appearance was in large measure accountable for the privileged position he occupied. Someone very aptly compared him to *un portrait peint par Gérard*. His "bringing-up" would naturally have the effect of fostering within him all his ultra-conservative instincts, and his respect for rigid professional and academic *étiquette* was abundantly evident on the occasion of the communication made to the Académie de Médecine by Professor Brouardel regarding the state of health of Dr. Cornelius Hertz. His views on surgery remained to the last conservative. But although he will, as a surgeon, leave behind him no trace, his urbanity, his old-world politeness of *un homme de cour*, will for a long time be missed.

Treatment of Dacryocystitis.

M. Duclos[1] speaks in eulogistic terms of the curative effects of fluorol in the above-mentioned affection. This salt (fluorol, or fluoride of sodium) is bluish-white, odourless, of a salty flavour, and is soluble in twenty-five parts of its weight of water. A 1 or even 0·5 per cent. solution prevents the development of pyogenic organisms. Fluorol is to be preferred to corrosive sublimate (which is sixteen times more toxic), silver nitrate, permanganate of potassium, formal, &c., because its introduction into the lacrymal apparatus is not painful, and because, further, it is distinctly more beneficial. Dr. Lagrange, in whose clinic at Bordeaux the new treatment has been extensively employed, opines that fluorol proves more efficacious than sublimate &c. because it does not coagulate albumin and because a protecting envelope is thus not provided for the germs. M. Duclos and Dr. Lagrange state that cases of dacryocystitis are very quickly improved, and often completely cured, by injections of a 0·5 per cent. solution of fluorol.

Hospital Districts in Paris.

Yesterday the new regulations concerning the admission of patients into the Paris and the department of the Seine hospitals came into operation. Under the new arrangement non-paying patients can only be received into the hospital specially attached to their *circonscription*, the privilege formerly enjoyed by them of choosing the institution in which they desired to be treated being thus abolished. There are, however, certain exceptions to this rule. Thus, children from any quarter will continue to be admissible into the two children's hospitals (Enfants Malades and Trousseau) as also into the children's surgical wards of the Tenon Hospital and the orthopædic wards of the Hôpital des Enfants Assistés. Patients suffering from certain special diseases will continue, as heretofore, to be admitted into special hospitals—namely, St. Louis, Ricord, and Broca Hospitals for skin diseases and syphilis; Salpêtrière Hospital for diseases of the nervous system; Lariboisière Hospital and the Hôtel-Dieu for eye affections; Necker Hospital for diseases of the urinary apparatus; Cochin Hospital for gynæcological surgery; Aubervilliers and Bastion 29 Hospitals for infectious diseases. In case of accidents the sufferers will be received into the nearest hospital.

Oct. 15th.

[1] Congrès Français de Médecine Interne.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

An Epidemic of Infanticide.

CERTAINLY people "sup on horrors" in the evening press of Italy. The case of infanticidal mania to which I lately drew attention has been followed by others on a much more extended scale, but before proceeding to these let me pursue the former to its conclusion. The malefactor in question (Callisto Grandi, it appears, is his name) is no longer to be allowed to return a free agent to the scene of his murders. Popular indignation made the step impossible, and so the authorities relegated him provisionally to the Muratte, the well-known Florentine prison. From this an attempt was made to transfer him to the Pia Casa di Lavoro (an establishment for the detention of ex-criminals on whom industrial task-work is imposed), and on his way thither he was followed through the streets by an ever-increasing crowd, which commented freely on his extraordinary cranial malformation and his unmistakable look of "dangerous imbecility." A first halt was made at the Questura (police-office), where, it having been ascertained that the Director of the Pia Casa had peremptorily refused to admit him, he was confined in a strong room. By this time, however, medical opinion as to his mental incapacity prevailed; at last, "at long last," says a Florentine contemporary, he has been recognised as "a "dangerous imbecile" or "irresponsible delinquent," and from the Questura he has been finally consigned to the Manicomio (lunatic asylum) of San Salvi. Had he been properly dealt with in the stage of puberty or even earlier, as Lombroso recommends, his diseased development would have been demonstrated, possibly rectified under treatment, or, if found irremediable, he would have been placed under surveillance such as would have made his crimes impossible. The deplorable fact remains, however, that his case is an all too common one, there being hardly an aggregation of Italian youth in which potential malefactors of the Grandi type are not to be found. The army, indeed, has many of them, as the recent wholesale murders committed by epileptoid subjects in barracks have so painfully attested. And now, when one "irresponsible delinquent" has finally been acknowledged to be such and detained in an asylum, we are startled by an infanticidal outbreak of appalling cold-bloodedness — twenty-three children poisoned by one of those semi-lunatics who pose as "witches." At Aderno, in the province of Catania in Sicily, a woman thirty-three years of age, Gaetana Stimoli by name, made it a practice to allure little children to her den with sweatmeats, after which she gave them a drink of wine containing undiluted phosphoric acid. The victims barely got home when they were seized with agonising pains, in which they died. The woman, having been arrested, at first denied her guilt, but then made a full confession, from which it appeared that, having lost two children of her own, she believed their death had been caused by incantation—"erano stato stregati" (they had been bewitched) was her expression—and to avenge them she poisoned the children of others! The woman's den was minutely searched and found to contain all the armoury or "stock-in-trade" of witchcraft, phosphorus included, while at the necropsy of her victims the evidence of poisoning by phosphoric acid was fully made out. The incident has created a profound impression throughout the kingdom, where similar cases (one victim having been boiled to death in a cauldron containing so-called "medicinal" herbs) are reported from nearly every province. The public are gradually becoming aware that Italy's expensive and ineffectual penal system is one gigantic illustration of "beginning at the wrong end," and that some such educational system as that which her medico-psychologists recommend can alone protect her from the homicidal explosions by which her daily life is periodically saddened.

The White Cross.

On the lines of the Red Cross, an association has sprung up in Italy for the relief of the civilian who from illness or accident has had to suspend work. A charitable institution designed mainly for the very poor, it had its origin in February, 1886, by which time, in Rome especially, the influx of labourers to assist in the reconstruction of the city had multiplied the contingent of poor patients. Under the name of "La Croce Bianca Italiana" it chose as President the Commendatore Luigi Pagliani, Professor of Hygiene at Turin, now Director-General of Public Health for the kingdom, and as Vice-Presidents the Commendatore Professor Achille Ballori, Sanitary Director of the Roman Hospitals, and the Advocate Umberto Dal Medico. On the council these gentlemen are assisted by the Commendatore Pietro Mariotti, Signor Tondi, member of Parliament, and Professor Gualdi, head of the "Ufficio Municipale" of Rome. So organised, the Croce Bianca has at its disposal a well-disciplined corps of young volunteers, male and female, equal to any duty in picking up and transporting the victim of an accident or the "wounded soldier of industry," administering "first aid" in urgent cases and tending or nursing them afterwards in hospital. Nearly eleven years old, the institution is a daily developing one, in harmony with the expansion and subdivision of the army of labour, and has stimulated the organisation of others, the Croce Verde (green cross) and the Croce Turchina (blue cross), also humanitarian in their design and medical, or quasi-medical, in their *personnel*. At Turin, where the association has taken vigorous root, an exhibition of its "armamentarium"—cars, portable chairs, stretchers, surgical appliances, materia medica and therapeutic adjuvants—has lately closed after drawing crowds of interested and appreciative visitors. Amid much that calls for reprehension, or even grave censure, in her institutions, Italy, "the mediæval mother of medicine," is laudably active in humanitarian work, and her White Cross associations, following up, or rather extending, that Red Cross Society of which she justly claims the maternity, are so many steps towards a goal at which all civilised countries ought to aim.

Oct. 13th.

PUBLIC HEALTH IN BRISTOL.—The expenditure in the department of the sanitary authority for the six months ending September, 1895, is as follows: Medical officer's department £2396; hospital expenses and medical attendance, £881; port sanitary account, £428.—The present number of the *Bristol Medico-Chirurgical Journal* congratulates the medical officer of health (Dr. D. S. Davies) and his assistants on the very satisfactory reports that have just been published and says: "The public of our city should be made acquainted with the fact that, though our sanitary rate may vie with that of most towns for amount, we can boast of being not only one of the healthiest towns in England, but in the world."

SOCIETY FOR THE STUDY OF INEBRIETY.—A meeting of this society was held on Oct. 3rd, and the president, Dr. Norman Kerr, in opening a discussion on the proposed Probationary Curative Detention of Inebriates, and others deemed to be insane, said that at present many inebriates and other persons were certified as lunatics and sent to asylums for the insane, who might have been otherwise cured under a better legislative state of things. The rich could now enter a lunatic asylum as voluntary boarders without certification of lunacy, but the poor could not avail themselves of this provision. The only chance of the poor escaping certification, even if only temporarily insane for a few weeks or less, lay in their recovery during the three days before a justice decided on their mental state, in most cases, or during the fourteen days in a few cases. Some were cured within the shorter and some within the longer term while thus attended and looked after (kindly and considerately, as Dr. Kerr had seen in some metropolitan workhouses). But, successful as the result was, how much more successful would it have been if the patients had been in a special temporary institution set apart for the mentally afflicted in an early stage, away from the hundreds of able-bodied and infirm pauper inmates, and with special equipment and ample grounds for the treatment of the insane. A good name would be "Hospital for the Treatment of Mental Disease." If at the end of six or eight weeks the patients were not cured of their insanity, then they might be certified as insane and transferred to an asylum. He ventured to predict that in twenty years or so more there would be: (1) probationary curative mental hospitals; (2) asylums not in one block, but in a number of smaller buildings, as in some American asylums; and (3) mental convalescent homes, where the discharged from the asylum could be received for a few weeks, to render the re-entrance of the convalescent into the world less trying, a work to some extent attempted at present by the excellent After-Care Association. Mr. Parker Young, Dr. Longhurst, Dr. Smith, and Dr. Usher approved of the suggestions.

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Obituary.

SIR THOMAS CRAWFORD, K.C.B., LL.D., M.D. EDIN., F.R.C.P., F.R.C.S. IRELAND.

HONORARY SURGEON TO THE QUEEN.

THE news of Sir Thomas Crawford's death on the morning of Saturday, the 12th inst., will have been universally received by the officers of the department of which he was the late Director-General and by a very large number of his friends and acquaintances with much sorrow, but by all who had the honour and privilege of knowing him intimately it will have been received with profound regret. A very able, capable man, and a thoroughly upright gentleman, who long held high and responsible posts in the department over which he was ultimately presiding when he retired from the service in May, 1889, has passed away—a man of generous, hospitable, and sympathetic nature, of fine presence, noble character, and of great intellectual capacity, with a departmental experience and a knowledge of military organisation and detail, and a power of work, of which very few indeed could boast. The late Sir Thomas Crawford was not by any means a rich man, and he had a large family, but he was nevertheless most charitable. He strove in this way and by his life, his influence, and his example to promote every good work. Many of his benevolent acts were known to his friends, but some were only known to himself. Among the sad experiences of life it too often falls to the lot of earnest men of elevated character to have to undertake tasks of extreme difficulty and to be misunderstood, and the late Director-General, no doubt, had his trials in these respects. No man had held higher or more responsible positions in the department, or enjoyed a greater popularity or a higher reputation for ability, soundness of judgment, and integrity of purpose, than did the late officer when he was selected for the direction of the Army Medical Service, but he assumed the post in very troublous times. He had soon after his appointment as Director-General to vindicate his service from the unjust aspersions which had been brought against it in Egypt in 1882, which he successfully did with singular ability, winning the esteem and respect of all impartial men. This was succeeded by an enormous amount of work and responsibility in making all the medical arrangements for the campaigns that subsequently followed in that country, with the result which may be briefly summarised by stating that from the first to the last expedition successes were obtained of a surgical and medical kind that had probably never before been achieved in warfare. Then came the question of military rank and titles, about which Sir Thomas Crawford most sincerely entertained strong convictions. He held, as everybody did, that as the military service formed a necessary and integral part of the military machine its officers must be provided for and adequately recognised and respected in every way, their rank and positions being definitely fixed upon a sound and secure foundation. As regards the question of titles, however—such as major-general, colonel, captain, &c.—he considered that this was an undignified position to take up and likely to prove detrimental to the true interests of a medical service. In an obituary notice it would be quite out of place to discuss the merits of this matter, but there is no doubt that the naval medical service and many able and experienced men of the military service were of the same opinion, and some still think that he was quite right and that the object in view could have been better attained than it was. Be this as it may, that Sir Thomas Crawford was sincere and conscientious in the course he took—the wisdom and correctness of which he maintained to the last—there can be no doubt whatever.



SIR THOMAS CRAWFORD, K.C.B., LL.D., &c.

Sir Thomas Crawford was a North of Ireland man and was born in 1824, and was consequently seventy-one years of age at the time of his death. He was educated at the University of Edinburgh, where he took his degree of M.D., and was subsequently made an Hon. LL.D. of the same university. He entered the Army Medical Service as an assistant surgeon in 1843, serving with the 51st Light Infantry throughout the Burmese war of 1852–53, and was on board the Hon. East India Company's steam frigate *Feroog* during the naval action and destruction of the enemy's stockades in the Rangoon river, also being actively employed during the succeeding three days' operations in the vicinity and at the storming and capture of Rangoon, and the storming of the White House Redout. He was also at the capture of Bassein, in various skirmishes at Prome, and in the advance on Meaday. For these services he received the Burmese medal with clasp for Pegu. Subsequently gazetted to the 18th Royal Irish Regiment, he served in the Crimea during the Eastern campaign from February, 1856 (when he was advanced to the rank of surgeon), to the fall of Sebastopol, receiving the Crimean medal with clasp for Sebastopol and the Turkish medal. Whilst in the same corps he acted as Principal Medical Officer to the Southern India Field Force in the Northern Mahratta country and the Deccan in 1857–58, and was subsequently selected as head of the medical branch in the Director-General's Office in London, afterwards proceeding to India as the chief administrative medical officer of the Sirhind circle in Bengal. On his return from India he was appointed head of the Army Medical Department in Ireland. Not long afterwards he returned to India as Surgeon-General of Madras, and subsequently as Surgeon-General and Principal Medical Officer of Her Majesty's forces in that empire. He occupied that position during the latter part of the second Afghan Campaign, and was thanked for his services in General Orders by the Commander-in-Chief and by the Governor-General in Council. From this responsible post he returned in 1882 to assume the duties of Director-General of the Army Medical Service, in succession to Sir William Muir, which office he filled till his retirement in May, 1889. Whilst serving as Principal Medical Officer in India, Surgeon-General Crawford was mainly instrumental in introducing the station hospital system into that country, by which a very large financial saving to the Indian Government was effected. Sir Thomas Crawford, who was created a K.C.B. in 1885, was, as we have already stated, an Hon. LL.D. of Edinburgh, an Hon. Fellow of the Royal College of Surgeons and of the Royal College of Physicians, Ireland, an M.Ch. of the Royal University of Ireland, and one of the honorary surgeons to

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Her Majesty from October, 1886. He had also been a member of the Senate of the Army Medical School at Netley. The deceased officer was twice married; his first wife died in 1860, and in 1869 he married the daughter of the late General Edwards, C.B. Lady Crawford, who was a most amiable and charming woman, died in the spring of the present year, to the great grief of all who knew her, but especially of her husband and their children, to whom their loss was an irreparable one. Sir Thomas Crawford's death has soon followed that loss, and it may be safely affirmed that no more upright or energetic public servant was ever conveyed to the grave than was borne there on Tuesday last. Sir Thomas Crawford, whose health and strength had been sensibly declining since his wife's death, suffered of late from the effects of prostatic disease and cystitis, on which uræmic symptoms eventually supervened. He was buried at Charlton Cemetery on the 15th inst., where his predecessor in the direction of the department and his great friend, Sir William Muir, lies interred.

Our illustration is a reproduction from a photograph by Mr. Wayland of Blackheath and Streatham.

THOMAS KEITH, M.D., F.R.C.S. EDIN.

THOMAS KEITH was born in the village of St. Cyrus, in Kincardineshire, on May 20th, 1827. He was the youngest but one of seven sons, three besides himself adopting the medical profession. His father was the well-known Rev. Dr. Keith, the author of several works on prophecy, the most noted of which was written more than half a century before his death, which took place at the age of eighty-nine. Always a delicate boy, Thomas Keith suffered from the early loss of his mother, and ascribed much of his ill-health through life to the want of proper care when a child. Educated first at the parish school, then at the Grammar School of Aberdeen and the High School of Edinburgh, he spent three years at the Arts classes at Aberdeen University, and then three in Edinburgh, being able to count one of these Aberdeen years as one of those necessary for the Edinburgh medical curriculum. In 1845 he was apprenticed to Sir J. Y. Simpson, and in his second year was put into the Maternity Hospital as house physician. In 1848, at the age of twenty-one, he graduated M.D., and was taken by Mr. Syme as his house surgeon. After fifteen months, and when he had arranged to stay another year with Mr. Syme, the appointment of physician to the British Embassy at Turin was offered to and accepted by him, and he spent two years in Italy. Returning to Edinburgh he became partner with his brother, Dr. George Skene Keith, in one of the largest general practices in that city, and in addition gave considerable attention to diseases of the ear, and up to the date of his leaving Edinburgh did a considerable amount of aural work. But his desire was always towards surgery. There is a certain amount of romance almost connected with his first operation of ovariotomy. In 1862 a workman employed putting in some windows was much impressed with Dr. Keith's knowledge of glass, which he had gained in the early days of photography, and spoke to him about his wife, who had a tumour. Dr. Keith gave the man little encouragement at first, but yielding after a time he saw the patient, and in answer to the inquiry whether the tumour could be removed told her and the husband that the operation of ovariotomy was nearly always fatal, that he had never seen it performed, but that he was willing to try. The patient said that she was willing to run any risk, and the ovarian tumour was removed in 1862, the case being complicated by a rupture of the cyst and double pleurisy. The husband was kept up most of the night before the operation boiling the water which was to be used, and one large sponge was inserted into the peritoneal cavity once; but the opinion of those present was that this dangerous interference with the peritoneum, as it was then thought, must not be repeated. Nature made a drain for the retained fluid towards the end of the second week by making an opening through the lower part of the wound. In this, his first case, Dr. Keith laid the foundation of his success—chemical cleanliness was what he aimed at, cleanliness not so much of the surroundings as of the patient and of everything that was to come in contact with her, and he also saw the necessity of leaving the peritoneal cavity dry. His second case also recovered; the third he found dead in bed one morning and the nurse lying dead drunk on the floor; the fourth was the largest he ever removed, the tumour lying not only on the thighs, but on the legs of the patient. The operation was performed in a cottage in the country, and the weight of the tumour and fluid removed was 120 lb., in addition to which a large amount of fluid escaped on to the floor. When the patient was put back to bed apparently moribund Dr. Keith said to the nurse that she would not give her much trouble as she would die soon; some weeks later the woman had the pleasure of telling Dr. Keith what she had heard him say. These recoveries, with others which followed, made a great sensation, and Dr. Keith thus in conjunction with his friend Mr. (now Sir) Spencer Wells, who had begun his great work four years earlier, established on a firm footing the operation of ovariotomy in Great Britain and in a lesser degree over the whole world. It is mainly to these two men, friends for over thirty years, that abdominal surgery is in the position it is to-day, for they were instrumental in laying the foundation upon which all abdominal operations have been founded.

In 1864, after some months of almost constant vesical irritation and pain, during which Dr. Keith continued hard at work, Mr. Syme opened the bladder, but failing to find a calculus there he succeeded in removing one from the urethra. Within six weeks of being operated upon, and before the wound was healed, Dr. Keith with his wonderful energy performed a difficult operation in Dumfriesshire. In 1866 a visit to Koeberlé at Strasburg taught Dr. Keith the use of the spirit lamp for cleaning the points of all instruments. He also saw the catch forceps, at that time unknown in England, and brought home two of Koeberlé's drainage-tubes. These were seen to be too short, and it was evident to Dr. Keith that the drainage must be from the bottom of the pelvis. Until Dr. Keith commenced to use the carbolic spray in 1887 all his instruments were put through the flame of a spirit lamp, thus realising very much the idea of chemical cleanliness. His dressing for years for all wounds had been gauze or lint soaked in carbolic and glycerine. About 1866 Dr. Keith was asked to become surgeon for ovarian diseases to the Royal Infirmary. Unfortunately, the only room available was one in the medical house close to the small-pox and scarlet fever wards, and he therefore preferred to open a small private hospital, in which he operated on any poor woman who was sent to him either from the hospital or elsewhere, lodging, feeding, nursing, and sometimes burying, them at his own expense. When the new infirmary was opened in 1879 suitable, though inadequate, accommodation was found for him, and on one occasion as many as eighty patients were on the list waiting for admission. In 1885 his son, who for some time had unofficially been doing most of the work, was associated with him. Until the spray was used Dr. Keith's health had been improving, and for some years he had had no hæmorrhage from the kidneys; but the poison was too much for these organs damaged by the presence of cystine calculi for many years, and at first after long operations, and then after most, there was a return of these attacks of hæmaturia. The spray was not discarded, however, until patients began to suffer in the same way. Since then he returned very much to his old practice; every instrument was washed as carefully as formerly, but instead of the spirit lamp carbolic acid was used, the skin of the patient and everything that came in contact therewith was carefully disinfected, although the elaborate washing of hands and disinfecting of rooms was looked upon by him as unnecessary. As an example of his great success it may be mentioned that one day the undertaker who was employed when a death occurred in his private hospital stopped the nurse in the street and asked her if he had offended the doctor, explaining that he had had no work from him for such a long time.

In 1871 a portrait of Dr. Keith, along with a service of plate, was presented to Mrs. Keith. In making the presentation Professor Christison said: "There were several grounds which had led to this expression of admiration—viz., Dr. Keith's great success in treating one of the most terrible diseases which may affect the life of women, his disinterestedness, his fine character, his devotion to duty, and the appreciation of the great sacrifice he had made in pursuit of his object. The great operation which Dr. Keith had so often and so successfully performed had been at one time looked upon as almost certainly fatal, and had been kept from disuse by one or two bold surgeons until the time when Dr. Keith and another

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surgeon in the South had succeeded in establishing it as one of the legitimate operations in surgery." Ovariotomy led to other operations, and hysterectomy in his hands became almost as safe; but he never liked the operation, and condemned in no measured terms the number of such operations which are now performed. It was with keen interest that he watched the progress of Dr. Apostoli's treatment. In 1887 one of his sons went to Paris to learn the new method from Dr. Apostoli, and on his return Dr. Keith decided that no operation should be performed for fibroid tumours of the uterus until electricity had been fairly tried on a number of cases. Over one hundred tumours were thus treated, and the results on the whole were so good that Dr. Keith did not perform many operations for fibroid tumours of the uterus after that time, though, strangely enough, the last operation but one performed by Dr. Keith, now nearly three years ago, was a hysterectomy, his last being a fixing up of the uterus by his operation of clamping the broad ligament. In 1888 Dr. Keith left Edinburgh for London; he had missed greatly his old friends, the late Dr. Mathews Duncan and Sir Joseph Lister. In 1889 he paid a professional visit to Mexico, his second to the new world. On the 9th inst. Dr. Keith quietly passed away, after a life of uncomplaining suffering and ill-health, of which few knew, but none better than his life-long friend, Dr. Mathews Duncan, who, in a dedication, has described him as a "hero in surgery."

Dr. Keith is survived by his widow, four sons, and three daughters. Two of the sons are medical men.

JOHN WATERS, M.R.C.S. ENG.

THE death on Tuesday, the 8th inst., at the age of sixty-seven years, of Mr. John Waters, of 41, Bloomsbury-square, W.C., has been a source of deep regret to all his friends. His illness had lasted nearly eighteen months and was borne with exemplary patience. Having completed his professional education as a student of the Middlesex Hospital, he obtained the diploma of the Royal College of Surgeons of England in 1856. He subsequently became a Fellow of the Medical Society of London and was for some years one of the surgeons to the Farringdon Dispensary. Up to within a few weeks of his death he discharged with untiring zeal and energy the duties appertaining to his official capacity as a member of the various governing boards of the parishes of St. Giles and St. George, Bloomsbury. To a thoroughly practical knowledge of his profession he added a geniality of manner which procured for him the esteem and affection, not only of his patients, but also of a large circle of friends.

ALFRED JOHN WILLIAMS, M.R.C.S. ENG., L.R.C.P. LOND.

WE regret to announce the death, at the early age of thirty-two years, of Mr. Alfred John Williams, recently in private practice at West Hill, Wandsworth. Mr. Williams received his medical training at King's College Hospital, which he entered in 1884. He was house surgeon to Professor Cheyne whilst Professor Koch's treatment by means of tuberculin was being carried out in Professor Cheyne's ward. In his observation of the treatment he displayed great earnestness and ability, subsequently contributing the result of his studies to our columns under the heading "Notes on Tubercular Cases under Koch's Treatment in King's College Hospital." He afterwards became a surgeon on board one of the P. and O. Company's steamers. After two years in this post he settled down at Wandsworth, where, as parish medical officer during the eighteen months previous to his decease, he won the esteem of all classes for his devotion to the poor. He was attacked by typhoid fever whilst in the discharge of his duty, and died in the third week of his illness. At King's College Hospital Mr. Williams was well known for his devotion to duty, while his good-nature endeared him to all his contemporaries.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jos. Oettinger, formerly Professor of the History of Medicine in the University of Cracow.—Dr. V. J. Eltsinski, formerly Professor of Special Pathology in Moscow, at the age of sixty-two.

Medical News.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch. B.) in the subject or subjects indicated after their respective names (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

George Alexander (B., C.), Andrew Aitken Barclay (B., Z.), James Freeborn Bennett (B., P.), Andrew Brownlie (B., Z., C.), George Frederick Buchan (P.), James Carruthers, M.A., (C.), George Morris Crawford (Z.), Charles Peter Garvie Crichton (B., Z.), Charles Cheven Cumming (B., C.), William Dick (B., P.), James Austin Dickie (B., C.), Frank Lindsay Dickson (B., P.), David Curr Douglas (B., Z.), John Pinkerton Duncan (B., C.), Hugh Campbell Ferguson (Z., C.), Comyn MacGregor Finlay (B.), John Andrew Garden (Z., C.), George Gardner (B., Z., C.), John Gardner (Z., P.), George Garry (Z., C.), William Gibson (Z., C.), Hyam Goodman, M.A. (B., Z., C.), Charles Aikman Gourlay (Z.), Nicol Jamieson (Z., P.), Andrew Kerr (C.), John Francis Lambie (B.), Norman Maclean Leys (B., P.), Andrew Love (Z., C.), Ramsay Millar (B., C.), Ebenezer Mitchell, M.A., (Z., C.), Daniel Morrison (Z., C.), Peter MacIntosh M'Fadyen (B., C.), John M'Gilchrist (B., C.), Charles Forbes Maclean (B.), George Todd Maclean, M.A. (B., Z.), Norman Forbes Macleod (B.), William Johnston Maclure (Z., C.), John M'Millan (Z.), Wm. Seymour MacMillan, M.A. (B., Z., C.), John Patton (P.), Thomas Stephens Picken (B., C.), John Reid, Lanark (P., C.), David James Smith (B., C.), John Steele Smith (Z., P.), William Stewart Stalker (B., Z.), Peter Alexander Steven (Z., P.), Alfred George Stewart (B., P.), Thomas Morton Straug (P., C.), Robert Taylor (Z., C.), Charles Pinkerton Thomson (B., P.), William Brown Thomson (Z., C.), Joseph Swinburne Townley (P., C.), John Turnbull (B., Z.), Arthur Vost (B., Z., P.), Alexander Laurie Watson, M.A. (B., C.), Joseph White (Z., C.), Morgan Watkin Williams (B., C.), Alexander Wilson (B., C.), William Wright (B., C.), John Doctor Young (B., P.).—Women candidates: Marjorie King Henderson Fleming (B., Z.), Helen Mary Gordon (B., Z.), Mabel Hardie (B., Z.), Catherine Spence Howden (B., Z.), Jessie Sophia Beatrix Hunter (B., Z.), Ina Lochhead M'Neill (B., Z.), Maud Ada Richards (B., Z.), Elizabeth Helen Smith (B., Z.), Edythe Marjorie Walker (P., C.).

The following have passed the First Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Stewart Dunbar, George Munro MacLeod.—Women candidates: Martha Jane Gilmore Cox.

The following have passed the Second Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (A., Anatomy; P., Physiology; M.M. and T., Materia Medica and Therapeutics):—

Alexander Smith Allan (M.M. and T.), James Alston (A., P., M.M. and T.), George MacLellan Blair (M.M. and T.), John George Wilson Boleyn (A., P.), William Cochran Burns (A., P.), David Louis Cairns (M.M. and T.), Francis James Charteris (M.M. and T.), George Clark (A., P., M.M. and T.), Joseph Adam Clarke (M.M. and T.), George Coats (A., P., M.M. and T.), George William Coats (M.M. and T.), James Duncan Cochran (M.M. and T.), Joseph Muir Corbett (A., P., M M. and T.), Robert Crawford (A., P.), John Crow (A., P.), Walter Scobie Findlay, M.A. (M.M. and T.), James Finlayson Fleming (M.M. and T.), Adrian Andrew Forrester (M.M. and T.), Thomas Bonnar Garvie (A., P., M.M. and T.), Thomas Hunter, M.A. (A., P.), Alexander Lawrie (P., M.M. and T.), Alexander Millar Lindsay (A., P.), John Watson Little (A., P., M.M. and T.), John MacDonald (M.M. and T.), Murdoch Macdonald (A., P.), James M'Haffie (M.M. and T.), David M'Kail (M.M. and T.), Laurence Abel Mackenzie (A., P., M.M. and T.), James M'Queen, M.A. (M.M. and T.), James Service Ormond (A., P., MM. and T.), John Reid, Glasgow (A., P., M.M. and T.), Norman Emil Henry Scott (M.M. and T.), Robert Scott (A., P.), John Laird Simpson (A., P.), Alexander Bankier Sloan (M.M. and T.), Samuel Macfarlane Sloan (M.M. and T.), David Steele Smith (M.M. and T.), John M'Callum Stewart (A., P., M.M. and T.), Donald Sage Sutherland (A., P., M.M. and T.), James Douglas Carnon Swan (A., P.), Matthew Logan Taylor (M.M. and T.), Daniel Rees Thomas (A., M.M. and T.), Walter Lewis Thomson (M.M. and T.), William James Alexander Walker (A., P.), William Watson (M.M. and T.), John Wotherspoon (A., P.), William Wyper (M.M. and T.), David John Young (M.M. and T.)—Women candidates: Daisy Annabelle Bennett (A.), Mary Gardner (A., P.), Jane Lorimer (A., P.), Minna Amelia Macfarlane (A., P.), Agnes Renton Robson (A., P.), Catherine Love Smith A., P.), Jessie Hawkesworth Smith (M.M. and T.).

The following have passed the Second Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Andrew Phillips Aitken, Walter Colquhoun, M.A., William Duncan, Charles Elphinstone Fleming, James Millar, James Rankin, B.Sc., Alexander Page Robertson, David Wallace Smith, Alex. James Thompson Swann.—Women candidates: May M'Mullen Pearson.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

(*A*) *Including Pathology.*—William Allen, James Mitchell Bonar, Hugh Borland, William Brown, James Butler, Hugh Calderwood,

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B.Sc., John Lindley Carstairs, M.A., Thomas Cochrane, Peter Latimer Leitch Craig, M.A., James Gardner, William Hansen, John Hepburn Lyell, Archibald Mason, Andrew Brown Murray, Norman Macnair, B.Sc., Robert Nelson, William Seaton Paterson, David Lyon Stevenson, M.A., Henry Hyslop Thomson, Andrew Colville Wilson, B.Sc.—Women candidates: Agnes Jane Anderson, Mary Philip Graham, and Mildred Ransome.

(*B*) *Not including Pathology.*—Donald M'Gregor Campbell, John Arthur Clarke Doonan, John Sharp Douglas, Charles Lowson, William Martin, M.A., John Irvine MacMillan, M.A., William M'Mullen Pearson, James Hood Rankin, James Rutherford Ratcliffe, Alexander Robertson, and John Taylor.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated on Wednesday, Oct. 9th:—

Anatomy and Physiology.—Laurence Otway Fuller, Edward Augustus Bullmore, Walter Sirr Sheldon, and Arthur Edward Francis, University College, London; Nelson Joseph Roche and Victor Stanley Partridge, Charing-cross Hospital; Charles Louis Francia, Bernard Edward Granville Bailey, Edmund Newton Berryman, Alexander Hampton Brewer, and John Kenneth Sprot Fleming, St. Bartholomew's Hospital; William Reginald Cazenove, Harold Percy Waller Barrow, Jenkins Howells, and Norman Williams, Guy's Hospital; Frank Bawtree, St. Thomas's Hospital; Warren Meade, St. George's Hospital; Harry Hipwell, Middlesex Hospital; and Kenneth de Risley Bell and Henri Nelson Harness, King's College, London.

Anatomy only.—Henry Priest Shanks, University College, London; and Edgar Curnow Plummer, King's College, London.

Sixteen gentlemen were referred in both subjects, and one in Anatomy only.

Thursday, Oct. 10th:—

Anatomy and Physiology.—George Gunning Campbell, Edward Percy Court, William Henry Cazaly, John Dalebrook, and Norman Humbert Joy, St. Bartholomew's Hospital; Peter Rowley Tarbet and David Llewelyn Kurtz Pritchard, University College, London; Arthur Daniel Lewis, Hugh Watson Fox, and William Walter Harrison, Guy's Hospital; Harold Cotterell Adams, Middlesex Hospital; James Charles Stewart Oxley, St. Thomas's Hospital; John Ignatius Worgan Morris and Llewellyn Lindop, St. Mary's Hospital; Ralph Bignell Ainsworth and Francis Barrallier Thompson, St. George's Hospital; and Fritz John Alfred Beringer, London Hospital.

Anatomy only.—Arthur Wellesley Penrose, Guy's Hospital; Arthur Cyril Bird, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Walter Amsden, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Frank Howard Lawson and Edward Simpson Shave, Middlesex Hospital; and Ernest John Distin and John James Cecil Hamilton, King's College, London.

Physiology only.—George Herbert Doming, St. Thomas's Hospital; and Colville Smith Agnew, Charing-cross Hospital.

Twelve gentlemen were referred in both subjects, one in Anatomy only, and one in Physiology only.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bahia:* Dr. José Carneiro de Campos has been appointed Professor of Anatomy.—*Buda-pest:* Dr. Julius Elischer, Lecturer on Gynæcology, has been granted the title of Professor.—*Cracow:* Dr. Jakubowski has been promoted to the Ordinary Professorship of Children's Diseases.—*Innsbruck:* Dr. Dimmer of Vienna has been appointed to the chair of Ophthalmology.—*Munich:* Dr. Otto Frank has been recognised as *privat-docent* in Physiology, Dr. H. Neumayer as *privat-docent* in Laryngology, and Dr. Martin Hahn as *privat-docent* in Hygiene.—*Prague (Bohemian University):* Dr. F. Marés has been promoted to an Ordinary Professorship of Physiology.—*Rostock:* Dr. Schuchardt has been appointed to the newly established Professorship of Psychiatrics.

THE TENTH ANNIVERSARY OF THE INTRODUCTION OF THE "SAFETY" BICYCLE.—In an annotation in the last issue of THE LANCET on "The Dangers of Cycling" mention was made of the introduction of a machine in 1885 which has served as the model upon which the most popular machines have since been constructed. The name of this machine, which was omitted by an inadvertence, is the "Rover," and a dinner in commemoration of the tenth anniversary of its introduction was recently given by its inventor, Mr. J. K. Starley, at the Café Royal, Regent-street, W.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The following Entrance Scholarships have been awarded:—In Arts, an Entrance Scholarship of £145 to Mr. Thomas Crisp English, and Entrance Scholarships of £50 to Mr. Henry Ayrton Chaplin, Mr. Lidbrooke Frank Cope, and Mr. Lawrence Jones. In Science, Entrance Scholarships of £85 to Mr. Herbert Stringfellow Pendlebury, B.A., Pembroke College, Cambridge; to Mr. Henry Goodridge Deller, B.A., Trinity College, Cambridge; and to Mr. John Howell Evans, B.A., non-collegiate student of Oxford. The two last named were bracketed, but owing to the excellence of their papers a full scholarship was awarded to each.

KING'S COLLEGE, LONDON.—Entrance scholarships have been awarded at this College to the following gentlemen—viz., to Mr. R. N. Batterbury, a Warneford scholarship of the value of £25 for three years, and to Messrs. J. G. Pritchard and H. G. Wright similar scholarships for two years each. The Clothworkers' Exhibitions have been awarded to Mr. C. F. Mott (£30 for two years) and Messrs. R. H. C. Gompertz and C. L. Cartwright (£20 for two years). The Sambroke Exhibitions have been awarded to Mr. W. L. Stuart (£60) and A. C. Williams (£40).

THE WATER QUESTION AT GODALMING.—The corporation of the borough of Godalming has decided in favour of public as against private water-supply, and intends to purchase the undertaking of the local water company. The value of the works is put at £33,267 and the price asked is £37,500; mortgage debentures, transfer costs, and additional necessary storage works will run the total figure up, it is estimated, to £48,000. It is proposed to borrow this sum, with interest payable during the first five years, and capital and interest by equal instalments during the succeeding fifty-five years, a sixty years' loan in all. The same evening the corporation agreed to apply for a provisional order to light the borough by electricity.

THE DIFFUSION OF SMALL-POX.—The information reaching us concerning the prevalence of small-pox during the first fortnight of the present month shows continued diminution of the disease in the provinces as well as in London. In the metropolis the last three weeks of September had shown cases to the number of 42, 23, and 21 respectively as having been removed to hospitals of the Metropolitan Asylums Board or to the Highgate Small-pox Hospital, wherein the cases remaining under treatment in the same weeks had fallen from 307 to 234; whilst in the opening week of October the new attacks removed numbered only 17, and the patients under isolation had fallen still further to a total of 198. There was one registered death, the deceased belonging to the Wandsworth sanitary area and being an unvaccinated infant under the age of twelve months. Last week the decline continued, only 9 cases occurring, and the hospitals housing on Saturday, Oct. 12th, only 153 patients suffering from small-pox—a total considerably less than half that which obtained at the close of August. There were two registered deaths, occurring in unvaccinated children belonging to as many sanitary areas in East London. Whilst, therefore, we can congratulate ourselves on a falling record of small-pox occurrences in the metropolis, it is well to remember that the period of autumnal recrudescence is upon us, and that action of a preventive character cannot with prudence be relaxed in view simply of a present quiescence of the malady. In the home counties small-pox has apparently disappeared for the present, and in the midland counties attacks are solitary in their occurrence, the few cases cropping up westward being scattered, and the northern districts east of Lancashire having a free bill of health in this respect. There has, however, been a serious outbreak in the Wigan district. At Aspull it has been so widespread that the schools have been closed for an indefinite period, and it is reported that a large number of persons have been removed to the sanatorium. On Tuesday of last week it was ascertained that 14 persons had been removed from Aspull to the institution, and that, including cases from the borough of Wigan, there were over 20 patients in the hospital suffering from small-pox. In the city of Manchester there have been upwards of a score of attacks since the beginning of September, the district of Openshaw being chiefly in question, though cases have also arisen in Newton Heath and Beswick localities of the city. The adjacent borough of Salford, nevertheless, continues free from the disease. In Oldham much more favourable accounts are to hand, for whereas in the fortnight ended Sept. 21st there were 11 new cases, there was not 1 recorded in the succeeding fortnight, 1 death, however, being registered. The last week of September and the initial week of October have not been so fortunate for Dublin in the matter of small-pox as earlier recent weeks, for in the last week of the month there were 2 deaths registered, both in vaccinated adults aged over twenty years; and whilst only 2 new cases were admitted to hospital, leaving 18 under treatment at the close of the month, the next week witnessed 11 fresh admissions, with another death in a vaccinated adult; and the hospital roll showed 27 patients as being under isolation on Oct. 5th.

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THE committee of the Bethnal Green Free Library have received from Mr. Charles Welch, F.S.A. (librarian at the Guildhall), and his brother, Mr. S. Welch, M.R.C.S., the gift of the library of their late father, Mr. Charles Welch of Hackney-road, who was for more than forty years the friend of the poor of Bethnal-green and medical officer of the district, and who always took a warm interest in the progress of the institution. In order to provide new shelving and bookcases for this and other gifts to the library and pay for cataloguing about £100 will be required, and the committee will be deeply grateful for any contributions, which should be sent to Mr. G. F. Hilcken at the Library, London-street, E.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the quarterly court of the directors held on Oct. 9th, the President, Sir James Paget, being in the chair, two new members were elected. There were no fresh applications for grants. Applications for continued assistance were read from 51 widows, 8 orphans, and 4 orphans on the Copeland Fund, and it was determined that a sum of £1182 10*s.* should be distributed at the next court subject to the report of the visitors. A sum of £452 was voted to be given at Christmas—viz., £8 each to the 51 widows, £3 each to the orphans, and £5 each to the 4 orphans on the Copeland Fund. A grant of £20 towards the self-maintenance of an orphan was made, and a special grant of 10 guineas was given to a widow. The expenses of the quarter amounted to £55 9*s.*

ÆSCULAPIUS LODGE.—The installation meeting was held at the Café Royal, Regent-street, on Wednesday, the 9th inst., when G. Crawford Thomson, M.D., was installed Master for the ensuing year. W. Anthony Nutt was appointed Senior Warden, G. Danford Thomas, M.D., Junior Warden, J. Pickett, M.D., Treasurer, and Thomas Dutton, M.D., Secretary. T. Horrocks Openshaw, M.B., M.S. Dunelm., F.R.C.S. Eng., was elected a joining member. Messrs. William Harrison, M.A. Cantab., and R. T. Hacker Bodilly, L.R.C.P. Lond., M.R.C.S. Eng., were admitted members. A cordial vote of thanks was recorded to Lennox Browne, F.R.C.S. Edin., G. Danford Thomas, M.D., and Thomas Dutton, M.D., for the very able manner in which they had carried out the work of the smoking concert which the lodge and chapter gave to the provincial medical Masons during the meeting of the British Medical Association in London last August. After the transaction of other routine business the lodge was closed and the brethren adjourned to the banqueting room, where they entertained visitors who had honoured the lodge with their company. A most enjoyable social evening was spent.

BEQUESTS TO HOSPITALS.—Mrs. Mary Ash, late of Victoria-square, Bristol, has bequeathed £200 each to the following Bristol medical charities—namely, the Royal Infirmary, the General Hospital, the Children's Hospital, the Medical Mission, and the Clifton Dispensary.—The late Mr. Alfred Lee of Mount Hermon, Woking, has bequeathed £500 free of duty to the Surrey County Hospital.—The managing committee of the Wolverhampton Eye Infirmary has received from the executors of the late Mr. John Parkes £250.—The late Mr. John Hughes of Wynnstay, Sefton Park, Liverpool, has bequeathed £350 to the Liverpool Blue Coat Hospital, £300 to the Liverpool Eye and Ear Infirmary, £200 each to the Liverpool Royal Infirmary and the Royal Southern Hospital, and £100 to the Stanley Hospital.—Miss Frances B. Fetherstonhaugh, late of Up Park, Sussex, has bequeathed £500 to the Chichester Infirmary.—The late Mr. Bernard V. Hall of Liverpool has bequeathed £5000 to the Liverpool Royal Infirmary, £2500 each to the Liverpool Royal Southern Hospital and the Liverpool Royal Northern Hospital, and £1000 to the Ladies' Charity and Lying-in Hospital.—Mr. Henry Nathan, late of Pembroke-gardens, London, has bequeathed £100 to the Jewish Hospital and Orphan Asylum, Lower Norwood, £50 each to the Metropolitan Free Hospital, Gray's Inn-road, the London Hospital, and the German Hospital, Dalston, and £100 each to the Birmingham General Hospital, the Birmingham Children's Hospital, and the Birmingham Queen's Hospital.—The late Mr. William Woolfall of Liverpool and New Brighton has by his will left the following legacies: Liverpool Royal Infirmary, £2000; Northern Hospital, £500; Royal Southern Hospital, £500; Stanley Hospital, £200; Wallasey Cottage Hospital, £100; Wallasey Dispensary, £100; Liverpool Hospital for Consumption, £100; Liverpool Dispensaries, £200; Liverpool Dental Hospital, £100; Liverpool Hospital for Cancer &c., £100; Liverpool Eye and Ear Infirmary, £100; and the Liverpool Infirmary for Children, £100.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
- Aids to the Analysis of Food and Drugs. By T. H. Pearmain and C. G. Moor, F.C.S.
- A Manual of Physiology, with Practical Exercises. By G. N. Stewart, M.D. Edin., D.P.H. Camb. Illustrated. University Series. 1895. pp. 796. Price 15*s.*
- An Atlas of Ophthalmoscopy. By Dr. O. Haab. Translated and edited by Ernest Clarke, M.D., B.S. Lond.
- The Methods of Microscopical Research. Second Edition. By A. C. Cole, F.R.M.S. 1895. pp. 207.
- The Tallerman-Sheffield Patent Localised Hot-air Bath. With Notes. 1895. pp. 51.

BIGGS AND CO., Salisbury-court, Fleet-street, London.
- Sewerage and Sewage Disposal of a Small Town. By R. B. Savage, A.M.Inst.C.E. Illustrated. With Index. pp. 78. Price 5*s.* 2*d.*

BLACKIE AND SON, Old Bailey, London, E.C.
- A Knight of the White Cross: a Tale of the Seige of Rhodes. By G. A. Henty. Illustrated. 1896. pp. 392. Price 6*s.*
- At War with Pontiac; or, the Totem of the Bear: a Tale of Redcoat and Redskin. By Kirk Munroe. Illustrated. 1896. pp. 320. Price 5*s.*
- Blackie's Science Text-books: Elementary Physiology. By J. R. A. Davies, B.A. Camb. 1895. pp. 216. Price 2*s.*
- For Life and Liberty: a Story of Battle by Land and Sea. By Gordon Stables, M.D., R.N. Illustrated. 1896. pp. 352. Price 5*s.*
- "Hallowe'en" Ahoy! or, Lost on the Crozet Islands. By Hugh St. Leger. Illustrated. 1896. pp. 320. Price 4*s.*
- The Tiger of Mysore: a Story of the War with Tippoo Saib. By G. A. Henty. Illustrated. 1896. pp. 379. Price 6*s.*
- Through Russian Snows: a Story of Napoleon's Retreat from Moscow. By G. A. Henty. Illustrated. 1896. pp. 352. Price 5*s.*

BROWN, H. & W., Fulham-road, London, S.W.
- The Art of Horse-shoeing. A Manual for Farriers. By W. Hunting, F.R.C.V.S. Illustrated. 1895. pp. 115. Price 3*s.* 6*d.*

CROSBY LOCKWOOD AND SON, Stationers' Hall-court, Ludgate-hill, London, E.C.
- Rural Water-supply. By Allan Greenwell, A.M.I.C.E., and W. T. Curry, A.M.I.C.E., F.G.S. 1896. pp. 210.

DIGBY, LONG, AND CO., Bouverie-street, Fleet-street, London.
- Perfect Womanhood: a Story of the Times. By Fred. J. Gant, F.R.C.S. 1895. pp. 237. Price 3*s.* 6*d.*

HEINEMANN, WM., Bedford-street, London.
- Movement. By E. J. Marey. Translated by Eric Pritchard, M.A., M.B. Oxon. Illustrated. 1895. pp. 323. Price 7*s.* 6*d.*

LONGMANS, GREEN, AND CO., London.
- A Manual of Pathology. By Joseph Coats, M.D. Third Edition. Illustrated. 1895. pp. 1130. Price 31*s.* 6*d.*
- Darwin, and after Darwin. An Exposition of the Darwin Theory and a Discussion of Post-Darwin Questions. By the late George J. Romanes, M.A., LL.D., F.R.S. Vol. II. 1895. pp. 344. Price 10*s.* 6*d.*
- The Methodical Examination of the Eye. Being Part I. of a Guide to the Practice of Ophthalmology. By Wm. Lang, F.R.C.S. Eng. 1895. pp. 96. Price 3*s.* 6*d.*

LIPPINCOTT, J. B., Co., Philadelphia.
- Cutaneous Medicine: a Systematic Treatise on the Diseases of the Skin. By L. A. Duhring, M.D. Part I. Illustrated, 1895. pp. 221.

LIVINGSTONE, E. & S., Edinburgh.
- The Urine in Health and in Disease, together with its Chemical Examination. By H. Aubrey Husband, M.B., B.Sc. Illustrated. Third Edition. 1895. pp. 143. Price 1*s.* net.

MACMILLAN AND CO., London.
- The Structure of Man; an Index to his Past History. By Dr. R. Wiedersheim. Translated by H. and M. Bernard, the Translation Edited and Annotated by G. B. Howes, F.L.S. Illustrated. 1895. pp. 227. Price 8*s.* net.

PENTLAND, YOUNG J., Edinburgh.
- Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. 1895. Fasciculus 12.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
- Twentieth Century Practice: an International Encyclopædia of Modern Medical Science by leading authorities of Europe and America. Edited by Thos. L. Stedman, M.D. In twenty volumes. Vols. i., ii., and iii. 1895. Prices 21*s.* and 30*s.* each, net.

SMALLMANN, CARL, Basel und Leipzig.
- Vorlesungen über chirurgische Infectionskrankheiten. Von Dr. T. Kocher und Dr. E. Tavel. Erster Theil. 1895. pp. 225.

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, Northumberland-avenue, London, W.C.
- Simple Methods for Detecting Food Adulteration. By John A. Bower. Illustrated. 1895. pp. 118. Price 2*s.*

SWAN SONNENSHEIN AND CO., London.
- Moral Pathology. By Arthur E. Giles, M.D., B.Sc. 1895. pp. 179.
- Stories for Ten-Year-Olds. By Frances W. Saunders. Series I. 1895. pp. 216. Price 2*s.* 6*d.* net.

THE GRAPHOTONE COMPANY, Maclean's-buildings, London, E.C.
- Weather and Disease: a Curve History of their Variations in Recent Years. By Alex. B. MacDowall, M.A., F.R.M.S. 1895. pp. 82. Price 2*s.* 6*d.*

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THE SCIENTIFIC PRESS, Strand, London.
Diet in Sickness and in Health. By Mrs. Ernest Hart. With an Introduction by Sir Henry Thompson, F.R.C.S., M.B. Lond. 1895. pp. 219. Price 3s. 6d.

UNWIN, T. FISHER, Paternoster-buildings, London, E.C.
Dog Stories. From the *Spectator*. Introduction. By J. St. Loe Strachey. 1895. pp. 264. Price 5s.

WERTHEIMER, LEA, AND CO., Circus-place, London-wall, London.
Penological and Preventive Principles, with Special Reference to Europe and America. By William Tallack, Secretary of the Howard Association, London. Second Edition. 1896. pp. 480. Price 8s.

The Natural History of Plants, Part 16, now completed, with Glossary and Index (Blackie and Son, 50, Old Bailey, London); price 2s. 6d. net.—The Treatment of Diphtheria by Antitoxin; by Wm. H. Welch, M.D. (reprint from the Transactions of the Association of American Physicians, vol. x., 1895).—China: Imperial Maritime Customs: 11, Special Services; No. 2, Medical Reports for the year ended September 30th, 1893, forty-fifth and forty-sixth issues (P. S. King and Son, King-street, Westminster, S.W.).—The Case against Butcher's Meat; by Charles W. Forward; illustrated; pp. 100 (The Insurance Publication Depôt, Dorset-street, London, E.C.); price 1s.—University of London: Accessions to the Library, 1886 to June, 1895 (Eyre and Spottiswoode, London, 1895).—Calendar of the Royal College of Surgeons of England, July 11th, 1895 (Taylor and Francis, Red Lion-court, Fleet-street, London): price 1s.—Observations on Congenital Dislocation of the Hip: by Bernard E. Brodhurst, F.R.C.S.; 1895 (J. & A. Churchill, New Burlington-street, London); price 1s.—The Royal Natural History, vol. iv., Part 24 (F. Warne and Co., Bedford-street, Strand, London); price 1s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARR, J. F., M.B., M.S. Glasg., has been appointed Assistant House Surgeon to the Glasgow Sick Children's Hospital.

BLANEY, A. J. M., M.B., B.Ch. Irel., has been appointed Physician to the Extern Department of the St. Vincent's Hospital, Dublin.

BRYANT, J. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Lecturer to the Nursing Staff, Guy's Hospital, London, vice Campbell.

CHALMERS, G., M.B., C.M. Edin., has been appointed Medical Officer to the York Board of Guardians.

CHARLES, R. P., has been appointed Analyst for the borough of Neath, vice Morgan.

COTTON, CHARLES, F.R.C.P. Edin., has been appointed Physician to the Seaman's Infirmary and General Hospital, Ramsgate, vice Dr. Leeds, resigned.

CRAIG, J. A., M.B., B.Ch., R.U.I., has been appointed Second House Surgeon to the Royal Southern Hospital, Liverpool.

DALGARNO, J. J. Y., M.B., C.M. Aberd., has been appointed Assistant Anæsthetist to the Aberdeen Royal Infirmary.

DEACON, J. G., M.D., M.Ch., D.P.H., L.A.H., has been appointed Medical Officer to No. 4 District of the Croydon Union, vice the late Dr. Case.

DEAN, GEO., M.B., C.M. Aberd., has been appointed to an Assistantship of Pathology in the Aberdeen University.

ENGLISH, S., M.B., C.M. Glasg., has been appointed Dispensary Surgeon to the Glasgow Sick Children's Hospital.

FINDLAY, WM., M.B., C.M. Aberd., has been appointed to an Assistantship of Practice of Medicine in the Aberdeen University.

FLETCHER, J. L., M.B., C.M. Edin., has been appointed Medical Officer of Health for the South Darley Urban Sanitary District, vice Cantrell, resigned.

GARROD, THOMAS A., M.D. Edin., has been appointed Physician to the Newport and County Infirmary, vice Davies, deceased.

GILBERT, JOHN, L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Crusheen Dispensary District.

GORDON, JOHN, M.D., C.M. Aberd., has been appointed to an Assistantship of Materia Medica in the Aberdeen University.

HUNTER, W. K., M.B., M.S. Glasg., has been appointed an Honorary Physician to the Glasgow Sick Children's Hospital.

LOW, ALEX., M.B., C.M. Aberd., has been appointed to an Assistantship of Anatomy in the Aberdeen University.

MCKERRON, R. G., M.B., M.S. Aberd., has been appointed to an Assistantship of Midwifery in the Aberdeen University.

MCLAREN, ALICE J., M.D. Lond., B.S., has been appointed an Honorary Physician to the Glasgow Sick Children's Hospital.

MILNE, J. B., M.B., C.M. Aberd., has been appointed Honorary Medical Officer to the Sheffield Children's Hospital, vice Cleaver, deceased.

PARHAM, WM. M., M.D., C.M. Edin., has been appointed Medical Officer for the Workhouse, Brecknock Union, vice Williams, resigned.

POLLARD, CHAS., M.D. Brux., F.R.C.S. Eng., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Halt Sanitary District of the Martley Union.

RENTON, W., L.R.C.P. Edin., L.R.C.S. Edin., L.M., L.S.A. Lond., has been appointed Clinical Assistant to the South London Royal Ophthalmic Hospital.

RIGG, S. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal United Hospital, Bath, vice W. A. Sharpin.

SAYERS, M. H., has been appointed Resident House Surgeon to the Royal Orthopædic Hospital.

SENIOR, A., M.B., B.C. Camb., has been appointed Medical Officer of Health by the Esher Urban District Council.

SUTHERLAND, L. R., M.B., M.S. Glasg., has been appointed Pathologist to the Glasgow Sick Children's Hospital.

SWALES, C. P. N., L.S.A., has been appointed Medical Officer for the Colwick Sanitary District of the Stafford Union, vice Tylecote.

TAYLOR, H. S., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Clayton Hospital, Wakefield.

THOMAS, J. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Borough of Lowestoft.

THOMPSON, G. R., has been appointed Analyst for the county of Monmouth, vice Morgan.

THOMPSON, J. R., M.B., B.Ch., R.U.I., has been appointed Third House Surgeon to the Royal Southern Hospital, Liverpool.

TIPPETT, SYDNEY G., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Westminster Hospital.

WALKER, W. W., B.A., M.B., B.C. Cantab., has been appointed Assistant Physician to the Peterborough Dispensary and Infirmary.

WEBB, A. L., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Clayton Hospital, Wakefield.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, S.W.—Surgeon to out-patients.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries £70 and £50 respectively, with board, washing, and attendance at the institution.

CARLISLE DISPENSARY.—House Surgeon. Salary £130 per annum, with apartments (not board). Applications to the Hon. Sec., 14, Bank-street, Carlisle.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months. Salary £20, with board and residence in the Hospital. Also, House Surgeon, for six months. Salary £20, with board and residence in the Hospital.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary 100 guineas per annum, with board (no liquors), lodging, and washing. Applications to the Town Clerk, Town Hall, Hull.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum for the senior post.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Examiner in Public Health.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Surgeon.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 a year to £130, with furnished rooms, coal and gas, and an extra allowance of £25 for travelling expenses. Applications to the Hon. Sec., The Firs, Norton, Stourbridge.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon (non-resident). Salary £200 per annum.

Births, Marriages and Deaths.

BIRTHS.

DAVIES.—On Sept. 24th, at Landour, North-West Provinces, India, the wife of Surgeon-Major A. M. Davies, Army Medical Staff, of a son.

HUDSON.—On Friday, Oct. 11th, at 16, Harley-street, Cavendish-square, W., the wife of C. E. Leopold B. Hudson, F.R.C.S., of a son.

MATHESON.—At Duntulm, North Berwick, on Oct. 10th, the wife of Angus Matheson, M.D., of a son.

ORD.—On Oct. 16th, at 2, Queen-street, Mayfair, the wife of William Wallis Ord, M.D., of a daughter.

MARRIAGES.

COX—WARNER.—On Sept. 3rd, at the Roman Catholic Church, Saharanpur, India, John Hugh Cox, I.C.S., fourth son of the late Surgeon-General Charles Lindsay Cox., F.R.C.S.L., to Augusta Edith, elder daughter of the late Edward John Rudyerd Warner, Barrister-at-Law and Government Advocate of the North-west Provinces, India.

SMYTH—STANLEY.—On Sept. 3rd, at the Cathedral, Shanghai, Richard Smyth, M.B., Trinity College, Dublin, C.M.S. Hospital, Ningpo, to Gertrude, eldest daughter of Charles Stanley, Lancaster-gate, W.

DEATHS.

CRAWFORD.—On Oct. 12th, at his residence, St. John's-park, Blackheath, London, S.E., Sir Thomas Crawford, K.C.B., M.D. Edin., Director-General, Army Medical Department (retired) aged 71.

EVANS.—On Oct. 10th, Evan William Evans, M.R.C.S., of Tadley, Hants, aged 43.

KEITH.—On Oct. 9th, at Charles-street, Berkeley-square, W., Thomas Keith, M.D. Edin., LL.D., F.R.C.S. Ed., aged 68.

MESSER.—On Oct. 9th, at Belgrave-place, Edinburgh, John Cockburn Messer, M.D. Edin., F.R.C.S.E., Deputy Inspector-General of Hospitals and Fleets, R.N., retired.

SHELTON.—On Oct. 12th, at Bolton-street, Piccadilly, Surgeon-General G. A. F. Shelton, aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. Frederic Hewitt and Mr. A. Marmaduke Sheild: On Posture in its relation to Surgical Operations under Anæsthetics.

WEDNESDAY.—HUNTERIAN SOCIETY.—8.30 P.M. Dr. G. Sims Woodhead: The Probable Limitations of Serum Therapy.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Introductory Address by the President. Papers:—Dr. Radcliffe Crocker: Impetigo Contagiosa Gyrata.—Mr. R. W. Parker: Sequel to a case of Removal of the Right Patella for Primary Sarcoma; Recurrence after Six Years in the Iliac Glands; Death.—Dr. A. Wilson: The Treatment of Acute Pleural Effusion by Incision.—Mr. C. Mansell Moullin: Suprapubic Cystotomy and Prostatectomy in cases of Multiple Calculi.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Mr. G. Stoker: Chronic Glandular Disease of the Naso-pharynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Delusional Insanity. Paranoia.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION &c., BROMPTON.—Dr. T. H. Green: Pleural Effusion.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Pityriasis Rubra Pilaris.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Keetley: Surgical Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. C. A. Ballance: Selected Surgical Cases—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Buzzard: Cases in the Hospital.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. A. Pearce Gould: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Anthrax and Malignant Œdema.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Stupor, Catalepsy, Katatonia, Dementia.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—Dr. Morgan Dockrell: Diseases of Sweat Glands.

During the week marked copies of the following newspapers have been received:—*Oban Express, Huddersfield Examiner, Wolverhampton Chronicle, Newcastle Leader, Northern Echo, Herts Reporter, Chorley Guardian, Hampshire Independent, Barnsley Chronicle, Craven Herald, Leicester Post, Manchester Guardian, Sheffield Telegraph, Truth, Dorset City Chronicle, Brighton Gazette, Times of India, Pioneer Mail, Builder, Scotsman, Citizen, Architect, Irish News, Liverpool Daily Post, Sanitary Record, Leeds Mercury, Brighton Examiner, Eastern Morning News, Lymington Chronicle, Yorkshire Post, Birmingham Gazette, Bristol Mercury, West Middlesex Standard, Local Government Chronicle, Reading Mercury, Mining Journal, City Press, Weekly Free Press and Aberdeen Herald, Buchan Observer, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Guy's Hospital Gazette, Down Recorder, Irish News, Le Courrier de la Presse, Western Daily Mercury, Musselburgh News, Long Eaton Advertiser, Arbroath Herald, Wisbeach Standard, North Cambridgeshire Echo, Ipswich Journal, Buckingham Express, &c., &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 17th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 11	30·06	N.W.	47	45	85	57	40	...	Fine
,, 12	30·12	W.	53	50	92	62	47	...	Cloudy
,, 13	30·29	W.	55	52	66	57	50	...	Overcast
,, 14	30·05	W.	52	50	77	60	50	...	Cloudy
,, 15	29·97	S.E.	52	51	80	63	49	...	Foggy
,, 16	30·11	N.E.	51	50	83	54	50	0·20	Cloudy
,, 17	30·47	N.E.	43	41	83	53	40	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"APPOINTMENT OF HOUSE SURGEON TO THE NORTH CAMBS HOSPITAL, WISBECH."

To the Editors of THE LANCET.

SIRS,—As the letter in THE LANCET of Oct 5th from "J. S. B., D. S., and R. E." may leave your readers under an erroneous impression, I should be obliged if you would allow me to state the facts of the case, with which those gentlemen were not acquainted. For the post of house surgeon there were eighteen candidates, *of whom Dr. Taylor was one.* He and the other seventeen sent in testimonials, all of which, I may say, were of very high character. From the eighteen candidates, after careful consideration, were selected *four, of whom Dr. Taylor was one.* He was acting as locum-tenent for the retiring house surgeon, and was informed verbally. Our honorary secretary, in writing to the other three, by a clerical error which we all regret, mentioned *three* as the number selected. In summoning the members of the committee to the special meeting he mentioned *four.* At this meeting each of these four gentlemen was invited in turn to interview the committee. After these interviews and some discussion the matter was put to the vote. Of the nineteen members of the committee twelve voted for Dr. Taylor, who was accordingly elected.

I am, Sirs, your obedient servant,

Wisbech, Oct. 10th, 1895. ROBERT R. R. WATTS, Chairman.

PERSISTENT HICCOUGH AND SNEEZING: A SUGGESTION WANTED.

To the Editors of THE LANCET.

SIRS,—A patient (female) aged twenty years has now been under treatment for a couple of years for the cure of hiccough and sneezing. Not a single day passes without her suffering from an attack, which very often continues from four to five hours, and leaves her in a very collapsed condition. She is a nervous patient, but not particularly so. Her dietary is a good one, and she takes a fair amount of open-air exercise, and lives in a good social sphere. There is no organic lesion in the throat or nose to give rise to any local irritation. Her powers of digestion are good. All the usual remedies, both local and constitutional, have been tried, but of no avail. Perhaps some of your readers would kindly suggest a means of treatment.

I am, Sirs, yours faithfully,

Glasgow, Oct. 13th, 1895. R. H. ALLEN, M.B., C.M.

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"PASSING RICH WITH FORTY POUNDS A YEAR."

WE have had brought to our notice the following advertisement, which has appeared in the *Galloway Advertiser and Wigtownshire Free Press*, and we confess to being deeply puzzled by it.

> "WANTED.—MEDICAL OFFICER (Resident) and Vaccinator for the Parish of Portpatrick. Salary, including medicines, £40 per annum; to attend private patients at the scale of fees fixed by Parish Council, copy of which can be obtained from the clerk. To enter upon duties on 11th November. Canvassing a disqualification.—Applications, with testimonials, to be lodged with the clerk of the Parish Council, Portpatrick, not later than 25th October."

The salary offered to the medical officer and public vaccinator of the parish is not large if it is to be his only source of income, for even the most frugal of Scotchmen would find it difficult to emulate the village preacher of "Sweet Auburn," and be passing rich with £40 a year. Naturally the medical officer will desire to have as large a private practice as he can get, and his official salary has been fixed from that point of view; but the parish council, it will be seen, propose to fix the scale of fees at which he shall attend private patients. This is, indeed, a departure, and one which will, we hope, make it very difficult for the parish council to obtain an officer. For, firstly, no one can fix the fees properly at which another man should attend private patients. This is entirely a matter for mutual arrangement between patient and attendants, and the interference of the parish council must lead to injustice to someone. And, secondly, the position assumed by the parish council towards their officer is intolerable. If they exercise the prerogative indicated in their advertisement they would have him entirely at their mercy; they could make his fees so high that no one at Portpatrick would employ him, or so low that he could not earn a living wage. We are sure that the council have not quite understood the nature of the new duties they propose to take upon themselves.

Hibernicus.—All the information our correspondent seeks can be obtained from the agents of the various lines, most of whose addresses can be found in the London, Liverpool, or Glasgow Directories.

M.D. is thanked for his communication. It is wrong that medical men should be expected to give certificates gratuitously. They should be paid for by those in whose interests they are demanded.

Riparian.—The cost can be made anything. Our correspondent is recommended to write to the four different Inns for information.

RIGOR MORTIS IN THE FŒTUS IN UTERO.

To the Editors of THE LANCET.

SIRS,—Some few years ago I sent an account to a contemporary of a case in which rigor mortis in the fœtus in utero was the cause of difficult labour. During the last two years I have had three other cases, so that an event which I looked upon as rare must not infrequently occur; but it appears to have passed unnoticed by the generality of practitioners, as everyone to whom I have spoken about the matter has confessed that he had never even heard of, much less seen, such a case, and the text-books do not mention it. The following notes of my last case are, I think, worth placing upon record.

On Sept. 6th I was called in to a primipara aged thirty-seven by the midwife in attendance, as, though the os was fully dilated, no advance of the head had taken place for several hours. On applying forceps considerable resistance was experienced, and what I expected to find an easy forceps case proved to be quite the reverse. Progress was slow until I secured extension, when the head came down well; but further difficulty was experienced in extracting the body, which gave the impression of being much too large for the maternal passages. The fœtus, however, proved to be not large, but rather under the average. The difficulty had arisen at the various stages: first, the normal flexion had not taken place, and at a later stage the stiffness of the neck had prevented extension, and the lateral flexion of the body had been interfered with owing to the same cause. Rigor mortis was well developed all over the body, the arms and legs being stiff and in the flexed position. On balancing the child's body on one hand its back kept almost straight and the legs in the same flexed position, the heels not dropping below the nates. Owing to the forcible flexion of the neck the head moved upon the trunk like a hinge joint. At the moment of applying pressure with the forceps there was a crunching noise quite audible, sounding as if one were breaking a bone.

I am, Sirs, yours faithfully,

B. JONES, M.D. Durh., M.R.C.S., &c.

Leigh, Lancashire, Oct. 5th, 1895.

Squills.—The person who has been left a legacy or share of residue in a will should not be an attesting witness to the execution. The attestation would be good, but the legacy would be forfeited. An executor may be a legatee under a will and very generally is. Our correspondent does not explain his position very clearly, and if these are not the only two points upon which he desires advice he had better consult a solicitor.

IMAGINATION AGAIN.

AT a recent inquest in the Shoreditch Coroner's Court a lay reporter made the medical man who had made the post-mortem examination of the body say that he had found death to be due to the deceased's heart having "burst in half," and that the only reasons to be assigned for the catastrophe were "over-excitement and eating too heavy a supper," and the paragraph was headed with a jocularity not quite apt to the occasion, "Death from a Broken Heart." The medical man, to whose attention the extraordinary statement credited to him has been brought, writes us the following account of the case, from which it will be seen that the "bursting in half" was a piece of reportorial exuberance:—

> "I was called on the Monday at 11.5 P.M., and found deceased just as she had fallen, in a crouching position on the floor, with her back against the bed, quite dead, and not resting in a chair as reported. I made a post-mortem examination on Thursday afternoon. I found the body well nourished and containing a fair amount of subcutaneous fat. The abdomen was greatly distended by air. The lungs were both gorged with blood, especially the right one—no doubt the beginning of an attack of congestion of the lungs. On opening the pericardium I found it completely distended with dark blood-clot and serum. The heart itself was soft and flabby, and presented the appearance of fatty degeneration; the valves were quite healthy, but the walls were thinner than normal. This was especially marked in the walls of the auricles, being very thin and soft. At the right side of the right auricle I noticed a patch a little larger than a shilling, and much deeper in colour than the surrounding tissue, presenting the appearance of recent inflammatory changes; at this spot there was an opening, with rugged edges, communicating with the interior of the right auricular chamber, and from which the hæmorrhage took place. The liver was larger than normal, soft, and friable; the kidneys were somewhat congested; the brain was normal, and the spleen also. I gave it as my opinion that the exciting cause of the rupture of the auricle was the hearty meal of eels and potatoes partaken of by the deceased, causing dyspepsia and flatulency, from which she often suffered, producing laboured action of the heart from pressure of an over-distended stomach, thus increasing the blood pressure from the stasis in the lungs, resulting in rupture, syncope, and death. I said nothing about over-excitement and I certainly never spoke of the heart bursting in half."

Mr. William Paul.—We agree with our correspondent that the subject is always deeply interesting; but we consider that the danger is practically non-existent, and that no immediate legal interference is necessary.

Messrs. Arthur and Co., of 69, Berners-street, Oxford-street, write, with reference to our notice last week (p. 921) of "Tannopumiline," that they have altered the name to *Tannopumilio*.

Mr. A. C. Elmore.—The story our correspondent tells us is not a creditable one.

"DROWNING FOLK-LORE."

To the Editors of THE LANCET.

SIRS,—The belief that men and women take a different position when floating after drowning is discussed by Sir Thomas Browne in the sixth chapter of the fourth book on "Vulgar Errors." The belief in his time dated from Pliny, and was that women floated face downwards and men on their backs. He says that Scaliger declines to accept the explanation that nature seeks to conceal thus the shame of the dead, preferring to attribute it to the fact that women take the prone position on account of the weight of the abdomen. "If so," says Sir Thomas Browne, "only men with great bellies will float downward, and only Callipygæ and women largely composed behind upward." If there is any truth in the fact that women float on their backs, it might be explained by the same reason as the floating of witches when put to the test of water—i.e., hysterical paralysis of the abdomen due to fright, and consequent gaseous distension of the intestine, which could not possibly assume the lower level in the water.—I am, Sirs, yours truly,

Oct. 12th, 1895. HISTORICUS.

Medical Jurist.—Our correspondent presents us with an excellent opening for casuistry. It is generally considered that when the cause of death is asked for it is the immediate cause that is meant, so that any cause directly behind that immediate cause should also be mentioned as primary. The primary cause in the example mentioned was the operation and the secondary cause the septicæmia. It is quite true that no operation would have taken place had there not been a pathological condition present, but such a train of reasoning can be reduced to absurdity. Suppose, for instance, the operation had been necessitated by a broken leg and the broken leg had been the result of a train accident—"locomotive attacks ye," as *Punch* has it—what would have been the primary cause of death?—the train, or the man who made it, or the driver, or George Stephenson?

A Constant Reader.—The regular and simple way of notifying a change of address is by sending to actual patients a visiting card with the new address substituted for the old one.

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"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET inquiry was made by a medical gentleman in the United States as to the facts of the services in the Army Medical Department of "James Barry," who, on her sudden death in Craven-street, Strand, was discovered at the inquest to be a woman.

In 1857 I travelled with this remarkable character on board the intercolonial steamer plying between St. Thomas and Barbadoes, when I occupied the same cabin, I in the top and she in the lower berth—of course, without any suspicion of her sex on my part. I well remember how, in harsh and peevish voice, she ordered me out of the cabin—blow high, blow low—while she dressed in the morning. "Now then, youngster, clear out of my cabin while I dress," she would say. A goat was on board to provide her with milk; she was a strict vegetarian, and she was accompanied by a negro servant and a little dog called "Psyche." The doctor was going at the time to visit her old friend and enemy, General Sir Josiah Cleote (commanding troops), with whom, when aide-de-camp to the Governor of the Cape, she had fought a duel and was wounded in the leg. The late Colonel Shadwell Clerke, who was at that period on the General's Staff, told me before his death last year that he, too, was challenged for some fancied insult, but that General Cleote pooh-poohed the idea and made them shake hands.

In person "James Barry" was short in stature, angular in figure, with a long Ciceronian nose, prominent cheek-bones, and a rather lugubrious expression of countenance. I possess a photograph of her, and there is another, kept under lock and key, in the medical officers' mess at the Royal Victoria Hospital here. Neither is a good likeness. Details of her life were given shortly after her death in the May number of *All the Year Round*, entitled "A Mystery Still," and from these particulars, as well as from such information as I subsequently gleaned, I formulated the heroine of my novel (in three volumes), "A Modern Sphinx," published in 1881, a reproduction of which in single volume, re-named and edited by Miss Braddon, "Madeline's Mystery," may still, I fancy, be obtained. "A Modern Sphinx" is out of print; but as I retain a few copies I shall have pleasure in placing a copy at your disposal for transmission, if you like, to your American correspondent. Few men knew more about Barry's career than the recently deceased Surgeon-General Sir T. Longmore, C.B., with whom I often corresponded on the subject, and who placed a copy of my novel in the Museum Library of the Victoria Hospital. But many other persons are, I believe, still to the fore who could furnish interesting reminiscences of this eccentric individual—notably, General Lowry, C.B., General W. Chamberlayne, General de Montmorenci, Colonel R. Wilson, and Surgeon-Major-Generals Tippetts and G. Langford Hine; all of them served from time to time with her at various foreign stations. I may add that she always seemed to have immense influence at headquarters and could almost choose her own station. Imperious in manner and officially dictatorial, in social circles she was admired and respected; she was, moreover, sympathetic and skilful in her profession—yet what a life of repressed emotions must hers have been?—a woman, too, who it was said gave birth to a child in her early days.

I am, Sirs, yours faithfully,

E. ROGERS, Lieutenant-Colonel,
(late Staff Officer of Pensioners and formerly Captain 3rd West India Regiment).

Netley, Oct. 15th, 1895.

To the Editors of THE LANCET.

SIRS,—At page 959 of THE LANCET you say: "Probably some of our readers can inform us and our correspondent with certainty about James Barry." I write to say that the medical officer so called travelled in a steamer of which I was the medical officer many years ago. In common with all on board, I was much struck with the peculiarities of that officer; and, I think, a notice of those has since appeared in one of the journals. The diet and the fondness for pets, the peculiar figure and appearance, all justified the ideas that were entertained about her at the time; and these ideas, it is said, were confirmed after her decease. It has been stated that this officer fought two duels; so it is evident that want of courage was not one of her weaknesses.

I am, Sirs, your obedient servant,

C. F. MOORE, M.D., F.R.C.S. Irel.

Upper Merrion-street, Dublin, Oct. 14th, 1895.

To the Editors of THE LANCET.

SIRS,—I see that you ask from your readers any particulars which may be known to them about Dr. James Barry. I heard of him (or her) from my old friend, Dr. Jobson, who, after spending many years as an army surgeon, finished his career as a physician in Kent. Dr. Jobson died about fifteen years ago, an old man aged about eighty-five years, so it must have been rather early in the century when he was at college in Edinburgh. One of his fellow students was remarkable by the persistency with which he avoided his fellow students, and was also laughed at because, in contradistinction to the shooting-coats which all the other students wore, he invariably appeared in a long surtout. However, although Barry kept the other students at a distance, he soon became friendly with Dr. Jobson and invited him to his lodgings, where he introduced him to his mother, with whom he lived. Both Dr. Jobson and Dr. Barry resolved to go into the army, and were together at a depôt where Dr. Jobson was astonished to find that Dr. Barry was afraid to go home by himself through a rather rough part of the town, but asked Dr. Jobson to go with him. Dr. Jobson, who, although a little man, was devoted to athletics, was much disappointed that he could not teach Dr. Barry to box. He never would strike out, but kept his arms over his chest to protect it from blows. Dr. Jobson and Dr. Barry were appointed to different regiments, and they never met again, although Dr. Jobson heard of him occasionally as performing all the duties of an army surgeon, and also of his performing serious operations in the hospital at Malta. When she died and it was discovered that she was a woman and had been a mother, Dr. Jobson was as much astonished as anybody; for, although he remembered the above-mentioned womanly traits, they had never caused him to have the slightest suspicion of her sex. What romance or tragedy led Dr. Barry to act as she did will not, I fancy, be ever known—at least, Dr. Jobson could never get any light upon it. As I myself am an old woman over sixty years of age I dare say there are not many people left who know anything about Dr. Barry, and I have thought these scanty particulars might interest your readers.

I am, Sirs, yours obediently,

India-street, Edinburgh, Oct. 14th, 1895. JANET CARPHIN.

To the Editors of THE LANCET.

SIRS,—There is no doubt of the existence of "James Barry," or of her sex. She lived some forty years ago in a street leading off Piccadilly—Down-street, I think. I lived in the same neighbourhood at that time, and knew her perfectly well by sight, and it was a matter of common repute that she belonged to a different sex than the one indicated by her clothes. Dr. Barry, as she was always called, was about 5 ft. 6 in. in height, slight in build, with a smooth, pale face. I saw her last in the year 1851 or 1852, and while in India later I remember reading of her death and of the discovery of the sex. She was a great friend of Lady Charles Somerset, who used to live near by in Piccadilly at that time. This information is not very definite, but it will help to assure Dr. Bright that "James Barry" is no figment, and that the story of her sex is undoubted. I am, Sirs, yours faithfully,

Oct. 16th, 1895. A.M.S.

To the Editors of THE LANCET.

SIRS,—Referring to Dr. Bright's queries under the above heading in THE LANCET of Oct. 12th, I beg to refer him to Dr. Meiring Beck of Rondebosch, Cape Town. Dr. Beck discovered reliable information concerning "Dr. James Barry," and read a most interesting paper on the subject to the Cape Town Branch of the British Medical Association, which was published in the *South African Medical Journal* about six months ago. It appears that "Dr. James Barry" served a useful career in the Army Medical Staff in Cape Colony, the West Indies, and, I think, also St. Helena. Her sex was not known until after death.

I am, Sirs, yours faithfully,

H. LAING GORDON, M.D. Edin.

Vincent-square, S.W., Oct. 14th, 1895.

Mr. J. C. Glenville.—We do not prescribe, and we do not recommend individual practitioners. We so far depart from our rule as to inform our correspondent that the method of treatment he desires is absolutely mythical, and we recommend him strongly to see a neighbouring surgeon.

Z.—We will inquire what M. Chauveau really said, and if we can learn definitely will communicate further through our columns. The newspaper cutting is, of course, absurd.

Kappa can only be advised to consult his medical attendant.

"THE PRESYSTOLIC APEX MURMUR WITHOUT MITRAL STENOSIS."

To the Editors of THE LANCET.

SIRS,—Dr. Arthur G. Phear's interesting article on the above subject, which appears in THE LANCET of Sept. 21st, makes me think it worth while to record the following case, which seems to indicate that a mere variation in the cardiac rhythm may give rise to a diastolic apex murmur.

A woman aged seventy years had constipation, nausea, and vomiting, with acute pain in the region of the vermiform appendix. The temperature was 99·5° F. and the pulse 100 per minute. The patient had previously had an attack of appendicitis. The bowels were opened with an enema. The vomiting ceased and the temperature became subnormal. There was a low-pitched, long, harsh diastolic apex murmur. There were no signs of cardiac hypertrophy and no other murmur. With ten-minim doses of tincture of digitalis every six hours the murmur completely disappeared in four days, and the pulse-rate was reduced to 83. The explanation offered is as follows. Normally the size of the ventricular cavity increases slowly during diastole and is kept quietly filled with blood. No diastolic murmur is then audible. But when the diastole is quickened the ventricular cavity increases too rapidly to be kept quietly filled. The flaps of the valve and the ventricular walls are deprived of their blood support, and the auriculo-ventricular stream is hastened by increased ventricular aspiration. Rapid diastole produces a hastened blood stream, flowing from one to another cavity upon unsupported muscular and tendinous structures that can be readily thrown into vibration. A diastolic murmur then becomes audible. It seems to me that in this case it was by slowing diastole that digitalis, combined, it may be, with the cessation of abdominal pain, caused the murmur to disappear. I am, Sirs, very truly yours,

Faseley, Tamworth, Oct. 14th, 1895. WILLIAM CATTO.

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Some new developments.

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An odourless substitute for Iodoform.

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Dusted upon a freshly cauterised surface it kills the pain at once.

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THE preference of the Medical Profession for this valuable Food-Digestant is abundantly justified by the results of an every-day clinical experience that has now extended over many years. It is, after all, the practice that tells, and had not results corresponded with expectations, "Maltine" would not have retained its high place among dietetic auxiliaries The valuable characteristics of "Maltine" are due to:—

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The Harveian Oration
ON
HARVEY AND THE RISE OF PHYSIOLOGY IN ENGLAND.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1895,

BY W. S. CHURCH, M.D.OXON., F.R.C.P.LOND.,
SENIOR PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

MR. PRESIDENT,—In obeying your request that I should undertake the delivery of the Harveian Oration I am painfully sensible of the gravity of the task you have imposed on me. For 239 years, with but few intermissions, the College has, in obedience to Harvey's own wishes, assembled to commemorate its benefactors, and if we can no longer precisely follow Harvey's directions and "commemorate all the benefactors of the said College by name, and what in particular they have done for the benefit of the College," the remainder of his words are still applicable, for part of the Harveian orator's duty is "to exhort others to imitate those benefactors, and to contribute their endeavours for the advancement of the society according to the example of those benefactors." This annual office has been filled during the years that have elapsed since Harvey's institution of it by some of the most illustrious Fellows on our roll—by Garth (1697), Arbuthnot (1727), and Akenside (1759); by Mead (1723), Heberden (1750), and Warren (1768), not to mention others of more recent date, men whose names will ever remain fresh in the history of the literature and medicine of our country. I have no claim to be associated with these great names, nor with the many learned and eloquent men who have addressed you in recent years, and I should have shrunk from attempting the task your favour has imposed on me had I not felt that in asking me to undertake it you were mindful of the position which it is my lot to hold in connexion with the great hospital to which the immortal Harvey was thirty-four years physician, in which he exercised an influence over its governing body that remains to this day, and where his memory is yet held in reverential remembrance. I wish it were possible for me to bring forward from the records of St. Bartholomew's Hospital any new facts illustrating either Harvey's life or works; but many years ago Sir James Paget, in his "Records of Harvey," exhausted all that is known of him from the journals of our hospital. In the fragmentary notices of him which we there meet with he is seen as the trusted adviser to the governing body and as the maintainer of the dignity of his order rather than as the physician. In his "Prælectiones Anatomicæ Universalis" we obtain glimpses of his work in the wards of the hospital, and had his "Medical Observations" come down to us there can be little doubt that in them much would have been found which emanated from the wards of the hospital and the dissections of patients who died whilst under treatment there.

Foremost among the benefactors to our College present to the mind of Harvey when he established this annual Oration must have been Dr. Richard Caldwell and Lord Lumley, who together founded and endowed in 1581 the Surgery Lecture which, under the name of the Lumleian Lecture, Harvey held from 1615 until 1656, and in the course of which he demonstrated to the College his immortal discovery. I have failed to find out the nature of the connexion, if any, between Caldwell and Lord Lumley. The latter succeeded his father, Lord Arundel, as High Steward of the University of Oxford in the year 1558, the year before Caldwell appears to have completely severed his connexion with the University. Of Lord Lumley, Camden says "that he was a person of entire virtue, integrity, and innocence, and in his old age a complete pattern of true nobility." By the kindness of our registrar my attention has been drawn to the very interesting notice of Caldwell in Hollinshed's "Chronicles," where an account is given of the first lecture delivered under the terms of this bequest by Dr. Richard Forster, "which was celebrated by a goodlie assemblie of Doctors, Collegiate and Licentiate, as also some Masters of Surgerie, with other students, some whereof had been Academical. Dr. Caldwell, his white head adding double reverence to his person, notwithstanding his age and impotencie, made an Oration in Latin to the auditorie, the same by occasion of his manifest debilities unfinished at the direction speciallie of the President: who after a few words shortlie and sweetlie utered, gave occasion and opportunity to Dr. Forster, then and yet the appointed Lecturer, to deliver his matter." It is impossible for me to mention the long list of those who, by their munificence or by the honour which their lives and labours have bestowed on the College, have to be commemorated as benefactors since the days of Harvey. Within the present year we have had a notable example, not only of the generosity, but what is still more to be desired, of the brotherly feeling which Harvey desired should exist among us. No one among our Fellows has during the last fifty years been a brighter ornament to this College or a greater benefactor to his country or the world at large than Edmund Alexander Parkes. It must be a source of gratification to us all that Dr. Hermann Weber, when generously endowing the College with the magnificent sum of £3000 for the furtherance of original research on the "Prevention and Cure of Tuberculosis," should have associated Dr. Parkes's honoured name with his own. The triennial prize, which the College has decided to found with this bequest, will tend, let us hope, not only to keep fresh in the memories of many generations of Fellows the genial and liberal donor and his valued friend, but may accomplish the object of the giver and lead to future discoveries by which the ravages of tuberculous disease may be controlled and abated, if not altogether prevented.

It may interest the College to know that the subject selected for the first competition is "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis, especial Regard being had to their Application to Human Tuberculosis." I should like to pause here to set before you at somewhat greater length the useful, pure, and unselfish life of Dr. Parkes and to recall to your memory the excellence of his scientific work in connexion with the ingestion and elimination of nitrogen in the system, as well as to draw your attention to the benefits which our naval and military services and the general public have received from his labours in the field of hygiene; but I must pass on now and content myself with thus briefly alluding to the munificent gift of Dr. Hermann Weber and the memory of Edmund Alexander Parkes.[1]

Harvey's fame is immortal, and he is to be placed in the same category with Hippocrates, Aristotle, Archimedes, and Newton, who by their genius may be looked upon as not so much the exponents as the founders of their respective branches of knowledge. Aristotle was the first, and in a sense the greatest, of biologists. Harvey was the founder of physiology. Harvey himself was an Aristotelian, educated in all the learning of the schoolmen; and in attempting to estimate his genius and originality it is almost impossible for us in these days of independent thought to realise the crushing influence which authority then exercised on the minds of men; in the words of Dryden, they

> "betrayed
> Their freeborn reason to the Stagyrite
> And made his torch their universal light."[2]

As in medicine, although there must have been practitioners before the days of Hippocrates, he is to be taken as the starting point, so in biology, notwithstanding the labours of Parmenides, Empedocles, and others of still earlier date whose writings are known to us but by fragments, Aristotle stands alone as the originator of biological science. He, together with his immediate successors, took, as has been observed by Professor Huxley,[3] "the broadest view of the subject, and man assumed his place as neither more nor less scientifically interesting than his fellows." Harvey's admiration of Aristotle is profound; he calls him the supreme dictator in philosophy, and in the introduction to the "De Generatione Animalium" says: "Foremost among the ancients I follow Aristotle; he is my leader." Dr. W. Ogle, in the preface to his excellent translation of Aristotle's work "On the Parts of Animals," says most justly: "The biological treatises of Aristotle are more often quoted than read, and, it may be added, much more often misquoted than correctly quoted." The prominent feature of Aristotle's biological

[1] Dr. Parkes died from acute general tuberculosis, March 15th, 1876.
[2] Epistle the Third. To Dr. Carleton.
[3] Appendix to Richard Owen's Life.

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writings, as, indeed, of his philosophy generally, is classification, in which respect his writings contrast strongly with the poetical and imaginative treatises of his forerunner Plato. From the time of Aristotle to that of Harvey no advance was made in physiological knowledge; in truth it had receded, overwhelmed by the glosses and erroneous interpretations so often put on Aristotle's writings.

In attempting to estimate Harvey's merits as a discoverer it is necessary for us as far as possible to realise the state of knowledge at the commencement of the seventeenth century, and the nature of his surroundings. Subsequently to the time of Aristotle, who was very imperfectly acquainted, as he himself admits, with human anatomy, the Alexandrian school, where the two rivals, Erasistratus and Hierophilus, practised human dissection, had considerably advanced human anatomy; their observations and discoveries were made use of by Galen, who added to anatomical knowledge by his accurate dissections of the lower animals, including apes. The anatomical facts thus observed were of comparatively little use through their being treated as disjointed observations; thus there can be no doubt that Erasistratus observed the lacteals in the mesentery of sucking kids hundreds of years before Aselli rediscovered them in dogs; and Aselli's observations would have proved as barren as Erasistratus's had Pecquet not traced the lacteals to the receptaculum chyli and thoracic duct, which vessel had many years before been noticed by Eustachius in the thorax of a horse, and described by him as the vena alba thoracis. With the revival of learning human anatomy began to be studied on account of its obvious bearing on medicine and surgery, and by Harvey's time, owing to the labours of Mundinus, Sylvius, Eustachius, Vesalius, Fallopius, and others, the details of the bodily structure of man observable by the unassisted eye were for the most part discovered. In physiology, on the other hand, there had been no advance whatever, unless the very imperfect knowledge of the lesser circulation be considered as having a claim to be so regarded. It in no way detracts from Harvey's merit or originality that Servetus, Columbus, and Cesalpinus all had an idea of the lesser circulation, without, however, comprehending it or seeing to what it led, or that Fabricius had demonstrated beyond doubt the existence of the valves in the veins. Dugald Stewart has remarked: "In the sciences the observations and conjectures of obscure individuals on the subjects which are level to their capacities, and which fall under their own immediate notice, accumulate for a course of years, till at last some philosopher arises who combines these scattered materials, and exhibits in his system, not merely the force of a single man, but the intellectual power of the age in which he lives."[4] Regard must also be paid to the spirit of the times, and the remarkable uprising of independent thought and inquiry which characterises the century immediately preceding Harvey's birth.

Bacon is frequently spoken of as the founder of inductive philosophy and the destroyer of the syllogistic reasoning which had been all-powerful before his day. This may be true when applied to moral philosophy, but is certainly not so when we consider physical or natural philosophy. In his biological writings Aristotle makes constant use of the inductive process, and he points out that it is absurd to suppose that syllogistic reasoning could lead to the discovery of any new principles;[5] and again he says, still more definitely, "that reasoning is naturally prior and more known that proceeds by syllogism, yet is that more perspicuous to us which is based on induction."[6] Aristotle's inveterate custom of specifying a final cause for every structure and organ which he came across in the animal body not only led him into many absurdly erroneous conclusions, but—joined with the oft-quoted maxim of Bacon, "Causarum finalium inquisitio sterilis est, et tanquam virgo, Deo consecrata, nihil parit"—has led to the wonderful work he did in biology being less thoroughly appreciated by us than it deserves. Bacon's objection to the consideration of final causes in physics was owing to his belief that it "banished the study of physical causes; the fancy amusing itself with illusory explanations derived from the former." That Bacon was wrong in this view is proved by Harvey himself, for we have it in his own words, as reported by Boyle,[7] that it was from studying the valves of the veins, and believing "that so provident a cause as nature had not placed so many valves without design," that he was first induced to think of a circulation of the blood. Equally false is the belief very generally held that Bacon was the first to revolt from the tyranny of the Aristotelian school. The alliance which had taken place between the Papal Church and the Aristotelians caused those who at the Reformation refused to recognise the infallibility of the Church of Rome also to throw off their allegiance to the tenets of the schools. Luther and Calvin, not to mention lesser men, declared that no man could be an Aristotelian and a Christian; and St. Paul's warning, "Beware lest any man spoil you through philosophy and vain deceit after the tradition of men."[8] was a favourite text for the ministers of the Reformation to expound. The same spirit of inquiry which broke down the tyranny of the Church also freed men's minds from the trammels of the dogmas of the current philosophy. The physicists, by questioning the accepted doctrines of the nature of the universe, were the first to commence this healthy movement, and the widespread popularity of Ramus's teaching very greatly expedited the change which occurred. Ramus, from the commencement of his career, disputed the authority of Aristotle, and may be said to have spent his whole life in opposing the orthodox philosophy of the times, and perished a martyr to his opinions and the rancour of his opponents in the massacre of St. Bartholomew's Day (1572). Harvey, when at Padua, must have been in the midst of the conflicting theories and bitter controversies of the Aristotelians and their opponents. His even and well-balanced mind prevented his joining either party. Throughout all his writings he pays the greatest respect to Aristotle, and takes him as his main guide in his work, "De Generatione Animalium." He makes also constant references to him in his "Prælectiones Anatomicæ Universalis"; and when Aubrey asked him what he should read bid him go to the fountain head and read Aristotle, Cicero, and Avicenna. The same authority tells us that Harvey, whilst esteeming Bacon much for his wit and style, was not enamoured of his philosophy. It would be interesting to know how intimate Harvey was with the Lord Chancellor, and whether their communications merely partook of the character of physician and patient, or whether Harvey discussed philosophical questions with the older man.

My predecessors in this office have so fully vindicated Harvey's claim to the discovery of the circulation against the attempts which have been made within recent years to deprive our countrymen of this honour that I will pass on, merely thanking Sir Edward Sieveking and Sir George Johnson for the able and triumphant manner in which they have refuted the statements put forward in favour of Cesalpinus as the true discoverer of the circulation of the blood. Neither Servetus, Columbus, nor Cesalpinus in any way anticipated Harvey, who not only discovered the greater circulation, but demonstrated it and explained the true motion of the heart. He, and he alone, recognised the muscularity of the heart's wall, and perceived and demonstrated that it was the contractile power of the heart which was the primary cause of the pulse and of the circulation of the blood through both systemic and pulmonary vessels. Harvey, by a chain of close and acute reasoning drawn from direct experiments and from observations on the pulsation in aneurysms and in vessels distal to aneurysmal dilatations and to portions of rigid and calcified arteries, demonstrated once for all that the motion and contraction of the heart was the main, though not the only, cause of the pulse. Leaving thus the "Excitatio Anatomica de Motû Cordis et Sanguinis," I wish to consider that which Harvey's discovery rendered possible—the rise of physiology—more especially in England, and the part which Harvey himself took in founding it.

It must be always borne in mind that but a portion of Harvey's work has come down to us. We gather from his extant writings that he had collected materials for, if not composed and completed, the following treatises: "Observationes de Usû Lienis," "Observationes de Motû Locali," and "Tractatum Physiologicum de Amore Libidine et Coitû Animalium." We do not know how far advanced his "Medical Observations," to which he makes frequent references; his disquisitions on the "Cause, Uses, and Organs of Respiration"; his "Medical Anatomy," or "Anatomy in its Application to Medicine," may have been. Harvey announces, in his first disquisition to Riolanus, his "intention of putting to press this last work," and it must be regarded as an

[4] Elements of the Philosophy of the Human Mind, vol. i., p. 217, sixth edition.
[5] Last chap. Metaph. [6] Analytics, Lib., c. ii., p. 3.
[7] Boyle's Works, folio edition, vol. iv., p. 539.
[8] Colossians, c. ii., v. 8.

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irreparable loss that the world should have been deprived of the material he had collected, for one cannot doubt that his "Medical Anatomy" would have displayed the same master mind as is shown in his other works, and that morbid anatomy would have been advanced to the position it was placed in a hundred years later by Morgagni. As it is, we have to collect Harvey's general views of physiology from scattered passages in his works. Next to his "Exercitatio Anatomica de Motû Cordis et Sanguinis," his most important work is "De Generatione Animalium." This is an unfinished work. Harvey had probably intended to publish a larger and more complete treatise, but had failed to satisfy himself on the subject of generation, and what he was persuaded by Sir G. Ent to entrust to him for publication were but the exercises from which Harvey had intended to compile his work. Possibly the loss of his "Observations on the Generation of Insects" prevented his undertaking the larger work; but no one who reads the treatise will come to the opinion that Harvey was prepared to publish it in the shape in which we now have it. In the exercises we find much repetition both of words and ideas, much speculative matter on which he expresses no opinion. Not having satisfied himself as to the facts of generation he allows himself to be under the influence of the

"Master Sage of those who know"[9]—

and permits himself to wander off from observed facts into the shadowy but enticing realms of fancy and metaphysics. It is no detraction from Harvey's merit that he failed in understanding the nature of generation. The necessary means were not in existence; the simple magnifying glasses used for the inspection of the *punctum saliens* were unable to show him his error in supposing that the male element did not enter the uterus—a conclusion he came to after repeated inspections. Writing of the uterus of the doe after copulation he says: "I began to doubt, to ask myself whether the semen of the male could by any possibility make its way by attraction or injection to the seat of conception; and repeated examination led me to the conclusion that none of the semen reached this seat" (Exercise LXVII.); and in another place (Exercise L.) he asks "whether the conception of the uterus be of the same nature or not with the conceptions of the brain, and fecundity be acquired in the same way as knowledge—a conclusion in favour of which there is no lack of argument"; and in his essay on Conception he gives us what I imagine was his final conclusion: "The woman, after contact with the spermatic fluid *in coitû*, seems to receive an influence and become fecundated without the coöperation of any sensible corporeal agent, in the same way as iron touched by the magnet is endowed with its powers." The aphorism *Omne vivum ex ovo* is ascribed to Harvey, and often quoted as if he made use of the expression. It is true that at the end of his consideration of the development of the egg he concludes by quoting Aristotle with approval: "All living creatures, whether they swim, walk, or fly, and whether they come into the world in the form of an animal or of an egg, are engendered in the same manner." But it is quite evident from many passages in his treatise that Harvey did not unconditionally reject the doctrine of spontaneous generation. In Exercise LXIII., after stating "now we at the very outset of our observations asserted that all animals were in some sort produced from eggs," he goes on to explain his meaning more fully: "An egg is a conception exposed beyond the body of the parent whence the embryo is produced. Let us therefore say that that which is called *primordium* among things arising spontaneously, and seen among plants, is an egg among oviparous animals; the prime conception in viviparous animals is of the same precise nature"; and earlier in Exercise XLV., when discussing the difference between epigenesis and metamorphosis, he says: "Some animals are born of their own accord, concocted out of matter spontaneously." Harvey showed that the mode of development and growth was the same in the embryos of viviparous and oviparous animals, and maintained that in creatures said to arise spontaneously or to take their origin from putrefaction, filth, &c., the same developmental changes occurred; but nowhere expresses an opinion as to the origin of the ova themselves, although it is probable that he inclined to the belief that they were "propagated from elements and seeds so small as to be inconspicuous (like atoms flying in the air) scattered or dispersed here and there by the winds" (Exercise XLIII.). In the same way he expresses no opinion as to the origin of the animalcules generated in our bodies, and of the worms produced from plants and their fruit or from gall-nuts, the dog rose and various other galls, contenting himself with remarking that the living principle of the animals thus arising cannot have existed in the plants on whose juices they live (Exercise XXVII.).

Though misled from the want of proper means for observation in the fundamental facts of generation, there is much touching general physiology scattered through the treatise which is extremely interesting. Harvey remarks that he was the first to note that the bronchia or ends of the trachea in birds open into air sacs in the abdominal cavity (Exercise III.), an observation which, so far as I know, attracted no attention and did not receive confirmation until John Hunter demonstrated these air sacs afresh, and showed that the bronchia in birds were continuous also with the hollow spaces in their bones. In Exercise LVI. he has anticipated Darwin's explanation of sexual adornments, remarking: "Ornaments of all kinds, such as tufts, crests, combs, wattles, brilliant plumage, and the like, of which some vain creatures seem not a little proud, are most conspicuous in the male at that epoch when the females come into season, and whilst in the young they are still absent, in the aged they also fail as being no longer wanted." Hereditary likeness did not escape him, or that form which is spoken of as atavism, for he asks, "Why the offspring should at one time bear a stronger resemblance to the father, at another to the mother, and at a third to progenitors, both maternal and paternal, further removed" (Exercise LXII.). After the circulation of the blood and the mysteries of generation the subject which appears to have had most attraction for Harvey was that of "innate heat"—*calidum innatum*—the θέρμη ἐμφύτη of Aretæus, a term by which more was meant than the temperature, although that was the sensible evidence of it. Harvey distinguished the *anima*—soul or vital principle—from the innate heat. To the consideration of the latter he devotes Exercise LXXI., and treats at length of the former in Exercises XXVI. and XXVII. It would take me too long to attempt to give a sketch of his views of the *anima;* it is clear that he himself was dissatisfied with his own conception of the vital principle or *anima*, for he says in Exercise XXVIII., speaking of the way in which the egg is produced, "leaving points which are doubtful and disquisitions bearing upon the general question (that is, on the *anima*), we now approach more definite and obvious matters." Animal heat before the knowledge of the production of heat by chemical union was an inscrutable mystery which not even the genius of Harvey could penetrate. The maintenance of animal heat was supposed to be the gift of the heart to the blood; the belief that the heart was the source of heat was universally held by the ancients, Aristotle saying "that its wall is thick that it may serve to protect the source of heat."[10] This Aristotelian doctrine Harvey dissented from and destroyed by reasoning little less cogent than that by which he demonstrated the circulation, although he was unable to account for the presence of animal heat and imagined that it was inherent in the nature of blood and of divine origin. His words are so grand and poetic that I may be permitted to quote them at length: "I say that innate heat and the blood are not fire, neither do they derive their origin from fire. They rather share the nature of some other and that a more divine body and substance. They act by no faculty or property of the elements; but as there is something inherent in the semen which makes it prolific, and as in producing an animal it surpasses the powers of the elements—as it is a spirit, namely, and the inherent nature of that spirit corresponds to the essence of the stars—so there is a spirit of certain force inherent in the blood acting superiorly to the powers of the elements, very conspicuously displayed in the nutrition and preservation of the several parts of the animal body; and the nature, yea, the soul in the spirit and blood, is identical with the essence of the stars" (Exercise LXXI.). This outburst of Harvey is most striking, so unlike his usual manner, and one cannot but be astonished at his inconsistency, for it occurs in the same exercise as the following shrewd and calm remark: "We are too much in the habit, neglecting things, of worshipping names. The word blood, signifying a substance which we have before our eyes and can touch, has nothing of grandiloquence about it, but before such titles as spirit and *calidum innatum*, or innate heat, we stand agape," for assuredly the substitution of the phrase that the nature inherent in the blood was responsive to the essence of the

[9] Dante's "Inferno," Cant. iv., l. 131.

[10] De Part. Animalium, book iii., chap. 4.

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stars is not less calculated to set us wondering than is the term "*calidum innatum*." Harvey, nevertheless, disproved for once and all the doctrine that the heart was the source of heat; he showed how animal heat was dependent on the due circulation of the blood and that the belief that the functions of the lungs were to cool the heated blood was absurd. He says: "The blood, instead of receiving, rather gives heat to the heart, as it does to all parts of the body; and it is on this account that the heart is furnished with coronary arteries and veins; it is for the same reason that other parts have vessels—namely, to secure the access of warmth for their due conservation and stimulation, so that the warmer any part is the greater its supply of blood, or otherwise—where the blood is in the largest quantity there also is the heat the highest." The "Prælectiones" are but notes to assist Harvey whilst lecturing, and it is therefore impossible to know what interpretation to place on them, but I think it highly probable that in the course of years Harvey, as his physiological knowledge increased, modified his views of the connexion between animal heat and the heart, for in the "Prælectiones" he speaks of the heart as the *fons totius caloris*, and calls it *arx et domicilium caloris* from which it appears that in 1616 he still held the Aristotelian opinion as to the heart as the source of heat. No portion of the "Prælectiones" show more strikingly the closeness of Harvey's observation, the amount of his knowledge, and the acumen of his reasoning than that relating to the exposition of the anatomy and the functions of the lungs. In his description of them and the pleuræ he makes constant references to their morbid anatomy and their embryonic condition. He is evidently in doubt whether the lungs expand and contract from their own movements or merely follow the movements of the thorax—a question which was afterwards fully investigated and explained by Mayow. The immediate followers of Harvey naturally turned their attention to the subjects on which he had thrown so much light—the circulation and respiration. Most notable among them were two distinguished Cornishmen, Richard Lower and John Mayow; the former is the best known from his experiments on the transfusion of blood, which attracted the attention of the general public, but those experiments are by no means the most important of his physiological researches; in addition to demonstrating in many ways that the red colour of arterial blood was due to the action of the air, he calculated the force of the heart and the quantity of the blood passing through it. He showed also by demonstrations on dogs that œdema of the parts distal to the heart followed ligature of the veins, and produced ascites by tying the vena cava in the thorax. Lower also was the first to show the dependence of the heart's action on nervous influence and to demonstrate the moderating effect of the pneumogastric nerve on the heart.

Mayow, though recognising that there was an interchange between the blood and air in the lungs, still thought that the source of vital heat was in the heart, "not that it contained a biolychnium (that is, a vital torch) flaring within it, but that from its perpetual motion for carrying on the circulation the nitro-aerial and sulphureous particles in it must be in a state of perpetual effervescence, and that necessarily remarkable heat must be excited."[11] Mayow thought that air was impregnated with a certain universal salt, which was of the nature of nitre, and with vital spirit, and with fire; notwithstanding this erroneous view of the nature of air, it is remarkable how closely his explanation of the action of this imaginary salt on the blood agrees with the actual action of oxygen, and he sums up his conclusions as to the uses of respiration as follows: "Life consists in the distribution of animal spirits which must be supplied for the pulsation of the heart. In very truth it is highly probable that the aerial salt is necessary for any muscular movement, so that without it no pulsation of the heart is possible."[12] In his essay "De Respiratione Fœtus in Utero et Ovo" he correctly infers that the blood of the fœtus obtained through the umbilical arteries not only nourishment, but also aerial salts which obviated the necessity of functional activity in the lungs during intra-uterine life, and states definitely that the placenta should not be regarded as an amplified liver, but as a uterine lung. It is not for his chemico-vital theories alone that Mayow deserves to be remembered; he first accurately described the action of the intercostal muscles and diaphragm, and showed that inflation of the lungs depended on atmospheric pressure. It was not until upwards of a hundred years later, when Black had shown the presence of carbonic acid in expired air and investigated the phenomena of latent and sensible heat, when Priestley had isolated oxygen, and Cavendish and Lavoisier had completed the analysis of atmospheric air, that any real progress could be made in the study of respiration and animal or vital heat. Even now we are by no means fully acquainted with this most complex and difficult subject. Your Croonian Lecturer pointed out a few months ago some of the many difficulties which still have to be surmounted before we can arrive at an adequate knowledge of how and where the interchange between the oxygen of the air and the tissues takes place, and how our systems accommodate themselves to the changes of pressure and temperature in the air, so as to maintain the animal heat at a uniform level.

[11] De Spiritibus Animalibus, chap. iv., p. 31.
[12] De Respiratione.

I have endeavoured, very imperfectly I fear, to set before you the rise of physiology in England. Before the discovery of the circulation of the blood a right understanding of the means by which life is carried on was impossible, and Harvey's discovery should rank on the same level as Newton's discovery of gravitation. In both cases others had to a certain extent prepared the way and may have had glimpses of the truth, but to them the truth was revealed, and they might say with Tennyson's Holy Sage,

> "Idle gleams to thee are light to me,"

and the light which their genius led them to perceive enabled their successors to reveal what we now know of the mysteries of animate and inanimate nature. We know very little of Harvey's practice as a physician; what little we can gather from his writings show him to have been fertile in resource and skilful in the management of gynæcological cases. We cannot doubt that one who showed such acumen in deciphering the problems of life, and who speaks so wisely of the necessity for the study of morbid anatomy, must have been far ahead of the rest of his contemporaries in the application of his knowledge to clinical work; and the disparaging gossip of Aubrey merely reflects the opinions of those too ignorant and too bigoted to appreciate him.

I have already spoken of the overpowering authority of Aristotle over the minds of the students of nature, but the completeness of his dominion was not to be compared to the overwhelming influence of Galen in the medical world during the sixteenth and early part of the seventeenth centuries, and it needed yet another than Harvey to enable men to throw off the benumbing mantle of Galen. Our College annals recount, as pointed out by our learned librarian in his Roll of the College, that in the year 1559 Dr. Geynes was refused the Fellowship because he had ventured to doubt the infallibility of Galen; and in our annals it is stated that Dr. Hook was not granted admittance to the examination for the licence because he had the honesty to say that he had not read Galen. The revival of anatomy had by Harvey's time somewhat undermined the authority of Galen, which was still further impaired by Harvey's own discoveries. Nine years after Harvey's death appeared Sydenham's "Methodus Curandi Febris, Propriis Observationibus Superstructa," &c., and the world became aware that one had arisen who brought independent thought, unbiased by the traditions and views of the various schools of medicine, to bear on the study of disease. Our ignorance of the details of Sydenham's life renders it difficult to express an opinion as to the position he occupied in society or among his professional brethren in the year 1666, when the "Methodus" first appeared. He had then been settled in Westminster for ten years, and his intimacy during his Oxford life with Locke and Boyle, to whom he dedicates the work, makes it probable that from his first arrival in town he must have mixed with those bright and inquiring minds who instituted the Royal Society; be that as it may, his treatise at once attracted their attention, and in the same year in which it was published we find it reviewed in the "Philosophical Transactions of the Royal Society," then in the second year of its existence. I will not stay to consider how great or how small were Sydenham's literary acquirements, or whether he wrote his works in Latin or whether they were translated from the vernacular by Dr. Mapletoft and Mr. Havers; the subject is fully treated of by Dr. Latham in his "Life of Sydenham," and I know of no fresh evidence that has been obtained. Whatever may have been the amount of Sydenham's scholarship, no one who reads his works can fail to see from his

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frequent allusions to Horace, Lucretius, Seneca, and others. that he was intimately acquainted with the Latin classics, and, like Dr. Latham, I should be sorry to consider that his admiration for Hippocrates—the divine old man—was taken at second hand. As to the other disputed point, whether Sydenham served as an officer in the Parliamentary army, the question has been set at rest by the discovery in the Record Office of a petition to the Lord Protector signed by Thomas Sydenham and endorsed "Captain Sydenham's Petition."[13]

Nurtured during the Civil War, the rough and turbulent early life of Sydenham left, perhaps, its stamp upon his character—a thoroughly upright, honest, God-fearing man, but somewhat intolerant of opposition, and of singular independence of mind. He had not the sweet nature of Harvey, which appears to have enabled that gifted man to have lived in peace with all men; but we must, I think, receive with caution the few contemporary anecdotes which have come down to us concerning him. It is pretty certain that Sydenham thought Sir Richard Blackmore a pedant and prig—an opinion shared by many, for, besides Dryden's well-known castigation of Sir Richard Blackmore, we have the following description of him by a contemporary:—

> "By Nature formed, by want a pedant made,
> Blackmore at first set up the whipping trade;
> Next quack commenced, when fierce with pride he swore
> That toothache, gout, and corns should be no more.
> In vain his drugs as well as birch he plied,
> His boys grew blockheads and his patients died."
>
> Col. Coddrington.

The oft-quoted story of the advice Sydenham gave him to read "Don Quixote" was probably only passing on that which Locke had given Sydenham, for the former says: "Of all the books of fiction, I know none that equals Cervantes's 'History of Don Quixote' in usefulness, pleasantness, and constant decorum."[14] And it may also have contained a covert allusion to the fictitious character of most medical writings. Sydenham's independence of mind is the key to his position in medicine. The opening paragraph in the preface to the first edition of the "Methodus Medendi" exhibits to us the serious and lofty view that Sydenham took of the physician's duty, whilst in the greatly expanded preface to the third edition he instructs us as to the means by which the science of medicine was to be advanced. It was his determination to study diseases as they presented themselves to him, keeping the peculiar and constant phenomena apart from the accidental and adventitious, and laying aside all hypotheses as to their nature, which enabled Sydenham to draw up those pictures of gout, dropsy, and fever which will remain classical for all time and justly entitle him to be called the modern Hippocrates. From Harvey's physiological teaching, and from clinical observations carried on in the spirit of Sydenham, our present knowledge of disease became possible. Harvey's work and writings had no direct influence on Sydenham; the latter makes no reference anywhere to Harvey, nor does he seem, in his treatise on "Dropsy," written in 1683, to have seen the bearing which Lower's experiments, made fourteen years previously, of ligature of the veins had on dropsy. Sydenham considered "weakness of the blood" to be the sole cause of dropsy, and throughout his writings he nowhere alludes to the physiology of the tissues. He quotes Hippocrates with approval, as blaming those who in their exceeding curiosity and officiousness busied themselves in speculations on the human frame, and, whilst admitting that more than one valuable medicine had been obtained from the chemists, blames those who thought that medicine could be promoted by the new chemical inventions of his day;[15] and he further on says: "The whole philosophy of medicine consists in working out the histories of diseases and applying the remedies which may dispel them; and experience is the sole guide."[16] Yet Sydenham himself had his theories, and, viewed by the light of our present knowledge, very incorrect ones, which were not in advance of those of his predecessors. Without theory—or, in other words, general principles—experience is a blind and useless guide. Rational theories of disease and its treatment can only be founded on physiological knowledge, and until, comparatively speaking, a very few years ago the knowledge of physiology and the knowledge of medicine were inseparably connected, for, with very few exceptions, the former was cultivated by medical practitioners alone, and may, without disrespect, be said to have been parasitic on medicine.

This is no longer the case, for using the term in its widest sense, as embracing the study of life, whether under normal or abnormal conditions, it has become the largest division of the natural sciences, throwing out like a gigantic tree huge branches from its main trunk, which depend more or less for support on chemistry and physics, and embracing within its ample boughs a vast series of subjects with whose rapid growth it is beyond the powers of any man to keep abreast. What is to be the future relation of it to medicine, or, rather, I should say, of medicine to physiology? The old position is reversed, and medicine—that is, the study of the manifestations of disease, its origin, course, and the means of alleviating its effects or preventing its occurrence—may be regarded as a branch of physiology, and one not less scientific than the observation of physiological phenomena in the laboratory. The practitioner of medicine turns to the physiologist, the bacteriologist, the chemist, and the physicist for aid in unravelling and explaining the symptoms he observes and has to deal with, and so long as they work together in the spirit which influenced Harvey and Sydenham—the pursuit of truth—the world must be the gainer.

The very brilliancy of recent discoveries and the vast increase in our knowledge may for a time react prejudicially on the art of medicine. Are we not in danger of being carried away by our enthusiasm? And may we not fall into the predicament, described many years ago by Buckle, of our facts outrunning our knowledge and encumbering our march? More especially does this difficulty arise in the training of our students; so vast is the range of subjects bearing on medicine, and so important does each appear to those best acquainted with them, that there seems to me danger lest, in endeavouring to secure an acquaintance with them all, we may forget that the future life of the majority of those entering our profession is to be spent in ministering to the victims of accident or disease, and that for the due recognition and treatment of sickness and injury experienced and trained clinical observation is absolutely necessary; no amount of laboratory training will enable a man to recognise the nature and proper mode of reduction of a dislocation, or know scabies when he sees it, and the words of Sydenham to his dear friend Dr. Mapletoft, "The art of medicine can be properly learned only from experience and exercise," will always hold good. There is no need to urge on the Fellows of the College another of Harvey's directions to the Orator of the day "to search out the secrets of nature by way of experiment," for at no period during the existence of our College have they manifested greater activity in that direction than at the present.

The great scientist who has recently passed away in the fulness of years and fame has opened to us new and most fascinating fields for future research, pregnant, I believe, with an abundant harvest of which he himself was permitted to see the first fruits; working out with scientific patience and accuracy the clue afforded by Jenner's discovery of the efficacy of vaccination in small-pox, Pasteur not only threw light on the darkness which surrounded the communicability of specific diseases, but placed in our hands a means to fight them. Pasteur has gone to his rest surrounded with all the honours a grateful nation could pay to his memory, and I know not that I can bestow a higher tribute to his genius than by saying that he will worthily be placed in the Temple of Fame by the side of our Harvey, both men honoured alike for the blameless character of their lives and the brilliancy of their discoveries. If we, as a nation, have not been able, through the action of our Legislature, to bear our full share in the furtherance of Pasteur's discoveries, we have at least the satisfaction that Lister was the first to recognise their bearing on morbific processes and to introduce new principles into surgery, which have added a hundredfold to its powers. The later developments of Pasteur's discoveries in the hands of Koch, Behring, Roux, Klein, and a host of equally earnest inquirers, have had in medicine a correspondingly important and beneficial effect on our conceptions of disease and its treatment. Remarkable as has been the nineteenth century in the development of science and its application to the needs of mankind, in no direction has it been more remarkable than in the progress of medicine. The introduction of anæsthetics marks the middle of the century, and its close will in the future be ever memorable as the era in which we commenced to have a truer and fuller insight into the causation and nature of disease

[13] A copy of the petition, together with other remarks, was published by Dr. Gee in St. Bartholomew's Hospital Reports, vol. xix., p. 1.
[14] Some Thoughts concerning Reading and Study.
[15] On Dropsy, par. 23, Sydenham Society's Trans.
[16] Op. cit., par. 45.

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than the world had yet seen. Let us all, then, strive to work after the examples of Sydenham and Harvey, in the confident hope that as our knowledge advances we shall obtain greater powers of control over disease in all its forms and become provided with new and more potent means for the mitigation of pain and suffering.

An Address

ON

SOME OF THE CHANGES IN THE SURGERY OF THE LAST SIXTY YEARS.

Delivered at Oxford before the Medical Society on Oct. 18th, 1895,

BY SIR GEORGE MURRAY HUMPHRY.
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GENTLEMEN,—On this day, fifty-nine years ago, my professional career commenced with an apprenticeship at Norwich, where I was initiated into the varied and practically useful work of a surgery under the direction and training of the most energetic and incessantly working, and one of the most learned and able, surgeons I have ever known, who, in spite of the engagements incidental to a large general and consulting practice, used regularly to examine me and my fellow pupils in our studies and who, in addition, gave me an early interest in the work of a pathological museum which has lasted through my life. It was no small privilege to be thus placed and to be a dresser and a case-taker in that Norwich Hospital which has been the scene of the labours of so many eminent physicians and surgeons. It was a happy time; I soon came to love the place and my work and those with whom I was associated, and it was, as you may suppose, a source of melancholy to me the other day, when I was there, to find that, owing to recent alterations (improvements?) in the regulations for medical study, there was not a single student to take advantage of that fertile field of knowledge and to take part with and stimulate and cheer the medical officers in their work. The Norwich Hospital without a student and the London hospitals overcrowded with them. This ought not to be. It is a grievous waste of practical opportunity and a serious loss to our profession and to the public that it is so. Having been on hospital duty as dresser, clinical clerk, or surgeon almost unremittingly from that day to this, at Norwich, St. Bartholomew's, and Addenbrooke's Hospitals, an unusually long and much favoured career, I do not know that I can better employ the time at our disposal than by giving a brief sketch of the changes I have witnessed in that period—changes which, in the main, have centred themselves about anæsthetics and antiseptics, and which rival the extraordinary social changes which have resulted from steam and electricity. In the museum to which I have referred there was a large ovarian cyst extracted through an incision in the linea alba successfully by Mr. Jeffreson of Framlingham. This was the forerunner of the marvellous results—the most marvellous, I think, in the history of surgery—which have since been attained in that direction by modern improvements. I well remember the respect with which I looked at and thought of this specimen in the days when tapping afforded the relief, and that a temporary one, from that distressing and fatal malady. There was also a calculus weighing fifteen ounces successfully extracted by a Norfolk surgeon in the presence and with the aid of Gooch and represented in his work on Surgery, and which stands, I believe, as the greatest triumph ever accomplished by the lateral operation of lithotomy. Now that operation, which was the pride and glory of my early life, which I thought one of the best and most unexceptionable of operations, seems in the way of being supplanted by litholapaxy and the supra-pubic method.

Let me narrate two cases which are good illustrations of the contrast between the past and the present. On the evening of Oct. 11th, 1838, a man aged twenty-six years, while carrying a sack of potatoes, fell with the right lower limb doubled under him, dislocating his hip into or above the sciatic notch. Attempts at reduction were made next morning at the Norwich Hospital by varied methods of manipulation and extension by pulleys. These were continued for four hours, during which time sixteen ounces and then twenty ounces of blood were drawn from the arm, and tartar emetic to the amount of twelve grains was given. Finally the man was taken to bed with the dislocation unreduced. He became feverish and delirious, with inflammation of the veins of the arm and about the hip: large abscesses formed and were opened in the hip and thigh, and after a lingering illness death ensued. One can scarcely conceive the occurrence of so disastrous an affair at the present time. In another case of a similar dislocation in a man of the same age, treated the morning after the accident at the same hospital in April, 1837, the same methods were applied; thirty ounces of blood were drawn, six grains of tartar emetic were administered, and not till after two hours and a half was reduction effected. The man recovered with a useful limb. Now, it is not too much to say that at the present day, in all probability, by the aid of an anæsthetic and the modern method of manipulation based upon better knowledge of the lesions accompanying the accident, the same surgeons would have reduced each of these dislocations in a few minutes. I say the same surgeons, for they were men of ability, well practised in surgery and supplied with the best apparatus and assistance which a large hospital provided at that time. The fault was not in them, but they had not the means and the additional knowledge which we now possess. We are no better than they, but we are better equipped to meet these and other contingencies in practice, and our patients are proportionately better off.

We dressers used to folow the surgeons round the hospital, each carrying a board laden with unguents and plasters and lint and tow, and a variety of appliances which were freely used in the dressing and redressing of wounds—too freely, as I even then ventured to think. The example and morale of Kneller's sagacious "Sympathetic Cure" made an early impression on my mind, and the plastering, undoing, and replastering of stumps, with the pulling at the ligatures and other devices which I saw practised, were a source of much distress to me, so that when I came to have the direction of affairs, as surgeon to Addenbrooke's Hospital, I discontinued these applications altogether, leaving the wounds, especially those after operations, freely exposed to the air without covering of any kind, the edges of course being united by sutures. The plan answered well, the wounds healed better than under the dressing method, the relief to the patient by the lessening of surgical interference was great, any discharge that escaped was easily cleaned away, and I regretted that other surgeons showed reluctance to adopt this simple open-air treatment. Happily, however, this good thing soon had to give way to a better—to the antiseptic—method, based upon a knowledge of the deleterious influence of air-borne micro-organisms, the ready acceptance of which throughout the civilised world has done more to extend the range, and promote the success, of surgery than anything in the whole history of our art; and the treatment of wounds, which was in my early days, and still more before them, the opprobrium, is now the glory, of surgery. Who would have dared in my early time to make exploring excursions about the peritoneal cavity, to cut into or remove a kidney, to cut out gall-stones, to open up the brain, and perform a variety of other operations, some of which are now of everyday occurrence—namely, excisions of joints and arthrectomy, radical cure of hernia and varicocele, removal of the thyroid gland and of the testes for senile prostatic disease, of the appendix cæci, the pylorus, and other portions of the intestinal canal, and the closure of perforating ulcers of the stomach. One day in the week used to suffice for the operating day; now a portion, often a considerable portion, of each day is in some hospitals devoted to this work. How greatly has the animal absorbable antiseptic ligature contributed to good results. Secondary hæmorrhage after operations, one of the sore trials of my early life and one of the sources of grave disaster to our patients, now scarcely ever occurs. The tied vessel heals without suppuration or ulceration, and is sealed whether a clot forms in its interior or not. Setons, moxas, and issues, in which we had much faith—at any rate, which we employed much—are almost forgotten, having given way to massage, douching, and other milder methods. That horrible compound, the black draught, the then so largely accredited

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panacea, is now rarely administered, while such a host of new and milder remedies have entered the field that one almost wonders how disease can hold its ground at all. Curious problems are presented by the processes—the combinations of accident, observation, and reason—by which these various remedies have come into use and acquired confidence. Much might be written on this.

Perhaps the most extraordinary change which has taken place is in the matter of blood-letting. Persons, generally about middle age, used to come to the surgery at spring and fall to be blooded, and I calmly would take away, at a shilling a head, *pleno rivo*, sixteen or twenty ounces, and the good people did not seem the worse for the loss, either in body or pocket. What the real effect was upon them it would be interesting to know, and it would be still more interesting to know what would be the effect if the same procedure were now adopted. In the hospital also the lancet was freely employed in the treatment of a variety of inflammatory and other affections, and, as I have narrated, in the reduction of dislocations. How many medical men who have been fifteen or twenty years in practice have never seen venesection and do not know how to perform it. It has gone, as it were, out of the memory; it went suddenly, and it now scarcely occurs to the practitioner as a means of treatment. If it did occur to him he would be afraid to have recourse to such a proceeding, partly because it is so unwonted, so unknown, and partly for want of knowledge how to do it—that at least is the case with many. It is scarcely credible that so great a change in the use of so potent a weapon can have taken place in so short a time. One cannot help asking if the change is quite creditable. Either the over-use in the past must have been wrong or the total disuse in the present must be so—probably both; for the human constitution cannot have so altered in that period as to justify the change. The pendulum of fashion, we must admit, is not without its swing—its potent, its too potent, swing—in medical ideas and medical practice as in other matters, and I cannot doubt that venesection affords an illustration of such an influence. Nor can I doubt that lives are now often lost and maladies prolonged for the want of judicious recourse to it. Some years ago I was called to a middle-aged man of average strength suffering from an attack of severe pain in the chest (pleuritic) with the usual accompanying symptoms. In accordance too much with routine I prescribed the applications and medicines then in vogue. In a few days he died. A year afterwards I was called to his brother, the counterpart of himself, lying on the same bed with the same malady and precisely similar symptoms. I bled him to twenty ounces and in a few days he was well, leaving in my mind the conviction that had the treatment in the first case been like that in the second the result would have been the same. A man past middle life was suffering under dyspnœa with some bronchitis, labouring and intermitting action of heart, and albuminuria. To my suggestion of the loss of a few ounces of blood the surgeon in attendance replied: "What! bleed a man with intermitting pulse and albuminuria? You must bear the responsibility and carry out your treatment." I did so, taking about sixteen ounces from the arm, which was well borne and gave relief. Some months afterwards the surgeon, meeting me, said: "You saved that man's life; the bleeding was the right thing." I am glad to notice that the tide of feeling is ebbing a little and the opinion gaining ground that in some cases venesection may be resorted to with advantage. It is remarkable how well loss of blood from wounds is commonly borne, how in urgent cases the blood-stream may be supplied by warm water with a little salt, and how soon persons recover from prolonged and copious drainage of blood caused by uterine or rectal maladies. These experiences, together with those of bygone days, may give some courage to those who feel that venesection still deserves a place among the recognised means of combating disease.

Vaccination has not only proved one of the greatest boons that ever accrued to mankind through our profession, it has also been a source of profound interest and speculation, to me at least, for many years in a physiological and pathological point of view. Did it stand alone? Were its results altogether exceptional? Was the immunity from a given disease (small-pox), engendered by the insertion into the system of a minute quantity of the poison of that disease modified by its passage through another animal, to remain the solitary example of that kind of phenomenon, or were we to look for other like examples and the unveiling of new and far-reaching principles through them? I often wondered that the advocates of the "similia similibus" doctrine, in their vain efforts to find some reasonable ground for their theory, did not alight upon, or make more of the practice and results of, vaccination coupled with those of inoculation. Here was to hand the unmistakable evidence of a disease being hindered or prevented or stopped by the modification by the like, that is to say, of that which caused it. By inoculation—the introduction, that is, direct of the poison of small-pox—the disease was produced; by vaccination—the introduction of the like of that poison—the disease was prevented. Prevention and cure are near allies; and was it not possible, indeed probable, that cure might be effected by means like those which staved off disease? These thoughts often occurred to me and doubtless to others. It is no small thing to have lived to see these ideas confirmed, to learn that immunity from other diseases besides small-pox is attainable by the introduction into the system of minute quantities of the modified essences of the diseases, and to dwell now in the midst of the lively discussions and observations which are going on respecting the influence of similar methods in the cure of diseases. Should our hopes in the direction indicated be realised, it is scarcely too much to say that the greatest discovery, the one most conducive to the welfare of mankind, in our generation will have been made—a discovery in therapeutics surpassing even those of anæsthesia and antiseptic methods in surgery. Vaccination, moreover, has proved an illustration of the great principle that good is rarely unattended with evil, and, further, of the fact that many fail to estimate rightly between the good and the evil. It would be difficult to point out an instance where the good really preponderates so much as in vaccination, yet the clamour against it has necessitated a Royal Commission, and that commission finds difficulty in issuing its report and making suitable recommendations.

Greater accuracy in the diagnosis, the noting, and the treatment of disease, leading almost to revolution in several branches of our profession, has been effected by the microscope, the stethoscope, the ophthalmoscope, the laryngoscope, and the cystoscope—by the clinical thermometer as well as by the introduction of new instruments of various kinds, tempting possibly somewhat too much to their use, in the invention of which the skill of the surgeon and that of the mechanician vie with one another. All these alterations, which are for the most part improvements, and more especially the greater attention to sanitary arrangements, have led to a decided prolongation of human life as well as to a diminution of suffering.

While thinking over these changes, and others which time fails me to mention, in the means and surroundings which the last half century has brought to the medical man, and over the wide possibilities for good attendant on them, one cannot help wondering a little upon the medical man himself. He has accommodated himself well to the shifting of things about him. He has become accustomed to, and is more receptive of, new ideas. The *rôle* that he plays in the service of his fellow men has enlarged. He sees more of the world and enjoys the culture resulting therefrom. The dog-cart and the brougham are largely substituted for the saddle, and his life is altogether easier and more comfortable than it was. But as to the man himself the problem is more difficult. Greater opportunities and powers do not necessarily make greater or better men. When I recall the men with whom I was associated in my early life I bring before me so many of high stamp, of honourable feeling and upright character, professionally and generally well informed, highly revered by myself and others, the real trusted friends and advisers of their patients, that one may search in vain to find their superiors in the present generation. The dispensing and charging for medicines, then so general, never appeared to me to lower them in the estimation of others. Character and knowledge, then as now, were the bases of respect. Time has altered the surroundings much, but the men have changed little, which accords with the teachings of history in our own profession and the human race generally. The men of old were, as far as we can judge, as great and as good as those of to-day; and whatever comparisons we may make with regard to the circumstances in which we live we have no right to be especially proud of ourselves. I do not know that medical men have now greater interest in their science, greater appreciation of their work, or a higher sense of their responsibilities in connexion with it than they formerly had. I do not think that we are justified in asserting, as has been recently done, that "an almost entire transformation in surgical ideals has occurred," or

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that there has been "a wonderful unfolding, enlarging, ennobling of the thought, spirit, aim, and ideal of surgery." So far as I can judge, the spirit, aim, and ideal of the seniors in my early life were as high and as noble as those of my juniors at the present time. They would have hailed with as much pleasure, and with the same motive, as is now done the increased means afforded for doing good in their generation.

Examination and education have shared in the general change, we will hope, somewhat for the better. I may be, and it is natural that I should be, *laudator temporis acti*. Certainly I often congratulate myself that my lot was cast in the days before examination tests and subjects of study were so numerous and *régime* so strict; when we were more free and there was little to damp our pleasure in our work. The enormous advantage of pleasure in study is, and must be to some extent, sacrificed to what is, perhaps, the necessity of examination test. I hope the general standard is raised, but I think we are apt to forget that the faculty of acquiring and retaining knowledge does not increase with the increase in the number and range of subjects any more than the power of digestion increases with the increase of food taken. Indeed, both brain and stomach are liable to be weakened by overloading. There is, to my mind, too great a mass of facts heaped on the memory, too little reflection on them inculcated, too great a straining after the directly practical, too little aspiration for the principles upon which good practice must be based, and too little of the kind of teaching which Lawrence and Latham and Brodie gave us. The sciences of physiology and histology have become, and those of pathology and anatomy are becoming, more separated from medicine—delegated, that is, to special teachers and special examiners, greatly, doubtless, to the advantage and width of scope of those sciences and to the greater knowledge of them; but I fear there is hereby engendered a tendency to take the student too far afield, and the remark applies to the so-called preliminary scientific subjects. It is apt to lead too much to meandering in altitudes, too little to steady straight-going upon *terra firma*, too much to pride and obtrusiveness of supposed higher knowledge, too little to reasoning and too little to power of reasoning upon simple data, and too little to that sort of reasoning which constitutes the basis of "common sense." The scientific and the practical, in short, become too much separated, and what is needed is a greater regard to that connexion between the two which should be maintained through the whole period of study. Upon examination methods I will not enter; they have recently been discussed in another place by one singularly qualified to judge. I will merely observe that they should test the qualities of readiness and briskness as well as those of calm, sober thought; for both are of so great importance in the practical work of our profession.

Prophecy is but inference from the knowledge of the past, and what does the past tell us of the future? It tells us that progress is sure to go on—to go on in medicine at about the same rate as in other sciences, but how and in what directions the progress will be made we cannot tell. The future, we may be certain, will differ from the present, but in what the differences will consist is not within our ken. The "blindness to the future kindly given," humiliating though it be, acts as a never-failing stimulus to our energies and our hopes. Great discoveries and great improvements in medicine have rarely been reasoned up to. The science is too difficult for that. They come like lightning flashes and take effect only where fuel is ready to be ignited. They are going on all around us, and it is the business of such societies as this to turn them to account and to photograph them. No one of your meetings takes place without bringing the opportunity for this. Each fact brought before you is a flash to be fixed and to kindle some thought. The facts may seem to be simple, but the inferences from them may be valuable. Any apparent dulness is probably not in ourselves, but in those who do not appreciate them, who, perhaps, have become too much accustomed to them to heed and scrutinise them. An ordinary case of hydrocele—the simplest of diseases—your society would, perhaps, consider to be beneath its notice; yet how little do we really know of it. How comes it and why does it defy all treatment, local and general, except the trocar? How much of physiology and pathology is hidden in it. *Ex hoc uno disce* not to despise simple cases, but to come to your meeting prepared to listen and to think over them as well as to communicate from your own stores, more particularly if you have anything new, or apparently new, to say or suggest about an old thing. Then will you come with pleasure, and profit by the coming.

An Address
ON
THE SURGICAL ASPECT OF TUBERCULOSIS

Delivered at the Opening of the Manchester Medical Society on Oct. 2nd, 1895,

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GENTLEMEN,—The changes in surgical affairs have within recent periods been so many-sided that it is probably well to pause now and then to review the nature and import of some of these revolutionary phases. Among them not the least interesting is that which concerns the attitude of surgery towards certain common tuberculous lesions. Less than fifty years ago it was assumed that tuberculosis lay beyond the province of the already sufficiently aggressive surgeon. The surgeon was allowed to take a languid interest in a disorder called scrofula, although his powers for good extended little beyond the application of iodine with a paint brush. The laying on of iodine served to replace the laying on of hands which in the seventeenth century gave to kings the privilege of curing this affection by the touch. Scrofula was in every way a convenient disorder. It was a cloak which covered a multitude of pathological sins. It represented something in the blood; it had a whispered relationship to syphilis; there was about it something of the attractive romance which attaches to an obscure domestic scandal. In reality the term stood, like the algebraical *x*, as representative of a profound quantity of ignorance. There was little agreement as to what scrofula really was, except to the extent that it admitted a large factor of the unknown. As soon as the term "tubercle" crept into existence scrofula and tuberculosis began to play the part of two Dromios in a tedious Comedy of Errors. Among the minor benefits which mark the close of the nineteenth century must be placed the discovery which brought this drama to an end. Nothing in the literature of medicine can compare with the great war of words which waged around these two time-worn terms. For more than one hundred years there was no peace in the pathological camp, and no assured period of silence fell upon a turmoil which was never other than wearisome. Hither and thither these two terms were bandied, with infinite vicissitudes and troublous importunity. At one time all the diseased conditions under dispute were ranked as scrofulous, and at another time as tuberculous; while now and then the agnostic of the time would declare that there was no scrofula or no tuberculosis, according to whichever mood suited his parable. Each writer defined the expressions "scrofulous" and "tuberculous" according to his individual lights, and in the resulting confusion of tongues the words had a meaning only to those who used them. One patient author has written the history of this conflict. His work—"The Chronicles of Tuberculosis"[1]—contains much of what little romance belongs to medicine and provides a strange picture of the development of a scientific creed. The work—although concerned mainly with the literature of modern times—includes the expressions of no fewer than 637 writers upon the subject.

It is difficult to avoid the temptation of alluding to a few crises in this great discussion. Scrofula was originally considered to be exemplified by the familiar chronic gland swellings in the neck, and later the term "tuberculous" was assumed to be most suitably applied to phthisis. It will be no matter for wonder that the conspicuous and disfiguring gland disease had a place in the nomenclature of medicine before pulmonary phthisis had been differentiated from among the numerous chronic

[1] Die Geschichte der Tuberkulose. By Dr. August Prédbl. Hamburg, 1888.

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affections of the chest. To the clinical observer the unwholesome-looking child with his swollen neck had become a clear individuality while yet the great world of pulmonary disease was without form and void. The χοιράδες of Hippocrates was rendered into Latin as scrofulæ, and the word in due course became English. Hippocrates and Galen considered scrofula to be due to a cold and pituitous condition of the humours, and this pretty fancy, this baseless fabric of a disease, remained an item of scientific knowledge for many centuries. Throughout the voluminous history of the seventeenth century this conception of scrofula still flourished, and there were few who did not cling to the gospel of the pituitous humour. Some, like the great Wiseman,[2] were led away by a belief in a peculiar acidity or acrimony of the blood, but the majority clung to the old faith. In the sixteenth and seventeenth centuries scrofula was, according to the views of the time, a widely prevalent affection. It was popularly spoken of as "the evil," and it stood forth as one of the great scourges of the day. Tuberculosis had not yet appeared upon the scene, and the term "tuberculous," when it was first employed, had about the same anatomical meaning as the term "nodular."

The increasing study of pathology led to a fuller knowledge of the post-mortem appearances in pulmonary phthisis, and then followed the first great event in the history of tuberculosis. About 1679 it dawned upon Francis Sylvius[3] that there was a resemblance between the changes noticed in phthisical lungs and those which had long been familiar in scrofulous glands. Sylvius went so far as to maintain that the morbid processes involved in the two diseases were the same, and that the tuberculous masses found in the lung were identical with those so often seen in the glands. To give reality to his belief he assumed the existence in the lung of minute lymphatic glands, which became swollen and, in due course, caseous and broken down. Thus, pulmonary phthisis became to be regarded as scrofula of the lung, and for long this theory held good.[4] Tubercles of the lung were soon very generally recognised, and the description of phthisis given by the ingenious Matthew Baillie in 1793 leaves little to be desired.[5] Early in the present century the second great event in the history of tuberculosis was reached. Bayle and Laennec[6] recognised the primary importance of the tubercle, and described with precision its exact anatomical condition. Laennec prepared the way for the recognition of tubercle as a product of parasitic nature. Scrofula was now dethroned and became a mere humble appendage of tuberculosis. The pituitous humour disappeared for ever, and the miliary tubercle reigned in its stead. There then followed an idolatry of the tubercle, which was no whit less fervent than the present worship of the bacillus. Laennec and his followers held up upon the point of a needle a minute grain, smaller than a millet seed, which they had isolated from a phthisical lung, and affirmed that it was the very cause of that dire disease. They claimed to have discovered a pathological element, and to hold on the needle point the secret of a mystery and the veritable seed of a disease. It seemed, indeed, as if the man of science had reached the actual confines of human inquiry, and that beyond the little speck on the needle there was only the unapproachable problem of the universe. There soon followed the third epoch in this changeful history. Buhl,[7] in 1857, ventured to regard miliary tuberculosis as an infective disease due to the absorption of a specific virus, and at once a new diagnostic feature came into being. In 1865 Villemin[8] actually demonstrated the infective nature of tubercle by a series of experiments on animals. In the meanwhile the tubercle had been demonstrated in the whole series of so-called strumous diseases, in the enlarged glands, in the scrofulous ulcer, in lupus, in caries of bone, and in the long familiar "white swelling." Finally, in 1882,[9] Koch published the account of his discovery of the tubercle bacillus. That organism was soon shown to be present in every recognised tuberculous and scrofulous affection, and here for the present the matter rests. In the fable the mountain was moved and a mouse came forth. The great mystery of the miliary tubercle had been shaken, and there issues the bacillus. Once more the student seems to have reached the limit of philosophical inquiry. As for scrofula, that once all-important disease fades, after multitudinous changes of fortune, into non-existence. As a definite disease it has no being, and the term is merely a ghostly relic of the past. Tuberculosis may now be defined as an infective disease in which the tissue changes are due to the action of a specific micro-organism, the tubercle bacillus. These tissue changes are, in their general characteristics, those of an inflammation of a low and usually chronic type. The use of the term "neoplasm" in association with tubercle appears to me to be fallacious and misleading. The inflammatory process concerned with tuberculosis is feeble and insidious—it is prone to extend locally; the troubled area is ill defined in its limits, and there is little tendency to produce a defensive barrier which will isolate the infected region. The products of the process are flimsy and unstable. Caseation is so far common as to be almost characteristic. Repair is uncertain and often insecure, and suppuration offers a quite frequent means of cure. Tuberculous affections respond readily to treatment when a free eradication of the diseased tissue is possible. The existence of extensive caseation has no little influence upon the details of surgical treatment. The process of caseation is one of necrosis and fatty degeneration. Caseous matter is not deposited in the usual pathological sense, and the term "caseous deposit" is misleading. Caseous matter is not inspissated pus, nor is it capable of any other than a merely chemical change. It cannot "break down into pus," as the common expression goes. The cheesy nodule is absolutely incapable of so active a process as pus formation. It is merely a mass of dead material, comparable to the sequestrum in necrosis of bone. Suppuration is often excited in the tissues around it, and the object of such suppuration is obviously to rid the body of the noxious mass. It is cast out as a foreign body is expelled, and its removal by surgical measures serves to restore peace to the disturbed district. The caseous material does not of necessity involve suppuration. It may become inspissated and leathery; it may undergo calcareous change; it may become encysted. As a general surgical proposition it may be said that it is as desirable to rid the body of a caseous mass as it is to remove from it a portion of necrosed bone, although the proposition, when the tuberculous lesion is concerned, is modified by many circumstances.

When one comes to consider the tuberculous individual it is essential to bear in mind that two things are needed to set in action the tuberculous process. There must be the seed and there must be a suitable soil. The seed is provided by the tubercle bacillus, and among the haunts of men this bacillus is, without doubt, liberally distributed. The more closely human beings are packed together the more common may the bacillus be expected to be. In spite of the very general diffusion of the bacterium in our midst, it is remarkable that tuberculosis, although a common affection enough, is by no means common to all men. Some individuals are more exposed to infection than others, but that does not explain the distribution of the disease. Were the seed alone the necessary thing, then all the nurses in hospitals for phthisis should become tuberculous, and from such institutions tuberculosis should spread as from a centre. Tuberculous disease, however, does not spread in this way, or only in a few very rare accidental instances, to which a little too much attention has been paid. It is evident that the soil is of much more importance than the seed—that there must be a large proportion of a population who are practically non-inoculable, while there is a proportion whose bodies form a suitable medium in which the bacillus can grow. The tuberculous individual is the one whose tissues form a suitable soil for the development of the bacillus. The non-tuberculosis individual is the one in whose tissues this micro-organism cannot obtain a hold, it being assumed that both are equally exposed to infection. Tuberculous disease may be acquired, but it cannot be inherited; that is to say, the parent cannot hand down to its offspring the tuberculous process in its complete condition, with its bacilli, its tubercles, and its caseating districts. What the parent can unfortunately transmit to its offspring is a body whose tissues form a suitable soil for the development of the bacillus, should that microbe ever reach it in sufficient strength. What is inherited, as a matter of fact, is not a

2 "'King's Evill' is a tumour arising from a peculiar acidity of the serum of the blood which, when it lights upon glandule, muscle, or membrane, it coagulates and hardens'—Chirurgical Treatises, by Richard Wiseman. London, 1692.

3 Opera Medica; Praxis Medica. Tract IV. Amsterdam, 1679.

4 Richard Morton: Opera Medica. Geneva, 1727. Morgagni: De Sedibus et Causis Morborum. Lugduni, 1765.

5 The Morbid Anatomy of the Human Body. London, 1793.

6 Bayle: Remarques sur les Tubercules; Journal de Médecine, Chirurgie, Pharmacologie, &c., an xi., tome vi. Laennec: Traité de l'Auscultation médiate; Paris, 1819 and 1826.

7 Zeitschrift für Rationelle Medicin, 1857.

8 Gazette Hebdomadaire, serie ii., 50, 1865, and Études sur la Tuberculose, Paris, 1868.

9 Berliner Klinische Wochenschrift, 1882, No. 15.

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disease, but a predisposition. On the other hand, the state of body needed to form a suitable soil for the bacillus may be acquired. This is well seen in what is known as "penitentiary" or "workhouse" tuberculosis. A number of children find their way to these institutions. Their parents may have been entirely free from tuberculosis, although possibly not perfect in health in other respects. These children are often brought up under unhygienic conditions, with insufficient exercise, insufficient sunlight, insufficient air, and insufficient food. Types of the individual thus produced are to be met with in the sodden-looking, purple-faced, clownish children who are now and then seen shuffling their chilled limbs in the ranks of a charity school parade. A small proportion of these depressing creatures become tuberculous for no other reason than that their surroundings during the period of growth have been such as to render their tissues a favourable soil for the bacillus of tubercle.

It has been said by some writers that any condition of ill-health may render a patient disposed to tubercle; but this is not so. The distribution of tuberculosis is not identical with mere ill-health. In connexion with the matter of soil, a prominent place must be given to localising conditions, such as injury in bone and joint disease, and catarrh and ulceration in connexion with tuberculous troubles of the respiratory passages and the alimentary canal. With regard to the question of the transmission of the bacillus or the channels of infection in tuberculosis, convincing evidence on many points is still lacking in regard to the human subject. Experiments upon animals have amply demonstrated the transmission of tubercle: (1) by inoculation, (2) by respiration, (3) by cohabitation, and (4) by feeding. When the possibilities of such transmission in man are studied in the light of clinical experience it soon becomes evident that data derived from laboratory researches and experiments upon animals must be accepted with considerable modification if it be sought to apply them to the disease in man. The animal man, viewed as a corpus vile, does not respond very readily to the tuberculous virus when it is introduced into the body by an unintended experiment. The position, so far as it can be discussed upon clinical data only, may be considered under the four headings just alluded to.

1. *Transmission by inoculation.*—Considering the wide distribution of tuberculous disease, and the fact that in many forms of it a discharge exists in which tubercle bacilli are more or less numerous, it is remarkable how very rare are examples in man of inoculation with tuberculosis through the medium of the skin or mucous membrane. It is evident that to effect such inoculation the circumstances must in one way or another be most exceptional. The pathologist at a large hospital for phthisis must have his hands soaked for hours at a time with tuberculous pus. His knuckles cannot always be free from abrasions and scratches, and yet how very rarely does any development of tubercle occur at the undoubtedly inoculated spot. It is true that at least one form of "anatomists' tubercle" is really tuberculous, but the condition remains quite local and is readily cured. Examples of communication by inoculation are afforded by such cases as the following. A servant maid wounds her finger cleaning a spittoon used by a phthisical patient, and develops a tuberculous ulcer at the site of the wound and tuberculous glands in the axilla. A girl tattooed on the arm by her lover who was dying of phthisis develops lupus at the inoculated spot. Lupus of the pinna has followed the wearing of earrings belonging to a phthisical patient. Tuberculosis has been several times communicated by the Jewish method of circumcision.

(2) *By respiration and* (3) *by cohabitation.*—A certain number of instances have been recorded in which it is more or less apparent that tuberculosis in the form of phthisis was communicated to a sound individual. The examples have been mainly noticed in the persons of husbands and wives, or intimate friends, or nurses and patients. The cases, however, are quite uncommon, considering the wide prevalence of the disease. Jousset would place them as low as 2 per cent. This method of communicating tuberculosis is practically unknown in hospitals for phthisis. On the other hand, it has been made evident that tuberculosis is more common in crowded communities.

(4) *By feeding.*—This method of communicating tubercle is in the human subject exceedingly rare and is doubted by many. Jousset (writing in 1893) affirms that no case has been demonstrated. It would appear that the bacilli of tubercle cannot live in the healthy stomach, and cannot survive the heat involved in the cooking of meat. The communication of the disease to a child by means of milk from a tuberculous cow has not been established beyond doubt. Niepve gives the case of an infant born of healthy parents who was suckled by a tuberculous nurse who had bacilli in her milk; the child soon died of tuberculous meningitis. That tuberculosis, however, is very frequently developed through infection from the mouth is undoubted. This is seen in the common enlargement of the cervical glands in association with some such trifling lesions in the mouth as may afford a convenient entrance for the tubercle bacillus. The steps of the infection from the mucous membrane to the glands have been well demonstrated in cervical gland disease in pigs. On clinical grounds this channel of infection would appear to be very common in the human subject, although it does not prove that the infection is conveyed to the mouth by actual articles of diet, such as milk from a tuberculous cow. It may here be mentioned that it would appear that the tonsils and the circle of adenoid tissue at the commencement of the pharynx form a kind of protective ring to the entrances to the larynx and pharynx. "The mass of adenoid tissue," writes Dr. Sims Woodhead,[10] "whatever its situation, if the cells are active, is a means of protection in so far as it consists of an enormous number of active cells which are capable of taking up large numbers of micro-organisms. ..... So long as these tonsils remain healthy, or so long as they are attacked by no extraordinary number of pathogenic micro-organisms, they are capable of resisting attacks and of dealing with micro-organisms, even of what would be called a most virulent type. ..... In many cases the tonsil itself bears evidence of being effected by tuberculous disease. It is evident that under certain conditions the very structures which ordinarily offer resistance to the general invasion of the bacillus may be so disorganised that they are no longer capable of dealing effectively with the organisms by which they are attacked." Dr. Woodhead proceeds to point out how the cervical glands become infected from these diseased tonsils.

These observations are worthy of being considered. I am frequently told by patients that they have been assured that the tonsils are quite useless organs and that any child is better without them. This statement is generally placed among the arguments advanced for the removal of the body in question. It is impossible to too strongly urge the immediate removal of actually diseased tonsils in unhealthy children, and the eradication of the pharyngeal tissue when it reaches the condition known as "post-nasal growths." At the same time, the wholesale removal of all tonsils which are just large enough to be evident as projections would probably sacrifice not a few masses of adenoid tissue which are still active and still capable of protecting the body from the invasion of noxious germs.

We now come to consider the general treatment of tuberculosis from a surgical standpoint. The first elements in the treatment are plenty of air, plenty of sunshine, and plenty of good food. Let the patient escape from the crowded city and live in the country; let him sleep with his bedroom windows open winter and summer. So long as mere movement will not be in itself injurious, let him be moved into the open air. Let him strive to live in the open air. The atmosphere should be dry. Patients do not do well in densely wooded districts, in valleys by the banks of large rivers, and in moist places. They do better by the sea, in districts with a low rainfall, with a porous soil, with spare vegetation, and with an unimpeded rush of air from the sea. Sunshine and dry air are deadly to the bacillus, and light and oxygen are of more value than all drugs. In the open air the tuberculous patient may feel safe. In England there is some difficulty in spending much time in the open air in the winter, although I have had patients with high temperatures and suppurating wounds, with acute joint mischief and psoas abscesses out of doors every day in the winter in spite of snow and frost and rain. The good results that I have seen to follow the operative treatment of spinal abscess have been due in no small degree to the fact that many of my patients after operation were able to be taken out of doors on a spinal carriage every day and all day through the whole of an English winter.[11] The great feature of Thomas's splints lies in the fact that they permit the patient to move out of the house. If the patient can winter in a more suitable climate than England, let him go to a place where the

[10] THE LANCET, Oct. 27th, 1894, p. 958.
[11] THE LANCET, May 21st, 1892.

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air is dry and the sun bright, and where he can be out of doors all day. Thus it happens that surgical forms of tuberculosis do as well at St. Moritz and in Canada as at Cairo and California. These are places with this at least in common: there are facilities and inducements to be out of doors in the winter months.

There are no drugs which are specifics against tubercle, and three-fourths of the medicines given are administered, not to treat the disease, but to soothe that inherited craving in the human race for physic, which is almost as uncontrollable as the craving for drink. Tuberculous subjects, especially children, appear to be benefited by taking an extra amount of fatty matter in their food during the cold weather. This can be supplied in the form of fat, butter, or cream. There is no excuse, so far as I am aware, for the administration of cod-liver oil. In all probability there is no more nauseous form of fat to be found, and I am not aware that it contains any chemical quality other than that of oil. Its use dates from a time when it was considered in keeping with the fitness of things that all medicines should be nasty. If adults like this oil, by all means let them take it; but it is unkind to force it upon children, who have no prejudices as to the efficacy of medicine, and have not reached an age to appreciate the beauty of nastiness. The public, moreover, cling to the belief that there are such medicines as "tonics." Tonics are medicines which give the taker strength. It is needless to say that there are no medicines which can effect this. Strength cannot be poured down the œsophagus. One might as well add to the Pharmacopœia a physic the taking of which will give wealth. Iron may be needed when there is anæmia, and is conveniently given to children in the form of Flitwick water. Arsenic and quinine are now and then of value, and in some few instances iodide of potassium is of service. Iodine is constantly employed in the form of Kreuznach water, and the special treatment carried out at Kreuznach is often of decided benefit in the early stages of gland disease.

With regard to the local or surgical treatment of tuberculous affections, it is interesting to note the changes which have taken place, and which are still taking place, in connexion with this department of practice. The time is not very far distant when tuberculous or scrofulous troubles were considered to be unsuited for surgical treatment. They were regarded as "constitutional" disorders, and as such were presumed to belong to the province of the physician. The surgeon applied splints, blisters, and iodine, and occasionally opened an abscess and removed a long-dead fragment of bone, but the responsibility of serious treatment rested with the man of medicine. Then came the great surgical revival, and tuberculous affections were attacked in common with nearly all other disorders which presented any local manifestations. There is no doubt but that in a while the pendulum swung too far in the opposite direction. From the position of not treating tuberculous affections at all, it proved to be a short step to the position of treating them too much. Now, I think, the mean is being arrived at, and the surgical treatment of tuberculous affections is becoming free of extremes. This is strikingly illustrated in connexion with the care of tuberculous joints, such as the hip and knee. The first care is to place the patient under what the student in his examination paper delights to call "favourable hygienic conditions." I am quite aware that among poor patients this is not always possible. Then the joint is placed scientifically at rest. The thigh—if the disease lie at the hip—is not abruptly forced into a stereotyped position which the surgeon declares to be one of rest, but which in reality is one of discomfort and one in which the tension within the joint is increased. The limb, on the contrary, is gently induced into the natural position and kept there. Under the treatment by perfect rest, in as nearly as possible perfect conditions, the majority of cases of tuberculous joint disease get well. By so much as the surroundings are imperfect, by so much is that majority reduced. If an abscess form in connexion with the hip, and if that abscess be treated upon general surgical principles, again it may be said that the majority get well. As an evidence of this, must be cited joint disease among the better classes. This is a very different story from the one told but a few years ago. It was assumed that the majority of cases of joint disease went from bad to worse. There was some truth in the assumption, and amputations were common. Excisions, mainly of the knee, were commoner. Mr. Holmes, writing in 1880, gives the results of 245 cases of excision of the knee performed in certain hospitals in London during five years. It would be interesting to know how many excisions of the knee for active tuberculous disease are performed in London per annum at the present time. A distinguished surgeon, writing in 1892, states that "when a well-marked case of pulpy disease has lasted over six months it is not worth while, in the interests of the patient, to attempt the conservation of the joint for a longer period." This was written in connexion with excision of the knee. There was a time, not so many years ago, when, in the opinion of some surgeons, excision of the hip or knee should be performed as soon as the diagnosis of tuberculous disease was established. Even by this time so-called "primary excisions" are more or less matters of the past. It was furthermore urged in connexion with hip-joint disease that as soon as an abscess appeared an excision should be carried out. It would, I think, be safe to predict that that verdict will not be confirmed in the immediate future. The excellent operation of arthrectomy, for the elaboration of which surgery is largely indebted to Mr. Wright of Manchester, is becoming wisely restricted in its use. Instead of being more frequently employed it is less frequently employed, and it has become quite manifest that it is not adapted as a routine treatment for even one particular phase of joint disease. Mr. Howard Marsh, in his recent work on "Diseases of the Joints," gives an excellent review of the present position of surgical feeling upon this subject, and in contrast to the literature of the time when excision (or, later on, arthrectomy) was almost a routine measure, his account shows a singular change in surgical practice.

In the treatment of tuberculous gland disease there was a great leap from doing nothing to doing possibly to much. The treatment of tuberculous glands of a certain grade by complete excision is in every way most excellent, and has been attended with the best results. But here, again, there is evidence that is is possible in adopting a new measure of treatment to run into extremes. It has been assumed by not a few that the only treatment of tuberculous glands is by excision, and I have heard the claim advanced that as soon as it is evident that a gland is tuberculous it must be removed. Those who urge this claim assert that there is no other course open and that disaster will follow if an operation be not at once performed. This pressing of an admirable measure to an extreme and irrational use is tending to bring a most useful operation into discredit. It may be safely asserted that certain cases of tuberculous gland disease recover, and recover well, without operation; and, also, that there are instances of gland trouble, especially when extensive and in adults, which are not suited for operation. In the treatment of gland disease two matters call for early attention. In the first place, it is essential that the periphery be examined and any exciting cause be dealt with as a primary feature in the treatment. There may be discovered some eczema of the scalp, or some discharge from the ear, or some nasal catarrh. In many instances there are enlarged tonsils, or post-nasal growths, or some ulceration within the mouth, or some wholly carious teeth. It is of little avail to attempt to treat tuberculous glands when the tonsil from which they have been infected is left untouched. I can recall the case of a young patient with enlarged cervical glands, who had been sent to certain well-esteemed health resorts without benefit, and who was finally advised to have the glands removed as the only measure of cure possible. The glands depended upon a tuberculous ulceration of the tongue, and when the tongue was treated and healed the glands subsided and ceased to give trouble. Many like cases may be quoted. As a second element in the treatment the part must be kept at rest. This is generally insisted upon when the enlarged glands occupy the axilla or the groin, but it is seldom urged when the trouble is in the neck. Yet the neck is in almost constant movement, and when the glands are beneath the sterno-mastoid muscle they are subjected to continual disturbance. Until the neck is fixed the great essential in the treatment of inflamed parts is ignored. In very many cases there is no measure for the diseased glands but removal, but this measure is likely to fall into disrepute if it become an article of faith—as it is with some—that the only treatment of a tuberculous gland is by immediate operation. It is sometimes promised to the patient that the scar left by the operation upon the glands will be quite insignificant, and, indeed, a mere white line, which will compare in a startling manner with the hideous scars left by "nature." Surgeons, on the other hand, who have seen much of the operations, will not be disposed to lay too much stress upon the invariable fineness and invisibility of the cicatrix left by art.

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When we turn to the treatment of tuberculous testis, it will be found that the fashions in treatment have followed some such lines as the following: In the early days the trouble was condemned as "constitutional," and left alone. Later the testicle was removed when it and the scrotum were hopelessly disorganised; it was evident that these operations were done too late. And then came the advice that the whole organ should be excised as soon as suppuration made itself evident; many of these operations were certainly too early. Now, perhaps, something like the right mean has been arrived at. The patient is placed under as favourable conditions as are possible, and the moment any point of softening appears in the epididymis, it is well opened up, well scraped, and well plugged with iodoform gauze. The operation may have to be repeated more than once. What is the result of this measure? In common with many other surgeons, I can cite an encouraging series of cases in which this simple plan of treatment has led to a complete cure, with loss of substance no doubt, but without loss of the essential part of the organ. It is, however, in connexion with the treatment of spinal and other tuberculous abscesses that the contrast between the treatment of the past and the present is the most striking in its results.

Not many years ago a psoas abscess was rightly considered to be a very fatal thing. The abscess usually presented below Poupart's ligament, and was allowed to break or was opened in a faint-hearted manner. Then followed the disastrous train of results due to inadequate evacuation of the morbid products, inadequate drainage, want of suitable rest to the parts, and the inevitable introduction of sepsis. The majority of the patients died, and among adults especially the results were most deplorable. At the present time the position of affairs is much altered. The actual steps of the operative treatment differ a little with different surgeons. The proceeding I have adopted myself is the following. The abscess is reached through the loin by the route I ventured to advocate in a paper read before the Royal Medical and Chirurgical Society in January, 1884. By this incision the abscess is opened as near as possible to the seat of disease. The spine, over a limited area, can be examined, and now and then diseased bone can be removed. The largest sequestrum I ever removed involved the greater part of the body of the first lumbar vertebra. Cases associated with such large sequestra are, however, quite rare. Now and then a surface of carious bone can be scraped. When the abscess has been evacuated suitable sharp spoons are introduced, and the lining wall of the cavity is carefully and thoroughly scraped until the whole surface has been laid bare. During the process the cavity is repeatedly flushed out with warm sterilised water, which, at the London Hospital, comes direct from a Berkfeld filter. Septa are broken down with the fingers and diverticula opened up. The amount of pus, cheesy matter, and membrane removed is often surprising. When the cavity is clean it is well dried with Turkey sponges on holders, which serves to remove what remains of débris. Finally, a little iodoform emulsion is introduced and the wound then closed. In spite of the contradictory evidence furnished by laboratory experiments, it certainly does appear, from clinical observation, that iodoform has a specific effect upon tuberculous lesions. The well-to-do patient passes his convalescence on a spinal carriage in the open air, be it winter or summer. The cavity left by the operation is more like that left by the removal of a very large tumour, such as a lipoma. It does not behave as does the wall of an ordinary septic abscess, and the healing is very usually immediate and complete. This peculiarity in the inflammatory phenomena with which tuberculosis is associated is well illustrated by the manner in which tuberculous peritonitis responds to operative treatment. In a series of 308 cases of tuberculous peritonitis treated by laparotomy there were 74 deaths, the mortality due directly to the operation being only 2·5 per cent. Those cases did best in which the operation consisted of little more than a free incision, and in which there was neither flushing of the abdominal cavity nor drainage. I think it may be said that in no non-tuberculous inflammatory condition is a parallel to this to be met with.

Such, in very brief and imperfect outline, are some of the changes which have in recent years concerned the relation of the surgeon to tuberculous disease. These changes have taken place along leisurely lines, and have been so far free from abrupt and startling departures that it is only when they are passed in review that the magnitude of their meaning is made evident. I think it may be affirmed that the lead in this department of progress has been taken by the surgeons of this country, and that this progress has been marked by that discriminating common-sense which has always been conspicuous in British surgery.

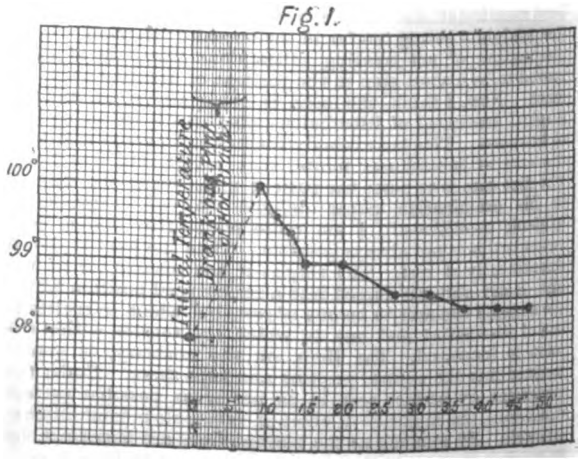
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ON THE VARIATIONS IN THE TEMPERATURE OF THE MOUTH IN HEALTH PRODUCED BY LOCAL APPLICATION OF HEAT AND COLD.

BY W. S. LAZARUS-BARLOW, M.D., M.R.C.P. LOND.,
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BY reason of accessibility and a belief that the true body temperature is thereby more nearly obtained it has become very usual to take the temperature of patients by placing the clinical thermometer in the mouth, while at the same time the patient is directed to keep the bulb under his tongue and his lips firmly closed around the stem of the instrument. This site has largely taken the place of the axilla, particularly in the case of patients who are fully dressed. The following simple experiment, however, will show that considerable care must be exercised before concluding that the mouth temperature is an indicator of the body temperature—if, indeed, it be not entirely deceptive. If an ordinary healthy person take the mouth temperature and then drink some moderately hot fluid, such as a cup of tea, and on finishing it again take his temperature in the same situation, he will find that the thermometer now registers one or two degrees more than it did at first. The importance of this fact, which can easily be verified, led to my undertaking certain experiments upon the subject with a view to determining the conditions under which the temperature in the mouth varies. An adult male perfectly healthy, but confined to bed by a small surgical ailment, was made the chief subject of the experiments. His temperature was normal, and the experiments were for the most part made about 2 P.M. It is unnecessary to give more than one example in each class of experiment, by reason of the uniformity of the results.

1. *The effect of heat locally applied by means of hot drinks.*—Below is given a typical temperature curve (Fig. 1) where the subject of the experiment took one pint of beef-tea the temperature of which varied between 150° F. and 110° during the time of its consumption. It will be noticed that (*a*) the



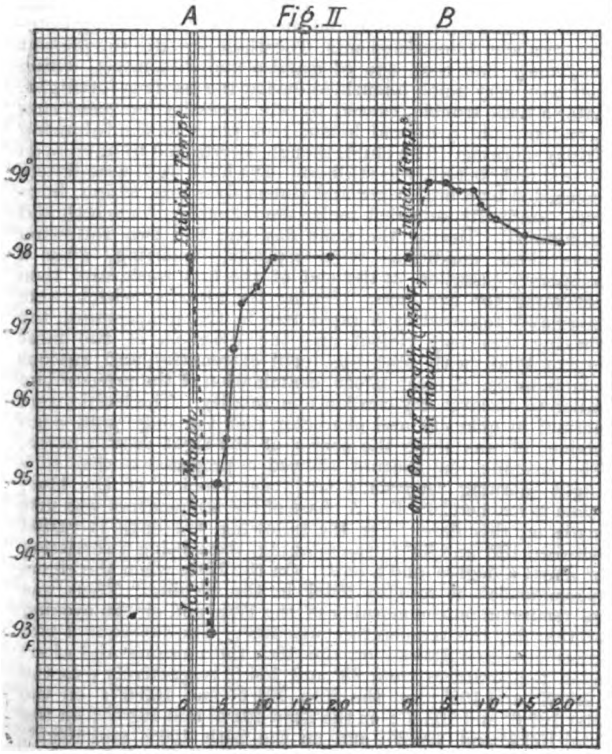
To show the effect of hot fluid upon the temperature of the mouth.

highest point of the rise occurs immediately after the fluid has been taken and that the temperature falls somewhat rapidly at first, but more slowly afterwards; and (*b*) the temperature in the mouth is still raised 0·4° forty minutes after the fluid has completely left the mouth.

2. *A comparison between the effects of heat and cold.*—The effect of cold applied by means of fluid at 50° was separately examined, but it will conduce to brevity if that set of

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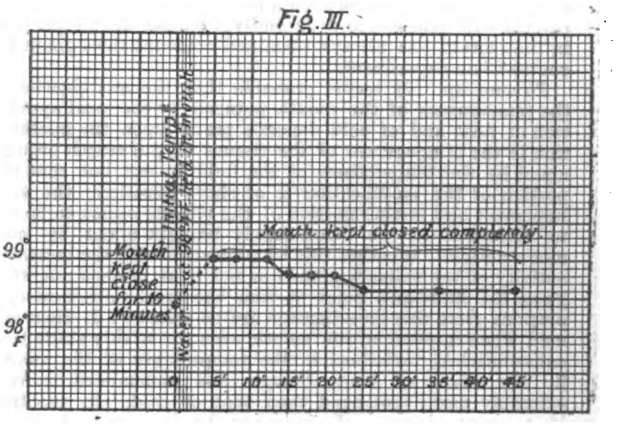
experiments be merged in the present class. The difference between them is merely one of degree. In order more accurately to compare the effects of heat and cold the period during which either was allowed to act upon the mouth was fixed at one minute. For a reason which will immediately appear the action of cold was invariably investigated before that of heat. The method of experiment was as follows. The temperature in the mouth was first taken with great care. A piece of ice of sufficient size to ensure that some was unmelted at the end of the allotted time was then kept in the mouth for one minute; the temperatures obtained from time to time afterwards were compared with the initial temperature. After the mouth temperature had again reached the initial temperature and had remained constant for a quarter of an hour, half an ounce of broth at 140° was held in the mouth, also for one minute, and the temperatures were registered as before. Below is a typical curve of such a double experiment. (Fig. 2.) It must be



To show the effects of holding (A) ice and (B) fluid at 140° F. in the mouth, each for one minute. Note.—B was not commenced till a quarter of an hour after the temperature change brought about in A had become readjusted.

borne in mind that the difference from the body temperature in the two experiments A and B was not the same, being 66° (98°–32°) in the case of the ice, and but 42° (140°–98°) in the case of the broth. In accordance with the greater temperature difference in the case of the ice the initial fall of the mouth temperature is greater, but, contrary to all expectation, the recovery is much more rapid than in the case of the hot fluid. Thus, in the example given above, the return to normal in the case of ice was complete in ten minutes, whereas with the hot fluid the rise, though less marked, was more prolonged, so that at the end of ten minutes the temperature of the mouth was still half a degree higher than it was before the broth was taken, while it was still above the initial temperature at the end of twenty minutes. The more rapid recovery of the mouth temperature from cold in such experiments as the above has been found to be invariable. The effect of cold, however, is not only shown when cold liquids or solids are taken, but it is also shown when cold air is inspired through the mouth. Thus, when a healthy person with an initial temperature of 97·6° (taken with the mouth closed for ten minutes) breathed through the open mouth air at 30° for forty-five seconds, drawing during that time twenty full breaths, his mouth temperature was, three minutes later, 96·8° (a fall of 0·8°), while it did not again reach the initial height until he had kept the mouth shut for a further seven minutes, making the whole duration of the effect of the cold air ten minutes.[1] It must be remembered, too, in this case that the effect of the cold air upon the mouth in inspiration is partially neutralised by the air at the body temperature which passes over the same parts in expiration. This point is of some importance, since it must be an almost constant source of error, as the temperature of the air respired by any person must vary between very wide limits unless he be definitely confined to a room which is kept at a constant temperature. The extreme variability of the mouth temperature, however, can be shown by even smaller temperature changes than those given above, for I have found that the mere act of reading aloud in an ordinary manner for one minute is sufficient to reduce the mouth temperature 0·3°, while the effect is not completely recovered from until the mouth has been kept closed during the five minutes which elapse after the reading aloud has ceased. The mere act, therefore, of describing his symptoms to the physician lowers appreciably a patient's mouth temperature.

3. *The effect of liquid at the same temperature as the initial temperature of the mouth.*—If the mouth temperature be taken with care, and water heated to the same temperature be held in the mouth for two minutes, the temperature of the mouth rises to a perceptible degree. By reason of the unexpectedness of this result the experiment was repeated many times on different subjects, but always with the same result. In some of the later experiments, since it was possible that even with great care the liquid might have a slightly higher temperature than the mouth, it was not taken into the mouth until it was definitely (half a degree) *below* that of the mouth. This modification, however, did not cause any alteration in the final result. Below is given a typical temperature curve of such an experiment. It will be noticed



To show the effect on the temperature of the mouth of the local application for two minutes of water heated to that temperature.

that by these means a rise of 0·6° is brought about, a rise quite outside the possibility of experimental error. The effect, moreover, is of long duration, since the temperature of the mouth was still raised perceptibly (0·2°) three-quarters of an hour after the water had been swallowed.

The facts, then, being such as have been described, their explanation becomes a matter of interest. That the explanation which first suggests itself—namely, that the modifications depend simply upon a transference of heat from the material with the higher temperature to that with the lower, with the object of equalising the temperatures of both—is not a fully satisfactory one is shown by the experiments of which Fig. 3 is an example. According to this view, since heat was neither added to nor abstracted from the mouth with the liquid, the mouth temperature should remain constant; that it does not so remain constant indicates that

[1] Throughout the whole investigation a "one minute" clinical thermometer was used, and three minutes' duration in the mouth was taken to ensure an accurate reading. The *initial* temperature was obtained invariably by keeping the thermometer in the mouth for ten minutes. For temperatures below 95° a non-registering thermometer was used, but was replaced by the clinical thermometer so soon as the temperature reached 95°.

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the process is more complicated. Nevertheless, the fact that the rise of the temperature of the mouth varies within limits according to the temperature of the fluid held in the mouth indicates that this explanation probably holds good in part. I would suggest that that portion of the rise or fall (as the case may be) which obtains immediately after the action of the heat or cold has ceased, and which is rapidly obliterated, should be regarded as in part depending upon an actual physical heating or cooling of the actual tissues of the mouth, and particularly the epithelium. Nevertheless, this accounts for a small portion only of the change and leaves entirely unexplained the experiments shown in Fig. 3. Now the simplest way in which these experiments can be explained is by regarding the presence of the water as a stimulus which inhibits the vaso-constrictors of the vessels of the mouth and therefore allows the parts to be flushed with a more rapid stream of blood which has come with less delay and in larger quantities from the deeper parts, and which is, therefore, of a higher temperature than that of the surface. That this is true is suggested by the facts (*a*) that the mouth temperature cannot be indefinitely raised by raising the temperature of the ingested fluids, (*b*) that the temperature change is brought about by a very short application of the stimulus, and (*c*) that it lasts a length of time quite out of proportion to the duration of the stimulus. Since the ingestion of food is accompanied by increased action of the salivary glands it seems reasonable to suppose that the increased temperature of the mouth may be bound up with the arterial congestion which is known to accompany increased salivary secretion. Nevertheless, I have not found that such fluids as clove-water, which markedly increase the secretion of saliva, cause the temperature of the mouth to be raised to any greater extent than does distilled water (at the same temperature), by which the salivary secretion is increased to a much smaller extent. That the modified temperature is not due to a modification of the temperature of the whole blood is obvious—firstly, because such a result is impossible for purely calorimetric reasons, and, secondly, because the temperature in the rectum has always remained constant throughout the course of an experiment.

To sum up. It seems probable that the modification in the temperature of the mouth induced by the local application of heat and of cold depends partly upon the modification in the temperature of the tissues of the mouth brought about by the temperature of the fluid in use, but that this portion of the modification is of short duration; the more important and lasting portion of the change seems to be due to variations in the blood-supply brought about by vaso-motor action. Whether this be connected with the increased activity of the salivary glands or not is at present doubtful. From the clinician's point of view the most important conclusions from this investigation are as follows: 1. Heat and cold when applied to the mouth even for a very short time cause marked variations in the temperature of the mouth. 2. The effect of heat, though less pronounced, is considerably more prolonged than that of cold. In practice, if a great degree of accuracy be required, I would suggest that the temperature should never be taken in the mouth unless other parts are inaccessible; but, if only the mouth be available, then attention should be paid to the following points: (*a*) one hour at least must have elapsed since the last food or drink of any kind, and even in the smallest quantity, has been taken by the patient; and (*b*) for ten minutes previously to inserting the clinical thermometer the mouth must have been kept completely closed. Under such circumstances as these, and under them alone, is a temperature taken in the mouth a reliable index to the body temperature.

Pathological Laboratory, Cambridge.

PATHOLOGICAL SOCIETY OF MANCHESTER.—The annual meeting of this society was held at the Owens College Medical School on Oct. 9th, Professor Sheridan Delépine, President, being in the chair, and the following officers were elected for the session 1895–96:—President: H. R. Hutton, M.B. Vice-Presidents: T. Harris, M.D., and W. Thorburn, F.R.C.S. Treasurer: T. N. Kelynack, M.D. Secretary: R. B. Wild, M.D. Committee: A. Brown, M.D., T. A. Goodfellow, M.D., A. T. Helme, M.D., E. T. Milner, M.B., E. S. Reynolds, M.D., W. P. Stocks, F.R.C.S., A. T. Wilkinson, M.D., and J. B. Wolstenholme, F.R.C.V.S. Auditors: D. Headridge, L.D.S., and J. W. Smith, F.R.C.S.

TWO CASES OF INFECTIVE FEVER SHOWING THE THERAPEUTIC VALUE OF INTESTINAL ANTISEPSIS.

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THE treatment of infective fevers, and of typhoid fever especially, by internal antiseptics has recently been widely advocated. As a contribution to the subject I desire to record two cases—one of an obscure infective fever which I believe to have been typhoid fever, and the other a case of undoubted typhoid fever—both of which were treated by measures calculated to promote intestinal antisepsis.

CASE 1.—I visited a patient on Tuesday, Feb. 5th, 1895, who was threatening to miscarry at the seventh month. She had already borne six children, and there had been nothing noteworthy about the confinements. The whole period of the present pregnancy had been one of malaise and discomfort, which had been very much intensified during the previous fortnight. After a little trouble, caused by the necessity for rectifying a malposition, a normal labour took place on the following Friday morning. The child, though ascertained to have been alive shortly before, was stillborn. The birth was immediately succeeded by a brisk rigor and violent dyspnœa, which, however, gradually subsided under the influence of warmth and stimulants. During the same day and the two following days these conditions were repeated, recurring, after a temporary cessation, at the end of the first week, and then persisting for five days. During the attacks, which were invariably followed by a rapid rise in the temperature, the shaking was very violent and the dyspnœa of the most urgent kind, with blue lips, cold extremities, and anxious countenance. A most careful examination of the præcordium failed to discover any cardiac abnormality. The lochia were normal in quantity and character, and the only pain complained of was along the course of the right sciatic nerve. The evening temperature showed a progressive rise with slight morning remissions until the evening of the 11th, when it reached 103° F. A chart of the temperature was first made on this date. For the following five days it varied between 102° and 99° in the morning, there being a remission of about a degree and a half. On the 16th, when the rigors recommenced, it rose to 104·4° in the evening. There was no remission on the morning of the 17th, and on the evening of that day the temperature was 105°. The subsequent progress was as follows: on the 18th the morning and afternoon temperatures were 99° and 104·6° respectively; on the 19th 99° and 103°; on the 20th 101·6° and 102·6°; on the 21st 101·6° and 102·4°; on the 22nd 101·4° and 102·4°; on the 23rd 100·4° and 102·2°; and on the 24th 100·2° and 102·0°. After this there was a progressive fall until March 1st, when the temperature was normal. The evening temperatures then began gradually to ascend, with decided morning remissions, until the 6th, when 103·6° was once more registered. The temperature, however, very soon fell again, and the case proceeded to a satisfactory issue. I have given the history of the temperature by itself to avoid needless repetition. At the commencement of the disease the cause of the obviously grave state of matters was a source of the greatest anxiety and perplexity. There was at no time any local or other condition tending to give colour to the idea of puerperal septicæmia which was constantly present. The lochia remained normal, and there was no tenderness over the uterus. The diet during the first week consisted of meat broths and jellies, egg-and-milk, and some alcohol. On Feb. 17th I had an opportunity of observing the effect of a meal consisting of some chicken jelly, a little toast, and half an ounce of champagne. It was taken with relish, but was immediately succeeded by flushing of the face and a feeling of discomfort which was shortly followed by a rigor. I therefore concluded that the cause of the rigors was somewhere in the intestinal tract. The food was changed to peptonised milk, with prepared food occasionally. The bowels, which had throughout been confined, had so far been regulated by cascara palatinoids. For these an enema every second day was now substituted. On the 19th Dr. Bankart of Exeter saw the patient with me. He agreed that the diagnosis was very obscure, and had no alteration to suggest in the measures which were being taken beyond a proposal that some general antiseptic

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should be administered by the mouth, in addition to bismuth, which was being given. I accordingly prescribed carbolic acid in pill form (two and a half grains three times daily). Constipation had all along been a very troublesome factor. The effect of the enemata was sometimes satisfactory, but very often not so. The motions were scybalous and blackened by the bismuth. On the 21st the patient was put upon barley water and milk exclusively and the bismuth was suspended, the carbolic acid pills being continued. As these appeared to produce unpleasant symptoms they were on the 24th also suspended, and thymol in pill form (two grains every three hours) substituted. The brief account of the temperature shows that from this time the patient's condition rapidly improved until March 3rd, when there was an acute recrudescence of the fever. I then determined to prescribe calomel. This was given in doses of two grains on two successive evenings (March 7th and 8th) with the best results, after which the patient made a good though protracted recovery. This rapid survey gives but a slight idea of the difficulties and anxieties of the case. Neuralgia, especially of the fifth and sciatic nerves, was the source of great trouble to the patient. The right parotid gland was swollen and indurated. There were several small oval ulcers on the uvula and back of the pharynx, which caused pain and difficulty in swallowing. Flatulence, abdominal pains and tenderness were very pronounced in the third week. The diagnosis of typhoid fever was not made until Feb. 22nd. The occurrence of the labour, the constant rigors, and the absence of any definite abdominal symptoms all tended to obscure the issue. What is particularly worthy of notice is the marked improvement in the temperature which ensued upon the exhibition, first, of the carbolic acid on the 20th, and, secondly, to a much greater degree, of the thymol on the 24th. The beneficial effects of the calomel administered on March 7th and 8th were probably due chiefly to its antiseptic properties.

CASE 2.—A young man aged nineteen years was taken ill on April 12th. I saw him on the following day and found a temperature of 104·4°F. The tongue was thickly furred, and there had been considerable epistaxis. There was pain in the head and in the right iliac fossa, slight pressure in which elicited gurgling. The general condition was such as to make it evident that the patient would have a very severe attack. He was at once put upon a rigid milk diet, with some alcohol, and was given the quinine and chlorine mixture recommended by Dr. Burney Yeo.[1] For the next four days the patient did not improve, but developed the usual evidences of the typhoid state. The tongue became dry and sordes appeared on the lips and teeth. The abdomen became tense and swollen. He lay on his back with his knees drawn up and tended to slip down in the bed, and his intellect became clouded. The afternoon temperature remained at 104°. On the 18th my friend Dr. Macindoe saw the patient with me. The temperature had fallen to 103·4°, but from his general condition we agreed that the prognosis was of the gravest. No alteration was made in the treatment, a careful pursuance of which we were agreeably surprised to find was soon followed by marked improvement. His afternoon temperatures for the next three days showed a steady decline; they were on the 19th 102·2°, on the 20th 100·6°, and on the 21st 98°. The fall in the temperature was accompanied by a corresponding improvement in the other symptoms, and he made a quick and uninterrupted recovery. I thought at first that there had been some mistake and that the patient was beginning the third week of the disease when I first saw him. This view was very strongly insisted upon by my friend when informed of the progress of the case. All the evidence, however, is against this supposition. The patient himself declares that, except for a slight cold, he was perfectly well until April 12th, and that on the 10th he was playing cricket with enjoyment. During the course of the fever the bowels acted freely, but there was no diarrhœa. The first motion which I saw was characteristic in appearance and odour. In all those shown to me subsequently the fetor was greatly reduced, and towards the end of the attack there was a distinct odour of chlorine in the evacuations. The illness began with every appearance of a very severe attack and the probability of a rapidly fatal issue. There was very little in the patient's favour. He was a delicate lad, the house he was in was insanitary, and he was without a skilled nurse. Yet so early as the end of the first week the case was in the highest degree hopeful, and it progressed with amazing rapidity to a satisfactory issue. This I can only attribute to the line of treatment adopted, and I have no hesitation in saying that, but for my good fortune in reading Dr. Burney Yeo's book, this lad would probably have lost his life.

The solution recommended by Dr. Burney Yeo he directs to be made as follows: "Into a twelve-ounce bottle put thirty grains of potassic chlorate, and pour on this sixty minims of strong HCl. A greenish-yellow gas is at once liberated. Close the bottle with a cork and agitate the mixture gently until the bottle is filled with gas; then pour water into the bottle little by little, closing the bottle and shaking well at each addition, until the bottle is half filled. Add to this mixture from twenty-four to thirty-six grains of quinine, and then fill the bottle with water. The dose is an ounce, administered, according to the severity of the case, every hour to every four hours." The "predominant partner" in the mixture, it seems to me, is the chlorine. It has long been used as a powerful antiseptic, especially as a wash for ulcers; but its special application to typhoid fever is a recent introduction of quite unusual promise. The foregoing cases, both of them severe, were successfully treated by means of intestinal antiseptics. The drugs used differed in the two cases, having, nevertheless, two properties in common. One of these—the germicidal—has already been referred to; the other is the property of volatility, to which I am inclined to attribute much of their efficacy, and I should, in selecting a drug for producing intestinal antisepsis, invariably give the preference to one possessed of this quality. That Case 2 was aborted by the administration of the chlorine mixture I have not the shadow of a doubt, nor have I any hesitation in saying that, but for the exhibition of some antiseptic such as thymol, the patient in Case 1 would not have recovered. The other lines of treatment which were open to me in conducting these cases were the expectant method and the cold bath treatment. The first, necessary as it frequently is in many obscure cases, is obviously a confession either of ignorance or impotence. The cold bath treatment, though it has had many eminent advocates, is one which has failed to find general acceptance. This has been partly due to the fact that it is cumbersome to the point of being dangerous, and largely to the fact that it is unscientific, in that it is a weapon directed against one symptom only, leaving altogether out of account the causation and essential lesions of the disease. The antiseptic method, on the other hand, presents a rational system of treatment directed towards counteracting or minimising the effects of specific morbid activities; it is easy of administration even in the humblest homes and is absolutely free from danger. Those who have had any experience of it will heartily concur with Dr. Burney Yeo when he says that "the practitioner who, in the face of the evidence which has recently been accumulated, neglects to promote intestinal antisepsis in typhoid incurs a very grave responsibility."

Sidmouth.

[1] Manual of Medical Treatment. Fourth edition, vol. ii., p. 635.

TROPICAL ABSCESS, RARELY A PRIMARY, USUALLY A SECONDARY, AFFECTION OF THE LIVER.

BY NEIL MACLEOD, M.D. EDIN.

EVERY physician who has had experience of tropical liver abscesses would say that their association with affections of the large bowel is only an occasional one, on clinical grounds alone. Unanimity of opinion on this point ceases if the results of post-mortem examinations are taken into account. Probably a large majority of observers in India hold the opinion of Murchison, which as lately as last year is set forth by Sir Joseph Fayrer in the work "Hygiene and Diseases of Warm Climates," and supported in the same volume by Professor Cayley of Netley—the opinion, namely, that these abscesses are usually the result of a primary suppurative hepatitis. Their origin as secondary to affections of the large gut, enunciated by Budd, Moxon, Martin, and others, is favoured by a minority of observers—a minority lately on the increase. This is a question which cannot be decided by general impressions, but by appeal to recorded cases. If they are usually the result of

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a primary liver disease, an examination of recorded cases ought to furnish at least a fair proportion in which no lesion was found in the large gut. If, on the other hand, they are rarely primary and usually secondary to a lesion of the intestine, a majority of recorded cases ought to present traces of these intestinal lesions. The following cases ought obviously to be rejected as throwing no light on this question: (*a*) all cases of abscess that have recovered and in which there is no history of bowel affection stated or implied, since post-mortem examination of fatal cases frequently demonstrates the presence of ulcers in the large gut even where dysentery or diarrhœa is stated not to have been present during life; (*b*) for the same reason all fatal cases with a similar negative history not examined after death; and (*c*) fatal cases examined after death, but where no statement is made of the condition of the large bowel—here obviously it cannot be assumed that intestinal lesions were either absent or present. Disregard of these considerations and too close reliance on the clinical aspect of these cases have no doubt led astray many of those who have had to deal with this disease in the East. Commencing my acquaintance with so-called "tropical" liver abscess in the prevailing belief that it was only occasionally associated with the dysenteric lesion, my attention was first pointedly directed fifteen years ago to the question when a case of multiple abscess presented itself not associated with a history of dysentery, but in which cicatrices were found in the large gut after death. Repetition of this experience also with single abscesses, cicatrices or ulcers being found, naturally led me to look with suspicion on recorded statements of the absence of dysenteric history. An experience of about forty cases, every one of which, with one exception, was associated with history of post-mortem signs of dysentery, surely justifies the opinion that the relationship is not one of coincidence merely. The exception recovered. Sir Joseph Fayrer distinguishes four forms of liver abscess which appear to differ from each other only in their etiology.[1] They are: (1) large, generally single abscesses, caused by climatic conditions combined with certain conditions of living, food, and drink, *not associated with dysentery;* (2) those multiple abscesses *secondary to dysenteric ulceration*, with which are classed those occurring "in a person who is or has recently been suffering from fever ..... with Peyerian ulceration" (so far from regarding typhoid ulceration, as it is here stated to be, as a satisfactory cause for these abscesses, the very rarity of such an association - for I cannot find such a case on record—seems to me to throw some light on the question, as I shall try to show later); (3) those abscesses *coincident with, not caused by, dysentery*, malarial fever, and hepatitis, but all of these the result of climatic influences (why is the association with dysentery in the second form regarded as something more than coincidence, but not so in the third?—the third form is said to be "obviously different from the before mentioned," but no obvious difference is furnished); and (4) pyæmic abscesses in any climate secondary to "injury, ulceration of stomach, gall-bladder or duct, gall-stones, ulceration in other parts of the body, and especially in phlebitis of the portal vein or mischief in the pelvis or hæmorrhoidal region." Here Sir Joseph Fayrer has no hesitation in accepting these causes in giving rise to single large as well as multiple forms of hepatic abscess. The following are grounds he furnishes for regarding his first and third forms even when associated with dysentery as not secondary to that disease: 1. "Liver abscess may, however, be unassociated with dysentery or diarrhœa."[2] It is at least noteworthy that out of the 49 cases of liver abscess at the end of the article from which these quotations are taken, cases given to illustrate "the chief points of etiological, pathological, medical, and surgical interest of tropical liver abscess," not one case can be pointed to as certainly unassociated with a bowel lesion. Of these cases, 24 had a previous history of diarrhœa or dysentery, 5 had diarrhœa and 1 blood and pus in the stools under observation; 5 are stated to have had neither diarrhœa nor dysentery, and recovered; and in 14 there is no statement of any kind regarding the bowel function at any time, and of these 3 died, 2 being examined after death, one having ulcers and the other hæmorrhoids and cancer of the rectum—that is, of the 19 that had no bowel affection, stated or implied, the only two that were examined after death had lesions of the large gut.[3] 2. "Sir Ranald Martin and others thought that liver abscess was intimately connected with diseases of the cæcum, but this has not been altogether confirmed, for of 72 cases where the cæcum was affected in only 22 was there liver abscess."[4] Had Sir Ranald Martin and others stated that most cases of cæcal ulceration are followed by liver abscess such an objection might be admitted, but these writers held that liver abscess is usually preceded by cæcal ulceration, a very different proposition. The same fallacy occurs when Sir Joseph Fayrer objects "that in temperate climates liver abscess is not always found connected with dysentery," and then quotes a number of cases of dysentery in which liver abscess did not occur.[5] 3. Sir Joseph Fayrer appeals to statistics, saying: "Of 44 specimens of liver abscess in the Pathological Museum at Netley 11 were complicated by intestinal lesions."[6] He cannot possibly have realised that these figures are of absolutely no value—nay, even misleading—unless the remaining 33 specimens were ascertained to have no intestinal lesion, though this is what is implied if the figures are to have any meaning. This implication is far from being borne out by a perusal of the Netley Museum official catalogue (1892).[7] Out of 54 (not 44) specimens from as many cases of liver abscess, in 10 (not 11) there were intestinal ulcers and sloughs or cicatrices noted; in one case the entire reference to the intestinal condition runs: "The intestines, stomach, and kidneys were healthy"; and in another: "The mucous membrane of stomach and intestines more easily torn than natural, and in many places more vascular,"[8] these being the only two cases which can be made to represent the absence of intestinal lesion, *for in 42 there is no statement of any kind as to the condition of the intestine, large or small.* Sir Joseph Fayrer has here fallen into a grievous error by disregarding the considerations pointed out at the beginning of this paper. Professor Cayley in the same volume,[9] in an article on "Tropical Disease of the Liver," says: "Acute hepatitis may run on to suppuration, and this is the *most frequent* cause of *tropical liver abscess*" (the italics are in the original). Abscess is undoubtedly an unknown result of liver congestion and inflammation at home, and I venture to regard it as at least uncommon where tropical liver abscesses occur, for the following reasons. 1. I have never seen an abscess that could be attributed to this source independently of dysentery. 2. I have not seen a case of primary hepatitis pass on to suppuration. Among such cases there are, I believe, those which we puncture without finding pus and which appear benefited by the puncture. 3. Singapore cannot be regarded as free from hepatitis by any means, but it is singularly free from liver abscess and dysentery. The West Indies are not singularly free from hepatitis; why, then, is hepatic abscess so infrequent there, as Sir Joseph Fayrer says it is, if hepatitis be the most frequent cause of these abscesses? 4. Professor Cayley, in illustration of his paper, cites eight cases of hepatitis, four of which developed into abscesses. These were single abscesses, and all four had a history of dysentery. Three had no history of dysentery and did not suppurate, but one is entitled "Congestion of the Liver leading to Acute Hepatitis, the Effect of Hot Climates and Malarial Fever, and coming on after Dysentery," and of this case the writer remarks: "In this case the symptoms, though obscure, rather point to the presence of an abscess, which very likely might have been discovered by further exploratory puncture. If there is an abscess present it may absorb or may become encysted, and may eventually show itself by more direct symptoms."[10] It is not a little curious that all Professor Cayley's cases of suppurative hepatitis should have had dysentery! In addition to the records of 53 cases referred to above in "Hygiene and Diseases of Warm Climates," I have collected 125 others from the pages of THE LANCET and *British Medical Journal* for the years 1874 to 1894, 7 cases from Councilman and Lafleur,[11] which with the 54 cases in the Netley Museum in all amount to 239. Of these, 133 died and 106 of them were examined after death, and of the latter in 59 cases there is no statement of any kind as to the condition of the bowel, 41 gave evidence of dysentery, and in 6 the following quotations contain the entire references to the intestinal condition which could by any possibility be construed as a demonstration of the absence of ulcers or cicatrices: "abdominal organs are

[1] Davidson: Hygiene and Diseases of Warm Climates, p. 643.
[2] Ibid., p. 645.
[3] Ibid., pp. 670-692.
[4] Ibid., p. 648.
[5] Ibid.
[6] Ibid.
[7] Catalogue of the Pathological Museum at Netley, vol. i., 1892, p. 329.
[8] Ibid., p. 311.
[9] Davidson: Op. cit., p. 264.
[10] Ibid., p. 623.
[11] Johns Hopkins Hospital Reports, vol. xxxi., Amœbic Dysentery.

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healthy,"[12] "the intestine was perfectly healthy,"[13] "the other organs were normal."[14] "the intestines, stomach, and kidneys were healthy,"[15] "the mucous membrane of stomach and intestines more easily torn than natural and in many places more vascular,"[16] "kidneys and intestines pale."[17] Such figures and statements surely cannot be regarded as sufficient to decide the question that tropical abscess is usually a primary liver disease. In not a single instance is it explicitly stated that no ulcer or cicatrix was found in the large intestine, which I have never seen without either of these in a fatal case of liver abscess. Surely it is not too much to look for something more explicit than the statements above quoted, supported as my own experience is by these forty-one out of forty-seven cases, reckoning fatal ones only.

Sir Joseph Fayrer appears to distinguish between the large single, tropical abscess (his first form) and the dysenteric or pyæmic (second or fourth), by the latter containing necrosed parenchyma. I have observed this condition in the large single abscess, noted also by Kartulis, Councilman, and Lafleur, Calmette, Manson, and others. I have now under observation the earliest opened case I have dealt with. In it the discharge consisted almost entirely of necrosed masses of liver tissue. My experience is that, opened later, the contents would have been pinker, with less of these masses and probably in larger quantity; later still, more fluid, yellowish and of equal consistence. The waiting game is now played less often than formerly in dealing with these as with abscesses elsewhere. The case referred to is now well. Manson recently says "it may be safely asserted that in 75 per cent. of cases of hepatic abscess a history of some degree of dysentery can be elicited. It must be recognised, however, that in this association the order of events is not always the same; usually the dysentery is antecedent to the hepatitis (abscess?); sometimes the diseases are coincident; more rarely the hepatitis (abscess?) precedes the dysentery, and in not a few cases the conditions alternate." Here Manson commences with the association of hepatic abscess and dysentery, but as he proceeds with the argument he substitutes hepatitis, and winds up thus: "It was shown that the hepatitis (abscess?) may precede the dysentery, and could not, therefore, be caused by it."[18] It was not dysentery, but its history or symptoms that were shown to be co-existent with, subsequent to, or alternating with, abscess in a minority of cases. It is not justifiable to infer that in such cases there was no dysentery antecedent to abscess formation, since even where there is no history or symptoms of dysentery at any time in a given case ulcers of the large gut may be present notwithstanding. Neither is it altogether safe to use "hepatitis" and "tropical liver abscess" as interchangeable terms in discussing this question. The occurrence of hepatitis apart from dysentery is not doubted by anyone. So far as can be ascertained, then, when liver abscess and dysentery are associated, in the majority of cases the dysentery is antecedent, and in no instance of the minority is it possible to say with certainty that dysentery was not antecedent. Before pyogenic organisms were even dreamt of in connexion with abscess, Budd maintained, as every authority now does, the secondary nature of those abscesses included in Sir Joseph Fayrer's fourth division, but opposed by many; he also held that tropical liver abscess was secondary to ulceration of the large gut. From time to time pathologists have shown that in certain cases of dysentery, if not in all, submucous suppuration occurs in varying degrees, taking part in the formation of sloughs of varying sizes. Here, then, we have pyogenic organisms in the dysenteric lesion, in a region as closely related to the liver as suppurative mischief in the pelvic or hæmorrhoidal region, and just as by no means in every case of this latter kind, so not in every case of dysentery, can secondary liver abscess be expected to occur. Speaking of this matter, Manson lately says, "At one time if was held that the abscess was caused by the absorption of pus by the portal vein from the dysenteric ulcers and from suppurative phlebitis, which was supposed to be present in the intestinal radicles of that vessel. But no such phlebitis was demonstrated."[19] Surely a process involving submucous suppuration, necrosis, ulceration, or sloughing of the mucous coat of the large gut, supplies the required affection of the intestinal radicles of the portal vein, for it is impossible to imagine these radicles escaping. Why is it that typhoid ulceration is so seldom, if ever, associated with liver abscess even in the East Indies? This form of ulceration is confined to glands at the free margin mostly of the lower end of the small bowel, whereas in dysentery the ulcers are not confined to gland tissue or any particular part of the large bowel circumference. But what is probably of greatest importance is the part played by the suppurative process which occurs so frequently in dysentery, but so rarely, and if at all to such a small extent, in typhoid ulceration. Yet one other aspect of the matter has to be dealt with. The finding of an amœba in some of these abscesses is considered by most of the finders as affording further proof of their secondary relation to dysentery, more especially to what is termed "amœbic dysentery." There can be little doubt that the terms "dysentery" and "dysenteric ulceration" cover more than one disease process. Manson has recorded[20] the first case in England in which an amœba has been found in liver abscess, terming it an "amœbic liver abscess," and suggests that it was caused, in the absence of dysentery and the known pyogenic organism, by the dysentery amœba. The patient died, but unfortunately no post-mortem examination was made to decide that this was not one of those cases where the patient had dysentery without being aware of it. The view that abscess of liver, when not a part of a general pyæmia, is rarely primary, but usually secondary to lesions occurring in close relation to some part of the portal circulation; to those lesions in which pyogenic organisms (micrococci, and it may be amœbæ) are concerned, this view claims no more for suppuration in the liver than is being demonstrated more and more every day for suppurative processes in the brain, which latter are rarely primary.

Shanghai, China.

[12] Brit. Med. Jour., 1884, vol. i., p. 1037.
[13] THE LANCET, Jan. 7th, 1893, p. 19.
[14] THE LANCET, Nov. 17th, 1877, p. 715.
[15] Catalogue of Pathological Museum at Netley, vol. i., 1892. p. 309.
[16] Ibid., p. 311. [17] Davidson: Op. cit., p. 643.
[18] Quain's Dictionary of Medicine, new edition, vol. i., p. 1124.
[19] Ibid., p. 1126.
[20] Brit. Med. Jour., 1894, vol. i., p. 677.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(*Continued from p. 1429 of Vol. I., 1895.*)

BEFORE proceeding to the continuation of my cases I must record the safe delivery and good health of mother and son in Case 23, operated upon in 1888, and incidentally referred to in my last communication. This is the second of the tuberculous cases which has not only made a perfect recovery, but has also passed through pregnancy without any unusual complication. I have also the satisfaction of recording the complete recovery of the patient upon whom I performed Abernethy's operation for tying the iliac artery in order to get at two small stones in the lower end of the ureter. I heard from her a few days ago that she had been able to accompany the guns, walking over the moors in Scotland on several occasions this autumn, and for the first time. I have also received a very satisfactory report from my seventh case of nephrorrhaphy. The patient had before the operation been a confirmed invalid for years, and now reports herself as quite well and able to walk and swim, jumping off a boat into the sea. I will now proceed with the record of my cases of nephrotomy, following the same plan adopted with the nephrectomies, and giving a very brief note of the less interesting cases and a more detailed account of the unusual cases. I have already published my first thirteen nephro-lithotomies, in which there were one fatal case and twelve recoveries.[1] The present series commences with Case 14.

CASE 14.—The patient was a woman aged sixty-two years, small, thin, and fragile. The urine was of low specific gravity, containing much mucus, a little albumin, many blood cells, and clumps of granulation cells visible to the naked eye as minute white specks in the urine. There was no pain or difficulty in urinating. On palpation both kidneys could be distinctly felt, and were of normal size, the right being

[1] Harveian Lectures: Surgery of the Kidneys. By J. Knowsley Thornton. Chas. Griffin and Co. 1889.

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very markedly tender. Three years before her admission into the Samaritan Free Hospital she was suddenly seized with violent pain in the abdomen while sitting in church; it lasted till night and recurred next day, and had continued more or less ever since, rarely being absent for more than a day or two at a time. It was sharp and stabbing, and shot over the abdomen and across the back. It was chiefly on the right side, but occasionally crossed to the left. I came to the conclusion that there was a calculus in her right kidney and removed it on March 30th, 1890, by the combined abdominal and loin incisions. It was an hourglass-shaped oxalate calculus in the pelvis of the right kidney. The left kidney was normal. Recovery was smooth and complete. The stone was about an inch long and had a very rough surface, and had evidently been adherent to the lining of the pelvis and ureter over nearly its whole surface.

CASE 15.—A married woman aged thirty-one years was placed under my care at the Samaritan Free Hospital by my friend Dr. Hamilton Bland. She had borne six children. On examining her pelvis I found a retroflexed, somewhat fixed, and tender uterus, and a very tender swelling about the size of a horse-bean at the entrance of the left ureter into the bladder. The urine had been thick for about twelve months; there had never been pain or difficulty in passing it, a symptom the absence of which I omitted to note in Case 14. The urine was of normal specific gravity, and contained a trace of albumin and a considerable deposit of pus and phosphates. She had passed a quantity of small stones about two months before admission, and some every time she passed water for about a fortnight. She first noticed pain in the left kidney when carrying her last child four years and a half ago. After its birth, while taking a long walk with the child in her arms, she was suddenly seized with severe pain in the abdomen, and a swelling came in the left side. She was laid up for six weeks, and the lump and pain recurred whenever she got about. I operated by the combined incision on April 23rd, 1890. I found the right kidney large, smooth, and healthy. In the pelvis of the left kidney there was a large stone. I removed it quickly and without difficulty through a small lumbar incision, and found that it was branched and showed two broken surfaces and several facets. Another piece was then extracted, fitting the largest broken surface. Then another large stone was detected and removed with difficulty; it had a deep groove in it where it had been grasped in the mouth of a calyx. Numerous small flat stones and some other broken fragments were also removed. The kidney was washed out with a solution of corrosive sublimate and the lumbar wound drained. I then found that the tender pelvic swelling was a hydro-salpinx and removed it. The patient made a slow recovery, only leaving the hospital on June 13th.

CASE 16.—A married woman aged thirty-one years had passed offensive urine from girlhood, the bladder not emptying itself properly. When seventeen years of age her horse ran away with her and she was strained internally and passed blood in the urine. Four years later there was an attack of pain and swelling in the left loin, and she had ever since had recurrences at frequent intervals. The attacks used to be frequent and short and without fever, but latterly had been prolonged and accompanied by severe fever, but at longer intervals. There was frequent and painful micturition during an attack, very little urine being passed. Her six children are all strong and healthy. The urine was of good specific gravity, with a small quantity of albumin, a few pus cells, oxalates, uric acid crystals, and renal and ureteral epithelium. I operated on April 24th, 1890, and found the exit of the left ureter from the pelvis blocked by a small stone and the kidney reduced to a mere bag, and I decided to remove it, but on examining the right kidney I found it also cystic and unhealthy and so contented myself with free incision and drainage of the left kidney. She made a slow recovery and remains in fairly good health, but she is subject to attacks of pain and fulness in the left loin, accompanied by fever, when she gets a chill or is over-fatigued.

CASE 17.—A married man aged thirty-one years had suffered from pain in the left renal region from childhood, and from time to time there had been blood in the urine. He now suffered from almost constant pain with occasional severe exacerbations laying him up for days at a time. On May 20th, 1890, I removed one large dark-brown oxalate calculus very irregular in shape and several smaller ones from the left kidney. The other kidney was quite healthy. The operation was rapid and without a hitch of any kind, there being very little handling of the kidney, a small, clean incision, and the stones were quickly and easily extracted. I emphasise these facts because of the subsequent history. He made an absolutely perfect recovery for a fortnight, when he was visited for the first time by his wife; he admitted much sexual excitement, followed by a nocturnal emission and pain in the left renal region; this recurred occasionally, and there was also pain on micturition from time to time. He went home apparently quite well at the end of three weeks and remained quite well for some months, still occasionally complaining of pain in the left loin. Then an abscess formed in the neighbourhood of the kidney and burst into the pleura, and he had pleuro-pneumonia and pneumo-thorax and died about seven months after the operation. I only heard of it some time afterwards. This unfortunate ending to a successful operation is useful as a warning to exercise great care in the after-treatment of these cases. I allowed the patient to get up too soon and to go home too soon, especially in view of the result of his wife's visit to him in town. I have no doubt that there was some disturbance round the kidney then, and that it never got quite right and was aggravated by sexual intercourse on his return home. I warned him to be careful, but saw that he did not believe in the necessity. I have not any good record of this case after he left my care, but it is interesting to compare it with Case 28 among the nephrectomies published in the Clinical Society's Transactions, vol. xxiii., p. 150, by Dr. Myrtle of Harrogate and myself, in which a large perinephric abscess burst through the lung, with complete recovery. The points I wish to emphasise are the importance of prolonged rest and care after these operations to allow of thorough consolidation of the cellular tissue about the renal wound, and the insidious way in which an abscess will form in these cases when the patient is apparently well. In neither of these cases was the presence of the abscess suspected till it burst into the chest. Similar suppuration occurred round the kidney in another case to be recorded in this series after a very smooth recovery.

CASE 18.—The patient was a married woman aged thirty-two years. I have lost the notes of this case taken before operation, but she had been very decidedly losing health, and her condition had been much worse after an attack of influenza. The diagnosis of right renal calculus appeared to me to be clear. I had no difficulty in finding and cutting down upon the stone, but it was so soft that it broke up in the forceps, and I had to wash it away by repeated injections. The process was a long one and there was a great deal of shock; whether there was also too great absorption of carbolic acid has occurred to me as aiding in the unfortunate result. The patient was in a low and depressed condition before the operation, and on the morning of the day the temperature was very much below normal. I left the patient without any uneasiness, but on looking in just before dinner I was surprised to find that she was still unconscious, and, indeed, had never rallied at all from the operation. She was breathing stertorously and was almost pulseless, the skin being cold and the respiration feeble and irregular. Later in the evening she recovered consciousness for a few hours, but could not speak correctly. She died twenty-seven hours after the operation, with complete suppression of urine four hours before death. I have never in any other case met with a stone of this kind; it appeared to be made up entirely of soft phosphatic matter, which at once crumbled away when I grasped it with the forceps, and I could not find any hard nucleus. When I first felt it, it was an almond-shaped stone of about the size of a haricot bean occupying the pelvis at the mouth of the ureter.

CASE 19.—A single woman aged twenty-eight years, who had suffered from symptoms of left renal calculus for many years, and for two years had been a confirmed invalid, was brought to me in the spring of 1891 by Mr. Aikin. The kidney was quite out of reach under the ribs, and I could not get a suspicion of tenderness by palpation, but all the other symptoms were so marked that I had no hesitation in recommending operation. The urine was of good specific gravity, contained no albumin, much mucus, some pus, and blood cells, and deposited lithates freely. I operated on March 9th, 1891, and was some time in finding the stone, which projected from one of the calyces into the pelvis, in which position it was so firmly grasped that I had great difficulty in extracting it. The stone was a pear-shaped oxalate one

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covered with sharp spicules and had a large angular projection which had prevented its escape from the calyx and caused the difficulty in its extraction. The patient made a good recovery in spite of the terrible shock of losing the sister who lived with her, who died after a few days' illness from diphtheria while she was in the same house and not yet well enough to leave her room after the operation. She is now married and in excellent health, and able thoroughly to enjoy life.

CASE 20.—A young man aged twenty-five years, single, had suffered from symptoms of calculus for two years before I saw him. There was marked pain on pressure over the situation of the junction of the ureter and pelvis of the left kidney. Pain was almost constant, but it was worse after any unusual exertion, and he had had several severe attacks. I found several small stones in the pelvis of the kidney; the largest broke in extraction, and I was eventually obliged to wash them out of the kidney with a continuous stream of hot water, which was useful in checking the hæmorrhage, the latter being unusually severe, and kept up, I have no doubt, by his taking the chloroform very badly and getting all his tissues loaded with venous blood. He made a good recovery, but has always had more or less blood in his urine since the operation, and latterly has had other symptoms which make me fear that a stone must have been left behind, so that I am going to reopen the kidney. I should have mentioned that the urine examined before operation was of low specific gravity, and contained a trace of albumin, oxalates, and blood cells. The urine passed just before I first examined him was clear, and that passed just after the examination contained blood.

CASE 21.—The patient was a young married woman, seen in consultation with Dr. Stivens and Sir William Broadbent. The exact nature of the illness was very obscure, but renal calculus was not suspected. I made a small incision in the loin and then pushed Sir Joseph Fayrer's grooved trocar cautiously into the kidney and let out a lot of pus. I enlarged the opening with a bistoury slid along the groove in the trocar, and on introducing my finger found a rough angular stone in the pelvis; this I removed, and then well flushed the kidney with warm water and drained it. Convalescence was very slow and there were many relapses, the tube having to be reintroduced over and over again in consequence of fresh suppuration in the kidney after she had apparently recovered. In some of these illnesses I saw her, and in some she was under the care of others, but she eventually got well.

CASE 22.—The patient was a single woman aged thirty-five years, seen in consultation with Dr. Ord and Dr. Falls. A right renal calculus was diagnosed and removed without difficulty; recovery in all respects was satisfactory, as is also her present condition.

CASE 23.—This was that of a young married woman upon whom I had operated for ovarian tumour many years before, removing a solid brain-like sarcoma, which I thought was almost certain to recur speedily; but she got quite well and bore several children after the operation. In September, 1891, seven months after her last pregnancy, she began to suffer much pain in the left renal region; during the pregnancy she had suffered much from what was thought to be severe cystitis, and when she got about again had some attacks of renal colic. She was attended by Mr. Maurice of Reading, and I had frequent communication with him about the case from time to time after the ovariotomy and up to the time of this final illness. I operated by the combined method in November, 1892, and quickly found a stone in the left kidney—this was one of the quickest operations I ever undertook. I could detect nothing wrong with the other kidney except that it was rather large and loose. She appeared at first to be making a rapid recovery, but then had a serious relapse, and I had to reopen the lumbar wound into the kidney. This gave relief for a time, but her condition was not satisfactory, and she began to complain of pain in the other kidney, which I found to be distinctly enlarging, and eventually it became so painful that I incised it through the loin at her urgent request, letting out pus and blood. Both kidneys continued to discharge, still giving her much pain, and she rapidly emaciated and died. I did not obtain a post-mortem examination, but I have little doubt, from the symptoms observed during the progress of the illness, that there was a sudden outburst of malignant disease in both kidneys. Dr. Guillemard of Southsea, who had attended her shortly before the operation, told me that he had on two occasions after she had had attacks of hæmorrhage found masses in the urine which appeared to him to be casts of the pelvis and upper end of the ureter, more or less coated with phosphates, and similar masses escaped from both kidneys after the loin openings were made free. I have seen similar casts of the ureter in other cases associated with malignant disease invading the pelvis of the kidney, but I have never met with them in any case of renal calculus. Supposing that the disease was already in progress in the left kidney when I removed the stone, it might well in an early stage have escaped my notice; then came the marked improvement and apparent recovery, which lasted as long as the kidney was freely drained and ended when I allowed the wound in the kidney to close up. The other kidney meantime becoming infected as a direct result of the wounds in the left kidney—watching the case closely and anxiously as I did, for she was a great personal friend as well as patient—this was the only explanation I could find for the symptoms and mode of death.

(To be continued.)

CASE OF RECOVERY AFTER TREPHINING IN TUBERCULOUS MENINGITIS.[1]

BY JAMES KERR, M.A., M.D. CANTAB.,
MEDICAL SUPERINTENDENT, BRADFORD SCHOOL BOARD.

THIS subject having been recently brought forward, the notes of the following case occurring in private practice may be of interest, particularly as at the time it was believed by those concerned to be the first time that the operation had been deliberately performed in this disease.

The patient, aged ten years, was a little light-haired boy of slight build, with marked internal strabismus and wearing glasses (+ 4 dioptres); he is clever in many ways, being, for instance, the best fiddler in the school band, but backward in ordinary school work. His father is clever in a low mental way and generally out of work. He has a neurotic mother, and a sister with hystero-epilepsy. There is on both sides a strong tuberculous family history; the patient's maternal uncle is reported to have died from tuberculous meningitis. The boy's illness began indefinitely; some abdominal pains had been complained of for about two months, and for two or three weeks he had been out of sorts and had done many strange things. He had lately had headaches, and on March 13th, 1895, and again on the 15th, was sent home from school ill. On the 16th he went in from play with a very bad headache, and was so ill that Mr. G. H. Dodd was consulted, who sent the patient to me on the following day. I found him complaining of headache, with intense exacerbations and intolerance of light and sound. He was feverish, with a dirty tongue and suffering from constipation. There was no other indication of ill-health; the lungs were healthy, and there was no optic neuritis or *tache cérébrale*. During the next ten days he steadily got worse, the pulse varying from 88 to 100, and the temperature from 99° to 100°F., being generally highest in the morning. He had intense exacerbating headache, night sweats, loss of flesh, cerebral vomiting, and delirium, also wetting the bed, and a meningitic cry and attitude were developing. On March 24th he was very excitable; he said he saw red lights and complained of his neck being stiff on the right side behind. He felt as if falling to the right when standing, but actually tended to fall backwards. He generally lay on the right side and sometimes knelt with the head on the pillows. On March 26th it was noticed that he slept much with his eyes open, the hands flexed, and the knees drawn up. There was optic neuritis in the left eye, the edges of the disc being pulpy and indistinct, with some lymph about the vessels; the right disc was normal. The bowels had not been opened for five days. During the evening there was a general convulsion, the head being drawn back and to the right. He was semi-conscious and in great pain, and was put freely on opium in order to lessen the distress. An operation having been consented to, I at 11 A.M. next day gave chloroform, and Dr. T. Jason Wood, assisted by Mr. Dodd, trephined one and a quarter inches above and the same distance behind the left meatus auditorius externus, removing a half-inch button. The dura mater bulged considerably; it was reflected, very little fluid escaping and the brain not pulsating. A fine cannula

[1] The patient was shown at the meeting of the Bradford Medico-Chirurgical Society on May 7th, 1895.

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was passed twice two and a half inches in the direction of the ventricle; no fluid escaped, but the brain began to pulsate. Half a dozen strands of silkworm gut were then with difficulty passed beneath the membranes towards the base; they seemed to go about one and three-quarter inches downwards, the free end being brought out at the edge of the wound, which was then stitched, dusted with iodoform, and covered with dry sublimate wool. After six hours' deep sleep, due probably to two and a half grains of opium given during the eighteen hours before the operation, the child was much better. Nine hours after the operation he was clear mentally, and free from headache for the first time for at least ten days: next day the bowels were moved after calomel. Sixty hours after the operation the dressing was changed, clear fluid draining off in small quantity; subsequently the dressings were changed every third day. On the fifth day after the operation the neuritis was noted as still being well marked. On the sixth day the patient suffered from headache for three hours; he had delusions, saw little men in the room, and later had a general convulsion. On removing the dressing the wound and drainage-tube were found to be sealed with a hard scab; this was loosened, and there was no further trouble. The drainage-tube was finally removed on the seventeenth day, the discharge having much diminished, and within a month of the operation the boy was playing cricket. The temperature then remained at from 99° to 100°, at intervals he had night sweats, and during the early part of September a recurrence of the paroxysmal headache with vomiting occurred, causing anxiety for nearly a fortnight. There was no advance in the symptoms, the vomiting was chiefly after food, and it was thought that a great part of the illness was hysterical, but it subsided gradually, and the patient now seems to be well, except for his regularly elevated temperature.

Remarks.—The whole course of the illness up to the time of the operation was typical of tuberculous meningitis. The slight localising indications pointed to most irritation about the base on the left side. The neuritis was indefinite for localisation—it was taken, if anything, as in favour of the other symptoms. The operation was performed with the idea that the affection was most severe about the base on the left side; it was followed at once by disappearance of the headache. The remission of temperature after operation noted in cases which have since been published was absent in this case. It is possible, having regard to the continued feverishness and the illness in September, that there is some massive tubercle about the base, and that there was an intercurrent attack of meningitis, but there can scarcely be a doubt that the operation relieved the symptoms and averted impending death. One would judge from this case that trephining is justifiable in tuberculous meningitis, if only to relieve headache, and ought to be done as soon as the diagnosis is clear, before the paralytic stage is reached, and that drainage can be kept up with advantage for a considerable time.

Bradford, Yorks.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The autumn general meeting will take place at the Café Monico on Tuesday, Nov. 12th, at 6.30 P.M., and the autumn dinner of the Association at the same place at 7 P.M. Lord Russell of Killowen, the Lord Chief Justice of England, will be the guest of the Association on the occasion.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held in the medical library of University College on Oct. 9th. Mr. A. W. Prichard, President, gave his inaugural address, which dealt chiefly with the surgical aspect of disease and accident as occurring in the boys of Clifton College. He mentioned numerous interesting cases, and insisted that there was a great benefit obtained by the following out of the course of athletics and games as arranged at that great public school. The honorary secretary (Mr. Paul Bush) read his annual report, as did also the assistant editor and honorary librarian (Mr. L. M. Griffiths). These reports were adopted. The following officers were elected:—President Elect: Dr. Aust Lawrence. Honorary Secretary: Mr. J. Paul Bush. Committee: Dr. Michell Clarke, Mr. Dacre, Mr. W. Harsant, Dr. B. Rogers, Dr. Shaw, and Mr. Munro Smith. Mr. L. M. Griffiths, Dr. Parker, and Dr. Jas. Swain were elected to serve on the Library Committee.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propria collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF INJURY TO THE ASCENDING COLON; FORMATION OF INTRA-PERITONEAL ABSCESS; INCISION; FÆCAL FISTULA; RECOVERY.

(Under the care of Mr. G. H. MAKINS.)

THIS is one of those cases which serve to emphasise the teaching that every injury to the abdomen should be kept under careful observation for several days, for it is a well-understood fact that serious injury may be done to the abdominal contents by direct violence without any definite evidence of its extent at the time or within a few hours. Shock is a very variable symptom and unreliable, therefore the absence of shock should not be looked upon as a proof that no lesion has followed such a severe nipping of the abdomen as had been experienced here. It is possibly due to the great care exercised by the patient's medical attendant that more serious consequences did not follow before the 28th. In the larger number of instances of intestinal injury the small intestines, being the most exposed, are damaged, and the colon escapes. Such cases as the following are very rare, almost unknown, therefore the remarks by Mr. Makins will be found very valuable.

The patient was a man aged twenty-four years, whose family and previous personal histories were good. On Aug. 1st, 1895, while engaged at work, he was caught between two trucks passing each other. He was forcibly turned round and round between the two waggons until they came to a standstill, when he dropped to the ground. He was taken to the hospital and examined, but as only superficial contusions were detected he was taken home: here, however, he was kept in bed by his medical attendant, Dr. Crossman. The patient suffered from some pain in the abdomen, which was not of a severe character, but not from sickness or any other symptom pointing directly to the intestinal tract. His temperature, however, was raised above normal, reaching 100° F. or more in the evenings, and his appearance suggested internal mischief. On the 26th he was allowed to get up, and he was then seized with sudden pain in the right half of the abdomen, and his urine was found to contain a considerable quantity of blood. His bowels continued to act, though somewhat irregularly, and there was no sickness, but a distinct swelling was to be felt in the right half of the abdomen. On Sept. 3rd he was sent to St. Thomas's Hospital by Dr. Crossman. There was some emaciation, which had been gradually increasing; the face was thin and flushed, and he complained of much pain in the abdomen, lying in the supine position with the knees drawn up. On examination of the abdomen a large, tense, elastic swelling with ill-defined margins was found in the right half, extending almost from the lower costal margins to Poupart's ligament. It was dull on percussion, the dulness, however, not extending into the right flank, and in the lower part fluctuation was distinct. The evening temperature reached 100°. The urine contained a trace of albumin, but no blood. On the 6th he was anæsthetised with ether, and an incision was made over the most prominent part of the swelling, at the outer margin of the rectus. The abdominal wall was infiltrated and stiffened, but no pus was met with until the peritoneal cavity was reached. An irregular cavity walled in by intestine was then opened, the ascending colon being firmly adherent to the anterior abdominal wall at the outer limit of the space. The pus was extremely offensive, fæcal in odour, and dirty-coloured, but no distinct fæcal lumps were present. The cavity was abundantly lined with lymph, and no definite opening in the intestine could be discovered by the escape of either fæces or gas. A large drainage-tube was inserted, and the wound was partly sutured with silkworm gut after the

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cavity had been thoroughly flushed with hot sterilised water. On the 7th he was found to have been very comfortable and to have slept well, there being no pain. The wound was dressed, the discharge from the tube being distinctly fæcal. For the next three days a small amount of fæces escaped daily, and the purulent discharge was abundant. After the 11th, however, there was no further appearance of fæces, and the pus, though still foul, became gradually sweeter and less abundant. He steadily improved in his general condition, the temperature remaining normal, and he rapidly regained flesh. The tube was gradually shortened and finally removed on the 30th, little induration remaining around the wound. On Oct. 7th the latter had entirely closed, and on the 9th he left the hospital well.

Remarks by Mr. MAKINS.—The main interest in the above case seems to centre in the question as to whether the original injury to the colon was intra- or extra-peritoneal in position. When such accidents are not rapidly fatal the explanation is usually to be found in the fact that the rent in the colon has occurred in the extra-peritoneal segment, hence extravasation takes place into the retro-peritoneal tissue of the loin, and the general peritoneal cavity escapes. In these cases, however, the abscess usually forms in the loin, while in the above instance the abscess was intra-peritoneal and also within the line of the ascending colon. Two modes of explanation seem to suggest themselves. First of all there seems to be little doubt that the original injury did not amount to an actual rent, or, if it did, that the rent was very small in extent. Under these circumstances adhesive inflammation may at once have commenced, and when the serious trouble took place on Aug. 26th there may have been some preparation for the limitation of the fæcal abscess. It seems, however, more likely that the injury in this case was in the posterior segment, the injury in the first instance being perhaps either a very slight rupture or severe contusion without an immediate rent, escape of the contents of the gut occurring only on the twenty-fifth day, when the patient tried to get about (Aug. 26th). The simultaneous occurrence of hæmaturia seems to afford corroborative evidence of some value in localising the injury to the inner side of the bowel—i.e., that nearest to the right kidney; while the adhesion of the bowel to the anterior abdominal wall noted at the time of operation also seems to point to the bowel having been pressed forward. Hence the absence of a palpable swelling of the loin in the usual position would be explained by the fact that the original injury, affecting the colon and kidney, so damaged the peritoneum covering them both as to render the passage of escaping fæces and pus more easy in the direction of the abdominal cavity than into the loin, and this is perhaps the more likely when the chronicity of the sequence of events is taken into account, the retro-peritoneal tissue in the immediate neighbourhood of the injury having become more dense from inflammatory induration. The dark colour and lumpy nature of the fæcal discharge seemed to leave no doubt that the colon was the portion of bowel injured.

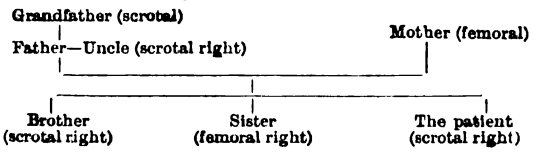
SWANSEA HOSPITAL.

A FAMILY HISTORY OF HERNIÆ.

(Under the care of Mr. J. KYNASTON COUCH.)

A SERIES of cases of hernia all occurring in one family has not often been brought forward. The tendency to defective construction at those spots in the abdominal wall where the anatomical design is weakest is hereditary—as would be expected; but the fact is so very familiar to all that surgeons have been prevented from publishing their experiences. In this interesting series it will be seen that this particular patient had a double vicious history, both parents having been affected, the father with the right scrotal hernia common to *his* father, brother, and son, and the mother also having a femoral hernia. It would seem most probable that the lad inherited his defect—over-patent inguinal rings—from his father, but the laxness of tissue present in his mother's case, and shared by his sister, as shown by their possession of femoral herniæ, may have counted for something in the size of the protruded mass. For the notes of the case we are indebted to Dr. Stephen Floyd, resident medical officer.

A well-developed boy aged seven months was admitted into Swansea Hospital with an enormous congenital scrotal hernia. It was as large as a good-sized orange and quite obliterated the penis. On radical cure being performed it was found to contain a great part of the small intestine, the cæcum, and part of the ascending colon. The patient made a perfect recovery. The appended schedule shows the different members of the family affected.



Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

On Posture in its Relation to Surgical Operations under Anæsthetics.

THE first meeting of this society for the present session took place on Oct. 22nd, Mr. HUTCHINSON, President, being in the chair.

Dr. ORD presented to the society the volume on "Climatology and Balneology" recently published by Messrs. Macmillan and Co. A committee was appointed by the society during the presidency of Sir Edward Sieveking, and the present book was the first volume of the work. It comprehended chiefly the climatology of the south coast of England and a description of the more important medicinal springs of Great Britain. Dr. Dickinson had dealt with Cornwall and the Scilly Isles, Dr. Symes Thompson and Dr. Lazarus-Barlow had described Devonshire and the Channel Islands, Dr. Mitchell Bruce had undertaken the compilation of that section dealing with Somerset, Dorset, and Hants, while the south-eastern counties—Surrey, Sussex, and Kent—had fallen to the lot of Dr. Ewart. All had worked zealously, and it was hoped that the medical public would appreciate the results of their labours.—The PRESIDENT remarked that the committee was an innovation on what had been accomplished by the society in the past, and he alluded in grateful terms to the valuable services rendered by Dr. Ord, the chairman of the committee.—Sir EDWARD SIEVEKING considered that the committee, which had admirably managed its business, should be made a standing one, to which the profession could turn in case of requiring advice or desiring to record climatological or other phenomena. He moved a vote of thanks to the committee and eulogised especially the services of the secretary, Dr. Archibald Garrod.—Dr. DICKINSON said that the committee was indebted to many observers in various parts of the country for valuable information. He proposed that each of these gentlemen should be presented with a copy of that paper in which his contribution appeared.—The vote of thanks to the committee was carried unanimously. The President presented the annual volume of the Transactions for 1895.

Dr. FREDERIC HEWITT and Mr. MARMADUKE SHEILD brought forward a paper on Posture in its Relation to Surgical Operations under Anæsthetics. They pointed out that the posture of a patient prior to, during, and after a surgical operation under an anæsthetic was a matter of considerable importance to the surgeon, to the anæsthetist, and in many cases to the patient himself. The subject was discussed under the following headings:—1. The posture of the head in its relation to that of the trunk; extension, flexion, and rotation of the head were considered. Stress was laid upon keeping the head, whenever practicable, in the longitudinal axis of the body. The circumstances which favoured the entrance of blood into the larynx and trachea were defined. 2. The influence of the force of gravity upon the circulation and respiration. The observations of Snow, the Hyderabad Commission, and of Dr. Leonard Hill were quoted; and the administration of anæsthetics to patients in the sitting and semi-recumbent postures was discussed. 3. The postures of surgery individually considered: (*a*) The dorsal, supine, or horizontal posture; the advantages of keeping the head turned to one side, and the disadvantages

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of allowing a patient to lie face upwards, and with the head slightly extended; (*b*) the dorso-lateral posture; (*c*) the lateral posture; its advantages in most major operations within or about the mouth and nose; operations for empyema. (*d*) The latero-prone and prone postures; necessity for caution when patients of certain types were placed in these positions. (*e*) The semi-recumbent posture; its disadvantages except in a few special cases. (*f*) The sitting posture. (*g*) Special postures, including the lithotomy, the semi-inverted, Trendelenburg's, and the knee-elbow. 4. The posture of the patient after the operation. Remarks were made concerning the raising of patients for bandaging &c., the application of bandages after an empyema operation, and the appropriate positions for patients when the circulation was feeble. Dr. Hewitt and Mr. Sheild strongly urged the advantages of at once turning patients upon the side after an operation, provided, of course, that there were no special contra-indications.—The PRESIDENT said that the subject dealt with in this manner was a novel one, and Dr. Hewitt and Mr. Sheild had handled it in a very thorough and painstaking way.—Mr. R. GILL regretted that the chief part of the paper was occupied with generalities, and that a particular anæsthetic was not mentioned when dealing with a particular posture. He could not agree that many of the positions described were so dangerous as had been maintained in the paper; for instance, in the supine posture with the head extended it must be very rare for blood or vomit to find its way into the air passages.—The adjournment of the debate was agreed to, being moved by Dr. SCANES SPICER and seconded by Dr. SANSOM. Dr. Sansom added that he regarded the paper as a most valuable one, and held that alterations of posture under anæsthetics were of the most extreme moment and importance.

OPHTHALMOLOGICAL SOCIETY.

President's Address.—Bilateral Glioma of the Retina cured by Enucleation of the Two Eyes.—Detachment of Choroid.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 17th, Mr. NETTLESHIP, President, being in the chair.

Mr. NETTLESHIP thanked the members for the honour done him in his election to the presidental chair. He adverted to his association sixteen years previously with those energetic spirits who were foremost in establishing the society, among whom he specially mentioned Dr. Brailey, Dr. Stephen Mackenzie, and the late James Adams, who influenced Sir William Bowman to launch the society. The President paid a graceful compliment to his predecessor, and pointed out that the Ophthalmological Society was a great educational institution and would continue so while its members preserved open minds and kept abreast of the growing knowledge of their subject. He spoke in high terms of the value of special hospitals and the special departments of general hospitals, with the friendly rivalry and intercommunication which greatly advanced the knowledge and skill of their officers. The material for study in ophthalmology was inexhaustible, but he thought the subjects might be usefully divided into three classes—namely, (1) rare diseases and conditions which were worthy of record and of which he instanced numerous cases; (2) subjects capable of final settlement by collective information submitted to a committee or discussion; and (3) subjects which could best be treated in separate monographs.

Mr. TREACHER COLLINS read a paper on Four Cases of Bilateral Glioma of the Retina cured by Enucleation of the Two Eyes. He first referred to the paper in which Mr. Lawford and he had shown that there was no authentic record of a case in which a gliomatous growth had recurred later than three years after enucleation of an eye for that disease. He related histories of the following four cases. Case 1. A boy who had his right eye excised for glioma when five months old and his left eye three years later. Three and a half years after the removal of his second eye he was alive and well, and there was no sign of any recurrence. Case 2. A girl whose left eye was excised for glioma when five months old and the right eye nine months later. She was seen to be in perfect health four years and seven months after the removal of the second eye. Case 3. A girl whose left eye was excised for glioma when ten months old and the right eye thirteen months later. Four years after removal of the second eye she was in good health and there was no sign of any recurrence. Case 4. A boy both of whose eyes were excised for glioma when he was one year and four months old, the left being a shrunken one. Three years and three months later he was in good health and had no sign of any recurrence. Seeing that all these four patients were alive and in good health, without any sign of recurrence, after an interval of more than three years from the date of removal of the second eye—that is, after the longest interval at which there is any authentic record of a recurrence having occurred—he thought he might justly claim that they were cured.—Mr. LANG reported three cases, two of which were described by Mr. Collins. In the third case operation was refused and only consented to when pain occurred and after the nerve was affected, the child dying at about eight years old with secondary growth.—Mr. LAWFORD quoted a case in which the first eye was removed at two months. Two and a half years later the second eye was affected; operation was refused and two years later sight was almost gone. At four years the eye became painful and was removed, but the nerve was invaded and the ultimate fate of the patient was still undecided.—Mr. P. SMITH related a case in which it was recorded that both eyes had been removed for cancer, the patient being about eight years old. This was at the Birmingham Infirmary.—The PRESIDENT recorded a case, the patient being now living, in which both eyes had been removed, the second three years ago.

Mr. C. DEVEREUX MARSHALL read a paper on Detachment of the Choroid. Three cases had recently come under his notice. The first case was the eye of a youth aged twenty years who suffered from glaucoma. Iridectomy was done, and three days later the eye became very painful owing to a large hæmorrhage having taken place beneath the choroid. On examining it after removal the choroid and retina were found to be completely detached. The second case was that of a man aged sixty years, who had suffered from glaucoma. Iridectomy was done, but the eye shrank and was removed. There was an extensive detachment of the retina and choroid; the subchoroidal space was filled with new tissue in which cyst-like spaces were developed. Microscopic examination proved it to be the much-thickened lamina supra-choroidea and lamina fusca; the small spaces contained pigment and were probably lymph channels. The third case was that of a man aged sixty-eight years who had a cataract extracted; the vision equalled $\frac{6}{18}$ and J. 1 afterwards, but six months later it failed. As it was feared that the eye contained a new growth it was removed. There was almost complete detachment of the choroid and retina; the only places where the coats remained attached to the sclerotic were where the vessels and nerves penetrated; thus there were four large balloon-shaped detachments, the subchoroidal space containing nothing but serous exudation. The first case is similar to that condition met with after an accident resulting in the loss of a large quantity of vitreous, and it is occasionally seen after cataract extraction, but here the hæmorrhage probably did not come on for three days after the operation, and there was no loss of vitreous. The last case is the most uncommon. The detachment probably came about as the result of (*a*) hyalitis, leading to shrinking of the vitreous; (*b*) choroido-retinitis; and (*c*) serous exudation poured out between the choroid and sclerotic. The diagnosis previously to removal is most difficult. The tension is usually diminished, and this is the most distinctive feature between the simple detachment and that due to a growth.

The following were the card specimens exhibited:—

Dr. ERNEST CLARKE: (1) Rare Form of Nystagmus; and (2) Orbital Tumour.

Dr. MOTT and Mr. TREACHER COLLINS: Case of Exophthalmos with Trigeminal Hemianalgesia.

Mr. KENNETH CAMPBELL: Case of Anophthalmos.

Mr. A. S. MORTON: Snellen's Operation for Symblepharon.

Mr. HIGGENS: Unusual Form of Conjunctivitis.

Mr. LAWFORD: Case of Retinitis Circinata.

HARVEIAN SOCIETY OF LONDON.

The Climate of Egypt.

A MEETING of this society was held on Oct. 17th, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Dr. E. SYMES THOMPSON read a paper on the Climate of

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Egypt. Dealing first with the journey thither, he thought the long sea route was often the less fatiguing. Invalids should land at Alexandria. A short stay at Ramleh both before and after the Nile journey should be made by those who leave England in October and return in May. The sulphur baths of Helouan were useful to those who were unequal to the social activity of Cairo. The Mena House Hotel, close to the Great Pyramid and on the edge of the desert, afforded a sunny haven for those unable to ascend the Nile. Luxor and Assouan, he said, were very warm in November. In February the temperature in the shade reaches 100° F. at these places, and January and February are the best times to be there. Invalids should be warned of the danger of chill at sundown on the Nile. Comparing Luxor and Assouan, he said that the air was drier at the latter place. The dangers of life in a *dahabiyeh* must be borne in mind, and it is often safer to travel by steamer. The hotels at Luxor and Assouan were commended. The indigenous maladies of Egypt were described. The warm, dry air was said to be of use in bronchial affections with emphysema, in case of quiescent phthisis in all stages, especially when of pneumonic, broncho-pneumonic, or pleuritic origin, and particularly when the disease follows influenza, measles, or enteric fever, and naso-pharyngeal catarrh. Hypochondria, hysteria, and neurasthenia were also benefited, and chronic cardiac and renal diseases do well in the climate; whereas, further, the electrical condition of the desert air sometimes interfered with the sleep of healthy persons, it acted otherwise on sufferers from hysteria. In conclusion, Dr. Symes Thompson drew a comparison between Egypt, the Alps, the Canaries, and the Cape.

Dr. JALLAND considered that Assouan afforded the best climate in Egypt. The cold weather in Cairo lasted from four to six weeks, but was less higher up the Nile. At Assouan the land was not cultivated, and the inundations of the Nile were not unhealthy. It was also a clean town.

Dr. CANNEY said that dry desert air was what patients sought. In this respect Luxor had great advantages. He advocated an earlier arrival in Egypt than Dr. Symes Thompson proposed, and thought the beginning of November a good time to go there.

Dr. SQUIRE, Dr. CHAPMAN, and Dr. WHARRY also spoke, and remarks by the PRESIDENT terminated the proceedings.

BRITISH GYNÆCOLOGICAL SOCIETY.

A New Method of performing Abdominal Hysterectomy.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 10th, Dr. CLEMENT GODSON, President, being in the chair.

The PRESIDENT announced the death on the previous day of Dr. Thomas Keith, a distinguished honorary Fellow of the Society. This was an irreparable loss, both to the society and to the world at large. He asked the Fellows to pass a vote of condolence with the family of Dr. Keith in their sad bereavement.—Dr. ROBERT BARNES and Dr. BANTOCK supported the President's motion in sympathetic terms, and the vote was passed unanimously.

Mr. F. BOWREMAN JESSETT read a paper on a New Method of performing Abdominal Hysterectomy, with Five Successful Cases. After briefly alluding to the history of abdominal hysterectomy Mr. Jessett pointed out that the methods of performing the operation may be divided into three classes—(1) the extra-peritoneal method of dealing with the stump by the use of Koeberle's clamp; (2) the subperitoneal method of dealing with the stump after removal of the tumour; and (3) total extirpation. Objection was taken to the extra-peritoneal method on account of the high mortality after the operation, the excessive pain caused by the dragging on the stump, the length of time which must elapse before the stump separates, and finally the weakening of the abdominal walls. Many of these objections are overcome by those surgeons who adopt the subperitoneal method. But in these the mortality is high, and Mr. Jessett pointed out that, there being a space between the roof of the vagina and the peritoneum which has been laced over the floor of the abdominal cavity, if there is any oozing of blood from the flaps a large hæmatocele may and often does result, which has in many cases broken down and suppurated. Moreover, if there should be any accidental hæmorrhage no notice is given of it until the patient may be in a collapsed condition. By total extirpation of the whole organ all these objections are overcome, but it was to the method of performing this operation that Mr. Jessett drew attention and submitted certain details which he has carried into practice with satisfactory results. Hitherto operators after removal of the entire uterus with its tumour have laced or stitched the two peritoneal surfaces of the flaps together across the pelvis, thereby restoring the floor of the abdominal cavity. Difficulty hitherto has been experienced in opening up the roof of the vagina, some accomplishing this per vaginam, and others by having an assistant's finger passed into the vagina. To overcome this difficulty Mr. Jessett has had a bivalved speculum made nine inches long, which an assistant passes into the vagina when the tumour is delivered through the abdominal wound; by having this instrument pushed well home the roof of the vagina is put upon the stretch, and it is an easy matter after the anterior and posterior flaps are reflected from the tumour to cut down upon the ends of the blades before and behind and then to ligature the uterine arteries on each side. By dividing the tissues between these ligatures and the cervix the uterus and tumour are lifted out. But it was on the treatment of the flaps that Mr. Jessett laid particular stress. He contended that by lacing these across there is a large raw surface left which will, or may, be a source of septic trouble afterwards. To overcome this he proposed that long loops of silk, some four or six in number, should be passed through these flaps at their edge so that the knot is made to come out through the speculum in the vagina by catching the loop in a specially made instrument. When all these loops are passed they are drawn taut, and the peritoneal flaps are in this way everted and doubled upon themselves into the vaginal roof. The vagina is then packed with strips of iodoform gauze, the speculum withdrawn, and the abdominal wound closed. All the patients on whom Mr. Jessett has performed this operation have convalesced easily and well, in fact just as after an ordinary ovariotomy or vaginal hysterectomy. Mr. Jessett read short notes of five cases in which he had operated successfully by this plan. The chief points in this operation are—(1) the use of the long speculum passed up the vagina, by means of which the uterus is somewhat lifted up and the roof of the vagina put on the stretch, which enables the operator to cut with precision into the vagina from above; (2) the treatment of the peritoneal flaps—by everting and drawing these down through the vagina the two peritoneal surfaces are brought into accurate apposition, and by being doubled on themselves raw surface is apposed to raw surface, and also free drainage is established at the lowest point of the abdominal cavity, through the vagina if required; (3) the flaps, being drawn down in this fashion, form a plug to the roof of the vagina, and the floor of the pelvic cavity is much firmer than if the peritoneum is simply laced across—moreover, by this method a large raw area is left, which is much more likely to cause suppuration; (4) by removing the whole uterus in this manner there is very little hæmorrhage and no need for the use of elastic ligatures or other means for constricting the neck of the tumour; and (5) the patients suffer no more pain or inconvenience after the operation than after an ordinary ovariotomy. There is no dragging on the stump, and the abdominal wound is not dragged in afterwards as in those cases which have been treated by the serre-nœud.—The PRESIDENT thanked Mr. Jessett in the name of the society for his valuable and interesting paper.—Dr. PURCELL said the chief difference between Mr. Jessett's method and that of Martin of Berlin was that the former opened the vagina from above, while the latter worked from below. He called attention to the great advantage of Trendelenberg's position for this operation.—Dr. HEYWOOD SMITH testified also to the convenience of Trendelenberg's position. He asked Mr. Jessett whether an ordinary glass speculum would not answer as well as the special one as a guide for opening into the vagina, and also what was the special indication for a drainage-tube in these cases.—Mr. TAYLOR expressed his indebtedness to Mr. Jessett for the work he had done. It seemed to him, however, that no one method could be of general application; for instance, there were cases where the inversion of the broad ligaments would answer as well as the formation of anterior and posterior flaps. Dr. Purcell was mistaken in supposing that Martin always adopted one method.—Dr. BANTOCK said Mr. Taylor had in great measure expressed his own ideas. The operation in future would rest between

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extra-peritoneal treatment of the stump and total extirpation.—After some remarks by Dr. LEITH NAPIER, Mr. JESSETT replied.

Mr. E. TENISON COLLINS (Cardiff) showed a very large Spleen removed post mortem. During life it was thought to be an ovarian tumour. Abdominal section showed its true nature. The medical attendant who was present would not sanction its removal, so the abdomen was closed without proceeding further. The patient, however, died the same evening from shock. No hæmorrhage was found at the necropsy.—Dr. HEYWOOD SMITH had lately had a case sent to him as an ovarian tumour, but examination showed it to be the spleen. He asked Mr. Bland Sutton to see it with him. Mr. Sutton advised removal and performed the operation. The patient made a good recovery.—Mr. H. B. GARDNER and Mr. J. W. TAYLOR spoke on the subject, and Mr. COLLINS replied.

Mr. J. W. TAYLOR (Birmingham) showed a large Uterine Myoma removed by Abdominal Pan-hysterectomy. Operation was urgently required on account of hæmorrhage. The shape of the tumour rendered the use of the clamp impossible or dangerous, and oöphorectomy would have been useless. He decided upon total extirpation. After separation of the tumour laterally by ligatures placed outside the ovaries and tubes, the bladder was dissected off anteriorly and the vagina was opened anteriorly and posteriorly. The remaining attachments were temporarily clamped whilst the tumour was lifted out. The patient did well and was discharged three weeks after the operation.

Mr. R. H. HODGSON showed a specimen of a large and partially solid Ovarian Tumour. The evacuated fluid portions measured three quarts and the remaining solids weighed four pounds. The patient made a good recovery.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

The Pathology of Certain Forms of Vesical Tumour.

A MEETING of this society was held on Oct. 10th at the Great Northern Central Hospital, the President, Mr. CHARLES KING, in the chair.

An address was given by Mr. J. H. TARGETT on the Pathology of Certain Forms of Vesical Tumour, which was copiously illustrated throughout by lantern slides prepared from photographs of the actual specimens. Mr. Targett discussed in the course of a most valuable address, not only the pathological appearances of the forms of tumour selected for the demonstration, but also their clinical recognition and modes of treatment. The first group of preparations illustrated the appearances of certain large single sacculi connected with the urinary bladder by narrow orifices. Much interest was especially taken in the description of sacculi occurring at the lower part of the bladder in the region of the trigone and probably the result of failure in the proper development of this region. Methods for the recognition of these sacculi during life were suggested, and the complications which arise owing to their growth were referred to. In certain cases the possibility of their removal was discussed, and operation was considered to be advisable by the speaker. The second variety of tumour brought forward was the recto-vesical hydatid cyst. It was shown that the cyst originated in close relation with the bladder walls, in fact in the muscular or fibrous coats, and that, therefore, the usual statement made in the text-books that they were found in the pelvis, having gravitated from the liver or some other situation in the abdominal cavity, was quite erroneous. The operative treatment adopted by Mr. Bond for this class of tumour was recommended and explained. The remaining preparations dealt with some of the important forms assumed by solid tumours of this region and the complications that they may bring in their train. Some exceptionally beautiful preparations were shown of the villous papilloma with all the epithelium *in situ*. In connexion with these the speaker mentioned the difficulty of recognising shreds of such papillomata in the urinary excretion. The most that might be expected to be observed was the very delicate fibrous strand forming the "core" of one of the villous processes. Even should this be found the diagnosis as to whether the tumour was malignant or not was in no degree advanced, for such a complication as the occurrence of an apparently benign villous growth covering or depending from a carcinoma is at times met with. The modes of extension of malignant growths formed a very interesting section of the demonstration. The last subject touched on was the possibility of the ureters becoming prolapsed and simulating polypi.

NORTH-WEST LONDON CLINICAL SOCIETY.

Exhibition of Cases.—Demonstration of Apparatus.

A CLINICAL meeting of this society was held on Oct. 16th, Dr. W. K. SIBLEY being in the chair.—Mr. JACKSON CLARKE showed a case of Aural Polypus successfully treated by the Application of Alcohol.—Dr. SIBLEY exhibited a case of Exophthalmic Goitre treated with Suprarenal Extract, and one of Abdominal Aneurysm.—Dr. CAGNEY showed a child with Infantile Paralysis in whose case energetic treatment in the acute stage was successful.—Mr. JACKSON CLARKE showed a patient in whom he had effected Perineal Drainage for the relief of Cystitis, and Mr. C. P. ALLEN exhibited some cases of dermatological interest.—Dr. Boulting, Dr. Bulger, Mr. C. G. Brodie, Dr. Campbell, and Dr. Herschell discussed the cases.

Dr. HARRY CAMPBELL gave an experimental demonstration of the Pulse and Arterial Tension with an apparatus which he had devised.

LIVERPOOL MEDICAL INSTITUTION.

Villous Tumour of the Rectum.—Chronic Hydrocephalus, Trephining, Recovery.—Latent Congenital Syphilis.—Exophthalmic Goitre, with special reference to the Thyroid Theory of the Disease and the Treatment of the Affection by Operation.

AN ordinary meeting of this society was held on Oct. 17th, Dr. WARBURTON, Vice-President, being in the chair.

Mr. PAUL related the case of a woman aged fifty-six years from whom he had removed a very large Villous Papilloma of the Rectum. Symptoms of bearing down, a constant desire to defecate, and the passage of blood and mucus had existed for five years. The growth formed a broad band two to three inches deep around the rectum about two inches and a half from the anus. The patient made a slow but otherwise good recovery. The tumour had the typical structure of villous papilloma and did not infiltrate the submucous tissue. The origin of the growth could be distinctly traced to the neck of Lieberkühn's follicles, and Mr. Paul suggested that the histological distinction between the three usual neoplasms in this situation was as follows. Papilloma commenced as an upward growth of the neck of the glands, polypoid adenoma as an overgrowth of the entire glands, and carcinoma as a downward growth of the deep portion of the follicles.—Mr. RUSHTON PARKER agreed with Mr. Paul that a purely villous papilloma was not likely to become malignant. No doubt it was an extremely rare disease in the rectum, but the patient having recovered well from the operation was probably entirely freed from her disease.

Mr. THELWALL THOMAS showed a young man nineteen years of age on whom he had operated six months ago. The case had been transferred from Dr. Glynn's wards. There was a history of very severe and increasing headache, chiefly occipital, for eighteen months, extreme giddiness and ataxia, with falling to the right side. There were nystagmus, diplopia, paralysis of the right superior oblique, and marked double optic neuritis. The circumference of the head was twenty-five inches. The right cerebellar fossa was opened and the tense, non-pulsating dura mater bulged; this was opened and then the brain bulged. By exploring with the finger no tumour could be made out, but the space under the cerebellum was closed by a membrane; this was easily broken through with the finger and a quantity of clear fluid liberated. The medulla and floor of the fourth ventricle were distinctly felt. The bone was not replaced. The headache soon disappeared, and the man quickly regained all his faculties and was now apparently quite well, six months having elapsed since the operation.—Dr. GLYNN, when he suggested operation to Mr. Thomas, thought the case was one of cerebellar tumour. The patient was nearly blind at the time of the operation. It was remarkable that it should not only have been followed by temporary relief but by permanent recovery. It was possible that a posterior meningitis had been followed by adhesions between the membranes in the neighbourhood of the fourth ventricle, and so caused

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chronic hydrocephalus. — Mr. RUSHTON PARKER, Mr. MURRAY, and Mr. LARKIN also made remarks, the latter two speakers suggesting that it probably was a case of cystic tumour in the cerebellum.

Dr. STOPFORD TAYLOR showed a case of Congenital Syphilis in a man aged twenty-four years. It began about four years ago as a sore on the upper lip, and this, slowly spreading, involved both cheeks, the left eyelid, the left half of the scalp, and the alveolus of the upper jaw; the nose also was completely destroyed. His present condition was best described as syphilitic lupus.

Dr. ABRAM read a paper on Exophthalmic Goitre, with special reference to the Thyroid Theory of the Disease and the Treatment of the Affection by Operation. A short description of the symptoms was given, followed by a critical examination of the various theories advanced to explain the disease. The thyroid theory was held to be the most satisfactory. Two operations—namely, partial thyroidectomy and ligature of the thyroid arteries—were thought to fulfil the conditions necessary for the relief or cure of the disease. —Dr. GLYNN was very interested in the paper, though he did not accept many of Dr. Abram's contentions. He was quite sure that mental shock was an exciting cause. He thought that many cases recovered perfectly well under medical treatment.—Dr. CARTER thought that where it was clearly indicated that the thyroid was the seat of the disease operation might do good; but he was sure that there must be many other causes for the disease besides excessive thyroid secretion.—Dr. CATON said that in future in severe cases he should recommend removal of a portion of the thyroid gland.—Mr. PAUL said he had operated on two cases for Dr. Barron. The first was only moderately severe; here he divided the thyroid isthmus. There was no immediate improvement, but later Dr. Barron reported that the case was much benefited. The second operation he performed ten days ago; this was a most severe case, and the entire right lobe, which weighed two and a half ounces, was removed. No difficulty was met with in the operation, and the bleeding was less than in the case of large adenomata. The change in the patient was most remarkable; in three days the remaining half of the thyroid was not visible, the temperature and pulse had fallen, and the exophthalmus was receding.—Dr. BRADSHAW had tried the prolonged application of an icebag to the thyroid, and also counter-irritation with red oxide of mercury ointment, but without benefit in either instance.—Mr. GEORGE HAMILTON said that in many cases goitres could not be operated upon owing to the enormous vessels and sinuses present. He spoke of a case where the whole neck pulsated violently, and the isthmus extended from the cricoid cartilage to below the upper part of the sternum; when cut down on this was found to contain large vessels like those of a cricoid aneurysm.—Dr. BUCHANAN said that the fact that the symptoms following artificial removal of the thyroid, excessive administration of thyroid extract, and the pathological atrophy of the gland seen in myxœdema so much resembled the symptoms of exophthalmic goitre strongly supported the view that this disease was the result of over-activity and excessive secretion of the thyroid gland. — Dr. LOGAN, Dr. DAVIES, Dr. GIVEN, and Dr. SHERRINGTON also took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

President's Address.

A MEETING of this society was held on Oct. 10th, the President, Dr. PORTER, being in the chair.

Dr. PORTER, in his address, dealt with many of the ethical questions now agitating the profession. In reference to medical etiquette he said that it was very desirable that certain canons or broad principles should be laid down decisively, and everyone entering the profession should be required to subscribe to them. Upon such a foundation a simpler and more natural system of ethics would erect itself. He then dwelt at some length upon the necessity for a more representative form of government in the profession on similar lines to the Incorporated Law Society. He also advocated very strongly the adoption of the "one-portal" principle, both as regards the entrance examination and the tests of professional fitness. There would then be no necessity for the representation of the universities and licensing bodies, as such, upon the governing body of the profession. They would then simply confer their titles on their own terms upon those who were already qualified medical practitioners. He believed, too, that one uniform standard of examination would tend to exclude some undesirable candidates for admission to the profession. Dr. Porter then touched upon the question of the abuse of medical charities, advocating a more searching inquiry on the part of hospital authorities into the circumstances of those who presented themselves as out-patients, and suggesting that in some cases the exaction of a small charge might be advisable, though he was not in favour of admitting cases indiscriminately as paying patients. State support or State aid he was not in favour of, but thought that registration and periodical Government inspection of all hospitals, dispensaries, and similar institutions would have a very salutary effect, especially if this was accompanied by the power to close all such institutions as were considered unnecessary or administered in an improper manner. He considered that the State had a duty to perform in preventing institutions which were conducted for private and personal ends being falsely marked with a title which was calculated to deceive the public and divert support from more deserving objects. The address concluded with some remarks on the national importance of medical education and the public side of medical work, and allusion was made to the very inadequate acknowledgment on the part of the public of their indebtedness to the medical profession as a body.

Reviews and Notices of Books.

Text-book of Operative Surgery. By Dr. THEODOR KOCHER, Professor of Surgery and Director of the Surgical Clinic in the University of Berne. Translated from the Second Revised and Enlarged German Edition, by HAROLD J. STILES, M.B., F.R.C.S. Edin., Senior Demonstrator of Surgery in the University of Edinburgh, &c. With 185 Illustrations. London: Adam and Charles Black. 1895.

THE Surgical Clinic at Berne, under the superintendence of Dr. Kocher, has for many years been one of the chief centres of surgical activity and progress on the Continent. Any work on operative surgery coming from such a source ought to command the attention of surgeons, and they will find this text-book full of interest. The book contains much that is new to British surgeons and is full of valuable suggestions, and no operator can fail to gain from its careful study. But it is essentially a work for surgeons rather than for students. Compared with the guides to operative surgery with which the British student is familiar, this work is markedly lacking in those numerous details attention to which is absolutely necessary for success. A knowledge of these is taken for granted by Dr. Kocher: he has written for those who are personally and practically familiar with the details of operating, and in many cases has sketched in outline only difficult and elaborate surgical procedures. For the practised surgeon this is an advantage, but it renders the work of less use for the student. The illustrations are numerous, accurate, and drawn on a large scale, and are a noteworthy feature of the work. Dr. Stiles has done his work of translation admirably; we are able to read Dr. Kocher speaking to us in good idiomatic English.

Diphtheria and its Associates. By LENNOX BROWNE, F.R.C.S. Edin. London: Baillière, Tindall, and Cox. 1895. pp. 260. Price 16*s*.

THERE can be no doubt that in respect to diphtheria scientific opinion is undergoing a marked change; for, although there are many inexplicable facts in its etiology which require to be harmonised, and although its affinities with other diseases are more numerous than was formerly conceived, the discovery of the bacillus diphtheriæ and the proofs of its pathogenic character have done much to lend accuracy to its definition. At the same time bacteriological studies have rendered the subject more complex,

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since they have largely added to the class of cases which bear a close resemblance in their clinical features to the specific disease and yet on the bacteriological test are shown to be not of its kindred. The author of this timely treatise does not hesitate to meet this problem in the most critical spirit, and he has succeeded in bringing into prominent relief the new light which bacteriology has shed on the question. It is probably too soon as yet to admit that the whole truth has been attained, and it is more than likely that many of the opinions founded on bacteriology will require modification in the future; but, as marking the standpoint at present reached, and as an endeavour to clearly expound this, his work is creditable and worthy of commendation. Starting from the definition that "diphtheria is an infectious disease due to the presence of a specific micro-organism (the Klebs-Loeffler bacillus)," he goes on to point out that this may occur in a pure or simple form, and in a complex form from the mingling of cocci with the specific bacillus—that there are forms in which the latter is absent (pseudo-diphtheria), and others in which a bacillus closely resembling it, but shorn of virulence, the chief factor. He further states that these etiologically distinct affections resemble one another in the type of inflammatory changes which are known as diphtheritic, that in all but the "false" form there is evidence of general systemic intoxication, whilst the concomitant phlegmonous and pyæmic processes, depending doubtless on the coccal invasions, may occur with equal intensity in every one of the varieties. When in subsequent pages he comes to deal with the subject of bacteriological diagnosis it will be found, doubtless to the surprise of many practitioners, that there is room for the differentiation of no fewer than twelve varieties of membranous sore-throat; but it will be reassuring to learn that only a small proportion of these are wholly dissociated from true bacillary diphtheria, and that clinical diagnosis is more often than not confirmed by the bacteriological test. Although it is of moment in prognosis, the specific or non-specific character of the inflammatory membranous exudation does not lead to material alteration in treatment, saving only as to the use of antitoxin, and this, be it noted, has to be administered as early as possible, before even time has allowed of the application of the bacteriological test, if the remedy is to exert its powers most fruitfully. In an appendix to the book the author submits the antitoxin method to a searching criticism, contrasting for this purpose two series of 100 cases of diphtheria treated at the same institution with and without antitoxin. In each series there were twenty-seven deaths, which he points out is almost exactly the average mortality from diphtheria in this country. It must, however, be objected that a thorough comparison of this character requires very complete information regarding the individual cases before a remedy appropriate only to bacillary diphtheria can be discarded. We believe that on both sides of this question there has been too much haste in drawing conclusions. Taken as a whole, this monograph is one which gives a succinct and interesting account of the disease of which it treats. The chapters on etiology and diagnosis are well planned and highly interesting. More might with advantage have been said upon the morbid anatomy, and we failed to find mention of the remarkable histological studies of Oertel, which afforded presumptive proof of the action of a systemic poison some years prior to the demonstration of the toxine. The author's advice to resort more often to laryngoscopic examination is hard to follow; his preference for lactic acid as a topical application and for biniodide over the perchloride of mercury, his description of intubation, and many another practical point will be of service to practitioners. The work, which is enriched by numerous admirably executed coloured drawings by the author, and micro-photographs of the microbes found in the different forms of the disease, will, as we have already indicated, take a prominent place in the literature of the subject, although in certain directions—e.g., that of diphtheria paralysis—it might with advantage be expanded. A word of praise is also due to the typography and production of the book, which could hardly be excelled.

Diseases of the Joints and Spine. By HOWARD MARSH, F.R.C.S. Eng., Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Hospital for Sick Children, Great Ormond-street. New and Revised Edition, with 79 Illustrations. London: Cassell and Co. 1895. Price 12*s.* 6*d.*

THIS volume is one of Messrs. Cassell's series of clinical manuals, and the reader must therefore expect to have the subject dealt with from a clinical rather than a pathological standpoint. Such is the case, and the work is very largely—indeed, almost entirely—the outcome of Mr. Howard Marsh's personal clinical experience. Of pathology, of course, we read, but this is by no means an especial feature of the book. Mr. Marsh has for years taken great interest in this department of surgery and has had great experience in the more conservative methods of treatment employed. He has taken a very useful part in combating views which have from time to time been advanced advocating very general resort to operation in the early stage of tuberculous disease of joints. The line Mr. Marsh has taken is stated very fully and with some amount of reiteration in this volume. We think something would have been gained by better classification of the subjects dealt with and by the exercise of more method. The various operations mentioned might perhaps with advantage have been described with more detail. The book impresses us, however, as being full of the results of a large and ripe experience.

LIBRARY TABLE.

The Stark Munro Letters. By A. CONAN DOYLE, M.D., M.S. Edin. London: Longmans, Green, and Co. 1895. Price 6*s.*—We like Dr. Doyle better as the romanticist or the Boswell of Sherlock Holmes than in his present *rôle* of literary executor. The book, perhaps from its being made up of letters, is scrappy and *décousu*. Dr. Stark Munro's theological disquisitions are intolerably dull—as dull and pompous as those in "Hypatia" or "Julian Home"—and if these are not dull where shall dulness be found? But if the reader skips these and passes on to the pages which recount the doings of the immortal Cullingworth, for immortal he surely will be, we can promise him a rich treat. Cullingworth's really great-mindedness curiously mingled with pettiness, his sound wisdom, his charlatanry, his dash of megalomania—to use the modern jargon,—all these make him one of the most memorable characters in fiction. His walk home from his surgery through the "doctors' quarter," the while he holds at arm's-length the bag full of fees, is real comedy. By the way, we should have thought that Dr. Doyle, being a man of medicine as well as a man of letters, would have been careful to select a name which could by no possibility be likely to give pain. It seems strange that he was unaware that there is in London a well-known consultant bearing this not very common surname. For the rest, the difficulties and disappointments which every young medical man will meet with in starting practice are well described, and Dr. Doyle might do worse than reprint the work in a cheap form without the theology, and get medical schools to distribute it to deserving students as an example of how, and how not, to run a practice.

Perfect Womanhood. By FREDERICK JAMES GANT, F.R.C.S. Eng. London: Digby, Long, and Co. 1895. Price 3*s.* 6*d.*—We can confidently recommend this book to anyone who is satiated with the modern woman as portrayed in the modern

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novel. Here he will find no woman with "views." Sister Eva, Violette, and Lady Teresa, it is true, look at life from different standpoints; they are all beautiful and eminently genteel, and more or less theologically sound, though we are afraid that the story of the Resurrection as written by Sister Eva would not be accepted by the School Board. The work is dedicated to Princess Helena.

Clinical Lectures on Subjects connected with Medicine and Surgery. By various German Authors. Third Series. London: The New Sydenham Society. 1894.—This volume of the New Sydenham Society contains translations of eleven German clinical lectures, each one of which repays careful study in the original. The first is by the late Professor Th. Billroth, three are by Professor Ziemssen, and one is by Dr. Erb—these alone would make the volume notable. These and all the other lectures are valuable, and the volume is worthy to rank in the excellent series published by this society. We must, however, suggest to the authorities that they should exercise greater care in the translations from the German than is shown in some of these lectures. We have come across passages which are barely comprehensible, and much that is not English—at the best German English. We are accustomed to such good work from the New Sydenham Society that we are surprised that this volume bears marks of poor translation.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Lond. London: H. K. Lewis. 1895. 10*s*.—The popularity of Dr. Carter's book is indisputably shown by the fact that it has reached its seventh edition. It is intended as an introduction to a more extensive study of medicine, and as such cannot fail to be a help to beginners. It is not, like so many smaller text-books, a simple mass of unconnected facts, but the broad principles of the different diseases are presented to the student in a form which is pleasant to read and easily assimilated. In this edition the part dealing with diseases of the skin has been written by Mr. Malcolm Morris. At the end of the book is an index of therapeutics which includes many examples of standard prescriptions which will afford a guide to the student for future work and his own modifications, which can only be made as his experience extends. There is no doubt that the present edition will obtain all the popularity of the former ones.

The Lumleian Lectures on Certain Points in the Etiology of Disease. By P. H. PYE-SMITH, M.D., F.R.S. London: J. & A. Churchill. 1895. 7*s*. 6*d*.—The Lumleian Lectures on the Etiology of Disease were delivered by Dr. Pye-Smith in 1892 and form one of the most carefully considered *résumés*, combined with a rare amount of original observation, now to be found in medical literature, and the medical profession will welcome a reprint of the same in book form. A long notice of the work is not necessary, as the lectures were commented on soon after their delivery. In the first lecture Dr. Pye-Smith considers the natural history of disease, external causes, effect of cold, contagion, and the invasion of bacteria and animal parasites. The section on the physiological origin of diseases embraces a large and important group of diseases, having their cause in physiological disturbance, gradually becoming more frequent, and ending in permanent structural disease, such as repeated errors in diet, both as regards its nature and the mode of taking meals, habitual constipation, overwork, mental and physical, &c. In the second lecture the author draws especial attention to the statistical method of inquiry and remarks that statistics, to be of value, must be taken without selection, designed or unintentional, and must be made in sufficient number to compensate for accidents. In the third lecture the special etiology of various diseases is considered, groups of disorders being taken in turn. Added to the lectures are the Harveian Oration for 1893 and a Memoir of the Life and Works of Harvey taken from the author's article in the ninth edition of the Encyclopædia Britannica.

Remote Consequences of Injuries of Nerves and their Treatment. By JOHN K. MITCHELL, M.D. Philadelphia: Lea, Brothers and Co. 1895. 240 pp.—War, with all its attendant horrors, has in many cases brought about indirect results which have been of the greatest utility. A conspicuous instance of such indirect benefits is the addition to our knowledge of injuries and diseases of nerve trunks by the brilliant observations and writings of Keen, Morehouse, and Weir Mitchell whose names will be for all time connected with the subject. A quarter of a century has passed since these observations were published, and the happy idea has occurred to Dr. J. K. Mitchell to follow up the cases which were treated by his father and others during and after the war. With great patience and industry he has ascertained the present condition of about fifty patients who had been treated for contusion, laceration, or complete division of nerves. He has grouped the cases together, and with each group gives a general account of the symptoms persisting and then furnishes the actual notes of the cases. He discusses in a special chapter the regeneration of nerves, and concludes with a chapter on treatment. The number in whom definite symptoms have persisted, even where the original lesion was slight, is very striking. These effects were chiefly pain, intolerance of heat or cold, or of both, trophic changes, especially thinning of the nails and ulceration round them, glossy skin, and in one or two cases increased growth on the side affected. The book is one of interest and will be read with great delight by those who have been inspired by Dr. Weir Mitchell's "Injuries of Nerves," and it can be strongly recommended to all interested in neurology as containing a fund of information which it would be difficult to find elsewhere.

New Inventions.

THE NIGHTINGALE JACKET.

WE have had brought to our notice a new invalid jacket—the Nightingale jacket—which is manufactured by the Jaeger Company and is on sale at their Charing-cross branch, 456, West Strand. The jacket is made of undyed camel hair and is very light and warm, and in addition to these, the main requisites of a wrap for the sick-room, it can be very easily put on, for there are no regular sleeves, only an abundance of stuff which can be wrapped round the arms and secured there by buttons at the wrists. The material is pretty as well as cosy and soft, and the price is moderate, so that we have no hesitation in cordially recommending this little sick-room comfort to the attention of our readers. In their well-known undyed woollen materials the Jaeger Company have also some new wares to display, including some pure woollen sheets which might be grateful to the rheumatic patient and the sufferers from torpid circulation.

THE OPTOMETER.

THIS instrument is a simple and handy means of testing the vision and of determining the number of the glasses required. It consists of a brass stand about twenty inches in height, which supports a disc a little more than one foot in diameter, capable of rotation on an axis, the periphery of which is perforated and carries sixteen spherical lenses numbered respectively +1, +2, +3, +4, +5, +6, +7, and +8 D, and −1, −2, −3, −4, −5, −6, −7, and −8 D. Projecting from the disc there is an arm with a clip supporting a card of test types and an astigmatic clock. The arm admits of being shortened or lengthened by sliding within a tube, the distance being fixed by a screw. Between the disc and the card there is a quadrant with four perforations carrying +0·25, +0·5, +0·75, and a + and −8. The vision is tested by looking at the card through one of the glasses, that one being selected which gives the best vision, slight differences betweeen the whole numbers being determined with glasses in the quadrant. The glasses enable the refraction to be determined of all cases from −18 to +18 D. The instrument is made by the Optical Institute of London, 89, Hatton-garden, E C.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 26, 1895.

YEAR by year on the festival of the Physician Apostle is held the solemn commemoration of the benefactors of the Royal College of Physicians of London, a commemoration founded by him who was at once a benefactor not only of the College but of the whole human race. And so it has come to pass that the commemorative oration is less a memorial of benefactors in general than of him who founded and endowed the occasion, the immortal WILLIAM HARVEY. Dr. CHURCH, the orator for the present year, physician, as he himself remarked, "to the great hospital with which HARVEY was so long connected," took for his subject HARVEY and the Rise of Physiology in England. Before the time of HARVEY physiology was in practically the same state as it had been in the time of ARISTOTLE; but HARVEY, with his rare scientific foresight, marshalled the scanty facts supplied by the work of his predecessors, and, adding to them the result of his own patient and laborious work, placed physiology upon a really sound basis. Having proved as far as possible with the means at his disposal the circulation of the blood, he turned his attention, to quote Dr. CHURCH, "to the problem of the maintenance of the bodily heat, and disproved the accepted doctrine that the heart was the source of heat." His immediate successors, LOWER and MAYOW, carried on his researches into respiration and circulation, and though, of course, oxygen was unknown to them, showed that the colour of arterial blood was dependent on the presence of air, and accurately described the mechanism of respiration. But so slow is the course of real knowledge that even we, in our day, are perhaps more uncertain as to the means by which animal heat is maintained than we are with regard to the means by which the solar heat is kept up.

It is a common and pathetic fact that great discoverers, in whatever field, are rarely allowed to see the benefits which eventually arise from their labours, and HARVEY was no exception. AUBREY tells us that he had heard him say "that after his book on the circulation of the blood came out he fell mightily in his practice, and was believed by the vulgar that he was crack-brained, and all the physitians were against him." Dr. CHURCH exemplified this when he pointed out that HARVEY'S researches had little or no immediate effect on medicine, even SYDENHAM being uninfluenced by them, and went on to warn his hearers that while formerly physiology was a branch of medicine the positions are now reversed. "The brilliancy of modern discoveries and the vast increase of our knowledge may for a time react prejudicially on medicine. So vast is the range of subjects bearing on medicine, and so important does each appear to those best acquainted with them, that we are in danger of forgetting that the future life of the majority of those entering our profession is to be spent in ministering to the victims of accident or disease, and that SYDENHAM'S words 'the art of medicine can be properly learned only from its practice and exercise,' will always hold good"—a warning which closely corresponds with the words of Mr. MITCHELL BANKS in his recent address before the Yorkshire Medical College. "Much study," as the wise man said long ago, "is a weariness to the flesh and of making many books there is no end." The multiplicity of subjects which a student is now expected to get up prevent his applying his time to acquiring sound and accurate clinical experience. A knowledge of nucleo-albumins, toxins, and the properties of dimethyloxyquinizine is useful to an expert, but for the average practitioner it is of infinitely more value to be able to appreciate the difference between a presystolic and a systolic murmur, or to adhere to the canon that an indefinite continued fever ought to be treated on the assumption that it is enteric.

Dr. CHURCH concluded with a graceful tribute to PASTEUR, who, he said, would be placed side by side with HARVEY in the Temple of Fame. There is, indeed, much that is common between the two: both were earnest seekers after truth, in both their scientific knowledge served but to deepen their religion, both, to use the words which the older worker quoted, were fully conscious of the fact that—

> "Never yet hath anyone attained
> To such perfection but that time and place
> And use have brought addition to his knowledge
> Or made correction, or admonished him
> That he was ignorant of much which he
> Had thought he knew; or led him to reject
> What he had once esteemed of highest price."

THE past season has been somewhat notable for the number and fatality of mountaineering accidents. In both Switzerland and the Tyrol the casualties have been numerous and the loss of life and limb grave, and the question naturally arises whether one of the favourite sports of Englishmen is worth such a sacrifice. This question will be differently answered according to the varying points of view of those by whom it is propounded. The ardent mountaineer will allege that all noble sports involve an element of danger; that danger necessarily means occasional loss of life; that the disasters of mountaineering are few in comparison, say, with those of the hunting-field; and that they are in the main avoidable and due to rashness, carelessness, and wilful neglect of proper precautions. Others—and among these may even be reckoned many enthusiastic travellers—regard mountaineering as a senseless pursuit, devoid of any real motive or utility, and a wanton incurring of unjustifiable risks. The late Mr. FREEMAN, we are informed by his biographer, could not understand how any reasonable being could waste his time among the barrenness of ice and snow when he might be spending it amidst historic cities or famous battlefields. The late Dean STANLEY, one of the most persevering and enthusiastic of travellers confesses in his letters that to him the Alps were simply "huge lumps." The ancients, as is well known, saw no beauty in mountains, regarding them rather as barriers to be surmounted or bleak regions to be sedulously avoided, and, so far as we know, there is no instance of a Greek or Latin poet celebrating the delights of mountaineering. But a sport that annually engages the energies of multitudes of the hardiest and most

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enterprising of English and German tourists is not to be summarily dismissed as absurd. It certainly possesses a singular attraction for many persons, and we do not think this attraction is difficult of comprehension. Pure air, magnificent scenery, healthful exercise, difficulties to be surmounted, dangers to be avoided, an end to be achieved—all these are involved in mountaineering and serve to explain its fascination.

In connexion with any sport the questions which arise are mainly three: Is it innocent? Is it enjoyable? Is it healthful? To expect a sport *quâ* sport to yield knowledge or gain is to regard it from the wrong point of view. *Dulce est desipere in loco;* we must all relax sometimes; and the arguments which are used against mountaineering would go far to condemn all forms of amusement. As regards the three questions which we have propounded, the answer to the first two is easy. Mountaineering is without doubt innocent, and in the judgment of its adherents it is inferior to no sport in point of enjoyment. The third question, which comes more directly within our province, admits of more debate. Can we regard mountaineering as in the main and for the mass of tourists a safe and healthful amusement? This is a question which cannot be answered without considerable reserves and qualifications. Mountaineering—by which we mean ascents of 10,000 or 12,000 feet and upwards—involves much strain and severe fatigue. The strain is first upon the muscular system; but it affects even more importantly the circulatory, respiratory, and nervous mechanisms. In some persons the heart seems to feel the tax most, in others the nervous system is chiefly affected. Palpitation and "mountain-sickness"—the latter in all probability a neurosis—are the two chief difficulties that beset the average mountaineer. It is clear from these considerations that mountaineering is not for everybody. There must be, first of all, a sound general physique, considerable endurance, and the capacity for prolonged and continuous effort. This goes without saying, and is so generally understood that weaklings usually steer clear of the higher peaks. But it is not at all so generally understood that a sound heart muscle—a well-developed and well-exercised myocardium—is indispensable for any considerable mountaineering feats. Hence any suspicion of structural heart disease is an absolute contra-indication for any such exploits. Further, the heart must be not only structurally sound, but well exercised and in good condition. Hence sedentary livers, who for eleven months in the year have no regular active exercise, should not employ their holiday month in mountaineering. Yachting or fishing will be much safer for such, and perhaps not less healthful. Many Alpine accidents have been the result of neglect of this very obvious rule. For similar reasons mountaineering should be eschewed by persons in middle life who have not acquired the requisite training in youth, and even those who in the heyday of their early prime delighted in the sport and enjoyed many a "crowded hour of glorious life" on some Alpine summit would do well to remember HORACE'S maxim regarding the ageing steed, and bid a timely adieu to exploits no longer suited to their years. A certain stability of the nervous system is indispensable for mountaineering, but it is difficult to say anything precise on this head. Neurotic individuals not only climb badly as a rule, but they do not benefit by the air above a certain moderate level. A certain coolness of nerve is a necessary qualification for the many ascents which involve actual danger—danger usually avoidable and seldom extreme, but not to be lightly encountered by those deficient in steadiness and self-control.

Many of the dangers of mountaineering which bulk largely in the popular imagination are either quite rare or easily avoided. Thus, snow-blindness is not at all of frequent occurrence, is almost confined to prolonged exposure to a blazing sun upon snowfields, and is usually successfully averted by the use of coloured spectacles. Bleeding from the nose and ears, which was described by the early explorers, is practically unknown—at least, to any serious extent—at the present day. Frostbite and sunburn, though not uncommon, are seldom severe. Perhaps the most frequent ground of attack upon mountaineering is its presumed perilousness. Accidents are, no doubt, frequent, but it is certainly true that for the most part they are avoidable. Their two most frequent causes are climbing without guides and climbing in bad weather, and these are quite indefensible errors. For an unpractised climber to essay a difficult peak without a guide is to court probable destruction, and climbing in bad weather is in every way to be reprehended. Impatience and neglect of well-established rules and indispensable precautions account for most Alpine accidents. For most, but not for all. There are some dangers of mountaineering which are in certain cases incalculable. Falling stones are a case in point, and avalanches occasionally occur in unusual localities, though, as a rule, their path is known and they can be easily avoided. But, as we have already said, a certain *quantum* of danger is inseparable from all noble sports, and this is true of mountaineering. It is sad that so gallant a climber as the late Mr. MUMMERY should leave his bones in some unknown spot among the Himalayas, but he lies amongst his beloved mountains, and who knows but that may have been the end which he would himself have chosen?

THE county of Dublin is about to institute an organisation for the isolation of infectious diseases, and the draft scheme has been prepared for submission to Parliament. It involves the formation of a board which in certain respects resembles the Metropolitan Asylums Board, the members of which are to be nominated by different bodies, including the corporation and the unions of Dublin. For the moment, however, we do not propose to discuss the scheme itself or the composition of the proposed board; we are rather concerned with the opposition which the scheme has met with from the Dublin Sanitary Association—an opposition which the promoters of the scheme appear to have heard of with astonishment. The opposition is assumed to have been organised at a very small meeting of the council of that Association; but, whether this be the case or not, the grounds of objection have been definitely set out, and they are worthy of consideration.

The first objection has to do with the probable cost of the scheme. But it is quite certain that, if it is right to remove infectious patients from the six or seven general hospitals and similar institutions in which such patients are now treated, this cannot be done except at some considerable

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cost. The contention is that the cost would outweigh the probable beneficial effect upon the public health. This is a difficult matter for us to determine; but one thing is certain, and that is that in London and elsewhere it has been determined—and it has been decided as the result of prolonged experience—that it is worth incurring a considerable expenditure in order to gain the very end which is here in question. This objection, as applied to Dublin, is, however, at the best a mere surmise, and for more than one reason it is hardly worth discussion from a medical point of view.

The next objection implies that such isolation of the infectious fevers in separate institutions can only be necessary in the case of one disease—namely, small-pox, the infection of which has been proved to traverse "wide air spaces." This argument, however, altogether ignores the fact that other specific infections easily traverse the smaller air spaces comprised within one and the same institution, and that the abandonment of the practice of receiving scarlet fever and similar diseases in the general hospitals of London and elsewhere has been brought about as the result of the experience that such cases could not be received into the hospitals in question with safety to the other patients. It is not a fact that small-pox is alone in question here, and hence we cannot endorse the attitude of the Sanitary Association in this respect.

The third objection which has been formulated is to the effect that the proposed scheme would very injuriously affect the interests of the Medical School of Dublin by interfering with the teaching of the infectious fevers and of their treatment by the clinical physicians of the city, and that in this manner obstacles would be thrown in the way of students. This, we frankly admit, is a real objection. The removal of the infectious fevers from the London general hospitals has tended in the same direction; and in order to meet it as far as possible it has become necessary to require, as a condition to admission for examination for a diploma to practise, that every student should have had special tuition in this respect in a hospital especially set apart for the reception of fever patients. But the difficulty is not one that applies to Dublin alone, and we may be certain that the physicians and teachers in the London hospitals would never have consented to the removal from their hospitals of the majority of the fevers, so necessary for teaching purposes, had there not been some altogether overwhelming reason for submitting to it. That such reason existed is perfectly well known, and it is highly probable that its application is by no means limited to the English metropolis. It is suggested by the chairman of the Public Health Committee of Dublin that the resolution embodying this objection could only have been passed at a council meeting in which the medical element predominated. We know nothing as to this; but we can very well understand that such an objection would be especially appreciated by the teachers at the several hospitals. The only question is whether, in Dublin as elsewhere, the evil of reducing facilities for clinical teaching is not more than compensated for by advantages to the public and to other hospital patients, and whether it cannot be made good by other teaching arrangements.

The last objection is one which carries but little weight. It is that parents and friends would object to send their children and relatives to hospitals at a distance; for it is admitted that such hospitals must be outside the city of Dublin. The experience as to this is altogether overwhelming. The difficulty in question does arise at first when the scheme is new; but when towns and cities of the size of, or larger than, Dublin have organised proper infectious hospitals the demand for admission into them steadily increases. Some 70 per cent. of the admissions to such hospitals are children; and the percentage of patients at tender ages is, as a rule, steadily on the increase. The experience of the Metropolitan Asylums Board is to the effect that they cannot keep pace with the demands made on them by Londoners, notwithstanding the fact that they are every year obliged to go further afield in order to obtain hospital sites.

Reviewing the whole series of objections raised to the principle of providing separate hospitals for the reception and isolation of the infectious fevers in Dublin, we cannot but think that the Dublin Sanitary Association would do well to reconsider the matter in the light of the experience which is available before they finally take up an attitude of opposition to the scheme now before the city and county.

Annotations.

"Ne quid nimis."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE subscriptions to the Metropolitan Hospital Sunday Fund have this year attained to a sum far in advance of any sum ever previously reached, and the result produced upon us is the same as that which the sight of the workhouse gruel produced upon Oliver Twist—we can only say (with due gratitude for what has been received), "Please, we want some more." And the combination of greed and gratitude is easily explained. For ten years the total sum received, while varying in its units, tens, and hundreds, had remained fairly constant in its thousands, and we had, in common with the officials of the Fund, begun to believe that the high-water mark was fixed at, say, £42,000. In good times the figure would rise, as in bad times it would fall, but this sum seemed to represent the amount which the public were prepared to give, though we have never allowed that it was quite the sum that should be expected, having regard to the size of the community and the undeniable excellence of the Fund. We had almost begun to believe that all efforts were required to bring the Fund to the point which it usually reached, and that much beyond that point it was useless to expect contributions, though a drop to much below that point might occur if the exertions of the supporters of the Fund were ever so little relaxed. The Fund, however, this year has reached the noble sum of £60,000—a leap by £15,000 in advance of the previous maximum sum. This striking proof that there is nothing constant about the figure to be expected, nothing stereotyped about the generosity of the public towards the support of our metropolitan hospitals, at once emboldens us to ask: If £60,000 this year, why not £70,000 another year? And it leads us also to look into the origin of the remarkable aggrandisement that has taken place in 1895, that we may learn its *rationale*, and apply, or assist in applying, similar methods on future occasions towards furthering the interests of a Fund whose object we have so much at heart, and with whose foundation and maintenance we can claim to have been so closely connected. The upward bound has certainly been due to the action of our contemporary the *Hospital*, a journal devoted to the

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interests of our hospitals and asylums, which published this year a special appeal that resulted in securing subscriptions to the Fund amounting to no less than £18,000, and we heartily congratulate our contemporary, no less than the Fund, upon this splendid outcome of well-directed journalism. The sum so raised represents the increase of the year, for the collections in the churches and from the public at large by offertory and donation remain the same as before—hardly, indeed, reaching the figure we have set down as the decennial average. But the large sums received through Messrs. Burdett and Harris, and Messrs. Pym and Vaughan from the Stock Exchange, and the princely generosity of Mr. B. Barnato, Mr. D. Marks, "and other City friends"—as they modestly style themselves in their letter to Mr. Burdett—have raised the total of the Fund from its level, possibly becoming a dead level, to the splendid figure we have announced. And the source from which these huge donations were received suggests the method by which we must, one and all, attempt to keep the Fund in the position to which it has attained, and to avoid the retrogression that at the first glance may seem likely to occur. Mr. Burdett, the editor of the *Hospital*, is also Secretary to the Stock and Share Department of the Stock Exchange, and has been able to move that notoriously open-handed and open-hearted body of gentlemen to this extent, bringing to bear upon their sentiments and their purses the influence of personal and intimate knowledge. And this is the only way in which the Fund can be made to grow; we are not even certain that it is not the only way that it can be prevented from shrinking. Individual effort is wanted. Work ersare wanted, zealots and proselytisers. And if by chance these can be found among the men who direct the paths of journals with power among different classes, sects, and *coteries* the success of the Fund, which all allow should be unquestioned, will be assured.

UNQUALIFIED ASSISTANTS AND THEIR PRINCIPALS.

IN spite of the many warnings which practitioners have had of the danger of allowing unqualified assistants to do the most responsible part of their work, the evil still continues to call for the most anxious attention of all who represent either the public or the profession. The last case which has come under our notice is instructive on this subject—that of a carman's child seven weeks old, living in Walworth, one of twins. The other twin died at three weeks from birth. They were prematurely born. The report of the inquest on which we write is in the *Daily Telegraph* of Oct. 19th. We shall be glad if there should be any incorrectness in our version of the facts to have them corrected by the principal in the case. We gather that the unqualified assistant visited the mother in her confinement. She paid him the fee. She thought he was registered or would not have received his visits. She took the deceased child to him and he said it would not live the night. Apparently it lived some days after, but there does not seem to have been any record of the visit in the books or any attempt to have the child seen by the principal, who had to decline giving a certificate. In the case of the previous child the certificate was filled up by the unqualified assistant and signed by the principal. This confusion of duties and this use of the unqualified assistant as if he were a registered practitioner is very much to be deprecated. The deputy coroner, Mr. A. W. Wyatt, characterised it "as nothing short of a fraud on the public." He then said: "We coroners are powerless in the matter. The cases ought to be taken up by the Medical Society." We cannot help seeing some confusion of duties in these last remarks of the coroner. Why is it the duty of any medical society to take up such facts? Neither medical men nor societies exist to detect fraud on the public. On the other hand, coroners and their juries do exist to investigate the causes and the circumstances of uncertificated death. This is their very function; and it is for them to make such representations of fraud in medical attendance or in medical certification to the public authorities—the Home Office, the Registrar-General, and the General Medical Council. It is true that one or two Medical Defence Societies have, at considerable expense and trouble, brought facts of the sort disclosed in this case before the authorities. They were only relieving coroners and public prosecutors or the Registrar-General of some part of their duty. But they have been little thanked for it; and it would not surprise us to see them tire of work which should be done by others. Be this as it may, any practitioner who employs unqualified assistants to attend dying patients and allows them to pose as registered men is acting without due regard to his own interests and his own duty.

A BOARD OF GUARDIANS IN A DILEMMA.

WE alluded in THE LANCET of Oct. 5th (p. 869) to vaccination prosecutions and the report of the Royal Commission on Vaccination, and pointed out the injury which is being done by the delay of this report. The Wigan board of guardians had, owing to the prevalence of small-pox, passed a resolution that the vaccination officer should prosecute defaulters since Jan. 1st, 1895. As a consequence the anti-vaccinationists, not by any means a numerous body, were up in arms, held a public meeting, and passed the usual condemnatory resolutions in regard to vaccination, and called on the guardians to stay proceedings till the report of the Royal Commission on Vaccination was published. It was then found that when the previous resolution was passed the friends of the anti-vaccinationists on the board had been napping whilst the resolution was carried. At their meeting on Friday, Oct. 18th, a Mr. Prescott was called upon to move the following resolution, of which he had given notice—namely, "That the resolution of Aug. 23rd, 1895, passed by the board of guardians, authorising Mr. Robert Halliwell, the vaccination officer, to take proceedings against vaccination defaulters, be rescinded"—and in doing so spoke as to the cases of small-pox in the town, stating that none had occurred amongst the unvaccinated children, and that the Royal Commission had requested that all prosecutions should be withheld until their report was given. When the report was before them they could consider the question afresh. Mr. Southworth very sensibly remarked that he really could not understand why they should come there fortnight after fortnight simply to pass resolutions at one meeting and rescind them at another. One intelligent guardian stated that, as no cases of small-pox had occurred amongst the unvaccinated, "it seemed to him that if any summonses had to be issued they should be issued against those who had had their children vaccinated and thereby brought disease upon them." After a lot of empty discussion on the legality of the last resolution Mr. Clayton, an old guardian, made a most intelligent and effective speech. He remembered the resolution to stay all vaccination proceedings, but it was five or six years ago. It was a resolution that no prosecution should be taken until the Royal Commission had given their report. Since then there had been three changes of Government, and the Royal Commission had had to be appointed every time. He did not know whether they had been reappointed during the present Government, but it was evident that if they had to wait for the report of the Royal Commission they would have to wait a very long time. He was one of those who believed in vaccination, but he also believed in shaking hands with a man or woman even if he or she might happen to differ from him. When he was a young man the vaccination question was more talked about than it was in these days, for when they looked back on the history of the last hundred years and saw what had been done to overcome the terrible scourge

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of small-pox they would see that now they were living in their own vineyard in comparison to the way their forefathers lived, and it had all come about simply through vaccination. At the present time the Wigan Sanatorium was full of small-pox cases, and in Aspull it was rampant, and they would stultify themselves as representatives of the ratepayers if they did not do their best in trying to continue the good work that their forefathers had done in keeping down the terrible scourge. When he went to school one child in every fifty was marked with small-pox, but it was seldom they saw one marked now. He would certainly vote against the resolution, for he believed that it was nothing but men having a few fads that had brought the question up again. Even if he had to stand by himself he would have his opinion the same as everyone else, and he would vote against the motion. Ultimately the motion was withdrawn, and the clerk was instructed to report at the next meeting on the resolution passed five or six years ago.

DEATHS UNDER CHLOROFORM.

IN the first case upon which we comment, which occurred on Sept. 11th, the patient was a woman aged fifty-four, who was admitted into the Greenwich Infirmary to undergo an abdominal section. She was carefully prepared for the operation. She was a chronic alcoholic, but physical examination revealed no organic disease. Chloroform was given from folded lint, the chin being supported by the ring finger and the little finger. Old iritis rendered the right pupil irregular; the left was observed to be small and to react to light. At first the patient held her breath, and there was some struggling. The pulse was watched, and was fairly strong and regular. Seven minutes after chloroform was commenced she ceased to talk, and conjunctival reflex went. The breathing was regular. The lint was now withdrawn and not reapplied. Immediately after this, before the operation was commenced, the breathing became stertorous and the face became livid. The tongue was now drawn forward and the chin further up, but the lividity increased, and, although artificial respiration was practised and venesection performed, the patient only gave five or six irregular respirations and then died. Inversion, cardiac acupuncture, nitrite of amyl inhalations, injections of strychnine and of ether were also tried. Two drachms of Duncan and Flockhart's chloroform were used, a little being dropped on either face of the lint alternately. The necropsy showed extensive fatty changes in the myocardium and engorgement of the viscera and meninges with dark fluid blood. The medical men present regarded the death as due to asphyxia, a conclusion which the details given above lead to. The reason for the overdose does not seem so clear. The use of lint is open to the objection that it is almost impossible to maintain an equable atmosphere of chloroform with it, as each time chloroform is dropped on the patient for the moment includes a higher percentage vapour. It is possible, if the chin had not been held up from the first stertor would have appeared earlier in the case, and so have given warning before the nerve centres had become so deeply narcotised. The name of the administrator of the chloroform is not stated. Another death is reported as having occurred under chloroform at the new Somerset Hospital, Cape Town. The patient, a man aged thirty, was admitted to have an operation performed on his finger. Chloroform was given by Dr. Hofmeyer, the assistant medical officer to the institution, after the patient's chest had been carefully examined. The operation was completed when the patient was noticed to be breathing badly. Half an ounce of chloroform was given from "a mask held near the face." The patient struggled a good deal in going under. When respiration grew embarrassed the pupils dilated and the face grew livid. The post-mortem appearances of fatty visceral changes were present. It was thought that the death was due to syncope. A battery was used over the precordial region and artificial respiration kept up for a time. This case resembles the one given above, and appears to be one of asphyxia—probably in each case the stage of struggling led to the intake of an overdose of chloroform. The third case we have already briefly noticed, but further particulars have since reached us through the courtesy of Mr. Richard Coates, the house surgeon at the Newport Infirmary. The patient, a man aged forty-seven, was admitted for the performance of a trivial operation on his finger. He had previously taken chloroform well for a similar operation. Having been duly prepared and physical examination showing him free from valvular disease of the heart, although the heart's action was weak, he was given chloroform by dropping it continuously on a towel rolled into a cone. The man was very nervous and apprehensive of the anæsthetic. After two minutes of inhalation he struggled, and an opisthotonic spasm occurred lasting half a minute. During this time no air entered the chest. When the spasm had passed, chloroform was again given, but with great caution. The breathing was now quiet, and the corneal reflex disappeared. The bandage was removed from the hand, when the man suddenly grew pale and then livid. The tongue was drawn forward, the mouth being kept open by the use of a gag, and the head depressed. Artificial respiration was commenced at once, and maintained for three-quarters of an hour, while nitrite of amyl inhalations were given. Air entered the chest freely; the pupils were of medium size, but no heart movements could be detected. About three drachms of Duncan and Flockhart's chloroform were used. Death was undoubtedly due, says Mr. Coates, to "primary heart failure." The heart muscle was found to be fatty. A death under chloroform is further reported from the Oldham Infirmary. The patient, a woman aged forty-three, was admitted to undergo excision of her right maxilla for the relief of cancer. The patient was examined and nothing found which was held to contraindicate the giving of chloroform. The gentleman who was acting as junior house surgeon, gave chloroform, first from lint and then through a nasal tube (catheter in nostril) attached to Junker's chloroform inhaler. Conjunctival reflex had disappeared when this change was effected. The operation was commenced, but the patient winced. The nasal tube was withdrawn and lint reapplied, but it was noticed that the patient had ceased to breath. Artificial respiration was carried on for forty minutes, and faradisation of the phrenic nerves and hypodermic injections were tried in vain. The coroner is reported to have said that while not depreciating the skill of the gentleman who gave the chloroform, he thought that in such cases an experienced surgeon should give the chloroform. Unquestionably this case is an instance of operation shock killing through an incomplete anæsthesia acting upon an enfeebled heart. The necropsy revealed marked fatty degeneration.

CAN CISTERNS BE DISPENSED WITH UNDER THE CONSTANT SERVICE?

THIS was the question which the metropolitan medical officers of health met to consider on the 11th inst., and which, despite the passing of a resolution by a small majority, was left practically unsettled. Dr. Dudfield had ascertained that cisterns were retained in Edinburgh and Liverpool, but were dispensed with or deemed unnecessary in Dublin, Glasgow, Manchester, and Birmingham, though he and Dr. Sykes, while they would have all draw-off taps affixed to the main, were of opinion that it would be unsafe to do so without a cistern for feeding the

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water-waste preventers in closets, the kitchen boilers, and the hot water service. This, however, was but a side issue, the question being the necessity of some reserve in the event of interruption of the supply through scarcity of water, accident to the mains, or necessary repairs. The essential merit of the constant service is that it provides at all times pure cold water direct from the mains, without the chance of contamination incidental to imperfectly covered and mostly ill-placed cisterns, and the retention of the ordinary cistern completely neutralises this advantage. But, while the possible contingency of the deprivation of this necessity of health and comfort—which, in the absence of cisterns, follows the suspension of the supply even for a few hours — can be averted only by maintaining a reserve of water in the dwelling, the use of that which had been stored in a cistern resorted to only at long intervals would be worse than the evils of the old system, and it would be impossible to prevent such water from being employed for dietetic purposes, the most urgent of all. The best, if not the sole, solution of the difficulty would, we think, be found in the provision of a new form of cistern, capable of holding a quantity sufficient to tide over the interval, but so constructed as to exclude alike the possibility of the entrance of dirt and vermin, and the accumulation of any deposit from the water itself. These conditions would be fulfilled by a cylinder having its bottom in the form of an inverted cone, to the apex of which the service pipe should be connected, and the whole surmounted by a lid so fitted and sealed as to be practically air-tight save for a small air vent in the cover. A cylinder 2 ft. by 5 ft., with an additional foot for the cone, would hold 100 gallons, and, if 3 ft. in diameter, 230 gallons, without risk of overflowing. These quantities would allow from ten to twenty gallons per head for a large household, and would be supplied whenever, as was done in East London throughout the recent scarcity, the water was turned on for a couple of hours each day, while constant renewal would keep the water always fresh. At the same time a draw-off tap connected immediately with the rising main would furnish water for drinking purposes perfectly fresh, and in hot weather colder than that from the cistern, which, as well as all pipes, ought in every case to be fixed where they cannot be affected by frost. Nothing can be conceived more irrational or worse than the vast majority of cisterns fixed in the most absurd positions on or under roofs, under floors or ceilings, even in waterclosets, covered, if at all, with loosely fitting boards cut away for the entrance of the supply pipe (which might just as easily be soldered into the side), and nearly always difficult of access for inspection or cleaning.

PAST v. PRESENT METHODS OF TEACHING.

THE address of Mr. Mitchell Banks before the Yorkshire College Medical Students' Society upon present methods of teaching as compared with past may well cause many who read it to ask themselves, "Are we so much better than our forefathers?" We have no desire to pose as reactionaries, but we must agree with Mr. Banks that a modern medical student is required to get up an enormous mass of material which is absolutely useless to him in his profession. "Botany and zoology," said Mr. Banks, "I would cut clean out of the medical course." It is impossible for any student to learn thoroughly all the subjects he is supposed to learn. The medical curriculum now embraces as many subjects as the School Board teach, and the result in many cases is equally useless. The average student knows all about the nerve to the stapedius or the course of the pneumogastric, but he cannot or does not realise why dyspepsia simulates heart disease. He heaps together a quantity of dissimilar facts, but fails to draw any deduction from them. We remember being once asked by an enthusiastic and hard-working student: "Can you tell me the microscopic appearances of the lymphatics of the rectum in an early stage of carcinoma." Having confessed our ignorance, we showed the inquirer a well-marked Pott's fracture, and said, "What's this?" "Oh, that!" he said, "that's talipes equino-valgus." Now it is this kind of diagnosis that we fear modern methods have rather a tendency to produce. The knowledge may be there, but the art of applying it is wanting. We can only hope that Mr. Banks's address will go some way towards making modern education less theoretical and more practical.

FRENCH COLONIAL MORTALITY.

M. LAGNEAU, who is admitted to be a competent authority on the subject, has recently written an important article dealing with the sickness and mortality of French soldiers on foreign service, which has been published in *La France Militaire*. It seems that although the most ample sanitary statistics are issued regarding the land forces on duty in France itself, as well as in Algeria and Tunisia, there are no official documents whatever from which similar information can be obtained with reference to the remainder of the stations that are garrisoned by French troops, and inquirers seeking for enlightenment on this head are obliged to depend upon private sources of information. Under such circumstances it is naturally very hard to arrive at an exact appreciation of the actual state of affairs, and the complexity of the question is still further added to by the exceeding difficulty of ascertaining the ultimate fate of the numberless invalids who are sent to their homes on account of maladies contracted while abroad. In default of accurate figures, M. Lagneau, after considerable research, has satisfied himself of the approximate accuracy of the subjoined table, which represents the military mortality per 1000 of strength at the stations named:—

France	7·00
Algeria	11·16
Tunisia	12·20
New Caledonia	8·30
Martinique and Guadeloupe	50·00
Guiana	237·00
Tonkin	77·00
Cochin China	21·00
Réunion	29·00
Madagascar (1880)	75·00
Senegal	74·00

The following extracts from M. Lagneau's paper are interesting: "Madagascar, with which we are so occupied at present, is remarkably insalubrious. 'What an army corps,' exclaims M. Planchut, 'could we not form with the soldiers and marines who gradually, one by one, have been overthrown by fever?' Dr. Guiol, who remained four years at Nossi-Bé, where thirty-nine principal medical officers succeeded each other during forty years, has left it on record that the annual mortality amongst civilians is 89 per 1000, and amongst the military 75 per 1000—proportions which lose nothing of their gravity when we remember the numbers that are sent to die at Mauritius and Réunion. ..... The troops most affected by colonial residence are the marine infantry. Taking part in all the expeditions to unknown territories, occupying in a more or less permanent fashion the most unhealthy posts, these soldiers too often contract diseases to which they succumb either before or after their return to France. According to Dr. Lutaud, out of 1000 marines 18·9 die annually in France, 31·2 in Martinique, 34·5 in Guadeloupe, 140·6 in Senegal, 28·5 in Réunion, 28·1 in New Caledonia, and 97 in Cochin China. The average mortality in this branch of the military service would seem to be 70 per 1000

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for the rank and file and 90 per 1000 for the officers." In conclusion, M. Lagneau eloquently calls for the regular publication of exhaustive information on all points that concern the health of the soldiers serving in foreign climes. "By the side of victories, of expeditions, of conquests, and of territorial acquisitions should appear the expenditure, the sacrifices, the victims entailed by these achievements. The nation which supplies the men, the Parliaments which decide for peace or war, the Governments which order the occupation of a district, the generals or admirals commanding the forces, all are interested in knowing the mortuary dime exacted by each war, each campaign, each territorial acquirement. For in our country, more rich than populous, it behoves us to be economical of human lives."

THE COUNTY COUNCIL AND THE LONDON WATER BILLS.

THE discussion at the meeting of the London County Council on Tuesday last on the question of the purchase of the undertakings of the London water companies took an important and interesting turn. It will be remembered, as was reported in our issue last week, that an amendment that the Bills for the purchase of the London water companies should be proceeded with, was lost by a majority of one only. This amendment was opposed to the recommendation of the Parliamentary Committee that the Council "do invite Her Majesty's Government either to deal with the question themselves or to appoint a Royal Commission to do so." This recommendation being approved by the small majority of 1, amounted to a decision not to proceed with the eight suspended water Bills. As, however, the Council have expressed a desire that they should be the water authorities for London, Dr. Collins proposed an amendment, on the debate being continued this week, that the matter should be referred to the Parliamentary Committee to report to the Council without delay the lines on which they suggest that the Government should be asked to legislate. This just and sensible proposal was carried by a majority of nine, so that in the event of the Government being asked to deal with the question they will, as Mr. J. Stuart, M.P., observed, at least have an outline presented to them of the course to be pursued. This, we hope, will lead to some very definite and distinct proposals being made, so that, after all, there is promise of the decision last week to abandon the Bills being annulled pending the report of the Parliamentary Committee.

INFANT CRIMINALS.

AN inquest was held recently by Mr. Troutbeck on the body of an infant four months old whose death was shown to have been caused by her little sister, three years old, who apparently from jealousy had stuffed the child's throat with paper. This must have been stuffed into the infant's pharynx with great force, as quite a large quantity was found lodged there when she was taken to Charing-cross Hospital. The child admitted that she had done it, and there seems to be very little doubt that she deliberately meant to get rid of an unwelcome rival. She had previously shown signs of jealousy, and had pinched the infant in a vindictive way and shown her feelings so decidedly that the mother seems to have had some misgiving as to the safety of leaving the two children together. This early development of jealousy and consequent spiteful conduct, and the expression of it in the form of deliberate murder by a child three years old, are fortunately rare. It is impossible from the facts adduced to say how far this may have been the outcome of a defective mental condition, and how far to absence of self-control traceable to faulty training or other circumstances of environment, but the case deserves to be pondered over by those who are responsible for the training and care of children. Much valuable work has been done by Baldwin, Preyer, and others on the physical and intellectual development of children, but their moral development is a field for research almost untilled. The development of the passions, the growth of self-control, and the way in which healthy development is modified or checked by environment or by physical health are subjects on which accurate observations are much needed. Further, in the case of children of tender years who, without regard for ulterior consequences, commit deeds that in older persons would be criminal it is most important to know what will be the future developments of character. It certainly does not indicate the same amount of inherent criminal tendency when an infant performs or attempts murderous acts as when an older boy or girl like the Plaistow lad deliberately kills another person. What is wanted is careful observation of a large number of children over many years. With a little coöperation much might be done in orphan schools, where children are received at a tender age and remain for some years. But a most fruitful field for investigation, the results of which would be of inestimable value to those who direct and organise education, is to be found in the ordinary private and public middle-class schools of the country. With the help of the medical officers of the schools forms might be devised so that the parents might give the necessary information as to the early moral as well as mental development of the children. This could be entered in a register, and every term the development of the boy or girl under observation could be added, with any striking instances in which particular moral traits had been exhibited. By such collective investigation much may be learned, and we may be able to judge from characteristics shown by a child in what way he will tend to develop, so that his education and his surroundings may be suitably selected. This need has made itself felt in the scholastic profession. The College of Preceptors has recently instituted a training college for masters of middle-class schools, and has arranged that one of the courses, given by a physician, shall include instruction in the observation of children with regard to the development of their faculties, both intellectual and moral. Such observations, carefully made and accurately recorded, cannot fail to produce extremely fruitful results, and it is to be hoped that the example of the College of Preceptors will be followed by other institutions which undertake the training of teachers.

LIQUID AIR, A COMMERCIAL COMMODITY.

TIME was when many of our present articles of commerce and trade were mere scientific curiosities such as only the research chemist was privileged to see, and even then under some difficulty. The tendency of the present age, however, is to turn every new scientific discovery to practical utility. Few could have anticipated the manufacture on a large scale of the complex organic compound benzoyl-sulphonic-imide, which is obtained after a long series of operations which at first were only of interest from a theoretical point of view; but yet saccharin, as it is better known, is now an important article of commerce, familiar to everybody as possessing many hundred times the sweetening power of cane sugar. Solid carbonic acid or carbonic acid snow, to give another example, was not long back viewed in comparatively small quantities with a feeling of awe and wonderment as an interesting specimen of the control which the chemist possessed over some of nature's forces. Now immense quantities of it are made chiefly for aerating beverages, and there are few of us who are not acquainted with the "steel tubes" which contain hundreds of gallons of the "liquid gas" which by the cold produced by its own

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evaporation condenses to a beautiful white solid. Practically in the same way it is announced that liquid air is now being obtained in commercial quantities. It was only a few years ago that Professor Dewar produced liquid air in any substantial quantity by his ingenious device of a vacuum-jacketed vessel. The intense cold was effected by a series of operations in which liquids of increasingly lower freezing points were successively employed. For the manufacture of liquid air on the large scale which has recently commenced in Germany the employment of intermediate cooling agents has been dispensed with, the cooling effect being obtained by the rapid evaporation of the product itself. Apart from the production of a powerful refrigerating appliance, the process promises to become one of commercial importance, since as the stages in the liquefaction of the air advance it becomes richer in oxygen, until a gas is obtained containing 70 per cent. The oxygen may be further purified, if required, from the nitrogen, of which the gaseous balance, it is said, chiefly consists. As it is, however, the gas may be used in many commercial operations. We should very much like to know what becomes of the argon in this process. Perhaps at no very distant date we may come to speak of this newly discovered atmospheric constituent as an important by-product, for in dealing with the enormous volumes of air, as must be the case in the process just described, argon must be encountered in very considerable quantity, and we should not wonder if this newly known constituent of the atmosphere is eventually supplied to research students for simply the asking. As considerable obscurity still surrounds the nature of argon it is to be hoped that this new departure in manufacture may afford very distinct aid in clearing up these mysteries by placing at the disposal of investigators an unstinted supply of material. Then it would be a happy instance of science helping commerce and commerce in turn helping science.

SMALL-POX IN MANCHESTER IN 1892-94.

IN Dr. J. Niven's first annual report on the health of Manchester an interesting *résumé* of the behaviour of small-pox during the above years is given. Dr. Niven observes that when a case of this disease occurs at a common lodging-house in Manchester it is practically impossible to obtain the revaccination of the other inmates, and he doubts whether any fresh legal powers would enable it to be done. He considers that in times of small-pox prevalence the lodging-house keeper should be liable to prosecution for admitting any inmate unable to produce evidence of recent successful vaccination or revaccination sufficient for protection. Obviously this would require the laying down of some standard in the matter. Although Dr. Niven fully recognises the agency common lodging-houses play in the dissemination of small-pox, he is not inclined to attach too much importance to this means of conveyance, and he quotes from Dr. Tatham's last report on Manchester as illustrating this point: "Although this disease was prevalent through the year 1891 in many of the towns and districts of Lancashire and Yorkshire, the cases imported into Manchester during the year did not exceed two." As an instance where apparently tramps were responsible for the dissemination of small-pox in Manchester, Dr. Niven refers to the prevalence of the disease after June 1st of last year, which he considers was due to the movements of tramps through the city at the time of the Queen's visit, and in the same year there were eleven fresh reimportations of the disease. Five cases of small-pox occurred during 1894 among the fever patients at Monsall Hospital; and, in consequence of this and of the feeling that patients isolated for scarlet fever ought not to be subjected to the risks of contracting small-pox, acute cases of the latter disease were isolated at Clayton Vale Hospital. It was found necessary, however, to bring back the convalescent cases to Monsall, a proceeding which Dr. Niven believes to be free from danger to the other patients. The acute cases treated at Clayton Vale were smeared with carbolic acid in order to minimise the risks of aerial convection. In commenting upon the difficulty of diagnosing slight cases of small-pox, Dr. Niven observes that during 1894 no less than sixty-three cases were erroneously reported as small-pox, a fact which may be interpreted as meaning that the medical profession in Manchester has much trust in the sanitary authority, and does not, therefore, hesitate to report suspicious cases. Conversely, however, instances occurred where genuine cases of small-pox were not reported. Dr. Niven urges the authorities of the Manchester Medical School to take advantage of every opportunity afforded them of teaching the diagnosis of small-pox. Unfortunately, there are many students of medicine who leave hospital without having ever seen a case of small-pox, and the comparative rarity of the disease must render its practical demonstration in many instances impossible. Still, when opportunities offer they should be taken advantage of. Dr. Niven seems to have made it a practice to see each case prior to its removal to Clayton Hospital; in other words, he acted practically as a consultant in diagnosis. If all medical officers of health had had as extensive an experience of infectious disease as Dr. Niven has, perhaps the practice might be generally adopted with advantage. The figures supplied in the report before us in regard to the behaviour of the vaccinated and unvaccinated among the cases of small-pox treated in hospital during the years 1892-94 are interesting; they relate to 996 cases. At all ages the fatality rate among the vaccinated was 4·04 per cent., among the unvaccinated 26·47 per cent., and among the doubtful 13·21 per cent. The most noticeable feature among the age groups was the absence in the vaccinated of any death below fifteen years of age. Among the unvaccinated, on the other hand, the fatality rate from birth to five years was 32 per cent. and from five to fifteen years 20 per cent. From fifteen to twenty-five the fatality rate among the vaccinated was 0·76 per cent., as compared with 21·74 among the unvaccinated and 11·11 among the doubtful. From twenty-five to forty-five the respective percentages were 6·16, 31·25, and 21·05, and from forty-five to sixty-five 9·23, 100·0 (only two cases), and 9·09. Dr. Niven includes in this part of his report an excellent memorandum as regards the investigation of cases of small-pox for the guidance of his sanitary inspectors.

BOGUS PRACTICES.

THE *Sheffield Weekly Telegraph* in a recent number gives an interesting account of the way in which a medical man may be taken in when buying a practice. It pictures the smart sporting medico who sets up on credit in a fashionable country spot and then, after a few months, advertises an advantageous opening which he (the present possessor) is obliged to give up on account of an appointment abroad. Eventually the practice is sold, and the new man finds out, all too late, that he has bought a worthless opening and is still further hampered by being unable to obtain any credit from the tradesmen around, as the gentleman who has just departed quite forgot to settle many bills. We cannot believe the swindling is carried on quite so systematically and in such a wholesale manner as represented by our contemporary, but it unfortunately cannot be denied that many unfortunate men are swindled in buying practices, and too often the deceivers do not get called to account, for the buyer, already having parted with much of his capital, dare not risk the remainder in an expensive and possibly unsuccessful lawsuit, but settles down to a struggle

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for existence which may hamper him for many years. The only true remedy lies in the great care which ought to be used before buying a practice, and it is well worth while to spend a little extra in having the books and general circumstances well examined rather than risk years of drudgery, and possibly ruin, which may follow an unfortunate purchase.

NEURITIS IN PREGNANCY.

THE view of Eulenburg that many cases described as puerperal neuritis are really cases of neuritis occurring in association with pregnancy receives confirmation from a case published in a recent number of the *Deutsche Medicinische Wochenschrift* by Dr. Stembo. The patient was a young woman aged twenty-four, who, in the second month of her first pregnancy, was seized with persistent vomiting, which continued for three months. During this time there were pains in the legs and later distinct weakness in them, especially affecting the left leg. There was pain on extending the fingers, impairment of the movements in the lower limbs, atrophy of muscles in the upper and lower extremities, especially in the left peroneal region, and pain on pressure both in the muscles and nerves of the legs. There was also talipes equino-varus, the sensibility was impaired, the right knee-jerk was lessened, and the left could not be elicited. Electrical and other treatment effected much improvement, and this was considerably increased when pregnancy was completed.

THE ADMINISTRATION OF OATHS IN COURTS OF LAW.

THE approaching autumn assizes, which will be held in all but a very few assize towns and cities, induce us to refer again to the subject of the administration of oaths in our courts of law. We learn from a reliable source that in the North of England the oath with uplifted right hand, which has been the universal practice in Scotland for ages past and is now permitted in England, Wales, and Ireland by the Oaths Act, 1888, makes slow progress. Those who avail themselves of the fifth section of the Act just cited are mostly members of our profession who, having the courage of their convictions, prefer this more cleanly and solemn mode of adjuration to the uncleanly mode of assenting to the oath by handling and kissing the cover or the inside of a book which has been used for a similar purpose by a succession of witnesses or jurors. The indifference shown in the matter is very remarkable and can only be accounted for by the Englishman's veneration for ancient customs however objectionable, and the rooted dislike to any change which makes him singular. It is strange in these days of bacilli and microbes that persons who would shrink from touching with their lips a glass, cup, pipe, or anything in common with other persons should see no danger in this kissing of the Testament. When the practice commenced we have been unable, even after the most diligent search, to discover, but there are very good grounds for believing that it did not become general till the latter part of the sixteenth century. Equally unsuccessful have we been in our efforts to discover when the uplifted hand first became the form of oath in Scotland. It is evident, however, that it is the more ancient form of adjuration as well as the more universal, kissing the Book being limited to England, Ireland, and the British colonies. The form of swearing with uplifted hand has already had to fight a battle with ignorance where such might have been least expected—namely, among legal coroners, stipendiary and lay magistrates, county court judges, and even recorders. Our learned judges have not displayed such lamentable ignorance of an Act which is now nearly seven years old, though one has expressed his surprise that anyone should think he incurred a risk by kissing a Testament. Another learned judge (Justice Henn Collins) takes a very different view, having ordered a book to be destroyed after it had been handled and kissed by a witness who was infected with syphilis.[1] All the other judges have permitted the "Scotch oath," as it is often called, to be taken before them without remark. All that is necessary for a witness to do is to raise his right hand as he enters the witness-box, when the form of oath will be given him on a card to repeat, or will be dictated to him. The same rule applies to an oath taken under any circumstances and by anybody.

THE TREATMENT OF LEPROSY.

WE are glad to observe that Dr. Impey, the medical superintendent of the leper establishment of Robben Island, has arrived in Europe for the purpose of visiting the leper asylums in Norway, Russia, and Constantinople. Communications to the daily press by the ubiquitous interviewer are probably not the form which Dr. Impey would himself choose as an authoritative exposition of his views on leprosy. It is from this source, however, we learn that Dr. Impey attaches great importance to the fact, which has been long known, that under the influence of febrile and inflammatory infections of the skin, such as erysipelas and dermatitis, the local symptoms of tuberculous leprosy often disappear for a time, and that he considers that if this treatment were pushed in the earlier stages of the disease better results than have yet been chronicled might be obtained. Dr. Impey is acting judiciously in visiting the chief centres of leprosy in Europe before employing this treatment on a large scale. Although the facts on which the suggestion is made are well known, the treatment is not even mentioned in the work recently published by Hansen and Looft. Dr. Impey obtained a prize from the Royal Commission on Leprosy for an essay on the disease in South Africa, and at Robben Island he has a large number of patients under his care. It is reasonable to believe that his visit to Europe will bear interesting fruit after his return to Robben Island. The same newspaper report refers to Dr. Impey's views on the isolation of lepers, but we prefer not to take a brief newspaper report as a declaration of Dr. Impey's ideas on this important question.

CONTAGIOUS DISEASES AND INDIAN CANTONMENTS.

REFERRING to a Memorandum of the Army Sanitary Commission of Dec. 11th, 1893, regarding the prevalence of venereal diseases among European soldiers in India, we notice that the Commission, whilst fully recognising the grave character and magnitude of the evil, state that they cannot recommend the re-institution of the system of compulsory lock hospitals, mainly because the results of the experience obtained during the long time that those hospitals were in operation showed that, so far from the sanguine views which were entertained as to the reduction of these diseases by their agency having been realised, the system had practically failed to accomplish that object. We gather that had it been otherwise the Commission would not have hesitated to urge its re-establishment without delay. That the prevalence of these diseases in our Indian cantonments has gravely increased of late years and urgently calls for remedy does not, unhappily, admit of any dispute. It is alleged, however, that on a comparison between the stations in which these hospitals were closed and other places where they were in continuous operation there was a reduction of the admissions into hospital from those diseases to the extent of one-sixth only in favour of the latter. If this be so, it shows, no doubt, that the system was a relatively ineffective one. But the fact that the statistical results of the system previously in force in India have not proved as satisfactory as could be wished

[1] THE LANCET, Nov. 10th, 1894; "A Condemned Bible."

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is not at all conclusive to our minds that the working of a different and better system would not be attended with different results. We hold that, at any rate, some provision is absolutely necessary to meet the requirements of the case of diseased women plying their trade to the grave danger of all who consort with them. It seems to us a violation of logic and common sense that the authorities should not have the power, as in the case of other contagious diseases, to expel women from cantonments who are known to be diseased and will not submit to treatment in hospitals provided for this purpose.

A MEDICAL APOLOGIST FOR THE ABUSE OF MEDICAL CHARITIES.

DR. THOMAS J. MOSS of New York, in the *Medical Record* of Oct. 12th, writes to refute the ordinary views held as to the frequent use of medical charities by those for whom they were never intended. His great argument is that well-dressed people are not necessarily well off. "All of these people must appear well dressed at their place of business or discharge would quickly follow." These institutions (free dispensaries) are labeled "free." "Why, then, should they advertise free treatment, and when once the patient is within the toils demand a fee?" This is either a play upon words or is playing with the intelligence of the profession and the public. Nobody denies that well-dressed people may occasionally be as poor as those who are badly dressed—in other words, nobody denies that mere dress is not a guide to the means of a patient. Nobody wishes to deny to decent, well-dressed people the help of a free or provident dispensary. Still less does anyone wish to deny them facilities for getting special help or a special opinion in special circumstances. What the profession universally, with the exception of Dr. Moss, demands is that in ordinary circumstances ordinarily well-to-do people of all classes but the poorest shall pay for medical attendance as they pay for all the other commodities of life. Ours is the only profession that accommodates itself to the means of the classes who are not rich, and yet the only one that is expected to act without due remuneration. By all means let the poor be healed in an emergency, if necessary, for nothing, but let us be sure that they are poor, and even then society and not the medical profession only should bear the cost.

AFTER the delivery of the Harveian Oration upon Oct. 18th the Baly Medal, awarded every other year to "some person who has distinguished himself in the study of physiology," was presented to Dr. W. H. Gaskell, F.R.S., the Lecturer on Physiology in the University of Cambridge. In the evening Dr. Gaskell and the Harveian orator, Dr. Church, were entertained at dinner in the College by the Fellows' Club.

AS will be seen in another part of THE LANCET the number of freshmen who have signified their intention of studying for the M.B. degree at the Cambridge University is 151, a number larger than in any previous year. At the present time there are nearly 200 students engaged in practical dissection, and the supply of anatomical material is unusually abundant.

AS we go to press the Comitia of the Royal College of Physicians of London are sitting in conclave discussing the question of the admission of women to the examination for the licentiate. There is, we understand, likely to be considerable difference of opinion among those present.

THE Sixth Congress of Medicine in Italy was opened on Tuesday last by Signor Baccelli, the Minister of Public Instruction.

THE report of the Council of the Royal College of Surgeons of England to be presented to the meeting of Fellows and Members which will be held on Nov. 7th has now been issued. Owing to press of matter in our present number we are obliged to defer publication of a summary thereof and our comments thereon until next week.

THERE have been recently three successful cases of excision of the spleen for injury at St. Thomas's Hospital. As these are, we believe, the first successful cases that have occurred in Great Britain the profession will look forward with interest to learning the details.

THE authorities of King's College, London, have arranged for the delivery of free public lectures in the theatre of the College during the winter session now commenced. The lectures will be given on alternate Mondays at 8 P.M.

DR. JOHN S. BILLINGS, director of the American Army Medical Museum, has retired from the service, and accepted the post of director of the Department of Hygiene in the University of Pennsylvania.

IN Mr. Septimus Lowe, Lincoln has lost a valued citizen, for he was for twenty years coroner for the city, only retiring from the post recently on the attainment of his seventieth year.

PROFESSOR KÖNIG of Göttingen has been chosen, we understand, to fill the post of the late Professor Bardeleben, Professor of Surgery at Berlin.

Pharmacology and Therapeutics.

VALUE OF CERTAIN COMBINATIONS OF IODIC ACID.

DR. RUHEMAN of Berlin, following up some previous researches, has shown that some of the salts formed by a combination of iodic acid with metals and with alkaloids possess a remarkable therapeutic value. This is especially the case with the iodates of silver, lithium, oxide of mercury, strychnia, codeia, hyoscine, and atropine. The first of these salts is insoluble in water, but all the others are soluble and can therefore be employed hypodermically. Iodate of silver administered internally is an excellent astringent and intestinal antiseptic, effecting a rapid cure in acute diarrhœa, chronic enteritis, and intestinal hæmorrhage. It does not interfere with the digestive functions, indeed, it appears rather to exert a favourable effect upon them. The dose is 0·005 to 0·01 gramme. Iodate of lithium was administered hypodermically in doses of 0·1 gramme in cases of uric-acid diathesis and nephritic colic. A very few injections were sufficient to stop the appearance of uric-acid deposits in the urine. This salt can also be given in the form of pills, each containing 0·15 to 0·20 gramme, to be taken three times a day. The iodate of oxide of mercury dissolves readily in water when iodide of potassium is present. The stability of the preparation is, however, uncertain. It is very suitable—in the form of hypodermic injections—for syphilis. The solution is made by dissolving 0·115 gramme of oxide of mercury and 0·08 gramme of iodide of potassium in 10 grammes of distilled water, so that a Pravaz syringeful contains about 0·01 gramme, or one-seventh of a grain of the mercury salt. The injections are somewhat painful and are only administered every second or third day. They were given with good results in twenty-four cases of syphilis in various stages. The total number required for a complete cure is stated to have been usually twenty, though occasionally thirty were needed, but the good effects very soon began to show themselves. The dose varied from that mentioned above to half as much again. The drug thus given was invariably well borne and appeared to have far less tendency than other mercurial preparations to excite stomatitis or kidney trouble. It may, of course, be administered by the mouth. Iodate of quinine may be administered either by the mouth or

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hypodermically in doses of from 0·05 to 1 gramme and produces neurotonic and anti-neuralgic effects. When given hypodermically but little pain is occasioned and abscesses are never formed. Iodate of strychnine should not be given hypodermically in doses exceeding 0·006 gramme. Iodate of codeia is a much more efficient sedative and analgesic than the other salts of this alkaloid. In hypodermic doses of from 0·03 to 0·05 gramme it is very useful in neuralgia and convulsive cough, and as a substitute for morphia in the treatment of persons who have contracted the morphia habit. Iodate of hyoscine has two or three times the therapeutic effect of the hydrochlorate, the iodide, or the bromide, so that the maximum dose may be considered as 0·0005 gramme for internal use and 0·0002 gramme for hypodermic use; indeed, half this last dose is usually sufficient to produce all the effect required. In ophthalmic practice a solution of the strength of 0·05 or 0·06 per cent. may be used with advantage as a mydriatic in iritis and keratitis; it acts more quickly than other preparations of hyoscine and does not set up any irritation. Iodate of atropine in a solution of the strength of 0·5 to 1·5 per cent. is likewise an excellent mydriatic, the dilatation it produces coming on more rapidly and disappearing earlier than that caused by other salts of atropine. Another advantage this solution of iodate of atropine has is that it remains sterile for a long time and does not require other antiseptic substances to be added to it. The great physiological activity of iodates, especially that of quinine, was insisted on many years ago by Sir Charles Cameron.[1]

TERTIARY BLOOD SERUM IN PRIMARY SYPHILIS.

Dr. Viéviorovski of Moscow has made some experiments on the treatment of primary syphilis by means of blood serum from individuals affected with gummata or other tertiary forms. He was careful to select for his serum-giving subjects three persons of ages between twenty-five and forty in whom the disease had run a favourable course. The blood was obtained from the median basilic vein and was received into a vessel into which had already been placed some solution of common salt of the strength of 20 per cent. and equal in quantity to one two-hundredth part of the volume of the blood to be drawn. From this mixture the serum was prepared and examined in chemical and bacteriological laboratories, none being used until it had been proved capable of standing in a thermostat at 37·5° C. for several days without developing any mould. It was preserved in the dark and in a cool place. Five patients were experimented upon, all of whom had either hard chancres or syphilitic rash and sore-throat, no other treatment being or having been employed. The serum was injected by means of a sterilised syringe with an asbestos plunger into the cellular tissue below the angle of the scapula, the mean dose being ten cubic centimetres, and the skin being first carefully cleansed by means of ether, spirit, and carbolic acid. The injections were repeated every alternate day and gave rise to scarcely any local disturbance. Under this treatment the patients rapidly improved, feeling better and being free from pain, sleeping well and increasing in weight. The physical signs of the disease, too, showed that a good effect had been produced upon it, the chancres healing very quickly and the rash becoming less distinct. More than twenty injections were given in each case. They did not, however, appear to have much effect in preventing secondary symptoms, so that Dr. Viéviorovski is far from professing to have discovered a perfect treatment for syphilis. He thinks, however, that he has shown that the serum of the blood of persons with tertiary syphilis has some beneficial effect on primary manifestations. His observations, therefore, though they are hardly likely to be repeated in this country, have a certain value from a theoretical point of view, and he proposes to carry out further researches on the subject himself and will doubtless find some of his own countrymen to repeat them. They are, in fact, a continuation of previous observations published by Professor Pellizzari of Florence and M. Gilbert of Paris.

TRIONAL AS A HYPNOTIC FOR CHILDREN.

The *Clinical and Therapeutic Journal of Infants* recommends trional as the most prompt hypnotic for children. Given in small doses of twenty centigrammes in cachets it produces a sedative action on the brain in many cases of nervous excitement, which results in sleep being quickly obtained.

TREATMENT OF VOMITING.

In cases of vomiting Lasegne has successfully given tincture of iodine in doses of five to ten minims in sweetened water. It has been found useful in the vomiting of pregnancy. It can be prescribed with chloroform—viz., tincture of iodine, chloroform, of each five grammes—of which five minims may be taken in a little water morning and evening on taking food. It may also be prescribed with peppermint water. Creasote has also been found useful in cases of vomiting, and may be prescribed thus: creasote, oil of sweet almonds, of each five grammes; five to ten drops three or four times a day in milk.

[1] THE LANCET, June 24th, 1882.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on Wednesday, Oct. 23rd, at 5.30 P.M., at 25, Grosvenor-street, W. Mr. Timothy Holmes, Vice-President, occupied the chair. There was a full attendance of members of the committee. The minutes of the last meeting were read and confirmed. The hon. secretary (Mr. Percy Dunn) read the following letter from the secretary of the Royal College of Surgeons in answer to a recent resolution of the committee which had been sent to the Council of the College.

"Royal College of Surgeons of England, Lincoln's-inn-fields,
"London, W.C., 31st July, 1885.

"Telegraphic address, 'Splints,' London.

"DEAR SIR,—I submitted to the Council your letter of the 22nd inst., forwarding a copy of a resolution adopted by 'the Committee of the Association of Fellows' in reference to the conduct of the business at the meeting of Fellows on the 11th inst., and in reply thereto I am directed to communicate to you the following resolution of the Council of the 11th inst.—viz.: 'That in answering Mr. Percy Dunn's letter the Council wish to point out that the meeting of Fellows was held and conducted in strict accordance with the regulations appertaining to the meeting, and that as there were no notices of motion on the agenda no discussion could properly take place, the regulations of the meeting requiring previous notice of twenty-one days.'

"I am, Dear Sir, yours faithfully,
"EDWARD TRIMMER, Secretary."

After some discussion it was decided to reply to the above letter in the form of the following resolutions, which were proposed, seconded, and unanimously carried: "1. That the Committee of the Association of Fellows regrets to learn that in the opinion of the Council the last meeting of Fellows was conducted in strict accordance with the regulations appertaining to these meetings. 2. That this regret is based upon the belief of the Committee that when the regulations for the Fellows meetings were first drawn up it was intended by their framers to give the Fellows the opportunity without definite notice (*a*) of making any observations necessary on the minutes; (*b*) of asking for any further information desired from the Council on any topic contained in the agenda; (*c*) of giving notice of motion for a future meeting, and (*d*) of discussing any of the subjects dealt with in the Council's report. 3. That, if the present regulations do not provide the opportunities referred to in the preceding resolution, the committee would respectfully suggest to the Council that the regulations should be modified in the direction indicated. 4. That a copy of the foregoing resolutions be forwarded to the secretary of the college for presentation to the Council at its next meeting."

A communication was read from the secretary of the Society of Members of the College, in connexion with which the following resolution was adopted: "That it is undesirable that the Association of Fellows should take any conjoint action with the Society of Members in regard to the resolutions which the latter body proposes to bring forward at the annual meeting of Fellows and Members of the College on the 7th prox."

It was also unanimously agreed that the question in regard to the admission of women to the examinations at the College was not one upon which the Association, as an association, was called upon to express any opinion. It was further decided not to bring forward any resolution on behalf of the Association at the ensuing annual meeting.

A resolution was passed fixing the annual general meeting of the Association for Wednesday, Nov. 13th, due notice of the same to be sent to the members of the Association.

The hon. secretary having reported that Mr. J. J. Purnell had been prevented by illness from attending the meetings of the committee, a resolution expressing the regret and sympathy of the committee was unanimously passed. This concluded the business of the meeting and the committee adjourned.

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ENTRIES AT THE MEDICAL SCHOOLS.

FROM returns kindly supplied by the Deans and Registrars of the various medical schools and universities of London and the provinces, we are again enabled to place before our readers a table showing the number of students who have registered for the first time, and also of those who are at the present moment in attendance at the various institutions for the purpose of finishing their curriculum. As far as possible we have endeavoured to make the table as useful for the statistician as for the general reader, but the schools do not all follow the same plan in computing the number of students on their rolls, and this consequently detracts from the usefulness of the table in cases, where mathematical precision may be required. It will be readily perceived that some of the preliminary science students may be included in the number of generals tudents, while it is just possible that some of the general students may also be dental students, and in this way the column giving the total of the entries for the year cannot be looked upon as giving the exact number of those who have entered for a strictly medical course. Of course, the entries are in many cases not yet complete, but for London and the provinces they are sufficiently so for approximate comparison. The Irish and Scotch schools begin work at a much later date than the English; and as they have practically only just commenced the winter session the figures are not available for comparison.

From a strictly medical point of view the column headed General Students gives the most interesting figures. Comparing the total number of general students who entered the London medical schools in 1894–5—namely, 555—with the aggregate of entries for the present session (excluding the London School of Medicine for Women)—viz., 580—it will be seen that there has been a slight increase.

The schools showing the most numerical progress are the London Hospital Medical School with an increase over the figures of last year of 24, St. Thomas's Hospital Medical School with a similar increase, and St. George's Hospital Medical School with an increase of 15. The greatest fall is at St. Bartholomew's Hospital Medical School, where the general entries number 14 less than last year. This, however, is not a serious falling off when the large number who patronise this school is considered. The London School of Medicine for Women shows a record of 5 less than last year. Of the 20 new students who have entered the National Dental Hospital, 13 take the two years' hospital curriculum and 7 study for a period of twelve months. These latter are either registered medical and dental practitioners or students from the Continent.

In all but two cases—Durham University and University College, Bristol—the provincial schools individually show an increase in the number of new entries, the most marked being that of Owens College, Manchester, which records an increase of 23. University College, Liverpool, has increased its number of new entries by 15, and Yorkshire College, Leeds, by 12. Cambridge University shows an entry larger than in any previous year, 151 of the freshmen who have matriculated this year having announced their intention of studying for the M.B. degree. On the whole, no very striking record has been made by either the metropolitan or the provincial medical schools.

NAME OF SCHOOL.	Analysis of new entries.					Number of students at present on the roll.					
	General students.	Special or occasional students.	Dental students.	Preliminary science students.	Total number of new entries for session 1895–96.	First year.	Second year.	Third year.	Fourth year.	Fifth year and upwards.	Total, 1895–96.
London Schools.											
St. Bartholomew's Hospital	105	62	—	20	187	†	†	†	†	†	—
Charing-cross Hospital	18	38	28	—	84	44	46	25	33	53	201
St. George's Hospital	50	3	1	1[1]	55	†	†	†	†	†	—
Guy's Hospital	80	37	32	35	184	†	†	†	†	†	—
King's College Hospital	30	71[2]	—	11	112	†	†	†	†	†	—
London Hospital	75	63	—	13	151	75	51	65	37	90	318
St. Mary's Hospital	71	73	1	13	158	†	†	†	†	†	†
Middlesex Hospital	18	27	9	2	56	28*	17‡	29††	45	69	188[3]
St. Thomas's Hospital	74	17	—	2	93	†	†	†	†	†	—
University College Hospital	45	76	—	82	203	†	†	†	†	†	—
Westminster Hospital	14	6	—	4	24	14	12	15	9	26	76
School of Medicine for Women	24	2	—	—	16	26	31	26	19	45	147
Provincial Schools.											
Cambridge University	—	—	—	—	151	†	†	†	†	†	—
Oxford University	†	†	†	†	—	†	24	25	†	†	49
Durham University	24	37	—	—	61	30	45	30	39	25	169
Mason College, Birmingham	34	35	4	8	91	†	†	†	†	†	—
Owens College, Manchester	66	60	13	62	201	†	†	†	†	†	—
Sheffield School of Medicine	13	—	—	3	16	16	†	†	†	†	16
University College, Liverpool	37	23	11	28	99	45	43	22	28	42	180
University College, Bristol	16	1	1	10	28	†	†	†	†	†	—
University College, Cardiff	18	30[4]	—	11	59	18	16	5	†	†	39
Yorkshire College, Leeds	37	4	—	19	60	†	†	†	†	†	—
Dental Hospitals.											
Dental Hospital of London	—	—	40	—	40	—	—	—	—	—	—
National Dental Hospital	—	—	—	—	20	—	—	—	—	—	41

[1] In addition to general students.
[2] Including bacteriology.
[3] Total number attending classes for their respective year's study in the conjoint curriculum.
[4] Not medical.
* Plus 9 dental students.
† Returns not supplied.
‡ Plus 12 dental students.
†† Plus 5 dental students.

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THE SANITARY STATE OF FULHAM.

AT a recent inquest on the body of a child, who lost his life by slipping on to the fly-wheel of a gas engine from which his father was removing the rust caused by an overflow of sewage, fresh prominence was given to a sanitary grievance which has existed in Fulham for the past ten years or more. Immediately after a heavy rain the basements of some of the houses become flooded with sewage to the depth of, in some cases, eighteen inches. After the storm is over the water subsides leaving several inches of foul smelling sediment. In the majority of instances the sewage enters the basement through the drainpipes, bubbling from the traps to a considerable height, and in one case the lid of an inspection chamber was forced off. In one house, the basement of which is covered by concrete, sewage water has forced its way through the soil, and the efforts of the occupier of the house and his builder to find the source of its entry have been fruitless.

For the past two or three years frequent complaints have been made by the Fulham Vestry, and towards the latter part of 1894 the County Council were appealed to on four occasions within a period of two months. As recently as August last they were petitioned, but no satisfactory reply has been received; indeed, the only answer which the vestry can obtain is that the Council are giving the matter their attention. Nothing whatever seems to have been done either to find out the cause or to remedy this deplorable state of things. The vestry give it as their opinion that greater pumping power is required to carry away the sewage, and some colour is given to this when it is noted that the flooding usually takes place after the occurrence of a storm on a Saturday or on a Sunday when the pumps are not at work. There is, however, another probable reason, and that is that the population has grown so rapidly that the main sewer, which eighteen years ago was large enough to serve a population of some 20,000 inhabitants, is not now of sufficient capacity to carry away the refuse of, in round figures, 100,000 people. That the evil is growing is shown by the fact that, although many of the houses have been troubled by the overflow for years, others are only just beginning to experience it. The occupier of one of the houses where the overflow has recently begun to show itself is having a brick wall nearly two feet high placed in front of his yard door in order to prevent the overflow from entering his kitchen, and another has been put to considerable expense for traps to keep out the sewage. But the evil of these palliative measures is clearly shown, for upon the removal of a floor upon which the flooding had recently taken place several inches of foul-smelling water were found beneath it. A deputation of the vestry and ratepayers has probably waited upon the Main Drainage Committee of the County Council by this time, and it is to be sincerely hoped that an epidemic of disease will not occur before the County Council take some active measures to stop such a scandalous condition of things.

THE PARIS PRISON CONGRESS, 1895.

THE Fifth Quinquennial Prison Congress recently held at Paris was well attended. Delegates from twenty-five countries were present, and for the first time Great Britain was represented officially. The President of the French Republic attended the opening sitting, and afterwards received the foreign delegates. The Minister of the Interior opened the Congress with an eloquent speech. Several other ministers also attended the meetings, and a few delivered addresses. The Congress, which met in the spacious rooms of the Collège de France, was divided into four sections, some of the principal subjects dealt with being habitual offenders, the Bertillon system, criminal insanity, intemperance and inebriate asylums, and juvenile offenders.

An animated debate took place in the section dealing with the subject of habitual offenders and cumulative sentences, and a resolution was unanimously adopted in favour of a progressive cumulation of sentences for this class of criminals, recommending also more rigorous dealing with the professional malefactor.

In the course of the discussion on the question of insane and weak-minded prisoners Dr. Motet (of T[illegible]) society in general has not hitherto been adequately protected against insane criminals or against their premature removal from asylums.

The very important questions of child saving and the treatment of criminal and neglected youth occupied a large share of the time and thought of the Congress. It was stated that in several American States the system of boarding out has been resorted to with excellent results. The children are placed with carefully selected foster-parents and are under regular supervision.

Opportunities of seeing the practical working of the Bertillon system of identification were afforded to many of the delegates, and the Congress recommended the general uniform adoption of the system as being most desirable everywhere. The members of the Congress were also granted permission to visit the prisons and reformatories in and around Paris. Considerable interest was manifested in the warders' school at the La Santé prison, where forty-eight warders from the provincial prisons come annually in two parties of twenty-four each, staying for six months, during which they receive instruction by lectures and classes in various branches of knowledge and are also taught the practical application of the Bertillon method of identification.

The Congress accomplished in the session of ten days an amount of useful and instructive work; many remedial measures were advocated, and if carried out the next quinquenial meeting will in all probability look back upon much of the work of the present Congress with satisfaction.

THE FORTY-FOURTH REPORT (WITH APPENDICES) OF THE INSPECTORS OF LUNATICS (IRELAND).

THE number of registered lunatics in Ireland on Jan. 1st, 1895, was 17,655. This shows an increase of 379 since the previous year. The inspectors repeat their views regarding this increase, attributing it as being mainly due to accumulation and to absorption of part of the mass of unregistered lunatics residing in private dwellings or wandering about the country at large.

The number of insane people of whom no official cognisance is taken appears to be large, amounting to over 22 per cent. of the whole; the statistical tables indicate that the ratio of registered insane per 100,000 of estimated population amounts to 384, while, if to this be added the number of the insane wandering at large according to the census returns of 1891, the proportion would be found to amount to 492.

Considering the overcrowded state of the existing accommodation, and notwithstanding the additions and extensions now in progress or about to be undertaken in the majority of Irish asylums, this state of affairs affords matter for serious consideration, and the inspectors appear to put it lightly when they state, "it is to be feared that this increase of the insane under care in Ireland must continue for some years to come." 3229 cases were admitted into the district asylums in 1894; of these, 2448 were first admissions. The recoveries amounted to 1309, or 40·5 per cent. of the admissions, and the proportion per cent. of deaths to the daily average number resident was 8·8. Suicide accounted for 5 deaths, and 2 serious accidents resulting in loss of life are recorded. Post-mortem examinations were held in 287 instances. This is a considerable increase on past years, but room is left for improvement. Two asylums, Richmond and Ballinasloe, are in the fore-front as regards pathological work with 66 and 62 per cent. of necropsies respectively; in nine asylums no post-mortem examinations were made. No doubt when the medical staff of these institutions is strengthened a much higher record will be established. Overcrowding is general; the sanitary arrangements of several district asylums stand in great need of improvement; fever and dysentery appear to be too prevalent. At Richmond Asylum an epidemic broke out resembling in its symptoms the Eastern disease known as beri-beri; 152 patients were attacked, and 25 succumbed. The epidemic during its whole course attacked only the insane inmates of the institution. The sanitary condition of this asylum has long continued to be a source of anxiety to all connected with the management, and it is to be hoped that the

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Portrane will afford a much-needed relief in this respect. Notwithstanding the many drawbacks under which they labour and the numerous difficulties with which they have to contend, the heads of the district asylums continue to show the same conscientious and scrupulous zeal in the interests of the insane as hitherto. This is evidenced by the favourable recovery-rate, the small proportion of suicides and accidents, and the low death-rate, which compares well with that of similar and more favoured institutions in other lands.

The State Criminal Asylum at Dundrum passed a quiet and uneventful year. Several much-needed improvements have been completed and others are contemplated. The system of payment to patients for work done, which has been beneficially employed at Broadmoor for a number of years, has been introduced here and has apparently produced very satisfactory results. The tale of the insane in the lunatic wards of Irish workhouses continues to be of the same sad and depressing nature. The patients numbered 4044. The buildings are overcrowded and understaffed, the sanitary arrangements primitive, and the personal cleanliness of the inmates and the state of the bedding in many cases show much need of improvement. It is surely time that the Local Government Board awoke to a sense of their duty and responsibility towards the most helpless of the insane. A liberal measure of relief for the amelioration of the lot of these pauper lunatics ought to be provided.

There is no change in the number of private asylums. It is pointed out that in some of these institutions more comforts for the patients, increased accommodation, and suitable exercise grounds are required. The usual tables and the inspectors' reports of their visits to the various asylums are appended. These are invariably favourable to the management.

From the fulness and accuracy of this report, and the attention given to the pressing need of improvements in the surroundings and condition of the insane in Ireland, it will be gathered that considerable zeal is displayed in the Lunacy Department. It is a careful summary of a year's work and affords interesting, although not altogether hopeful, reading.

CHOLERA.

THE latest official accounts from St. Petersburg show that there has been a marked decrease in the number of cases of cholera in Russia, and, as we surmised last week, the sanitary authorities in that country are confidently looking forward to the early disappearance of the disease.

We learn from Cairo that there were two fresh cases and two deaths at Damietta on the 20th inst., while at El Menzaleh and its vicinity there were altogether thirty cases in the course of two days, twelve of which terminated fatally. Some very interesting information about Damietta, from our Egyptian Correspondent, will be found in another column.

ST. GEORGE'S HOSPITAL AND MEDICAL SCHOOL.—Considerable changes and improvements have taken place in the hospital and school during the past year. The interior of the hospital has been repainted and decorated throughout, and a reconstruction of the central block has been begun and carried nearly to completion. The reconstruction, which is not seen from the street, will provide two new operating theatres of the most modern pattern, the benches and floors being composed of marble terrazzo, and the fittings entirely of metal and glass. There are included also an extension of the chapel and board-room and a new nurses' dining-room. In the school the electric light has been installed, the arc light being laid on to all the theatres for the purpose of lantern demonstrations. The anatomical collection has been extended, a collection of surgical instruments provided for inspection, and facilities given for photographic work. Additional classes for the University of London and for the Cambridge Second M.B. work have been arranged for, and a lectureship established, for the first time in London, in Tropical Medicine. Dr. Patrick Manson is the occupant of the new chair. A valuable prize for proficiency in bacteriology has been established in the school by Mrs. Frederick E. Webb of Maida Vale, who has endowed it with the sum of £1000.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Worcestershire County Sanitary District.—Mr. G. H. Fosbroke reports that the general death-rate of the county, with an estimated population of 303,313, was for 1894 14·2 per 1000, as against 18·1 and 16·1 in 1892 and 1893 respectively. Small-pox invaded many of the urban and rural districts of Worcestershire during the period in which the disease was epidemic in Birmingham, and the city seems to have formed the focus for spreading the disease in this county. In reference to the notification of measles, Mr. Fosbroke states that his experience hitherto has tended to the conclusion that such a step reduces the mortality from the disease owing to the fact that the official visits lead to at least some sort of isolation, and thus to reduced exposure. Facilities were afforded to medical officers of health and general practitioners by the Worcestershire county council both for obtaining antitoxin for the treatment of diphtheria and also for submitting doubtful cases to bacteriological examination. Mr. Fosbroke reserves for a subsequent date a detailed report upon this subject, but he remarks in general terms that, so far as the experience of his county goes, the antitoxin treatment has had satisfactory results. Tewkesbury rural district council strenuously refuses to adopt compulsory notification. As Mr. Fosbroke observes, the fact that thirty-four out of thirty-five sanitary districts in Worcestershire have voluntarily availed themselves of the Notification Act should be sufficient to induce the Tewkesbury district councillors to give the Act a trial. Obviously, however, the councillors referred to are disinclined to admit that the mere fact of a large majority is any evidence of either the moral or intellectual rectitude of the position. In a sense we feel compelled to admire this stubborn resistance of the Tewkesbury rural district council in face of these overwhelming odds, but we think they might now capitulate without any very serious loss of dignity. To Worcestershire, as our readers will probably remember, belongs the honour of issuing the two first "orders" under the Isolation Hospitals Act, 1893, and Mr. Fosbroke states that in his county the Act has had a very beneficial effect.

Derbyshire County Sanitary District.—In the middle of 1894 the administrative county of Derbyshire had an estimated population of 444,118. Some slight modifications have taken place in certain districts as a result of the operations of the Local Government Act, 1894. The general death-rate of the county for 1894 was but 15·4 per 1000; the death-rate from zymotic diseases showed a very marked decline upon that of 1893, as also did infantile mortality. There are signs in Derbyshire of considerable activity under the Isolation Hospitals Act, and one hospital district has already been formed, while steps in connexion with another are almost complete. In the case of the Belper Hospital district, one of the urban district councils covered by the terms of the order has decided to appeal to the Local Government Board to be removed from the combination. In each of the above instances the county council has left the control of the hospitals in the hands of the hospital committee, and it has not elected any permanent members on either of the committees. Provision has, however, been made to the effect that, if the hospital committee fail within five years to erect a permanent hospital to the satisfaction of the county council, a new hospital committee, on which the county council is to elect the majority of members, is to come into existence. Dr. Sidney Barwise, the county medical officer of health, expresses a hope that future hospital committees will have larger areas under their charge, so that two or three hospitals may be erected on each area.

LONDON PORT SANITARY DISTRICT.

The report of Dr. Collingridge upon the half-year ended June 30th, 1894, which has just been issued, shows not only how well London is protected against the importation of infectious disease by sea, but also the necessity of continuing the precautions, and even of increasing the equipment at the

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disposal of the port sanitary authority. During the half-year under consideration no less than 12,715 vessels were inspected, a total which shows a very material increase on former half-yearly periods. Out of this number 496 were found to be in an insanitary condition, and 455 structural alterations were carried out without any resort to legal proceedings. This latter fact is, Dr. Collingridge remarks, a sufficient indication of the real desire which exists to do what is possible to improve the lot of the sailor, and, we would add, it is an indication also of what must be the admirable tact displayed by the officers of the London port sanitary authority. There are few duties in which the personal equation is of greater importance than in the details of port sanitary administration. Dr. Collingridge thinks it would be of considerable advantage to shipowners and seamen if all plans for new vessels were submitted to the port sanitary authority for approval. Certainly it is desirable that some steps should be taken for securing the construction of all new vessels with a due regard to proper sanitary arrangements and the prevention of overcrowding. Vessels are visited by the port sanitary authority as heretofore in conjunction with Her Majesty's Customs; but there seems to have been some little difficulty in connexion with this matter in the spring of the present year. Complaints of delay to shipping arose, it seems, owing to the practice then in vogue of dealing with each ship in strict rotation, a practice which in some instances led to the detention of vessels for a considerable time. A conference between Her Majesty's Customs and the port sanitary authority was held, at which the former seemed to favour the dissociation of the combined method of inspection. This was, however, objected to, and we are glad to learn that a conference of the two authorities with the Local Government Board had the effect of solving the difficulty in a manner satisfactory to everyone concerned. Briefly put, the arrangement amounts to this:—that where it is found necessary to examine a ship and its passengers and crew in detail, such ship shall be detained until other ships awaiting inspection have been visited. In other words, "the misfortune of one vessel is not to affect all arriving at the same time." The arrangement at Sheerness by which vessels passing through the port sanitary district of London are inspected by a medical officer paid jointly by the London and Rochester port sanitary authorities continues to work satisfactorily. During the half-year under consideration 53 cases of cholera or choleraic diarrhœa were reported as having occurred on vessels during their homeward voyage, and 24 cases of small-pox were dealt with by the port sanitary officers. By-laws have been drawn up by the port sanitary authority for the prevention of nuisances from the carriage of offensive matter &c. by boat, and these when in force should form valuable additions to the means at the disposal of the port sanitary authorities for dealing with nuisances of this kind. Out of the total number of vessels inspected during the half-year 84·5 per cent. were English, 6·3 per cent. Swedish and Norwegian, 4·9 per cent. German, and 1·1 per cent. Danish. No inconsiderable amount of food was condemned within the port sanitary district during the half-year; it comprised 394 cases of tinned meats, 108 casks of salt beef, 390 carcases of mutton, 30 quarters of beef, and 10,200 packages of fruit.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6526 births and 3873 deaths were registered during the week ending Oct. 19th. The annual rate of mortality in these towns, which had been 19·4 and 21·0 per 1000 in the two preceding weeks, declined again last week to 19·1. In London the rate was 17·9 per 1000, while it averaged 19·8 in the thirty-two provincial towns. The lowest rates in these towns were 10·4 in Derby, 13·1 in Nottingham, 13·6 in Croydon, and 15·3 in Brighton; the highest rates were 24·0 in Liverpool, 24·3 in Manchester, 25·5 in Salford, 25·7 in Burnley, and 31·5 in Blackburn. The 3873 deaths included 670 which were referred to the principal zymotic diseases, against 871 and 895 in the two preceding weeks; of these, 333 resulted from diarrhœa, 107 from diphtheria, 83 from measles, 60 from "fever" (principally enteric), 47 from scarlet fever, 39 from whooping-cough, and 1 from small-pox. The lowest death-rates from these diseases were recorded in Halifax, Brighton, Croydon, Norwich, and Leicester; the highest in Swansea, Gateshead, Salford, Burnley, and Blackburn. The greatest mortality from measles occurred in Wolverhampton, Swansea, and Blackburn; from whooping-cough in Gateshead; from "fever" in Bolton and in Sunderland; and from diarrhœa in Salford, Gateshead, Burnley, and Blackburn. The mortality from scarlet fever showed no marked excess in any of the large towns. The 107 deaths from diphtheria included 76 in London, 5 in West Ham, 4 in Manchester, and 3 each in Wolverhampton, Salford, and Hull. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 119 cases of small-pox in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 19th inst., against 234, 198, and 158 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 21, 17, and 9, in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2838, against 2807, 2802, and 2827 on the three preceding Saturdays; 241 new cases were admitted during the week, against 339, 252, and 332 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 158 and 175 in the two preceding weeks, further rose to 215 last week, but were 114 below the corrected average. The causes of 39, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Oldham, Newcastle-on-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks, from 17·5 to 19·3 per 1000, declined again to 18·7 during the week ending Oct. 19th, and was 0·4 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 16·8 in Greenock to 22·1 in Leith and 22·5 in Aberdeen. The 539 deaths in these towns included 53 which were referred to diarrhœa, 13 to whooping-cough, 9 to scarlet fever, 7 to "fever" (principally enteric), 5 to diphtheria, 3 to measles, and not one to small-pox. In all, 91 deaths resulted from these principal zymotic diseases, against 96 and 94 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·2 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The deaths from diarrhœa, which had been 62 and 58 in the two preceding two weeks, further declined to 53 last week, of which 20 occurred in Glasgow, 15 in Dundee, and 8 in Edinburgh. The 13 fatal cases of whooping-cough showed an increase of 2 upon the number in the preceding week, and included 5 in Glasgow and 3 in Edinburgh. The fatal cases of scarlet fever, which had been 4 and 7 in the two preceding weeks, further rose to 9 last week, of which 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The 7 deaths referred to different forms of "fever," were within one of the number in the preceding week, and included 3 in Glasgow and 3 in Edinburgh. The fatal cases of diphtheria, which had been 2 and 5 in the two preceding weeks, further rose to 6 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 98 and 97 in the two preceding weeks, declined to 92 last week, but were slightly below the number in the corresponding week of last year. The causes of 43, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·3 and 26·8 per 1000 in the two preceding weeks, declined again to 24·2 during the week ending Oct. 19th. During the past three weeks of the current quarter the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 17·0 in London and 18·2 in Edinburgh. The 162 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the

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preceding week, and included 20 which were referred to the principal zymotic diseases, against 12 and 29 in the two preceding weeks; of these, 12 resulted from diarrhœa, 4 from "fever" (principally enteric), 3 from scarlet fever, 1 from diphtheria, and not one either from small-pox, measles, or whooping-cough. These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 2·8 in London and 3·4 in Edinburgh. The fatal cases of diarrhœa, which had been 8 and 17 in the two preceding weeks, declined again to 12 last week. The 4 deaths referred to different forms of "fever" were within 2 of the number recorded in the preceding week, and the 3 fatal cases of scarlet fever exceeded the number registered in any week since June last. The 162 deaths in Dublin last week included 36 of infants under one year of age, and 26 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Three inquest cases and 3 deaths from violence were registered; and 43, or more than a fourth, of the deaths occurred in public institutions. The causes of 22, or more than 13 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL DUKE and Surgeon-Captains Manders, Hayman, and Hale have embarked for a tour of service in Ceylon. Brigade-Surgeon-Lieutenant-Colonel Supple has been transferred from Jersey to Dover, and has been succeeded at Jersey by Surgeon-Lieutenant-Colonel Kirwan. Surgeon-Majors Hayes and Johnston and Surgeon-Captain H. H. Browne have embarked for a tour of service at Hong-Kong. Surgeon-Major O'Keefe has embarked for India and Surgeon-Captain Hearne for Singapore.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Colonel Banks to be Principal Medical Officer, Nagpore District; Surgeon-Captain K. Whitcombe to take Medical Charge of the 6th Bombay Cavalry. Brigade-Surgeon-Lieutenant-Colonel Moore, A.M.S., on return from sick leave from England, is transferred from the Mhow District to the Sind District. Surgeon-Major Lane, A.M.S., on arrival from England, is posted to general duty in the Quetta District. Surgeon-Lieutenant Rivers, on arrival from England, is posted to general duty in the Bombay District. Surgeon-Captain J. G. Hojel is appointed to act as Professor of Materia Medica and Pharmacy, Grant Medical College. Surgeon-Captain J. M. Cadell, Officiating Civil Surgeon, Etawah, is appointed to the Medical Charge of the camp of the Lieutenant-Governor and Chief Commissioner. Surgeon-Lieutenant W. Young, Officiating Superintendent, Central Prison, Lucknow, on being relieved, is appointed to officiate as Civil Surgeon, Gonda, and to hold Visiting Medical Charge of the Bahraich District. Surgeon-Captain J. J. Pratt, Civil Surgeon, is transferred from Gonda to Fyzabad, and to hold Visiting Medical Charge of the Bara Banki District. The Queen has approved of the following promotions among the officers of the Indian Medical Services:—*Bengal Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Patrick Balfour Haig, Thomas William Archer Fullerton, Ralph Henry Maddox, Edward Victor Hugo, M.D., Harry George Melville, Arthur Oldham Hubbard, Charles George Robson Scott, Herbert Austen Smith, Douglas Richard Green, George McIver Campbell Smith, Hubert Malins Earle, and Joseph George Hulbert. *Madras Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Pulteney Charles Gabbett and John Lewis Macrae. *Bombay Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Francis Edward Swinton, Sidney Harvey Burnett, and Thomas Jackson. Her Majesty has also approved of the retirement of the undermentioned officer:—*Bombay Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel Andrew Barry, M.D.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeons: J. L. Barrington to the *Astræa;* F. S. Jackson to the *Forte.* Surgeons: F. W. Stricker to the *Inflexible;* E. D. Minter, J. D. Hughes, T. Austen, and A. H. L. Cox to be lent for study at Metropolitan Hospitals.

THE CHITRAL DESPATCHES.

The telegram from Simla giving a nominal list of the officers mentioned in Sir R. Low's despatches, which was published last week, enabled us to extract the names of the several medical officers that had been included therein. The *Pioneer Mail* of the 3rd inst. publishes in a supplement the notification that has been issued by the Government of India in the military department. The Viceroy of India and Governor-General in Council takes the opportunity afforded by the approaching return to British India of a large portion of the relief force to signify the cordial recognition of the Government of India of the distinguished manner in which the force has acquitted itself during the arduous and completely successful operations now brought to a close. A letter from the Adjutant-General in India forwarding the despatch from Lieutenant-General Sir R. C. Low, commanding the Chitral Relief Force, recapitulates the operations of the force and brings to notice the services of officers and men who have specially distinguished themselves. Among the paragraphs conveying the views of Sir George White, the Commander-in-Chief in India, in regard to these services we find the following: "To the careful medical arrangements and to increased sanitary precautions may be ascribed, in Sir George White's opinion, the comparative immunity from disease and the general good health that the troops have enjoyed under very trying conditions. These results could not have been attained without the great forethought and administrative experience of the late Principal Medical Officer, Her Majesty's Forces in India, Surgeon-Major-General Bradshaw, C.B., and of the officer now filling that appointment, Surgeon-Major-General A. A. Gore; and their efforts have been well seconded by Surgeon-Colonel T. Maunsell, principal medical officer with the force, and the medical officers under his orders." Surgeon-Lieutenant D. W. Sutherland, of the Indian Medical Service, is mentioned "for the promptitude and coolness he displayed in attending on the wounded under short range fire" in connexion with the action on the Panjkora River on April 13th. Surgeon-Colonel T. Maunsell, Army Medical Staff, the principal medical officer with the force, is mentioned as "an officer of ability and experience, and his management of the medical and sanitary arrangements connected with the force has been most successful." Surgeon-Colonel Thomson, M.B., Indian Medical Service, principal medical officer, on the line of communications, is mentioned as "an officer of judgment and experience who administered his department in a very satisfactory manner." The names of Surgeon-Lieutenant-Colonel W. Donovan and Surgeon-Major G. Coutts, M.B., of the Army Medical Staff, and Surgeon-Lieutenant-Colonel P. F. O'Connor and Surgeon-Lieutenant-Colonel W. A. Simmonds, of the Indian Medical Service, are also included in the despatch. It is, of course, very gratifying to us as medical journalists to put the foregoing on record, and to notice that the military authorities in India recognise the labours of the medical service and the good work that its members have done in connexion with the Chitral Relief Force.

THE SEWERAGE OF ALDERSHOT CAMP.

For many months now the rural district council, complicated, of course, by the various local authorities, has been trying to arrange with the Government as to sanitary provision for Aldershot Camp in the matter of drainage. The suggestion was made that a sewage farm should be constructed to receive the contents of the camp drains, the ultimate disposal of the residue to be in the hands of the local authority. A draft agreement on these lines was drawn up and submitted to both parties, and it was understood that the only proposal the Government wished to put forward was that, in lieu of paying a lump sum annually for the sanitary provision, the War Office should become a ratepayer and pay upon its assessment like other ratepayers. The council paid for an assessment of the new military buildings on these suggestions being put before them, but at a meeting on Thursday, Oct. 17th, it appeared that they had been too "previous," to use an Americanism. They had stipulated that their consent to the War Office proposals should pledge them to the acceptance of no definite site for the proposed farm before the matter should have been placed before a consulting engineer to report thereon. The War Office wrote that they considered this practically a refusal by the council to proceed with the stipulations of the draft agreement, and that the question of the disposal of the garrison sewage would now be taken into

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consideration by the Secretary of State. The council, after an animated debate, resolved to write to the department objecting to the construction which had been put upon their letter, and calling attention to the fact that it was the authorities' own wish, expressed in November, 1894, to become ordinary ratepayers that had determined the council to carry out the valuation, at considerable expense, of the Government property in order to bring it on the rate books. A resolution from the Portsmouth authorities suggesting the valuation of Government property on the ordinary and uniform basis was endorsed by the Aldershot council. The opinion was freely expressed that the Government department might now carry out the work independently of the latter body.

MALARIA AND ITS CAUSES.

The *Pioneer Mail* of the 3rd inst. has an interesting article on this subject, reviewing the report of Surgeon-Colonel Harvey, of the Indian Medical Service, published in the *Calcutta Gazette*, on the causation of malaria, made in connexion with the Sanitary Drainage Bill recently passed by the Bengal Government. Our Indian contemporary points out how much we still require to learn in connexion with this subject, and considers that the Government should institute a thorough and scientific investigation into the numerous questions at issue. We notice, by the way, that Surgeon-Colonel Harvey accepts the view that malarial fever is due to a parasite, in which, it may be added, he is strongly supported by the observations and researches of several medical officers who have scientifically studied the subject in India.

DEATH IN THE SERVICES.

Surgeon-General George Augustus Frederick Shelton, M.B., M.R.C.S. (retired), on the 12th inst., in his seventy-fourth year. He joined the Army Medical Service in 1845, was promoted Surgeon in 1854, Surgeon-Major in 1865, Deputy Surgeon-General in 1873, Surgeon-General in 1880, and retired on half-pay in 1882. The deceased officer served with the 48th Regiment during the latter part of the siege of Sebastopol (medal with clasp, and Turkish medal).

The London Companies of the Volunteer Medical Staff Corps will take part in the time march which is to take place in the northern suburbs of London on Saturday night next (Oct. 26th).

Correspondence.

"Audi alteram partem."

THE BIRMINGHAM LUNACY PROSECUTION.

To the Editors of THE LANCET.

SIRS,—As I am the unfortunate individual alluded to in your article on this subject—which is of vital importance, owing to the far-reaching principles involved—I must ask you to kindly insert this lengthy communication. I am sure that you must have based your accusations of my ignorance of lunacy laws and practice on the garbled reports and articles in the Birmingham press. Ever since I recovered damages for libel against one of these journals and threatened another of them they have not been prejudiced in my favour. I never personally pleaded ignorance; it would have been false, dishonourable, and disastrous for me to have done so. I was, and am, saturated not only with the Lunacy Acts of 1890-91 but also with the equally important Commissioners' and Lord Chancellor's supplemental statutory rules, besides leading cases. I had lunacy cases before, and I was not so imbecile as to trifle with pains and penalties. What I did admit in my address to the learned Recorder was that I regretted I might have misconstrued the equitable significance of two words—a pardonable error by lawyers, but unpardonable by me. I said "might" out of courtesy. I should, however, now require a High Court decision to convince me that I was wrong. None of the books you refer to decide the point.

I received a lady on May 21st. As she was only suffering from simple mania, and not, consequently, in my opinion,—I beg pardon, I am not allowed an opinion or discretion by the recent decision—"certifiably insane," I accepted her under the Act as a "voluntary boarder." I did not, therefore, require a licence, reception order, or urgency order. Before the statutory twenty-four hours for reporting to the Commissioners in Lunacy had expired a petition for an inquisition had been filed in the Court of Chancery on May 22nd. Now, if she had been "so found by inquisition," the Commissioners could not have got at me. Owing, of course, to the usual Chancery delays, they reached me through a common law quibble. The case came before the chief clerk on May 27th. He was informed that she was in my house and under my care; being satisfied, he adjourned for a further report without making any order. On June 15th I sent up an affidavit and those of two other practitioners certifying a satisfactory condition. On June 17th he was again satisfied, did not make an order, but appointed a Chancery visitor and adjourned to July 20th. In equity, if not in law, she was even now under Chancery jurisdiction. She was "pending," being so found by inquisition. But still more. The Lord Chancellor's Second Rule says that cases "pending" are the same as cases "found," and that persons acting under such conditions are to be indemnified against loss. By reason of this construction I did not keep a register of mechanical restraint, or a register of seclusion, or furnish any of the returns required in the case of Commissioners' patients, for none such are required in the case of private Chancery patients. The Masters in Lunacy do not want formalities, only general information of the patient's condition from the Chancery visitor, leaving the physician discretion in matters of treatment.

On June 26th two practitioners came on a magistrate's order and certified that the patient was not under "proper care and control." In consequence of this my patient was abducted and taken to an asylum, where she died twelve days afterwards, I believe, from exhaustion. For my construction of the two words, I was summoned on Sept. 10th for having committed six misdemeanours, which rendered me liable to twelve years' imprisonment and penalties amounting to £1800 as a possible maximum. The Commissioners in Lunacy, amongst whom were three members of the professsion, gave a fairly large order. At the Sessions I was found guilty of three misdemeanours, and fined £50. For some reason the learned Recorder was not made acquainted with the Chancery proceedings until after the verdict had been returned; that was when I addressed the court. He did not charge me with ignorance of lunacy law and rules—in fact, he appeared to agree with me. He, however, as a layman did consider me grossly ignorant of the proper medical treatment of lunatics, and had intended to have given me a term of imprisonment for having used mechanical restraint.

The patient, aged fifty-six years, suffering from simple mania, alcoholic gastritis, acute bronchitis, dilatation of left ventricle, with mitral murmur (recent), was admitted on May 21st. There were no signs of paralysis, meningitis, or ocular abnormalities, though the retinal vessels were slightly swollen. The membranes of both ears were normal. The urine was free from albumin, sugar, and casts; sp. gr. 1025. The pulse varied, according to excitement, from 85 to 120, and was fairly normal in rhythm and tension. There were no signs of vascular degeneration. She would, and was allowed to, wander about the first night and next day, followed by an attendant. On the 22nd she developed "acute mania." On the 23rd she received whole bath; temperature 100° F. She was wasted (weighed 81 lbs. nude), but very strong. She was placed in bed, and kept there by postural straps—viz., one across the chest and under the arms, which were free, the feet being kept in the centre by ankle straps, which allowed limited motion. She was confined in a barred single room, was quite unconscious of restraint, and made no effort to rise. No medicine or stimulants were given throughout. Soda water was given on first two days, afterwards 60 to 80 oz. milk, 6 eggs, and 3 oz. corn-flour, in a semi-fluid mixture, poured into the pharynx and swallowed automatically owing to inattention. The patient rapidly passed into mania gravis, and on May 29th into acute delirium. Bronchitis was relieved by inhalations, and the dilatation and murmur increased. Acute delirium not even alluded to in many text-books, and apparently not considered by those who discuss restraint. Pathognomonic signs: high temperature 102 to 104 in this case, rapid wasting, sordes, perfect incoherence, unconsciousness of environments, abolition of cerebral function, and above all, continuous restlessness, excitement, and insomnia tending to fatal exhaustion.

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Treatment.—Obtain sleep (1) by forced comfortable posture in bed, of necessity (2) perfect quietude, exclusion of attendants from the room necessary, but supervise through an inspection hole in the door frequently. If not, then there are only six possible alternatives to the use of postural straps. The Recorder was told that if I had not wished to avoid expense two trained attendants in the room could have "managed" her—whatever that means—without postural straps. Granted; but I, however, wanted sleep, not "management." Alternative: (1) one or two trained attendants to hold the patient down in bed, whenever there, night and day. Objection: (*a*) this is "manual restraint," much more irritating; (*b*) the necessary noise and presence of the attendants constantly disturb the patient, whose audition and vision are hypersensitive. No sleep here. If not (1) then (2). Permitting the patient to tumble out of bed and as often replacing her, night and day. Objection obvious. If not (2) then (3). Permitting the patient to tumble about in a room "padded" or not, "trained attendants" present or not. Objection: Applicable only to cases with temporary excitement, and where the patient is rational enough to assume a comfortable posture instinctively and sleep voluntarily. In mania gravis and acute delirium such conditions are not present, consequently insomnia and fatal exhaustion must ensue. If not (3) then (4). Pack, "wet" or "dry." Objections: Wet pack must be changed frequently; inapplicable. Dry pack; a much more severe form of restraint than postural straps with the arms free. Still, the Commissioners, even in their last rules, sanction its use, but require the patient to be released every two hours. If I had used the "dry pack" and disturbed according to their rule, I would have killed my patient and got two years—not a quarter enough for my barbarity. In the Holloway case they very properly did not disturb. No prosecution followed. The learned Recorder was horrified, and fined me £50 because I allowed the patient to remain in one position for sixteen[1] hours and did not get her up more than twice a day for natural purposes, but as she had no sense to respond to calls of nature I never knew when to disturb her and get her up. If not (4) then (5). The "protection bed." This is somewhat like a coffin I have seen used abroad. Objection: As the arms are wholly confined it is much more severe than the postural straps. Although recommended by eminent English authorities I would have got about twelve months additional if my patient had died in it. If not (5) then (6). Chemical restraint, hynotics, narcotics. Moderate doses only intensify excitement without producing sleep in acute delirium. Sixty to seventy grains of chloral were given on a few occasions. The risk, however, is very great, and besides does not affect the question of postural straps. This enumeration of alternatives refers only to the treatment of mania gravis and acute delirium, the only form of insanity characterised by continuous excitement and insomnia tending to fatal exhaustion. You say, Sirs, that I ought to have made myself aware of the uses of mechanical restraint. I knew all about the divergent views from Connolly down, but such views are beside my question. These men were discussing the 99,999 cases and I the other one—viz., typical acute delirium with cardiac dilatation occurring in a person aged fifty-six. I will sum up my view. If the patient will stay in bed and sleep, no restraint of any kind. The following statement by R. Percy Smith comes near, but not quite, to my case: "In patients who are wearing themselves out with rolling about or continuous movement some form of restraint, such as the dry and wet pack, is sometimes necessary." During the thirty-six days the patient was exercised once at mid-day in the airing court; and secondly at night in the corridor. On June 21st the temperature was normal, the wasting had ceased, the weight being 73 lbs. There was no dilatation or murmur as observed under chloroform, incoherence and inattention were still present, there was considerable strength, and six hours' sleep was obtained daily without hypnotics.

The Lunacy Commissioners discourage the use of mechanical restraint and seclusion. It is, therefore, necessary to keep the registers as clear as possible of entries of hours of both in all institutions under their inspection. The first may be avoided by "manual restraint," of which no entries need be made. The second, seclusion, by keeping the patient in a single room with unlocked door and an attendant outside, or a convalescing patient, to give notice of attempted egress.

Professional Discretion.—This is a matter of supreme importance to general practitioners. The Recorder of Birmingham has decided that I had no right to use mechanical restraint, it not being necessary for "medical purposes" under Section 40. Although I from the dock emphatically affirmed that in my discretion "rest" was a medical treatment, and was absolutely necessary to avert death, it mattered not. Although counsel cited Hack Tuke, Percy Smith, Deas, and Yellowlees—the latter of whom was said to be antiquated—it mattered not, the witness disagreed with all, and no more authorities were permitted to be cited. Now, if I have not any discretion, from whom must I get it, especially on an emergency. Must I ask the poor father of a child suffering from diphtheria for a stamped deed of indemnity against prosecution before I perform tracheotomy, lest some practitioner who only believes in intubation may witness against me, or the man who advocates antitoxin only, do likewise? Or must I demand the opinion of all the specialists around, requiring their fees in advance, lest some of them may appear against me in case I should be indicted? Or shall I proclaim myself an incompetent coward by abandoning the case? I know not. Medical witnesses in my experience act the part of prosecuting counsel. I hold the unique position, I believe, of having stood twice in the dock on professional grounds alone. The first time Mr. Justice Wills did not allow five hostile witnesses to impeach my discretion, saying that there was "an element of vindictiveness about which he could not speak calmly." He said practitioners were allowed almost unlimited discretion by all authorities on jurisprudence. This dictum would not have kept me out of prison last time, however.

Now in my fortieth year, I can truthfully assert that I have never shirked any case in surgery, midwifery, or gynæcology to which I was summoned. I fortified myself to meet each exigency. I never contravened the ethical code in the slightest degree. Then why this persecution? Shall my hair be turned white and the flesh worn off my bones by disturbed dreams of "docks" and visions of prison cells? Must I at forty abandon the profession in despair, with my youth gone, my spirits broken, and a financial wreck?

I am, Sirs, yours respectfully,

Oct. 21st, 1895. FITZWILLIAM R. A. EVANS.

[1] This figure appears to be as intended by the writer, though it is impossible to be certain from the copy, which in this respect is indecipherable.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 3rd there is an interesting letter on the above subject by Dr. W. S. Hedley containing extracts from an important paper by Dr. A. M. Bleile, Professor of Physiology in the Ohio State University. Dr. Hedley has done me the favour to send me this paper, to some parts of which, not quoted by him, I shall presently refer. Dr. Bleile states that when dogs were killed by a strong charge of electricity the condition of the heart and bloodvessels examined immediately after death was always the same. "The left side of the heart was quite relaxed, the right side was intensely gorged with blood, as were also the large veins in the immediate vicinity of the heart. ..... It was also noted that deep and extensive cuts made in the tissues were free from blood, that the arteries were quite small and contracted, and that the blood was crowded into the very large veins in the trunk." These, then, are the main anatomical facts, which are very interesting and significant, but I find it difficult to accept Dr. Bleile's explanation of the phenomena. He says: "Taking these facts, it was suggested that the current acted upon the arteries through the nervous centre which controls their diameter. It is well known that the arteries are supplied with a middle muscular coat in which the fibres are circular, and their contraction would of course cause a narrowing of the artery, rise of the blood pressure, and a consequent impediment of the heart's action; in fact, it has been experimentally demonstrated that the arteries can be constricted to such an extent as to produce a rise of blood pressure which the heart is unable to overcome, and the circulation will stop from this cause." The chief defect in this statement is that the writer makes no distinction between the large arteries whose middle coat is mainly composed of elastic tissue and the

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terminal microscopic arterioles whose middle coat is entirely muscular. The elastic resiliency of the larger arteries helps the heart to drive the blood onwards, while the contraction of the muscular arterioles impedes the onward passage of the blood, and so causes distension of the large arteries and of the heart's cavities. The emptiness of the systemic arteries and of the left side of the heart, which is said to be constantly found after death from electric shock, is certainly not the result of contraction of the systemic arterioles, and no physiologist can suppose that electricity excites such contraction of the large arteries as to arrest the circulation. The great distension of the right side of the heart and of the large veins while the left cavities of the heart are relaxed and the systemic arteries are empty is the condition which is found immediately after death from what is commonly called asphyxia, but which should be designated apnœa.

When the blood pressure in the carotid is measured and the heart of an animal is exposed during the progress of apnœa it is constantly observed that in the first stage of the process there is an increase of systemic arterial pressure with great distension of the left cavities of the heart; in the final stage the pressure in the pulmonary artery rises while that in the carotid is falling, the right cavities of the heart and the venous trunks become distended while the left side of the heart and the systemic arteries are almost entirely bloodless.[1]

The explanation of the facts is that, in the first stage, venous blood passing into the systemic arteries excites contraction of the arterioles, with resulting distension of the large arteries and the left side of the heart. In the second stage of apnœa the blood, having become entirely deoxygenised, excites contraction of the pulmonary arterioles, the result being that the trunk and large branches of the pulmonary artery, the right cavities of the heart, and the large veins are gorged with blood while the left side of the heart and the systemic arteries are empty. The arrest of the circulation by the extreme contraction of the pulmonary arterioles obviously explains the engorgement behind and the depletion in front of the obstruction. If we assume that the electric shock arrests the breathing by paralysing the respiratory centre the appearances found immediately after death are completely explained, and I believe that these appearances admit of no other explanation. Dr. Shettle, in his letter in THE LANCET of Sept. 14th, says: "The absence of oxy-hæmoglobin in the blood after death by electric shock is a fact beyond dispute." It is also beyond dispute that this condition of the blood is invariably found after death by apnœa; and it is inconceivable that the absence of oxy-hæmoglobin could result from the direct action of electricity upon the blood. It has been suggested that the heart's action is suddenly arrested by the electric shock; but if this were so there would not be the great disproportion in the amount of blood on the two sides of the heart which is said to be constantly present. After death from a sudden arrest of the heart's action the amount of blood on the two sides of the heart is nearly equal; but in cases of death from apnœa the right cavities of the heart are found immediately after death to contain about eight times as much blood as the left, the proportion being, approximately, that of ounces to drachms. In an annotation in THE LANCET of July 27th (p. 223) reference is made to the post-mortem appearances in a New York criminal executed by electricity. It is stated that "two quarts of blood escaped when the skull was opened." The annotator truly remarks that there is not room in the skull for so much blood. The explanation is that in opening the skull, which must have been done before the chest was opened, a large sinus or vein was wounded, and the blood escaped from the veins of the neck and trunk, which were over-distended in consequence of the arrested circulation through the lungs. If death had resulted from cardiac paralysis such copious hæmorrhage from excessive intravenous pressure would not have occurred.

Dr. Bleile in his paper argues that arrest of the breathing is not the cause of death from electric shock, because in no case did resuscitation result from artificial respiration; but this is a fallacious argument. In the few cases in which artificial respiration was practised the electric discharge was excessive, from 96 to 525 volts, and applied for from 2 to 10 seconds. These strong currents probably inflicted irrecoverable damage upon the nervous centre. Then it is notorious that, when suspension of the breathing—as, for instance, from an overdose of chloroform—is known to be, in some cases, the cause of death, the most prompt and persevering performance of artificial respiration too often fails to restore natural breathing. The respiratory centre has been irremediably paralysed. Dr. Bleile found that when a dog was made to breathe nitrite of amyl a stronger current of electricity could be given without being fatal. From this the author infers that "death in electric shock is entirely due to the fact that the current produces a contraction of the arteries through an influence on the nervous system, and that this constriction of the arteries throws in such an impediment to the flow of blood as the heart is unable to overcome, and that when drugs are given to counteract this effect much larger doses of electricity than the ordinary can be borne." There is, of course, a partial truth in this statement, but it is incomplete and, I believe, in one important particular erroneous. It is assumed that electricity excites contraction of the arteries by its direct action upon them through the nervous system. On the contrary, I maintain that the facts are consistent only with the theory that the contraction of the pulmonary arterioles, by which the circulation is finally arrested, is a result of the apnœal condition caused by paralysis of the respiratory centre. I have in this communication described the successive phenomena of ordinary apnœa, and in the paper in THE LANCET before referred to I have shown that when the arterioles have been paralysed by nitrite of amyl, by atropine, or by an overdose of curara the phenomena are greatly modified. There is no increase of systemic arterial tension in the first stage of apnœa, no resistance caused by contracting pulmonary arterioles in the final stage, and consequently no resulting over-distension of the right cavities of the heart. In consequence of the absence of pulmonary obstruction the circulation continues longer, and the animal's life is considerably prolonged.

I have been told by two friends—one of them a physiologist—that they have recently read the report of a patient having been rendered unconscious by lightning and restored by artificial respiration, but neither of them could remember where the report had appeared. If any of your readers can refer me to the report of that or any similar cases I shall feel greatly obliged.

There is, I think, an interesting analogy between the arrest of breathing by an electric shock and the respiratory failure which Mr. Victor Horsley has proved to result from intracranial pressure, from a violent blow on the head, or from a bullet wound of the brain.[2] Dr. Kramer and Mr. Victor Horsley have shown by experiments on etherised dogs[3] that as a result of a bullet passing through the cerebral hemispheres there is first a slight fall of blood pressure, followed by a considerable rise of blood pressure. This rise of systemic blood pressure, as we have seen, always occurs during the first stage of apnœa. The authors have found that in some cases of this kind death may be prevented by artificial respiration. The full report of their experiments will shortly appear in the Philosophical Transactions.

Before I conclude this long letter I beg permission to indicate the manner in which the inhalation of nitrite of amyl, in all cases of suspended animation from the various forms of apnœa, serves as a most influential adjunct to artificial respiration.

In the paper before referred to[4] the following experiment is described: "Into the trachea of a small dog, prepared with the chest and pericardium opened and kept alive by artificial respiration, a glass T-tube was introduced, through which nitrous oxide gas was passed into the lungs, whilst the expired gases escaped into the air. As usual, first the left, then the right, cavities became distended, and in one minute the heart's action had nearly ceased from over-distension of the right side. Then, without loss of time, inhalation of nitrous oxide, *impregnated with the vapour of nitrite of amyl*, was substituted for the pure N_2O, by means of a two-way stop-cock, and the result was that almost immediately the distension of the right cavities began to subside, and in two minutes they had nearly regained their normal size." This experiment shows that even while atmospheric air was excluded from the lungs by nitrous oxide gas the over-distension of the right cavities was removed by the relaxing

[1] See my paper on the Physiology of Asphyxia, THE LANCET, April 4th and 11th, 1891.

[2] Quarterly Medical Journal, July, 1894.
[3] Proceedings of the Royal Society, 1894, No. 331.
[4] THE LANCET, April 4th, 1891.

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effect of nitrite of amyl upon the pulmonary arterioles. This clear demonstration of the action of nitrite of amyl shows the value of that agent as an aid to artificial respiration in all cases of suspended animation from apnœa. Whatever the primary cause of the apnœa, whether hanging or drowning, the inhalation of an azotic gas such as nitrous oxide or nitrogen, a blow on the head or mechanical injury of the brain, the shock of lightning or electricity—in each and all of these cases the relaxation of the pulmonary arterioles by the vapour of amyl nitrite has a double effect, (1) it immediately lessens the weakening over-distension of the right cavities of the heart; (2) by allowing the blood to pass on to the left side of the heart and so to the coronary arteries, the contractile power of the heart's walls, which had been impaired by anæmia resulting from the arrested pulmonary circulation, is increased. I am, Sirs, yours faithfully,

Savile-row, Oct. 14th, 1895. GEORGE JOHNSON.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—After many days it seems that the seed which some of us have been persistently, if somewhat feebly, sowing is taking root, and here and there springing up. We have to show that we are not acting selfishly, but as much in the interest of the sick poor as our own. Provident arrangements made in accordance with the just demands of the profession tend to encourage independence in the working class and to obviate pauperism. Provident arrangements forced upon the profession by syndicates and insurance societies on their own terms, and chiefly in their own supposed interests, pauperise the working class and degrade the profession.

Eastbourne, Portsmouth, Lincoln, &c., have become centres of revolt against impositions which have become unbearable. It is necessary now that the movement should become national and cease to be merely local. I would suggest that in each town and district throughout the country medical unions should be formed, and that each union should regulate the provident question in its own district on the lines of the Eastbourne arrangement, modified according to the needs of each locality. Existing friendly societies and medical aid associations can easily make arrangements with the practitioners of their district, and those of their medical officers who have earned the respect and esteem of their clients will at once step into a position of comparative independence with a chance of private practice. All that these societies have to do is to accept the "wage limit," to consent to a reasonable provident payment, and the principle that each head of a household shall choose his own medical attendant without the presence of canvassing or touting.

To accomplish this all that is necessary is united action in the profession. I am, Sirs, yours faithfully,

Loughborough, Oct. 18th, 1895. J. B. PIKE.

To the Editors of THE LANCET.

SIRS,—As medical officer to a medical aid association I beg to take exception to the *ab uno disce omnes* strain of Mr. Lionel Stretton's letter published in THE LANCET of the 19th inst. That certain abuses do exist in the management of several medical aid associations and that these abuses are countenanced by the medical officers I admit; but I am unwilling to acknowledge that this is the rule, not the exception. In order to justify the existence of these institutions we must consider the causes which led to their formation. In the first instance, medical men confided the care of their club patients to the tender mercies of unqualified assistants; secondly, club notes were frequently given to malingerers in order to secure their votes; and, lastly, cases of gross imposition were often winked at. To procure the services of a medical attendant whose qualifications would be guaranteed friendly societies were obliged to coöperate, and in order to make their medical officers independent of individual members, as a precaution against fraud, it was found necessary to pay a fixed salary. To prove that this state of affairs did exist I should not have to go a thousand miles from home, but could instance several cases not far away where the wives of club patients have been attended by unqualified assistants, and at present there is practising in the district an individual whose only pretention to qualification is that he was assistant to a local practitioner the greater part of whose club practice he managed for some time. That imposition by certain friendly society members has been winked at can be easily proved, for within a very short space of time I have examined for a society either nine or ten members certified to be suffering from various complaints; in only one instance was there the least evidence of disease or infirmity, and my decision—that with this single exception they were able to work—was disputed by only one member, who was afterwards examined by an independent medical man and expelled from the society.

Now, Sirs, I do not wish to justify the action of those medical associations that treat their surgeons as mere money-making machines; but I do say that friendly societies have a right to provide themselves with the best medical attendance for the money they can afford to spend; and, furthermore, I would add that in my opinion the dignity of the profession is as safe in the keeping of medical aid surgeons as it is in the hands of those whose only right to dictate is that the practice they purchased has been reduced in value by the action of the clubs. I have been medical officer to an association for over three years, and I challenge any medical man in the district to prove me guilty of the slightest breach of medical etiquette. Before medical aid associations were brought under the notice of the General Medical Council I wrote to Dr. Leslie Phillips offering to resign my position if he thought by doing so I would benefit the profession. I am still prepared to act in the same manner under a like condition.

I am, Sirs, yours faithfully,

N. L. USHER SOMERS.

High-street, West Bromwich, Oct. 20th, 1895.

To the Editors of THE LANCET.

SIRS,—I have no wish to prolong this correspondence, but must again assert that our balance on the year's (1894) working was £40, and not £200 as stated by you. Our receipts for 1894 was £989 10*s.* 2*d.* and payments £949 1*s.* 1*d.*, leaving balance on year of £40 9*s.* 1*d.*, as per my previous letter. I am, Sirs, yours faithfully,

WM. COULSON, Secretary.

Lincoln Oddfellows' Medical Institute,
Lincoln, Oct. 22nd, 1895.

*** We refer Mr. Coulson to the balance-sheet of the institute for the year in question and our words.—ED. L.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—In the interest of accuracy I beg your insertion of a quotation in my letter of Sept. 24th side by side with Dr. Waring's deduction therefrom in your issue of Oct. 12th:—

"A searching scrutiny ..... showed that 96 per cent. of the cases (out-patients) were entirely fit and proper subjects for gratuitous treatment, and though in the remaining 4 per cent. sufficient information could not be obtained, it was thought that even in these cases, were closer scrutiny possible, it might be shown that several could be received without any abuse of the charity."	"According to Dr. A. J. Richardson ..... 4 per cent. of the cases which were treated were not entitled to charity."

In my above-quoted extract from the hospital report it is evident that, when the "several" who could be received without abuse are subtracted from the 4 per cent., 4 cannot remain. Having been a member of the sub-committee which drew up this very clause, I may explain that this 4 per cent. was made up of three groups: (1) the unfit for charity; (2) the cases which it was impossible to duly investigate; and (3) the cases it was inadvisable to further investigate for various reasons. Now neither I nor the secretary of the hospital have given the proportions of these three groups. I am, Sirs, yours faithfully,

A. J. RICHARDSON.

St. John's-terrace, West Brighton, Oct. 14th, 1895.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—I shall be glad if you will kindly allow me space to state that I was careful not to fall into the error suggested by Mr. Tait in his letter of Oct. 12th, and that I did not refer to operations undertaken for the relief of uterine myoma. I am, Sirs, yours faithfully,

Southampton, Oct. 22nd, 1895. JOHN F. BULLAR.

*** This correspondence must now cease.—ED. L.

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THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 945.*)

"SWEATING" OF MEDICAL MEN AT LINCOLN.

THE figures given with regard to the number of patients seen and the amount of medicine dispensed by the five medical officers of the two dispensaries which the friendly societies have established at Lincoln show that too much work is done to be uniformly well done. There must be hurrying over the work somewhere and sometimes, and therefore I have urged that reform was needed in the interests of the patients as much as, or perhaps more than, in the interests of the medical profession. Now I have before me what might almost be qualified as a manifesto emanating from the friendly societies themselves, and setting forth how much reform was needed when a better system than the present one prevailed. What, then, must be the state of affairs now? Formerly there were at Lincoln only club medical officers who worked under the usual conditions. These officers undertook to provide medicine and attendance for the members of the clubs at an annual payment of 3*s.* 6*d.* per member. The medical officers were able to attend to their private practice, and their connexion with the members of the clubs helped to increase it. Young practitioners, by the care they devoted to the club patients, could make a reputation which led to advantageous private practice. This was a direct incentive to devote themselves to their club patients. But, on the other hand, there was the fact that the pay was miserably low, and consequently the temptation to neglectfulness sometimes proved irresistible. The need of reform was then acknowledged, though the reform adopted has in reality made matters much worse. Strange to say, it is in seeking to defend the present system that these facts have been brought forward. In answer to the attacks against the friendly societies' dispensaries the *Lincolnshire Echo* published on April 5th last a letter setting forth, on behalf of the members of the friendly societies, the reason which led to the abolition of the old system. The arguments adduced for this purpose are worth quoting and noting. The author of the letter in question wrote: "The abuses and neglect which crept in brought such a great demand upon the sick funds, and dissatisfaction amongst the members, whose constitutions were sacrificed and lives endangered, that a remedy had to be sought out. On inquiry it was found that attendance on a club patient was a secondary consideration with the club doctor. 'Club patients' were commonly relegated to the care of assistants, usually inexperienced and often unqualified. Hours of weary waiting in passages, kitchens, and other unsuitable and uncomfortable places increased the complaint and frequently terminated by the kitchen-maid telling them to call again. The address and the treatment in many cases were harsh, and the attendance, especially if the doctor happened to be a Poor-law officer, the same as that given to a pauper and as a matter of charity; all were supplied with club physic and club pills. Needless to say, there were many honourable exceptions to this manner, and Lincoln boasts of having years ago a record of medical men devoted to the work."

The sufficient answer to this extravagant charge against the club system is contained in the last lines of the description itself, which admits that in Lincoln there was a record of medical men devoted to the work. Angels must not be expected under such an exacting system as the old club or the new medical aid association system. The wonder is that the patients were so well served.

The friendly societies of Lincoln, however, instead of combining so as to improve the position of their medical officers, organised dispensaries where they obtain a much greater amount of work for a much smaller amount of pay. Formerly the whole of the 3*s.* 6*d.* went to the medical officer, now the friendly societies "sweat" a big profit out of this contract price. Formerly the merchant tailor had his own workshop. If 3*s.* 6*d.* was the price allowed for the labour of making a waistcoat it all went to the workmen employed there. Now the merchant tailor saves himself the trouble of organising a workshop and gives the cloth &c. and the 3*s.* 6*d.* to a sweater, who takes the whole to his den in the East-end of London. There, by the subdivision of labour and by employing starving Polish Jew refugees from Russia, the sweater gets the waistcoat made for less than 3*s.* 6*d.* and thus "sweats" his profit out of the labour he employs. The only difference, as I have already remarked, between the East-end sweater and the dispensaries of the Lincoln friendly societies is that the latter make a larger percentage of profit out of the 3*s.* 6*d.* That such profit is made out of the labour of medical men is admitted in the following sentence which I quote from the above-mentioned letter written in defence of the action of the friendly societies: "All lodges are not connected with these dispensaries, and some employ private practitioners, but to the disadvantage of the members and the funds of the society."

There is another very important admission made in this letter which fully justifies the fears that the growth of the friendly societies will deprive the medical profession of their present means of existence. The writer says: "Over 250,000—a quarter of a million—of our countrymen have allied themselves with these medical institutions. The membership and funds of the societies have increased and are increasing immensely, and not until they are able to provide for members from 'the cradle to the grave' will the leaders, managers, and supporters of these associations consider their work completed. Men of all classes are now allying themselves with friendly societies, from the peer to the peasant; bishops, clergymen, ministers of all denominations, politicians, Members of Parliament, members of our county and city councils—all unite to help forward these societies, which are founded on principles of thrift, self-reliance, self-help, independence, benevolence, concord, friendship, love, and truth."

It is very remarkable that this defence of the friendly societies embodies accurately the very complaints the medical profession makes against these organisations. As fully explained when describing the position of affairs at Portsmouth, there was a great readiness to give medical aid to ill bread-winners for a small sum per annum; but then it was understood that, so long as the bread-winner was able to work, he should pay a proper fee for the attendance given to his family. Cases where the fees for attending families varied from £1 to £7 a year were described, though the head of the family, as a member of the Manchester Unity of the Oddfellows (the same society that has established one of the dispensaries at Lincoln), only paid 4*s.* a year for the medical attendance he himself received from identically the same medical man. I pointed out that, while the club practice in one instance only brought in about 4*d.* a consultation or visit, it was the means of securing many visits or consultations at a fee of 2*s.* 6*d.* But if, as proposed in the above letter, everyone is to be a member from "the cradle to the grave," it is no longer a question of merely insuring the bread-winner, but the whole family. Whence, then, will the 2*s.* 6*d.* fees come that are the compensation for the cheap club work done and the only material inducement to attend to club work carefully, attentively, without hurry, and without undue economy in the matter of the drugs dispensed?

All that I have said so far does not, however, represent the principal grievance on which the members of the profession at Lincoln especially insist. Their great complaint is that a large number of leading tradesmen and well-to-do men of independent means avail themselves of the friendly societies and obtain medical aid for 3*s.* 6*d.* per annum when they are well able to pay proper fees. In the face of this disgraceful fact the champion of the friendly societies is so blind to the points at issue that he deliberately boasts that "men of all classes" join the friendly societies. That is just the grievance. A gentleman who was formerly Mayor of Lincoln and is now alderman, is a leading member of the Oddfellows. Nor is he merely an honorary member, patronising the institution from benevolent motives; but he receives the medical benefits just as if he was a poor working man instead of a wealthy, successful tradesman and one of the most prominent citizens of the town. It has been calculated that last year, in exchange for the paltry club subscription amounting to only a few shillings, this gentleman and his family received medical attendance and medicine which, at the rate of 2*s.* 6*d.* per visit, would have amounted to £35. As, however, a person in his position might well be called upon to pay 5*s.* per visit, it may be said that through the connexion of this one family with a benefit society the medical profession has lost £70 in one year. Far from denying this gross abuse of an institution created to help poor

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working men, the letter above mentioned actually confirms the fact by stating that "members of our county and city councils all unite to help and forward these societies." Further, it should be mentioned that when the General Medical Council held an inquiry into this matter the gentleman in question actually went up as a representative of the Lincoln Oddfellows. Another member of the Lincoln town council was a member of a benefit society, and his wife and children were attended by the club medical officer. He has now, however, recognised the false position he occupied and has sought the advice of a private practitioner, leaving his club officer to attend to the poorer members of his society. Among the various persons pointed out to me as being in receipt of medical aid from friendly societies were a master printer in a large way of business and several rich butchers. One of the latter has retired from business and lives in a handsome villa. Some master tailors, two of the principal tobacconists of the town, a person holding a high position in a foundry and earning a good income, the proprietor—or, at least, the manager—of a large hotel, a young man who is earning a good income in the beer trade, and even a dispensing druggist were all mentioned to me as being in receipt of medical aid, though they can well afford to pay proper fees. A practitioner who for many years had been in the service of one of the friendly societies dispensaries said that he was then obliged to see from eighty to ninety patients per day, and was convinced that at least 10 per cent. of these members of friendly societies could well afford to pay the usual fee for medical attendance, and had therefore no right to claim medical aid.

The presence of so many prosperous and wealthy tradesmen and others on the books of friendly societies, not merely as patrons or as participants in financial benefits, but as claimants of medical aid, is not only a great injury and injustice to the medical profession, but it is also very detrimental to the interests of *bonâ-fide* working men and to others who are morally or rightfully entitled to medical aid by reason of their slight resources. The well-to-do members of the friendly societies, being better educated, more skilful administrators, and better writers and speakers, have naturally been elected on the managing committees of these organisations. It has been urged that not only does the system tend to make medical men neglect the great crowd of patients that come upon them, but that it also tends to make the medical officers give far more attention to some of the patients than to others. Surely, as the payment is the same the treatment should be the same, but this is said not to be the case. What, then, has become of the brotherhood of which these societies boast? The medical officers of these dispensaries have to spend an undue amount of time in visiting members of the committee and their middle-class friends. They have, consequently, less time to give to the more numerous but poorer members of the society. It is a beautiful picture for the British workman to contemplate. This sworn adversary of the sweating system, this friend of fair play and a fair day's wage for a fair day's work, has elected to manage the friendly societies organised for his benefit a number of shopkeepers, small capitalists, and other middle-class men, who only pay the same subscription as the workmen. It was even proposed that one of the medical men should stop in apart from the ordinary consulting hours so as to receive the better-class members, though it was never proposed that for this extra accommodation and privilege the annual subscription should be augmented. There are to be first-class patients, but all are to pay third-class fares. It was on this point that one of the medical officers employed at Lincoln resigned. He had to attend morning and evening at the dispensary to give medical advice to the members of the society, and the waiting-room was then crowded with working men and poor people. The wealthier members did not like to come there and mix with a rough crowd, therefore they proposed that the medical officer should stop in during the afternoon so as to receive them. The medical officer, however, refused to sacrifice his afternoons so as to see some half-dozen well-to-do members who, in spite of their wealth, did not pay higher subscriptions than the workmen. Ultimately this medical officer had to resign because he did not sympathise with and help the wealthy members of the society who were anxious to receive medical aid for the 3*s.* 6*d.* per annum workmen pay, but would not put up with the rough accommodation and surroundings workmen have to endure. With the dispensers the grievance is the same as with the medical officers. The wealthy members do not like to wait in the crowd for their medicines, so they want the dispenser to stay after hours and give them their medicines separately and in a more select company. Such is the brotherhood of these dispensaries. The middle-class committee-men have introduced, for their own benefit, a system of privilege which is to the advantage of their own class, but is paid for out of the funds which, in the main, are provided by the working class. If someone gets more than his share someone else has to suffer. In this case it is the poorer members of the societies who pay for the richer members. A well-to-do tradesmen, the owner of house property, pays 3*s.* 6*d.* a year and 8*s.* for all his family. When he is ill the medical officer hastens to his house, a servant opens the door, keeps him waiting, and a good quarter of an hour is devoted to this one case. As a natural consequence, the workman hard by, who pays exactly the same sum, is treated with much greater haste. Being a workman, and feeling that he is not paying much for his medical attendance, he does not keep the medical officer waiting and is grateful for what attention is bestowed on him. He would not, however, be so contented if he realised that the visit was brief and hurried because too much time had been devoted to the wealthy brother member who lives in a luxurious villa.

Fortunately, there are at least a few working men in Lincoln who are beginning to realise how serious a grievance this inequality of treatment has become. Unfortunately they are, for the most part, but poor speakers, and though they feel very sore on the point they have not yet plucked up the courage to attack the managing committees. The rank and file of the friendly societies are sadly in want of leaders and speakers. If such leaders were forthcoming the privileges which middle-class families enjoy as members of friendly societies and at the expense of their poorer fellow-members would soon be swept away. The working-class element would also, I am convinced, indignantly abolish the sweating system. It cannot be repeated too often that medical aid is only justified within a certain wage limit, and that if wealthy members are admitted abuses will arise that are not only detrimental to the interests of the medical profession, but are equally injurious to the well-being of the working men themselves.

If the working men will not take action it is difficult to say what, for the moment, can be done to prevent this state of things. It is no use attempting to persuade the five medical officers of the two dispensaries to resign till there is such organisation or unanimity of feeling among the profession throughout Great Britain as to prevent other practitioners taking their positions. Public and professional opinion has to be further stirred and moved on this question. In the meanwhile perhaps a list might be published of wealthy persons who avail themselves of the medical aid organised only for the poor; and certainly an appeal should at once be made to honorary members of the societies who have lent their names so as to strengthen what they imagined were merely benevolent institutions. The Bishop of Lincoln is, I am told, an honorary member of one of these bodies, and yet it is very certain the reverend Bishop does not mean by this to signify that he approves of the sweating system. Pressure from above and pressure from below could be brought to bear upon the managing committees till they are compelled to establish a wage limit. If this is not done then the medical profession will have to discover some means of preventing qualified practitioners from accepting office in dispensaries where the sweating system is enforced and no wage limit is established.

Lincoln, October.

SOME OF THE HOSPITALS IN NORTHERN ITALY.

(BY A HOLIDAY CORRESPONDENT.)

Ospedale Maggiore in Milan.

DR. GRANDI, the medical director of the Milan Hospital, kindly gave me his last report, which consists of 285 pages, being chiefly statistics very carefully worked out. It is dated 1894 and refers to the three years ending in 1891. The Italian custom seems to be to publish statistics only every three

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or five years, and then somewhat tardily. The annual admissions on the average of these three years are 22.735, with 2828 deaths. The daily admissions vary from 15 on Christmas Day to 120 in August, and the deaths from 1 to 20 per day, while the average number of in-patients ranges from 1852 to 2456. In one year as many as 1087 cases of small-pox were treated, of which 63 broke out in the hospital. The average diphtheria patients number 296 in the year, including 17 which arise in the wards, and the death-rate is 47 per cent. Typhus fever would seem to be rare, for only 5 cases are admitted annually. There were only 17 cases of measles, 15 of scarlet fever, and 21 of whooping-cough. There is a special report on Dr. Visconti's work with Koch's tuberculin, which is now no longer employed. The summing-up briefly is that it is useless as a cure for tubercle, but of value for diagnosis, especially in the case of animals. Dr. Visconti spoke to me very highly of Koch's work, and believes that to him is due the credit of initiating the system of serum injections, of which that for diphtheria is a natural sequence. The great prevalence of enteric fever in Milan calls forth a very interesting report. There are 559 cases a year treated in one military and three civil hospitals, with a death-rate of 12·6 per cent. Besides this there are 147 deaths from enteric fever in the town, and if it is supposed that the mortality in the town is the same as that in hospital about 1176 cases must be added to the hospital ones, and this figure will, perhaps, include mild cases not diagnosed. This gives an annual total of 1735 patients with 218 deaths certified from one preventable disease alone in a town of 315,000 people. On investigation it appears that half the patients suffering from enteric fever come from seven of the forty-one parishes of the town, and, further, that these seven districts are intersected or surrounded by old canals—now open drains. No less than 1069 "delirious" patients are admitted to the Ospedale Maggiore in the year, besides 315 lunatics. The number suffering from scabies is 646. During the three years in question there have been 49 ovariotomies, with 8 deaths. The annual admissions include 150 "drunk" and 67 patients who attempted suicide, mostly men between twenty and forty years of age; also 15 cases of hydrophobia were treated during the three years. Since 1889 there has been an anti-rabies institute at the hospital, 97 cases having been treated in 1890 and 157 cases in 1891. The pathological laboratory was opened in 1868 by Dr. Visconti and has been under his superintendence since. The chief causes of death found in the large post-mortem room, which is furnished with five tables, are in the following order: tubercle of lungs, senile decay, pneumonia, broncho-pneumonia, diphtheria (occurring all through the year and chiefly in children under ten), and, lastly, cerebral hæmorrhage. But in a year only about 610 necropsies are accurately made. Besides ordinary notes a register is kept giving a *résumé* of the post-mortem examinations, and also a reference by numbers to other books where very thorough details are written of the clinical notes, microscopical results, and museum preparations. When a patient dies in the wards he is kept in his bed for three hours, and then for a further period of six hours on one of ten beds in the deadhouse. Each of these beds has at its head an electric bell rope, and the porter told me that he had been called up by this bell six times in the last six years, each time occasioned by some increase of rigidity in the corpse. Dr. Visconti and his assistants also examine under the microscope all clinical material sent to them from the wards, and of this work accurate registers are also kept. I was thus able to see at a glance how many times the eggs of various entozoa had recently been discovered in the fæces of in-patients. There are some out-door charities in connexion with this hospital, the most important of which provides for the care of 32,000 patients a year at their own homes, the average visiting list numbering 246 per day. No modern hospital report is complete without a reference to influenza, and here there is a list of 38 epidemics which have occurred in Italy, going back to December, 1173, and March, 1259.

Mombello Lunatic Asylum.

This is the chief madhouse for Milan province and is distant one hour's journey by train from that town. It merits a short description because it is the best hospital which I met with in the north of Italy. It has been ably superintended for the last thirty-two years by Dr. Gonzalez, who most kindly devoted a whole afternoon to showing me round. He told me he was an ardent disciple of Conolly and glories in having almost abolished restraint. His method, which is suited to his own generous enthusiasm, is to treat all his patients like children, patting their cheeks and listening for a moment to each of them. Needless to say he knows every one and they all brighten up at his approach. However, I saw another side to his character when he thundered at an old monomaniac who had just written him a threatening letter. On the whole, asylum physicians seem to require very little protection, and indeed get very little from the untrained attendants during their rounds. It must be remembered there is no Broadmoor in Italy, and every county asylum contains a dangerous homicide or two. The hospital consists chiefly of nine pavilions for patients, besides all necessary offices, connected by a narrow-gauge line for trucks. There are 1422 patients, and the attendants are reckoned at the rate of 1 in 10 for ordinary cases and 1 in 3 for the excited ones, religious sisters being strongly disapproved of by Dr. Gonzalez. He has six assistants lodged in the central building, once a palace and inhabited by Napoleon I. It stands on a commanding hill and is surrounded by forty acres of land, partly tilled by the patients, some of whom I also saw weaving, tailoring, plaiting, and making maccaroni. The mattresses of the beds were stuffed with seaweed (zostera marina) from Genoa, which, besides being very cheap, is antiseptic and does not harbour insects, and also cannot burn when lighted by an ordinary match. Among the patients in the gardens and the workrooms and playrooms I saw several general paralytics and many pellagra insane, both men and women, and in one airing court I was suddenly addressed in English by a Maltese who had a chronic alcoholic history. About 1 patient in every 70 had more or less goitre, and there was a well-marked hermaphrodite aged fifteen years in the female wards suffering from melancholia. There were also among the show cases 3 microcephali, 2 of them being brother and sister. They knew each other when brought into the same room, and kissed sadly and noisily.

Lunatic Asylum at Voghera.

An hour's railway ride from Milan in another direction there is the asylum for the province of Pavia, under the superintendence of Professor Raggi of the University of Pavia, who good-naturedly placed himself at my disposal. He has two resident assistants, and the attendants are calculated at the rate of 1 to 10 patients. The average number of patients is 470 and the annual death-rate is 66. In going through the wards I noticed that many were tied in bed with a stout band or in camisoles, and in the infirmary ward I counted sixteen men so tied, including several general paralytics. However, this is chiefly for the convenience of the attendants, and a daily list is kept of the restrained epileptic and the workers. For instance, on the day previous to my visit 5 men and 5 women were reported as "clamorous," 16 men and 7 women were under restraint, 4 had epileptic fits, 11 had been violent or had received bruises, and 2 women were menstruating; 70 men and 105 women were on the workers' list, while 200 men and 111 women were from various causes declared to be unable to work. Professor Raggi showed me an interesting collection of skulls and of brains preserved by the Jaccomino method. I learnt at this asylum and others that there are no visiting lunacy commissioners, and also that there is no general lunacy law for Italy, though Crispi has tried to introduce one. Every province has its own local regulations, and in most of them one medical man's certificate is enough to insure admission into an asylum. Much good work is being done by the medical men of North Italy, but they have not yet been carried very far on the modern waves of asepticism, hygiene, and scientific nursing. It is this latter which prevents the notions of restraint in asylums from being quite up to English date.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Privileges of Benefit Societies.

IT is well for the working man to bear in mind that in insuring his life in a benefit society he is bound by the rules of the society, and that there are liabilities as well as benefits entailed by his membership. These facts were strikingly illustrated in a case recently tried at the county court. A man sued the secretary and trustees of Court Friar Tuck of the Ancient Order of Foresters for £3 5*s.* which he claimed as arrears of sick pay; the answer to this claim

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was that the plaintiff had forfeited the amount under the rules of the Order. According to the rules any such question in the first instance had to be referred to arbitration, with an appeal from the lodge to the district, and so on until a final court of arbitration was reached. Instead of this the plaintiff had gone direct to the county court. The judge there informed him that at this stage there was no jurisdiction to help him. He might come back to the court, but people who joined voluntary societies must abide by the rules. The law is ready to provide a remedy in cases of unfair advantage or ignorance, but it is well that a reminder of this kind should be thoroughly known by those who join for prospective but mutual benefits.

Queen's College.

Since the removal of the medical faculty from this college things have gone on in a bad way. At the annual meeting summoned a few days since only four out of thirty-two governors put in an appearance. There was consequently no quorum. The same thing happened at the previous annual meeting. It seems that the college has now only nine students, and that during the last year there were but three entries. The saying of a deceased physician appears to be likely to be realised when he observed some years ago that "the grave of Queen's College was dug, and he, the grave-digger, stood at its side." Certainly theology left to itself does not flourish unassisted by the departments which were transferred to Mason College.

Insanitary Dwellings.

In one instance lately brought under the notice of the authorities the skeletons of two children were found in a cellar of a house. The owner carried on the business of an undertaker. The excuse offered was that the bodies had been received for burial, but the amount paid in such cases was so small that he only made a journey to the cemetery when he had a number to bury. The two bodies discovered were brought in a year ago, and although he had the certificates of death he did not cause the remains to be interred. Evidently any stick will do to beat a dog with, but an excuse of this kind ought not to be taken for the violation of a duty not only to the parents of the children but to the community at large. For another instance a man was summoned for having in his occupation a railway carriage in such a state as to be a nuisance or injurious to health, and so overcrowded as to be injurious to the health of the inmates. The carriage was divided into three compartments, with a total length of 20 feet and an extreme breadth of 7 feet. Exclusive of furniture about 280 cubic feet were allowed for each of the two occupants. An order was made for its removal. It is true that many people live in worse conditions than thus represented, but this does not alter the facts as pronounced by sanitary laws.

Midland Medical Society.

The inaugural meeting for the present session is to be held on Nov. 7th, when Dr. W. S. Playfair will give an address on the Nervous System in connexion with Diseases of Women. From the well-known work which Dr. Playfair has done in this direction, and the popularity of the society, a large meeting is expected.

Oct. 22nd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Port Sanitary Authority for Manchester.

THIS important question has advanced a step further. A conference of riparian authorities along the banks of the Ship Canal was held a week ago in the Lord Mayor's parlour. It was convened by an order of the Local Government Board, which was represented by Dr. Barry, one of the inspectors. He explained that under the Public Health Act of 1875 every sanitary authority bordering upon a waterway had certain duties imposed upon it with regard to the passing of ships and the health of the people on those ships, which, for the time being, were regarded as houses. There were also the Cholera Orders of the Local Government Board to be observed by these riparian authorities, acting in concert with the Revenue or Customs House authorities, and thus forming the first defence against the introduction of cholera into this country. He pointed out that where there were numerous authorities it was an advantage that there should be one responsible for carrying on the work. In the Manchester port there were sixteen or seventeen authorities, some on the Canal and some on the Mersey, and it was at present the only one in the country without a port sanitary authority. As to the "plant," as he termed it, a medical officer of health and one or more inspectors of nuisances would be required; also hospital accommodation and a mooring station where ships could be disinfected. Dr. Barry suggested that an arrangement might be made with the Liverpool authorities, who had an admirable station of the kind in the Sloyne. It would be difficult to find one altogether suitable in the Canal. Mr. C. H. Beloe, deputy chairman of the port sanitary authority of Liverpool, said it was vitally important that an infected vessel should not enter the tideless waters of the Canal; so that Manchester would have to do the work of inspection at the Customs station in the Mersey, and the Liverpool authorities might possibly object to two jurisdictions in the tideway. It had suggested itself to him that the authority of the port of Liverpool should undertake the work of examination with regard to infectious diseases, leaving to Manchester the ordinary sanitary inspection on the arrival of vessels in the Canal. The only question would be what proportion of the cost of the Liverpool work the Manchester authority should bear. Alderman Walton Smith, chairman of the Sanitary Committee, and Alderman Mark spoke of the offer Mr. Beloe had made on behalf of Liverpool as being most generous. A motion to the effect that a Manchester port sanitary authority should be formed was carried *nem. con.*, and also one that representation should be in proportion to contribution.

Waste Products in the Streets.

Numerous "orderly boys" are to be seen in the streets sweeping up horse droppings and other rubbish all the day. This certainly is to be commended. At the last meeting of the council, however, it was moved that the Cleansing Committee should report on the advisability or otherwise of providing on the footpaths suitable receptacles in which pedestrians—as the resolution somewhat pedantically has it—may deposit waste paper and other waste materials. It was said, on behalf of the committee, that some time ago receptacles were provided for the purpose, but "people mistook them for post-office pillar-boxes and put their letters in them." It is not surprising, therefore, that the resolution was lost.

Grant to the Manchester Museum.

The discussion on this subject was resumed at the council meeting last week, and, after a series of speeches nearly as long and impassioned as those which preceded the loan of several millions to the Ship Canal, it was decided, happily for the credit of the corporation, to grant the sum of £400 a year to the museum, as recommended by the Free Libraries Committee. This committee spent last year £19,703, while the amount that would be raised by the rate to which it is entitled would be £24,186 a year; the grant, therefore, will not cripple the libraries. As the benefits of this free museum, said by Sir W. H. Flower to be in some respects one of the best in the country out of London, extend over a wide area, it may be hoped that the county councils of Lancashire and Cheshire will give some help.

Extension of the Infirmary.

The resolutions of the grand committee, reported last week, do not mark any great advance. Instead of deciding on a definite course all the ground is again to be traversed. No doubt it is a serious matter to determine on rebuilding at a cost of £200,000; but there is reason to hope that the money will not be a serious difficulty. It would, however, give an opportunity for clearing away from the foundations all the old soil saturated with sewage, and all the remains of the porous brick drains of former days, and of starting afresh rid of this ancient filth. The plans for the wards, their adjuncts, and the administrative quarters could be arranged in the best possible manner, untrammelled by the defects of the present building. The alternative schemes for patching up or putting on another storey—almost unanimously condemned by the medical staff—would perpetuate many evil things, such as long dark corridors communicating with each other all over the building and preventing the possibility of isolation, and would do away with all chance of a clean foundation. Much has been done, at great cost, to improve the sanitary arrangements and condition of the present building, but the defects of construction are radical. If these schemes

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are adopted for the sake of cheapness the result will ever remain a diappointment and a failure, and the principal hospital of Manchester will be a monument showing how far she has lagged behind the knowledge of the time and how she has allowed the provision for the sick and for clinical work to stand contrasted in their poverty with the splendid appliances for teaching at the Owens College.

Oct. 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Villa Garden Settlements.

THE Northern Allotments Society has purchased an estate of 215 acres at Stocksfield to be converted into a villa garden settlement. This is the third estate the society has purchased and laid out in the near neighbourhood of Newcastle within the last few years, so that it may be concluded the former ventures have been successful. The Stocksfield Estate has been divided between sixty-six owners. The object of the society is to induce dwellers in Newcastle and the district to build and to occupy houses on portions of land of not less than one acre in extent. This is an excellent movement, and one which, as the crowded business centres of our large towns cease to become residential, is likely to be imitated wherever facilities for villa garden settlements exist.

Is Crime Decreasing?

Mr. J. T. Wharton, the able and experienced chairman of the Durham Quarter Sessions, thinks that it is, as the number of persons now brought before him is considerably less than it was some years ago. The *Newcastle Daily Chronicle*, however, demurs to the conclusion, and points out that a smaller number of prisoners does not necessarily prove that there is less crime. In support of this contention the amount of undetected crime in the country generally, and in the North particularly, is cited. It appears that in the immediate neighbourhood of Newcastle during the last few years at least five undoubted murders have been committed and no one has been made responsible. We hoped that education would diminish crime. Can it be possible that criminals are now sharper than they were in avoiding detection, or is there something wrong with our means of detecting crime?

High Death-rate in the North of England.

For the last few months the death-rate in the usually healthy borough of Sunderland has been abnormally high, owing chiefly to an outbreak of typhoid fever, as to the cause of which a Government inquiry is being held. It is not in Sunderland only, however, that a high death-rate prevails just now. In the district governed by the Morpeth rural council, the greater part of which is agricultural and pastoral, a mortality of 31 per 1000 is officially reported. This high death-rate is not due to zymotic disease, and the mortality is chiefly among children under five years of age, the causes of death being returned as diarrhœa, debility, and wasting. In the colliery villages of Ashington and Hirst the rate of infantile mortality is particularly high, being at the rate of 30·6 in the former and 54 per 1000 in the latter place.

The Tyne Piers.

After upwards of thirty years' continuous work these magnificent piers at the entrance of the river are finished. Lord Salisbury, the Duke of Devonshire, Mr. A. Balfour, and Mr. Goschen have all been asked to declare them open on Nov. 6th, but unfortunately none of these distinguished statesmen is able to accede to the commissioners' request, and consequently it has been determined to postpone the function till May, 1896. It has been suggested that the Prince of Wales might then be willing to perform the ceremony.

Wear Valley Extension Railway.

A long-talked-of project has just been completed. This line, some nine miles in length, made by the North Eastern Railway Company, from Stanhope to Wearhead, has this week been opened for traffic. It runs through a very beautiful district, hitherto not easily accessible, and in addition to opening up an isolated neighbourhood it is hoped that it may be the means of doing something to revive the now almost extinct industry of lead mining in Weardale, and thus preserve from extinction a stalwart and estimable class of men—the Weardale lead miners.

River Tyne Port Sanitary Authority—Resignation of Dr. H. E. Armstrong.

Dr. H. E. Armstrong has resigned his appointment in connexion with the above-named authority, and his resignation has been accepted. Dr. H. E. Armstrong has acted as medical officer to the Tyne sanitary authority for fifteen years, and resigns in consequence of a desire having been expressed by the town council of South Shields that the medical officer should reside at the mouth of the river, and not in Newcastle.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the Winter Session at the Edinburgh University.

THE winter session of the Medical School of Edinburgh began last week. In the University several of the professors delivered introductory lectures on subjects of current interest. Sir Thomas Grainger Stewart, in the class of practice of medicine, discussed the Nauheim treatment of heart disease and the treatment of tetanus and diphtheria by means of antitoxines. He traced the discovery of these and quoted statistics showing the value of the treatment in diphtheria. He also referred to some of the unpleasant symptoms which sometimes followed the use of antitoxin. He likewise alluded to the difficulty of preparing the antitoxin, and thought that failure might in some instances be due to the inferiority of the antitoxin employed. He spoke of the certainty that other antitoxins would be discovered, and paid a warm and suitable tribute to those who had done so much to develop this side of science. In the class of midwifery Professor Simpson reviewed the history of the chair since its inauguration in 1726. He believed it to be the earliest instituted chair of midwifery in any university. At the close of his lecture he referred to the death of Dr. Thomas Keith, who was one of the most illustrious of the men Sir. J. Y. Simpson trained. Dr. Keith and Dr. Mathews Duncan were assistants to Sir James Simpson at the same time, and they both took their share in the experiments that resulted in the discovery of the anæsthetic properties of chloroform. After graduating Keith was house surgeon to Professor Syme, who recognised his rare surgical gifts. He joined his brother, Dr. George Skene Keith, in practice, and was largely engaged in general practice before he devoted himself to the class of operations which had given him a world-wide fame. It was curious to note the influence of the two masters on the career of a pupil in whom they both took pride. Syme trained his surgical instincts, and Simpson gave them direction. Syme and the surgeons of Edinburgh generally condemned the operation of ovariotomy and denounced the operators; Simpson and the obstetricians generally maintained its justifiabilility and encouraged the younger men to operate. There were long and keen debates on the subject in the Medico-Chirurgical Society, and it was owing to the success of Keith's first six cases, which were laid before the society in 1863, that the opposition was silenced. In pathology Professor Greenfield, and in surgery Professor Chiene, dwelt upon Pasteur and his work; Professor Chiene also referred to Dr. Thomas Keith's work in surgery.

Professor Annandale's Health.

I am glad to be able to state that Professor Annandale has made so much progress towards recovery that he has been able to meet his clinical surgery class.

Scarlet Fever in Edinburgh.

Scarlet fever is endemic in Edinburgh, as it probably is in all large centres of population. In Edinburgh, owing to compulsory notification, the majority of the cases are known. From time to time the disease becomes more widely epidemic; in fact, as soon as a fresh supply of susceptible children pass from infancy this takes place. Occurring at this season of the year, it necessarily interferes grievously with school attendance, and children attending school are doubtless more liable to meet infection than if they were carefully kept at home. But if it comes to be a question between attending school and playing about the streets and closes I doubt if the former is as bad as the latter. Some nervous people think that an epidemic of scarlet fever would cease if Board schools were closed, but I fear that no such simple remedy would suffice. Every year almost there is

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more or less of an epidemic extension of the disease, and not much is heard of it until it invades the better quarters of the town, but when it does people write to the newspapers and express surprise that sanitary officials cannot prevent this and make suggestions as to how it might be avoided. All this may have its good side, but until the parasite of the disease is discovered we are not likely to see scarlet fever successfully held in check. In Edinburgh at the present time there has been the usual outcry, and the extent to which the city hospital is being used has given people the idea that the epidemic is exceptionally bad, and they cry out for additional measures for repression. The extreme infectiousness of the disease, the difficulty in securing sufficient isolation, the indifference of the great bulk of the lower classes to the risk of infection, and the fact that many mild cases are allowed to associate freely with other children make the stamping out of scarlet fever, or even the restraining of its extension, practically impossible with our present knowledge.

Death of Dr. Messer.

Dr. John Cockburn Messer, Deputy-Inspector-General of Hospitals and Fleets, Royal Navy, died last week in Edinburgh. He was a graduate of Edinburgh of 1851 and a Fellow of the Royal College of Surgeons of Edinburgh, and had seen a good deal of service.

Lectures to Sanitary Inspectors.

Dr. T. Pearson Munro, lecturer on public health in Anderson's College, Glasgow, is to give during the winter a series of lectures and demonstrations to the sanitary inspectors of the city on Chemistry in its application to Sanitary Work.

Medico-Chirurgical Society, Glasgow.

At a meeting of this society on the 18th inst. Dr. Geo. S. Middleton gave a clinical demonstration on a series of nervous cases. The following cases were included in the demonstration: (1) a child with spastic diplegia and athetoid movements; (2) a young woman with post-hemiplegic athetosis; (3) a man, the subject of acquired syphilis, with bilateral facial paralysis and absolute deafness; (4) a case of old-standing facial paralysis, with contracture and secondary over-action; (5) a woman with bulbar paralysis, muscular atrophy, and increase of reflexes; (6) a boy with peripheral neuritis due to administration of liquor arsenicalis; and (7) a man who had recovered from severe peripheral neuritis, but in whom the knee-jerk was still absent.

Oct. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

St. Vincent's Hospital, Dublin.

THE address at the opening of the medical session at St. Vincent's Hospital was delivered by Mr. R. F. Tobin, F.R.C.S. Irel., surgeon to the hospital, who took for his subject Some Questions of Medical Education, urging upon his hearers the supreme necessity of acquiring the faculty of observation in the hospital wards, and assuring them that without cultivated powers of observation no mere book knowledge can be turned to use in the practice of their profession. The first two years of the five years' curriculum are almost altogether occupied in the Dublin school with the study of sciences that form the foundations of medicine — viz., anatomy, physiology, physics, and chemistry. During the third year, however, students can give a great deal of attention, and during the fourth and fifth years almost their whole attention, to medicine and surgery proper. There are thus two stages in the curriculum—a preliminary scientific stage and one devoted directly to medical problems. Students, however, do not spend their time during this second stage to the best advantage, for in place of applying themselves wholly to hospital practice they are obliged to attend the schools for theoretic lectures in medicine and surgery and for examinations in connexion with these lectures, and these so dominate their views that even in the hospital wards many of them are on the look-out for answers to examination questions rather than interested in watching the changes in the patients. The student is reluctant to make records of cases, for he knows that, from an examination point of view, it does not pay, and if towards the conclusion of his course he is offered the position of resident pupil in a large and busy hospital he often refuses it, because he is going in for his "Final," which it is essential to pass. Medical education, therefore, notwithstanding a large amount of hospital attendance, is literary rather than practical, and this system has the serious defect of neglecting the faculty of observation. This undesirable state of affairs has been brought about by the circumstance that the regulations require the theory of medicine and surgery to be condensed each into a course of fifty lectures, and at the same time refuse to recognise systematic theoretic lectures given in hospitals in conjunction with practical work. The obvious remedy is that regulations shall be issued applying to the teaching of medicine and surgery the same principle that has been applied to the teaching of all other arts and sciences—the principle, namely, of making theoretic and practical work go hand in hand. Knowledge obtained by the observation of cases is deep, abiding, and useful, in comparison with that which is reached altogether through words.

If it is right for a student to receive his medical and surgical training at a hospital, it follows that his hospital teachers should have a voice in his qualifying examinations, assessors from the Licensing Body whose qualification is sought, of course, attending such examinations. These changes in the method of conducting medical education would not be difficult to carry out, and their effect would be far-reaching. The objections urged against them are chiefly two, the first being that the clinical teaching in hospitals is not sufficiently full and systematic to warrant the abolition of theoretic lectures in the schools. But these lectures, though only fifty in number for medicine and for surgery, are supposed to complete the education of the student in these most extensive subjects, and so hospital teachers, relieved from the responsibility of giving systematic instruction, tend to "walk the wards" with their pupils in a rambling and drifting fashion. The second objection is that hospitals do not possess museums, such as are attached to some of the schools, the specimens of which are useful in illustrating lectures. The answer to this is that in hospitals there are specimens of both life and death, of men and parts in which disease is active, and of men and parts in which it has done its work. Another superiority of hospital teaching over museum teaching in this branch of study is that in the former the natural average proportion of the various classes of disease is maintained; but in the latter there is no such proportion, for museums abound in curiosities and despise common things. Museums are of use for the purpose of making additions to existing knowledge, but not for the laying of its foundations.

The Rotunda Hospital, Dublin.

On Wednesday afternoon, Nov. 27th, the new wing of the Rotunda Hospital will be opened by her Excellency the Countess Cadogan in the presence of a large and representative assembly of the citizens of Dublin. On the previous evening, the 26th, a conversazione and Cinderella dance will be held in aid of the complete equipment of the new wards and building.

The Fatality at Jervis-street Hospital.

A man named McNamara, who was accused some months ago of negligence in causing the death of a gentleman who stepped into the shaft of the lift at the Hôtel Métropole, Sackville-street, recently attempted to commit suicide, and was accordingly confined in Jervis-street Hospital under the charge of two members of the police force. He managed, however, to elude their vigilance, and jumping through a window fell some forty feet, sustaining injuries which proved fatal in a few hours. The case of Mr. McMarr, the gentleman who was killed at the Hôtel Métropole, was somewhat remarkable from the surgical point of view. It was proved at the inquest that he had fallen a distance of only eight feet and a half, and that he was found standing at the base of the shaft. The injuries which he received were notwithstanding of a most severe character, including rupture of the diaphragm and rupture with displacement upwards of the stomach.

Irish University Education.

Irish University education will probably soon again be thrown into the political melting pot, but in what form it will emerge it is difficult to say. The present state of affairs is not satisfactory to anyone, and quite recently the whole question has been reopened

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by a series of resolutions passed by the Catholic archbishops and bishops. After stating their grievances they say their claims would be satisfied substantially: (*a*) by the establishment and endowment in an exclusively Catholic or in a common university of one or more colleges conducted on purely Catholic principles, and at the same time fully participating in all the privileges and emoluments enjoyed by other colleges of whatsoever denomination or character; (*b*) by admitting the students of such Catholic colleges, equally with the students of non-Catholic colleges, to university honours, prizes, and other advantages; and (*c*) by securing to Catholics, in the senate or other supreme university council of a common university, should such be established, an adequate number of representatives enjoying the confidence of the Catholic body. The question of how fairly to settle the claims of all parties in Irish university education is a very difficult and thorny one. Three courses suggest themselves:—1. A great central Irish university might be established embracing Trinity College, the Queen's Colleges, and the present Catholic University College, Dublin. To this plan, obviously, Trinity College would be strongly opposed, and it must be remembered it was over such a scheme that Mr. Gladstone was shipwrecked in 1873. 2. Another plan would be to found and endow a Catholic university, probably combining with it the Queen's Colleges of Cork and Galway, and to unite Trinity College and Queen's College, Belfast, in one Protestant university. In this way there would be two universities in Ireland. The Royal University would then, of course, cease to exist under such an arrangement, and its buildings would form the Catholic university. I am afraid, however, that Queen's College, Belfast, would never consent to such an arrangement, and probably Trinity College would not like the plan either. The old graduates of the late Queen's University of Ireland, many of them former students of Queen's College, Belfast, can never forget that it was to save Trinity College that their university was destroyed, and there is a tradition that the plan for its destruction was hatched within the walls of Trinity College, Dublin. Hence, with such a feeling still prevailing, the union of Trinity and Belfast Queen's Colleges in one common university would hardly be possible. 3. The third and, in the opinion of many, the most workable solution of the education question in Ireland would be to let Trinity College remain as it is, to establish and endow a Catholic university, and also to create a university of Belfast fully equipped and endowed with medical, Arts, theological, and engineering faculties. To such an arrangement there are two obvious objections, first, Can such a small country as Ireland support three universities? In reply, one has only to look to Scotland, where there are four universities, and to Wales, where, notwithstanding the number in England, the inhabitants are calling out for another university. The second objection is that such a plan would be merely denominationalism; but, under existing circumstances, however we may reget it, such a course is certainly gaining ground. If this third solution of the Irish education difficulty were carried out, of course the Royal University would cease to exist, and its present buildings could be handed over to the Catholics for their university. The University of Belfast would assist if Queen's College—which is in such a flourishing condition—and the Presbyterian colleges of Belfast, and Magee College, Derry, would form the theological faculty. The Presbyterian Church, to which the great majority of the Ulster students belong, could be granted under this scheme the right of appointing theological professors. I have ventured to sketch some plans for the solution of this vexed question of Irish university education. To all of them, undoubtedly, there are objections, but one thing is certain—the present arrangement, which is satisfactory to no one, cannot well continue much longer, and an attempt will probably be soon again made to settle the problem of Irish university education.

Extension of the Boundaries of Belfast.

At a special meeting of the city corporation held on Oct. 21st it was decided that a Bill should be presented to extend the boundary of Belfast so as to include the Parliamentary area. In future there are to be sixty members of the corporation and fifteen wards. Owing to the very rapid extension of the city in all directions there is, in many cases, no supervision either of the building or sewerage arrangements or any regulation of the frontage lines. In such places as Ligoniel and the district of the Connswater the bad drainage arrangements are constantly being discussed, but when these parts are taken within the corporate area there will be one sanitary authority, and so matters will more easily be adjusted.

Oct. 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Institut Pasteur: M. Pasteur's Successor.

THE administrative council of the Pasteur Institute met on the 16th inst. for the purpose of electing a successor to the directorate vacant by the death of M. Pasteur. The council is composed as follows: MM. Joseph Bertrand of the Académie Française, Jules Simon, Wallon, Duclaux, Maguin, and Christophe, Drs. Brouardel, Grancher, and Roux, Baron Alphonse de Rothschild, and the Vicomte Delaborde. M. Duclaux was unanimously promoted from the subdirectorship to the directorship, Dr. Roux being at the same time appointed sub-director in the place of M. Duclaux. An addition was made to the council in the person of M. Vallery-Radot, M. Pasteur's son-in-law; and M. Jean-Baptiste Pasteur, the late illustrious director's only son, was elected a member of the Assemblée (composed of thirty members, and under whose approbation the affairs of the Institute are managed by the council). The Institut Pasteur is the property of a company, but, having been recognised by the Government *d'utilité publique*, it is under the control of the State (Home Office). The Assemblée is made up of founders; by it the council is elected, the accounts passed, &c. The revenue is derived from the following sources: (*a*) the interest of 1,200,000 fr., balance of the sum of nearly 3,000,000 fr. publicly subscribed, about two-thirds of which was absorbed by the acquisition of the land upon which the Institute stands and by the building of the said Institute; (*b*) a subvention of between 20,000 fr. and 30,000 fr. made by the Agricultural Department for services rendered ("vaccinations" of animals against charbon, glanders, &c.); (*c*) a subvention (sum not mentioned) of the Ministry of Public Instruction to provide for the salaries of such officials as belonged formerly to the École des Hautes Études; (*d*) profits derived from the sale of vaccines supplied at a low rate to veterinary surgeons, these profits having been ceded to the Institute by M. Pasteur and by MM. Roux and Chamberland (the revenue from this source reaches about 20,000 fr. per annum; and (*e*) fees paid by the bacteriological students of the Institute. The anti-diphtheric department, directed by Dr. Roux under the dual control of the council of the Institute and the Ministry of the Interior, is an *annexe* of the Institute, but has a distinct budget. The headquarters of this department are at Garches (where Pasteur died) on a property ceded to Pasteur by the State. The serum is distributed gratis, according to the demands of the Ministry of the Interior, to the army, and to the hospitals and *bureaux de bienfaisance* of France and her colonies. The expenses are met by the interest of the public subscription (collected by the *Figaro*) and by a sum voted annually by Parliament (this year it amounted to 80,000 fr.). The serum is supplied to the public under the provisions of the Pharmacy Law, a small bottle being procurable at every druggist's for 3 fr. Any profit accruing from the sale will be devoted to the improvement of the particular *service*. The work done at the Institute comprises inoculations and lectures delivered by Drs. Roux and Metchnikoff, whose pupils are divided into two categories—those who are simply listeners and those who come to acquire the technique of bacteriology. There are, moreover, laboratories provided for investigators engaged in original research, the results of whose work are chronicled in the "Annales de l'Institut Pasteur." The teaching *personnel* is as follows:—Biological chemistry, M. Duclaux, who is besides Professor at the Faculty of Sciences, but who now gives his lectures at the Institute instead of at the Sorbonne, as was the case formerly. Rabies: Professor Grancher, with the collaboration of Drs. Charrin and Chantemesse. Sanitary bacteriology, "vaccinations," and practical applications: M. Chamberland. Morphological bacteriology: Dr. Metchnikof. Technical bacteriology: Dr. Roux. Finally, Professor Nocard of the Alfort Veterinary College superintends a veterinary *service* attached to the Institute. The Institute, opened in 1888, will continue its activity under the same constitution as under its late chief.

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Some Curious Clinical Analogies.

In a recent lecture on Exophthalmic Goitre Professor Potain drew attention to the curious similarity existing between the symptomatology of that disease and a fit of passion. Look at a man under the influence of intense anger and you have an exact reproduction of the aspect of a sufferer from Basedow's disease—facial immobility, prominence of the eyeballs, fixity of gaze, trembling especially of the hands, palpitation of the heart, abundant sweating, sometimes diarrhœa and psychical disturbance reaching at times unconsciousness. What renders the analogy more marked is the fact that the onset of exophthalmic goitre has synchronised with a fit of passion. Professor Potain then remarked on the resemblance in many respects of Basedow's disease with Parkinson's (paralysis agitans). This neurosis he takes to be closely analogous to another physiological condition—terror. Thus in 1848, after the Revolution, there came under notice a large number of cases of paralysis agitans. Professor Potain graphically describes exophthalmic goitre as "congealed rage," and paralysis agitans as "congealed terror" (*colère figée* and *frayeur figée*).

Oct. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Winter Weather.

"'WINTER cities,' with a vengeance," was no doubt the remark of many an "arrival" who, having expected to bask in the warmth of a genial October, looked out yesterday on the snow-besprinkled Apennines. From the Agro Romano the heights beyond Rocca Priora and the flanks of Monte Gennaro appear arrayed in white, though Soracte remains bald and bleak as if determined to prove that only in the writings of Horace is it ever touched by snow. Curiously enough, it is the extreme spurs of the Southern Apennines that are most heavily visited by the premature winter; indeed, at Agnone in Sicily the thermometer had yesterday sunk to zero Cent. The bitter *tramontana* (north wind) meanwhile is sweeping over plain and city, enfilading the streets with "chilled shot" and forcing the thinly clad pedestrian within doors, whence he comes out, if at all, cloaked and muffled as if the ground on which he treads were a landslip from Siberia. Other cities than ours are even more fiercely assailed by the northern invader, and Florence, I hear, looks out on the uplands behind Vallombrosa and above Pistoia—nay, on Monte Morello itself—fleecy with winter. "Our Lady of Flowers" in ermine, as she appeared in February last, is doubtless a lovely and imposing object; but that she should affect that pose ere the autumn is well over is too much for her most thorough (I cannot say "warm") admirers. Italians, as a rule, are ill-prepared for such unseasonable visitations, and the sick-list and even death-rate from chest affections are apt to be abnormally large in consequence. The British tourist, *a fortiori* the British invalid, who contemplates a sojourn more or less prolonged in one or other of our winter cities, would do well, therefore, to bring plenty of warm clothing, as the arrangements for heating hotel or *pension* are not always satisfactory, and the stone floors, thinly carpeted or merely strewn with rugs, are fraught with danger to susceptible new-comers, particularly to young females. Catamenial disturbance, often of a very intractable kind, has thus been occasioned, while catarrhal affections, from the simple cold in the head (what Italians call *costipazione di testa*) to the gravest lesions of the mucous tract, respiratory or alimentary, are induced or aggravated by the same absence of comfort in draughty rooms or passages.

Congresses and Congressers.

To the information already given as to the Congress of Internal Medicine, which sits here from the 22nd to the 25th inst., I may add that the representation of the profession will be weightier, as well as more numerous, than on any similar occasion. Feletti of Catania, Massalongo of Padua, Sclavo of Turin, Giuffré of Palermo, Patella of Perugia, Rovighi of Bologna, Salomone-Marino of Messina, Masini of Genoa, Sgobbo of Naples, and Banti of Florence, all professors at these respective seats of learning, are a few out of many other delegates of the same standing, while as to the physicians in consultant or general practice their name is legion. The novel feature in the present congress is, as already stated, the delivery of clinical lectures in hospital (in this case the Santo Spirito) by past masters in their special subjects. Dr. Cardarelli, Professor of Clinical Medicine in Naples University, will discourse, with illustrative references, on Primary Sarcoma of the Pleura; Dr. De Giovanni of Padua on a Form of Congenital Hepatic Lesion; Dr. Grocco of Florence on the Psychical Stigmata of Hysteria (an interesting study of such cases as that of Louise Lateau); and Dr. Riva of Parma on the Cure of Empyema. The tendency to define and limit the subject-matter of these professional congresses explains this wholesome innovation on the old, promiscuous, and decidedly over-charged programme; while the announcement of the themes beforehand enables the Congressisti to reconsider or re-examine them in anticipation, and thus to profit the more from their treatment by experts. At Venice another important congress has been held on a subject of prime importance in Italy—Hydrology and Climatology. Her rich supply of mineral waters, and the variety, salubrity, and amenity of her climates are just beginning to be appreciated by her physicians and made practically available for the invalid. Gratifying progress in this latter direction was put *en évidence* at the congress, and, as to Venice in particular, the new drinking-water with which she has been provided, the baths, and the opening up of the Canal of Saint Mark being adduced as showing the advances made in sanitary resources by the Queen of the Adriatic. Another improvement of the kind was the restoration of the port of the Lido. This is the main entrance to the city from the Adriatic, but it was allowed to become so shallow by the silting up of its bottom that the water could not admit vessels of any considerable "displacement," while the currents were so few and so sluggish as to make the islands to the north quite malarious in hot weather. The cleansing and deepening operations effected by the "Genio Civile di Venezia" have changed all that; the largest ships can now enter the lagoons with safety, and the islands are as healthy and habitable in summer as in winter. All this is very reassuring to the travelling public and may be classed with the Disinfection of Baths, the guaranteeing of Purity in the Mineral Waters of Commerce, and such like matters discussed at the congress as proofs of Italy's hygienic, no less than political, "risorgimento." A curious topic, by the way, cropped up at this congress, Free Trade in Waters impregnated with Iodine Salts. Salt, or chloride of sodium, it is well known, is a Government monopoly in Italy. Now in such mountainous tracts as the Apennine range between Forli and Florence there are many salt springs containing iodine. These are under close surveillance for the salt they hold in solution; but, notwithstanding this, the peasantry contrive to get the water in considerable quantities and extract the salt for their own use. Their *modus operandi*, however, does not eliminate the iodine, and by their use of salt so iodised they often injure their health, insanity being in some cases induced. The subject is important enough to attract the attention of the Public Health Department, and its ventilation at the congress will doubtless contribute to remedial legislation in the matter. In our university yet another congress opened to-day, that of Dermatology and Syphilography. Its president is Professor Tommaso De Amicis of the Neapolitan school, and a number of interesting papers were read and discussed in the forenoon and afternoon sittings. Of these I may note, for such of your readers as are making special studies in the same direction, Professor De Luca's monograph on Some Attempts at Sero-therapy in Lepra; Dr. Ciarrocchi's on the Absolute Necessity of Depilation in the Cure of Favus; Dr. Breda's on the Frambœsia of Brazil; Dr. Ciarrocchi's on Exudative Pleurisy during the Roseolar Stage of Syphilis; and Dr. Pini's note on Acute Psoriasis. Other papers are announced for tomorrow, and these, as reproduced in the officially revised "Atti" of the congress, will doubtless, like their predecessors, afford proof of the advances made by Italy in this very important branch of the healing art. I might wind up the list of medical or quasi-medical congresses held this month throughout the kingdom by a note on the Congress of Midwives (*Levatrici*) just concluded at Florence. But the interest attaching to this, though very real of its kind and sufficient to attract a large assemblage of *sages-femmes*, was rather social than scientific in its tenour, and even in the social aspect was of too local a character to merit more than this passing reference.

Oct. 19th.

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VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE proposal to transfer the General Hospital to the site of the Lunatic Asylum has now been set aside through unforeseen circumstances. The authorities were disposed to sell the site of the Lunatic Asylum to the State and to acquire the so-called Kobenzl (a hill in the environs of Vienna) for the purpose of building a new establishment there, as in this locality, which is remote from the bustle of the city, the asylum would have agreeable surroundings and, on the other hand, the General Hospital would have been a gainer by the change of situation. But pecuniary difficulties seem to have arisen when the matter came before the Finance Board, for although the prescribed time (Sept. 30th) has already passed, the Board has not yet made any sign of coming to a decision. As this project is now at an end the only alternative is the acquisition of the barracks next to the hospital; but in this case the clinics of the present hospital would have to be built elsewhere for the additional area would not be sufficient.

The Treatment of Diphtheria.

According to statistical returns published by the secretary of the Anna Hospital for Children the cases of diphtheria during 1894 numbered 914, with 425 deaths, being a mortality of 46·24 per cent. Among 760 cases treated by the old methods there occurred 385 deaths, yielding a mortality of 50·65 per cent., but since the introduction of serotherapy in October, 1894, there have been 40 deaths among 159 children affected with diphtheria, or a mortality of 25·15 per cent. Stenosis of the larynx in croup and diphtheria was treated by O'Dwyer's intubation and tracheotomy, either separately or in combination. In the cases where the stenosis was very urgent only tracheotomy was performed. Of 108 cases treated only by intubation 89 recovered and 19 died, being a mortality of 17·6 per cent. Both intubation and subsequent tracheotomy were performed in 121 cases, among which 28 recovered and 93 died, being a mortality of 76·8 per cent. In 166 cases tracheotomy only was performed, and among these there were 161 deaths, being a mortality of 97 per cent. The total number of cases with diphtheritic stenosis of the larynx which were operated on amounted to 395, with 122 recoveries, being a proportion of 30·8 per cent.

Professor Albert on Medical Study by Women.

The pamphlet on the Medical Education of Women published by this far-famed surgeon and teacher has not failed to cause a general sensation. The writer seeks to prove on physiological grounds that women are not well fitted to practise medicine; but his arguments ultimately lead to the conclusion that women are unsuited for any scientific occupation or pursuit, and should devote themselves to domestic duties and the exercise of the maternal functions. Under altered conditions of education women may succeed in approaching the comparatively high intellectual level of men; but they will nevertheless not be logical, for the impulsive faculty predominates in them, whereas the reflective and methodical habit of mind is peculiar to men. After this unflattering decision the writer discusses the question of the admission of women to medical study, and appeals to a pamphlet by the late Karl Vogt of Geneva, in whose opinion the small success of women as medical practitioners is due to their insufficent preparatory studies. Women, he concludes, are not competent to undertake the difficult tasks of medical practice, but they may do useful service in midwifery and operations. For this purpose they should be instructed in the elements of physics, chemistry, anatomy, physiology, surgery, and midwifery.

The Health of the Army.

According to the official report the number of recruits in 1893 amounted to 764,222, of whom 74·9 per cent. were rejected, as against 77·6 in 1892 and 75·3 in 1891; 2·3 per cent. were disqualified because of insufficient stature, and 51·7 per cent. because of weakly development of body, while 20·9 per cent. were declared absolutely unfit for service. The stature of 153 cm. (= 5 ft. 1 in.) was reached by 3·6 per cent. The details of the rejections for disease and deformity are the following; 0·49 per cent. for scrofula, 1·98 per cent. for diseases of the eye, 2·66 per cent. for varix, 2·39 per cent. for goitre, 2·21 per cent. for hernia, 0·81 per cent. for varicocele, 1·69 per cent. for knock-knee, 1·4 per cent. for flat-foot, and 2·18 per cent. for deformities of the thorax, the spinal column, and the skull. Insufficiency of stature existed in the following proportions among the men of the several nationalities: 1·6 per cent. for the Croats, 2·6 per cent. for the Hungarians, 2·8 per cent. for the Germans, 3·5 per cent. for the Bohemians, 4·3 per cent. for the Roumanians, 6·7 per cent. for the Poles, whereas the cases in which the requisite standard was attained respectively amounted to 27·4, 26·7, 24·2, 23·8, 34·8, and 22·2 per cent. During 1893 the rate of invaliding was 8·79 per cent. of the soldiers against 9·11 in 1892 and 8·91 in 1891. Scorbutus formed 0·23 per cent. of all the registered diseases, arthritis 0·81 per cent., scrofula 0·13 per cent., phthisis 0·32 per cent., trachoma 0·77 per cent., pneumonia 0·85 per cent., pleurisy 0·44 per cent., angina 4·59 per cent., syphilis 6·54 per cent., and diseases of the skin 21·58 per cent.: the report also mentions 41 cases of cholera. The number of deaths amounted to 1172, being a mortality of 0·39 per cent. of the army, against 0·45 per cent. in 1892 and 0·4 in 1891, the highest monthly rate being registered in April and the lowest in August. Suicides numbered 321, being equal to 0·1 per cent., and there have also been 109 cases of attempted suicide and 76 of self-mutilation. The report confirms the well-known fact of the increasing degeneration of the Galician population and the prevalence of venereal disease, attributable to service in Bosnia, where syphilis is raging.

Unhealthy Houses in Vienna.

Those who expected that the new Building Act would become law in 1894 have been disappointed, and meanwhile houses have been erected in contravention of the rule that 15 per cent. of the site should remain uncovered by buildings. The housing of the masses, therefore, remains as unsatisfactory as ever, and will not be improved as long as the poor are at the mercy of speculators eager for exorbitant profits. Under these circumstances it is not surprising that many persons have to rent cellar dwellings and other places unfit for habitation. Another abuse which frequently occurs under the present system is the premature occupation of newly built houses. It is well known that brickwork requires a year for effectual drying and for the passage of air through the interstices to become established, but nevertheless, and in spite of legal prohibition, tenants enter into possession almost before the scaffolding is removed. Chronic ill-health among children, scrofula, infectious diseases, early death, and the initiation of youth into vice are some of the evils resulting from overcrowding and unwholesome dwellings.

Cholera in Galicia.

During last week 19 cases of cholera and 18 deaths have been reported from the districts of Tarnopol, Kamionka, and Trombosola, making a total of 113 cases with 77 deaths since the commencement of the outbreak.

Oct. 21st.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

New Regulations for the Russian M.D. Degree.

CONSIDERABLE changes are about to be made in the Russian degree of Doctor of Medicine, both in the methods by which it is obtained and (so far as Government authority can alter the status of a degree) in the general standing of the M.D. degree. The proposed alterations were suggested some years ago by the Ministry of Education, and in the meantime were submitted to the criticism of the medical faculties of all the Russian Universities and the Imperial Army Medical Academy. Finally the scheme came, as all such schemes must, before the Medical Council, the final authority in all medical matters. The Council has decided to make the following changes. The degree of M.D. will no longer be an *utcheno-practitcheski* degree as hitherto—that is to say, it will cease to be classified among others as a "scientific-practical" degree, but will be purely *utchenui*—that is, "scientific" or "learned." Consequently, Doctors of Medicine will cease to be classed as belonging to an *utcheno-sluzhebnui* calling. To make this quite clear would necessitate a complete account of the system of *tchins*, castes or ranks, which obtains in Russia, and by which the whole nation is divided and subdivided into groups and each person labeled according to his calling and rank in it. Briefly the result of the new change appears to be that, as the above-mentioned term signifies rather the official rank (length of

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service &c.) of the individual than the extent of his scientific attainments, holders of the M.D. degree will be outside such official designation altogether. The conditions under which the degree will in future be granted are these: The candidate must have obtained the Russian diploma of "Vratch" (or medical practitioner) at least three years before the examination for the M.D. is concluded. This examination, which covers many subjects, must not extend over two *semestres*. The candidate who passes this must within the next five years present and defend a thesis on some professional subject; if he does not do so, but should still desire to obtain the degree after a longer period than five years, he has to undergo a fresh examination. The examination includes such general subjects as anatomy (macroscopic and microscopic), physiology, pathological anatomy and histology, the history of medicine, and general hygiene; but it is more particularly directed to the special branch of the medical sciences which the candidate may choose. Specialism is, indeed, the keynote of the new regulations. There are seventeen subjects or branches of specialism named; these are anatomy, histology, physiology, physiological chemistry, pathological anatomy and histology, general pathology, pharmacology, pharmacy and pharmacognoscy, internal diseases, nervous and mental diseases, venereal and skin diseases, surgery, ophthalmology, midwifery and gynæcology, disease in children, hygiene, and finally legal medicine. There is little doubt that under the new regulations the degree of M.D. will be considerably harder to obtain than it is now; and it is now by no means easy. What seems likely to be questioned is the wisdom of making it practically inaccessible to any but specialists. On the other hand, specialism meets with high approval and success in this country and is carried to an extent undreamt of in England.

Cholera in Russia.

The following table completes the statistics of cholera in Russia up to the present; it is a continuation of the table in my last letter:[1]—

	Cases.	Deaths.
In Volhynia.		
Between Aug. 19th and Aug. 26th	4273	1668
,, Aug. 27th ,, Sept. 2nd	3554	1417
,, Sept. 3rd ,, Sept. 9th	2330	903
,, Sept. 10th ,, Sept. 16th	1919	798
In Kief.		
Between Sept. 3rd and Sept. 9th...	16	3
,, Sept. 10th ,, Sept. 16th...	41	18
In Podolia.		
Between Aug. 20th and Aug. 26th	35	11
,, Aug. 27th ,, Sept. 2nd	16	8
,, Sept. 3rd ,, Sept. 9th	28	15
,, Sept. 10th ,, Sept. 16th	9	3
,, Sept. 17th ,, Sept. 23rd	0	0
In Primorskaia or Maritime Province.		
Between July 1st and Aug. 29th...	74	54
,, Aug. 30th ,, Sept. 5th	8	4
,, Sept. 6th ,, Sept. 12th	8	11
,, Sept. 13th ,, Sept. 18.h	2	1

It will be seen that the epidemic is diminishing everywhere except in the government of Kief, where it is, or was, increasing. It is present in only one *uyezd* of the government—that of Berditchef. In Podolia, it will be observed, the epidemic is extinct.

The late Tsar and M. Pasteur.

In connexion with the death of Pasteur it may be of interest to recall the fact that one of the most munificent of the original donors to the Institut Pasteur was the late Tsar, Alexander III., whose donation was no less than 100,000 fr. Many Russian learned societies and some lay corporations sent representatives to the recent funeral ceremony in the Rue Dulot.

Causes of Death in the Medical Profession.

The last monthly report of the Medical Department contains a supplement of some interest. This is a tabular statement of the cause of death of 1400 medical men who have died in Russia during the last six years. The most striking figure in the table is the 457 deaths from infectious diseases—that is to say, that nearly one-third of the total number of deaths were due to disease contracted (presumably) in the course of professional duty. These 457 deaths include 95 from typhus fever, 193 from pulmonary consumption, 28 from typhoid fever, 10 from diphtheria, and 3 from small-pox. From diseases of the respiratory organs there were 52 deaths, of the circulatory organs 122, of the alimentary system 39, of the excretory system 35, of the nervous system 120, and, finally, from suicide 50.

St. Petersburg, Oct. 7th (19th).

[1] THE LANCET, Oct. 5th, 1895. The dates in the table are all according to the Old Style.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera at Damietta.

TWELVE years ago, on June 22nd, 1883, cholera was discovered at Damietta, a seaport town of about 40,000 inhabitants of the strictly conservative order of Mussulmans. Now, after many summers during which cholera has been fruitlessly searched for by clinical and bacteriological experts, the fiend has suddenly reappeared. So far it is unknown whence or why, and it has not yet been possible to trace any connexion between it and the return of the pilgrims from Mecca, where there undoubtedly was cholera in the summer months. But it is satisfactory to state at once that its discovery has not, as in 1883, been preceded by a long period of premonitory diarrhœa. There is a history of seven outbreaks of cholera in Egypt since 1831, and every one of those occurred during the summer, usually beginning in June and ending in October—i.e., appearing when the Nile is low and the drinking-water foul, and vanishing gradually when the Nile flood has been some little time at its height and has had time to carry all impurities from canals and wells by its majestic flow towards the sea. To find a parallel to the present year I must go back to 1837, when there was a short mild outbreak of cholera in September, but this, according to Hirsch and other observers, was part of a continuous progress through Tripoli and Tunis to Abyssinia and Zanzibar. The 1837 disease has left no official traces behind it in Egypt, and I can only hope that the present scare will be as little harmful to the welfare of this country. On Oct. 12th news reached the Sanitary Department in Cairo, from their inspector at Damietta, that he had heard of two cases of suspicious diarrhœa and vomiting, and that in one the patient was already dead. Instructions were at once telegraphed to him to perform a necropsy and preserve the intestines for Dr. Kauffman, who was immediately sent to Damietta with Dr. Pinching. Dr. Kauffman reported next day that he had found no bacilli in the fresh fæces, but that they existed in small numbers in peptone cultures. He sent at the same time a special messenger with some of the suspected material to Dr. Bittar, a disciple of Professor Koch, who shares with Dr. Kauffman the highest bacteriological reputation in Egypt. Dr. Bittar, working in his laboratory in Alexandria, telegraphed independently that he also failed to find any comma bacilli until after a peptone culture. Dr. Kauffman, who studied cholera clinically at Hamburg, also stated that the cases in the hospital wards and in the post-mortem room were not unlike mild cholera. The English authorities determined from the outset to act energetically and openly. The Quarantine Board and the press were informed, Dr. Rogers Pasha was recalled from leave in Europe, and all possible sanitary measures were put in force at and near Damietta. On Oct. 13th there was a second death, and on the 14th two others, all confirming the diagnosis only too certainly. On Oct. 15th at 2 A.M. characteristic colonies on gelatine were seen of the first two cases, and to-day I, with Dr. Armand Ruffer, have seen bacilli from the sixth death, which occurred yesterday. A rice-water stool was taken direct from the ileum soon after death and furnished bacilli on peptone, but in very small quantities. It is by no means conceded in Egypt that the comma bacillus is the cause of cholera, but it is, of course, recognised that it is a constant companion, if not more. Altogether there have now been seventeen cases, including eight deaths, all living in one of the worst quarters of Damietta and taking water from an unclean canal in the neighbourhood. Now that the existence of the disease is proved the water-supply is of the greatest importance. I am able to state upon the highest authority in Egypt that Damietta is now having its best possible water-supply, though its poorer inhabitants may have to be prevented by force from making use of that which is bad. The Nile flood reached Damietta this year at the end of July about ten days earlier than usual, and even before that there was a very fair supply of water all through the

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summer, for the Nile was at an exceptionally high level. When the Nile is low the water becomes salt because it is then below the sea level, and the inhabitants have to depend upon a large cistern which has lately been made water-tight and is regularly cleaned out. This is sufficiently large to supply the town for two months. Moreover, since 1890 a new circular canal has been dug, bringing Nile water from near Cairo, and this is now at its height. About the same date the *cloaca maxima* of the town was filled in and converted into a road. During the latter half of September there was a mysterious illness in the village of Ekhwa, and also in the eastern Delta, but many miles from Damietta; twelve sick people were treated and as many as nine died. The sick and the necropsies were seen by Dr. Kauffman, who failed to find any evidence of cholera, bacteriologically or otherwise. They were also seen by Dr. Hamdy Bey, who, as sanitary inspector of Cairo in 1883, had a large experience of cholera. Both declared officially that the disease was not cholera, and they believed that it was due to some ptomaine poisoning. The inhabitants of this village lived chiefly at this time upon dates, which they were gathering all day, and upon "fisikh," a stinking fish of which the natives are very fond. Since the reports from Damietta I have interviewed both these medical men, and they are still quite firm in their belief that the September illness was not cholera.

Cairo, Oct. 16th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Election of the Staff of the Melbourne Hospital.

ON Aug. 15th last the whole of the honorary medical staff of the Melbourne Hospital, eighteen in all, were elected by the subscribers to the institution for a period of four years. The polling was conducted in a large hall in Collins-street, the pavement in front of which, and for a considerable distance beyond, was blocked all day by an eager crowd, and the public excitement was even greater than that seen at a political contest. The partisans and touts of several of the candidates wore colours and distinguishing badges, and were most persistent in pushing the claims of their respective candidates. The proceedings, as a whole, were anything but calculated to raise the profession in the eyes of the public, and in individual instances were most offensive, and even ludicrous, as, for instance, when a small donkey-cart, holding a diminutive boy, was driven up and down the street placarded with large posters asking for votes for two of the candidates, both of whom, however, repudiate the device. A remarkable feature was the number of ladies who were present working for different candidates, while a most discreditable one was the fact that between twenty and thirty cases of impersonation of voters occurred. For months past (as explained in a previous communication) candidates and their friends have been conducting a most vigorous canvass, personally and otherwise, and it is an open secret that money was spent freely in manufacturing votes. It was supposed that a by-law passed a few months ago would have prevented this; but some means of evading it must have been discovered, as the president of the hospital stated, in a letter to the press, that 130 people in Adelaide voted by proxy and for one candidate. It must not be supposed that all the candidates resorted to these undignified and discreditable electioneering dodges, and it is gratifying to know that those members of the old staff who refrained from making a personal canvass and conducted their electioneering in a quiet and honourable manner were not only re-elected, but in most instances occupied good positions at the poll. The results were as follows, all the members of the old staff seeking re-election to their former positions being returned, their names being indicated in each case by an asterisk:—

PHYSICIANS.

To IN-PATIENTS (4).

	Votes.		Votes.
*Dr. J. Williams ...	2674	*Dr. P. Moloney ...	1962
*Mr. J. W. Springthorpe	2481	Dr. D. Grant ...	1761
*Dr. J. R. MacInerney	2331	Dr. H. E. Astles ...	1427

To OUT-PATIENTS (5).

	Votes.		Votes.
*Dr. J. B. Nihill ...	2658	Dr. W. Andrews ...	1713
*Dr. W. R. Boyd ...	2383	Dr. G. Annand ...	1201
*Dr. W. C. Dalsh ...	1984	Dr. E. J. Keogh ...	1194
*Dr. G. T. Howard ...	1863	Dr. C. Bage ...	1166
Dr. H. F. Lawrence	1726		

SURGEONS.

To IN-PATIENTS (4).

	Votes.		Votes.
*Mr. R. A. Stirling ...	2632	*Mr. C. S. Ryan ...	2249
*Mr. T. N. Fitzgerald	2310	Mr. H. M. O'Hara ...	1418
*Mr. F. D. Bird ...	2278	Dr. W. Gardner ...	1034

To OUT-PATIENTS (5).

	Votes.		Votes.
*Mr. A. W. F. Noyes	2364	Mr. W. K. Hughes ...	1524
*Mr. G. A. Syme ...	2247	Mr. James Amess ...	1119
*Mr. G. C. Rennie ...	2177	Mr. R. H. Russell ...	906
*Dr. W. Moore ...	2143	Mr. H. P. Godfrey ...	743
*Mr. F. H. Langlands	2093	Mr. J. A. Robertson	591

As has happened after previous elections, proposals are now being made for altering the method of election. A Bill was introduced into the Legislative Council to appoint an electoral college for all the hospitals in the colony, but the Bill was not even voted on, so evident was the opposition to it. The Medical Society of Victoria at its last meeting decided to hold a conference with the other medical societies for the object of devising some better method of election. In the past, however, the difficulty has not been in devising schemes, but in getting them carried into effect.

Fatal Case of Abortion by a Quack.

Reference has already been made to the success and effrontery with which quackery is practised in Sydney. One of the fraternity, however, would appear recently to have gone a little too far, and in consequence is now lodged in gaol on a charge of murder. The first discovery in the case was rather sensational, a packing case being found in a principal street in Sydney containing the mutilated remains of a young woman. The inquiries of the police soon enabled them to get the body identified as that of a girl who had left her mother's home and went to Sydney with the object of getting abortion procured. It would appear that she went to the quack in question, who is alleged to have operated, with the result that she developed peritonitis and died. He then is said to have made a crude post-mortem examination and attempted to dispose of the remains in the manner described, which led to his speedy arrest.

Hydatid Cysts: their Treatment, Diagnosis, and Prevalence

Hydatid disease continues to occupy the attention of the profession in Australia. Mr. Charles Ryan of Melbourne has recently read two papers dealing with its surgical treatment. In the first paper two cases of multiple hydatids of the abdomen were described. In one case eighteen cysts were dealt with in four separate operations. At the first operation thirteen cysts in the omentum were removed, the portion of omentum containing them being ligatured and removed *en masse*; while another cyst growing from the pelvic peritoneum was evacuated, the cyst removed, and the adventitial sac sutured and dropped back into the abdominal cavity and the parietal wound closed (Bond's method). This cyst suppurated and had to be opened and drained, and another cyst pressing on the rectum was opened through the cyst first treated. Two other cysts on the other side of the abdomen were treated by Lindemann's operation and drained. The patient was desperately ill for a time, but recovered perfectly. In the second case fifty cysts in all were treated in six successive operations. Eighteen omental cysts were completely removed at the first operation. At the second seven further omental cysts were removed and two cysts in the liver treated by Lindemann's method. At the third operation two more hepatic cysts were treated in the same way. At the fourth operation five cysts in the mesentery were removed and three were incised and dropped back without suture of the adventitia. At the fifth operation a cyst on the upper surface of the liver was opened through the pleural cavity after excision of portion of a rib; the cyst was extracted and the wound closed without drainage or suture of the adventitia. Finally, at the sixth operation a splenic cyst was opened from the abdomen and treated in the same way. A good deal of constitutional disturbance followed the first four operations, but not the last two. In his second paper Mr. Ryan related four further cases of hepatic cyst treated by the intra-peritoneal method, without suture of the adventitia, and with immediate closure of the abdominal incision. All did well, and in three recovery was much more rapid than after Lindemann's operation. In one case some constitutional disturbance occurred, and eight days afterwards bile was evacuated through the wound and continued to discharge for three weeks. As the result of his experience Mr. Ryan is a strong advocate of the method of treatment adopted in these

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cases, and says that "Lindemann's operation may now be relegated to the past for simple and uncomplicated cases, and be confined to suppurating and a few exceptional cases." He also points out the advantage of dealing with multiple hydatids in several successive operations when an attempt to remove too many at once would prove fatal. With this opinion surgeons who have had experience of these cases will agree, but the discussions on the two papers and on previous occasions show that there is far from unanimity as to the general applicability of the intra-peritoneal method, and difference of opinion exists as to its dangers and as to what happens when hepatic cysts are healed in this way. Some maintain that the edges of the incision in the adventitia become apposed to the abdominal incision, and that if serum or bile be effused into the adventitial sac the effused fluid will make its way out through the parietal incision and not into the peritoneal cavity. Others maintain that the fluid will escape into the peritoneal cavity, but will do no harm, being rapidly absorbed—i.e., if aseptic. Several cases have now been reported which show that bile does escape, and so far it has always, so far as is known, made its way out through the parietal incision and without doing serious harm. Since Mr. Ryan read his paper, however, he has himself operated by the intra-peritoneal method on a large cyst in the left lobe of the liver, with a fatal result from septic peritonitis. At the post-mortem examination the adventitial cyst was not near the incision in the abdominal wall, and was moderately distended with dirty grumous fluid similar to that which occupied the general peritoneal cavity. Dr. Fiaschi of Sydney contributes to the August number of the *Australasian Medical Gazette* a note on the value of "Santini's hydatid resounding sound" obtained by percussing a hydatid cyst while auscultating it. Dr. Fiaschi has verified the fact that the sound exists, and regards it as valuable, not only in helping to diagnose hydatid from other tumours, but in distinguishing single from multiple cysts. At the last meeting of the South Australian Branch of the British Medical Association Dr. E. C. Stirling of Adelaide read a paper on the Relative Prevalence of Hydatid Disease in the various Australasian Colonies, compiled from figures supplied to him by the different hospitals. It appears that hydatid disease is most prevalent in South Australia, where practically 1 out of every 100 patients admitted to hospital suffers from it. Victoria comes next with a percentage of 0·64, New South Wales has a percentage of 0·57, Tasmania 0·52, Western Australia 0·23, New Zealand 0·19, and Queensland 0·07. The average for all the colonies is 1 hydatid for every 206 in-patients. There is a special concentration of the disease in the south-eastern district of South Australia and the western district of Victoria. From a comparison of these figures with those compiled by the late Dr. Davies Thomas in 1884 it appears that there is a substantial increase in the prevalence of the disease, though the increased ratio is also probably to be accounted for to some extent by the disease being more frequently recognised.

Phthisis in Australia.

Dr. G. L. Mullins of Sydney has contributed to the August number of the *Australasian Medical Gazette* a paper bristling with statistics as to the prevalence and distribution of phthisis in the Australian colonies. He controverts the statement of Hirsch that "the reputation that Australia used to enjoy for the rarity of consumption and for the favourable influence of its climate upon the course of the malady has of late been shown to be a mistaken one." Comparing the death-rate from phthisis both per 100 deaths from all causes and per 1000 living inhabitants of Australia with other countries, Dr. Mullins shows that Australia has by far the lowest rate, and that the capital cities of that continent have a much lower rate than European cities. Further, it appears that phthisis is decreasing in prevalence in Australia. From the returns of Queensland—the only colony from which suitable returns can be procured—it appears that the Australian born population is not subject to phthisis. At the last meeting of the New South Wales Branch of the British Medical Association Dr. Sydney Jones advocated the establishment of a "farm hospital" for the treatment of cases of phthisis in its early stage. The buildings should be of an inexpensive kind, surrounded by a large area of land to be cultivated by the patients, and in this way it might be partially self-supporting. He objected to the mixing of early and advanced cases of phthisis in the same hospital.

Obituary.

THOMAS GROOM, F.R.C.S. ENG.

BY the death of Mr. Groom of Whitchurch, who passed quietly away on Oct. 7th, the county of Salop has lost its senior medical practitioner, a highly respected veteran, whose talents had for more than sixty years been devoted to the relief of suffering. He belonged to a very old Shropshire family, being the fourth son of the late Mr. John Groom, formerly of Hardwicke Grange, and he was born at Wolverley Hall in the same county. Hardwicke was the residence of Lord Hill, the famous general of the Peninsular War, who also fought at Waterloo, and was Commander-in-Chief to His Majesty George III., and it was there that he died. Mr. Groom commenced the study of medicine by becoming an apprentice to the late Dr. Gwynne of Wem. He subsequently studied at Guy's and St. Thomas's Hospitals, and after passing the usual examinations gained the diploma of the Society of Apothecaries in 1833, and became a Member of the Royal College of Surgeons of England in 1834. Having commenced practice at Whitchurch in 1834, he for many years enjoyed a large and lucrative practice in the town and neighbourhood, and in 1861 was admitted an Honorary Fellow of the Royal College of Surgeons of England, but of late years he retired from the more active duties of his profession. The deceased endeared himself to a large circle of friends, by whom he was much esteemed, and his cheerful disposition and genial hospitality will long be remembered. He would have been eighty-six years of age had he been spared a few weeks longer to see Nov. 21st, and was a widower, having been twice married, but has left no family. He was an ardent sportsman, and as showing the abundance of game in the neighbourhood of Whitchurch in the "good old days," as compared with the present time, it may be noted that one forenoon in September in the "forties," before the days of breechloaders, he killed with one barrel thirty brace of partridges. So greatly was the deceased respected that when his funeral took place, on Oct. 10th, along the entire route from his late residence to the parish church there was not a house where the blinds were not drawn down or the shutters closed. Many beautiful wreaths and mosses were deposited on the grave by relatives and personal friends.

FREDERICK BERNARD BETTS, M.R.C.S. ENG., L.R.C.P. LOND.

ALL those members of the profession who came in contact with Mr. F. B. Betts will be deeply grieved to hear of his untimely death at Antofagasta, Chili, on Sept. 4th. Mr. Betts entered the medical school of the Westminster Hospital in 1884, and worked with unremitting zeal until he became qualified to practise in 1889, distinguishing himself by taking no small number of prizes. He held in the hospital all the resident posts until failing health sent him for three voyages to South America as surgeon to the R.M.S. *Iberia*. On his return with recovered strength he acted as resident medical officer at Queen Charlotte's Lying-in Hospital, after which he left England for the last time on his acceptance of a post as surgeon to the Huanchaca Silver Mine and Railway Company at Antofagasta. Possessed, as he was, of an exceptionally cheerful disposition, he quickly won the hearts of those among whom he had elected to dwell, and his early death—Mr. Betts was but twenty-eight years of age—was received with universal dismay amongst European residents and Chilians alike. The *Chilian Times* of Sept. 11th paid a touching tribute to his memory in a long article, concluding: "Although but little more than two years resident in Antofagasta, the universal grief manifested at his death and at his grave testified how much he was respected and beloved. His memory will linger long in many a grateful heart."

JOHNSON MARTIN, L.F.P.S. GLASG., L.S.A. LOND.

THE many friends and acquaintances of Mr. Johnson Martin, of Great Lever, near Bolton, have been deeply moved by his death, which took place on Sept. 22nd at his residence, Carlisle-terrace, Moses Gate. He was the son of

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Dr. Robert Martin, and was born at Tyldesley in 1821. Having resolved to follow his father's profession, which two of his brothers had already entered, he studied at the Pine-street School of Medicine, Manchester, increased his knowledge by apprenticeship to one of his brothers, and qualified as L.S.A. in 1851. After a further period of study at King's College he obtained the diploma of the Faculty of Physicians and Surgeons of Glasgow in 1857, and before many years was in the enjoyment of an extensive practice at Farnworth, near Bolton, from which place he removed to Moses Gate in 1881. Mr. Martin took an active part in local politics and public business for more than thirty years, contributed several articles to periodical medical literature, and in 1883 wrote a report on Over-pressure and Home Lessons to the Local Government Board. He has left a widow and family, one of his sons being in the medical profession. At the time of his death he was President of the Bolton Medical Society.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. L. T. Tumas, formerly Professor of Internal Medicine in Warsaw, from phthisis at Yalta in the Crimea. He had been a distinguished student in the St. Petersburg Medico-Chirurgical Academy, where he held office under the late Professor Botkin and was assistant physician in charge of Professor Manassein's wards. He had published papers on phthisis, on the vomiting centres, and other subjects.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board under the four years' regulations in the subjects indicated:—

Chemistry, including Chemical Physics:

Anderson, Lewis Pemberton, University College, Liverpool, and Owens College, Manchester.
Ashe, Arthur Ogilvie, King's College, London.
Duncan, James Simpson, Westminster Hospital.
Duncan, John Marie Sloane, London Hospital.
Edwards, William Howard, Guy's Hospital.
Read, Walton Rix, private study.
Wolverson, John Archibald, Mason College, Birmingham.

Materia Medica:

Ahrens, Henry Augustus, King's College, London.
Argles, Robert Lendon, St. Mary's Hospital.
Beverley, George William Bertram, University College, Bristol.
Butler, Thomas Langton, St. Mary's Hospital.
Cater, Joseph, King's College, London.
Chidley, Thomas James, Carmichael College and Royal College of Surgeons, Dublin.
Duncan, George Ernest, Guy's Hospital.
Edwards, William Howard, Guy's Hospital.
Ellis, Martin Francis, Yorkshire College, Leeds.
Fox, Campbell Tilbury, University College, London.
Haynes, George Secretan, St. Bartholomew's Hospital.
Henery, John Philip Edmund, St. George's Hospital.
Hopkins, Edward Lewis Nathaniel, Middlesex Hospital.
Lennane, Alfred James Andrew, University College, London.
May, Walter John, Charing-cross Hospital.
Meade, Frank Elliott, St. Bartholomew's Hospital.
Mussellwhite, William, Guy's Hospital.
Nicholls, Ernest Albert, London Hospital.
Norrington, Henry Lawrence Weekes, University College, Bristol.
O'Flaherty, Austin Romnald, London Hospital.
Silvester, William George, Mason College, Birmingham.
Wilcox, Richard Loy, University College, London.
Williams, William John Howard, St. Mary's Hospital.
Youell-Carter, Oliver Charles, Charing-cross Hospital.

Elementary Anatomy and Elementary Physiology:

Bennett, Percy Moore Septimus, Middlesex Hospital.
Beringer, Fritz John Alfred, London Hospital.
Dutton, William, Owens College, Manchester.
Holroyde, Alfred, Yorkshire College, Leeds.
Walmisley, Nicholas, St. Bartholomew's Hospital.
Whyte, Frederick William, Queen's College, Belfast, and Mr. Cooke's School of Anatomy and Physiology.

Elementary Anatomy only:

Agnew, Samuel Skelton, Queen's College, Cork and Belfast.

Elementary Physiology only:

Nelson, William Ernest, Cambridge University.

The following gentlemen passed the First Examination of the Board under the five years' regulations in the subjects indicated:—

Chemistry and Physics:

Alderson, Francis Bellairs, Firth College, Sheffield.
Bell, Robert John, Charing-cross Hospital.
Bennett, William Frederick Cockayne, Firth College, Sheffield.
Beverley, Kenneth Harold, University College, Bristol.
Brunton, Arthur Greene, Mason College, Birmingham.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Causton, Albert Edward, Guy's Hospital.
Clarke, Arthur Allen Faster, St. Thomas's Hospital.
Cox, George Ralph, School of Science, Cheltenham.
David, Archibald Sinclair, London Hospital.
Davis, Alexander Montagu, Mason College, Birmingham.
Devitt, Herbert Pye-Smith, University of Cambridge.
Dunstan, Robert, London Hospital.
Francis, William Varè Chalmers, Westminster Hospital.
Fyffe, Robert James, Firth College, Sheffield.
Gauld, Reginald, London Hospital.
Goble, Edwin Wallace, Guy's Hospital.
Goodwin, William Richard Power, St. Mary's Hospital.
Green, Samuel Morris, University College, Liverpool.
Gribbell, William Ernest, St. Mary's Hospital.
Hagon, Albert, University College of South Wales, Cardiff.
Haig, Thomas Baker, St. Bartholomew's Hospital.
Hall, Robert William Basil, Guy's Hospital.
Harris, Thomas Arthur Ball, Firth College, Sheffield.
Harrison, Reginald Temple, St. George's Hospital.
Hearn, Edward Michael William, London Hospital.
Hopkins, William George, St. Mary's Hospital.
Kerfoot, Stanley James, London Hospital.
Lamb, Ralph, University College, Liverpool.
Leggatt, Claude Edward Heisch, St. Mary's Hospital.
Lewis, Arthur Cedric, Guy's Hospital.
Loosely, William Henry, Guy's Hospital.
Mead, Edgar Preston, London Hospital.
Moses, David Assur Henry, St. Bartholomew's Hospital.
Narramore, Edward Giles, School of Science and Technology, Liverpool.
Passmore, William Henry, Charing-cross Hospital.
Porter, Charles Robertson, London Hospital.
Reilly, Percy George, London Hospital.
Rowland, Frank, Mason College, Birmingham.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Speirs, William Clark, St. Mary's Hospital.
Wells, Hardy Vesey, St. Mary's Hospital.
Woodyatt, Henry Constantine, Owens College, Manchester, and University College, London.
Young, Thomas, St. Bartholomew's Hospital.

Practical Pharmacy:

Asten, Walter, Mason College, Birmingham.
Beale, Hanway Richard, St. Thomas's Hospital.
Beale, Joseph Richard, St. Thomas's Hospital.
Brown, Thomas Warren, St. Bartholomew's Hospital.
Bradley, Richard Walter, St. Mary's Hospital.
Capper, Harold Selwyn, University College Hospital.
Cornish, Philip Alfred, Middlesex Hospital.
Crawley, Herbert Edward, Oxford University.
Cunningham, John Francis, St. Thomas's Hospital.
David, Archibald Sinclair, London Hospital.
Edington, Ernest Adolphus, University College, London.
Fyffe, Robert James, Firth College, Sheffield.
Hawker, Herbert, University College, London.
Hearn, Edmund Michael William, London Hospital.
Hoyle, John, Owens College, Manchester.
Jeaffreson, Dudley, St. Bartholomew's Hospital.
Ruttledge, William Edward, University College, London.
Scott, Claude Sigismund, St. Bartholomew's Hospital.
Smith, Thomas Shalden, St. Mary's Hospital.
Stephens, Henry Zouch, St. Thomas's Hospital.
Twort, Frederick William, St. Thomas's Hospital.
Vine, Alfred Bertram, Middlesex Hospital.
Wood, Charles Herbert, University College, London.

Elementary Biology:

Barnes, George, St. Mary's Hospital.
Brangwin, Charles Harold, Guy's Hospital.
Bryan, Clement Arthur Douglas, Guy's Hospital.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Cope, Gilbert Edgar, Westminster Hospital.
Davies, Arthur Gerald Capel, Guy's Hospital.
Harrison, Sydney George, Charing-cross Hospital.
Hill, Leonard Vincent, Firth College, Sheffield.
M'Ennery, Ambrose Richard, University College, Bristol.
Morris, Herbert Edward, Guy's Hospital.
Narramore, Edward Giles, School of Science and Technology, Liverpool.
Newton, Reginald Goldie, Oxford University.
Roberts, Stuart Kenyon, St. Bartholomew's Hospital.
Robinson, James Frederick, Birkbeck Institute.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Sloane, Hans Hill, St. Bartholomew's Hospital.

Elementary Anatomy:

Baker, Dodington George R. Sherston, University College, London.
Brinton, Arthur Greene, Mason College, Birmingham.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Cathcart, George Elliott, St. Bartholomew's Hospital.
Dowman, Charles Darby Allen, St. Bartholomew's Hospital.
Everington, Francis Edgar, St. Bartholomew's Hospital.
Foster, Arthur Herbert, St. Mary's Hospital.
Graves, David Sydney, Guy's Hospital.
Green, Samuel Morris, University College, London.
Griffiths, William Layard, University College, London.
Hicks, Charles Edward, Guy's Hospital.
Jones, David Morgan, St. Mungo's and Anderson's College, Glasgow.
Lister-Kaye, Alan, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology.
Murdock, Horace Thomas Thorns, Yorkshire College, Leeds.
Perks, John, St Bartholomew's Hospital.
Prichard, John Llewellyn, University College, Liverpool.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Spiers, William Clark, St. Mary's Hospital.
Tordiffe, Arthur Murray Stewart, University College, Bristol.

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SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:—

Surgery.—Adams, E. G., Royal Free Hospital; Collinson, F. C., Leeds; Gough, E. M., Royal Free Hospital; Hedden, R., Guy's Hospital; Hughes, H., Liverpool; Lawrence, A. S., Middlesex Hospital; Silver, H. W., Charing-cross Hospital; Stamper, G. C., Guy's Hospital; Stewart, D. D., Liverpool; Tarbet, W. E., Sheffield; Thorne, M., Royal Free Hospital; and Whitmarsh, R. P. H., St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—Coker, A. P., Middlesex Hospital; Harmer, W. A., Aberdeen; Jones, R., St. Mary's Hospital; Langford, F. C., Charing-cross Hospital; Thorne, M., Royal Free Hospital; Welch, C., London Hospital; and Williams, H., Middlesex Hospital.

Medicine and Forensic Medicine.—Hort, E. C., Cambridge University and Guy's Hospital; and Merry, S. R., Charing-cross Hospital.

Medicine.—England, H., Sheffield; Graham, J. W. F., St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—Adams, E. G., Royal Free Hospital; Jones, H. G., St. Mary's Hospital; and Yorath, T. H. B., Guy's Hospital.

Forensic Medicine.—Ramsay, H. W., St. Mary's Hospital; and Wright, A. M. St. J., Madras.

Midwifery.—Hulbert, G. P. Y., Birmingham; Jackson, G. C., Cambridge University and St. Mary's Hospital; Stamper, G. C., Guy's Hospital; and Vale, C. S., Paris.

To Messrs. England, Graham, Hedden, Jones, H G., Jones, R., Lawrence, Ramsay, Stamper, Williams, and to Miss Gough and Miss Thorne was granted the diploma of the Society, entitling them to practise Medicine, Surgery, and Midwifery.

FOREIGN UNIVERSITY INTELLIGENCE. — *Gratz:* Dr. Alois Sachsalher has been recognised as *privat-docent* in Ophthalmology.—*Halle:* Dr. Eberth, Professor of Comparative Histology and Anatomy, has been appointed to the chair of Pathological Anatomy and General Pathology, in succession to Dr. Ackermann, retired; Dr. W. Roux of Innsbruck has been appointed to the chair vacated by Dr. Eberth.—*Kharkoff:* Dr. Barabasheff has been appointed Extraordinary Professor of Ophthalmology.—*Königsberg:* The title of Professor has been granted to Dr. G. Stetter, *privat-docent* in Surgery and Otology.—*Prague (Bohemian University):* Dr. J. V. Rohon has been appointed Extraordinary Professor of Histology.—*St. Petersburg:* Dr. Dogiel of Tomsk has been appointed Professor of Microscopical Anatomy.

THE DIFFUSION OF SMALL-POX.—The news as to small-pox prevalence continues to be of a favourable character, as the amount present in London, though small, is the largest contribution to the disease at the moment. During last week the number of patients suffering from small-pox in the metropolis removed to hospital was only 7, as against 21, 17, and 9 in the three weeks preceding; and the only death registered in the whole of the thirty-three towns of the Registrar-General's returns was in London, in the person of an unvaccinated infant of four months of age, which had been removed from the Bethnal Green sanitary area to the hospital ship "Atlas." The cases remaining in hospital at the close of the week have been steadily falling since the end of the fourth week of August, when they were 342, the number on Saturday last being only 119. These cases, however, cover a large area, as we learn of attacks as far apart as Shepherd's Bush in the west and Bethnal-green in the east; and on Monday of the present week there were three fresh cases in London. The Orsett board of guardians have been considerably exercised by the occurrence of cases of small-pox in the vicinity of the hospital ships at Long Reach, an outbreak at Purfleet and West Thurrock being placed to the credit of the small-pox ships in the river, ten of the eleven cases occurring within a mile of the ships, which the guardians desire to see placed lower down the river. In the four weeks ended Oct. 5th the small-pox cases notified in the whole of London totalled 108, an average of 27 per week, the average of the preceding like period having been 60, and 70 in the September four-weekly periods, so that the disease is showing much decline; and of the twenty-three sanitary areas (out of forty-three) invaded five only, and these all east and south, accounted for 69 of the 108 attacks, Bethnal Green being credited with 31 and Camberwell with 14. The news from the provinces shows that small-pox cases are but few. Essex alone in the districts adjacent to the Thames reports recent invasion. In Dublin the figures of the week ended Oct. 12th are much more favourable than in the week before. Only a single case was removed to hospital, and the remaining patients fell in number from 27 to 24, though one death was registered—namely, in an adult over forty years of age, and stated to have been vaccinated. Much discussion is going on now in the city on the vexed question of accommodation for the isolation of small-pox cases in the future, and the medical and sanitary world seems divided as to the danger or otherwise of isolating small-pox in the midst of the city population. We hope that wise counsels will prevail and secure the removal of all cases outside the range of populations of any magnitude. Some amount of friction has recently arisen at Bo'ness, in Linlithgowshire, on account of the removal to hospital by the sanitary inspector of the relatives of a small-pox patient notified in the borough, the medical officer and the local authority being at loggerheads on the point as to whether the inspector had any right to remove other than the immediate attendant on the patient. However, a compromise seems to have been arranged by the dismissal to their home of the quarantined relatives.

SERIOUS SEWER EXPLOSION.—A serious explosion took place at Farnham recently—where the Bishop of Winchester's castle is situated—in one of the public sewers. A town labourer had occasion to enter the man-hole where several sewers meet, and held a lighted candle in the mouth of one of them. Instantly there was an explosion, and the gas is said to have ignited and burnt in "variously coloured flames." A fellow workman went to the injured man's assistance, and medical aid was at once procured. The man was found to be suffering from severe burns and shock to the system. A doubt is expressed as to the nature of the gas which was confined, but it is well known that pent-up sewer gases contain hydro-carbons consisting chiefly of marsh gas, and therefore it is always a risky proceeding to examine a sewer with a naked light until the sewer has been ventilated. The fact of the accumulation of gases in the present instance speaks ill for the thorough ventilation of the drains.

DIPHTHERIA IN LONDON.—The condition of London in the matter of diphtheria prevalence is growing from bad to worse, and to-day the actual mortality from that disease in the metropolis is more than 40 per cent. in excess of the corrected average for the fortieth week of the last decennial period. The data for the four-weekly period ended Oct. 5th show that in that period as many as 1178 cases of diphtheria were notified in the metropolis, 41 of the 43 separate sanitary areas having suffered from the malady. Not only so, but in nine of those areas there were as many as 682 notifications, Greenwich having 114 to its credit, and 100 being placed to the credit of Camberwell. The weekly average was for London 295 attacks, as compared with only 202 in the preceding period of like length, and this shows a rise of very nearly 50 per cent. The registered deaths in this period to the 5th of the present month reached a total of 192, a weekly average of 48, or 16 per cent. of the notified cases; and the admissions to hospital 423, or only 36 per cent. of those cases. In the two weeks that have since elapsed the deaths have been respectively 56, or 17 above the corrected average, and last week the abnormal total of 76, or as many as 34 in excess of the average. In the fortnight we find the Registrar-General crediting sanitary areas as follows: to St. Pancras and Greenwich, each, 12 deaths; to Islington, Kensington, and Camberwell respectively 6 deaths; to Marylebone and Mile End Old Town, each, 5 deaths; and to Fulham, Shoreditch, and Battersea, respectively, 4 deaths. In the two weeks together only 2 of the 132 deaths occurred in persons aged over twenty years. Complaints are being made in several parts of the metropolis as to the difficulty found in securing the removal to hospital of many cases needing such removal, and the small percentage of removals to cases occurring seems to warrant the feeling that is abroad as to the necessity for a larger amount of isolation accommodation for fever patients. The admissions in the last two weeks have been 102 and 115; and the numbers of patients remaining under treatment on each of the last two Saturdays have been respectively 659 and 667. In the outer ring of the metropolis the deaths from diphtheria have been 27 in each of the last two weeks, and they have been located in the West Ham registration district to the number of 23; in Waltham Abbey district, 4; in Edmonton, 4; and 3 in Isleworth. So that the matter is not only of serious import to London county, but it is assuming serious proportions also in the extra-urban portions of the metropolis, even as far out as Waltham Abbey on the north. Indeed, the Edmonton union would appear to be passing through a diffused epidemic of limited extent at present, but none the less of a growing character.

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ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The opening meeting of the new session of this society will be held on Monday, Nov. 4th, at 8 o'clock, when the President, Mr. David Hepburn, will deliver the inaugural address.

LITERARY INTELLIGENCE.—Mr. William F. Clay of Edinburgh will publish shortly an authorised English edition of the "Histo-pathology of the Diseases of the Skin," by Dr. Unna of Hamburg, translated by Dr. Norman Walker, Assistant Physician in Dermatology, the Royal Infirmary, Edinburgh. This new edition will be revised with additions by the author and will include forty-four additional illustrations specially drawn for this edition.

SUNDAY LECTURE SOCIETY.—The first of the series of lectures given by this society was delivered on Sunday afternoon last, Oct. 20th, in St. George's Hall, Langham-place, when Professor Sir Frederick Pollock, Bart., M.A., LL.D., lectured on "Tyndall as Worker and Teacher." Mr. C. W. Kimmins, M.A., D.Sc., will lecture on Sunday next, and the Rev. Stewart Headlam, B.A., Prince Kropotkin, Mr. Graham Wallas. M.A., Mr. Wyke Bayliss (President of the Royal Society of British Artists), and Mr. R. D. Roberts, M.A., D.Sc., on subsequent Sundays.

BRADFORD INFIRMARY EXTENSION.—The new buildings which have just been opened by the Hon. H. E. Butler, High Sheriff of Yorkshire, constitute a valuable addition to this infirmary. The estimated cost of the extension is £6000, but the new arrangements for heating and cooking will effect a saving of £200 a year. It is noteworthy that the institution, which, seventy years ago, began work with only 4 in-patients, treated in 1894 2086 in-patients. One desirable addition to the existing buildings is the observation ward, where suspected infectious cases will be isolated until the nature of the disease has been defined.

TORQUAY MEDICAL SOCIETY.—The annual meeting of this society was held at the Torbay Hospital on Oct. 2nd, and the following gentlemen were elected to take office during the current year. President: R. Pollard. Vice-President: T. Finch. Hon. Secretary: G. Young Eales (re-elected). Council: F. Thistle, F. Crowdy, Winwood Smith, and W. Powell. Hon. Librarian: A. Watson. Hon. Auditors: F. E. Cave and H. Cumming. A special meeting was held on Oct. 4th, Mr. R. Pollard, President, being in the chair, to hear an address by Mr. J. Hutchinson, F.R.C.S., F.R.S., on Heredity in Disease. The meeting was well attended, the audience including many members of the profession from Exeter, Plymouth, and the neighbouring towns to whom invitations had been sent. The annual dinner of the society, which was largely attended, was held the same evening at the Albert Hall, the president being in the chair.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALDOUS, G. F., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer, Plymouth Public Dispensary.

BELBEN, F., M.B., B.C. Cantab., F.R.C.S., M., L.R.C.P. Lond., has been appointed Senior House Physician, St. Bartholomew's Hospital.

BENNETT, A., HUGHES M.D. Edin., F.R.C.P. Lond., has been appointed Consulting Physician to the Hospital for Epilepsy and Paralysis, Regent's-park.

BENNETT, W. E., F.R.C.S. Eng., has been appointed Senior House Surgeon to the Metropolitan Hospital.

BOTTOMLEY, F. C., M.B., B.C., B.A. Cantab., has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, London, vice W. H. Bowring.

BUCHAN, W. A., M.B., C.M. Edin., has been re-appointed Medical Officer, Plymouth Public Dispensary.

BURNETT, F. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

CALVERLEY, J. E. G., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician to the Metropolitan Hospital.

CHRISTOPHERSON, J. B., M.B., B.C. Cantab., has been appointed Senior House Physician, St. Bartholomew's Hospital.

COLLINGS, D. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

CORNISH, S., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

COSENS, WM. BURROUGH, L.R.C.P., Lond., M.R.C.S., has been appointed Honorary Surgeon to the Dorset County Hospital, vice G. A. George, resigned.

DRAKE, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

DUNN, W. E. N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital.

EMSON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Workhouse of the Dorchester District of the Dorchester Union.

FOX, G. R., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

GILES, L., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

GUTHRIE, LEONARD GEO., M.D. Oxon., M.R.C.P. Lond., has been appointed to the charge of In-patients in addition to that of Out-patients at the Hospital for Epilepsy and Paralysis, Regent's-park.

HAMPTON, T., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to the Metropolitan Hospital.

HEDLEY, W. S., M.D. Edin., M.R.C.S. Eng., has been appointed Medical Officer in charge of the Electrical Department, London Hospital.

HEWER, C. M., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

HOGARTH, R. G., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the General Hospital, Nottingham.

HOOD, N. L., M.B., B.C. Camb., has been appointed Assistant House Surgeon to the Sussex County Hospital.

JACKMAN, J. J. H., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer to the Waterford Workhouse.

LAMPLOUGH, C., M.R.C.S., L.R.C.P. Lond., has been appointed resident Clinical Assistant to the St. Marylebone Infirmary, vice L. N. Gibbes, resigned.

LEE, W. E., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

LINDSAY, D. LAUDER, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed House Physician to the Glasgow Royal Infirmary.

MARTIN, RICHARD STANLEY, L.R.C.P., L.R.C.S. Edin, L.F.P. & S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Lever District of the Bolton Union, vice J. Martin, deceased.

MICHELL, R., M.B., B.C., F.R.C.S. Eng., has been appointed Junior House Physician, St. Bartholomew's Hospital.

MURPHY, J. K., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

PHILLIPS, L. C. P., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

POWERS, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gosforth Sanitary District of the Whitehaven Union.

POOLE, S., M.B., M.S. Edin., has been appointed Medical Officer for the second Wolverhampton Sanitary District of the Wolverhampton Union.

POYNDER, F. C., M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

RENDLE, A. C., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Physicians' Assistant, Plymouth Public Dispensary.

ROGERS, K., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

ROUE, W. BARRETT, M.D., M.S., has been appointed Consulting Physician to the Bristol Hospital for Sick Children and Women.

THOMAS, T. W., M.R.C.S., has been appointed Medical Officer for the Caerphilly Sanitary District of the Pontypridd Union.

THOMPSON, GEO. R., has been appointed Analyst for the Borough of Neath.

WATT, J. L., M.B., M.S. Aberd., has been appointed Medical Officer for the second division of the third district of the St. German's Union.

WHITE, C. P., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

WILLIAMS, E. H., M.R.C.S., has been appointed, *pro tem.*, Medical Officer for the Carnarvon Workhouse.

WILSON, W. C., M.B., C.M. Edin., has been reappointed Physicians' Assistant, Plymouth Public Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN. — House Surgeon. Salary £100 per annum, with rooms and attendance (not board).

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary £250 per annum. Applications to the Registrar of the University of London, Burlington-Gardens, W.

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CATTERHAM ASYLUM (under the Metropolitan Asylums Board).—Second Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, furnished apartments, attendance, and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk-street, London, W.C.

CITY OF DUBLIN HOSPITAL.—Visiting Surgeon. Applications to Hon. Sec., Medical Board, City of Dublin Hospital, Upper Baggot-street, Dublin.

CITY OF SHEFFIELD.—Assistant Resident Medical Officer of the two City Hospitals for the Treatment of Cases of Infectious Disease. Salary £120 per annum, with board, lodging, and attendance. Applications to the Town Clerk, Town Clerk's Office, Sheffield.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Head Dispenser. Salary £160 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months. Salary £20, with board and residence in the Hospital. Also, House Surgeon, for six months. Salary £20, with board and residence in the Hospital.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary 100 guineas per annum, with board (no liquors), lodging, and washing. Applications to the Town Clerk, Town Hall, Hull.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

LIGHTBURN HOSPITAL FOR INFECTIONS DISEASES, Shettleston, near Glasgow.—Resident Physician. Salary £120 per annum, with board, lodging, washing, and attendance. Applications to the Clerk of the Joint Committee, 194, Ingram-street, Glasgow.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. A gratuity of £10 will be given if found satisfactory.

ST. MARY'S HOSPITAL FOR SICK CHILDREN AND MEDICAL MISSION DISPENSARY, Plaistow, London, E.—Resident Medical Officer. Salary £80, with board, washing, and attendance. Applications to Chairman of Committee, Rev. T. Given-Wilson, Plaistow.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon (non-resident). Salary £200 per annum.

SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per year, and £30 per year for Dispensing, with furnished apartments and attendance.

Births, Marriages, and Deaths.

BIRTHS.

EDWARDS.—On Oct. 17th, at Banbury, Oxon., the wife of Henry J. Edwards, L.R.C.P. Edin., of a son.

HARDYMAN.—On Oct. 18th, at Great Pulteney-street, Bath, the wife of George Hardyman, M.B. Edin., of a son.

LEAKE.—On Oct. 18th, at Nightingale-place, Woolwich, the wife of Surgeon-Lieut.-Colonel George Dalton Nugent Leake, Army Medical Staff, of a son.

MARRIAGES.

BAKER—SMITH.—On Oct. 17th, at St. Thomas's, Portman-square, by the Ven. Archdeacon Smith, uncle of the bride, assisted by the Rev. W. De Foe Baker, uncle of the bridegroom, and the Rev. Percy Thompson (Vicar), Charles Ernest Baker, M.B. Cantab., F.R.C.S. Eng., of 5, Gledhow-gardens, South Kensington, to Ada Marion, third daughter of Thomas Smith, Esq., F.R.C.S. Eng., of 5, Stratford-place, W.

BROOKE—MOORE.—On Oct. 16th, at the parish church, Duffield, Derbyshire, Frederick Brooke, M.R.C.S. Eng., L.R.C.P., elder son of Thomas George Brooke, M.R.C.S. Eng., of Langport, Somersetshire, to Constance Blanche, fourth daughter of the Rev. Francis Wellington Moore, Vicar of Duffield.

FRANEY—LANSDOWN.—On Oct. 16th., at St. Paul's Church, Clapham, Arthur Britten Franey, L.R.C.S., L.R.C.P. Edin., Hadleigh, Suffolk, to Amy Estelle, daughter of the late T. W. Lansdown, J.P., of Plymouth.

STEEGMANN—BARNETT.—On Oct. 15th, at St. George's Church, Barrow-in-Furness, by the Ven. Archdeacon Phillips, Edward J. Steegmann, M.B., of Grove-park, Chiswick, to Mabel, daughter of Rear-Admiral Barnett, of Barrow.

WYNTER—WILLS.—On Oct. 19th, at St. Paul's, Clifton, by the Rev. Canon Mather, assisted by the Rev. Canon Dacre, Walter Essex Wynter, M.D., B.S.Lond., M.R.C.P., F.R.C.S., of 30, Upper Berkeley-street, Portman-square, London, W., eldest son of the late Dr. Andrew Wynter of Chiswick, to Ada Margaret, third daughter of Samuel Wills, Esq., J.P., of 1, Royal-park, Clifton.

DEATH.

BETTS.—On Sept. 4th., at Antofagasta, Chili, of pneumonia, Frederick Bernard Betts, M.R.C.S. Eng., L.R.C.P. Lond. aged 28, eldest son of J. F. H. and Catharine J. Betts, of 83, The Chase, Clapham Common.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. C. B. Keetley: Cases of Intestinal Resection and Intestinal Exclusion.—Mr. H. Allingham: A Series of cases of Intestinal Resection.

WEDNESDAY.—NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Sir R. Quain: Some General Remarks on Professional Topics. (Presidential Address.)

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Dr. Goodhart will open a Discussion on "Spasmodic Asthma and its Treatment."

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY.—8.15 P.M. Mr. Mayo Collier: Chronic Nasal Obstruction.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. A Discussion on "Gastric Ulcer" will be opened by Dr. Hood and Mr. Bruce Clarke. Drs. Alderson, Drewitt, Campbell Pope, S. Taylor, and Mr. Keetley will take part in the Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Mr. G. C. Wilkin: Aural Polypi.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Developmental Insanity, Circular Insanity.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

HOSPITAL FOR CONSUMPTION &c. (Brompton).—Dr. J. K. Fowler: Bronchitis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Ball: Throat Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. W. Arbuthnot Lane: Selected Surgical Cases.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Beevor: Muscular Atrophy.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Dr. T. Henry Green: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Tuberculosis and Leprosy.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Climacteric and Senile Insanity.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—Dr. Morgan Dockrell: Syphilis.

During the week marked copies of the following newspapers have been received:—*Walsall Advertiser, Hackney Mercury, St. Andrew's Citizen, Batley Reporter, Morning Leader, Chester Chronicle, Brighton Gazette, Wolverhampton Chronicle, Rochdale Observer, Bradford Observer, Belfast News Letter, Sydney Morning Herald, Newcastle Chronicle, Halifax Guardian, Birmingham Mail, Irish News, Glasgow Herald, Leicester Daily Post, Sheffield Independent, Builder, Liverpool Daily Post, Times of India, Architect, City Press, Pioneer Mail, Bristol Mercury, Lymington and South Hants Chronicle, Leeds Mercury, Buchan Observer, Yorkshire Post, Local Government Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Mining Journal, Hertfordshire Mercury, Southampton Echo, Crewe Guardian, Surrey Advertiser, Evening News (York), Local Government Journal, Elgin Courant, Orkney Herald, Waterford Mirror, Torquay Directory, Montreal Herald, St. Bartholomew's Hospital Journal, Dorset and Somerset Standard, Farringdon Advertiser, Royal Cornwall Gazette, Warwickshire Times, Western Mail, Scotsman, Tonbridge Telegraph, &c., &c.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 24th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 18	30·51	N.E.	45	43	67	55	40	...	Foggy
,, 19	30 41	E.	51	49	59	54	45	...	Foggy
,, 20	30·27	S.W.	52	49	58	53	50	...	Foggy
,, 21	30 04	S.W.	45	44	65	53	43	...	Foggy.
,, 22	29·71	N.	44	44	47	45	44	0·05	Raining
,, 23	29·58	N.E.	42	40	52	46	40	0·43	Overcast
,, 24	29·52	W.	33	32	65	44	31	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

FEES AND THE LOCUM-TENENT.

A CORRESPONDENT writes:—"A few weeks ago I had occasion, when acting as locum-tenent in Scotland, to sign a lunacy certificate. To whom does the fee go? Am I entitled to it, or does it go to the principal? There is a difference of opinion amongst the members of the profession in regard to the above." To this we have to say that all fees made or earned by a locum-tenent are obviously due to the practitioner whose place he is holding, in the absence of any special contract to the contrary. Occasionally it happens that a fee represents some unusual duty or service, when there is much to be said for its being divided between the principal and his assistant, but this is a matter of grace on the part of the principal.

Dr. Augustus H. Bampton is thanked for his interesting communication with regard to the procuring of immunity from malarial fever. The treatment suggested, however, is, in the present state of our knowledge, a little visionary, and we do not think that its promulgation would serve any practical purpose.

H. B. would be glad to hear of any recent book on Cottage Hospitals and Convalescent Homes and the publisher's name.

"PERSISTENT HICCOUGH AND SNEEZING: A SUGGESTION WANTED."

To the Editors of THE LANCET.

SIRS,—If there be no lesion of the cerebrum the case is most likely of the rheumatic gout nature. Salicin in thirty-grain doses three times a day will effect a cure in four days or less, if my surmise be correct. If the case should be due to organic nervous system derangement producing an erythematous condition of the nasal, pharyngeal, and gastric mucous tracts of an intermittent nature, small doses of arsenic, nux vomica, and iron three times a day, with milk and lime-water night and morning, will be the remedy. I have known a case of a gentleman affected with sneezing which suddenly attacked him after intervals of a few weeks, and lasted day and night continually. I have known a case where hiccough, sneezing, and laryngeal asthma were periodic visitants. Arsenic and tonics relieved the first; salicin cured the second. I am, Sirs, yours truly,

Kingstown, Oct. 21st, 1895. JOHN ROCHE, M.D.

MEDICAL WORK AND ITS REMUNERATION IN WALES.

THE *Western Mail* says that a movement is on foot at Llanelly to secure an increase in the fees paid to the medical officers of the various works. At present the payment is only 9*d.* per month to cover medical attendance for each workman and his family. In other towns the rate is 1*s.* Some have already conceded the very reasonable demand, but at Morewood's Works it is intimated that if the medical attendant is not satisfied his resignation will be accepted. We trust that the workmen here will reconsider their resolution and the inadequacy of the pay of the medical man. If they do not, and drive the present holder to resignation, it will be discreditable to any medical man to take the vacated post. Nine shillings a year for medical attendance on a man and his family who are in receipt of good Welsh wages is not just.

Dr. H. Harley.—The Sickness and Accident Assurance Association, Ltd., of 64, Moorgate-street, E.C., offers insurance of the kind indicated by its title to professional men; and the Medical Sickness, Annuity, and Life Assurance Society, of 33, Chancery-lane, E.C., covers the sickness risk. But we are not able to decide upon the comparative merits or competing claims of these two societies.

Mr. John Newton.—We never give medical advice or recommend treatment, and regret that we can be of no service. Our advertisement columns contain the addresses of many institutions that might serve our correspondent's purpose, and his medical attendant can help him to a choice between them.

A. Z.—There does not seem to be any publication containing the desired information. Particulars concerning the meteorological qualities of any specified locality can always be obtained, but such a comprehensive work as our correspondent seeks has yet to be written.

H. S.—The "Laboratory Guide," by A. H. Church, M.A., F.R.S. (Gurney and Jackson, 1, Paternoster-row).

Joseph S. P. has neglected to supply us with his full name and address.

"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—As the correspondence on Dr. James Barry's strange history makes little or no mention of her military career, may I be allowed to supplement my letter in THE LANCET of last week with a few particulars?

Reference to Hart's Army List for the year 1865 will show that "James Barry" stands at the head of the list of Inspectors-General of Hospitals. In July of that year the *Times* one day announced the death of Dr. Barry, and the next day it was officially reported to the Horse Guards that the Doctor was a woman. She was buried at Kensal Green, and over her grave was erected a tablet with the simple inscription: "James Barry. Born ? Died 1865." These facts, the proceedings of the inquest, and the registry of her death should be still available as verification of the Doctor's sex. The dates of her several commissions in the army will be found as follows; but it is very remarkable that the grades of "Surgeon," "Assistant Inspector," and "Brevet Deputy Inspector" of Hospitals were passed over in her case:—Hospital Assistant, July 5th, 1813; Assistant Surgeon, Dec. 7th, 1815; Surgeon-Major, Nov. 22nd, 1827; Deputy Inspector of Hospitals, May 16th, 1851; Inspector General of Hospitals, Dec. 7th, 1858; retired on half-pay, July 19th, 1859; Died, July, 1865. In "Fifty Years of my Life," by the late Earl of Albemarle, at page 96, vol. ii., will be found some interesting comments on Dr. Barry's services and death. He says: "A mystery attached to Barry's whole professional career, which extended over more than half a century. While at the Cape he fought a duel and was considered to be of a most quarrelsome disposition. He was frequently guilty of flagrant breaches of discipline, and on more than one occasion was sent home under arrest; but somehow or other his offences were always condoned at headquarters. ..... It is singular that neither the landlady of *her* lodging nor the black servant who had lived with her for years had the slightest suspicion of her sex. The late Mrs. Ward, daughter of Colonel Tidy (Military Secretary, Jamaica, 1856, and at the Horse Guards, 1855), from whom I had these particulars, told me further that she believed the Doctor to have been the legitimate granddaughter of a Scotch earl whose name I do not now give, as I am unable to substantiate the correctness of my friend's surmise, and that the *soi-disant* James Barry adopted the medical profession from attachment to an army surgeon who has not been many years dead." In a letter to me from Surgeon-General McKinnon he states that he found Dr. Barry to be "a pleasant and agreeable man. He neither cursed nor swore, but behaved himself like a gentleman. I have heard many reports about him, and the most of them were false, the people making them being obviously interested parties. I never heard of his ever being an operator of any kind, nor do I think he ever had any opportunity of showing his skill in that line." On the other hand, Surgeon-General Longmore, writing to me from Netley in 1882, says: "I acted as P.M.O. at Trinidad for nearly a year shortly after Dr. Barry vacated the post. I also saw her in the Crimea, when staying with Lord Raglan on a visit." And in an appreciative comment on my treatment of the case in the character of *Dr. Fitzjames* in my novel, "A Modern Sphinx," he adds: "Some years ago a French writer in a history of 'Le Médecin Militaire' remarked: 'Le fait en lui-même ne laisse aucun doute; et cependant je doute fort que Miss Braddon elle-

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même oserait jamais faire de cette personne l'héroine d'un de ces romans.' *You* have accomplished what the writer evidently thought no one dare do."

I could tell several amusing stories of Dr. Barry's "mistaken identity," as, for instance, that of the adjutant of a regiment in Jamaica requesting the Doctor to discontinue visiting his wife just at the hour he had to be on parade or in the orderly room. But most of these anecdotes I have interwoven into my novel, "A Modern Sphinx," or its reproduction, "Madeline's Mystery," either of which volumes may no doubt be found in some of the numerous libraries of the country.

I am, Sirs, yours faithfully,

Savage Club, Oct. 21st, 1895. H. ROGERS, Lieutenant-Colonel.

To the Editors of THE LANCET.

SIRS,—I have great pleasure in sending you my recollections of "James Barry," the lady surgeon referred to in your columns.

It was in the year 1844, I think, that I was sent from Barbadoes to Trinidad to sit on a general court-martial, which was exciting great interest in the islands at that time. On the assembling of the court an individual appeared as spectator who at once attracted my attention. He was in the full dress of an army surgeon, but had all the appearance of being a woman. On making inquiries I was told that the individual was Dr. Barry, the principal medical officer of the district. The impression and general belief were that he was a hermaphrodite, and as such he escaped much comment or observation in places where everyone was used to him. But I was under the belief that there had never existed a true human hermaphrodite; so that I was convinced James Barry was a woman about sixty years of age, and being much interested in him I cultivated his acquaintance and we became very friendly. He frequently asked me to visit him, and I endeavoured to draw out his antecedents, but found him very reticent. The only thing that I discovered was that Lord Fitzroy Somerset (afterwards Lord Raglan) was a friend of his, from which I inferred that it was to him Barry owed his high position. He was a vegetarian and drank only water.

Some years ago I read of his death, and that his sex had been discovered, as well as traces of his having borne a child.

I am, Sirs, yours faithfully,

Oct. 17th, 1895. CAPTAIN.

*** We have received the above letter from an intimate acquaintance of the late Dr. James Barry through Mr. Henry Taylor, F.R.C.S., of Quarry-street, Guildford, who, remembering that he had heard a gentleman speak of having made this curious person's friendship, kindly wrote in our behalf for particulars. Mr. Taylor also refers those of our readers who are interested in the case of James Barry to "a capital story of a Spanish nun, in the seventeenth or eighteenth century, who enlisted in the army and served with much credit in the West Indies and Spanish Main, written by M. de Hérédia, the French poet, and purporting to be a true history." Several correspondents also refer us to the account of James Barry given in Taylor's "Principles and Practice of Medical Jurisprudence," edited by Dr. Thomas Stevenson, fourth edition, vol. ii., p. 290. This chapter contains allusions to the Chevalier D'Eon and several other of the more notorious impersonators of sex.—ED. L.

WHAT IS LIFE?

To the Editors of THE LANCET.

SIRS,—As this subject is discussed separately in the current issue of THE LANCET by no fewer than three great authorities—Professor Beale, Professor Rindfleisch, and Sir James Crichton Browne—it is evidently of more present interest than I had supposed. To my understanding, however, the problem is about as hopeful as the process described in one of Æsop's fables—"Viper gnawing file"! Many years since I read both Büchner and Beale, but of course with no decisive result, though I considered that the former had the better case. In later years I have read Huxley, and agree with him that there is no prospect—as I have already stated—of the question being settled, and that, therefore, of the three alternatives—materialism, animism, and agnosticism—the only rational choice is, unsatisfactory as it may be, to candidly, if not cordially, accept the last, provisionally at any rate. If that is so, are not the scientific gentlemen in question rather too dogmatic against what Professor Rindfleisch calls "the tyranny of materialism"? I cannot but think that animism, whether old or new, is more presumptive and difficult of acceptance than materialism, and that Huxley's agnosticism bids fair to hold the field for long enough against all positivism on the subject. So far the thing is an inscrutible mystery, and it is, therefore, foolish to conjecture about it.

I am, Sirs, yours faithfully,

Oct. 21st, 1895. ONLY A MEDICO.

THE MORPHIA HABIT.

To the Editors of THE LANCET.

SIRS,—Would any of your readers who have had experience in the treatment of the above do a great kindness by naming the best work on this subject, and stating whether or not there is any drug or means of mitigating the suffering during the treatment? Is the morphia habit less likely to be acquired by one who takes it for *bond-fide* suffering than by one who has either been carelessly slow in giving it up after recovery or who indulges in it for mere pleasure? I write on behalf of a great sufferer who is compelled, and will be for some time, to use hypodermic injections.—I am, Sirs, yours faithfully,

Oct. 21st., 1895. VIGILANS.

THE EFFECT OF HEAT.

THE *American Meteorological Journal* for October contains a paper by Mr. B. S. Pague on "Sensible Temperature, or the Effect of Heat on the Body in California." Over the great valleys of the Sacramento and San Joaquin, and over that large area of the State removed from the immediate coast and south of the Tehachapi Mountains, maximum temperatures of from 106° to 118° are experienced during the summer months, and as high as 122° have been recorded in Death Valley in July. The temperatures noted are from Weather Bureau records, and show the temperature of the air, the thermometer being in the shade in a standard thermometer shelter. Mr. Pague states that the reason these temperatures do not kill is that, while the degree of heat noted is that which is actually recorded, that which is known as the sensible temperature is about 40° less, dependent upon the amount of moisture in the air, and it is this sensible temperature which affects life. By sensible temperature is meant that which is felt at the surface of the skin where the skin is exposed, as on the face or hands. This temperature is obtained from the usual form of wet-bulb thermometer. The highest temperatures on record at San Francisco during the months from June to September, inclusive, average 95°, while the sensible temperatures on the same days average 65°. At Yuma the average highest is 116°, and the average sensible temperature at the time of highest air temperature is 75°. This shows that, while high temperatures prevail at periods of the year, the temperature which the body is required to endure is about 35° less than the air temperature recorded, and this difference is due to the amount of moisture in the air. If the air were as moist as is found in the region of the Great Lakes and along the Atlantic seaboard, and the temperature as high as it now is at times, the effect of the heat would be to kill by what is called sunstroke the greater number of the population, to destroy vegetation, and to desolate the country that now produces as much and as great a variety as does the most favoured section of the globe.

Mr. K. P. Popat.—Our Students' Number contains full information as to the examining boards of the United Kingdom and their requirements. It would be impossible to give our correspondent this sort of information about America, where every State can make its own arrangements.

H. A. C.—We do not identify the author of the testimonial to Rudd's remedy. The name and description do not exactly correspond to any in the Medical Register. Can our correspondent give us exact particulars of name, address, &c.?

M.R.C.S., L.S.D.—The situation our correspondent describes to us is decidedly galling, but he will understand that we cannot express an opinion upon it unless both sides of the question are made clear to us.

WANTED, AN EXPLANATION OR A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Would any of your readers give me an opinion on the following case? A child aged eight years was revaccinated a year ago. Four vesicles resulted, one of them imperfect. A growth subsequently appeared in each of the cicatrices, and at the present time the condition is as follows. There are three hard, freely movable masses of pink-coloured, smooth, shiny tissue of almost cartilaginous feeling. The masses are of almost the same size, oval, and about three-quarters by half an inch in their diameters, raised above the surface of the surrounding skin by about one-eighth of an inch. The outlines are regular, but the three masses are joined in their long diameters by thin portions of the same tissue about one-eighth of an inch long and one-sixteenth of an inch wide. A very much smaller mass occupies the site of the cicatrix of the abortive vesicle. The masses are quite painless, but as the patient is a little girl the unsightliness of the arm has to be considered. A brother of the child was revaccinated whilst away from home at school at about the same time, and he has developed precisely the same condition. The family history is very good and the children otherwise extremely healthy. What is the probable nature and cause of the growths, and are they likely to be of a keloid nature, when removal would not be advisable? What would be the most appropriate treatment to adopt?

I am, Sirs, yours truly,

Oct. 21st, 1895. CICATRIX.

A Subscriber.—No such work as our correspondent requires is known to us. The time has hardly arrived for such a summary of knowledge necessarily recent, but he will find scattered through our columns information embracing all the different points.

THE Liebig's Extract of Meat Co., of 9, not 6, Fenchurch-avenue, E.C., as printed in an analytical report in THE LANCET of Oct. 12th, point out that their new preparation is called *Peptonum Carnis*, and not "Extractum Carnis."

ERRATUM. — On page 1004 the words "75 millimetres," "50 millimetres," "33 and 36 millimetres," ought to have been respectively 75 μ, 50 μ, 33 and 36 μ. 75 μ are equal to 0·075 millimetre, and the other figures should be read in that proportion.

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Communications, Letters &c. have been received from—

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An Address
ON
SOME OF THE LIMITATIONS OF MEDICINE.

Delivered at the Opening Meeting of the Session of the Medico-Chirurgical Society of Exeter, on Friday, Oct. 18th, 1895,

BY JAMES F. GOODHART, M.D. ABERD., F.R.C.P. LOND.,
PHYSICIAN TO GUY'S HOSPITAL.

GENTLEMEN,—In Mr. Leslie Stephen's life of his brother, Sir James Fitzjames Stephen, there occurs this passage with reference to the choosing a profession by his distinguished lawyer brother: "He therefore begins in the most prosaic fashion by an attempt to estimate the pecuniary and social advantages of the different courses open to him. These are in reality the Church and the Bar, although, by way of exhibiting the openness of his mind, he adds a more perfunctory discussion of the merits of the medical profession. Upon this his uncle Henry Venn had made a sufficient comment. 'There is a providential obstacle,' he said, 'to your becoming a doctor, you have not humbug enough.'" Now that was, of course, some forty years ago, and there are those who may think that the medical man of to-day is not the man of that long gone time. Nor is he. It would, indeed, be a sad day for all of us if, with all our immense additions to knowledge, the world had no better medical men now. But I should not be disposed to let even our ancestral worthies rest under any such offensive imputation. They acted in their day quite as much up to their lights as we do now. But I take it that, in passing it on, the writer of the memoir from which I have quoted has in some measure made the present day responsible for a similar impression, and I am afraid it is true that a good section of the general public—and even, I fear, it must be confessed, not always the least discriminating—has floating about in its mind, and sometimes lets escape in veiled speech, that a medical practitioner must be more or less of a humbug. It is very interesting in looking over our weekly *Punch* to see how sometimes the artist misses true humour by being too absolutely real. This is so with the "Old Millionaire" of Oct. 12th. What could be more pathetic than that very old man with his "no expectations"? But it is no caricature. The same may be said of the medical man of good bedside manner and small acquirements of a few years ago. It, too, was painfully real, with a double edge, for it cut both at the public and at the supply which in some small measure its demand has created. It is a good illustration of my text. I have thought it, therefore, not inappropriate to our meeting to-day to discuss one or two of the conditions under which we are obliged to practise that seem to me to conduce to such an erroneous notion. And it seems to me that the explanation is to be found first and chiefly in the uncertainties of medicine; next, perhaps, in the impossibilities—the forlorn hopes—we are so constantly being called upon to deal with and to lead; and, thirdly, I would add, in some degree with our manner of dealing with such limitations as these under which we labour. Now the uncertainties of our work are so many and so manifest that it might, indeed, seem quite unnecessary to mention them; but I shall tax your patience by a few of them, and they shall be some of the commonest, though perhaps not too well known for all that.

Let us take the matter of diagnosis first. How great is often the practical difficulty of coming to a conclusion upon the real state of a particular person's lungs. There are those who may, perhaps, think that the existence, say, of cavities in the lungs can be determined with ease—and I do not say that it is not so for many cavities; but we all know that a large cavity may exist in the lung without giving any signs of its presence, provided that it be surrounded by healthy lung tissue or that the bronchus by which it communicates its physical signs be blocked. It may not, perhaps, have occurred to all of you to observe, on the other hand, how a very small cavity, provided that it be near the surface and surrounded by condensed lung, may give all the physical signs of a large cavity, a point of the greatest importance now that surgical procedures have added so largely to the resources at our disposal for the treatment of diseases of the viscera. And I take it that in this fact is to be found the explanation of another fact, also an illustration of my present contention—viz., that it is by no means uncommon to obtain the physical signs of a cavity in cases where the lung is only consolidated in acute pneumonia. Take another case. It is practically impossible in many cases to speak positively as to the existence of early phthisis. Many a patient has been said to have had phthisis, and, perhaps, has spent winters abroad in consequence, who has never had anything of that sort the matter with him; while many another on the brink of a galloping tuberculosis has been pronounced sound by equally competent authorities. Then take the heart; and how uncertain often are the signs of grave muscular weakness, so that a really experienced man shall say one day that there is nothing the matter and the next day sudden death takes place. I may even take up a more extreme position and say how uncertain often are the evidences of enlargement of the heart. We are all hearing now of what the general public is pleased to call the new treatment of heart disease, the treatment by mechanical exercises and so forth. I cannot now discuss the value of it. It has its value undoubtedly in selected cases; but I want to say that any support it may derive from the varying amount of præcordial dulness before and after the exercises is of a very unreliable description. We all know that in the post-mortem room the largest hearts are often found unsuspected, and that even under very competent hands a large heart sometimes becomes, under the rigid presentation of the dead-house, a very large heart indeed. Emphysematous lungs are a great hindrance to the detection of large hearts, and for the same reason—the greater expansion of the lung under the exercise—no observation upon the præcordial dulness before and after exercise is of much value. I may note two other points concerned with the same difficulty. I allude to the doubt that there often is about estimates of the amount of fluid in the pleura. One can, perhaps, generally say that there is fluid in the chest, but often and often one cannot get any idea from the physical signs how much there really is. The diagnosis of pericardial effusion labours under the same disabilities. To be certain of even considerable effusion in this sac is often a matter of the greatest difficulty, not to say impossibility; and I think I may say that I have had a rather exceptional experience of such cases. Here, again, the post-mortem room tells that many a pericardial effusion has descended to that department unrecognised, and, on the other hand, that sometimes an effusion suspected, or even diagnosed, is not found. I have seen a pericardial sac cut down upon as being full of fluid, after the most careful examination, only to be found dry. In the abdomen, again, appendicular colic seems to have added a new terror to diagnosis by necessitating a still further differentiation of colics. It was bad enough sometimes to have to decide between nephritic and hepatic colic, between neuralgia of the kidney—if there be such a thing—and simple colic. And, by-the-bye, in passing, is there such a thing as a simple colic agony, for by such a term only can I explain my meaning? Is one ever justified in attributing to simple spasmodic intestinal pain any attack so severe as to induce vomiting? Are not these the signs of calculus, or peritonitis, or twists, or something dreadful? I think that unbearable pain from simple intestinal muscular action is rare, although it may well seem somewhat inconsistent to allow its existence for such an insignificant little canal as the appendix cæci and to doubt it in the case of the bowels proper. But, perhaps, it is the very insignificance of the appendix that constitutes its sting. Even the worm will turn. That a pure appendicular colic—that is, colic due to disease in the appendix cæci in association with retained mucus—will occur without the existence of any inflammation of the peritoneum I have indisputable proof, but no doubt I ought to ask pardon of the surgical section of my audience for putting forward so elementary an assertion. But for us poor physicians I would again insist that its existence has added a new terror to life for the medical man as well as his patient. And if one turns from the uncertainties caused in diagnosis by what might, indeed, seem straight sailing conditions, what are we to say of those countless questions that obtrude themselves upon our attention when we have to decide between the many ill-adjusted balances of physiological relation—between such states of ill-health and their differences as are caused, say, by one organ failing to do its proper share of work and where other organs are called upon

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to do the more, of which perhaps the hypothesis of renal inadequacy may serve to clear my meaning? Such hidden meanings must result in perplexed purpose, and perplexed purpose is the opportunity of chance.

It is still worse when we come to grapple with the uncertainties, not of diagnosis, but of treatment; because here in still greater force comes out the individuality of man. What does this not mean when you come to champion health and pit yourself against his many maladies. This living machine (we call it a machine, and perhaps it will be in the future) is in truth a great coöperation where each department differs greatly, one factory from another, in intuitive ease of working, in capacity for work, as well as in methods of working. We are for ever assuming—perhaps we are obliged to assume—that our bases of operation are constant; whereas the very opposite is the fact, and much of our uncertainty comes from the patient and not from his disease. There are those who go through life without a day's illness, and there are those who seem to "catch," as it is called, every thing that is going. There are those whose every cut turns to a sore—though I daresay the surgeon turns aside to whisper, "Yes, if not properly treated"—and there are others whose perhaps serious wound never looks back in the process of repair. There are those whose stomachs think no evil of assafœtida, and others to whom the most delicately prepared pill of a simple drug acts as a poison. There are those again to whom climate seems to be the main obstacle to at any rate pleasurable existence, and others who can go anywhere, do anything, and never turn a hair. Yet all these varied existences have to be treated, and treated for diseases that have the same names in the one and in the other, and treated by the same drugs, more or less, that are allocated to each disease. To prescribe for a headache may be an easy thing, albeit not always very successful; but to prescribe for John's headache, and Thomas's headache, are different things. "There are at least six personalities distinctly to be recognised as taking part in a dialogue between John and Thomas," says the Autocrat of the Breakfast Table. You know them: "The real John, known only to his Maker," who is not his physician unfortunately. It is, indeed, too sadly true for applied physic that the medical man's patient is never the real John, or John's John, but often very unlike either. We, indeed, know nothing of the details that produce individuality—one might almost fear that we never can know, forged as we are in the past and moulded by the present, constantly adapting ourselves to changing circumstances. To attempt to control disease as modified by such unstable conditions might well seem hopeless—an attempt to reorganise and reform a complex system that is the growth of years: a task meet, indeed, for the reformer who is blind to disaster even in the wreck of revolution, but not for the thoughtful mind, not for the balanced judgment, not for us. Happily, things are not so uncertain as they might seem, and day by day they become a little less so, but for the present, and for long, it must still be that we know much less than we do not know. And this ought to be made as clear to the mind untrained to medicine as to us.

Of the impossibilities of medicine—and although it will have been apparent that medicine has been used to include all branches I will yet specially here note the fact—I will take only one, the greatest of all: the attempt to cure the incurable. That is what we are constantly being asked to do. I have known a man come to town and visit five or six surgeons, one after the other, in a morning to get rid, if it were possible, of the terrible incubus of a diagnosis of cancer of the tongue. An intense love of life is in the immense majority of the human species a part of the fact of the possession of it. Only a very painful disease or an exhaustion of such nervous centres as appreciate the happiness of living can crush it out. The medical man possesses it himself equally with his patient. Is he to crush it out? He could not if he would. Death is inconceivable to those who still climb upwards on the hill of life. The reality of death comes only as the physical fact comes—slowly. No man not past his work can know of a readiness to die. Rather is it that he can see no reason save the awkward one of fact why men do not live on for ever. Thus beaten—sadly beaten, as he too often is—the medical man rises from the ashes of defeat untaught, unteachable: indomitable still, instinct as is the sick one with the potentialities of life. And it is this one great living instinct of hope that underlies all the difficulties of medicine and—God forgive them—that leads the undiscerning to think that the medical man must be a humbug. Knowing more than they, we can readily allow that it is this great unconquerable attribute of life that does indeed seem to place us sometimes in equivocal circumstances. Let us look a little into this. In the first place, and because of it, medical men are believed systematically to suppress the truth; and in the second place—this is a criticism that comes from within us—in our eagerness to do our best for our patients and to cure or ameliorate the results of disease we no doubt sometimes err—for my own part I shall say often err—by the over-treatment of disease or of symptoms.

And, first, as to the systematic disguise of the truth. The common complaint of the man in the street is generally this (I borrow from a letter addressed not long ago to one of the medical papers by "a patient"): "If," says this person, "a patient is content to accept his doctor's prescription without inquiring too closely into his opinion of the nature of the case, I do not think it is incumbent on the doctor to reveal in all cases his suspicions of grave danger. But where a patient is clamouring to know what is the matter with him, it is too often the doctor's habit to return not only evasive but misleading replies, and I am strongly of opinion that the suspense and anxiety which result from this practice are frequently more injurious than the knowledge of the truth would be." "If," the writer says further on in his letter, "the impression that doctors habitually deceive their patients for their patients' good were once removed I am certain that the general esteem in which doctors are held would be greatly increased." This is, of course, only an opinion, and I cannot think that it is worth much because the writer talks of a rule of the profession not to take the patient into confidence in serious cases. I know of no such rule. Each case is decided on its own merits, and if such separate decisions in the gross have resulted in a practice of this kind it must be because medical men have seen reasons for concluding that it is on the whole the one most conducive to the welfare of the majority of minds. I do not claim for ourselves that we are better than any other body of men, but we are not worse, and if, for the sake of argument, we do habitually tell lies, the very disinterestedness of our damnation may well be considered as very strong evidence of the necessity that we think to be laid upon us. Medical men, unfortunately, know more of the natural man than does the patient quoted. They know that there are three classes of patients, if not more. There are those who really want to know all that we can tell them—the very truth. I put this group first in deference to the view of the "patient" I am combating, but it is, in my opinion, a very small group indeed. These generally succeed in making it quite clear that they really are in earnest in their request, and, in my experience, the absolute naked truth is told them. Then there are those who, having asked for the truth, did not really know their own minds; they only wanted favourable truth, and when it turns out unfavourable they seek an opportunity to go away from Dr. A—— to Dr. B——, because, say they, Dr. A—— is so abrupt, or so desponding or depressing, or always takes the worst view of his cases. In another still larger group of cases the question is never faced at all. They may have grave fears about the gravity of their malady and they unconsciously minimise their symptoms. They may brood over and fear the worst, but they never ask for an opinion, they never even mention their suspicions or fears themselves; these leak out perhaps by the sigh of relief that results from a cheery verdict or from the furtive aside of an accompanying friend. I venture, therefore, to state, as the result of deliberate and experienced conviction, that just as it is those who have little the matter with them who go about in fear of death—not those whose days are really numbered—so those who are not stricken with mortal illness are clamorous to know the truth, and those who are mortally wounded in the battle of life seldom seem to have any desire to know. The desire that they should know comes usually from the bystanders and concerns itself with the great question, "What next?" That "Won't you tell him?" when the physician gives an adverse verdict implies that most beautiful and most poetic, but most unreal, idea that man passes over the confines of Time and enters the Land of the Future with all his faculties vivid and intense in transit. But is it so?

"And may there be no moaning of the bar
When I put out to sea"

is very beautiful, but it is not applicable to the mass of

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mankind. Death seldom comes to man till his intellectual faculties are incapable of appreciating that passage of the bar. Thus there is nothing terrible to the dying in death itself. The veil between two worlds is but a cloud, and one passes through it imperceptibly.

If we except, then, such as have not arranged their affairs where it is of real importance for those who are to be left behind that this should be done, and those who, wanting to know everything, are granted their wish, I shall admit that for the large majority of the remainder, not that the truth is systematically disguised, but that the worst points in a case are kept in the background, and that the more promising ones are made the most of. I am prepared to justify this practice as not only the most humane, but as the best thing to do in the interest of the prolongation of the life at stake. And first of all, What is truth? As I write this I have come from the bedside of an old lady aged eighty-four years, stricken with acute pneumonia at the apex of one lung. She said as I was leaving her, "I know you won't deceive me; if I am going to die you will tell me the truth." Was I to say, would it have been right to say, "At your great age you are nearly certain to die"? That would have been the truth, and no more than the truth, for such a case, and would have been exactly what I thought. But truth can be brutal as well as kind. Was it not more humane to tell her that she was very ill but going on exceptionally well, which was the truth disguised or presented with "tact" or however you like to express it? Who can doubt that the right thing to do was to leave the patient with the life-sustaining hope, a hope that I certainly shared, although hardly daring to expect to see it realised? Well, then, how often in a single experience does it happen to a man to be able to say, while his patient is in a condition to be able to take advantage of it, "you have only got so long to live." In this very case I have mentioned the patient has recovered from her pneumonia, although the ultimate issue at such an age must still be very doubtful. Over and over again a patient has been given up by his medical attendants only to return to healthy life, and not uncommonly to make a life-long laughing-stock of those who have condemned him. Years ago, when resident house physician at Guy's Hospital, I arranged with the sisters in the medical wards that I should be called to every case that seemed to be dying. I wanted, apart from my duties, to obtain also some actual knowledge of facts that foretell immediate dissolution. It was a painful and depressing ordeal, and having gone through it I cannot say I am better informed now than I was before. I still find it as impossible as ever it was to get behind that impassable barrier of Providence,—The day and the hour knoweth no man.

I have chosen this, the most vital, question upon which to defend our freedom of judgment as to how we shall present our opinions to individual patients, because this is the one where our wisdom is most commonly called in question. But there are numberless other circumstances in which, if we would do the best we can for those who consult us, we cannot always say exactly what we think. We may, for example, think that a certain individual drinks too much. It is seldom advisable to blurt out, "You drink." At least, if one did it is more than probable that all chance of influencing the patient for good would be sacrificed, and that much obloquy and even personal loss would result to the medical man, for such people as this will talk and are not usually particular about strict veracity. So what is called "tact" is necessary, and tact is a vehicle to disguise the real taste of the truth. Thus careful inquiries about the daily diet of the patient are gradually worked off the meats on to the drinks of the ailing one, and the amount of claret taken daily. Of course, he or she never takes anything stronger. Thus is obtained an opening upon which to discourse upon the hostility of alcohol to some constitutions, and to this one in very particular. There are any number of times when one is equally unable to put things as bluntly as might for some reasons be desirable. For instance, to tell a lady that she is hysterical is equivalent to asking her to attend the practice of your most hated rival. Also, if you want to keep your patients you must not say they are nervous. This I know from experience. You may say they are highly strung. I conclude, therefore, that to tell brutal truths to patients is on several accounts mostly impossible, and I fail to see why we are dubbed untruthful on account of such inability.

In the matter of the over-treatment of disease, although it comes from the best of motives, perhaps hardly such intelligible reasons can be given for its occurrence. But in the first place I must say what I mean by over-treatment, and I will do this by appealing to current thought. No doubt you have all seen a correspondence initiated by an address given at the British Medical Association by Sir William Priestley upon Over-operating in Gynæcology. Sir William Priestley has been much taken to task by some of our surgical *confrères* from what, it seems to me, is a very narrow point of view, in that it has been made a class question of the physician, who is jealous at the success of a surgical coöperator. But I venture to say that the question must be considered from a much wider standpoint. It is not for anyone of us to play the part of the saucepan calling the kettle black, and I do not propose to confine my criticisms to any one branch of practice. Looked at from this broader aspect by the dispassionate watcher of the tide of progress, there is surely much that is wise, nothing that is not true, so far as I can see, in Sir William Priestley's address. And I will take medicine first and point my argument by illustrations. There came into my room the other day two brothers in the prime of life. They looked healthy, and they were healthy, but they complained of indigestion. You all know how much or how little that may mean. They both had the same tale to tell. They were full of gout, so their medical adviser said, and they had been taking the waters to drive it out. I went into their habits and their history with the greatest care, fully determined to find out anything that there might be that was treatable; and I am sure that if anyone could look at those two young men, apart from the bias engendered by the continual treatment of disease, he would say, as I do, that they are specimens of perfect health. This seems to me a good illustration of over-treatment, and is an example which, *mutatis mutandis*, will apply to a good many cases that we all meet with—men and women who will have medicine although they do not want any so far as their bodily condition is concerned. Let me give one more common case—that of the lady who, being wealthy, has had plenty of time to pay undue attention to her varied sensations. Say that there is something rather crocky about her family history, and this has made her unduly anxious about her lungs. She therefore consults many medical men, and perhaps one or another suggests the possibility of the presence of tubercle. She is seldom long without a medical man afterwards; she goes here and there and everywhere in search of health, and it is doubtful whether she has ever been tuberculous at all. And as this leads me to the subject of tuberculosis it will do as well as any other disease to illustrate the point under consideration.

I cannot but think that there is great danger of our letting the facts run away with us as regards the exact importance of the bacillary origin of tuberculosis. Once phthisis is shown to be infective, it is by many at once assumed that infection is infection, always the same, and to be dealt with always in the same manner. I have elsewhere treated of this matter,[1] but as the present occasion affords me the opportunity, as it were, of crying aloud upon the housetop I will say again that if anything is sure in the history of tuberculosis this is that the infecting agent is *not* a virulent one and is in many respects quite peculiar in its methods of invasion. Years ago, in making experiments upon rabbits and guinea-pigs upon the production of artificial tuberculosis, I found, as Wilson Fox had found before me, that the nature of the injury to the animal was comparatively immaterial. Tuberculosis was induced whether the primary lesion was the insertion of tubercle itself or the introduction of bits of cloth, of setons, and so on. Any chronic irritant appeared equal to producing it, and the disease was explained in those days as a matter of lymphatic hyperplasia, of infection from cell to cell, one cell imparting its morbid activity to another—a form of activity that has been banished from the pathology of the present day, but one which, I take the liberty of thinking, will some day become rehabilitated in the esteem of pathologists, when the bacterial boom shall have receded to its just proportions. But other observers followed, of whom one of the first, if not the first, was Dr. Dawson Williams, who showed that if the experiments were carefully conducted, and all the instruments carefully sterilised, no tuberculosis resulted save where tubercle had first been inoculated. It has been assumed from experiments such as these that the primary essential is, therefore, the introduction of the tubercle bacillus, and the other changes are the result of its introduction. But I have always

[1] Medical Magazine, 1894.

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thought that a rider to this is also possible; for in the first place it might well seem a little strange that out of a very large number of experiments so many non-tuberculous lesions should yet become inoculated with such regularity, whereas there was an important difference in the mode of operating in that the conditions resulting were just those to reduce the local inflammation to its lowest possible degree. Therefore, it may have been that in avoiding local inflammation a large part of the risk of the introduction of tubercle was also avoided. There are many facts in the history of tuberculosis that show that this is really so. A case in point readily comes to my mind. In the spring of the present year I was asked to see a young man who, in previous good health, had about the end of an influenza epidemic come home one evening, had a rigor, and from that time forward was feverish. After about ten days a friend of mine who was attending him asked me to see him because the fever was continuing, and no cause could be discovered. Just at that time a small patch of pneumonia began to show itself at the lower part of the right lung, and I said that no doubt the man had had influenza, and out of it had come a slowly developing pneumonia, as is not uncommon, and that now things would go on aright. There was, I think, something against the patient's family history, and I was therefore pushed as regards the possibility of the disease being tuberculous. But I said, "No." The disease did not begin like a case of tubercle; the initial rigors were much more like a pneumonia; the apices of the lungs were perfectly sound, and he would do all right. The case went on as one expected for some days; the whole of the right base solidified, and when we met again two or three weeks later the whole of the lower lobe was absolutely solid, the apex remaining quite healthy. But now time was getting on and the temperature was regularly up to about 102° F. every night, and again I had to defend my position that the case was not one of phthisis. I still refused to admit that the case was tuberculous. We now had the sputum examined, and on two occasions it was found free from bacilli, and I still stuck to my guns. But time ran on still further, and after six or eight weeks the lung showed no sign of resolving, or the temperature of abating; and now the sputum, when examined, showed a few bacilli, and later the bacilli became fairly numerous. What was I to say now? Many would say it has been an unusual case of phthisis, beginning at the base of the lung. It may be so; but for my own part I think the proper explanation of such a case is such as I have contended for in the tuberculosis produced in rabbits by setons and so forth, and that the pneumonia has let in the tuberculous germs, and that in this way the case becomes one of secondary tuberculosis. I give this case because it is an unusual and an interesting one, but there are any number of parallel cases; and I take it that the practice of the future, not perhaps the near future, will be a rebound to the teaching of a bygone day, not a struggle with countless hosts of invisible enemies, a struggle that might well seem hopeless did we stop to think about it, but, with increasing powers of securing health, a recognition of the fact that by keeping people healthy these microbic armies lose their terrors.

This is not to say that we need not avail ourselves of the precautions inculcated by our present-day knowledge of bacteriology. That would, indeed, be folly. It is to say that our precautions are to follow our knowledge and not to run in advance of it. And this is a distinction very necessary in the matter of tuberculosis. What are the facts as regards phthisis? There is no mistaking the drift of opinion. We are beginning to regard this disease as we do any other of the infectious diseases, totally different as most of them are in natural history. We are now taught that phthisis can be caught, and isolation is being preached as the right thing if it could be accomplished. Notification also has the same half-suppressed advocacy, and after it, or with it, comes the disinfection of houses in which the tuberculous have lived. I saw a case of phthisis the other day, and he left me to go and stay with his sister. Within a post or two this lady wrote to me to know what I thought of infection, because she had young children and she was herself delicate. I am often getting such letters.

Let us ask ourselves what we really know as to the value of disinfecting houses that have been inhabited by the tuberculous. I know nothing, but I dreamed not long ago that from some coign of 'vantage I beheld a stronghold of bacilli grown big and visible in the illusions of the night assaulted by the sanitary inspector with his sulphur and his lime, and as the fumes arose these bloated midges giggled to themselves at the pleasure they derived from the unusual perfume. But by-and-bye Messrs. Soap and Water came upon the scene, the windows were opened and the winds of heaven let in, and then it was that they turned tail and fled. Harassing precautions are all very well when we know that they will accomplish the end in view; but in the case of the tubercular bacillus we have no such knowledge, and for the present we had much better content ourselves with insisting upon absolute cleanliness and plenty of ventilation. We shall be in accord with, but not in advance of, our knowledge, and we shall have a much better chance of having our orders attended to. I should think there is nothing more sure in medicine than that the tubercle bacillus has special attributes, that it is not easily caught, and that it is successfully dealt with by common-sense precautions without turning society upside down. One other point with reference to this same disease. Do you not think we overdo the extradition of phthisis? It may be, and is, all very well and advisable that people who have plenty of money, and who can obtain every luxury, should travel for their health. They can carry home with them in a measure, and at the end of the voyage, as at the beginning, they have only to please themselves. But I am seeing every few days almost some poor clerk or shopman, or governess may be, who has been advised to go abroad for a weak chest. "And what," I ask, "are you going to do when you get there?" "Oh! look out for some work," is the reply. "Do you know anything of the country?" "No." "Have you any friends who can help you?" "No." "You are going by yourself?" "Yes." Thus they would go to a strange land without knowing a soul, and in search of clerical work, where workers of that sort who are strong are at a discount, and mostly are spending the small sum of capital saved or raised because they or their friends want to do the very best for them. And too often it is the very worst for them.

Aneurysm of the arch of the aorta is another malady that is, I think, too often over-treated. But it is a disease so desperate that one may be excused for making somewhat frantic efforts to save the life of the patient. I would, however, insist that we do not know the natural duration of any aneurysm. We know that they are practically incurable and that many last a long time—three, four, five, or even seven years—if under favouring circumstances. It is my belief that a very rigorous treatment in the way of dieting and prolonged rest in bed is a dangerous one unless directed with great judgment. It eases some symptoms, and in a solitary case now and again it has been said to cure. But I doubt if the good results are any set-off to the harm that is done by its routine application. The best that can be done, in my opinion, for an aneurysm of the arch of the aorta at present is to look upon it as incurable by any means; to, therefore, allow gentle exercise, with occasional rests in bed if pain be severe or there be signs of rapid increase of the aneurysm; an ample diet of good blood-making food, including fats, which the late Dr. Wooldridge showed by experiments to have some power in increasing the coagulable quality of the blood; reducing as far as practicable, without destroying the comfort of the patient, the amount of fluid taken in the twenty-four hours, and giving such drugs as are suitable to the case. Anything further than this—and cases are often treated much more rigorously—is what I should call over-treatment.

With some trepidation, too, I am inclined to say that a very different disease is made more of than its importance deserves, and that is ringworm. I never now attempt to treat it; I send it on to the dermatologist. I cannot cure it, and very often he cannot. And sooner or later it is taken out of his hands, and either left alone or treated by the herbalist with ink or Condy's fluid, who then, having made to himself friends of the mammon of unrighteousness as far as he deems judicious, calls it cured, and thenceforth the child is let loose again upon society. I often wonder when I hear of a child with ringworm of a year's, or perhaps two years', standing, and, of course, kept out of school and away from his companions all that time, what would have happened to his associates equivalent to the harm that has accrued to the child and his attendants from the treatment that he has undergone. Honestly I should very much like to see the parable of the tares and the wheat applied to this disease under scientific observation. To start with, no doubt, the sheep and the goats—I mean myself and the dermatologist; no, I beg pardon, the dermatologist and I—should differ as to the prospects of the

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harvest, *I* not expecting in the end to have much of the tares to deal with, *he* not much of a field of wheat. Anyhow, I am quite sure of this—that we should hear much less about ringworm—whether for the good or evil of the community I will not attempt to decide—if mothers had not got it into their heads, quite erroneously, that it is a dirty disease. Not long ago I was seeing a baby that had scurvy rickets, and the father was bemoaning the hardness of his luck, that, whereas he had always considered his family as a particularly clean one, one child had recently had ringworm and now another had got scurvy.

This is a very fair confession for me as a physician. Very shortly let me turn my attentions to surgery, and first I will say that I have often of late years asked myself the question whether we do not make too much of lateral curvature of the spine. Did anyone ever yet see a slight curve go on into a very bad one? It seems a rational assumption enough that it is so. But are we sure that it is so. It is mostly a disease of girls, and mothers quickly get into a panic if a shoulder is supposed to be growing out, and then we advise what is now the proper treatment, a prolonged course of the most irksome exercises. Now do not let anyone who is interested in this or any other subject I have treated think I am wishing to speak *ex cathedrâ*. I come before you in all these questions I have raised an honest doubter wanting to know if such ideas as have occurred to me have not also presented themselves to you. I see something of these cases, as do you, under different circumstances and at other times, odd times, than those at which the specialist sees them. And I incline to think that slight spinal curvatures, which form the staple of the successes in treatment, are a distinct class of cases from the bad cases. If not, then I should conclude that an incurable, I will not say an irremediable, condition is very quickly reached—at least, very many seem to be told they should have come before, and that they are bad cases and can only be prevented now from getting worse. Then surely there are some lateral curvatures that advance in spite of the best treatment. All things considered, then, I would venture to ask whether we should content ourselves with the groove in which we are now running—that the slightest lateral curve discovered, the sufferer must at once go in for a long course of specially adapted exercises. No doubt this plan is both more physiological and more rational than the now mostly discarded one of instruments and supports, but it does not seem to me that the results of even this method of treatment are quite so satisfactory as its advocates would have us believe. And I am not quite satisfied that we do not make too much fuss over these cases, and that the early ones would do just as well by turning them out to grass and insisting upon healthy, enjoyable exercise in healthy surroundings, combined with plenty of rest. Flatfoot is another condition the exact importance of which it is difficult to appraise. There are hundreds of people going about with flat feet and not in the least inconvenienced thereby. It is only in the small proportion of these cases that there are pain and so forth. So that it would seem that the trouble is more in the individual than in the shape of the foot; and I incline to think that we sometimes make too much of the foot and too little of the individual who owns it.

I will only mention one more affection, and that the disease of late years called adenoid vegetations of the naso-pharynx. Again, do not let anyone misunderstand me—I am not belittling the enormous amount of good that has come to humanity by the recent methods of dealing with these growths. I should think ear disease and tuberculosis starting in the neck and stunted development have been reduced enormously by the surgical treatment of these growths. But I do think, from what I have seen, that they are tending to become the red rag to the bull. I have in the course of the last few years seen children where the removal of these growths has been advised and where there was not one single symptom of their presence. They were there, but they caused no symptoms. He would do a good piece of work, in my opinion, who would make observations upon the proportion of children in our large towns who have this condition. I am inclined to think three-fourths of all would be no great over-statement of the number affected. At any rate, they exist in a large number of children without any symptoms, and I cannot think that it is wise to interfere in the absence either of deafness, or of enlargement of glands, or of a contracting chest, and so on. A lady came to me one day some time ago about her daughter. It appeared that not long before her small son had had adenoids, and as it was necessary to remove these the medical men thought they had better circumcise him at the same time, and no doubt it was a wise and proper proceeding. But the way it came to the mother's vision was that he had been "trimmed up all round," as she expressed it, and she came to me to protect her daughter from a similar fate. And that recalls to mind that the other day an American lady came to me with a child, and when she was seated she opened the ball by asking, "Have you a disease that is called appendicitis over here?" I replied that I had heard of it. "Well," she said, "where I come from they don't think anything of you unless you have had at least two cases in the family." So that it appears that over the water also our surgical brothers suffer, as we do, from a most unreasonable prejudice against the use of the knife! It is my belief, then, that in all branches of our professional work excess of zeal in treatment does occur. But, inasmuch as it is the necessary consequence of that enthusiasm without which no such responsible work could make any real progress, I do not think it can be altogether avoided. But let each of us see to this.

And here I must stop. It is not my purpose to point the moral to what I have said—I do not, indeed, know that it can be pointed; for, however it has been treated, my subject opens up large questions and great issues both to the medical man and his patient. And it is in this dual relationship that the difficulties occur; for mostly it is that our difficulties and errors of action are not those of our own making—they are forced upon us by those to whose service we have committed ourselves. But I think that we should all probably agree that we should find ourselves less often in troublesome corners if we more often kept the upper hand in dealing with our patients. The patient leads us in all manner of directions where we ought to lead him. For instance, he seems to me to have come to look upon a medical man as the repository of all knowledge, so that anyone who happens to say "I don't know" is looked upon as an ignoramus. Our patients need to be more constantly taught that doubt is no evidence of ignorance. One of the good things said by the late Sir William Gull is thus reported. He was attending a scion of nobility with one or two other medical celebrities of the time, and allowing their doubts to appear his lordship said: "Well, gentlemen, *you* don't seem to know what is the matter with the patient; is there anyone else that can give us more information?" "Yes, my lord," said Sir William Gull, with his usual readiness, "plenty if they are ignorant enough." I am constantly told that I must give some name to a doubtful case. I object altogether to give names to diseases that have not declared themselves, and I think that the friends of the sick, and the sick themselves where possible, ought to be educated on all possible occasions up to the understanding that there are diseases that no drugs can cure; that there are diseases that get well without drugs; that there constantly crop up sets of symptoms that admit of several different interpretations, and that hesitation and doubt may be as sure a measure of knowledge as decision. I think, too, that the time has come when, unintelligent as the layman seems to be in matters pertaining to his health, a resolute effort should be made to induce people to think for themselves. Can the practice of medicine be in a really sound state when we have to tell Mr. Dick, Mrs. Tom, and even, as I have several times known, adolescent Harry, that they may eat mutton but never touch beef, that they must not touch potatoes, and that they may have a warm bath at night, but not a cold one in the morning? There are few things less hopeful of the future of medicine than that at this the end of the nineteenth century it still seems necessary to treat grown up men and women as if they were children, and, what is worse, to find that dispensing leading strings finds much acceptance. You all know very well how the natural man curls up when someone comes into your room with the introduction, "I want you, please, to tell me what I may eat and drink." How your outward man at once congeals into a smug sitting-for-your-portrait sort of mien; and your inner man attempts to see things honestly as the patient sees them and to reason out the possibility that for this individuality dangers hitherto undreamed of may really lurk in every article of daily food, except perhaps toast and whisky, which seem very seldom to disagree. You have some of you no doubt felt, as I have often done after interviews of this kind, that an inward soreness has been left behind, a half

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questioning doubt whether in thus accepting such childlike faith one has not put back the promise of the future. For if the public will ask our advice about details upon which, if they only thought for a moment, they would see that they themselves must of necessity be far better judges than ever a stranger to their habits can be, what hope is there that they will ever be able to consider with you those weightier matters of the law, those subtle aberrations of function, those insidious early changes that constitute the beginnings of disease? Yet unless they are in some measure able to follow these with their medical advisers how can they possess their souls in patience—how can they ever be far off the patent medicine or the quack? And from these, in that future we shall not see, but which will yet surely come, may medicine be emancipated.

An Address
ON
THE SURGERY OF TO-DAY AS COMPARED WITH THAT OF TWENTY-FIVE YEARS AGO:
ILLUSTRATED BY THE WORK IN THE GENERAL INFIRMARY AT LEEDS.

Delivered before the Leeds and West Riding Medico-Chirurgical Society on Oct. 18th, 1895,

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GENTLEMEN,—I must first thank you for the honour you have conferred on me by electing me to the most distinguished position of President of this important society, which, both on account of its members as well as from the value of its papers and discussions, not only holds a premier position among the provincial but is second only in general interest to two or three of the chief metropolitan societies. It is customary for your President to deliver an address at the opening of the session, and as my predecessor in this chair reviewed the work of this society up to last year I have had to look around for another subject. I thought that a comparison of the surgical work of to-day in the General Infirmary at Leeds, the institution in which we regularly meet, as compared with that of twenty-five years ago, might prove of sufficient interest, as it would tend to show what a reformation—or shall I term it a revolution?—in surgical thought as well as in the science and art of surgery has taken place in the past quarter of a century. To those of my hearers who, like myself, have passed through this most critical period of the history of surgery, it is most evident that the changes in these twenty-five years are simply marvellous, and if we compare the report of the Leeds Infirmary for 1870 with that for the year 1894, issued in 1895, we can see not only that the mortality all round has lessened, but that in certain operations, had not a change come, their performance would have had to remain a matter of history, since the mortality was so high as to render them almost unjustifiable. The number of operations has increased remarkably. Whereas there were in 1870 271 general and 198 ophthalmic operations, making a total of 469, in 1894 there were 1527 general, 1200 minor, 1171 ophthalmic, and 141 gynæcological operations, making a total of 5039; and whereas the all-round mortality in 1870 was 6·6, in 1894, although the magnitude of the operations performed was in many cases infinitely greater, it had fallen to the notably low percentage of 1·2; so that if the number of operations had been equal in the two years, and the mortality had remained the same, there would have been 332 deaths in 1894 instead of 60. An analysis of the hospital registers for the years named affords some interesting and startling facts; for instance, in the 1894 report the following operations are recorded which have no place in the report of 1870: radical cure of hernia, of which no less than 53 cases are given; osteotomy, 69 cases; removal of vermiform appendix for recurrent appendicitis; cholecystotomy and other operations on the gall-bladder; enterectomy, prostatectomy, gastrotomy, pyloroplasty, hysterectomy, nephrectomy, laminectomy, laryngectomy, bone-grafting, nerve-grafting, and others, all of which are now well-established, useful, and successful operative measures. In the same way a reference to the registers shows that some surgical diseases, unfortunately too common in 1870, are now happily rare, and in some instances have no place in the record of 1894. I refer to hospital gangrene, phagedæna, pyæmia, erysipelas, septicæmia, secondary hæmorrhage, and such-like surgical misfortunes. No better example can be given than that of tetanus; for twenty-five years ago it was not very unusual to see this fatal disease follow even slight operations, yet during the last fifteen years I have not seen a single post-operative case, all instances that have come under observation having occurred after neglected wounds received outside the hospital.

Perhaps in no class of cases has greater progress to be recorded than in abdominal diseases, which formerly were for the most part treated expectantly in the medical wards. For instance, in 1870 and 1871, under the heading "Abdominal Section" no case is recorded; in other words, the peritoneal cavity was only opened for ovariotomy and for strangulated hernia; whereas in the two years 1893 and 1894 573 patients had abdominal section performed in this hospital, the all-round mortality—including malignant cases, strangulation of gut, cases of acute intestinal obstruction, internal gangrene, suppurative peritonitis, &c.—showing a mortality of 12·2, or a saving of life in 87·8 per cent. The statistics of ovariotomy in this hospital twenty-five years ago were so bad that tapping was frequently resorted to in order to defer the major operation, and even in 1875 12 patients were thus treated, only 7 having been submitted to the radical operation. Out of these 7, 5 died, yielding a mortality of 71·3 per cent. On the other hand, in the years 1893 and 1894 ovariotomy was performed 132 times with 123 recoveries, giving a mortality of 6·8 per cent., and seeing that this includes malignant cases as well as patients extremely ill in other ways, the mortality is one of which no hospital need feel ashamed. For it must be borne in mind that statistics are in no way considered, and if an operation offers any chance of giving relief it is resorted to. Only a few years ago it was the custom to treat these cases in single wards and to have two special nurses for each, but as the work increased this was found to be impracticable, it being impossible either to provide sufficient small wards or nurses, and it soon became manifest that the patients treated in the general wards recovered equally well. Hence, isolation was given up, and it is now the custom to operate on these cases in the theatre and to remove them to the general wards, just as is done with other surgical cases.

Compound fractures afford a bright example of progress in treatment, for instead of amputating where the large joints are opened or where the bones are extensively smashed and the soft parts lacerated, and instead of the majority of cases having to go through a tedious process of healing by granulation, possibly with the complication of abscess and secondary hæmorrhage, and after many weeks or months recovering with stiffened joints and impaired functions, at the present time, although joints may be opened and the bones severely smashed, so long as the circulation can be carried on amputation scarcely enters into the question, and the limb is put up, after purification of the wound, with every prospect that the case will pursue the ordinary course of recovery like a simple fracture. Thus there is not only effected a great saving of life and a much more rapid restoration of function, but a marked diminution in the time spent in hospital. In this way, as well as in the treatment of joint diseases, surgery has become much more conservative and amputation is now only looked on as a *pis aller*, and almost as a sign of failure; though, if amputation has to be done, the mortality of to-day compares very favourably with that of twenty-five years ago, for, including all the major amputations, the mortality of 1870 was 20·8 and of 1875 25·60, whereas in 1894 it was only 11 per cent. This conservative tendency is exemplified by the care exercised to attain perfection in the repair of injured tissues, whether accidental or operative; for instance, it used to be considered satisfactory to bring all the tissues in an abdominal wound together by sutures piercing the whole thickness of the abdominal wall, the result not infrequently being a yielding of the cicatrix and the development of a ventral hernia; but by bringing peritoneum to peritoneum, muscle to muscle, aponeurosis

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to aponeurosis, and skin to skin, the integrity of the parts is restored and permanent weakness avoided. In no class of wounds does this great care show to more advantage than in injuries of the forearm and hands, where suture of tendons and nerves is thought of as much importance as union of skin; even if there be a deficiency of nerve or tendon modern surgery is equal to the occasion, since grafting of both can be successfully effected. The aiming at cure, or as nearly as possible at complete restitution, rather than simply at relief, is exemplified in the performance of ovariotomy in place of paracentesis, of excision of joints in place of amputation, of erasion or simply removal of disease instead of excision, of enucleation of thyroid tumours instead of thyroidectomy, and of prostatectomy in place of drainage or frequent catheterism. The operation for strangulated hernia illustrates not only the greater success 12·5 per cent. mortality in 1894—against 33·3 in 1870 and 60·6 in 1874—but the difference in aim of the modern surgeon, for in 1870 the saving of life was, as a rule, simply considered, and the patient on recovery was left more crippled than ever, since the hernial aperture was as a rule larger, whereas at present the radical cure is considered an essential part of the operation. In consequence of the almost absolute safety of operative interference at an early stage of strangulation, and the almost certain cure of the hernia, very little time is wasted on taxis, and operation is urged as being a blessing, though in disguise. Even in those very terrible cases where, through ignorance or neglect, the intestine becomes gangrenous, unless the patient is too ill to bear more than a mere incision, instead of establishing an artificial anus a cure is aimed at by excision of the gangrenous loop and restoration of continuity by means of simple suture or by means of some apparatus such as the decalcified bone bobbin or the metal button, the closing of the neck of the sac so as to form a radical cure completing the operation.

In the treatment of certain impacted fractures such as Colles's fracture of the wrist at any age, or impacted fracture of the cervix femoris in a healthy young or middle-aged man, union is certain if the case be left to nature, but I take it that any surgeon would feel dissatisfied with his work if he simply rested content with securing union without restitution. In the same way, in transverse fracture of the patella bony union and complete restitution, which were once rare events, are now definitely aimed at either by extra- or intra-articular suture. The tendency of modern surgery is to be thorough, this being well exemplified in the treatment of malignant disease; for instance, in cancer of the breast no surgeon would now consider his work satisfactory who simply removed the tumour without amputating the whole of the breast as well as clearing out the axilla, just as in cancer of the cervix uteri he will perform supra-vaginal amputation or complete hysterectomy no matter how early the disease be discovered. The benefit of this thoroughness is shown in the lengthened respite or in some cases in the complete cure. That the thorough operation in these two classes of cases which have served me for examples is safe is shown by the 1894 statistics, for, of the 36 amputations of the breast and of the 9 hysterectomies for cancer, all recovered. I might have mentioned two other examples of the thorough removal of malignant disease in laryngectomy for malignant disease of the larynx and proctectomy for cancer of the rectum, both of them being comparatively new and successful operative procedures.

In the days when any simple operation wound might be followed by serious complications the advice necessarily given, where the question was one of mere disability or of deformity, was, "Be content with the ills you have rather than those you know not of"; but now that wound complications with due precautions can be discounted our sphere of usefulness is widely extended, and our advice as to operation is well exemplified in the report for 1894, where it will be found that besides the 53 radical cures of non-strangulated hernia for the removal of disability no less than 64 osteotomies were performed for the rectification of crooked legs or thighs, to say nothing of the numerous plastic operations performed simply for their æsthetic effect. I remember the time when healing by granulation was considered quite satisfactory, and occasionally the surgeon would be gratified by obtaining primary union; now not to obtain healing by first intention in clean operation wounds is considered discreditable to modern surgery and to the institution in which it occurs. Then, not only daily, but several times a day, the dressings had to be changed, whereas at the present time one dressing is applied at the operation, and as a rule is not changed for a week or longer or until the wound is quite healed. I find that so late as 1880 over five tons of linseed were supplied to the infirmary to be used as poultices for wounds, whereas in 1894 the amount was so small that it is not entered in the list of stores, and at the present time I think the student would have to make his acquaintance with this commodity outside the surgical wards. On the other hand, the amount of cotton-wool supplied last year was over five tons, it being chiefly used in the manufacture of the antiseptic dressings salufer or salicylic wool. Although an improvement in results was steadily being brought about by increased cleanliness and by improved sanitary arrangements it was not until the introduction of the antiseptic system by the father of modern surgery, Sir Joseph Lister, that surgery emerged from the darkness and uncertainty which had surrounded it for ages to the scientific accuracy and greater certainty of the present time. The truth of this is proved, if proofs were needed, in the facts I have mentioned, culled from our own hospital records, which are open to all. The change was not simply a gradual evolution, but a well-marked revolution, not depending so much on merely manipulative dexterity (for our hospital twenty-five years ago could boast of the greatest surgical skill) as on an increased knowledge of the causes of surgical disaster and how to avoid them. While on this subject it would be base ingratitude to pass on without an expression of profound sorrow for the loss sustained by science and by mankind in the person of M. Pasteur, that genius who, from the discovery of the causes of aberration in the processes of fermentation in alcoholic beverages, extended his theories so as to enlarge the whole range of pathological thought by showing the intimate relation between fermentation and contagious disease, an extension of this study leading, as we all know, to the practice of antiseptic surgery. Since the Listerian reformation in surgery evolution has been taking place all along the line both in surgery and among surgeons themselves.

The time has passed for the surgeon to be obstetrician, general practitioner, physician, and surgeon blended in one; the true surgeon must give his life to his work, and must be an artist as well as a scientist, conversant at the same time with physiology and pathology as well as with anatomy and bacteriology; he can no longer shirk the work of diagnosis and accept the dictum of the physician as to when he should operate or decline to operate, but he must be able to use his brains as well as his hands in order to attain to an ideal. Nowhere is more judgment required than in those difficult cases, most frequently abdominal, where, even with the co-operation of his medical *confrère*, only an approximate diagnosis can be arrived at, and where the awaiting of developments which would clear up the mystery means the loss of life. In such cases exploratory operations, because of their safety, are becoming more and more frequent; in the 1894 report 10 such are given, all of which recovered; but this does not represent the whole of the truth, for in many cases the designation is afterwards affixed to the bed paper though the operation began as an exploratory procedure. In other words, whereas formerly diagnosis was considered essential before operative interference, now operation at times precedes diagnosis. The increasing tendency to "operate when in doubt" will do much to lessen the number of cases to which "too late" has yet to be applied. The surgeon never had such responsibility resting on his shoulders as at the present time, for it will no longer serve him to blame the supernatural for his own oversights or auto-infection for germs introduced by himself or his assistants. Knowing what we do of the causes of wound complications, and how without that knowledge it was practically impossible to avoid them, it should excite in the mind of the surgeon of to-day the most lively admiration of the able men who brought our art to the state in which it was in the period preceding the antiseptic era. Although they were disquieted by failures which they believed to be beyond control they had the courage to rise above their disasters and in many cases to score successes which the modern surgeon might consider impossible under such adverse circumstances. In accepting the responsibility of operative work the surgeon has to place himself to a certain extent in the hands of those assisting him, and as the strength of a chain is tested by its weakest link, so his success may be marred by the ignorance or the carelessness of another. In hospital work and in

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surgical clinics this difficulty does not arise, as the surgeon can carefully select his own assistants. In a school so large as the medical department of the Yorkshire College, and with the large amount of clinical material at our disposal for the purposes of teaching, the student has every possible advantage to make himself proficient, and while dresserships are available for all, to those who are diligent and who choose to avail themselves of their opportunities the resident appointments at the infirmary are open, so that the want of skilled assistants is never felt in hospital practice, though in private work at the homes of the patients the difficulty is at times not a little embarrassing. Hence I think it will be found that at the present day, given the skilful and careful surgeon, his success will be greatest in the following order—(1) at the surgical clinics where he is personally responsible for the assistants, nurses, and general *entourage;* (2) in his hospital practice, where the responsibility is divided and where his assistants are frequently changing; and (3) in the private homes of patients where the surroundings are often ill-adapted to the purpose and where the responsibility is still further divided.

Twenty-five years ago I think it would have been found that the greatest success followed the surgeon's efforts in the homes of his patients and the least in his hospital wards, because of the prevalence of wound complications in the latter and the greater purity of the air and of the surroundings in the former. Surgery has, however, not yet attained its goal, and much good work remains to be done. The members of this great society, as they have in the past, will doubtless in the future contribute their share; not only in surgical but in medical science in its various branches has the society done useful work and signalled progress, as we hope and believe it will continue to do in the future.

GLEANINGS FROM SURGICAL PRACTICE.

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I.

I PROPOSE in the following papers to collect and hand down to those who may be interested in past surgical work some of the lessons which can be imparted to others out of the many that I have learnt during a somewhat extensive surgical experience, and in so doing to record brief notes of such rare and exceptional cases as I now, after a process of free elimination, find retained in my notebooks; for during the past year, when occupied in looking over my records of hospital and private cases, I speedily realised the conclusion that, whilst the notes *en masse* would, when I have passed over to the majority, be useless to anyone, some of them, and particularly those of private cases, might be misemployed. Under these circumstances I have submitted all my notes to a process of sifting, and after throwing away what may be called ordinary examples of disease or injury I have preserved only such as appear to be typical, rare, or exceptional, and I must add that the notes of most of these have been condensed down to what could be recorded upon a half-sheet of note-paper. From these condensed notes of sifted cases I shall illustrate this and all future papers.

I.—INJURIES OF THE ABDOMEN WITHOUT EXTERNAL WOUNDS.

For the first of the series I have selected those which refer to the subject of injuries of the abdomen without external wounds, since it can hardly be open to a question that the diagnosis and treatment of this class of cases are, as a rule, very puzzling to most practitioners, not only on account of the difficulty which is always experienced in arriving at an accurate diagnosis of the nature of the injury which may have been sustained, but because there are no cases which call for more prompt or decided measures when the diagnosis of the case is sufficiently clear to allow of such being carried out; indeed, it is on account of this uncertainty of diagnosis that so many cases of abdominal injury are too often allowed to drift until the hour for active beneficial interference has passed, and the surgeon learns too late in any individual case from its necropsy that by the help of his art repair might have been rendered possible and recovery probable. How to make the diagnosis of these cases more certain will form an important part of this paper.

In estimating the nature of the injury in any individual example care should always be taken to learn from the eye-witnesses of the accident every detail connected with its occurrence which can be obtained, particularly as to the nature of the force which has been applied, and the direction of its application with reference to the position of the patient at the time of injury. The condition of the patient's clothes should also be well looked to, for by such a scrutiny a conclusion may be deduced as to the exact seat of impact or direction of the injuring force; indeed, these points taken together much help the surgeon to form some conclusion respecting the nature of the case he has to treat after its due investigation. It must always be kept in mind that a case, which may at first sight appear serious from having been the result of the application of a powerful force, may in its progress prove to have been of the nature of a trivial injury; whilst, on the other hand, a case that may have been regarded as one of a trivial nature from having been brought about by a slight force may be followed by the gravest consequences. Thus I have seen the two side wheels of a four-wheeled waggonette holding two adults pass over the abdomen of a boy aged six when on his back without doing more harm than that produced by fright; and I have known the blow from a stone the size of a walnut thrown from afar, after striking a girl aged seven on her abdomen, produce a rupture of the small intestine which caused death. And yet the fact to which I have drawn attention and the cases I have quoted to illustrate it must not mislead us, for it is essential that all surgeons should acknowledge that, as a rule, the greater the force applied to the abdominal contents the greater probably will be the injury the viscera and vessels have sustained. Thus the passage of a wheel over the abdomen, as a diffused, dragging, and crushing force, is most likely to be followed by a bruising or laceration of parts; whereas the blow of a stone, a fall upon a stone or small blunt object, a kick, or like injury, where the force of impact has been quite local, is more prone to produce in a distended hollow viscus a local rupture. It is also always to be remembered that the condition of a hollow abdominal viscus—whether full, half full, or empty—must have an important influence in determining the consequence of any external violence; so that where the local application of a force to a distended organ may in one case produce a fatal rupture, the application of the same or even greater force applied to the same viscus when empty will be followed by no serious result. In all abdominal injuries it is well, therefore, for inquiry to be made as to the relation of the time of the accident to that of the antecedent meal or act of micturition, since with the knowledge so acquired the diagnosis of a case is helped and made more certain, and its treatment is more likely to be successful. Again, it must always be acknowledged that in any example of abdominal injury a liver or spleen may be fissured or even crushed without giving rise in its early hours to any such symptoms as will lead the surgeon in attendance to diagnose the presence of such an injury; although when collapse has immediately followed the accident and the force which has been applied to the abdomen has been great, and when the state of collapse persists or becomes more marked, some suspicion of its presence should certainly be excited; or, again, should, as the early hours pass without shock, a sudden collapse occur, fatal or otherwise, the fear of a secondary hæmorrhage having taken place must arise; or, as days pass, symptoms of peritonitis show themselves, the probability of the breaking down of some bruised or injured tissue should not be overlooked. Again, a hollow viscus may be bruised or partly torn, but not through all its coats. At one time the serous covering may be split, but not the mucous; at another the reverse condition may exist; and under such circumstances, if the case be rightly treated, all may eventually go well. In a hollow viscus, where the mucous membrane lining its lumen has been torn away from its muscular and serous coverings, symptoms would exist which should be recognised, and with such an injury complete repair may be obtained. Cases will be quoted to illustrate these points.

The chief effects of any abdominal injury as well as those which are the immediate causes of death may be enumerated as four—namely, shock, hæmorrhage, extravasation of the visceral contents, and peritonitis, the first two

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and the last two causes of death being more or less intimately associated.

Shock or collapse is under all circumstances an alarming condition, since it always means a tendency towards death and suggests by its presence in any case of injury to the abdomen some serious visceral or vascular complication; and yet experience tells us that as a primary symptom in these cases it is often unreliable, for it is not uncommon to meet with examples of severe injury to the abdominal viscera which are associated with but slight collapse as an early symptom; and it is at least as common to find grave and at times prolonged shock present in the early hours of a case which eventually turns out to be one of quite a trivial nature. Nevertheless, shock or collapse is always indicative of danger, and if not evanescent had better be interpreted as a significant sign of some serious visceral or vascular complication with or without hæmorrhage. Again, collapse in some instances of abdominal injury may pass away wholly or in part, to return either slowly or suddenly after the expiration of a few hours or days. This form of collapse should be called "relapsing collapse," and when it occurs it always means mischief, and probably serious mischief, for it either indicates the existence of secondary hæmorrhage or the giving way or separation of some damaged tissues. Indeed, this relapsing collapse has for diagnostic purposes much the same value as that possessed by a persistent primary shock or collapse which immediately follows an accident, although the relapsing form indicates either a secondary hæmorrhage at the seat of injury rather than a primary, or some secondary giving way of a tissue which had been damaged by the accident but not at the time separated, this secondary separation of tissue being brought about either by an absence of repair at the seat of injury or by some ulcerative process. In either case the relapsing collapse is due to a secondary hæmorrhage or to the extravasation of the contents of some hollow viscus, or it may be to the combination of both. By way of conclusion it may therefore be accepted that in every case of abdominal injury in which shock or collapse is a prominent symptom it is reasonable to entertain a fear that either hæmorrhage or visceral rupture may be the cause. If the symptom persists or becomes more marked that fear must be strengthened and even become a certainty; although, on the other hand, the reverse does *not* hold good, since a serious and necessarily fatal consequence of injury may exist with only a very slight or evanescent indication of shock. Shock or collapse as a relapsing symptom is, however, always indicative of a serious complication.

Hæmorrhage as a consequence of an abdominal injury and as a cause of death is very common, although it must be understood that shock may be present in a severe, if not fatal, form without hæmorrhage. The symptom is thus clearly due to some effect of the injury acting through the sympathetic nervous system upon the cardiac plexus and so upon the heart. In my work on the "Practice of Surgery"[1] I quote two cases which seem to support this view. Such a conclusion should never, however, be accepted in any given case without the most careful and complete examination of the body after death. When collapse is persistent or becomes more marked the presence of hæmorrhage should be diagnosed, although its exact source may be a dark point. It may have come from a fissure, laceration, or crush of a solid viscus, such as the liver or spleen; it may have come from a lacerated or ruptured hollow viscus, or from some tear in a mesenteric or other vein or vessel. When collapse shows itself in the relapsing form it is certainly reasonable to conclude that it is due to a secondary hæmorrhage brought about either by the giving way of a vessel that was injured but not torn at the time of the accident, or to the separation of part of a solid viscus which was so crushed by the force which caused the injury as not to be followed by primary bleeding, but which as time passed and shock diminished subsequently separated, either as a consequence of some unfortunate movement which was allowed under a mistaken view of the nature of the case, or which was made without leave, or which took place during the muscular effort caused by defecation.

Extravasation of the visceral contents may take place either as a direct consequence of an abdominal injury or as a secondary result, this secondary result being due to the giving way of a part which might have been contused at the time of the accident, but in which there was no absolute solution of continuity, the subsequent rupture taking place by either the casting away of the contused tissue as a slough, or by a process of ulceration which has taken the place of repair at the part injured, or it may be by a rupture from over-distension of the injured hollow viscus. Under the former circumstance, when the rupture has been the direct result of the accident, it is more frequently than otherwise associated with hæmorrhage, and in the latter circumstances, when it has been brought about by secondary causes, it is more frequently than not associated with first a local and subsequently a general peritonitis. A full recognition of the truth of these preliminary observations ought to be present in the mind of every surgeon before he approaches a case of injury of the abdomen with a view to its diagnosis and treatment; and it is with this feeling very clearly fixed in my own mind that I now pass on to consider the difficult subject of diagnosis of an abdominal injury.

The Diagnosis of Abdominal Injury.

Although from what has been written a feeling of uncertainty must predominate in the mind of every surgeon when he approaches a case of injury to the abdomen with a view to its diagnosis, that of blank dismay as to success must not be allowed to reign, for with a methodical investigation of any case from first to last enough information will usually be obtained to justify the formation of a provisional diagnosis which will be sufficiently clear to sanction the laying down of a clear and scientific line of treatment, although both the diagnosis and the treatment based upon it may require modification as symptoms change and the true nature of the case by its progress becomes more defined. As a primary line of investigation the surgeon should, as already advised, as a matter of routine inquire in every case from those who may have witnessed the accident as to the character and degree of force which had been applied, with the direction of its application, and more particularly with reference to the position of the patient at the moment of its application and to its seat of impact, and these inquiries should be followed by the careful scrutiny of the clothes of the injured one; for by adopting these methods of preliminary inquiry valuable suggestions as to the probable nature of the injury may be raised which must prove of value in directing the attention of the surgeon into a right channel; indeed, with such evidence alone the surgeon will occasionally have for a time to be satisfied. The examination of the injured region should come next in order, and this examination should be very carefully undertaken with the full recognition of the fact that the gravest internal abdominal injuries may coexist with the slightest or even with no external evidence of mischief; and that marked evidence of external mischief to the abdominal parietes may be associated with absolute immunity from injury of the abdominal contents. Should no external evidence of abdominal injury be visible after due inspection, the surgeon must not allow himself to be put off his guard, and more particularly when he has received reliable information from those who had seen the accident as to its true nature. Indeed, upon such circumstantial testimony the surgeon, for the time, may have chiefly to rely, not only for his provisional diagnosis, but for the line of treatment he should lay down, although that treatment may be simply one of expectancy, which will have to be modified by either the development of fresh symptoms or by the disappearance or modification of such general symptoms as may have been at first present. should marked ocular evidence of local injury be found—and this local evidence tallies with the circumstantial history of the accident which had been obtained and the general symptoms of shock or collapse which followed the accident—the diagnosis of serious internal mischief would be justifiable, although such a diagnosis would be either weakened if the general symptoms of shock or collapse had been but slight or of a passing character, or in the same way strengthened if the indications of shock or collapse instead of passing off had become more marked or of a steadily intensifying character—the persistency of shock or collapse, or its sudden or gradual intensification, being under all circumstances of abdominal injury a symptom of grave import, either with or without ocular evidence of local injury.

With respect to *vomiting* as an indication of mischief much might be said. The mere evacuation of the contents of the stomach after the receipt of the injury is to be looked for as a consequence of shock, and is not, therefore, significant, although should vomiting appear without the presence of shock it is a serious indication. When the

[1] Practice of Surgery, vol. ii., p. 684. Fourth edition.

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stomach has, however, once emptied itself, its action, if the result of shock alone, should cease; consequently when vomiting persists or reappears after it has once ceased some serious intestinal mischief should be suspected. The earlier the appearance of vomiting after the receipt of the injury, and the more persistent the symptom, the greater is the probability of some rupture of the upper part of the small intestines. The later the appearance of vomiting after the injury the greater is the probability of the seat of rupture being lower down, for it is certain that the small intestine may be torn or perforated in its lower region, not far from the cæcum, without being associated with vomiting at any time, or should vomiting appear it will not do so for some ten or more hours after the receipt of the injury—that is, until some secondary shock has taken place as a result of extravasation of the contents of the ruptured bowel, or septic peritonitis has set in. When blood is found to be mixed with the evacuated material at the first vomit a suspicion of some injury to the mucous lining or other coats of the stomach should be excited. When it is absent in the early vomit and appears later the probability of some intestinal rupture high up, as in the upper extremity of the jejunum, is raised. Rupture of the large intestine *per se* is not in my experience attended with vomiting of blood, but rather with intestinal hæmorrhage.

The value for diagnostic purposes of the *passage of flatus* or its expulsion from the bowel per anum with or without motion deserves more than a passing notice; for, strange as it may seem, it is but true that a patient with a lacerated wound of his ileum 3 ft. from the cæcum, and who died on the eighteenth day, had two natural actions of his bowels during this period. A man who had a rupture of the middle of his ileum from the kick of a horse, and who lived but forty-eight hours, passed flatus downwards freely. A man aged forty-one, who died on the fourth day from suppurating peritonitis due to fæcal extravasation the result of a complete rupture of the ileum 3 ft. above the cæcum, passed flatus freely and had a natural motion. A boy aged six who died six days after an injury produced by the treading of a horse, which caused a double perforation of his small intestine, one being 14 in. from the pylorus and the other 1 ft. lower down, had two natural actions of the bowels. A man aged twenty-one who lived eighteen days after the passage of the wheels of a heavily-laden van over his abdomen, which had ruptured his ileum above the cæcum, had two natural motions, although he died from peritonitis due to extravasation. And lastly, a boy aged sixteen who was hurt by the wheel of a cart passing over his abdomen, and died on the fifth day after the passage of a motion which was followed by collapse and death, was found to have had secondary hæmorrhage into the abdominal cavity from the separation of a mass of liver which had been crushed at the time of the accident, the muscular exertion which attended defecation having doubtless brought about this sudden death.

Pain as a symptom of diagnostic value is at times very confusing, for its absence is by no means to be accepted as being any evidence of the trifling nature of an abdominal injury, and its presence even to a marked degree supports no argument in favour of severe trouble; for pain in abdominal injuries is always to be estimated, as in all others after a due consideration of the personal equation. Still, persistent local or general abdominal pain is always a symptom of importance as well as of gravity. In most cases it is central and radiating. Pain seems to be, so far as its severity is concerned, about the same in injuries of the solid as of the hollow viscera; it may likewise be slight in visceral injuries and severe in integumental.

With these preliminary general remarks upon the causes, effects, methods of investigation, and diagnosis of abdominal injuries, I propose to quote the brief notes of such cases as may illustrate their truth; and first of all of the statement which is so important to bear in mind: That abdominal injuries which have been brought about by severe external violence, and are associated with external features and general symptoms which suggest grave internal complications, may in their progress prove that such an inference was incorrect and that the internal injury was really trivial.

CASE 1. *Severe abdominal crush without intra-abdominal mischief, but with hæmorrhage into the orbits.*—The patient was a man aged thirty-two years who was admitted under my care into Guy's Hospital on May 2nd, 1873, for an injury he had just sustained when cleaning his railway engine. The engine moved when he was at his work, with his abdomen resting upon its crank, and in so doing crushed him between the crank below and the body of the engine above. He was rendered perfectly insensible by the accident, as well as collapsed, and in that state he was brought to the hospital. His abdomen was found on his admission to be generally bruised, especially upon its left side, and his eyes were blackened from blood effused into the eyelids, as well as into both orbits, the blood coming forward from behind the eyeballs. There was, however, no paralysis. Consciousness returned in about ten or twelve hours, when he complained of intense abdominal pain, and his pulse improved. His urine, which was drawn off, was quite clear. As hours passed no fresh symptoms appeared, and with each day it became evident that his abdominal injury had not involved any viscus. In the course of a few weeks he left the hospital convalescent, although the subconjunctival hæmorrhage had not disappeared. It is to be noticed that in this case there was no vomiting, and that although the character of the accident more than justified a diagnosis of a serious abdominal injury, yet from the progress of the case it became clear that the viscera had escaped. The hæmorrhage into the orbits and eyelids indicated by its presence that the abdominal pressure must have been very severe, the bloodvessels having doubtless ruptured from their over-distension brought about by the abdominal pressure. I have, however, seen this orbital hæmorrhage before in a case of crushed thorax, but with it there was also bleeding from both ears; recovery likewise took place in that case.

The next statement I wish to prove is the reverse of the last, and that is that the gravest internal abdominal injuries may coexist with the slightest or with no external evidence of mischief, and even without shock or collapse.

CASE 2. *Ruptured liver; death on fifth day.*—In October, 1883, a boy aged sixteen walked into Guy's Hospital after having been run over by the wheel of a cart which had passed over his abdomen. The boy, although in pain, had walked at least a quarter of a mile to the hospital after the accident. When admitted he was pale and in great pain, but his pulse was full and there were no external signs of injury. When put to bed he vomited, but there was no blood in the vomit. His urine, which was passed naturally, was clear. On the second day his abdomen became more distended and hard. His pulse was 104. On the fourth day he passed flatus downwards, but no motion. On the fifth day he rested with his legs outstretched, but rather to the right side, and later on the same day he had an action of the bowels, which was accompanied with severe abdominal pain and speedily followed by collapse and sudden death. After death a fissure three inches deep was found in the right lobe of his liver, filled with blood-clot and covered with lymph. There was also evidence of slight peritonitis about the seat of injury. It seems more than probable that in this case recovery might have taken place if the straining for a motion had not been called into requisition.

CASE 3. *Ruptured spleen; death on twelfth day.*—A girl aged five was run over, a wheel passing over the upper half of the abdomen, and admitted into Guy's Hospital in 1873 with a fractured jaw and injury to the left side of the thorax, but without any evidence of abdominal trouble. No fracture of the ribs was made out, although it was suspected from the difficulty of breathing which was present from the first. The child seemed to be doing well and about the fourth day was able to sit up in bed. On the eighth day abdominal symptoms appeared suggesting peritonitis, and then, rapidly increasing, proved fatal on the twelfth day. After death, besides the fracture of the jaw, the fifth left rib was found to have been broken as a green stick, and there was some recent lymph about the left lung, and on separating the intestines, which were distended and inflamed, some four or five ounces of grumous blood were found about the spleen, which was ruptured on its anterior edge. In this case there was no evidence whatever of intra-abdominal injury, and nothing except the nature of the accident to suggest the probability of its presence. The development of peritonitis raised the question very definitely, although the true cause of the abdominal mischief was only revealed at the necropsy of the case. The case shows very clearly that a spleen may be ruptured by some external violence, and that the symptoms primarily associated with such an injury may be absolutely negative.

CASE 4. *Ruptured jejunum.*—That a bowel may be partially or wholly divided as the result of an injury, and yet

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be associated with no such severe symptoms as to suggest the true nature of the accident, is a truism which should always be recognised. Thus, a man aged forty walked into Guy's Hospital on June 23rd, 1877, after having received a kick from a horse on his abdomen. He appeared to be so slightly injured that his friends wished to take him home, for he was neither sick nor collapsed and only complained of local pain where he had been kicked. As a means of precaution he was, however, put to bed, although to die within thirty-six hours from acute peritonitis. At the necropsy, besides evidence of general peritonitis, intestinal contents were found in the peritoneal cavity, and great difficulties were experienced in finding the seat of the rupture; indeed, the bowel was carefully looked through twice without success, and it was only by distending the bowel slightly with water that the leak was found in the small intestine through an opening about a sixth of an inch in diameter situated about three feet below the duodenum. The edges of the opening were everted, and the opening was covered with lymph.

CASE 5. *Ruptured ileum.*—A man aged forty-nine when working at the river-side was knocked down by a falling bale of wool and doubled up. He was at once taken to Guy's Hospital, when he was so free from pain and shock that he walked up two flights of stairs to the ward. When examined a fractured clavicle was found, but there were no indications of any other injury. As a matter of precaution the man was kept in the hospital for the night, when about ten hours after the accident he suddenly became collapsed and died in two hours. At the necropsy some slight ecchymosis was seen over the abdomen, and upon opening this cavity the intestines were found partly covered by omentum and matted together by lymph and blood mixed with some fæcal matter. A portion of intestine six feet from the cæcum and situated beneath the umbilicus was found to be lacerated on its mesenteric side for two-thirds of its circumference, and through this rupture extravasation of fæces to a very limited extent had taken place. There was also evidence of local peritonitis at the seat of injury.

CASE 6.—A boy aged thirteen, after a blow on the abdomen, walked a mile with but little assistance, and when he died—thirteen hours after the accident—the duodenum was found to be completely torn across.

CASE 7.—A man aged twenty-five walked into Guy's Hospital after receiving an abdominal injury and complained only of local pain. He lived thirty-six hours and died collapsed. After death his duodenum was found to be ruptured.

These brief notes of seven cases are enough to prove the point for the illustration of which they have been quoted, and they should so impress the minds of all surgeons who read them as to lead them to accept the statement that the gravest internal abdominal injuries may coexist with either the slightest or with no external evidence of mischief, and even without shock or collapse or other general symptom to suggest their presence. With this assurance in their minds surgeons will then recognise, more than probably some do now, the value and importance of the history of every case of abdominal injury, and thus be led to regard as probable what might otherwise have been regarded as vaguely possible—the presence of grave intra-abdominal mischief, with the absence of grave symptoms, when the nature of the injury has been such as might reasonably have been expected to have brought it about. With this view predominant in the surgeon's mind a careful expectant treatment would naturally be adopted and much harm consequently be avoided. In the cases which have been quoted the truth of this conclusion has been well demonstrated.

Grosvenor-street, W.

FOOTBALL CASUALTIES.—Last week, in a match between the Fishpond and Bristol teams, a player for the former sustained a fracture of his leg.—On Saturday last the following accidents occurred: During a match at Egerton Park, Hopewood, between the Heywood Rovers and Ramsbottom teams, a full-back player for the home team fractured his clavicle.—The captain of the Royal High School team, and last year one of Scotland's three-quarters, in a match between the School and the Stewartonian teams, fractured one of his ribs.—During a match at Lawrence-road, Wavertree, between the Toxteth and Huyton Quarry Clubs, a player of the latter club fractured his leg and was removed to the Southern Hospital, Liverpool.—In a match at Rochdale, a player with the Horridge Club received such serious injuries to his head that he died on Monday last.

ON THE SENDING OF PHTHISICAL PATIENTS ABROAD.

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AUTUMN is full upon us and has displayed almost winter severity, and with the change in the weather comes the important question of deciding upon winter quarters for our phthisical patients. "Go abroad" is advice so easy to give and often so difficult to follow. I propose to consider what are the difficulties in the way of acting on such good advice. I shall assume that it is best for a phthisical patient to winter in a good climate if possible, but I shall not discuss the different winter resorts or compare them with one another. I shall devote attention chiefly to those individual or personal factors in the problem which constitute its real difficulty, and upon the due appreciation of which the value of the advice given depends.

Climate is not a cure for phthisis, but it may help a phthisical patient to get well. There is probably no place on earth where phthisis cannot exist, and though where the air is pure and the conditions of life sanitary there will be little phthisis or none at all, still even there if the conditions of life are altered and if they become less sanitary or even unwholesome phthisis will develop or increase. Thus it is that there is more phthisis in towns than in the country, and in the crowded parts of the same town than in the less crowded parts of it. Even in Australia, which was once thought to be free from phthisis, it is now becoming the same scourge it is elsewhere, and especially in the large towns. Sunlight and fresh air are potent remedies for phthisis, and those places are best for phthisical patients where they can be longest out of doors in bright sunshine and in pure air. A good climate is a place to get well in or to convalesce in, and in order that a phthisical patient should derive full benefit from such a climate he must be more or less convalescent—i.e., getting better, or at any rate not getting worse. In other words, the phthisis must not be in the acute or active stage. Even in the best of climates the patients must still be treated as invalids or convalescents, and must be taken the ordinary care of such as prudence and common sense would suggest. No climate is perfect, none will do away with the need of care; yet how many patients suffer by not knowing or disregarding this—by acting as if the climate would do the impossible, running risks and doing things which at home none but the healthy and strong would do, and such as an invalid should never attempt.

The question of going abroad is a very serious one. It involves the abandonment of the ordinary occupations and perhaps the loss even of the means of livelihood, the breaking up of the home and family it may be, and the expenditure of much money. This, therefore, is a question not to be lightly decided. It requires the greatest deliberation, and into it enter many considerations besides those which are purely medical. It is often a question of not what is the best in the abstract, but what is the best possible under the circumstances in which the patient is placed. In every case the question must be answered with a special reference to the individual concerned, and cannot be settled on general principles, for however true such principles may be in general they often lead to the gravest error in practice if applied indiscriminately and without special consideration to an individual case. Patients often go to a medical man expecting him to decide offhand. This is sometimes attempted, and not infrequently with lamentable results.

There are several questions to be answered before the right conclusion can be arrived at. 1. Is the patient in such a condition as to be likely to derive permanent benefit from a better climate than he has at home? 2. If he is fit to travel, how long a journey can he undertake, and what kind of travelling will be the best? 3. What are his means (for foreign residence is largely a question of money)? 4. How long can he stay away from home? 5. Who can go with him? 6. When shall he start and how shall he go? 7. What kind of place is likely to suit him best? 8. What is the patient's general character, and how will it be affected by living in a foreign country, with houses, customs, and food all strange to him? 9. How

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can he occupy his time or amuse himself? 10. What effect will separation from home and family have upon him? 11. As regards the place, we must consider: (*a*) how far it will meet the various requirements already specified; (*b*) whether the patient is in a condition to derive full benefit from the advantage it offers; (*c*) the accommodation the place affords for an invalid in respect of housing, food, and general comforts; and (*d*) its accessibility, not only in respect of the journey out for the patient, but for the journey home should the patient decide to return, and especially with reference to the coming and going of friends, visits which go so far to make absence from home tolerable.

This is a long string of questions to be considered, but many others, too, of less importance will easily suggest themselves, and, small as many of them may seem to be, it is just upon such trifles as these that the whole comfort of the invalid depends and the success or failure of the sojourn abroad turns. All these questions must be considered carefully if wise advice is to be given. The medical adviser must, in fact, put himself in the patient's place and regard the question from his point of view, taking into consideration all these personal facts in the problem as well as the medical aspects of the case, and according as he does this or not will his advice be wise and beneficial or the reverse. The most disastrous mistakes are often made by sending patients abroad without careful thought—disastrous alike to the patient, to the family, and to the practitioner's own reputation. Even with every care the difficulties of a right decision are often enormous, but those who take most care will make fewest errors. The light and almost flippant way in which patients are sometimes advised to go abroad, with little or no regard to the special circumstances of each case, is often cruel in its results and cannot be too strongly reprobated.

If the patient is to benefit by a good climate his condition must be such that he may be able to take full advantage of it when he gets there. A patient, therefore, who is in the acute stages of disease, who is too ill to be up and spends all day in bed, is obviously not a case to send abroad, nor is he either fit to travel. He is best at home, where he can be carefully nursed and tended. Even if he is less ill than this and able to be up part of the day, though with a temperature above normal every day and with marked constitutional signs, he is best at home. In these respects the constitutional condition of the patient, rather than the physical signs, is our best guide. If, on the other hand, the temperature is not much raised and the strength fair, so that the patient may be a good deal out of doors every day when the weather permits, he may fairly be sent abroad. Of course, the most suitable cases of all are those in which the constitutional symptoms are entirely absent and the disease stationary, and this is true in any stage of the disease whatever the physical signs may be.

The next question is, What kind of a journey can the patient stand? This often limits greatly the choice of place. Some journeys are obviously out of the question on account of the exposure or fatigue they entail. If the journey is too long to be travelled right through at once it may be broken at convenient places. In some journeys, such as that to the Riviera, the arrangements are so well made for invalids that they can travel easily right through in comfortably warmed and ventilated carriages, but even such a journey as this is tiring and may be more than the patient can stand. If the journey be broken the breaks must be carefully timed and thought out, so that the patient may not be exposed at night, especially in chilly or cold weather. In this country, unfortunately, all journeys abroad involve crossing the sea, and there is nothing worse for invalids than waiting on draughty piers and in railway stations, on landing or going on board, when the day is cold and windy or at night time. In some instances a journey by ship all the way is an easier mode of travelling than by railway; still, the patient ought to be a good sailor and the weather promising. It can do no invalid good, whether a good sailor or not, to be under closed hatches for some days in a cabin or saloon which is poorly ventilated and perhaps shared with other invalids too; still, in good weather and on a good vessel travelling by steamer is one of the easiest and best modes of making a long journey.

Perhaps the most essential question is the means of the patient. Can he afford to be away from home some time without anxiety as to cost, to travel in every comfort as an invalid should, and to have every comfort in the place of destination in respect of housing, food, amusement, and attendance? To go abroad as an invalid is a very expensive business whatever be the place chosen and often involves an outlay of from £300 to £500. It is often better for the patient to be at home, surrounded by the usual comforts and occupations, than to be without them in a good climate, and to be able to afford only a second-rate accommodation, food, and attention, and to be obliged to economise in the small comforts and luxuries which could be provided at home. To be abroad and worried by such petty cares will undo all the good a good climate might do.

It is useless to send phthisical patients away for only a month or two. They should leave in October and not return until May or June. Of course, they need not stay in the same place all the time. They may, for instance, spend the autumn in Geneva or at the Italian lakes, and make their way to the Riviera as winter sets in, going up perhaps to the mountains as the heat of spring and summer comes on. At any rate, the whole winter must be spent away, and if the first proves a success possibly a second and a third. All this means money, and on this score the mind must be easy if the climate is to do good.

If the patient is a young man who is fairly active he may go abroad to settle and alone, but in other cases a companion will be needed, and the question is, Who else can go? Preferably, of course, some member of the family should be selected, for it is difficult to find a paid person who will at the same time be a good companion and an attentive and skilful nurse. Even from among the family it is not always easy to find a companion congenial to the patient. One of the great difficulties to be dealt with in arranging to send a patient abroad is the way in which it breaks up the home. If the mother is the patient she will have to take her daughter with her, perhaps the one who naturally would fill her place when she was away. Or if the daughter is sick and the mother has to go, she will have in most cases to leave her husband alone, whose profession or business makes it impossible for him to be long away from home.

Closely connected with the question of companionship is the character of the patient, whether he is of a cheerful and sociable disposition and inclined to make the best of what he even does not like, or whether he is morose and despondent, inclined to take a despairing view of most things and to magnify the discomforts of being away from home. Few persons like to be sent abroad for their health. Some may enjoy it if well enough; but these are generally young people with no special responsibilities or cares, to whom the novelty and change of life are full of interest. Most other persons look upon it as exile, and to those of a despondent nature home sickness and the petty discomforts and trials of foreign residence often make the life intolerable to them. Again, some occupation must be provided if the invalid is not to suffer from *ennui*, for time often hangs heavy on a sick man's hands. Open-air exercise and occupation are the best of all if the invalid is well enough to enjoy them; but if not so, it may often be difficult to keep the patient occupied and happy. It will also be necessary to consider what the effect will be upon the invalid of leaving home, family, and friends. Many patients feel and say that they would rather live a shorter time at home, with their family and friends about them, than a longer time abroad, separated from all that makes their life worth living. To banish a phthisical mother from her family and home is often cruel, and almost as often ineffectual, for the craving for home and the grief of separation produce more harm than the climate does good. Due allowance must be made for this personal question. A compromise may be sometimes made with advantage by choosing a place not too far away where the mother, for instance, may feel that if necessary her children could always come to her, or if need be she could go to them. The idea of absolute separation is sometimes unbearable, and the fear which some patients have lest they should die abroad not infrequently decides them against a foreign journey.

If these preliminary questions have all been satisfactorily answered we have next to consider what place will best fulfil the requirements, bearing in mind especially the kind of life the patient is likely to lead, whether he will be much out of doors and lead a more or less active life, or whether he is incapable of much exertion and must lead a more or less sedentary life when out of doors. In the latter case the place must be warm, but in the former it may be colder and more bracing. The idiosyncrasies of the individual again

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must not be forgotten. It will be well to ascertain what kind of place has hitherto suited him best, whether a high or low place, a hot or cold place, a bracing or a moist and more relaxing air. Speaking generally, phthisical patients are best in a warm but not hot place fairly high up and with a more or less bracing air; at any rate, great heat and great moisture do not suit most.

With respect to the place especial consideration must be given to its accessibility and to the accommodation available. In regard to accessibility we have to consider, not only the distance of the place and the time it takes to reach it, but also the means of travelling thither. Some places comparatively near, like Davos, are more troublesome to get to—at any rate, at certain times of the year—than those further away, like Madeira. There is also to be considered the ease with which the patient's friends and relatives can make the journey to and fro, and the facility offered for the patient's return home if it should be necessary. Nervous patients often object strongly to the feeling of being locked up in a place from which they could hardly move, even if it were necessary, until the winter was over. The accommodation is also an important factor, for some excellent climates are quite unavailable for the want of such hotels or dwellings and such cooking or comforts as an invalid must have. For these local details local knowledge is necessary, and it is well for patients to put themselves into relation with the medical man of the place as soon as they arrive, so that they may obtain the best advice as to the part of the town to live in and the actual lodgings and rooms available. A great deal turns on these points, and the information can only be supplied by a resident in the place with the necessary knowledge.

If it is settled that the patient shall go abroad he must leave the country before the bad weather sets in—that is, before November—and must time his journey so that he reaches his destination at the right season and is not exposed on the way to great extremes of temperature; for instance, if he were going to Australia in October he would not go through the Suez Canal and Red Sea, but would take the voyage round by the Cape, or if going to Davos he would arrange to get there before the winter had set in.

The places recommended as winter resorts for phthisis differ so much from one another in respect of climate that it is difficult to see what they have in common, yet good results are obtained in suitable cases with all alike. Statistical statements are most unreliable—first, because of the smallness of the numbers dealt with, and, secondly, because there is no guarantee that the cases in each group are really patients in the same stage or condition of the disease so as to admit of fair comparison *inter se*. The only requisite which it appears every suitable climate possesses is that it should be such as to admit of the patient being as much in the open air and sunlight as possible. Wherever a patient can spend all day out of doors, and when indoors can still live in a pure atmosphere, phthisical patients will do well; and I have little doubt that, with the same precautions and subject to the same *régime* that phthisical patients voluntarily submit to abroad, they might easily live and benefit in many places at home in spite of our cold winds, moist air, and comparative want of sun in winter.

I may conclude, much as I began, by stating that in this question of wintering abroad we have to decide not what is best in the abstract for phthisical patients in general, but what is the best possible under the circumstances for a particular case. What these circumstances are will take time and trouble to investigate, but they are the prime factors in the problem. To come to the right conclusion in any given case requires some knowledge and experience, much care and trouble, and, most of all, sympathy and common sense.

Wimpole-street, W.

BRITISH COLLEGE OF PHYSICAL EDUCATION.—A meeting of the governors of the British College of Physical Education was held at the office of the college, 83, Lancaster-gate, on Saturday last, when it was decided that the college should be incorporated under the regulations of the Board of Trade, that no members or licentiates should be admitted to the college without examination after Jan. 1st, 1896, and that the next half-yearly examination should be held at the People's Palace on Saturday, Nov. 30th. A subcommitte was appointed to suggest the names of eminent men to lecture on physical education.

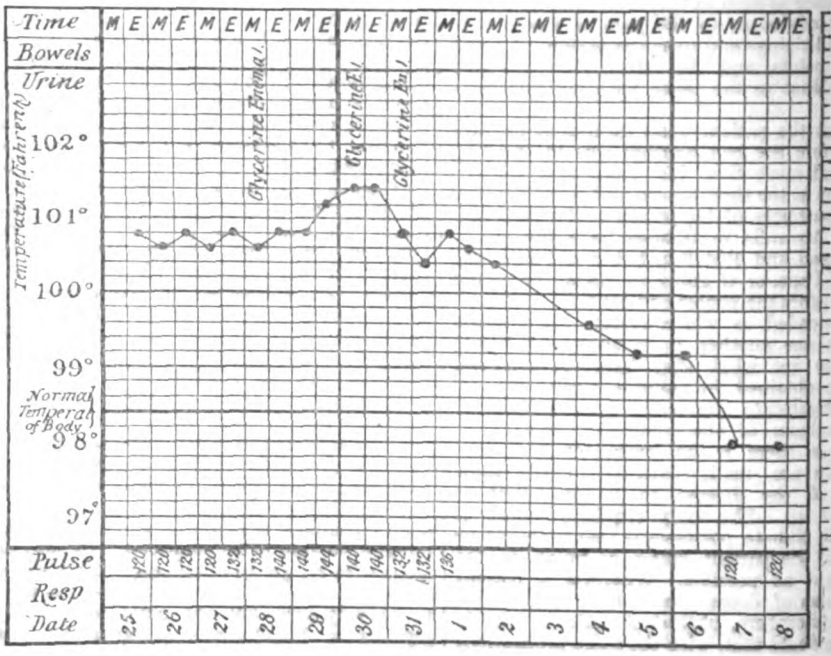
A CASE OF TRAUMATIC TETANUS TREATED WITH TETANUS ANTITOXIN; RECOVERY.

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DURING my vacation in Arran I heard incidentally on a Sunday morning (Aug. 25th last) of a case of "blood poisoning" after an injury to the foot. I was told that the patient was the daughter of a butcher at Corrie, and had already been seen by two medical men, who had given a fatal prognosis. When passing the house later in the day I was hastily summoned, and found the child, a girl aged four years and a half, in a state of opisthotonos, the lips blue, the face cyanosed, the eyes turned upwards, and the conjunctivæ insensible. I could not detect any pulse at the wrist, and respiration was arrested; on listening over the heart, however, feeble, slow pulsations were heard. Under the influence of a hot bath respiration gradually recommenced, the appearance improved, and the pulse gained in frequency and in force. The spasm of muscles relaxed to a moderate extent only, the legs remained extended, and the muscles of the calf and thigh were rigid; the muscles of the upper limbs were also firm, but the hands could be moved slightly. The muscles of the abdomen were in strong contraction, the recti being prominent. Respiration appeared to be effected entirely by the intercostals, but the movements of the diaphragm (if any) may have been masked by the condition of the abdominal walls. When the immediate anxiety about the patient was somewhat relieved I learnt that, in running about with bare feet, she had cut her left foot badly about a fortnight before, there had been a great deal of hæmorrhage, and the mother had succeeded in extracting a piece of glass, which she thought was part of a broken jelly jar. The foot had been bound up and had been thought to be healing nicely for a week, and then lost its healthy look and did not progress. It was possible that in the interim the child might have played in the slaughter-house or in the adjoining stables. During Aug. 20th, 21st, and 22nd she had not been as cheerful as usual, she had lost appetite and had been much quieter, but no medical man was sought until Aug. 23rd, when she had a succession of severe convulsions. She was then seen by Dr. Neil Fullarton of Lamlash, who at once recognised the case as undoubtedly one of tetanus and ordered the foot to be poulticed. He also commenced treatment with six grains of chloral hydrate every four hours, and a chlorate of potash gargle was tried, as the tongue appeared to be very sore, but the child refused to employ this, so glycerinum boracis was substituted. Between the 23rd and the 25th she had numerous severe convulsions and was seen by a German medical man staying a few days in Corrie, who agreed with the diagnosis. Much difficulty had been experienced in attempting to induce her to take the chloral; the violent convulsion which I witnessed was attributed to the excitement of endeavouring to persuade her to take it from a spoon. The mother showed me the injured foot; there was a deep cut nearly three inches long, extending transversely across the inner side and sole of the foot about an inch behind the big toe; the wound was granulating and looked fairly healthy, and no foreign substance could be detected with a probe. There was no tenderness or swelling along the course of the lymphatics. I left a note for Dr. Fullarton, who lived ten miles off, explaining the circumstances of my examination of his patient, and on my way homewards telegraphed to my friend Dr. Hewlett at the British Institute of Preventive Medicine for some tetanus antitoxin. Through the kind help of Mr. James Coats, who placed his steam yacht at my disposal, I was able to obtain and employ the antitoxin within twelve hours from the time it left London. During this interval there had been three severe convulsive spasms, none of them so alarming as the one I had first seen, but the general condition remained very much the same. The child was conscious and could speak in short sentences, not using more than three or four words, and then only to call for milk, or water, or to beg to be taken up or else

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put back to bed. She was extremely restless and fractious. The mouth was drawn up at the angles, the masseters being firm and rigid; the jaws could not be voluntarily opened beyond a third of an inch, and through the aperture the tongue could be seen to be much marked by the teeth and with an aphthous white membrane over the upper surface and yellowish sloughy patches on the lower. At the time of the convulsive spasms the jaws were always firmly clenched, and the tongue appeared to be driven forwards against the teeth. So far as I could ascertain the tongue had not been bitten; its condition resulted from the damage done by pressure in the course of convulsion. In addition to the three severe convulsive spasms above mentioned there had been very numerous little "starts" in which the only difference was the short duration; they would commence with a short stifled cry, then the body and limbs would become rigid and the respiration would be arrested momentarily, and then the spasm would partially relax. The feet could be bent slightly, but the general tonic rigidity of the calves and thighs persisted, and the abdomen remained firm and unyielding. During the intervals there was frequent complaint of epigastric pain, but there was no special tenderness on pressure, and the pain appeared to be similar to that so often met with after severe spasmodic cough. This, then, was the general condition when I obtained the antitoxin. Some difficulty was



experienced in powdering the ten grains, the dose employed, as the arrangements in the cottage were distinctly primitive. In place of distilled water I had to be content with water which had been freshly boiled and allowed to cool, but I found that prolonged patient stirring was needed to dissolve the ten grains in a fluid drachm of water, and then, having only an ordinary hypodermic syringe at hand, the dose was injected under the skin of the front of the left thigh, the needle being kept in position while the syringe was refilled. Beyond the momentary pain with the first insertion of the needle, the injection of this quantity of fluid gave very little discomfort, the resulting swelling speedily becoming somewhat reduced in size. The first injection was made at 11 P.M. on Monday, Aug. 26th, and the condition of the child remained very much the same during the night. At 2 A.M. she had an opisthotonic convulsion and another at 4 A.M., but according to the mother's account these, though bad, were not as severe as the convulsions she had had the previous day. At 10 A.M. on the 27th a second dose of ten grains was injected high up on the right thigh; there had been no material change in the temperature, but the child was perspiring profusely about the head, neck, and thorax. The pulse was still of good quality, and nourishment was well maintained by milk, which was frequently asked for. The day passed quietly enough, though the slight "starts" were frequent and the tonic spasm had not materially relaxed. A third injection of ten grains was made in the left thigh at 8 P.M. on the night of the 27th. The child was very restless during the night, constantly asking to be taken up and frightened if her mother left her for a moment. At 6 A.M. and at 8 A.M. she had convulsive attacks, but these did not last long. At 10 A.M. on the 28th a fourth injection of ten grains was made in the right thigh. The sites of the former injections were still swollen and discoloured like bruises; they were also somewhat tender. A glycerine enema produced a slight motion. During the day the child appeared to be much better and brighter, and when I saw her at 7 P.M. the only unfavourable sign (as compared with previous days) was an increased frequency of the pulse. The thighs now looked so swollen that I thought of injecting a fifth dose into the buttock, but as she was being turned over a very severe opisthotonic spasm occurred, and the breathing stopped, the lips became purple, and the conjunctivæ insensible; for the moment I thought the child was dead, but the heart could still be heard beating feebly, and on putting her hurriedly into a hot bath breathing again became re-established and the spasm relaxed. Not to disturb the child more than I could help, the fifth dose of ten grains was injected into the front of the left thigh near the knee. She passed a fairly quiet night after this, only being disturbed by slight convulsive starts. At 10 A.M. on the 29th a sixth injection was made in the right thigh above the knee. At this time it was found that the muscles of the calves were much less tense and the mouth could be opened a little more. Slight spasmodic starts occurred during the day, and when seen at night she was found to be covered with numerous sudamina, some reddened, giving the appearance of a punctate rash. She complained of much irritation about the forehead and scalp. The temperature was 101·2° F., the pulse 144 and more feeble. Whisky in half-drachm doses was accordingly given at intervals with the milk. On the morning of the 30th the temperature was 101·4° and the pulse was still feeble. A glycerine enema produced a copious motion, pale and formed. Patches of urticaria were found on the thighs in the neighbourhood of the injections, but the swellings had almost entirely subsided and only one of the sites of injection retained a bruised discolouration. On the morning of the 31st, at 6 A.M., a slight opisthotonic spasm occurred, but when seen at 10 A.M. the calves and thighs were much more flexible, and although the masseters could still be felt as firm bands there was not so much distortion of the features. The abdominal wall remained tense, and there was much complaint of pain over the epigastrium. Another glycerine enema again resulted in a copious evacuation. During the day there was much trouble with mucus in the mouth, which was ejected with blowing efforts. The accumulations of mucus gave much

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istress, and several slight starts occurred after efforts at xpulsion. During the afternoon the child appeared much asier, holding a feather in her hands and playing with it. he limbs were not so rigid; she could draw up the thighs n bed. She slept at intervals and was noticing more. The vening temperature was 100·4°. On Sept. 1st there was still uch mucus coming from the mouth, and occasionally this as blood-tinged. The child slept during the greater part f the day, sometimes waking with a convulsive start, but oing to sleep again almost at once. On Sept. 2nd her conition had much improved, but she was still troubled with ucus. The temperature was 100·4°. On Sept. 4th the emperature had fallen to 99·6°. Much blood came from he mouth with the mucus. She played with her toys, but lid not talk. During sleep the mouth had been much more pen, and the pained look had left her face. On Sept. 5th after a quiet morning she had a slight pisthotonic spasm on being suddenly startled. The temperature had fallen to 99·2° and the pulse had gained in volume. Later in the day she talked to her brothers and played. The abdominal muscles were still somewhat rigid. She could urn in bed. During the night of Sept. 6th she had a slight spasm, in which she seemed to be in pain, but she went to sleep almost immediately afterwards. A similar slight spasm occurred on the afternoon of the 7th, but the temperature was then only 98°. I examined her for the last time on the evening of the 8th, and although not completely healed the wound in the foot was much smaller and looked healthy, and although there was much sense of resistance over the epigastrium there was no complaint of tenderness. She could move freely in bed, and when seated on her mother's knee her legs hung down freely, with bent knees and flaccid calves, but she was unable to sit up unaided. I considered her convalescent and returned to town, convinced that it would be only a few days before I should hear of complete restoration to health. On Sept. 10th the mother wrote that the patient "is getting on nicely; she can sit on my knee to-day without any support ..... she has not been one bit stiff to-day." On Sept. 12th she wrote that she "is still improving; I see such a difference in her every day; she takes little spasms yet, but they don't last any time, and she does not get stiff under the knee. ..... When I was lifting her out of the bed she put her arms round my neck and lifted herself up till she stood on her one foot." On Sept. 16th she said the patient "is able now to lie on either side and sit alone in bed. ..... She only cried twice with pain during the night; she has not any pain during the day." On Sept. 19th she further wrote: "She is able now to creep on her knees from one end of the sofa to the other; she can turn herself any way. ..... The skin has come off her hands, feet, knees, part of her body, and behind her ears." Finally, on Oct. 2nd, she wrote saying that she "can walk alone now, but she is still lame. I do not know whether the lameness is from weakness or that she is afraid to bend the sole of her foot. The foot is quite healed up, but it seems to be tender. She has no pains in her stomach nor anywhere else. ..... There is no twitching of any kind. ..... She plays with the others and is as bright as any of them."

Remarks.—The points of especial interest in this case are the following:—1. The proximity of stable and slaughter-house, which afforded possible sources of contamination of the wound. 2. The readiness with which milk was taken throughout the course of the illness. 3. The degree of spasm of the abdominal and respiratory muscles; this gave rise to the urgent symptoms quite at the beginning and also constituted the chief feature during the later stages; tonic and spasmodic contractions of these muscles persisted long after the muscles of the limbs had become flaccid. 4. The amount of mucus and blood coming from the mouth. Although the tongue was obviously sore and injured quite early in the case, this over-secretion of mucus only became manifest some days after the antitoxin had been used. 5. The excessive perspiration and the sudamina also were only noted after the antitoxin. 6. The severity of the convulsions as well as the frequency became much reduced after the antitoxin, though one of the worst attacks occurred on the 28th. The slight rise of temperature may have been due to the antitoxin; the urticaria was certainly, I think, a direct result. While it is extremely difficult to speak with certainty about the benefit of the antitoxin, I can only say that when I first saw the child I fully anticipated a speedy fatal termination, and this view was shared by two other medical men who saw her. Whenever we attempted to give medicines by the mouth so much excitement resulted that we had to desist. Certainly after the antitoxin the child was more peaceful, and the severity of the opisthotonic spasms was less.

Harley-street, W.

HEART FUNCTION AND PELVIC LESIONS IN THE FEMALE.[1]

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I WISH to confine my remarks, which will be brief, entirely to the so-called "functional" heart disorders. Of a little over 300 women whose hearts and pelvic organs I have examined during the last six years, and of whose cases I have accurate records in my possession, I have been able to gather twenty-five cases in which functional heart disorders were found clinically to coexist with obvious abnormal conditions in the pelvis. No case is included in these twenty-five in which there was a previous history of rheumatic fever or in which there existed organic valvular disease. Pregnancy and obvious hæmic conditions, such as are produced by profuse leucorrhœal discharges and abnormal uterine hæmorrhages from various causes, have also been carefully excluded. A careful analysis of the symptoms and clinical history of the twenty-five cases shows at a glance that the majority of the patients sought relief for troublesome symptoms referred directly to the heart, but it also indicates a minority who complained primarily of distress in the region of the pelvis. Some believed themselves to be the victims of heart disease from the construction which they themselves placed upon reflex submammary pain associated with a sense of throbbing or palpitation over the præcordium. Their ages ranged from seventeen to forty years. No case where the woman was above forty years of age is classified, in order to avoid the influences of the menopause. I shall not give a detailed account of each patient; it will be sufficient for my purpose to speak of them in groups arranged according to the particular pelvic organ affected.

Lesions of the uterus.—Of the twenty-five cases the uterus was affected in eleven instances. Eight of the eleven were patients in whom the uterus was displaced either backwards, forwards, or downwards. All these were married, and all except one, who was sterile, had borne several children. One of the eleven was a case of a rapidly growing abdominal uterine fibroid in a single woman aged twenty-eight years who had been under observation for two years. There was never any metrorrhagia, and but slight menorrhagia. The remaining two are cases of slowly growing pelvic uterine fibroids in women nearing the age of forty who complained of no pelvic symptoms of any kind and who were quite ignorant of their existence. All these women, however, suffered more or less acutely from symptoms and disturbances directly traceable to the heart in the form either of palpitation, throbbing, giddiness, pain and uneasiness over the præcordium separately, or of a combination of all. In some of the cases the heart's action was intermittent and in others it was irregular, the irregularity manifesting itself in a variation in the strength of the beat or in the time of the beat, and sometimes in a combination of both. In one of the cases of slowly growing pelvic fibroids—that of a married woman aged forty years—the nature of the cardiac derangement was very interesting. For ten, twenty, thirty, forty, and even fifty beats or more the heart's action was hurried. This hurried period was followed by a slow interval during which the cardiac beats were comparatively infrequent. These waves of hurried and slow action alternated, and in order to detect them it was found necessary to watch the pulse for several minutes. Also in this particular case variations in the blood pressure were observed to occur; for from one to three minutes the tension was high, and then there ensued a period during which the tension was low, which continued rather longer than the high-tensioned periods. These periods recurred in regular sequence. Such a pulse I have since occasionally met with

[1] Read before the South Wales and Monmouthshire Branch of the British Medical Association, February, 1895.

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in women at the menopause. Whenever this patient rose suddenly from her bed or chair or abruptly turned round she was seized with giddiness, which lasted two or three minutes. Appropriate treatment, directed towards improving the position of the uterus, effected a complete cure of all heart troubles in five out of the eight cases of displacement already referred to. The three cases that did not improve were: (1) a married woman aged thirty-five years, sterile and suffering from pathological anteflexion of the uterus, with stenosis of the cervix and pin-point os; (2) another patient aged forty years, suffering from dysmenorrhœa and retroflexion; and (3) a woman aged forty years, suffering from prolapsus uteri, with multiple fissures of the cervix. Hysterectomy relieved the case of abdominal fibroid. The two cases of pelvic fibroids still remain unrelieved.

Lesions of the cervix uteri.—Two of the twenty-five cases were instances of stenosis of the cervix. One occurred in a robust, full-blooded girl aged seventeen years who had never menstruated and was suffering from severe face-ache, abdominal pains, and pains in the thighs, which lasted about five or six days and recurred once a month. At the same time she suffered from heart hurry and giddiness. I tried all kinds of medicinal treatment for fully six months, but to no purpose. Eventually I felt compelled to make a pelvic examination, when I discovered stenosis of the cervix. Subsequently the cervix was gradually dilated under anæsthesia, with the result that a few weeks later she menstruated for the first time, and without heart trouble. The other was a case of a sterile married woman aged twenty-nine years who was troubled with dysmenorrhœa, cervical stenosis, and menstrual headache and giddiness. Dilatation afforded no relief.

Lesions of the ovaries.—In six patients, all of whom were married and had borne children, one only being sterile, the lesion was ovarian. Inflammation and prolapse of one or both ovaries existed in five instances, the sixth being a case of a large-sized unilocular cyst growing from the hilum of the right ovary. Attention to the inflamed prolapsed ovaries and removal of the cyst allowed the heart's action to return to normal.

Lesions of the vagina.—A case occurred in a sterile, nervous married woman aged twenty-eight years who suffered from vaginismus, facial neuralgia, cardialgia, and severe palpitation. A lengthened but futile course of medicinal treatment was adopted. At last she consented to be anæsthetised and to have the ostium vaginæ forcibly dilated and cauterised with pure carbolic acid. This procedure was twice repeated. At the end of three months she was cured of all her bad symptoms.

Lesions of the rectum and anus.—Two married women, aged thirty and forty years respectively, the younger being sterile, were troubled with palpitation and a sense of uneasiness over the præcordium. The heart's action was irregular in time and strength, and there was an occasional abortive beat. They had for months suffered excruciating pain during and after defecation. Their suffering was due to a fissure. Surgical treatment under anæsthesia speedily cured the condition and effected in the course of a few months a complete restoration of health and strength and an absence of all cardiac trouble.

The remaining three cases of the twenty-five are as follows. 1. That of a multiparous married woman aged forty years who contracted influenza and three days later, when the fever was at its height, pelvic peritonitis. She was under treatment for six weeks and ultimately was quite relieved of her peritonitis, but she found after her convalescence was over that she became out of breath on the least exertion. On examining her heart I was astonished to find it beating at the rate of 120 per minute. I tried all sorts of remedies, but my endeavours were of no avail. She still suffers from tachycardia. Probably the influenza was the cause of both the pelvic and heart affection in this case. 2. That of a multiparous married woman aged twenty-five years troubled with pain in the lower part of the coccyx, inability to sit except by resting on one or other hip, painful defecation, tenderness and a sense of oppression over the præcordium, and palpitation and irregularity of the heart's action. When the local lesion was relieved her general health rapidly improved and the cardiac symptoms disappeared. 3. That of a married woman aged forty years suffering from a floating kidney and occasional attacks of giddiness and palpitation, with intermittent heart action. Strictly speaking, this ought not to find a place in the list, but still the wandering kidney may be regarded as simulating the influence of an abdominal tumour springing from the pelvis. No treatment was adopted beyond the use of an abdominal belt as the next best thing to nephrorrhaphy, and the cardiac symptoms are still unrelieved.

From the brief analysis above given, and I fear very imperfectly, it is clear, first, that relief has been afforded to the heart sufferings of seventeen women out of twenty-five in whom functional cardiac disorders coexisted with obvious pelvic and abdominal lesions; secondly, that this relief was afforded through directing attention to, treating, and curing the local lesion; and, thirdly, that some of the women here referred to sought medical advice under the firm impression that they were suffering from heart disease, and would hardly allow any reference to the pelvic organs as the seat of their complaint. As my chief object in writing this communication has been an honest endeavour to record accurately and faithfully the cases as they came under my observation, I shall not indulge in speculations or theories as to the possible modes by which diseased or displaced pelvic organs may influence the heart and the cardio-vascular system. That organic and functional cardiac diseases and pelvic lesions do coexist in the female in a moderately high ratio is an acknowledged fact. It is also recognised that the disturbances of the circulation in middle-aged women constitute a very considerable group of the functional disorders of the heart met with, at any rate in Great Britain and Germany.[2] In a previously published paper,[3] embodying the results of post-mortem investigations conducted by myself at the Edinburgh Royal Infirmary as to the frequency of the co-existence of valvular heart disease and pelvic lesions in the female, I have shown that organic cardiac disease is more frequently met with in women than in men, and that one of the chief differences of organic valvular disease of the heart in its relation to the two sexes is the great predominance in the female of mitral stenosis, and in the male of aortic incompetence, over all other cardiac lesions. The masterly and life-long researches of Sturges[4] into the heart affections in childhood show that cardiac disease is more often met with in young girls than in boys. Just as the metaphysical heart is more often accessible to a state of disturbance in the fair than in the sterner sex, so also its physical analogue, it is probable, is more frequently the seat of disease.

Cardiff, S. Wales.

FATAL ACUTE POISONING BY COCAINE.

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THE following case is, I venture to think, of sufficient medico-legal interest to be recorded.

About 3.30 P.M. on Monday, Oct. 7th, 1895, at the request of the authorities, I made a superficial examination of the body of a young woman who had at about 7 A.M. swallowed for the relief of toothache upwards of two drachms of a ten per cent. solution of the hydrochlorate of cocaine, the equivalent of twelve to fifteen grains of the alkaloid. She had almost immediately afterwards suffered from vertigo, followed by epileptiform convulsions, nine in number, occurring in somewhat quick succession, and died within forty minutes. She appeared to be about seventeen years of age, and the body was well nourished. The trunk still retained a considerable degree of warmth, but the extremities were cold, rigor mortis being well developed in all of them. The face, lips, and anterior surface of the body were very pallid and waxlike, while on the dependent portions well-marked cutaneous hypostasis was present. The expression of countenance was placid. The pupils were dilated, and the conjunctivæ were not injected. The teeth were firmly clenched. On the following day (Tuesday), as further instructed, I made a post-mortem examination. The external appearances remained as described. Frothy mucus, slightly blood-stained, was freely exuding from the right nostril. The brain was anæmic, but otherwise normal. The meninges were deeply congested. The heart was healthy in substance, and all the valves were found to be competent. The right ventricle contained a

[2] Mitchell Bruce: Year-book of Treatment, 1891, p. 22.
[3] Transactions of the Obstetrical Society of Edinburgh, vol. xv., p. 183.
[4] THE LANCET, March 10th, 17th, and 24th, 1894.

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small quantity of dark-coloured fluid blood, the left ventricle was quite empty. Both ventricular walls were relaxed. The lungs were much congested throughout and everywhere highly crepitant. A considerable amount of frothy mucus, in part blood-stained, was present in the bronchi. The liver, spleen, and kidneys were hyperæmic, but otherwise normal. The stomach and contents were removed and preserved intact for expert analysis, consequently there was no opportunity afforded for inspection of the mucous surface of that organ.[1] The bladder contained from three to four ounces of urine. All the other organs were normal.

Remarks.—The recorded cases of fatal poisoning by cocaine are comparatively few in number. Among these are that of a woman seventy-one years of age, who died five hours after the subcutaneous injection of two-thirds of a grain;[2] and the case of a man, mentioned by Haenel,[3] in whom the injection of one and one-third of a grain was followed by a fatal result. Zambianchi[4] also records a case where death occurred in a female after three grains and a half had been administered hypodermically. It is stated that a man died almost immediately after swallowing twenty-two grains.[5] Montalti[6] relates in full detail the case of a woman in whom death occurred after twenty-two grains accidentally swallowed. The first published fatal case in England was that of a man who was given in mistake twenty grains and succumbed in about an hour.[7] A fatal case occurred in Russia from a dose of twenty-two grains administered by rectal injection.[8] A melancholy interest attached to this case, as the surgeon who in mistake prescribed this overdose immediately afterwards committed suicide. Recoveries have taken place after very large doses taken into the stomach. The most typical case of the kind I am acquainted with is that of a man who swallowed forty-six grains and recovered.[9] On the other hand, serious symptoms of poisoning have been occasioned by the hypodermic administration of such doses as the seventh of a grain[10] and less than half a grain.[11] One-twentieth of a grain given subcutaneously to a girl gave rise to dangerous symptoms,[12] and a hundredth of a grain applied to the eye of a patient aged fourteen years has occasioned symptoms of poisoning.[13] The case I have above reported lends support to the correctness of Mannheim's[14] estimate that the fatal dose of cocaine is about fifteen grains. In the present state of our knowledge it is, however, practically impossible to state the smallest lethal dose, seeing that a dose of two-thirds of a grain has caused death, and so minute a dose as a hundredth of a grain has given rise to symptoms threatening life.

Leith.

[1] No analysis was made, as the Crown authorities were satisfied that the case was one of poisoning by misadventure.
[2] Dixon Mann: Forensic Medicine, first edition, p. 569. 1893.
[3] Berliner Klinische Wochenschrift, 1888, p. 890.
[4] Gazzetta degli Ospedali, 1888.
[5] Guy and Ferrier: Forensic Medicine, seventh edition, p. 626. 1895.
[6] Lo Sperimentale, 1888, p. 294.
[7] THE LANCET, Feb. 9th, 1889.
[8] THE LANCET, Sept. 28th, 1889.
[9] Dixon Mann, loc. cit.
[10] Luff: Forensic Medicine, first edition, vol. i., p. 314. 1895.
[11] Gooding: THE LANCET, Feb. 25th, 1888.
[12] Hamilton: System of Legal Medicine, first edition, vol. i., p. 429. 1894.
[13] Ibid.
[14] Zeitschrift für Klinische Medicin, 1891, p. 380.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE INFLUENCE OF INHERITANCE ON THE TENDENCY TO HAVE TWINS.

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THE following has been written to draw attention to the great factor of causation that inheritance plays in those who have twins. Like almost all of our inherited peculiarities, the tendency may come either from the maternal or from the paternal side. The relative frequency which either the maternal or the paternal side plays can only be established after considerable observation of cases. At present I have only collected seventeen cases. They include every case of twins I have investigated as to the above-mentioned point. Of the seventeen cases there is a history of twins to be obtained in 13, or 76·47 per cent. As the observations have been made almost entirely among the uneducated class this is a more remarkable fact than if they had been made among the more fortunate class, for the former class can rarely give any information of their families further back than grandparents. In eight cases the inheritance came from the maternal side only, or 47·06 per cent. In four cases the inheritance came from the paternal side only, or 23·53 per cent. In four cases there was no history to be obtained, or in 23·53 per cent. In one case there was a history on both sides, or in 5·88 per cent. When the inheritance comes from the father's side the twins seem to be always of the same sex, so far as the present observations go. This is interesting, for it is generally known that when the twins are joined together they are always of the same sex, and we may, therefore, reasonably suppose that this result is brought about by some abnormal potentiality of the spermatozoa — that is, this form of abnormality comes from the paternal side. The following is a table of the cases:—

Number.	Date of birth of twins.	Age of mother last birthday.	Birthday of mother.	Number of children, including twins.	Twins' sex.		Whether inheritance is on the mother's or father's side.	Condition of placenta.	Nearest relative who has had twins.
					First child.	Second child.			
1	1894	—	—	—	F.	F.	Father.	—	Father's grandmother.
2	—	—	—	—	F.	F.	Father.	—	Father's mother.
3	—	—	—	—	M.	F.	Mother.	—	Mother's grandmother.
4	—	—	—	—	F.	F.	Father.	—	Father's grandmother.
5	—	—	—	—	M.	M.	No history.	—	—
6	—	—	—	—	F.	F.	Mother.	—	—
7	—	—	—	—	M.	F.	Mother.	—	Mother's grandmother.
8	Aug. 29, 1894	41	Jan. 7	—	M.	F.	No history.	—	—
9	—	—	—	—	M.	M.	No history.	—	—
10	—	36	May 23	—	M.	F.	Both sides.	—	First cousin of mother and grandmother of father.
11	July 31, 1895	25	Feb. 6	7	M.	F.	Mother.	—	Mother's mother.
12	Sept. 8, 1895	26	June 2	6	F.	F.	Mother.	Single; two sacs.	Mother's aunt.
13	1895	19	—	—	M.	M.	Mother.	—	Mother's grandfather was a twin.
14	—	—	—	9	F.	F.	Mother.	One placenta; two sacs.	Mother's sister.
15	Oct. 10, 1895	25	March 20	—	M.	M.	Mother.	Double.	Mother.
16	Oct. 12	36	Oct. 1	4	M.	M.	No history.	Single; one sac.	—
17	Oct. 20	26	Aug. 14	5	M.	M.	Father.	Single; two sacs.	Father's maternal aunt.

Lambeth Palace-road, S.E.

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PUERPERAL SEPTICÆMIA: USE OF STREPTOCOCCUS ANTITOXIN.

By ANGUS E. KENNEDY, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.

A PRIMIPARA aged twenty-eight years was confined on Aug. 28th, 1895. The presentation was left occipito-posterior, and a child weighing ten pounds was delivered with forceps, the occiput not rotating and the perineum being torn to the sphincter. The labour lasted twelve hours. She recovered fairly well and progressed till the evening of the fourth day, when her temperature rose to 103° F. and she had a shivering fit; but after a copious motion—the bowels had not been open since the confinement—the temperature became normal, and she went on without regaining strength till Sept. 11th, when the temperature rose to 101° in the evening. On Sept. 12th she was carried to a sofa, but soon asked to go back again. On Sept. 13th she was not well enough to be moved. On Sept. 14th, seventeen days after labour, she had a slight rigor in the morning, followed by a more severe one in the afternoon, when the temperature rose to 104°. On Sept. 15th her temperature was 104°, the pulse 130 and very feeble. The abdomen was somewhat distended and tympanitic, the tongue being fairly clean. There was no uterine tenderness. After a copious evacuation of the bowels her temperature fell, and she remained very exhausted and feeble, but with a normal temperature till the evening of Sept. 17th, when it rose to 103° and her pulse to 120. There were no local symptoms whatever, and the distension of the abdomen had disappeared, but her pulse was so bad and her general condition so very much worse that I gave her 40 c.c. of the antitoxin at once. In six hours her temperature had fallen to 100°, and the pulse to 112, and she said her head felt much clearer; but fourteen hours after the first injection her temperature had risen to 102°, and the pulse to 120, and I then gave her 45 c.c. of antitoxin. Her temperature reached 99° in six hours, and in twenty-four hours was normal, and since then there has been constant improvement, though she remained so exhausted that it was seven weeks before she was able to walk across the room alone, and she is as thin as a convalescent from typhoid fever. The child was of course weaned before the first injection. My idea of the case is that there was a septic thrombus in a vein, which was loosened and carried into the general circulation when she was taken out of bed; but the actual cause of the symptoms is very obscure, though no one seeing her would have doubted its being septic.

Being the first time that streptococcus antitoxin has been used in England the case seemed worth publishing, and I am indebted to Dr. Ruffer for his kindness in getting me the antitoxin.

Plaistow.

A CASE OF COMPLETE SEPARATION OF THE UPPER JAW.

By G. HERBERT HOPKINS, F.R.C.S. ENG., SURGEON TO THE SWANSEA GENERAL HOSPITAL.

A MAN aged forty-nine years was admitted to Swansea Hospital on Aug. 7th, 1895. He had been struck on the back of the head by a wooden beam and knocked forward on to a coal truck, the sharp edge of which had caught him at the root of the nose. On examination the whole of the upper jaw was found to be detached from the skull, the nasal processes of the superior maxillary bones and the zygomatic processes of the malar bones being fractured. There was over an inch of separation in the middle line. The frontal sinus and anterior ethmoidal cells were opened up. The eyes were quite uninjured. The parts were cleaned and stitched up, free drainage being provided for by the nose. A Smith's gag was used, which kept the parts in very good position. The patient wore this continuously for a fortnight. He is now quite well with the exception of slight ptosis of the right eye

Swansea.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LIVERPOOL ROYAL INFIRMARY.

CASE OF HYDROCEPHALUS; TREPHINING; OPENING OF THE FOURTH VENTRICLE; RECOVERY.[1]

(Under the care of Dr. GLYNN, and Mr. THELWALL THOMAS).

THIS case is a brilliant example of the good results obtained by modern surgery in a disease which has hitherto, with very few exceptions, proved fatal. It is only necessary to read the subjoined notes to understand how desperate the condition was in this patient. The methods formerly adopted by surgeons for the relief of hydrocephalus—tapping the lateral ventricles of the brain through the anterior fontanelle or after trephining when the skull had already closed—were but palliative in their effects, and death was only postponed for a time. Drainage of cerebro-spinal fluid from the spinal canal has been unsuccessfully tried, and until Mr. Parkin, following out some suggestions made by Mr. A. C. Morton, trephined a child aged four years and a half on April 4th, 1893,[2] we were without proof that the operation could be done on the living subject. It is true that this first case was unsuccessful, but great temporary relief was afforded to the patient, and when the case alluded to by Mr. Thelwall Thomas in his remarks came under treatment operation with slow drainage for eighteen days was followed by complete success. It is very evident from this brief abstract that the number of cases in which it is possible to do any good by operation is very few, for it may be taken for granted that if such came under the observation of physicians they would eagerly avail themselves of this chance of effecting a cure. The operation is only in its infancy as yet, and therefore it behoves those with any experience to give the profession the benefit of it. For the notes of this case we are indebted to Mr. Thelwall Thomas, senior surgeon to the infirmary.

The patient, a young man aged eighteen, was admitted into the Royal Infirmary, Liverpool, on March 15th, 1895, with the following history. Eighteen months previously, when a steward on an Atlantic steamer, he began to suffer from occasional attacks of severe headache and giddiness, which lasted for a few hours at a time. The pain was most marked in the back of the head. The attacks increased in severity and frequency, so that for the last six months he had hardly been free from pain. Latterly the attacks of giddiness had been so severe that he fell during them, always towards the right, although surrounding objects appeared to revolve to the left. For five minutes before an attack he felt very sick (he had only vomited once, three months previously, when an iron hook struck the back of his head and determined a fit); his head felt very hot, but he experienced a sensation of coldness and numbness in the trunk and limbs and a buzzing noise in both ears. If he closed his eyes the giddiness was not so troublesome, and he could avoid falling if he clutched at a railing or some article of furniture. When he fell he had remained on the floor as long as half an hour, conscious, but unable to rise or speak, although he understood what was said to him. Memory, sight, and hearing had been gradually failing. For six months he had suffered from insomnia, occasionally getting a few hours' sleep only to wake up with intense headache. For the last three weeks he had been afraid to leave his bed on account of the giddiness. On admission he was found to be a well-nourished thick-set youth with a very dull look and a large head twenty-five inches in circumference. His temperature was 97·6° F. and the pulse was 66. Severe headache was referred to the right occipital region; the head was tender

[1] This case formed the subject of a paper read before the Medical Institution, Liverpool, on Oct. 17th, 1895, the patient being exhibited.

[2] THE LANCET, Nov. 18th, 1893.

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to percussion all over, particularly so in the frontal region. There was slight nystagmus on looking to the right; the pupils reacted well to accommodation and light, but were unequal in size, the right being 3 mm. and the left 2½ mm.; both optic discs were in a condition of marked neuritis, and the fields of vision were slightly restricted. With the left ear he could hear a watch on contact, and with the right ear at a distance of four inches (this ear had been deaf since he was eight years old, when he had scarlet fever). There was no middle-ear disease. Smell and taste were normal. On getting him out of bed to stand he reeled like a drunken man and fell towards the right; he made very wide shots at his nose with the index-finger of both hands. The plantar and knee reflexes were present, but the abdominal and cremasteric were absent. He had occasional loss of control over the bladder, but the bowels were very constipated. The respiratory and circulatory systems were normal. There was no history of tubercle or syphilis in the family, and the patient had never had gonorrhœa or syphilis. Ten grains of iodide of potassium four times a day were given, and inunctions with mercury ointment were used, supplemented by ten grains of bromide of potassium in a few days, also five grains of blue pill to overcome constipation. Morphia hypodermically in quarter-grain doses was necessary to procure sleep, and the only rest from pain was due to this drug. In the first five days he lost control of the bladder on two occasions, and on the sixteenth day after the administration of a drop of croton oil given as a purgative he passed urine and fæces involuntarily. On the seventh day the pupils were sluggish and the occipital pain more severe. Six leeches were applied over the right mastoid region with some relief, and on the nineteenth day six more were used with temporary relief, but he slowly got worse. On the twenty-sixth day (April 10th) he was much worse, the pain was continuous, and vomiting had become an occasional symptom. Mr. Thelwall Thomas saw the patient for Dr. Glynn, and he now had marked nystagmus and diplopia, with paralysis of the right fourth nerve; the veins of the scalp on the right side in the occipital region were greatly distended. He could hardly stand with his eyes open and holding on to the bed with his hands; if he closed his eyes he at once fell to the right. His temperature had been subnormal since admission; it had never once reached the normal line. He had all the classical symptoms of marked intracranial pressure, and all indications pointed to the right cerebellum and vermiform process. After consultation with Dr. Glynn it was decided to explore through the right cerebellar fossa. Knowing that symptoms indicating cerebellar disease have led to operation without any discovery of tumour (nine out of sixteen operated upon—Starr), it was decided to explore the neighbourhood of the fourth ventricle if no tumour were found. On April 17th the patient's head had been shaved, well cleansed, and covered with a carbolic towel for twenty-four hours. Chloroform was administered by Dr. Armstrong, house physician. An incision, commencing at the right mastoid process and proceeding along the superior curved line of the occipital bone and down the middle line of the neck for two inches, was rapidly made. With a few strokes of the knife and a free use of the raspatory the lower part of the occipital bone was exposed. The bleeding was terrific from the scalp and emissary veins, which appeared to be legion, coming from the lateral and occipital sinuses; these were temporarily controlled by clamp forceps and sponge pressure manipulated by Mr. T. H. Agnew, house surgeon. An inch trephine was applied to the bone about the middle of the cerebellar fossa. After a few turns, when only through the external table, the patient stopped breathing. Artificial respiration by using the left arm *à la* Silvester and compression of the right chest during expiration was carried out, and the operation hurried on. Manipulation of the right arm would have hindered the operation. As soon as the crown of bone came away the dura mater bulged to beyond the outer table, was pulseless, and looked like a button mushroom. The patient made a few attempts at natural breathing; the dura mater was at once incised, when some fluid escaped. The finger was inserted and gently insinuated under the cerebellum, but nothing abnormal was felt, although the under surface of the right lobe, the vermiform process, and a portion of the left lobe were explored; so the finger was directed towards the fourth ventricle and encountered a soft bulging which immediately gave way, and the posterior surface of the medulla was clearly felt, but the space was not at all suggestive of a cyst. On withdrawing the finger a rush of fluid took place, and the cerebellum and dura mater fell within the skull and the patient breathed freely and fully. The hæmorrhage from the above-mentioned veins ceased. It was considered certain that the partition broken down was the posterior medullary velum bounding the fourth ventricle, and that an internal hydrocephalus had been relieved. The hole in the dura mater was sutured, the vessels in the flap were ligatured, and the site of the operation was cleansed with hot 1 in 40 carbolic lotion. The piece of bone was not replaced on account of a slight oozing of clear fluid which trickled through the dura mater. Silkworm-gut sutures united the flap and a small rubber drainage-tube was laid through from end to end at the base of the flap, but not into the cranial cavity. Dressings of cyanide gauze under wood-wool tissue were applied under a capelline bandage. The patient was collapsed from loss of blood, but quickly rallied, and on regaining consciousness at once cried out that the headache had gone. He slept well. The wound was dressed on the second day, and on the fourth the tube was removed. Union had taken place all along the line except, of course, where the small orifices occupied by the tube were. The ataxia as tested on the arms appeared less marked and his vision was only blurred, and he instinctively covered the right eye "to do away with the shadow," as he expressed it. The stitches were removed on the tenth day and a collodion dressing applied as a protective. There was occasional nystagmus for some days, but this and the blurred vision quickly righted themselves. For four days (from the twenty-fourth to the twenty-seventh after operation) his urine had to be drawn off and constipation required purgatives; it was also noticed that he had some weakness in the right arm and hand—dynamometer test, right, 20; left, 50; but in eight days this recovered and the test recorded—right, 75; left, 65. He was allowed to get up on the forty-first day, and on the sixty-third he was sent to the convalescent home at Woolton, walking well without ataxia, seeing plainly, and expressing himself as quite cured. During convalescence he had a slight frontal headache one day for a few hours, but he slept well and did not require a single dose of morphia or sleeping draught after the operation. On Oct. 17th he walked well without ataxia, his reflexes were normal, and he read $\frac{2}{36}$ with both eyes. The right optic disc was normal, but the left had a small patch of neuritis still present where a vessel left it. Hearing was normal in the left ear, but he only heard a watch a few inches from the right ear (this had been so for years). There was no headache or giddiness.

Remarks by Mr. THOMAS.—Obliteration of the foramina in the posterior medullary velum has been noticed in many cases of hydrocephalus, and it is just conceivable that some mild chronic meningitis may have effected this here, producing all the symptoms of intracranial pressure. Lowson of Hull[3] opened the fourth ventricle in a child and drained externally, but the case terminated fatally; the operation was performed after lumbar incision into the subdural space had failed, thus emphasising the fact that the foramen of Majendie and the fissures in the lateral recesses of the fourth ventricle were obliterated. Parkin of Hull[4] has opened the subarachnoid space in a child aged eleven months, and drained for eighteen days with success. Waterhouse,[5] in a case under the care of Dr. W. W. Ord, drained the subarachnoid space for eighteen days in a case of tuberculous meningitis with perfect success. One cannot hope much from this procedure in hydrocephalus unless the fourth ventricle is also opened.

WEST SUSSEX, EAST HANTS, AND CHICHESTER GENERAL INFIRMARY.

A CASE OF PITYRIASIS RUBRA.

(Under the care of Mr. F. SKAIFE.)

WE published in THE LANCET of July 27th of this year (p. 207) the account of a case of this somewhat rare affection of the skin, and by means of illustrations showed the general character of the eruption. In that case the patient, who was under the care of Mr. W. Cooper of Barnstaple, was also a female, but younger (being only twenty-eight years of age), and the disease continued for three and a half months without any complication; there was, however, considerable

[3] Brit. Med. Jour., June 24th, 1893.
[4] THE LANCET, June 1st, 1893, p. 21.
[5] THE LANCET, March 10th, 1894, p. 597.

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exhaustion and loss of strength afterwards. The occurrence of the diarrhœa and the renal inflammation during the progress of this case were probably indications of the extent to which the function of the skin was interfered with, and it is interesting to observe their sequence. According to Hebra the sufferer from pityriasis rubra (acute general exfoliative dermatitis) remains in good health for a long time, but ultimately wastes, becomes cachectic, and sinks from exhaustion. For the notes of this case we are indebted to Dr. A. W. Kirkpatrick-Picard, house surgeon.

The patient, a widow aged fifty-nine years, was admitted into the infirmary on Nov. 13th, 1894, under the care of Mr. F. Skaife, suffering from a varicose ulcer on the left leg. The ulcer was unhealthy-looking, about the size of a five-shilling piece, and the skin around was eczematous. She was in a feeble state of health generally and looked considerably more than her age. Her past history was good except for occasional slight attacks of eczema. She had suffered more or less from the ulcer on her leg for some years. Apart from this the woman was apparently sound all over. The urine was normal, though of rather low specific gravity (1010). During the first ten days the ulcer steadily improved with rest in bed and treatment, which consisted of boracic fomentations for three days until it was clean, and then a weak sulphate of zinc lotion was applied. On the 24th the eczematous skin around the ulcer became markedly reddened. This condition rapidly spread over the whole body, other patches of redness occurring and coalescing until all the limbs, the trunk, and the head were affected within thirty-six hours of the time the change was first noticed on the leg. During the onset there were no marked symptoms beyond some slight prostration, and the patient was somewhat alarmed at her sudden change of colour, which became uniformly bright scarlet. There was no papular affection of the hair follicles. The condition of the ulcer was unaffected by the general dermatitis. There was no exudation or thickening of the skin, nor was there at first any itching. The mucous membrane of the mouth and throat did not show any marked congestion. The urine remained unaltered, and there was no rise of temperature and no acceleration of the pulse or respiration. The skin became covered with thin wafery scales, and this was followed by profuse shedding, large flakes coming off the hands and feet. The skin beneath the scales was bright scarlet. The patient, who had been in bed ever since admission, was kept warmly clothed and put on a light nourishing diet. Externally ointment of tar with vaseline was applied to the skin, and internally a mixture containing strychnine and digitalis was given. The condition remained without any improvement for about a fortnight, when there was a slight diminution in the amount of scales shed as measured by the handfuls removed from the bed. The front of the trunk and the head were the first parts to show areas of healthy skin three weeks after the onset; the limbs and the back were still very acutely affected. At this time (Dec. 15th) the patient was first ordered brandy, three ounces in the twenty-four hours, owing to increasing feebleness of the heart's action. The improvement in the skin of the trunk was not constant, fresh patches continually lighting up, accompanied by free shedding, though the head was never so markedly affected as at the first onset. At the beginning of January, 1895, the itching, which previously had been very slight and occasional, became very marked, especially in the legs and hands, and no relief was obtained until a lotion of subacetate of lead and opium was applied. At this time the tar ointment was replaced by a lotion of oxide of zinc, boracic acid powder, and subnitrate of bismuth in olive oil. During the early part of January the trunk and upper arms were distinctly better, the lower limbs and buttocks, the hands, and the forearms being the parts chiefly affected; these, however, slowly improved until about the middle of February, when the skin was healthy except over the buttocks, and on March 1st the skin was sound all over. The return to a healthy condition only lasted one week, for on March 8th the whole skin again became involved, fresh scarlet patches appearing almost simultaneously over the whole body and involving the entire surface within two days of its reappearance. Free shedding of the skin followed, lasting for eight days before there was any apparent diminution in the quantity of scales cast off. There was now a steady improvement with occasional slight outbursts, especially of the skin on the front of the abdomen, until the end of April. During this relapse the patient complained of marked general tenderness. The total duration of the second attack was about nine weeks, the first attack having been over twelve weeks. On March 17th, just when the diminution in the amount of shedding was noticed, there was an attack of diarrhœa which lasted until the 20th. On the 21st, for the first time since her admission, the temperature rose to 101°F. in the morning and to 101·2° in the evening, and on that day the urine was scanty and smoky, acid, and of specific gravity 1010, and it contained blood and one-fourth albumin. The temperature reached 101·2° in the evenings of the 22nd and 23rd, and on the latter date the patient complained of pain in the left knee. The joint was swollen and tender, and the synovial membrane was distended with fluid; the skin was of a dusky-red colour and felt hotter than that of the opposite knee. A back splint was applied, and a mixture containing bicarbonate of soda, carbonate of lithium, and colchicum was given. It was found necessary to remove the splint after a couple of days owing to its causing slight irritation of the skin, and the limb was steadied between sandbags. The pain had disappeared on the 25th, but the joint still remained swollen. The blood and albumin in the urine diminished steadily after three days from their first appearance, and by the 29th the urine was normal. The swelling of the knee did not entirely subside until the beginning of May. The patient was very feeble on her legs for some time afterwards, and was not able to get up until May 15th, when she was assisted into a chair. On the 30th she was carried out into the grounds for the first time. She recovered strength very slowly and was not discharged till the end of July, when she left completely cured though still somewhat feeble. During the last three months of her stay in the infirmary there was no return of her skin affection.

The satisfactory result of the case was in the opinion of Mr. Skaife largely due to the careful way in which the patient was nursed throughout her long stay of eight months and a half in the infirmary.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Intestinal Resection and Exclusion.

AN ordinary meeting of this society was held on Oct. 28th, the President, Sir JAMES CRICHTON BROWNE, being in the chair.

Mr. C. B. KEETLEY related three cases of Intestinal Resection and Intestinal Exclusion. The first was in a girl aged seventeen, who had been ill for a year after exposure to cold and wet. She was in a hectic state and passed pus per anum. A large abscess was present in the lower abdominal wall. This was opened and the wound afterwards partly closed, the lower part, from which a fistula led to the rectum, being packed with gauze. A fistula opened into the small intestine a few days afterwards. Later, laparotomy was performed and the small intestine proximal to the fistula divided and united end to end by Maunsell's method to the gut distal to the fistula. Thus a portion of ileum was excluded, and from this portion fistulæ led to the rectum and skin respectively. The patient was now in good health and wore a colotomy truss over the fistulous opening in the abdominal wall. The second case was a girl aged fifteen, who presented two tumours in the abdomen below and to the right of the umbilicus; the lower tumour was fixed and the upper one movable. The patient was emaciated and suffered from vomiting, and there was hæmorrhage from the rectum. An incision was made over the upper swelling, the ascending colon presented, and a tumour was felt within it. The colon was opened and the tumour found to be a growth involving the region of the ileo-cæcal valve, which was intussuscepted into the cæcum. The tumour was cut off flush with the wall of the cæcum and the cut edges of the small intestine united to those of the cæcum by Maunsell's method, save that the stitches did not traverse the peritoneal coat. Six weeks later an attempt was made to remove the lower swelling, which proved to be a retro-peritoneal glandular mass, and which had grown in the interval. In taking this mass out the meso-colon was divided, and this led to the sloughing of a portion of the

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wall of the colon and the formation of a fistula. The patient ultimately died from chronic obstruction due to recurrence of growth in the retro-peritoneal glands. The third case occurred in a middle-aged man who was very anæmic from advanced cancer cachexia; there was a large perfectly movable tumour in the left side of the abdomen. The growth was removed, together with the splenic flexure and a portion of small intestine which were embedded in it, the operation taking three hours and a half. The proximal portions of both colon and small intestine were united to their respective distal ends and the abdominal incision closed. The patient, who suffered great pain, died after twenty-four hours.

Mr. HERBERT ALLINGHAM related a series of cases of Intestinal Resection including all the cases he had done, as by so doing only was it possible to arrive at a definite conclusion as to the correct way of treating cases of intestinal stricture. He had operated upon 10 cases—6 recovered and 4 died. In 4 of the cases that recovered the intestines were empty prior to the resection. In the 4 that died the stricture was resected while the intestines were distended. From this it was seen that distension of the intestines at the time of resection enormously increased the risk of the operation. The following was, perhaps, the explanation: when the intestines were distended large quantities of fæces were pressed down towards the seat of union, and no doubt were constantly disturbing it by the peristalsis they set up. Further, the patient was in a way poisoned by the fæcal accumulation, and when in such a state the union between the divided ends of the intestine might be delayed or take place in a feeble or even imperfect manner. Again, in large intestine cases fæces might block the bobbin and so tear it away. Therefore, stricture of the large intestine must not be resected when the intestine above the stricture was distended with fæces. Stricture of the small intestine might be resected even when the gut was distended, for the fæces were liquid. The following course should be carried out in distended cases. The gut just above the stricture should be fixed to the abdominal wall—in fact, a colotomy performed—and so the intestine thoroughly emptied. Later the colotomy opening and stricture should be resected, and an end-to-end anastomosis done. In some cases it was possible to bring the strictured piece out through the abdominal wall; then it should be fixed and the gut above it opened. Later the strictured piece of gut could be resected, and then an end-to-end anastomosis done. Some form of button or bobbin was necessary in cases of intestinal resection or anastomosis.

The PRESIDENT expressed his admiration of these operations, which involved great foresight, manual dexterity, and ingenious contrivance.

Mr. MAYO ROBSON sent a written communication, in the course of which he stated that he had employed decalcified bone bobbins in a large number of cases. These were made in various sizes, and for them he claimed the following advantages. They enabled the operation to be completed with simplicity, rapidity, and efficiency, a continuous suture being employed and none other being required; there was no tension on the gut, and therefore no sloughing; there was a continuous mucous channel, and therefore no cicatricial contraction; the bobbin guarded the line of suture while the raised ends of it kept it in place. There was no foreign body within the gut, as the decalcified bone speedily dissolved; it was so light that the gut could not kink from its weight; its presence caused no irritation within the gut; it served equally well for all kinds of operations upon the intestine, and in the hands of himself and others it had proved safe and efficient.

Mr. L. BIDWELL spoke in favour of Halstead's method of suture, the essential principle of which was that the submucous coat should be included in every stitch. If a straight needle were used and it were pushed in until resistance were felt and then lateralised this would be accomplished. After using Maunsell's method on one occasion he had some fæcal discharge from the wound.

Mr. BRUCE CLARKE thought that no general rule could be laid down for intestinal suture, but he preferred as a rule to do without mechanical apparatus. He referred to the case of irreducible hernia in a boy (already published in the Clinical Society's Transactions), in which he resected portions of both the small and large intestine, uniting first the mucous membrane with a continuous suture and then uniting the peritoneal and muscular coats by a second continuous suture, fastening it off in four or five places round the circumference, another row being placed beyond this if necessary. He had employed the same method in gastro-enterostomy. He knew of two cases in which Murphy's button had been used in which death resulted afterwards from perforation when the button had moved down the bowel and had become impacted there.

Mr. LOCKWOOD said that two very clear theses were before the meeting. One was that the operation should not be performed when the gut was distended and paralysed, an endeavour being first made to empty the gut and then afterwards to suture. The other thesis was to use a bobbin in intestinal suture. He had operated on two cases in which the small intestine was the seat of trouble: one was a case of gangrenous gut, and it recovered; the other was one of intussusception, and it died. In both the gut was united without bobbin by a method similar to that described by Mr. Clarke. He thought that in the small intestine bobbins were not required, but in the large gut they might be wanted; the large intestine would tolerate the presence of a hard mechanical object better than the small bowel. In cases of end-to-end suture for gangrenous bowel the operation was performed under more adverse conditions than the cases Mr. Allingham had related, but the results appeared to have been equally successful. He regretted that Mr. Robson had not given a list of his cases, as a definite series of corresponding cases was required to decide as to the best method.

Mr. JONATHAN HUTCHINSON, jun., said that three years ago he resected five inches of gangrenous small intestine in a case of femoral hernia, using the simple method of suture without bobbin; that case was at present well. Three other similar cases all proved fatal: one died from giving way of the sutures soon after the operation; in that case the gut was excessively thin; the other two lived ten days and fourteen days respectively, and the fourth he thought would have recovered but for the supervention of pneumonia; during the coughing which accompanied this a small part gave way.

Mr. STANMORE BISHOP said that Murphy's button as at present made had holes which were apt to cut the intestine. Jessett's bobbin was quicker in application than Robson's. It should not be forgotten that celerity in uniting the ends of intestine was not the most important matter.

Mr. KEETLEY, in reply, said that he agreed that mere celerity was not so important as some would think. A prolonged operation would not affect the patient much if he were kept warm and loss of blood avoided. Temporary fæcal fistula seemed to have followed nearly every described kind of suture. The bobbins often acted as mechanical irritants.

Mr. ALLINGHAM, in reply, said that the bobbins kept the gut at rest and rendered suture easier. In two cases after using Murphy's button the gut had given way, and he knew that a good many other cases had occurred.

CLINICAL SOCIETY OF LONDON.

President's Introductory Address.—Impetigo Contagiosa Gyrata.—Sequel to Case of Patellar Sarcoma.—Treatment of Acute Pleural Effusion by Incision.

AN ordinary meeting of this society was held on Oct. 25th, the President, Dr. T. BUZZARD, being in the chair.

The PRESIDENT delivered an Introductory Address. After expressing his thanks for the great honour the society had conferred upon him by electing him to a post which was unsurpassed, in his estimation, by any that could fall to the lot of a practising physician, he remarked that some of the aspirations which had been expressed at the foundation of the society twenty-eight years ago had not been, perhaps, altogether fulfilled. The application of drugs and medicaments for the cure or relief of disease—the existence of which appeared to be looked upon as a foregone conclusion—overshadowed everything else in the first President's address, which contained no hint of investigation of disease with a view to its prevention as work to engage the attention of the society. The last quarter of a century had wrought an extraordinary change—a signal illustration of which was to be found in the revolution brought about as a result of Pasteur's immortal researches extended and applied to surgery by the genius of Lister. The success in the treatment of myxœdema—a disease the investigation of which was so largely

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identified with the Clinical Society—was an example of the application of the scientific method in medicine as striking as anything to be found in the domain of physics. The success in the treatment of vast numbers of cases of paralysis and convulsive disorders which had followed the discovery of their frequent dependence upon syphilis was another example of scientific therapeutics as contrasted with the tentative application of drugs which was formerly the rule. And so also was the recognition of the influence of alcohol in the causation of a form of progressive paralysis, which opened the way at once to success in treating such cases. With our present knowledge of that which was formerly most frequently unsuspected we could picture to ourselves the numerous cases of this description which even at the time of the society's formation must have gone steadily on to death uninfluenced in any degree by the various drugs and other measures which were employed. How little would here avail the most careful trial and comparison and statistics of the effect of this or that drug. In the absence of the key to the cause of the disease success in treating it would be impossible. Reference was made to the question of the causation of disease by micro-organisms, and it was remarked that in disease of the nervous system the infective origin of leprosy, tetanus, hydrophobia, and diphtheritic paralysis admitted of no reasonable doubt. He suggested that there was a most interesting field for inquiry as to the possible dependence of many chronic diseases of the nervous system upon a source of infection. Infantile paralysis (acute anterior poliomyelitis), there could be little or no doubt from the occurrence of many epidemics of the disease, was an infective disorder. It was possible, he thought, that the form of progressive muscular atrophy in which the lesion occupied the same anatomical position would be likewise found to be of infective origin. Insular cerebro-spinal sclerosis, there were strong reasons for believing, owed its origin to some influence of this description. The suggestion that chorea and some forms of epilepsy had an analogous origin was yet but a conjecture, which appeared, however, to be worthy of investigation. As regarded such "family" diseases as certain myopathies and the so-called Friedreich's ataxy, the supposed hereditary element might prove, he thought, to be open to a similar doubt to that which many of us experienced respecting tuberculosis and cancer, and that what appeared to be an inheritance might be, at least in great part, the result of exposure of members of the same family to a local source of infection. The subject was one which must be approached from several sides, especially the clinical, bacteriological, and chemical. He could imagine no more important inquiry and no society the members of which were so well qualified to do justice to it as that which he had the honour to address.—A vote of thanks to the President for his able address was proposed by Mr. CHRISTOPHER HEATH, seconded by Dr. RADCLIFFE CROCKER, and carried unanimously.

Dr. RADCLIFFE CROCKER related the details of a case of Impetigo Contagiosa Gyrata. He said that the eruption was a new form of impetigo contagiosa in this country which had occurred in the last two years, and that well-marked cases were rare. It was characterised by the formation first of a pink papule the size of a hempseed with a slight indication of vesiculation at the apex; this enlarged and formed first a tense and later a flaccid bulla from a quarter to a third of an inch in diameter, with sero-purulent contents; a faint narrow red areola surrounded the bulla. The bulla dried into a thin scab, enlarging at the periphery, where there were still indications of fluid, and beyond that again the areola had become pronounced. When the centre cleared a thin greenish crust on the ragged inner edge enclosed the clear centre and was itself surrounded by a red areola. The largest single lesions were about an inch across, but some of them coalesced and formed compound lesions of several square inches in area, and a patch with a gyrated outline was thus produced. In the patient the whole back was covered with these gyrate patches, but in many patients there were only a few lesions from unruptured bullæ; pure cultures of staphylococcus pyogenes aureus were obtained, and in some cases an ordinary form of impetigo contagiosus was present simultaneously with the gyrate eruption either in the patient or in some other member of the family. He was not aware that this form of eruption had been previously recognised except by Dr. Patrick Manson, who had described a pemphigus contagiosus tropicus, and, judging from Dr. Manson's description, this other affection above discussed appeared to be identical.—The PRESIDENT asked if any plan of diagnosis could be suggested other than the bacteriological one to discriminate between this disease and pemphigus associated with disease of the nervous system.—Dr. P. MANSON, referring to the Chinese or Malay disease, said that that affection did not correspond to the one that had been shown. It was not characterised by such a degree of surrounding inflammation, there was more marked exfoliation of skin around the spots, and the eruption was entirely confined to the hot portion of the year. The application of perchloride solution of the strength of 1 in 1000, and dusting with boric acid powder, was followed by a rapid subsidence of the disease. He had ascertained on microscopical examination that the organism was a diplococcus and not a staphylococcus.—Dr. CROCKER, in reply, said that in these cases the mode of development was different from cases of pemphigus, and the eruption was scattered and accidentally distributed. It did not come out in crops as in pemphigus, and the bullæ did not remain tense. The degree of surrounding inflammation varied very much in different parts, and there was no doubt that many different pathogenic agents might produce morphologically similar eruptions.

Mr. R. W. PARKER communicated the sequel to a case of Removal of the Right Patella for Primary Sarcoma. The patient, a girl aged thirteen years, was shown to the society after the operation nearly seven years ago, as recorded in the Transactions, vol. xx., p. 254. The growth was intimately connected with the patella, which was removed. The girl recovered with a stiff joint and remained well for three years. Then a slight local recurrence took place in the scar, which was excised, after which the girl remained well for a further period of three years. Then some new growth occurred in the lymphatic glands deep in the pelvis. An attempt was made to remove them, but was only partially successful. The girl died after some weeks from exhaustion. At the necropsy masses of glandular new growth were found deeply seated in the pelvis. There were no secondary deposits in any of the organs or in any bone. The original growth was a firm spindle-celled sarcoma.—Mr. MARSH remarked on the rarity of this affection. He had only seen one case at St. Bartholomew's Hospital. The patient was a young woman; the tumour formed a large mass in front of the knee, and Sir James Paget dissected the growth entirely away. The patella was often enlarged in osteo-arthritis, but disease of that bone was rare, though he had seen a case of syphilitic disease of the patella which was at first regarded as a sarcoma. Recently he had seen a case of primary sarcoma of the synovial membrane of the knee-joint.

Dr. A. WILSON (Leytonstone) read a paper on the Treatment of Acute Pleural Effusion by Incision. The experience of three successful cases was given in favour of free incision into the pleural cavity with drainage as soon as the effusion was so large that it would not be reabsorbed. It was urged that in empyema the lung might be bound down by adhesions and compressed so as to be unable to expand again, and a case was quoted to illustrate this. The same occurred in a minor degree in pleural effusion if drainage were delayed. A case reported by Dr. Morrison[1] illustrated this. The first and second cases of pleural effusion were simple and recovered in about ten days; the effusion was large. In the second case Dr. Wilson removed five pints, the apex beat being displaced outwards to the nipple line. The heart returned to its normal position, and the lung expanded within half an hour, without distress or shock to the patient. Friction sounds indicated effusion of lymph on the pleural surfaces. On the third day the pleural cavity was shut off by the lung; then it was found that some air and fluid were sealed up lower down, so the pleural adhesions were detached to allow of drainage. Two days after the operation there were no abnormal physical signs. This was eleven years ago, and the patient died two years afterwards, the result of an accident; meanwhile she was healthy. The third case, in May, 1894, in a young woman, was complicated with severe influenza and pneumonia. When the operation was done the patient was almost moribund, being kept alive by constant oxygen inhalations and strychnine injections. Within forty-eight hours the lung had completely expanded. On the fourth day the lung closed the wound; about six pints of fluid had been removed from the right side. A week later she was very ill from pneumonia on the opposite (left) side. A fortnight later the

[1] Brit. Med. Jour., July 13th, 1895.

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right side was normal. For some weeks the temperature kept rising at night, and she seemed to be in a rapid decline, so she went to Margate, where she regained the power of walking. In August Dr. Nichol reopened the incision, and about four ounces of sweet pus escaped; possibly the lung had closed the wound too soon, hence the great importance of always detaching the lung and draining the lower part. The incision was between the ninth and tenth ribs in the post-axillary line. Five months after the operation the cavity would hold from four ounces to five ounces of fluid and radiated about two inches all round the wound. The temperature kept up, and the case looked very unfavourable, like general tuberculosis. It was found that drainage was imperfect, that always about two ounces of pus were retained, and by inserting a small india-rubber drainage-tube downwards this part was kept empty. Then the temperature at once fell to normal and kept so, until finally the cavity was closed, and the wound healed in January, 1895, nine months after the operation.—Dr. S. WEST said that it was difficult to see why incision was practised when aspiration gave such good results. Incision was justifiable when ordinary methods had been tried, but had not succeeded. The lung expanded freely after paracentesis. He published recently a remarkable case treated ultimately by incision, and in that case, although the effusion was of two years' standing, the lung was not in any way bound down or adherent, though recovery was long delayed by empyema, which followed incision in spite of antiseptic precautions.—Mr. MARSH said that in cases of acute effusions into joints a surgeon would not hesitate to open and drain; similarly with acute hydrocele, acute diffuse periostitis, and with a rapid and large effusion into the abdominal cavity: these, he thought, were arguments for treating the chest in the same way.—Dr. WEST upon this wished to add a word of caution; there was much that could be done with a cavity like the abdomen that could not be done with the pleura.—Dr. WILSON, in reply, said that all the cases he had related were in a bad way, and not enough relief would have been given by aspiration. The incision relieved tension more completely than did tapping. He made the incision low down and posteriorly for the purpose of securing good drainage.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Oct. 23rd at the Medical Institute, Birmingham, Dr. T. EDGAR UNDERHILL being in the chair.

Mr. GAMGEE showed a man aged twenty who had had a Thyroid Tumour half the size of a large orange, causing difficulty in breathing for the past two months. An operation was performed on Sept. 12th, 1895. Both the superior thyroid and the right inferior thyroid arteries were tied. Two small processes from the upper part of the gland and a process at the lower part into which the left inferior thyroid artery entered were left in position. Complete relief of symptoms ensued.

Dr. FOXWELL showed the Lungs of a man who had died from Acute Pneumonia. The interest lay in the great thickness of the visceral pleura over the greater part of each lung. The thickening was entirely fibrous, and on the surface lay recent lymph. The parietal pleuræ were not thickened and adhered to the visceral only by slight recent inflammatory bands. The illness began with diarrhœa followed in three days by stabbing chest pains. Widespread moist friction sounds were first heard, the pneumonic signs appearing later and very gradually, and never amounting to marked dulness or intense tubular breathing. The pneumonia crept over the greater part of both lungs. The presence of friction and absence of flatness in the percussion note prevented recognition of the old thickened pleuræ. The peculiarity of the dulness and breath sounds were considered as probably due to the partial distension of both chest wall and lung owing to the restraining pleura. The cause of the thickening was doubtful. There was no history of alcohol or syphilis. As a child the patient had had rheumatic fever twice; the heart was, however, healthy. Still, one or both attacks may have been complicated by pleuro-pneumonia, with the resulting slow fibroid growth resembling scar tissue. The case showed well the great difficulty sometimes arising in the diagnosis of thickened pleura in acute pneumonia, and, therefore, the great value of a knowledge of the previous state of a patient in making a prognosis.

Dr. SHORT showed a portion of Intestine from a case of Enteric Fever. The Peyer's patches were unusually large, with deep and extensive ulceration. Tremor of the hands had been a marked symptom throughout. Towards the end of the third week of her illness the girl, who was subject to epilepsy, had a severe fit. After this the pulse rapidly failed, and she died in about twenty-four hours.

Dr. SHORT also showed the Liver, Stomach, and Pancreas from a woman aged sixty-four. The stomach was divided into two cavities by an indurated cicatricial band which appeared to be secondary to a large transverse ulceration. There were several large nodules in the pancreas and neighbouring glands, strongly suggesting a malignant origin. The liver showed a large abscess towards the posterior part and several smaller ones in various parts of the gland; whilst scattered all over it were numerous soft hæmorrhagic foci obviously rapidly breaking down. Nothing was found elsewhere to suggest a pyæmic origin. The marked feature of the case was the latency of the symptoms up to a few days before death.

Mr. MARRIS showed a specimen of Intra-pericardial Aneurysm of the Aorta, with chronic adhesive pericarditis.

Mr. HEATON showed a Growth removed from the Umbilicus of a Boy aged four years and a half. The child was brought with a history that when he strained he "passed water from his navel." On making him cry a small jet of a clear yellow fluid ran from the umbilicus. A fine probe passed into a fistula at the umbilicus downwards and backwards for three inches and a half. The fluid was clear, light yellow, had a peculiar soapy feel, and was strongly alkaline—in fact, chemically resembled succus entericus. On abdominal section being performed a large, thick-walled, pear-shaped sac was found passing downwards and backwards and adherent by a band of fibrous tissue to the small intestine. The sac was partially excised in September, 1893. In August, 1895, the remaining part of the sac was removed and showed on microscopic examination the structure of small intestine. The vitello-intestinal duct forming the direct communication between the intestines and the yolk sac had been only partially obliterated. The end nearest the intestine was represented by a fibrous cord. Its outer half opened at the umbilicus and became distended by secretion into a thick-walled muscular sac.

Mr. CHAVASSE read notes of a case and exhibited a male adult upon whom a Primary Amputation of the Entire Upper Extremity had been performed for a machinery accident in May last. After the initial shock had been overcome recovery was rapid and healing complete in a month.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

President's Address.—Symphysiotomy.—Splenic Leukæmia following a Blow upon the Abdomen.—The Relation of Influenza to Diseases incidental to the Seasons.—Excision of the Larynx.—Exhibition of Specimens and Cases.

A MEETING of this society was held on Oct. 18th, Mr. A. W. MAYO ROBSON, President, being in the chair.

The PRESIDENT delivered an address, which we print in full this week, on the Surgery of To-day as compared with that of Twenty-five Years Ago, illustrated by the Work in the General Infirmary at Leeds.

Dr. BRAITHWAITE read the notes of a case in which he had performed Symphysiotomy.

Dr. CHURTON showed a case of Splenic Leukæmia following a Blow upon the Abdomen. The patient was a man aged twenty-eight years whose spleen filled the greater part of the left abdomen and extended beyond the middle line. The red blood cells were diminished in number; the leucocytes were 1 in 10. The patient looked well. The face and lips were red, the eyes bright, and the movements brisk; but he was unfit for heavy work (tachypnœa). His family was healthy. He had had no illness until this, though he had been careless in his diet, and had lived in a very damp house, and was often wet at work. In 1887 he was kicked in the abdomen rather severely, but not disabled. In 1892 a piece of steel weighing 2 lb. flew off a mass of steel struck by a hammer of 85 tons impact, and, travelling in an upward direction from two feet above the ground, struck him at eight yards' distance on the left abdomen about two inches from the

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median line and just above the umbilical horizontal line. The shock might thus have been directed through the colon and spleen, injuring both. He fell violently, but resumed work after three hours. The skin was deeply bruised for two or three weeks; the diameter of the bruise was about three inches. Eight or nine months after the blow he began to feel weak; three months later the spleen was found to be enlarged. Gradually quickness of breathing came on. He left his work in March last. When first discovered two years ago the spleen was about half its present size; probably, therefore, it had taken one year to attain that size. It seemed possible that after the blow micro-organisms from within had traversed the damaged intestine and invaded the similarly damaged spleen.

Dr. BAMPTON (Ilkley), in a paper on the Relation of Influenza to Diseases incidental to the Seasons, submitted the following propositions:—1. That we recognise a pure type of influenza. 2. That we meet with influenza *plus* the disease peculiar to the time of the year—e.g., influenza *plus* bronchitis, influenza *plus* follicular tonsillitis, or *plus* summer diarrhœa. We have then to deal with compound diseases. 3. We may meet with two specific epidemic diseases running concurrently—e.g., mumps and influenza. We then have to deal with a dual disease, each modifying the other. 4. We recognise the lowering of the resisting power during an attack of influenza, bringing into evidence the disease diathetic to the individual and *vice versâ*. 5. The modern explanation of the classic clinical saying "that in times of epidemics all diseases are apt to assume an asthenic type" is that at such times we have the specific epidemic germ grafted on to the ordinary disease.—The paper was discussed by Dr. BARRS, Dr. DE MOUILLOT, Mr. WOODCOCK, and Dr. CHADWICK.

Mr. WARD read a paper on Excision of the Larynx, illustrated by cases in which he had performed the operation.

The following card specimens and cases were exhibited:—

Dr. ADOLPH BRONNER (Bradford): Lower Turbinated Bones removed for Nasal Obstruction.

Dr. TREVELYAN: A Becker's Microtome.

Dr. BARRS: Spastic Paraplegia; Pseudo-hypertrophic Paralysis; Athetosis.

The PRESIDENT: Case of Gastrotomy with Sphincter formed by the Rectus Muscle; Myomata Uteri removed per vaginam; Multiple Fibroids removed by Abdominal Hysterectomy, with a new treatment of the Pedicle.

Mr. LITTLEWOOD showed a man aged sixty-nine on whom he had performed Supra-pubic Prostatectomy on Aug. 22nd, 1895, removing eleven drachms of prostate. The patient had complete retention with foul urine before the operation; now the urine is clear and is passed every three or four hours during the day and once or twice during the night.—Mr. LITTLEWOOD also showed a specimen of Malignant Disease of the Cervix Uteri removed by Vaginal Hysterectomy. The broad ligaments were very wide, as there was a hydro-salpinx on one side and a small ovarian cyst on the other. These were removed, the patient making a good recovery.

Reviews and Notices of Books.

From Matter to Mind. By MARCUS R. P. DORMAN, M.A., M.B. Camb. London: Kegan Paul, Trench, Trübner, and Co. Pp. 319. 1895. Price 7*s.* 6*d.*

THE origin of mind and its relation to matter have been subjects of discussion from very early times, and the answer of the latest writer whose book now lies before us supplies little information that is in advance of the common knowledge of the day. The author commences by accepting as most probable the theory of Kant that space was occupied originally with countless meteorites, which, attracted by force of gravity to certain centres, formed suns, generating intense heat by the violence of their mutual impact. The fundamental material, or, as the Germans term it, the "Anlage," of such suns we still may see in the nebulæ. When formed a cooling process, by radiation into space, takes place, which will ultimately lead to their extinction. The planets have been formed in the same manner. What led to the first movement of these distributed meteorites? "Gravity," he says, "originally gave rise to heat, and it is extremely probable that heat has since become differentiated, according to Nature's requirements, into all the other forces with which we are acquainted. It has an intimate relationship to light, electricity, mechanical forces, and chemical action, which are all essential to life. It is thus possible, then, that the great force, life itself, at some very remote period was derived from the same source." Why, we may ask, should it have been at some very remote period? Why not to-day?

It is, indeed, in a high degree improbable that life began when the temperature of the world was high. It is far more probable that it commenced at such temperatures as are those now common in the warmer parts of the earth, and at which the lower forms of organic life still live and thrive and multiply best. But we look in vain for any explanation, or even suggestion, of the origin of life—of the essential difference between the living and the not-living combination of atoms which the title of the book might reasonably lead us to anticipate. The conclusions of his second chapter are: that matter consists of elements which are constantly combining with other elements to form compounds; these in turn break up and recombine, always with manifestation of heat; that the properties of the elements are lost in the compound, but reappear when the elements are again set free: and that there is no loss of matter. He then asks, "What is the object, then, of these repeated changes in the elements? The answer is at once apparent—the manifestation of energy and the maintenance of life." So that the author accepts a purely teleological view of inorganic changes. He then proceeds to define energy, distinguishing between kinetic and potential energy, and then discusses organic matter and life. Of the nature of the latter he sums up the chapter in these words: "Living organisms are complex compounds, built up of simple elements. They are possessed with a force called life. This life is dependent upon certain conditions, of which heat, moisture, and nutrition are the chief. The organism has the power of selecting its food and throwing off what it does not require. During its life it has the power of reproducing similar organisms. The length of time the force of life remains in the organism is limited." Alas, in all this we do not find the bridge connecting living with non-living things. A great gulf still separates matter from mind.

Dr. Dorman again takes up a teleological view in regard to plants which somewhat surprises us. "But what," he remarks, "is Nature's object in creating the vegetable world at all?" and his reply is "that animals must have their protoplasm ready prepared for them." Animals no doubt primarily feed on vegetables even in the case of carnivora, and are therefore the outcome of the plant and could not exist without plants; but it is pure surmise to say it was Nature's object that animals should proceed from plants. Several chapters are occupied with a description of the animal kingdom, of the process of development, and of the gradual ascent from the lower animals to man, with incidental sections on Rudimentary Structures and the Origin of Sexes. These are all, though briefly, correctly given.

The second book, which is devoted to the development of the mind, is much the most interestingly written part of the volume. In this the author traces lightly the advances of mental manifestation, from the lower form of animal life to the higher arthropoda and vertebrata. He rightly declines to recognise the distinction so often attempted to be maintained between instinct and intellect, and he thinks the passage easy from the monkey to the man. We should have liked to have gained some insight into Dr. Dorman's ideas on the origin of instinct. Original man, he thinks, when he wanted food, either plucked berries, collected shellfish and blubber, or killed small animals,

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his instinct enabling him to detect what was good to eat. But how did the instinct arise? Dr. Dorman proceeds to point out that by the accidental contact of two fluids or friction between boughs of trees fire would be discovered. Shelter being required, he would construct a rude hut. Wood floating on water would suggest it as a means of crossing rivers. The hollow trunk of a tree would be the prototype of a canoe, and the means adopted for the formation of this would lead to the invention of stone instruments. The advantages of sociability would soon be manifest; communities would be established, differentiation of work carried out, and in due course wars arise which may hereafter be settled, not by killing men, at a vast outlay, who are paid at a fixed rate to risk their lives, but by the conflict of mind with mind. The succeeding chapters deal with the further development of the mind, beginning with impressions from simple sensations and pain; reasoning from facts, in the course of which the foundations of Christianity are dealt with, and a thoroughly agnostic view taken of them. There are some sensible remarks on the early training of the intellect, in the course of which Dr. Dorman points out its immense importance. Every subject, he thinks, should be taught from a historical standpoint, and the reasoning powers should be cultivated rather than the memory. The scheme of education he proposes is, however, very large, since it includes comparative philology, history, geography, the elements of science, and the cultivation of poetry, painting, and music. We fear little time would be left for the stimulation of the imagination of the cheerful youth by the habit of "building castles in the air" which Dr. Dorman proposes if each of these were studied on the historical method. Finally, he discusses the nature of the will, and gives chapters to Ethics, Marriage, the Soul, Theosophy, Evolution and the Bible, and Faith. The range of subjects, it will be seen, is rather wide, and though many of them are ably treated within the limits the author has imposed on himself, they might be greatly expanded with advantage.

The Animal Tuberculoses and their Relation to Human Tuberculosis. By ED. NOCARD, Professor of the Alfort Veterinary College. Translated by H. SCURFIELD, M.D. Edin., D.P.H. Camb. London: Baillière, Tindall, and Cox. 1895.

DR. SCURFIELD has done good service in translating into English the little monograph on this formidable malady, written by a most active investigator, who has done more to enlighten the public of France as to the nature and dangers of the disease than anyone in that country, and who must be accepted as a leading authority upon everything pertaining to it, either from a pathological or a hygienic point of view. The subject is of great interest and the highest importance, and because of the dangers attending it in flesh- and milk-producing animals, as well as its extensive prevalence and the heavy losses it occasions, it cannot be too seriously considered and promptly dealt with. In this country, though it is now about twenty years since attention was directed, in a lengthy article that appeared in the *British and Foreign Medico-Chirurgical Review*, to the great risks this disease in bovines imposed on mankind, and though these risks have been abundantly proved to be real and constantly increasing since that time, nothing has been done to check its ravages or diminish its dangers, for the Royal Commission which was appointed some time ago added but little to our knowledge of the disease, nor did it afford much information as to how the malady is to be checked among animals. As is stated in the introduction to M. Nocard's work, there is no disease in existence which attacks so many different kinds of animals. Not one of our domestic animals is completely refractory to it, they simply vary in their susceptibility, and those which under natural conditions escape infection are unable to withstand experimental inoculation. Our poultry-yards, even, are often decimated by tuberculosis; and the tribute paid by man to it is so heavy that in Paris, according to the latest statistics, more than 23 per cent. of the deaths were due to it, and even this high percentage is exceeded in many European towns. But the disease causes the greatest amount of destruction among cattle, though the proportion varies according to the locality, for, while it may be entirely unknown in some places—though nowadays these are, indeed, few—in others it may affect from 10 to 40 or 50 per cent. of the bovine population. In this way it is the most damaging scourge among cattle, and exacts a far heavier tribute than contagious pleuro-pneumonia ever did. Next to cattle, pigs appear to be the most liable to tuberculosis, though in them it is comparatively rare, and still more infrequent in the horse, while it is scarcely ever met with in the sheep and goat—indeed, these animals are markedly refractory to experimental inoculation. Cases of dogs becoming tuberculous when brought into contact with phthisical persons have been reported, and kittens, it is asserted, are easily infected by the ingestion of tuberculous material, particularly milk.

M. Nocard says that when the disease is localised in the pleura or peritoneum, as it frequently is, the Germans and English call it "Perlsucht," or "pearl disease," because the tuberculous nodules of the serous membranes, before they become too old, bear a strong resemblance to pearls. So far as this country is concerned this is an error, as the designation of "pearl disease" is popularly unknown, the masses of tubercle in the situations mentioned receiving the name of "grapes" from the manner in which they are clustered. Hence it is by butchers and others simply called "grapes" or the "grape disease," though it has other vulgar and significant appellations.

The monograph deals with tuberculosis of cattle, pigs, horses, small ruminants, dogs and cats, as well as birds, in separate chapters, and sufficiently in detail to include all important particulars with regard to the lesions, the symptoms, the clinical, bacteriological, and experimental diagnosis, and the various methods of inoculation. M. Nocard insists on the identity of the disease in man and animals, and advocates the employment of tuberculine as an unfailing guide in detecting its existence, even in cattle which give no evidence of being infected. Proof is given of the malady being both infectious and contagious, but the chief cause operating in its spread among cattle is the introduction of a diseased cow into a healthy herd, though an instance is given in which a phthisical cowman infected the cows he attended. With regard to the danger mankind incurs M. Nocard is very emphatic, and he gives cases which undoubtedly were due to accidental inoculation from tuberculous cows; to these cases might be added that of a veterinary teacher who died less than a year ago in this country from acute pulmonary phthisis, presumably due to an inoculation wound in the hand while examining the carcase of a diseased cow. Strong evidence is also adduced by the author in favour of human contamination by milk from affected animals; he therefore energetically insists on the sterilisation of all milk intended for use as food. With regard to the use as food of the flesh of tuberculous animals, he does not go so far as some hygienists, who would condemn the entire carcase of a cow if only a small tuberculous nodule were found in any part of it; he, on the contrary, would permit it to be issued as food if it were of good quality and the lesions were localised. In cases of generalised tuberculosis, however, he would exclude the entire mass from consumption, and he gives his reasons for following both courses. The entire suppression or eradication of the disease from among animals is also, of course, included in the treatise, and there can be no doubt that if the measures the author recommends were adopted and

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rigidly carried out everywhere the scourge would eventually be subdued. By all who take an interest in this profoundly interesting matter M. Nocard's remarks should be read and pondered over, for tuberculosis in man and beast is certainly one of the gravest questions, if not the gravest, with which the sanitarian has now, or ever has had, to grapple. Dr. Scurfield has given an appendix of three pages in which the scheme of Professor Bang of Copenhagen, for eliminating tuberculosis from a herd of infected cattle without destroying all of them, is described.

JOURNALS AND REVIEWS.

The Journal of Anatomy and Physiology. Conducted by Sir GEORGE HUMPHRY, Sir WILLIAM TURNER, and Dr. M'KENDRICK. Vol. XXX., Part 1. October, 1895. London: Charles Griffin and Co. Price 6s.—This part contains fourteen original articles, viz. :—1. Homoplasty of the Brain of Rodents, Insectivores, and Carnivores. With a Plate. By Gustav Mann, M.D. 2. Clinical Value of the Four-root Theory of the Cranial Nerves. By T. K. Monro, M.D. 3. Optic Nerve as Part of the Central Nervous System By the same observer. 4. Origin and Intracranial Course of the Ophthalmic Artery, and the relationship they bear to the Optic Nerve. By Edward Fawcett, M.B. 5. Retinacula of Weitbrecht: What is their Function? By the same writer. 6. Lymphadenoma (Hodgkin's disease) of the Lymphatic Glands as a Distinct Pathological Affection. By Gordon Sharp, M.B. 7. Nerve of Wrisberg. By A. Birmingham, M.D. 8. Organ of Jacobson in the Monotremata. With a Plate. By R. Broom, M.B. 9. Effects upon the Testis of Ligature of the Spermatic Artery, Spermatic Veins, and of both Arteries and Veins. With a Plate. By Joseph Griffiths, M.D. 10. Critical Note on Colour Vision. By John Tennant. 11. Note on the Stereophotochromoscope: a New Optical Instrument. By David Fraser Harris, M.B. 12. External Characters and Some Parts of the Anatomy of a Beluga (Delphinopterus leucas). With a Plate. By John Struthers, M.D. 13. Morphology of the True "Limbic Lobe," Corpus Callosum, Septum Pellucidum, and Fornix. By G. Elliot Smith, M.D. 14. Anomalous Muscle of the Thorax connected with the Diaphragm. By Francis J. Shepherd, M.D.

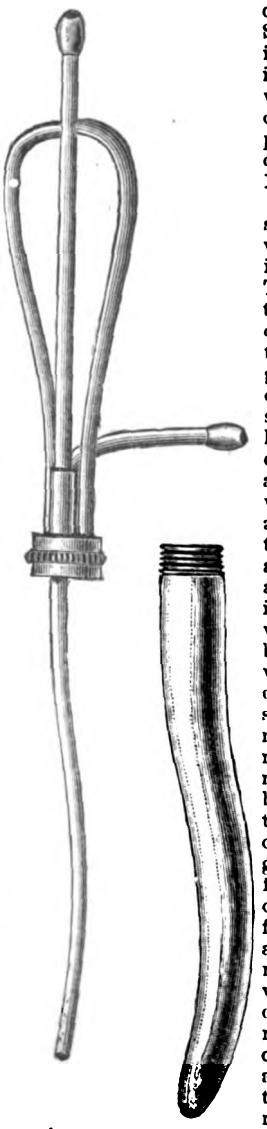
The Journal of Mental Science. October, 1895.—The reappearance of articles by Dr. Nicolson and Dr. Maudsley, after too long an absence from the pages of the journal, renders this number specially interesting. Dr. Nicolson deals with "Crime, Criminals, and Criminal Lunatics." He raises a timely protest against some of the extravagances into which the latest school of criminologists have been betrayed. With all the weight of his authority and experience he points out on how unreal a basis many of the theoretical deductions of the criminologists rest. He objects strongly to applying to criminals generally the biological peculiarities and anomalies found in a minority of the criminal class. Dr. Maudsley, in his lucid article on "Criminal Responsibility in relation to Insanity," also devotes his attention to the subject, and in pungent and powerful satire ridicules the unripe observations and sensational theories in vogue amongst criminologists, which he states "make the judicious grieve although they make the vulgar stare." What may be termed a duel takes place between Dr. Batty Tuke and Dr. Clouston on the respective merits of rest and exercise in the treatment of mental cases. Much can be said in favour of both aspects, but probably Dr. Clouston's advocacy of judicious exercise will meet with general approval. Some interesting information regarding epilepsy is given in the psychological retrospect. The name of Dr. Rayner appears on the list of editors in place of that of the late Dr. Hack Tuke.

The Birmingham Medical Review.—This is always an [illegible] periodical. In the October number is a paper by Mr. Law Webb commenting on the Immunity from Carcinoma which he has observed among colliers. He suggests that the sanitary habits of the collier—i.e., to wash the outside of the body daily, and never to take any water, save in the form of tea or coffee, to drink—may have something to do with it. Dr. Paul Chapman contributes a useful note on the Misuse of Emollients in Chronic Superficial Inflammation.

New Inventions.

NEW AND IMPROVED FORM OF HOT-WATER UTERINE DILATOR.

THE accompanying illustrations show a new form of uterine dilator designed and used in hospital and private practice by Dr. Geo. Bell Todd of the Samaritan Hospital for Diseases of Women, Glasgow. The instrument may be used as an ordinary Hegar's dilator without the application of the hot-water arrangement. Still, the principle on which the instrument depends is that while in use it may always be kept warm by a stream of hot water circulating through it of a temperature requisite to keep the dilator heated to about 10° or 15° F. above normal.



The set of dilators comprises six graduated sizes, commencing with No. 10 catheter size, and increase in regular proportion. They are made of block tin so that they may be bent into various curves to suit special cases, are thick and stout behind, but gradually taper forwards into a conically pointed end. They all screw into and fit the same handle. The handle is constructed especially for lightness, durability, and cleanliness. It is furnished with a tube marked "inlet," which after running through the fenestrum of the handle terminates in a portion made of softer metal, and extends forwards into the interior of the hollow dilator within half an inch of its point; by this means the current of hot water is led into the interior of the dilator, and makes its exit by the short downwardly curved tube marked "outlet." By attaching a rubber tube to the outlet the water may be conveyed to a suitable vessel beneath the operating table or on the floor. The instrument can be connected with any existing irrigating apparatus such as is usually found in hospitals. The length of the handle gives the operator full command of the instrument, and no boring or awl-like movement is necessary or allowable as with the short-handled Hegar's dilator. By the aid of heat the resistance of the tissues about the cervix is more easily overcome and less force is employed in dilatation, so that there is less risk of rupturing the structures about the cervix uteri. Owing to the tapering shape of the dilators they are not so liable to be caught or gripped by the structures when they are withdrawn as when a cylindrically shaped instrument is used. Dilatation is more easily performed by the aid of heat in cases where it is unsuitable to give an anæsthetic.

Messrs. S. Maw, Son, and Thompson, 7 to 12, [illegible] street, London, are the makers of the inst[illegible]

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 2, 1895.

WE print in our issue this week the petition of the students of the London School of Medicine for Women to the Royal College of Physicians of London praying for admission to the examinations and diplomas of the College. This petition, as will be seen, is signed by a numerous and influential body of our profession—having, indeed, affixed to it a series of names that would make it impossible for it to be treated with other than deep consideration and respect. And in this spirit, we are glad to say, it was received by the College at the debate which ensued upon it in Comitia on Thursday, Oct. 24th, while the result of the voting must have come as a surprise to more than one Fellow of that ancient corporation. For of 109 Fellows present at the Comitia 50 were found to support the petition. A similar petition has been presented to the Royal College of Surgeons of England, and is set down for discussion in the agenda of the annual meeting of the Members and Fellows of the College on Thursday next, and its fate will be awaited with curiosity. The constitution of the two Colleges is so different that it is possible to conceive the following anomaly—that while the corporations as a whole might be of similar opinion with regard to the petition, it might be amply supported by the governing body in one place and emphatically rejected by that in another. For the Comitia of the Royal College of Physicians of London—i.e., the Fellows in conclave—is a large body, and its vote, more nearly approaching the vote of a plebiscite, would be more inclined to uphold revolutionary courses; while the Council of the Royal College of Surgeons, consisting of a much smaller number of men, much under the sway of tradition and hereditary principle, would for various reasons be more inclined to be reactionary. But before the question comes to the notice of the Council of the Royal College of Surgeons it will have been voted upon at a general meeting of the College, so that the Council will know the views of their electorate before proceeding to discuss the petition.

From every point of view, then, it would seem that the petition of the women is to receive consideration from the Colleges. The Royal College of Physicians has debated the question, and, in an assembly presumably representing the feeling of the highest grade in its corporation, has decided by a nearly equal vote not to admit women to the examinations and diplomas. The vote to be taken at the annual meeting of Fellows and Members of the Royal College of Surgeons will give the medical world an opportunity of seeing what the surgical branch of the profession at large thinks of the question; while the meeting of the Council of the same Corporation will register the views of the oligarchical government of that body. So that, whatever the issue may be and whether it be but a temporary or a permanent settlement of the question, we are glad to feel that the women are to have fair play. There are many arguments—and most of these are familiar to our readers—against the inclusion of women in our ranks. We do not, however, intend at this moment to set them out, but only to say a few words on one much employed in behalf of the petition at the recent meeting at the Royal College of Physicians. The chief argument in favour of acquiescence was that as women have obtained admission elsewhere it was illogical to refuse it to them at the College. This we have no hesitation in saying is no argument whatever. Their inclusion in other bodies is entirely beside the point. It is true that women can win the most coveted medical degree in the profession, and that they can obtain medical diplomas from several licensing boards; but this can have nothing to do with the refusal for the present of the Royal College of Physicians of London to admit them to its diplomas save that the refusal is deprived of much of its sting by the fact that it does not debar the petitioners from proceeding with the profession of their choice. The action of other corporations can only be quoted as a precedent, for or against, by displaying fully the results of the concessions to women; the fact of the concession counts for nothing at all.

And here we will leave the matter as far as the Royal College of Physicians of London is concerned. The Fellows of the College under a judicious and temperate President, with the advice of one of his wisest and most highly honoured predecessors, have decided for the present to reject the petition. They have a right to do so, and have acted from the highest desire to do their duty by the College. To some their course will seem to have been decided by a sentimental desire to hand on traditions merely—for who can imagine HEBERDEN, HALFORD, WATSON, or JENNER sitting in Comitia with women? Others will see in their action a desire to act as they consider rightly without reference to what other bodies have done: and, possibly, with some disregard of expediency. On all hands we hear that the result of the voting has been a matter of surprise. Yet the fact that at least as many are surprised at the extent of the support which the petition received as are surprised at the solidarity of the opposition, would seem to show that the result might have been foreshadowed.

THE event of the academic year is the celebration of the four-hundredth anniversary of the founding of the University of Aberdeen. By the Bull issued by Pope ALEXANDER VI. the "Studium Generale et Universitas Studii Generalis" arose in the then Ultima Thule of learning, and the provision thus made for supplying the north with education, professional and lay, has borne fruit beyond the most sanguine dreams of the social enthusiast. If, in BACON'S memorable phrase, the "Georgics of the Mind" are the fit subject-matter for academic husbandry, they have in Aberdeen given occasion to some of the finest specimens of intellectual "high-farming"—worthy, indeed, of a VIRGIL

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to do them adequate justice in song. The industry and sagacity that evolved such harvests from a soil apparently unpromising and under conditions well-nigh desperate are among the most conspicuous triumphs in the roll of national "self-helps." With more than her share of the Scottish love for the liberal arts, Aberdeen from the outset showed her grasp of the educational truth that the training of the mind must precede all professional or specialised activity, and that the more finely tempered, the more vigorously braced the mental instrument, the more will its activity be profitable and nobly prolific. Hence it is that with all her so-called worship of the "knowledge that pays" she has rarely, if ever, been untrue to "knowlege for its own sake." If proof of this were wanted it would be found in the prominence she has always given to the "humanities" in general and to moral and metaphysical speculation in particular—to that kind of knowledge and culture which in spite of its lofty ideal receives but scant attention from peoples who love to call themselves practical. And, like other Scottish seats of learning similarly inclined, she has found the discipline she vouchsafed her *alumni* the best adapted even for the work-a-day walks of life. Just as, according to Sir WILLIAM HAMILTON, the trained metaphysician like DESCARTES or LEIBNITZ found the most difficult problems of the mere mathematician an "easy game," so the student, braced and developed by the *palæstra* of the Aberdonian curriculum, comes to the special studies of law or medicine prepared to grapple successfully with the details or principles of either—thanks to the well-schooled mental equipment with which, again in BACON'S phrase, he "bowed and buckled himself" to the task.

We must go a step deeper, however, in the Scottish civilisation to account for the growth, development, and yield of Aberdeen University. The conditions under which she lived and throve were not exhausted by the Papal Bull. Like every other seat of learning north of the Tweed, she owes much to the educational system of which the inspiring genius was JOHN KNOX. That mighty reformer, in other senses than the religious, grasped the *perfervidum ingenium* of his compatriots in its totality, and his requirement that "wherever there is a parish church there must be a parish school" was calculated to bring up to the universities a perennial contingent of aspirants to the higher culture. Scottish annals, literary and scientific, teem with evidence of the blessings thus conferred on all ranks of the people through generations when other countries had nothing similar to show. The professions were in this way recruited, and university education fed, from social strata which—south of the Tweed, for example—were content to supply the menial service of the *petite bourgeoisie*, and fresh and vigorous blood thus welled up from sources elsewhere practically dry. In the profession of which, more than any other, it may be said "its field is the world"—a profession owing least to locality or tradition, but capable of being practised wherever the *corpus humanum* lives and moves—this outlet for Scottish genius was appreciated from the first in Aberdeen. Medicine, having no articles or irreducible creed like divinity, not bound by statute or precedent like law—open indeed to the practitioner in whatever clime or state he chose to settle—possessed peculiar attractions for the ambitious young Scot and pre-eminently for the young Aberdonian. At nearly every Court in Europe we read of Aberdonian graduates acting as physicians; while in the services—naval, military, and diplomatic—Aberdeen has contributed surgeons, sanitary officers, and consultants out of all proportion to the number of her duly qualified sons. For two centuries and more she has recruited the profession all the world over with men of masculine ability and varied accomplishment, and in that now drawing to a close she has produced names second to none in every department of the healing art. Sir JAMES MACGRIGOR on the Army Medical Staff, Dr. NEIL ARNOTT in medical philosophy, Dr. ALEXANDER KILGOUR in clinical teaching, Dr. FRANCIS ADAMS in medical scholarship, Dr. MATTHEWS DUNCAN in gynæcology, and Sir ANDREW CLARK in consultant practice are, in Baconian language, "instantiæ prærogativæ" in their respective walks, men whom the most august of *almæ matres* might be proud to own.

And the benefits such *alumni* conferred on their University did not stop there. Many of them, in gratitude for the start in life it had given them, endowed it with substantial bequests. Earl MARISCHAL, a hundred years after the foundation of the school, added to its resources the College that goes by his name, and this foundation, after rivalling and stimulating its elder sister for 267 years, has, by Act of Parliament, been amalgamated with the original seat of learning to form the "Universitas Aberdonensis" so honourably *en évidence* to-day. Other adjuncts and subsidies to the efficiency of the school have steadily been added since Earl MARISCHAL'S time, till they have culminated in the splendid extension buildings conferred by the late Dr. CHARLES MITCHELL. Of these we have given elsewhere an adequate account and will at present only say that as conceived and carried to completion they will prove equally honourable to the grateful pupil who gave them and to the *alma mater* by whom such gratitude was inspired. But with this addition to her equipment Aberdeen would be untrue to her enterprising and vigorous past if she rested on her oars and ceased to spread her sails for new voyages of discovery or new expeditions into the scientific unknown. She has rivals, and very formidable ones, with some of whom she is too wise to compete or to do more than silently profit by. "Not wholly in the busy world nor quite beyond it" may, according to the late Mr. MARK PATTISON, be the ideal of a university's situation, and Aberdeen undoubtedly enjoys that advantage. But, as a medical school, what she gains in the peace required for purely scientific study, she loses by the absence of the seething tide of humanity which makes London, for example, the "happy hunting ground" of all clinical observation and research. Indeed, there is no medical school which can be called complete in itself. Each has, more or less, its special feature—local, accidental, or historical—which makes it unique among the fraternity. It is the praise, the high praise, of Aberdeen that,

"Pæne sub Arcturi sidere nata poli,"

she combines so much of all that contributes to make what the old Greek defined as the perfect physician, the τέλειος ἰατρός, and that amid the competition brought about by four hundred years of existence, competition fed by her

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own *alumni* transferred to rival seats of learning, she will enter on the twentieth century more vigorous than at any epoch of her history and better equipped to enhance the common standard of professional culture for the honour of the British civilisation and the welfare of mankind.

THE Report of the Council of the Royal College of Surgeons of England deals with the usual variety of topics. It is compounded of the Secretary's report published in the Calendar of the College, reports from the Curator and Librarian, abstracts of the lectures delivered during the past year, together with the returns of the results of professional examinations, a statement of receipts and expenditure (both of these tables being found in the Calendar), and an obituary. With the obituary less trouble has been taken than in preceding years, the names of deceased Fellows only being given, whilst the Members are dismissed with the brief statement that the names of 354 Members have been removed from the Calendar in consequence of death, several of them having died some years ago. As the obituary is omitted from the Calendar it appears to us to be a pity that it should be lopped of its proper proportions, and we trust that next year the names of the deceased Members as well as of the deceased Fellows will be published in the Report as heretofore.

During the year new by-laws dealing with the election and admission of members of the Council, the misconduct of Fellows and Members, and the fees for the certificate in dental surgery have been obtained. The new by-law (Section 4), which simplified the mode of distribution and return of voting papers for the election of members of the Council, came into force before the last election and resulted in a considerable increase in the number of votes recorded by the Fellows. The original form propcsed by the Council for the new by-law (Section 16) relating to the misconduct of Fellows and Members was couched in phraseology which appeared to Mr. ASQUITH, the then Home Secretary, to be open to some objection on the ground of its wide and indefinite character. Mr. ASQUITH had been addressed by the Society of Members, who strongly objected to any fresh powers being conferred on the Council of the College, adducing in support of their objection the unrepresentative character of the Council, the manner in which the Council had hitherto treated the Members, the nature of the by-law (Section 17) relating to meetings of Fellows and Members, and the possibility that the Council might apply he phrase "disgraceful conduct" to political actions directed against the government of the College. The Council of the College replied in detail to the letter from the Society of Members to the Home Secretary, with the result that Mr. ASQUITH suggested that the objects which the Council had in view would be obtained by a by-law couched in terms similar to those of Section 29 of the Medical Act of 1858. This solution of the difficulty was at once accepted by the Council, and the incident terminated. As now enacted Section 16 will enable the Council to deal with many cases of misconduct of which, under the limited scope of the former by-law, they were unable to take cognisance, and will remove the disability under which the Council were not infrequently precluded from taking action against Members of the College whose names had been removed by the General Medical Council from the Medical Register for "disgraceful conduct." Section 7 of the Report, relating to the Primary Examination for the Fellowship, is an instructive example of "how not to do it," which might have been copied from the celebrated "Circumlocution Office" of DICKENS. In June, 1892, the examiners in physiology for the Fellowship submitted to the Council a scheme for the practical part of the examination in physiology, but, several changes being made at the June meeting of the Council among these examiners, the scheme was referred back to the altered Board. An amended scheme was submitted to the Council in June, 1893, and this scheme was then referred to the Nomination Committee. In May, 1894, the Nomination Committee and the examiners discussed the scheme together, when it was found that two examiners were in favour of the scheme and two opposed to it. Nevertheless, at the request of the Committee, the examiners drew up a syllabus defining the scope of the proposed examination. The Committee considered the syllabus and visited the Primary Examination for the Fellowship in November, 1894, finally recommending that no change should be made. This battledore-and-shuttlecock method of dealing with the examination in practical physiology, which was kept up for two years and ended in nothing being done, will be found to be the usual mode of procedure in regard to all questions of education or examination which come before the Council. The game is usually triangular, the parties to it being the Council, a special committee of the Council, and the Nomination Committee. Occasionally the medical schools are asked to participate in the exercise. This has been the case recently with regard to the proposed institution of a special examination in ophthalmology, which, according to the Report, is still *sub judice*, and which will probably be dealt with in the Report for 1896 or 1897.

The question of the admission of women to examination at the College, which has arisen out of a memorial to the Council from the London School of Medicine for Women, will be submitted to the annual meeting for discussion before it is formally debated and finally determined by the Council. This question will be submitted in redemption of the Council's undertaking, first made in 1885, to take the opinion of the Fellows and Members in "the larger constitutional questions which more rarely arise." In view of the claims which the Members of the College are putting forward for an increase in their privileges and for representation on the Council of the College, Section 16 of the Report, relating to finance, is a most important one. It comments in detail on the various items of income and expenditure during the past year. The statement itself is taken from the annual report of the Finance Committee; and we are sorry that that report has not been reprinted in its integrity, as the omitted parts related especially to the large decrease in the examination fees and offered some remedial suggestions. So far as it goes, however, it is sufficiently significant and instructive. The expenditure of the College for the year is £376 in excess of the expenditure of the previous year and nearly £750 more than the amount which had been estimated by the Committee, and though there are some heads under which the out-goings for the

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current year will probably be reduced there are others under which it will be greatly increased, and the Committee estimate that the expenditure will be heavy. Unfortunately the income of the College is not likely to increase. During the past year it was £537 less than in the previous year, and the main decrease is due to the smaller receipts from the examinations, and chiefly from the examinations for the Membership of the College, the receipts from the First and Second Examinations continuing their downward course. The decrease is partly attributable to the addition of a year to the curriculum of study, which innovation has now been in force for two years; but we strongly suspect that the bulk of it is due to a loss of popularity by the College. The Council will probably soon begin to see that the prosperity of the College depends not upon the Fellows but upon the Members of the College, and that if the institution is to continue to flourish measures must be adopted to attract the rank and file of the profession and to counteract the competition of the universities and other bodies. The needs of the College will be the opportunity of the Members, and it rests with the Members themselves to make the most of the opportunity thus presented to them. A temperate exposition of their claims and a firm, but conciliatory, attitude will tend to enlist the sympathies of the Fellows, of whom not a few are, we have reason to believe, convinced that the Members are justly entitled to a share in the government of the College and to representation on the Council. At the annual meeting, if we set aside the women's question, the course will be clear for the Members, and we sincerely trust that those who speak in their behalf will display that unruffled temper and that calmness and cogency of argument which are worthy of the great and important cause which it is their privilege to advocate.

Annotations.

"Ne quid nimis."

THE STUDY OF LEGAL MEDICINE.

THE Medico-Legal Society of America is an institution of established position in the United States which devotes itself to the advancement of legal medicine. The study is one that in recent years has grown very markedly both in importance and in precision; indeed, these two aspects really represent under different points of view one and the same advance. It is precisely because in recent years the scientific bases upon which it rests have gained in breadth and exactitude that the practical aspect and application of the study have gained in importance. But at this point we pass from the precise sphere of legal medicine and enter those of physical science on the one hand and of jurisprudence on the other. New instruments within the last quarter of a century have opened up new fields of investigation and laid bare new ways of approaching truth, but the discovery of the principles upon which these new inventions rest and their adaptation to the physical uses to which they can be applied are tasks that fall within the sphere of the physical sciences rather than within that of medical jurisprudence. The medical jurist takes these things as data and proceeds to ascertain how they can be utilised in the practice of the law and to what extent they necessitate or suggest improvements in the existing methods of procedure. The same thing may be said of the development of mental pathology. Criminal responsibility and the right to be the custodian of one's own affairs, although matters of profound interest, are too special to be studied apart to any advantage. Both depend upon the general relationship between the individual affected and society at large. All that the student of forensic medicine can do is to apply in this department the results reached by workers whose interest is primarily engaged with the morbid facts themselves, and he must thus be content to walk in the wake of *confrères* who are occupied with the more elementary facts. But in recent years the progress all along the line of scientific investigation and discovery has been so rapid that the difficulty with those who labour in the field of the applied sciences has been to keep the pace and not to make it, and so it comes to pass that the Medico-Legal Society, in common with many kindred institutions, is able to show an excellent record of progress achieved in the region which chiefly engages its attention. It must not, however, be supposed that in pointing out the dependence of legal medicine upon the physical sciences we are in any way disparaging the work of those who have the practical end of improved juridical practice directly in view; on the contrary, we desire to point out that their labours clothe the abstract scientific truths with new significance and harness them to serviceable ends. And in this direction there lie great possibilities of usefulness before the American society.

GOOD AND BAD TEETH.

THAT the tendency to decay of the teeth is in some way dependent on a deficiency of lime salts has often been assumed; it is only lately, however, that crucial investigations can be said to have settled the question. In a series of remarkably interesting articles, concluded in the current number of the Journal of the British Dental Association, on the Analysis of the Teeth, Mr. Charles Tomes records some quantitative estimates of his own and compares them with those of Dr. Black recently published in America. After describing in detail his method of estimating the various constituents of dentine, obtained from sets of teeth in his own possession, Mr. Tomes remarks: "Taking all teeth examined the percentage of lime salts in dentine is 71·9. "I am inclined, however, to think Dr. Black is right in thinking that the percentage of lime salts is not the factor which determines the liability to caries, for in one set of teeth, in which the wisdom teeth were barely in place, two bicuspids had been largely affected, there was incipient caries between many of the teeth, one wisdom tooth was badly decayed, and the incisors were markedly striated transversely; yet this set of teeth gave an average of 71·4 per cent. of salts, whilst another much worn dentition, quite free from any trace of caries, also gave 71·4 per cent. of salts; that is to say, both were 0·5 below the general average." It must certainly come as a surprise, not merely that teeth which we recognise as types of vigorous, healthy formation should be no better off in lime salts than those presenting all the signs of liability to decay, but, moreover, that teeth worn down by attrition, in which it has been assumed an extra calcification has taken place, should actually be below the average percentage of lime salts. Another curious outcome of these investigations arose from a statement by Dr. Black that there were differences in the amount of mineral matter in teeth taken from the same individual. Mr. Tomes, in confirmation, adds: "But I also find an unexpected fact which is of much interest. The differences are not fortuitous, for I have found that the incisors and canines uniformly contained a smaller portion of mineral matter than

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the molars." He gives the proportion as follows: incisors, 71·2 per cent. inorganic salts and 28·8 per cent. organic matter and water; molars, 73 per cent. inorganic salts and 27 per cent. organic matter and water. This further appears to support the view that the proportion of lime salts is not a chief factor in the production of decay, for the molar teeth are certainly more prone to decay than the incisors, although according to these figures the former are richer in lime salts than the latter. Mr. Tomes has promised to carry his investigations further; meanwhile he suggests that "the difference between good and bad teeth may lie in the amount of combined water, in the proportion of calcium carbonate, in the nature of the organic matrix, or, finally, it may not lie in the dentine at all, but may be a difference in the enamel."

"POPULAR REMEDIES."

THAT the general public are taking an increased interest in medical matters is shown in many ways. Current literature is full of the subject, and the medical element in the modern novel has been referred to in these columns on several occasions. The stage, too, often puts before the public studies in which morbid processes both of mind and body occupy a conspicuous position, and the daily press displays an avidity for the latest cures of incurable diseases. This is the burden of Dr. Nestor Tirard's excuse for taking "Popular Remedies" as the subject of an address which he delivered on Monday last before a lay audience at King's College, London. Dr. Tirard laid most stress on the folk-lore aspect of the subject, and from this point of view there is a wealth of interesting material, humorous and instructive, which might well occupy the attention of both the lay and the medical public. Many of the old popular remedies, while absurd in their composition as a whole, contained one ingredient which undoubtedly possessed a therapeutic value, and the other components of the remedy were introduced merely to minister to that innate craving of humanity which is for ever seeking after the rare or mysterious. On the other hand, the principle of faith-healing no doubt underlies the old recipes which contained drugs and things of no known therapeutic value whatever. General attention to diet, exercise, sleep, and the use of hot and cold water internally and externally, and a "return to the ways of physiological righteousness," may do much to cure diseased states of the body. All these things were done or brought about if the patient religiously followed out the instructions in many of the old prescriptions; for, amongst other things, the patient had often to collect the ingredients composing the prescription himself, and this would frequently entail early rising (for some plants had to be gathered early in the morning); and active exercise where the object sought was rare and difficult to obtain. The aspect of the subject, however, which will most interest our own profession is that which the lecturer touched upon when speaking of modern popular remedies as exemplified in the growing fashion for using Murphy's Merciless Mixture, Pongo's Puerile Pills, or Pudge's Pungent Plasters. As when we hear a tune played for the first time on a street organ we perhaps take no notice of it, and later, hearing the same tune again, we recognise it as the tune we previously heard, and hen by-and-bye the catchy air has so insidiously worked its way into our brain that we catch ourselves humming some music-hall song of which we do not know the words, and if we did should not, probably, give utterance to them, so the alliterative titles of the specious patent medicine advertisements play upon the mind of the public until familiarity brings about the desired object of the advertiser. Another cause which the lecturer thinks contributes to the popularity of these nostrums lies in the growth of medical knowledge. The young medical men of the day, believing the cure of certain morbid conditions of the body to be hopeless, instead of attempting to battle with these conditions, tell their patients that nothing can be done for them. And here is the opening for the nostrum dealer, who promises everything and whose statements are always positive and never negative. The popular remedies of a nation also afford some index of its health and habits, and, in spite of the views often expressed in works of modern fiction, the moral health of this country has of late been essentially respectable, for an analysis of the drugs used in prescriptions for the past ten years shows that tonics, stomachics, and such-like drugs are of far more frequent use than preparations of mercury and iodide of potassium.

BATHS AT BATH.

SOME friction has been caused by the management of the baths at Bath. The committee a few weeks ago, at the suggestion of a well-known physician, decided to introduce the "Thermalsoolbad," so that patients could have this method of treatment without the trouble and expense of going to the Continent. The committee passed a by-law as to the use of the bath which was thought to be somewhat stringent, and most of the medical practitioners of Bath felt themselves aggrieved at this. Some of the inhabitants, too, are complaining of the extra expenditure at the baths, but as these form the chief attraction of the city the majority of the residents will not hesitate to keep their baths up to the highest state of perfection. There is only one member of the medical profession on the Baths Committee, which is certainly not sufficient, considering how many medical men in Bath are interested in the baths and have patients using them. If the profession had been more fully represented on the committee the friction alluded to in all probability would never have occurred.

"MORAL PATHOLOGY."

WE are coming to speak of a modern science of ethics as of some new revelation, and such in a sense it is. In the same way we talk of a new planet. Both, in fact, are ages old, but are now for the first time explained to us by a new interpretation. There nee be no surprise, therefore, when we find that many suggestions and assertions made in our own day on the authority of original thought and observation have long ago found expression in other phrases, whether these be the maxims of daily practice, the records of independent reflection, or the accepted doctrine of sacred writings. To explain these truths anew in the language of cause and effect is not, therefore, to teach them for the first time, but to corroborate them by establishing their essential connexion with other facts of life. Ethical science thus becomes a reconciler of opinions respecting the natural and what we have known hitherto as the supernatural. Its teaching goes far to verify the real unity of terms apparently so diverse and to show that the laws of action to which they are related are often, if not always, virtually identical. Recent literature has repeatedly furnished us with suggestions illustrative of this unity. The processes of biology, social usage, and morality have again and again been proved to follow similar lines of action, and this resemblance is, perhaps, nowhere better seen than in the parallel changes observed in physical disease and moral disorder. We have before us an interesting contribution to this subject in a handbook on "Moral Pathology" by Dr. Arthur E. Giles. In a series of brief chapters he traces the progressive effects and variations of moral evil from its probable origin in some act of bodily indulgence—some "fall" of the man, or rather of the child—through further developments to the more or less complete deformation of character. The analogy

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between moral wrongdoing and disease is carefully and closely followed throughout, and is described with force and clearness. The moral physician, in order to treat successfully the complex forms of soul sickness with which he has to do, must, as is truly said, be equally well endowed with insight, sympathy, experience, and the influence of personal example. A chapter on moral diatheses will instruct very many. The right use of egoism as a motor of good actions is worth noting, so also is a chapter on the causation of moral disease. We have been particularly attracted to the observations on selfishness; in opposition to this vice we seem to find the clue to a perfect reformation. Dr. Giles's preference for healthy altruism as a remedy rather than for merely negative self-sacrifice will commend itself to most readers. It is encouraging to find that even in a study so sombre as moral pathology we are in sight of a hopeful prognosis. Moral death, it is maintained, is unknown to man, though a species of soul coma is not. Recovery is always possible, provided that the will, captive to evil, be aroused to efforts of release by a stimulus of sufficient power. The remarks on treatment, though necessarily short in a work professedly descriptive of disease, are characterised in an eminent degree by friendly wisdom and practical good sense. In particular we may notice three: (1) that careful moral training should begin in childhood; (2) that such instruction should at any age and as far as possible be individual rather than general; and (3) that in order to succeed it must be sympathetic. Such rational suggestions as the above are of happy augury when we regard them as expressing the active purpose of the new and yet primeval science of ethics.

TUBERCULOSIS OF THE BONES, MUSCLES, AND EYES OF CATTLE.

IN the inspection of the carcases of animals destined for the food of mankind something more is necessary for the detection of tuberculosis than a cursory examination of the lungs and lymph glands, as the lesions are sometimes observed in the hard tissues and muscles, which are not usually cut into for investigation. In a German periodical devoted to the hygiene of flesh and milk the remark is made as to the comparative infrequency of tubercles in the flesh of cattle, and especially in the myocardium. In the latter situation only one instance had been observed until recently; this was in a cow which had very extensive tuberculosis of the pleura, and in the wall of the right ventricle there was a tuberculous mass as large as a bean. Not long ago at the Leipzig abattoir a calf six weeks old and in good condition was slaughtered, and on dressing the carcase it was found to be affected with generalised tuberculosis—the lungs, pleura, and lymphatic glands of the neck, chest, and abdomen, as well as the liver, spleen, kidneys, &c., being involved. On the right side of the heart, near the surface, and only separated from each other by a thin muscular partition, were two masses of tubercle, each as large as a hazel-nut. One was embedded in the wall of the left ventricle, near the auriculo-ventricular groove, and the other at the apex of the organ, on the middle of its anterior surface. Another veterinary abattoir inspector had some time ago discovered a case in which there was tuberculosis of the sternum, the elbow-joint, and the pectoral muscles. More recently he has met with another instance of muscular tuberculosis, which was apparently not primary, but consecutive to tuberculosis of the cartilage of the seventh rib. The latter was completely destroyed at certain points, the remaining portions containing yellow, rounded, cup-shaped nodules, which when removed left circular cavities that neither in colour nor appearance could be distinguished from normal cartilage. Around the diseased cartilage there were seven small abscesses, one of which was open; the pus in these contained the tubercle bacillus. The cow was the subject of thoracic and abdominal tuberculosis. There are a number of cases of ocular tuberculosis in the ox recorded in veterinary literature, and among the latest are two described by Herr Winter of Bromberg. The first case was that of a four-year-old Dutch cow, which was so stupid or stupefied as to be insensible to the voice and to blows. At its necropsy generalised tuberculosis was noted, the pleura, lungs, peritoneum, lymphatic glands, liver, kidneys, ovaries, and udder, as well as the brain and its coverings, being diseased. The cornea of the right eye was opaque, bluish-grey in some places and bluish-black in others. Near the internal angle there was a prominent mass formed of lenticular tubercles, and the sclerotic also showed pyriform and lenticular projections that appeared to come from the interior of the eye. At the junction of the cornea with the sclerotic there was another mass of the diameter of a 50-centime piece. The interior of the ocular globe was fully occupied by a caseous mass, bright yellow in colour, semi-fluid, and containing calcareous particles. At the papilla of the optic nerve the retina was separated from its deeper layer by cheesy tubercles; the prominences seen on the outside of the sclerotic were found to be situated between that and the choroid coat, and were calcified in some places and puriform in others. The crystalline lens could not be recognised, and the iris was confounded with the cornea. By the aid of the microscope tubercle bacilli were found everywhere. The other case was that of an emaciated cow also affected with generalised tuberculosis. The right cornea was turbid and of a dark-blue tint; at the margin of the sclerotic there were several yellowish tubercles each about the size of a lentil; the vitreous humour was muddy and opaque, but the retina and crystalline lens were normal. The posterior surface of the iris was partially adherent to the lens by a thin white layer, and on its anterior surface there were nodules which could be seen through the cornea, with yellow miliary tubercles grouped in tufts or in grape-like masses at its lower border where it joined the cornea. In all these neo-formations the tubercle bacilli abounded.

WHEN IS SKIMMED MILK NOT SKIMMED MILK?

MR. HADEN CORSER, the magistrate at Clerkenwell Police-court, expressed himself in the following terms last week on the occasion of a summons against certain refreshment-room proprietors for selling to their customers milk from which the fat had been abstracted to the extent of 15 per cent.: "I am sorry my judgment is bound by the case which has been decided in a superior court. I consider the section referred to was passed to prevent wholesale milk-sellers or retail dealers from skimming off the cream and knowingly selling poor milk. I am bound by the decision of the higher court, although I am convinced an injustice has been done. I am bound to do an injustice in this case because a superior court orders me to do it. I shall impose a fine of 6*d*. and the cost of the summons." Mr. Haden Corser urged, as the basis of these remarks, that if milk were put in a pan the cream rose to the top and the early purchasers got it, whereas if it were sold from an urn with a tap those who came last received all the cream. But what if the milk had been skimmed before it was put in either of these receptacles? We want to make no imputation, but we cannot gather a particle of evidence that such was not the case; at any rate, such a case could easily occur. What an excellent loophole of escape, then, would Mr. Haden Corser's judgment afford. The milkman or vendor would only have to say that his milk was put in a pan and the cream rose to the top, and the early birds—no, the early purchasers—got the cream, or that the milk was sold from an urn with a tap, and those who came last received all the cream. In Mr. Haden Corser's

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judgment this is good defence, so that the only question to be decided is, What kind of vessel was it from which the milk was poured? The cream, however, or the bulk of it, may never have been put in, be it pan or urn. We are not sorry, as Mr. Haden Corser was, that in this case his judgment was bound by a similar case which had been decided in a superior court. The occasional use of a stirrer would have obviated the necessity of bringing the case before Mr. Haden Corser at all, granting, of course, that the cream had been there.

THE EDIBLES AT COUNTRY FAIRS.

A DEATH and illnesses which occurred recently at East Liss, on the eastern borders of Hampshire, seem to point to the need of a more stringent inspection by sanitary officers of the edibles sold by itinerant stall-keepers at country fairs and feasts. A labourer bought some fried fish at a stall at Petersfield fair which made him very sick. He went to work as usual next day, but was very ill, and returned to his lodgings, having lost the use of his limbs. A medical man who was called in found every symptom of poisoning, and the necropsy confirmed the opinion that the death was due to the diseased fish which the man had eaten. Several instances of slight illness included the experience of another labourer, who ate very little of the fish he bought, as it "tasted so unwholesome." The police were unable to trace the vendors in this case, but a prior inspection of the barrows might have obviated a fatal result. It is, perhaps, a matter of wonder that we hear of so few fatal illnesses contracted from the consumption of the contents of the evil-smelling and dirty conveyances of peripatetic costermongers.

THE ISLINGTON INFIRMARY.

WINTRY weather has set in this year somewhat earlier than its wont, and with it has come the usual influx of patients into the metropolitan Poor-law infirmaries. A few days' frost or fog seriously interferes with the out-door employments on which so many of the unskilled London workers depend, pulmonary and rheumatic troubles show themselves, no money can be earned, and the relieving officer is the only resource. The poor also know that in time of sickness they will have in the infirmary good accommodation, food, nursing, and medical attendance, a combination of benefits unattainable in their own homes; and the natural consequence is that these applicants for what is primarily medical relief are sometimes so numerous as to cause anxiety to the parochial authorities. There is every prospect that the Islington board of guardians will have a difficult problem to solve during the next two or three months. The parish contains more than 300,000 inhabitants, and as early as the middle of October the inmates of the workhouse and infirmary largely exceeded the regulation limit. According to the official certificate the workhouse can accommodate 781 persons and the infirmary 473; but, as a matter of fact, there were 595 patients in the infirmary on Oct. 13th. Now these are not, as a rule, chronic infirm patients, lingering out their last years and in but slight need of medical attendance; on the contrary, this infirmary is a busy hospital, into which during the present year 1365 patients were admitted from Jan. 1st to May 7th, and 236 deaths occurred during the same period. This gives a weekly average of nearly 76 new admissions and 13 deaths, and some of our readers will hear with surprise that the labour and responsibility of bestowing due attendance and care on this aggregation of suffering humanity are shared between only two medical officers. A little computation will show that these gentlemen can hardly give more than a brief consideration to individual cases, and as far back as last July steps were taken by the guardians to create a third medical appointment, but when the day for selecting a candidate arrived the guardians changed their minds and decided that an additional medical officer was unnecessary. The question of providing further accommodation for the sick and destitute cannot be solved in this easy manner. Apparently the guardians hope to surmount the present difficulty by resorting to extemporised structures, but there is no reason to suppose that the winter admissions of sick and destitute persons will be less in the future than at present, and the wisest policy would no doubt be the prompt construction of a new infirmary on a site sufficiently spacious to permit the erection of such additional buildings as may from time to time be required.

BRAVERY.

"HEROISM without risk" was the motto of Mr. Gilbert's band of brigands, but the heroism that is attended with risk is widely exemplified in this (Thursday) morning's papers. The death of Fireman Sprague is a sad comment on the dangers encountered in coping with a fire, and the valour displayed by him and his companions is by this time known throughout the land. Women, too, are not laggards in bravery. The *Times* reports that the Royal Humane Society have just presented three ladies—Miss K. Gelling, aged sixteen, Miss Violet Ponsonby, aged eighteen, and Mrs. G. Anderson—with testimonials for saving life. The last-named nearly lost her life in saving a boy who was bathing at Sherringham; Miss Gelling saved a boy bathing at Castletown; and Miss Ponsonby swam out, fully clothed, into the Cookham rapid and saved a lady who was upset from a canoe. These ladies are to be congratulated on their pluck and the success which attended their efforts.

THE FACIAL NERVE AND LACRYMAL SECRETION.

IN a recent number of the *Deutsche Medicinische Wochenschrift* Dr. Franke of Greifswald makes some remarks with reference to the anatomical, physiological, and experimental evidence regarding the nerve controlling lacrymal secretion. Krause's conclusion that the trigeminus has a decided influence on this secretion and that the facial also takes some part in its control is alluded to. The evidence for this lay in the fact observed by Krause that complete extirpation of the Gasserian ganglion did not cause a complete cessation of tears in the eye on the side on which removal had taken place. Dr. Franke is inclined to refer this effect, however, to injury to the greater superficial petrosal nerve. The patient whose case Dr. Franke describes showed complete paralysis of the left side of the face with only slight secretion of tears on the affected side, although the trigeminus was intact. His view is that the facial nerve is the nerve of the lacrymal gland, and that disappearance of the secretion is determined by a lesion of the facial nerve either involving the geniculate ganglion or an even more central part.

THE DELMAR CHARITABLE TRUST.

MR. F. O. T. DELMAR of Bayswater, who died on Oct. 14th, has left £100,000 to his trustees to form a fund to be called the Delmar Charitable Trust. Nine-tenths of the annual income from this fund is to be divided between selected charitable institutions in London or its neighbourhood, "having regard to the relative importance and magnitude of each institution." The testator expresses his desire to benefit in particular the establishments for the care and treatment of epileptic and cancerous patients and the Royal Society for the Prevention of Cruelty to Animals. It is to be hoped that the trustees in their wisdom will select for the benefit of this bountiful bequest those institutions more especially which

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have been established long enough to have a record of ably administered benevolence, as this is the surest guarantee that the charity has gained the confidence of the public. The Cancer Foundation of the Middlesex Hospital stands almost alone in this respect, and certainly deserves a substantial share of such support as the trustees can legitimately divert to it. Founded in 1792, this permanent refuge for victims from cancer still shelters the sufferers until "relieved by art or released by death," and the present is a peculiarly appropriate time for rendering it pecuniary assistance. His Royal Highness the Prince of Wales presided last year at a festival dinner to raise funds for providing a separate building for patients suffering from incurable cancer, and up to the present time a sum of over £8000 has been subscribed. But the building will cost at least an additional £4000, and further donations to the endowment fund are earnestly invited by the governors of the charity in order to maintain these poor afflicted people in comfort and thus relieve a severe strain upon the general funds of the hospital.

THE WATER-SUPPLY OF HIGH BUILDINGS.

THE immense height of the colossal office and business buildings in the lower part of New York, where there are scores of buildings ranging from twelve to twenty storeys high, is, says the current issue of the *Leisure Hour*, bringing forward a serious problem in connexion with water-supply. New York has an excellent water service from its great reservoirs at Croton, where its waterworks compare with those of any of our own large cities. The water service gave satisfaction until the era of twenty-storey buildings began. Since then owners and tenants of these tower-like structures have been complaining that they are never able to obtain water on the upper floors. The difficulty principally affects buildings of more than fifteen storeys. The owners of the buildings recently formed themselves into an organisation and deputed a committee to discuss the position of affairs with the mayor. It was then made plain that the fault was not entirely with the supply of water. That was sufficient to meet the needs of these tall buildings. The water could be forced into the topmost storeys of them; but to do so would demand a pressure which would wreck the water fittings in at least seven-tenths of the other buildings and dwelling-houses in the city.

THE DANGERS OF DUELLING.

ALTHOUGH in the great majority of cases duelling with the sword is not nowadays a very serious affair, the wounds inflicted being generally of a trifling nature and by no means dangerous to life, still occasionally, and especially when one or other of the combatants is a tyro with his weapon, graver consequences may ensue, and the contest which for the most part is regarded as a formality becomes converted into a fatality. When the pistol is the weapon employed for the adjustment of disputes, it would at first sight appear as though the risk of the encounter was considerably augmented; but experience has proved that the firearm is a far less lethal instrument of offence than what our Gallic neighbours call *l'arme blanche*. This, no doubt, is owing to the fact that ninety-nine men out of a hundred are excessively bad shots for want of practice, being unable, as the saying is, to "hit a haystack flying." In the early years of the present dying century pistol shooting was an essential portion of every "young blood's" education, and none were considered proficient until they could hit the ace of hearts at sixteen paces, but happily the barbarous practice has now completely died out even on the Continent, where duels are not yet quite defunct. The foregoing reflections have been suggested by a sad occurrence which recently took place in Corsica. In consequence of a newspaper article Dr. Alessandri, a retired naval officer, challenged the editor, whose name is Benedetti, and a duel with pistols was the result. Shots having been exchanged at thirty paces without effect, the weapons were reloaded, and the combatants once more confronted each other. The signal was given, two shots sounded as one, and the unfortunate Dr. Alessandri fell to the ground with a mortal wound in his right side, from which he shortly afterwards expired. Death was almost instantaneous, being due, as was shown subsequently at a post-mortem examination, to a severed pulmonary artery. The deceased, who was a Chevalier of the Legion of Honour, had seen a considerable amount of service. As the President of the General Council, who pronounced the funeral oration, said: "It was heart-rending that a distinguished surgeon, who had passed without a scratch through several campaigns, should fall a victim to hazard in a paltry encounter which owed its origin to the rancour of political passion."

THE INTERCOMMUNICATION OF HUMAN AND ANIMAL DISEASES.

IN our correspondence columns is published a letter from Dr. J. W. Allan suggesting the formation of institutions where the intercommunicable diseases of man and animals could be practically investigated. There can be no doubt as to the importance of such investigation so far as mankind is concerned, for the human species incurs much more risk of danger from the existence of communicable disorders in animals than do animals from such affections in human beings. However desirable it may be to have such investigations thoroughly carried out, there are grave obstacles to be encountered in founding such establishments, the first and most important being the provision of money. It is almost certain that the Government will not provide it, and it is to be feared that private benevolence cannot be relied upon to achieve this object. So that it is to be apprehended we must rely upon the establishments we already possess for the investigation of allied subjects, such as the histological and pathological laboratories of the medical and veterinary schools, and special foundations like that of the British Institute of Preventive Medicine, to afford opportunities for learning more of these transmissible diseases. There are now many labourers in this field, both in this country and abroad, and it must not be forgotten that the Local Government Board has for many years past spent considerable sums of money in the investigation of those disorders of animals which can be conveyed to man. With regard to the suppression of these diseases it has also to be remembered that medical opinion is, at least, as regards some of them—rabies and glanders, for instance—ahead of public and legislative opinion.

AMERICAN VIEWS OF ANTISEPSIS IN MIDWIFERY.

THE *New York Medical Record* of Oct. 5th gives an interesting report of a discussion on the importance of asepsis in the practice of obstetrics at the Medical Society of the County of New York, in which a comparison is made between the methods and results of aseptic and antiseptic midwifery as practised in four city institutions and the same in the private practice of four physicians. In the institutions the mortality was about one-eighth of 1 per cent., while in the practice of the physicians it was one-fifth of 1 per cent. The chief difference in the methods was that in the hospitals the vaginal douche was practised before and after labour and the pubes were shaved. The latter seems to us a very questionable procedure, and the vaginal douches are only less so. As to the great points of aseptic towels, cleaning the genitals, washing in the antiseptic sense the accoucheur's hands, there was a general consensus of opinion.

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and it is obvious that any practitioner who neglects thoroughly to wash his hands and nails and to preserve the asepticism of his clothes is not doing his duty to his patient. The private practitioner must not allow his success to fall below that of the public institutions. Dr. Reid, the writer of the paper, while not objecting to the details of hospital asepsis, did not think all of them necessary. Dr. Tucker was glad to hear a private practitioner express the opinion that milk fever was septic. He himself thought it usually so, not always. Dr. R. A. Murray emphasised the importance of personal cleanliness in the physician. "When the physician kept himself and his hands clean he did not have sepsis, no matter what the surroundings of the patient." Dr. Reid had had but one death from sepsis in his last 458 cases. Dr. Thomas Darlington as a private practitioner made not the least interesting contribution to the discussion. In country or sparsely peopled districts he frequently found none of the amenities of antisepsis. Soap, boiled water, or water of any kind (!), were conspicuous by their absence. His success was the record of the debate. "He had confined nearly 1000 women and had lost none from any cause. Whenever there was sepsis he believed it came from the physician. He carried bichloride tablets to wash his hands. He thought the vaginal secretions helped the passage of the head and that the douche retarded it." There is a ring of common sense about these last remarks which will impress them on private practitioners and fasten on them the responsibility of clean aseptic hands.

A CHILD'S RIGHT OF ASYLUM.

IT is to be hoped that we have not yet heard the latest explanation of a case of cruelty recently decided in the Marlborough-street Police-court. A child, after being grievously maltreated by her mother, had been removed to the shelter of the Society for the Prevention of Cruelty to Children. The mother, fearing prosecution, endeavoured to resume possession of the child, but was prevented on the request of the latter by the society's officials. It will be remembered that special provision is made by the Acts relating to this form of cruelty for such an appeal as this, and also that officials in charge of the society's shelters are entitled to give it effect. Naturally, therefore, many persons have been surprised by the announcement that a stipendiary magistrate of recognised ability has taken an exactly opposite view of the merits of this case, has denied the legality of the society's action, and has insisted on restoring the child to her mother's keeping. We confess that after a careful examination of the facts upon which it is founded the justice of this decision entirely baffles our comprehension. It would be interesting to learn what form of sanction can be pleaded in its support. So far none is evident, but, on the contrary, the process of justice and the practical utility of the Acts appear to be hopelessly irreconcilable. If, as would seem to be the case, the right of appeal conferred upon children subjected to ill usage cannot be exercised without a near prospect of parental retribution, it is obviously a right of merely nominal value.

SHAMS.

MR. WILLIAM BENJAMIN DAVIES has recently been fined £22 4*s*. for infringing the Medical Act by falsely taking and using the title of a surgeon. According to his solicitor, Mr. Davies had gone through the usual medical training up to the final examination, from which he withdrew, so it is quite possible that his medical knowledge was fairly good. But he represented himself as being what he was not, and richly deserved his punishment. His offence is only too common nowadays in every department of trade. You ask for bread and butter and get presumably bread—though no one has yet defined what bread is—and certainly margarine. It is fair to state that in a recent case the purchaser was told beforehand by the vendor that he would get margarine. Ground coffee is openly sold as a mixture of chicory and coffee. It is useless to say most people like it so—ninety-nine out of a hundred English people do not know what coffee is. In an evening contemporary was recently printed a prize menu for two people to last a week; among other items was a quarter of a pound of coffee, price 4*d*. Conceive the infusion made from four ounces of coffee at 1*s*. 4*d*. a pound to last two people a week; but this kind of wash is the average housewife's notion of coffee. A return to the methods of our ancestors—the quack paraded through Cheapside with a collar of "jordans" round his neck, the adulterator, whether wholesale or retail, in the pillory at Charing-cross, with his falsely named goods at his feet—would go a long way towards purifying money-getting and preventing robbery. An even more stringent punishment than these is on record, the case being that of a falsifier of wine, who, being compelled to drink some of his product, died. Perhaps if this was carried out in every case the effects would be too uniformly fatal, but the suggestion is one to be borne in mind.

CEREBRAL TUMOUR AND HYDROCEPHALUS.

DR. DINKLER recently published in the *Deutsche Zeitschrift für Nervenheilkunde* a case of more than usual interest, both in its clinical course and in the nature and extent of the morbid conditions which were present. The following are the particulars. A child, without any hereditary morbid tendency so far as could be discovered, was seized in his third year with a vague illness, from which he speedily recovered. About four months before his admission, being then of the age of four, he was found to have distinct weakness of the upper part of the body and head, the weakness being revealed in sitting, standing, or walking. He also apparently lost control over bladder and rectum. He was found to have a fairly big head, sluggish pupil reactions, swollen discs on each side, weakness of the right side affecting the face and limbs, normal sensibility, and an increased knee-jerk on the right side. After a few days there were sickness, somnolence, and finally loss of consciousness; after four weeks an epileptiform attack occurred, with twitchings of the left side of the body, and there were increased reflexes on both sides, and after three months paresis of the left leg and an increase in the circumference of the head. On each side there was distinct optic neuritis. On account of the increasing size of the head puncture of the dura mater was performed between the third and fourth lumbar vertebræ, and a large quantity of fluid was withdrawn. The pulse, however, again became slow and finally irregular, and death occurred seven months after the patient came under observation. The diagnosis which was arrived at was one of cerebellar tumour with hydrocephalus, but at the necropsy it was found that there was a huge tumour of the *right* cerebral hemisphere besides severe internal hydrocephalus. Microscopical examination revealed a high degree of degeneration of the *left* cerebral cortex and atrophy, through pressure, of the right parietal lobe. There was no degeneration in the cerebellum, pons, or peduncles, but in the spinal cord the posterior columns and roots, from the cauda equina to the first cervical nerve, were very much degenerated. The following is Dr. Dinkler's view of the connexion of the lesions and clinical phenomena. The illness at three years of age had as a sequel internal hydrocephalus. Then, in consequence of the advent of a tumour in the neighbourhood of the right supra-marginal gyrus, the symptoms of intracranial pressure were developed—choked disc, headache, and vomiting. The tumour compressed the hydrocephalus on the right side, causing an

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enlargement of the ventricle on the left, which led to atrophy and degeneration of the cortex on this side. In consequence of this right-sided weakness resulted, while an extension of the tumour on the right side over the Rolandic area gave rise to weakness as well on the left side, so that before the end there was a condition of double hemiplegia. The main points in the case are the presence of the usual symptoms of cerebellar tumour and the absence of any affection of the cerebellum, and the degeneration of the posterior roots and columns associated with a central lesion. The explanation of this latter condition is by no means obvious.

THE CASE OF MISS LANCHESTER.

ON Friday, Oct. 25th, a Miss Lanchester, whose "views" on the subject of marriage are now public property, was forcibly removed upon an urgency order to an asylum. On Tuesday, the 29th, she was released by order of the Lunacy Commissioners. In the interests of the medical man or men who signed the certificate, no less than as regards the question of the liberty of the subject, an inquiry into all the circumstances is imperatively demanded, and we hope that the proper authorities will promptly initiate such an inquiry.

A DISASTROUS GAS EXPLOSION.

THE past twelve months have been remarkable in bringing into ugly prominence the defects that may happen, and that may be productive of very serious results, in connexion with all three of our service supplies—gas, water, and electricity. It was about this time last year that we were confronted with the dangers of explosion in the street boxes of the electric mains, later (in February) the water mains were frozen, and when the thaw set in the pipes were fractured and several districts were without a regular service for many weeks. To complete an unfortunate trio of disasters a defective gas pipe has now been the means, it would appear, of a sad and most serious occurrence. It happened on Tuesday evening last, in a busy court in the Strand leading to the closely populated district of Clare-market and directly opposite Somerset House. An escape of gas had been noticed in the court for some time, certain repairs had been executed by the gas company not long ago, and on the very day of the explosion men had been employed to make good the pathway. In one or other of these operations it is possible that a defective repair was made, or that a good repair was damaged and converted into a serious leak again by the filling in of the gap and by pressure being probably brought to bear upon the stones or similar materials in making up the hole. With the earthy stuff saturated with gas as it must have been from the previous leak, the fact of a strong smell of gas would not give rise to any suspicion of a fresh leak. It is not difficult to imagine as a consequence that the escaping gas then gained access into and accumulated in the cellar of a house immediately opposite, where it only required a light to produce a terrible explosion. So terrible was the force of the explosion that ensued that a house of three or four floors collapsed completely. During the work of a most plucky rescue amongst the scattered débris an adjoining house fell literally to pieces, burying two firemen, one of whom escaped with slight injuries, while the other remained unextricated for ten hours. He was eventually rescued and taken to King's College Hospital, but the poor fellow succumbed to his injuries. In all, some thirty-one persons were injured, but no other loss of life was reported. We understand that Colonel Majendie has inspected the scene of the disaster with a view to ascertaining its precise cause. Though there seems little doubt that the disaster was due to a considerable escape of gas, it is stated by an evening contemporary that there appears to be a suspicion that some miscreant had been connected with the occurrence, for the authorities of Scotland Yard have been very active in obtaining full particulars. We sincerely hope that any suspicion of this sort will prove to be entirely unfounded.

THE LATE MARK MORRIS.

ALL St. Bartholomew's Hospital men will hear with unfeigned regret of the death of Mark Morris, the steward to that hospital. He was, and had been for many years, so widely identified with the working of the institution that his loss will be, perhaps, more generally felt than that of any other official would be. Everyone liked him, everyone knew him, and there was no one but had the highest esteem for him. If a patient went out of the hospital friendless and in need Mark Morris was ever ready to help him, not only with money or perhaps clothes, but also by genuine sympathy. If an overworked house physician or house surgeon was in despair owing to there being no vacant bed for an urgent case the invaluable steward was applied to and somehow or other managed to provide a bed. His was a striking personality. He somewhat resembled in manner and gait the late Provost of Eton, Dr. Goodford, as portrayed in *Vanity Fair*, and had the same shrewd kindliness of disposition. He was a perfect mine of information as to the history of the hospital, and although an admirable organiser and man of business he was also a fair art critic and an acute judge of old prints, of which he had a good collection. After forty-five years of faithful service he has gone to his rest, and though he will never be forgotten we hope that the governors of the hospital will see their way to establish some tangible memorial of so faithful a servant and so good a friend.

WE have received from the treasurer of Guy's Hospital a copy of a letter from Mr. Gladstone to him urging the claims of the hospital to public support. This eloquent letter has, we are certain, fallen under the notice of most of our readers in the daily press, so that we need not quote its words. If anyone can advance the cause in which it has been written he will be serving the sick and poor in the most efficacious and direct manner.

AS we have intimated, there has been unavoidable delay in the structural alterations of the premises of the General Medical Council, which makes it impossible for the usual November meeting to take place there. It is contemplated to postpone the meeting for some weeks. This is no doubt a serious course; but there are said to be difficulties in the way of holding the meeting in any other place.

THE Lord Bishop of London is, we regret to hear, suffering from a sharp attack of acute tonsillitis. The report, however, as we go to press is that his lordship's condition is much improved, though he is still very weak.

DR. J. B. BRADBURY will deliver the Bradshaw Lecture of the Royal College of Physicians of London, "On some New Vaso-dilators," on Tuesday, Nov. 12th, at 5 P.M.

THE dinner of the Metropolitan Police Surgeons' Association, arranged for Oct. 31st, has been unavoidably postponed.

WE regret to learn of the death of Inspector-General Sir William Mackenzie, K.C.B., C.S.I., M.D., which took place on Tuesday last at the ripe age of eighty-four. Sir William Mackenzie was an honorary physician to the Queen and had seen much service in India under Sir Hugh Rose and Lord Napier of Magdala.

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ROYAL COLLEGE OF PHYSICIANS OF LONDON.

DEBATE ON THE PETITION FOR ADMISSION OF WOMEN TO THE EXAMINATIONS AND DIPLOMAS.

AN extraordinary Comitia of the Royal College of Physicians of London was held on Thursday, the 24th ult., the President, Sir J. RUSSELL REYNOLDS, Bart., being in the chair.

Communications were read from the Royal College of Surgeons of England reporting the proceedings of the Council on July 29th and Oct. 10th, and asking for the appointment of delegates to confer with delegates of the Royal College of Surgeons of England upon the question of altering the arrangements of the Five Years' Scheme adopted by both Colleges in January, 1892. The delegates of the Royal College of Surgeons of England were Mr. T. Bryant, Sir W. MacCormac, Mr. H. G. Howse, Mr. C. Heath, Mr. R. Harrison, and Mr. T. P. Pick.

The PRESIDENT nominated as the delegates of the Royal College of Physicians of London Dr. Ord, Dr. Norman Moore, Dr. E. Liveing, Dr. Cayley, Dr. Poore, and Dr. F. Taylor.

A petition from the officers and teachers of the London School of Medicine for Women, and of the staff of the Royal Free Hospital and others, praying the College to admit the students of that school to the examinations and diplomas of the College, was read by the Registrar.

Dr. C. WEST, as the senior Fellow present, rose to move that the petition be not granted. He remarked that eighteen years ago the same question was debated in the College, and the admission of women was rejected by 68 votes to 16. The same privilege was sought for now—namely, the admission of women to become members of the College, to take part in its work, and to have the right even of occupying the presidential chair. It was the bounden duty of the College, before granting such a request, to ask the reasons for its being claimed. Quoting from an inaugural address by the founder of the movement for the admission of women to the medical profession, he said that the grounds put forward were those of opening to them a career of serious occupation—one which rendered them independent of marriage for a position, and which saved them from the fear of poverty; and he contrasted such aims with the high and impersonal motives that used to be put before the newly-admitted graduates of the University of Berlin as guiding their career in medicine. He admitted that many fell below these high requirements, but considered that women had duties to fulfil nearer to them than that of following the medical profession; or if they had no home ties there were many other avenues open to them in which to earn a livelihood, such as teaching and nursing, pursuits for which they were far better fitted. But in regard to their claims to follow callings similar to those adopted by men, they were pleading as if they were deprived of their heritage, unmindful of the fact that in all times the highest homage had been rendered to woman. The question of the fitness of women to practise medicine was not in any respect one of their ability to pass examinations. There had always been learned women who were not out of proportion to the number of learned men. But what claim had they to be introduced into the College? What had they done for midwifery, which for a century and a half was entirely in their hands? Even their writers on this subject—as Madame La Chapelle and Madame Boivin—were largely assisted in their works by medical men. They had invented no new procedures, and he would ask what contributions to medicine had proceeded from the female practitioners in America during the fifty years or so of their work there, or from those in England? Had they done anything to raise the standard of medical ethics, and how would medical questions be assisted in debate or otherwise by their partaking in them? Even on the lower ground of expediency there was no need for this change, which was regarded but as a step to their admission to other professions. It was not a mere social change, but a social revolution that was threatened—a "shooting of Niagara." He trusted that all the Fellows would see that it was something more than the dignity of the College that was at stake, it was the whole question of the position of women in the social body, and he expressed the hope that in the interests of women themselves the Fellows would show that they still retained the old spirit of chivalry in spite of the onslaughts made on it by the new woman, and refuse to countenance a movement which might ultimately lead to the revival of the legend of Pope Joan in the occupancy of the presidential chair. He moved: "That the Royal College of Physicians having maturely considered the petition of the officers and teachers of the London School of Medicine for Women, and of the staff of the Royal Free Hospital and others, praying the College to admit the students of that School to the examinations and diplomas of the College, decline to grant the prayer of the petition."

Sir J. FAYRER, in seconding the motion, said that the question was one in which he had never desired to take part, but upon which he felt strongly. He would not follow Dr. West in his arguments of the fitness of women to practise medicine, that not being the question before them, which was one concerning the dignity of the College and the expediency of admitting women to its examinations and diplomas. He did not question their fitness, but he did doubt the propriety of altering the constitution of the College — an ancient corporation of scientific men — for the sake of a dangerous experiment. Such a proposal might indeed be reconsidered after ladies had been admitted to the Senate, Bench, or Bar. Turning to the question of zenana work in India, Sir J. Fayrer said that so far as his experience went there was no difficulty in the way of medical men entering the most jealously guarded harem when there was need for their services, and he thought too much had been made of this argument. There was, indeed, scope for educated women to instruct native women in the principles of prevention of disease, but no need of them as doctors. He said that the many portals whereby women could enter the medical profession proved that there was no necessity for the College to also open its doors, and he failed to see either the expediency or propriety of there being ladies admitted to their meetings; for of course if they were admitted as Licentiates they would qualify to become Members and Fellows.

Sir B. W. RICHARDSON said that he had no desire to encourage women to enter the profession of medicine, but he could not support the proposal to reject this petition to the College. He reminded the Fellows that in the past the College had more than once done injury to itself by refusing to take steps in advance. About ninety years ago it declined to take the lead in establishing a new order of practitioners, so that it was left to the Society of Apothecaries to fill the breach, and for fifty years by itself perform a duty which the College eventually had to take up. So now it was not to the interest of the College that the duty of licensing women for medical practice should be left in the hands of other bodies. He reminded the Fellows that when the College was first founded there had never been a woman at the head of the State, but since then four women had sat on the throne, and it was not consistent to exclude women from medical practice whilst recognising their fitness to govern the country. As to the plea that, were this petition granted, a woman might one day become President of the College, he pointed out that since he became a Fellow thirty-five years ago there had only been five or six Presidents, and therefore it was very improbable that the contingency alluded to would be likely to occur within a period of years, when perchance public opinion may have quite changed, and when possibly women may have failed to maintain their position; and if so, what injury would be done to the College? But if, on the other hand, they rose and became a power, there might not be anything very incongruous in their obtaining the highest offices.

Dr. C. J. HARE felt that it would be a dereliction of duty if he did not express some of his thoughts on the subject. It was true that women could pass examinations as creditably as men; but they had no capacity for creating knowledge or advancing it. They had done nothing in music, although far more of them had studied than had men, who alone filled the ranks of composers. In mathematics there had, it is true, been a Miss Herschell and a Mrs. Somerville, but even these talented women had not extended our knowledge of mathematics. Yet it was asked to admit women into the medical profession, where they were not wanted, and even in India they were not really needed. He reminded

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Sir B. Richardson that queens governed through their Ministers. The Royal College of Physicians of London was more than an examining body; it represented ethics and was in direct communication with the Government, and he thought its position would be weakened were this change in its constitution to be brought about. Nor did he agree with the opinion that because women were admitted to the profession they must inevitably be admitted into the College. There are many other careers open to them, easier to gain and easier to follow, and until they were made judges or sat on the bench of bishops the question of their admission to the College might be left aside. Until that time came he trusted the College would not change its constitution—established for 300 years—to meet a transient fancy.

Sir W. BROADBENT (Senior Censor) said that he did not hold office when he signed the petition now under discussion. He did not intend to say much, for he supposed that every Fellow had made up his mind on the subject, which no one would consider lightly. Nor would he follow the eloquent address of Dr. West, although he saw no reason why the lofty ideas of professional responsibility claimed for men should not be equally credited to women. Most of the remarks made, so far, had been addressed to the question of the admission of women to the medical profession, but that question *is* decided, and from the first he had watched the experiment with great interest; nor, in his opinion, had it been a failure. There are to be women doctors, and, that being so, they should have the opportunity of coming under the jurisdiction of the College; it would be better for them and the public that they should be under this jurisdiction. Although Sir J. Fayrer said that in his own experience he had no difficulty in attending native women in India, it could not be said that these women received anything like ordinary medical care. It was an injustice to these women who were devoting their lives to this zenana work to deny them the recognition of the College. They desired a higher status, and it was distinctly discouraging to them not to be able to take the College diploma. He recognised none of the evils alleged to follow the admission of women to the medical profession, and said it was not very respectful to the intelligence of the College to advance as a reason for denying their petition that a woman might one day come to be President of the College.

Dr. BARNES had come to the conclusion that the medical education of women must be imperfect, it could not fairly embrace all the diseases of men, and an imperfectly trained practitioner should not be licensed. He emphatically asserted as the outcome of long observation and experience that the admission of women was a degradation of the profession of medicine.

Dr. DOUGLAS POWELL, referring to a document which had been circulated, and had been signed by very distinguished Fellows, said that it contained some very cogent reasons against the proposal to admit women to the College. The question was one which had to be considered: (1) as it affects the Licentiates of the College; (2) as it affects the community at large; and (3) as it affects the constitution of the College itself. On the first point he remarked that there was nothing for women to do in the medical profession which could not be done as well or better by men; and if the over-stocked profession were to be diluted by the addition of women it could not fail to cheapen and degrade (he did not mean in a bad sense) the lower ranks of the profession. As regards the community the College was regarded by the State as the referee in all great questions of public health and the like, and its opinion on the question of the practice of medicine by women was of importance. For if they could enter this profession they were just as fitted to enter any other. This question had not been hitherto brought before an exclusively medical body. In the University of London it was decided against the opinion of the majority of medical graduates by the votes of graduates of other faculties. But now it came before a purely medical authority, which would assume grave responsibility if it lightly dealt with it. For it was a public question. The appropriate duties of womanhood in the home, and in the rearing and training of children, were incompatible with the practice of any profession, which would exhaust her physical and mental energies and divert them from their rightful objects.

Dr. PAYNE, recalling the discussion in the College eighteen years ago, and the eloquent speech then made by Dr. C. West, fancied that some of the arguments used this day had been uttered then, although the state of affairs had much changed. One thing had not changed, and could not be changed—that was the increasing effort of women to earn a living, a fact not due to caprice, but to economical laws. The simple fact is that there is such a large preponderance of women in this country—about a million in excess of men. The women of the lower classes had to earn their whole living, and the same stress was spreading upwards, so that more and more women had to labour. The old avenues were blocked. They could not all be nurses or governesses, and the economical law was forcing them to seek new careers. They did not have to consider whether medicine was a suitable career for women, or whether it was desirable to prevent them or discourage them. Arguments for their total suppression were slightly out of date, and the right principle was that they should be given a fair field. As to women failing to advance science, it is not asked of candidates for the licence whether they are prepared to add to scientific knowledge, but only if they have a competent ability for a certain task. The history of the College had, as Sir B. W. Richardson pointed out, been sometimes marked by a tendency to declare, *Non possumus*. This happened not very long ago when the College refused to coöperate with the Society of Apothecaries in examinations, with the result that the Society remained as a separate diploma-granting body. At one time only graduates of Oxford or Cambridge were admitted to the Fellowship. The Fellows should consider whether it was wise to adopt a purely negative policy on the question before them. Since it was last discussed the experiment of medical education of women had been tried. He had himself examined a large number of women candidates at the University of London, and could say they were of high average. Nor was there any practical difficulty in conducting the examination. He asked whether it was wiser of the College to raise a protest against the movement and refuse to get the right of exercising any control over female practitioners rather than say that they shall be submitted to the same control as the College exercises over its male licentiates.

Sir R. QUAIN did not see why the surplus population should seek to enter the College. Surely the Bar and the Church were more fitted for them. He fully concurred with what Dr. West, Sir J. Fayrer, Dr. Hare, and Dr. Powell had said, and he felt sure that the opinion of the College on the whole question would have great weight. He contended that in the interests of women themselves and of the public and the profession they should be discouraged from following medicine.

The PRESIDENT said that he had received a letter from Sir W. Jenner, in which he expressed the hope that none of these changes would take place, for he considered that women were unfit to enter the profession by their mental, moral, and physical conditions. His own opinion was much the same. He, too, did not think that women are physically, mentally, and morally fitted to become good medical practitioners. They may be able to pass examinations, to do many clever things, but they have not the knowledge of the world or powers to follow a profession of this exacting kind; nor was it good for the world that they should strive to follow it. He did not look at the question solely as regarded the College. His own judgment was against their entering the profession of medicine; it was the profession which of all they were the least qualified to follow. From a conversation he had lately with a gentleman who knew India well he could confirm what Sir J. Fayrer had said, that the physicians there had free access to all who were in need of their services.

A division was then taken, and there voted: *for* Dr. West's motion, 59; *against*, 50. The petition was thus rejected by a majority of nine votes.

The Comitia then adjourned.

The following is the petition of the students of the London School of Medicine for Women which gave rise to the preceding debate:—

TO THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

"SIR,—We, the undersigned, desire respectfully to petition the Royal College of Physicians of London to admit to its examinations and diplomas students of the London School of Medicine for Women.

"A similar request was made many years ago to the Royal College of Surgeons, England, and refused; but we venture to hope for a different result upon the present occasion, when both Colleges will be approached. That request was made at a time when the admission of women to the medical profession was a question still *sub judice*. Doubts were then felt as to the effects which such a change would have upon the profession and upon women themselves. Years have since passed;

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the main question has solved itself, and doubtful points have been settled by experience.

"At the beginning of the present year there were over 200 women upon the Medical Register, of whom more than 150 had been educated at the London School of Medicine for Women. One after another, universities and examining boards have admitted women to their degrees and diplomas, so that few now remain closed. In the charters of recently established universities the right of women to a degree is recognised. Several medical schools for women have been opened in Scotland and Ireland, and the total number of women studying medicine has steadily increased. Many women, both in this country and abroad, hold appointments on the staff of hospitals for women and children; some of these hospitals are worked entirely by women, and cases of all kinds and of all degrees of severity are received. Public bodies, like the General Post Office, the Metropolitan Asylums Board, and various county councils, have appointed women as assistant medical officers in the institutions under their control.

"The British Medical Association, the Medico-Psychological Association, the Society of Anæsthetists, and the Anatomical Society of Great Britain admit women as members. In short, the reception of women into the profession is going on steadily; and experience has proved that those evils have not resulted which it was feared might follow the admission of women to the study and practice of medicine, and that there is a demand for women as medical practitioners.

"The London School of Medicine for Women now numbers on its books 150 students. The results of its teaching, as shown by the position taken by its students in public examinations, are excellent. The biological, chemical, and physiological laboratories are adequate, though the Council desire to improve them, and are raising a fund for rebuilding the school. The Royal Free Hospital, to which students of the London School of Medicine for Woman alone are admitted, provides ample clinical opportunities, and the teaching of the staff is organised upon the usual lines.

"We, therefore, submit that the London School of Medicine for Women, with the Royal Free Hospital, is worthy of recognition by the Royal College of Physicians of London. The withholding of this recognition is a source of serious inconvenience and loss to the school and to its students. If desirous of taking a diploma from a college of physicians or surgeons the students are compelled to travel to Ireland or Scotland, and thus incur unnecessary expense and fatigue in connexion with their examinations.

"On the above grounds we earnestly hope that the Royal College of Physicians of London will accede to our petition, and will open its examinations to the students of the London School of Medicine for Women. We are, Sir, your obedient servants,

ELIZABETH GARRETT ANDERSON, M.D., Dean and Lecturer on Medicine.
JULIA COCK, M.D., Subdean.
ALFRED T. NORTON, F.R.C.S., Treasurer and Lecturer on Surgery.
ISABEL THORNE, Honorary Secretary.
Sir GAINSFORD BRUCE, Chairman of the Committee of the Royal Free Hospital.
CHARLES BURT, Chairman of the Weekly Board, Royal Free Hospital.
JOHN COCKLE, M.D., F.R.C.P., F.R.C.S., Consulting Physician.

"Royal Free Hospital Staff.

*WILLIAM ROSE, M.B., B.S., F.R.C.S.	WILLMOTT EVANS, M.D., B.S., F.R.C.S.
FREDERICK J. GANT, F.R.C.S.	SAMUEL WEST, M.D., F.R.C.P.
A. BOYCE BARROW, M.B., F.R.C.S.	HARRINGTON SAINSBURY, M.D., F.R.C.P.
JAMES BERRY, M.B., B.S., F.R.C.S.	THOMAS C. HAYES, M.D., F.R.C.P.
J. GROSVENOR MACKINLAY, F.R.C.S.	JAMES CALVERT, M.D., F.R.C.P.
WILLIAM H. BATTLE, F.R.C.S.	F. W. ANDREWES, M.B., F.R.C.P.
H. WORK DODD, F.R.C.S.	J. WALTER CARR, M.B., B.S., F.R.C.S.
H. W. ROUGHTON, M.D., B.S., F.R.C.S.	LOUISA B. ALDRICH BLAKE, M.D., B.S.

* Consulting Surgeons.

"Lecturers at the London School of Medicine for Women.

STANLEY BOYD, M.B., B.S., F.R.C.S., Lecturer on Anatomy.
H. B. DONKIN, M.D., F.R.C.P., Lecturer on Medicine.
MARY L. DOWSON, L.R.C.P.I., L.R.C.S.I., Lecturer on Forensic Medicine.
A. DUPRÉ, F.R.S., F.C.S., Lecturer on Toxicology.
W. D. HALLIBURTON, M.D., F.R.C.P., F.R.S., Lecturer on Physiology.
CHARLES MERCIER, F.R.C.S., Lecturer on Mental Pathology.
MARY A. D. SCHARLIEB, M.D., B.S., Lecturer on Midwifery and Gynæcology.
A. QUARRY SILCOCK, M.D., B.S., F.R.C.S., Lecturer on Pathology.

*Sir WILLIAM H. BROADBENT, Bart., M.D., F.R.C.P.	THOMAS BOND, M.B., B.S., F.R.C.P.
Sir JAMES PAGET, Bart., F.R.C.S.	CHARLES J. CULLINGWORTH, M.D., F.R.C.P.
Sir HENRY ACLAND, Bart., K.C.B., M.D., F.R.C.P., F.R.S.	W. R. GOWERS, M.D., F.R.C.P., F.R.S.
Sir THOMAS CRAWFORD (the late), K.C.B., M.D., F.R.C.P.I., F.R.C.S.I.	VICTOR HORSLEY, F.R.C.S., F.R.S.
Sir ALFRED GARROD, M.D., F.R.C.P., F.R.S.	STEPHEN MACKENZIE, M.D., F.R.C.P.
Sir HENRY THOMPSON, F.R.C.S.	FREDERICK TREVES, F.R.C.S.
Sir WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.	J. KNOWSLEY THORNTON, M.D., C.M.
Sir SPENCER WELLS, Bart., M.D., F.R.C.S.	E. A. SCHÄFER, F.R.S.
SAMUEL WILKS, M.D., F.R.C.P., F.R.S.	AUGUSTUS WALLER, M.D., F.R.S.
J. HUGHLINGS JACKSON, M.D., F.R.C.P., F.R.S.	I. BURNEY YEO, M.D., F.R.C.P.
THOMAS BUZZARD, M.D., F.R.C.P.	RICHARD BARWELL, F.R.C.S.
H. CHARLTON BASTIAN, M.D., F.R.C.P., F.R.S.	HERBERT W. PAGE, M.B., F.R.C.S.
THOMAS BARLOW, M.D., F.R.C.P.	JOHN H. GALTON, M.D.
W. ORANGE, C.B., M.D., F.R.C.P.	FREDERICK T. ROBERTS, M.D., F.R.C.P., M.R.C.S.
T. LAUDER BRUNTON, M.D., D.Sc., F.R.C.P., F.R.S.	JONATHAN HUTCHINSON, M.D., F.R.C.S., F.R.S.
	E. RAY LANKESTER, M.A., LL.D., F.R.S."

The following is the text of a statement circulated among the Fellows of the College prior to the meeting on Oct. 24th:—

"We the undersigned Fellows of the Royal College of Physicians of London, gravely impressed with the far-reaching importance of the question, now before the College, whether to admit women to its diplomas, desire to place on record our reasons against granting the prayer of the petition recently presented by the officers and teachers of the London School of Medicine for Women.

"In common with a large body of medical men—probably a great majority—we hold, and always have held, that the admission of women to the medical profession is most undesirable; and, whilst fully admitting the ability of women to comply with mere examinational tests, we are none the less convinced that they are by nature unfitted for the pursuit and practice of the medical profession.

"Although some holding this view have nevertheless deemed it both consistent and desirable not to oppose the admission of women, but have, on the contrary, given substantial aid to the attainment of that object, yet we see no reason to depart from our original carefully grounded objections, and, while recognising with regret the action of other bodies, desire to offer all legitimate opposition to the same course being followed by the Royal College of Physicians.

"We are unable to admit the force of the arguments urged in favour of the admission of women to the diplomas of the College, on the ground that other corporations and Universities have admitted them, and we fail to recognise any injustice in the refusal. The number of Universities and Medical Corporations of the United Kingdom which now admit women to their degrees or diplomas is sufficient to secure a full and complete trial of what at present is but an experiment—an experiment which another generation may show to be a mistake. In the metropolis itself the London University and the Apothecaries' Society open their doors to women, and thus offer ample opportunities for qualification.

"To the argument that the admission of women to the College is 'inevitable,' we desire to offer the fullest resistance; believing that the principle is wrong, we refuse to submit to considerations of expediency, and regard it as a duty which we owe to the College, to the Profession, and to the Public at large to prevent, to the utmost of our ability, the Royal College of Physicians being made a portal to the obtaining that which our reason and judgment condemn.

"On two points we have reason to believe considerable misconception exists. Inasmuch as the licence of the College gives a title to proceed to the membership, and that the Members are potential Fellows, it would be difficult if women were admitted to the lowest to exclude them from the higher diplomas. Those who support their admission must be prepared to admit them to the counsels and administration of the College, and to place the highest offices in the College within their reach.

"It is also urged that, in view of the possibility of the Royal College becoming associated for examinational purposes with a reconstituted London University, such a circumstance would of necessity compel the College to admit to its diplomas all candidates, irrespective of sex, in whose examination the College took a share. But this is not so. In all discussions in the College on the University question, the full power of the College to confer or withhold its diplomas by the vote of the Fellows, as at present (independently of the results of examination), has been fully reserved.

"On the ground, therefore, of our objection on principle to the admission of women to the profession, and having regard to the extensive opportunities they already possess for obtaining a registrable qualification, we protest against this College, the most ancient and influential medical corporation in the kingdom, being forced into a position from which there would be no receding and which could only be occupied with loss of dignity and prestige, in order to satisfy what we believe to be the improper demand of an inconsiderable minority.

"CHARLES WEST.	SAMUEL GEE.
RICHARD QUAIN.	J. FAYRER.
WILLIAM JENNER.	HENRY GERVIS.
JOHN W. OGLE.	J. MITCHELL BRUCE.
CHARLES J. HARE.	W. H. ALLCHIN.
F. W. PAVY.	DONALD W. C. HOOD.
W. H. DICKINSON.	PATRICK MANSON.

"Oct. 22nd, 1895.

"*** The foregoing statement has only been prepared within the last few days, and no extended attempt has been made to obtain signatures. The College officers have not been asked to sign."

From the signatures attached to the petition and to the above circular it will be seen that a large number of Fellows of the College had publicly stated their views before the meeting. We have only to add that we consider it both a sign of the times and a manifestation of wisdom that the proceedings at the College on this occasion were not declared *secreta Collegii*.

THE YARROW CONVALESCENT HOME.

ON Saturday last, on the invitation of the beneficent founder, a very large party of medical men and others were conveyed by special train to Broadstairs, where every facility awaited them for seeing this Home (to the establishment of which we have already referred), with all its provisions for the comfort and the health of the young invalids and convalescents in the ranks of the respectable but straitened classes for whose benefit it has been erected. The day, though fine, was cold, but so admirably warmed was every corridor and room that everybody felt comfortable. The accommodation is for fifty girls and fifty boys under the age of fourteen, though there is power left to the committee,

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in special circumstances, to admit those a year or two older. The five shillings a week that have to be paid are just enough to facilitate the selection of a class above the very poor, who are pretty well provided for in other homes. The building is of red brick and does credit to the architects and builders, respectively Messrs. Davis and Emanuel, Finsbury-circus, and Messrs. Colls and Sons, London. Every room is cheerful in its light and abundantly supplied with fresh air, which is warmed on its way into the house. This feature of warmth is very important and renders it possible to keep many cases in winter on a healthy coast which might otherwise be too cold. The walls of all the rooms are adorned with really pretty pictures, which are understood to be the gift of a friend of Mr. Yarrow. The Home stands in fine grounds covering an area of ten and a half acres, and has a fine sea frontage. The cost of the building and the endowment of it are the exclusive work of Mr. Yarrow, who admits no one to share in the pleasure, which he must feel to be great, of providing a convalescent home for classes that have been much overlooked by philanthropists. We have often thought, and even said, that this is the true way to found and endow hospitals in a wealthy country. It was thus that Guy's Hospital took its rise. It is an example to be followed.

Of two hundred guests that were present the great majority were members of the profession. Among them were Sir William Broadbent, Sir William Roberts, Sir J. Crichton Browne, the President of the Royal College of Surgeons of England (Mr. Heath), Mr. Hutchinson, Mr. Holmes, Mr. Langton, Mr. C. B. Keetley, Mr. Treves, Mr. Arbuthnot Lane, Mr. Reginald Harrison, Mr. Swinford Edwards, Dr. C. J. Hare, Dr. J. Harley, Dr. Stephen Mackenzie, Dr. J. B. Ball, Dr. Glover, Dr. Sainsbury, Dr. R. Dudfield, Mr. L. Bidwell, Mr. D'Arcy Power, Mr. Jackson Clarke, Dr. Stowers, Mr. Percy Dunn, Dr. Henderson, Mr. Charles King, Dr. Abercrombie, Mr. M. Morris, Dr. Alderson, Dr. Clemow, Mr. R. Lloyd, Mr. L. Mark, Mr. Jocelyn Swan, Dr. H. P. Henry, Dr. Clippingdale, Mr. H. Menzies, Dr. Eddowes, Dr. Yarrow, Dr. Lough, Mr. Lewis Lewis, Dr. Kisch, Dr. S. Smith, Mr. Mallam, Dr. Warham, Dr. Senior, Dr. Dodsworth, Mr. E. R. Spencer, and others.

Sir William Broadbent well represented the visitors, publicly thanking the founder for the Home as one likely to meet a great want. Mr. Yarrow's only anxiety is to be well advised of suitable cases, and for this he looks mainly to the medical profession. After the meeting on Saturday he is not likely to look in vain, and we heartily wish for the institution under the management of Miss Power a long career of usefulness.

REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD, 1893-94.

[SECOND NOTICE.[1]]

CONTINUING our analysis of the contents of this publication, we have to notice a report by Dr. Wheaton on an outbreak of diphtheria in the Hinckley urban and rura sanitary districts. The precise extent of this outbreak, which occurred from September to November, 1893, is not accurately known, as notification is not in operation in the district. However, the fact that within eleven weeks there occurred no fewer than twenty-eight deaths from this disease, as compared with but one such death in the preceding eight months, points to an epidemic of considerable proportions, probably between two and three hundred attacks. The inquiry was conducted carefully and systematically, with the result that neither the water-supply, milk-supply, nor general sanitary conditions could be implicated as the cause of the outbreak. The cases were fairly equally distributed, and no connexion could be traced between their incidence and local drainage or other defects; indeed, the majority of cases occurred in houses where the drains were in good condition. On the other hand Dr. Wheaton believes that the susceptibility to infection and the severity of attacks are probably influenced by exposure to the effluvia from privy middens and the impregnation of the surrounding soil. The precise origin of the outbreak is a matter of doubt. There had been a large fair in the town at the end of August, whilst ever since the previous year "septic" throats had prevailed in association with measles or scarlet fever. But if the origin of the outbreak was mysterious there can be no doubt as to the influence of schools in spreading the disease. The outbreak coincided with the reopening of the schools, and the families attacked were almost exclusively those whose children attended the public elementary schools. The incidence of the disease was mainly on children under fourteen years of age, and in nearly every one of these the first to be attacked was attending one or other of the schools. When to this is added the lack of sufficient sanitary precautions, of disinfection and the like, the spread through the school attendance of children from infected houses accounts for a great deal of the epidemic. Dr. Wheaton found that sore-throats were exceedingly common among the school children, and he himself met with several cases among the children of the town generally, including those who were below school age. The relationship of these forms of sore-throat to diphtheria is discussed, and the inference to be drawn is that this must be very close. It is remarkable that these throat affections undoubtedly prevailed most in insanitary houses with defective drains, ill-constructed middens, and the like. The bacteriology of these forms of sore-throat is a subject which is worthy of elucidation, and its study may throw some light on their alliance with diphtheria.

The remarkable outbreaks of a form of Epidemic Skin Disease amongst the inmates of certain metropolitan workhouse infirmaries, to which attention was first directed in 1891 by Dr. Savill at Paddington and Marylebone infirmaries, forms the subject of a lengthy report by Dr. Monckton Copeman. His inquiry related to the outbreaks in 1893 and 1894 at the infirmaries of Bethnal Green, Bow, Shoreditch, St. Marylebone, and St. George's-in-the-East. The clinical and pathological characters of the affection are lucidly described, their resemblance to pityriasis rubra and acute general eczema pointed out, and the fact that this was associated with marked febrile disturbance, the eruption being followed by great desquamation and not infrequent relapse. The fatality was from 5 to 12 per cent. of the attacks, the fatal cases being generally in the aged, and in some preceded by albuminuria and uræmia. It can hardly be said that the etiology of this peculiar affection has been fully cleared up. The subjects were all fairly advanced in years and of both sexes, and being infirmary subjects were mostly suffering from chronic ailments. The disease could not be attributed to any ordinary sanitary defects, although it is stated—as may naturally be expected—that lack of ventilation seemed to be responsible for its spread and for the severity of attack. In one instance it seemed as if the milk-supply had to do with the outbreak, but in another infirmary there was no reason to suspect that this article of diet had any such relationship with the disease. Nevertheless, in the former instance there was so marked a coincidence between the first occurrence of the affection and a change in the supply of milk, and a similar coincidence between other outbreaks and the milk-supply from the same contractor, that it is difficult to altogether set aside the hypothesis. Dr. Copeman and Dr. F. W. Andrewes made bacteriological investigations into the disease, but they failed to detect any specific organism other than a staphylococcus identical with one that is known to occur in healthy skin. The report is furnished with several portraits and with clinical charts.

The important subject of Lead Poisoning from the consumption of Water derived from certain Moorlands has been for several years under consideration. In 1885 Dr. Sinclair White, then medical officer of health of Sheffield, had reported that the implicated waters had an acid reaction, and in a communication to the Local Government Board upon this report Mr. W. H. Power had suggested that the special quality of such water which rendered it capable of dissolving lead might possibly be due to the agency of a microphyte. It was then decided to make an exhaustive inquiry into the prevalence of lead poisoning amongst the consumers of moorland waters and to determine more precisely the conditions under which the water acquires this property. An interim report on the inquiry is here published from Mr. Power's pen. The investigation began in 1890 and is not yet completed. It was determined to study these waters on their gathering grounds, and for this purpose the laboratory work was carried on at Settle, first by Mr. and Mrs. Atkinson of Settle, under the supervision of Dr. Barry, and later by Dr. Houston. An extensive preliminary inquiry had shown that, whereas in the West Riding lead poisoning

[1] The First Notice was published in THE LANCET of Sept. 28th, 1895.

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attributed to moorland water was widely recognised, it was hardly known in districts of Lancashire, and not at all in Cumberland and Westmorland. The report (page 335) says: "How far this contrast in the amount of observed lead poisoning in the several counties was to be thought of as referable to intrinsic differences in moorland water as such, to precautionary measures, private or public, that had been taken, or to want of recognition of lead poisoning that was tending to occur could not be judged of from the data supplied, so that it was seen that in these aspects the subject would require further study, which has accordingly been undertaken."

The Settle investigations had, prior to Dr. Houston assuming their direction, established the fact that not only was the solubility of lead associated with acidity of the water, but that no other condition was implicated, the research being carried on with a particular water, of which samples were gathered and examined regularly week by week for a long period (the specimens of water were taken from Burnmoor from November, 1891, to April, 1893). The continuous labour involved in these investigations must have been considerable; their result is concisely summarised by Mr. Power as follows (page 338): "As the outcome, therefore, of exact study of the natural history of different classes of waters from the given gathering ground, one class alone of such waters—that obtained from certain pools in the peat—was found to possess in marked degree, and persistently, ability to dissolve lead. And, further, among a plurality of conditions, physical and chemical, appertaining to this particular class of water, one alone was found distinctly and uniformly parallel to its property of readily dissolving lead—namely, acidity of nearly every sample."

To Dr. Houston has been assigned the task of extending these observations in the direction of determining the differences in action on lead exercised by water, and the correlation of acidity and lead-dissolving property in regard of moorland waters. More important still has been the attempt to determine the cause of the acidity of moorland water. This work is still in progress, but it suffices here to state that he has succeeded in finding an intimate connexion between the development of acidity and the presence of certain bacterial organisms derived from peat, the morphological and biological characters of which are described in an appendix to the report. Thus it will be seen that there is every probability that Mr. Power's sagacious inference from his study of the facts of the Sheffield observations in 1885 is likely to be verified, and a way found of depriving moorland water of this obnoxious quality.

A report on Cholera in Germany during the winter of 1892-93, by Dr. F. W. Barry, and a memorandum on the sanitary survey of the ports and riparian sanitary districts made by the officers of the Board during 1893, as well as the various memoranda issued on the subject of cholera by the medical officer, keep this important question fully under notice. Dr. Thorne Thorne also makes a report with his colleagues of the British delegation upon the International Sanitary Conference of Dresden.

The space devoted to the record of scientific investigations undertaken for the department during the year is not so large as usual, but the interest of the reports contained in this part is in no way inferior. Dr. Klein, continuing his studies on the Etiology of Typhoid Fever, shows that the differentiation between the typhoid fever bacillus and the bacillus coli (considered to be identical by some French authorities) obtains outside the animal body in water. He proposes to further study the behaviour of these two organisms in waters of various characters and under various conditions. In his examination of the water furnished by the supplies at Worthing and at Rotherham during the epidemics in those places he found true bacillus coli, as well as a bacillus closely resembling it, and in a few colonies a bacillus presenting the characters of the typhoid fever organism. Dr. Klein also carried out a series of experiments upon monkeys, both by feeding and inoculation, with the typhoid fever bacillus without obtaining any evidence of the lesions of that disease in the animals, except that in the latter group (inoculations) some presented splenic enlargement and one had also enlargement of lymphatic glands. Nor were the results of bacteriological examination more conclusive, and, as Dr. Thorne Thorne says, they were too indefinite for Dr. Klein's purpose. He next proceeded to inoculate calves subcutaneously with cultures of the typhoid fever bacillus; no febrile disturbance followed, but the lymphatic glands of the inoculated region were swollen and yielded the typhoid fever bacillus "in abundance." It remains to be seen whether this organism can multiply in the tissues of the milch cow, and, if so, "if it is at any time capable of passing out of the animal's body by way of the milk gland or milk," and this Dr. Klein proposes to investigate. The same observer contributes a further Report of his researches on the Antagonisms of Microbes, in which he shows that no poisonous action is exerted by intra-peritoneal injections in guinea-pigs of large doses of the intra-cellular substance of bacillus anthracis, of bacillus diphtheriæ, and of bacillus of fowl cholera respectively, which therein differ from Koch's cholera vibrio, Finkler's vibrio, the bacillus coli, the typhoid fever bacillus, the bacillus prodigiosus, and the proteus vulgaris. Nor does such injection (in the case of the three first-named) "confer any immunity whatever against, or any tolerance of, a further injection with the living microbes." The bacillus of grouse disease, however, resembles the second group in the protection conferred by injection of its intra-cellular substance into the guinea-pig. Dr. Klein also reports on Psorosperms in their Relation to the Etiology of Cancer in a paper largely critical of the work done by other observers on this subject, concluding that the intra-cellular bodies alleged to be parasitic in nature are to be explained by nuclear and other changes. He excludes, however, from this category the amœba-like bodies discovered by Kerotneff and named by him "rhophalocephalus carcinomatosus," but even these are sparse in distribution and may have no etiological relationship with the cell proliferation of carcinoma. Some further research on the Etiology of Vaccinia is also reported by Dr. Klein. It consists mainly in the record of failure to cultivate vaccine lymph either directly on culture media or indirectly by using the tissue of glands enlarged after inoculation of the guinea-pig or calf with vaccine lymph.

Dr. Sidney Martin gives a preliminary report of his investigations upon the Chemical Pathology of Tetanus, his general conclusions as so far obtained being: "(1) That in all cases of traumatic tetanus there are present, in the spleen and in the blood, the products of bacterial action—viz., albumoses, and certain acid organic bodies; (2) that to the albumoses must be ascribed the production of the fever of tetanus—they produce no tetanic convulsions; and (3) that the other extract contains the substances which are the direct excitants of the muscular spasms in tetanus."

The volume concludes with a paper by Dr. Cautley on the Bacteriology of Catarrh, the nasal secretions being examined in ten cases, which, although yielding several microbes, did not contain any to which specific characters could be attributed; and also papers by the same observer on the Micro-organisms found in the Bronchial and in the Mesenteric Glands.

THE CASE OF MR. R. B. ANDERSON.

FROM time to time we have recorded the various stages reached in this case, and quite recently [1] we gave a *résumé* of the whole case. It will be remembered that the jury who tried Mr. Anderson's case in England returned a verdict in his favour, but the presiding judge entered judgment for the defendant on the ground that no action would lie against a judge in his judicial capacity. This judgment was upheld on appeal. Mr. Anderson gave notice to set aside this judgment, but the Court ordered it to be struck out of the list. He then served a notice of motion to have the original motion restored, and on Thursday, Oct. 24th, personally applied to the Court for leave to have this motion heard, and that the judgment should be set aside as void or voidable on the ground that, since the judgment had been given, he had discovered certain new facts which, he alleged, disqualified Lord Esher, one of the judges constituting the Court of Appeal, from taking part in the judgment. As Lord Esher was sitting on the bench now, Mr. Anderson applied that the Court should be properly constituted, stating that he had authorities to show that the Court had power to set aside its own judgments, and explaining that, as an action was pending against Lord Esher at the time an appeal was made, the Court which heard the case was not properly constituted and the judgment not a judgment at all. The Court, however, dismissed the application.

Mr. Anderson, we understand, will now take the case to

[1] THE LANCET, Aug. 31st, 1895.

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the House of Lords, providing he is not deterred by the consequent expenses. But, surely, Englishmen, who in times past have fought some noble battles for their rights in cases almost as hopeless as this appears to be, will not withhold the sinews of war for a cause which concerns themselves as much as it does Mr. Anderson. The justness of his cause has been recognised by law, but because his oppressor is one who had the right to administer the law Mr. Anderson is compelled to go without redress.

The Civil Rights Defence Committee, whose address is 5, Mitre-court, Temple, have charge of the case, and we wish them God-speed in their efforts.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wolverhampton Urban Sanitary District.—The county borough of Wolverhampton, one of the thirty-three great towns, had during 1894 a corrected death-rate of 21·66 per 1000, as against an average for the thirty-three towns of 19·59. Its zymotic death-rate (3·23 per 1000) was, too, above the large towns average, which was 2·24. In the matter of scarlet fever mortality Wolverhampton takes first place with a rate of 0·63 per 1000, against an average of 0·21. The social conditions appertaining to the east sub-district of the borough are, Dr. Henry Malet considers, very largely responsible for the high death-rate of Wolverhampton. As an instance of the protective value of vaccination to persons exposed to small-pox Dr. Malet gives the following table showing the number of vaccinated, unvaccinated, and re-vaccinated exposed in infected houses and the protection afforded in each case:—

—	Persons.	Cases of small-pox.	Deaths.	Very severe.	Severe.	Mild.	Very mild.
Vaccinated	241	54	3	2	4	6	39
Unvaccinated	21	8	2	3	3	—	—
Revaccinated	10	—	—	—	—	—	—

To the ten revaccinated persons referred to in the table may be added thirteen members of the staff, all of whom remained exempt from attack. In dealing with the question of scarlet fever Dr. Malet alludes to the much higher fatality-rate which characterised the cases occurring in the east sub-district as compared with those in the west, the difference being equally marked both in home treated and hospital treated cases. A certain number of enteric fever cases which occurred in Wolverhampton during 1894 may possibly have been due to the consumption of infected watercress; while a small outburst of scarlet fever was brought home to milk infected with that disease. Dr. Malet makes some interesting observations on "return" cases of scarlet fever, a subject which we notice is to be discussed at the Epidemiological Society on Nov. 15th by Mr. T. W. Thompson, the author of that admirable monograph on the Natural History of Infectious Diseases contained in vol. ii. of Stevenson and Murphy's "Treatise on Hygiene and Public Health."

Dumbarton County Sanitary District.—In his annual report for 1894 Dr. J. C. McVail sets before his sanitary authority the general principles which should be held in view with regard to the formation of special scavenging and cleansing districts according to the provisions of the Local Government (Scotland) Act, 1894. From the scavenging facilities afforded by the Act Dr. McVail anticipates very great benefit, and he points to the danger which must necessarily accrue from the present air pollution caused by "heaps of decomposing filth collected behind almost every house." Dr. McVail records some interesting outbreaks of infectious disease in his report. In one instance a local outbreak of enteric fever may have had its origin either in a polluted water-supply or in manure from Glasgow. Under either circumstances there would appear to be need of reform; the water should be protected from risks of pollution, and the manure traffic should be so carried on as to diminish the nuisance as much as possible; covered sheds should be used for unloading, as Dr. McVail advises, and covered carts and waggons for transport. A peculiar outbreak of diarrhœa occurred at Woodilee Asylum during 1894. The first few cases were all in one ward, and several cases occurred in adjoining beds. There were three deaths. Drainage, food, milk, and apparently water were excluded as causes of the outbreak. On the whole, Dr. McVail was inclined to regard this disease as an irritative diarrhœa capable of conveyance atmospherically from bed to bed or by nursing, cooking utensils, or night-stools. Once developed, it manifested an ability to attack able-bodied individuals, such as nurses and others exposed to contagion; in fact, the outbreak seems to have borne some resemblance to that which occurred at Greenwich Workhouse in 1893. Into the question of rivers pollution Dr. McVail does not enter in his annual report, as the subject is to be dealt with in special reports, one of which, that relating to the Gareloch, is noticed below.

Bolton Urban Sanitary District.—The estimated population of Bolton for 1894 was 118,303, and the number of persons to an acre 50·2. The fall which has taken place in the general death-rate of this district since 1851 is one which should encourage the sanitary authority. For the four decades comprised within the years 1851 to 1890 the average rates per 1000 were respectively 30·7, 27·5, 23·8, and 21·8; per 1000 for the four years 1891–94 the average rate was 21·7, and for the year 1894 18·7.

ESTUARY POLLUTION IN DUMBARTONSHIRE.

In his annual report for 1894 Dr. J. C. McVail, the medical officer of health for the county of Dumbarton, omitted any detailed reference to rivers pollution in his district owing to the fact that the subject was about to be dealt with in special reports. The first of these reports, that referring to the pollution of the Gareloch, has just reached us, and it is certainly an extremely interesting document. The Gareloch is a branch of the Clyde estuary, and as such the Rivers Pollution (Prevention) Act does not apply to it without an Order from the Secretary for Scotland. The waters of this arm of the Clyde are much polluted by human excrement, and with a view to the discontinuance of such pollution an endeavour is being made by the Dumbarton County Council to bring the Gareloch under the operations of the Rivers Pollution (Prevention) Act. As a means to this end an elaborate report has been made to the Rivers Pollution Committee of the Council by Mr. Francis Buchanan, convener of the Public Health Committee, and Dr. McVail. The inquiry relates solely to the pollution of the Gareloch, and it has been deemed advisable to confine the inquiry to the drainage of the dwelling-houses on the shore of the loch and pollutions of the vessels anchored in, or plying on, its waters. The effects of the pollutions of the Clyde upon the condition of the Gareloch have not been dealt with. In order to establish the degree and effect of the pollutions experiments were made in regard to the currents in the loch and to the amount of suspended fæcal matter present. The observations with respect to the currents were made with heavy wooden floats sunk well into the water by means of a leaden keel, and kept in view by means of a flag; it was found that cork floats were too much influenced by the wind to give a correct idea of the currents. The results of the float experiments were very interesting, as they showed that excreta from ships in the loch tend to be carried up and down its waters rather than to pass out into the Clyde. The observations with regard to the matter in suspension were made with tow-nets consisting of bags constructed of fine but strong muslin which were towed behind a steam launch. By this means much fæcal matter was collected, and it was demonstrated that one of the chief causes of pollution in the outer basin was due to the *Empress* training ship, with some 400 persons on board, which was anchored in this locality. These interesting observations were made by Mr. Pearcy of Owens College, Manchester, who had experience of this sort in the *Challenger* expedition, and the same gentleman also makes in the report some very interesting observations on the influence of pollutions upon marine life. That there is considerable pollution of the Gareloch has certainly been demonstrated, and the question now is as to whether the Secretary for Scotland will consider the facts adduced sufficient to justify him in

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bringing the Gareloch under the provisions of the Rivers Pollution Act, or sanctioning by-laws under Section 57 of the Local Government Act, 1889. The question is one of very considerable public importance, as doubtless other sanitary authorities, both in Scotland and England, cannot fail to be guided in some degree in their future action by the decision of the Secretary for Scotland.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6111 births and 4011 deaths were registered during the week ending Oct. 26th. The annual rate of mortality in these towns, which had been 21·0 and 19·1 per 1000 in the two preceding weeks, rose again to 19·7 last week. In London the rate was 17·5 per 1000, while it averaged 21·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·7 in Croydon, 13·1 in Huddersfield, 13·5 in Brighton, 15·5 in Bristol, and 15·9 in Leicester; the highest rates were 27·6 in Sunderland, 27·7 in Burnley, 27·8 in Liverpool, 30·5 in Salford, and 32·3 in Blackburn. The 4011 deaths included 583 which were referred to the principal zymotic diseases, against 895 and 670 in the two preceding weeks; of these, 203 resulted from diarrhœa, 121 from measles, 95 from diphtheria, 74 from "fever" (principally enteric), 47 from whooping-cough, 42 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases was registered last week in Derby; in the other towns they caused the lowest death-rates in Brighton, Portsmouth, Plymouth, and Nottingham, and the highest rates in Oldham, Swansea, Burnley, and Blackburn. The greatest mortality from measles occurred in Salford, Oldham, Swansea, and Blackburn; from whooping-cough in Wolverhampton; from "fever" in Oldham, Burnley, Bolton, and Sunderland; and from diarrhœa in Manchester, Swansea, Blackburn, and Burnley. The 95 deaths from diphtheria included 61 in London, 8 in West Ham, 4 in Birmingham, 3 in Cardiff, and 3 in Wolverhampton. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 114 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 26th ult., against 198, 158, and 119 at the end of the three preceding weeks; 14 new cases were admitted during the week, against 17, 9, and 7 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2833, against 2802, 2827, and 2838 on the three preceding Saturdays; 269 new cases were admitted during the week, against 252, 332, and 241 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 158, 175, and 215 in the three preceding weeks, further rose to 235 last week, but were 137 below the corrected average. The causes of 57, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Newcastle-on-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 18·7 per 1000 in the two preceding weeks, rose again to 18·9 during the week ending Oct. 26th, but was 0·8 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·8 in Edinburgh and 16·9 in Dundee to 20·3 in Glasgow and 21·1 in Paisley. The 545 deaths in these towns included 21 which were referred to diarrhœa, 12 to "fever," 11 to whooping-cough, 10 to scarlet fever, 9 to diphtheria, 2 to measles, and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against 94 and 91 in the two preceding weeks. These 65 deaths were equal to an annual rate of 2·3 per 1000, which was 0·6 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 62 to 53 in the three preceding weeks, further fell to 21 last week, of which 6 occurred in Glasgow and 5 in Dundee. The deaths referred to different forms of "fever," which had been 8 and 7 in the two preceding weeks, rose again to 12 last week, and include 9 in Glasgow and 2 in Edinburgh. The 11 fatal cases of whooping-cough were within two of the number in the preceding weeks, and included 5 in Glasgow. The deaths from scarlet fever, which had been 4, 7, and 9 in the three preceding weeks, further rose to 10 last week, of which 6 occurred in Glasgow and 2 in Edinburgh. The fatal cases of diphtheria, which had increased from 2 to 6 in the three preceding weeks, further rose to 9 last week, and included 4 in Edinburgh and 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 97 and 92 in the two preceding weeks, rose again to 130 last week, and were 16 above the number in the corresponding week of last year. The causes of 34, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·8 and 24·2 per 1000 in the two preceding weeks, further declined to 20·7 during the week ending Oct. 26th. During the past four weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the rate during the same period being 17·1 in London and 17·6 in Edinburgh. The 139 deaths registered in Dublin during the week under notice showed a decline of 23 from the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against 29 and 20 in the two preceding weeks; of these, 6 resulted from diarrhœa, 5 from "fever" (principally enteric), 2 from whooping-cough, 1 from small-pox, 1 from scarlet fever, and not one either from measles or diphtheria. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 2·5 in London and 2·7 in Edinburgh. The fatal cases of diarrhœa, which had been 17 and 12 in the two preceding weeks, further declined to 6 last week. The deaths referred to different forms of "fever," which had been 6 and 4 in the two preceding weeks were 5 last week. The mortality from whooping-cough showed an increase, while the mortality from scarlet fever was below that recorded in the preceding week. The 139 deaths in Dublin last week included 18 of infants under one year of age, and 32 of persons aged upwards of sixty years; the deaths of infants showed a further marked decline from those recorded in recent weeks, while those of elderly persons showed a slight increase. Five inquest cases and 6 deaths from violence were registered; and 45, or nearly a third, of the deaths occurred in public institutions. The causes of 9, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL O'FARRELL has arrived in England on transfer to the Home Establishment, and his successor, Brigade-Surgeon-Lieutenant-Colonel Macnamara, has arrived in Cairo. Surgeon-Colonel Maxham has embarked for South Africa in relief of Surgeon-Colonel Hamilton. Surgeon-Captain Macdonald has been transferred to Gosport, Surgeon-Captain Doyle to Cork, and Surgeon-Lieutenant Prynne to Alderney. Surgeon-Captain Maturin has arrived from Gibraltar on completion of a tour of service.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Henry William Alexander Mackinnon, D.S.O., retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following promotions are made in the Bombay Medical Establishment:—Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—J. W. Clarkson and J. Parker. Surgeon-Captain to be Surgeon-Major:—C. J. Sarkies. Surgeon-Captain F. E. Swinton succeeds Brigade-Surgeon-Lieutenant-Colonel Hay as Personal Assistant to the Principal Medical Officer, Bombay Command, the latter officer having vacated the appointment on transfer to the Civil Department. Surgeon-Lieutenant-Colonel F. C. Barker and Surgeon-Captain W. E. Jennings have respectively delivered over and received charge of the Rajkot Prison. Surgeon-

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Major J. Crimmin, V.C., and Surgeon-Major M. Collie have respectively delivered over and received charge of the Ratnagiri Prison. Surgeon-Captain A. L. H. Dixon, A.M.S., retires from the service, receiving a gratuity.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeon R. S. P. Griffiths to the *Alexandra*. Staff-Surgeons: C. A. Macaulay to the *Pembroke*; A. Patterson to the *Endymion*; M. Ronan to the *Warspite*; Herbert Canton to the *Immortalité*; J. L. Lambert to the *Narcissus*; Hugh W. Macnamara to the *Cordelia*. Surgeons: M. L. B. Rodd to the *Grafton* and *Redpole*; F. E. Rock to the *Endymion*; R. T. A. Levinge to the *Vernon*; F. D. Lumley to the *Pigmy*; F. J. A. Dalton to the *Plover*; E. D. Minter to the *Pembroke*; J. C. Durston and P. M. May to the Hong Kong Hospital; H. N. Stephens to the *Centurion* for the *Esk*; W. B. Macleod, M.B., to the *Hearty*; J. H. Pead to the *Alacrity* and for recommissioning; A. E. Kelsey to the *Daphne*; H. Harris and W. Spry to the *Grafton*; E. S. Miller and H. H. Pearce to the *Wildfire*; Cecil H. Rock to the *Vivid*; Thomas W. Phillip to the *Jackal*; Edward S. P. Eames to the *Blenheim*; John M'Ellwell to the *Centurion*; Walter J. Bearblock to Plymouth Hospital. Surgeon and Agent: W. J. Carmichael at Collieston.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel Samuel Smith, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers. Surgeon-Lieutenant Francis James Lewis Warwick, M.B., 1st Tower Hamlets Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Lieutenant T. J. Schollick resigns his commission. 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant R. J. Hughes resigns his commission. 2nd Volunteer Battalion the Hampshire Regiment: Surgeon-Captain R. T. Cæsar to be Surgeon-Major. 1st Dumbartonshire: Surgeon-Captain T. F. Macdonald, M.B., resigns his commission. 26th Middlesex (Cyclist): Surgeon-Lieutenant R. S. O. Dudfield, M.B., resigns his commission.

THE CHITRAL EXPEDITION AND ENTERIC FEVER.

We learn that, notwithstanding the great care that was taken in regard to the camping grounds and water-supply for the troops on the late expedition, enteric fever broke out in some of the British regiments composing the force. The Commander-in-Chief in India during his recent tour of inspection ordered that samples of the water used by the troops at various camps should be forwarded for chemical and bacteriological examination. We need scarcely point out, however, that it does not at all follow that the samples so forwarded will be identical with the water which was consumed at the time of the outbreak. The conditions may have altogether altered in the meantime; and it is also possible that some of the corps affected in the field may have brought the disease with them from their cantonments. It is alleged in the *Pioneer Mail* of the 3rd ult. that in the wing of the Derbyshire Regiment at Benares all the drinking-water has been boiled since April 1st last, but the results as regards the prevalence of enteric fever have not been at all encouraging. An experiment of this kind is not conclusive, however; although the water may have been boiled for the troops, we cannot be sure that they all drank it or that the boiled water was not subsequently contaminated by being passed through fouled barrack-room filters, to say nothing of the men having consumed impure water in the drinks supplied them in the bazaar. It is a singular fact that enteric fever is one of the scourges of all European armies in the field, and nothing should be left undone to discover and remove, if possible, the causes of this being so. Although we regard contaminated water as one of the most direct and best-established causes of enteric fever, we do not feel at all warranted in saying that it is the exclusive cause. There is still much to be learned about the causation of enteric fever in tropical and subtropical climates, and still more, perhaps, as to the best practicable methods of preventing it on service.

PORTABLE INCINERATORS ON FIELD SERVICE.

It has been suggested that incinerators should in future become a regular part of the camp equipment of Indian campaigns. No doubt incinerators would prove most useful in various ways, especially in sanitation. That is quite obvious but what is not by any means so obvious is the practicability of applying the suggestion. Every ounce of weight to be carried is of importance in a campaign. In every military expedition the great difficulty to be overcome is transport. It amounts to a platitude to say that the multiplication of impedimenta to meet all required needs may become such as to put all rapid movement of a force out of the question, and military success is, after all, the paramount object of warfare. It has also been suggested that portable steam disinfectors should be taken on service, but it seems to us that it might be better and cheaper in the end to burn all infected clothing at once under such circumstances instead of attempting to disinfect it by heat. In favour of incinerators, it may be said that, in addition to their utility in effectually destroying camp refuse of all kinds, they could be employed for this and other purposes. As regards fuel, a proposal of the late Professor de Chaumont, we believe, about the employment of petroleum under certain circumstances might be worth consideration. Our wars in India and elsewhere are seldom on a large scale and commonly in very difficult countries as regards the use of wheeled transport, and are very different in these respects from big Continental wars. At the base of operations and at large temporary camps on the line of communications the supply of incinerators might be practicable; they would certainly be very beneficial in many ways.

AN EXAMPLE WORTHY OF IMITATION.

A wealthy French lady named Furtado-Heine has given her villa at Nice to the Minister of War with a view to its conversion into a "residence of repose" for fifty officers belonging to either land or sea forces. The donation comprises an annuity to cover all expenditure incurred on account of the sick officers as well as the up-keep of the premises and the wages of the *personnel*. What a boon an institution of this description would be to many an officer in our army whose health has broken down in India or elsewhere and whose relations are not rich enough to give him all the comforts necessary for his recovery. It is greatly to be desired that the example afforded by this generous lady may find imitators on this side of the Channel. It would be impossible to devise a more popular and patriotic means for utilising superfluous funds.

DEATHS IN THE SERVICES.

Inspector-General Sir Wm. Mackenzie, K.C.B., C.S.I., at his residence in London on Oct. 29th. He entered the Madras Medical Service in 1835, was Field-Surgeon with Lord Strathnairn in Central India 1857–58, and was appointed Hon. Physician to the Queen in 1857.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon Surgeon-Lieutenant-Colonel Charles Cormack Greig, 2nd Volunteer Battalion the Gordon Highlanders.

MATRONS' COUNCIL.—At a meeting of the above society, held in the Medical Society's rooms on Oct. 24th, 1895, Mrs. Bedford Fenwick in the chair, a paper was read by Miss Isla Stewart, matron of St. Bartholomew's Hospital, on the subject of a Uniform Curriculum of Training for Nurses. The replies received from matrons and others to a number of questions bearing on the subject were taken up in detail, special attention being directed to the very full expression of opinion from Miss Nightingale. The ease with which ignorant and unsuitable women, of little or no training, obtain work as fully-trained nurses was pointed out, and it was urged that State registration of certificated nurses was the only means of adequately combating this evil. A preliminary course of training and a preliminary examination were advocated, as enabling the authorities to more properly discriminate between candidates and insuring a smaller number of failures during the first year of training, to the great benefit of the hospital patients and the permanent nursing staff. Other questions discussed in the paper were: the manner in which the three years of training should be spent, the establishment of a central board of examiners, the form of certificate to be granted by hospitals, and whether payment or entrance fee should be demanded of the nurses. Discussion on the subject followed, and at the conclusion of the meeting a motion was unanimously carried approving of a uniform curriculum of training for nurses.

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Correspondence.

"Audi alteram partem."

DUBLIN INFECTIOUS HOSPITALS SCHEME.

To the Editors of THE LANCET.

SIRS,—I have read with deepest interest your leading article upon the attitude of the council of the Dublin Sanitary Association towards the draft scheme, prepared by the superintendent medical officer of health of the city of Dublin, "for the formation of a board for establishing hospitals for infective diseases in the county Dublin."

Although I have the honour to be the President of the Dublin Sanitary Association I do not presume to speak on behalf of the council of that body, which will at the proper time, no doubt, justify the deliberate conclusion at which it has, after due consideration, arrived in regard to Sir Charles A. Cameron's scheme. In my private capacity, however, I desire to make a few remarks upon a topic with the bearings of which I may without presumption claim to be familiar. You say: "The county of Dublin is about to institute an organisation for the isolation of infectious diseases, and the draft scheme has been prepared for submission to Parliament." This, Sirs, is not an accurate statement. The draft scheme has indeed been prepared. It has also been explained to a meeting of representatives of the public bodies concerned, all of whom were very careful to make it perfectly clear that they were present to hear, but not to vote for or against, the scheme. They went to the meeting on Oct. 10th invested with neither power nor authority by the bodies of which they were the delegates. Several of these bodies have since that meeting considered the scheme and repudiated it. The board of guardians of the Rathdown Union have refused to coöperate in any way in the scheme. The Kingstown Township Commissioners have decided to take no further action with reference to it. The Commissioners of the important and wealthy Pembroke township do not approve the scheme and have refused to send representatives to serve on a subcommittee appointed to carry out details. Thus one-half of the "County Dublin" has already declared itself dead against the scheme, which is a "City of Dublin" scheme from beginning to end.

In discussing the first objection urged by the council of the Dublin Sanitary Association you speak of removing "infectious patients from the six or seven general hospitals and similar institutions *in which* such patients are now treated." What do you mean by the words "*in which*"? Surely it is a notorious fact that no general hospital in Dublin receives into its wards infectious patients other than those suffering from typhoid fever. The fever blocks attached to these hospitals are isolated in the grounds surrounding the main buildings. This is the case at the Meath Hospital, Sir Patrick Dun's, the Adelaide, the City of Dublin, and Steevens' Hospitals. Into these fever blocks, further, small-pox has never been received since 1878. As regards other infectious fevers there is, so far as I know, not a scintilla of proof—if you will, it has yet to be proved—that typhus, scarlet fever, or measles has ever spread from the isolated fever wings into the main hospital buildings. In some cases the fever wings are perhaps not all that they should be, but this is a matter of detail. In the face of this explanation you will hardly stand by your answer to the second objection of the council of the Dublin Sanitary Association that the scheme practically deals with one disease only—namely, small-pox. You write: "This argument, however, altogether ignores the fact that other specific infections easily traverse the smaller air spaces comprised *within one and the same institution*, and that the abandonment of the practice of *receiving scarlet fever and similar diseases in the general hospitals* of London and elsewhere has been brought about as the result of the experience that such cases could not *be received into the hospitals in question with safety to the other patients*." No such state of things has existed in Dublin for at least fifteen years. I am glad you frankly admit the force of the third objection of the council to the scheme. It will be bad enough to substitute salaried medical officers for the independent clinical physicians who at present attend fever patients in the epidemic wings of the general hospitals. But it will be nothing short of a disaster to the public, as well as to the profession, if medical students are discouraged from studying fevers by such a change of teachers and by the removal to a distance of their "fever cases." As to the last objection of the council, you say it "is one which carries but little weight." I cannot doubt that this is really your deliberate opinion, but possibly your experience lies among the Anglo-Saxon rather than among the Irish poor. For thirteen years I acted as physician to Cork-street Fever Hospital; for more than twenty years I have been physician to the Meath Hospital; and from this experience I emphatically dissent from your conclusion. The lower orders among an Irish population dread the very name of a fever hospital, and the difficulty of inducing parents to send their sick children to hospital is enormously increased when the order is for a fever hospital and not for the fever wing of a general hospital. I gladly accord my tribute of praise to the present resident medical officers of Cork-street Fever Hospital for the manner in which, by tact and kindness, they have within recent years succeeded in making that institution comparatively popular, but Dr. J. Marshall Day and his colleagues will, if I mistake not, bear me out in what I have stated.

The council of the Dublin Sanitary Association, in the preamble to its objections, distinctly recognised the advisableness of providing adequate and safer accommodation for the treatment of patients suffering from small-pox and other infectious diseases in Dublin and its vicinity, as well as the urgent necessity which exists for the establishment of convalescent homes for patients recovering from such infectious diseases and of refuges for the reception of the inmates of infected houses. But these desirable reforms could all be carried out by a liberal interpretation and enforcement of Sections 149 and 155 of the Public Health (Ireland) Act, 1878, without the necessity of going to Parliament with a revolutionary, cumbrous, unwieldy, unpractical, and unworkable scheme which in one short fortnight has been spurned by half the people who were to work it.

I am, Sirs, your obedient servant,

JOHN WILLIAM MOORE, M.D. Univ. Dubl., F.R.C.P.I.,
Senior Physician to the Meath Hospital, and Consulting Physician to Cork-street Fever Hospital, Dublin.

Fitzwilliam-square-west, Dublin, Oct. 28th, 1895.

*** In answer to Dr. J. W. Moore's question as to the meaning of the words "*in which*," we would say that we regarded "in which" as referring to the treatment of the infectious cases within the precincts of the same institution; and we had regard to the fact that, unless the whole administration of a fever block was entirely distinct from that of other blocks, there was risk of communication of disease from one block to the other. As regards diphtheria, the danger is probably a still greater one; the experience of the Metropolitan Asylums Board as to this is more than suspicious. Our reference to "the smaller air spaces" was governed by similar considerations.—ED. L.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—A representative committee of seven medical men practising in Taunton and the surrounding district has been formed to consider what measures can be taken to prevent the increasing abuses connected with club practice. I understand that the medical men at Bridgwater (Somerset) have declined to accept the terms offered by the National Medical Aid Company, which has sent another medical practitioner to the town.

I am, Sirs, yours faithfully,

Shrapnels, Taunton, Oct. 28th, 1895. C. E. ABBOTT.

To the Editors of THE LANCET.

SIRS,—As a small contribution to the history of "the Battle of the Clubs," the following facts may be of some interest to your readers. In a Midland town of about 50,000 inhabitants, chiefly composed of the industrial class, several agents are at the present time employed by a certain insurance company in a thorough canvass of the town. As an inducement to take out policies, these men are offering to provide insurers above fourteen years of age with free medical attendance, and in addition to give the same attendance to all members of the family under this age for

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a weekly payment of one halfpenny each. Nor is this offer without warrant, because when illness does occur a medical man drives up in a smart victoria, the coachman's hat being decorated with a cockade.

I am, Sirs, yours faithfully,

Oct. 29th, 1895. ADMIRER.

To the Editors of THE LANCET.

SIRS,—At the annual meeting of Convocation of Victoria University, held at Manchester on Wednesday, Dr. John Brown moved a resolution, which, in view of the forcible articles now appearing in your pages under the title "The Battle of the Clubs," will be read with particular interest: "That, in the opinion of Convocation, it is desirable that medical graduates of Victoria University should decline to accept any appointment of any medical aid or similar association in which the conditions of the appointment are such as to degrade the professional man to the position of a paid servant in a trading company." The motion was not proceeded with, but I submit that it is the kind of action taken by Dr. John Brown that is most required if the profession at large is to preserve its self-respect and independence. I am, Sirs, yours faithfully,

Kensington, Oct. 31st, 1895. M.B.

UNQUALIFIED ASSISTANTS AND THEIR PRINCIPALS.

To the Editors of THE LANCET.

SIRS,—In your issue of the 26th inst. I notice that you have drawn the attention of your readers to an inquest held the previous week in the Newington Mortuary (S.E.) on the body of Ellen Preswell, an infant of seven weeks. The mother resided at 77, Pollock-road, Walworth, and was confined of twins early in September. In commenting on this case you state that you have derived *all* your information from the *Daily Telegraph*, and you add further that you shall be glad if there be any incorrectness in your version of the facts to have them corrected by the principal in the case. I gladly avail myself of your kind offer. The report is not correct, because, in the first place, it would make it appear that my assistant attended Mrs. Preswell in her accouchement; and, secondly, that he received a fee *for* so attending.

Such is not the case. I, personally, attended her, and, with the exception of the nurse, no one else, certainly no medical man, was present during her delivery. The mother afterwards made a very good recovery, but of the children I had very slight hopes. It is quite true that my assistant paid a few visits to Mrs. Preswell when she was in the convalescent stage, and on one of these occasions he received *my* fee for attending her. There is nothing wrong about that, I think—nothing, in my opinion, to justify the use of the word "fraud," nor for the insinuation that I allowed my unqualified assistant to do the most important part of my work. Although, from the beginning, I had very little hopes of either of the infants surviving, I refused a certificate on the death of the second child as a protest against what appeared to me to be negligence on the part of those most responsible for seeing it was properly attended to. It is not because the child was of premature birth and delicate that every care should not be taken to preserve its life or prolong its existence. At any rate I did not, under the circumstances, feel justified in giving a certificate, and as my conscience rules my conduct, I am afraid under similar conditions I would again feel obliged to refer the matter to the coroner. My assistant did *not* give a certificate in the case of the child first dead. When she applied for it I was ill in bed, and to save me the trouble he simply filled in the blank spaces and I certified the cause of death. I could, of course, do so in this case, as the interval between birth and death was comparatively short, besides having warned the mother when the child was born that more likely than not she would not be able to rear it. The other I had not seen for some weeks previous to its death. Was I not right to refuse a certificate? I think so.

"Unqualified assistant" seems now to be a term of reproach. Why I know not. Many men that I know of passed creditably every examination but the Final, and previous to its coming off were obliged through death or unexpected reverses of fortune to leave their college and earn their own living. Many of those men to my knowledge led, even as students, exemplary lives; some of them gave evidence of superior intelligence—and are they now, after the years they spent studying medicine, to be precluded from earning their living as assistants? I should hope not. It was misfortune—not their fault—that obliged them to abandon a profession they would have adorned. Such a man was my late assistant. In the notice printed in THE LANCET above the advertisements affecting those gentlemen you state that the General Medical Council do not object to their being employed by practitioners when resident in or near their employers' houses. Permit me to state that my assistants are always under my immediate supervision. We work at the same surgery, and I always take the greatest precaution before accepting the services of unqualified men to warn them that none of the privileges which principals have imposed upon them by the General Medical Council must be ever broken through. Whether those conditions were broken through in this case or not your readers can now see for themselves. I certainly do not think so.

I am, Sirs, yours faithfully,

JAMES J. PHELAN, L.R.C.S. Irel., &c.

84, Rodney-place, New Kent-road, S.E., Oct. 31st.

THE SURGICAL ASPECT OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—In common with many of your readers, I have read Mr. Treves' address in THE LANCET of Oct. 26th with great interest. It is refreshing to read his vigorous comments on the use of that "ghostly relic of the past"—the word "scrofula." So-called "tonics," cod-liver oil, and iodine paint he dismisses with as much contempt as on previous occasions he has dealt with that belated ghost, the linseed poultice. May they all be comfortably buried in the nineteenth century. There is, however, one point in Mr. Treves' paper that I think deserves greater emphasis—viz., the importance of insisting on climatic treatment in the earliest stage of surgical tuberculosis. This principle is readily admitted in theory, but, judging from my own experience, is not always acted upon in actual practice. It is pitiable to see the hopelessly incurable cases that drift down to this district after they have wasted valuable months and even years in trying the effects of "hypophosphites," cod-liver oil, and so-called tonics. The profession and the public have at last recognised the uselessness, if not cruelty, of sending cases of advanced pulmonary tuberculosis to linger and die away from home. Is it too much to ask that surgical tuberculosis should be considered from the same standpoint? I am quite aware that the tubercle bacillus in attacking the lung is attacking a vital organ; at the same time the analogy is sufficiently exact to demand a similar method of treatment. There are dozens of excellent health resorts in England adapted for cases of surgical tuberculosis; in fact, they outnumber by ten to one the resorts suitable for cases of pulmonary disease, because in the treatment of the former a calm and equable temperature is not of such great importance. Much more could be said on this subject, but I do not wish to labour the point. We who live away from crowded cities are able to testify to the sometimes extraordinary effects of plenty of fresh air and sunshine with appropriate surgical treatment. I am glad to see such a distinguished authority as Mr. Treves protesting against over-operating in gland cases. Many glands that I have reluctantly given the benefit of the doubt have disappeared, to my surprise, without the use of the knife, tonics, or even hypophosphites. I know of few problems more difficult to decide than the exact time to operate in some cases of tuberculous glands. I trust that it may not be presumptuous for a provincial practitioner to have called special attention to the importance of the climatic treatment of tuberculosis of bones, joints, and glands at the earliest possible period, and that this variety of the disease should be treated on the same principles as obtain in the treatment of tuberculous phthisis. I am, Sirs, yours faithfully,

Margate, Oct. 29th, 1895. BERTRAM THORNTON.

INFECTIOUS DISEASES IN MAN AND BEAST: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—The subject which I venture to bring before your readers is of such wide scope that I must condense my remarks as much as possible. It is now fully recognised,

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and every day becoming more apparent, that the infectious diseases of man and the inferior animals are in many cases identical, or at least due to a common cause. Anthrax is common to men and animals, in the former assuming the varied forms of malignant pustule and wool-sorters' disease. Hydrophobia is common to men, dogs, cats, &c. Diphtheria is found in birds and seems to have been transmitted through them to human beings. The relations between scarlatinal disease in the cow and in the human subject are of pressing interest and importance. These are merely examples; I purposely refrain from extending the list to save space. What I wish to urge is that an establishment or establishments should be made in the United Kingdom where the infectious diseases of animals could be practically studied by members of our profession, by veterinary surgeons, and by laymen who were interested in cattle, horses, &c. This may seem to be rather a "mixed" interest; but a moment's reflection will show that it is a "common" interest, since those different classes of men would be furnished with an opportunity of studying subjects which are of intense interest and importance to them all, and the result of such study would be a benefit to mankind and the lower animals. For our profession it would mean a saving of human life and suffering, in the case of veterinary surgeons it would mean success in checking epidemics among horses and cattle, and in the case of agriculturists it would mean a saving of stock and consequently of money. It seems to me that these interests form a very wide and strong basis, and one which should ensure State recognition and support. Of course, as a member of the medical profession, I write in the interests of humanity, but my cause is strengthened by the pleas of benefits to the lower creatures and the saving of money to stockholders. Are there not establishments of this kind on the Continent? Why should we, a rich and practical people, lag behind in such good and necessary measures? If Dr. Thorne Thorne, the worthy medical chief of the Local Government Board of England (who has rendered such valuable services to public health), should see fit to take the matter up it would soon be carried to a successful issue.

I remain, Sirs, your obedient servant,

JAMES W. ALLAN, M.B. Glasg.

India-street, Glasgow, Aug. 5th, 1895.

"THE ADMINISTRATION OF OATHS IN COURTS OF LAW."

To the Editors of THE LANCET.

SIRS,—With respect to your annotation in this week's issue (p. 1058), in which you say you have been unable to discover when the practice of kissing the Testament commenced, I beg to say that in "Haydn's Dictionary of Dates," fifteenth edition, 1876, p. 521, under "Oaths," it is stated: "Oaths were taken on the Gospels so early as 528, and the words 'So help me God and all Saints' concluded an oath until 1550." The authority for this statement is not given, but if substantiated it would show that the *use* of the Gospels (irrespective of kissing the same or not) is of very ancient date. I merely mention this as an interesting point in history. I have always thought kissing the Book most objectionable on all grounds.

I am, Sirs, yours truly,

J. E. BULLOCK, M.D.Brux.

Ladbroke-grove, Notting-hill, London, W., Oct. 28th, 1895.

DEATH RETURNS IN THE STRAITS SETTLEMENTS.

To the Editors of THE LANCET.

SIRS,—In the "Notes from Singapore" in your issue of Aug. 31st there are two mis-statements which I appeal to your sense of fair-play to correct. The first occurs under the heading, "The Government and the Municipality," and is as follows: "The death return for April was delivered by the Government to the municipal authorities so late as June 1st; that this was the first special indication to the medical officer of health that the death-rate in April was so unusually high." The second mis-statement is under the heading, "The Present System of Registration," &c., and is as follows: "In this way this official is kept in total ignorance of the death-rate of the district which is his special care, and he can have no guide or indication which might lead him to suspect the presence of any unusual fatal element until some weeks later." The real fact (entirely omitted by your correspondent) was, and is, that a return of the number of deaths registered by each deputy-registrar within the municipal area was supplied immediately, *every week*, to the municipal health officer. This fact was publicly mentioned by the president in the municipal council,[1] and on July 8th the president of the municipality wrote to the Government: "I have carefully gone over with the municipal health officer the weekly death returns for the months of April, May, and June last, as supplied to him by the registrar-general." It is to be regretted that, owing to the distance between this place and London, your correspondent's report should have had so long a circulation uncorrected.—I am, Sirs, yours faithfully,

MAX. F. SIMON, M.D.,
Principal Civil Medical Officer and Registrar-General of Births and Deaths, Straits Settlements.

Singapore, Oct. 1st, 1895.

*** We have received a communication to the same effect from Dr. W. R. C. Middleton, medical officer of health for Singapore. We regret to have been misinformed by our correspondent.—ED. L.

ANNUAL MEETING AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to call the attention of Members of the Royal College of Surgeons of England to the fact that the annual meeting of Fellows and Members takes place on Thursday, Nov. 7th, at 3 o'clock P.M. precisely, at the College, Lincoln's-inn-fields? Members are urgently requested to attend on that day and give their support to important resolutions affecting the welfare of the Members and the government of the College which will be submitted to the meeting by the Society of Members of the College.

I am, Sirs, yours obediently,

JOSEPH SMITH,
President of the Society of Members of the Royal College of Surgeons of England.

THE THERAPEUTIC VALUE OF INTESTINAL ASEPSIS.

To the Editors of THE LANCET.

SIRS,—I was much interested in reading in THE LANCET of Oct 26th the remarks of Dr. Williams on the treatment of typhoid fever by the antiseptic method of using chlorine. I wish only to say that as far back as 1857, during my apprenticeship in Yorkshire, we used this treatment for a severe epidemic of scarlet fever, and since that time I have always used chlorine in the treatment of enteric fever with the very best results; so that this way of prescribing can hardly be attributed in the first place to Dr. Yeo.

I am, Sirs, yours truly,

Harrow-road, Oct. 29th, 1895. A. L. GRIFFITH.

THE VALUE OF COD-LIVER OIL.

To the Editors of THE LANCET.

SIRS,—On reading Mr. Treves' learned discourse on the Surgical Aspect of Tuberculosis, published in THE LANCET of Oct. 26th, I was much struck with the following paragraph on the treatment of this disease. "Tuberculous subjects, especially children, appear to be benefited by taking an extra amount of fatty matter in their food during the cold weather. This can be supplied in the form of fat, butter, or cream. There is no excuse, so far as I am aware, for the administration of cod-liver oil. In all probability there is no more nauseous form of fat to be found, and I am not aware that it contains any chemical quality other than that of oil. ..... If adults like this oil by all means let them take it; but it is unkind to force it upon children," &c. Now, in view of the fact that practically every surgeon orders cod-liver oil in this and other diseases, and also that children so thoroughly dislike it, I think that you would be doing the profession and public a kindness if you allowed the active and special advantages of this fat above ordinary fats

[1] See Straits Times of July 4th.

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and butter (for not many patients can get cream) to be discussed in your columns. Personally I have seen children who were taking the ordinary diet suitable to them, including butter and dripping, &c., improve markedly when ordered this oil as a medicine, and I have no doubt many other medical men have seen the same thing.

I am, Sirs, yours truly,

Oct. 28th, 1895. E. H. W.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1071.*)

DISUNION IN THE PROFESSION AND SLATE CLUBS AT GREAT GRIMSBY.

EVERY one of the towns so far visited in the course of this inquiry possesses a medical society. An effort to group and organise the medical profession has been made. The union may not be so complete or so far-reaching in its purpose as is desirable, still some sort of organisation exists. It seemed, therefore, that it was time to visit a town where there is absolutely no organisation and where the medical profession has never sought to act in union. For this purpose I selected Great Grimsby. It is a new town which has grown with the railways that rendered the inland fish trade possible. At the same time it is a town that has a population composed almost exclusively of fishermen, workmen, and business men. Under such circumstances the population is not likely to very generally appreciate the sacrifices necessary to acquire the training and education by which alone a practitioner can obtain his qualifications. The tendency is to estimate the value of a medical man's work by what he actually does in the presence of the patient, and by the medicine he gives him, and no allowance is made for his previous expensive studies. Thus it often happens that patients refuse to pay fees unless a bottle of medicine is given them. They do not think much of the advice the medical man offers; but a bottle of medicine is something substantial, and they realise that it would not be honourable to take it without payment. They can go to a shop and talk to the shopman without paying, but they must pay if they take any of his goods away, and they look upon the medical man in the same light. They will take his advice gratuitously, but think themselves bound to pay for the medicine. Under these circumstances 2*s*. 6*d*., including a bottle of medicine, is considered a somewhat high price. Medicine can be had much cheaper from a druggist. It is, therefore, difficult to explain to so unappreciative a people that the pay given to club medical men is inadequate. They not infrequently answer that they think the pay is very good and would be glad to do the same work for the same price, thus showing how completely ignorant they are of what the work is in itself and what previous study and labour are required. From people of this sort there is little or no hope of obtaining good fees. Grimsby is a town where there is plenty of work to be done, but for very small fees. It is not a town that offers any particular inducements to medical men, and in comparison with the number of the population there are not many practitioners established there. Those who have settled in the town have not shown any particular disposition to come together and work together. In the district of New Clee, which has been recently added to the borough of Grimsby, the principal local practitioners have met. They have formed no society, but they have spoken of their common interests and have agreed in an unofficial manner to help each other and to work together. This sort of friendly understanding does not constitute a union. The profession at Grimsby are therefore still disunited. Nor does there seem to be any hope for the present that a union will be constituted. This, I was assured, could only be done if some outside agency or person were to take the matter in hand. No local practitioner holds so pre-eminent a position and exercises a sufficient personal influence to take the initiative. The competition between the practitioners is so keen that, if any one of them took any decided steps with a view to form a medical union, his motive might be misinterpreted. It is with regard to such towns as Grimsby that a great national union could render efficient service. An appeal from some outside and respected authority should be made to the practitioners of the town, calling upon them to form themselves into a union, and this would probably meet with a favourable response.

It is needless to say that, with so large a working-class population, there are many benefit societies at Grimsby; but the speciality of this town seems to consist of slate clubs organised by public-house keepers. There is much to be said in favour of the purpose for which friendly societies were originally constituted, but this scarcely holds good with regard to public-house slate clubs. To secure medical aid for people who are really too poor to pay the usual fee is a very good object, and the grievance against friendly societies is that they have departed from their original aim. But the public-house keeper has hit upon this very ingenious device for keeping his customers together, and proposes to take upon himself the trouble of organising for their benefit a slate club. The general terms are the payment of 6*d*. per week, the publican acting as cashier. Out of this sum of 26*s*. per annum there is paid to the medical officer of the slate club 2*s*. 6*d*. for each member and for each year. The disposal of the remainder of the money varies a little in different clubs. As a rule, a financial allowance is made to those members who fall ill during the course of the year. The great attraction, however, of the slate club is the fact that it is a yearly club. At Christmas all the money that remains in hand is equally divided among all the members. If there has not been much illness, there is a goodly sum to share among those members who have been regular in their payments; so that it sometimes happens that the members have returned to them at Christmas 10*s*., sometimes 15*s*. or more, out of the 26*s*. they have paid in 6*d*. weekly instalments. This sum, coming at Christmas, is extremely useful. Then there is another great advantage. The publican does all the work; he organises and manages everything, and no one has the slightest fear that he will tamper with the money entrusted to his care. There is no bother about electing committees, secretaries, and treasurers, or obtaining registration under the Friendly Societies Act. The member of the slate club is spared all these anxieties and troubles, and he has to pay no fees for management: every penny he gives he gets back again either in cash or in kind. In one sense nothing could be more advantageous to the members—i.e., if one assumes that the members are all regular frequenters of public-houses. It is also easy to understand that it is in the publican's interest to take upon himself the trouble of organising a slate club which helps to keep his customers round his bar. They go there at least once a week to pay their subscriptions, and when at Christmas they receive their share of the balance remaining in hand a good portion of it may be spent over his counter.

If slate clubs afford considerable advantages to the members and the publicans who organise them the same cannot be said with regard to the medical officers engaged in this service. First of all, the allowance is only 2*s*. 6*d*. per member. Nevertheless, one medical practitioner assured me that he made a very good income from slate clubs. He pointed out that a great many of the members were fishermen, and when they required medical attendance they might be away fishing in some distant part. Some of them also belonged to friendly societies and were not certain to call for the slate club medical man. Then the slate clubs were in the main composed of men in the prime of life, so that, in the natural course of events, they would not require much medical care. Therefore, though the sum of 2*s*. 6*d*. was very small, there was not much work to be done. Also, as the members of the slate clubs were anxious to have as large a balance as possible remaining to be shared amongst them at Christmas, they took good care to keep out of their clubs unhealthy members.

Another practitioner whom I questioned on the subject did not take such a favourable view of this institution. He pointed out that it was to the interest of the publican to make hard drinkers members of his club, and this meant a great deal of work for the medical attendant. On the other hand, the publican must be careful to exclude men who were constantly ill, as this would prevent the benefits and thus disappoint the other members. Yet, again, it was objected that when one slate club got rid of a bad member he soon managed to gain entrance into some other slate club. However this may be, there is one point on which no doubt whatsoever can be entertained—namely, that there can be no such thing as a wage limit. If there was a wage limit it would be the other way about; for, instead of

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seeking to prevent persons with good incomes from joining the club, the publican would find it suit his purpose best to keep the poor away. Thus it is that smack-owners, skippers of fishing boats, and others who make good yearly incomes are members of slate clubs, and by means of these institutions only pay 2*s.* 6*d.* a year for their medical attendance. The difficulty with regard to a wage limit, therefore, applies especially to the slate club; but this institution will be viewed with far greater apprehension by those who are more solicitous of the dignity than of the material interests of the profession. It is bad enough that medical men should be utilised as a sort of bait to enable touting agents to secure the payment of premiums for life insurances; still, if people are persuaded to insure their lives because medical insurance is thrown in as an extra inducement, there is nothing injurious, wrong, or immoral in the insurance of a life. But by becoming the medical officer of a slate club the practitioner practically lends his skill and science to promoting the interests of the publican.

Under these circumstances I was not surprised when one of the practitioners on whom I called explained that members of clubs entitled to the attendance of the medical officers of the clubs often only consulted them for slight ailments and, when anything serious occurred, called in a private practitioner and paid the usual fee. Another medical man told me that he was treating an entire family except the father, who was attended by his club medical attendant because, having to pay for his family, this man preferred that they should have someone other than his club medical officer. On the other hand, it must be recognised that some club officers lead a terribly hard life in this town. Seamen arrive with a large accumulation of wages in their pockets; this they spend in riotous living, and so rapidly that it would seem as if their sole object was to get rid of the money as soon as possible. Perhaps they have an instinctive feeling that the more quickly it is spent the less mischief will be done. Nevertheless, there is time enough for much disease to result. Practice among such a population is not pleasant, and at Grimsby there are very few better-class patients to relieve the monotony of attending either very poor people or a rough, though fairly well-paid, seafaring population.

Grimsby, Oct. 24th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The School of Medicine.

IT is becoming gradually more and more difficult for any former student of the Liverpool Royal Infirmary School of Medicine to recognise his old school in the buildings of the Medical Faculty of the Liverpool University College. Formerly there was the second Royal Infirmary, a building defective from the very first in consequence of the architect having forgotten the stairs in his original plan, and in being a huge rambling pile of buildings. The School of Medicine was located in a small building the capacity of which was severely tested in 1860 by the rush of students who entered to escape the preliminary examinations. There was also the Lunatic Asylum and the Lock Hospital. Of all these buildings the last named is the only one which remains *in statu quo*. The third Royal Infirmary is as free from defects as its predecessor was full of them, being even in these days of almost daily improvements a model hospital. Of the old school building little remains, and before long it will in all probability have been entirely rebuilt. The buildings of the Liverpool University College occupy a considerable part of the adjoining space, which will soon be entirely covered with them. When these are completed the facilities for teaching chemistry and physiology will be equal to those of any medical school.

The Anatomical Rooms.

These continue to receive additions and improvements, and at the present time students possess ample facilities for the practical study of anatomy. Before long new buildings, which will add greatly to the comfort and convenience of Professor Paterson, his assistants, and the students, will be complete, while later it is hoped that greater accommodation for an increased number of students may be obtained.

Hospital Practice.

The proximity of the Royal Infirmary to the college induces the larger proportion of students to attend its practice. But the practice of the Royal Southern Hospital is recognised by all the examining bodies, and a certain proportion of students attend it. Before long there will be a new Northern Hospital on the site of the existing hospital, but with a greatly increased area, and efforts will be made by its medical staff to ensure the erection of a hospital which shall be in all respects worthy of "Greater Liverpool." The present hospital has for a long time past been wholly unequal to the demands made upon it.

Penetrating Wound of the Abdomen and of the Intestines.

Referring to the case of the woman admitted into the Northern Hospital under Mr. Puzey's care a fortnight ago, and given in detail in my last letter,[1] it is very satisfactory to state that she is still living and that there are hopes of her recovery. The injury was alleged to have been caused by her husband, who is not yet in custody. The case is of great interest both surgically and in its medico-legal aspect. It is certainly a triumph of surgery to change what might have been a charge of murder into one of wounding.

Oct. 29th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Court.

AT a meeting of the Edinburgh University Court held last week various matters of medical interest were decided upon. The recognition of the two Edinburgh Schools of Medicine for Women was continued for another year under the original conditions. It was also agreed that the pathological gallery in the Museum should be open one day a week to women students in medicine. The Court also admitted women to the advanced courses in botany and natural history for purposes of graduation in science and to the class of physics for purposes of graduation in medicine. Professor Selby of University College, Cardiff, was recognised as a teacher whose course in physics should qualify for graduation in medicine, and the University of Sydney was recognised as a medical school, the classes at which should qualify for graduation in medicine at Edinburgh both for men and women.

General Council of the Edinburgh University.

The statutory half-yearly meeting of this body was held last week in Edinburgh, Sir W. Muir presiding. Dr. Heron Watson was reappointed an assessor in the University Court, and Dr. Joseph Bell was appointed, in succession to Dr. John Duncan who had intimated that he did not desire re-election. The report of the finance committee indicated that under the new arrangements the University exchequer was running dry, and it was suggested that a combined appeal should be made to the public for funds. This, however, was objected to as the time was not opportune for such an appeal and also in view of the diminution in the number of students.

St. Andrews Ambulance Association.

The annual meeting of the subscribers to this useful association was held last week. It appeared that during the past twelve years 9942 men and women had been trained in ambulance work. The association had also instituted a waggon service and had distributed letters through the town. The balance-sheet showed a balance of £116.

Opening of the Royal Medical Society, Edinburgh.

This society was to have been opened last week by an address from Dr. Clouston. This arrangement, unfortunately, had to be abandoned owing to the illness of Dr. Clouston.

Sir James Crichton Browne at Hawick.

Sir James Crichton Browne lectured last week at Hawick on Brain Rest.

The Pharmaceutical Society's Proceedings.

In the Dundee Sheriff's Court a grocer's assistant was last week charged under the Pharmacy Act with selling opium, which at the time formed an ingredient in a quantity of Powell's balsam of aniseed. A plea of guilty was tendered.

[1] THE LANCET, Oct. 19th, 1895.

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The sheriff appears not to have sympathised with the prosecution, for he stated that if the sale of a substance, a mere ingredient of which was poison, was actionable it was sufficient for the prosecution of every publican and grocer in the city. He, however, after some differences with the counsel for the prosecution, accepted the plea, but said that if a case of the same kind was brought before him again it would require to be proved that the quantity of poison sold was likely to cause injury to health. The purpose of the Act was to protect the community and not to constitute a monopoly to any pharmaceutical or other society. The agent for the society stated that the Privy Council had compelled them to take proceedings. A fine of 1*s.* with expenses of £1 1*s.* was inflicted.

The Quatercentenary Celebration at Aberdeen.

The quatercentenary celebrations at Aberdeen University were duly carried out on Oct. 24th and 25th, but in consequence of the lamented death of Mr. Charles Mitchell, LL.D., which occurred last August, they were on a much less extensive scale than was originally contemplated. Mr. Mitchell's generous munificence has, among other advantages, enabled the University to erect a Graduation Hall and Students' Union, and to heighten and ornament the tower of the Marischal College. A clock and bell were also placed in the tower, and on Oct. 24th the clock was set in motion by Miss Mitchell, a daughter of the deceased donor, in presence of a very large assembly of members of the University and the general public. The handsome rooms composing the Students' Union were then formally opened, and the remainder of the day was filled up by divine service in King's College Chapel and social festivities. On Oct. 25th the Marquis of Huntly, who is the Lord Rector of the University, opened the new Mitchell Graduation Hall, and honorary degrees were conferred on a number of prominent individuals. In the afternoon the Lord Rector addressed a large audience his subject being entitled "Historical Interest," and the celebrations were brought to a close by a dinner and a torchlight procession in the evening.

Oct. 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dinner to Sir Christopher Nixon.

A COMPLIMENTARY dinner was given to Sir Christopher Nixon on Thursday, Oct. 24th, on the occasion of his receiving the honour of Knighthood. The assemblage at the Shelbourne Hotel included many members of the medical as well as of the clerical and other learned professions. The chair was occupied by the Right Reverend Monsignor Molloy; and among the company were the Most Reverend Dr. McCormack (the Roman Catholic Bishop of Galway), the Lord Mayor of Dublin, Sir John Banks, K.C.B., and Mr. Henry Thynne, C.B.

The Banbridge Union.

A special meeting of the Banbridge board of guardians has been held with reference to a statement by Dr. Moorhead, honorary secretary of the Workhouse Medical Officers' Association, read before a meeting of the council of the Irish Medical Association, in which the Banbridge Union was put in the lowest class—those in which proper sanitary appliances, efficient nursing, and suitable furniture are absent—and that the guardians had declined to make any improvement. In reply to such a charge a guardian pointed out that the sanitary scheme was prepared by an eminent London engineer, that there are constantly three trained nurses, with others in case of emergency, and that the infirmary beds had woven wire and hair mattresses; the dietary also was second to none in such places in Ulster. Dr. Hawthorne, medical officer, said there was no foundation for Dr. Moorhead's statement, so far as the Banbridge Union was concerned. It was then resolved unanimously that, having considered Dr. Moorhead's statement and heard Dr. Hawthorne's report, the board considered the aforesaid statement to be unfounded, and that it should be publicly contradicted.

Burning Accidents in Belfast.

At an inquest on Oct. 22nd on a fatal case of burning in a child aged five years attention was drawn to the number of such cases in Belfast. It was the sixth inquest of the kind held by the coroner in October, and during the twelve months ending Aug. 31st 232 persons had been treated for burns in the Royal Hospital, and of that number thirty-two had succumbed to their injuries. In a large number of cases of this nature the victims are children who through the carelessness of their mothers are left alone.

The New County Monaghan Infirmary.

The old infirmary building, which was disposed of for £1000, has passed into the possession of the governors of the county Monaghan Asylum, and at present is used as an auxiliary house for the treatment of lunatics; while the old gaol at Monaghan is being converted into a new infirmary. At present the governor's house at the gaol is being used as a temporary infirmary. The work of alteration and reconstruction of the gaol into an infirmary will probably not be completed until spring.

The Outbreak of Fever at Ardboe, County Tyrone.

At the weekly meeting of the Cookstown guardians, held on Oct. 26th, Dr. Clibborn, Local Government Board inspector, reported he had gone over the infected district with Dr. Burgess, and referred in the highest terms to the way in which Dr. Burgess and the relieving officer had discharged their duty under circumstances of great difficulty. Dr. Clibborn suggested that the sanitary authority might make use of the provisions of the Labourers Act with a view to the gradual improvement of the dwellings of the labouring classes, especially in the infected districts, where the people live partly by fishing and partly by agricultural labour. It is probable that want of cubic space in the houses where these people live, combined with overcrowding and filth, has had to do with this outbreak of typhus fever.

The Battle of the Clubs at Cork.

It will be in the recollection of your readers that a Mr. Carroll took proceedings in the Cork Police-court for the recovery of sick pay from his club, a branch of the Irish Foresters. The magistrates gave him a decree for the full amount, but the case came on again on appeal recently before the Recorder. Counsel were engaged in the case. It was admitted that a very hostile feeling existed against Mr. Carroll because he had thought fit to call in the assistance of a medical man unconnected with the club. The counsel representing the appellants directed his attention principally towards endeavouring to extract from the Recorder an opinion hostile to the action of the Cork profession in opposing the encroachments of the clubs, but the Recorder, who has the reputation of being a very sound lawyer, simply confined his attention to the case before him and avoided all extrinsic subjects. It was stated that the committee of the club felt annoyed because they have "an uphill fight," and they considered Mr. Carroll had deserted them by not continuing under the care of the club medical officer. Dr. O. T. O'Sullivan, under whose care Mr. Carroll now is, stated in evidence that the unfortunate man has a cavity in one of his lungs. The Recorder animadverted very strongly on the action of the committee in refusing sick pay to such a patient, and confirmed the decision of the court below, with 40*s.* costs. It is to be hoped this will prove a salutary lesson for the Cork clubs in more ways than one.

The Cork District Lunatic Asylum.

At a meeting of the board of governors held recently there was a protracted discussion with reference to the necessity of providing increased accommodation owing to the various boards of guardians objecting to be responsible for the charge of harmless lunatics. The expenditure likely to be involved is naturally causing much anxiety to the governors. One speaker suggested that a new building would cost £200,000, and added that if the present "wave of lunacy" should subside a more or less useless tax would have been put on the ratepayers, and he accordingly suggested that one of the existing workhouses should be fitted up as an auxiliary asylum. Another governor stated that at the end of last year there were 2021 inmates in the asylum, that there are 500 lunatics in the workhouses of the county, and 400 idiots at large, and he said that if the 500 lunatics in the workhouses, with perhaps the whole of the 400 idiots, were sent to them, their establishment would become unmanageable, at least from a medical point of view. Eventually a resolution was adopted to the effect that the increased accommodation should be provided within the present asylum grounds.

The Queen's College, Cork.

Dr. McArdle, who had been a student of the Queen's College, Cork, had the distinction of being the first out of

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all Ireland at the recent Royal University examinations for the degrees of M.B., B.Ch., and he is now Demonstrator of Anatomy in his *alma mater*.

Relative Consumption of Alcohol in England, Ireland, and Scotland.

A recent return shows that during the year 1894 the cost of drink consumed per head in England, Scotland, and Ireland was respectively £3 17*s.* 4*d.*, £3 1*s.*, and £2 2*s.* 8*d.* One of the Cork papers, commenting on the subject, says: "A significant fact about the figures is that they prove Ireland to be twice as sober a country as England and once and a half as sober as Scotland."

Oct. 29th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sero-therapy as a Prophylactic of Tetanus.

AN instructive paper on the above subject was read at the Académie de Médecine on Oct. 15th by M. Nocard of the Veterinary School of Alfort. He began his remarks by reminding his audience that, whilst being extremely sensitive to the influence of heat, the toxine of tetanus shared with that of diphtheria the property of filtering virtually intact through porcelain. It is possible to procure some specimens of tetanus toxine capable of killing the guinea-pig at the dose of $\frac{1}{5000}$th of a cubic centimetre; and M. Nocard has succeeded in killing strong horses with an injection of only $\frac{1}{10}$ c.c. or two drops of this same toxine. Animals subject to tetanus can, however, be rendered refractory to these poisons by the inoculation of minute doses of the pure toxine or of the toxine previously heated to 65° or 70°C., or again of the toxine mixed with weak Gram's solution. The inoculations should be frequently repeated at more or less short intervals and the dose injected gradually increased. MM. Roux and Vaillard, as also M. Nocard himself, have thus succeeded in immunising certain horses who subsequently remain indifferent to a massive injection in the jugular vein of 250 to 300 c.c. of tetanus toxine—a quantity sufficient to kill 2500 uninoculated horses. The serum of these immunised animals is, moreover, endowed with prophylactic properties. This anti-tetanic serum sometimes possesses quite remarkable powers; a certain horse "vaccinated" by M. Nocard supplies a serum so active that an injection of so small a quantity as the ten-thousandth part of the body weight of a guinea-pig guarantees that animal from the effects of a dose of toxine invariably mortal to the same animal unvaccinated. But the immunity of "vaccinated" animals, although acquired immediately after the injection, is short-lived, lasting only four, five or six weeks, and being in this respect distinctly inferior to "vaccination" with attenuated microbes. A conclusive experiment to prove the uselessness of "vaccination" with anti-tetanic serum even when combined with amputation of the inoculated part was then conducted by M. Nocard. Three long-tailed sheep each received in the tail extremity a splinter impregnated with dried tetanus spores. At the first sign of tetanus the tails of two of the sheep were amputated at a point twenty centimetres above the seat of infection. One of these tail-amputated animals then received a dose of serum adequate for the protection of the normal animal, these injections being repeated every two hours. All three sheep succumbed without any difference being discernible in the symptoms. But the prophylaxis of tetanus opens up a more hopeful field. In certain districts of France tetanus is extremely common amongst horses the subjects of operations or accidents, such as castration, bites of insects, a nail-wounded hoof, tail-docking, wounds of limbs, &c. Since December, 1894, M. Nocard has supplied to veterinary surgeons anti-tetanic serum, recommending the injection of 10 c.c. behind the shoulder immediately after the receipt of a wound, operative or accidental, liable to be followed by the disease, the "vaccination" to be repeated twelve or fourteen days later. This treatment was applied to 375 animals, 327 being horses, mules, or donkeys, 47 lambs, and 1 an ox. Each received two injections at a fortnight's interval of 10 c.c. each for the large and 5 c.c. for the small beasts (sheep). In each instance the injections proved inoffensive. All the animals belonged to stables or farms where tetanus had made victims some days, weeks, or months previously; several of them had as neighbours tetanic animals, and some had been wounded at the same time and in the same manner as non-treated companions who became tetanic. Not one of these "vaccinated" animals died. M. Picard, veterinary surgeon of Sourdou, lost from tetanus in four years fifteen horses after castration or tail-docking. In 1895 not one of his operated horses has had the disease, thanks to preventive "vaccinations" in infected localities. Again, M. Coret of Aubervilliers has met with thirty or forty cases annually of tetanus in horses during the last fifteen years. During the first half of the present year he has treated fifty-four wounded horses with the serum, the lesions all enjoying an unenviable reputation for tetanic complications. Not one horse contracted the disease. During the same six months the same practitioner saw seven horses with tetanus untreated with serum. Finally, M. Nocard received a telegram on May 21st, 1895, from M. Gellez, veterinary surgeon of Carvin, asking for serum for forty-nine recently castrated lambs. Nine had already succumbed to tetanus; on May 23rd a first injection of 5 c.c. was given to the forty survivors. Two of these died on the same day, whilst the thirty-eight recovered. The castration had been practised by the shepherd on May 2nd by the ligature (of the cord) method.

Paris Hospital Statistics.

I gather from official sources that the average numbers of patients present at one given time in the Paris hospitals are as follows: General hospitals, 7900; special hospitals, 2000; children's hospitals, 1900; and Maison Dubois (paying hospital), 149. The average annual admissions are: General hospitals, 115,000; special hospitals, 32,400; children's hospitals, 13,800; and Maison Dubois, 2290. The deaths in hospital were in 1892 (the latest mortality figures refer to this year, 1892) 16,682, 12,107 occurring in the general, 1254 in the special, 2825 in the children's, 159 in the temporary, and 537 in the paying (Dubois) hospitals. The number of days spent in hospital in 1892 were: General hospitals, 3,562,113 (women, 1,238,708; children, 318,752); special hospitals, 867,034; children's hospitals, 891,766; Maison Dubois, 96,270; and temporary hospitals, 153,819. The average annual number of deaths for the whole of Paris being 55,000, it will be seen that, adding to the figure 16,682 quoted above the 1800 occurring in *hospices*, a large proportion—about one-third—take place in charitable institutions. The strain on hospital accommodation is so great that of 69,899 applications for admission made at the Bureau Central in 1893, there were 38,689 refusals due to want of beds. The work done by the Paris medical confraternity may be judged of by the following supplementary figures: Patients treated gratis at home, 112,608; of these 33,336 were paupers and 79,122 only in straitened circumstances. This number (112,608) yielded 4057 deaths. There were 15,207 women attended gratis in their confinements at home.

The New Director of the Pasteur Institute.

The new director, Émile Duclaux, was born at Aurillac in 1840, entered the École Normale Supérieure in 1859, was admitted Agrégé des Sciences Physiques in 1862, from which year until 1865 he was Prèparateur to M. Pasteur. Docteur-ès-Sciences in 1862, he has been successively Professor at the Lycée of Tours (1865–66), Professor of Chemistry at the Faculté des Sciences of Clermont (1866–73), and Professor of Physics at the Faculty of Sciences of Lyons (1873–78). Returning to Paris as Professor of Physics and Meteorology at the Institut Agronomique, he was appointed the same year (1878) Lecturer at the Faculty of Sciences of Paris, where he has been since 1888 Professor of Biological Chemistry. A long association with M. Pasteur marked him out as the fittest person for the post of sub-director, a position he has now left for the directorship. In 1894 M. Duclaux was elected a Member of the Academy of Medicine and of the Academy of Sciences. He is, besides, an *officier de la Légion d'Honneur*. M. Duclaux is Director of the "Annales de l'Institut Pasteur," each number of which contains a contribution from himself. His published works include the following:—"Études relatives à l'Absorption de l'Ammoniaque et à la Production d'Acides gras volatils pendant la Fermentation Alcoolique" (Thèse de Doctorat-ès-Sciences, 1862); "Sur la Fermentation Alcoolique" (Comptes rendus de l'Académie des Sciences, 1863; ibid., 1864); "Sur un nouveau Procédé pour l'Étude et le Dosage de l'Alcool du Vin" ("Annales de Chirurgie et de Physiologie," 1874);

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"Sur la Matière colorante du Vin" (ibid., 1874); "Sur les Acides Volatils du Vin" (ibid., 1875); "Ferments et Maladies" (1882); "Premier Mémoire sur le Lait" ("Annales de l'Institut Agronomique," 1882); second memoir (ibid., 1883) on "Les Phosphates du Lait" (1894); "Sur le Rôle Protecteur des Microbes dans la Crème et les Fromages" (1894); and "Le Lait" (Études Chimiques et Microbiologiques, 1894). M. Duclaux is also the author of several memoirs on "La Sériciculture" in the "Annales de l'École Normale" and the Comptes rendus de l'Académie des Sciences (1869-78); and of sundry studies on "Le Phylloxéra" (*même recueil*, 1872-75). Dr. Roux, the new subdirector, whose name will be familiar to your readers in connexion with the new treatment of diphtheria, was born at Confolens in 1853. Beginning his medical studies at Clermont, where he worked in M. Duclaux's laboratory, he came to Paris, where he became Aide de Clinique at the Faculty of Medicine; Préparateur to M. Duclaux at the Sorbonne; and then Préparateur to M. Pasteur, whom he followed from the Rue d'Ulm to the Rue Dutot in the capacity of Chef de Service.

Oct. 29th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Bardeleben's Successor.

PROFESSOR König of Göttingen, who has been elected by the faculty of Berlin University as successor to the late Professor Bardeleben is reported to have consented to his nomination, and will within a few weeks undertake the two conjoint offices of Ordinary Professor of Surgery and chief surgeon of the Charité Hospital. He might have been appointed to this chair in 1882 in succession to the late Professor von Langenbeck, but as he then declined to leave Göttingen for Berlin Professor Bergmann was elected. Professor König is one of the most renowned surgeons of Germany and is very well known in Berlin as one of the most regular attendants at the annual surgical congresses and as taking an active part in the discussions. The weight of his authority has more than once been beneficially employed in restraining the undue enthusiasm of younger men for new methods and remedies, and although his opinions in this respect have sometimes been regarded as old-fashioned it has nearly always been the case that time has proved the soundness of his judgment. His treatise on Surgery is now the best German book on the subject, Bardeleben's work not having been re-issued of late years. He is also the author of a great many articles and memoirs relating chiefly to diseases of the joints. Being an excellent operator and a very able teacher, he is certain to be heartily welcomed by the medical profession and the students of this city.

Professor Virchow's Eulogy of M. Pasteur.

The Berlin Medical Society resumed its meetings on Oct. 16th, and the renewal of the professional gatherings, together with the opening of the University lectures, has now put an end to the dull season in Berlin medical life. At the first meeting Professor Virchow, the President, read an address commemorating the deceased members, and giving special prominence to the late M. Pasteur of Paris, who since 1892 had been one of the few honorary members of this society. He described the work of the eminent French *savant*, arguing that the society's estimate of his merits ought not to be influenced by the fact that he was not a friend of Germany, and declaring his personal opinion that the Berlin Medical Society had honoured itself by electing M. Pasteur as honorary member. He suggested that M. Pasteur's obvious aversion to Germany might be accounted for by the circumstances that Strassburg, the town where he had gained his first honours, had changed owners, and that his native district had witnessed one of the most unhappy periods of the war. It is a real comfort for all who dislike the intrusion of political hostility into scientific matters that Professor Virchow seized the opportunity to point out the immortal merits of the deceased. The German lay press, and, unfortunately, a small portion of the medical press as well, have been prompted by the occasional unfriendliness of M. Pasteur's utterances to stop short of an adequate appreciation of this great man. The warmth of Professor Virchow's speech and the ardent approval of his sentiments by the greatest medical society of Berlin sufficiently show that the German medical profession realises the greatness of the loss which science all over the world has suffered by the death of M. Pasteur.

Oct. 28th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

THE SIXTH CONGRESS OF INTERNAL MEDICINE.

Dr. Baccelli's Address.

ON Oct. 22nd the *aula magna* of the University was thronged in every part as his Excellency, Dr. Guido Baccelli, opened with an inaugural discourse the Sixth Congress of Internal Medicine. After a reference to the great International Congress held in Rome at the Easter of last year as encouraging Italy to reconquer her old position in the "foremost files" of medicine, his Excellency indicated the incessant movement, which was not always progress, in the medical world, and insisted that its goal was ever the same: the perfecting of clinical medicine and State medicine, both of them having as basis general and experimental pathology, which must that day be reinstalled in the post of highest honour. "With clinical medicine," he continued, "we cure the individual. With State medicine we conserve the people. The etiology of disease, with its vast horizons and its multiform reciprocation of scientific attempts to unveil it, no longer contemplates merely the morphological indication of pathogenic micro-organisms, but feels the necessity of prosecuting unswervingly the study of toxic products—an arduous undertaking in which, from the first discoveries of Koch, the Italian school pledged itself, as by a military oath, to coöperate." Pointing out how often new and prolific truths reveal themselves at the bedside before the laboratory confirms them by experimental demonstration, his Excellency proceeded: "The scientific movement of the day surges around the cure of infective maladies, and sero-therapy holds the place of honour. Behring's therapeutic conception was justified by events, but criticism, in its severer mood, clipped the wings of a too sanguine expectation. Sero-therapy in diphtheria constitutes to-day the method that numbers most successes; nevertheless, it leaves something to be desired, some material for new studies, so that we may reap the harvest it is capable of yielding. To-day one of our colleagues proposes sero-therapy even in tuberculosis. But a truce, gentlemen, to *a priori* judgments, possibly inspired by sentiments inadmissible in the cool contemplation of facts. In the impartial and severe response we shall have to pronounce before the scientific world let us not forget the famous motto of the 'Accademia del Cimento'—'Provando e riprovando' (by testing and re-testing)." From this his Excellency passed to another prominent theme before the Congress on "the metabolism whose activity in the human organism is at once its conservation and its defence. Of late years, even in other fields of pathology, Italian work, especially in the nervous system, earned fame for its authors and honour for their country. Once and again I have told you that, while respecting all, we should be jealous of our own achievement and not allow the scientific world to hold as of non-Italian origin those truths which had their birth-place in Italy. Some years ago one of our number had to show to Nannyn that what he announced as to the murmurs of the impaired heart had already been taught in an Italian clinique, and to-day we must adopt the same attitude towards some late French doctrine appropriating to itself the discovery of the lines of propagation of mitral murmurs (especially in insufficiency)—a 'discovery' which for thirty years had been a *locus communis* in Italian clinical teaching." Reverting, however, from this vindication of national merit to the brotherhood of science, his Excellency discoursed on the advantages of periodical meetings like the Congress which had brought them together, and concluded, amid loud applause, with the aspiration that *pari passu* with Italy's political resurrection would proceed her rehabilitation in the world of science.

Sero-therapy.

Dr. Pio Foà, Professor of Pathological Anatomy and Bacteriology in the University of Turin, thereupon delivered his report on Sero-therapy. I may summarise his conclusions as follows:—Sero-therapy is the result of patient, systematic

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research in the laboratory, and is founded on the reaction of a receptive animal organism to an infective agent introduced, like vaccine, by various methods, or on the reaction of the organism to the toxic products of the agent itself. Organisms endowed with natural resistance do not ordinarily react with the production of immunising and curative substances; the most effective reaction is given by the most receptive organisms. Hitherto the soundest results have been obtained by toxic infections, still the latest researches point to obtaining similar effects in septic infections. The notion that every infection is reduced to a simple poisoning and every reaction to the production of an antidote, is, perhaps, too absolute. We must distinguish the specific poisons (diphtheria, tetanus) from those which are not, while the reaction of the organism will possibly be excited either against the poison or against the protoplasm itself of the bacterium. Sero-therapy in diphtheria issues triumphant from the test of practice, and statistics establish for it a distinct diminution of mortality. Sero-therapy in tetanus has proved less efficacious in acute cases. The tetanic manifestations in such cases would indicate deep organic lesions already completed, against which sero-therapy would be unavailing. Still, sero-therapy is an excellent prophylactic. Sero-therapy in typhoid fever and cholera has yet to be tried. The main difficulty, perhaps, depends on the notable difference subsisting between experimental results and the natural course of infections in man. Important experimental studies have been made (and their results recently published in THE LANCET[1]) by Professor Tizzoni and Dr. Centanni on Sero-therapy in Rabies; but we await its more extended application to the human subject. The researches of Viquerat and Marmoreck give promise of the success of sero-therapy in the surgical field through infections by (for example) the streptococcus pyogenes. Dr. Foà's latest studies seem to solve the problem of sero-therapy in the diplococcic infection of the rabbit; he has yet to investigate the problem in animals of greater bulk admitting of the application of the results to man. Sero-therapy (he concluded) ought to be no bar to the development of prophylaxis. Both aim at preventing maladies; and sero-therapy, where it proves efficacious in preventive immunisation, will itself become a prophylactic measure. Dr. Maragliano, Professor of Clinical Medicine in the Genoa school, then took up the subject where Dr. Foà left off, and his views (already to some extent placed before the British Medical Association at its last meeting) may thus be epitomised):—The therapeutic serums, to develop their proper action, require the effective coöperation of the affected organisms. The value of sero-therapy can be determined only by clinical observation. Sero-therapy can manifest its peculiar action as well in acute as in chronic affections. The therapeutic serums hitherto employed in European practice are absolutely innocuous. Sero-therapy, in its clinical applications, has up to the present yielded indeterminable results in the streptococcic and typhoid infections; doubtful results in tetanus; promising results in pneumonia, which only requires a methodical clinical employment of it; positive results in tuberculosis, where it awaits nothing more than the confirmation of a case-list, which already bids fair to be an extended one; and impregnable and truly triumphant results in diphtheria.

Oct. 28th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera Intelligence.

DURING the last week there have been 18 new cases at Damietta and in a village adjoining it, many of them young children, and mostly mild cases. However 7 patients have died during the week, showing that the disease must not be trifled with, though it does not possess any of the alarming symptoms usually seen in the East when cholera first breaks out. At Mansourah some little excitement was caused by a man being found dead on a barge which had just arrived from Menzaleh. As Dr. Kaufmann found in this case the comma bacillus the clothes were burnt, the barge disinfected, and the man's companions were isolated in a tent in a field outside the town, where, after five days, they are all quite well. As this death showed that the disease probably existed at Menzaleh a native inspector was at once sent to seek out any sick there and to start a hospital. His first report now states that he has found 18 sick at Menzaleh and two neighbouring villages, besides which 5 cases have died. Since then Dr. Keatinge has been sent in a steamer to patrol the canal and the villages between Mansourah and Menzaleh, and he already reports that he has discovered 4 suspicious cases at a tiny village called El Kordi on this canal, about one-third of the way from Menzaleh towards Mansourah. He has left a medical man with these 4 cases and all necessary equipment. Dr. Kaufmann has found some cases of cholera in isolated villages of Lake Menzaleh. The whole of the cholera in Egypt is at present confined to two foci, Damietta and Menzaleh, both in free communication with each other, and both considerably behind the rest of Egypt in sanitary progress. At both places there is an abundant supply of good water coming from the Nile below Cairo, and the English irrigation engineer is himself superintending the supply. Of course there has been the usual demand for sanitary cordons, based on the most selfish and illogical reasons, but I glad to say that the Egyptian Government has accepted the advice of its English medical men and has decided, instead of cordons, to establish inspection stations for the examination of those coming from infected districts. In at least two instances temporary blocks on the railway and on a canal were caused by an attempt at a limited cordon, but these have now been removed as it was conclusively shown that their only effect was to impede bales of cotton and commerce generally, while no restriction could be placed on people using other routes, of which in this roadless country there are very many.

Need of Telegraphic Communication.

It is distinctly inconvenient that there is no telegraph between Mansourah and Menzaleh. It has been recommended to lay down a temporary wire, and in the meantime mounted orderlies are despatched every day with letters. There is no panic in the country, and people on the whole are behaving very well. Based on the experience of sixty years, there is a very widespread belief that cholera cannot seriously spread over the country at this time of year.

Mansourah, Oct. 23rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Inspection of "Way Passengers."

FOR the purpose of more effectually protecting the country against an invasion of cholera from Japan the United States Treasury Department established an inspection of passengers on the Pacific Mail Steamship Company's vessels returning from infected ports in that country. This inspection was not limited to passengers bound to the United States, but included also passengers who intended to disembark at Yokohama, or, in other words, "way passengers." The company objected to the action of the Consul at Kobe, who ordered this inspection, and appealed to the Secretary of the Treasury. The decision of the Secretary was that, "for the protection of the through passengers and the people of the country, it is as important that the way passengers, or those who are to stop at the intermediate ports, should be inspected. Otherwise the passengers bound for the United States would always be in danger of contagious and infectious diseases from such uninspected passengers. If persons who take local passage from Kobe to Yokohama, for instance, are exempt from inspection under the law, then for the same reason a shipload of passengers could without inspection be brought from Kobe or some other eastern port to a Canadian port on a vessel coming to the United States." The request to discontinue the inspection was therefore refused.

Results of Municipal Sanitation.

When the Health Department of New York was organised on a scientific basis in 1886 the death-rate was 35·04 per 1000. In 1868 it had fallen to 29·31. In twenty years more the rate was further reduced to 26·60. In 1893 the rate was 23·52, and in 1894 the lowest record was reached since 1814—viz., 21·05 per 1000 inhabitants. The decrease in the death-rate for twenty-five years represents a saving of over

[1] THE LANCET, Sept. 14th, 21st, and 28th, 1895.

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3500 lives annually and of over 80,000 lives during the quarter of a century.

The Epidemic of Cholera in Japan.

The medical officer in the United States Consulate at Yokohama, Japan, reports, Sept. 16th, that cholera has now existed in Japan for some five months, that it has been very widely disseminated, chiefly by the troops and coolies returning from the seat of the late war, and is now, or has recently been, present in every province of the empire. There are many centres of infection, so that the total number of disease foci is very great. The present epidemic has a mortality higher than the average, the death-rate for the whole country having, so far, ranged between 65 and 75 per cent., while in certain districts nearly every case has proved fatal. The total number of reported cases is 42,708, and the deaths 28,513.

Life in the Steerage.

The arrangements for steerage passengers on one of the best ocean steamers, the *Campania*, are as follows. The steerage quarters, which are situated on the lower deck, are divided into seven different sleeping apartments for the accommodation of some 700 or 800 passengers. There are separate apartments for the single men, single women, and married couples. The five apartments for the use of the two first-named classes are equipped with from 60 to 110 berths, measuring 6½ ft. by 2½ ft., which are built close together and arranged in tiers of two in the centre of each steerage. These berths are constructed of adjustable galvanised iron piping, thus preventing the accumulation of dirt so common in the case of the old wooden berths. Each passenger is provided with a clean straw mattress and a heavy rough blanket. Each time the steamer reaches port the old mattresses are burned and new ones taken on board, while the blankets are thoroughly washed and cleansed before the return voyage. The quarters for married people are aft, on the lower deck, in a "pocket" on either side of the vessel. Each of these pockets is divided into some twenty state rooms, each containing from two to six berths, which are furnished in the way already described. All the forward steerages extend across the entire width of the deck, are approachable by two entrances, and are well ventilated. The "pockets," which are confined to either the port or starboard side of the vessel, are less roomy and have only one entrance to each. The arrangements for ventilation in the steerage are exceptionally good on this ship. Besides the ventilation obtained from the hatchways and from the large flue ventilators a new ventilating attachment has been placed upon each porthole. It is generally necessary to close the portholes if the voyage is at all rough. This is done by fastening a heavy inch-and-a-half plate-glass cap over the hole, which lets in the light. Just outside the glass cap on the top of the port-hole are several small openings for ventilation. Each one of these openings is provided with a cork so placed on the inside as to allow the air to pass in, but should a heavy wave strike the porthole the force of the breaker drives the cork to its place, closing the openings for ventilation until the wave retreats. The passengers eat their three meals a day sitting on long rows of benches arranged before narrow shelves fastened to the sides of the vessel in the sleeping apartments. Each emigrant is provided on boarding the ship with a plate of heavy crockery, a knife, fork, spoon, and tin cup. These articles each individual is supposed to care for and keep clean during the voyage. After each meal a big pan of water is placed upon the floor in each of the steerages as a common cleansing place for all the dishes. As a matter of fact, however, less than one-third of the passengers ever take the trouble to wash their dishes. Two light and airy hospitals, containing twelve beds each, are situated on the main deck for the use of the sick. The steerage passenger medical officer attends to all cases of illness among the passengers. He is required to punch the inspection card of each emigrant daily after each examination, which is a guarantee to the inspection officers at the Immigration Bureau that the passenger has had no contagious disease. On a certain day during the voyage all the steerage passengers are mustered on deck by order of the ship's medical officer to pass the vaccination examination. If they are found to have been properly vaccinated they receive a certificate to that effect; if not, they are put on one side for subsequent treatment.

Oct. 16th.

Obituary.

LAUNCELOT ANDREWS, M.D., L.R.C.P. LOND., M.R.C.S. ENG., D.P.H. CANTAB.

THE announcement of the death of Dr. L. Andrews, which occurred on Oct. 29th at 22, Cheyne-gardens, Chelsea, will, we know, be received with the deepest regret by all who knew him. Launcelot Andrews was the eldest son of the Rev. W. R. Andrews, rector of Teffont Ewyas, Wilts. He was educated at Haileybury and St. Bartholomew's Hospital, where he held the appointments of house physician, house surgeon, ophthalmic house surgeon, and assistant electrician. Some five years ago he started practice in Chelsea, and for so young a man succeeded remarkably well. His death was due to a very rapidly growing malignant tumour of the abdomen. He was most popular among all with whom he had to do at the hospital. A hard worker in everything he did, always cheerful and apparently never tired, his untimely end — he was only thirty-one—will be a source of sorrow to his many friends as well as to his patients. He leaves a widow and one child.

ARTHUR MEREDITH WHITEHEAD, M.B., C.M. ABERD.

WE regret to announce the death of a well-known and highly respected colonial practitioner, Dr. Whitehead of Petone, Wellington, New Zealand, who first arrived in the colony about nine years ago and passed away on Aug. 30th at a comparatively early age. He was the son of a Nottingham alderman and was born in 1861. Having made up his mind to follow the medical profession, he became a student at the London Hospital and also attended classes at Aberdeen University, where he graduated in 1883. After a short experience of practice in Nottingham he made several voyages as surgeon of a passenger steamer plying to China, and in 1886 settled in Petone, which was thenceforward to be his home, although he made a long visit to England in 1894, returning to the colony in the beginning of the present year. The funeral was conducted with military honours, in presence of a great assemblage, including Government officials, military and naval officers, and representatives of various public bodies. Dr. Whitehead has left a widow and a young family.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Litthauer, "Physicus" of the Fifth Municipal District of Berlin, and a well-known local authority on sanitary matters. — Dr. Schütte, formerly Director of the Elizabeth Children's Hospital, Berlin.

DIPHTHERIA IN LONDON.—The returns for London in the matter of fatal diphtheria last week were, it is true, somewhat better than in the week immediately preceding, wherein 76 deaths from that disease had been registered. But even last week the registered deaths numbered 61, or 22 in excess of the corrected decennial average of the similar week of the years 1885-94. The malady is widely distributed over the metropolis, finding place in districts stretching from Greenwich, southward and eastward, to Enfield on the extreme north of the "outer ring." Of the 61 deaths, 7 belonged to St. Pancras, and 6 each to Islington, Poplar, and Greenwich sanitary areas. The cases finding their way into hospital are far from being the whole of the attacks arising from week to week, and much dissatisfaction is being felt by sanitary authorities at the small percentage of removals. The admissions last week were 115 in number, against 90, 102, and 115 in the three preceding weeks. The patients remaining under treatment for this disease on Saturday last numbered 675. In Greater London the deaths for three weeks in succession have been identical—namely, 27; and of this total last week there were 9 in West Ham, 7 in Edmonton, and 3 in Willesden registration areas. In the Edmonton district there has been a state of panic on account of the disastrous outbreak of the disease in the Waltham parishes, the sanitary condition of the places affected being seriously called in question.

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Medical News.

UNIVERSITY OF ABERDEEN. — The following candidates received the degrees of Bachelor of Medicine and Master in Surgery on Oct. 26th:—

Affleck, James, Scotland.
Auden, Arnold William Montford, B.A., England.
Ayatullah, India.
Bell, William Jarvis, America.
Bray, Ernest James, Australia.
Bruce, John, Scotland.
Campbell, Robert Brown, Scotland.
Carmichael, Edward William Scott, Scotland.
Coates, John Mandall, Scotland.
Crawford, James Mansfield, Ireland.
Crerar, Donald, Scotland.
Dewar, David Fitchie, England.
Dixon, James Herbert, England.
Elliott, George Christopher, England.
Evans, Alfred Thomas, Wales.
Evans, David, Wales.
Evans, William, England.
Fernandes, Ramsden Walker Luis, England.
Fitzgerald, William, New Zealand.
Fleming, Archibald Nicol, Scotland.
Fothergill, George Algernon, England.
Gibson, Francis Maitland, B.Sc., Scotland.
Guthrie, Roger Christian Lingard, Scotland.
Hewison, John James, M.A., Scotland.
Hewison, William, Scotland.
Hirst, John, England.
Johnson, Walter, England.
Lall, Chaman Chandu, India.
Lamb, James Henry, Scotland.
Leighton, Gerald Rowley, England.
Livingston, George Robert, Scotland.
Love, Alexander Mayne, Ireland.
M'Rae, George Douglas, Scotland.
Martin, James Sackville, Ireland.
Massey, James, Ireland.
Masson, George Henry, Trinidad.
Moore, William Andrew Wylie, Ireland.
Munn, Patrick James, Scotland.
Ogilvy, Stewart Grant, Scotland.
Park, Alexander John, Australia.
Pentland-Smith, Archibald Lumsdaine, M.A., B.Sc., Scotland.
Purves, Robert Black, Scotland.
Roberts, John Howard Digby, India.
Rodger, Robert Stuart, England.
Roe, Robert Lloyd, Ireland.
Roger, David, Scotland.
Ross, Alfred Peter, England.
Saldanha, Luis Cupertino, India.
Scott, James George Campbell, Scotland.
Sibbald, Bernard Ian Graham, Scotland.
Smith, Sydney Harold, England.
Theobalds, Arthur John Arundel, England.
Thompson, Charles Gurney, England.
Twidale, Frederic William, India.
Vos, Jacob William de, Cape Colony.
Williams, Lewis Arthur, England.
Wills, Frederick Telemachus, British Guiana.
Wilson, William Henry, England.

FOREIGN UNIVERSITY INTELLIGENCE.—*Marburg:* Dr. Joseph Disse of Halle has been appointed Professor of Anatomy.—*Pisa:* Dr. Minati, Professor of Midwifery and Gynæcology, has retired.—*Rome:* Dr. Galassi, Professor of Special Pathology, has retired.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting was held on Oct. 25th at the Hotel Mount Doré, when the committee's annual report and the balance-sheet were submitted. Mr. C. H. W. Parkinson, the retiring President, gave up the chair in favour of Mr. D. C. Embleton, President-elect. The following officers were elected for the ensuing year: Vice-President, Mr. A. G. S. Mahomed; Treasurer, Dr. Kinsey-Morgan; Secretary, Dr. H. G. Lys; Librarian, Dr. S. L. Clift; Committee, Mr. A. C. Kemble (Poole), Dr. W. H. L. Marriner, Dr. C. D. Muspratt, and Dr. F. W. Ramsay. The annual dinner was held after the meeting, at which twenty-three members and seven guests were present.

A NEW WORKHOUSE INFIRMARY.—An entirely new infirmary, a mortuary of noteworthy completeness, and a disinfecting chamber are approaching completion at the Guildford workhouse. The former consists of two blocks in duplicate united by the administrative buildings. Each block is 210 ft. long and from 24 ft. to 64 ft. wide, and consists of three storeys. On the ground floor are two separation wards of four beds each, a long ward for the aged and infirm with twenty beds, and two wards containing altogether seventeen beds for children and special patients; a day-room, offices, and exercising yard being attached. The separation wards only rise one storey; in other respects the first floor of each block follows the ground plan, while above are the nurses' day and night quarters. The staircases are of concrete, and heat is supplied by hot-air stoves. The administrative buildings include a large kitchen, surgery, and attendants' room, but the general cooking will be undertaken at the workhouse, with which a corridor connects the infirmary. Lying-in wards are over the administrative block. An "observation block" for suspicious cases—two wards and attendants' rooms—is built at a short distance. The mortuary consists of a viewing-lobby separated from the dead-house by a glass partition, as in the Morgue, a post-mortem room with operating-tables, and a hearse-house. A disinfecting chamber has also been built to provide the means of fumigating clothing by gas. The total accommodation of the new buildings is some 160 beds.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen, having passed the necessary examination for registered practitioners, have been admitted Licentiates of the College:—Edward Barker Barber, L.S.A. Lond., and Henry Ernest Watts, L.S.A. Lond.

ROYAL BRITISH NURSES' ASSOCIATION. — The first sessional lecture of the season will be given at 17, Old Cavendish-street, W., on Friday, Nov. 22nd, at 8 P.M., by Dr. Louis H. Parkes, medical officer of health, Chelsea, on the Importance of breathing Fresh Air.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—On Monday, Oct. 28th, in the theatre of the school, Dr. Howship Dickinson distributed the certificates of honour given to students who had gained scholarships, exhibitions, and prizes during the year. The recipients were: Mr. Walwyn Thomas, £100 Exhibitioner and Treasurer's Prizeman; Mr. Sidney Smith and Mr. Frank Morley, Brackenbury Prizemen in Medicine and Surgery respectively; Mr. E. T. Fison, Special Certificate of Honour in Medicine; Mr. R. A. Cooper, Brodie Prizeman; Mr. H. S. Barwell, Henry Charles Johnson and Proficiency Prizeman; Mr. R. E. Drake-Brockman, Brodie Prizeman; Mr. C. R. Keyser, Sir Charles Clarke's Prizeman; Mr. T. M. Neatby, Proficiency Prizeman; Messrs. H. S. Pendlebury, H. G. Deller, and Howell Evans, Entrance Scholars in Science; and Messrs. T. C. English, H. A. Chaplin, L. F. Cope, and Lawrence Jones, Entrance Scholars in Arts. Addressing the students at the close of the ceremony Dr. Dickinson warned them against the danger of becoming one-sided—a danger to be avoided by a legitimate degree of indulgence of an Englishman's natural taste for sport and by the cultivation of the great masters of English literature. For the works of Milton, Addison, and Gibbon he claimed special attention.

THE DIFFUSION OF SMALL-POX — There was some slight increase of small-pox in London last week as compared with the week preceding. The totals of removals had in the three weeks ended Oct. 19th been respectively 17, 9, and 7, but last week they were 14 in number. There was one registered death, that of an unvaccinated infant of six months of age removed from Chelsea to the hospital ship *Atlas*. According to returns from the Metropolitan Asylums Board and from Highgate Small-pox Hospital the patients remaining under treatment for small-pox numbered on Saturday last 114, a further slight decline on the total of 119 in the preceding week. The cases occuring in the week ended last Saturday were very unevenly distributed over the several days; on Friday, for example, no attack was reported. There is still an outcry respecting the position of the hospital ships at Long Reach, their proximity to populous districts being considered a distinct danger to the community, and much has been said locally as to the desirability of the removal of the vessels from their present moorings. The General Purposes Committee of the Metropolitan Asylums Board have suggested that plans be prepared for temporary small-pox buildings at Joyce Green farm, Dartford, and the Small-pox Hospitals Committee have advised the appropriating of the whole or part of Gore Farm Small-pox Hospital at Darenth for convalescent fever patients. In the provinces some small stir has been caused at Kington by reason of the charge of £3 10*s.* on account of the damage done to a cab in which a doubtful case of small-pox was removed to the workhouse, no proper ambulance and no proper hospital having apparently been provided. Both Manchester and Salford in recent weeks report freedom from small-pox cases, and from Oldham we learn that only a single, and that non-fatal, attack of small-pox was heard of in the fortnight ended Oct. 19th. The locality of Wigan seems to have suffered somewhat recently, but good use is being made of the local hospital arrangements. Small-pox is not extinct in Dublin, but the subject of the isolation provision to be made for that disease is just now receiving an amount of attention far beyond that given to the actual presence of the malady itself. Much comment has been passed on the workhouse shed in which convalescing patients have been housed at Kilmainham, and loud outcry has been raised against the continuance of small-pox hospitals in the midst of the city. The question has been pronounced upon by the medical staff of the Irish Local Government Board in a manner to cause the advocates of city small-pox isolation provision to hesitate before committing the city to further danger from the treatment of small-pox near aggregations of population.

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THE SANITARY INSPECTORS' ASSOCIATION.—The first ordinary monthly meeting of the Session 1895–96 will be held to-day, Saturday, Nov. 2nd, 1895, at 6 P.M., at Carpenters' Hall, Throgmorton-avenue, E.C., when the annual address of the chairman will be delivered by Mr. Henry Thomas, chief sanitary inspector of Bermondsey, and applications for election to membership will be considered, after which there will be the usual members' conference.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the South-Western Division was held at Wonford House, Exeter, on Oct. 15th. Dr. Morton, Dr. Rutherford, Dr. McLean, and Mr. Laslett were elected members of the association. Dr. Deas opened a discussion on the Uses and Limitation of Mechanical Restraint as a Means of Treatment. Dr. Deas's able and succinct remarks were followed by a prolonged and interesting discussion. Dr. Morton read notes on Three Cases of Spontaneous Gangrene. It was agreed that Dr. Macdonald's paper on the Nursing Staff should be the subject for discussion at the next meeting. The spring meeting was fixed for Tuesday, April 14th, 1896. The members afterwards dined at Pople's New London Hotel.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The first meeting of the session was held on Oct. 26th at St. Marylebone Infirmary, the President, Mr. J. R. Lunn, F.R.C.S. Edin., being in the chair. There were several visitors, amongst whom were Dr. Colcott Fox, Mr. Geo. Stoker, and Dr. M. H. Spencer. Dr. Colcott Fox delivered a short address on Ringworm, explaining the varieties, the differences of their growth, and the treatment to be adopted. He deprecated the constantly recurring craze for some new parasiticide, which invariably ended in disappointment, chiefly because the proper method of application was not intelligently carried out. He then briefly described the irritant treatment, recommending the use of an ointment containing the red oxide of mercury.—Dr. F. S. Toogood (Lewisham Infirmary) pointed out the danger of producing permanent baldness by over-irritation.—Mr. Geo. Stoker described the method, and exhibited his apparatus for the treatment of ulcers of the leg by the oxygen bath.—Mr. J. R. Lunn exhibited cases of pemphigus exfoliata, pemphigus rash produced by the internal administration of iodide of potash, functional chorea, ankylosis of lower jaw relieved by operation, tabetic feet, congenital pemphigus, and Charcot's disease of the shoulder-joint. Mr. Lunn also showed a card specimen of aneurysm of the thyroid axis cured by operation.

LITERARY INTELLIGENCE.—Mr. W. B. Saunders of Philadelphia announces the early issue of the "American Year-book of Medicine and Surgery," edited by Dr. George M. Gould, the author of the latest excellent "Dictionary of Medicine," whose experience peculiarly qualifies him for the preparation of this work, not only to review the contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe, thus enlarging the survey and making the work characteristically international. These reviews will not simply be a series of abstracts, nor will they be retrospective of "news" one or two years old, but the treatment presented will include only what is new as regards the year in question. The work will be profusely illustrated.—"Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation," by Charles J. Cullingworth, M.D. Durh., F.R.C.P. Lond., is the title of a work which will shortly be issued by Messrs. Rivington, Percival, and Co. The work, which consists of a series of drawings with descriptive text and histories of the cases, is designed to assist medical practitioners who have few opportunities of seeing the diseased parts after removal from the body, but within whose experience the diseases often come. The coloured drawings have been made while the specimens were still fresh. A feature of the work will be the frontispiece, in which an attempt has been made to depict the Fallopian tubes as they are found in the living subject as distinct from drawings made from dissecting-room specimens pinned out for display without regard to the natural relations of the various adjacent parts.—"Haydn's Dictionary of Dates," the most universal book of reference in a moderate compass in the English language, and a work indispensable to literary men, is, we are glad to note, about to pass through a new edition brought down to the autumn of 1895. This, the twenty-first, edition will contain some 1230 pages, 12,000 articles, and 140,000 dates and facts. Messrs. Ward, Lock, and Bowden, Limited, are the publishers.

THE Royal National Pension Fund for Nurses received £22,500 last week.

MR. W. H. JALLAND, M.R.C.S., of York, has accepted the office of Sheriff of the city for the ensuing year.

AN ASYLUM FOR CARDIFF.—A conference of delegates from the Glamorgan County Council and the borough councils of Cardiff and Swansea was held at Cardiff last week in reference to the Bridgend Asylum. It was stated that 400 out of the 1000 patients now under treatment were from Cardiff, and it was decided that Cardiff should separate from the union of the asylum authorities and construct an asylum of its own.

A PUBLIC ABATTOIR FOR BRISTOL.—At the meeting of the Bristol Sanitary Committee held last week a report was presented by the medical officer of health (Dr. D. S. Davies) and the assistant medical officer (Dr. Dowson) upon Slaughter-houses. It stated that there are eighty-five slaughter-houses in Bristol; forty-four are unfit for that purpose owing to structural derangements, unsuitability of locality, and neglect of common sanitary precautions, twenty-one are passable, and only twenty can be classed as fit; only one complies with the recommended rule of the Local Government Board that the abattoir should be 100 yards from a dwelling-house. There is only one meat inspector in Bristol, and he has to look after the fruit and vegetables as well. He cannot do all this thoroughly, and so there are facilities for the disposal of unsound meat which are practically beyond the control of the inspector. Dr. Davies mentioned that Liverpool, with an abattoir, had six meat inspectors. Financially the abattoir would be a benefit, as the majority of these in other large towns pay from 4 to 6 per cent. The report concluded with a strong recommendation for the erection of a public slaughter-house. The chairman of the sanitary committee proposed, and it was carried, that it was desirable to provide a public slaughter-house, and that the engineer be requested to give particulars of the working, cost, revenue, &c. of such structures, and to suggest a suitable site. The slaughter-houses in Bristol are evidently in a most unsatisfactory state, and it is gratifying to see that the sanitary committee are anxious to carry out the suggestion of their medical officer of health for the erection of a public abattoir. As Bristol is a large meat-distributing centre it is impossible for one inspector to do his work thoroughly. This can easily be remedied by the employment of additional inspectors.

ROYAL ALBERT ASYLUM.—The annual meeting of this institution for idiots and imbeciles of the northern counties was held on the 25th ult. at Southport, the chair being occupied by the mayor, Alderman Dr. Wood. The report stated that there were 542 patients in the asylum—370 boys and 172 girls. The great majority came from Lancashire and Yorkshire. During the year there had been 64 admissions, 56 discharges, and 17 deaths. There was great difficulty in making it understood that it was "an educational establishment, and that it would be a sheer waste of resources, with the full and varied staff of teachers and trade instructors, to receive hopeless cases of idiocy." In moving the adoption of the report Sir John Hibbert said there were 5000 weak-minded persons in the northern counties under twenty years of age, of whom one-half were capable of being trained in such an institution as theirs. They had accommodation for 600 patients, and with an increase in the subscriptions they could fill up the vacancies. Those admitted were put through a course of seven years' training, and there were few cases in which great improvement did not take place. Of the 56 discharges 20 were much improved, 24 materially, 8 slightly, and only 4 not improved. Many discharged patients earned their own living (one was receiving 23*s.* a week at the trade he learned at the asylum), and during the year two enlisted in the army, of whom good accounts had been received. He contrasted the scanty provision made in this country for these cases compared with what was done in America and in many European countries. In Norway and Sweden there are, in addition to several special institutions, classes in connexion with the public elementary schools for feeble-minded pupils; and during the past year the London and the Leicester School Boards had made special provision for these cases, but Sir John Hibbert did not know that this was done in any of the northern counties.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AMESS, JAS., M.B., Ch.B. Melb., has been appointed a Public Vaccinator for Richmond, Victoria, Australia.

BATEMAN, C. E. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Workhouse and the Walsingham Sanitary District of the Walsingham Union.

BOULTON, A. E., M.R.C.S., has been appointed Medical Officer of Health for the Horncastle Rural Sanitary District, vice H. George.

CARMICHAEL, W. J., M.B., C.M. Aberd., has been appointed Surgeon and Agent to the Coastguard at Colliston and Medical Officer for the Parish of Slains, vice Dr. Jamieson, resigned.

CHARLES, RHYS P., has been appointed Analyst for Neath.

DAVENPORT, H. D., L.R.C.S. Irel., has been appointed a Public Vaccinator for the district of Hunterville, New Zealand.

EDWARDS, NORMAN FOX, of Bowdon, Cheshire, has been appointed House Physician to the Swansea Hospital.

EVANS, ARTHUR HENRY, has been appointed Resident Obstetric Assistant to the Westminster Hospital.

FLEMYNG, G. G., M.D., B.S. Dubl., has been appointed Medical Officer for the Downham Sanitary District of the Ely Union.

GARSTANG, THOS. W. H., M.R.C.S., has been appointed Medical Officer of Health to the Bucklow Rural District Council (late Altrincham Rural Sanitary Authority).

GIBBS, F. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eighth Sanitary District of the Wycombe Union.

GLEDDEN, A. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Miners' Association at Minmi, New South Wales.

GOODE, W. H., M.D., Ch.M. Dubl., L.K.Q.C.P. Irel., has been appointed an Official Visitor to the Hospitals for the Insane at Gladesville and Callan Park, New South Wales.

GORDON, W., M.A., M.D., B.C. Cantab., M.R.C.P., has been appointed Physician to the West of England Eye Infirmary, Exeter.

HOOD, A. J., M.B., Ch.M. Glasg., has been appointed Honorary Physician to the Sydney Hospital, New South Wales, vice Huxtable, deceased.

HOUMAN, ANDREW, M.R.C.S. Eng., has been appointed Health Officer for Williamstown, Victoria, Australia, vice Johnston, resigned.

JAMES, PHILIP, F.R.C.S., has been appointed Surgeon to the Wellington Hospital, New Zealand.

JOLLY, R. W., M.R.C.S., has been appointed Medical Officer of Health for the City of Peterborough, vice W. E. Paley.

JOYCE, A. F., M.B., Ch.B. Melb., has been appointed Public Vaccinator for East Brighton, Victoria, Australia.

KIDD, A. E., M.B., C.M. Edin., has been appointed Resident Medical Officer in the Dundee Hospital for the Sick Poor.

LITTLEJOHN, T. H., M.B., C.M. and F.R.C.S. Edin., D.P.H., has been appointed Medical Officer for Scarborough.

MORGAN, H. DE R., M.A. Oxon., M.R.C.S., L.R.C.P. Lond., has been reappointed Medical Officer of Health for the Cockington Urban District Council.

MORLEY, H. W., M.R.C.S., L.R.C.P., formerly Assistant House Surgeon, has been appointed House Surgeon to the Royal Portsmouth Hospital.

MUTCH, F. R., M.D. and C.M. Aberd., has been appointed Surgeon to the Samaritan Hospital for Women, Nottingham, vice E. B. Truman, resigned.

NAYLOR, A. G. E., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer for Dunmunkle Shire, North Riding, Victoria, Australia.

PATTINSON, H. A., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Seaton Urban Sanitary District.

POWELL, T. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Deputy District Vaccination Officer by the Retford Board of Guardians.

SHEWEN, ALFRED, M.D. Lond., M.R.C.S., has been appointed an Official Visitor to the Hospital for the Insane at Parramatta, and the Lincensed House for the Insane at Cook's River, New South Wales, vice Huxtable, deceased.

SWALLOW, F. McD., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Penistone Rural Sanitary District.

THROWER, M. R., L.R.C.P., L.R.C.S. Edin., has been appointed a Public Vaccinator in South Australia.

TIBBETTS, T. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health by the Quarry Bank Urban Council, vice W. H. Thompson.

WEST, WALDEMAR S., M.A., M.B., B.C. Camb., has been appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City-road, London, E.C.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100 per annum, with rooms and attendance (not board).

CATERHAM ASYLUM (under the Metropolitan Asylums Board).—Second Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, furnished apartments, attendance, and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk-street, London, W.C.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £80 per annum, with board, washing, and residence in the house.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square, London.—Resident Medical Officer for six months. Board, residence, laundry, and an honorarium of 10 guineas.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House Surgeon, for six months. Board and residence provided, and an honorarium of 15 guineas.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. A gratuity of £10 will be given if found satisfactory.

ST. MARY'S HOSPITAL FOR SICK CHILDREN AND MEDICAL MISSION DISPENSARY, Plaistow, London, E.—Resident Medical Officer. Salary £80, with board, washing, and attendance. Applications to Chairman of Committee, Rev. T. Given-Wilson, Plaistow.

SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.

TOWNSHIP OF TOXTETH PARK.—Junior Assistant Resident Medical Officer for the Workhouse Infirmary. Salary £75 per annum, with board, washing and apartments. Applications to the Clerk to the Guardians, 15, High Park-street, Liverpool.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per annum, and £30 per annum for Dispensing, with furnished apartments and attendance.

Births, Marriages, and Deaths.

BIRTHS.

CARVELL.—On Oct. 27th, at Grove-villas, Wanstead, the wife of J. Maclean Carvell, L.S.A., of a son.

CLOSE.—On Oct. 18th, at Strafford House, Boston, the wife of Henry A. Close, Deputy-Inspector-General R.N. (retired), of a daughter.

EDWARDS.—On Oct. 27th, at 55, Harley-street, W., the wife of T. Swinford Edwards, F.R.C.S., of a daughter.

HARRIS.—On Oct. 29th, the wife of John Russell Harris, M.D. Brux., of Adam-street, Adelphi, of a daughter.

HAYNES.—On Oct. 27th, at Lansdowne-place, Leamington Spa, the wife of Fredk. H. Haynes, M.D., of a daughter.

HOWELL.—On Oct. 23th, at Cleeve House, West Hill, Wandsworth, the wife of Thos. Arthur Ives Howell, of a son.

HUTCHINSON.—On Oct. 25th, at Haslemere, Surrey, the wife of Roger J. Hutchinson, M.R.C.S., L.R.C.P. Lond., of a daughter (Marjorie).

MAITLAND.—On Oct. 26th, at The Terrace, Haslar, Gosport, the wife of Percy E. Maitland, Surgeon R.N., of a son.

MARRIAGES.

BAKER—YULE.—On Oct. 26th, at Trinity Church, Finchley-road, Hampstead, J. H. Baker, M.B. Durh., of Tavistock-square, W.C., to Florence, second daughter of J. B. Yule, of Netherhall-gardens, Hampstead, N.W.

BOSTOCK—HADEN.—On Oct. 24th, at the parish church, Sidmouth, Robert Ashton Bostock, Surgeon-Captain 2nd Scots Guards, to Caroline Mary, daughter of Mrs. Haden, of Cardigan.

LYTTLE—LEWIS.—On Oct. 23rd, at St. Catherine's Church, Pontypridd, James Shaw Lyttle, M.D., M.Ch., M.A.O. Irel., Clifynyd, Pontypridd, to Edith Mary, eldest and only surviving daughter of the late Rev. Moses Lewis, Vicar of Llanwonno.

REID—WESTON.—On Oct. 23rd, at St. Mary's, Stafford, Charles Reid, M.B. Aberd., of Stafford, youngest son of the late David Reid, of Aberdeen, to Ada Mary, eldest daughter of Edward Francis Weston, of Stafford.

WEST—DEAR.—On Oct. 23rd, at St. James's Church, Pokesdown, Bournemouth, Richard Milbourne West, M.R.C.S., L.R.C.P., eldest son of H. A. West, of Ryde, Isle of Wight, to Ellen, daughter of F. C. Dear, of Bengoe, Hertford.

DEATHS.

ANDREWS.—On Oct. 29th, at Cheyne-gardens, Launcelot William Andrews, M.D. Lond., eldest son of the Rev. W. R. Andrews, aged 31.

BATESON.—On Oct. 24th, Robert Sander Bateson, Deputy-Surgeon-General I.M.S., of Upna Ghur, Lancaster, in his 64th year.

HUTCHINSON.—On Oct. 26th, at St. Andrew's, Bedford, James Alexander Caldwell Hutchinson, M.D., Surgeon-General, I.M.S. (retired), aged 67.

MACKENZIE.—On Oct. 29th, at Gloucester-terrace, Hyde-park, Inspector-General Sir William Mackenzie, K.C.B., C.S.I., M.D., Honorary Physician to the Queen, late Madras Medical Service, aged 84.

MILLS.—On Oct. 30th, at his residence, 12, Museum-street, Ipswich, William Partridge Mills, M.D., J.P., aged 79 years. No cards. No flowers.

REDFORD.—On Oct. 26th, at Cricklewood, N.W., George Redford, F.R.C.S., aged 79.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

A Manual of Veterinary Physiology. By Veterinary-Captain F. Smith, F.R.C.V.S. Second Edition. 1895. pp. 573. Price 15s.

Guide to the Medical and Dental Professions. By P. Turner. 1895. pp. 159. Price 3s. 6d.

Pathology and Treatment of Diseases of the Skin. By Dr. Moriz Kaposi. Translation of the last German edition under the super-

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vision of Jas. C. Johnston, M.D. Illustrated. 1895. pp. 684. Price 25s.

A Treatise on the Nervous Diseases of Children. By B. Sachs, M.D. 1895. pp. 666. Price 21s.

Relations of Diseases of the Eye to General Diseases. By M. Knies, M.D. Edited by Henry D. Noyes, A.M., M.D. 1895. pp. 467. Price 18s.

Proceedings of the West London Medico-Chirurgical Society. Vol. vi. Sessions 1892-93 and 1893-94. 1895. Price 5s.

BLACK, A. & C., London.

Milk: Its Nature and Composition. By C. M. Aikman, M.A., D.Sc. 1895. pp. 180. Price 3s. 6d.

BLACKIE AND SON, Old Bailey, London, E.C.

Two Gallant Rebels. A story of the great struggle in La Vendée. By Edgar Pickering. Illustrated. 1895. pp. 288. Price 3s. 6d.

His First Kangaroo. An Australian Story for Boys. By Arthur Ferres. Illustrated. 1896. pp. 288. Price 3s. 6d.

A Thane of Wessex. Being a Story of the Great Viking Raids into Somerset. By C. W. Whistler. Illustrated. 1896. pp. 288. Price 3s. 6d.

BRYCE, WILLIAM, Lothian-street, Edinburgh.

The Student's Guide to Practical Therapeutics. By Alex. Wheeler, L.R.C.P. Edin. 1895.

BURROUGHS, WELLCOME, AND CO., Snow-hill Buildings, London; and LIPPINCOTT, J. B., Co., Philadelphia.

The Practice of Pharmacy. A Treatise intended as a Hand-book for Pharmacists and Physicians, and a Textbook for Students. Third Edition. By J. P. Remington, Ph.M., F.C.S. Illustrated. 1895. pp. 1448.

CHURCHILL, J. & A., New Burlington-street, London, W.

Guy's Hospital Reports, Vol. li. Being Vol. xxxvi. of the Third Series. 1895.

CORNISH BROTHERS, Birmingham.

The Ingleby Lectures. 1895.

On Appendicitis and on Perforation of Gastric and Duodenal Ulcer. By G. Barling, M.B., B.S. Lond. 1895. pp. 92.

DOUGLAS, DAVID, Edinburgh.

Moller's Operative Veterinary Surgery. Translated and Edited from the Second Edition of 1894. By John A. W. Dollar, M.R.C.V.S. 1895. pp. 733.

LIVINGSTONE, E. & S., Edinburgh.

Materia Medica Tables. Designed for the use of Students. By A. H. Butcher, L.R.C.P. & L.R.C.S.

LONGMANS, GREEN, AND CO., London.

The Life of Sir Henry Halford, Bart., G.C.H., M.D., F.R.S. By Wm. Munk, M.D., F.S.A. 1895. pp. 284. Price 12s. 6d.

A Book for Every Woman. Part I. The Management of Children in Health and out of Health. By Jane H. Walker, M.D. Brux., L.R.C.P., L.R.C.S. Irel. 1895. pp. 257. Price 2s. 6d.

MACMILLAN AND CO., London.

An Atlas of the Fertilization and Karyokinesis of the Ovum. By E. B. Wilson, Ph.D., with the coöperation of E. Leaming, M.D., F.R.P.S. Columbia College. 1895. Price 17s. net.

PENTLAND, YOUNG J., Edinburgh and London.

Tuberculous Disease of Bones and Joints. Its Pathology, Symptoms, and Treatment. By W. Watson Cheyne, M.B. Edin., F.R.S., F.R.C.S. Illustrated. 1895. pp. 374.

The Principles and Practice of Medicine. By William Osler, M.D., F.R.C.P. Second Edition. 1895. pp. 1143.

STEINHEIL, G., Rue Casimir-Delavigne, Paris.

Les Suppurations de l'Apophyse Mastoïde et leur Traitement. Par A. Broca et F. Lubet-Barbon. 1895. pp. 259.

SMITH ELDER AND CO., Waterloo-place, London.

Transactions of the Pathological Society of London. Vol. xlvi. 1895.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London, E.C.

A Woman's Words to Women. By Mary Scharlieb, M.D., B.S. Lond. 1895. pp. 240.

THE DARIEN PRESS, Edinburgh.

Practical Chemistry. By Stevenson Macadam, junr., F.I.C., F.C.S. Second Edition. 1895. pp. 90.

THE ROXBURGHE PRESS, Victoria-street, Westminster.

Furs and Fur Garments. By Richard Davy. pp. 108. Price 3s. 6d.

WEST, NEWMAN, AND CO., Hatton-garden, London.

A Smaller Atlas of Illustrations of Clinical Surgery. By Jonathan Hutchinson, LL.D., F.R.S. Illustrated. 1895.

An Essay on Diphtheria and its Specific Treatment: by John Pirnat, M.D., Evansville, Ind.—The Tests for Colour-Blindness: by F. W. Edridge-Green, M.D., F.R.C.S.; reprint (Baillière, Tindall, and Cox, King William-street, Strand, London), 1895.—Transactions of the Obstetrical Society of London, vol. xxxvii. for the year 1895, Part 3 for June and July (Published by the Society, 20, Hanover-square, W., 1895); price 4s.—Tours in the West Indies (Sir Jos. Causton and Sons, London).—Steam Laundries and Public Health (Sanitary Publishing Company, Fetter-lane, Fleet-street, London); price 6d.—Copies 1, 2, and 3 of the Religious Tract Society's Invalids' Library (The Religious Tract Society, Paternoster-row, London, E.C.).—La Cure Radicale des Hernies Abdominales: par Dr. E. Kummer (Rey et Malavallon, Genève, 1895).—Clinical Notes on Psoriasis: by L. Duncan Bulkley, A.M., M.D.; reprint from Transactions of the Medical Society of the State of New York. 1895.—Magazines, &c., for November: The Strand Magazine, The Picture Magazine, Illustrated English Magazine, Boys' Own Paper, Girls' Own Paper, Leisure Hour, Sunday at Home, Pall Mall Magazine, Westminster Review, Contemporary Review, Chapman's Magazine, Blackwood's Magazine, Friendly Greetings.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 31st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. in Shade.	Min. Temp	Rainfall.	Remarks at 9 A.M.
Oct. 25	29·53	W.	34	33	72	48	33	...	Hazy
,, 26	29·54	N.	36	35	50	43	33	...	Foggy
,, 27	29·71	W.	38	36	64	45	32	...	Cloudy
,, 28	29·76	S.W.	31	30	64	46	30	...	Foggy
,, 29	29·77	N.	36	35	49	43	31	...	Overcast
,, 30	30·10	N.W.	36	34	65	47	34	...	Hazy
,, 31	29·86	S.W.	47	46	61	51	36	0·01	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. President's Inaugural Address. Mr. C. J. Boyd Wallis: (1) Discolouration of Teeth after using Hyd. Perchlor: (2) Some Remarks on Amalgams.—Mr. J. Main Nicoll: (1) Ptosis of Dental Origin; (2) Fracture of the Maxillary Tuberosity during the Extraction of the Second Molar Tooth. The Discussion on "The Immediate Regulation of Irregular Teeth" will be resumed.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Dr. Snow: The Non-existence of Round-celled Sarcoma as a Distinct Class of New Growth.—Drs. Garrod and Hopkins: On the occurrence of large amounts of Hæmatoporphyrin in the Urine after the administration of Sulphonal.—Mr. Beadles: The Relation of Biliary Calculi to Malignant Disease of the Liver.—Mr. Jackson Clarke: Dermoid Tumour of the Testis.—Mr. Edmunds: Cystic Accessory Thyroid. Card Specimens:—Mr. Beadles: Ureter Obstructed by Calculus.—Dr. Willcocks: Perihepatitis and Thrombosis.—Dr. Walsham: Pulmonary Stenosis.—Mr. Edmunds: Myxoma of Breast.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Papers:—Prof. G. E. Curatulo (introduced by Dr. Griffith): On the Influence of the Removal of the Ovarian Metabolism in connexion with Osteo-malacia.—Mr. J. Bland Sutton: On a case of Tubo-uterine Pregnancy; Primary Intra-peritoneal Rupture; Recovery.—Dr. A. E. Giles: A case of Uterus Didelphys, with Remarks on the Clinical Importance of this Malformation. Special General Meeting. Confirmation of Revision of Chap. vi. of the Laws.

THURSDAY.—NEUROLOGICAL SOCIETY OF LONDON.—8.30 P.M. A Clinical Demonstration (Drawings and Patients) of the Tropho-neuroses of the Skin, more especially Herpes and Morphœa, at Mr. Jonathan Hutchinson's Museum, 1, Park-crescent.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Mansell Moullin: Supra-pubic Cystotomy and Prostatectomy in cases of Multiple Calculi.—Mr. Golding Bird: A case of Intussusception through a patent Meckel's Diverticulum.—Mr. Langton: A case of Osteopsathyrosis (Fragillitans Ossium) in which, after firm union of several fractures had taken place, disunion occurred in some several years afterwards.—Dr. Althaus: A case of Brain Tumour successfully healed by Internal Medication.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Dr. Whistler: Syphilis of the Pharynx and Larynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION &c. (Brompton).—Mr. R. J. Godlee: Surgical Anatomy of the Chest.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Lichen Planus.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Eccles: Cases of Hernia.

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THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. W. A. Lane: Selected Surgical Cases.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Bastian: Cases in the Hospital.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. J. Hutchinson: Cases in the Wards.
FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Actinomycosis and Glanders.
SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Insanity with Syphilis.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—Dr. Morgan Dockrell: Syphilis.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.
Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.
We cannot prescribe or recommend practitioners.
Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."
Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*
We cannot undertake to return MSS. not used.

BAREFACED USURPATION.

A CORRESPONDENT has drawn our attention to the following legend, which appears on the letter-paper of a certified masseuse:—

MISS F——, 108, —— Road,
M.B.M.A., LOND., —— Street,
CERTIFIED MASSEUSE, ——.

He says that at first sight he thought that the letter in question emanated from a Bachelor of Medicine and Master of Arts in the University of London. He has since found that the affixed initials to Miss F——'s name are meant to imply that that lady is a Member of the British Massage Association, and he wants to know what we think of such methods. We have no hesitation in saying that to place the initials M.B.M.A. Lond. after a name is to imply that the person in question holds the degrees with which our correspondent credited Miss F——. The fact that there is no gap between the B and the M is a trifle that might escape anyone's notice (how often do we see M.B., C.M. printed without proper spacing?) and the addition of the word "Lond." seems specially designed to carry out the imposture. We consider that the heading to this letter-paper constitutes, as we have termed it, a barefaced usurpation by a masseuse of the style and title of a graduate in Arts and Medicine of London University.

Mr. Charles Blair.—The best account of the Burmese hairy family is to be found in Yule's "Mission to the Court of Ava" (Smith, Elder, and Co., London, 1858), pp. 93, 94, 95, where a portrait will be found Some of the descendants of this family were, we believe, living at the court of King Theebaw at the time of our recent annexation of Upper Burmah.

Cardiffian.—The volumes have no pecuniary value worth mentioning.

"WHAT IS LIFE?"

To the Editors of THE LANCET.

SIRS,—I can heartily sympathise with your correspondent, "Only a Medico," who asks the above question after having perused various writings on the subject in THE LANCET. That of Dr. Lionel Beale is of great interest, but I do not quite follow him in one particular. He says that life is not the product of any physical change, but is an independent principle, or a distinct "guiding and directing agency." Now, in the analogous case of the mind there are also the two similar theories—the one that mind is an emanation from the brain; the other that it is an independent principle, remaining when the body decays and becoming an immortal spirit. In like manner, as regards the vital principle, or "vitality," I ask, What becomes of it when a vegetable or animal is burned or otherwise destroyed? I should like the lecturer's clear opinion or belief in this matter—demonstration he cannot give—so that I may more fully seize the thread of his argument.

I am, Sirs, your obedient servant,
Oct. 27th, 1895. ENQUIRER.

FEES.

To the Editors of THE LANCET.

SIRS,—In October, 1894, I attended a woman in her confinement (who had engaged me for a fee of one guinea). After the child was born I found she had adherent placenta. This I endeavoured to remove, but during removal I found she was in a collapsed condition. Having brought her round, after a time I operated, removing part but not all. She then collapsed again. I informed the nurse that the case was serious, and told her that I should call in another practitioner. I saw the husband, and sent him for another medical man, upon whose arrival we administered chloroform and removed the placenta. After three weeks' attendance the patient recovered I sent my account in with an additional charge of half-a-guinea—the fee I paid the other practitioner for his attendance. The husband refusing to pay, I reluctantly summoned him for the debt. The county court judge at the hearing allowed the guinea fee, but disallowed the half-guinea paid under the circumstances mentioned above.

If this is a correct decision, what are we to do in such circumstances with a serious case? Are we to call in another practitioner, pay his fee, and bear the loss ourselves; or are we to leave the patient without further advice? The net result to me has been that after attending the case before, during, and after confinement I receive a guinea, out of which I have to pay my colleague 10*s.* 6*d.*, leaving me with the same amount as a reward for my anxiety and trouble.

I am, Sirs, yours faithfully,
Oct. 24th, 1895. T.

*** In our opinion the hardship of these cases, which are constantly occurring, might be avoided, if the medical man, when undertaking to attend a midwifery case for, say, a guinea, made it clear that for that fee he would only attend for the confinement and ten days after, and that it would not include attendance beyond that time, if it should prove necessary, or the services of another medical man if the case should be one requiring another practitioner on account of some complication. In this actual case when the medical man saw the husband and obtained his sanction to call in another practitioner he should have explained that the latter would have to be paid separately. At the same time we sympathise with our correspondent, who has had shabby treatment meted out to him.—ED. L.

M.D., in writing of the Dentists Act, attributes grossly unprofessional conduct to a brother practitioner. He will understand that we cannot print his letter without knowing to whom he is referring, and that even then a question would arise as to the utility of the publication.

M.D.—Technically, the School Board never demands a certificate. It is only the magistrate who does so. If "M.D." is unwilling to give a certificate he had better refer the parents to the parish doctor.

Mr. J. Allison Smith.—There is no such fund at our disposal or elsewhere. Particulars concerning THE LANCET Relief Fund can be obtained from Mr. E. Davis, THE LANCET Office.

Dr. White is advised to do nothing.

"WANTED, AN EXPLANATION OR A SUGGESTION."

To the Editors of THE LANCET.

SIRS,—I should suggest the probability of the case described in THE LANCET of last week being one of so-called "scar keloid" which sometimes follows variola pustules, syphilides that have destroyed the skin, and the scars of burns. I have known of a similar case in a child six years of age, where two firm, freely movable pink masses with well-defined projections made their appearance in the cicatrices shortly after vaccination. They were about an inch long and three-quarters of an inch wide, and gave rise to no subjective symptoms. The family history was good; but there seemed to be a predisposition on the part of the skin to such formations, as a similar mass developed in the same case after the healing of an incised wound on the leg. The case was successfully treated by electrolysis, a stout needle being used and multiple punctures made in all directions and in the tissues for a space about the growths. I am, Sirs, yours truly,
Halifax, Oct. 26th, 1895. H. LAWRANCE GILL, M.D.

"THE BIRMINGHAM LUNACY PROSECUTION."

To the Editors of THE LANCET.

SIRS,—I beg to correct the impression in THE LANCET of Oct. 26th. The number of hours was *six*, not sixteen.—Yours truly,
Birmingham, Oct. 30th, 1895. F. R. EVANS.

During the week marked copies of the following newspapers have been received:—*Huddersfield Chronicle, Midland Times, Manchester Guardian, Straits Budget (Singapore), Liverpool Echo, Dover Express, Dudley Herald, South Wales News, Suffolk Chronicle, North Wales Chronicle, Leicester Daily Mercury, Sussex Daily News, Hastings Times, Birmingham Chronicle, Guardian, Sheffield Independent, Hinckley Times, Medical Record (New York), Tolnes Times, Glasgow Herald, Dublin Evening Telegraph, Western Mercury, Nottingham Daily Express, Bradford Observer, Cork Constitution, Brighton Gazette, Scotsman, Citerer, Leeds Mercury, Builder, Portsmouth Times, Citizen, Architect, Yorkshire Post, Cyclist, Bristol Mercury, Sanitary Record, Perthshire Advertiser, Family Doctor, St. Mary's Hospital Gazette, Technical World, Pioneer Mail, Guy's Hospital Gazette, Midland Sun, Australasian Medical Gazette, Graye Standard, Islington Gazette, Anglo-Celt (Cavan), Evening Chronicle (Newcastle), Birmingham Daily Post, &c., &c.*

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Communications, Letters, &c. have been received from—

A.—Dr. J. H. Abram, Liverpool; Mr. P. J. Atkey, Putney; Mr. W. J. Attygalle, Aberdeen; Æsculap Bitter Water Co., Lond.; Arema Manufacturing Co., Lond.; Argos, Lond.; A. Z., Brighton.

B.—Dr. J. Banks, Aberdare; Dr. L. Backus, Chatham, Ontario; Mr. T. B. Browne, Lond.; Mr. C. Birchall, Liverpool; Mr. L. Browne, Lond.; Messrs. Bostel, Lond.; Messrs. Bates, Hendy, and Co., Reading; Messrs. Burgoyne, Burbidges, & Co., Lond.; *Bristol Med.-Chir. Journ.*, Editor of; B., Lond.

C.—Dr. J. Cagney, Lond.; Dr. J. G. S. Coghill, Ventnor; Dr. R. H. Collins, Tow Law; Major S. Churchill, Lichfield; Mr. J. Cotman, The Minories; Mr. W. J. Collins, Lond.; Mr. R. P. Charles, Neath; Mr. D. F. B. Cotes, Burton-on-Trent; Mr. J. J. Clarke, Lond.; Messrs. C. J. Clay and Sons, Lond.; Messrs. J. Cleave and Son, Crediton; Messrs. Cornish Bros., Birmingham; Central Lond. Throat and Ear Hosp., Sec. of; County Asylum, Dorchester, Sec. of; Corinne, Lond.; County, Lond.

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M.—Dr. A. E. Morison, Hartlepool; Dr. H. B. Melville, Nowgong; Dr. Macdougall, North Berwick; Mr. W. Macalpine, Lond.; Mr. P. B. Mason, Burton-on-Trent; Mr. J. W. Moore, Lond.; Mr. W. B. Moore, Stourbridge; Mr. H. Marsh, Lond.; Rev. R. D. Maxwell, Teignmouth; Mr. R. Mosse, Lond.; Messrs. Merryweather and Sons, Lond.; Messrs. Macmillan & Co., Lond.; Matrons' Council, Lond., Hon. Sec. of; *Morningside Mirror*, Editor of; M.B., London; M.D., London.

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S.—Sir James Sawyer, B'ham.; Dr. R. E. Shettle, Reading; Dr. F. H. Smith, Lewisham; Dr. M. F. Simon, Singapore; Dr. W. A. Smith, South Shields; Mr. H. E. Steel, Liverpool; Mr. G. B. Smith, Lond.; Mr. H. Simpson, Frodsham; Mr. J. D. Staple, Bristol; Mr. W. B. Saunders, Philadelphia; Mr. J. B. Sutton, Lond.; Mr. P. F. Sturridge, Kendal; Mr. A. Stenhouse, Glasg.; Messrs. G. Street and Co., Lond.; Messrs. Stubbs, Lond.; Sanitary Wood Wool Co., Lond.; *Science Progress*, Lond., Editor of; Sister, Ramsgate.

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V.—Veritas, Lond.

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Y.—Dr. J. Young, Annan.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. W. D. Arnison, Newcastle-on-Tyne; Mr. R. R. Anderson, Carmarthen; Mr. K. Adamson, Accrington; Angle-Swiss Condensed Milk Co., Lond.; Aston Union, Clerk of; A. P. W., Lond.; Alpha, Lond.; Ajax, Lond.; A., Alsager; Assistant, Lond.

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J.—Justice, Lond.; J. W., Lond.

K.—Mr. T. S. Keys, Mumbles; Mr. W. R. Kingdon, Lond.; Mr. B. C. Kendall, Helston.

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An Address
ON
THE ADVANTAGES OF OXIDATION.

Delivered before the West London Medico-Chirurgical Society on Oct. 4th, 1895,

BY A. SYMONS ECCLES, M.B. ABERD.,
PRESIDENT OF THE SOCIETY.

[AFTER a few words of thanks to the Society for selecting him as their President, Dr. Eccles said:]

Gentlemen,—There are certain phenomena of life so familiar by reason of their constant occurrence within, around, and about us that I would venture to suggest the possibility of forgetting them if they were not so frequently brought before us in all their significance by some disturbance in regularity which we recognise as pathological; and at the risk of being tedious I would ask you to permit me to discuss very superficially, and of necessity inadequately, so well-established and unassailable a physiological doctrine as is embodied in the title of this address, "The Advantages of Oxidation." My excuse for referring to a subject, which you may regard as too obviously belonging to the very A B C of physiological truth to require any suggestion on my part, is that for the last two or three years I have been endeavouring in a very small way to learn for myself some lessons bearing on the oxidation processes in the human body. If, then, you are needlessly reminded of elementary physiological facts at the outset of this address you will perhaps forgive me for alluding to them in order to clear the way for those suggestions which I shall offer as the result of personal investigations—lessons in a measure self-taught, and maybe replete with error, inasmuch as they are only the crude and clumsy attempts of one who has not at his disposal the knowledge and skill of a scientific physiological chemist.

The first fact—or, so to speak, letter—of the physiological alphabet which it appears to me we should bear in mind while discussing the advantages of oxidation in regard to the human body, in health and disease, is this, that whereas plants by a reduction process build up simple bodies of small molecular value and stable composition into complex combinations of high molecular value and unstable constitution, animals, on the other hand (the human body, for instance), by oxidation break up the complex combinations of atoms formed by plants into bodies of much simpler constitution and of greater stability, and in this combustion process heat, work, and other forms of energy are evolved. The second letter of our physiological A B C to which I would draw your attention is that the end products of these oxidation processes are carbon dioxide and water, the result of non-azotised substances, and urea, which may again be decomposed into carbon dioxide and ammonia, the result of azotised matters or proteids. May I venture to suggest that most of the work done in the human body is performed, so far as we are yet aware, by the combustion of the carbohydrates, while the wear and tear of the organism itself are represented by the nitrogenous waste matters, the end product of complete combustion being urea? It may be that this suggestion will not hold good, but that, to continue my simile, I am attempting to construct from our physiological alphabet a word which is mis-spelt and does not exist as a physiological truth; but on reference to Professor Michael Foster's work I find that my notion, at any rate in regard to muscular work, is not so far-fetched as it might appear to be, for he compares the special contractile carbon-hydrogen substance of a muscular contraction to the charge of a gun, the products of its combustion being carbonic and sarcolactic acids, while the real living material of the fibre may be compared to the gun itself, which, however, is constantly undergoing change in excess, according to Foster, of mere wear and tear.

Since a large proportion of the oxidation processes carried on in the human body occurs in the muscular system, it may not be unprofitable to note briefly the present state of our knowledge in regard to the series of chemical events taking place in an active muscle. We find that the products of incomplete oxidation of both nitrogenous and non-nitrogenous matters are always in excess, while, except in cases of severe and almost unique over-fatigue, the formation of urea—i.e., of completely oxidised proteid matter—is not increased. It is to the accumulation of partially oxidised waste products within the muscle that we must attribute the fatigue, and that impotence to continue work after a certain time which supervenes on muscular exercise. It appears that the quantity of nitrogenous material oxidised is the same in an active and passive muscle, but during contraction such a quantity of oxygen is used up in the combustion of the hydrocarbons that insufficient oxygen remains for the complete oxidation of the nitrogenous matter; so, instead of urea, we have other substances resulting from muscle waste—default of oxygen leading to incomplete combustion and the consequent formation of uric acid and creatinine, substances which may be regarded as the insufficiently oxidised precursors of urea. But this incomplete oxidation is also shared by the hydrocarbons, for, although we find seven times the amount of carbon dioxide formed in an active muscle over and above the amount produced in the passive organ, there are certain products of incomplete combustion derived from hydrocarbons rendering the reaction of the fatigued muscle acid instead of alkaline. The most constant of these non-nitrogenous fatigue products is sarcolactic acid, and it is probably to the accumulation in the system of both this and the incompletely oxidised nitrogenous products of muscular activity that we may attribute the aching weariness of over-fatigue experienced by persons unaccustomed to exercise. It must be remembered, however, that, although evidences of excessive acidity and of leucomaines may be found after over-exercise in the urine of persons habitually sedentary, no such phenomena present themselves in the urine of individuals who are in training. In other words, it is possible to improve the processes of intra-organic oxidation and to render them more complete by means of a course of regular and systematised exercise, which will induce increased amplitude of respirations, augment the volume of blood passing through the muscular system, and favour the combustion of fatty tissue.

But oxidation does not only take place in the muscles, for we know that it occurs in the blood itself, in the glandular structures, and, as Ehrlich has shown, in the cells of all the tissues, especially in those of the brain, liver, and heart, where processes of oxidation and reduction are constantly going on.[1] I cannot hope to add much to the knowledge already placed at our disposal by Gautier,[2] who first gave the name leucomaine to alkaloids appearing during life in the tissues of animals. His researches, with those of Brieger, Bouchard, Liebreich, and Pouchet on the Continent, and of Thudichum in our own country, have resulted in the isolation of these toxic substances in healthy and morbid urine. It has been shown that they are physiologically produced in our bodies and eliminated by the bowels, kidneys, skin, and lungs. They exist in the blood where they accumulate if for any reason they are not got rid of, and under these circumstances we suffer from the effects of auto-intoxication; but there are two distinct methods by which nature provides that we should not poison ourselves with our own venom—viz., the elimination of these toxines by the organs of excretion and their destruction by oxygen. Of these two methods the most important is the process of oxidation, for most of these leucomaines are very readily oxidised, and, as Gautier has shown, it is by the constant renewal of oxygen that they are burned up and made to disappear, such of them as are not destroyed by combustion being more readily and easily eliminated after oxidation. Under normal conditions only a very small proportion of leucomaines is found in the urine; but if anything should interfere with the due oxygenation of the blood, or if the oxygen therein contained should be used up for the oxidation of other materials, then we find that there is a remarkable increase of leucomaines in the urine, pointing to an excess of these toxines in the blood, so that it would not be far wrong to describe the morbid condition of some patients as "leucomainæmia." In 1882 Bouchard demonstrated the presence of animal alkaloids in healthy urine and that they were greatly in excess in cases of infectious fevers, particularly in typhoid fever; while Pouchet observed them in the urine in certain cerebral maladies without fever. It is, however, in the class of disease so admirably described by Bouchard as "maladies per ralentissement de nutrition"—e.g., anæmia, chlorosis, gout,

[1] Brunton: Croonian Lectures, 1889, p. 96.
[2] Ptomaines and Leucomaines. Paris, 1886.

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glycosuria, neurasthenia, and uricacidæmia—that we find the clearest evidence of insufficient activity in the oxidation processes, with excess in the urine of the products of incomplete oxidation. Speaking for myself, I would venture to assert that many phenomena of functional nervous disorders are primarily due to this deficiency of oxidation; that, as a consequence of this insufficient combustion, toxic substances accumulate in the blood and give rise to the train of symptoms—dyspeptic, myelasthenic, encephalasthenic, and emotional—which we classify or generalise under the term neurasthenia.[3] Whether these toxic matters are alkaloids or not, they appear to be capable of producing more or less profound disturbance in the functions of nutrition; and it may be that these extractives, nitrogenous and incompletely oxidised, exist side by side, as Gautier has suggested, with alkaloids which have been isolated and crystallised. The method employed for the detection of leucomaines in the urine is that which is described by Professor Alexander von Poehl of St. Petersburg in his communication on Oct. 10th, 1892, to the Academy of Sciences of Paris on the Rôle of Spermine in Intra-organic Oxidations, and is set down by him as follows. "To 100 c.c. of urine are added 25 c.c. of hydrochloric acid, HCl (sp. gr. = 1124), and 10 c.c. of a decinormal solution of phosphotungstic acid. The precipitate is composed of leucomaines as phosphotungstates." Von Poehl goes on to say that he estimated the nitrogen of this precipitate by the method of Kjeldahl, and in cases in which albumin or peptone was present these substances were eliminated by precipitating them with phosphotungstic acid in the presence of acetic acid. In examining urine for the presence of leucomaines I have closely followed the directions given by Von Poehl as above, save in regard to the Kjeldahl process for the estimation of nitrogen, which is of too complicated a character for ordinary clinical use. In every case the whole of the urine passed during twenty-four hours available for testing purposes has been collected, and from the mixed urine so obtained the necessary quantity for examination has been taken. (See Tables I. and II.) In some cases several observations have been made on the urine passed in the same twenty-four hours, and the morning and evening urines in a few cases have been separately tested.

Each specimen has been tested for albumin by the heat and nitric acid test, and in some cases after filtration by the acetic acid and ferrocyanide of potassium test. Similarly in every case the biuret test for peptones has been employed. Albumin has not been detected in the urine in any of the cases here recorded; in those in which the presence of peptone was indicated by the biuret test the urine has been filtered after the peptone was precipitated by the phosphotungstic acid in the presence of acetic acid, and the filtrate so obtained has been treated with hydrochloric and phosphotungstic acids in the proportions indicated by Von Poehl. In estimating the quantity of the precipitate of phosphotungstates each filter paper has been separately weighed before use, and from the total weight of the dried precipitate and filter paper after filtration the weight of the filter paper has been subtracted. The filter papers employed were those usually regarded as chemically pure, and the weights were taken by means of Becker's balance sensible to $\frac{1}{2}$ milligramme. Every precaution was taken to avoid error in carrying out the tests as far as they go, but I am aware that they are open to objection on the score of accuracy in the description of the precipitate. It is maintained by scientific chemists whom I have consulted in the matter that substances other than leucomaines and ptomaines are precipitated from urine by the reagents employed in the proportions cited, and one of my friends has been good enough to perform control experiments with Hofmeister's and other tests for animal alkaloids given by Von Jaksch in his work on Clinical Diagnosis.[4] In trying several of these reactions it was found that the results differed materially, and it appears therefrom that the excessively complicated nature of some of the bodies present in healthy urine, and still more so in urine under pathological conditions, renders it well-nigh impossible to be sure as to what one is doing. Under these circumstances lengthy investigation would be necessary to show where the differences lie, and the work would be very complicated. Attempts have been made to eliminate the source of possible error, but without any marked success. Von Poehl, however, is my authority for the methods employed, and to use his own words, "le précipité se compose de leucomaines à l'état de phosphotungstates." The urea has been estimated by the ureameter of Southall, and it is interesting to note that in comparing the relation between the weight of the phosphotungstate precipitate and that of the urea as estimated for the same twenty-four hours it will generally and almost invariably be found that they are in inverse ratio. When the proportion of the precipitate is high the estimated quantity of urea is low, and *vice versâ*. The exceptions to

TABLE I.—*Showing Daily Amount (in grammes) of Leucomaines and Urea passed during Twenty-four Hours for Ten Days by Four Healthy Persons unaccustomed to Exercise on Ordinary Diet.*

First ten days, without exercise.		Second ten days, with exercise.		First ten days, without exercise.		Second ten days, with exercise.		First ten days, without exercise.		Second ten days, with exercise.		First ten days, without exercise.		Second ten days, with exercise.	
Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.
7·5	38	10	32	9	40	10	38	8·4	36	9·5	36	7·2	35	9·9	35
9·3	33	13	33	8	36	10	36	7·5	33	10·8	38	6·9	35	9·2	38
9·0	33	10·5	32	7	35	10	35	7·9	35	10·2	38	7·5	38	9·5	35
10·3	32	11·3	33	9	38	10	33	8·2	38	10·0	35	7·9	36	9·0	37
9·75	36	12·2	32	9	38	9	38	7·8	32	9·9	38	9·0	36	9·2	35
6·5	32	11·8	34	10	33	10	35	9·6	33	9·5	38	8·5	35	8·9	35
7·8	37	11·5	32	7	35	10	33	9·2	33	10·0	33	7·9	35	9·2	35
9·2	38	12·2	35	7	38	10	32	8·5	35	10·0	35	8·2	38	8·4	38
9·0	35	11·5	33	7	38	11	36	7·5	32	11·2	36	7·4	32	9·7	35
10·3	33	11·0	31	9	35	10	36	7·2	35	10·0	35	7·4	35	9·2	35

TABLE II.—*Showing Daily Amount for Thirty Days, in Grammes, of Leucomaines and Urea passed in the Urine of an Anæmic Person treated by Rest, Massage, and Exercise.*

Leucomaines.	Urea.	Leucomaines.	Urea.	Leucomaines.	Urea.
6·5	33	7·5	36	7·9	38
6·2	33	7·2	38	8·2	38
6·5	29	9·2	38	10·2	35
6·5	32	8·5	35	10·0	36
7·0*	33*	7·0	33	8·5	36
8·2	35	7·2†	33	8·5	35
7·5	35	9·5	38	9·2	35
9·2	35	10·0	36	9·5	35
7·5	36	10·2	38	9·0	35
7·2	33	9·2	38	7·5	35‡

* On fifth day massage commenced.
† On sixteenth day active exercises added.
‡ From thirtieth day onwards the average of leucomaines passed was 7·5 grammes, and of urea 35 grammes.

[3] See also Herter on Intestinal Putrefaction in certain Neuroses, New York Medical Journal, Jan. 27th, 1894; Macpherson on Disinfection in Acute Insanity, Journal of Mental Science, January, 1893; and Uric Acid in Causation of Disease, by A. Haig. (London: J. & A. Churchill, 1894.)

[4] Von Jaksch: Klinische Diagnostik, p. 116.

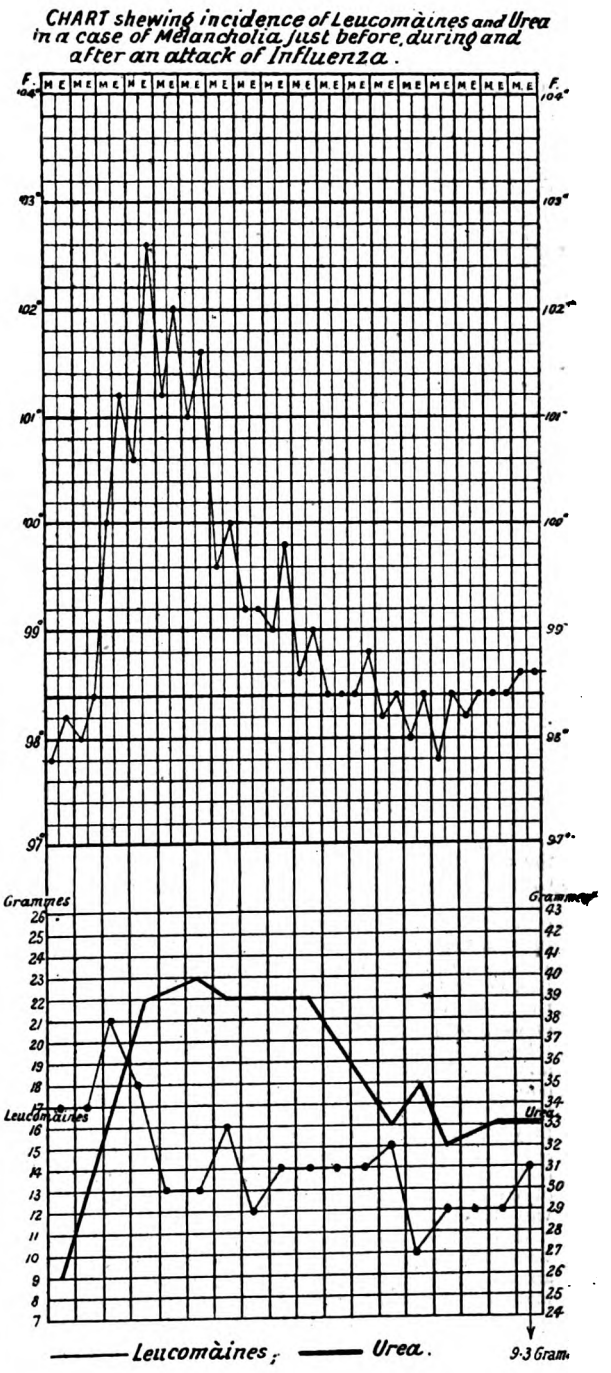
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this have been so rare that they may be regarded as unimportant.

In regard to Table III., it must be borne in mind that the amount of urea has been computed from the volume of nitrogen gas evolved. But this nitrogen may represent urea *plus* other nitrogenous urinary constituents, normal and abnormal; therefore, if my experiments are correct, the presence of leucomaines appears to interfere with the elimination of azotised waste product, for even when the phosphotungstate precipitate is heavy the volume of nitrogen does not seem to increase proportionately. While, then, I do not desire to lay great stress upon the comparative quantity of the leucomaine precipitate on the one hand, and that of urea computed by the hypobromite test on the other, as the conclusions drawn therefrom may be based on error, there still remains the clinical fact that when Von Poehl's test shows a heavy deposit certain conditions of disturbed function appear to be associated therewith, and it would appear that these functional derangements may be regarded as symptoms of retention poisoning. That uric acid is not the only factor in the production of the symptoms which I believe to be due to the presence of incompletely oxidised bodies in the system is shown by the fact that in many cases there is distinctly low tension.

Now in every case of healthy urine the amount of the precipitate (which for the purpose of this address I shall assume to be correctly deemed to be composed of leucomaines or of these alkaloid *plus* other products of nitrogenous waste incompletely oxidised) is very small compared with the quantity thrown down from morbid urine. Again, the amount of urea, although it varies somewhat in health and disease, is usually greater in the former case. In a case of melancholia or profound depression, in which an attack of influenzâ for the time being was attended by complete remission of all the mental symptoms, the patient during the period of pyrexia losing all despondency, dread, and insomnia, it was most remarkable to see the fluctuation in the amount of leucomaines before, during, and after the pyrexial attack. (See Chart I.) During the first four days of the disease the temperature rose from 97·8° to 102·5° F., with an intermission of one degree on the evening of the third day. From this point it gradually declined, reaching the normal on the ninth day and never again rising, though occasionally subnormal. The quantity of urea excreted was 26 grammes on the first day. From this point the quantity rose considerably with the temperature, reaching 40 grammes on the fifth day, and declining thence to 33 on the twelfth day, between which point and 35 grammes it remained. The quantity of leucomaines was 17 grammes at the beginning; by the third day it had risen to 21, whence it declined steadily to 13. During the following twelve days it remained at this point or below, save that on two occasions it rose to 15 and on one dropped to 10. On the seventeenth day it suddenly fell to 9·3. Those who are familiar with cases of nervous depression often meet with those of intermittent melancholia in which sometimes with regularity, at others irregularly, the patient presents all the features of most profound depression and mental morbidity, with abject inability to believe that there is any hope of betterment or of avoiding catastrophe on one day, and shortly after, without apparent cause, the demon of misery, irritability, and dejection is supplanted by cheerful freedom from all mental depression and physical malaise. How are we to account for these hitherto inexplicable variations in the subjective symptoms of one and the same individual occurring within a few hours? I believe that the explanation will be found in the ebb and flow of the tide of toxines manufactured and accumulated in the system. The habits of these persons are often sedentary, or tend to become so under the influence of the weird sensations in the head, the vague disorders of the digestion, and the semi-incoördination of the limbs from which they suffer. On examining the urine in such cases, before I was acquainted with Von Poehl's test for leucomaines, I often noticed the presence of oxalates and urates in excess and the small excretion of urea, in one instance the amount per diem of this last substance falling as low as 24 grammes. Since I have employed Von Poehl's method only two opportunities have arisen for noting the incidence of leucomaines in persons suffering from paroxysmal neurasthenia. In both cases the attacks of mental and physical exhaustion have come on without any cause assignable by the patients. In each case vertical and occipital headache, insomnia, mental agitation, hopelessness, and emotionalism have been attended by extreme physical languor and general aching weariness in the back and limbs. Both occurred in otherwise healthy men leading active lives, and certainly in one there was no psychical or physical cause for the sudden supervention of neurasthenia. In the other, possibly overwork of a sedentary

CHART I.

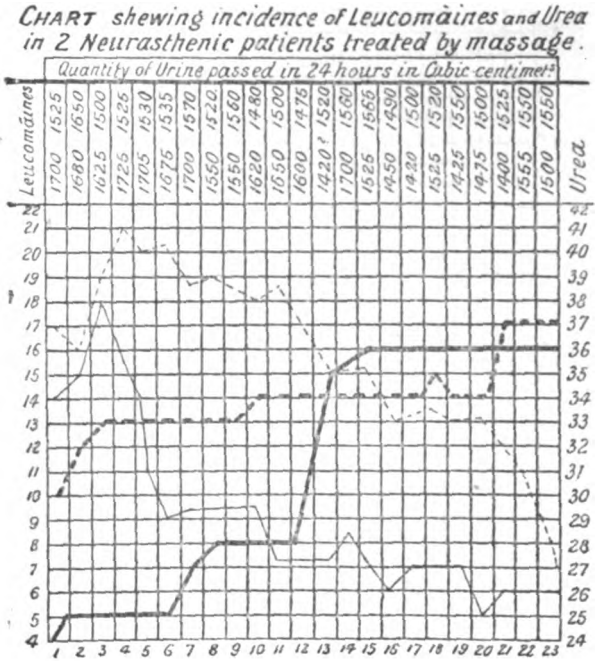


nature may be regarded as a determining factor. Now on examining the urine on each occasion of recurrence of the nervous symptoms a heavy precipitate of leucomaines was observed. At the commencement of treatment by vigorous massage, rest, a light nutritious diet, and mild saline aperients the amount of leucomaines excreted at first increased, but in the first week there was a decrease in the precipitate, which gradually fell in the course of three weeks in one case, and five in the other, to a small quantity, no

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greater than has been observed in health, while the urea excretion increased. (See Chart II.) *Pari passu* with these changes in the urinary conditions the nervous symptoms of these patients improved and the attack passed off. Now it may be quite fairly alleged that since in the one case complete remission had occurred without any treatment on more than one occasion credit is not to be too readily given to the means employed for the oxidation and elimination of the toxines; yet in face of the evidence in the other case which I shall lay before you, I think that incomplete oxidation of toxines having been recognised during the attack, which passed off with a diminution of their appearance in the urine, it may be conceded in the light of the future history of this patient that

CHART II.



the advantages of oxidation were fully established in his case. This patient, who had been almost entirely incapacitated for his usual occupation during five years by reason of constant breakdown, mental and physical, has kept himself in good health by following my *régime* in regard to exercise. Before he came under observation he had led a very sedentary life, never taking any exercise worth speaking of. During the last two years he has been free from his old enemy, only rarely consulting me—I think thrice only—for slight occipital headache. This happy issue out of his affliction I attribute to the fact that he is constantly employing his leisure in doing those things which are requisite and necessary as well for the body as the soul. He plays lawn-tennis, fences, sculls, and rides according to the season of the year, and has lately developed a very pretty taste for golf. In other words, he is fostering the processes of oxidation initiated by massage and kept up by healthy, vigorous exercise.

It would be easy for me to multiply instances from my case book illustrating the advantages of oxidation in cases of anæmia, glycosuria alternating with uricacidæmia, and other maladies which are obviously conditions associated with incomplete oxidation, in which the promotion of the oxidation processes by the employment of massage, athletic and mechanical exercises, and the use of red bone marrow or injections of spermine, has been attended by the happiest results; but time will not permit, and I will only cite one case which has recently come under my notice fully bearing out the advantages of oxidation in auto-intoxication. A very vigorous, robust friend, who is one of the most athletic of muscular Christians I have ever met, was prevented by an accident from carrying out his usual round of healthy exercise. He straightway fell into a melancholy, peevish condition and consulted me. We devised means for repairing the damaged ankle and I bade him resume his accustomed pastime. While awaiting the opening of the shooting season he accepted an invitation to a country house which for some reason fell through, and my patient, disappointed of his lawn-tennis, became more irritable and felt himself much aggrieved. In his urine I had found ample evidence of deficient oxidation, and suggested various exercises possible in town, of which he would have none; but one morning he arrived in my consulting room radiant and glowing with good health and spirits, when I found that he had taken a leaf out of Mr. Toole's book in the play of *The Upper Crust*. You will perhaps, remember that the gentleman of sudden fortune whose part is played by Mr. Toole, after being annoyed by the snubs of his aristocratic guests, sticks his thumbs into his armholes and truculently announces, "That rascal Grubbins didn't touch 'is 'at to me this mornin'; I'll go and give 'im something." My friend, in much the same frame of mind, having received an annoying letter among his morning correspondence, went forth and hired a pugilist for a twenty minutes' "mill," whence he came back to me announcing where he had been. All the irritability and despondency had been worked off in self-defence, and due oxidation had been re-established. The next day there were only traces of leucomaines in the urine. (See Table III.)

TABLE III.—*Effect of Pugilistic Exercise on a Healthy Person temporarily Sedentary.*

Amount of urine.	Leucomaines.	Urea.	Condition.
	Grammes.	Grammes.	
1600 c.c.	4·5	38	
1525 c.c.	5·9	42	Headache owing to lack of usual exercise; irritable.
1500 c.c.	4·5	39	
1480 c.c.	6·9	35	
1500 c.c.	7·2	33	
1275 c.c.	6·9	33	Exercise.
1625 c.c.	13·2	35	Cheerful.
1560 c.c.	10·0	38	Quite well.

Gentlemen, at the outset I warned you that my remarks would assume a suggestive, not a constructive character. Now what I am going to say will be speculative rather than suggestive, so that it may fairly be regarded as unpractical and therefore valueless; but we who are not always able to verify our opinions, and who carry out the work of our lives and base most of our practice on what, after all, is only opinion, know that, however valuable scientific certainty must be, there are times when unconscious knowledge, medical instinct, intuition—call it what you will—comes to our aid and guides us to a correct decision, why and wherefore we are never able to formulate. This confession of a fact, which we all recognise even if we will not acknowledge it, must be my excuse for the following speculations. Granted that there is a great family likeness between the toxines due to physiological processes and those of bacterial origin, that both may be anaerobic and by oxidation will be rendered easier of elimination, does it not seem probable that in most cases, if not in all, the presence of pyrexia denotes the existence of toxæmia, and fever is only a vigorous and sometimes over-energetic method of nature to oxidise these matters and so get rid of them either by burning them up or by making them ready for excretion? Under these circumstances high temperatures, so long as they are not hyperpyrexial, may not be altogether without beneficence. If I do not weary you, let us note for a moment the parallelism between the prodromatous symptoms of the acute fevers and the usual concomitants of chronic functional nervous disorders. In both we find general malaise, rachialgia, prostration, nervous and muscular, disordered digestion, headache, derangements of sleep, and mental disturbance. Nor does the similarity end here, for in not a few instances of so-called nervous maladies we meet with pyrexia, as in the hysterical hyperpyrexia known to us all. May not the fevers of over-fatigue, of hysteria, and of zymotic disease proceed from one and the same cause? Not, indeed, of common origin, for in the one set of cases we are dealing with auto-intoxication without the intervention of bacterial agencies; in the other the infection is introduced from outside. How often we see the temperature of little children running up to a great height as the result of some transient disorder of digestion and subsiding equally rapidly under the administration of a little dose of

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calomel, at once an intestinal disinfectant and an eliminant. Is not the hyperpyrexia in these cases an effort of nature to oxidise, and thus aid in the elimination of leucomaines or ptomaines absorbed from the gastro-intestinal tract? There is, however, another small point in reference to disturbance of digestive function to which I should like to allude before passing on to the brief consideration of other conditions pointing to the importance of oxidation. In cases of chronic disease depending on, or associated with, deficient oxygenation, we find dyspeptic symptoms markedly present, and of these one of the most frequent causes is butyric fermentation. Now, as you are aware, while lactic fermentation is aerobic and normal, when not excessive, butyric fermentation is always abnormal and anaerobic. This condition is very common among anæmic persons and those suffering from wasting maladies; sometimes, also, I believe, it is not uncommonly present in pneumonia. Under such circumstances the administration of the so-called ozonised water, which is really a solution of peroxide of hydrogen, proves valuable in checking the fermentation process. I have not myself had opportunities of testing the value of what our French neighbours manufacture and describe as "l'eau oxygénée" in acute maladies; but in the digestive troubles of anæmic, chlorotic, and obese subjects I have found this preparation exceedingly useful; indeed, I am not at all sure that I have not seen benefit arise from the simple practice of swallowing air, although under ordinary conditions of flatulent dyspepsia, due rather to lactic than to butyric acidity, we all know how greatly the discomforts of a recumbent patient are increased if we do not teach them to take liquid nourishment without swallowing quantities of air. May not the introduction of oxygen into the stomach prove useful in arresting the suffering which anaerobic fermentations set up, greatly adding to the already heavy burden which the patient with pneumonia has to bear? This gastric complication in acute maladies and its local treatment may be a comparatively trivial matter regarded in the light of the more serious and dangerous conditions arising out of deficient oxidation; yet, since we are not only engaged in the endeavour to save life and arrest disease, but also to assuage suffering and relieve pain, it may not be altogether beneath your notice.

I suppose there are few who would object to the general statement that all anæmic patients are constipated; but is it not equally true that most sufferers from constipation are anæmic or present signs of deficient oxidation? Every day clinical observations appear to point to the existence of more or less coprostasis as the cause of the bloodless condition. Compare the headache, foul tongue, depression, and irritability produced by a large dose of quinine with the similar conditions accompanying constipation and the absorption of toxines arising therefrom. Ehrlich's observations on the effects of quinine upon living cells have shown how these are deprived of their oxygen and reduced from a state of amœbic activity to an inert mass of almost spherical protoplasm. Now it has been shown that leucomaines and ptomaines are very readily oxidisable, or, in other words, that they are also like quinine, powerful reducing agents, and if we remember that oxidation and reduction processes are constantly alternating within the cells it is easy to understand how readily this rhythm may be upset by the presence in the blood of these poisons. On this point it would be interesting to obtain further information as to the relationship which I believe exists between the presence in the blood of toxic substances and the pale, almost waxy appearances associated with long-continued habitual constipation. We know that the large intestine takes a great share in the work of absorption. After the richer elements of the food have been elaborated, prepared, and absorbed by the stomach and small intestine, in the splendid economy of nature that which remains is so dealt with that we may regard the colon as the "chiffonnier," the mass of material finding its way into this last receptacle, being, as it were, carefully picked over, slowly and laboriously turned and stirred, until nothing that can be utilised for the purposes of nutrition is suffered to escape. When this purpose, however, takes too long in doing the chemical processes assume a putrefactive nature, and thus follows the introduction of poisonous in place of nutritive material. Now one feature in the character of ptomaines and leucomaines is their greed for oxygen. They are among the most easily oxidisable nitrogenous bodies, so when they reach the blood, either by absorption from the intestines or as the result of tissue waste, it is not difficult to explain the anæmia, blood starvation, and deficiency of oxygen which we recognise as salient symptoms in the condition of so many who consult us. The same struggle for life which has been so brilliantly described by the Russian scientist as existing between phagocyte and microbe would appear to occur chemically rather than physically between the invading horde of leucomaines and the army of peaceful red corpuscles engaged in the labour of obtaining, conveying, and giving up the oxygen necessary for the life of the tissues. How often do we not see the history of communities simulated—nay, almost repeated—in the physiological story of our own bodies? The unstable, half-starved, ill-conditioned nomad sweeps down from his mountain fastnesses upon the hard-working, somewhat sleek, and certainly unwarlike pastoral population of the plains. So it is with these conditions of deficient oxidation; not only do we find bodies formed which are in themselves evidences of oxygen poverty, but when formed and absorbed from without they not only seize upon the surplusage but deprive the blood and tissue cells of their fair share of oxygen. In examining the blood of persons suffering from constipation who have also exhibited anæmic and neurasthenic symptoms the corpuscular value is not often found to be decreased, but the proportion of hæmoglobin is usually below the normal in all such cases, so that in conditions of bloodlessness due to auto-intoxication we do not find at first a diminution in the numbers employed for conveying oxygen to the tissues, but a deficiency in their load; thus the anæmia is qualitative rather than quantitative. Under these circumstances elimination alone will not suffice to restore the health of the patient, but means must be taken to promote also oxidation processes in themselves favourable to the destruction or evacuation of the offending matters.

It is interesting to note in connexion with the processes of oxidation the swing of the therapeutic pendulum of the day. We have our attention on the one hand constantly drawn to the virtues of numerous antipyretics of coal-tar origin, all of which owe their action to their reducing qualities, while on the other hand we are beginning to recognise the value of animal extracts, the majority being remarkable for their potency as oxidising agents. I cannot help thinking that we are apt to be too prone to avail ourselves of the antipyretic series, while perhaps we are not plucky enough to make as much use as we might of the oxidising properties of organic extracts. We find that retention of toxines, the products of incomplete oxidation, means prostration, depression, and general misery, whereas their elimination is attended by cheeriness and restoration to comfort of body and peace of mind, as in the cases already cited, where influenza arrested melancholia and a bout with a prize-fighter restored equanimity.

I have tried to suggest some of the advantages of oxidation and the probable relationship between various obscure nervous states and deficient oxygenation. In our practice to-day we are called upon to treat a generation which is beginning to escape from the hereditary consequences of mercury and bleeding prescribed to their forbears. Evidences of attenuation are growing fainter, robust and sthenic types are not so rare as heretofore. The "Lydia Languish" of yesterday is being ousted by "Mary Fenwick's Daughter" of to-day; but we still meet with examples in both sexes of persons who, in spite of the fact that they were evidently meant to take plenty of healthy exercise and to breathe deeply draughts of fresh air, will not find time or opportunity for duly oxygenating their blood and oxidising their tissues. It is our duty to enforce on our patients the paramount necessity of caring for their bodies, and in a race so addicted to out-door pursuits and so fond of sport it is not often that difficulties are placed in our way. But spasmodic efforts to perform the allotted task make pain of pleasure, and too vigorous exercise after a long spell of inaction does more harm than good. The combustion processes must be maintained with regularity as well as vigour. We must endeavour to foster the chemical interchange between the blood and the tissues necessary to health by such means as will induce the introduction of sufficient oxygen and the more active oxidation of organic matters, raise the temperature, increase the secretions, and stimulate respiration and circulation.

FOOTBALL CASUALTY.—In a match, on the 26th ult., between the Excelsior and Brighton Teachers' teams, a player in the former team fractured his clavicle.

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GLEANINGS FROM SURGICAL PRACTICE.

By THOMAS BRYANT, M.Ch., F.R.C.S. Eng. & Irel.,
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II.[1]—Rupture of the Liver.

This injury, although always grave, is not of necessity fatal, for it is capable of being repaired. Preparations (Nos. 1948[a] and 1951[b]) and drawings in the pathological museum of Guy's Hospital clearly illustrate the truth of this observation. When recovery follows this injury such cases have been usually classed and treated as examples of traumatic peritonitis, their true nature not being at the time revealed. The amount of injury to the liver must, however, when life has been saved, always be limited, and the case otherwise not seriously complicated. In a general way, when a liver or spleen is lacerated death from shock and hæmorrhage speedily follows the injury. In exceptional cases the patient may survive a few days. Thus, out of nine consecutive cases of ruptured liver admitted into Guy's Hospital five died rapidly and three (men) survived three, seven, and nine days respectively.

Case 8. *Fracture of the ribs on the right side, with rupture of the liver; death on the fourth day.*—An old man aged seventy-one was admitted into Guy's Hospital with fracture of some of his right ribs, but without any abdominal symptoms. Bronchitis ensued, and death occurred on the fourth day as a result. After death a rent was found in his liver, which was filled with blood-clot and reparative material, which, if he had not had other complications and had possessed more reparative power at the bank of health to draw upon, would doubtless have completely closed up. There was no blood in the peritoneal cavity.

Case 9. *Injury to the head and abdomen; death from secondary hæmorrhage from ruptured liver.*—A man aged forty-five fell from a cart when intoxicated, and the wheel was said to have passed over his head. Intoxicated to an extreme degree, he was admitted, under Mr. Birkett's care, into Guy's Hospital, presenting neither collapse nor symptom of either abdominal or even cranial mischief beyond some hæmorrhage beneath the right conjunctiva. He was put to bed and soon fell asleep, and on the following morning, with the exception of the hæmorrhage into the orbit, no signs of internal mischief could be detected. Rest, however, in the horizontal position was strictly enjoined; but to this he would not submit, and thirty-six hours after the accident he got up, walked about, and, with a sudden pain in his side, fell back and died. After death a fissured fracture of the skull was found passing across the right orbit, without brain complication; and about a pint of blood existed in the peritoneal cavity, which had evidently escaped from a severe laceration of the liver—a mass the size of a man's fist, situated in the right lobe, having been nearly separated. The right kidney was also fissured on its convex surface, and the fissure was covered with coagulated blood. In this case the man clearly died from rupture of the liver, which at the time of the accident was not associated with either collapse or bleeding; the injured mass, however, subsequently became separated by the patient's walking, and death from secondary hæmorrhage was the result. Had this incident not taken place recovery might have been possible.

Case 10. *Ruptured liver; death on the twenty-eighth day.*—A woman aged forty-two, much given to drink, was admitted into Guy's Hospital under my care on June 23rd, 1876, having been brought in by the police in a state of intoxication after she had been injured in a drunken row. When seen by the house surgeon, besides a wound of the lip and some head bruises, there were indications of local injury over the right lower ribs, where she had apparently been kicked, and a rough diagnosis was made of fracture of these ribs, for which she had her side carefully strapped up. The woman apparently went on very satisfactorily for seven days, when chest symptoms appeared, involving both lungs, and within a week she became very ill, so that she died with chest complications on the twenty-eighth day. At the necropsy the bronchial tubes in both lungs were found to be full of mucus, and the right lung was in a state of grey hepatisation, particularly at its base. The liver weighed fifty-four ounces, and in it there was a large abscess which occupied the greater part of its right lobe; the abscess extended up to the diaphragm, which formed its upper wall and below came within half an inch of the under surface of the liver. The contents of the abscess were broken-down liver structure, blood, and pus. It seems tolerably clear that in this case the abscess formed as a consequence of injury to the liver and of effusion of blood into its structure; and it seems also probable that if the woman had been in better health repair from the injury might have taken place.

Case 11. *Ruptured liver; death on the eighteenth day.*—A man aged twenty-nine was admitted into Guy's Hospital after having received a kick in the region of his liver. He was collapsed on his admission, but soon rallied and complained only of local pain. In a few days symptoms of peritonitis appeared of a localised and chronic nature, and the man sank on the eighteenth day. After death a fissure two inches long and one inch deep was found in the anterior edge of the liver along the fissure for the gall-bladder; this rupture was full of blood-clot, and the tissues about were matted together with reparative material. The gall-bladder was also ruptured to the extent of three-quarters of an inch in the line of the liver, and the edges of the ruptured walls were inverted. There was no bile in the gall-bladder, and no evidence of any having been extravasated. The opening in the gall-bladder was sealed with lymph. In this case the possibility of ultimate repair being secured might reasonably have been entertained, under the most favourable circumstances, if a suspicion only of the nature of the case had been excited in the surgeon's mind who had it in his charge; even as it was nature had done much to repair the mischief which had existed.

Case 12. *Ruptured liver; fractured right lower rib; laceration of the stomach; death on the nineteenth day from peritonitis.*—I must quote one more case to illustrate this part of my subject, for I know of no better example of ruptured liver and complications in which nature's efforts of repair were so nearly successful. A man aged thirty-seven was admitted in 1867 into Guy's Hospital under the care of the late Mr. Hilton, having been crushed between the buffers of two railway carriages applied respectively to the epigastric region and back. As an immediate result of the accident he fell insensible when released, but he recovered his senses in a few minutes and was soon admitted into Guy's Hospital cold and speechless. When put to bed he retched a little, but did not vomit, and as reaction appeared he complained of epigastric pain and liked to rest on his left side. It was made out at the time that the ribs of his right side below the fourth were fractured, but no other diagnosis of injury was framed. His urine was natural. He soon complained of thirst, but on taking some milk it was rejected, but without blood. In two days he had much improved and took a small piece of meat. His bowels also acted naturally. He complained, however, of pain across his chest and of some tightness at the pit of his stomach. His respiration was quiet and he had no cough. The abdomen was slightly distended. On the seventh day his bowels became loose, but he did not pass blood in his stools. His respiration also became thoracic. On the eleventh day the abdomen had become more distended; on the fourteenth this had increased, and a pleuritic rub appeared over the left lower ribs (uninjured side); on the sixteenth day he wanted more food; and on the nineteenth he died as if choked. At the necropsy the right ribs were, as suspected, found to be fractured, and the right pleura was full of serous fluid compressing the lungs. The peritoneal cavity contained some stringy lymph which was blackened from blood which had been mixed with it. There was lymph also about the liver of a yellow saffron colour. The liver was adherent to the diaphragm, and on its upper surface, about its centre, there was a rupture to the extent of two inches.[2] The stomach was adherent to the liver, and at the seat of adhesion on its anterior wall there was an irregular rent of the mucous membrane nearly three-quarters of an inch long by a quarter of an inch wide, and at one end of the rent the peritoneal coat was perforated; the opening was, however, completely closed by adhesion to the liver. There was no evidence of extravasation of blood or of the contents of the stomach having taken place, and all the injured parts were well glued together. This case is full of interest, although the absence of all or any symptoms which might have suggested the nature of

[1] No. I. was published in THE LANCET of Nov. 2nd, 1895.

[2] Preparations, Guy's Hospital Museum, No. 593.

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the injuries which had been sustained was very remarkable. That the ribs were extensively fractured by the squeeze was but natural, and that the convex surface of the liver was ruptured by the same force was also what might have been expected; but that there should have been a laceration of the stomach without symptoms is difficult to explain, unless this fact is made intelligible by supposing that the original rupture of the stomach brought about by the squeezing force had been incomplete and had not extended sufficiently far through all its coats to allow of extravasation. Under these circumstances the progress of the case seems explicable. Had the chest mischief been less severe I am disposed to think that a complete recovery might have been secured to both the hepatic and stomach mischief.

With respect, therefore, to the diagnosis of rupture of the liver, it must be confessed that there are no special symptoms which can be accepted as being indicative of its existence, although severe shock and collapse as immediate results of a forcible local injury to the right side of the abdomen or to the lower part of the right side of the thorax should always suggest its probable existence; and even when the same kind of injury to the same regions is unattended by any such serious symptoms as have been just alluded to, the surgeon should be alive to the possibility of a limited rupture of the liver being present, and he should treat the case accordingly. The cases quoted afford ample evidence to support the truth of this proposition, and are more than enough to support a diagnosis which includes a possibility of serious mischief to the liver in spite of an absence of serious general symptoms when the nature of the injury has been such as to render it probable that such an injury may have been sustained. Had such a possibility been a prominent thought in the minds of those who had the treatment of the cases I have quoted I am tempted to believe that the cases themselves would not have been in my possession, since a recovery might have been secured in the majority of them.

With respect to the diagnosis of rupture of the spleen the remarks which I have just made with reference to the liver are equally applicable. It is to be recognised that cases of limited rupture of this organ, as of the liver, are quite reparable, as illustrated by Preparation 2018 in the Guy's Hospital museum, taken from a body seven days after the injury, and that when such cases recover they, during life, have most probably been regarded as examples of local traumatic peritonitis. In Case 3, already quoted, there was no suspicion of such a form of injury being present, and it was not till a fatal termination of the case by an acute peritonitis that an opportunity of finding out its cause was afforded to the surgeon. When a severe laceration of the spleen has taken place death from shock and collapse due to hæmorrhage is the common result. When the laceration is limited the case may be overlooked and regarded as one of peritonitis. The cautious surgeon should, however, in all cases of injury from any local force applied to the left hypochondriac or lower thoracic region, whether with or without general symptoms, have the possibility of its presence before his mind, and this possibility, however remote, should always lead him to treat his patient with all the care and precaution as if, indeed, he felt sure that this kind of injury existed. The observance of such care, under all circumstances, must be beneficial, its non-observance may be fatal.

Rupture of the stomach when complete is a very fatal injury, shock and irrecoverable collapse, as a rule, speedily following the escape of its contents into the abdominal cavity. When incomplete—that is, when only its mucous lining or peritoneal covering, with or without its muscular coat, is involved—recovery is not impossible. When the external injuring force is applied to the fully distended stomach a rupture is more likely to take place than when it is empty, and this rupture may be either complete or incomplete. In the last case reported (Case 12) it is reasonable to believe that the rupture had been incomplete and had not extended sufficiently far to allow of extravasation of its contents to take place, for no blood was vomited although the stomach rejected food, and there were no primary symptoms to indicate any injury to the organ. In the Guy's Hospital museum there is a preparation (No. 592) showing a laceration and detachment of the mucous membrane of a stomach over an area of about two inches, extending transversely around the middle of the organ to within an inch on either side of the greater curvature. It was taken from a boy aged nine who had been run over by an omnibus and who shortly after admission vomited a blood-stained fluid and died the next day; in addition to the stomach injury, there were found laceration of the liver, extravasated blood behind the pancreas, and a broken thigh. There is likewise a second preparation (No. 594) showing two extensive lacerations in the peritoneal and muscular coats of the stomach, and a very slight tear in the mucous membrane. It was taken from a man who was brought into the hospital dead, having fallen thirty feet on to the deck of a vessel.

That the incomplete separation and laceration of the mucous coat of a stomach, as revealed by the specimen at Guy's Hospital, are clearly possible is an important fact, and I have good reason to believe that the same accident may occur to the intestines and even bladder, and that persistent or intermittent hæmorrhage from either of these organs following injury should suggest its presence. Thus, a man aged thirty-nine fell thirty-five feet upon his abdomen and subsequently passed blood mixed with his motions for seven consecutive days, associated with local tenderness over the colon, and then recovered. I suspected laceration of the mucous membrane of his colon, and upon such a diagnosis treated him successfully. And in a boy about fourteen years of age, who fell from a height upon his perineum and subsequently had hæmaturia and passed fresh clots and pure blood with his urine for some days, accompanied with pain, when there were no indications of urethral or renal mischief, the same diagnosis was rendered probable. At any rate, of this I am sure, that whenever, as a result of an abdominal injury, blood is found to be mixed with the vomit and vomiting recurs in small quantities at intervals, the probability of this symptom being due to a rupture of the mucous lining of the stomach should be entertained and the treatment of the case modified by this opinion.

Grosvenor-street, W.

SPORADIC GOITRE: ITS VARIETIES, AND THE RESULTS OF MODERN TREATMENT.

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History.—We may assume that goitre was known objectively in the earliest periods of medical science, although there are no definite allusions to the affection in th Hippocratic writings. In the first century the Alpine goitre were familiar objects in the public eye, as even a non-medical writer, Juvenal,[1] exclaims by way of popular illustration:—

"Quis tumidum guttur miratur in Alpibus?"

Before the third century the Greeks had devised the words[2] "bronchocele" and "tracheocele" to designate such tumours, but nevertheless without understanding anything of the special character of enlargements of the thyroid gland. To their view, in fact, goitre was differentiated by position only from scrofulous swellings of the cervical glands.[3] This confusion existed even until quite modern times, whence the term "struma" is still used for goitre in German nomenclature. The first essay, indeed, to segregate bronchocele from other tumours of the neck does not come to us till 1610, when Riolan[4] demonstrated that a sharp line of distinction should be drawn and goitre relegated to a class apart. Other writers followed his lead until the question was definitely settled. With respect to goitre accompanied by exophthalmos, &c., the general recognition of this malady is almost of contemporary date. The disease, however, was observed clinically and adequately described long before the time of the men whose names are so intimately connected with it. In 1786 Caleb H. Parry of Bath noticed a case of exophthalmic goitre and subsequently many others; but, though a copious writer, his observations in this department only came to light in a posthumous work[5] published in 1825. Parry's experiences, however, were ignored by, or never gained the attention of,

[1] Sat. xiii., 162.

[2] Galen: Finitiones Medicæ (ascr.), Opera Omnia; Venetiis, 1554, tomus 1, p. 155c. Paulus Ægineta, l. vi., cap. 38.

[3] Fabricius Hildanus: Obs. et Curat. Chir., Obs. 34, 35, cent. iv., 1619.

[4] Opera Omnia, p. 632. Paris, 1610.

[5] Collections, &c., vol. ii., p. 111. London, 1825.

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the profession at large. In 1835 Graves of Dublin began to give demonstrations of exophthalmic goitre, and his prominent position as a clinical teacher at once brought the disease into general notice. He was, presumably, unacquainted with Parry's work in the same field. Yet Graves published nothing on the subject till 1843, when he included an essay on the malady in his "Clinical Medicine."[6] In the meantime (in 1840) Basedow of Merseburg brought out a monograph[7] on this form of goitre, which at once attracted notice in Germany. Subsequently exophthalmic goitre has been commonly called "Basedow's disease" by the Germans, but has been better known as "Graves' disease" in other countries. The same credit seems to be due to both men as clinical observers, their originality never having been questioned, but the considerable priority of Parry's observations is altogether beyond dispute.

Semeiology.—In a London throat clinic goitre is met with in three almost sharply defined manifestations. 1. Tumours variable in size, but never very large, variable also in consistency, and apparently of purely local significance. The swelling is not usually remarkable for its symmetrical outline; it may extend across the whole front of the neck or exist only on one side or in the middle. When the whole thyroid gland is involved one lobe may be implicated much less than the other; the isthmus may be the chief seat of enlargement or may appear as a well-defined depression between two lateral eminences. As a rule, the goitre is firm but compressible and more or less movable on the neck. In a minority of cases, however, it is remarkably dense. Some hard goitres have a very regular surface, whilst others are more or less irregular and may even give the impression of a rather rough stone wrapped in a covering of integument. 2. The second class of goitres is comparatively rare; it resembles the first class in seeming to be a purely local manifestation, but the tumour differs considerably as to shape and density. Regularity of outline, smoothness of surface, and concentricity are the rule. Occasionally, however, two or more swellings, conjoined to a greater or lesser extent, are met with. To palpation these goitres give a tolerably clear impression of containing fluid, and are, in fact, cysts. 3. In this division are to be reckoned a number of thyroid tumours, as a rule soft and puffy, and also diffuse and symmetrical, which generally commence in young people between the ages of about fifteen and twenty years. They differ from the two first classes in being allied, in a great majority of instances, to one or more of certain other symptoms—viz., nervous exaltation, neurasthenia, cardiac excitement, anæmia, and less frequently protrusion of the eyeballs (exophthalmos). Some of these, however, are probably merely examples belonging to the two former varieties in an initial stage. In the most pronounced cases the action of the heart is very tumultuous and the pulse may attain 140 or 150 beats per minute. Under these circumstances throbbing of the carotids may be so great as to produce a visible rhythmic movement of the goitre and to communicate a considerable systolic jerk to the hand if placed on the tumour. A murmur may be heard with a stethoscope. Whether there is a pulsation, an expansile movement in the substance of the swelling, is a doubtful point. Looking to the great vascularity of the thyroid body, which receives more blood than the brain, it might well be so, especially if the vessels were dilated or multiplied in proportion to the mass of the goitre. Another peculiarity of this kind of bronchocele is that a variation in size, perhaps at different periods of the same day, is liable to occur. It may happen that the tumour as a regular occurrence is larger in the evening, or the increase may be only occasional, concomitantly with indisposition, mental excitement, or the catamenial flow. As to the exophthalmos, it may be so slight as almost to escape notice, or may proceed to such an extent that the strain on the envelopes of the eye produces ulceration of the cornea. This, however, is rare, and I have not myself met with such a case. The patients when seen by the practitioner are generally in a very nervous condition, sometimes scarcely able to speak intelligibly from muscular tremor and paresis. Tremor and drooping of the eyelids are often noticeable. Anæmia is not constantly present, and occasionally the patient seems to be rather plethoric than otherwise. The evolution of symptoms in Graves' disease seems to take the following order: neurosis, cardiac excitement, goitre, and exophthalmos. It the thyroid gland may, of course, be in a morbid condition before its hypertrophy becomes apparent. All kinds of goitre may give rise to troublesome symptoms by pressing on the adjacent parts of the neck. The most common occurrence is dyspnœa from compression of the trachea, but it may also have neuralgia or aphonia from nerve pressure, giddiness or vertigo from vascular disturbance, &c. When the windpipe is borne on by the tumour noisy respiration—i.e. "roaring"—may occasionally be observed. Such tracheal compression probably occurs only when the growth insinuates itself between the air tube and the sternum. An irksome feeling in the throat or stiffness in swallowing is not infrequently complained of. It is, however, altogether exceptional for a bronchocele to produce any decided subjective phenomena by its mechanical effect on contiguous parts. It may be mentioned that "metastatic goitres"—that is, tumours in various parts of the body having the anatomical characters of the thyroid gland—are sometimes met with.

Pathogenesis.—Despite the persevering researches as to the etiology of goitre, and the immense literature which has accumulated around this disease, its immediate causation remains quite unknown. It is a matter of common knowledge that in certain mountainous districts all over the world goitre is an endemic affection. Popularly the water of the locality has always been accused of generating the swelling, but chemical analysis has not fixed on any substance which can be proved to have a goitre-producing faculty. Some observers, indeed, have abandoned the water theory and promulgated the hypothesis of a "goitre miasma." It seems certain, however, that goitre is a water-carried and not an air-borne disease, but no forecast can yet be made as to whether the honour of discovering the actual *materies morbi* will fall to the chemist or the biologist. To decide between mineral and microbe remains a crux to be solved by some future investigator.[9] It is a well-ascertained fact that "acute" goitre may occur in endemic districts, as when persons inhabiting other parts shift their residence to such places.[10] Families and bodies of soldiers have been thus affected suddenly and as promptly cured by removal. "Goitre wells" are also said to be known in Germany.[11] Some of the goitres arising about puberty and in connexion with pregnancy develop so rapidly as to deserve the name of acute. Considerable collateral advances have, however, been made in this field by the investigations of Ord and others which show that myxœdema results from functional aberrance of the thyroid gland, and cachexia strumipriva from its deprivation—phases of the same pathological condition with different causation. Nor is cretinism, which is esteemed to be a further or hereditary stage of goitre, any longer supposed to result from calcareous deposits (aqueous) about the base of the skull impeding the flow of blood to the brain. It is now known to be the full manifestation of myxœdema when occurring in early life through congenital or artificial loss of the thyroid gland. Experiments have also shown that an apparent bronchocele can be produced in animals by feeding them with thyroid gland substance or extract, a valuable therapeutic discovery, though not enlightening us as to the origin of clinical goitre. We are also not so much in the dark with respect to exophthalmic goitre, although the advance is more in the nature of casting off from old beliefs than of anchoring fast to new ones. The etiological connexion between uterine derangements and this malady, urged by Graves, may now be put aside, considering that the train of symptoms are occasionally met with fully developed in the male sex. Besides, it is obvious that any serious disease occurring in females is almost certain to create a disturbance of the sexual functions. We no longer with Kœlen[12] and his school, look to the sympathetic system as the starting-point of the neurosis, but to the goitre itself.

[6] P. 674.

[7] Exophthalmos durch Hypertrophie des Zellengewebes in der Augenhöhle. Casper's Wochenschrift, March 28th, 1840.

[8] See Lücke: Archiv für Klinische Chirurgie, Band ix., 1867, p. 88.

[9] Among those who have recently given their attention to this subject Kocher of Berne states that a micro-organism found in the water is the actual cause of goitre. He has produced the disease by practising injections on rabbits, &c. (Statistics of Goitre, &c., Berne, 1889.) On the other hand, Berry decides in favour of a mineral origin. (Brit. Med. Jour., June 13th, 1891.)

[10] See Nivet: Études sur le Goître Epidémique. Paris, 1873.

[11] Berry: Loc. cit.

[12] De Exophthalmo ac Struma, &c.; Berlin, 1855. At first the neurosis was thought to be affected by pressure of the goitre, but after Claude Bernard's experiments on the sympathetic the tumour itself was considered secondary to the nerve lesion.

[13] See Greenfield: THE LANCET, Dec. 16th, 1893.

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If the symptoms arose from a primary nerve lesion it is evident that we should as a rule have one side only affected, with exophthalmia and goitre confined to that side. No case, however, of unilateral Graves' disease is on record. The thyroid gland, being in a morbid state, may allow some deleterious matter to remain in the blood or may contaminate it by pouring out some perverted secretion. Noting the symptoms arising from an overdose of thyroid gland, Greenfield [14] thinks the affection may represent the converse of myxœdema. But whether the tumour in these cases has a similar extrinsic origin to that of ordinary goitres is still altogether undetermined. Certain predisposing causes of goitre are very well marked, and at the head of these stands sex. Comparatively few cases of sporadic goitre are found in males, though it is said that the endemic form attacks both sexes alike. Next in order comes puberty or adolescence, when most goitres seem to manifest themselves; and further we have heredity, pregnancy, and the puerperal state. I have not met with evidence of heredity, which probably only becomes a factor in endemic districts. Exophthalmic goitre is sometimes met with in members of the same family, and several cases of sisters being so affected have been reported.[15] I have myself seen an instance of two sisters exhibiting the disease under circumstances which suggested a family predisposition.[16]

Pathological anatomy.—The thyroid gland consists of vesicles connected by areolar tissue, and it is larger in females than in males. In case of enlargement the necropsy may reveal a true hypertrophy in which the tumour throughout resembles the normal gland, or the increase may be confined to the parenchymatous elements, which have multiplied and become condensed, in some cases to such an extent as to extinguish more or less completely the function of the organ. In other instances one or more vesicles may have become dilated, afterwards coalescing to form large cysts, which still contain the yellowish fluid constituting their normal contents. If both processes advance together *pari passu* the goitre will consist of a number of cysts about the size of a filbert, more or less, with very thick walls. A veritable fibro-cystic tumour is thus formed, which sometimes attains to great dimensions. Sporadic goitre, however, rarely grows to be very large. In the hardest bronchoceles calcareous laminæ or granules may be found embedded in the substance; or we may have some tumour, fibroma, atheroma, &c. developed from a nucleus in the thyroid body.[17] A few necropsies have been obtained in cases of epidemic (acute) goitre. Here the condition is one of increased vascularity and fibrous hypertrophy. Small cysts may be formed, and the epithelium of the vesicles is infiltrated with granulations.[18] The structural distinction between exophthalmic goitres and those of purely local significance is believed in by most writers on the subject. So far, however, nothing has been formulated. Necropsies have not revealed the development of any "spongy erectile tissue," the existence of which has been imagined by some observers in order to explain the pulsatory impulse and variability of size. According to Shingleton Smith[19] the gland is in a state of "villous and vascular hypertrophy," but Greenfield[20] denies the vascularity; he thinks it, in fact, less than normal. In the view of this, the latest, observer, the thyroid is in a condition of rapid glandular evolution, seen in nothing else but the development of an adenoma. On the whole, perhaps, the appearances are not different from those to be seen in any actively growing goitre. Such patients soon apply to the practitioner, and the disease, if it terminates fatally, runs a comparatively short course. Thus necropsies are likely to be obtained in an early stage of the thyroid growth. Very hard goitres and cysts proper do not appear to be pathologically connected with Graves' disease. Traube and Recklinghausen,[21] however, speak of sclerotic and cirrhotic conditions being found. Semon[22] also states that every form of bronchocele may be met with in conjunction with exophthalmos. The associations, under such circumstances, may be deemed fortuitous. Morbid changes are usually found in the sympathetic nerves, but by no means always, swelling and hypertrophy of ganglia, and degeneration of ganglionic cells. Disease of the central nervous system also exists, and perhaps invariably, but the alterations have not yet been tracked out. Germain See,[23] in fact, considers that the phenomena spring from paralysis of the pneumogastric, and Filehne[24] has even shown that section of the restiform bodies in their anterior fourth produces symptoms in rabbits, &c., very suggestive of Graves' disease. It is a rather curious fact that the cause of exophthalmos has not yet been elucidated satisfactorily by any post-mortem researches. Certain lesions have often been found, such as hyperæmia and extravasation in the retina and choroid, adipose deposit in the cellular tissue of the orbit, &c., but such manifestations do not explain the protrusion of the eyeballs. This phenomenon must, therefore, be the result of transitory conditions, probably vascular engorgement, with more or less serous effusion, and tonic muscular spasms, which disappear with life. In long-standing cases every variety of organic heart disease has been found.

Diagnosis.—Some writers seem to include every tumour of the thyroid gland under the name of goitre. Thus, even cancer of the organ may be denominated malignant goitre. As a rule, however, we understand by goitre, or bronchocele, only those tumours of specific though unknown origin which I have been dealing with in the present paper. The general diagnostic sign of enlargement of the thyroid gland is that the tumour follows the upward movement of the larynx in deglutition. Too much importance should not, however, be attached to this point, as, owing to weight, connexions, loose pedunculation, &c., the motion may not be very perceptible. As goitres are common and tumours of the vicinity likely to be mistaken for them are altogether rare, mistakes cannot often occur, nor are they likely to be of much moment considering that the identical treatment may be the best in each case. It is advisable, however, to distinguish bronchocele as soon as possible from simple inflammation, cancer, hydatids, and gaseous tumours. Thyroiditis comes on more or less suddenly and with the usual accompaniments of inflammation—viz., local heat, pain, tenderness, and concomitant fever. Its early subsidence soon abridges any doubts that may be entertained, but a chronic enlargement may result and pass for a genuine goitre. As to cancer,[25] it is not likely to be diagnosed until it reveals itself by pain or tendency to ulceration &c., or until its nature is proved at the necropsy. Hydatids[26] may be mistaken for cystic goitre, but are usually recognisable as lodgments in the gland as distinct from any general hypertrophy. An air tumour or emphysema may be developed in or about the thyroid body in connexion with a tracheal leakage or fistula. Diagnosis is easy if it can be emptied by pressure and palpation. In any case it conveys a peculiar sensation to the touch. Tumours arising in other parts of the neck—such as enlarged glands, lipomata, &c.—do not simulate goitre and are not likely to be mistaken for it. Small bursal tumours attached to the larynx close to the thyroid gland, and rising in the act of swallowing, are easily distinguished from bronchocele. They rarely grow larger than a pigeon's egg.

Prognosis.—The usual course of a goitre is one of slow increase for an indefinite period, but after three or four years the growth of the tumour is, as a rule, almost imperceptible. Very hard goitres, whatever their age when first seen by the practitioner, may in general be safely predicted to have attained their utmost dimensions. Intercurrent symptoms of any moment are not to be apprehended, unless when actually present in an incipient stage. In Graves' disease the prognosis is more serious, as a certain proportion of these patients pass into a state of hopeless anæmia and

[14] Ibid.

[15] See Cheadle: St. George's Hospital Reports, 1869-71-78.

[16] A married lady aged thirty-eight presented herself with rather mild symptoms of Graves' disease. After about a twelvemonth she was well enough to leave off treatment. Five years after her first coming she returned with a sister aged fifty, also married, suffering in the same way. She herself appeared to be practically well. In the second case the action of the heart was very tumultuous; indeed, that was the only marked symptom. In both instances the goitre was small and the exophthalmia but slight. The elder sister was under observation for about eighteen months and expressed herself as being much better. The cardiac excitement had not appreciably abated. These sisters had lived apart in different districts for twelve or fifteen years.

[17] See Berry: THE LANCET, Jan. 25th, 1890.

[18] See Collin and Lebert: Recueil des Mémoires de Médecine, &c., troisième série, tome vi., 1861.

[19] Medical Times, June 15th, 1878.

[20] Loc. cit. Very contradictory opinions have been formed on the evidence of necropsies in this malady. See Withusen, Bibliothek far Läger, 1859 (trans. in Dublin Medical Press, 1859). Also Trousseau (Peter and Lanceraux), Clinique Médicale, &c., tome ii., 1868.

[21] Deutsche Klinik, 1863, No. 29.

[22] Heath's Dictionary of Surgery.

[23] Diagnostic et Traitement des Maladies du Cœur, p. 284, 1879.

[24] Erlanger Sitzungsbericht, 1879.

[25] See Wolfenden on Cancer of the Thyroid Gland. Medical Press and Circular, vol. ii. 1888.

[26] See Gurlt: Die Cystengeschwülste des Halses, p. 273. Berlin, 1855.

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feebleness, and finally perish, usually when attacked by some trifling malady, such as febricula from taking cold &c. Nevertheless, a small percentage of cases seem to be of a temporary nature, pass through a period of exacerbation and decline, and ultimately undergo a practically spontaneous cure. Under these circumstances the goitre may almost disappear under the influence of a kind of cirrhosis. In all instances some dregs of the disease are left. Progressive exophthalmos is, in my opinion, the most unfavourable symptom. It is, indeed, surprising what an amount of cardiac tumult may exist for months, and even years, without giving any great discomfort to the sufferer, provided that in other respects the malady is not signally developed. The menopause is very unfavourable to victims of the disease, but the prospects are worst in the case of young women who have been in delicate health previously to being attacked.

Treatment.—1. In ordinary cases of goitre, such as I have included in the first class, excision of the tumour has been a favourite operation with German surgeons, notably Lücke, Billroth, and Kocher. During the recent Surgical Congress at Berlin the last-named presented his list of such operations completed to the number of 1000. Generally speaking, however, this means of radical cure has rather declined of late years owing to the discovery of myxœdema. This affection was independently noticed by Kocher in the form of "cachexia strumipriva," the term he applied to a train of symptoms observed by him to follow frequently on the total removal of a goitre. Tetany also very commonly occurs after complete excision. The difficulty is now met by leaving a small portion of the gland to fulfil the functions of the organ. Out of the 1000 cases of excision Kocher has put on record, only 12 per cent. of deaths resulted from the operation. A brief allusion will here suffice to the method of treatment employed extensively in India by a Captain Cunningham,[27] and said to have been successful in some scores of thousands of cases. I allude to applying an ointment of biniodide of mercury to the surface of the goitre and then causing the patient to keep the part exposed to the glare of the sun for an hour or several hours until blistering occurs; then the ointment may be reapplied and the case left alone for a twelvemonth, when, if the cure is not complete, the measure can be repeated. This treatment doubtless falls in easily with the habits of natives of the tropics, but it has failed here owing probably to its being less consonant with the routine or perhaps the solar opportunities of European life. We now come to the means of treating goitre introduced about a quarter of a century ago by Alfred Luton[28] of Rheims—viz., the injection of iodine into the substance of the tumour. This is undoubtedly the greatest advance ever made for the relief of bronchocele. Compared with excision the procedure is without risk either with respect to life or myxœdema, whilst in suitable cases the result is almost as certain as in the grave operation. It must be borne in mind, however, that very hard goitres will not yield to this treatment—the success of the injections is, in fact, precisely in an inverse ratio to the amount of induration. Thus, in some instances only a slight diminution of the swelling can be attained, but in a majority absorption will proceed until practically nothing is left of the tumour. I have found that in ordinary cases (when the goitre is, let us say, somewhat less in size than the average fist) an injection of about twenty minims of tincture of iodine once a week produces the maximum of reducive effect. Frequent injections are not, however, necessary to recovery, as the contractile result of a single operation does not die out altogether until a month or more has elapsed. Occasional injections may, therefore, be quite as successful as when they are carried out regularly once a week; but of course the time occupied will be proportionately longer. The slower treatment is advisable in the case of nervous and delicate patients, as the first effect of an injection is to produce some parenchymatous swelling and inflammation, which for two or three days is often accompanied by rather severe pain about the neck. Hence weakly persons soon begin to dread the little operation. In such cases it is well on each occasion to freeze the surface with ether spray at the point chosen for inserting the needle. How the injection acts is not quite certain; but it seems that the point of lodgment forms a focus from which the substance of the gland becomes devitalised in a diminishing degree throughout a considerable area. Consequently an active absorption of débris is set up, stimulated by the inflammation, the iodine, or both. The specific part played by the iodine is, however, a minor one, as good results can be obtained by the similar use of other fluids, such as solution of perchloride of iron, alcohol, dilute acetic acid, &c. As to the mode of procedure, the point of the needle should first be steadied on the spot selected for entry. Then by a quick movement the needle is driven straight in for half an inch, an inch, or more, according to the size of the goitre. Practising the insertion rapidly in this way the stab is so little felt that an ordinary patient will scarcely wince. When carelessly done the needle may carry the skin over the smooth surface of the goitre and enter at an acute angle, being itself bent or broken in the process. It is advisable that the needles for these injections should be stouter than those furnished for ordinary hypodermic use, in which it is only necessary to penetrate to the subcutaneous tissue. Unless the tumour is distinctly bi-lobed or extends across the whole front of the neck, it makes not much difference whether the injections are made always at the same spot or in various places. In the smaller goitres the needle must be directed from the point of entry towards the centre, and thus the site of lodgment will be always practically the same. The effect of the injections is, however, somewhat widespread, and even when the whole mass of the thyroid gland is involved the swelling may be observed to diminish on one side while the treatment is confined to the other side. As to very large goitres in which the enlargement approaches the size of the head or thereabouts, I have only seen one such case. In that the injections were unsuccessful, although the tumour was rather soft and appeared to consist of a number of fibrocysts, each being somewhat larger than a walnut. Such developments are undoubtedly very rare in sporadic instances. The treatment of bronchocele by the internal administration of drugs has been very extensively attempted, but the results are only occasionally satisfactory. Iodide of potassium has of course been generally the sheet-anchor, but hydriodic acid[29] and hydrofluoric acid[30] have, for a time at least, been strongly advocated. At the German Congress above-mentioned Kocher spoke very highly of thyroid gland and phosphate of potassium used conjointly, and such a recommendation coming from a surgeon so habituated to the use of the knife in these cases should certainly carry great weight. 2. In cystic goitres the indications for treatment are simple and after the old-established measures adopted for the radical cure of hydrocele—tap the cyst and inject some fluid capable of setting up an inflammatory process by which the secreting membrane lining the cavity may be destroyed. Thus the tumour is entered about its lower third by a medium-sized trocar and cannula, care being taken to avoid any vein which may appear near the surface. When the contents are evacuated two or three drachms of solution of perchloride of iron (two drachms to an ounce) are injected through the cannula, which is stopped with a plug and allowed to remain in, its retention being ensured by some suitable fixing. The discharge-pipe of the syringe used should be bent at an obtuse angle, so that the body of the syringe is held somewhat upright when injecting. This form was adopted by Mackenzie after he had had a death from injecting air into a vein, in order to ensure that no bubble of air should remain in the liquid injected. After two or three days the plug is removed, when, in the most favourable cases, the discharge will be found scanty, mixed with some pus, and perhaps a little blood. The plug is reinserted and removed daily or on alternate days for two or three weeks until the discharge diminishes to a small amount of purulent liquid. Finally the cannula is withdrawn and the opening is afterwards kept open by any simple device, such as keeping a piece of thin wax bougie strapped into it with plaster, until the discharge ceases and the cyst is evidently obliterated. Sometimes it happens that the goitre refills very rapidly and there is little evidence of the interior irritation which should result from the injection. The latter must then be repeated. In the most obstinate cases Woakes's[31] plan of passing a probe or "acid-carrier" dipped in saturated solution of chromic acid into the cyst may be tried. It must be impressed on the mind of any practitioner without experience of this treatment that the operation,

[27] See Mouat, Indian Annals of Medical Science, April, 1857; also S. Mill Frodsham, Bulletin Général de Thérapeutique, tome lix., 1860.
[28] Archives Générales de Médecine, 1867. Interstitial injections with various fluids had been tried by Velpeau and others before that date, but without method and perseverance.
[29] American Dictionary of the Medical Sciences: article Goitre.
[30] Woakes, THE LANCET, March 19th, 1881.
[31] THE LANCET, June 21st, 1890.

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simple as it is, causes a great deal of constitutional disturbance. In women not particularly robust the pulse will often rise to 120 or more immediately after the tapping, and several weeks will often elapse before the vascular fervescence at length gradually subsides. Deaths have even been reported, though none happily have come under my own cognisance. Females, however, who are in any way fundamentally delicate often remain in a state of weak health for many months. I have never heard of any drugs being vaunted for the cure of cystic goitre, but electrolysis has been tried, as it has in other goitres, with, however, more promising results. According to Dickson[32] of Toronto the best method is to empty the cyst by means of an aspirating needle isolated to within an inch of its point. Then refill the cavity with a solution of common salt and connect the needle with the negative pole of the battery, the positive electrode being applied between the shoulders. A current of thirty milliampères may be employed for fifteen or twenty minutes, after which the sac is to be emptied and the opening sealed. The repetition of this procedure two or three times at short intervals may effect a cure. It may be mentioned that operating surgeons sometimes enucleate the cyst in this class of goitres. 3. Until recent years exophthalmic goitre has been regarded as entirely outside the domain of surgery. The patient, has, therefore, been subjected only to the influence of such drugs as seemed likely to combat the symptoms, especially bromides, digitalis, strophanthus, &c., with perhaps a surface application of electricity to the tumour or to the cervical sympathetic after the manner of Eulenburg.[33] Iodine has not been relied on in this affection as it has in ordinary goitres, although in one case recounted by Trousseau[34] it appeared to have a specific action. Both thyroid and thymus gland, antagonistic substances as it is thought, have recently been administered, but the evidence does not yet enable us to decide as to their value. The persevering use of galvanism to the goitre sometimes produces a diminution of size, but the value of electricity is most marked when the negative electrode is applied to the course of the sympathetic nerve in the neck.[35] An almost immediate reduction of the pulse to 80 or 90 often follows with a general sense of relief to the patient, which may last for two or three days. When there is a tendency to spontaneous cure, or the malady is stationary, such measures are palliative in a very high degree. As early as 1873 Watson[36] of Edinburgh had excised the goitre in three cases with encouraging results, but he was practically without imitators. Now, however, owing to the different views spreading as to the nature of Graves' disease radical measures are steadily coming into vogue. Thus, at the recent German Surgical Congress Mickulicz of Breslau brought forward a number of cases treated by partial excision and also some by ligature of the afferent arteries. Unfortunately, at present the wave of psycho-therapeutics has risen to such a height that a considerable number of practitioners are ready to attribute every successful result to hypnotic suggestion. It may be said, indeed, that in medicine now measures

> "Of great pith and moment,
> With this regard their currents turn awry
> And lose the name of action."

I have myself been accustomed for some years to inject these cases as in ordinary goitres, though at much longer intervals than when there are no signs of neurosis. Not that I consider there is any special danger to be apprehended from the injection in such patients, but merely that the subjects being as a rule in a very nervous state the mere prick of the needle may drive them into hysterics, make a scene, &c., at the time, and even after some days the practitioner may hear that the patient is still displaying unusual restlessness in the domestic circle. After the injection has been done two or three times, however, this condition of things to a great extent passes off, and the sufferer submits with tolerable equanimity to the operation. It is just in this class of cases that freezing the surface becomes a valuable preparatory measure, and it is highly advisable to have recourse to it. I have little doubt but that in the future the cardinal rule for treatment of exophthalmic goitre will be to first get rid of the bronchocele. Electrolysis has been tried in exophthalmic goitre, but I have met with no laudatory report of its action. I may here append some statistical information relating to 287 instances of all forms of goitre which have passed through my own hands:—

	Fibrous.[37]	Cystic.	Mixed.	Exophthalmic.	Totals.	Results. Cured.	Relieved.	Negative.[38]
Males—								
15–25	1	—	—	2	3	—	—	—
25–50	7	1	3	—	11	—	—	—
Females—								
15–25	57	—	7	51	115	—	—	—
25–50	82	18	23	35	158	—	—	—
Totals ...	147	19	33	88	287	—	—	—
Treatment—								
Injection... ...	135	1	30	17	183	111	39	33
Tapping	—	15	—	—	15	9	2	4
Drugs and external application	12	3	3	71	89	11	40	38
Totals ...	147	19	33	88	287	131	81	75

Finsbury-square, E.C.

THE VARIOUS METHODS OF OPERATING ON THE MASTOID PROCESS AND THE INDICATIONS FOR THE SAME.[1]

By ADOLPH BRONNER, M.D.

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DISEASES of the mastoid process due to affections of the middle ear are very common, but only a small number of cases are operated on; and even when an operation is performed the anatomy of the parts and the technique of the operation are often so imperfectly understood that the results are not as good as they might be. Every surgeon sees large numbers of cases with extensive disease of the mastoid process in which no operation has been performed until the disease has spread to the brain, or where the operation has been restricted to Wilde's incision or to the use of a gimlet or gouge. In operating we have three important cavities to deal with: the middle ear, the attic, and the mastoid antrum or cells. The attic is separated from the middle ear by fibrous bands and ligaments only, and the attic and mastoid antrum are practically directly continuous. The dangers of operating are not very great if we are thoroughly acquainted with the anatomy and pathology of the parts and have frequently performed the operation on the dead body. They are naturally extremely great and grave, if we restrict our methods of operating to roughly and rudely scraping out the middle ear or perforating the mastoid process with a gimlet or gouge. Some of the dangers are: (1) lesion of the facial nerve or (2) of the external semicircular canal; (3) opening the sigmoid fossa; (4) wounding the lateral sinus or (5) the internal carotid artery; and (6) perforating the tegmen tympani. In some cases the positions of these parts vary to a considerable extent, and we have therefore to operate with great caution. Frequently there is only a very small mastoid antrum and few cells, or we only find a few cells on a level with the attic and above the lateral sinus. This is of great practical importance. The indications for operating, according to Schwartze, are: —1. Acute primary or secondary inflammation of the mastoid process, if the symptoms under treatment do not improve in a few days. It is, of course, often difficult to know exactly

[32] Canadian Practitioner, Aug. 16th, 1892.
[33] Ziemssen's Cyclopædia, vol. xiv.
[34] Loc. cit.
[35] For elaborate observations on this point see Cardew: The Practical Electro-therapeutics of Goitre.—THE LANCET, July 4th, 1891.
[36] Edinburgh Medical Journal, Sept., 1873. See also the account of a case cured by a seton.—Macnaughton Jones, Brit. Med. Jour., Dec. 19th, 1874.

[37] Here are included all goitres not obviously cystic and without apparent neurosis.
[38] These are chiefly patients lost to sight before the treatment had a fair trial.
[1] Abstract of a paper read before the Leeds and West Riding Medico-Chirurgical Society, March, 1895.

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when to operate, but it certainly is safer to err on the right side and operate too soon rather than too late. If there is redness and swelling in the upper and posterior wall of the external meatus, or if the apex of the mastoid process is swollen and painful, we should operate at once. 2. Chronic inflammation of the mastoid process with recurrent attacks of swelling. 3. Fistula over or near the mastoid process. 4. Chronic inflammation of the middle ear without apparent affection of the mastoid process if there are symptoms of retention of pus (pain, fever, &c.) or if there is a cholesteatoma. 5. Persistent neuralgia of the mastoid process. 6. Chronic otorrhœa without symptoms of swelling of the mastoid process or of retention of pus, as soon as we think that the inflammation extends beyond the middle ear. In ordinary practice all cases of otorrhœa would be included which, under proper treatment, do not heal in from six to nine months. In cases where there are slight cerebral symptoms it is always advisable to first operate on the mastoid process before opening the brain cavity. Extensive disease of the bone can give rise to such symptoms as slight optic neuritis, strabismus with diplopia, convulsions, coma, &c. Whether there is not slight meningitis present, which subsides after the mastoid operation, it is difficult to say, but certainly in some cases these well-marked cerebral symptoms disappear after the ordinary mastoid operation.

Schwartze in 1873 was the first to publish a series of cases of operations on the mastoid process, and he described a method of operating which was universally practised from 1873 to 1889.[2] The idea was to open up the mastoid antrum from behind the ear and establish a free communication and drainage between the antrum, the middle ear, and the external meatus. Schwartze strongly recommended the use of the chisel and hammer, and these are now in universal use. The operation as described by Schwartze is well known and can be found in all text-books of otology. The wound and cavity are plugged with iodoform gauze for several weeks and a lead nail or wire is then introduced into the fistula behind the ear and worn as long as possible—sometimes for one or two years. Macewen does not like the chisel and uses a rotatory burr for opening up the antrum. He thinks that with the chisel we may break down or crack any thin layer of bone between the diseased parts and the sigmoid groove or the middle cerebral fossa, or that we may loosen septic thrombi of the small vessels. In operating according to Schwartze's method it was soon found that, although the majority of cases did extremely well, in a certain number the bone did not heal for years in spite of careful after-treatment. Experience proved that the majority of these cases were those in which the attic and surrounding bone had been diseased. In 1889 Küstner[4] recommended that in all cases in which the middle ear is extensively diseased we should not be content with Schwartze's operation, but should also remove the whole of the posterior wall of the osseous external meatus. He passes a drainage-tube through the external meatus and antrum. Bergmann[4] suggests that the posterior and also the upper wall of the external meatus should be removed. He thinks that we should be very careful in syringing, as we may thus readily force pus into healthy tissues or cavities. Lucae[5] makes similar suggestions. Zaufal[6] uses Luer's bone forceps for a similar operation. In 1892 Stacke[7] suggested several important alterations in Schwartze's operation. He removes the outer and lower wall of the attic, the posterior and upper wall of the osseous external meatus, and the outer and lower wall of the mastoid antrum. One large cavity is thus formed out of the external meatus, the middle ear, attic, and antrum. These modifications are of such great practical importance that I may perhaps describe the method of operating in a few words. A long incision is made behind the ear, the cutaneous external meatus is cut through above the drumhead, and the whole is drawn well forward. We thus get a clear view of the diseased parts. The remains of the drumhead and the malleus are removed, and a bent probe is passed into the attic. The outer and lower wall of the attic is then chiselled away. The middle ear and attic now form one cavity. A bent chisel is used. The probe is then passed into the aditus ad antrum, and the upper and outer wall of the external meatus and the outer wall of the antrum are removed with the chisel. We now have one large cavity formed by the external meatus, middle ear, attic, and antrum. The ear is then replaced and the wound sewn together. Schwartze now also performs a similar operation, but he first opens the antrum and then works forward into the attic and middle ear. He does not cut through the whole of the cutaneous external meatus, but only through the posterior half. In the last few years most excellent work has been done in this country by Ballance, Arbuthnot Lane, Urban Pritchard, and especially by Macewen and Victor Horsley. They have, however, chiefly dealt with the methods of operating on such cases in which cerebral complications have developed. Macewen and Horsley have made most valuable suggestions for the after-treatment of mastoid operations. In severe cases they prolong the ordinary incision behind the ear forwards round the top of the auricle, and thus make a large gaping wound which can be easily overlooked and dressed. The wound is not stitched at all, but is allowed to fill up by granulations from below. By this method a recurrence of the disease is rendered practically impossible. I hope that in the interests of otology, Horsley and Macewen will publish their experiences in this method of after-treatment. It seems to me to be of the greatest value, and we shall in future be better able to effect a radical cure and prevent any fresh outbreak of the disease. I have for some time drawn attention to the fact that it is a great and fatal mistake to sew up the greater part of the wound, and thus we should leave a large opening so that we can watch the diseased parts. In bad cases I am now adopting Horsley's method, and make a large incision round the ear and use no stitches. It seems to me to be a great and distinct advance in mastoid operations.

In determining which method of operation we should adopt in the various cases it is of course essential that we are thoroughly acquainted with the anatomy and pathology of this region, so that we may be able to form an opinion as to which parts are affected and how far the disease has spread. In acute cases of mastoid disease the ordinary Schwartze's operation suffices. When there is neuralgia of the mastoid process we make Wilde's incision and then remove part of the cortex of the process. In cases of chronic otorrhœa, when the disease is confined chiefly to the mastoid process, Schwartze's operation gives excellent results. When there are no symptoms of mastoid disease it is best to perform the first part of Stacke's operation. We can then thoroughly explore the middle ear and attic. In most cases we will find that the latter is diseased. We then remove the outer and lower wall of the attic, scrape away the diseased bone, and see if any pus or granulations come from the mastoid cells or antrum. There are frequently some mastoid cells on a level with the attic, which are generally overlooked. In some cases the antrum is extremely small. If we think that the antrum is diseased we finish Stacke's operation. In many cases of chronic otorrhœa the disease is chiefly confined to the attic and to a few surrounding cells. In cases of perforation of Shrapnell's membrane, or disease of the ossicula, we should at once perform the first part of Stacke's operation. Some years ago numerous cases were recorded, chiefly by American writers, in which removal of the ossicula cured the disease of the attic. Milligan[8] has lately also published some cases. My own experience, and also that of others,[9] seems to prove that removal of the ossicula may stop the suppuration for a short time, but that in nearly all cases the disease breaks out again. I therefore now invariably strongly recommend Stacke's operation at once, or at least the first part of it. In cases of extensive cholesteatoma we should perform the whole of Stacke's operation and form one large cavity, which can be carefully watched and any recurrence at once seen. In severe cases it is best to leave a large permanent opening behind the ear.

The facts to which I should like to draw particular attention in this short paper are: (1) that we should not undertake operations on the mastoid process unless we are thoroughly acquainted with the anatomy and pathology of the parts and unless we have frequently operated on the dead body; (2) that in all cases of chronic purulent otitis media which do not yield to the ordinary methods of treatment the attic and mastoid antrum should be carefully examined and, if necessary, operated on; (3) that the use of

[2] Archiv für Ohrenheilkunde, Band vii., p. 157, and Band xi., p. 21.
[3] Deutsche Medicinische Wochenschrift, Nos. 10 to 13.
[4] Die Chirurgische Behandlung der Gehirnkrankheiten, 1889.
[5] Archiv für Ohrenheilkunde, Band xxxi., p. 225.
[6] Ibid., Band xxx., p. 291.
[7] Berliner Klinische Wochenschrift, No. 44, and Archiv für Ohrenheilkunde, Band xxxi., p. 213.
[8] Brit. Med. Jour., Nov. 24th, 1894.
[9] McBride, ibid.

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the gimlet or gouge alone is a dangerous and incomplete method of operating; and (4) that in the after-treatment we should not stitch up the wound, but leave a large opening, so that we can carefully watch and treat the diseased parts, and that in severe cases we should prolong the incision well round the ear, plug the wound with gauze, and allow it to heal up from below by granulation.

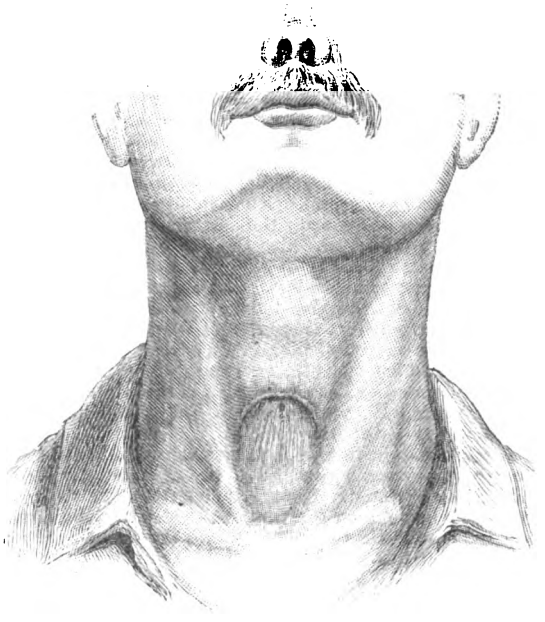
Bradford, Yorks.

ON A CASE OF MEDIAN CERVICAL FISTULA.

By J. BLAND SUTTON, F.R.C.S. Eng.,
ASSISTANT SURGEON, MIDDLESEX HOSPITAL.

Some months ago Sir Hugh Beevor kindly placed under my care a young adult with a "median cervical fistula." In the lower third of the neck, as represented in Fig. 1, the skin presented what looked like a depressed and puckered scar. At the upper part of this bay or recess there was a rounded opening from which clear mucus exuded. An ordinary probe introduced into this hole easily passed upwards in the middle line directly beneath the skin to stop at the middle of the lower border of the basi-hyal. It was

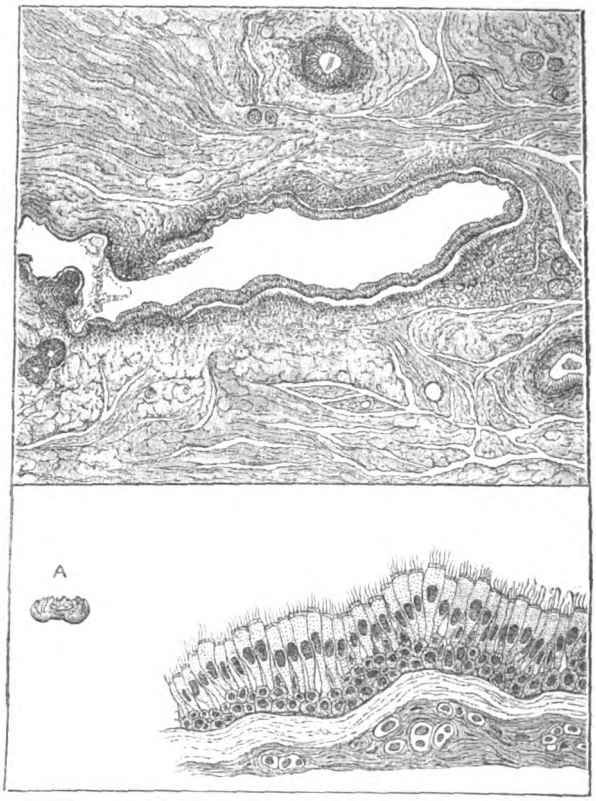
Fig. 1.



Median cervical fistula.

evident that I had before me an example of a persistent thyroid duct. The patient stated that the opening in the neck existed as long as he could remember, but his parents told him that it appeared when he was about three years old. Ordinarily the fistula caused no inconvenience, but during the past two years it seemed subject to catarrh, and the excessive flow of mucus caused him so much inconvenience that he was anxious for relief. The man was admitted into the hospital, and I dissected out the duct. It passed vertically upwards beneath the deep fascia of the neck to the basi-hyal, and in the course of the dissection it was found that near its lower end the duct bifurcated, one arm ending blindly, the other opening on to the skin at the margin of the bay as already described. The upper end of the duct passed behind the basi-hyal, finally becoming incorporated with the thyro-hyoid membrane. I succeeded in removing the duct entire, guided by a probe introduced into it at the beginning of the operation. The incision in the deep fascia was secured by interrupted sutures of cat-gut and the skin brought together by means of fine silk. As no previous attempt had been made to cure this fistula I had the duct carefully hardened and sectioned. Its lumen was lined with typical columnar ciliated epithelium; goblet cells were present. The tissue forming the walls of the duct resembled atrophied thyroid tissue; here and there, as shown in Fig. 2, isolated acini lined with epithelium were detected. This case illustrates very well the chief features of the thyroid segment of the thyro-glossal duct: (1) Its median position and relation to the basi-hyal; and (2) The appearance of the fistula subsequently to birth. It thus stands in striking contrast to branchial fistulæ, which are (1) always lateral and in close relation to the anterior border of the sterno-mastoid muscle; and (2) are always congenital. I have had many opportunities of studying and operating upon these ducts and fistulæ, but this is the first occasion on which I have been able to secure a thyroid duct

Fig. 2.



Section of a persistent thyroid duct.
A represents the duct of natural size. The lowest drawing shows the epithelium more highly magnified.

which had not been damaged by previous attempts at cure, thus the epithelium was in good condition. It is a noteworthy fact that the epithelium of the thyroid duct and persistent branchial fistulæ is identical. This example demonstrates what I have often emphasised—namely, the thyroid duct is a real and tangible structure large enough in adults and even in children to accommodate a probe: it is not a minute passage existing only in the embryo and requiring elaborate histological methods and high powers of the microscope to render it visible.

Queen Anne-street, W.

South-West London Medical Society.—A meeting of this society will be held at 235, Lavender-hill, on Wednesday, Nov. 13th, at 8 P.M. Dr. Chas. W. Chapman will read a paper on Heart Disease in the Young, its Management and Treatment, and proposes, if possible, to show patients illustrating his paper.

In Memoriam.—The honorary medical staff of the Sydney Hospital, New South Wales, intend to erect a tablet in the hospital chapel, in recognition of the great services he rendered to the profession, as a memorial to the late Mr. Louis R. Huxtable, M.B., C.M. Edin., who died at his residence in College-street, Hyde Park, Sydney, on July 30th last.

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NOTES OF A CASE OF PRIMARY THROMBOSIS OF THE SUPERIOR LONGITUDINAL SINUS IN AN ADULT, FOLLOWED BY RECOVERY.

BY E. HUGH SNELL, M.D., B.Sc. LOND., D.P.H. CAMB.,
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THE occurrence of primary thrombosis in the superior longitudinal sinus in an adult is, I believe, comparatively infrequent; also the symptoms presented are so rarely characteristic that a diagnosis during life appears to be eldom made and not often possible. The following case is probably, therefore, of sufficient interest to atone for its publication.

A young woman, aged twenty-six, came under my care at the Paddington Infirmary on Oct. 27th, 1893, complaining of severe headache together with loss of power in the right arm and right leg; she was unable to walk or stand. The previous history was as follows. Until three weeks previously she had always been in fairly good health; she had had one or two "fits" before menstruation commenced, but none since. She was usually rosy-cheeked, bright, and intelligent. On Oct. 8th she complained of a headache and of not feeling well; this was followed by a severe attack of diarrhœa accompanied by vomiting. She continued to work until the 11th, when she was compelled to remain in bed. No cause for the diarrhœa was discovered. A week afterwards, while still in bed, she complained of more frequent and severe headache situated at the back of the head. The diarrhœa and vomiting still continued; the vomiting was said to have come on after taking food. There was no hæmatemesis. Then, a few days before admission as an in-patient, she complained of weakness in the legs and inability to stand. Mentally she became very dull and stupid. There were no convulsions and there was no loss of consciousness. When seen by me on Oct. 27th her face was flushed, the rest of the body being pale and anæmic. The tongue was pale and tremulous, and covered by some small, dry, brownish patches. She lay in bed in an apparently helpless condition and was very slow and dull in answering questions. She held the right arm rigid and could not move it; the arm could be forcibly flexed without pain to the patient, the only resisting force being muscular. When the arm was held up by a second person it commenced to tremble violently, remaining at the same time rigidly extended at the elbow; the tremors were large and irregular. She could stand with help, but could not move the legs forward; there was some paresis of both legs. The knee-jerks were normal, and there was no ankle-clonus. The plantar reflexes were likewise normal. There was no anæsthesia. It was noticed that the right calf was larger than the left. There was no disease of the heart and lungs. The pulse-rate was 108 per minute, small and irregular. Ophthalmoscopic examination showed that the right fundus oculi was normal, except that the arteries were somewhat tortuous; on the left side the arteries were tortuous and the edge of the disc was slightly blurred; the appearances suggested commencing optic neuritis. The urine was of sp. gr. 1022, acid, contained a faint trace of albumin, with a deposit of urates. At 6.30 P.M. on Oct. 27th she called out to the sister of the ward that she was going to have a fit and said, "Hold me." She then gave a short cry, becoming livid in the face and then unconscious; there was no foaming at the mouth. Convulsive movements commenced in the right arm and right leg, the mouth was drawn to the left side, the eyes were fixed, and the conjunctival reflex was absent; the convulsive movements then affected slightly the left arm and left leg. Consciousness returned in two or three minutes, the patient sobbing. She afterwards explained that she felt that a fit was coming on because of a choking sensation in the throat; she had had no fits before except those mentioned in the previous history. At 6.10 A.M. on the 28th there was another fit of a similar character lasting two or three minutes; it was doubtful when the convulsions began. She knew that a fit was coming on and called out; but it was not attended by screaming. On the 30th an improvement in the mental condition was observed; she could move slightly both the right arm and right leg, but could not walk without assistance. The right grasp was feeble, the left very good. The tongue was still dry, with brown patches. The pulse was 108 and irregular. She was very anæmic and had been constipated since her admission. Ophthalmoscopic examination showed slight, but distinctly commencing, optic neuritis in both eyes. Iron, quinine, and arsenic were administered, as also stimulants and a nourishing diet. On the 31st the mental improvement was still more marked. Œdema was looked for over the scalp and forehead, but none was found. There was no cerebral tenderness. The face was still slightly flushed; the tongue was not so dry and brown. The disproportion between the calves noticed on her admission was still more marked; the circumference of the right calf was 13¼ in., and that of the left 12 in. Deep tenderness existed in the right calf, this not having previously been noted; but there was no tenderness in the popliteal regions or in the femoral veins. The pain in the head was always worse at night time and sleep was very much disturbed. The right grasp, measured by the dynamometer, was 25 and the left 37½. On Nov. 1st the grasps were: right, 23; left, 57. On the 2nd the pain in the head was better, and she passed a better night; the tongue was clean. On the 3rd the grasps were: right, 25; left, 50. During the night of the 4th an erythematous rash appeared on both arms, which caused much irritation; its distribution was confined to the external surface of the arms and the posterior surface of the forearms. It was more marked on the left side and disappeared on pressure. By the 6th the rash had disappeared. On the 8th the optic neuritis in both eyes was found to have much increased; the edges of the discs could not be defined. On the 11th both grasps were 48. On the 16th the right calf measured 12½ in. and the left 12 in. There was no tenderness of the former. The right knee-jerk was less marked than the left. She no longer complained of headache. On the 24th no recurrence of the pain in the head was found to have taken place. The knee-jerks were equal and normal. She could walk without limping, and there was no obvious weakness in either leg. On the 30th ophthalmoscopic examination showed that the neuritis in the right eye had improved, and the edge of the disc could be defined; the improvement in the left eye was not so marked. On Dec. 2nd the right grasp was 60 and the left 70. On the 7th the right calf remained half an inch larger than the left. The optic neuritis had still further diminished; the vision, which had previously been impaired, was improving; there was no weakness of the arms or legs, and she was intellectually very bright. She left at her own request on the 8th, and she did not again come under my observation, but I heard a month later that she felt quite well, and that her vision was unimpaired. The temperature was never above 100° F.

Remarks.—The history of diarrhœa continuing for a fortnight; the subsequent paralysis of the right arm and right leg, with some paresis of the left leg; the fits with convulsions commencing on the paralysed side; the impairment of the intellect; the tremulous tongue; the headache; the optic neuritis; the rigidity and large tremors of the right arm—all these suggested to me that the case was one of so-called "primary" or "marantic" thrombosis of the superior longitudinal sinus blocking the veins from the left hemisphere more than those from the right, and led me to form an unfavourable prognosis, but at the same time induced me to try what result tonics, stimulants, and a good diet might effect. In spite of the absence of any œdema of the scalp or forehead, the subsequently noticed signs of thrombosis in the deep veins of the right leg appeared to support the diagnosis, and the gradual improvement and ultimate recovery seemed to exclude any other alternative. It is possible that the extreme anæmia may have assisted in producing the optic neuritis; but, on the other hand, it may have been wholly due to the thrombosis in the sinus. A perusal of the monograph on Thrombosis of the Cerebral Sinuses by Professor Dusch[1] shows that of 11 cases of distinctly "primary" thrombosis quoted by him 7 occurred in children and aged people, and 4 between the ages of twenty and sixty; 3 only of these latter arose from acute conditions, and were attributed (by Cruveilhier and Schmucker, who originally recorded them) in two cases to too copious venesection and in the third to diarrhœa. It appears to be well established that among young children diarrhœa is by far the most common cause. A necropsy was made in all the cases quoted by Professor Dusch. That the

[1] Translations of the New Sydenham Society, 1861.

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condition is regarded as especially fatal may be due to the scarcity of those cases in which a diagnosis is possible. The only instance of recovery from such a condition that I have been able to find is one recorded by Voorman and quoted by Dr. Gowers;[2] in this case the patient was a child aged five months, and the recovery was incomplete.

East Greenwich, S.E.

SPASMUS NUTANS.

BY GILBERT A. BANNATYNE, M.D. GLASG.,
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SPASMUS NUTANS, or head-nodding, while comparatively rare in children, is almost unknown in adults. Except the cases mentioned by Dr. McGillivray of Dundee,[1] I have failed to find any mention of it in the literature at my command. Possibly, therefore, the report of such a unique condition may be of interest to some of the readers of THE LANCET. For details of the disease in children I would refer them to Henoch,[2] who was the first to point out the features of the disorder, and to the papers of Dr. Stephen Mackenzie,[3] Dr. Gee,[4] Dr. Hadden,[5] and Dr. G. Dickson.[6]

A man aged forty-three was admitted to the Bath Royal Mineral Water Hospital on Aug. 30th, 1895, suffering from pains in the back and right hip, with lateral spasmodic movements of the head and eyes. According to the report furnished by his medical attendant the patient had suffered from rheumatism and sciatica from about the middle of May and had been steadily getting worse up to the time of admission. He also stated that the patient had suffered from nystagmus from birth. On admission the patient stated that fifteen years previously he had what he thinks was an acute attack of rheumatism; since then he had been free from it until the onset of his present illness. There is no history of syphilis, either inherited or acquired; the family history is good. He complained of pain about the right hip and down the course of the right sciatic nerve, and to a less extent over the lower lumbar spines. His complexion is unusually fair, but he is not an albino. On examining the joints no changes were detected, the movement being free, and on passive movement there was no pain. There was no pain or tenderness down the course of the sciatic nerve, and there was no wasting or other sign of nerve degeneration. Sensation was normal, and the reflexes were active. Over the lumbar spines some slight tenderness was obtained on deep palpation. At the same time, although not complained of, it was noticed that he suffered from horizontal nystagmus of both eyes, with internal strabismus of the right eye and lateral oscillation of the head. On inquiry these symptoms would appear to have existed as long as he could remember and, he believed, from birth or soon after. No cause could be given for its onset, and as far as he knew he never was seen by a medical man. He stated that it had not altered much in degree or character, and had never been sufficient to interfere with his work. His schooling seemed to have been of the scantiest. At times he was troubled with a feeling of weight and heaviness in the head, principally on the right side. For years he had been subject to sudden attacks of partial loss of consciousness. These were unaccompanied by any premonition and usually made him either fall backwards or at least clutch at something to prevent him from falling. He never became quite unconscious and had never hurt himself. The fits at their worst occurred as often as twice or thrice a week. They became worst during the five years from 1888 to 1893, after which they gradually became fewer and have now entirely ceased. The other symptoms have altered little. The movements of both head and eyes became worse when he was excited or when his attention was drawn to them. They ceased during sleep and to a certain extent when lying down—that is to say, whilst in the recumbent position the movements of the head ceased entirely, whilst those of the eyes became slower and not so frequent. On closer examination it was seen that the first movement of both eyes and head was to the left, and the divergence was certainly greater to that side of the middle line than to the right. The movement was entirely of a horizontal nature. The movements of the head and of the eyes did not correspond with each other either in number or in rhythm; the eyes oscillated from 80 to 100 times per minute, whereas the head only did so from 20 to 30 times, or it might be even less if his attention was taken up by other things. He had little control over either movement, the mere fact of trying to control them at times seeming to bring them more into evidence. This became so marked that now and then twitching of the left facial muscles occurred. The strabismus also at those times became more marked. Mr. W. M. Beaumont kindly examined the patient's eyes for me, and he reports that there is "well-marked horizontal nystagmus of both eyes, exaggerated if the eyes are deviated either to the right or left. There are also frequent lateral or slightly rotatory movements of the head not synchronous with the nystagmus and somewhat irregular. He appears to be able to control the movements to a slight extent, and they cease when he lies down. The nystagmus does not cease when he lies down. Interior of the eyes by ophthalmoscopic examination: There is a delicate veil-like opacity of the vitreous, with fine particles floating about. The choroidal vessels are seen very clearly (he is an extremely fair man, with light-yellow hair, but not albinic), and in each eye there are more than twenty dioptres of myopia, with posterior staphyloma. His vision cannot be improved beyond $\frac{6}{6}$. The bad vision and nystagmus are said to be congenital." Treatment consisted in a course of the mineral waters, both externally and internally, with iodide of potassium. On Oct. 10th the patient expressed himself as feeling quite well, being free from all pain and also of the feeling of weight in the head. He stated that he was as well as he had ever been, and, being anxious to return to work, he was discharged. Little or no change occurred during treatment in the head and eye symptoms, and one may safely say that in all probability they will remain for the rest of his life.

Remarks.—Looking at the case as a whole it may, I think, be classed with those to which the somewhat misleading term of "spasmus nutans" has been given. In saying that the name is misleading I mean in so far as it implies that the head is nodded, for in a certain proportion of cases the motion is not from back to front, but from side to side, and, therefore, strictly the term should not be applied. It has been given, however, and has come to be associated with a sufficiently well-marked series of symptoms, and it would be a pity to add confusion by applying a new term to those cases in which the movements are lateral, as has been suggested. The question of diagnosis must remain for the present undecided. I am not inclined to believe that this is only one of the many forms in which epilepsy is manifested, but rather think that it is a disease *per se*. It must be borne in mind that head movements with nystagmus are fairly common in grave nerve disorders merely as symptoms. Whether, when they occur, as in the above case, unaccompanied by other symptoms, they are to be regarded as constituting a regular disorder or only as a group of symptoms having a deeper significance must for the present be left alone. The points of most interest in the symptoms are their persistence, the lateral character of the movements, the attacks of *petit mal*, the facial twitching and strabismus, the fair complexion, and the pain and tenderness over the spine. The outstanding feature is undoubtedly the persistence of the symptoms. In almost all the cases hitherto reported the disease has proved to be transitory, seldom lasting more than a few weeks and ceasing, as a rule, when some reflex exciting cause has been removed. With the exception of three cases described by Henoch[7] and nine mentioned by Dr. McGillivray,[8] all the other cases hitherto reported have been under two years of age and mostly under one at the beginning of the attack. As a rule, it has lasted for from a few days to several months, but with the exception of the cases mentioned never longer. Henoch's three cases were seen respectively at the ages of nine, ten, and twelve. In only one was the onset fixed, which was a year and a half before coming under observation; the other two cases were accompanied by other symptoms pointing to central nerve disease, and therefore cannot be regarded as pure cases. The cases of Dr. McGillivray are of much interest. Eight occurred in one family in four generations, thus establishing a hereditary tendency in the

[2] Diseases of the Nervous System, vol. ii., p. 420. 1888.
[1] Ophthalmic Review, August, 1895.
[3] Diseases of Children. Translations of the Sydenham Society.
[3] THE LANCET, May 1st, 1886.
[4] St. Bartholomew's Hospital Reports, vol. xxii., 1886.
[5] THE LANCET, June 14th, 21st, and 28th, 1890.
[6] THE LANCET, Oct. 5th, 1895.

[7] Loc. cit., vol. i., p. 195.
[8] Loc. t.

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complaint. It was apparently transmitted by the female side, skipping one or more generations, more often than by the male. The disease was congenital, and in all cases persisted throughout life. The other case occurred associated with three others in which lateral nystagmus only was developed, and it would look as if the nystagmus were an early or not so fully developed condition. In Dr. McGillivray's cases the sight was usually affected. In the case under consideration it is not only seen in an adult, but from the history given it cannot be doubted that it came on early in life and had since persisted without intermittence. It was likewise unaccompanied by any further symptom pointing to other and more grave nervous trouble. Is it to be classed with those of Dr. McGillivray in so far as to call it congenital (no direct evidence exists that it was so), or is it to be classed with those of Henoch and others? There is, on the one hand, no history of heredity, and, on the other, it is a mystery why it should have persisted. Henoch and Dr. Hadden are of opinion that it arises from reflex impulses set up by disordered dentition or other slight irritation in the earlier months of childhood. This patient in all other respects is a strong, healthy man, and has hitherto been quite capable of carrying on his somewhat arduous occupation. The family history affords no clue. He is married and has healthy children, and there is no history of syphilis, either inherited or acquired, and no epilepsy. It must be presumed that it originated in some hitherto unexplained way, but probably in the manner suggested by Henoch. Next in order is the direction of the movements. In the large proportion of cases hitherto reported these have been of a nodding character; in some, however, this character has been modified by a more or less lateral movement, producing a rotatory spasm, and in a smaller proportion there has been a pure lateral movement. The eye movements as a rule correspond in direction with that of the head. In this case the motion was undeniably first to the left, showing that the spasm commenced in the left muscles; but one could not determine whether the corresponding spasm on the right side was only an induced and subsidiary spasm or an independent one. I am inclined to think that probably the right-hand spasm was purely sympathetic. The facial twitching I have not seen mentioned in any other report, and it is probably only a further extension of the disease. It did not occur so frequently and was not so marked as the head spasm, being usually brought on by excitement. The strabismus only occurred during excitement, but apart from the disease the condition of the eyes themselves was sufficient to account for it. What was described as rheumatic pain was, I take it, entirely nervous in origin, there being no joint or other rheumatic phenomena. Henoch states that the disease arises from some reflex irritation such as dentition acting on an unstable nerve system. This belief would appear in the majority of cases to be well founded, as many, if not all, seem to be cured on the removal of the irritating cause. If the disease is looked at as a whole the significance of the attacks of *petit mal* is increased. It points to some lesion on the surface of the brain rather than to one involving the nerve roots. As I have explained, I do not consider the head and eye oscillations to be mere, however rare, symptoms of epilepsy, but rather that they all have a significance in common. In this and similar cases probably what was at first only an instability of the ultimate nerve elements has passed insensibly into actual organic change. In hereditary cases this instability would be all the more marked and slighter exciting causes would bring about the onset. Probably the disease would prove more resistant to treatment and more likely to take on a permanent character. The lesions probably might be localised in the first and second frontal convolutions, as in monkeys. In these animals a centre for the movements of the head and eyes has been found to exist in that locality; the centre for the facial movements lies in the lower third of the ascending frontal, and therefore, if the face be implicated, the lesion, although slight and superficial, must affect a comparatively extensive area. As to the nature of the irritation, although very fair, the patient is not an albino, but it is rather suggestive that in albinism nystagmus is common through the early visual impressions being painful and of disturbing excess through the absence of pigment. Such ideas open up endless vistas of theories, which can in the present state of our knowledge only end in theories. Taking the disease *en masse*, it appears to me to be due originally to some over-action of certain nerve cells, with induced spasms in certain muscles, producing oscillation of the head and eyes, and at times through some sudden discharge of nerve energy giving rise to regular attacks of *petit mal*. The occurrence of the latter symptom is a good guide to what is going on, as it is known that it is due to a sudden liberation of nerve force. Experiment has taught that *petit mal* can be produced by irritating the cells of the cortex and thereby causing over-action of these cells and a sudden discharge of their energy. The probability is that in such cases as have been described there is an initial defect in the cortical cell nutrition, which, being determined by some reflex irritation, passes first into a temporary state of increased activity and, if the irritation be severe enough or be sufficiently long continued, of actual organic change. I hope I have made my views sufficiently clear, and I reiterate that I consider the affection a disease *per se* and not merely a subsidiary form of epilepsy.

Bath.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PHLEGMASIA ALBA DOLENS IN THE VIRGIN.

BY DANIEL MOWAT, M.D. EDIN.

THE case described by Dr. Herman in THE LANCET of Oct. 5th recalls a similar one which occurred in my practice in January last. The patient was eighteen years of age, tall, and slightly anæmic; her menstruation was regular but somewhat scanty; she had no cardiac trouble. She was suddenly seized with pain in the right thigh, shortly after which the leg began to swell. The patient became unable to walk, and the temperature rose. The leg presented the usual appearance of "white swelling." There was no trace of sugar or albumin in the urine. Under treatment the limb began to recover, but it was several weeks before the patient was able to stand. Last September she had a slight return of the phlegmasia in the same leg. Dr. Herman's case is still more interesting as both legs were affected, the one becoming swollen as the other recovered.

Stamford-hill, N.

A CASE OF QUINTUPLETS.

BY J. W. STOKER, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.

THE patient was a woman aged thirty-five years, 5 ft. 1 in. in height, of very slight build, and healthy. Her mother had given birth to twins on two occasions; apart from this no further family history has been ascertained. She had been married for six years and had borne four children at full period, and never had any difficulty in labour. Coming to the present case the patient computed that she had been pregnant for six months and said she could not understand why she felt much bigger than on former occasions. She complained of a pain (fixed) in the left side of her abdomen, and imagined that she was larger on the same side. Otherwise she felt well up to two days before her confinement. Labour set in on Sunday, Oct. 20th, at 10 P.M., and was concluded on Monday at 6.45 A.M. On that day the pains were regular, though not strong, and the contractions good. On my arrival at 3 A.M. the patient was strongly in labour, and on making an examination I found the membranes ruptured and a shoulder presenting. There was no difficulty in performing version. The child was dead (recently). On making an examination after the birth of the first child I easily became aware of the existence of more than one remaining fœtus. The membranes protruded and became tense at each pain. The presentation was a transverse one. In this case, also, there was not much difficulty in performing internal version. The child was alive and lived a couple of hours. The third fœtus was also enclosed in a separate bag, which required to be ruptured. This was a breech presentation, and the child was delivered naturally, being alive and surviving for an hour. In the fourth case the same procedure of rupturing the membranes was gone through, and immediately there was hæmorrhage to an alarming extent.

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so much so that the mother collapsed. I turned as quickly as possible after administering stimulants, but the difficulty did not end here, as the chin became locked in that of the fifth. There were some difficulty and considerable delay in freeing them, though the extent of the locking was not at any time formidable. The child was dead (recently). The fifth was a head presentation and the child was delivered naturally; it was alive and lived for half an hour. The placenta was delivered about five minutes after the birth of the last child and consisted of two portions united by a narrow isthmus. One, the smaller, had two cords attached centrally and close together; the other, and larger, had two cords attached in a similar way to the former, and one where it was joined by the isthmus. It appeared to be perfectly healthy. The cord of the fourth child was so short that it had to be tied in the vagina. The mother rallied quickly and has gone on well. The children were all females and much about the same size, making a total weight of eight pounds, or, on an average, a little over one pound and a half each.

Rainham, Essex.

A PECULIAR CASE OF DISLOCATION OF THE SHOULDER-JOINT.

By C. C. BAXTER-TYRIE, M.B., C.M. EDIN.

THE methods by which a joint may become dislocated are many and various. Especially is this true as regards the shoulder-joint, and the following case, being perhaps unique, seems worthy of being added to the list of peculiar histories of causation. On Sept. 18th I was called to see a patient whom I found suffering from a subcoracoid dislocation of the head of the humerus. On inquiring as to the cause of the injury I elicited the following peculiar history. The man was returning on horseback from the smithy to his house when the horse ran away up a steep hill. The animal after going a few hundred yards abated speed, and the rider, with the intention of "taking it out of the brute," raised his hand to strike. The horse caught sight of the whip and sprang forward, with the result that the man felt an acute pain and a sense of something having given way in his shoulder. He did not fall off, but rode a little further into a farmyard, where he was helped to dismount. Had he been thrown I should have been dubious as to the above history of causation. As the weight of the whip was inconsiderable (four ounces) the explanation of the cause of injury is, I think, found in the inertia of the arm converting it into a lever of the first order. The coraco-acromial arch, instead of fulfilling its normal function of preventing displacement, acted in this case as a fulcrum. The limb from the fingers to that point acted as the "long arm," and the head and part of the neck of the humerus served as the "short arm." The inertia of the arm, left as it were behind, supplied the power, while the ruptured capsular ligament and displacement of the head of the bone would represent the work done.

Victoria-road, Keighley.

NOTES AND OBSERVATIONS ON A CASE OF SUPPOSED DELAYED INHERITED SYPHILIS.

By TOM ROBINSON, M.D. ST. AND.

A MAN aged thirty-six consulted me in January, 1890, for a swollen testicle, which he said had crept slowly and painlessly on. There was an absence of any history of gonorrhœa, injury, or previous attack. On examination the left testicle was found to be as large as a sheep's heart. The epididymis was not involved. The surface of the testicle was smooth and was somewhat pear-shaped. It had that dense, heavy feel which has always been noticed in cases of syphilitic orchitis. A most careful inquiry was made into the history of the case, without discovering any subjective or objective evidence of syphilis, the narrative being free even from evidence of the possibility of contagion. The patient was a married man and the father of four children, all of whom were apparently healthy. His wife was free from any display of syphilis, and she had never miscarried. It was not possible to carry the history of the patient any further back, as his parents had been dead for some years and he was an only child. His childhood had been, so far as he knew, a healthy one, and he certainly betrayed no evidence, so far as physiognomy or teeth were concerned, of having inherited a syphilitic taint. Sir James Paget was good enough to see the case with me, and he corroborated the opinion that it was one of delayed inherited syphilis. The patient was ordered to rub a drachm of blue ointment into the enlarged gland twice a day, and, at the same time, to take a mixture three times a day containing five grains of iodide of potassium in each dose. In six weeks the volume of the testicle had diminished until there was little apparent difference between the two organs.

Experience has already demonstrated the fact that inherited syphilis has three epochs of activity: (*a*) where it manifests itself at or about birth; (*b*) where it manifests itself during childhood; and (*c*) where the disease is delayed until after puberty. Cases such as this one are, I believe, not uncommon. If inherited syphilis will lie dormant for six years, why should not the period be prolonged to thirty-six? We know that in the acquired form of the malady there is no limit to the time in which the organism may not be attacked by the sequelæ. The sequelæ of scarlet fever, measles, and other blood diseases will spread over a number of years, and senile scrofula has become current coin in the medical profession. The interest of all syphilitic problems lies in the attempt to follow backwards the footmarks of the poison. Our difficulties are sometimes insurmountable, but there is no disease which leaves in its path so many evidences of its march and none which possesses a more potent interest.

Prince's-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF TUBERCLE OF THE BLADDER IN A MALE; SUPRA-PUBIC CYSTOTOMY; RECOVERY.

(Under the care of Mr. W. H. BATTLE.)

WE have published this year in THE LANCET other cases of supra-pubic cystotomy for the cure of tubercle of the bladder in the male, and in most of them the results were very satisfactory. It is admitted that in this case a sufficiently long period of time has not elapsed since the patient left the hospital to enable it to be said with certainty that the man is cured, but the prospect is undoubtedly good, and the benefit already received is great. Tuberculous disease of the bladder is one of the most painful of all affections of that viscus, the frequent painful micturition being most distressing, and the patient obtaining but little rest, either day or night, whether in bed or going about. It is not surprising, therefore, that there is now a tendency to attack the disease boldly and directly when examination of the patient makes it probable that the disease is primarily of the bladder and has not extended to other parts. The results already obtained are so satisfactory as recorded that no surgeon can be blamed for refusing to continue week after week medication through the urethra with an uncertain result in cases such as that described, when an incision above the pubes will enable him to exactly gauge the extent of the mischief and arrest its progress by scraping, the bladder being subsequently drained for a few weeks. For the notes of the case we are indebted to Mr. Paterson, dresser.

A tall, strongly built man aged thirty-one was admitted to St. Thomas's Hospital, under the care of Mr. Mackellar, on July 20th, 1895. The family history was good; there was no history of phthisis. He was a married man with two healthy children. There was no illness of moment in the previous history. The first symptom noticed was severe pain in the penis five months before admission, followed by a

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burning sensation during micturition; the pain was then worst at the beginning of the act. A week later he passed some blood in the urine, bright red in colour, and coming after all the urine had been expelled. He had medical treatment for this, and after getting worse for a time, with shooting pain referred to the rectum and abdomen, recovered to a great extent. About three weeks before admission the blood again appeared in the urine, the pain in the penis and bladder increased, and the urine was noticed to be "thick and mattery," depositing an abundant sediment, sometimes white and sometimes red. He stated that he had lost 2 st. in weight recently. On his admission there was nothing abnormal to be detected in the abdomen, and no fulness in the kidney region. On rectal examination the prostate could just be felt, but there was no definite enlargement. The epididymis was normal on both sides. The heart was healthy; the lungs were emphysematous. The temperature was normal. Micturition took place every hour or hour and a half when he was in bed. The urine was acid, of specific gravity 1012, and contained pus. On microscopical examination pus was present in large quantities, also blood corpuscles. On July 29th, although the patient had been lying in bed, there was more pus in the urine than on his admission. Two examinations for tubercle bacilli were made, with negative results. He had attacks of sharp pain about the "back passage," especially after defecation. There was little improvement under general treatment, and on Aug. 12th Mr. Battle (who was on duty for Mr. Mackellar) examined the patient under ether. The surface of the bladder when the sound was passed appeared to be abnormally rough, but no distinct tumour could be found. This roughness was most marked in the position of the opening of the right ureter. The bladder was also examined with the cysto-cope, but with negative results. He complained of pain for some time afterwards and had a bad night although a morphia suppository of half a grain was administered. Next day the temperature was 101·4° F. On the 14th Mr. Battle performed suprapubic cystotomy. The bladder was washed out with boracic acid lotion, and about three ounces of the solution were left in. The silver catheter was also left in position, and a piece of elastic tubing tied round the penis. The usual median incision was then made, and the bladder wall exposed. A curved needle with silk was passed through the wall of the bladder on each side of the middle line. A median incision was made, and the halves were held apart by the silk sutures. The finger was introduced, and as a velvety condition of the mucous membrane was only felt the bladder was thoroughly examined with the electric light, a Sims's speculum being introduced at the upper angle. The wall of the bladder was thickened; the mucous membrane bled very readily when touched, especially in the neighbourhood of the right ureter, where some roughness could be felt. Yellowish, raised patches could be seen in places, and one long streak about half an inch wide ran down the posterior wall from the aperture. In several places granulation-like projections could be felt. These were scraped away with the finger-nail. As much of the softened tissue as possible was rubbed off with the finger. The shreds and clots were washed away with boracic lotion, and the whole was sponged out. The sides of the wound were stitched to the wound in the abdominal wall (the incision in the bladder having been previously lessened by the insertion of a silk suture), and a drainage-tube was inserted. The abdominal wound was closed in its upper part. Cyanide gauze was used as a dressing. On the 19th a tracheotomy tube of rubber was inserted, and the contents of the bladder, by means of a long tube placed through the tracheotomy tube, were drained into a vessel under the bed. The bladder was washed out daily with boracic acid lotion. The temperature was slightly raised, but was under 100°. During some days preceding the 31st the patient passed some urine by the urethra and had a return of the old shooting pains in the back passage. It was not easy to keep the tube in position. The stitches had been removed some days previously. On Sept. 14th the suprapubic tubes were removed. There was very little urine passed into the dressings, most of it being passed per urethram and without pain. There was still some complaint of pain in defecation. His general condition was good. On the 17th the urine was of specific gravity 1018, slightly alkaline, and contained a little albumin, but much less pus than when last examined. The wound closed towards the end of September, and when the patient went to a convalescent home on Oct. 3rd there was no albumin in the urine or pain in micturition. He could hold the urine for a longer period—viz., for from two to three hours—had become much stronger, and had put on flesh considerably.

Remarks by Mr. BATTLE.—This case was a fairly typical one of tuberculous disease of the mucous membrane of the bladder. It is true that no tubercle bacilli were found in the specimens of urine examined, but it is notoriously difficult to find tubercle bacilli in the urine, and the condition of the bladder was of itself convincing proof of the nature of the disease when it was exposed at the time of operation. It is very probable that in this patient the bladder affection was primary, and not secondary to any disease of the kidneys. Careful examination under an anæsthetic failed to give any evidence of renal enlargement on either side. The patient was a big man, with strong abdominal muscles, so without the use of an anæsthetic it was not possible to speak definitely on this point. Examination of other parts, such as the lungs, prostate, and epididymis, showed no disease. A still more satisfactory proof as to the healthiness of the kidneys was afforded by the condition of the urine when the patient left the hospital at a later date. It also showed the remarkably improved state of the bladder. It is quite evident that no other method of treatment would have been so efficient as the one adopted; the disease was scattered irregularly throughout the bladder, even in the fundus, and could have been but slightly affected by intra-vesical medication. By scraping away all the diseased patches with the finger-nail and then giving prolonged rest to the bladder the best chance of cure was given. In my opinion drainage alone, even when prolonged, is not likely to be so effective, otherwise a better result would have been obtained in times past when the perineal route was used. It is too early, perhaps, to say that the man is cured, but there is no doubt of the great relief which he has obtained. I am much indebted to Mr. Fox-Symons, who was the house surgeon when the man was under treatment, for his attention to the case.

VICTORIA HOSPITAL, HULL.

CASES OF BASAL (SUBARACHNOID) DRAINAGE; REMARKS.

(Under the care of Mr. ALFRED PARKIN.)

WE are pleased to be able to place before our readers notes of two more cases in which drainage of the ventricles has been carried out for hydrocephalus. It is evident that the operation for the insertion of the drain is not one which is either difficult or prolonged, and no physician need hesitate in recommending it for fear that it should be too severe for the child. The drainage should be gradual and continued for some days. The result in the first case was undoubtedly satisfactory. The second teaches a valuable lesson as regards the rate of drainage advisable. The other cases alluded to by Mr. Parkin in his remarks belong to a more unfavourable class for treatment of any kind, and the prognosis, from the fact that in each patient unconsciousness had set in for some hours, was exceptionally bad. Perhaps the physician will be able some day to define more clearly the point in the progress of a tuberculous meningitis when the interference of the surgeon may be requested with a greater possibility of success.

CASE 1.—A male child aged three and a half years was admitted into the Victoria Hospital, Hull, on Feb. 27th, 1894, for fits. The head was large, globular, nineteen inches and a half in circumference, and out of proportion to the rest of the body. The anterior fontanelle was still open, but there was no extension backwards between the parietal bones. The child was said to have had numerous fits since birth, apparently of a general character, and recurring about once or twice a month. There was little sign of intelligence; he was unable to talk or walk, and the bowels and bladder acted involuntarily. No attempt was made to pick up or play with toys. The sight was apparently good, there being no changes in the disc. The condition being obviously one of chronic hydrocephalus, it was determined to drain the subarachnoid cavity in the manner adopted by Mr. Parkin and described in THE LANCET of Nov. 18th, 1893. This was accordingly done on March 17th by removing a small piece of the occipital bone a little to one side of the median line by means of a gouge, enlarging the opening with forceps until it was the size of a sixpenny-piece, incising the dura

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cnater, and inserting a small silk drain beneath the cerebellum after first passing a curved probe into the cavity of the fourth ventricle so as to open up the post-medullary velum in case the normal openings had become closed for any reason. In this way excellent drainage was established without allowing a too sudden or a too copious discharge of cerebro-spinal fluid. The after-history of the case was marked by a gradual but steady improvement, which has continued up to the present time. The wound healed rapidly; there was no rise of temperature, and the general condition remained excellent. Two days after the operation the knee-jerks, which were previously absent, returned, and the next day attempts were made to take hold of things. A week later the child began to sit up by himself and showed marked indications of returning muscular control. The drain was kept *in situ* for twenty-eight days and then removed; the removal was followed by an attack of sickness and general irritability, but these symptoms disappeared at the end of another week. On May 22nd the patient could stand against a wall without any assistance, and could raise himself into a sitting posture. On July 3rd he was reported by the mother to be able to stand without any support, to be able to say a great many words, and to show altogether many more signs of intelligence than he had previously displayed. On Jan. 8th, 1895, he was seen by Mr. Parkin among the out-patients; he could talk fairly well, recognise different objects and persons, and could walk if assisted with the hand. Since the operation he has grown two inches and a half, and the bodily increase in size, along with an absence of cranial increase, has almost removed the disparity which previously existed. When last seen by Mr. Parkin, in June, the improvement was even more marked.

CASE 2.—The patient, a male child aged five months, was admitted for fits and enlargement of the head on Aug. 20th, 1895. The circumference of the head was eighteen inches; the fontanelles and sutures were widely opened. The history pointed to congenital syphilis. There was double otorrhœa. The body was emaciated; the child was anæmic and took food badly. Basal drainage was set up on Sept. 3rd, and kept up by the insertion of a horsehair drain. For the next three days the child seemed very much better; a considerable quantity of fluid drained away, and everything seemed satisfactory. Four days after the operation vomiting set in, followed by a rise in temperature to 103° F., and death occurred from hyperpyrexia, due to the withdrawal of too much fluid, six days after the operation. Post mortem there was a general distension of all the ventricles, which still contained a considerable quantity of fluid. There were no septic changes about the wound, which was quite healed.

Remarks by Mr. PARKIN.—The very interesting and successful case of hydrocephalus treated by basal drainage—recorded in THE LANCET of Nov. 2nd, 1895—by Dr. Glynn and Mr. Thelwall Thomas has suggested to me the advisability of putting on record the above cases. The first case is instructive from the gradual improvement, dating from the operation, and perhaps more from the mental than from the bodily changes which have resulted. In the second case there appeared from the outset to be little chance of doing the child much permanent good, but it did not seem right to deprive him of the possible advantages from relief of the intra-cranial pressure which such an operation readily gives. The operation itself in children is extremely easy and can be readily done in ten minutes; in such cases there is generally instantaneous relief, as evidenced by alteration in the pulse and respiratory rates. The drainage is direct, and there is no necessary bruising of, or damage to, brain substance. I have operated so far in only four cases of tuberculous meningitis, and have not yet been able to come across a case where coma had not developed. It is obvious that in order to do good it is advisable, if not absolutely necessary, that operative measures should be undertaken in the early or irritative stage in order to ensure more successful results. In all the cases noted below the patients undoubtedly lost their distension pain, and life was prolonged from one to two weeks. The first case was that of a male child aged six months, with abdominal symptoms followed by convulsions rapidly passing into coma, the head symptoms having lasted for ten days before his admission. He was operated on six hours after he had become comatose and lived for twelve days after the operation. Post mortem there was found to be general tuberculosis, with tuberculous meningitis, the disease originating in the mesenteric glands. The second case was that of a female child aged three years. All the symptoms of tuberculous meningitis from caseous mediastinal glands, following whooping-cough, were present. She was operated on in the third week of the disease and was in a comatose state. She died four days later. No post-mortem examination was allowed. The third case was also that of a female; she was aged ten and was admitted for phthisis of the left apex, and for head symptoms of fourteen days' duration. She became delirious and unconscious, with marked symptoms of meningitis. She was operated on twelve hours after unconsciousness had supervened, and died ten days later. No post-mortem examination was allowed. The fourth case I have already recorded in the columns of THE LANCET.[1] The patient was operated on in deep coma, with Cheyne-Stokes breathing. The breathing became quite natural after the operation, death ensuing sixteen hours later.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Non-existence of Round-celled Sarcoma as a Distinct Class of New Growth.—Hæmatoporphyrin in the Urine after Administration of Sulphonal.—Relation of Biliary Calculi to Malignant Disease of the Liver.—Dermoid Tumour of the Testis.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Nov. 5th, Mr. BUTLIN, President, in the chair.

Dr. SNOW read a paper on the Non-existence of Round-celled Sarcoma as a Distinct Class of New Growth. He said that a generation since the term "soft cancer" was loosely applied to any malignant tumour of soft consistence, no matter from what tissue it had sprung. At the present day the word "sarcoma" was frequently used in a similarly vague sense, and, in particular, "round-celled sarcoma" denoted almost any rapidly growing mass of round or oval cells whose origin was often doubtful. The lesions commonly so designated fell into three groups, and were either (*a*) carcinomata, (*b*) lympho-carcinomata, or (*c*) blastomata. Of the first, the huge encephaloid cancers of the female breast were the type. There was only slight concurrent enlargement of the axillary glands; examined at the core they consisted of a loose mass of cells and cell débris, with little acinar structure; a thin section, however, from the growing margin would display the familiar acini of mammary carcinoma. True sarcoma was rather rare in the breast, except in association with cysts. The second group, lympho-carcinoma, sprang from adenoid tissue in some form or other, to which appertained the bone marrow. As well as in the more external glands, the growth might be developed in those of the abdominal cavity and mediastina, in the tonsils, spleen, omentum, &c. The variety also comprised the central tumours of bone. The third, blastoma, sprang from uneffaced embryonic vestiges; it might very largely consist of round-celled parenchyma, but this was most commonly largely mingled with other structures, tubules, cysts, acini, &c.; its favourite sites were the kidney, ovary, and other derivatives of the Wolffian body. After careful study for many years past of all the specimens which presented themselves, Dr. Snow had been forced to the conclusion that no malignant tumour composed of round cells alone originated in the connective tissues; that every sarcoma, properly so called, contained much spindle-celled tissue, or spindle-cells ranged in bands and that none could be held genuine without this pathognomonic badge.—Mr. BOWLBY thought that the question at issue was really what names should be given to certain microscopic specimens; the specimens labeled lympho-carcinoma he should call sarcoma. The demonstration of the existence of melanotic carcinoma of the skin did not disprove the existence of primary melanotic sarcoma of that structure.—Mr. W. G. SPENCER said that melanotic papilloma was a common growth in pug dogs, and in old dogs it might develop into melanotic carcinoma. He deprecated the use of the term "blastoma," which was loosely applied to all kinds of new growth.—Mr. JACKSON CLARKE said that the

[1] THE LANCET, July 1st, 1893.

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specimens labeled sarcomata he should put down as carcinomata.—The PRESIDENT remarked that there was no kind of disease about which there was so much difference of opinion as the round-celled sarcomata. Later we might have to make a division amongst these growths according to their origin, but we had at present no basis for forming such a classification.—Dr. SNOW, in reply, said that he was quite prepared to find that he had no supporters of his heresy. He had pointed out what he regarded as a straightforward definition of sarcoma, which was that this neoplasm, as the true offspring of connective tissue, was characterised by the occurrence of bands of spindle cells. He held that the very cells which secreted melanin in the skin were the cells of the Malpighian layer of the epidermis, and it was from these that the malignant pigmented growths of the skin sprang. In the eye melanotic sarcomata sprang from the pigmented connective tissue structures. The term "blastoma" was a convenient one to include a class of malignant growths derived from unobliterated fœtal rudiments which did not fall into the ordinary groups of sarcoma and carcinoma.

Dr. ARCHIBALD GARROD and Mr. HOPKINS contributed notes on the Occurrence of Large Quantities of Hæmatoporphyrin in the Urine of Patients taking Sulphonal. After pointing out that hæmatoporphyrin was present in traces in normal urine and in larger amounts in many morbid conditions, they proceeded to discuss its occurrence in much larger quantities still in the dark-red urine of some patients who had as a rule taken sulphonal for some time. The evidence connecting this with sulphonal was discussed, and an epitome was given of the associated clinical symptoms and post-mortem appearances in the published cases. The patients were nearly always women who had taken the drug without ill-effects for weeks, months, or even years previously. Abdominal pain and vomiting were prominent symptoms, and death in collapse frequently followed shortly upon the onset of the symptoms, which might only develop after the drug had been discontinued. Alkaline treatment appeared to have been useful in some cases. Clinical histories of three cases (of women taking sulphonal), supplied by Mr. J. Delpratt Harris, Dr. W. M. Abbot Anderson, and Mr. M. J. Nolan, were then given. All the cases ended fatally, but no post-mortem examinations were made. In one instance sulphonal had been taken for four years, and the symptoms only commenced ten days after the drug was stopped. A detailed account was then given of the general and spectroscopic characters of the dark-red urine of these patients. Tube casts were present in each instance. Even the trace of iron found in normal urine could not be detected. Various methods were employed for the extraction of the hæmatoporphyrin, and it was found that the soda and ammonium chloride methods, which worked so satisfactorily in ordinary cases, were quite unable to cope with the amount of the pigment present in these specimens. Repeated extraction with acetic ether was found very useful for the partial separation of the abnormal pigments present. In each instance the colour of the urine was only in part due to ordinary hæmatoporphyrin. In one case there was present much of a pigment derived from hæmatoporphyrin which yielded two absorption bands like those of oxyhæmoglobin. In a second case another derivative of hæmatoporphyrin was found, and in all the dark tint of the urine was largely derived from a reddish-brown pigment, such as was observed by Hammarsten, which yielded no spectroscopic absorption bands. The views of Stokvis as to the origin of urinary hæmatoporphyrin were referred to.

Mr. C. BEADLES read a paper on the Relation of Biliary Calculi to Malignant Disease of the Liver. He described the two chief theories which had been current to explain the coexistence of gall-stone with cancer of the liver. The first, which might be called the "irritation" theory, was that gall-stone was formed first and by acting as a foreign body set up irritation, which led to malignant growth. The second, or "concentration," theory stated that the gall-stone arose as a secondary result from stagnation of the bile in the ducts caused by their obstruction from malignant growth. The differences observed between primary and secondary carcinomatous growths of the liver as to situation and naked-eye characters were pointed out. Of 100 post-mortem examinations at the Cancer Hospital 4 were cases of primary carcinoma of the liver, and all had calculi in the gall-bladder; 36 had secondary carcinomatous growths in the liver, but there were no gall-stones present in any of them. Of 9 cases of primary carcinoma of the liver at Colney Hatch 5 were males and 4 females, and gall-stones were present in 7, being absent in 1 male and 1 female. These facts supported the theory of irritation, the carcinoma arising as a secondary result of the irritation produced by the presence of the calculi. A remarkably high percentage of insane people showed gall-stones post mortem, and in the majority there was no sign of co-existing inflammation of the gall-bladder or ducts.—Mr. SHATTOCK regretted that more histological detail was not given in the paper. If the carcinomata arose from irritation of the bile-ducts by calculus the columnar variety should be found.—Mr. W. G. SPENCER said that a clear distinction should be drawn between primary cancer of the liver and cancer of the gall-bladder.—Dr. VOELCKER said he had made 7 necropsies on cases of primary cancer of the liver and gall-bladder. In 2 cases the growth was primarily of the gall-bladder, a tubular carcinoma, and in both gall-stones were present. In 5 cases of primary cancer of the liver no gall-stones were present. In the post-mortem room of Middlesex Hospital last year 10 per cent. of the cases examined were found to possess gall-stones. In the cases in which evidence of irritation was present, such as adhesion and thickening, no cancer was found.—Mr. BEADLES, in reply, said that full details of the site of origin of the growths and of their histology were given in the paper.

Mr. JACKSON CLARKE showed a Dermoid Tumour of a Testis which had been presented to St. Mary's Museum by Surgeon-General Giles, who removed it from an infant aged one year. The following description of the growth was given. "A right testis containing a dermoid cyst as large as a hen's egg. The cyst is everywhere invested by the tunica albuginea; its cavity is almost entirely occupied by a large intra-cystic projection which springs from the region of the hilus and contains bone and cartilage. The remaining cleft-like space is filled with hairs and sebaceous matter. The microscope shows that the cyst is lined by skin containing pilo-sebaceous follicles and sweat glands. No trace of the tubules of the testis can be found in the loose areolar tissue which lies between the cyst wall and the albuginea, though the vas deferens and vessels are normal." The condition was a rare one, only one other case being recorded in the Transactions of the society—namely, by Mr. D'Arcy Power. The opinions of Lannelongue, Jacobson, Bland Sutton, and others were briefly discussed. As to diagnosis, cystic sarcomata occurring in infancy were alone likely to give even a superficial resemblance to the condition in question. When the cyst formed in the interior of the testis the treatment was that practised by Surgeon-General Giles in this case—namely, castration.

The following card specimens were shown:—
Mr. BEADLES: Ureter obstructed by Calculus.
Dr. WILLCOCKS: Perihepatitis and Thrombosis.
Dr. WALSHAM: Pulmonary Stenosis.
Mr. EDMUNDS: Myxoma of Breast.

ÆSCULAPIAN SOCIETY OF LONDON.

Urethral Stricture with complications.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 1st, Dr. R. F. WILLOUGHBY, President, being in the chair.

Dr. C. G. MACK read notes of a case of Urethral Stricture with complications in a man aged seventy-two years. The stricture was of twenty-three years' duration, and led to the formation of a peri-urethral abscess with consequent perineal fistula. A period of catheterisation followed. A year and a half ago rapid dilatation by means of graduated bougies was carried out until a No. 12 passed the stricture. The urine contained pus and also casts of renal epithelium. Four months later a large perineal abscess formed and was opened, urine passing through the fistula, and this was followed by the formation of others of small size. For a time the patient improved, but retention followed and was accompanied by persistent hæmorrhage from the urethra and fistulæ. While in this condition a soft rubber catheter was passed, tied in, and removed daily, the bladder being washed out with weak Condy solution followed by a copious douche of boric acid. Under this treatment all troublesome symptoms disappeared and the patient was able to micturate freely and to follow his occupation. The syphon douche was used.

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Dr. J. T. CONNER showed two cases of Pigmentation of the Lips and Mouth in twins, both girls, aged twelve years, of dark complexion and anæmic. The pigment spots, which were only noticed two years ago, were of ink-black colour, mostly of very small size, and scattered over the lips (especially the lower), gums, and hard palate, but not on the tongue.

Dr. CONNER also showed a case of Chronic Ptyalism (hygrostomia) in a woman aged sixty-eight. It had lasted for ten years without intermission. The flow occurred at night as well as in the day. In fact it was greater when the patient was in bed, and considerably interfered with sleep. The secretion of one night was shown. It was an opalescent fluid with a cloudy viscid deposit and amounted to 3 oz. The reaction was acid, the specific gravity 1006, and it readily converted starch into sugar. The patient had lost all her teeth and did not use artificial ones. The mouth was unduly moist; otherwise there was nothing abnormal and her general health was good. Dr. Conner believed that this form of salivation had not been previously recognised; but he had found a case anonymously recorded[1] which curiously corresponded to his in almost every particular—age, sex, absence of teeth, and preservation of the general health. He also compared these cases with the opposite condition (xerostomia), which in all other respects they resembled.

Dr. A. K. CHRISTIE showed a specimen of Fatal Endocarditis in a female child aged nine years. She belonged to a generally healthy family, only one member of which suffered from rheumatism. The patient's personal history was absolutely free from any rheumatic taint. She appeared to be well on Oct. 2nd, became suddenly drowsy towards evening, and died the next morning. A post-mortem examination showed the viscera to be generally healthy but for the evidences of old and recent endocarditis, especially on the mitral valve. There was also a softened patch on the anterior wall of the left auricle studded with small soft vegetations. Embolism from the detachment of one such vegetation was suggested as the cause of death.

Dr. B. G. MORISON showed specimens of Branching Casts of Plastic Bronchitis expectorated with some hæmorrhage by an elderly man of rheumatoid type.

ISLINGTON MEDICAL SOCIETY.

Acute Inflammation of Bone.—The Islington Workhouse Infirmary.

A MEETING of this society was held on Oct. 22nd, Dr. WHITE being in the chair.

Mr. BATTLE read a paper on Acute Inflammation of Bone as it is met with in children over five years of age. He divided the cases met with into three classes according to their severity, and gave the principal points which assist in diagnosing the condition from other diseases. He then discussed the treatment, advocating very strongly an early incision through the periosteum without waiting for fluctuation, in order that the fever might be cut short, necrosis prevented or much limited in extent, suppuration in joints prevented, and the risk of pyæmia minimised. He gave examples from his practice to illustrate this part of the subject, and showed a patient. The treatment of these cases when a joint was invaded was now considered and conservative measures advocated. The endurance of these patients was commented on, and examples given to show the good result which may follow patient treatment in some instances. Two cases were shown, both of which had been under care some years ago. One had ankylosis of the knee in consequence of extension of the inflammation through the epiphysis to the joint. The other had perfect use of the knee-joint, which had suppurated and been drained four years ago. Each had had extensive necrosis of the tibia. In the one there had been no growth at the upper end of the tibia since the sequestrotomy. In the other, where suppuration in the joint had resulted, growth of the tibia had continued unimpaired. In one case mentioned the patient recovered after suppuration in the knee, ankle, and big-toe joints.

On Oct. 30th a special meeting of the society was called to consider the duty of the society in respect of the present crowded condition of the infirmary and its insufficient medical staff. The following resolution was passed: "That the members of the Islington Medical Society desire to express their deep concern at hearing of the overcrowding of the Islington Workhouse Infirmary and the admitted insufficiency of the medical staff in attendance on the sick. Having in the course of their professional duties to advise poor patients to go into the infirmary, they cannot but feel much hesitation in doing so if such a state of things continues. The Islington Medical Society would respectfully urge upon the board of guardians to take immediate steps to remedy the overcrowding in the wards, and to provide such additional medical, dispensing, and nursing assistance as the great number of patients in the infirmary really needs."

[1] THE LANCET, April 9th, 1892, p. 845.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Ætiology and Treatment of Gastric Ulcer.

A MEETING of this society was held on Nov. 1st, Dr. A. SYMONS ECCLES, President, being in the chair.

Dr. DONALD HOOD, in opening the discussion from the medical standpoint, said his remarks would be confined especially to considerations on diagnosis in those cases where symptoms are indefinite, ambiguous, and often misleading. He would refer to the importance of weighing well the value of the symptom hæmatemesis, and he would draw special attention to the careful differentiation between various forms of acute abdominal pain with a view to diagnosis at the earliest possible moment of the existence of perforative ulcer. He proceeded to give a brief clinical picture of the most important subdivisions of groups under which gastric ulceration practically came before practitioners for treatment. He cited a case which had been judged to be one of merely prolonged dyspepsia, but which an examination after death proved to have been one of extensive recurrent ulceration, producing much contraction of the stomach and leading to perforation of the diaphragm. He referred, also, to a case of acute perforation and severe hæmatemesis in a young anæmic girl, and in connexion with this he adduced certain criteria which would help to differentiate cases of hæmorrhage caused by organic breach of the stomach walls from those which frequently occurred in early adult female life without any such breach—a condition for which he proposed the name "hæmatemesis puellaris."

Mr. BRUCE CLARKE, introducing the surgical side of the discussion, began by referring to the rarity of perforations of gastric and duodenal ulcer. He described two principal varieties, those in which collapse was the prominent symptom, and a second variety in which the extravasation of intestinal or gastric contents was more gradual. These cases were often indistinguishable from intestinal obstruction, and, indeed, gave rise to it by the peritonitis which they set up. There was only one keynote to success in ruptured ulcer and that was early diagnosis and early treatment.

Dr. F. H. ALDERSON thought that gastric ulceration when unaccompanied by hæmorrhage and vomiting was frequently overlooked. He commented on the rarity with which gastric ulcer was assigned as a cause of death, and quoted the Hammersmith statistics for five years, where out of 8305 deaths only 11 were assigned to this cause. He narrated a fatal case from his own practice in which at an early stage, owing to the absence of definite symptoms, diagnosis was impossible. In this case the patient was an adult male.

Dr. SEYMOUR TAYLOR spoke only of that form of ulcer which is found almost exclusively in young women and is clean and punched out in appearance. He argued that this was an almost constant incident in the clinical history of prolonged cases of chlorosis, and cited authorities who had noticed this connexion. He pointed to the common factors of age, sex, and neurosis, and held that neuropathy was the starting point in chlorosis. Further, the ulcer in its appearance and character approaches those ulcerations which are distinctly neuropathic, tabetic ulcers, herpes, &c. He held that the connexion was further established by treatment. He maintained that the embolic theory was untenable in view of the splendid collateral circulation of the stomach.

Dr. CAMPBELL POPE called attention to the remarkable rarity of gastric ulcer among certain vegetarian populations. For treatment he preferred belladonna to opium in the earlier stage, and later he used arsenic and iron.

Mr. KEETLEY contrasted the signs of perforation in various situations, and advocated early operation, even at times without waiting for recovery from shock and without an anæsthetic.

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WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Chronic Nasal Obstruction.

A MEETING of this society was held on Tuesday last, Dr. ERNEST CLARKE, President, being in the chair.

MR. MAYO COLLIER read a paper on the above subject, in which he reminded his audience of the extraordinary frequency of the condition. He next showed that this state of things was seldom or never congenital, but was progressive, commencing at or about the time of puberty to increase with the development of the parts. Having enumerated a long list of affections the direct outcome of obstruction to the nasal passages, he pointed out the serious and irreparable damage often done to the young growing skull by leaving things to themselves. Moreover, the symmetry of the face and beauty of the countenance were in many cases lost or impaired. The commonest effects on the growing skulls of young persons were a pinched and flattened or hatchet-shaped appearance of the face, comparative smallness of the upper jaw, high, arched palate, with crowded and irregular teeth. Associated with this were often general anæmia and stunted growth.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Oct. 24th, the President, Dr. PORTER, being in the chair.

Mr. SNELL introduced: 1. A woman with Embolism of the Central Artery of the Retina; she had mitral and aortic disease. 2. A man aged forty-eight with Extreme Myosis, Argyll-Robertson Pupils, and loss of Knee-jerks. He had been under observation for years in practically the same condition. 3. A man with Traumatic Palsy of both Sixth Nerves. Mr. Snell drew attention to the cases of traumatic palsy on record, specially mentioning the valuable papers of Purtscher and Friendwald. It appeared that the other cranial nerves were more liable to suffer from trauma than the sixth pair, and when the latter did suffer other nerves were implicated. Altogether fifty-seven cases were on record, and seventeen were bilateral. 4. A girl with Bilateral Palsy of External Recti and Double Papillitis. Headache and sickness were the other symptoms suggesting some intra-cranial growth.

Dr. SINCLAIR WHITE exhibited and related particulars of: 1. A case of Trephining for Temporo-sphenoidal Abscess due to Suppurative Middle-ear Disease. An abscess containing two ounces of offensive pus was cleared out and disinfected, but in spite of this the patient got worse. Four days later the wound was reopened, more bone removed, and a second independent abscess discovered and treated. Although the lad appeared to be *in extremis* he rapidly recovered after the second operation, and is now quite well except for his deafness. 2. A large number of Gall-stones removed from a Suppurating Gall-bladder. Owing to the distended gall-bladder being bound down by omental adhesions it was not in contact with the anterior abdominal wall. This fact, conjoined with absence of history of hepatic colic, rendered a diagnosis difficult prior to exploration. The patient, a woman aged fifty-three, made a good recovery. 3. A girl aged seventeen years, from whom the Right Astragalus had been removed eighteen months previously for a myeloid sarcoma. Excision was done through a single external wound. The resulting foot was both shapely and useful, the girl being able to walk several miles without fatigue. The arch of the foot was preserved, and, contrary to what is generally taught, there was considerable movement at the new ankle-joint. Dr. White had not been able to find a case of excision of the astragalus for tumour on record.

Mr. DALE JAMES introduced a case of Paraffin Acne. The patient was a boy who worked in a wire mill, where, the wire having been hardened in a tank of crude paraffin, he had to make it up into rolls. Hence his clothes became saturated, and the eruption appeared about a month after he began this work. Three other boys working in the same mill are similarly affected. The eruption is chiefly on the legs, on the anterior and lateral aspects, and on the forearms. It is confined to the follicles and presents various appearances—i.e., a black plug filling the follicular opening; a second stage in which the plug is raised at the summit of a papule; further in which the papule is inflamed, and again when this is surrounded by a flush; and, finally, there are several places in which a very small fleshy tumour is substituted for the papules. Innumerable minute scars mark the seats of past lesions.

Dr. ARTHUR HALL showed two cases of Syphiloderma and one of Circumscribed Scleroderma.

Dr. BURGESS showed a case of Xanthoma Multiplex. The patient had been jaundiced for over a year from hypertrophic cirrhosis of the liver.

LIVERPOOL MEDICAL INSTITUTION.

Large Vesical Calculus.—A Method of producing Rapid Delivery in Puerperal Eclampsia.—Villous Tumour of the Bladder.—Professor Fraser's Snake-bite Antidote.—The Subsequent History of twenty-three cases of Typhlitis.

AN ordinary meeting of this society was held on Oct. 31st, Mr. CHAUNCY PUZEY, President, being in the chair.

MR. GEORGE HAMILTON showed, as a card specimen, a Vesical Calculus which he had removed and which weighed over half a pound.

Dr. T. B. GRIMSDALE related a case in which he had induced Rapid Delivery by deeply Incising the Cervix Uteri. The patient was suffering from Puerperal Eclampsia. Before the operation the os would just admit the finger; after the incisions were made the forceps could be easily applied, and a living child was extracted in three or four minutes. The incisions were four in number, radiating from the os and extending through the cervix to the vaginal reflection. After delivery the fits diminished, and in twenty-four hours the patient had regained consciousness, but four days later she became maniacal and did not recover from this for five weeks. The albumin disappeared from the urine on the third day.—Dr. BRIGGS considered that where rapid delivery was easy and the cervix thinned and moderately dilated there could be no objection to speedily emptying the uterus, but thought that in many cases rapid withdrawal of the uterine contents would not be desirable.—Dr. IMLACH and Dr. DAVIES also made remarks on this case.

Mr. NEWBOLT showed a young man aged twenty-one years who had been under his care since June, 1894. For three years he had complained of great pain during micturition, with sudden stoppage of the flow and the frequent passing of blood. A sound detected a soft substance in the bladder, which bled readily. The bladder was opened above the pubes on several occasions, and a quantity of villous growth could be seen surrounding the orifice of the urethra and covering the whole surface of the mucous membrane except at the summit of the bladder. Removal of considerable portions of the tumour was made from time to time by a Volkmann's flushing spoon, the severe hæmorrhage being controlled by very hot water. The last operation was performed in April of this year, and the patient was now much improved in every respect, but still suffered from frequent sharp pain in the left loin. This pain, Mr. Newbolt thought, was probably due to contraction of the orifice of the ureter or blocking of it by growth. There was now no pain during micturition or bleeding, but there was a small deposit of pus.—Mr. PAUL, Dr. BRIGGS, and Dr. ROSS made remarks on this case.

Dr. LOGAN showed Professor Fraser's Anti-venine both as a liquid serum and in the crystalline form.—Mr. NICHOLSON said there was no doubt as to the scientific value of Professor Fraser's work, but he questioned whether the antidote would have any practical value in India. Considering the enormous population of India, death from snake-bite was very infrequent. Every case of snake-bite was not necessarily fatal; on the contrary, numbers of persons recovered, and various antidotes gained great credit in consequence.

Mr. R. W. MURRAY divided his twenty-two cases of Typhlitis into three groups. They were all collected from the records of the Children's Infirmary, Liverpool, since 1886. The numbers by no means represented all the cases treated during that period, but those of which he had notes and whose subsequent history he had been able to trace. With one exception no case was more recent than two years ago. He then gave the groups as follows: 1. Nine patients in whom there was inflammation of the vermiform appendix, with, most probably, a slight and strictly localised peritonitis; these all recovered under medical treatment and remained well, though three of them were relapsing cases; the

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period that has elapsed since their admission varied from three to seven years. 2. Ten cases, where there was a localised peritoneal abscess due to inflammation of the appendix in which the abscess was simply opened and drained; nine of the children remained well, the time which has elapsed since operation varying from three to six years; one died from suppurative peritonitis owing to an accident during the syringing of the wound. 3. Three cases where the appendix rapidly became gangrenous and perforated; they all died.—Dr. GLYNN referred to the difficulty sometimes experienced in distinguishing between chronic inflammatory induration in the region of the cæcum and malignant disease of that part. He believed that the inflammatory cases commenced with acute symptoms, pain, and constipation, whereas in malignant disease there was often diarrhœa with discharges of blood and mucus.—Mr. RUSHTON PARKER said that, where perforation of the appendix occurred, general septic peritonitis and death speedily resulted. He had seen several cases of typhlitis in adults where the question of abdominal section was raised, but recovery took place under rest and opium. He was convinced that promiscuous operation was not indicated in typhlitis, whether attended by intestinal obstruction or not.—Mr. PAUL thought that in adults there was undoubtedly a class of cases which could not be freed from a recurring danger without operation, whilst the operation, if undertaken at the right time, was almost always successful and devoid of risk.—Mr. RAWDON said that during the time he was surgeon to the Children's Infirmary all cases which suppurated did well, and he could not remember a single instance of recurrence.—Mr. LARKIN remarked that in his opinion the recurrent cases of appendicitis were a distinct clinical group, and only to be cured by removal of that structure.—Mr. A. DAVIS referred to the injurious effects of purgatives and the marked beneficial effects of opium in these cases.—The PRESIDENT, Dr. BANKS, Dr. P. DAVIDSON, Dr. BOYCE, and Dr. ABRAM also took part in the very interesting discussion on Mr. Murray's paper.

PLYMOUTH MEDICAL SOCIETY.

Otorrhœa and some of its Complications.

AT the meeting held on Oct. 26th the Hon. Secretary read (in the absence of the author) Mr. CHAS. E. BEAN'S paper on the above subject. The writer confined his remarks to the salient features of chronic purulent otitis media and its more usual complications. The records of the Devon and Cornwall Throat and Ear Hospital showed that out of 2160 aural cases 660, or 30·5 per cent., were classed as "otorrhœa." The gravity of its effects were shown by the figures of the Registrar-General, wherein from 300 to 400 deaths are annually returned as due to "otitis." Mr. Bean then proceeded to the symptoms, course, and treatment of cases of chronic purulent otitis media, emphasising the need for drying the middle ear thoroughly after antiseptic irrigation; the careful use of the curette when removing granulations, carious bone, and fragments of membrana tympani; and the use of cocaine as a hæmostatic. The complications described were perforation of membrana; polypi; caries and necrosis of temporal bone, with abscess of parotid gland, especially in children; implication of the mastoid antrum and cells, and the indications for operation; and intra-cranial diseases, including (*a*) extradural abscess, (*b*) meningitis, (*c*) cerebral and cerebellar abscess, and (*d*) sinus phlebitis, associated with which may be thrombosis of the internal jugular vein and ulceration of the internal carotid artery.

In discussing the paper, Mr. ELLIOT SQUARE pointed out the value of instilling cocaine previously to operating under a general anæsthetic, both to check hæmorrhage and to prevent movements during imperfect anæsthesia.

Mr. LUCY exhibited a specimen of the Left Temporal Bone removed from a boy aged five years, which showed the large size of the mastoid antrum, its porous roof, and the small size of the mastoid process and the absence of cells.

Mr. WEBBER urged the part played by post-nasal adenoids in causing otorrhœa, and cited an interesting case of hæmorrhage from both ears (recorded in THE LANCET of March, 1894).

Dr. RIDER concurred as to the frequent association of adenoids and otorrhœa, urged the cautious use of chromic acid, and pointed out the dangers of plugging the meatus with powders or wool.

Mr. WOOLLCOMBE recommended the more frequent clearing out of the mastoid antrum and cells previously to other operative measures.

Mr. WHITEFORD cited septic affections of the pharynx as causes of otorrhœa, and urged the advisability of clearing out thrombus from the lateral sinus and internal jugular vein.

Reviews and Notices of Books.

The Growth of the Brain: a Study of the Nervous System in relation to Education. By HENRY HERBERT DONALDSON, Professor of Neurology in the University of Chicago. London: Walter Scott and Co. 1895. Price 5*s*.

THIS volume is one of the excellent Contemporary Science Series, edited by Mr. Havelock Ellis, and contains a very large number of facts of great interest, which are, no doubt, for the most part gathered from well-accredited sources, but which it is extremely convenient to have at hand in a collected series and in a well-arranged form. It is indeed in the arrangement of large masses of facts and statistics and in the demonstration of their connexion with each other that the chief value of a work like this consists, and we can say with confidence that Professor Donaldson has executed his work with much care, judgment, and discrimination. The introductory chapter describes the nature of a cell and the process of fertilisation. He refers to the recent calculations of Francke that the human body contains, including the blood corpuscles, rather more than twenty-six billion—or million million—cells, an amount which, although inconceivably great, yet, supposing each cell to be 1000th of a cubic millimetre, might be contained in a cube having a side of 2·8 centimetres (about $1\frac{1}{10}$ in.), or in a space of 22·5 cubic centimetres. The power of growing seems to be closely connected with length of life, but as yet there is no adequate explanation of the fact that some animals live longer than others; and, as the larger animals have longer lives, long life is associated with size, and the author points out that size depends upon two factors: the rate of growth and the length of time that growth continues—so that animals that attain a large size grow both rapidly and for a long time. A table that is given shows that the rate of increase in the rabbit and in man is about the same, but, owing to the fact that in man growth continues for about twenty-five years, whereas in the rabbit it stops at the end of one year, the difference in the final size of each is very great. Since, then, natural death is the result of old age; since, further, old age is not attained until growth has been completed, and large size depends on long-continued growth: therefore long life and large size are found associated. From the moment of birth there is a rapid falling off in the proportional daily increase in the body-weight in all the higher animals—a time soon comes when increase ceases, and the body then becomes more susceptible of destructive influences. With the decay of any part of the organism comes a disturbance of the balance in the work allotted to other portions. Tissues not specialised for the purpose are compelled to discharge the functions of those already damaged and perform them but imperfectly. The result is progressive enfeeblement of these overtaxed cells, until finally some function is so imperfectly performed that the life processes are blocked and the organism as a whole dies. Minot pointed out that in the mature cell the proportion of cytoplasm to nucleus is greater than in the growing animal, and on this ground he propounds, half humorously, the aphorism that "protoplasm is the physical basis of advancing decrepitude." We have reproduced the above sentences in a somewhat abbreviated form from Professor Donaldson's work, but they suffice to show that he writes well and clearly. Succeeding chapters deal with the increase in weight

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of the entire body (in which the tables of Dr. Charles Roberts are taken as a guide, because, unlike those published in Denmark, Germany, Sweden, Russia, and the United States, they include the ages before four and after twenty, which are not given in foreign statistics since the latter deal only, or chiefly, with school children); with the weight, increase of different parts of the body, and increase in stature; with the weight of the brain and spinal cord, and the capacity of the cranium; with the histology of the nervous system; with the localisation of function in the brain; with physiological rhythms; with fatigue and old age; and with the education of the nervous system. This last chapter is a very thoughtful and suggestive one, and we are tempted to make a short extract from it. "It is extremely interesting," the author says, "to see how in a series of eminent men, excluding men of action, the determination of distinction follows the order in which the brain normally attains the high development necessary to command recognition in a particular profession. The manner in which the encephalon becomes organised shows that some combinations among the central elements are normally completed earlier than others. When, however, such sensori-motor connexions are once established the time required for their perfection is comparatively short. Further, it appears that high excellence, especially in the acts requiring simple sensori-motor combinations, is acquired speedily or not at all; and thus prolonged exercise, though it may have value as a moral training, is insignificant for technical improvement." Professor Donaldson gives a table from Sully which shows that amongst 287 men of eminence those who gave promise earliest, produced in their own art earliest, and distinguished themselves earliest might be ranked in the following order: musicians, artists, scholars, poets, men of science, novelists, and philosophers. The work throughout is very readable and constitutes a valuable addition to the series of which it forms a volume. It may be read with advantage by all engaged in the tuition of the young.

A Manual of the Practice of Medicine. By FREDERICK TAYLOR, M.D., F.R.C.P. Lond., Physician to, and Lecturer on Medicine at, Guy's Hospital. Fourth Edition. London: J. & A. Churchill. 1895.

THE rapidity with which new editions of a text-book are called for is unfailing evidence of its merits and its suitability to the student's needs. Of text-books in medicine there is indeed no lack, and therefore it is all the more gratifying to find that so comparatively a new-comer as "Taylor's Medicine" should have obtained within five years the distinction of a fourth edition. The author is to be congratulated on this practical proof of the popularity of his work—a popularity which is thoroughly well deserved. Nor has he been unmindful of the duty, incumbent on every teacher in these days of rapid additions to knowledge and changes in thought, to carefully revise his work, so that it may keep abreast of the times. He says in his preface that in the section on specific infectious diseases "I have endeavoured to represent the latest views and discoveries; and the questions of immunity, protective inoculation, and antitoxins have received attention." Space is also given to a fuller account of tropical diseases, whilst chapters have been introduced on Acromegaly and Mycosis Fungoides. And as another striking example of revision of medical opinion the "subject of appendicitis has been largely re-written." It would be a work of supererogation to submit this text-book to any detailed critical analysis. Its author is well known as an accomplished physician, and his teachings are evidently based upon wide clinical experience. The result of his labours is a work which can safely be recommended as a trustworthy and reliable guide to the principles and practice of medicine.

Surgery: its Theory and Practice. By WILLIAM JOHNSON WALSHAM, F.R.C.S. Eng., M.B., C.M. Aberd., Senior Assistant Surgeon, Lecturer in Anatomy, and Surgeon in charge of the Orthopædic Department, St. Bartholomew's Hospital, &c. Fifth Edition. With 380 Illustrations. London: J. & A. Churchill. 1895.

IN preparing the fifth edition of this work the author states that he has endeavoured to increase its usefulness by amplifying those subjects that seemed to require it and by describing many conditions and operations not mentioned in former editions. This, we learn, has been done without materially enlarging the book by leaving out such matter as, with the advance of surgical science and practice, has now ceased to be of value. The character of the type is improved and more illustrations are added; some of these are, however, superfluous, such as No. 269, the diagrams to show the lines of incision for the arteries of the extremities are useless, and No. 289 is a reproduction of No. 146. Altogether this edition is, however, considerably improved. We still hold that the true use of a book such as this is for men at the close of their student career, when, having firmly grasped surgical principles, they want to freshen their memories on the details of surgical injuries and diseases. It is not, in our opinion, well adapted for the student, in whose hands it is probably used as a "cram." We know that it is liked by the student from the frequency with which we see it carried about, but we regard it as inadequate to supply the knowledge required by one who is studying surgery as an important part of professional education. Our experience is that few students buy more than one book on surgery, and we contend that such a subject should be more fully treated than it can be in a volume of the size of this one.

Verhandlungen des Congresses für Innere Medicin. Herausgegeben von Dr. E. LEYDEN und Dr. EMIL PFEIFFER. Dreizehnter Congress. Wiesbaden: Verlag von J. F. Bergmann. 1895. (*Transactions of the Congress of Internal Medicine.* Edited by Dr. E. LEYDEN and Dr. EMIL PFEIFFER. Thirteenth Congress. Wiesbaden: J. F. Bergmann. 1895.)

ONE of the most interesting and most fruitful of the annual medical congresses that now so plentifully abound is that of "Innere Medicin," which for many years used to meet regularly at Wiesbaden. It always assembles in the spring of the year, and one of its chief features is the selection beforehand of two or three topics of current interest for general debate. The meeting last spring was at Munich under the presidency of Professor von Ziemssen, and the published volume of its Transactions contains much that is noteworthy and valuable. Thus the first day's subject was the Serum Treatment of Diphtheria, which was introduced by Professor Heubner of Berlin, and discussed by a large number of physicians from all parts of Germany. The next debate was on Iron in Therapeutics, opened by Professor Bunge of Basle and Professor Quincke of Kiel; whilst the third was upon the Pathology and Treatment of Typhlitis (*lit.*, the "typhlitides"), opened by Professor Sahli of Berne and Professor Helferich of Greifswald, who were followed by Dr. Sonnenburg, who gave a very instructive account of his experience of "Appendicitis Simplex." Many memoirs on subjects of more or less clinical importance make up the volume, which strikes us as being one of the most valuable and interesting that has appeared amongst the thirteen that have been published since the Congress was instituted. We may have occasion to refer again to some of these articles.

LIBRARY TABLE.

Circular Sewer Discharges. By a MUNICIPAL ENGINEER. London: The St. Bride's Press, Limited. 1895. Price 1*s.*—For the municipal and prospecting engineer this is an

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indispensable table, in the form of a handy pocket-book, giving the discharge from circular sewers at different gradients, when running full, in cubic feet per minute. The figures are based on a calculation of the formula of Weisbach, in which the chief factors are head of water in feet, length of pipe in feet, diameter of pipe in feet, velocity in feet per second, coefficient for friction, and coefficient of resistance for entrance of water into pipe. Thus at a glance the engineer can get just the information he wants in regard to the capacity and flow of sewers when preparing new schemes of drainage.

Examination of Water for Sanitary and Technical Purposes. By HENRY LEFFMANN, A.M., M.D., Ph.D. Third edition, revised and enlarged, with illustrations. Philadelphia: P. Blakiston and Co. 1895. Price $1.25.—Since the issue of the first edition of this useful little work we have employed several of the processes described therein for the analysis of water in our own laboratory, with results which occasion us no surprise that in a very short space of time there has been a demand for three editions. The present edition has been revised entirely by Dr. Leffmann, his former colleague, Dr. William Beam, having left to reside in a distant part of the world. The book is quite in touch with recent progress, as is instanced in the observations on useful and worthless filters, while much of the text in the section on Biological Examination has been rewritten in harmony with modern notions. To the English reader its only blemish is its American orthography. The plural of sulphide is written "sulfids," and so on. That this system is not consistent, moreover, is evident from "chlorin" and "urine."

Elements of Modern Chemistry. By the late CHARLES ADOLPHE WÜRTZ. Fifth American edition. Revised and enlarged by WM. H. GREENE, M.D., and HARRY F. KELLER, Ph.D. Philadelphia: J. B. Lippincott Company. London: 10, Henrietta-street, Covent-garden. 1895.—The author of this volume was the editor of the well-known "Dictionnaire de Chimie," supplements to which, we believe, continue to be published. His knowledge had extended far into every branch of chemical science, and fresh facts, as they were brought to light from time to time, could hardly have escaped his notice. Had it been otherwise we should have been surprised to find that what is nowadays a really difficult task—namely, to include the whole of the leading and most important facts of both organic and inorganic chemistry, to say nothing of the treatment of the theoretical portion, within the convenient dimensions of such a volume—had been so successfully accomplished. But Würtz was not only a master of chemical science but a teacher and a writer, and we are glad that the simplicity of his own language has been preserved so far as the exigencies of translation would permit. The plan of treatment of the subject is old, but nevertheless good. The student must grasp the mathematics of chemistry and pass over the *pons asinorum* before he so much as handles a test-tube. Thus the laws of chemical combination and of definite proportions, the atomic theory, and the system of nomenclature are his first intellectual exercise. It is interesting to find a paragraph devoted to argon in the section on Air, giving a description of its preparation and properties. It is the first reference we have found in text-books to the newly discovered constituent of the air. While this affords evidence that care has been taken to include the latest advances in inorganic chemistry, we see the same fact brought out in the organic section, where space has been found for a description of the new antipyretics which organic chemistry has placed at the service of the physician, as exemplified in antipyrin, phenacetin, and thalline. Indeed, the section on Organic Chemistry is, consistently with the size of the volume, very fairly complete, and concludes with some excellent paragraphs on the alkaloids, albuminoids, albumins, biliary principles, and other bodies of physiological importance and of general medical interest. Würtz commenced as a student of medicine, and medico-chemistry was a subject of special interest to him. The book may be recommended as an excellent manual on chemistry for students of medicine to read in the earlier part of their curriculum.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary quarterly Comitia of the College took place on Oct. 31st, the President, Sir J. Russell Reynolds, Bart., being in the chair.

J. H. Dauber, M.B. Oxon., M. S. Löwenthal, M.D. Würzburg, E. S. Smith, M.D. Durh., and H. C. Thomson, M.D. Lond., were admitted to the Membership of the College.

Licences were granted to the successful candidates at the recent examinations of the Examining Board.

On the motion of Sir R. Quain the use of the library was granted to the General Medical Council for the purpose of its next meeting.

Two communications were received from the Colonial Office, one conveying a report on the sanitary condition of Hong-Kong, and the other enclosing a despatch from the Straits Settlements relative to the alleged discovery in Java of a supposed remedy for diphtheria.

A report was received from the University of Edinburgh awarding the Murchison scholarship to Mr. Neil Macvicar, M.B.

A communication was read from Mrs. Blenkins, widow of the late Deputy-Inspector-General Blenkins, offering for the acceptance of the College the collection of anatomical and pathological preparations which he had made, chiefly from specimens obtained in the Crimea. Mr. Blenkins in 1851 had received the thanks of the College for work done in its museum. The offer was referred to the museum committee for consideration and report.

Sir Dyce Duckworth briefly reported the circumstances of his representation of the College at Paris on the occasion of the State funeral of M. Pasteur.

The audited accounts for the year ending Sept. 29th were laid on the table, and reports from the finance committee, the committee of management, and the laboratories committee were received and adopted.

Dr. Ord was re-elected a member of the committee of management, and Dr. Pye Smith of the laboratories committee.

SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.—In the recently issued statement of the Bristol branch of this society it is stated that since 1889 it has investigated 2200 complaints of cruelty in Bristol and the neighbourhood, affecting 42,000 children. In cases where the complaints were well founded, and this was generally the case, the offenders were warned, and then, if necessary, prosecuted. The actual number of prosecutions had been 300, and only 12 had been acquitted, this being below the average of acquittals of the society throughout the country. Up to the end of 1894 the number of cases investigated in this district exceeded that in any other district of England except London.

THE MEDICAL GUILD, MANCHESTER. — The quarterly meeting of the Medical Guild was held in the Victoria Hotel on Oct. 31st, Mr. Alderman Walmsley, J.P., being in the chair. At the previous meeting the Council of the Guild was asked to report generally on Provident Medical Aid. An interim report was now read, dealing with the Friendly Societies' Sick Clubs, Provident Dispensaries, and Medical Aid Associations. After discussion the report was referred back for completion, and ordered to be then printed, and a copy sent to each member of the Guild one month before the next quarterly meeting. On the motion of Dr. Brierley it was by a majority resolved that the council be instructed to draw up a scheme of provident medical aid on the basis of a wage and age limit, constructed on a sliding scale.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 9, 1895.

THERE is a general feeling throughout the profession in favour of a more strict enforcement of the principles and duties of medical ethics. The profession is crowded as it never has been before, and the temptation to resort to undignified and unprofessional methods is greater than it has ever been; but the general antipathy of medical men towards such methods continues, and is likely to continue. Our profession is not a well-organised one. Its great corporations are only beginning to realise their duties to their members. And the voluntary associations of medical men are still far from acting with that clearness and cohesion which are necessary to make an effective impression either on the profession or on the public outside. Progress, however, in every direction may be noted. At its last annual meeting the British Medical Association devoted quite an unusual amount of attention to such subjects. It imposed by resolution on its council the duty of approaching Government, the General Medical Council, Parliament, teachers of medicine, and others in support of measures for the better regulation of medical conduct. We do not pretend to know how far the council is giving effect to these resolutions; but it will be called to account if it does not soon give evidence that it is endeavouring to give effect to them. A still more satisfactory sign of the steady progress of the profession in regard to medical conduct and methods of practice is to be seen in the reports of our Special Commissioner from various important towns under the heading of "The Battle of the Clubs." The essence of all medical ethics is the recognition that the individual practitioner in the last resort is the custodian of the honour of the profession, and that he is bound to do nothing to tarnish it either personally or through the agency of bodies or societies. The unity and organisation of the profession in most of the towns our Commissioner has visited are altogether admirable. We can only desire to see this example followed in every town and in every country district. Neither the General Medical Council nor the medical corporations can help medical men who will not use their own local authority in an organised and dignified manner for the assertion of medical rights and in condemnation of those members of the profession who are willing to betray its general interests if they can gain a personal advantage.

If medical men will organise in their several localities they will be more respected by the public, and they will create an *esprit de corps* that will have the most beneficial effect on those who are tempted to forget that they are members of a liberal profession that deserves to be treated respectfully in a civilised and self-respecting community. They will, moreover, leave little to be done by the medical authorities in the way of vindicating medical ethics.

Still, it is of the first importance that these authorities should have full power of controlling their members whenever th ir conduct exceeds that which is incapable of correction by the expression of local medical opinion or of the larger voluntary associations of the profession. The Royal College of Surgeons of England has set an excellent example to the other corporations in obtaining the sanction of the Home Secretary to an alteration of its by-laws bearing on the misconduct of Fellows and Members. We have already alluded to this feature of the work of the College in the past year. But for the opposition of a certain section of the Members the College might have had a still more powerful by-law. The incident shows how much stronger the College would be if it would meet the reasonable wishes of the Members for a modest representation on the Council. This demand cannot be long refused, and the sooner it is granted the more it will be appreciated. The concession of the just claim of representation would, we are convinced, add immensely to the strength of the College. Of all duties which the Council owes to the Members this is the greatest—to recognise their claim to a certain voice in the governing body. The College has set an example to all the medical authorities in making clear its own ethical powers by having them defined in a by-law that meets the approval of the Home Secretary. We call upon the other medical authorities to take note of this fact. But we look confidently to the Royal College of Surgeons of England for one example more for a due recognition of the claims of its own Members to a share in all the functions of the College. This step would initiate a harmony and a power in the profession hitherto wanting, and would secure for it the greater respect of statesmen and the public.

WE have already, in noticing the Report of the Sanitary Commissioner with the Government of India for 1893, touched upon a number of points that are embodied in the Report to Parliament on Sanitary Measures in India during 1893–94. But the number and importance of the subjects included in the Blue-book issued from the India Office a few months ago well entitle them to further consideration. Notwithstanding what has been said to the contrary, and in spite of the fact, as it seems to us, that Indian reports are too numerous and voluminous and too complicated and full of statistical tables to enable people to get at the information they really require, we hold that some of them are very ably compiled and valuable. It must be borne in mind that they are prepared for the information of Parliament and not for the special edification of the medical profession and *savants*; they deal with results and vital statistics, and not with scientific theories and hypotheses, except in so far as these have been made the basis of some legislative action and financial expenditure. The reports of the late Dr. BRYDEN, for example, quite apart from the correctness or otherwise of any generalisations or hypotheses he may have put forward, were in his day models of the way in which most valuable information could be condensed and rendered in tabular form. Instead of vague guesses about diseases and deaths in relation to climate, age, length of service, and many other points, they gave a foothold of facts and figures which enabled

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the Government of India to calculate beforehand what they had to expect under given conditions and environments. This is, and must always be, one of the main objects of reports prepared for the information of official bureaux charged with the responsibility of practically forecasting the probable cost and results of political measures and departmental proposals. Nor are Government and other official reports invariably altogether devoid of scientific and literary interest. Some notice is generally taken of the prevailing view or doctrine of the day in relation to the facts and figures set forth. The report on the last census of India, to cite an example, was one of the most learned and interesting public documents that has ever been published. We have introduced these remarks with the object of pointing out that there is a point of view which is apt to be lost sight of—namely, the financial and administrative one—from which Blue-books must be regarded. We are far from saying that they are at any time a form of light literature, or that they are not capable of much improvement in the way of arrangement, clearness, and condensation, but they were not, it would seem, designed for the progress or elucidation of science or the diffusion of information regarding the results of modern scientific researches.

Turning, however, to the *précis* of the sanitary measures in India recently issued by the India Office we find that the health of the European army in India during 1893 was, on the whole, more satisfactory than in the previous year, save that there was a small increase in the daily sick-rate. The death-rate in an average strength of 70,091 was 12·61 per 1000; the loss by invaliding was 25 per 1000. Of the three armies in India that of Bengal was the most unhealthy. The chief causes of sickness in the whole European army were, as in the previous year, venereal diseases and ague. The chief cause of mortality was, as usual, enteric fever, which gave rise to 42 per cent. of the total deaths, or 5·29 per 1000 of the strength, as compared with a death-rate of only 0·04 per 1000 in the large native army. There were only sixteen admissions due to, and ten deaths from, cholera in the whole army in 1893. Among the general population cholera was also remarkably quiescent during 1893, the death-rate from this cause being the lowest recorded for some years, and showing a decrease of 507,188 on the deaths recorded from this disease in 1892. This fall was general almost all over India, and it forms a very striking and interesting fact. Under the head of "Fever" the deaths among the native population were enormous. The fevers were no doubt mainly of a malarious type; but there can be no doubt also that a very large number of deaths from other diseases are registered under this head. Brigade-Surgeon-Lieutenant-Colonel W. H. GREGG states that after an experience of twenty-two years spent in the study of the health of the people of Bengal he has no hesitation in saying that the crying want of the province is improved drainage, and that without it the death-rate from malarious fever will go on increasing. The Drainage Bill which is now before the Bengal Legislative Council he regards as being conceived in the truest and best interests of the people, and he adds a hope that nothing will prevent it from passing into law.

We may also add our hope that the Government of India will not lose sight of the scientific aspects of the problems that press for investigation in the medical history of a country, which affords an almost unique field for bacteriological researches. Mr. HANKIN'S labours in this respect have already been fruitful of results, and have given a precision to the various points that remain for further inquiry. We trust that bacteriological laboratories and scientific investigators will be multiplied in India and nothing be left undone to discover and remove the causes of such diseases as enteric fever, for example, which is so fatally prevalent among our young troops serving in that country. Recent views and researches have given a great impetus to the study of the causes of disease. Without a fairly accurate knowledge of what these really are it is scarcely necessary to say that our efforts to eradicate or diminish them must be futile. But all Government officials have probably a keen eye to practical results. The discovery of a specific bacillus as the essential cause of a disease is of great importance and scientific interest, but the matter does not end there, as if everything could be relegated to that discovery. The root of the matter lies in the practical outcome and application of such discoveries. What can an official do, and how is he to justify his action and the expenditure of public money to the men of culture and education, and of sound judgment perhaps, but with no special knowledge or technical training, with whom he has to deal? It is only fair to say that a great amount of work has been done and vast changes for the better have taken place in India, especially considering the poverty of the people and their aversion to all change or interference with their habits. Those who have had the best opportunities of knowing what the progress has been and the great difficulties which sanitary work in India has to contend against do not at all agree with the representations that have been lately put forward in this country; on the contrary, they regard them as unjust alike to the Indian Government and its medical services.

IT is not to be wondered at that the public have taken an intense interest in the issue of what has been called "the LANCHESTER case." At the South-Western Metropolitan Police-court on the 26th ult. Mr. SULLIVAN, a working man, who is described as a member of the Battersea Social Democratic Federation, asked Mr. CLUER, the magistrate, for his advice. He said that he was engaged to be married, and the ceremony was to have been performed that day, but the parents of the lady objected to the alliance because she did not intend to conform with the present marriage laws. In reply to the magistrate the applicant said that they were not to be married at a registry office, as they did not believe in the marriage laws as at present constituted; he added that he had been informed that the lady was forcibly removed to an asylum by her friends. The lady referred to is Miss EDITH LANCHESTER, who is twenty-four years of age and of good birth, position, and education. She is a well-known Socialist, and was a candidate at the recent School Board elections. It appears that she had been removed from the house where she was living upon a certificate of insanity granted by Dr. FIELDING BLANDFORD, who had been consulted by her father and brothers, who said they

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thought she was not in her right mind. According to Dr. BLANDFORD'S statement, Miss LANCHESTER declared in his presence that she would live with Mr. SULLIVAN, that it was right to do so, and, in answer to a question, said she would not marry him even if he would marry her. She could give no reason for this conduct beyond saying that marriage was immoral. Dr. BLANDFORD states that he came to the conclusion that Miss LANCHESTER was of unsound mind for the following reasons: "I was informed that there was insanity in her family, her grandmother and an uncle having been insane; that she had always been eccentric, and had lately taken up with Socialists of the most advanced order. She seemed quite unable to see that the step she was about to take meant utter ruin. If she had said that she contemplated suicide a certificate could have been granted without question. I considered I was equally justified in signing one when she expressed her determination to commit this social suicide. She had a monomania on the subject of marriage, and I believed that her brain had been turned by Socialist meetings and writings, and that she was quite unfit to take care of herself." After a few days' detention in a private asylum Miss LANCHESTER was released upon the order of the Lunacy Commissioners who visited her and had an interview with her. Her opinions on the marriage question (she says) have undergone no change by her detention in the asylum; if anything, she holds to them more firmly than before.

This dramatic story has in it much of the serio-comic element. The man who wished to be married without marriage, and the woman who would not be married if she could form strange figures in our everyday real life; and they serve to illustrate the lengths to which ill-advised "morality" doctrines of the Socialistic type would impel young persons who are in other ways harmless and well meaning. On the other hand, the story brings us face to face with the question whether the persons thus indoctrinated are to be prevented from carrying out in practice the resulting social *modes* of their "morality" by authoritative restraint in asylums on the plea of insanity. The curious part of it is that we are unable to point to a player who is doing the part of "villain" in this tragi-comedy; for we believe that all the performers carried out their respective *rôles* with absolute *bona fides*, from the girl herself at the commencement to the Lunacy Commissioners at the finish. This fact, to our mind, simplifies the task of criticism and enables us to look calmly and deliberately at the main circumstance in the case after the first fervour of a needless public excitement has passed away.

When a man of Dr. BLANDFORD'S high position, great experience, and professional and personal uprightness gives his certificate of insanity, that certificate can be called in question only under circumstances of a very exceptional character. Looking at this case in all its bearings, we venture to regard the circumstances as, in themselves, almost unique; and if, therefore, in what is practically a test case, we feel that we are unable to agree with Dr. BLANDFORD as regards the necessity for the certification and immediate removal of Miss LANCHESTER to an asylum, it is largely due to the fact that we have had more time to consider the bearings of the question; while, on the other hand, we are bound to admit that we have not had, as Dr. BLANDFORD has had, the important advantage of completing our knowledge of the case by an interview with the young lady and of hearing her speak for herself. If any right-minded young lady of our acquaintance who had been carefully and religiously brought up were suddenly to proclaim the doctrine that marriage is immoral and to insist upon living with her father's coachman, we should have some difficulty in certifying her to be of sound mind. Indeed, we should naturally regard her as having "gone off her head" and should look for other indications of insanity; and, finding these, we should probably have her medically cared for and looked after. But when this doctrine represents the teaching, however preposterous, of a society or group of individuals, however insignificant, and when its logical outcome in practice brings up the question of the person's sanity for decision, as in Miss LANCHESTER'S case, we hold that a certificate of insanity and consequent removal to an asylum are not warranted or justified either on the ground of public safety or with a view to the earliest proper treatment of the mental condition. The point which Dr. BLANDFORD makes as to certification being equally justified whether the suicide determined upon is actual or merely social is not conclusive, because we have a right to use more forcible and extreme measures to prevent a person attempting to commit suicide, which is a criminal and punishable act, than we have to prevent a woman living unmarried with a man, however suicidal socially it may be for her to do so. If at the first blush of a case of this sort we might have been disposed to think with Dr. BLANDFORD that, so far as Miss LANCHESTER was concerned, the end justified the means, further reflection and the actual result show that the course pursued was not the best one, for the lady's mental state has not been improved, nor is it likely that prolonged and indefinite detention in an asylum would have altered her convictions. The far-reaching importance and relationships of optional and obligatory morality in regard to our individual and social life could not be more strongly evidenced than in this case; and we feel that medical men have a very heavy responsibility upon their shoulders in guiding unstable and eccentric members of the community through life successfully and without mishap. This responsibility becomes intensified in proportion as deviations from the normal in conduct stretch away towards positive insanity.

THE REPORT OF THE COMMITTEE ON PRISONS.—The annual report of the Howard Association, 5, Bishopsgate Without, E.C., contains some not altogether favourable criticism of the Report of the Committee on Prisons, full notices of which appeared in THE LANCET of May 4th, 18th, 25th, and June 15th, 1895. The association is especially opposed to the committee's recommendation that the isolation system should to some extent be relaxed. The committee were of opinion that the tread-wheel and other deterrent influences should be abolished, but in the absence of these it becomes the more necessary that cellular separation should be rigorously maintained. The committee, moreover, recommended associated labour, of course with due regard to classification. It is asserted, however, by some authorities that any associated labour, though apparently profitable in a financial sense, invariably results in the less hardened offenders becoming hopelessly deteriorated.

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Annotations.

"Ne quid nimis."

FILTHY ICE-CREAMS.

THE report of THE LANCET Special Commission on the Sanitary Condition of the Italian Quarter, published nearly twenty years ago,[1] showed under what loathsome conditions ice-creams were made, and might have enabled any intelligent person to predict with certainty the exact species of organism which would be found probably in millions in a pennyworth of ice-cream on bacteriological examination. Is it, to take one example, at all surprising that the bacterium coli commune, the constant inhabitant of the human bowel and ever present in sewage matters, is found in ice-creams when we learn from our Commissioner's report that the mixture is made in filthy backyards or in dark cellars where it is exposed to foul emanations, gaseous, liquid, and solid, where the floor spaces oftentimes cannot be crossed except by boards, which in some instances sink suddenly into the sludge oozing from a defective drain beneath and splashing the malodorous mixture into any receptacle that may be near? We leave out the very questionable character of the materials employed in making ice-creams; they were bad enough, as our Commissioner saw, in some of the houses of the Italian quarter in London. Rotten eggs, bad flour, and repulsive-looking milk, all excellent pabula for the disease germ, are often, it is to be feared, the ingredients of the ice-cream compounder's recipe. The numbing effect of the ice upon the palate coupled with the sweetness of the sugar is an effectual disguise to the disagreeable taste of these ingredients. Bacteriological examinations of ice-creams have been made from time to time and more recently by Dr. Klein, whose report was discussed in THE LANCET of Oct. 13th, 1894. A fresh and a very exhaustive inquiry has just been completed by Dr. Macfadyen of the British Institute of Preventive Medicine and by Mr. Colwell, F.I.C., which should deal the death-blow to an evil unchecked and secure the prompt assistance of the Legislature to place these disease-breeding grounds under the control of the law. The average chemical composition of an ice-cream according to these investigators is as follows: total solids, 26·5 per cent.; fats, 4 per cent.; sugar, 12 per cent.; starch, 6 per cent.; albuminoids, 4 per cent.; and mineral matter, 0·5 per cent. Microscopical examination revealed the following delectables: bed bugs, bugs' legs, fleas, straw (bed?), human hair, cat's and dog's hairs, coal dust, woollen and linen fibre, tobacco, scales of epithelium, and muscular tissue. Could the list be more complete in absolute confirmation of our Commissioner's observations on the filthy environment under which they found ice-creams being made? ("The rooms contained as many double beds as could be got into them; there were no washstands, no basins, no towels—nothing but beds with very scanty, filthy, black bedding swarming with vermin."—*Vide* THE LANCET Commission, THE LANCET, Oct. 18th, 1879, page 590.) Shop samples were, as a rule, better as regards their bacterial contents than the street-barrow supplies, the maximum number of organisms found in the former being just over a million per cubic centimetre, and in the latter seven millions. The water used in making the creams teemed with micrococci, bacilli, and spirilla, one sample containing over five million bacteria in one cubic centimetre (about twenty-five drops). Putrefactive microbes were constant inhabitants, and so on *ad nauseam*. The results are too highly disgusting to need further comment, or to require at our hands any other remark on the urgent need for agitation for the immediate interference of public authority in this matter.

[1] THE LANCET, Oct. 18th, 1879, p. 590.

THE REMUNERATION OF MEDICAL WITNESSES AT ASSIZES AND SESSIONS.

IT will be remembered that early in the year a deputation from the United Kingdom Police Surgeons' Association waited upon Mr. Asquith, then Home Secretary. Their object was, *inter alia*, to show him how inadequately medical men were remunerated for their services as witnesses at all courts of law, but more especially when attending at assizes and sessions held in towns and cities distant from those in which they lived. It may also be remembered that Mr. Asquith courteously received the deputation, heard all they had to urge upon him with most exemplary patience, and conceded that the existing remuneration was not sufficient. But he frankly admitted that as his predecessors in office had declined to make any change, although their attention had been frequently called to the matter, he felt equally unwilling to burn his fingers. He suggested that in the case of police surgeons those bodies which appointed them should take the matter into consideration when fixing the salaries. This would still leave untouched the case of medical witnesses who are not police surgeons, and who comprise probably the larger proportion of medical witnesses. Moreover, the suggestion made by Mr. Asquith can hardly be regarded as either feasible or fair. Assize and sessions cases do not come with mathematical regularity, but in a very uncertain manner, and too often at the most inconvenient time. It would be impossible to fix such a salary as should fairly make up the deficiency of fees for attendance in such cases. Besides, it is obviously more just that the borough or county authorities who require the attendance of the medical witness should themselves remunerate him. It is the intention of the same Association to wait upon the present Home Secretary early in the ensuing year and to urge the importance of the matter upon him. The present autumn assizes will certainly furnish many cases illustrative of the hardship endured by medical witnesses, who so far from being remunerated are barely able to pay expenses while absent from home, and are not infrequently actually out of pocket. Full details of any such cases should be sent to the secretaries of the Association, Mr. F. W. Lowndes of Liverpool, and Mr. H. Culliford Hopkins of Bath.

SHOULD PATIENTS SMOKE?

DR. JANKAU, in an article in the *Zeitschrift für Krankenpflege*, tries to answer the question so often asked by patients and convalescents: "May I smoke, Doctor?" As a general rule there is no need to forbid the use of tobacco in surgical affections and during convalescence after operations, with the exception of those on the eyes, the abdomen, and the bladder. Does the use of tobacco play any part in the pathology of cancer of the lips and of the tongue? Nothing certain can be said on this point. It should be forbidden as a general rule in affections of the throat and of the pharynx, and with certain restrictions in catarrh of the naso-pharynx. The toxic action of tobacco must not be forgotten, and those suffering from internal affections should only be allowed to smoke with circumspection. Fortunately, however, most of the affections in which the use of tobacco is injurious are just those which cause the patient to dislike it; indeed, attention is often drawn to the fact that a man is unwell by his evincing a disinclination for smoking. Therefore, it is occasionally a good sign when the convalescent again feels a désire to smoke. Tobacco should be strictly forbidden in cases of peritonitis, typhlitis, and peri-typhlitis. According to Dr. Jankau gastric affections

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should not be considered an absolute counter-indication. Patients who suffer from organic affections of the heart cannot generally tolerate tobacco with any ease; nevertheless, a habitual smoker may be allowed two or three mild cigars daily. As to pulmonary affections, experiments have taught us the prophylactic and even bactericidal action of tobacco on the micro-organisms of the mouth and those of carbuncle, of typhoid fever, and pneumonia. The same effect of tobacco is seen in the case of the bacilli of tuberculosis. He also considers that it is a great mistake not to allow those in the first stage of phthisis to smoke; on the contrary, he would encourage them to do so even more than formerly. There are two other points in favour of tobacco—its disinfecting qualities on the mouth and the soothing effect exercised by it on the genital functions, which at the beginning of tuberculosis are very excited. Moreover, tobacco has a favourable influence on the central nervous system, both on account of its slightly narcotic action and by distracting the patient's thoughts from himself and his illness to his smoking and the associations which it brings with it. It is most important that phthisical patients should be prevented from continually thinking of themselves and their malady. Tobacco need not be absolutely forbidden even when hæmoptysis exists, if only it is but slight. With regard to functional affections of the nervous system, it would not be advisable absolutely to forbid smoking from the commencement of the disease. The medical attendant should, however, be careful to state plainly the number and quality of cigars which may be smoked, and to ascertain as far as is possible whether the patient adheres to the directions given. In nervous affections of the heart it is most important that the greatest care should be exercised, and this is also the case with nervous dyspepsia. In fact, the use of cigarettes, however mild, may in the latter lead to very serious consequences. In organic affections of the nervous system great caution is requisite. Permission to recommence smoking during convalescence should only be accorded after a thorough examination, and the patient should be advised to act with great caution in this matter. In all cases both the quality and quantity of tobacco should be rigorously supervised and its consumption only allowed to increase gradually. He is very sceptical with regard to the so-called hypnotic property of tobacco; according to him this is nothing but a theory. Finally, he doubts the justice of the view held by the majority of people with regard to the good effects of cigars after meals. He advises that a small quantity of milk should be swallowed from time to time while smoking. This is especially desirable for patients or for those who are convalescent.

STREET NOISES.

THE Balloon Society have come down from the empyrean to the consideration of a very earthly and singularly annoying subject. At a recent meeting Mr. Charles Fox read a paper and laid a draft Bill before the meeting. This Bill, which we earnestly hope will pass, provides for the registration of itinerant musicians when British subjects, and their licensing when foreigners. There are other clauses dealing with the distance from any building within which playing should be allowed. Street music is bad enough, but an even more aggravating disturbance is caused by the hordes of howling sellers of newspapers. The halfpenny papers are the chief offenders, and if the Anti-Gambling League want to win popularity let them back up Mr. Fox's Bill, and insert a clause to the effect that anyone who yells "winner" in the street ought to be instantly arrested and his papers confiscated. On Sunday morning the noise is even worse than on a week-day, and the nuisance in certain parts of London is intolerable. We have not the slightest objection to Sunday papers per se, but no one should be allowed to cry them. Other noises made by costermongers, the sellers of coal, who moan like the old drivers of the plague carts, bands and the idiots who try to blow post horns on omnibuses, the Salvation Army and other itinerant preachers, demonstrations in aid of hospitals, and street collectors of all kinds should be rigorously put down. It is all very well to cant about the blessings of freedom, the birthright of every Englishman to earn his own living, and so on, but the freedom to earn one's living by annoying other people ought not to be allowed for an instant. In this matter the much-abused Russia is far more free than England. The traveller who walks through a Russian town is never pestered by newsboys, street collectors, or other plagues. The City is a portion of the metropolis comparatively free from nuisances of this description, and we cannot see why the rest of London should not be made equally quiet. We have referred to the subject upon previous occasions,[1] and shall continue to protest upon every opportunity, until freedom to annoy their fellow citizens is taken away from those who have the power to do so.

POISONING BY CREOLIN.

IN No. 41 of the *Deutsche Medicinische Wochenschrift* Dr. Pinner, physician to the Jewish Hospital in Hamburg, reports the case of a woman sixty years of age who had attempted suicide by swallowing seventy-five grammes of creolin. It was at first not known which of the preparations called creolin had been taken, but the druggist from whom it was purchased subsequently stated that he only sold Pearson's. The woman was found unconscious in her room and was taken to the hospital two hours after the attempt on her life. She was then comatose, with livid face, moist skin, and blue lips; her right pupil was larger than the left, and there was no reflex action of the cornea. Her temperature was 36·6° C., her pulse 112 and regular, and her respiration deep and snoring, with tracheal râles. In the pharynx there was a large quantity of white mucus; the palatal arches and the posterior wall of the palate were covered by a grey superficial coating. There was a strong smell of creolin in the breath. By the stomach-pump 300 grammes of a thick grey fluid mixed with mucus were withdrawn, and pressure on the pylorus caused thick brown drops of pure creolin to come through the tube. The first urine (150 grammes) was of a light-yellow colour, without albumin, sugar, or indican; the bromine-water test showed traces of tar acid in it. Microscopical examination revealed nothing abnormal. Milk given through an œsophageal tube was immediately vomited, but was eventually retained. An hour after admission into the hospital there were well-marked symptoms of shock, for which injections of ether were successfully made. There was also copious diarrhœa, and the stools had an odour of creolin. Some hours later the patient regained consciousness and afterwards became better. She complained of severe pain in the epigastric region and in the pharynx. The urine (80 grammes) was now of a dark-green colour, had an odour of creolin, and contained traces of albumin; by the tribromophenol reaction it was estimated that 7·5 c.c. of tar substances were present in 100 c.c. There was no hæmoglobinuria, and only a small quantity of leucocytes and red corpuscles and some casts. The patient slept very well during the first night, and on the following day there was an obvious improvement, the pulse, temperature, and respiration being normal, although she still complained of headache, want of appetite, and hoarseness, and an erosion on the epiglottis and the arytenoid

[1] THE LANCET, May 4th, June 8th, and Aug. 24th, 1895.

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cartilage was observed with the laryngoscope. On the fourth day there was more diarrhœa, the stools still smelling of tar products. The urine continued for a week to be of a green colour and contained ½ per cent. of albumin, with much indican. After four weeks the patient was able to leave the hospital in perfect health and did not show any trace of injury from the poisoning. Dr. Pinner states that this is the seventh case of creolin poisoning described in medical literature, and that it was remarkable for the extremely severe symptoms which appeared almost immediately after the poison had been swallowed. Creolin, he says, used to be considered harmless because it could not be absorbed by the stomach, but in the above case the gastric juice very soon transmuted the creolin into a form which very quickly passed into the circulation and appeared after two hours in the urine. It was very remarkable that the urine of the first four days, even when kept in open glasses, showed neither any growth of bacteria nor any putrefaction, and the normal development of bacteria after exposure to the atmosphere occurred only in the urine passed on and after the fifth day. Dr. Pinner therefore suggests that the internal use of creolin may, perhaps, be useful in bacterial diseases of the genito-urinary system such as pyonephrosis, cystitis, &c. As it also checked fermentation in the bowels, perhaps intestinal derangements attended by extreme fermentation may be successfully treated by creolin. Notwithstanding the alarming symptoms of the first few hours, the patient very soon recovered, the creolin being obviously removed by the kidneys, which, though disordered for a short time, did not sustain any permanent injury. Creolin, therefore, according to Dr. Pinner, must be regarded as a comparatively innocuous substance. Another case of alleged creolin poisoning is reported by Dr. Gras of Vilshofen in the *Blätter für Gerichtliche Medicin*. A tuberculous woman thirty-five years of age was treated on the sixth day after confinement with vaginal irrigations of 3 per cent. creolin solution on account of fetid lochia. After the third irrigation the patient suddenly became collapsed and lost consciousness, the extremities being cold, the pulse feeble, and the respiration shallow; but injections of camphor and other restoratives were very soon followed by recovery, and no traces of carbolic acid were found in the urine. It seems rather doubtful whether these symptoms were due to creolin poisoning or were merely the effects of shock occurring in a woman weakened by childbirth and tuberculosis. There were no positive toxic symptoms, and the quick recovery makes it probable that the seizure was not really due to poisoning.

TRADES AND THE WEATHER.

EVERYONE will remember *Mr. Punch's* picture of the depressed sandbag vendor on a warm day. "No trade?" "No. Lord send us a real crool east wind, that's wot we wants." Another trade, somewhat more aristocratic than the one we have referred to, insomuch as it trenches upon the medical profession, is the cough-drop trade, and it, too, is dependent upon weather, being "quiet" when fine and "booming" in a "Kaffir"-like manner (we like the strictly commercial style) when good foggy weather comes. Such were the arguments put forward by a Mr. Hemming summoned for not paying his gas bill; the weather had been fine, trade had been bad, consequently he could not pay. The cough-drop of the summer, it appears, gives place to the "paregoric tablet" of the winter, cough-drop apparently being too familiar an expression to impress the average buyer. Among a certain class it is used as a term of affection or opprobrium, we are not certain which—e.g., "the Battersea cough-drop," as a certain M.P. was called the other day. Paregoric tablets, we presume, have a small quantity of opium in them, and it is to be hoped that mothers will not give babies too many of them, for the corner of the handkerchief through which the delicacy is sucked, though it keeps out the dust which has settled on the tablet from the street, will not keep out the opium.

PROSECUTION OF A MIDWIFE.

WE learn that the Superintendent Registrar of Merthyr Tydfil recently summoned a midwife for making a false statement as to the birth of a child. She had declared that it was stillborn, but medical and other witnesses proved that it had lived for some hours and that death resulted from suffocation. She was found guilty and fined £2 10*s*., with the alternative of a month's imprisonment. In the course of the proceedings it was mentioned that the coroner had informed the Registrar-General that, in his opinion, offences of this description were not uncommon in the district. An almost precisely similar case which occurred in Battersea was recorded in THE LANCET of Dec. 1st and Dec. 8th, 1894, and the prosecution initiated by the coroner resulted in the infliction of a fine. It is satisfactory to find that the authorities are prompt to use all the means in their power for the repression of this offence, which is so full of peril for infant life, and the commission of which is so much facilitated by the non-registration of still-births.

PARACENTESIS OF THE SPINAL THECA.

PROFESSOR QUINCKE of Kiel was the first to advocate and practise puncture of the spinal sheath in cases of cerebro-spinal meningitis, whether tuberculous in origin or not. This simple expedient has, however, not been much practised elsewhere, and in many cases has not been followed by permanent results. It is obvious that if it is to be of use in tuberculous meningitis the case must be one in which no other region or organ is the seat of miliary tubercle, and that may explain the fact of failure to ensure recovery even after a marked improvement as regards the cerebral symptoms, such as disappearance of coma, has followed the lumbar puncture and drainage. In a paper read before the recent meeting of the Association of German Naturalists and Medical Men (*vide* THE LANCET, Oct. 19th, 1895) Professor Quincke laid stress on its value in diagnosis. He affixes a manometer to the trocar and thus measures the degree of pressure within the canal. Failure to secure a flow of fluid is to be attributed to imperfect performance of the puncture—e.g., the passage of the needle between the nerve roots outside the sheath, or the presence of thick pus which will not flow through a too fine needle. He is convinced of the therapeutic value of the plan, especially in rapidly developing forms of acute serous and sero-purulent meningitis. Professor Quincke announced that one of his assistants was preparing an account of the experiences of his clinic on the method for publication in the *Archiv für Klinische Medicin*. Professor von Ziemssen said that there has been ample confirmation of the reports as to the diagnostic and therapeutic value of the lumbar puncture since its introduction by Professor Quincke. He himself had injected a weak solution of iodine into the canal by this means. He did not use a trocar, but a simple Dieulafoy's needle. Sometimes the patient, shrinking at the moment of puncture, approximated the vertebræ and thus hindered the entrance of the needle, and he thought that anæsthetics should be given in the case of adults. No reaction followed, and in some cases examined after death no trace of the puncture could be found. In acute cerebro-spinal meningitis, which occurred sporadically in Munich, he had seen good result, as well as in serous spinal meningitis. It was surprising that in uræmia, in spite of the high arterial pressure, only

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a few drops of fluid are to be found in the cerebro-spinal sac. Dr. Lenhartz had done lumbar puncture in fifteen cases, of which three were cerebro-spinal meningitis. In several cases there was no result, although the needle undoubtedly entered the vertebral canal. In one case, ending fatally after two days, 80 c.cm. of slightly sanguineous fluid escaped. The puncture was without any effect in this case on consciousness, pulse-rate, &c. Only once had he found tubercle bacilli in the fluid, and in another case the tuberculous nature was proved by inoculation experiments. In one instance, after the escape of 100 c.cm., the patient grew worse. Professor von Ziemssen said that in severe cases the patients will always die. Exceptions cannot disprove the rule. In many cases the favourable course was certainly to be ascribed to the puncture.

CHOLERAIC AND DIARRHŒAL FATALITY IN GRIMSBY.

SOME time back the corporation of Grimsby complained somewhat bitterly of announcements of deaths in connexion with cholera in their borough. We are well aware of the fact that the term cholera as used by the Registrar-General in his quarterly returns does not necessarily imply Asiatic cholera; but when we look at the deaths which occurred in the Grimsby sub-district—which, in addition to Great Grimsby, includes Cleethorpes and some rural area—we find enough to justify the gravest apprehension as to what has been going on there. In the quarter ending Sept. 30th last 124 deaths were registered from diarrhœa, 22 from "cholera," and 10 from "fever." These are the headings of the Registrar-General's return. They indicate a very grave loss of life and call for some public explanation as to what this serious fatality was due to, and also whether the causes of it were exceptional and temporary or whether they are permanent.

PRACTICAL DISINFECTION OF ROOMS.

THE frequency with which second and third cases of scarlet fever appear in houses that have been disinfected by the inspectors of sanitary authorities casts grave doubts on the efficiency of the procedure usually adopted, despite its official sanction. Stripping the walls, lime-washing walls and ceilings, and scrubbing wood-work and floor-boards with soap and water are indeed effectual enough, and to these when thoroughly done we are disposed to ascribe any successful results rather than to the more technical process of so-called disinfection by sulphur fumes, which is little better than a superstitious rite or incantation shorn of the religious character it had in the mind of Ulysses when he "fumigated" the halls desecrated by the massacre of his wife's suitors after removing the corpses and washing away the blood with a promptness that precluded all thought of other than moral pollution. But in the light of bacteriological experiments dry sulphurous acid fumes, whether generated by burning sulphur or carbonic sulphide, or, as has of late become the fashion, by opening cylinders of the compressed gas, are for all practical purposes useless. The gas would act as a fairly powerful germicide on articles or fabrics previously saturated with water, but its bleaching action precludes its employment in this way with coloured materials, carpets, or curtains, and it is as what is called an "aerial disinfectant" that it holds its ground in popular esteem. But aerial disinfection is an absurdity; no one wants to purify the foul air, which is easily enough removed by simple ventilation. In disinfecting a room the true aim is to kill the germs contained in the dust on ledges or in the crevices between the boards, or adhering to the walls and other surfaces, and the dry gas is powerless for this, which is best attained by a sublimate solution of the strength of 1 part in 1000, or by lime (not white) washing, provided the lime be fresh burnt and caustic; the carbonate or chalk used in white washing under the name of whiting, and into which lime is converted by long exposure to the air, being inert. The series of experiments on the infection and disinfection by various means of wall papers, distempers, and other wall surfaces conducted by Dr. Cronberg, under the direction of the late Professor Uffelmann at Rostock, showed that subsequent scrapings were invariably and almost instantaneously sterilised by washing or spraying with the sublimate solution and equally so by lime-wash after the lapse of twelve to twenty-four hours. The danger of corrosive sublimate is, we believe, exaggerated, for the smallest fatal dose for an adult being probably three to five grains—equal to at least a quarter of a pint of the solution—accidental poisoning with the solution is practically not probable, and as a further safeguard it might be coloured with indigo or "laundry blue." Carbolic acid, which is sold without restraint and is in universal use, is more dangerous on this account, and is, indeed, frequently employed with suicidal intent and with fatal effects. In France, Germany, and Italy sublimate has nearly superseded all other disinfectants, and its neglect in this country is inexplicable. As to carpets, curtains, bedding, and clothing, all that is capable of being washed should be plunged in a copper of boiling water for a quarter of an hour and such articles as would be spoiled by this treatment should be disinfected by steam.

COLD BATH TREATMENT OF TYPHOID FEVER.

THE treatment of typhoid fever by the cold bath method has been written on over and over again. It has been proved to be a most valuable one in many cases, and consequently just comments and further record of cases should be duly welcomed and considered. In the *Philadelphia Medical News* of Oct. 12th, 1895, a paper on the subject appears by Dr. Osler, giving his five years' experience with the cold bath treatment of typhoid fever. He states that during the first year of the hospital service typhoid fever was treated symptomatically. The number of severe cases admitted was unusually large, and there were eight deaths among thirty-three patients—a percentage of 24·2. For the past five years ending May 15th, 1895, systematic hydro-therapy had been used—the method of Brand, with certain minor modifications. Each patient received a tub bath of twenty minutes at 70° F. every third hour when the rectal temperature was at or above 102·5°. Frictions were applied in the bath, and a warm drink or stimulant given afterwards. The following are the general statistics given by Dr. Osler:—Cases admitted during the six years ending May 15th, 1895, 389; number of deaths, 34; percentage of mortality, 8·7. Cases admitted before the introduction of hydro-therapy, 33; number of deaths, 8; percentage of mortality, 24·2. Cases admitted since the introduction of hydro-therapy, 356; number of deaths, 26; percentage of mortality, 7·3. Number of cases bathed, 299; number of deaths among the bathed cases, 20; percentage of mortality in the bathed cases, 6·6. The percentage 7·3 represents the total mortality during the past five years, but as it does not represent the true mortality of the cases treated by hydro-therapy the figures must undergo a further analysis. Many circumstances interfere with the systematic carrying out of the plan which Dr. Osler pretty fully criticises. We have not space to give more than the smallest sketch of his remarks, but the original paper will well repay perusal. In the first place, a number of cases are admitted in the second or third week with a falling temperature; such cases are not bathed. In the very mild cases, also, seen more frequently in private than in hospital service, the baths are unnecessary. In the second place, some patients are admitted late in the disease and are too ill to be bathed. Thirdly, there is a group of cases

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which present serious complications—hæmorrhage, signs of perforation, very intense bronchitis, pneumonia, pleurisy, or intense meteorism, with severe diarrhœa. Fourthly, there are cases which are not bathed at first because the diagnosis seems doubtful. Two of the fatal cases fell into this group. Two advantages are claimed for hydro-therapy in typhoid fever—a mitigation of the general symptoms of the disease and a reduction in the mortality. From his experience Dr. Osler is of opinion that these claims are well based. He maintains that the cold bath treatment, rigidly enforced, appears to save from six to eight in each hundred patients suffering from typhoid fever admitted to the care of the hospital physician.

MEDICAL EMERGENCIES IN THE NIGHT.

How long will it be before society makes provision for the night emergencies of illness as it does for those of fire? At present it throws all the onus on the medical profession, and medical men are expected to turn out at any ring of the bell, perhaps when themselves ill or exhausted after a hard and ill-paid day's work. The *Bradford Observer* publishes the particulars of such a case. A labourer attacked in the night with hæmatemesis sent for two or three medical men, who exercised their right of refusal. At last his messenger met a policeman, who sent him to the relieving officer, who gave him an order to Mr. White. When Mr. White's assistant arrived about an hour and a half later—he would have been there sooner but for some misreading of the address—the patient was dead. The jury was satisfied with the assistant's (Mr. Burnett's) explanation, and returned a verdict of "Death from natural causes." The question of emergencies and the provision for them remains. It is unreasonable to throw the blame of non-attendance on medical men. *Semper paratus* is an excellent motto for the profession, and one generally acted on, but it implies some obligation on the part of society. And the reckless carelessness of society in the matter is to blame for instances in which the usual benevolence of the profession seems to fail.

LEPROSY IN NEW SOUTH WALES.

THE total number of persons admitted to the New South Wales leper lazaret at Little Bay from April 19th, 1883, to Dec. 31st, 1893, was fifty, six of whom were females, all of European descent, five being natives of New South Wales and one a native of New Zealand. Of the forty-four males nine were natives of New South Wales, all of European descent, and one was English, the remainder being made up of twenty-nine Chinese, one native of India, one West Indian, one Javanese, and two South Sea Islanders. During that period there were thirteen deaths, and the West Indian patient was discharged, his sores having healed and there being no law warranting his detention. On Jan. 1st, 1894, there were, therefore, thirty-six persons at the lazaret. During 1894 twelve persons were reported in accordance with the Leprosy Act as suspected lepers, but on investigation seven were found to be suffering from some other disease, and five who suffered from leprosy were placed in the lazaret; of these one was a native of New South Wales, of European descent, one a native of Queensland, of European descent, one a native of Saxony, one of New Caledonia, and one of India. The number remaining on Dec. 31st, 1894, was forty, one native of New South Wales having died during the year. The number of persons segregated during 1894 is considerably less than during any year since the notification of leprosy became compulsory; the comparatively numerous admissions during 1891 and 1892 were no doubt owing to the newly created necessity of notifying cases. No application has been made to the Board of Health for the special isolation of any patient outside the lazaret, and at the present time all known cases of leprosy are confined there. The accounts contain entries of £148 for drugs and £168 for tobacco, cigars, and opium. The attendants and nurses at the lazaret are under the direct supervision of the medical superintendent and the matron of the Coast Hospital. Elaborate descriptions of the last five cases, written by Dr. J. Ashburton Thompson, have been printed by the Board of Health Office, 127, Macquarie-street, Sydney, and every facility is given to members of the medical profession to visit the lazaret for the purpose of studying the disease.

THE CASE OF SURGEON LEA.

WE have referred to this case upon several previous occasions.[1] We understand that several members of Parliament have interested themselves in the question and that the subject will, doubtless, be referred to on the reassembling of Parliament. We notice that the *Times* of Nov. 6th in its Naval and Military Intelligence contains the following announcement: "Captain W. L. H. Browne to the *Ringarooma*," and we shall be curious to see whether this has any bearing or not on the matter in question.

"SUMMER AND WINTER WITHIN A MONTH."

OUR chief rainfall authority, Mr. G. J. Symons, F.R.S., writing to our contemporary the *Times*, gives under the above heading some interesting figures with regard to the temperatures in London during the last seven days of September and the corresponding dates of October. The mean of the maxima and minima in September from the 24th to the 30th was 65·0°, 1·9° warmer than the average warmest week during a long series of years. The mean of the maxima and minima in October during the period referred to was 35·9°; the average temperature of the coldest week, also during a long period of years, is 37·9°, thus making the week ending Oct. 30th, 1895, 2·0° colder than the average coldest week in the year. The occurrence of second fruit crops and spring blossoms in winter comes upon us now with little or no surprise, but the above facts are little less than sensational.

THE GASEOUS PRODUCTS OF CERTAIN PYRENEAN WATERS.

IN some of the sulphurous springs in the Pyrenees the water is remarkable for producing very minute gaseous bubbles soon after it is drawn, the ebullition in a few instances continuing for hours. Many of these springs, which are called *azoades* by the Spaniards because they yield nitrogen, are to be found on the southern slopes of the range, at Panticosa, and elsewhere; but, as is well known, there are also several on the French side, the most celebrated being those of Salut de Bigorre, Cauterets, and La Rallière. During a sojourn at Cauterets MM. Bouchard and Troost occupied their leisure in analysing these gases, and the following are the conclusions which they communicated to the Académie des Sciences: "We are not absolutely decided as to the origin of all the gases contained in these mineral waters, and it is possible that those with which we occupied ourselves may have owed their origin to the atmospheric air drawn down into the depths by the surface water. The latter, after undergoing alkalinisation in a sulphurous medium, would rise again to the upper stratum, deprived necessarily of oxygen and carbonic acid, and containing only nitrogen and argon. It would seem, nevertheless, even at this stage of the investigation, that although a portion of the argon, and perhaps also of the helion, may be derived from atmospheric sources, the presence of both is likewise due in part to some subterranean action. In one of

[1] THE LANCET, June 15th, 22nd, and 29th, and Aug. 17th, 1895.

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the springs which we examined both these gases were found coexistent, whereas in another helion alone was revealed, while in a third there was evidence of something in addition to the helion, which was certainly not argon." In this connexion it would be interesting to note whether any correspondence exists between the medicinal properties of the various Pyrenean waters and the nature of the gases emanating from them, more especially with reference to argon and helion. The entire subject is well worthy of renewed investigation, when no doubt many other important points will receive elucidation.

METROPOLITAN HOSPITAL SUNDAY FUND: COUNCIL MEETING.

A SPECIAL MEETING of the council of the Hospital Sunday Fund was held on Thursday last, Nov. 7th, under the presidency of Sir Joseph Renals, Bart., the retiring Lord Mayor, to receive the report of the Distribution Committee, who at their meeting last week announced that the sum of over £61,000 would be available this year for distribution among the various hospitals. At the same time it was hinted that a still further sum would probably be forthcoming before the financial year of the Fund closed. This means that participating institutions will receive a further grant equal in amount to three-eighths of the grant made in August last. The receipts from the churches this year exceed those of previous years, but it must be borne in mind that it is to the munificence of Mr. Barnato and his friends that the increase is in a great measure due. The Lord Mayor, too, has worked most assiduously for the Fund, and as he now gives place to his successor as President of the Fund we take the opportunity of tendering him our most hearty thanks, not only for his kindness in placing the rooms of the Mansion House at the disposal of the Fund, but for his personal labours in presiding at the meetings and his ever-ready help and interest in all that concerned the Fund. A full report of the proceedings will appear in our next issue.

THE ADMINISTRATION OF OATHS IN COURTS OF LAW.

OUR remarks in THE LANCET of Oct. 26th on the above subject have this week received an endorsement in a Sussex police-court which it is hard to look upon as other than a very unwieldy and ridiculous joke. The Rector of Graffham and East Lavington, the Rev. Rowley Lascelles, was concerned as a witness in a trespass case which was heard recently before the Petworth magistrates, Major Sir Walter G. Barttelot, Bart., being in the chair. Mr. Lascelles asked to be sworn in the Scotch fashion, whereupon the following colloquy ensued:—

The Chairman: I should like to know, Mr. Lascelles, why you, being a clergyman of the Church of England, object to kiss the Book?
The Rev. R. Lascelles: I have a strong objection to kissing the Book in these days of infectious diseases. I should be happy to kiss it if I may turn it inside out.

This was done, and Mr. Lascelles having been sworn in the usual fashion the chairman went out of his way to remark in an undertone: "He is afraid of catching an infectious disease from the Bible." Would Sir Walter Barttelot argue, then, that scarlet fever could not be caught at church, and that while a patient's letters and novels would need disinfecting, contagion could not be conveyed within the pages of his Bible or Prayer Book? Even more to be deprecated was the speech of a later witness, who, when he was sworn, piously remarked: "Although I am only a layman I am not afraid of catching infectious diseases from the word of God." It is impossible to believe that these phrases were the result of any thought whatever. If certain combinations of words and letters are safeguards against contagion, let us drop isolation and return to the use of phylacteries; let us inscribe the walls of our small-pox hospitals with pious phrases and build Board schools next door, for absurdity such as this would be our justification.

CANCER CURERS IN SWANSEA.

A SWANSEA correspondent writes that Mr. E. Davies, the medical officer of health, and Messrs. Rawlings and Brook attended last week at the police-court and complained to the stipendiary magistrate that a number of persons in Swansea profess to be able to cure cancer, and although not possessed of any medical knowledge or qualifications, nevertheless give advice to patients suffering from this disease. Cases were adduced in proof of these statements, and a summons was applied for against one of these pretenders, a woman who had treated a patient improperly. The stipendiary magistrate regretted the facts, but said that he was unable to take any action in the matter, and thought that some amending of the Medical Acts was required. Cancer patients in their emergency lend a willing ear to the specious promises of ignorant or interested advisers. Legislative enactments against the abuses connected with unqualified practice would no doubt be desirable, but in the present state of public opinion there is little hope of their being seriously considered, and such social anomalies as the cancer curers in Swansea, provided that they make no claim to the possession of a diploma, usually incur no penalty or reproach beyond the occasional censure of a coroner's jury.

THE TYNE PORT AND THEIR MEDICAL OFFICER.

THE announcement made in our columns on Oct. 26th (p. 1074) that Dr. Henry Armstrong had resigned the post of medical officer of health to the Tyne port sanitary authority will have been received with regret; but it is impossible to regard his action otherwise than justified under the circumstances. The trivial attempt made a short time ago to identify him personally with a case of small-pox that occurred in one of the Tyneside districts showed that on his board there were some at least who failed altogether to appreciate the high professional standing which Dr. Armstrong has acquired in matters relating to public health during a series of years which he has devoted to that subject. And no one could have been surprised, when application was made to the Local Government Board to inquire into the matter, to find that the central authority informed the port authority, after fully considering the matter, that they saw nothing whatever to inquire into. This rebuff was followed by a motion that was desirable that the port medical officer should live near the mouth of the river, and Dr. Armstrong at once wrote a dignified letter to the authority stating that he could conceive that the alteration thus suggested might have certain advantages, and therefore, in order that the authority might feel perfectly free to act as they saw best, he placed his resignation in their hands. Now the port authority want to get another officer for £150 a year—that is, we presume, someone who will either work up a respectable means of living by taking other work elsewhere, or someone already busily engaged in private practice in the neighbourhood. But they evidently see that to lose the services of an official who has devoted his whole time to his public duties will be a blunder, and hence they want to retain Dr. Armstrong as a consulting officer. Whether he will ever accept any such divided responsibility towards a body which has acted as the Tyne port authority

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has remains to be seen. One thing is certain, the notoriety for successful action which attaches to this port is due to the notoriety for ability and administrative capacity which in this country—and, indeed, in Europe and America—has been acquired by Dr. Armstrong as one of the leaders and pioneers in the work of port sanitation. It was his individuality that gave such confidence during the cholera importations of 1893-95; and his loss will be a loss to a larger circle than the authorities whose districts border on the Tyne.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL SERVICES IN INDIA.

WE have been favoured with a copy of a resolution and protest from the South Indian Branch of the British Medical Association, relative to the proceedings and action taken by the Public Health Section of the association at its late meeting in London, for publication in THE LANCET. The resolution has reference to the subject of Indian sanitation, and was adopted at a special meeting held at Madras on Sept. 20th, and has been forwarded to this country with the view of its being laid before the council of the association. We have already dealt with this subject generally in an Annotation in THE LANCET of Oct. 12th last in connexion with the communications which we had received thereon from various other sources. The matter having now been referred to the council of the British Medical Association, it does not seem necessary to publish the documents *in extenso* in our pages. Briefly described, the resolution with its accompanying protest refers in strong terms to the alleged inaccurate, misleading, and unjust nature of the statements that have been put forward, and upon the unmerited discredit which such statements are calculated to bring upon a large body of the profession in India and upon the Government which the medical officers in both the civil and military departments have the honour to serve. It is contended that an accurate knowledge of all the facts regarding sanitary progress in India, and of the work done there during the past thirty years by members of the medical services and of the medical profession generally, would lead to a very different conclusion from that which seems to have been formed.

AFTER full consideration it has been determined to hold the meeting of the General Medical Council at the usual time. Members have been summoned to meet on Tuesday, Nov. 26th, at 2 P.M. The meeting will be held at the Royal College of Physicians of London. This is not the first time the Council has been indebted to the kindness of the College. We cannot but think that the President is acting wisely in holding the usual meeting, even if at some little inconvenience to the members and officials. The powers of the Council are too grave for a few months' delay to make no difference. The meetings of committees will be held as usual at the premises in Oxford-street.

WE beg to call the attention of our readers to Sir William Broadbent's letter (p. 1187) urging upon the profession the claims of the British Medical Benevolent Fund. The work which the Fund does is admirable, and the distress which it relieves so genuine and so bitter, that we feel confident that the honorary treasurer's appeal will meet with cordial replies.

PROFESSOR H. MARSHALL WARD, F.R.S., the well-known cryptogamic and physiological botanist and Professor of Botany in the Royal Indian Engineering College, Cooper's Hill, has been elected Professor of Botany in the University of Cambridge, in the room of the late Professor Babington.

THE BATTLE OF THE CLUBS.

(Continued from p. 1137.)

THE FORMATION OF A PROVIDENT MEDICAL ASSOCIATION AT BEXHILL-ON-SEA.

WE congratulate the medical men of this seaside town on the formation of a Provident Medical Association on the lines of the combination whose success is already assured at the neighbouring town of Eastbourne. The following are the rules and constitution of the Bexhill Provident Medical Association formed in October, 1895:—

RULES AND CONSTITUTION.

1. *Object.*

This Association is a self-supporting society to enable those who cannot pay for medical attendance at the usual charges to secure for themselves and their families the advantage of medical attendance, advice, and medicine during illness.

2. *Management.*

It shall be managed by a general committee, which shall consist of the whole of the medical men in Bexhill who shall sign the undertaking. The general committee shall appoint a chairman and honorary secretary annually. The whole of the business of the Association shall be managed by the general committee, which shall hold an annual meeting and, in addition, shall meet as often as the business of the Association demands. Four members shall form a quorum.

3 *Undertaking.*

Any duly qualified and registered practitioner residing in Bexhill (not practising as a homœopath) may become a member of the staff subject only to his appointment being approved by the committee. All members of the staff must also sign an undertaking—1. Not to conduct clubs of their own at all (other than friendly societies registered under the Act) unless it be at rates the same or higher than those of the Bexhill Provident Medical Association. 2. To have no professional intercourse whatever with any medical man who associates himself with any of the companies known as medical aid societies or with similar institutions so long as the methods adopted by these societies include (*a*) canvassing for members in the interests of individual practitioners, (*b*) the virtual sweating of their medical officers by the inadequate remuneration offered for the work done.

4. *Membership.*

Artisans and their families, and others who may be considered suitable by the committee shall be eligible for membership, provided they live within two miles and a half from the town hall. No person can become a member who is in receipt of parochial relief. All applicants must be in good health on joining, and must first be passed as such by one of the medical officers. If persons in indifferent health are to be admitted at all it can only be at special rates determined by the committee. Each medical officer shall receive the subscriptions from the members on his list, and render to the monthly meeting a list of defaulters and new members.

5. *Wage Limit.*

Although a most desirable matter, it is very difficult in practice to adopt a hard-and-fast "wage limit," and therefore it would appear that the best way of preventing abuse of the Association by persons who are too comfortably off will be by leaving absolute discretion in the hands of the committee to consider the case of every applicant on its own merit. But, as a general rule, it may be laid down that in the case of families they shall be eligible, if the combined incomes of the parents do not exceed 30*s.* a week, at the rate of 2*d.* a week each adult—*i.e.*, over fourteen years of age—and 1*d.* a week for each child. It will be expected that the whole of the family shall be entered on the lists (exception being made in the case of any members who may be already members of a registered friendly society), but in large families not more than six children shall be charged for. Any person who has been a member in childhood can, on completing his or her fourteenth year, continue as an adult member by paying the additional penny a week.

No domestic servant can be admitted as a *joining* member, but a member who enters service does not thereby forfeit the privileges of membership. When in service servants can only be attended at the surgery. Single persons shall pay at the rate of 2*d.* a week.

If at any time a member is discovered to be in receipt of an income such as renders him or her, in the opinion of the committee, unsuitable for membership, it shall be in the power of the committee to remove his or her name from the books of the Association on giving such member a quarter's notice. But it shall always be open to such persons to first explain their circumstances to the committee if they so wish. Each member or family shall have a card of membership bearing their names and address; and on the back of this card receipts of all payments shall be made by the doctor on whose list the members are. To cover the cost of printing and material a charge of 2*d.* will be made for each card.

All the subscriptions are to be paid monthly or quarterly, and in advance, to the member's medical attendant. No member more than a month in arrears will be entitled to the benefits of the Association. If any member be more than two months in arrears his or her name shall be erased from the books. No person who, having been erased from the books, desires readmission shall be received again as a member unless he pay up all arrears due by him or such part of the same as the committee may require.

Members on joining must select their own doctor, but cannot change him for another without first informing him verbally or in writing that it is their wish to place themselves under another member of the staff; and they must always give a quarter's notice of any such change.

Each of the medical staff shall have the right to refuse to receive on his list any member.

In the event of a married member expecting to be confined, it will

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be expected that she shall employ the doctor on whose list she is to attend her. If she does not, she will forfeit her right to his professional services for a period of six weeks from the date of her confinement. The fee for attendance at a confinement is 15s, and must be prepaid to the doctor in full one month prior to the confinement. Attendance at a miscarriage or premature confinement will be at the same rate. The fee for vaccination shall be 2s. 6d. Fractures, dislocations, and major surgical operations will be charged for at the following rates:—

Nature of Case.	Charge. £ s. d.
Compound fracture of thigh or leg ... ... Amputation of leg, arm, foot, or hand ... ... Strangulated hernia	5 0 0
Fracture of lower jaw ... ... Simple fracture of thigh ... ... Simple dislocation of hip ... ... Fracture of patella	3 0 0
Fracture of leg, tarsus, metatarsus, or toe ... ... Amputation of finger or toe ... ... Dislocation or fracture of arm or forearm ... ... Dislocation of knee or ankle ... ... Fracture of carpus, metacarpus, fingers, or thumbs ... Fracture of clavicle, scapula, olecranon, or ribs	1 0 0

A minimum fee of 10s. 6d. shall be fixed for consultations or assistance at confinements.

All the above rules and any others they may subsequently adopt the committee shall have in their power to alter, provided there is a two-thirds majority of the committee in favour of the proposed change, and provided also that every member of the committee shall have had twenty-eight days' notice of the meeting and have been informed at the same time of the terms of the resolution to be laid before the meeting embodying the proposed alteration.

We are gratified to learn that the formation of the association had its origin in the articles published in THE LANCET. For it is honourable and amicable coöperation of this kind that will alone protect the members of the profession against the tactics of some of the numerous sick aid institutions whose methods include—in the words of the above memorandum—(*a*) canvassing for members in the interests of individual practitioners, and (*b*) the virtual sweating of their medical officers by the indequate remuneration for the work done. The rules of the Bexhill Provident Medical Association strike us as being good and comprehensive, and we recommend them to the consideration of medical men in other quarters where a stand against organised oppression is felt to be necessary. The committee of management consists entirely of the medical men who do the work, and no place is found upon it for the sort of philanthropist whose name too frequently figures on the bills of charitable institutions where the only thing to be given away is the medical man's time and labour. The unanimity of the local practitioners in the promotion of such associations is, of course, the essence of their success. Indeed, it makes the success inevitable; and that this has been already recognised at Bexhill is proved by the fact that an emissary from one of the sick-aid institutions has been to the town with a view of persuading some one of the medical men to default. We are happy to learn that he was quite unsuccessful. The poor of Bexhill who are unable to pay for medical attendances at the usual charges will be able to secure for themselves direct from their medical men adequate attendance at rates which will allow of the proper discharge of the duties undertaken; while their just claim to such consideration will not be vitiated and obscured by the intrusion into the provident association of persons quite able to pay on a higher scale. The poor will be benefited and the medical men will manage their own affairs instead of being placed in the position of underpaid employés.

RIVIERA WINTER SERVICE.—The International Sleeping Car Company announce the following arrangements for the winter season in the South of France:—The Calais-Mediterranean Express will run every Thursday (commencing Nov. 7th) in connexion with the 9 A.M. service from London (Victoria and Charing-cross), calling at Marseilles, Cannes, Nice, Monte Carlo, Mentone, &c., reaching Vintimille at 12.36 P.M. the following day. Baggage will be registered through to destination and examined *en route*. The train will be composed entirely of the company's sleeping and dining cars. A Mediterranean Express will also leave Paris (P.L.M. station) every Tuesday and Saturday at 5.30 P.M., reaching Vintimille at the same time as Thursday's train from Calais. The Nice Express will leave Paris (Gare du Nord) at 7.44 P.M. daily, to which, between the Nord and Lyon stations, a restaurant car will be attached. The Rapide will leave Paris (Gare de Lyon) for the Riviera every evening at 8.25. Through tickets, single and return, are to be obtained at the company's offices, at 14, Cockspur-street, S.W., where places must be reserved in advance.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

THE NEWPORT EPIDEMIC OF 1894.

THE official report[1] by Dr. Theodore Thomson on the serious epidemic of enteric fever which occurred at Newport, in the Isle of Wight, in the autumn of last year has been issued by the Medical Department of the Local Government Board. It is a somewhat voluminous document and it contains a number of lithographed and other plates; but having regard to the importance of the occurrence from a public health point of view, especially in relation to chalk waters, it is much to be regretted that the Stationery Office should place a price on it which is so high as to carry the suspicion that they want, on behalf of the State, to make money out of it. Including some 40 attacks of enteric fever in the earlier parts of 1894, there occurred no less than 436 attacks of that disease on a population of 10,512 in the borough of Newport, the great bulk taking place between Sept. 19th and the end of November. There were, in addition, 36 attacks in the barracks and prison, and 44 in other adjacent places in the rural district; these attacks also occurred essentially at the same period. And, further, there were 43 attacks which were regarded as doubtful. In seeking the cause of this very exceptional epidemic Dr. Thomson spent much time, and he discusses every possible source of the disease with much care. We can, however, only summarise his results In the matter of sewerage and drainage, the borough, barracks, prison, and other localities invaded had nothing in common, having separate systems; some places had no sewers, and even in the borough there was no special incidence of fever on any one line of sewers, although many of the culverts were defective in the extreme. General sanitary circumstances had in like manner to be set aside; there was nothing in common with them to account for the simultaneous prevalence of fever in Newport, Carisbrooke, Gunville, the prison, and the barracks. It also became clear that milk was not the agent whereby enteric fever had been suddenly disseminated over the several invaded places; but it was otherwise when the water-supply came under consideration. Of some 2660 houses in Newport only about 50 derive their water from local wells; the remainder are supplied from a public service which is in the hands of the corporation and which is derived from two wells and certain adjacent springs at the eastern end of Carisbrooke village. The wells supply the high-level service, and the springs the low-level service. One well, the old well, is sunk 23 ft. into the chalk, and then has a bore hole of 20 ft. more; and the well has no puddling of clay or other protection. The new well is 27 ft. deep and has a bore hole of 80 ft. more in depth. For 4 ft. from the surface the well is bricked and concreted, and the remainder is lined by iron cylinders. This public service goes to 121 out of 159 houses in Carisbrooke, to 67 out of 96 houses in Gunville, as also to Parkhurst Prison and the barracks. Of the 436 cases of enteric fever in Newport 432 were known consumers of the corporation water service; 4 are not known to have consumed it. Of 28 persons attacked in Carisbrooke 25 had drunk unboiled Newport water, 2 are not known to have drunk it, and 1 was removed ill from Newport to Carisbrooke. In Gunville all the 7 persons, out of a population of 295, who were attacked were consumers of the public water-supply; and the same applies to the prison and the barracks. There is a very considerable aggregation of houses in the vicinity of the waterworks; many of the Carisbrooke houses drain into cesspools which, like the wells, are sunk in the chalk. Two cesspools, 15 ft. and 20 ft. deep, were simply disused wells; and the general trend of water in the chalk towards the bottom of the valley would lead to cesspool soakage gaining access to the chalk water. A mill pond close by has also soakage from privies &c. fouling it, and the level of the mill-pond water is such as to facilitate soakage of its contents into the low-level reservoir of the waterworks. As the result of throwing lithium into this mill-pond it was recovered from the reservoir and from the old well.

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow Hodges, Figgis and Co., Dublin. 1895. Price 7s.

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None was traced in the new well. Water taken from the low-level reservoir was found to contain the bacillus coli communis and the bacillus fluorescens putidus; and the latter bacillus was also found in the old well water. Similarly the bacillus coli was found in water taken from a tap in Parkhurst Prison; and when the corporation had samples of their water examined on their own account both the bacillus coli communis and the bacillus of enteric fever were reported to have been found in it. The report, in short, supplies a body of evidence which affords the strongest possible presumption that the Newport public water served to distribute the poison of enteric fever; and circumstanced as the wells are in a neighbourhood where there had been not infrequently fever, and which is constantly the resort of strangers and visitors, there is no lack of material for surmising how the infection may have got access to the supply. Both at the prison and the barracks orders were given on Oct. 26th to boil all milk and water, and the Newport supply was cut off from the barracks on Oct. 29th. This report, which needs to be read in detail in order to be fully appreciated, coming as it does so soon after a somewhat similar one concerning the still graver epidemic at Worthing, raises very important considerations as to chalk well waters, and is in other ways a document of much interest from the etiological point of view. By means of fissures and otherwise matters are liable to reach chalk wells in the face of greater obstacles, such as those involved in distance and otherwise, than was formerly deemed to be probable. The danger to public water-supplies which results has now been proved to demonstration, and it behoves those who are responsible for advising as to the localisation and construction of chalk wells to hold the risks which have been shown to exist in constant view, and to have regard not only to the population and houses within a zone of any such well at the time of its construction, but also as to the prospects which are in view in the future. Two such stories as those which have formed the basis of the official reports on Worthing and Newport deserve the most serious consideration of sanitary authorities, medical officers of health, and water engineers.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6542 births and 4454 deaths were registered during the week ending Nov. 2nd. The annual rate of mortality in these towns, which had been 19·1 and 19·7 per 1000 in the two preceding weeks, further rose last week to 21·9. In London the rate was 21·2 per 1000, while it averaged 22·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·3 in Croydon, 14·2 in Huddersfield, 15·0 in Halifax, 17·3 in Portsmouth, and 17·6 in Brighton; the highest rates were 26·2 in Burnley, 27·5 in Manchester, 30·8 in Salford, 33·1 in Blackburn, and 35·5 in Liverpool. The 4454 deaths included 590 which were referred to the principal zymotic diseases, against 670 and 583 in the two preceding weeks; of these, 150 resulted from measles, 136 from diarrhœa, 108 from diphtheria, 83 from "fever" (principally enteric), 56 from whooping-cough, 53 from scarlet fever, and 4 from small-pox. No fatal case of any of these diseases occurred last week in Norwich; in the other towns they caused the lowest death-rates in Croydon, Brighton, Halifax, Plymouth, and Nottingham, and the highest rates in Sunderland, Wolverhampton, Burnley, Salford, and Blackburn. The greatest mortality from measles occurred in Manchester, Swansea, Wolverhampton, Salford, and Blackburn; from scarlet fever in Birkenhead and Salford; from whooping-cough in Burnley, Liverpool, and Bradford; from "fever" in Preston, Salford, Sheffield, and Sunderland; and from diarrhœa in Bolton, Hull, and Burnley. The 108 deaths from diphtheria included 72 in London, 7 in Birmingham, 6 in West Ham, and 4 in Manchester. Three fatal cases of small-pox were registered in West Ham and 1 in London, but not one in any other of the thirty-three large towns. There were 106 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Nov. 2nd, against 158, 119, and 114 at the end of the three preceding weeks; 29 new cases were admitted during the week, against 9, 7, and 14 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2841, against 2827, 2838, and 2833 on the three preceding Saturdays; 215 new cases were admitted during the week, against 332, 241, and 269 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 158 to 235 in the three preceding weeks, further rose to 366 last week, but were 28 below the corrected average. The causes of 66, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Cardiff, Bradford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Huddersfield, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 18·9 per 1000 in the two preceding weeks, further rose to 20·5 during the week ending Nov. 2nd, but was 1·4 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·1 in Leith and 17·5 in Dundee to 22·3 in Perth and 22·5 in Paisley. The 591 deaths in these towns included 25 which were referred to diarrhœa, 19 to whooping-cough, 11 to scarlet fever, 6 to "fever," 5 to diphtheria, 3 to measles, and not one to small-pox. In all, 69 deaths resulted from these principal zymotic diseases, against 91 and 65 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·4 per 1000, which was 0·4 below the mean rate last week from the same diseases in the thirty-three large English towns. The 25 fatal cases of diarrhœa exceeded by 4 the number in the preceding week, and included 10 in Glasgow and 5 in Dundee. The deaths referred to whooping-cough, which had been 13 and 11 in the two preceding weeks, rose again to 19 last week, of which 11 occurred in Glasgow, 4 in Aberdeen, and 3 in Edinburgh. The fatal cases of scarlet fever, which had increased from 4 to 10 in the four preceding weeks, further rose to 11 last week, and included 5 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of fever, which had been 7 and 12 in the two preceding weeks, declined again to 6 last week, of which 4 occurred in Glasgow. The 5 fatal cases of diphtheria showed a decline of 4 from the number in the preceding week, and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 92 and 130 in the two preceding weeks, further rose to 136 last week, but were slightly below the number recorded in the corresponding week of last year. The causes of 48, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks 26·8 to 20·7 per 1000, rose again to 31·5 during the week ending Nov. 2nd. During the past five weeks of the current quarter the death-rate in the city has averaged 24·9 per 1000, the rate during the same period being 17·9 in both London and Edinburgh. The 211 deaths registered in Dublin during the week under notice showed an increase of 72 upon the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 20 and 15 in the two preceding weeks; of these, 5 resulted from scarlet fever, 4 from diarrhœa, 2 from "fever," 1 from small-pox, 1 from diphtheria, and 1 from whooping-cough. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 2·8 in London and 1·5 in Edinburgh. The deaths from measles, which had been 3 and 1 in the two preceding weeks, rose to 5 last week. The fatal cases of diarrhœa, which had declined from 17·6 in the three preceding weeks, further fell to 4 last week. The deaths referred to different forms of "fever," which had been 4 and 5 in the two preceding weeks, declined again to 2 last week. The 211 deaths in Dublin last week included 50 of infants under one year of age, and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those recorded in recent weeks. Eight inquest cases and 5 deaths from violence were registered; and 66, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or nearly 10 per cent., of the deaths in the city last week were not certified.

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THE SERVICES.

INDIA AND THE INDIAN MEDICAL SERVICES.

THE services of Surgeon-Captain J. G. Hojel (Bombay) are placed at the disposal of the Government of Bombay. The services of Brigade-Surgeon-Lieutenant-Colonel G. W. R. Hay (Bombay) are placed temporarily at the disposal of the Government of Bombay. Surgeon-Lieutenant-Colonel G. Hutcheson, M.D., is appointed to officiate as Inspector-General of Civil Hospitals, North-West Provinces and Oudh, until further orders. Surgeon-Lieutenant-Colonel J. W. Clarkson and Surgeon-Major C. G. W. Lowdell have respectively delivered over and received charge of the office of Deputy Sanitary Commissioner, Western Registration District.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon George Kell has been placed on the Retired List from Oct. 25th, 1895, at his own request, with permission to assume the honorary rank of Deputy-Inspector-General of Hospitals and Fleets. Staff-Surgeon Arthur Willoughby Russell has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet.

The following appointment is notified:—Fleet-Surgeon Archibald M'Kinlay to the *Howe*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Clark, 1st Banff Volunteer Artillery (Southern Division, Royal Artillery), to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Gloucestershire: Surgeon-Captain J. S. Carleton to be Surgeon-Major. *Rifle:* 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Captain W. M. Vores, M.B., to be Surgeon-Major.

THE JAPANESE ARMY MEDICAL ORGANISATION.

Contrary to the general run of Blue-books, Surgeon-Colonel W. Taylor's Report on the Medico-military Arrangements of the Japanese Army in the Field in 1894 and 1895, is an interesting document containing much readable matter dealing with the organisation of the medical field service in Japan. The principal general hospitals at the base of operations, the field hospitals, and the dressing and regimental stations were conducted in a manner most satisfactory. One point worthy of note is the foresight with which the Japanese authorities anticipated probable requirements. They never waited till a difficulty actually arose, but had ample provision made for almost any contingency that might arise, and consequently the work was done with smoothness, regularity, and ease. Considering the efficiency of these departments of the Japanese war service, however, their ignorance of sanitation was not a little surprising. At the beginning of the late war it is true they had "Orders for the Field Sanitary Service," but these orders did not refer to questions of sanitation at all. Such subjects as conservancy, latrines, urinals, prevention of the fouling of wells or other sources of water-supply were not dealt with and in practice the same want of thought for all sanitary precautions, even the most ordinary, was evident. Early in March, however, they awoke to the importance of sanitary measures, and an elaborate system of drainage and sewerage was carried out in the most expeditious and admirable manner. With regard to water-supply and its means of purification each battalion carried with it a box containing appliances and materials for the chemical analysis of water, it being the duty of one of the officers to go on ahead to any proposed halting-place for the purpose of examining and reporting upon the water. Two simple filters, similar in construction to that popularly known in England as the Poor Man's filter, except that a bucket is substituted for the flower pot, are carried by each battalion, and a small pocket filter is supposed to be carried by each officer. It is satisfactory to note that no cases of septicæmia were reported in the hospitals.

THE LATE INSPECTOR-GENERAL SIR WM. MACKENZIE, K.C.B., M.D.

We briefly recorded last week the death of this officer, who had a very long and distinguished military career in India. Inspector-General Sir Wm. Mackenzie, K.C.B., C.S.I., M.D., was also honorary physician to the Queen. He was born at Dingwall, Ross-shire, in 1811, and died on the 29th ult. at his residence in Gloucester-terrace, Hyde Park, at the ripe age of eighty-four. He graduated M.A. of King's College, Aberdeen, in 1830, M.R.C.S. London in 1832, entered the Madras Medical Service in 1835, and became M.D. of Aberdeen University in 1856. Few men possessed a longer or more distinguished war service than did the late Sir Wm. Mackenzie, as may be seen from the following record. He served with the Ellickpur Force of the Nizam of Hyderabad's army in 1841, and again in 1851 against insurgent Rohillas; as Staff Surgeon to the 1st Brigade Central India Field Force, under Major-General Sir Hugh Rose, during the whole of the campaign of 1857–58, and was present at the engagement before Dhar, the cavalry action at Chicklia, siege of Dhar; operations at Mundersore on Nov. 21st, 22nd, 23rd, and 24th, 1857; siege of the Fort of Chanderee from March 6th till the final assault on March 17th, 1858; general action at the Betwah on April 1st, 1858; the assault on the Fort of Jhansi, April 3rd, and subsequent operations; the taking of Koonch, May 7th, 1858; the engagement at Goolowlee, May 23rd, 1858; capture of Calpee, May 22nd, 1858; engagement at Morar, June 16th, 1858; and subsequent attack on Gwalior, with pursuing column under General Napier, and engagement at Jowrah Allipore. He also served as staff surgeon to the Bearer Field Force from November, 1858, to March, 1859, and was present at the engagement of Chichumbah on Jan. 15th, 1859. For these services he was in 1859 awarded the C.B., and in 1867 the C.S.I.; he was appointed honorary physician to the Queen in 1857, and subsequently K.C.B. He was Inspector-General of the Madras Medical Department and retired in 1871.

THE MALARIA PARASITE.

The Anglo-Indian papers of the latest date contain some further communications and information regarding Surgeon-Lieutenant-Colonel Lawrie's researches as to the non-existence of Laveran's polymorphic parasitic bodies in the blood of malarious patients, to which we have already alluded more than once. It appears that Surgeon-Captain Patrick Hehir, M.D., who is regarded as an excellent microscopist and has greatly devoted himself to the study of blood parasites, had been invited to demonstrate the malaria parasite, but it is alleged that he failed to convince those who examined his specimens at Hyderabad that they were other than illusory appearances. Surgeon-Lieutenant-Colonel Lawrie is quite prepared to maintain that he has demonstrated the fact that Laveran's parasitic forms are in reality but altered white blood-cells. A full and detailed report of the Hyderabad researches is, meanwhile, as we have already said, awaited with much interest.

THE DINNER TO THE DUKE OF CAMBRIDGE.

The dinner given to Field-Marshal H.R.H. the Duke of Cambridge by the War Office officials at the Cafe Monico on Tuesday, Nov. 5th last, was attended by some two hundred guests, including not only men who have made themselves conspicuous by their valour in the military service of the country, but also some distinguished civilians. The Marquis of Lansdowne, who presided, proposed the toast of the evening in felicitous terms, remarking on the distinguished services of His Royal Highness to the country. In his reply the Duke, in a dignified and highly sympathetic manner, referred to his endeavours not to retard any improvement for the benefit of the Army and to his ready acquiescence in any change likely to benefit a colleague.

DEATHS IN THE SERVICES.

Surgeon-General J. A. C. Hutchinson, M.D., I.M.S. (retired), at Bedford on the 26th ult., aged sixty-seven years. He retired in 1884.—Deputy-Surgeon-General Robert Sander Bateson, I.M.S. (retired), on the 25th ult., at Lancaster, aged sixty-four years. The late officer served during the Indian Mutiny and was at the actions near Agra and in the engagement with Tantia Topee at Dowsa.

Surgeon-Major-General T. Walsh, principal medical officer of the Bengal Command, is about to proceed home on medical certificate, and Surgeon-Colonel T. Maunsell, it is reported, will officiate in his stead.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon, the 4th inst., Sir James Crichton Browne presiding. The managers reported that the late Mr. John Bell Sedgwick, M.R.I., had bequeathed £300 to the Royal Institution in aid of the Fund for the Promotion of Experimental Research at Low Temperatures. The special thanks of the members were returned to Sir Frederick Abel, Bart., for his donation of £50 to the same fund.

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Correspondence.

"Audi alteram partem."

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—I am sorry once more to be obliged to make an appeal to the profession on behalf of the British Medical Benevolent Fund, but for the last few months we have at every meeting of the committee overdrawn our account at the bank and have even then been unable to afford assistance in many cases where it was felt that help ought to be rendered. In September £44 was all the money available, and six grants were made, amounting to £50. At the meeting on Tuesday, Oct. 29th, there were twenty cases to be considered, besides those postponed from September, and only £34 was in hand to meet the claims, and, till the end of the year, there is no prospect of improvement in our financial condition unless through the response of the profession to our appeal.

During the year 174 cases have come before the committee and 119 grants have been made, amounting to £1083. This gives an average of about £9; but, as a matter of fact, our grants, to be of the greatest use, require to be £12 or £18, so as to enable a monthly instalment of £1 or 30*s.* to be paid throughout the year, and lately we have been obliged to reduce the allowance to the inadequate sum of £5 or £6, sometimes with the promise that a second application may be sent in at the end of six months if funds permit.

Applications and the severity of the cases which come before us increase year by year, and the subscriptions and donations, on which we depend, do not keep pace with them. The working expenses of the fund are extremely small; there is no rent for offices, no expenditure on advertisements, and no payment of officers except for clerical assistance, which is absolutely necessary, as the mere writing connected with the investigation of cases and the collection of funds and keeping accounts has become more than could reasonably be expected of men who have other work to do. The cases selected for relief at the last meeting are illustrations of the everyday work of the fund.

1. A widow aged thirty-five, whose husband had become incurably insane after two years' illness. She has three young children, and is penniless. Granted £12, ought to have been £18.

2. A medical man aged seventy-eight, quite unfit to work. Two daughters at home, one an invalid, the other recovering from scarlet fever. Granted £12.

3. A widow with young children and unable to earn anything on account of influenza. Granted £6.

4. A lady sixty-six years of age and quite deaf. Granted £6 for six months.

5. A lady who has maintained herself as a midwife, but is now too infirm to undertake cases. Granted £6.

6. A governess aged thirty-three, who has been obliged to relinquish work on account of illness. Granted £5.

These show the urgency of the distress, and I may mention that a member of the committee has already sent me a donation of twenty guineas.

I am, Sirs, yours faithfully,

W. H. BROADBENT,
Treasurer, British Medical Benevolent Fund.

Brook-street, Nov. 5th, 1895.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 21st your Special Commissioner asks the question, What is to be done if men are imported from other towns? with reference to the attempt of the Portsmouth men to combat the action of the members of the clubs in forcing them to attend their wives and children on their own terms. I venture to assert that the answer to that question is a simple one—viz., join the Incorporated Medical Practitioners' Association. Our aim and intention are to unite all the medical men, especially those in general practice, for mutual defence and support; call it a trades-union if you like—union is strength. We have been successful in establishing a branch for Devon and Cornwall, and we intend to take measures to establish branches all over the country, having a branch for divisions or counties, with sub-branches for towns. The members of the Devon and Cornwall branch have signed a declaration similar to that referred to by your Special Commissioner as being signed by the men at Eastbourne.

We have been successful to a very great extent in preventing the London and Manchester Industrial Society, which works a medical aid branch in connexion with, and to help, their insurance work, from extending and establishing itself here. The Incorporated Medical Practitioners' Association, having its headquarters in London and having branches all over the kingdom, will be able, in great measure, to defeat the aims of such societies as the National Medical Aid Society. Associations such as the Portsmouth and the Eastbourne ones will find their hands strengthened by affiliating themselves to us. It is true there are many men who are quite independent of the sort of work which these societies—i.e., National Medical Aid Associations, &c.—take up, but I think that the saying "that man does not live for himself alone" should be remembered by such persons. Looking at it from the point of view of such men, I think they should remember that this sort of thing has a tendency to spread, and that the public, like tigers having once tasted blood, long for more. Perhaps they will say, with Louis XV., "Après moi le déluge." If so, all I can say is that such men are selfish in the extreme and deserve no consideration whatever. I think, therefore, if all men in general practice would join our association and help to form branches in their own neighbourhood much benefit will result to the medical profession, and indirectly, by getting the work better done, to the public as well.—I am, Sirs, yours sincerely,

GEO. JACKSON, F.R.C.S. Eng. (Exam.),
President of the Incorporated Medical Practitioners' Association.

Portland-villas, Plymouth.

To the Editors of THE LANCET.

SIRS,—The enclosed cards are, to my mind, proof of the low state of the medical profession in ————. The medical man whose name is on one of the cards is styled "Dr.," and on his door-plate the same title is used; but reference to the Medical Register for 1895 shows him to have no proper right to the style. He is the holder of several local appointments. The payment made by the Liverpool Victoria Legal Friendly Society (see card enclosed) is only ½*d.* per week per head, and I suppose the agent deducts a commission. Is it not a direct violation of the oath we take to uphold the dignity of the profession to accept such pay? There are other medical men in the town, and these men will not have anything to do with the Liverpool Victoria Legal Friendly Society or the National Medical Aid Company.

I am, Sirs, yours faithfully,

C. F. HARDING.

*** Dr. Harding encloses specimens of the cards of membership of the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company, Limited. The general style of these is probably known to the readers of our articles, and the way in which the two companies work together was explained in our Special Commissioner's letter from Eastbourne.[1] To secure life assurances the former of these companies became intimately associated with the latter, finding it easier to persuade people to insure against sickness than to insure their lives. The canvassers, therefore, point out the advantage of belonging to the National Medical Aid Company, Limited—only 6*d.* entrance fee for individual or family, 1*d.* a week for adults, ½*d.* a week for persons under fourteen, for medical advice, attendance, and medicine!—afterwards explaining that such medical insurance cannot be effected unless the individual insures his life, and the insurance is granted by the Liverpool Victoria Legal Friendly Society. We do not know if the agent in this case deducts any commission, or whether the medical man gets the whole of the

[1] The Battle of the Clubs, THE LANCET, Oct. 5th, 1895.

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halfpenny, but we agree with our correspondent that it is deplorable that such fees should be taken.—ED. L.

To the Editors of THE LANCET.

SIRS,—Your article on the subject of the "Battle of the Clubs" in your issue of Oct. 12th contains a reference to this Company which is inaccurate in fact and calculated to mislead. You refer to this Company as one of two assurance companies which combine "medical aid association" with their own proper business. The transactions of this Company, however, are confined exclusively to life assurance, and medical aid forms no part of the Company's operations. In certain cases, I believe, the agents of the Company do introduce persons to medical men who are willing to attend patients at a fee settled by the medical men themselves, and which is collected by persons appointed and remunerated solely by them, and with which our agents have nothing to do. The Company has for years past had only one medical referee at Eastbourne, and he alone reports and receives remuneration from us. I find that the Company's agents have introduced certain persons for medical attendance to one other medical gentleman, who has had a club, but he has no connexion with the Company, and the introductions in question were quite unknown to the Company. I am informed that he has joined the Association lately formed at Eastbourne, but there has been no abandonment of connexion with the Company, for it never existed, and the statement that three medical officers of the Prudential have abandoned their connexion with this Company has no foundation in fact. The real facts of the matter were stated in your issue of Oct. 5th, and I can only suppose that the reference to the Company contained in your issue of the following week was an inadvertence.

I am, Sirs, yours faithfully,
T. C. DEWEY, Manager.

Prudential Assurance Company, Limited, Holborn-Bars, London, Oct. 31st, 1895.

*** We have compared our article of Oct. 12th with that of our Special Commissioner which appeared on Oct. 5th, and regret that we should have alluded to the Prudential Assurance Company, Limited, as offering medical aid to their members. As will be seen from Mr. Dewey's letter there were circumstances that might well lead us to the conclusion we arrived at. We have before now in our columns testified to our sense of the value of the work that is done by the Prudential Assurance Company, Limited, and are glad to publish their disclaimer of all association with the methods employed by sick-aid institutions.—ED. L.

THE ADMINISTRATION OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Your criticism in THE LANCET of Oct. 26th of the use of lint as productive of dangerous concentration of vapour during the administration of chloroform induces me to put forward some arguments for and against the different inhalers that are in use. In administering chloroform two points are of vital importance. First, the administrator should be fully cognisant at every moment of the amount of chloroform vapour which the patient is *at that moment* inhaling. Secondly, an equable quantity of vapour should be maintained, and therefore the chloroform should be added drop by drop. The use of one corner of a new and therefore fairly stiff white towel pinched up into the form of a cone fulfils both these conditions. Chloroform can be dropped on the outside of this drop by drop, and on this texture it produces a wet, dark stain the intensity of which is a visible index to the chloroformist of the quantity of vapour at each instant being presented to the patient. The size of the cone can be adjusted to the requirements of each case, and as soon as one corner begins to show the wet stain less distinctly, becoming limp from the moisture in the patient's breath, one of the other corners can be substituted for it. The quantity being thus appreciated by the eye and its effect on the patient noted, the chloroformist attains, after practice with this method, to some control over, and precision in, dosage, and can tell approximately the number of drops that should be put on the towel at the various stages of anæsthesia. This, together with a full knowledge of the signs of these stages, on the one hand, enables him to avoid concentration of vapour, especially at times of excessive absorption or of defective elimination, and, on the other hand, emboldens him to give a sufficient quantity to prevent the occurrence of incomplete anæsthesia, with its risks to the patient, to say nothing of the annoyance to the operator and anæsthetist.

The objections to the other inhalers may now be briefly considered. The least objectionable appears to be the Scotch method, in which chloroform is poured on the upper margin of a folded towel which is held round the patient's face. The free admission of air that is allowed certainly lessens the risk from concentration of vapour, but as there is more than a single layer of cloth to absorb the chloroform the intensity of the wet stain is no indication of the quantity of chloroform being inhaled. There is also unnecessary waste in the method, a large quantity of vapour being lost and causing annoyance to the administrator. Similarly, Junker's inhaler, while well diluting the vapour, affords no indication of the dose actually being given. Finally, the materials in greatest use as inhalers are flannel and lint, and neither of these shows a distinct wet stain with chloroform. Of 35 fatalities under chloroform from 1892 to 1894, where the form of inhaler used is mentioned, it was in 43 per cent. lint and in 25·7 per cent. flannel—i.e., Skinner's inhaler—against 14·3 per cent. in which a towel was employed. Further, the metal rim of Skinner's inhaler interferes with the evaporation of the vapour and allows drops to fall on the patient's face; and with a double fold of lint an equable quantity of vapour cannot be maintained, sudden concentration being apt to occur whenever the lint is turned after a fresh supply has been added. Of course, the choice of the inhaler is only one detail to ensure the safe administration of chloroform; but I consider that the method I advocate, being more accurate than any other, deserves a wider application than it at present has, and should, until some better method is discovered, displace lint and the other forms of inhalers now in use.

I am, Sirs, yours faithfully,
HOWARD GLADSTONE, M.D., C.M.

Royal Chest Hospital, City-road, E.C., Oct. 29th, 1895.

To the Editors of THE LANCET.

SIRS,—Under the heading of "Death under Chloroform" we constantly read "the chloroform was administered in the usual way." I would ask what is the usual way: is it with or without an inhaler? Both ways cannot be "best," so which is? Is the percentage of deaths more or less with the inhaler, as compared with the percentage of deaths (if any) where chloroform is administered on the Edinburgh plan? The only inhalers I ever saw in Edinburgh were those which Sir Jas. Y. Simpson (ah! how many years ago) used to show on his lecture table as interesting relics of a bygone age. In England and America I have seen chloroform administered by inhalers, and without even after stertor had set in, which both Syme and Simpson taught all their pupils was an alarming "danger signal." We did not think a great deal about what quantity of chloroform we gave in those days, but the chloroform *towel* was pretty quickly removed if a suspicion of stertor occurred. I wonder a coroner's first question in all such cases is not, "Did you use an inhaler?"

I am, Sirs, yours faithfully,
R. WHITTINGTON LOWE, M.D. Edin.

Park-place, Nov. 4th, 1895.

*** The ambiguity of the expression is matter of regret. The "usual way" commonly means that chloroform is exhibited from a towel or piece of lint. The number of deaths in which the "open method" is employed largely exceeds that where an inhaler is used, but as the former plan is so much more frequently adopted it is impossible to trust to statistics in attempting to arrive at a decision upon the relative safety of the methods. There have been several deaths under the Edinburgh method, as indeed in the case of every known way of administering chloroform. The use of a towel-end is advocated in some places, but cannot be regarded as being exact since the amount of vapour which reaches the patient must depend upon varying quantities—e.g., the temperature of the room, the vigour of the respiration of the patient, the texture of the towel, &c. With many inhalers an

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exact quantity of chloroform is evaporated in a given time and mixes in a known proportion with the inspired air; and, further, the proportion of chloroform can be lessened at will or can be maintained constant. This cannot be done with the rough-and-ready "open method." The teaching in London of Snow, Clover, and their followers has always been to regard "stertor" as an evidence of obstructed breathing, and to insist upon the extreme danger of that symptom. In no well taught London hospital would a student be permitted to continue the inhalation of chloroform to a stertorous patient.—ED. L.

"DUBLIN INFECTIOUS HOSPITALS SCHEME."

To the Editors of THE LANCET.

SIRS,—In reference to the above subject, permit me to make the following statements, which I submit to the judgment of your readers. 1. The draft scheme for providing isolation hospitals outside the city of Dublin was drafted by me and submitted to Mr. Stafford, the medical inspector of the Local Government Board of Ireland. Mr. Stafford amended the scheme, and it was then submitted to and approved of by the Public Health Committee. 2. The scheme was submitted to a conference of representatives of the local sanitary authorities, and it was distinctly stated to them that the scheme could be modified in any way provided that provisions were made in it for establishing one or more hospitals for small-pox and a home for convalescents from infectious diseases outside the city. 3. In the draft scheme no reference is made to the existing Dublin hospitals, and a motion made at the conference to consider the question of the public money grants made to them was spoken against by me and was rejected. 4. In the recent small-pox epidemic there was not sufficient accommodation for the patients in the fever hospitals, and hundreds—chiefly convalescing cases—were obliged to go into the workhouse hospital. 5. The council of the Dublin Sanitary Association played a sorry part when they tried to stifle a scheme which was chiefly designed to provide a proper hospital for small-pox and a home for convalescents from infectious diseases. It is a new departure for a sanitary association to show solicitude for the ratepayers and apprehension that the establishment of isolation hospitals might interfere with medical education. 6. It is a pleasure to me to be able to state that at the beginning of our small-pox epidemic the authorities of the general hospitals at once agreed not to admit small-pox cases. I trust the time is not far off when they will extend the exclusion to a few other infectious diseases—scarlet fever and typhus fever, for example. There are in Dublin eight general hospitals (some of them with maternity departments) in which fever cases are received.—I am, Sirs, your obedient servant,

CHARLES A. CAMERON,
Superintendent Medical Officer of Health.

Public Health Office, Dublin, Nov. 2nd, 1895.

THE EFFECT OF CHRONIC NASAL OBSTRUCTION ON THE GROWING SKULLS OF YOUNG PERSONS.

To the Editors of THE LANCET.

SIRS,—Will you permit me to call attention to a point I have long insisted on—namely, the irreparable damage done to the growing upper maxillary bones, and consequently to the facial appearance, of young persons the subjects of chronic nasal obstruction? I have observed in a multitude of instances the constant association of narrow, flattened faces, pinched upper lips, highly arched palates, and crowded, irregular teeth with chronic nasal obstruction in one form or another, notably with deflected septa and turbinal hypertrophies and engorgements. Continental and American authors have frequently noticed this association, but apparently have not hit upon the relation of one to the other. For instance, Trendelenburg has pointed out the frequent association of highly arched palates with deflections of the nasal septum. Jarvis has reported a series of four cases in the same family, and thinks they are hereditary. Bosworth and many others have noticed the same association and have offered various explanations, none of which appear to me sufficient.

I venture to think Ziem has set the matter at rest by his experiments. Ziem has proved that every obstruction of the nose exerts widely spread consequences on the development of the skull in young animals, one of whose nostrils he completely closed up for a long time. There was seen a deviation of the intermaxillary bone and sagittal suture towards the shut-up side; also lesser length of the nasal bone, of the frontal bone, and of the horizontal plate of the palate bone; and less steep elevations of the alveolar processes; smaller distance between the anterior surface of the bony auditory capsule and the alveolar process, also between the zygomatic arch and supra-orbital border; and smaller size and asymmetrical position of the vascular and nerve canals on the closed side of the nose. The distance of the two orbits from the middle line was unequal, which, as has been observed in man, leads to asthenopia, astigmatism, and strabismus.

I am, Sirs, your obedient servant,

Harley-street, W., November, 1895. MAYO COLLIER.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—One result of the publication of my letter in your issue of Oct. 26th has been that a former pupil of mine (Mr. Charles H. Piesse) has done me the favour to send me a reference to an interesting paper in THE LANCET of Oct. 4th, 1890, by Mr. Percy Pope. For the benefit of those of your readers who may not be able to refer back to that number of THE LANCET I beg permission to state briefly the main points of the lucid narrative.

A number of soldiers at Aldershot were stationed under some small trees watching a cricket match when a sudden flash of lightning, like the bursting of a shell, was followed by cries for help from the men under one particular tree. Five men were found to have been more or less injured. No. 1, who had been sitting on the ground with his back against a tree from which a portion of bark had been stripped close to his head, was dead; the breathing and pulse had ceased and artificial respiration failed to revive him. No. 2 was quite unconscious; the respiration had ceased, but the pulse was still perceptible. "In this case artificial respiration was rewarded after some minutes by a gradual return to consciousness." Brandy was then given; he was removed to hospital and soon recovered. Nos. 3, 4, and 5 recovered consciousness without artificial respiration some few minutes after being struck. The state of the pulse and breathing during the brief unconscious period is not mentioned. All the four men were able to return to duty within a few days. It is remarkable that the man who was killed had no marks of injury on the head or face, but No. 2 had his hair singed, and there were marks of burning (like ecchymosis) on the left side of the face, neck, and upper part of the chest.

These cases afford interesting illustrations of three degrees of injury from lightning shock. No. 1 was fatally injured, with simultaneous arrest of the heart's action and breathing; No. 2 was unconscious, with suspended breathing, but was restored by artificial respiration; and Nos. 3, 4, and 5, temporarily unconscious, probably with suspended breathing, recovered from the shock without special assistance. The practical lesson is that *one man's life was saved by artificial respiration.* Some interesting particulars were given of the condition of the patients after the return of consciousness, but with these I need not occupy your space.

I am, Sirs, yours faithfully,

Savile-row, Nov. 4th, 1895. GEORGE JOHNSON.

"A VERY EFFECTUAL METHOD OF TREATING MALIGNANT DISEASE OF THE BREAST."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 12th, 1895, under the above heading, appears an article by Mr. Arbuthnot Lane. I have on two occasions performed an operation exactly similar to the one he describes for recurrent scirrhus of the breast, with the exception that the third part of the subclavian

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artery in my cases was tied without preliminary resection of the clavicle. Both of these patients recovered from the operation. The first case was operated upon on May 30th, 1893, and full notes of the condition and operation are published in the Edinburgh Hospital Reports for 1894, page 480. This patient died in August, 1894, and I am indebted to Dr. Herbert E. Hick of Bradford, under whose care she was, for a note of her condition when she died. He says: "The operation was a complete success, as up to the time of her death there was no sign of recurrence of the disease in the neighbourhood of the scar." She died from a rapidly growing malignant tumour of the stomach. The second case has been operated upon too recently to make any further note of it useful, but so far as I can judge the whole of the diseased structures were excised, and this would have been impossible by any other method.

I am, Sirs, yours faithfully,

RUTHERFORD MORISON.

Saville-row, Newcastle-on-Tyne, Nov. 5th, 1895.

"THERAPEUTIC VALUE OF INTESTINAL ASEPSIS."

To the Editors of THE LANCET.

SIRS,—I read with great interest Dr. Williams's paper on the treatment of typhoid fever by the chlorine mixture. The only drawback I have found is the difficulty patients have in taking it; in several of my cases it has produced retching for some time afterwards. The mixture has invariably brought down the temperature, and with the above exception has generally improved symptoms. With regard to sulphurous acid, patients take it well and with the best results. The dose I generally prescribe is half a drachm to one drachm freely diluted with water, every three or four hours.

I am, Sirs, yours truly,

Khedive-road, Upton, Nov. 2nd, 1895. E. H. BLAKE.

To the Editors of THE LANCET.

SIRS,—Dr. Burney Yeo has drawn my attention to a mistake I made in attributing to him the first use of the chlorine treatment in "typhoid" &c., and has referred me to his book, in which I should find references to "Watson, Murchison, and others." I see that Dr. Williams speaks of the benefit of this treatment as "recommended" by Dr. Yeo. I take this opportunity, in common fairness to Dr. Yeo, of making this statement.

I am, Sirs, yours truly,

Harrow-road, Nov. 5th, 1895. A. L. GRIFFITH.

"THE ADMINISTRATION OF OATHS IN COURTS OF LAW."

To the Editors of THE LANCET.

SIRS,—The quotation given by Dr. Bullock is also given in Notes and Queries, Fourth Series, Vol. X., p. 119. I believe it was the practice to lay the hand upon the book "*tactis sacro-sanctis Dei evangeliis.*" The same publication mentions other curious facts in connexion with oath-taking, one being that in certain parts of Ireland it was formerly considered unlucky for a pregnant woman to take an oath within a certain period of her delivery. But no mention is made of the date when "kissing the book" first began, though this question was specifically asked by a correspondent twenty-three years ago. The Scotch oath is also mentioned, but no reason is given for the different mode of adjuration in England, Wales, and Ireland on the one hand, and in Scotland and the Channel Islands on the other. Can any of your readers help us to discover this?

I am, Sirs, yours faithfully,

Liverpool, Nov. 4th, 1895. FRED. W. LOWNDES.

THE INFLUENCE OF HOT AND COLD DRINKS ON THE TEMPERATURE IN THE MOUTH.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 26th Dr. Lazarus Barlow drew attention to the influence of hot and cold drinks on the temperature in the mouth. I have often thought that one might easily be misled if the temperature were taken in the mouth too soon after food. Two instances which have recently occurred to me show this. A few weeks ago I saw a boy suffering from tonsillitis. His mother, a few minutes before my arrival, had taken his temperature in the mouth and found it to be 102° F. I took it in the mouth and found it to be 100°. Our thermometers were tested and found to agree. On inquiry I found that he had had some hot beef-tea just before his mother took his temperature. The second instance occurred yesterday, when I saw a boy who had symptoms of influenza. Immediately on going into the room I put my thermometer in his mouth, when it registered 104°. Doubting the accuracy of this, I put it under his arm and found it registered 99°. After waiting a little while I put it in his mouth again, and found it registered 100·2°. Just before my arrival he had taken a glass of very hot milk. These two cases show how easily one may be deceived if one trusts entirely to the thermometer.

I am, Sirs, yours faithfully,

Bedford, Nov. 6th, 1895. W. GIFFORD NASH.

"BERI-BERI."

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Sept. 21st a letter with the above heading which may possibly lead to some misconception, as the disease described—which is a very common and troublesome one among tea garden coolies, and of which Dr. Sheperd has given a perfectly correct account—is certainly not beri-beri but anchylostomiasis. There are intense anæmia and hydræmia, but none of the characteristic symptoms of beri-beri — no peripheral neuritis or any affection of the great nerves supplying the heart and lungs. It has certainly for a long time been known locally as beri-beri, owing, doubtless, to some misconception on the part of the practitioners who saw the earlier cases. The appearance of the patients is characteristic, but if any doubt exists as to the diagnosis of a particular case a simple microscopic examination of the fæces will, if they are present, instantly reveal the large non-operculated segmented ova without the trouble of washing out the worms. There is a delicate shell having a single contour, non-operculated, enclosing a segmented yelk separated from the shell by a colourless fluid. A good illustration of this and other intestinal ova will be found in "Davidson's Hygiene and Diseases of Warm Climates." With regard to the administration of thymol, I have never had any bad symptoms, even in delicate children, and I have given it to babies six months old. The proper way to administer it is dry, in which case very little is absorbed and the worm gets the full benefit of the dose. The effect of thirty grains given in ten-grain doses at four hours' interval is often magical, the anasarca disappearing before other treatment can be resorted to. I have never seen the slightest mental disturbance. A certain proportion of the cases are inveterate, and it will generally be found that these are earth-eaters. The coolies themselves recognise this. The curious part of it is that they cook the earth. I have never been able to discover the worm embryo or egg in earth or water, but have little doubt it develops in the soil. I do not know whether the disease is prevalent among the indigenous local population (the coolies are all imported and live under special local conditions), but I fancy not. I quite recognise the force of Dr. Sheperd's remarks as to the importance of the early recognition of the disease in ship's crews, emigrant coolies, and others, but must emphasise my objections to having thus easily cured disease confounded even verbally with such a serious disorder as beri-beri. A confusion of terms easily leads to confusion of diagnosis. I should be much obliged if any of your readers could give me an account, clinical, nosological, &c., of the disease known as "kala azar" which is so prevalent in some parts of Assam. I shall be happy, if you wish, to send you specimens and microphotographs of the eggs.

I am, Sirs, yours truly,

CHAS. E. SEAL, M.R.C.S.

Chundiechena Tea Estate, S. Sylhet, Oct. 11th, 1895.

PRESENTATION. — Mr. Algernon Sudlow, M.R.C.S., of Castle-Combe, Chippenham, has been presented by his friends, on retirement from the profession after forty-three years' practice in that village, with an illuminated address and a cheque for £150. The presentation was made, on behalf of the subscribers, by Sir A. Neeld, the high sheriff.

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BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday.

THE amount collected on Oct. 27th reached the sum of £4264 9*s.* 3*d.*, which goes this year to the General Hospital.

Hospital Saturday.

The annual reunion of the patients of the convalescent homes at Tyn-y-Coed and Marle Hall took place in the town hall on the 4th inst. The object is to keep up the interest of those who have passed through the homes in the Hospital Saturday movement. Over 3000 invitations were issued, of which some 250 were returned through the dead letter office on account of change of residence. Up to the present time, the fourth annual meeting, 2075 men and 586 women have passed through the two homes. Mr. Smedley, the President, claimed for the homes that they would bear comparison with any similar institutions in the country for their surroundings and appointments, for the liberality of the fare, and for the advantages which the patients enjoyed. A presentation of a writing table was made to Dr. Woodhouse, one of the honorary surgeons, and a similar gift to Mrs. Woodhouse. The police band rendered efficient service, and a pleasant evening was spent.

Medical Mission.

The twentieth annual meeting of the Birmingham Medical Mission was held on Oct. 24th. The report stated that the past year had been one of unusual activity. The number of patients treated was the largest there had been, 5832 having received the benefits of the mission. The consultations given at the stations and at the homes of the poor were 26,698, while the staff consisted of one medical man, an apothecary, a general helper, and one nurse. It may be inferred from this that much energy must have been displayed, and that very little spare time was available. The cost per patient was about 2*s.* 6*d.* When the distress of last winter was at its height about 250 families were daily relieved, and breakfast for 180 was provided three times a week to the sick poor. Garments, boots, and shoes were also distributed. The income was £858 18*s.* 7*d.*, and after payment of expenses a balance of £134 remained in hand.

The Burial of Stillborn Children.

In a former note the discovery of unburied stillborn children in a house in the town was alluded to. The city coroner, Mr. Oliver Pemberton, in holding an inquest upon the bodies, made some valuable suggestions as to dealing with such cases. He proposed that the parents of such children shall be required to give notice within a specified time to the registrar of the district; that the registrar shall record this and give an order for burial, which shall take place within a given time; also that the registration shall be made in the books at the cemetery. In case of undue delay notice shall be given to the police authorities, and it shall be unlawful for undertakers or other persons to keep the bodies of stillborn children on their premises other than a reasonable time before burial. If these recommendations are carried out they will go far to prevent the laxity and carelessness which are common in dealing with this evil, a prevalent one unfortunately in all large towns.

Obesity and Old Age.

That this combination is capable of existing was lately proved at Cradley Heath by the death of a resident at the advanced age of eighty-four. He weighed 26 st., and for over fifty years kept a well-known public-house in the district. Some drawbacks evidently attended his career, for he was unable to move about much and had to be hoisted up into his bed at night. Nevertheless, his long life and great weight did not interfere with his conduct of business or hinder his ordinary enjoyment.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

AT the last meeting of the committee a suggestion made by Dr. Niven in his annual report on the health of Manchester, with reference to securing a milk-supply of guaranteed purity through the agency of a company or association, was considered and referred to a standing committee. The question of poisoning by carbolic acid was also introduced with a view to an effort being made to get it scheduled as a poison, but action was deferred till certain statistics could be obtained. The subject of accidents owing to the use of inferior oils and of badly constructed lamps was next considered, and it was decided to memorialise the Home Secretary with reference to having the standard flashing point raised for illuminating oils. It is said that in the United States, notwithstanding the great use of oil lamps and stoves, comparatively few explosions take place, owing no doubt to the fact that the flashing point of the oil used is so much higher than it is in this country.

Children's Holiday Fund.

The object of this most useful charity, which held its annual meeting the other day, is to send poor children into the country for a three weeks' holiday. The report gave a somewhat discouraging view of its position. Whatever the cause—whether due to the general and long-continued depression of trade (from which, however, we are now said to be recovering) or to a growing indifference to suffering and misfortune—the fact remains that hospitals and charities of all kinds have for some time told the same story of crippled means. In the present case it is stated that the committee began their work this year with an adverse balance of £286 and a falling off in the subscriptions, so they had been unable to give a holiday to the usual number. This led to their sending "only delicate children or such as absolutely required a change." Thanks were given to the medical men who had examined the children and given the necessary certificates before they were sent to the country, and to the Manchester press for their references to the work done by the society. The honorary treasurer, in moving the adoption of the report, said the committee deeply regretted that they had to curtail their work. Last year more than 1200 children were sent for a holiday, while this year the number had fallen to 385. The Lady Mayoress, who occupied the chair, commended the society's work and hoped the coming year would bring increased funds.

Manchester Edinburgh University Club.

The members of this club had their annual dinner on the 21st ult. Though open to all professions, that of medicine is most numerously represented. The guest of the evening was the Rev. John Watson of Liverpool, better known perhaps as "Ian Maclaren," the author of "Beside the Bonnie Briar Bush." When speaking in response to the toast of his health, Mr. Watson referred to some remarks made by its proposer as to the tribute he had paid in his book to the medical profession. He had tried, he said, to express the feeling of gratitude which he believed every person in the community, but especially people who lived in country districts, and most of all country clergy, had for the country members of the medical profession. He had said nothing in his book "which could not be verified in actual lives known to himself and to other men."

The Vegetarians.

The forty-eighth annual meeting of the Vegetarian Society was held here on the 21st ult. A paper was read by Miss Eccles, in which it was contended that vegetarianism was nothing if not religious, and that man "could not possess the simple virtues justice and honesty in their fulness while he deprived those whose right was equal to his own of the blessing of life, dearest to all of them as to him." Mr. A. W. Malcomson followed with a paper on the Æsthetic in Food, in which he urged that eating and drinking could be refined and elevated by the beauty of simplicity and purity. "Vegetarians had become possessed of a perception of what was true and beautiful and what was false and hideous in the matter of food. The occupation of a butcher and slaughterman was ostracised and debarred from all poetry and romance, all beauty, all æstheticism. No one of refined and cultured tastes, certainly no æsthete, would ever choose it"! A public meeting was held in the evening, at which a lady presided who was a Grand Vice Templar, I.O.G.T.—whatever that may be. Stress was laid on the importance of fruit culture, and it was contended that it did not receive sufficient recognition or assistance from Government and that everything should be done for the encouragement of British fruit culture. One gentleman said he once visited all the fruiterers' shops in Chester and could get no British-grown apples, though there were plenty of foreign ones. I am afraid that is very much the fault of the growers, who.

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keep to their old inferior kinds, and if they have a good sort it is not well grown, is badly selected, badly packed, and offered in a less attractive condition than its foreign rival. Spade culture was advocated as opposed to the plough, especially the steam plough. It seems that many social and economic difficulties would vanish if vegetarianism prevailed. A member of Parliament of that cult was wanted to put before its members from a vegetarian standpoint "the great problem of taking labour from the congested towns to happy and healthy life on the land." Professor Mayor of Cambridge, the President of the society, said that when he first remembered Cheshire farm-houses a visitor was never offered anything purchased at a shop—it was all home-made. Now all this was reversed. Mr. Axon of Manchester, a veteran in the cause, was very enthusiastic, saying it was not merely a system of dietetics, but "something that contributed to the simplification of life, to the elevation of morals, to the improvement of life generally, and to all good causes whatsoever. ..... It was the sister of all other good movements of peace societies, purity societies, and thrift societies. The adoption of the vegetarian system by the nation would solve a great many of those grave and pressing problems which were perplexing alike statesmen and moralists all over England and Europe." This enthusiasm is harmless, and perhaps to a certain extent useful, in a nation of beef-eaters, while the vegetarians are to be congratulated on the happiness they evidently feel in being "so very superior."

Nov. 5th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

St. Oswald's Home for Friendless Girls.

THE foundation-stone of this valuable institution was laid at Cullercoats last week by Mrs. J. R. Burn, in the presence of the Bishop of Newcastle, a number of local clergymen, and others. The building is to cost £5600, of which sum Mr. J. R. Burn, with his usual liberality, has contributed £2000. The Society for Providing Homes for Waifs and Strays provides £500. The house will contain accommodation for fifty children. It is a Church of England institution.

Cruelty to Children.

Hardly a week passes without the Society for the Prevention of Cruelty to Children bringing before the magistrates in this neighbourhood cases revealing shocking neglect of children by drunken parents. Mr. Barnado says that some of the worst examples of child degradation he has met with come from Newcastle-on-Tyne. A few days ago a man and his wife were charged with exposing and neglecting their three children aged four years, two years, and six months respectively. Inspector Appleton found them all lying in an old pay office six feet square, on a miserable mattress, with only a few rags to covert hem. The children were benumbed with cold. The place was full of rags, bones, and pieces of old iron. They had slept there for four or five weeks. The infant had been born in an old coal-house. The father and mother were both drunkards. The infant weighed 9 lb. The bench sent the parents to gaol and removed the elder children permanently from their custody.

Amateur Operetta by Children.

A new operetta, *The Demon Spider*, by Miss E. G. Simpson, a grand-daughter of a well-known local medical man, and Mr. M. E. Lawson, was performed in the Art Gallery, Newcastle, on Wednesday, Oct. 30th, for the benefit of the Royal Infirmary. The house was crowded. The characters were all taken by children, and Mr. J. H. Beer, in the absence of Mr. Lawson, kindly conducted.

The Tyne Port Sanitary Authority.

At a meeting to-day of the Tyne port sanitary authority it was arranged to advertise for a medical officer in the place of Dr. H. E. Armstrong. The duties were defined and the salary fixed at £150 per annum, the officer to reside at the mouth of the river. It was suggested that Dr. H. E. Armstrong should be asked to accept the appointment of consulting medical officer, and in the public interest it is to be hoped this suggestion will be accepted, for there can be no doubt that the experience of Dr. H. E. Armstrong would be most valuable.

Tynemouth Victoria Jubilee Infirmary.

A cheque for £2000 has been received by the chairman of the above-named charity from Mr. R. T. Donkin, M.P., for the purpose of completing the hospital by the building of a new wing and a porter's lodge, and providing furniture. This generous gift of the member for the borough will be thoroughly appreciated by the inhabitants of Tynemouth.

Newcastle-on-Tyne, Nov. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Prosecutions by the Pharmaceutical Society.

REFERENCE has already been made to prosecutions at the instance of the Pharmaceutical Society of Great Britain, against various persons charged with contravening the Pharmacy Act, 1868. Two of these cases were carried from the Sheriff's Court to the Justiciary Appeal Court. One of the cases was against Mr. Hume of Edinburgh, who designated himself a "scientific instrument maker and technical chemist" and a "photographic chemist." The other was against Mr. Turnbull, and the question raised in his case was whether he had committed the offence of keeping open shop for the retailing, dispensing, or compounding of poison. Lord Trayner, in dealing with Mr. Hume's case, recognised the difficulty of the case. The Act had been passed for the safety of the public and forbids anyone keeping open shop for retailing poisons or using the title of chemist unless qualified and registered as the statute provided. He considered that the title "technical chemist" was within the statutory prohibition. The title of chemist was used in connexion with premises in which poisons were sold in small quantities, and the public, for whose safety and protection the Act was passed, were more likely than not to regard the title "chemist" without paying any attention to, or perhaps understanding, the qualification "technical." That the prefix of a qualifying adjective to the title chemist or druggist did not take the person using such title out of the statutory prohibition had been decided in England, where "botanical chemist" and "shipping druggist" had been treated as contraventions of the statute. Had these English decisions been to a contrary effect his lordship would not have dissented from them. They would then, he must admit, have been more in accordance with the inclination of his own mind. It was not desirable, however, that an imperial statute should be interpreted differently in different parts of the kingdom, and he was, therefore, prepared to follow them and decide accordingly. In doing so his lordship was doing the respondent no wrong or even putting him to any serious inconvenience, while he was only affording to the public the protection which this statute intended. With regard to the other case, he held that the shop in question was the respondent's shop, and it was certainly kept open, *inter alia*, for the sale of poisons in small quantities. The other two judges concurred in this finding. The agent for the Pharmaceutical Society did not ask for expenses, and stated that the society only wanted the point decided. The Lord Justice Clerk approved of this, as there was nothing whatever against the character of either of the respondents. They had not acted in a surreptitious manner at all. It was only technically that the court were obliged to come to the judgment they did.

Opening of the Royal Edinburgh Hospital for Sick Children.

On Thursday last week the new buildings of the Royal Edinburgh Hospital for Sick Children were opened by Her Royal Highness Princess Beatrice, who had travelled, accompanied by Prince Henry of Battenberg, from Balmoral for this purpose. Owing to the limited accommodation at the hospital comparatively few invitations were issued for the ceremony, even the staff of the Royal Infirmary not being honoured with them. After the usual preliminaries and the formal "I declare this hospital open," Her Royal Highness was conducted over the hospital. At each of the wards the Princess was asked to hand to each of the nurses a silver badge commemorative of the occasion. These badges were the gift of the physicians and surgeons to the hospital. The Princess named one of the wards the "Beatrice" ward. The old Sick Children's Hospital was situated in Lauriston-lane, but it was demolished a few years ago and the site sold to the Royal Infirmary for its extension. Since that time a building at Morningside has been used as a temporary hospital. The

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new hospital is situated on the south side of the meadows, within five to ten minutes' walk of the Royal Infirmary and the Medical School. The building is in the form of the letter E, the central block containing the administrative department, kitchen, and servants and nurses' bedrooms, as well as the medical and surgical theatres. The two arms of the building run southwards and are three storeys in height. The ground and first floors contain general wards, while the upper floors are devoted to observation, isolation, and spare wards. The four principal wards contain twenty-four cots each, the total accommodation in the hospital being 118 beds. The flooring of the wards is of teak, and the walls are finished with Parian cement polished to a smooth surface. The angles of walls and ceilings are rounded, and all ornamentation is excluded so as to avoid ledges for the harbouring of dust and microbes. Attached to the main building are an out-patients' department, mortuary, and pathological rooms, and laundry buildings. The hospital has been erected at a cost of £40,000, and seems on the whole to be a satisfactory example of the special type of hospital construction.

Edinburgh Royal Infirmary.

At the meeting of the managers of the Edinburgh Royal Infirmary on Monday a long discussion took place with reference to a sum of about £70,000 which shortly is to be paid into the coffers of the institution. It was decided that part of this money should go to wipe out the whole debt on the infirmary, which amounts to about £40,000.

The Presidency of the Royal College of Surgeons of Edinburgh.

Emeritus Professor Struthers has been elected President of the Edinburgh Royal College of Surgeons. The new president is a Fellow of some fifty years' standing.

Glasgow University.

The winter session was this year opened without any formal introductory address. At the first meeting of the class of physiology Dr. McKendrick gave an account of the work of Carl Ludwig, and discussed the limitations attending the application of physical methods of research to the problems of physiology. Professor Coats addressed his class on Ludwig and Pasteur, and claimed that the personal characters of these men of science formed a complete refutation of the statement that vivisection exercised a degrading and immoral influence on those who practised it. Professor Coats has been elected Honorary President of the Students' Medico-Chirurgical Society and has delivered an address on Immunity to Infective Diseases, Natural and Acquired. Mr. Jas. Carslaw, M.B., has been appointed Assistant to the Professor of Medicine, and Mr. Hugh Galt, M.B., Assistant to the Professor of Medical Jurisprudence. Dr. Fraser Harris is to show to the Glasgow Philosophical Society a new optical instrument known as the stereo-photo-chromoscope, the aim of which is to photograph an object in such a way that the "positive" of the picture, viewed as a transparency, will present the object with its natural colours and also with stereoscopic effects. At the meeting of the General Council on the 30th ult. considerable dissatisfaction was expressed at some of the recent Ordinances of the Universities Commission, and the opinion of several speakers, including Dr. McVail, seemed to be that the sooner the Commission was dissolved the better for the Scottish universities. Dr. McVail and the Rev. Dr. King have been re-elected as the representatives of the Council on the University Court for a further term of four years.

New Convalescent Houses for Murthly Asylum.

Two new convalescent houses have recently been erected by the Perth District Board of Lunacy, the object being to separate patients, who have to a considerable extent recovered, from association with those in whom mental disorder is still pronounced. The formal opening of the new houses took place on the 2nd inst., Lord Belvaird handing over the key of the new houses to Dr. G. M. Robertson, the medical superintendent. The visitors, amongst whom were Lord Provost Dewar of Perth and Dr. Yellowlees of Glasgow, were afterwards entertained to luncheon.

Gaelic Society of Glasgow.

At the opening meeting of this society the President, Dr. Campbell Black, delivered an address on Some Traces of Eastern Mythology in certain Celtic Superstitions.

Glasgow and the British Institute of Public Health.

The Institute has accepted an invitation from the corporation to hold their annual meeting next year in Glasgow, and a committee has been appointed to make the arrangements necessary for their reception.

Glasgow Obstetrical and Gynæcological Society.

At the first meeting of the session, held in the Faculty Hall, St. Vincent-street, on Oct. 30th, the following office-bearers were elected:—Honorary President: Sir John Williams, Bart., London. President: G. A. Turner, M.D. Senior Vice-President: Malcolm Black, M.D.; Junior Vice-President: J. Nigel Stark, M.B. Treasurer: Alexander Miller, L.R.C.P. & S. Secretary: Robert Jardine, M.D. Reporting Secretary: A. W. Russell, M.D. Pathologist: John Lindsay, M.B. Members of Council: Dr. Kelly, Dr. Cullen, Dr. Gunn, Dr. Jenkins, Dr. Reid, and Dr. Munro Kerr.

Glasgow Medico-Chirurgical Society.

At a meeting of this society on the 1st inst. Dr. Jas. A. Adams showed—(1) a woman on whom he had successfully performed excision of the pylorus for malignant disease; and (2) a patient who had suffered from a large ventral hernia which had been successfully operated on. Mr. A. E. Maylard showed—(1) a child on whom an inguinal colotomy had been performed for imperforate rectum; and (2) a boy who, as the result of a fall on the head, suffered from paralysis of the right upper limb and right facial spasm, these symptoms having been removed by trephining over the corresponding motor areas on the left side, with removal of a blood-clot which was situated between the dura mater and the bone.

Faculty of Physicians and Surgeons of Glasgow.

Dr. Bruce Goff has been re-elected President, Dr. James Dunlop Visitor, and Dr. James Finlayson Honorary Librarian to the Faculty.

Lifeboat Demonstration at Paisley.

An inaugural demonstration in aid of the Lifeboat Fund took place in Paisley on the 2nd inst., and some of the members of the medical profession took an energetic part in securing its success. Thus the chief marshal of the procession through the streets of the town was Mr. James Wallace, surgeon-dentist, who had for his principal assistants Dr. W. Wallace and Dr. R. Brownridge.

Aberdeen University.

At the meeting of the University Court held on Monday, Nov. 4th, the Lord Rector read a letter which he had received from Mr. C. W. Mitchell, who said he was pleased to hear that the University Court had decided to proceed with the North Tower of Marischal College. In his letter Mr. Mitchell quotes from a letter to Sir W. Geddes written by the late Dr. Mitchell, who said: "Lord Huntly, I believe, is endeavouring to raise a special fund of £20,000, and if £6000 of that amount can be collected soon, I would be prepared to contribute an additional £4000; further, if his lordship can increase his collection to £10,000, I will increase my subscription to £6000, thus making up the required £16,000 without appeal to the Government." "I now beg to confirm this offer," writes Mr. Mitchell, "subject to the consideration that your lordship's £6000 is collected by Jan. 1st, 1896, and the additional £4000 by May 1st." Lord Huntly said they were exceedingly grateful to Mr. C. W. Mitchell for so generously and nobly coming forward to homologate the wishes of his father, and he moved that the letters be referred to the executive committee with the request to take the necessary steps to raise the money and issue an appeal. This motion was seconded by Sir W. Geddes and agreed to.

Lord Provost Stewart's term of office has now expired, and as he is *ex officio* a member of the University Court this was his last meeting. The Lord Rector, on behalf of the members of the Court, expressed their regret at losing a member who took such a keen and practical interest in the progress of the University. At the same meeting the Court appointed to the Fordyce Lectureship in Agriculture Mr. James Wilson, M.A., B.Sc., who is at present Lecturer in Agriculture at the University College of Wales, Aberystwith. Mr. Wilson will take up duty on Jan. 1st next.

Nov. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Annual Distribution of Prizes at the Royal College of Surgeons in Ireland.

ON Monday last the annual distribution of prizes for the session 1894–1895 took place in the hall of the college. Sir

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W. Thornley Stoker, president of the college, who presided, addressed the students in eloquent terms and concluded by assuring them that he was in grave earnest when urging them to take enough relaxation in view of the severe routine of the medical education of to-day.

The Belfast Children's Hospitals' Staff Dinner.

On Tuesday, Oct. 29th, the medical and surgical staff (consulting and acting) of the Belfast Hospital for Sick Children, and of the Ulster Hospital for Women and Children, dined together at Thompson's Restaurant, Belfast. Including guests there were between thirty and forty present. Mr. John Fagan, F.R.C.S.I. (consulting surgeon to the Belfast Hospital for Sick Children), occupied the chair and proposed the special toast of the evening, "The Medical and Surgical Staffs of the two Children's Hospitals." He referred to the very happy feeling that existed between the two rival institutions, the ambition of both being to do the utmost possible good. He spoke of his own efforts in founding the first children's hospital in Belfast. Dr. McCaw of the Queen-street Hospital, and Dr. Calwell of the Mountpottinger Hospital, replied. A very pleasant programme of music was supplied by Dr. J. A. Lindsay, Dr. McCaw, Dr. McKisack, and Dr. Leslie.

Opening of the Medical Session.

The present winter session in the Belfast Medical School began on Oct. 29th at the college, when the professors commenced to lecture; and at the Royal Hospital on Thursday, Oct. 31st, when Dr. A. B. Mitchell, assistant surgeon, gave an inaugural address to the students on their duties, which was received with great favour. There was a very large attendance of the medical staff and of the students in the theatre, which has been enlarged, and which, when the new aseptic appliances are put in, will be in every respect an admirable operating-room.

The Notification of Infectious Diseases.

At a meeting of the Belfast Corporation, held on Nov. 1st, the Public Health Committee in their report again reaffirmed their opinion that the time has come when a thoroughly equipped hospital for the isolation and treatment of citizens suffering from infectious disease should be provided for the city of Belfast, and that such hospital should consist of not less than sixty beds, at an annual cost of £30 per bed (£1800). They were also in favour of the Notification of Infectious Diseases Act being adopted. The chairman of the Public Health Committee (Alderman Graham, M.D.) said that in Belfast 223 cases of infectious disease were notified during the last month (only a moiety of those actually occurring), and yet of these only 31 were treated in hospital. Of these cases 110 were scarlet fever, and yet only 10 of them were treated in hospital. The death-rate from zymotic diseases in Belfast was greater than in any other large town in the three kingdoms. Last year it was 4·10, while in Dublin it was only 2·4. The hospital, Dr. Graham thought, would not cost more than about £2700 each year. After considerable discussion, an amendment that the report be adopted, omitting the questions of the infectious hospital and of the Notification Act, was lost by 16 to 8 votes. The reasons which are advanced against the course recommended by the Public Health Committee are two: first, the increased expense, necessitating more taxation; and, secondly, the fact that the notification of infectious diseases would have to be made to the dispensary medical officers, who, in each of their districts, are the health officers, and not to the medical superintendent of the city. This arrangement, in case the Act is adopted, will have to be altered so that there will be one principal central health officer to whom notification can be made, and not a divided authority.

The Health of Belfast.

At the present time the health of the city of Belfast is very bad. The last reported death-rate was 23·1 per 1000, while last year at the same time it was only 17·7. In zymotic diseases, chest affections, and in the total from all causes, the deaths are largely in excess of the normal. The cases of infectious disease are more numerous than ever previously noted. Scarlet fever is very prevalent in every district of the town; the cases of typhoid fever are also very numerous, and measles has reappeared. With existing arrangements, neither isolation nor proper treatment of infectious disease can be enforced. The cases returned to the city medical officer of health are only those occurring amongst the poorer classes; he knows nothing as to the prevalence of infectious disease amongst the well-to-do people. Until the Notification of Infectious Diseases Act is put in force, and a new hospital built for the treatment of such cases, epidemics of scarlet fever or typhoid fever cannot possibly be dealt with in Belfast.

Night Nursing at the Ballycastle Workhouse.

The Ballycastle Board of Guardians having by fifteen votes to four declined to appoint a competent night-nurse, notwithstanding that their own medical officer reported that such an appointment was absolutely necessary, the Local Government Board wrote stating that if the guardians did not take the necessary steps to appoint a competent trained night-nurse they would issue a sealed order placing the management of the workhouse in the hands of law officers. As a result of this threat the board, on Nov. 2nd, decided to advertise for a trained nurse with a knowledge of midwifery, at a salary of £20 per annum, with rations and apartments.

A Hospital Sunday for Belfast.

At a meeting of clergymen representing the various religious denominations, held on Nov. 4th, it was decided that the last Sunday in November shall henceforth be held as Hospital Sunday, the day chosen for collection in the churches of Belfast on behalf of the Royal Hospital.

Larne Water-supply.

The engineer employed by the Larne town commissioners reports that the present supply from the Sallagh springs is quite ample if stored. The reservoir will hold 9,500,000 gallons, and its elevation will command the highest house in Larne. The engineer gives particulars of new works required and estimates the total cost at about £4200. The matter is not yet finally settled, but it is hoped that such an important seaside resort as Larne will soon be provided with an adequate water-supply.

Proposed Increase of Salary for the Visiting Medical Officers of the Cork Union Hospital.

Some months ago the guardians of the Cork Union decided on increasing the salaries of the visiting physicians to the Cork Union Hospital by £25 a year each, but the Local Government Board wrote refusing their consent. Last week the guardians unanimously passed a resolution expressing their entire approval of the manner in which the medical officers have discharged their duties and urging that in the interests of the ratepayers a salary of £125 a year ought to be paid to each of the medical gentlemen. It remains to be seen whether the members of the Local Government Board residing in Dublin will consider that they are the most competent judges as to what is best for the Cork ratepayers and for the sick poor in the Cork Union hospitals.

The Annual Dinner of the Cork Medico-Chirurgical Association.

The annual dinner of the members of this association was held at the Imperial Hotel on Saturday last, and was a great success. Dr. Giusani, president of the association, was in the chair. A number of toasts were proposed and responded to, and a very enjoyable evening was spent, music and song forming an important part of the programme. These social reunions do much to bind the members of the medical profession together, and just now union is everything to the Cork men.

Nov. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Statistics of Hernia.

PROFESSOR BERGER of the Paris Faculty furnishes us[1] with the result of his examination of some 10,000 patients who applied for trusses at the Bureau Central from Feb. 4th, 1881, to Aug. 11th, 1884. The information thus gathered differs materially in many respects from that currently met with in standard works, and for which Malgaigne and the Truss Society of London are responsible. The applicants consisted of 7433 males and 2534 females (or three males to one female). Of the males of all ages affected with simple or multiple hernia 96 per cent. have the inguinal variety. Of 6220 hernia in the male, 4526 were double inguinal and 1042 simple inguinal (or 4·34 double to 1 single). This is in direct contradiction to all known statistics, and goes to prove

[1] French Surgical Congress, 1895.

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that in the immense majority of cases inguinal hernia is a double process pursuing a synchronous or successive evolution on the two sides of the body in the same individual. Right inguinal herniæ are to left as 1·46 to 1. In bilateral inguinal hernia the right and left swellings are equal in volume to 42·2 per cent. in adults and 65·03 per cent. in adolescents, when irregularity exists the right is generally larger than the left. Many cases of budding (small) hernia escape observation, so much so that double hernia is even more common than would appear from the above figures. It is impossible in every case to assert the congenital origin of a hernia. In only 479 instances (216 above and 263 below fifteen years, 166 being complicated with testicular ectopia and forty-eight with other congenital malformations) was Professor Berger able to do this. The right side offers a manifest predisposition for the congenital form which is very rarely bilateral. The funicular variety (Birkett's "hernia into the funicular portion of the vaginal process of the peritoneum"), which is very frequent, is indistinguishable from acquired hernia. There are no certain means of distinguishing in the living subject direct inguinal from external oblique hernia. In females simple or double inguinal hernia alone, or associated with other varieties, occurs in 44·6 per cent.; the simple is about thrice more common than the double in infancy, but only twice as frequent in adolescence and maturity. Femoral hernia is rare in hernial males (6·6 per cent.), and it is in the majority of instances associated with other varieties, almost invariably the inguinal. Double is about as frequent as simple femoral hernia; right femoral is rather more commonly met with than the left. In females only 37·1 per cent. of hernial subjects have femoral hernia; *crural hernia in females is, therefore, less common than inguinal hernia* (1 to 1·35). In a certain number of cases the crural hernia escapes directly *in front of* the femoral vessels. The association of an inguinal hernia on one side, with a femoral hernia on the other, is sufficiently common, especially in the male (most commonly right femoral with left inguinal). Professor Berger has met with 207 examples in the male and only 19 in the female of uni- or bilateral co-existence of femoral and inguinal hernia. The most frequent combination is inguinal and femoral on one side with inguinal on the other (69 cases). Of herniæ in the male, 5·46 per cent. are *umbilical;* in the female, 27·34 per cent. Above fifteen years of age umbilical hernia in the male is almost always associated with other varieties (119 cases out of 134); below that age it co-exists with single or bilateral inguinal hernia in rather less than half the cases. In the woman umbilical hernia is invariably unaccompanied with other varieties. In the infant of either sex it is frequently associated with sub-umbilical eventration. Hernia through the linea alba and epigastric hernia are more commonly met with than is generally believed. Of the total number of herniæ, they represent 1·37 per cent. (Macready's figures are 0·096 per cent.). They are much more common in the male than in the female; they are sometimes multiple (Professor Berger has seen four superposed herniæ through the linea alba), and seem to be the remains of the aplasia of the linea alba which constitutes in the infant sub-umbilical eventration. Twenty-nine laparoceles in the female, and only 9 in the male, 1 case of obturator hernia, 2 of lumbar hernia, 4 hypogastric and 4 cicatricial herniæ make up, with the preceding, 13,483 herniæ noted in 7433 males of all ages; 2534 female subjects furnished only 3317 herniæ. The proportion of herniæ to the subjects of them are in the male sex 2 to 1, and in the female sex 1·3 to 1. Professor Berger calculates that in the Department of the Seine there is for every 14·9 males, for every 44·7 females, and for every 22·3 of all ages and sexes, 1 affected with hernia. In the male the frequency of simple inguinal hernia, very marked in the first five years of life, especially for the right side, diminishes rapidly up to thirty years, then increases up to a second maximum at fifty-five years. Double inguinal hernia, rare in infancy, increase rapidly in frequency from thirty to forty-five years, less rapidly from forty-five to sixty-five, and then decrease. Congenital inguinal hernia is extremely common during the first five years of life; they then diminish very rapidly in frequency, or are only seen associated with other varieties between thirty-five and fifty-five years. This is a proof that nearly all cases of congenital hernia disappear spontaneously or under the influence of a truss. The radical cure of these herniæ is, therefore, apart from exceptional cases, unjustifiable during the first four years of life. Femoral herniæ, exceptional in the male children in whom it always is simple, hardly begin to show themselves towards the age of thirty; their maximum of frequency is between sixty and seventy years. Simple umbilical hernia in the male is very common in the first year; from the fifth year onwards it practically disappears. Associated with other varieties, however, it is seen in middle and especially in advanced life. Epigastric hernia, rare in the male child, is hardly seen until after the age of thirty. Multiple herniæ are rare in the male child, less rare in adolescents, but frequent in adults, and especially in old men. In the female the dominant form in early years is the umbilical, which is extremely common; it disappears almost entirely between ten and thirty years, but becomes again more common after the latter period. Inguinal hernia increases in frequency between the ages of five and thirty, and both it and the crural variety from the latter age up to seventy, when both decrease rapidly. The majority of inguinal herniæ (in the male) appear first between forty and fifty years of age (congenital herniæ are not counted). Left inguinal herniæ appear later than right. Congenital inguinal herniæ make their appearance mostly very early in life; this may, however, be deferred to the first or second childhood, or even to puberty, or again to a later period. In the female inguinal hernia appears somewhat earlier than in the male (from thirty to thirty-five years). Femoral hernia appears most frequently in woman between the ages of thirty-five and forty-five, in man between forty and forty-five, the maximum of frequency in woman corresponding, as for inguinal and a certain number of umbilical herniæ, to the period of sexual activity. Umbilical hernia is congenital, or appears during the first year in nearly all cases in males, and in the great majority in females. In woman, a large proportion appearing after thirty years, it is a question whether these subjects are not congenitally affected, and whether pregnancy has not been the aggravating cause. Professor Berger has discovered that the average age at which hernia first appears in individuals affected with multiple or double varieties (especially double inguinal) is much more advanced than is the case in the subjects of simple hernia. This would seem to prove that simple hernia is more often congenital in origin, whilst the double or multiple are acquired. The interval (very variable) between the appearance of two herniæ in the same subject is longer for congenital inguinal herniæ than for all other varieties of hernia. In acquired inguinal and in double femoral hernia the interval hardly exceeds ten years; in a good third of the cases the bilateral herniæ development is simultaneous. Hereditary influence was noted in 2079 out of 7542 cases. This hereditary predisposition is especially homosexual (from father to sons and from mothers to daughters). In families in which the hernial heredity was noted, 1 in 3, or even 1 in 2, members had hernia, thus demonstrating the existence of hernial families. The influence of occupation in the production of hernia is undoubted (manual labour and, also, work in the erect posture). Certain sedentary occupations requiring a forward inclination of the body and repeated efforts predispose particularly to hernia. Parturition favours hernia, as is shown by its enormous frequency in multiparæ. It is especially after labour, rather than during pregnancy, that hernia appears, although some already existing herniæ only then increase in volume. Diseases of the respiratory organs favour hernia; urinary affections and habitual constipation have hardly any influence. Amongst occasional causes unusual muscular effort whilst in a *false* position or whilst carrying a burden is prominent. ¡Cicatricial hernia are, according to Professor Berger, rarely seen. Irreducible hernia is comparatively rare (1 in 28); it is commoner in femoral than in inguinal, in umbilical and epigastric than in femoral, and more frequent in woman than in man. It is less commonly seen in herniæ subjected to the pressure of a truss than in others. Functional troubles (colic, local pain) are observed in cases of voluminous and partially irreducible herniæ. Dyspeptic symptoms are very frequent in male subjects with epigastric and in female subjects with umbilical ruptures. Of 10,000 hernial subjects of all ages and both sexes 3·31 per cent. had suffered at one time or another from serious complications connected with the hernia. These complications were more frequent in the female (5·34 per cent.) than in the male (2·46 per cent.), in femoral hernia (6·45 per cent.) than in umbilical (1·91 per cent.) or inguinal (1·45 per cent.). Of these complications, strangulation (serious 250 cases, mild 43 cases) was the most common. The wearing of a truss appears to exercise no

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influence one way or the other in inducing the appearance of complications which are liable to recur. They are more frequent in old than in recent hernise; they are more serious in woman than in man, in femoral than in other varieties. In more than one-half of the cases of strangulated femoral hernia in the woman kelotomy had to be resorted to. Thus, while females are much less liable to hernia than males, complications are more frequent, and these complications are more serious in their nature. *This is an important point in life assurance reports.* Strangulated hernia, with or without operation, does not, however, appear to involve a high mortality (about 1 per cent.). There is, therefore, one condition without which the operation for the radical cure of hernia is unjustifiable—and that is its innocuousness. The foregoing *résumé* of a most valuable paper is, unfortunately, rather diffuse. The vast importance of the subject is, I imagine, a sufficient excuse for this long-windedness, and the profession owes a debt of gratitude to Professor Berger for his painstaking researches.

Nov. 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Sixth Congress of Internal Medicine.

By a not altogether desirable arrangement the forenoon sitting on Oct. 23rd was devoted, not to the discussion of the report on Sero-therapy—an account of which was published in the last issue of THE LANCET,—but to the reading of the paper by Professors De Renzi and Reale on the Decline of Nutrition in the Human Economy. Professor De Renzi, who holds the chair of Clinical Medicine in the Neapolitan school, took up the first part of the subject, and after an elaborate and interesting exposition he came to the conclusion that there is a group of maladies presenting characters in common—characters hitherto attributed to a decline, slackening, or falling off (*rallentamento*) in metabolism. But the genesis of these maladies—at least, in some cases—cannot unreservedly be ascribed to this *rallentamento*. With more probability must we seek their cause in the diminution of the oxidising processes and the position as regards aeration (*posizione aerobia*) of the tissues. By such perturbation in nutrition are developed acid products and substances peculiarly toxic, above all in the nervous system. A character common to nervous disturbances in these affections is their manifesting themselves mainly in the night, when, by the patient's reposing in bed, there is a considerable diminution in the consumption of oxygen and in the elimination of carbonic acid. The principal remedy in such cases consists in the diminution of food and in exercise, while benefit may be derived from a special alimentation and from diverse modes of treatment, chemical and physical. But it is not improbable that with the discovery of oxidised *media* or ferments extracted from the tissues we may attain a rapid and complete cure of these maladies. The remainder of the subject was dealt with by Professor Reale, assistant to Professor de Renzi. His positions were these: The received doctrine of nutrition is based on two orders of facts, first, those which have regard to the organic equilibrium, and secondly, those which concern the bio-chemical processes carried on in the *vie intime* of the tissues. Research into the organic equilibrium of the healthy subject is far advanced as compared with that into the unhealthy or diseased, which latter, indeed, can hardly be called "initiated." The former must be our main guide in studying the alterations in the material exchange (metabolism). Experimental investigation into the *vie intime* of the animal tissues establishes the existence of a *funzione anarrobia* which is not in opposition to the data of the pathology of metabolism. Decline of nutrition is not manifested under one form only. Diminished energy of exchange in the cellular elements, strictly so called, is found only in polysarcia adiposa. It is wanting in all the other affections commonly held as kindred, diabetes included. In these latter we are confronted, as a characteristic note, with the fact that a part of the material of decomposition abandons the tissues incompletely oxidised. The appearance and the augmented elimination of some principles really indicate an alteration in the intimate nutritive exchanges of the tissues, and peculiarly in the deficiency of organic oxidation. Recent studies diminish the value hitherto attached to uric acid, withholding confirmation from its claim to be a product of the decomposition of albumin; but not so for oxalic acid, to which the same studies revindicate the importance originally assigned to it. To determine the degree of insufficiency of the oxidative products (*prodotti ossidativi*) in the organism we have at length a sound method—by comparative researches on individuals themselves in determining the relation between the neutral sulphur (*solfo neutro*) and the acid sulphur (*solfo acido*) of the urine. This closed the forenoon sitting. After luncheon began the discussion of the previous day's report on Sero-therapy. Professors Guiffré, Petrone, Fazio, and Senise made diverse criticisms, agreeing, however, that those who had watched closely the patients treated with the Maragliano serum found the results surprisingly favourable. After this the discussion took a theoretical turn and brought Professor Foà to his feet in reply. Admitting that sero-therapy was still on its trial, and that in tuberculosis particularly the laboratory has much to prove, while the clinique is by no means entirely convincing, he maintained that the therapeutic art, with its new agent, was on the right track and the desired goal not far distant. Professor Maragliano next availed himself of his right to reply, and said that as a clinician he reduced his claim to the narrow compass of being able to prove that his serum is a true adjuvant to the treatment of tuberculosis—always subordinating the seductive findings of the laboratory to the test of tests—that of the bedside. By permission of the President the Neapolitan Professor von Schrön was allowed to speak in supplement to Professor Maragliano. The tenour of his remarks was on the whole favourable to the serum in tuberculosis. Too early in the day for a definite judgment, we may yet claim, he thought, for the Maragliano agent an increase in the number of cases of tuberculosis in the primary stage. The forenoon sitting of the 24th was occupied with miscellaneous subjects, the first of which, as handled by Dr. Queirolo and Dr. Caramelli of Pisa, on the Ictus Cordis, was especially interesting. Cognate to this, and equally well discussed, was the paper of Dr. Bonetti of Padua on the Morphology of the Heart, while Dr. Gay of Pinerolo read a useful monograph on Infantile Paralysis. The afternoon witnessed some "slaughter of the innocents" in the suppression or perfunctory hearing of other papers, some of which yielded in interest and expository power to none of the preceding ones. The sittings of the 25th were similar in their tenour, the papers most likely to form the chief attraction of the official "Atti" (proceedings) being Professor Lucatello's on Puncture of the Liver with a Diagnostic Aim, Dr. Pittarelli's Studi Urologici, and Dr. Mennella's on the Treatment of Anæmia and on Velocipedism. Dr. Baccelli (President), *à propos* of a paper by Professor Reale on Nitrate of Silver in the Therapeutics of the Stomach, described some cases of follicular disease of the pylorus in which he had found the nitrate wholly successful. The Congress was thereafter closed by an eloquent discourse from Professor Rummo, who, in the absence of Dr. Baccelli, was called to the presidential chair; and preparations for its successor, the seventh, were made by the appointment of an organising committee, of which Dr. Baccelli was re-elected president, Professors Mirri and De Renzi vice-presidents, Professor Maragliano secretary, and Dr. Rossoni treasurer.

A Warning to Tourists.

Italian vineyards have of late years been heavily visited by the peronospora, and to counteract it sulphate of copper has been freely powdered over the stems, the shoots, the leaves, and even the grapes themselves. In consequence the vine and its product have become so charged with copper as to be a fertile source of poisoning. So frequently has this been the case that in some communes the sanitary authority prohibits the use of vine-leaves as wrappages for butter, while, as to the grapes themselves, so favourite an adjunct to dessert, they have proved in many instances positively dangerous to the consumer. Gastro-intestinal irritation in every degree up to active poisoning is quite a common sequela to their consumption, so much so indeed as to add a new terror to the sojourner in *pension* and hotel. In the better class of these houses the grapes are well washed before being put upon the table, and even then they are none the worse for an extra dip or two in the finger-glass, or, failing that, in the tumbler. In Italy, indeed, where medieval uncleanliness pervades even city life, it is always well to wash one's fruit in this way before tasting it at dinner—a glimpse of the hands through which it has previously passed

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sufficing to justify the precaution. But in the matter of grapes the powdering of vine-leaf and fruit with cupric sulphate makes previous washing of them doubly necessary on the consumer's part, if he would minimise the risk of severe colic or worse. Nor is it from the grape alone that the danger of copper poisoning is a real one in Italian hotels. The other day in the Neapolitan territory, on the opening of a new railway line, I read of a banquet in honour of the occasion, at which between thirty and forty of the company's employés sat down. Every one of them before regaining his home was the same evening attacked with the severest abdominal pains all too traceable, it is said, to poisoning due to verdigris adhering to the culinary pots and pans. From the same cause, as opportunely reported in THE LANCET not so many months ago, some forty patients in the great hospital of the Santa Maria Nuova in Florence were seized with excruciating tenesmus, and, as there was a "cholera shadow" on the wing, the alarm so occasioned extended beyond the specially visited ward and threw the whole establishment and neighbourhood into not unjustifiable panic. Medical inquiry soon set the matter at rest, however, having ascertained that the culinary apparatus in use at the hospital was foul with verdigris, the irritant properties of which had been liberated in unusual proportion by some accidental ingredient employed in cooking. Italian winter cities are apt to grumble if for a season the travelling world gives them a wide berth. Does it never occur to them that they themselves are often more prolific of deterrents than of attractions, and that a more hospitable view of the "foreign import" than as a source of revenue should prescribe on their part a little more attention to sanitary and culinary law? They may look on the stranger within their gates as a "goose"—but then he is a goose that lays "golden eggs"; and their wisest policy is to keep him in good case, to do anything to him but "kill" him.

Nov. 1st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Gout.

HORBACZEWSKI'S opinion that there is a constant proportion between the number of white corpuscles in the blood and the amount of uric acid excreted has been refuted by Dr. Kolisch, who stated at a meeting of the Vienna Medical Society that from the nuclein there originate albumin and nucleinic acid, the latter again forming phosphoric acid and an unknown substance which transforms itself into uric acid and the so-called alloxur bases. As long as the kidneys are sound all the products of the decomposed nuclein are excreted as uric acid, but in renal disease the formation of uric acid is incomplete, and in its place there occur alloxin bases. There is a certain connexion between true gout and some forms of renal atrophy, but the nature of this relation is not yet cleared up. The analogy of these diseases of the kidneys with those occurring in lead poisoning, and the further fact that lead may play a part in the etiology of gout, support the theory of the toxic nature of gout. Dr. Kolisch has succeeded in proving experimentally that there is an increase of alloxur bases in the urine of gouty patients, and he therefore supposes these substances to be the cause of gout. During normal action of the kidneys the greater part of the alloxur bases is excreted as uric acid; but when the structures which form uric acid are enfeebled there is an increased excretion of alloxur bases, with concomitant toxic effects. The most probable explanation of the uric acid diathesis is the existence of a congenital inherited tendency to an abnormal decomposition of nuclein. The substances thus originating do not impair the kidneys rapidly, for at first their toxic effect is counteracted, but in the course of years the kidneys become disordered, lose their power of counteracting the toxic effects of the nuclein products, and the health of the individual gives way. A fit of gout is, therefore, due to an overcharging of the organism with the products of the decomposed nucleins. Gout cannot be treated specifically, for there is no remedy which can diminish the inherited tendency to the decomposition of nuclein; but the patient must avoid all that is likely to increase the quantity of these products or to injure the kidneys. The beneficial effect of the alkaline treatment is probably due to the fact that by it the energy of the kidneys is increased. There is no ground for reducing the amount of albuminous food with the exception of tissues containing nuclein. Boiled meat is to be allowed, and also milk, eggs, and fat. Gout may be easily diagnosed, especially in children, by the so-called perinuclear basophilia on microscopical examination of the blood or by the occurrence of alloxur bases.

Pigmentation of the Skin after the Use of Arsenic.

At the last meeting of the Vienna Medical Society Dr Schlesinger exhibited a patient who had been taking Fowler's solution on account of a tumour in the right arm-pit, and after three weeks' use of it he noticed a discolouration of the skin. Pigmentation of the skin due to the use of arsenic was first observed some thirty years ago in a case of psoriasis. As a rule it commences gradually, and there is no pigmentation of the mucous membranes—a circumstance which distinguishes these cases from Addison's disease and argyria. The total quantity of arsenious acid taken by the patient amounted to 0·464 gramme (about 7 grains). Mathieu has published a case in which a patient took arsenic for ten years without sustaining any harm, but discolouration of the skin occurred when the daily dose was increased. Dr. Schlesinger advocated the use of arsenic in cases of lymphosarcoma, for the patient showed no other ill-effects attributable to the arsenic, and there was perceptible retrogression of the tumour.

Riotous Behaviour in the University.

Some days ago the University was the scene of disorders which have not failed to cause a general sensation. According to an old custom all the students' societies were present at the inauguration of the Rector Magnificus, which is celebrated with great pomp. But there is an old feud between those students who fight duels and those who refuse to do so, the latter, as true Catholics, condemning the practice from the religious point of view. Nevertheless, they appeared in the *aula* of the University with sabres, a proceeding which caused a great commotion, for the so-called "fighting" students tried to compel them to leave, and a scuffle ensued; but quiet was restored by the intervention of the Pro-Rector, who exhorted the students to respect the dignity of their *alma mater*. Charges against eighteen students have been laid before the Senate of the University, and the Rector has prohibited the so-called "Bummel," a promenade in the *aula*, which takes place every Saturday.

The Dermatological Congress at Gratz.

Tertiary syphilis was one of the subjects discussed at this gathering. Dr. Caspary (Königsberg) said that statistics have not proved that it is prevented by the intermittent treatment proposed by Fournier. He recommends the so-called symptomatic treatment in slight cases of secondary syphilis, and makes use of Fournier's method in grave secondary and tertiary forms. Dr. Meisser (Breslau) said that the omission of energetic mercurial treatment during the early stage of syphilis seems to be the most important factor in the etiology of tertiary symptoms. Mercurial treatment should be commenced as soon as syphilis is satisfactorily diagnosed, and in this case it sometimes happens that no relapse occurs during ten years. A proof of the etiological relations between neglected or insufficient mercurial treatment during the early stage of the disease and the eventual occurrence of tertiary manifestations is the prevalence of endemic syphilis in localities where it is not methodically treated.

Professor Vogl.

The Pharmaceutical Society of Great Britain has presented the Hanbury Medal to Dr. August Vogl, the Professor of Pharmacology. This is the eighth award of this medal, which was presented in 1881 to Flückiger, in 1883 to John Elliot Howard, in 1885 to Dragendorff, in 1887 to Dymok, in 1889 to Plaichon, in 1891 to Hesse, and in 1893 to Maish.

Medical Fees.

The country practitioners of Lower Austria are at present discussing the question of medical fees. Dr. Läufer has proposed the following tariff: advice at the house of the physician, 8*d.*; first visit to a patient's house, 1*s.* 3*d.*; all subsequent visits, 1*s.*; night visits, 2*s.* 6*d.*; a subcutaneous injection, 10*d.*; an injection with antitoxin, 3*s.* 4*d.*; putting up fractures, 9*s.* 10*d.*; herniotomy or tracheotomy, £1 5*s.*; amputation, £1 15*s.*; induction of premature labour, 16*s.*; and microscopical examination for bacteria, 3*s.* 4*d.* If the patient sends for another practitioner the one already in

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attendance is to be informed of the fact, and when a patient desires to change his medical adviser the practitioner called in is not to undertake the case unless his predecessor has been paid.

Cholera in Galicia.

During last week 57 cases of cholera, with 32 deaths, have been reported from the districts of Tarnopol, Czortkow, Husiatyn, Kamionka, and Przemysl, making a total of 196 cases with 123 deaths since the commencement of the outbreak. In the preceding week there were 19 cases and 18 deaths.

Nov. 3rd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

DURING the last twenty-four hours 7 new cases and 2 deaths have been reported from the infected districts. Since cholera was first officially declared on Oct. 13th there have now been 266 cases discovered, including 148 deaths. Allowing for the probable existence of a few mild cases which have not been reported, these numbers give a mortality of about 50 per cent. The districts may be geographically divided into four: Damietta and its suburbs have furnished 59 cases and 36 deaths, the medical officer of the district being Dr. Pinching; in Menzala and its neighbourhood there have been 167 cases and 94 deaths, and on the canal between Mansoura and Menzala 19 cases and 11 deaths, all being under the inspection of Dr. Graham, who has been lent for this work by the Egyptian Army; Fakus, a small town in another province, has furnished 21 cases and 7 deaths, and the whole of this neighbourhood is under Mr. H. Milton. Dr. Keatinge, moreover, has been despatched to Mansoura to carry out sanitary reforms begun there last week by Dr. Sandwith. Each of these medical men has a competent police officer attached to him and as many native medical men as he wants. It seems to be admitted without argument by all nationalities that it is only Englishmen to whom the energetic work of stamping out disease can be entrusted. It is satisfactory to see that cholera has as yet not spread beyond the places where it was originally discovered after active search. The abominations of land quarantine and sanitary cordons are not being used, but a constant series of inspections of all barges and their passengers has been instituted on the Nile and canals between Cairo and the infected spots. Dr. Rogers Pasha returned to Cairo from England a week ago and has organised a system which ought to be sufficient to eradicate the existing bacilli. His greatest ally is the Nile in flood, the current of which flows in the direction exactly opposite to that of the cholera march.

Precautions at Mansoura.

English readers may like to know some of the principal points which are likely to occupy a sanitary reformer in an Egyptian town threatened with cholera. Mansoura has a population occasionally reckoned at 40,000, and sometimes at 60,000, but with no proper sanitary inspection. There is an attempt at a town council, but it consists entirely of natives and is quite useless. The drinking-water all comes from the Nile, and instead of being taken from stagnant pools near fouled banks must be drawn from the current itself a few yards out. Rafts for this purpose were made in two days, and every drinking place and the whole bank were placed under constant inspection. This was a very popular measure in the eyes of even the natives. The streets, the markets, and stables were all ill kept, and the organisation for scavenging existed only on paper. It is chiefly for this kind of work that young English police officers are admirable. A sanitary commission already exists for the town consisting entirely of unintelligent natives, so an attempt was made to leaven it by inducing the Mudir to add to it two European merchants. Most mosques have a public latrine attached to them, and all these have to be carefully inspected and the cesspools emptied out. Arrangements had to be made for both the sick and the dead in the event of cholera occurring either among the natives or among Europeans. This matter becomes complicated when one remembers that every European's home is sacred to him and to his Consular authority. Woe betide the Anglo-Egyptian if he happens to "infringe the domicile" of a French Syrian. A supply of disinfectants had to be summoned from Cairo to replenish the hospital stores, and all the quicklime of the town was bought up by the Mudir. Medicine for possible cases of diarrhœa was distributed gratis throughout the town, and huts for 36 patients were rapidly erected to make the nucleus of an infectious hospital to the south of the general hospital. The public baths, the prison, and the schools all had to be examined and reported upon, and certain salutary changes effected. It is impossible in a short space to describe the manifold duties of the moment, and it is quite possible that even better work is now going on in other towns and villages. The natives work extremely well under Englishmen, though they do absolutely nothing if left alone. They say themselves that they are contented with merely giving orders, whereas the Englishman goes the next day to see if his orders have been carried out.

Cairo, Oct. 30th.

Obituary.

RICHARD BASIL MORLEY, L.R.C.P., L.R.C.S. EDIN.

THE news of the sudden death of Mr. Morley at the early age of forty-three when in apparently perfect health came as a painful shock to his many friends in Leeds. He was the son of the late George Morley, for many years one of the leading practitioners in Leeds and lecturer on forensic medicine at the Leeds School of Medicine. Mr. Basil Morley began his medical career comparatively late in life. Of genuinely scientific and speculative tastes, he had found business uncongenial, and he entered as a student of the Leeds School of Medicine, where he was greatly distinguished amongst the men of his year in winning honours and prizes. He qualified in 1883 and became resident officer at the Leeds Public Dispensary. He then began practice at Chapel Allerton, Leeds, where for nine years he had a name for thoroughness of work and kindliness to the poor. Mr. Morley was always a lover of nature, and delighted especially in country work. He was a man of such an unusually quiet and retiring disposition that comparatively few of his professional brethren knew the breadth of his mental endowments or the force and depth of his personal character. To his friends and patients he was greatly endeared by his kindly and genial disposition and his gentle and generous heart. The cause of his death was cardiac syncope. He had ridden out three miles into the country upon a bicycle to visit a poor patient, and, sitting by her bedside, he fell forwards suddenly from his chair and almost immediately expired. The very large number of mourners who filled the churchyard at his funeral testified to the public esteem which he had won in his short professional life.

JAMES MATHEWS, L.R.C.P., L.R.C.S. EDIN., L.A.H. DUBL.

PUBLIC feeling in Cavan has been deeply moved by the death of Mr. James Mathews, who passed away on Oct. 20th after a short illness. The deceased gentleman's blameless life, gracious manner, and devotion to the interests of his patients, united in procuring for him an enviable position in popular esteem. He came of a talented family, many members of which as priests have devoted themselves to the spiritual welfare of their fellow creatures, and his natural abilities found congenial exercise in the acquisition of professional knowledge during the long period which has elapsed since he entered into practice in 1860. On Oct. 22nd a solemn mass for the dead was said in Cavan Cathedral and the interment took place in the burial ground at Laragh in presence of a very large assemblage. Mr. Mathews leaves a sorrowing widow and family.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Otto Janicke, chief medical officer of the Augusta Hospital, Breslau, after a short illness. He was a comparatively young man and was greatly esteemed for his skill in operative surgery.—Dr. Hermann Fischer of Berlin, formerly Professor Langenbeck's assistant. He, however, gave up surgery and practised as a homœopath.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual meeting of Fellows and Members of the Royal College of Surgeons of England was held on Thursday afternoon in the Hall in Lincoln's-inn-fields, London. Mr. CHRISTOPHER HEATH presided.

The Council's Report.

The PRESIDENT formally presented the annual report from the Council, extracts from which have already been published. In doing so he gave a welcome to those attending the meeting, and ventured to remind them that they, the Fellows and Members, were the corporation of the College. That he found was a fact that was very often overlooked.

Surgeon-Major INCE moved: "That the Fellows and Members here assembled in annual meeting desire to thank the Council for the interesting and important report now presented, and particularly to express their approval of the new By-laws, Sections 4 and 16, and of the Regulations of the Council, Section 25, relating to the meetings of the Fellows and Members of the College." He desired, he said, to express sympathy with their esteemed secretary.

The PRESIDENT asked Surgeon-Major Ince to confine himself to the business and be as brief as possible.

Surgeon-Major INCE said he apologised. This, he went on to say, was the third time he had moved a motion of the kind. He trusted it would be the last, because he thought the motion should come from a Fellow rather than a Member. The motion was very necessary and it was desirable. By accepting such a motion the Council conceded to them the privilege of criticising their administration of the affairs of the College, and if these annual meetings were continued, they should in the course of time acquire a prescriptive right to have annual meetings. That was an important reason why a motion of this kind should be brought before the meeting. Surgeon-Major Ince was proceeding to raise an educational question when the PRESIDENT again interrupted him, asking him to confine himself to the motion.

Surgeon-Major INCE thereupon formally moved the resolution.

Mr. GANT seconded.

Mr. GEORGE BROWN did not know how they should accept such a motion. They did not know what the by-laws referred to in it were, and he was quite sure the Council did not require a formal expression of the Members' and Fellows' approbation. They should drop this and go on with the more important business on the paper. He moved the previous question.

Mr. BRINDLEY JAMES seconded this amendment.

The PRESIDENT at once put the proposal to the meeting, and the previous question was carried by a majority.

Reform in the College.

Mr. JOSEPH SMITH rose to move: "That this meeting requests the Council to take steps to obtain an amended Charter which shall contain the following provisions: (*a*) that no alteration in the constitution and external relations of the College shall be effected without the consent of the body corporate convened to discuss such alterations; (*b*) that the present annual general meeting be made statutory, and that the report of the Council shall be submitted for formal adoption; (*c*) that the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council." He said it was continually being asked: Who were the men who were agitating for reform? Where did they come from? What was their standing? Members of the Council were continually harping on this string, suggesting that those who asked for reform were nonentities. But what he had to tell those members of Council in reply was that for the last ten years resolutions asking for reform had been carried in that building by crowded meetings from all parts of England. It did not matter what was the membership of their association, whether it numbered 5, 50, or 5000. They spoke in the name of those men who had met for years and years, and in the name of 5000 men whose signatures were attached to a petition which at present lay at the Home Office, asking what they were demanding here. Yet they were held to be an insignificant body.

The PRESIDENT suggested that the proposal should be taken in sections.

Mr. SMITH said he wished the proposal to go forward as a single resolution, but he was in the hands of the chair.

The PRESIDENT thought it advisable to proceed in sections.

Mr. SMITH formally moved (*a*) as a section.

This was seconded by Mr. DICKINSON, and unanimously carried.

Mr. SMITH, in next moving Section (*b*), said they held this and like meetings subject to their good behaviour. It was quite open for the Council to shut the door in their faces, telling the Members and Fellows that they did not want them.

Mr. DICKINSON seconded, and this section also was unanimously adopted.

Mr. SMITH said that Section (*c*) was the *crux* of the resolution. He believed the membership of the College was 14,000 or 15,000, and all they asked for was a representation of eight, who might be Members or might be Fellows. At present the Members had absolutely no control over the affairs of the College. It all lay in the hands of the Fellows, who numbered only about eleven hundred. Those who asked for reform did not ask for any of the privileges of the Fellows, but they fully believed that if the Members were represented on the Council that body would be very much strengthened. Their chairman of to-day was not the President of the College of Surgeons.

The PRESIDENT: I beg pardon.

Mr. SMITH: No; you are only elected by the Fellows; you are the President of the Fellows. How much greater would be your power and influence if you were elected by Members in addition to Fellows.

Mr. DICKINSON seconded.

The motion was supported by Dr. ALDERSON, Mr. TIMOTHY HOLMES, and Mr. CRAVEN, and on being put to the vote was carried, there being only two dissentients.

Admission of Women.

The PRESIDENT stated that the Council desired to afford the Fellows and Members present the opportunity of expressing their views upon the question of the admission of women to the examination for the diploma of Member. The matter came before them in this way. The Council had received a letter from Mrs. Garrett Anderson asking that the students of the London School of Medicine for Women should be admitted to the examination of the College. The question was a very important and vital one, and, while having no proposal to make, the Council wished to have the benefit of the meeting's views on the subject.

Mr. GEORGE BROWN said everyone had sympathy with ladies who were studying for their noble profession, but he could not conceive any good reason for admitting them to Membership of the Royal College of Surgeons. They could get diplomas elsewhere, as all the universities of the United Kingdom were open to them.

Mr. JOSEPH SMITH, agreeing with Mr. Brown, moved: "So many portals are open to women to obtain a surgical diploma, it is not expedient that this College should open its doors to admit women to examination for the diploma of the College."

Mr. BRINDLEY JAMES seconded this motion. He did not wish the College to be under petticoat government. He was afraid that if women were admitted Members of the College they would also be admitted to the higher positions, to the Fellowship and to the membership of the Council. As a matter of fact, he for one objected altogether to women getting into the medical profession, and if they were to obtain diplomas at all he would prefer that they should get them from the Royal College of Physicians.

Mr. CLEMENT LUCAS moved as an amendment that in the opinion of this meeting women should be admitted to the diploma of this College, but he did not think the Members and Fellows of the Royal College of Surgeons should be frightened at the competition of women, and he hoped that no petty feelings would prevent this meeting from doing the women justice.

Mr. NORTON seconded the motion. He saw no reason why women should be excluded.

Dr. R. BARNES, in supporting the original motion, pointed out that surgery was the highest grade of the profession. It demanded the highest talent, skill, and powers, and these did not belong to women.

Dr. ALDERSON did not think it would give strength to the

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College to admit women to the best surgical diploma in the world.

The amendment was then put to the meeting and rejected by 58 votes to 48. On the original proposal being next put as a substantive resolution, 58 voted for it and 39 against it.

A vote of thanks to the President brought the proceedings to a close.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. Weintrand, late of Berlin, who was recently appointed to the post of Chief Medical Officer of the Policlinic, has been recognised by the University as *privat-docent.*—*Budapest:* Dr. Herczel has been recognised as *privat-docent* in Surgery.—*Bonn:* Dr. A. Partheil, first assistant in the Marburg Pharmaceutical Institute, has been appointed Extraordinary Professor of Pharmacy.—*Gottingen:* The chair of Surgery, vacated by Professor König's translation to Berlin, is expected to be offered to Dr. Riedel of Jena.—*Marburg:* Dr. Ostmann of Königsberg has been appointed Extraordinary Professor of Otology in succession to Professor Barth, who goes to Breslau.—*Tubingen:* Dr. Lenhossek of Würzburg has been appointed Prosector in the Anatomical Institute in succession to Dr. Freriep, who has been promoted to the Professorship of Anatomy.—*Wurzburg:* Dr. Johannes Sobotta, assistant in the Berlin Anatomical Institute, has been appointed Prosector in place of Dr. Lenhossek.

DIPHTHERIA AT LEATHERHEAD.—The Leatherhead urban district council is unable to account for an epidemic of diphtheria. Mr. E. L. Jacobs, the medical officer of health, has reported to a recent meeting of the body in question that he is unable to arrive at any definite conclusion as to its cause. At one of the infant schools a few cases of sore-throat have been noted, and it is suggested that a slight unrecognised diphtheritic attack in some of these cases may have been the cause. Dr. Thorne Thorne, writing to Mr. Jacobs, expressed an opinion that the impurity of the water-supply had never caused the disease, there being, indeed, he said, abundance of evidence in the opposite direction. At the same meeting of the council more cases of scarlet fever were reported and some water-supplies stated to be unfit for domestic use. No action was, however, taken in regard to the latter.

DIPHTHERIA IN LONDON.—The condition of the metropolis as regards diphtheria is even worse than we reported last week. In the last week of October the registered death-rate fell to 61 from the 76 of the previous week, and though the 76 deaths were a rise in one week from 56, it was hoped that the high total was exceptional. These hopes were, however, dissipated by the death-roll of last week, when the registered deaths from diphtheria in London again rose to over 70—being 72—and were 34 in excess of the corrected decennial average of the forty-fourth week of the years 1885-94. Whilst the heaviest number of deaths belonging to any one sanitary area occurred in Greenwich, there was also a large amount of the disease in the north of the metropolis, especially in Islington, and even further afield. The number of removals continues to be ridiculously small in comparison with the new cases coming to light, the removals of last week being slightly over 100, and in the previous week only 115 out of some 320 fresh cases. On Saturday last the patients remaining under treatment in the London hospitals numbered 671, practically the same as in recent weeks. It is evident that as vacant beds are reported they are filled up at once, but this by no means suffices for the amount of disease newly arising. In greater London the deaths were last week again over 20 in number, occurring most numerously in West Ham, in Hornsey, and in Willesden. In all these districts, especially the former, the disease seems to be established; and in Essex we hear of it as far away as Larkfield, near Maidstone, where schools have had to be closed, and several deaths are reported. During last quarter there were 1805 deaths from diphtheria in England and Wales, and of these 605 occurred in London—that is, one-third of the total number of deaths in but one-seventh of the population. In the county of Essex the death-rate from diphtheria was 64 per 10,000 of population, as against 24 in the country at large; and in the town of West Ham it was as high as 85. In Willesden, Hornsey, and also in several home counties, in addition to Essex, the fatality was exceptionally high, though there were counties with absolutely no deaths from the disease during the entire quarter.

SUPERANNUATION ALLOWANCE.—Mr. Thomas G. Anthony, M.R.C.S., late medical officer and public vaccinator the Tredegar district and workhouse, Bedwellty union, has been granted a superannuation allowance of £80 per annum.

A SAD CATASTROPHE.—A fatal accident occurred on Friday last at Chepstow to Mr. Arthur Snead Lawrence, late a student of Middlesex Hospital, the eldest son of Mr. A. G. Lawrence, M.D., J.P., of Chepstow. The deceased gentleman, who had very recently obtained his double qualification at the Conjoint Board, was thrown from his horse and sustained a fracture of the skull, to which injury after thirty hours' unconsciousness, he succumbed on Saturday evening.

SUSSEX COUNTY HOSPITAL.—An influential public meeting was held in the Royal Pavilion, Brighton, on Oct. 31st, for the purpose of calling attention to the financial position of the Sussex County Hospital, and devising means for increasing its income. The Earl of Ashburnham, who presided, said that the hospital had claims on the generosity of the public far beyond the limits of Brighton, the town being a favourite resort of visitors from all parts of the country. The hospital was very embarrassed in a financial sense, a balance of £295 being due to the treasurers on Dec. 31st, 1894, and a large legacy recently bequeathed having become the subject of a law suit. Repairs of the present building and very considerable structural improvements were absolutely necessary, some of these being sanitary towers estimated to cost about £2900; additional accommodation for the nurses, about £4850; a new out-patients' department, about £4800; a hydraulic lift about £600; and a new operating room about £1200. The total estimated cost of these indispensable buildings was £25,000, and a resolution was passed to the effect that every effort would be made to raise that amount.

NEWTON ABBOT WORKHOUSE.—On Wednesday last Dr. James Culross, medical officer of Newton Abbot District and Workhouse, presented a quarterly report to the Newton Abbot Board of Guardians, in which he advisedly deviates from the usual course in such reports, and takes a survey of the condition of the workhouse and of the progress that has been made during the past twelve months in the institution. After referring to the improvements that have taken place on all sides—improvements which it must be a source of gratification to the guardians to observe have been productive of much good—Dr. Culross calls attention to the grave structural defects which exist. One of these—the absence of an infirmary—will in all probability be soon remedied, as the plans for such a building have been completed and are only awaiting the sanction of the Local Government Board. But unfortunately the receiving wards are totally unfitted for their purpose, and it is quite obvious that so long as the provision for dealing with cases on their very entry is inadequate all the care that may be taken in other departments of the building will be rendered futile. With regard to administrative questions it is quite apparent that the nursing staff, if it is to be properly effective, must be thoroughly reorganised. Appended to the report is a gratifying testimonial to the staff of the institution, to whose loyal and persevering efforts the Medical Officer attributes much of the progress that has been made during the year.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JOSEPH, M.B., C.M. Edin., has been reappointed Medical Officer of Health to the Runcorn Rural District Council.

ADDENBROOKE, E. H., M.R.C.S., has been reappointed Medical Officer of Health to the Kidderminster Rural Sanitary District.

BARR, JOHN, M.B., C.M. Glasg., has been reappointed Medical Officer of Health to the Rishton Town Council.

BEAUMONT, A. W., L.R.C.S., L.M. Edin., has been reappointed Medical Officer of Health to the East Ham District Council.

BROWNING, B., L.R.C.P. Lond., M.R.C.S., D.P.H. R.C.P. Edin., has been reappointed Medical Officer of Health by the Weymouth and Melcombe Regis Urban District Council.

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BURNETT, W. E. S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Tintwistle Rural Sanitary District.

CAMERON, R. D., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer and Registrar of Births and Deaths for the Wallingfen Sanitary District of the Howden Union, Yorks.

CLENDINNEN, W. McB., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Coseley Urban District Council.

COLLINS, E. TREACHER, F.R.C.S., has been appointed Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

COOKE, T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Limehurst Rural District Council.

FITCH, FREDK., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health to the Kidderminster Rural Sanitary District.

FOSTER, WILLIAM, M.B., D.P.H. Camb., M.R.C.S., has been appointed Medical Officer of Health to the Shipley Urban Sanitary District.

GOODMAN, R. N., B.Sc. Lond., M.D. Camb., L.R.C.P. Lond., M.R.C.S., D.P.H., has been reappointed Medical Officer of Health for the Ham District of the Kingston Union.

GROOM, H., M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health to the Walsoken Urban District Council.

HALL, A., M.D. Edin., F.F.P.S. Glasg., F.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Mayfield Rural Sanitary District.

HASWELL, N. R., M.R.C.S., has been reappointed Medical Officer of Health to the Helston Rural District Council.

JONES, J. H., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Newport County Council.

KEIFFENHEIM-TRUBRIDGE, L. W. A., M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Ho Rural Sanitary District, vice Packman.

LEWIS, C. E. M., M.A., M.B., B.C. Camb., has been appointed Assistant Resident Medical Officer to the North-West London Hospital.

LIGERTWOOD, C. E., M.B., B.Ch. Vict., has been appointed House Physician to the General Infirmary, Leeds.

LUKE, THOMAS D., M.B. Irel., has been appointed Medical Officer to the Parish of Dwiness, Sutherlandshire.

MACCULLOGH, T. A., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Bishop Auckland Urban Sanitary District.

MCKENZIE, A., B.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the General Infirmary, Leeds.

MCNIDDER, JAS., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Urban Sanitary District of Hull.

MOLES, FREDERICK P., L.S.A. Lond., has been appointed Medical Officer of Health to the Urmston Urban District Council.

MORRIS, T. H. P., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Stourbridge Dispensary.

NICHOLSON, J., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer at Ida Hospital, the General Infirmary, Leeds.

OLIPHANT, FRANK, M.B. Edin., has been appointed Senior House Surgeon to the Chesterfield and North Derbyshire Hospital, Chesterfield.

PENNY, JOHN, M.B., D.Sc. Edin., has been appointed Resident Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat, Bowdon, vice N. F. Edwards, resigned.

RICHMOND, R., M.D., C.M. Edin., has been appointed Medical Officer of Health for the Dunmow Rural Sanitary District, vice B. Ronald, resigned.

STEWARD, E. S., M.R.C.S., L.R.C.P., has been appointed Resident Ophthalmic Officer to the General Infirmary, Leeds.

STOTT, W. A., has been reappointed Pathological Curator to the General Infirmary, Leeds.

TAIT, A., M.B. Lond., has been appointed Resident Obstetric Officer to the General Infirmary, Leeds.

TATE, S., M.D., B.Ch. Irel., has been appointed Medical Officer for the Richhill Dispensary District, Belfast.

TRETHOWAN, WM., M.B., C.M. Aberd., has been appointed Honorary Assistant Surgeon to the General Hospital, Perth, West Australia.

TROTTER, R. H., M.B., B.Ch. Vict., has been appointed House Surgeon to the General Infirmary, Leeds.

TUNSTALL, E. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Thornton Urban Sanitary District, vice T. G. Drake, resigned.

WILD, LEONARD, M.D. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Consulting Medical Officer to the East Sussex County Council.

WRAY, G. B., M.R.C.S., D.P.H., R.C.P.S. Lond., has been appointed Medical Officer of Health by the Barford Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CLIFTON DISPENSARY, Dowry-square, Bristol.—Resident Medical Officer. Salary beginning at £150 a year, with an annual increase of £10 a year up to £200, with furnished rooms only.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £80 per annum, with board, washing, and residence in the house.

GENERAL INFIRMARY, Northampton.—House Surgeon. Salary £125 per annum, with furnished apartments, board, attendance, and washing.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum (increasing to £125 after twelve months' service), with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

KILBURN, MAIDA-VALE, AND ST. JOHN'S-WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Board. Applications to the Secretary, 13, Kilburn-park-road, N.W.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House Surgeon, for six months. Board and residence provided, and an honorarium of 15 guineas.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. A gratuity of £10 will be given if found satisfactory.

ST. MARY'S HOSPITAL FOR SICK CHILDREN AND MEDICAL MISSION DISPENSARY, Plaistow, London, E.—Resident Medical Officer. Salary £80, with board, washing, and attendance. Applications to Chairman of Committee, Rev. T. Given-Wilson, Plaistow.

THE NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two qualified Medical Women as House Surgeons.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board and lodging.

THE VICTORIA UNIVERSITY, Manchester.—External Examiners in Pharmacology and Therapeutics, and in Surgery.

TIVERTON INFIRMARY AND DISPENSARY.—House Surgeon and Dispenser, unmarried. Salary £105 per annum, with lodgings, attendance, fire, and lights.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House Surgeon. Salary £80, rising £10 annually to £100, with board, residence, and washing.

WESTERN SKIN HOSPITAL, 179, Great Portland-street, London.—Vacancy on the Honorary Medical Staff.

Births, Marriages, and Deaths.

BIRTHS.

BURTON.—On Nov. 3rd, at the Barracks, Whittington-heath, Lichfield, the wife of Surgeon-Major F. H. M. Burton, M.D., Army Medical Staff, of a daughter.

CHEYNE.—On Oct. 31st, at 75, Harley-street, W., the wife of W. Watson Cheyne, F.R.S., of a daughter.

DEMPSTER.—On Nov. 3rd, at Viewley, Redhill, the wife of J. H. Dempster, L.R.C.P., M.R.C.S., of a son.

EVANS.—On Nov. 2nd, at Windsor-esplanade, Cardiff, the wife of Percy C. Evans, M.D., of a daughter.

EVANS.—On Oct. 28th, at Nottingham-place, W., the wife of Surgeon-Major Evans, I.M.S., of a daughter.

GAIRDNER.—On Nov. 2nd, at Westwood, Ipswich, the wife of M. W. Gairdner, M.B. Edin., Naples, of a son.

HAMILTON.—On Oct. 28th, at The Priory, Wymondham, Oakham, the wife of Henry Hamilton, M.R.C.S., L.R.C.P., L.S.A., of a son.

HICKLEY.—On Oct. 27th, at 302, South Lambeth-road, S.W., the wife of A. Mackenzie Hickley, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

MARSHALL.—On Oct. 17th, at The Common, Upper Clapton, N.E., the wife of Arthur L. Marshall, M.B. Cantab., of a son.

MASON.—On Nov. 3rd, at Pear-tree House, South Ockendon, the wife of A. Haynes Mason, L.R.C.P. Edin., of a daughter.

PESKETT.—On Oct. 30th, at Oxford-street, Nottingham, the wife of A. W. Chalmers Peskett, M.A., M.B., B.C. Cantab., of a son.

TOWNSEND.—On Nov. 3rd, at Ivy House, Normanby, Middlesbrough, the wife of F. E. Townsend, M.D. Irel., of a son.

MARRIAGES.

DAUBER—POTTER.—On Nov. 6th, at Jesmond Parish Church, Newcastle-on-Tyne, by the Venerable the Archdeacon of Lindisfarne (assisted by the Rev. E. Sidney Savage, M.A., Vicar of Jesmond, and the Rev. R. P. Hudson, M.A., Vicar of St. John's, Bury), John Henry Dauber, M.A., M.B. Oxon., M.R.C.P. Lond., of 29, Charles-street, Mayfair, to Margaret Isabel, third daughter of the late Addison Potter, C.B., of Heaton-hall, Newcastle-on-Tyne.

LINNELL—WHITWORTH.—On Oct. 31st, at All Saints' Church, Turvey, by the Rev. G. F. W. Munby, Alfred Linnell, of Paulerspury, third son of the late James Edward Linnell, of The Hill, Paulerspury, to Mary Blanche Joanna, younger daughter of the late John Whitworth, of Turvey.

LIVINGSTONE—SCOTT.—On Oct. 30th, at St. Matthew's Church, Edinburgh, John Livingstone, M.B., C.M. Edin., Penrith, to Edith Ronald, only daughter of William Scott, Braid-road, Edinburgh.

SIMPSON—HERBERT.—On Nov. 5th, at St. Mary's Parish Church, Folkestone, James Christian Simpson, M.D. Edin., Tunbridge Wells, to Margaret Primrose, eldest daughter of the late Nicholas Herbert, South Kensington.

WAINEWRIGHT—BUSBY.—On Oct. 30th, at St. Cuthbert's Church, Kensington, Robert Spencer Wainewright, M.D. Lond., youngest surviving son of the late John Wainewright, of Belmont, Lee, Kent, to Emily Blanche, third daughter of the late Alexander Busby, of Cassilis, New South Wales.

DEATHS.

BALL.—On Nov. 6th, at his residence, Mille Crux, York, Alfred Ball M.R.C.S., aged 69.

NEWBIGGING.—On Oct. 5th, at Willowmore, Cape Colony, of phthisis, Robert Pope Newbigging, B.A., L.R.C.S. and P. Edin., eldest son of the late Robert Newbigging, of Madras, aged 40 years. Indian papers please copy.

SHARKEY.—On Oct. 26th, at his residence at Ballinasloe, County Galway, Ireland, Edmund P. Sharkey, M.D. Dubl., in his 90th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 7th, 1895.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov.	1	30·39	S.E.	45	45	67	54	44	0·13	Foggy
,,	2	30·28	E.	45	43	71	52	41	...	Hazy
,,	3	30·01	N.E.	45	43	56	51	40	...	Foggy
,,	4	29·76	S.W.	48	47	56	52	44	0·04	Foggy
,,	5	29·51	N.E.	47	47	60	59	44	0·25	Raining
,,	6	29·53	S.W.	56	52	86	61	47	0·12	Cloudy
,,	7	29·35	W.	53	52	59	57	52	0·14	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases. Dr. Sansom: Addison's Disease treated by Supra-renal Extract.—Mr. Harold: Congenital Feeble-mindedness associated with Congenital Deficiency of the Chest-wall and with Cardiac Disease.—Mr. Wallis: (1) Wired Patella for Fracture in a Man aged seventy; (2) Compound Comminuted Fracture of the Skull, with Facial Paralysis.—Dr. L. Guthrie: (1) Spina Bifida Occulta with Paresis of Leg; (2) Postero-lateral Sclerosis.—Mr. S. Edwards: Case after Nephrectomy for Injury (with specimen).—Dr. Savill: Cases of Telangiectasis.—Mr. S. Boyd: Temporary Resection of Upper Jaw for Naso-pharyngeal Growth.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. Frederic Hewitt and Mr. A. M. Sheild: On Posture in its Relation to Surgical Operations under Anæsthetics (adjourned discussion).—Dr. R. A. Gibbons: Renal Colic in Infants.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-sq., W.).—5 P.M. Cases, Specimens, &c., by Dr. J. B. Ball, Dr. F. W. Bennett, Mr. A. A. Bowlby, Dr. A. Bronner, Mr. H. T. Butlin, Dr. Wm. Hill, Dr. A. A. Kanthack, Dr. Percy Kidd, Dr. Edward Law, Dr. Scanes Spicer, and Mr. W. R. H. Stewart.

HUNTERIAN SOCIETY.—8 P.M. Clinical Evening. Mr. W. Campbell McDonnell: Case of Congenital Ataxia.—Mr. Targett: Excision of Temporo-maxillary Joint in a Child.—Dr. Sequeira: Nystagmus.—Dr. Glover Lyon: Imperfectly developed Pinna.—Dr. Fred. J. Smith: Paroxysmal Hæmeglobinuria with Local Asphyxia.—Sir Hugh Beevor: Cases of Cervical Herpes, and of Retracted Lung in a Boy of four.—Dr. Ettles: Cases of Distension of Left Frontal Sinus, and of Horizontal Nystagmus.

SOUTH-WEST LONDON MEDICAL SOCIETY (Stanley's, 235, Lavender-hill).—8 P.M. Dr. Chas. W. Chapman: Heart Disease in the Young, its Management and Treatment.

THURSDAY.—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.)—8 P.M. Card Specimens:—Mr. Wray: Case of Detachment of the Retina after Treatment.—Mr. Stephenson; Irideremia in Two Brothers.—Dr. Bronner: Tumour of Lacrymal Gland.—Mr. Hartridge: Retinitis Circinata.—Mr. Tweedy: Multiple Foreign Bodies in an Eye retaining Normal Vision.—Mr. Work Dodd: Case of (?) Congenitally Small Field of Vision. 8.30 P.M. Papers:—Mr. W. H. Jessop: Some cases of Graves' Disease with Destruction of Eyes.—Mr. C. Wray: The Treatment of Detachment of the Retina.—Messrs. Eales and Sinclair: Uveal Cyst of the Iris.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens by Dr. Elder (Nottingham) and Mr. Skene Keith. Papers:—Dr. Elder (Nottingham): (1) The Present Condition of a Patient operated upon in April, 1894, for Double Ovarian Papillomata; (2) Notes on a Porro's Operation.—Mr. Skene Keith: Unusual Complications in two cases of Removal of the ovaries.—Dr. Halliday Croom: Glycosuria complicating an Ovarian Tumour and Ovariotomy.—Dr. John Shaw: Short Note on a Complication impeding the Convalescence of a case of Oöphorectomy.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital, Holloway-road, N.).—8.30 P.M. Clinical Evening. Cases will be shown by Mr. Brooke, Mr. Hamilton, Mr. Mower White, Mr. T. P. B. Beale, Dr. R. C. Beale, and Dr. James Galloway.

FRIDAY.—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-sq.).—8 P.M. Mr. T. W. Thompson: Considerations in respect to "Return" Cases of Scarlatina.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Adjourned Discussion on "Gastric Ulcer" to be opened by Mr. C. B. Keetley. Dr. Drewitt, Dr. Clippingdale, Mr. S. Edwards, Mr. Wharry, Mr. Bidwell, and Mr. Eccles will take part.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Whistler: Tuberculosis of the Larynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Impulsive, Homicidal, and Moral Insanity.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. J. B. Bradbury: On Some New Vaso-dilators. (Bradshaw Lecture.)

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

HOSPITAL FOR CONSUMPTION &c. (Brompton).—Dr. R. Maguire: Aortic Disease.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Diseases of the Hair.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Turner: Neurological Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. John H. Morgan: Surgical Cases.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Taylor: Syphilitic Disease of the Nervous System.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Dr. W. Hale White: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Typhoid Fever and Diphtheria.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: General Paralysis of the Insane.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Parasitic Diseases (Vegetable).

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

JEAN JACQUES ROUSSEAU ON TIGHT-LACING.

To the Editors of THE LANCET.

SIRS,—There are probably few sumptuary topics about which more has been written than the feminine habit of seeking to improve upon nature by mechanical means, but I greatly fear that for all the good their admonitions have brought forth the well-meaning scribes might just as well have saved their labour. Fashion is a power against which it is vain to cope, and so long as that mysterious authority chooses to decree small waists, small waists we shall see though livers grow furrowed and kidneys break loose from their anchorages. At one of the numerous congresses that were held in Bordeaux the Hygiene of Clothing was the object of a discussion which was initiated by Dr. Solovief, but, inasmuch as all the discussers belonged to the ruder sex, it will readily be conceived that the proceedings savoured of monotony. It goes without saying that the manifold atrocities of the corset came up for universal reprobation, but although the denunciators of that unspeakable garment were full of eloquence it is no disparagement of their powers to say that not one of them was equal to Rousseau. Here is what the philosopher of Vevay wrote in "Sophie, ou la Femme" more than a hundred years ago.

"We know that the easy-fitting clothing of the ancients, which nowhere incommoded the body, contributed largely towards the preservation in both sexes of those exquisite proportions that we still may see in statues—proportions which nowadays have to serve as models for artists because disfigured nature has ceased to supply any. Of all those Gothic shackles, those multitudinous ligatures which impede our limbs in every direction, they did not have a single one. Their

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women knew naught of those whalebone contrivances by means of which ours cripple the forms which they vainly imagine they are improving. I am quite incapable of imagining that this abuse, which in England they push to an inconceivable point, could possibly end otherwise than by causing degeneration of the species; and I even go so far as to maintain that the fascinating result aimed at is in bad taste. It is not an agreeable spectacle to see a woman cut in two like a wasp; it shocks the eye and wounds the imagination. Slenderness of the waist, like everything else, has its proportions, its proper measurements, and to depart from these is most certainly a defect. In the nude the eye could not fail to appreciate the incongruity of a too-slender waist; how, then, can it be reckoned a beauty beneath clothing? I do not dare to dwell upon the motives which induce women to insist on, as it were, encasing themselves in armour — a drooping bosom, an enlarging abdomen, &c. I admit that these things are not pleasing in a young person of twenty, but at thirty they are no longer shocking; and inasmuch as we are compelled, whether we like it or not, to remain at all times exactly as nature pleases—and seeing, moreover, that in these matters a man's eye is not to be hoodwinked—it is evident that these defects are less displeasing at any age than the silly affectation of posing for a young girl at forty. *Everything that impedes or constrains nature is in bad taste;* this is just as true of garments for the body as it is of ornaments for the mind. Life, health, reason, comfort, should weigh more than aught else; *grace cannot be present where ease is absent*, delicacy is not languor, and one need not be unwholesome to give pleasure. Pity is excited by suffering, but pleasure and desire seek for freshness and health."

I am, Sirs, yours faithfully,

Nov. 4th, 1895. A FAMILY MAN.

*** We have at different times spoken our minds concerning tight-lacing and the mis-shapen corset. But the well-fitting corset is a valuable article of attire. With different modifications it becomes, as all in our profession know, a useful surgical instrument; and the ordinary corset provides a grateful support in many conditions.—ED. L.

Mr. A. C. Elmore's letter was acknowledged in our issue of Oct. 19th, p. 1020. We must have full names and dates in support of his statements before we can consider the advisability of publishing his letter.

X.—We cannot answer general questions on such topics, as every separate case has a right and a wrong. If our correspondent will state the particular case we will advise him.

Mr. J. B. Pike.—We do not think the moment opportune to publish quite so contentious a letter.

Dr. A. Butler Harris is thanked for his communication.

TUBERCULOSIS AND SCROFULA.

To the Editors of THE LANCET.

SIRS,—In your report of Mr. Treves's address at Manchester he is made to say: "The tuberculous individual is the one whose tissues form a suitable soil for the development of the bacillus." A little earlier he defines tuberculosis "as an infective disease in which the tissue changes are due to ..... the tubercle bacillus." These statements I find much difficulty in reconciling, and cannot see how an individual can be "tuberculous" into whom no tubercle bacillus has entered, according to the latter of the two statements quoted. For this pre-tuberculous condition, which is quite defined, I think the term scrofula (or possibly struma as less abused) a reasonable one until more is known of this stage or condition. Many individuals may undoubtedly be termed scrofulous who just as certainly could not be termed tuberculous. As a lesion of this character the swelling of the upper lip and nose, so common in scrofulous children, may be mentioned. Doubtless not a few enlargements of the lymph glands are also of a similar character. The scrofulous condition is one of hereditary malnutrition and vulnerability to various injuries, of which the tubercle bacillus is no doubt the most important, though many others exist, as cold and overstrain. Tuberculosis is damage done to the tissues by the tubercle bacillus. Scrofula may be an unsatisfactory term, and has been wrongly applied to many tuberculous lesions; it, nevertheless, describes sufficiently a definite condition about which we know little, and yet one that ought not to be condemned as tuberculosis. The abuse of the term is not yet sufficient argument against its use.

I am, Sirs, yours truly,

Nov. 5th, 1895. RICHMOND LEIGH.

THE HEALTH OF EURASIANS.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of your readers could tell me where I can find information regarding the health and physique of Eurasians and of their offspring. I am, Sirs, yours truly,

Nov. 5th, 1895. ETHNOLOGIST.

M.B.—The information will be found in THE LANCET of March 21st, 1891. But we believe that the patentee is dead, and we do not know where the article is obtainable.

M.D.—"The Woman who Wouldn't" (Simpkin, Marshall, Hamilton, Kent, and Co.); "Baby Buds" (Mrs. Wostenholme Elmy, Buxton House, Congleton), 1*s.*

Mr. John Bickerdyke is thanked for his communication.

MEDICAL ADVERTISING AT TENTERDEN.

A handbill has been sent to us, said to have been left in every shop in the town, announcing a Course of Lectures to Ladies by "Dr. Redman, Surgeon Lecturer *(sic)* and Hon. Life Member St. John Ambulance Association." All ladies interested are invited to attend. The charge is 2*s.* 6*d.*, and each lecture is to be illustrated by a practical demonstration. Our opinion is asked of this proceeding. We cannot approve of it and we trust that Dr. Redman will reconsider it in the light of professional objections to all sorts and methods of advertising the names of medical men.

MEDICAL MEN who may possess the current issue of the "Komical Kalendar," edited by Howard Paul, will have been astonished at the contents of the page allotted to the 301st day of this year, which are as below:—

301 **1895.** 64

OCTOBER

28

MONDAY

Doctor X. is not a crack shot, and is not remarkable as a physician; but despite this fact, when the shooting season comes round, he spends a fortnight in the fields with dog and gun.

"And that's the only period of the year when he doesn't kill anything," remarked Dr. Robson Roose, with a twinkle in his other eye.

Dr. Roose is doubtless ignorant of the way in which his name is being used. We trust that Mr. Howard Paul will in future years display better taste and not use the name of a living medical practitioner to give point to an offensive "chestnut."

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—In view of the frequent remarks in THE LANCET and at the last meeting of the British Medical Association concerning medical advertising, I bring under your notice the enclosed cutting, which I took out of a recent copy of the *Irish Times*. From it you will notice that the honorary secretary of a general hospital gives his name, qualifications, and private address at the bottom of the advertisement of this hospital, a thing which to my mind is wholly unnecessary and can have but one object. The advertisement, as it is on the enclosed cutting, appears daily in the *Irish Times*. Trusting you will give the matter your attention and thanking you in anticipation,

I am, Sirs, yours truly,

Nov. 4th, 1895. A CONSTANT READER.

*** We think that it would be highly advisable that the honorary secretary in question should take steps to have his official correspondence directed to the hospital, making arrangements to have it forwarded thence to his private address, if it is more convenient to him to transact the hospital business at home. With regard to our correspondent's other queries: (*a*) Licentiates are not entitled to the style of "Dr."; (*b*) the assistant's work should certainly be done under the principal's active supervision, and the principal is the only person who would be officially recognised.—ED. L.

Parish Council.—B. has the claim of propinquity, but the Parish and the Local Government Board have the gift of the appointment.

R. W. S.—We do not recommend individual practitioners or give medical advice.

"WHAT IS LIFE?"

To the Editors of THE LANCET.

SIRS,—Without plunging into any metaphysical speculations, may I be allowed to ask whether the question propounded by scientists—"What is life?" is altogether a rational one? It would appear that investigations as to what conditions may produce, bring about, or manifest life are held as synonymous with life itself. For example, let us suppose chemists, by some synthetical process apart from any living matter, could so operate on inorganic matter as to produce or change this inorganic matter into living matter. It is clear we should have in such case no facilities by which we could recognise life as an entity other than we now possess. It is true we should manifest life for ourselves in lieu of life being manifested for us through nature; but we should have no comprehension of life *as an entity* beyond our present comprehension—hence, I submit, we should be no nearer in answering the question, "What is life?" than we now are.

I am, Sirs, yours truly,

Queen's-road, S.E., Oct. 29th, 1895. CLEMENT H. SKES.

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The Bradshaw Lecture

ON

SOME NEW VASO-DILATORS.

Delivered before the Royal College of Physicians of London on Nov. 12th, 1895,

BY J. B. BRADBURY, M.D. CANTAB., F.R.C.P. LOND.,

DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE; PHYSICIAN TO ADDENBROOKE'S HOSPITAL.

MR. PRESIDENT,—My first duty, Sir, is to thank you, as I do most sincerely, for the great compliment you have paid me in asking me to deliver the Bradshaw Lecture of 1895. To most of those present it is known that this lectureship was founded by the widow of William Wood Bradshaw, of Andover and Reading, who was a member of this College and a Master of Arts and Doctor of Civil Law of the University of Oxford. In thus wishing to perpetuate the memory of her husband Mrs. Bradshaw stipulated that the subject of the lecture should be "connected" with some question of medicine or surgery. Having recently undertaken in my capacity as Downing Professor of Medicine in the University of Cambridge to teach and advance to the best of my ability the subjects of pharmacology and therapeutics, it occurred to me that I could not do better on the present occasion than address you on a subject in this department of medicine—and here I wish to express my obligation to my assistant, Mr. Marshall, who has rendered me invaluable aid in conducting the experiments mentioned in the lecture. I propose, then, to ask your attention to certain vessel dilators, which, so far as I am aware, have not previously been brought before the notice of the profession.

The vaso-dilating action of nitrites and nitro-glycerine has long been known, and the whole subject of their action was ably reviewed and further extended by Professor Leech in the Croonian Lectures of 1893. But, as you are aware, these compounds possess a powerful though more or less transient action, and, as in some conditions, it would be advantageous to possess a drug having a more prolonged though less powerful effect, it has been the endeavour of pharmacologists to discover such a substance. With this end in view Professor Matthew Hay[1] experimented with ethyl nitrate, nitro-cellulose, and allied bodies, but came to the conclusion that these were of no practical value. Later, Dr. Leech, investigating the action of the nitrates of the fatty series, found that all these bodies possessed a dilating effect, which is generally of a prolonged kind.[2] He suggested them as remedial agents, but at the same time pointed out their liability to cause headaches. Still more recently Dr. Lauder Brunton has experimented with hydroxylamine hydrochlorate, but he found this compound liable to cause gastric disturbance.[3]

As all the alcoholic nitrates previously examined had been found to be vaso-dilators, and as the only multivalent nitrate used, viz., nitro-glycerine, has a powerful influence in this direction, it seemed not improbable that the drug in quest might be found among the nitrate derivatives of the higher-valent alcohols or their allies. The nitrates of erythrol, mannitol, and some of the sugars were therefore examined; later the series was extended; but it is mainly to the results of the examination of the bodies just mentioned and their possible bearing on therapeutics that I ask your consideration. Chemically, as you are probably aware, nitrates consist of an NO_2 group united to a radicle by a bond of O, thus $R.O.NO_2$. True nitro-bodies on the other hand consist of an NO_2 group united to a radicle by the N atom directly—i.e., without the intervention of an O atom—e.g., $R.NO_2$. Although I may occasionally use the expression nitro-compounds, all the bodies we are dealing with are in reality true nitrates. Unfortunately the term "nitro" in reference to these bodies has become so familiar from long use that it is difficult to discard it altogether.

Preparation.—All the substances I have experimented, with were obtained by nitrating the alcohols or corresponding compounds by means of a mixture of nitric and sulphuric acids at a low temperature. The product obtained was well washed with water and dilute alkaline solution until free from acid and was subsequently dried. The solid nitrates were afterwards crystallised from ethylic alcohol or ether. From the alcohols the following series was prepared:—

Methyl nitrate	$CH_3.ONO_2$	B.P. 65° C.
Glycol (ethylene) di-nitrate	$CH_2.ONO_2$ | $CH_2.ONO_2$	—
Glycerol tri-nitrate (nitro-glycerine)	$CH_2.ONO_2$ | $CH.ONO_2$ | $CH_2.ONO_2$	M.P. -20° C.
Erythrol tetra-nitrate	$CH_2.ONO_2$ | $(CH.ONO_2)_2$ | $CH_2.ONO_2$	M.P. 61° C.
(Arabinol penta-nitrate)	—	—
Mannitol hexa-nitrate	$CH_2.ONO_2$ | $(CH.ONO_2)_4$ | $CH_2.ONO_2$	M.P. 113° C.

Arabinol penta-nitrate, which would occupy the place intermediate between the erythrol and mannitol compounds, has not yet been prepared. Among the sugars the nitrates of dextrose, levulose, and saccharose have been investigated. Constitutionally these bodies differ from the alcoholic nitrates in containing an aldehyde or ketone group and fewer nitrate (NO_3) groupings. Other nitrates, those of cellulose and starch, have also been examined, but as these have no bearing on therapeutics I shall not deal with them further. The composition of the nitrates used was determined by means of a Lunge's nitrometer. This gives off all the nitrogen in these compounds as nitric oxide (NO) from which the number of NO_3 groups in the body can be determined.

Properties.—Of the nitrated alcohols the first three are liquid at the ordinary temperature of the air, the others are solid and crystalline. When pure they are colourless, and if kept in a dark and moderately cool place are stable. Exposed to sunlight or warmth they gradually decompose, turning yellow and giving off nitrous fumes. Heated rapidly or subjected to percussion they explode. Methyl nitrate distils at 65° C.; but the boiling points of the glycol and glycerol-nitrates have not been determined as these bodies rapidly decompose as their boiling points are approached. Erythrol nitrate melts at 61° C. and the mannitol compound, according to Socoloff, at 113° C. All these nitrates are more or less soluble in water, their solubilities showing a gradual transition from the methyl (the most soluble) to the mannitol (the least soluble) compound. In all cases the solubility in water is slight, but in alcohol and ether they are readily soluble. The nitrated sugars, as I have obtained them, are white or slightly yellow tenacious masses, decomposing readily, and difficult to prepare in the pure state. Like the corresponding alcoholic esters they are readily soluble in alcohol and ether, and slightly so in water. All the nitrates when heated with alkalies give the nitrite reaction—i.e., they liberate iodine from a slightly acidified solution of potassium iodide, and produce certain colour reactions (the meta-phenylene-diamine test, &c.).

PHARMACOLOGICAL ACTION.

All the soluble organic nitrates of the composition $R.ONO_2$ hitherto examined dilate blood-vessels and change the normal spectrum of the blood. Their activity however varies within wide limits, and appears to be due to their different solubilities and liability to decomposition. The latter is, perhaps, the more potent factor,[4] as methyl nitrate—the most soluble compound—has a comparatively slight vaso-dilating effect. On the other hand, glycol di-nitrate, the least stable, has a powerful action, closely resembling that of nitro-glycerine. Its effect, however, is more transient. The erythrol and mannitol nitrates and the nitro-sugars, being less soluble than the other compounds, have a correspondingly weaker effect, but, as we shall see, their action is more prolonged.

The vaso-dilating action of these bodies has been determined by means of perfusion experiments on both warm- and cold-blooded animals, and the duration of

[1] The Practitioner, vol. xxx., p. 321.
[2] THE LANCET, June 24th and July 1st, 1893.
[3] St. Bartholomew's Hospital Reports, vol. xxx., p. 189.
[4] Hay, loc. cit., p. 329.

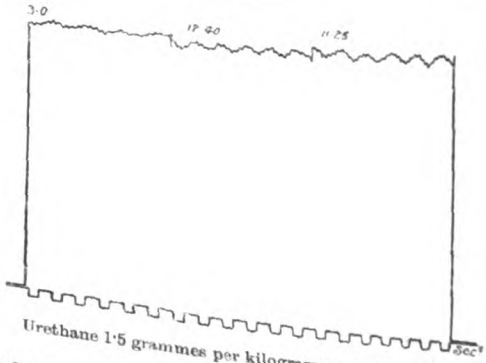
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this action by their effect upon the blood pressure in animals and the pulse in man. Nitro-glycerine has been largely experimented with, but as the vessel-dilating effect of this drug is now so well known I shall say little further about it. For the purposes of this lecture the diagrams of nitro-glycerine may be looked upon as standards of action with which the activity of the other drugs can be compared.

Perfusion experiments.—The method of perfusion through excised organs, which we owe to the genius of Ludwig, demonstrates absolutely the direct effect of drugs upon blood-vessels. In such experiments there is no question of nervous action, except it be a purely local one. But whether the effect of an agent be upon the terminal nerve fibrillæ and intra-mural nervous ganglia or upon the muscular tissue of the vessel walls is of little moment. For all practical purposes it is sufficient to know that a drug acts either directly or indirectly—i.e., chiefly upon the peripheral vessels or upon the vaso-motor centre. For determining the action of these agents upon the vessels of warm-blooded animals the kidney of the sheep, as being most readily procurable, was used. For the effect on cold-blooded animals frogs and water-tortoises were employed. But in all the general effects obtained were the same, and I shall therefore confine myself to my experiments on the former. In all the experiments except those with methyl nitrate a presumable strength of 1 of the drug in 10,000 of blood was used (I say "presumable" because in a few instances, notably those of the nitrates of mannitol and the sugars, complete solution of the drug may not have occurred). By means of ovens the excised organ and blood were kept at the normal temperature (37° to 38° C.), and the blood was perfused under a constant pressure (70 mm. of mercury). The outflow of blood from the vein was measured at intervals of a minute, first during the passage of normal blood, and subsequently during the flow of

FIG. 1.

March 23th, 1895. Rabbit, weight, 1·900 kilogrammes; 10.45: 3 grammes urethane.

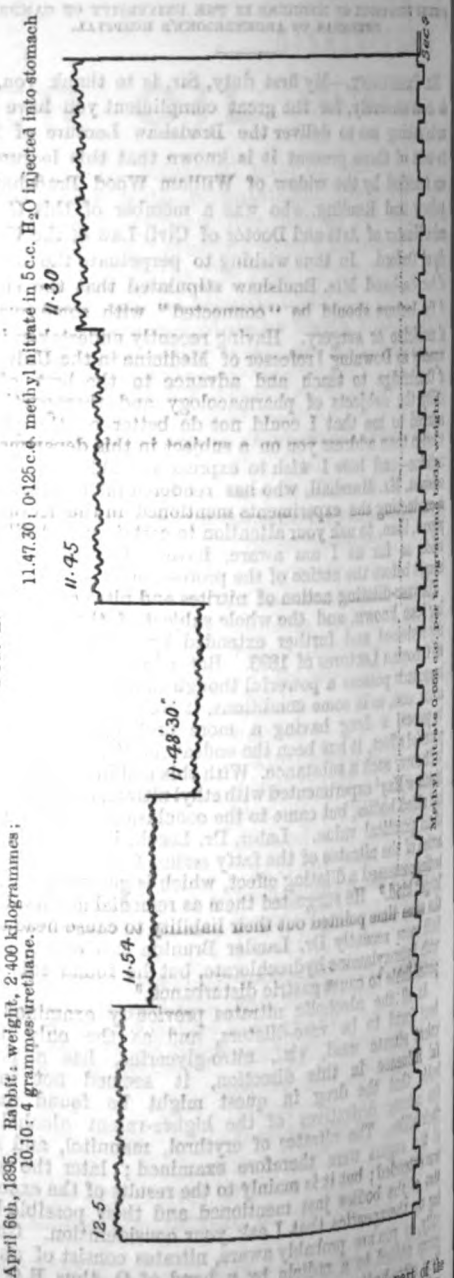


Urethane 1·5 grammes per kilogramme body weight.

nitrated blood. Methyl nitrate in the strength of 1 in 10,000 has scarcely any dilating effect. In 1 in 1000, however, it transformed a normal venous flow of 23 c.c. per minute to one of 33 c.c. per minute. After the perfusion of normal blood the venous outflow again reached its former level. A second and a third time vascular dilatation was produced by the nitrated blood and each time was followed by contraction when the normal blood was perfused. The other nitrates are much more powerful. Di-nitrate of glycol perfused in the strength of 1 in 10,000 increased the outflow from 9 c.c. per minute to 23 c.c. per minute, and nitro-glycerine in the same strength converted a normal outflow of 9 c.c. to one of 19 c.c. per minute. In both cases contraction immediately followed the perfusion of normal blood, and a second and a third time marked dilatation was produced by the perfusion of nitrated blood. Erythrol and mannitol nitrates also caused marked dilatation, the former increasing the venous outflow from 13 c.c. to 35 c.c. per minute, the latter from 6 c.c. to 11 c.c. per minute. A nitrate of dextrose containing four NO_3 groupings, and therefore corresponding to a tetra-nitrate, when perfused increased a normal outflow of 14 c.c. to one of 26 c.c. per minute; similar results have been obtained with the other nitrated sugars. There can, therefore, be no doubt as to the capability of these bodies to dilate bloodvessels; but, as I have previously intimated, what we want to know for therapeutic purposes is the duration of their action. This is shown in the blood pressure and pulse tracings.

Blood-pressure tracings.[5]—The blood-pressure tracings were mostly taken from rabbits which were kept under the influence of urethane, a drug exerting scarcely any effect upon the blood pressure (Fig. 1). In the case of the glycol and glycerol nitrates an amount of drug corresponding to 0·025 gramme per kilogramme of the body weight was introduced. In this dose methyl nitrate had scarcely any effect, and therefore a dose of four times this amount—i.e., 0·052 c.c. per kilogramme body weight—was used. Even in this dose, as we shall presently see, the effect was slight and transient. With the solid bodies doses of 0·025 gramme and 0·05 gramme

FIG. 2.



per kilogramme body weight were used, but as part of the substance could be extracted from the contents of the stomach after the completion of the experiment this does not represent the amount absorbed. In the case of the liquid bodies the substance was dissolved, and in the case of the solid bodies in part dissolved and in part suspended in weak ethylic alcohol, the mixture being injected through a catheter into the stomach. The effect in the several cases is

[5] I take this opportunity of thanking Professor Schmiedeberg of Strassburg for allowing my assistant the use of his laboratory for this purpose.

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...own in the diagrams. Both glycol di-nitrate and glycerol ...i-nitrate (nitro-glycerine) have a powerful action. The ...rmer (Fig. 3) in one minute reduced the blood pressure ...om 112 mm. of mercury to 85 mm., and in four minutes to ...2 mm. The pressure then gradually rose, and fourteen ...inutes after the administration stood at 106 mm. of ...ercury. Later the blood pressure again fell, probably ...wing to further absorption of the drug, and later still com- ...enced to rise again. Under similar circumstances nitro-

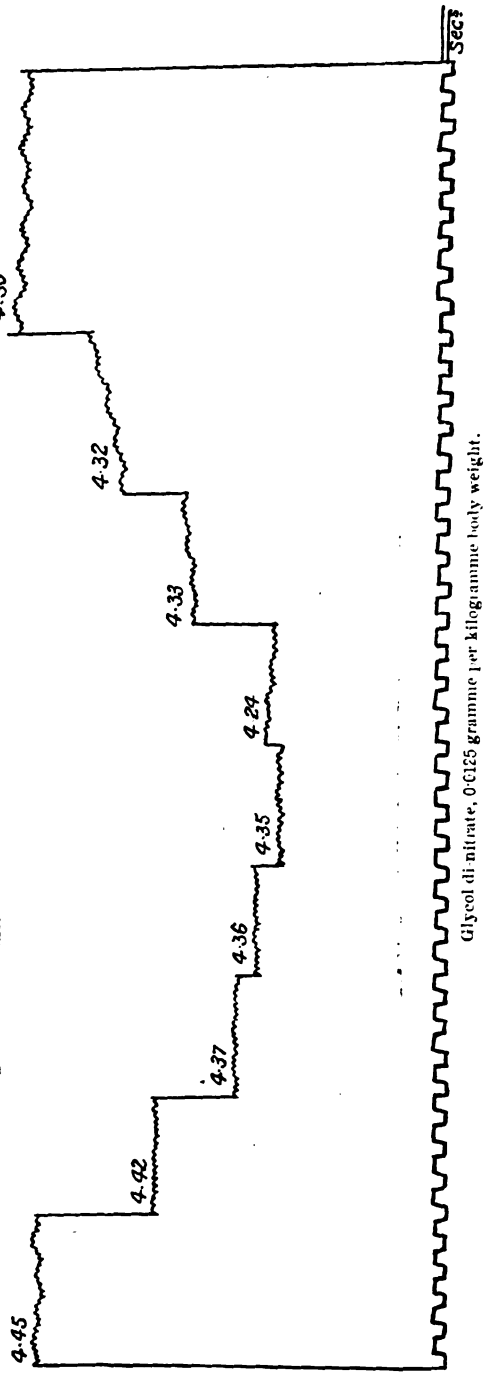


FIG. 3.

glycerine produced an almost identical effect (Fig. 4). In one minute the pressure was reduced from 100 mm. of mercury to 76 mm., and in three minutes and a half to 37 mm. It then commenced to rise, and seventeen minutes after the administration of the drug stood at 71 mm. The effect of erythrol and mannitol nitrates is much less evident. No abrupt fall of pressure occurs, but there is also no subsequent return to normal. Twenty-eight minutes after the introduction of erythrol nitrate (Fig. 5) a fall of pressure from 85 mm. of mercury to 63 mm. occurred, and thirty minutes later the fall was further increased to 54 mm. The subsequent fall was trifling; two hours and forty-eight minutes

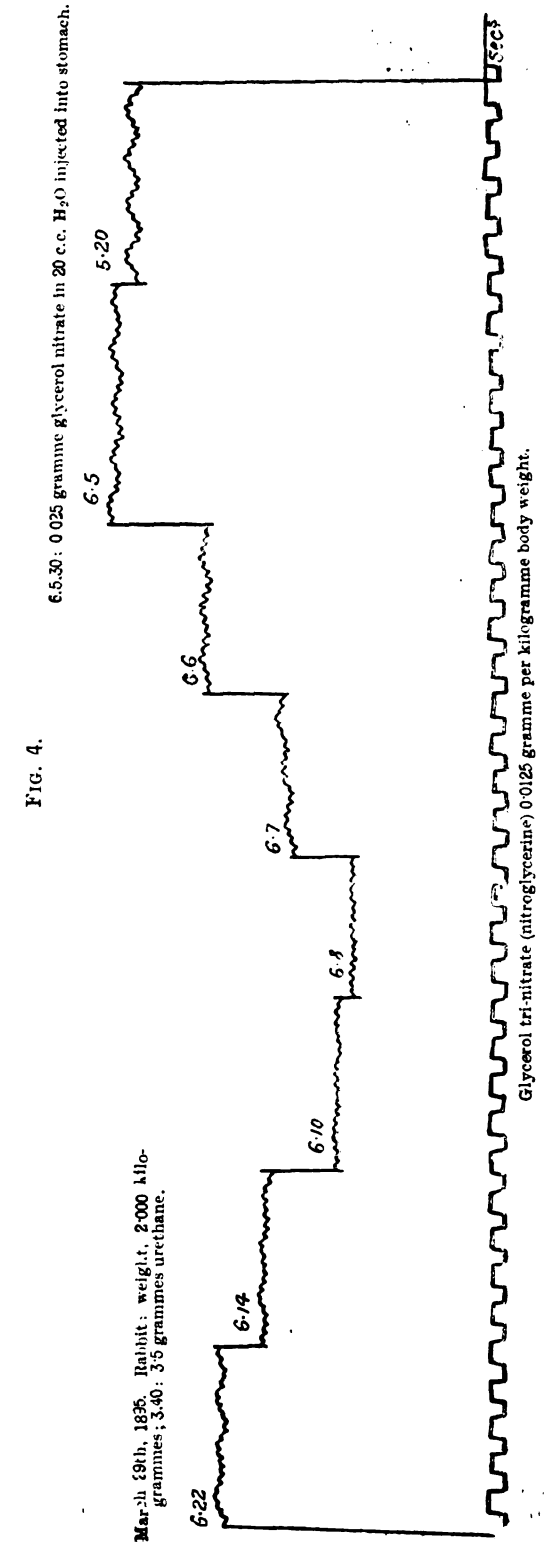


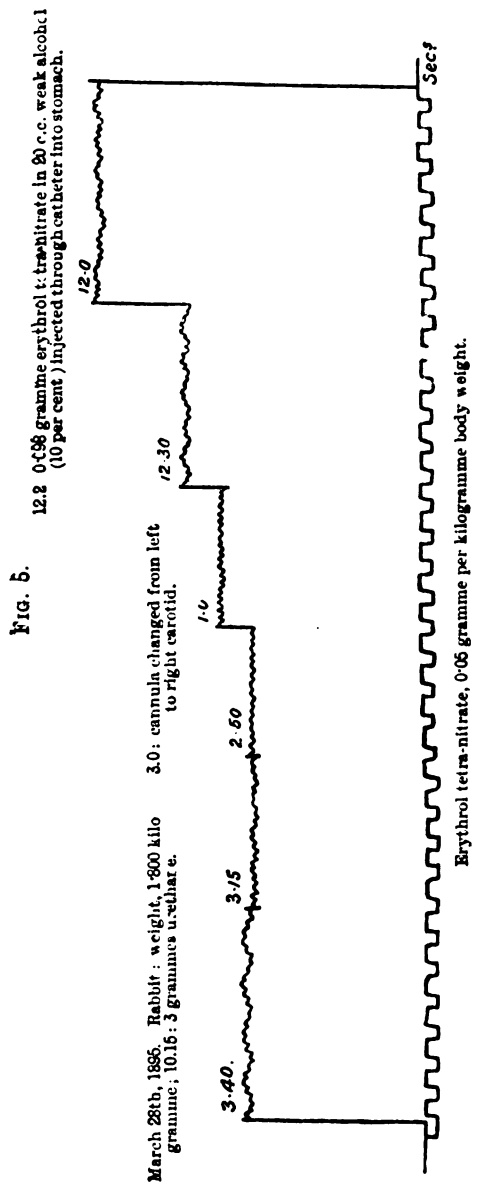
FIG. 4.

after the administration of the drug the pressure was 46 mm. of mercury, and an hour later it stood at the same level. In the meantime the cannula had been changed from the left to the right carotid owing to a clot having formed in the

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former vessel. After mannitol nitrate a similar effect occurred (Fig. 6). Twelve minutes after the introduction of the drug the blood pressure had fallen from 98 mm. of mercury to 84 mm.; an hour later it had fallen to 60 mm. Subsequently a slight rise, followed by a fall, occurred; four hours and twelve minutes after the commencement of the experiment the blood pressure still remained at 58 mm. of mercury. The effect of methyl nitrate upon the blood pressure is slight. After introducing 0·125 c.c. of the substance (i.e., about four times the quantity used in the case of the other liquid nitrates), dissolved in 5 c.c. of water, into the stomach (Fig. 2) the blood pressure fell from 96 mm. of mercury to 70 mm. in the course of a minute, but immediately commenced to rise again; six minutes and thirty seconds from the commencement of the experiment the pressure was 82 mm. and eleven minutes later was practically normal.

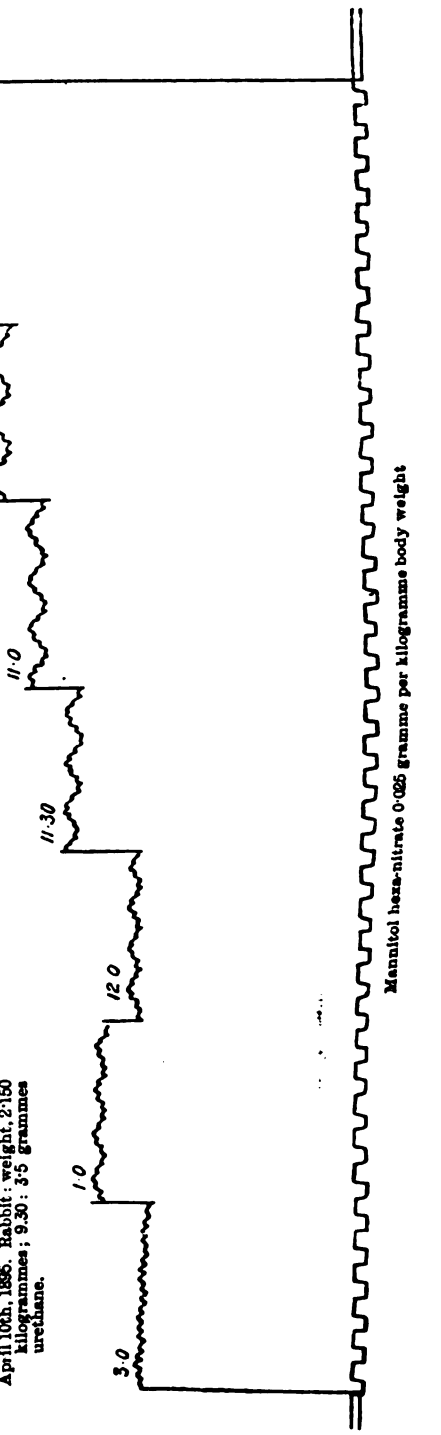
FIG. 5.



A consideration, therefore, of the action of these drugs on blood pressure leads us to the conclusion that the nitrates of erythrol and mannitol have a less marked but more prolonged action than those of glycerol and glycol, and that methyl nitrate has comparatively little action. These relations are again brought out in the various pulse-tracings before you. These have been selected from a number taken under varying conditions of health and disease, and they show in a graphic manner the fall of arterial tension and its relative duration; they are, in fact, a complement to the experiments I have described.

Pulse-tracings.—The tracing of methyl nitrate (Fig. 7) shows, perhaps, a more marked fall of arterial tension than we should expect from our previous experiments, but, as you see, the dose is an excessive one, being one thousand times greater than the glycol and glycerol nitrates, and ten times that of the solid nitrates. It is, however, essential for practical therapeutics that we should know the dose sufficient to produce a salutary effect, and hence the comparatively large dose given. The arterial tension was reduced in little more than a minute, continued to fall for sixteen minutes, and then gradually returned to normal

FIG. 6.



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six hours after the administration of the drug the tension was still considerably below normal, a condition not reached until the following morning. Glycol di-nitrate in $\frac{1}{100}$-grain doses, like nitro-glycerine, quickly reduces tension. The tracings shown (Fig. 8) were taken from a young woman suffering from anæmia. The normal tension of the pulse was somewhat low, but in less than a minute it was reduced still lower, and in three minutes was hyperdicrotic. The effect, however, was very transient, and in sixteen minutes

FIG. 7.

Methyl nitrate.



J. E.—Before methyl nitrate.



J. E.—1 minute 20 seconds after 10 minims CH_3ONO_2.



J. E.—5 minutes after 10 minims CH_3ONO_2.



J. E.—9 minutes after 10 minims CH_3ONO_2.



J. E.—16 minutes after 10 minims CH_3ONO_2.



J. E.—21 minutes after 10 minims CH_3ONO_2.



J. E.—1 hour after 10 minims CH_3ONO_2.



J. E.—3 hours after 10 minims CH_3ONO_2.



J. E.—6 hours after 10 minims CH_3ONO_2.

the pulse had almost reached its normal degree of tension. Fig. 9 is one showing the effect of a corresponding dose of nitro-glycerine. It is a little peculiar in that it shows a more transient effect than usual with nitro-glycerine, but otherwise it presents the same features as those obtained by other observers. The pulse-tracings of the solid nitrates show a marked difference from those of the foregoing. Thus during the time in which nitro-glycol and nitro-glycerine present their period of greatest activity these show little or no action. After the administration of one grain of erythrol tetra-nitrate (Fig. 10) no very marked effect is noticed until fifty minutes have passed; the tension then falls gradually for another hour and a half, and afterwards as gradually returns. In the present case five hours and fifteen minutes after the administration the pulse tension had not yet reached its previous level. In the same dose mannitol hexa-nitrate produces a very similar effect (Fig. 11). The pressure in the arteries is scarcely affected until nearly an hour has passed, and it has not reached its former level even after five hours. But the relative effects of the various members of the "nitro-group" will, perhaps, be better understood by reference to a diagram (Fig. 12). This has been constructed from sphygmographic tracings controlled by perfusion and

FIG. 8.

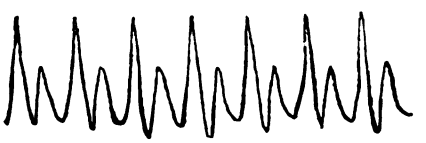
Glycol di-nitrate.



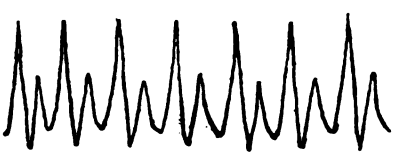
C. D.—Before glycol di-nitrate.



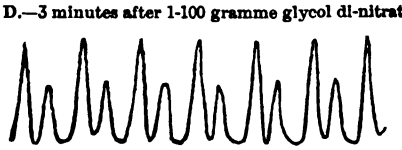
C. D.—1 minute after 1-100 gramme glycol di-nitrate.



C. D.—2 minutes 10 seconds after 1-100 gramme glycol di-nitrate.



C. D.—3 minutes after 1-100 gramme glycol di-nitrate.



C. D.—6 minutes after 1-100 gramme glycol di-nitrate



C. D.—10 minutes after 1-100 gramme glycol di-nitrate.



C. D.—16 minutes after 1-100 gramme glycol di-nitrate.

blood-pressure experiments, and although it does not pretend to minute accuracy, except as regards time relations, it will, nevertheless, serve the purpose I have in view. The time is stated in minutes and hours and the fall of arterial tension is represented by a fall from the base line which in its turn is supposed to represent the normal tension. You will see that erythrol tetra-nitrate and mannitol hexa-nitrate are quite inactive during the period of greatest activity of the other members of this series, but that their effect is markedly prolonged.

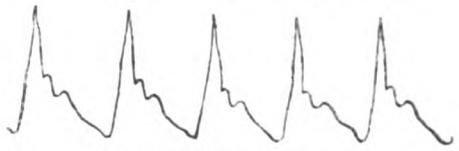
Insusceptibility.—In individual cases slight differences in the extent and duration of action of these bodies are noticed, and occasionally cases are met with comparatively insusceptible to their influence. Thus in some cases of advanced

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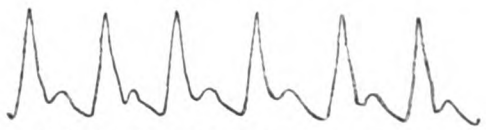
heart disease, where the artery presents a feeling of fulness, but yet remains easily compressible (virtual tension of Broadbent), vaso-dilators have often little effect. In these cases the arteries, like the heart, have lost their normal tone, are considerably dilated, and, although possessing a sense of fulness and, on superficial examination, of resistance, are yet arteries of low tension. Coupling with this fact the tendency to fibrous tissue formation in the various organs in this condition we have some explanation of the comparative irresponsiveness of these cases. In some cases of not far advanced Bright's disease, where the tension is very high and is evidently due to causes existent in the blood, a comparatively large dose of nitro-glycerine or its allies is necessary to produce any marked reduction of tension. But, apart from such pathological conditions, we now and then come across individuals who can bear large

FIG. 9

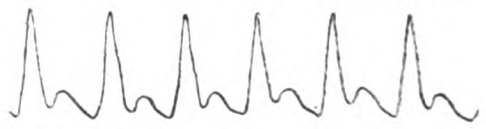
Glycerol tri-nitrate (nitroglycerine).



A. C.—Before nitroglycerine.



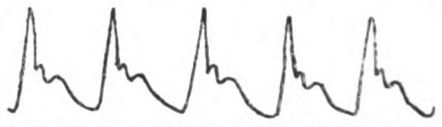
A. C.—1½ minute after 1-100 gramme nitroglycerine.



A. C.—3 minutes after 1-100 gramme nitroglycerine.



A. C.—5 minutes after 1-100 gramme nitroglycerine.



A. C.—10 minutes after 1-100 gramme nitroglycerine.



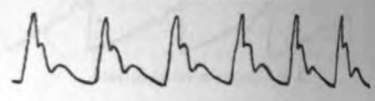
A. C.—1 hour after 1-100 gramme nitroglycerine.

doses of these drugs with impunity (Fig. 13). Even in animals there seems to be considerable variation of susceptibility to the action of vessel-dilating drugs and particularly of the organic nitrates. The reason of this is not always clear. Habitual use tends to diminish their action, but this is obviously not the explanation in many cases. With the solid nitrates the condition of the alimentary canal is an important factor. The amount of fluid in it at the time of administration as well as its reaction will have an important influence in determining the amount of drug dissolved and therefore absorbed (Fig. 14). It may be that under the influence of the alkaline juices of the intestine these nitrates are converted into nitrites (e.g., sodium nitrite), but I am rather inclined to believe that this change, if it occur at all, takes place in the blood or in the cells which form the walls of the bloodvessels. Hitherto, however, I know only of one case, and that a man suffering from dilated heart the result of alcoholism, in which these drugs failed to have any distinct effect.

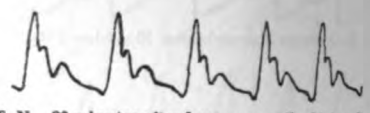
Concerning the actions of organic nitrates upon other organs I shall be brief, as they are of little practical importance. Upon the heart the direct effect of these compounds is very slight. Indirectly, owing to the diminished work consequent on dilatation of the blood-vessels, increased rapidity and sometimes palpitation

FIG. 10.

Erythrol tetra-nitrate.



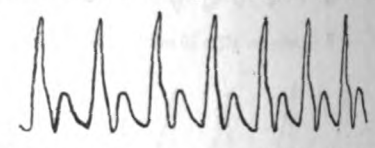
T. N.—Before erythrol tetra-nitrate.



T. N.—20 minutes after 1 gramme erythrol tetra-nitrate.



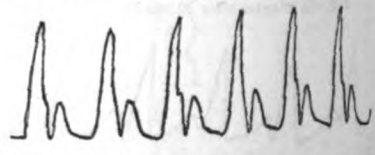
T. N.—50 minutes after 1 gramme erythrol tetra-nitrate.



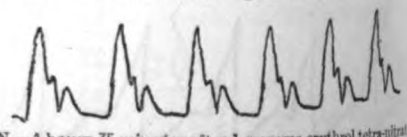
T. N.—1 hour after 1 gramme erythrol tetra-nitrate.



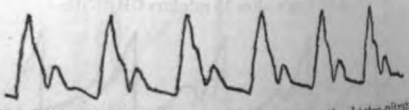
T. N.—2 hours 30 minutes after 1 gramme erythrol tetra-nitrate.



T. N.—3 hours 30 minutes after 1 gramme erythrol tetra-nitrate.



T. N.—4 hours 35 minutes after 1 gramme erythrol tetra-nitrate.



T. N.—5 hours 15 minutes after 1 gramme erythrol tetra-nitrate.

(especially after glycol and glycerol nitrates) are noticed. Certain nervous effects have been attributed to nitro-glycerine, but none have as yet followed the administration of the solid organic nitrates. The effect upon urinary excretion is practically *nil*. These bodies, as far as they have been investigated, are not diuretic.

As ordinarily administered the organic nitrates present no cumulative action. The continued use of nitro-glycerine produces a lessened susceptibility to its effect, but this has as

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yet not been noticed after the administration of the erythrol and mannitol compounds.

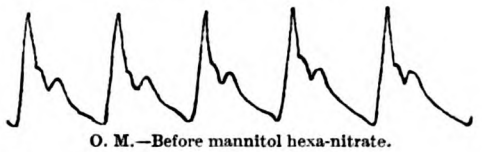
Reviewing, therefore, the action of these compounds upon the vascular system in regard to their practical application to the treatment of disease, I think we may, at the present at least, discard methyl nitrate as being the least likely to prove of clinical value. Glycol di-nitrate, again, is so similar in action to nitro-glycerine, and, at the same time, is so much more expensive, that it also is not likely to enter into our stock of remedies. The longer acting nitrates, however, may prove of value, and I shall now turn to what I consider the therapeutic indications of these compounds.

THERAPEUTIC INDICATIONS.

From the pharmacological action of these two nitrates it would seem that the chief indication for their use is a condition where the heart is labouring under increased work imposed upon it by contracted arteries. As life advances the hitherto elastic vessels become converted into more or less rigid tubes, the fibrous adventitia is thickened, and fibrous tissue replaces, to a greater or less extent, the muscular and elastic tissues of the middle coat. As a result increased work is put upon the heart and hypertrophy results. Sooner or later, however, central or peripheral degeneration occurs: either the heart fails from the increased strain put upon it on the one hand, or causes rupture of a vessel from excessive power on the other. In disease the normal evolution may be compressed into a much shorter space of time; thickened arteries and hypertrophied hearts may be found comparatively early in life, and the final result may be the same. If by any means we can dilate the vessels we diminish the work of the heart and the pressure upon each unit of area of the artery, and thus in both ways avert the tendency to death. Our difficulty hitherto has been not so much to reduce arterial tension when we wanted as to keep the tension constantly below a certain level. Both nitro-glycerine and sodium nitrite have been used for this purpose, but their administration is attended with some inconvenience. As we have seen (Fig. 12) these drugs have comparatively little action after two hours, and it would therefore be necessary to give them at least every two hours to produce continuous low tension. Even then there would be considerable variation in the arterial pressure. By the substances I have described the tension is not brought so low, but the reduction is of longer duration, and the pressure is less liable to fluctuation. They are also, as far as I am aware, free from poisonous properties, a quality readily explained by their slight solubility. Let us consider *seriatim* the diseases in which these drugs might prove useful.

FIG. 11.

Mannitol hexa-nitrate.



O. M.—Before mannitol hexa-nitrate.



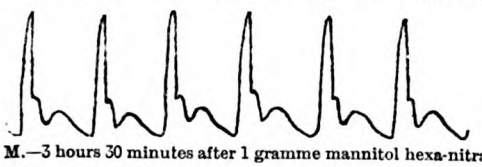
O. M.—25 minutes after 1 gramme mannitol hexa-nitrate.



O. M.—55 minutes after 1 gramme mannitol hexa-nitrate.



O. M.—2 hours 25 minutes after 1 gramme mannitol hexa-nitrate.



O. M.—3 hours 30 minutes after 1 gramme mannitol hexa-nitrate.



O. M.—5 hours 20 minutes after 1 gramme mannitol hexa-nitrate.

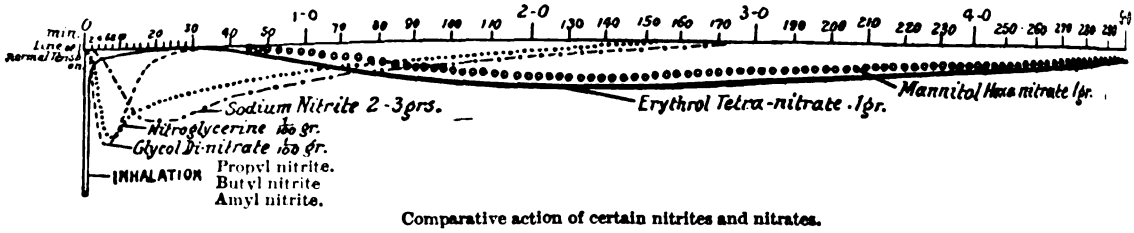
Cardiac pain.—Under this name I include all forms of pain accompanying diseases of the heart or vessels. I adopt it in preference to angina pectoris, as the limits of this disease appear to vary with different writers, and while some would almost confine it to Heberden's classic form, others would extend it to cover the whole realm of cardiac pain. The point of interest to us at present, however, is the relation of this pain to arterial tension. Is cardiac pain always accompanied by contraction of the arterial walls; and, if so, is the relation one of cause and effect? Since Dr. Lauder Brunton's discovery the question has been asked many times, but there has been no unanimous answer. Some observers state that obvious increase of tension does not always accompany heart pain, and I agree with them; but, as Dr. Leech pointed out, the increase may be more relative than absolute. In a heart weakened by disease a very slight increase of resistance may prove too much for this organ to overcome. This slight increase may be due to a general effect almost inappreciable in any one artery or to an effect localised in one or more areas. Of greater significance is the fact that vaso-dilators do not always relieve angina-like pains, especially if these occur, as I have previously mentioned, in cases of far-advanced heart disease with a low-tension pulse. In such cases morphine is of much greater value.

But what we want to know is whether attacks of anginal pain can be prevented by keeping an individual's arterial pressure permanently below its normal level, for obviously this is the only way in which the solid organic nitrates can be of service. When an attack has come on it is necessary to resort to more quickly acting drugs, and in cases of a sudden and severe nature inhalation of the fatty nitrites is advisable. For cases in which the pain is less severe and of longer duration the administration of nitro-glycerine or sodium nitrite is perhaps more beneficial. But if we can prevent the advent of these attacks a great stride ahead will have been made in the course of medical treatment. Much may be done by the exhibition of purgatives and attention to the general health, but in the majority of instances something more is needed. This something is, I believe, a vessel dilator. Hitherto nitro-glycerine and sodium nitrite have been the drugs mainly used, but, as I have already mentioned, their evanescent and varying action renders them unsuitable for this purpose. Nevertheless, I have seen cases in which the continuous administration both of nitro-glycerine and sodium nitrite seemed to prevent the occurrence of anginal attacks, and other physicians have reported similar results. In many of these cases, however, attacks occasionally developed, and it is quite possible that the longer acting remedies, such as erythrol nitrate, might have prevented them altogether.

Chronic Bright's disease.—Of the pathology of thickened arteries I do not intend to speak in detail. The most important change, and the one which affects us most closely, is the arterial thickening attending Bright's disease. As in the aged, this leads to hypertrophy of the heart, and both combined to a high-tension pulse. Sooner or later, if the patient does not succumb to uræmia or some intercurrent disease, the increased vascular strain begins to tell either upon the heart or on the vessels, often on both. Either symptoms of heart failure develop, or attacks of apoplexy of a more or less severe type occur. Previously to such undesirable terminations, headache, mental inaptitude, weariness, and similar symptoms are not uncommon, and sometimes these may be noticed with a high-tension pulse where no other direct evidence of renal disease exists. In

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FIG. 12.



Comparative action of certain nitrites and nitrates.

all such cases the longer acting vessel dilators are often beneficial. I do not wish to convey the impression that I regard the thickened condition of the arteries as the primary cause of the high tension of Bright's disease. This, I believe, is due in the first instance to an impure condition of the blood, and the correct treatment under the circumstances is to rid the blood as far as possible of this impurity. Once, however, that the fibroid and muscular thickening in the arteries is produced, it becomes, as I have shown, a danger in itself. It is a condition we cannot cure, and our treatment must therefore be symptomatic. By keeping down the arterial pressure in such conditions we may not only

FIG. 13.

Showing comparatively little action after 1·25 gramme glycol di-nitrate.



S. N.—Before glycol di-nitrate.



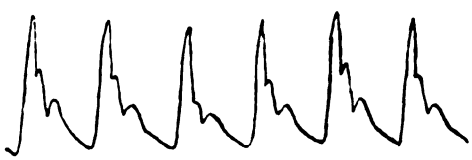
S. N.—1 minute after 1·25 gramme glycol di-nitrate.



S. N.—3 minutes after 1·25 gramme glycol di-nitrate.



S. N.—6 minutes after 1·25 gramme glycol di-nitrate.



S. N.—14 minutes after 1·25 gramme glycol di-nitrate.

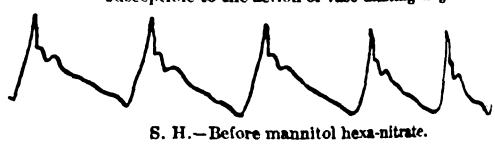
alleviate unpleasant symptoms, but may also prevent the onset of such disastrous conditions as cerebral hæmorrhage. The fibroid thickening of the bloodvessels does not annul the action of these nitrates, though it diminishes to some extent their power. Of the tracings I pass round, one series was taken from a man in advanced Bright's disease, the other is from a man who had had slight attacks of cerebral hæmorrhage. With regard to the action of these drugs upon the kidney disease itself I have little to say. I do not anticipate any beneficial action; they are not diuretic, at the same time they are not irritant to the kidneys, and, given even in acute inflammatory conditions of these organs, are not likely to produce ill-effects.

Aneurysm.—In cases of aneurysm—and I confine my remarks at present to those coming under the care of the physician—it is very necessary to keep the circulatory system as far as possible in a state of physiological rest. This is best accomplished by dilating the peripheral arteries, and for this purpose iodide of potassium has for some time been the drug most in vogue. Without detracting in the least from the value of potassium iodide in this condition, it seems to me that the nitrates of erythrol or mannitol will accomplish this end better, and will give more satisfactory results in cases not of syphilitic origin. The pain which accompanies aneurysm is not often relieved by vaso-dilators, and, therefore, I do not anticipate any benefit from the drugs I have described. Usually the pain is a pressure-effect which is only relieved by the administration of morphine.

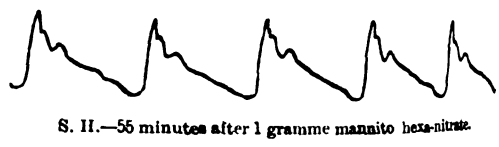
Raynaud's disease.—Of other conditions connected with the contraction of bloodvessels Raynaud's disease is one that has been successfully treated with nitro-glycerine. If vaso-

FIG. 14.

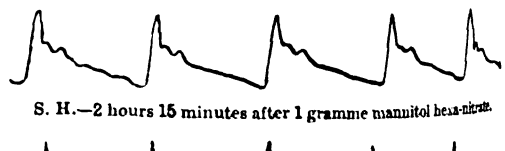
Showing slight effect of 1 gramme mannitol hexa-nitrate in a man susceptible to the action of vaso-dilating drugs.



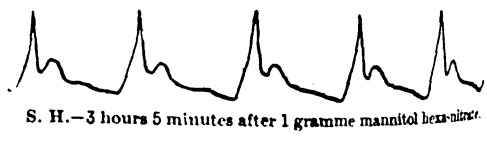
S. H.—Before mannitol hexa-nitrate.



S. H.—55 minutes after 1 gramme mannito hexa-nitrate.



S. H.—2 hours 15 minutes after 1 gramme mannitol hexa-nitrate.



S. H.—3 hours 5 minutes after 1 gramme mannitol hexa-nitrate.

dilators are of value in this condition it seems to me that erythrol nitrate, as tending to keep up a more constant dilatation, would be of greater value.

Dyspnœa.—With regard to respiratory conditions I do not anticipate any beneficial effects from these bodies. In various forms of dyspnœa (uræmic, asthmatic, and bronchitic) nitro-glycerine and the nitrites are sometimes of value, but they often fail to relieve. By their means sibilant rhonchi may be converted into sonorous, and sometimes may even disappear altogether, but I do not agree with Professor Fraser[6] as to the rapidity of this change. The change of pitch seems to occur *pari passu* with the fall of arterial tension, and in the majority of cases the effect is not marked. Where loud and numerous moist sounds are present even less effect is obtained.

[6] International Journal of the Medical Sciences, vol. xiv., p. 122.

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Seeing, then, that the action of these comparatively powerful vaso-dilators is not very distinct, we should not expect the less powerful drugs I have mentioned to exercise much influence. They may prove of prophylactic value in the dyspnœa occurring in Bright's disease for example, but beyond that it would be useless to hazard conjectures. In cases of chronic bronchitis, however, and in other conditions where the dyspnœa is of cardiac origin, amelioration might be obtained from these compounds. In such cases the weak heart is unable to drive the blood with sufficient power along the arteries, stagnation therefore occurs in the veins, and the pulmonary system is often the first to suffer. Thus aeration is limited by the pulmonary lesions on the one hand, and the cardiac on the other. By dilating the vessels and thus relieving the heart the circulation becomes more efficient and the blood is better aerated. But under such conditions digitalis is usually of much greater benefit. Disappearance of the headache occurring in a chronic bronchitic, with full rather tense pulse, followed the administration of erythrol nitrate.

Headache.—It is also very probable that anæmic headaches occurring in patients with a high-tension pulse may be relieved by this drug, but my observations on this condition have been confined to those with a low-tension pulse, and here the results have been somewhat conflicting.

Nervous diseases.—Although nitro-glycerine has been given in many nervous affections I do not think much benefit will follow the use of erythrol or mannitol nitrates in these diseases. Migraine and neuralgia are oftentimes accompanied by reflex contraction of the bloodvessels, and the use of vaso-dilators has sometimes proved curative. The solid organic nitrates, however, are much too slow in action to be of benefit, though it is possible they may prevent attacks of migraine if administered continuously. The drugs might also be used by those who believe in the value of nitro-glycerine in epilepsy, but as I have rarely used this drug in this affection my experience on this point is limited. Other nervous diseases—epileptic vertigo, cerebral congestion, tetanus, &c.—in which nitro-glycerine has been used are not likely to yield to treatment with the nitrates under discussion.

In many other conditions nitro-glycerine is said to have proved of value. In various forms of poisoning (opium, coal gas, &c.), in vomiting from any cause (pregnancy, sea-sickness), in lienteric diarrhœa, in diabetes mellitus, in hysterical paralyses, and many other affections, nitro-glycerine is said to have proved curative or ameliorative. The pharmacological action in such conditions is difficult to understand, and in most cases the results obtained were probably coincidences. I do not think that other organic nitrates will give beneficial results when administered in these or similar affections, and therefore I do not advise the use of the nitrates under consideration in such conditions.

Dose and administration.—The dose of the solid organic nitrates may be taken as one grain; more may be given if it is thought necessary, but usually this amount will suffice. They may be taken in the form of pills or tablets or in alcoholic solution. The last method I prefer. A solution of erythrol nitrate in the strength of 1 in 60 may be made, and one drachm may be taken in an ounce of water when necessary. Mannitol nitrate is not quite so soluble, but a 1 per cent. alcoholic solution can be prepared, of which one and a half or two drachms may be taken in water. The solutions thus made are stable and free from irritating properties.

Résumé.—In conclusion, the only condition in which I think these nitrates will be of benefit is one that I have already alluded to—viz., high arterial tension. Whenever we wish to keep down the blood pressure for a length of time then I believe these nitrates will be of value. Such a result may be necessary for many reasons; a few I have attempted to indicate. It may be that the therapeutics of the drug will widen with our increasing knowledge, it may be that the limits I have laid out for them will be much diminished; but, whichever it be, I thought that a lecture devoted to the pharmacological action and therapeutic indications of a drug of which we stand so much in need would not be alien to the noble purpose which the foundress of this lecture had in view.

Although I know of no evil effects having followed the administration of these drugs, and though no such effects are anticipated, I ought to say that the research on these compounds is not yet complete.

ON THE SUPPURATIVE JOINT LESIONS OF SCARLET FEVER.

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It has long been known that joint manifestations are not uncommon in specific infectious diseases, varying from an effusion which is described as serous to the most destructive form of arthritis; but the cases in which this latter condition occurs are admittedly rare, hence it has seemed worth while to put on record the following instances which have come under our notice (and most of them also under our care) at the North-Eastern Fever Hospital of the Metropolitan Asylums Board. The infrequency of these suppurative joint lesions is shown by the statement of Dr. A. D. P. Hodges[1] that no cases occurred, during a period of three years at the South-Eastern Fever Hospital, in 7000 cases. And this would seem to be the experience of Bennet, who has stated that the rheumatic joint lesions of scarlet fever show no tendency to pus formation. Ashby[2] states that out of a series of 500 cases he met with arthritis in two only, and that in his experience the condition is rare. He alludes to one other case which he has also seen. On the other hand, in an epidemic which took place in Dublin from 1834 to 1842, this complication is described as being both frequent and malignant.[3] This suggests the possibility that its presence tends to vary with different epidemics. We have notes of nine instances in which the condition occurred, out of a series of nearly 5000 cases of scarlet fever.

CASE 1. *Scarlet fever; ulcerated throat; suppuration in elbow; broncho-pneumonia; death.*—A female child aged one and three-quarter years was admitted to the North-Eastern Fever Hospital on Aug. 10th, 1893, after three days' illness, with general scarlet fever rash, ulcerated fauces, and diarrhœa. The temperature was 103·4° F. From the date of admission until Aug. 24th her throat was continuously ulcerated, and there was much ulceration on the palate. The temperature had been generally between 101° and 104°, but occasionally a little higher, and fairly continuous in type; the respiration-rate was about 30, and the pulse averaged 130. On the 26th there was considerable swelling over the left elbow. The temperature was 104°, the pulse 160, and the respiration 50. On the 27th the elbow had increased in size; there was no definite fluctuation. The temperature was 102°. On the 28th fluctuation was obvious. Chloroform was given and the joint was explored on the outer side of the olecranon; a quantity of pus escaped, and the cartilage was eroded in places and the bone felt to be bare and rough; there was undue mobility about the joint, there being a considerable space between the bone ends. The temperature was 104°, the pulse ranged from 160 to 180, and the respiration from 50 to 60. On the 29th the patient was attacked with broncho-pneumonia, and she was unable to retain food given either by nasal tube or by rectum. On the 30th hyperpyrexia set in and death ensued. Post mortem streptococci were found in cultivations made from pus in the elbow; cultures made from the kidney showed streptococci. There was broncho-pneumonia of both lungs, and pus in the tubes. As regards albumin, a trace was found on two occasions—i.e., on Aug. 19th and 22nd. No urine was subsequently obtained for examination. The child died from septic broncho-pneumonia.

CASE 2. *Scarlet fever; pyæmia, right and left elbow; right knee; death.*—A male child aged two and a half years was admitted on Dec. 22nd, 1892, with a punctiform rash, swollen fauces, and rhinorrhœa. On Jan. 1st, 1893, there was double otorrhœa. On the 7th a septic rash showed itself, and on the

[1] THE LANCET, Nov. 17th and 24th, 1894.
[2] Brit. Med. Jour., vol. i. 1886, p. 970.
[3] Kennedy, quoted by Graves in his Clinical Lectures, Sydenham Society's publications, vol. i., p. 392.

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8th the right hand became swollen; the temperature being 104·5° F. On the 9th chloroform was given and an incision made over the second metacarpal on the back of the hand, and a little pus was found. The temperature was intermittent, ranging from 100·5° to 104°. On the 10th there was a swelling over the head of the left radius accompanied by wrist-drop. On the 11th an incision was made over the swelling, but no pus was found. There was paresis of the left external rectus. On the 15th there were bronchial breathing, râles, and dulness over both bases, and an ulcer on the right tonsil. An abscess over the front of the chest was opened. On the 16th fluid in the right knee was detected; there was persistent pyæmic temperature. Death occurred on the 17th. No post-mortem examination was allowed. The urine was only tested once—two days before death; no albumin was found.

CASE 3. *Scarlet fever; thrombosis of internal and external jugular veins; pus in knee and wrist; death.*—A female child aged four was attacked by scarlet fever on Feb. 3rd and was admitted on Feb. 15th. On the 21st the neck was incised, and pus was found infiltrating the tissues; there was no circumscribed cavity. The temperature ranged from 100·5° to 104° F. On the 23rd the right hand was swollen; on the 24th the temperature was 104·5°. She was very restless, and the neck was much less angry. On the 25th the temperature reached 105°; the left knee had swollen, and the patient vomited once, her pulse being very feeble. On the 26th the temperature was still 105°, and death occurred. Post mortem a large diffuse purulent infiltration of the neck was found, and thrombosis of the internal and external jugular veins at the base of the neck for a distance of about two inches; pus was discovered in the knee and wrist joints, and petechiæ in the synovial membrane of the knee. Six tubes were inoculated with pus from the left knee, all of which grew pure cultures of streptococci. Albumin was found in the urine once (the only time it was tested).

In the following three instances the joints recovered more or less completely, the results obtained being distinctly better than we at times dared to hope for, considering the serious and almost desperate state the patients were in.

CASE 4. *Scarlet fever; suppuration in elbow-joint; recovery.*—A male child aged four years was admitted on Sept. 22nd, on the fourth day of illness, with general rash, peeled tongue, and an extremely severe condition of the throat, there being much swelling of the tonsils and soft palate, with exudation on the tonsils and uvula. The temperature reached 104° F. during the first five days after admission. The throat remained swollen and ulcerated and did not perceptibly improve under treatment, and the patient seemed only to be kept alive by frequent nasal feeding, which was rendered necessary by the difficulty in swallowing. On Oct. 5th offensive otorrhœa set in. The temperature at this time varied between 100° and 102°, and the patient began slowly to improve as regarded the faucial condition. On Oct. 6th there was marked swelling about the left elbow, with effusion into the joint. Glycerine and belladonna were used as an application, and the swelling subsided a little in two days' time, the temperature falling to 99°. On the 10th the temperature rose to 102°, and the joint was much swollen again and very painful; there was undue mobility; fluctuation was felt readily on either side of the olecranon, and the olecranon process was displaced inwards, the internal condyle being obscured by the swelling. The tissues for some distance round the joint were swollen, œdematous, and brawny. Under chloroform the joint was freely opened on the outer side of the olecranon and some thin, purulent fluid escaped. The soft parts cut through were much infiltrated with inflammatory material, and the joint capsule was lax, allowing free lateral movement of the bones of the forearm on the lower end of the humerus. The ends of the bones were partially denuded of cartilage, allowing of marked crepitus in the joint. The temperature was 102°; the pulse since admission had ranged from 120 to 140, and the respiration from 30 to 40. On the 13th the throat had healed wonderfully well. A great deal of brawny swelling was still evident about the elbow; the discharge was sweet, and a drainage-tube was introduced into the joint to keep the opening through the capsule patent. The temperature had been normal since the operation. On the 17th the elbow was put up at right angles, and subsequently dressed each day in a different position. There were profuse otorrhœa and rhinorrhœa; there now developed hectic temperature, ranging from 98° to 108°, which lasted eight days, after which it remained close to normal. The heart and lungs were unaffected. On the 20th the arm was found to be tender and the joint still much swollen, the pulse varying from 120 to 160; the fauces were clean. The left otorrhœa persisted, and hot boracic baths were ordered for the arm and continued daily. On the 27th there was very little pain on moving the joint, with only a slight amount of discharge from the wound, which was healing rapidly, but a great deal of thickening still existed around the joint. On Nov. 16th the joint was freely movable, with slight grating on complete flexion; but there was some thickening about the elbow. On the 29th grating had quite disappeared, and the patient was fit for discharge, with an elbow satisfactory in all respects. There was never any albumin in the urine.

CASE 5. *Scarlet fever; nephritis; pus from wrist.*—A female child two and a half years of age was attacked by scarlet fever on Oct. 4th, 1893, and was admitted on Oct. 14th with fading rash, cleaning tongue, inflamed fauces, and rhinorrhœa. Her temperature was 100° F. On Oct. 21st the temperature rose to 102°, with swelling of the glands in the neck and vomiting. The temperature fell to normal next day, but vomiting persisted, and on the 24th albumin made its appearance in the urine as a trace; the temperature was then below normal. On the 27th the temperature had risen to 102°, and there was very marked œdematous swelling of the right hand and wrist, with great pain on movement of the hand; the swelling was most marked in the palm of the hand, and fluctuation was distinctly obtainable. Incisions were, on the 28th, made into the palm and dorsum of the hand, but although a quantity of clear fluid (due to the œdema) was drained away no pus was found, and it seemed evident that there was none in the tendon sheaths. There was a cloud of albumin in the urine. Hot boracic fomentations were used throughout. On the 31st the temperature ranged between 98° and 101°; there was much blood and albumin in the urine; the œdematous swelling had extended further up the forearm; the hand had become a little less tender on manipulation. On Nov. 1st the temperature varied from 98° to 100°. The abdomen was very distended, the spleen was felt; there were slight lumbar œdema and œdema of the feet; and albumin and blood were found in the urine. On account of definite fluctuation in the palm and sign of deep-seated pus, chloroform was again administered and the palm of the hand was again explored thoroughly; serous fluid escaped, but no pus was found and no bare bone. On account of the marked swelling in the palm of the hand the probability of there being pus about the carpal bones was not thought of, although the extreme pain on manipulation of the hand and also the presence of swelling over the wrist ought to have drawn our attention to this. The temperature went down to normal, and subsequently remained so. On the 3rd the hand was less swollen, but was distinctly very tender on manipulation; the hæmaturia persisted, but the general condition had improved. On the 5th there was on dressing the hand a sudden escape of thick, creamy, sweet pus from the lower end of an incision which passed down over the third metacarpal to the carpal bones. This pus welled up freely, and was evidently from the carpo-metacarpal joint. On the 6th there was not much pus from the wound, and no bare bone; the patient's general condition was good. From this time the swelling of the hand and wrist rapidly subsided, and on the 10th the hand was almost normal in size. There was no rise of temperature. On the 13th the albumin had ceased in the urine, and there was good movement in the wrist. The child was seen a year later (Nov. 8th, 1894), when the movement in the wrist was perfect. There was no thickening, the hand was slightly smaller than the left, and there was a little wasting of the outer interossei muscles. There had been occasional swelling of the wrist during the winter of 1893-94.

CASE 6. *Scarlet fever; nephritis; apical pneumonia; empyema; pus in hip-joint; recovery.*—A male child aged three years had had scarlet fever rash five weeks before admission to hospital on Nov. 4th, 1893, desquamating. The temperature was between 102° and 104° F., the pulse was 130, and the respiration 40; the neck was swollen and the face was puffy. The child had a cough. The urine was scanty in amount, smoky, and contained blood and a thick cloud of albumin. There was no lumbar œdema. The temperature kept high, and the respiration continued to increase until it reached 78 on the 7th, there being at the same time a pulse-rate of 150. Signs of right apical pneumonia developed. The skin was hot and dry. On the 8th

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the crisis occurred, the temperature falling from 104° to 96° and the respiration coming down to 37. All this time there was scanty urine, which, when it could be measured, was found to vary in amount from seven to ten ounces in the twenty-four hours; blood and albumin persisted. On the 10th the temperature rose again to 104° F., and the respiration-rate began to increase also. Nothing very definite was found to account for this until the 14th, when at the right base signs of effusion showed themselves with impaired percussion note and weak breathing. Meanwhile the respiration-rate increased to 76, the temperature keeping up to 102° and 103°. On exploration of the chest pus was found. On the 15th, under chloroform, a portion of rib was resected and about seven ounces of thick, creamy pus escaped, an examination of which showed pneumococci. The nephritis gradually improved, the blood first disappearing and the urine becoming larger in amount. Finally, on the 22nd, the albumin ceased. On Dec. 15th the temperature had been varying from 101° to 103°. There had been marked flexion of both hip-joints for several days, with considerable swelling round the right hip, with œdema of the skin over it, and dislocation of the head of the femur on to the dorsum ilii. Under chloroform an incision was made over the great trochanter. There was very considerable bulging of the capsule of the joint; on incising this a quantity of thick pus escaped and the ligamentum teres was found to be destroyed. The joint cartilage was not impaired. The temperature after the operation kept between 100° and 101° until Dec. 22nd, and then rose daily to 100° until Jan. 1st, 1894, after which it remained about normal. On Dec. 22nd extension was put on the leg, as the head of the femur did not remain in the glenoid cavity. The patient became extremely emaciated from vomiting and diarrhœa, this condition lasting during December and January. It was with the greatest difficulty that the child was enabled to retain sufficient nourishment to just keep him alive, everything being tried. About the end of January he began to improve, but for many weeks was nothing but skin and bone. On Feb. 3rd the tube was left out of the empyema wound, and on Feb. 10th out of the hip-joint wound. The empyema wound gradually healed up, and within three months of the operation the wound over the hip was healed, but extension was still kept on. At this time measurement of the two legs gave a difference in length of from half to three-quarters of an inch. Four months after the operation the child moved the joint himself without pain, and was allowed to sit up. A month later he was walking about the ward by the aid of a chair, the movements at the hip-joint being carried out practically by the pelvis. He was sent to the seaside with a high boot. When last seen by us in November, 1894, he was in splendid condition: the chest was normal, there were about 10° of movement in the hip-joint, and three-quarters of an inch shortening. The leg was in good position, and there was no evidence that the head of the femur was out of its normal situation.

CASE 7. *Scarlet fever; cellulitis of neck; effusion into sterno-clavicular joint; dislocation.*—A female child aged fourteen years had a severe brawny neck on admission on Aug. 3rd, ten days after the onset of scarlet fever. This was incised on Aug. 4th, but the temperature remained at 102° or 103° F., and from the 10th to the 14th pyæmic symptoms were well marked. The temperature varied from 97° to 105° daily; rigors were present and free perspiration. Subsequently, although there were no rigors, the temperature kept up to 102° or 103°. The swelling of the neck slowly subsided and no pocketing of pus could be made out. On the 25th a swelling appeared over the left sterno-clavicular joint, which gradually increased in size and was tender, and the skin was reddened over it. As the inflammation appeared to be subacute, and as the temperature fell on the 27th to normal, no active surgical treatment was adopted. The swelling slowly subsided, and as it did so the inner end of the clavicle was felt to be very much thickened, and at the same time, although the distension of the joint had never seemed to be extreme, it was found that there was undue mobility resulting. On Oct. 1st the condition was as follows. The wound in the neck had practically healed. The inner end of the left clavicle was unduly movable and was dislocated upwards and inwards behind the sterno-mastoid muscle, so as to lie on the upper border of the sternum, extending inwards as far as the middle line of the neck. It could be brought down readily to its normal position, but slipped out again at once. There was no pain in the joint, and the movements of the arm were not impaired. The inner end of the clavicle was distinctly enlarged.[4]

CASE 8. *Scarlet fever; pus in ankle-joint; nephritis; recovery.*—A boy aged sixteen had a kick on the right internal malleolus about five weeks before the onset of scarlet fever. A week later he sprained his right ankle, and after walking about on it for a fortnight was admitted to the Poplar Hospital, when the swelling subsided under treatment. He contracted scarlet fever on April 9th, 1894, and was admitted to the North-Eastern Fever Hospital on the 12th. The attack of scarlet fever was slight; the fauces were a very little inflamed. The ankle was restrapped; there was no pain in it or any sign of inflammation. Six days after admission pain returned in the ankle, and the strapping was removed, when the ankle was found to be swollen and hot. As it was in much the same condition on the 27th—red, hot, swollen, and extremely painful—it was explored with a needle, and a few drops of turbid fluid were drawn off. Nephritis made its appearance on the 26th with albumin and a temperature of 101·2° F.; blood appeared in the urine on May 1st. On May 9th the condition was as follows. The ankle was much swollen, red, and œdematous; the hollows on either side of the tendo Achillis were obliterated; there was thickening over the lower end of the tibia; tenderness was most marked about the internal malleolus. On May 11th there were marked bulging on either side of the tendo Achillis and swelling round the malleoli; fluctuation was obtainable through the joint. At night when the patient dozed off to sleep there were twitchings in the ankle, with sudden pain. The temperature was 99° and the pulse 132. On the 12th the ankle was more tense. The joint was again explored, but nothing could be drawn off with the exploring syringe. There were signs of cardiac dilatation. The temperature had risen to 101°. On the 13th the foot and leg were very œdematous, and there was difficulty in detecting any fluctuation in the ankle; the lower end of the tibia was felt to be markedly thickened. A.C.E. mixture was then given and the joint again explored with a syringe, but without result. On account of the marked thickening of the lower end of the tibia it was determined to first examine this bone. An incision was made over the inner surface of the tibia extending down into the internal malleolus; the soft parts were œdematous, and the periosteum was found to be softened and thickened. It readily stripped up from the subjacent bone, and there were seen spicules and plates of new bone attached to its under surface. There was about one-sixth of an inch thickness of new bone deposited over the lower end of the tibia. The underlying bone was exposed with a gouge for about one-third of an inch in depth; the bone was soft and carious; there was no necrosis. The epiphysis was exposed; there were no signs of epiphysitis. An incision was then made into the joint just anterior to the internal malleolus, when a thin purulent fluid escaped. A finger introduced into the joint found the upper surface of the astragalus rough and devoid of cartilage. Another opening was made on the outer side just in front of the external malleolus, and the joint was syringed out, glycerine and iodoform being introduced. The wound was dressed with hot boracic fomentations. On the 21st the nephritis still persisted, and the urine was porter-coloured. During the week following the operation the ankle remained swollen and œdematous, and the swelling became more marked on its inner side behind the internal malleolus and along the inner side of the foot. On the 20th an incision was made over the swelling behind the inner ankle, and pus escaped. A counter opening was made on the outer side of the tendo Achillis. The posterior ligament of the joint was much softened, readily giving way under pressure of the finger, thus allowing free drainage backwards of the joint. A hot boracic bath was ordered. The leg was now more comfortable than it had been; the wounds discharged freely; the foot was in the bath for three hours. Blood and one-eighth albumin were found in the urine. By the 24th the time of the bath had been increased, so that on the 25th the foot remained in the bath all day and night. There was less blood and albumin in the urine. On the 26th the foot was put on a splint at night and in the bath during the day; only a trace of albumin was in the urine. The temperature ranged from 100° to 103°. By July 1st the albumin had disappeared from the urine, and the heart apex, which had been in the nipple line, wa

[4] Roswell Park and Güterbock have mentioned cases where dislocation of the hip-joint occurred without the discharge externally of pus, and De Lapersonne quotes Samuel as having seen a similar case Annals of Surgery, vol. xiv., p. 483.

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returning to its normal position. The boy had been much worn out by the nephritis and the joint suppuration, but was now beginning to mend. The wounds were healing rapidly. On Aug. 1st they were all healed. On Aug. 14th, when the patient was discharged, there was considerable thickening about the malleoli. There was no movement in the ankle-joint, but no œdema, pain, or tenderness. On Nov. 3rd the patient wrote to say that he could walk on his foot without any pain, and that he would be able to follow his employment when he had recovered his strength. His ankle, he said, was quite stiff. The points of interest about this case are these:—1. The previous injury; this undoubtedly determined the seat of the scarlatinal arthritis. 2. The early onset (ninth day), with the steady but slow increase in the severity of the inflammation. 3. The subacute nature of the inflammatory process. 4. The marked thickening of the lower end of the tibia. This was not altogether, if at all, due to the injury, for it increased very markedly in the course of the inflammation of the joint. No evidence of primary disease in the bone was found at the time of the operation.

CASE 9. *Scarlet fever; ulceration and perforation of palate; abscess about great trochanter.*—A male child four years of age was admitted on May 18th, 1893, with severe scarlet fever. The temperature was 104° F. For some days the fauces were in an inflamed condition and were covered with membranous exudation. The temperature remained high, and in spite of the active treatment adopted a slough developed at the back of the throat. On June 8th there developed an oval opening at the junction of the palate on the right side with the pillar of the fauces. Rhinorrhœa was profuse. Nasal feeding was difficult on account of swelling of the nasal mucous membrane. The patient was fed by an œsophageal tube. On the 5th ulcerative stomatitis was present; on the 6th the temperature had fallen to normal; but from the 9th to the 14th the temperature was remittent, ranging from 100° to 104°. A piece of membrane over the hard palate had sloughed, exposing the bone for a space the size of a sixpenny-piece. On the 19th the temperature had been down some thirty-six hours. Vomiting was troublesome, but the opening in the soft palate had not increased. On the 21st the temperature had again risen to 104° and by the 25th was intermittent and remittent. There were considerable swelling, tenderness, redness, and œdema over the great trochanter on the left side. During the last day or two the thigh had become flexed and could not be rotated outwards except with great pain. Indistinct fluctuation was felt over the trochanter. Chloroform was given, and an incision was made down to the bone on the outer side. The periosteum was healthy. On passing a director through the insertions of the glutei muscles towards the head of the bone abundant pus was found, evidently coming from the hip-joint; the opening was enlarged and a drainage-tube inserted. After the operation the temperature fell and the child improved. The hip discharged fairly freely and healed up well, so that the patient was sent out on Aug. 22nd.

GENERAL REMARKS.

On referring to the somewhat scattered literature on these joint affections, and on comparing our cases with those already on record, various points of interest come out, which may briefly be dealt with under separate headings.

Joints affected.—In seven out of nine of our cases the affection was monarticular, and in two polyarticular. Both these latter cases died. It is generally stated (De Lapersonne and others) that of all the articulations the knee is the one that is most frequently affected in the infectious joint lesions. As far as our cases go, the evidence in support of the statement is wanting. Seven joints were affected in the upper extremity as compared with five in the lower, the elbow being the seat of trouble in 3 cases, the knee and hip in 2 cases each, and the ankle and sterno-clavicular joint 1 each. Taking the forty-five joints mentioned by different authors as being affected, we get the following results: shoulder, 2 cases; elbow, 11 cases; joints of wrist and hand, 12 cases; hip, 4 cases; knee, 5 cases; ankle and joints of foot, 10 cases; and sterno-clavicular joint, 1 case. The comparative infrequency of suppuration in the knee is well shown. Of the larger joints the elbow comes first, being affected in almost a quarter of the cases. These cases, as far as can be ascertained, all occurred in children, and it is interesting to compare the statement of Neve that in small-pox occurring in children the upper extremity is more frequently affected than the lower, and that the elbow is the favourite site of all the joints. He thinks the arm is more liable to exposure and injury than the leg in children.[5]

Condition of joints.—The conditions described by different authors have varied from thickening and injection of the synovial membrane to extreme disorganisation. Henoch says: "In all cases of the kind I have found during life the affected joints swollen, very painful, and immovable, the tissues over them being œdematous. In some instances the condition was only discovered twenty-four hours before death. We found post mortem the cavities of the joints containing greenish-yellow creamy pus, the synovial membrane very opaque, but otherwise unchanged." On the other hand De Lapersonne says: "The thickened synovial membrane very injected, the cartilages are eroded and may completely disappear, detachment of epiphyses may occur, and in one case spontaneous dislocation of the femur has occurred. Heubner and Fischer both speak of extensive disorganisation of joints. So far as our own experience goes we have met three types. 1. Cases where flail joint and dislocation followed absorption of fluid effusion into joint (see Case 1). 2. The cases in this group correspond to those described by Henoch. There exists considerable œdematous swelling round the joint together with pain (which is sometimes variable in amount) on movement. On incising the part thick, creamy pus escapes. The synovial membrane thickened, showing in some cases petechiæ. The cartilages do not show to the naked eye any signs of erosion. In these cases one would probably obtain by early incision good subsequent movement. 3. This third variety is characterised by a far more virulent condition. From the commencement there are intense pain in the joint and marked redness and swelling over it, due to inflammatory infiltration of the surrounding tissues. In fact, the inflammation seems as much *peri-* as *intra*-articular. From the interior of the joints a thin, purulent fluid is obtained, and the capsule, softened by the inflammatory process very soon after the onset, allows of undue mobility. This was very well seen in the two cases where the elbow was affected (see Cases 3 and 4). The ends of the bones are more or less extensively denuded of cartilage and rough. In one case (Case 4) there was movement which was finally quite free (and not ankylosis resulted. When, however, we consider the amount of surrounding inflammation, such a result can scarcely be expected to occur often.

Time of onset.—The time of onset of these suppurative joint lesions seems to be commonly about the third or fourth week of the disease. If we exclude Case 6, where the joint affection may be considered as secondary rather to the pneumonia and empyema than to the scarlet fever attack, and exclude also Case 8, we have seven cases where primary suppuration occurred. These seven cases give an average time of onset of 23 days (19, 17, 20, 17, 23, 31, and 38 respectively), and on examining cases published by other authors the time of onset closely corresponds. In a case published by Mauriac the joints were affected during the third week. Another three cases were rather earlier. One of them had the joint affected on the eleventh day. Of the other two one was fatal on the nineteenth and the second on the fifteenth day. Henoch[6] gives three cases where joints were affected in two weeks, two weeks, and three weeks respectively after the onset of scarlet fever. Dr. Caiger[10] relates a case where the elbow-joint was affected on the thirty-fifth day.

Association of nephritis.—The time of onset of suppuration in the joint, as we have already pointed out, is coincident about the end of the third week. This corresponds with the time of onset of nephritis. Of our nine cases five had albuminuria. This generally preceded the arthritis by a few days. In the one case where the joint affection was as early as the sixth day nephritis did not occur till the seventeenth day, about the usual period. In Dr. Caiger's case mentioned above nephritis occurred on the twenty-fifth day, and the elbow was affected on the thirty-fifth. Both lesions are probably expressive of the same general poisoning of the system.

Heart conditions.—None of our cases were accompanied by any marked cardiac lesion, nor have we seen this complication noted in other published cases.

Mode of onset.—Authorities vary in their opinions as to the origin of suppurative arthritis. Two varieties have been

[5] Neve: International Medical Journal, 1891, vol. i., p. 461.
[6] Diseases of Children. Sydenham Society.
[7] Des Arthrites Infectieuses, p. 102. Paris, 1895.
[8] Glasgow Medical Journal, 1894, vol. xli., p. 279.
[9] Loc. cit., p. 281.
[10] THE LANCET, April 13th, 1891, p. 835.

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SYNOPSIS OF CASES.

No.	Sex.	Age.	Onset of disease.	Condition of throat, &c.	Condition of kidney.	Onset of joint affections.	Joints affected.	Operations on joints.	Result.
1.	F.	1½ yrs.	Aug. 7th.	Much ulceration; temp. 103° F., continuous; throat very bad.	Albumin, a trace on Aug. 19th and 22nd.	Aug. 26th (nineteenth day).	Left elbow.	Opened Aug. 28th; quantity of pus; cartilage eroded; undue mobility of joint; considerable space between bone ends; streptococci in pus from joint.	Aug. 30th: Death; septic broncho-pneumonia; streptococci in cultivations from kidneys.
2.	M.	2½ yrs.	Dec. 22nd.	Fauces swollen; temp. 105° F.; rhinorrhœa; double otorrhœa; intermittent temp., 100·3° F. to 104° F.; septic rash on 16th day.	Urine tested once two days before death; no albumin.	Jan. 8th (17th day). Jan. 10th. Jan. 16th.	Right wrist. Swelling over head of left radius; Right knee. [wrist-drop.	Incised Jan. 9th; a little pus found. Incised; no pus found.	Jan. 17th: Death; broncho-pneumonia; no post-mortem examination.
3.	F.	4 yrs.	Feb. 3rd.	Purulent infiltration of neck; temp. 100·3° F. to 104° F.; neck incised on 18th day.	Urine tested once; albumin present.	Feb. 23rd (20th day). Feb. 25th.	Right hand swollen. Left knee.	—	Feb. 26th. Death; thrombosis of internal and external jugular veins; pus in knee and wrist joints; petechiæ on synovial membrane; pure cultivations of streptococci in pus from joints; no abscesses elsewhere.
4.	M.	4 yrs.	Sept. 19th.	Extremely bad throat; exudation; temp. 104° F.; offensive otorrhœa; exceedingly ill.	No albumin.	Oct. 6th (17th day).	Left elbow swollen; undue mobility and fluctuation; much swelling of surrounding parts.	Opened Oct. 11th; considerable amount of thin pus; joint capsule lax, allowing undue lateral mobility; joint surfaces denuded of cartilage.	Nov. 16th: Recovery; joint freely movable without grating; some thickening left.
5.	F.	2½ yrs.	Oct. 4th.	Moderate inflammation of fauces; temp. 100·3° F.; rhinorrhœa. Oct. 21st: Secondary adenitis; vomiting; nephritis; temp. 102·2° F.; enlarged spleen.	Albumin appeared on 24th (marked nephritis); hæmaturia; œdema of feet.	Oct. 27th (23rd day).	Hand and wrist very swollen; swelling spreading up arm.	Oct. 28th: Incisions made in palm and over dorsum; no pus found. Nov. 1st: Palm of hand explored; no pus found. 5th: Sudden escape of thick sweet pus from incision on dorsum extending over wrist-joint; pus welled up from wrist-joint; swelling rapidly subsided.	Nov. 13th: Recovery; albumin ceased; free movement in wrist; no thickening apparent a year later; occasional swelling of wrist-joint in following winter.
6.	M.	3 yrs.	*Nov. 4th.	Admitted with severe nephritis; face puffy; scanty urine; blood; temp. 103° F.; desquamating otorrhœa; pulse 130; respiration 40; signs of apical pneumonia marked on 7th; crisis on 9th, followed by empyema (pneumococci in pus); operation on 15th; nephritis well by Nov. 22nd.	Nephritis on admission.	Dec. 15th.	For two or three days child has kept both legs flexed and has complained of pain. On examination swelling round right hip with œdema of skin; dislocation on to dorsum ilii.	Dec. 20th: Oblique incision over great trochanter; considerable amount of creamy pus escaped on opening capsule of joint; head of femur on dorsum ilii; ligamentum teres destroyed; cartilage not eroded; no surrounding inflammation.	Recovery by May after severe marasmus; seen in following November; in splendid health; leg ankylosed in extended position, with ¾ in. shortening; about 10° movement in joint.
7.	F.	14 yrs.	July 24th.	Admitted Aug. 3rd with large brawny swelling left side of neck; ulceration of left tonsil; incised next day; intermittent temp. 96·8° F. to 105° F., with rigors and free perspiration; pain in head; otorrhœa; rigors ceased on 14th, but temperature kept up.	No albumin.	Aug. 25th (32nd day).	Left sterno-clavicular joints; swelling noted on this date, subacute, slowly increasing, tender, fluctuating. On 27th temture fell to normal.	—	Recovery, Oct. 1st, wound in neck practically healed; inner end of clavicle is unduly movable and is dislocated upwards and inwards on to upper border of sternum; readily reducible; inner end of clavicle enlarged; movements of arm unimpaired.
8.	M.	16 yrs.	April 9th.	Kick on right ankle five weeks ago; sprained right ankle four weeks ago; admitted to Poplar Hospital; swelling subsided on admission to North-Eastern Fever Hospital; fauces but slightly affected.	April 26th: Onset of nephritis; temp. 101·2° F.; hæmaturia &c. July 1st: No albumin.	April 18th (9th day).	Right ankle swollen and painful. April 27th: Few drops of turbid fluid withdrawn; inflammation subacute. May 9th: Much swelling; fluctuation.	May 13th: Incisions; thin pus in joint; astragalus bare; thickening lower end of tibia; soft parts much infiltrated. 22nd: Continued swollen; cavity containing pus between tendo Achillis and ankle-joint opened; posterior ligament softened; much œdema persisted; intermittent temperature.	Aug. 1st: Recovery; wounds healed. Dec. 3rd: Can walk on foot without pain; ankle is stiff; considerable thickening round malleoli.
9.	M.	4 yrs.	May 15th.	Very bad throat; membranous exudation; rhinorrhœa; temp. 104° F. June 3rd, perforation of soft palate. 14th, patch of bare bone on hard palate. July 1st, double otorrhœa. 4th, broncho-pneumonia.	No albumin.	June 21st (34th day).	Left hip-joint; swelling, tenderness, œdema, redness over trochanter; thigh fixed in flexed position. This condition became marked by June 25th. Temp. 104° F.	June 25th: Incision made over great trochanter; periosteum healthy; wound prolonged to hinder part of hip joint; abundant pus escaped; condition of interior of joint not ascertained. July 14th: Temperature fallen to normal.	Recovery; wound gradually healed and patient was discharged Aug. 22nd.

*Onset five weeks before admission.

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described: (*a*) cases in which the ordinary serous arthritis of scarlet fever (scarlatinal rheumatism so called) passes on to suppuration; and (*b*) cases in which the affection of the joint is purulent from the commencement. According to Kennedy, Corrigan, Duchâteau, and Trousseau the first is the commoner variety. "The affection commences as a case of simple serous polyarthritis; then, at the end of three or four days, fever, rigors, the aggravation of general symptoms, with an increase of redness and swelling of the joint, indicate the appearance of pus in the joint."[11] Henoch, on the contrary, states that it far less commonly happens that ordinary synovitis passes into suppurative, but that the majority of cases are due to septic emboli and are purulent from the commencement.[12] Both on clinical and bacteriological grounds we should have expected to find the early serous effusion passing occasionally into the suppurative form. Ashby[13] made a great advance in our knowledge when he insisted on a distinction being made between the early and late rheumatic affections of scarlet fever, maintaining on clinical grounds that the swelling of the joints occurring early in the case was to be regarded in the light of a septicæmic condition and not as a truly rheumatic manifestation. This view has received strong support from the bacteriological side. Babes, Marie Rankin, and Lenhartz have found streptococci in the fluid withdrawn from the joints of patients presenting the early pseudo-rheumatisms of scarlet fever. We have had two cases in which death occurred shortly after the subsidence of an early serous effusion into the joints. Many sections made from the synovial membrane of this case by our colleague Dr. Scholefield, and again later by ourselves, showed abundance of micrococci infiltrating the tissues, and in one of the cases streptococci (pure cultivation) were grown from the fluid in an ankle-joint. There was no suggestion in either of the cases that the joint lesions, which were multiple, were on the point of becoming purulent. With the exception, perhaps, of Case 8 we were not able to satisfy ourselves that the purulent effusion was preceded by a serous effusion in any of our cases, thus corroborating the views held by Henoch.

Source of infection.—The majority of cases that have been described have been associated with some inflammatory condition of the pharyngeal and cervical structures. In some cases the faucial trouble is the most marked and is evidently the source of infection, as in Case 9. In several fatal cases there has been found thrombosis of the internal jugular vein. In Case 3 there was diffuse purulent infiltration of the neck, with thrombosis of the internal and external jugular veins for a distance of two inches at the base of the neck. Heubner has described a case where suppuration at the back of the right tonsil started a cellulitis of the neck which extended to the internal jugular vein, setting up septic phlebitis and thrombosis. In one of our cases (Case 6) the joint affection followed pneumonia and empyema, and in two cases where Schüller found pneumococci in the pus from the joint there had been antecedent pneumonia. Another method of infection is by the extension of inflammation to a joint from a peri-articular abscess. We have seen one case where distension of the knee-joint with a slightly turbid fluid followed the formation of an abscess just above the supra-patellar pouch. The child died before the fluid in the knee became purulent. Kennedy mentions epiphysitis as occurring at Dublin frequently in an epidemic from 1834 to 1842. In none of our cases were we able to make out that epiphysitis was the cause of the joint suppuration. This is worth comparing with the statement of Neve that epiphysitis is common in the joint affections of small-pox. In one case of acute arthritis of the hip-joint following measles we have seen the head of the femur lying loose in a large intra-articular abscess.

Treatment.—In addition to early and prompt surgical treatment consisting of free incision and drainage, we would lay stress on the advantage to be gained by prolonged immersion of the joint in a warm boracic bath. During any intervals between the baths hot boracic fomentations are preferable to dry dressings. Nasal feeding is in some cases essential in order to combat the exhaustion of the patient, and may often be used as an easy way of giving *extra* food in cases where the patient is exhausted with the effort of taking nourishment by the mouth.

Results.—With regard to results, ankylosis need not necessarily occur, even when the inflammation is so severe as to cause relaxation of ligaments and denudation of the bone ends. Dr. Caiger[14] has described a case where, following suppuration in the elbow-joint, good movement resulted. Case 4 is another example. Here, in spite of the erosion of the cartilage and the severe surrounding inflammation, free movement subsequently resulted. This we attributed to the fact that passive movement was adopted soon after the joint was opened, the arm being put in a different position each time it was dressed. Other cases where the cartilage is intact, and where there is but little surrounding inflammation, should, and do, stand a much more favourable chance of recovery with movement.

OVARIAN TUMOUR (AXIAL ROTATION), WITH RETRO-PERITONEAL CYST OF SAME SIDE; REMOVAL; RECOVERY.

BY WILLIAM TRAVERS, M.D. DURH., F.R.C.S. ENG.

ON June 5th of this year I was asked by my friend, Mr. Meredith Townsend, to see with him a woman aged fifty-one years whose history was as follows. Although not robust she had not needed medical aid since her last confinement twelve years previously. Menstruation was becoming irregular; for some little while past she had complained of an undefined uneasiness about the abdomen generally and, save in this part, had become thinner. On May 14th she was seized with an attack of acute pain in the epigastric region, with vomiting. The bowels were constipated. The temperature was normal. Beyond much tenderness, which hindered very close examination, there was nothing to be found on palpation. Under treatment the acute symptoms subsided, but she remained ill. On the night of May 29th the temperature suddenly rose to 103° F., and pain with great tenderness was felt in the right iliac region; the tongue was clean and moist. The temperature fell to 101° the following morning, but rose again to 103° in the evening. This state of things continued much in the same manner during the ensuing six days. When Mr. Townsend and I saw the patient together for the first time on the seventh day the temperature and tenderness (this latter still being fixed to the right side) had a good deal lessened. On inspection it was only noted that the abdomen was somewhat generally enlarged, not at all distended, but rather flattened. On palpation it was now evident that a cyst existed in the left side, at this time not very tense; thrill was only obtained anteriorly; there was resonance above the umbilicus, but there was ill-defined dulness in the left flank. Nothing could be felt per vaginam. We diagnosed an ovarian cyst, and on account of the right-sided pain thought it to be probably of the right ovary and to have undergone axial rotation. We urged immediate operation. The patient took three days to consider, and on June 7th the temperature again reached 102°. On the following day, with the assistance of Mr. Townsend and Dr. Schacht, I removed a cyst of the left ovary. At the time of operation the tumour had much increased in size, was much more tense and more mesial in position. There were numerous recent adhesions, which were easily swept down. The cyst contained four pints and a half of dark, chocolate-coloured fluid mingled with a good deal of purulent matter. There was one complete turn in the pedicle. The cyst wall contained a plate of bone and two teeth. On examining the abdominal cavity ere closing the wound I came upon a retro-peritoneal cyst of the same side; it extended from the diaphragm to the pelvic brim and laterally from the spine to the axillary line; it was not very tense, and the fingers could with care be passed under its margin; it lay in front of, and of course completely overlapped, the kidney. We considered it to be probably a hydro-nephrotic cyst, and as the patient had had no symptoms pointing to kidney trouble at any time, recent or remote, and the state of the pedicle and cyst contents fully accounted for the temperature, we agreed that this tumour should be left until the patient had sufficiently recovered to allow of my reaching it by a loin incision. She progressed

[11] De Lapponne: Des Arthrites Infectieuses. Paris, 1886.
[12] Lectures on Children's Diseases. Sydenham Society's Translations, vol. iii., p. 210.
[13] Brit. Med. Jour., vol. i. 1886, p. 970.
[14] Loc. cit.

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very satisfactorily; the temperature went down at once, and she was not troubled with sickness. She passed 16 oz. of urine the night after the operation, of sp. gr. 1023, acid, and containing no albumin, but 1·2 per cent. of urea. On the second day she passed 16 oz. of dark chocolate-coloured urine (that passed both before and after being quite normal), which on skilled examination was said to be "deeply coloured by hæmoglobin, with dense deposit of blood, mucus, pus, &c., innumerable crystals of calcium phosphate, some casts, numerous red blood-corpuscles, leucocytes in every stage of transition, and some renal epithelium." A smaller quantity of this type was again passed on the third day, but on no other occasion. The stitches were removed on the eighth day, when the wound was practically healed. She was keeping so well and improving so markedly in general health that, although the second cyst was notably increasing in size, whilst carefully watching her, I was disposed to wait yet a few days ere submitting her to the second operation, which probably meant a nephrectomy. On the night of the sixteenth day from her first operation the temperature began to rise, but she herself seemed well, and the cyst, which had been still slowly increasing in extent, gave rise to no pain or tenderness, the urine, too, keeping normal. On the night of the eighteenth day it somewhat suddenly reached 104°. On the day following (June 25th), with the aid of the same assistants as before, I adopted the lumbar incision recommended by Mr. Henry Morris, and easily came down upon the left kidney and a somewhat tough-walled sac, closely approximated; the cyst was slightly connected with its surroundings by recent adhesions. Breaking these carefully down with the finger, I at length found that the cyst and kidney were entirely separable, being in no way connected. Having tapped the cyst with an ascites trocar and removed four and a half pints of dark greenish fluid, I without the least difficulty shelled it out from its bed. There was very little hæmorrhage, only one ligature being called for, and that in the abdominal wound. A large-sized rubber drainage-tube was put in deeply and the wound closed with silkworm gut. Save for the small aperture made by the trocar, the cyst proved watertight; its inner surface, over about a third of its extent, was coated with a thick, shaggy lining of recent organised lymph. The patient's recovery from the day of operation was uneventful. The temperature became normal on the fifth day and never rose again; she passed three pints of urine of normal character within the first thirty hours, and it has continued so since. The wound discharged very freely for two days and then gradually slackened. The stitches were removed on the fourth day, as was also the tube, as the edges of the wound showed some slight redness, which, however, then at once disappeared. At the end of eight days she was removed to a sofa in the daytime, and she is now convalescent and has gained flesh markedly.

Remarks.—The chief interest in this case centres round the retro-peritoneal cyst. I have carefully searched the literature at my disposal and cannot note a like case. It appeared on palpation (and the rare opportunity of effecting this intra- as well as extra-abdominally here existed) to be of renal origin; the character the urine presented, too, on the second and third day after the ovariotomy pointed seemingly to grave kidney distu bance. The position of the tumour and its consequent capability of acting as a kidney irritant or mere mechanical obstruction to the ureter must be borne in mind. It is also a singular fact that these two tumours should have been present at the same time in the same patient without giving rise to earlier or more marked symptoms.

Phillimore-gardens, W.

THE HANTS COUNTY ASYLUM.—A new block for idiots has just been completed at the Hants County Asylum at Knowle, near Fareham. It is already occupied by thirty-seven patients. During the past year a committee of the county council have had under consideration the question of installing a water-softening apparatus to deal with the hard water which is obtained from the new pumping station, and a scheme for the carrying out of the work is promised for the next meeting of the county council. The separation financially of the Isle of Wight from the county of Hampshire proper has just been carried out, and in future patients from across the Solent will be charged at the same rate as other out-county inmates of the asylum. There has been an increase, in common with the country as a whole, in the numbers of inmates, the total at present being 1083—492 males and 591 females.

SEQUEL OF A CASE TREATED BY KOCH'S TUBERCULIN, WITH THE RESULTS OF THE NECROPSY.

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IN 1891[1] I described in detail the successful treatment of ten cases of pronounced pulmonary tuberculosis by Koch's method in the Royal National Hospital for Consumption, Ventnor, during a period of sixteen weeks. These cases were repeatedly examined by, and the treatment was conducted under the observation of a large number of, medical men unconnected with the hospital. The subsequent history of these cases has been carefully noted, and reports of their condition obtained at frequent intervals from competent observers. At present, after a lapse of over four years, eight of these ten patients are in excellent health, with every evidence of complete arrest of the pulmonary lesion, and are following their ordinary avocations. One of them has been serving for nearly three years in one of the battalions of Her Majesty's Foot Guards. Of the other two cases, one—referred to in my report as No. 7—died eighteen months after leaving the hospital from a return of symptoms referable to fæcal accumulation, similar to that which caused the tuberculin inoculations at the hospital to be suspended from the 19th to the 31st March. This attack was in nowise associated with tuberculosis.

The remaining case, described in my report as No. 10, was inoculated, I may say, almost under protest, both lungs being affected, the tuberculous process so acute, advanced, and extensive, and the general conditions also most unfavourable. He pleaded so earnestly that as he had only a few months, perhaps weeks, to live, he might be allowed the chance of improvement for the sake of his wife and young children, and I must confess I very reluctantly yielded. After leaving the hospital the patient took up his residence in Ventnor. The case was therefore kept continuously under my own observation and examined from time to time until the fatal termination, which occurred very suddenly from cardiac failure on Nov. 17th, 1894. A post-mortem examination was made within eighteen hours, and it is most interesting to compare the conditions then ascertained, with the physical signs and other symptoms described in my report as previously noted during and after treatment by tuberculin innoculation. For the purpose of this comparison I must briefly recapitulate the principal details of the case from the above mentioned report. The patient was a man aged forty-five years with a strumous diathesis. His height was 5 ft. 5¼ in., and weight 8 st. 4 lbs. He had been ill for three years. Severe and persistent cough began two years previously. There had been night sweats for twelve months, with loss of appetite, and progressive emaciation. There had been no hæmoptysis. Before innoculation he expectorated daily an average of two ounces of thick, greenish-yellow sputum, nummular, and containing abundant bacilli. The evening temperature reached 101° F., and in the morning was subnormal. The specific gravity of the urine was 1022, acid, with a slight mucous deposit, and a haze of albumin. The pulse was 102, soft and compressible. The first cardiac sound in the mitral area, and the second sound in the pulmonary area, were reduplicated. Respiration was 25 per minute. The physical signs in the lungs were as follows. There was flattening at both apices, above and below the clavicle, but more so on the left side, where movement was also more restricted. On the right side in front the percussion note was impaired to the third rib, with expiration prolonged, vocal resonance increased, and distant amphoric breathing under the clavicle. Behind, the note was impaired at the apex, expiration was lengthened, and increased vocal resonance to spine of scapula. In front of the left lung there was absolute dulness to the third rib and impaired to the fifth rib. There was loud superficial cavernous breathing with pectoriloquy to the lower margin of the third rib, with moist crepitations over the whole lung. Posteriorly there was absolute dulness at the apex and in the supraspinous fossa; in the latter there was amphoric breathing but no crepitation.

[1] THE LANCET, May 16th, 23rd, and 30th, 1891.

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The patient was inoculated with 0·001 gramme of tuberculin at 10 A.M. on Dec. 27th, 1890; the highest temperature was 102·5° at 9 P.M. The pulse was 116. The breath rate was unaffected, but the cough was severe, and the expectoration, which was very frothy, increased to three ounces in twenty-four hours. The urine became flocculent on cooling and showed a phosphatic deposit with alkaline reaction and sp. gr. 1020. On examining the chest, in addition to the previously noted sign, fine crepitations could be heard all over the left lung posteriorly. By the 29th these crepitations had disappeared, and the patient stated that he he "had coughed up less the last twenty-four hours than for the last two or three months," but bacilli were still found even more thickly clustered in the sputum. By Jan. 5th, 1891 (nine days), he had lost 4 lb. 4 oz., and this loss of weight occurred during the course of the earlier inoculations in seven of the ten patients under treatment. From this I inferred that the dose of tuberculin was still too large, and the reactions injuriously excessive, and in all subsequent inoculations I adapted the amount of tuberculin, so as to produce merely an indication of reaction, and to this I mainly attribute the exceptional success of the treatment in my hands. By Jan. 19th the loss of weight was recovered, and the increase went on rapidly and continuously. On Feb. 8th the fifth inoculation of 0·003 gramme was followed by moist râles or crepitations, exaggerated on coughing, over the whole of the right lung in front and the upper third behind; and in the left lung anteriorly there were crepitations over the base and friction round the lower limits of the vomica; at the apex behind there were also crepitations. The development from time to time after inoculation of peculiarly superficial, small, dry crepitations, especially over the bases of the lungs posteriorly, was noted in nearly all the cases. These crepitations conveyed to the ear the impression of some pleuritic origin, as if the pleura was hyperæmic or the pulmonary tissue immediately under it was affected in some way. The association, also frequently noted after the earlier and larger inoculations, especially of severe pains in the joints, abdomen, and head would point to some similar concurrent cause, but not, however, of a tuberculous nature. Their disappearance was usually as sudden as their onset and as complete. By April 14th this patient had had twenty-two inoculations—the highest, 0·065 gramme—amounting in all to 0·4625 gramme of tuberculin. The greatest reaction, 104·6°, was reached on Jan. 8th, after 0·002 gramme In this case I was much impressed with what seems almost to amount to a law—that, in proportion to the extent and activity of the tuberculous lesions, the greater and more prolonged is the reaction to the same doses of the lymph; hence, the more advanced and active the pulmonary lesion the greater the necessity for proportionally smaller doses and longer intervals in its administration. On leaving the hospital on April 16th, 1891, his weight was 9st. 3lb., being a gain of 13lb. since Dec. 25th, 1890, and a gain of 17lb. 4oz. since Jan. 5th. The patient had improved remarkably in condition and appearance. He expressed himself as "feeling wonderfully better." He had no night-sweats. The cough was easier; but the expectoration varied greatly, and on the whole was less in quantity and not so purulent and nummular. Bacilli, however, were still abundant. The appetite and digestion were excellent, and the functions regular. His pulse was stronger and fuller. The first sound of the heart was reduplicated in the mitral, and both sounds were reduplicated in the aortic and pulmonary areas. The flattening of the lungs was more marked, and movement more deficient under both clavicles, especially at the left side. In the right lung, anteriorly, the note was dull to the nipple. There was increased vocal fremitus, amphoric breathing under the clavicle, and pectoriloquy, with a few scattered crepitations; and posteriorly dulness to the inferior angle of the scapula with a very few crepitations. In the left lung the note from the apex to the nipple was more impaired than on the right side, with loud superficial amphoric breathing and pectoriloquy, with crepitations only on coughing, also a few small crepitations at extreme base. Posteriorly there was dulness to the spine of the scapula, obscure amphoric breathing and exaggerated vocal resonance in the supra-spinous fossa, and towards the base a few scattered crepitations. The patient, with his family, took up his residence in Ventnor. I inoculated him at intervals for six weeks, by which time the temperature, now normal, ceased to respond to the tuberculin. The moist crepitations throughout the lungs gradually cleared up, and the other physical signs indicated that only the smaller vomica at the right apex was quite dry, the larger at the left apex still affording moist crepitations on coughing. The only cough was that necessary to raise daily, and mostly in the morning, the six to eight nummules which now constituted his daily expectoration. The patient, who could be seen daily walking smartly about Ventnor and the neighbourhood, came to me every three months or so to report himself and to be examined. The sputa always contained bacilli, the physical signs remained the same except when an occasional catarrh declared itself, which, however, always passed off. The patient all the time used a respiratory inhaler with guaiacol, eucalyptol, and chloroform, and took, with occasional interruptions, capsules of five minims of guaiacol (three daily) which he said "always improved his wind." On Sunday, Dec. 11th, 1894, he had been at morning service and had afterwards partaken of a hearty dinner at table with his family. On the 13th I was asked to see him "as his breathing was very bad." I found him suffering from extreme dyspnœa, with an anxious, drawn face, but able to speak rapidly and explain his symptoms. The pulse was hardly to be counted, it was so faint and compressible. The heart sounds were also very faint, and the apex beat was hardly perceptible. I prescribed a mixture of tincture of digitalis, tincture of sumbul, ether, chloroform, and compound tincture of cinchona co., to be given at frequent intervals, with appropriate nourishment, &c. Next day I found him very much better. I visited him the next day and one, when he seemed further improved. The following day I also saw him, and he wrote out some directions and signed some documents with a steady hand, but I had not left him above an hour when he all at once raised his hands, laid them on his wife's shoulders, and then suddenly expired.

Necropsy.—The post-mortem examination was performed eighteen hours after death by Dr. Lewis and Dr. Frost, resident medical officers of the Royal National Hospital, Ventnor. They made independent notes which are embodied in this report. The body was found to be fairly well nourished. The right lung was adherent, and the pleura much thickened over the upper half of its extent; the left lung was adherent superiorly for about two-thirds of its extent, and there were also smaller adhesions to the pericardium and diaphragm. There was, however, no difficulty in removing the lungs from the thoracic cavity without rupture of their substance. The whole of the upper lobe of the left lung was occupied by a cavity with thick fibrous capsule and lined by a pyogenic membrane with pus-moistened walls. The middle lobe was adherent to the upper and also entirely excavated, and the capsule and lining presented similar characters. These vomicæ did not communicate, and each opened independently into a bronchus. The right lung contained a caseous nodule surrounded by a thick fibrous capsule. The whole upper third of this lung was occupied by a cavity with an extremely thick fibrous wall. The lining membrane had no pus on its wall—indeed, it seemed almost dry; it communicated with a small bronchus. This vomica is the one recognised in the original examination and referred to in the report as of older standing than the excavation in the left apex, and as also being in a condition of arrest. The lungs of both lungs were much congested hypostatically, and contained a few capsulated caseous nodules scattered throughout their substance. The heart was extremely small, anæmic, and its walls much thinned; the right side was dilated and full of blood. The valves were quite healthy.

Remarks.—If the physical signs and symptoms of this patient as ascertained by competent observers before treatment, the phenomena developed during its course, and its condition at its termination, and subsequently, be compared with the state of the lungs as revealed at the necropsy, there can hardly be any hesitation, I think, in ascribing the arrest of this extensive area of acute pulmonary tuberculosis to judicious tuberculin inoculation. This case confirms me in the opinion I have always held, and still hold, that tuberculin has potent therapeutic efficacy in the treatment of tuberculosis when used judiciously and with caution in dose and under conditions adapted to each individual case. In the Continent Koch's method has survived the unscientific and regrettable haste which, after the great promise of its inception, too prematurely condemned it. No less an authority than Dr. Armand Ruffer, when writing to me lately on another subject, told me that he was much impressed with what he saw of this treatment on the occasion of a recent visit to Berlin.

Ventnor, Isle of Wight.

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EXOPHTHALMIC GOITRE.[1]

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DURING the last two years I have had under my observation five cases of exophthalmic goitre, and I have had the exceptional experience of two necropsies—one on a case of my own and the other on a case of Dr. Davidson at the Infirmary. I shall divide the remarks I have to make into three groups—viz., (1) the symptoms; (2) the morbid anatomy and pathology; and (3) prognosis and treatment.

1. *Symptoms.*—The onset may be acute or chronic, the course short or prolonged over years. The earlier symptoms are associated with the cardio-vascular system and consist chiefly of a persistent tachycardia. Occasional attacks of palpitation are present. Physical examination reveals a diffused cardiac impulse, with enlargement of the area of cardiac dulness. Functional bruits are common. The arteries in the neck are dilated, and visible pulsation in them is common. The radial pulse is frequent and of low tension; the frequency may be 150 to 200 per second. Goitre follows and consists of a firm enlargement of the gland, usually more marked upon the right side. The goitre is painless, and, in my experience, is not pulsatile. A rough systolic murmur is usually audible in the neighbourhood of the gland. Exophthalmos may be a very late symptom. Other eye symptoms are defective descent and retraction of the upper lid. In one case I noted a symptom first recorded by Joffroy—viz., a loss of the contraction of the frontalis muscle associated with the sudden upward movement of the eyes. The pupils in my cases, with one exception, were not dilated. To the so-called cardinal symptoms another should be added—viz., muscular tremor. It was present in all my cases, and is, I believe, a constant and early symptom of the disease. The tremor has been thoroughly investigated by Marie,[2] who states that it may be best brought out by getting the patient to hold the arms in the extended position. The narrow excursions and the rapidity (8½ per second) distinguish the tremor from other forms; that of alcoholism, which most resembles it, may be recognised by the irregularity both of time and excursions. The general features of the disease are familiar, and may be, therefore, very briefly given. They are emaciation, anæmia, irregular rises of temperature, flushings and sweatings, diarrhœa, and excitable mental state, passing on to actual insanity. Amenorrhœa is a constant feature in women. Diminution of the electrical resistance of the skin is said to be a constant phenomenon. In a few cases general enlargement of the lymphatic glands has been observed, and in both the necropsies I have made the lymphoid follicles in the intestines were swollen. Dr. Hunt informs me that he has twice operated for enlarged tonsils in cases of Graves' disease. In both cases the enlargement took place after the onset of the latter. Rarer symptoms are various forms of paralysis, glycosuria, albuminuria, and œdema. The termination may be in recovery or death from exhaustion or syncope.

With this brief account of the clinical features I pass on to consider my second group.

2. *Morbid anatomy and pathology.*—The older theories of Stokes and Graves (primary cardiac) and Marshall and Taylor (pressure on nerves and vessels of neck) have been long abandoned. The sympathetic theory must, I think, now be given up also. The tachycardia and the vascular dilatation at first sight suggest a lesion of the sympathetic nervous system. On closer examination it is found, as Gowers points out,[3] that this theory involves the assumption of (*a*) a partial affection, or (*b*) a twofold action—viz., a stimulating one upon the accelerating fibres for the heart and a paralysing one upon the vaso-motor fibres—a double-barrelled action the probability of which is rather remote. Again, if there were a sympathetic lesion we should expect dilatation of the pupils to be a common symptom, whereas it is rare. It was only present in one of my five cases. Moreover, the sympathetic system in the neck has been found to be normal in the vast majority of the fatal cases. In thirteen cases recorded by Lewin[4] it was normal in all. It was normal in both my cases. A much more probable theory is one which locates the lesion in the central nervous system, and more especially in the medulla. The association of arterial dilatation with increased frequency of the heart's action is in harmony with Marey's well-known law that "there is an inverse ratio between pulse frequency and blood pressure in consequence of their relationship to a central mechanism." Filehne, and Durdufi, in repeating Filehne's experiments, have shown that division of the restiform body gives rise to symptoms closely resembling those of exophthalmic goitre. There is no doubt, too, that in some cases, more especially the acute ones, lesions have been found in the medulla—e.g., increased vascularity by Greenfield[5] and myself, hæmorrhages by Müller,[6] Hale White, Stewart and Gibson,[7] and abscess by Stewart and Gibson.[8] The usual absence of anatomical changes and the undoubted presence of a marked neurotic inheritance led Charcot to regard the disease as a neurosis, and to this phase of the nervous theory I shall allude again. For my own part, I fail to see how a lesion in the medulla can give rise to the psychical and paralytic symptoms so commonly met with in this disease. It is probable that the cardio-vascular phenomena are due to a disturbance of the medullary centres, but that this disturbance is secondary and not primary. The nervous system theory is still accepted by many writers (Mannheim[9] and others), but the latest, and at present, I think, the most satisfactory, theory is the one which attributes the disease to a primary lesion of the thyroid gland. In considering the affection from this aspect the thyroid gland must be dealt with first. The examination of the goitre in my two cases revealed a condition which was in striking contrast to that usually described. The condition I found corresponds closely to that recorded as present in their cases by Stewart and Gibson,[10] Greenfield,[11] O. Hezel,[12] Joffroy,[13] and Putnam.[14] The thyroid gland was enlarged; the alveoli were small and apparently more numerous, they were packed with cells, and the colloid material was absent. In one of my cases (acute) there were masses of leucocytes at the points of entrance of the larger vessels. In chronic cases an overgrowth of connective tissue has been present, with some tendency to cyst formation. It will be noticed that in this description there is no allusion to any marked increase of vascularity. Is the goitre a vascular one? From the clinical side I must say that in my five cases repeated examinations failed to detect any expansile pulsation in the goitre, and the histological examination of my own case and under Dr. Davidson's care confirms me in the belief that the goitre is not a vascular one. Of course, some increase in vascularity is necessarily present in an over-active gland, but my point is that there is nothing approaching an aneurysmal condition, and therefore the goitre in Graves' disease is not clinically a pulsatile one.[15] The marked thrill and bruit present in these cases are due to vibrations in the main thyroid arteries and not in the gland itself. It is important to note that the histological characters described above are present even when the gland during life is not appreciably enlarged—a point of great interest in connexion with cases of persistent tachycardia, which many observers would class as *fruste* examples of Graves' disease. Greenfield[16] compares the histological characters to those seen in an active mammary gland, and suggests that the thyroid gland in these cases is in a state of over-activity. Some support is lent to this suggestion by the fact that the gland tissue in Graves' disease bears a close resemblance to the thyroid tissue in early life, when the gland is supposed to be in a state of great activity.[17] Assuming, as I think is permissible, that the thyroid gland

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[1] A paper read before the Medical Institution of Liverpool on Oct. 17th, 1895.

[2] Contribution à l'Étude des Formes frustes de la Maladie de Basedow. Paris, 1883.

[3] Diseases of the Nervous System, vol. ii., p. 885.

[4] Inaugural Dissertation, Berlin, 1888.

[5] Bradshaw Lectures, THE LANCET, Dec. 16th, 1893.

[6] Deutsches Archiv für Klinische Medicin, Band xli.

[7] Brit. Med. Jour., Sept. 23rd, 1893. [8] Ibid.

[9] Morbus Gravesii. Berlin, 1894.

[10] Brit. Med. Jour., Sept. 23rd, 1893. [11] THE LANCET, Dec. 16th, 1893.

[12] Deutsche Zeitschrift für Nervenheilkunde, 1873.

[13] Progrès Médical, December, 1894.

[14] American Journal for Nervous and Mental Diseases, December, 1893.

[15] My point is sustained by a case of Mr. Paul, in which, when the isthmus was divided in the operation of partial thyroidectomy for Graves' disease, no bleeding of any moment took place.

[16] THE LANCET, Dec. 16th, 1893.

[17] Professor Sherrington informs me that after partial thyroidectomy the remaining gland tissue assumes the character of that seen in Graves' disease—a fact which gives additional and strong support to Greenfield's suggestion.

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is over-active in these cases, it has yet to be shown that excess of thyroid secretion can give rise to the symptoms of the disease. The symptoms of thyroidism in the human subject bear a very close resemblance to those of exophthalmic goitre—emaciation, sweating, frequent pulse, tremors, excitable nervous system, and exophthalmos[18] have all been observed. Again, the contrast between the symptoms of myxœdema, which it is universally acknowledged are due to the absence of thyroid secretion, and those of exophthalmic goitre, which it is suggested are due to an excess of thyroid secretion, is very marked, as will be seen by the following comparison:—

	Myxœdema.	Exophthalmic Goitre.
Thyroid gland	Atrophy	Hypertrophy.
Sweating	Absent	Copious.
Temperature	Subnormal	Often raised.
Sensation	Of cold	Of heat.
Electric resistance of skin	Increased	Diminished.
Pulse	Infrequent	Frequent.
Mental and bodily state	Sluggish	Excitable.

Further support is lent to the thyroid gland view by the fact that in some twelve cases recorded by Ord and others the symptoms of Graves' disease have been followed by those of myxœdema. The intimate connexion between the thyroid gland and exophthalmic goitre is still further emphasised by the favourable results following operations which lessen the amount of secreting gland tissue.

—	Number of cases.	Improvement.	Recovery.	Death.
Putnam[19]	51	34	13	4
Wette[20]	30	28	—	—
Lemke[21]	8	3	5	—
Krönlein[22]	8	8	—	—
Kocher[23]	39	39	—	—
Tillaux[24]	2	2	—	—

It seems, therefore, that there is much probability in the view that exophthalmic goitre is a thyroid disease and that the symptoms are due to an excess of thyroid secretion in the blood. Mr. Edmunds,[25] on experimental grounds, seems to incline to the sympathetic theory, but upon this I need not touch again. He raises the question as to whether the disease is due to an excess of normal secretion or to a perverted secretion. No doubt the injection of cocaine produces many, if not all, of the symptoms of exophthalmic goitre, but it appears to me that, inasmuch as normal thyroid juice will give rise to all the symptoms of the disease, it is unnecessary to assume the existence of any poison akin to cocaine.

Before dealing with the question of prognosis and treatment I must add a word with regard to the eye symptoms. Exophthalmos is frequently a very late symptom, and is, I believe, due to the dilatation of the retro-bulbar vessels. In one of my cases it disappeared during an attack of diarrhœa, to return when the diarrhœa ceased. In the fatal cases I examined no appreciable increase of intra-orbital fat could be made out, and it has always been a matter of wonder to me why this suggestion should have been made in view of the fact that emaciation is a marked feature of the disease. The external ocular muscles were pale, but not obviously fatty; Müller's muscle I could not find in one case. The mechanism of Von Graefe's and Stellwag's symptoms is no doubt nervous, but as to the exact nature thereof I have no suggestion to offer.

3 *Prognosis and treatment.*—Gowers[26] says "that in few diseases of equal severity and corresponding apparent gravity is the prognosis so uncertain, and that in well-marked cases little or no improvement has followed the most careful treatment." With the first clause of this statement all will agree, but it is probable that the thyroid theory of the disease may lead us to reconsider the second. Briefly put, the routine treatment has consisted in rest in the recumbent posture and quiet surroundings, and in four of my cases this was sufficient to enable the patients to go back to work. The late Mr. Denton Cardew strongly recommended electrical treatment, and Nothnagel speaks very high effect of mountain residence. Drugs, in my do but little good, although it is interestir the reputed value of belladonna from its well-kn on the salivary glands. Although I have n experience to offer, yet it seems to me, from th have submitted, that in operations intended to di amount of thyroid gland tissue there exists a better prospect of affording relief, if not cure, t jects of Graves' disease. Two operations seem to the test of trial. They are (1) partial thyroidect right lobe only has usually been removed, in all th my list, with the exception of Kocher's. (2) Ligat thyroid arteries. This was the operation selected and is based upon the experimental work of Tarch has shown that ligature of the thyroid arteries atrophy of the gland. In Kocher's cases three four main arteries were tied.

A few words must be added with regard to the e side of the question. There is little definitely k I shall just touch upon the two points which are en in all the text-books. The first is that in the ma not in all, of the cases there is a marked neuroti ance. I made this out in all my cases. The secon emotional disturbance is a prominent exciting caus was certainly not so in my own cases, and it is probe in the cases attributed to emotional disturbance the has been present, though unnoticed, and that emotio caused an exacerbation of symptoms which brou patient under observation. The intimate relationship the thyroid gland and the central nervous system h established beyond all doubt by the experimental Horsley and others, and, therefore, it is impossible absolutely that the thyroid changes are dependent primary nervous lesion. It seems probable tha admitting this, the symptoms are brought about by e thyroid activity.

In conclusion I would urge that the important link chain of phenomena called "exophthalmic goitre" thyroid gland, and that it is to the breaking of this li we must direct our efforts for the removal of the sym of the disease.

Liverpool.

[18] Béclère: Archives Générales de Médecine, February, 1895.
[19] Loc. cit. [20] Archiv für Klinische Chirurgie, Band xliv., 1892, p. 44.
[21] Deutsche Medicinische Wochenschrift, No. 42, 1894.
[22] Correspondenz-Blatt für Schweizerische Aerzte, No. 15, 1894.
[23] Ibid., January, 1895.
[24] Traité d'Anatomie Topographique, p. 426 and footnote.
[25] Transactions of the Pathological Society of London, 1896, p. 224.
[26] Loc. cit., vol. ii., p. 891.

A NOTE ON

CYSTIC DEGENERATION OF THE MAM WITH THREE CASES OF "RECURREN ON THE OPPOSITE SIDE.

BY HERBERT SNOW, M.D. LOND.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

ALTHOUGH one not seldom hears a breast tumour s of as "a simple cyst," I desire to point out that such a very rarely, if ever, occurs in women verging on middle when the organ is entering its devolution epoch. In young a dilated milk-duct is often seen as the resu obstruction, and may well be thus described. After the of thirty-four cyst formation is, in my experience, invari due to a general aberration in the devolution of the e parenchyma, not merely of one but, as the follo cases show, of both mammæ. There may be found a single cyst of appreciable size; with this, how are always associated numerous others, possibly ha larger than a pin's head, uniformly distributed throug the gland tissue. If not operatively interfered with the dition may continue until the entire mamma becom congeries of cysts, within which, sooner or later, "in cystic vegetations," carcinomatous or sarcomatous, deve It is brought about, like cancer, by any emotiona mechanical hindrance to the natural processes, whereby mammæ pass to their obsolete phase. When there redundant formation of white fibrous tissue between cysts the tumour is spoken of as a "cystic fibrom but there is no essential difference between this and simpler cystic degeneration. It is best when operat carefully to remove the whole breast tissue, and questioned, as commonly happens, about possible "rec rence" to give a guarded prognosis so far as concer the remaining organ. The point that we have here to d with a general and not merely a local lesion of t

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parenchyma is hardly, I think, sufficiently appreciated by the profession at large; but unless attended to may involve the practitioner in some disrepute.

The first case was that of a woman aged forty-eight, married, with two children, who was admitted to hospital in October, 1894, with an induration at the root of the right nipple of one year's duration. She complained of some lancinating pain. There had been no injury, but chronic ill-health, and latterly she had been unfortunate in business. The tumour appeared as large as a hazel-nut. The patient thought there had been discharge from the nipple. There was no gland enlargement. Upon removal it was found to be one large cyst, with the remaining parenchyma pervaded by minute cysts; there were no vegetations and no malignant indications. The patient has just (October, 1895) had the left breast removed for an exactly similar condition, the right side remaining, of course, healthy. The second case was that of a woman aged thirty-five, single, sent by Dr. Garry Simpson of Acton in August, 1892. She was a spare, neurotic woman with a fluctuating tumour in the left breast, which had been noticed six weeks, as large as a pigeon's egg. On removal one large cyst filled with turbid fluid was found; the whole breast tissue was full of tiny cysts. In July, 1893, the remaining organ was found to be slightly lumpy. In August, 1895, a distinct cyst the size of a bean was apparent in the lower segment, and removal was advised. The third case was that of a widow aged forty-six, who had three children; she was seen in November, 1893. In the right breast was a large prominent globular tumour the size of a hen's egg, freely movable, hard, and solid to the touch. The patient was neurotic through much worry. On removal a multilocular cyst with solid round fibroma as large as a marble was found. There was no malignant tissue. The patient reappeared in July, 1895, with a tumour the size of a walnut, rounded and hard, in the left mamma. It quickly increased in size from augmentation of the fluid contents, and has just been removed, proving wholly cystic.

Gloucester-place, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SYMPATHETIC OPHTHALMIA WITHOUT EVIDENCE OF MICRO-ORGANISMS.

BY W. J. COLLINS, M.D., M.S. LOND., F.R.C.S. ENG.,
FELLOW OF THE UNIVERSITY OF LONDON.

A WOMAN aged sixty-five years was admitted on Aug. 20th, 1894, into the London Temperance Hospital. There was a history of failing vision for two years, for which she had been treated at another hospital, where an operation for cataract had been performed on the right eye in April, 1894. The operation was unsuccessful, and the eye had remained painful and almost blind. Three weeks prior to admission the sight of the left eye suddenly became dim, and there was much ocular pain. She was seen for the first time as an out-patient on Aug. 16th, and was told to go in at once, but unfortunately she did not present herself until Aug. 20th. On admission the right eye was painful and red, and the media were not clear. The site of the old coloboma was occupied by a reddish-yellow mass, and the remainder of the iris was fixed by a dirty bloodstained effusion. There was only perception of light. The left eye was red, watery, and painful; the cornea was clear, but the pupil did not act to light. Owing to the presence of a nearly mature cataract the vision was only perception of light and hand reflex. The right eye was at once excised and belladonna fomentations applied to the left. Subsequently she developed a smart attack of iritis in the left eye, with swelling of the eyelids, which, however, yielded slowly to treatment. She was discharged with the left eye in a quiet condition, but with some posterior synechiæ. Owing to the cataract the vision could not be further tested. The excised eye was placed in Müller's fluid and handed over to Mr. Cargill, surgical registrar at King's College Hospital, who made a careful search for micro-organisms by various methods, and mounted several sections of the eye. The sections show the coloboma blocked with leucocytes; the lens, or remains of the lens, is present; the deeper layers of the ciliary body and choroid are crowded with small, round lymph cells, and the sheath of the optic nerve, especially in the neighbourhood of the porus opticus, exhibits similar infiltration. Mr. Cargill assures me that elaborate searches for micro-organisms yielded absolutely negative results. Here, then, was a case of sympathetic iritis in which the exciting eye, excised *flagrante delicto*, yielded no evidence whatever of particulate infection by the most thorough methods of investigation. The mystery of sympathetic ophthalmia is not yet solved. During the height of the neurotic school of thought we were directed to the ciliary nerves for some kind of reflex causation; the humoralists, however, looked to the lymphatic sheath of the optic nerve as the path of infection. In obedience to the germ theory domination the ciliary nerves have of late been less accused, and the lymphatic sheath has been regarded as merely providing a path along which bacteria might proceed. The case I now record will serve to indicate that this explanation may not be all-sufficient. The reflection that sympathetic ophthalmia is in some way merely corollary to the law of symmetry and the recollection of the selective powers exerted by similar tissues may supply a more fruitful working hypothesis.

Albert-terrace, N.W.

NOTES ON A CASE OF APYREXIAL ENTERIC FEVER.

BY W. RUSSELL, M.B. ABERD., D.P.H. LOND.,
RESIDENT MEDICAL OFFICER, NORTH CITY FEVER HOSPITAL, LIVERPOOL.

A BOY aged thirteen years was admitted to hospital as suffering from enteric fever. His parents said that he had been ailing for over a week. On admission he presented a typical typhoid look of prostration, lying on his back with his arms lying loosely by his side. The pupils were dilated and he had a circumscribed flush on each cheek; his tongue was covered with a dirty-white fur. The abdomen was slightly tympanitic, and there were two rose-coloured spots disappearing on pressure. There were no lung complications, and all that the patient complained of was a feeling of being tired. There was no diarrhœa at any time during his illness. He was fed solely on milk. The temperature on admission was 100° F.; it fell to normal next day, and remained so for ten days, during which time his tongue was still heavily coated and the typhoid appearance was well marked, when the temperature rose to 103·2°, and he passed about three ounces of blood, his temperature falling in twenty-four hours to normal. Next day there was another rise to 101·4°, and he passed about four ounces of blood, his temperature subsiding to subnormal and continuing so for eighteen days. He was then allowed to sit up in bed, but kept strictly on a milk diet, as his tongue, notwithstanding stomachic medicines, had not perfectly cleared up. Two days later the temperature rose to 101°, and then a typical typhoid temperature continued, with numerous typhoid spots and very foul tongue. Gradually his tongue began to clean, and he was discharged from the hospital four weeks later. The point of interest in the above case was the fact of the patient presenting typhoid symptoms, tongue, spots, hæmorrhage, &c., notwithstanding that his temperature remained normal or subnormal, except before the hæmorrhage occurred, and after being allowed to sit up in bed.

Liverpool.

RADICAL CURE OF HYDROCELE BY INJECTION OF PERCHLORIDE OF MERCURY.

BY N. WHEATCROFT HOLMES, L.R.C.P., L.R.C.S., L.M. EDIN.
LATE GOVERNMENT MEDICAL OFFICER IN WEST AND SOUTH AUSTRALIA, AND HOUSE SURGEON TO THE MANCHESTER SOUTHERN HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN.

THE result of the following case proved very satisfactory. A man aged sixty-eight years, suffering from diabetes, had a large fluctuating swelling of five years' duration in the scrotum on the right side, pyriform in shape, with a smooth regular outline. There was no impulse on coughing, and it was non-translucent by transmitted light. On Sept. 22nd I first made an exploratory puncture with a hypodermic needle and

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drew off some clear fluid, then by tapping with trocar and cannula I further evacuated twenty ounces of serum of a dark-brown colour with numerous flakes. With the intention of washing out the tunica vaginalis without withdrawing the cannula I connected a large glass syringe by means of a piece of fine indiarubber tubing and injected an ounce and a half of a solution of perchloride of mercury (two-thirds of a grain to six ounces); but as this did not return upon pressure, and not wishing to make a further puncture with a larger trocar, I let it remain. On Sept. 23rd the scrotum was slightly inflamed and œdematous, and there was a temperature of 101° F., necessitating the patient remaining in bed. The temperature rose to 102° on the 25th, but by use of evaporating lotion it became normal on the 26th, when the patient got up. On Sept. 28th there was slight orchitis, with some fluid in the sac (no doubt the perchloride of mercury solution injected). On Oct. 1st the orchitis and fluid were subsiding. On Oct. 30th the fluid was all absorbed; there was no refilling of the sac, only a slight enlargement of the right testicle, which was the case when the patient was young. The scrotum appeared to be contracted, and the patient felt quite comfortable. The object in this case was to avoid the operation of excision of the sac, the condition of the patient not admitting of it, and to obtain a radical cure without pain, inflammation, or necessity of the patient going to bed. No doubt the retention of the perchloride of mercury solution set up a little more inflammation than would have occurred, otherwise the patient need not have remained in bed the three days. Three years have now elapsed, and all is well and the patient comfortable.

Tachbrook-street, S.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

A CASE OF RADICAL TREATMENT OF UMBILICAL HERNIA IN A CHILD.

(Under the care of Mr. EDMUND OWEN.)

THIS case is published as a proof that there are even exceptions to the rule that reducible umbilical hernia in a child should never be submitted to operation. We consider that to this rule there are *very few* exceptions, and any surgeon who does operate should be prepared, like Mr. Owen, to give his reasons for departing from the recognised practice. We must, therefore, draw attention to the fact that this patient was kept under observation in a hospital bed for five weeks, and full consideration was given to her case before the operation was performed. We do not consider that the operation itself presents any great danger in the hands of a skilled operator, but this form of hernia is so very common in children that if it were once admitted that operation might be done for, it many cases would be subjected to the treatment which would be most likely to effect a speedy cure. Some patients would die (although the percentage of deaths might be a low one) who would have made a satisfactory recovery had the usual treatment of this form of infantile hernia been patiently carried out. For the notes of this case we are indebted to Mr. G. R. Baldwin, F.R.C.S., surgical registrar.

An ill-nourished female infant aged fifteen months was admitted to the Hospital for Sick Children, Great Ormond-street, on July 2nd last. The history given was to the effect that she was born with a rupture at the umbilicus, and that it had been steadily increasing in size ever since, until it had attained the size of a small hen's egg. It was reducible with the greatest ease, the opening into the abdomen being large enough to admit the index-finger and having a firm, circular border. She had a high, square forehead, a natiform skull, and an ill-developed nose. There was, however, no confirmation whatever of the existence of the congenital taint which these features suggested, and as the wrist-ends of the radii were greatly enlarged the general feebleness of the infant was ascribed to rickets. She had been specially sent into the hospital in order that the hernia might be operated on, the persistent trial of less radical measures having failed to produce any improvement. For five weeks she was kept in bed and carefully dieted, the protrusion being kept back with a flat pad; but at the end of this time (Aug. 7th), preparations having been duly made, chloroform was administered, and an operation was performed as follows. The bowel having been returned, an incision was made, skirting the base of the tumour down to the peritoneum. The peritoneum was then cut off flush with the front of the abdomen, integuments and sac being taken away together. The circular opening in the peritoneum was then sewn up, and the edges of the skin wound were approximated by stitches which, inserted wide of the cut surface, traversed the fibrous wall of the abdomen and made all secure. A week later the dressings were changed, the wound being soundly healed and giving no impulse on the patient crying. On Aug. 29th she was taken home, to all appearances perfectly cured.

Remarks by Mr. OWEN.—If the evidence of the parents can be relied on, the foregoing was an example of that somewhat rare form of umbilical hernia which consists in a protrusion of a piece of bowel into the interior of the umbilical cord—a true *congenital umbilical hernia*. For the most part, the variety of umbilical hernia met with in infancy and childhood is that in which, on account of the umbilical cicatrix being too soft and weak, the intra-abdominal pressure first causes a bulging at the scar and then an absolute emigration of the bowel—an *acquired umbilical hernia*. On seeing an umbilical hernia, the first thing to be done is to find out why the protrusion has occurred. It may be that it was acquired because the infant had been perpetually straining with vomiting, in which case, if a flat pad is strapped over the aperture and the food and feeding are properly regulated, a cure may be gradually effected. Sometimes, again, the hernia is caused by straining set up by a tight foreskin, by diarrhœa, constipation, a rectal polypus, or by whooping-cough. In such cases a radical operation is obviously out of the question. Then, again, in the rickety child, when the bowels are distended by the accumulation of gases and the linea alba is frayed out and the interval between the recti abdominis is widened, the umbilical scar must needs be weakened, and the occurrence of an exomphalos is invited. In these circumstances the administration of repeated doses of rhubarb and soda, together with careful dieting and supervision, may effect all that is needed. But when the causes of the rupture are obscure, when no clear "indications" for treatment are discoverable, when the abdominal aperture is large and the flat pad and strapping have failed, a radical operation is not only justifiable but necessary. At the present time surgical ingenuity seems to be specially busy in designing new methods of procedure.[1] But it by no means follows that, because a surgical procedure is new and original, it is necessarily "improved," and, so far as my experience goes, the simple and ordinary operation briefly referred to above leaves, as a rule, nothing to be desired. After operating I apply no strapping, band, or belt; if the operation has been done with due care it should need no supplement, though it is prudent to keep the child in the horizontal position for a few weeks subsequent to the healing of the wounds. Provided that the child has not been operated on "straight away," but has been subjected to a sufficient preparatory treatment, the cure of the exomphalos should not be the cause of the occurrence of a rupture in the inguinal region, but I can quite understand that if the inflated intestine of a rickety child has been thrust back into an unreceptive abdomen a secondary rupture might occur. However, such an event is outside my personal experience. Lastly, supposing that both gentle and radical measures fail to effect a cure on a child's umbilical hernia, will the exomphalos persist during school-life and manhood? I think not. On the contrary, I do not remember ever to have seen an umbilical hernia in adult life except in the case of extremely obese women and men whose abdominal cavities and lineæ albæ have been taken possession of, and seriously weakened, by an ever-increasing deposit of fat.

Before submitting this clinical record I thought it my

[1] See La Semaine Médicale, March 6th, 1895; also Revue de Chirurgie, April 10th, 1895.

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duty to have the child up for examination. I saw her on Nov. 6th and regretted to find that on Saturday, the 2nd, during a violent fit of coughing, a slight protrusion had taken place. There was a small aperture running transversely through the linea alba, behind the scar of the operation, and, though it is insignificant compared with the size of the original opening, its presence is disappointing. On re-reading my report and observations, however, I have the satisfaction of finding that the procedure carried out was termed "radical *treatment*," not "radical *cure*." Treatment and cure are, unfortunately, not always synonymous terms.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Posture in its Relation to Surgical Operations under Anæsthetics.

AN ordinary meeting of this society took place on Nov. 12th, Mr. HUTCHINSON, President, being in the chair.

The adjourned discussion on the paper by Dr. Frederic Hewitt and Mr. Marmaduke Sheild on Posture in its relation to Surgical Operations under Anæsthetics was resumed by Dr. SCANES SPICER, who said that posture was most important in operations upon the throat and nose. He held that whenever possible it was better to do these in the consulting-room chair under a local anæsthetic. In the recumbent position illumination was most difficult. He had never seen a bad result from the administration of chloroform to children in a sitting posture. In removing laryngeal growths from children he had had chloroform administered in this position, and, further, had used cocaine locally to produce a more complete anæsthesia. The Trendelenburg position was useful in cases in which the larynx had to be split. He asked if any special precautions were considered necessary for the maintenance of a free air-way in the sitting posture and how long after the production of etherisation would the anæsthesia last.

Dr. SANSOM thought that the paper had a direct bearing on the reduction of the present terrible mortality from chloroform. Dr. Hewitt and Mr. Sheild deprecated the sitting and semi-recumbent positions, as did the Hyderabad Chloroform Commission, and this was more for the avoidance of circulatory than respiratory failure. Dr. Leonard Hill's experiments were of extreme value, as showing that there was a real danger from syncope in the administration of chloroform. This did not occur through direct paralysis of the cardiac centre, but through a special paralysis of the vaso-motor mechanism governing the abdominal vessels; this was part of the phenomena of shock. Reviewing the practice of chloroform administration from the early days there were two schools of thought. On the one side, Syme, Lister, and others held that there was no danger from syncope from chloroform administration, but from failure of respiration only. On the other hand, Snow and others thought that this doctrine was dangerous, and experiments were made to prove this view. Thirty years ago he himself recorded a large number of experiments on animals and he proved that respiration was nearly always the first to cease; a large number, however, showed evidence of failing heart rather than failing respiration. During the present year up to the end of October forty-eight deaths from anæsthesia had been recorded; forty-one of these were due to the administration of chloroform, and in thirty-nine the death took place during the administration: this seemed to him to be a great waste of life. Failure of the respiration brought about in an indirect way paralysis of the heart. The lessons derived from experiments on animals could not in this instance be directly and without qualification applied to man; for the cardio-vascular reflexes in the two were not the same. He did not personally know of any condition of heart disease which of itself excluded the administration of an anæsthetic. It appeared to be the strong hearts rather than the weak which were more likely to succumb. A tendency to syncope had been observed in athletes after influenza, and to such hearts chloroform might be harmful. He concluded by urging the necessity of watching the circulation as well as the respiration.

Mr. SPENCER WATSON, speaking of the sitting posture for nose and throat operations, said that he was against the use of chloroform for these, and restricted the anæsthesia to that which could be produced locally. At the Royal Eye Hospital it was so arranged that each bed could be wheeled to the operating theatre, and this obviated movement of the patient immediately before and after the operation.

Mr. BRAINE criticised the recommendation of Dr. Hewitt and Mr. Sheild that the patient should not be first anæsthetised and then moved afterwards, and said that he did not agree with it either from the anæsthetist's or the patient's point of view. The patient should preferably be anæsthetised on the side, the under hand being placed beneath the pillow. If there were any struggling the upper hand was placed beneath the under elbow and thus the patient would remain quiet. The after-removal of the patient to the theatre for the operation would not induce vomiting if the anæsthesia were sufficiently deep. With Clover's crutch the centre of the strap should be placed over the centre of the vertebra prominens and the free ends brought over each shoulder in front. He agreed that the lateral posture was the best when the patient was coming round after the operation.

Sir WILLIAM DALBY said it was a matter of common knowledge that he had removed adenoids in the sitting posture under an anæsthetic since 1883. He continued to prefer this attitude, which caused no trouble or anxiety. He criticised certain statements in the paper with reference to faulty positions of the head and urged that the opinions expressed with regard to these positions should not be equivocal.

Dr. SEMON remarked that it was in operations upon the throat and nose that the greatest danger arose. He added that the recommended posture, with the head turned on one side, was not the correct one for goitre. In some large goitres the trachea had become converted into a soft and flexible tube. If such a trachea were turned one-fourth round on its own axis, death on the table might occur, and had occurred before the operation had actually commenced. In chronic laryngeal obstruction patients often carried their heads in one position, which was most comfortable for them. If the head were extended respiration would stop; in such cases the anæsthesia should be induced in the position most comfortable for the patient, as less likely to excite reflex spasm. The great point about operations such as those for adenoids was not to anæsthetise too deeply.

Dr. LEONARD HILL remarked that it was not often that a physiologist could turn out work of immediate utility in practice. He referred to the methods of restoring animals from syncope. In chloroform collapse the heart was dilated in all cases. Deaths from anæsthesia occurred in the physiological laboratory. If the thorax were immediately opened after such a death the heart would be found in a condition of diastole, and the subjects might continue to respire for some moments after the heart had ceased to beat. In such a condition pressure on the abdomen only increased the mischief by tending to thrust more blood into the over-full heart; the only chance was to rhythmically compress the heart itself in order to get good blood from the lungs into the coronary arteries. He did not think that respiratory failure was of importance in connexion with chloroform administration in animals. The condition of cardiac dilatation never occurred with ether. The condition of vaso-motor paralysis varied much in animals. If the vaso-motor system were out of order gravity would take the blood down to the abdomen. In some animals the vaso-motor system would actually over-compensate when the animal was moved from the horizontal to the vertical position. In the human being, if the vaso-motor system were weakened, as after influenza, this vaso-motor influence could be readily demonstrated. Severe operative lesions of the abdomen might cause vaso-motor paralysis and syncope; pressure on the abdomen would restore such a patient. A large crucial incision in the abdominal wall, by allowing the bowels to hang down, abolished the vaso-motor constriction, which could be restored by supporting the abdominal contents. Mere mechanical pressure on the abdomen was good, therefore, in cases of shock, but not in instances of chloroform dilatation. In these latter the animal should be placed in the horizontal position and the heart rhythmically compressed, this being accompanied by artificial respiration.

Dr. BOWLES insisted on the importance of gravity in assisting the keeping open of a free air-way in chloroformisation. Pulling forward the tip of the tongue would not raise the

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base of that organ, but on turning the patient to one side gravity would cause the base of the tongue to fall away from the back of the pharynx. In cases of embarrassment from chloroform administration the heart was poisoned from an overdose, and this made the question of the dose and its measurement important. The Marshall Hall method of restoring the apparently drowned squeezed the heart and thus acted in the manner Dr. Hill had recommended.

Mr. GEORGE ROWELL was unable to dissent from any of the generalisations in the paper. The air-way was more narrowed when ether was used, owing to the congestion of the mucous membrane which that drug produced. In many deaths under chloroform the impediment to the breathing was the first bad sign. A good many deaths had occurred when the head was quite extended and the incision just commenced in the operation of tracheotomy. He related the details of a case of removal of an epithelioma from the mouth of a man aged seventy, and of a case of thyroid tumour in a woman accompanied by dyspnœa, both of which were operated upon in the semi-recumbent position; in both of them signs of collapse were at once arrested on temporarily resuming the recumbent position. He held that the condition of the respiration should be the chief guide in practice, and that Lawrie's cases without a fatality went far in support of this. Ether was given in the sitting posture every day for dentists, and it was quite exceptional for trouble to arise. In the Guy's Hospital reports for 1892 he had advocated compression of the heart in chloroform dilatation.

Dr. SILK thought that a more scientific and practical way of dealing with the subject would be to treat of it according to the particular operation proposed to be performed and the particular anæsthetic proposed to be given. A great distinction should be drawn between the induction and the maintenance of anæsthesia. The impossibility of swallowing was more often due to propping open the mouth than to extension of the head. If the head were turned to one side the chin should be kept well up. He asked Dr. Hewitt and Mr. Sheild what position they recommended for cerebral operations.

Dr. HEWITT, in reply, said the phenomena attributable to faulty head posture had been by others attributed to other causes. Ether could be given in the sitting posture with safety, and the length of time during which its effects would last would depend upon the amount administered. He thought that the true explanation of the collapse in cases of softened trachea was still to be given.

MEDICAL SOCIETY OF LONDON.

Addison's Disease treated by Supra-renal Extract.—Temporary Resection of Upper Jaw for Naso-pharyngeal Growth.—Congenital Imbecility with Deficiency of Chest Wall and Cardiac Disease.—Wiring of Patella in Elderly Man.—Periostitis of Tibia.—Spina Bifida Occulta.—Postero-lateral Sclerosis.—Nephrectomy for Renal Injury.—Secondary Syphilis.—Double Ptosis with Crossed Diplopia.

A CLINICAL meeting of the above society took place on Nov. 11th, Sir JAMES CRICHTON BROWNE, President, being in the chair.

Dr. SANSOM showed a man aged twenty-five years who was the subject of Addison's Disease and who had been treated by Supra-renal Tabloids. He was admitted into the London Hospital last July suffering from noises in the head, nausea, and vomiting. He was a labourer by occupation and had been in good health until twelve months before admission. The discolouration of the skin had been noticed for seven months, and photographs were shown to illustrate its condition at that time. The patient was given one tabloid of the supra-renal extract three times daily at first, and two tabloids daily later. In a month an extraordinary improvement was noticed, and he had gained fourteen pounds in weight. Under a previous arsenical course he had lost a pound and a half in a fortnight. There was no history of tuberculosis in the family, but there was a little impaired resonance under the left clavicle, and there had also been slight hæmoptysis.—Dr. ALTHAUS asked if sugar had been found in the urine. In a case in which he had administered the gland extract improvement was noticed at first, but later a fatal result followed.—Dr. SANSOM, in reply, said that there was no sugar in the urine, but there was a slight trace of albumin.

Mr. STANLEY BOYD showed a patient on whom he had performed Temporary Resection of the Upper Jaw. The man was forty-nine years of age, and when admitted to hospital he could not breathe through the right nostril. There were profuse epistaxis, proptosis, epiphora, diplopia, and anosmia. There was no elevation of the orbital floor or disturbance of the line of the teeth, and the hard and soft palates were normal. The naso-pharynx was found to be blocked by a growth of benign nature on the right side. The head was turned to the left, the carotid artery was exposed in the neck, and an assistant kept his finger on it to control hæmorrhage if necessary. The usual incision for resection of the jaw was then made, the upper incision extending outwards to the mid-zygoma; the nasal process of the superior maxilla, the zygoma and the malar bone were then divided and the hard palate sawn through, but the soft palate was retained intact. The superior maxilla with the cheek was then turned outwards, and a gap an inch wide was found to exist at the posterior nares. The growth, which was found to spring from the region of the sphenoidal sinuses, was cut away with scissors, and the dura mater was exposed at the bottom of the wound. The superior maxilla was replaced, wire sutures applied, and an iodoform plug inserted in the sphenoidal sinus. There had been no recurrence of the growth, and the diplopia and epiphora had disappeared.—Mr. MANSELL MOULLIN mentioned that he had devised a somewhat similar operation (which was described in full in THE LANCET of Sept. 30th, 1893), and he had found when looking up the literature of the subject that thirteen other methods had been described. He did not ligature the carotid artery, but he performed a preliminary tracheotomy and had no trouble from hæmorrhage. Mr. Macready had modified this operation by dealing differently with the hard palate flap.—Mr. WALSHAM had split the soft palate and then cut away the hard palate, which obviated the necessity of moving the superior maxilla, and there was no external scar. Another objection to the resection method was that there was sometimes a good deal of trouble with the lacrymal duct, and permanent swelling of the lower lid had also occurred.—Mr. WALLIS said that he had removed a large naso-pharyngeal growth by the route Mr. Walsham recommended, having previously performed tracheotomy on the patient. The growth was attached to the internal pterygoid plate, was easily seen, and it was removed with but little hæmorrhage.

Mr. HAROLD showed a patient with Congenital Deficiency of Chest Wall. He was sixteen years of age, and the youngest of four children. He was five years old before he attempted to walk, six before he began to speak, and ten before he was understood by strangers. He was undoubtedly mentally deficient. Below the fifth rib on the left side there was a deficiency of rib cartilages, so that the præcordial area was unprotected, and the heart could be felt on palpation to rotate under the hand. There were double apical and basic murmurs present.—Dr. FLETCHER BEACH agreed that the patient was a congenital imbecile, and added that the mother had suffered from a severe shock during early pregnancy.—The PRESIDENT said that in these cases there was usually more than feeble-mindedness present.—Dr. SHUTTLEWORTH said that congenital heart mischief in this class of cases was not uncommon. The diagnosis of the nature of the cardiac lesion was, however, a matter of difficulty and was often not confirmed post mortem.—Dr. SANSOM remarked on the disproportionate hypertrophy of the right ventricle which was present. The arrested mental and physical development pointed to an aperture in the inter-ventricular septum, and this condition was accompanied by mitral and perhaps aortic regurgitation from super-added rheumatism.

Mr. F. C. WALLIS showed a man aged seventy years who had suffered from a Transverse Fracture of the Patella, and on account of a tendency to bronchitis he wired the bone. The lower portion of the divided patella was broken into three; one loose piece he removed, and the others were partly extruded through the untorn aponeurosis over the bone, and could not be returned except on division of this structure. The patient was allowed, owing to cough, to sit up in bed on the third day, and made a good recovery.

Mr. WALLIS likewise exhibited a boy who, after acute Periostitis of the Tibia, developed suppuration of the knee-joint. Though pus was present in the joint and drainage maintained for six weeks, yet recovery with good movement resulted.

Dr. LEONARD GUTHRIE showed a boy with Spina Bifida Occulta and Paresis of the Leg. The child was aged ten; there was a depression opposite the first sacral lamina, which was deficient, and in the mid-line there was a post-ana

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dimple. The left leg was slightly shortened and wasted, and this had commenced nine months ago. The foot assumed a position indicating paralysis of the interossei, and sensation was impaired to heat and to the effect of the battery, the reaction of degeneration being present. The condition of the limb, he thought, was due to peripheral neuritis of the posterior tibial nerve, which was subjected to some traction near its root.—Dr. SAVILL suggested that the absence of sensation of heat and cold indicated the presence of syringo-myelia.

Dr. LEONARD GUTHRIE also showed a patient aged twenty-seven years who had been in the National Hospital for the Paralysed and Epileptic, Queen-square, in 1894 with grave nerve symptoms, which had improved greatly under mercury and iodide of potassium. Later spastic paraplegia had developed, which passed away under the same treatment. His condition, which had varied from time to time, was that of marked unsteadiness of gait, not like tabes or spastic paralysis, but more resembling that of cerebellar disease. The knee-jerks were increased, but there was no ankle-clonus, the ocular movements were perfect, the sphincters normal, and there was no pain or sensory disturbance. There were no signs of cerebellar disease and no history of syphilis. He suggested that the lesion was a peri-vascular inflammation somewhere in the mid-dorsal region.—Dr. ORMEROD did not agree with the name given to the disease; he thought that the patient was possibly suffering from disseminated sclerosis.—Dr. GUTHRIE, in reply, agreed that the case was not one of ordinary type. The fact that the patient had so considerably recovered was against the diagnosis of disseminated sclerosis.

Mr. SWINFORD EDWARDS showed a man aged fifty-five years who was admitted into the West London Hospital in February, after having fallen from a third storey window and spiked himself on the railings below. There was a comminuted fracture of the eleventh and twelfth ribs, and a wound in the loin exposing the kidney, which was bleeding. The kidney was removed, and by the fifth day the normal amounts of urea and urine were passed. The wound suppurated for a month, but a good recovery ultimately ensued.

Dr. SAVILL showed a girl aged fifteen years suffering from a Secondary Syphilitic Eruption which somewhat resembled erythema iris.

Dr. SAVILL also showed a boy aged thirteen years who had Double Ptosis and Crossed Diplopia, which came on suddenly three weeks before. There had been a sore-throat before the advent of the ocular symptoms. He thought the cause to be a central lesion at, or in front of, the corpora quadrigemina, involving the inner aspects of the third nerves.

CLINICAL SOCIETY OF LONDON.

Suprapubic Cystotomy and Prostatectomy in cases of Multiple Calculi.—Intussusception through a Patent Meckel's Diverticulum.—Fragilitas Ossium.—Cerebral Tumour healed by Internal Medication.

AN ordinary meeting of this society was held on Nov. 8th, Dr. BUZZARD, President, being in the chair.

Mr. MANSELL MOULLIN read a paper on Suprapubic Cystotomy and Prostatectomy in two cases of Multiple Calculi. The patients were both men over sixty years of age and heavily built. One had already passed five uric acid calculi spontaneously, and the other three. In the former, when the bladder was opened above the pubes, eighteen more calculi were found lying in the post-prostatic pouch, all of them approximately of the same size and shape, rather larger than those that had been passed by the urethra, and ground into a more or less cubical shape by friction. Each was a distinct calculus with a nucleus of uric acid, not the fragment of a larger one broken up. In the second case there was only one stone, about the size of a penny, but a good deal thicker and fitting accurately in the pouch. In each case there was a considerable median upgrowth of the prostate into the bladder behind the urethral orifice. This was excised with scissors and cutting forceps, a mass approximately of the size of a walnut being removed, and the route made level and as smooth as possible. No constitutional disturbance followed in either case. The wounds healed rapidly without leaving a fistula, and urine was passed per urethram in about three weeks. Convalescence was a little delayed in one of them by an attack of epididymitis that followed the introduction of a catheter. Union was greatly helped by means of a truss (shaped something like a double inguinal truss) devised by Mr. Birch of Clapton and so arranged as to press the deep surfaces of the wound together. Mr. Moullin brought forward these two cases as illustrating a principle suggested some time since by Mr. Mayo Robson that in cases of multiple or recurrent calculi, associated with median vesical enlargement of the prostate, the operation of election was suprapubic cystotomy with excision of the intra-vesical portion of the upgrowth, so as to obliterate as far as possible the post-prostatic pouch. Lithotomy or lithotrity without this addition is in such cases little better than a temporary expedient. In men of a certain time of life who had suffered from multiple calculi it was more than probable that as they grew older fresh ones would either form in the bladder or descend from the kidney, and then the operation had to be repeated. There could be no doubt that in both the above cases, had the prostate not been enlarged, no operation would have been required; the calculi would have been got rid of while still small enough to pass down the urethra. One patient had already got rid of five in this way, and the other of three. Unhappily the rest did not escape at once; they fell back into the post-prostatic pouch and increased in size until they could not be passed. Nor did the removal of the projecting portion of the prostate add materially to the gravity of the operation so long as the urine was acid. The high rate of mortality with which suprapubic prostatectomy was credited was due to the fact that it had nearly always been performed as a last resource in hopeless cases where everything else had been tried and had failed, where the patient's strength was completely broken, and where the wall of the bladder was infiltrated with septic organisms from long-continued suppurative cystitis. In cases in which the urine was acid and was kept aseptic the prognosis was entirely different.—Mr. GOLDING-BIRD said that even in advanced years it was safer to clear the bladder by the suprapubic route, whether the growth of the prostate was removed or not. The risk was less than with lithotrity.—Mr. BUCKSTON BROWNE held that excision of the middle lobe of the prostate did add materially to the risk. So far as he could judge—and his experience in these matters was great—the second case might have been equally well treated by lithotrity.—Mr. MANSELL MOULLIN, in reply, said that the gravity of excision depended entirely upon the amount of the prostate that was removed. Ablation of the middle lobe, provided that the urine remained acid, did not add much to the gravity of the procedure, and the result was better inasmuch as calculi coming down afterwards were easily expelled from the bladder in a natural manner.

Mr. GOLDING-BIRD read notes of a case of Intussusception through a Patent Meckel's Diverticulum. The case was that of an infant four weeks old through whose umbilicus soon after birth a red protrusion was seen, and through which motion passed. Shortly before coming under observation the protrusion had increased and altered in character. Its appearance in all respects corresponded with that of an intussusception, and this diagnosis was given, it being further regarded as one of protrusion of the distal, and not proximal, bowel through the open umbilicus. It was not possible to undertake anything operative, and the child shortly died; the necropsy showed the diagnosis to have been correct. He remarked on the rarity of these cases and referred to a paper by Barth which dealt exhaustively with them. That surgeon quoted a very similar case to the one now brought forward, but the intussusception was from the proximal into the distal gut (Meckel's diverticulum), and not in the reverse direction. Mr. Golding-Bird considered his case as, in all probability, unique, and pointed out that the chance of recovery could only be given by a laparotomy, with probably resection of the affected gut, but his patient was too collapsed to permit of so grave an operation. All the cases of complicated prolapsed and patent Meckel's diverticulum that he had been able to discover had ended fatally, and, therefore, considerable immediate risk to life by operation was certainly warranted.—The PRESIDENT remarked that Brinton, as a result of his great experience of intussusception, had averred that almost invariably it was the proximal portion of the gut which was forced into the distal; in the case related the reverse obtained.—Mr. HOWARD MARSH asked if at the necropsy the condition of the parts suggested that the intussusception could have been reduced by manipulation after laparotomy.—Mr. GOLDING-BIRD, in reply, said he made up his mind after first seeing the case that resection would be necessary if any operation was undertaken; this view was confirmed at the necropsy.

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Mr. LANGTON gave the details of a case of Osteopsathyrosis (Fragilitas Ossium) in which, after firm union of several fractures had taken place, disunion in some occurred several years afterwards. The patient, aged twenty-three when first seen in 1883, had been the subject of several so-called "spontaneous fractures" as the result of muscular action or of very slight injury. In all except one firm union had ensued, but in one fracture of the femur, after unnecessary violence on the part of a bonesetter, the fracture never became firmly united. Subsequently, two united fractures of the left femur and the right humerus disunited, and the latter eventually became the seat of a sarcomatous growth.—Mr. EDGAR WILLETT described the pathological appearances of the specimens from this case. He referred to the case of a child aged four who had sustained fractures of no less than six of the long bones. They all united readily, and the clavicle alone at present showed signs of thickening at the seat of fracture.—Mr. LUNN said that three cases of locomotor ataxy had been under his care, each with a spontaneous fracture. In one it was of the femur, in one of the tibia, and in one a Pott's fracture. These fractures in each case were unknown to the patient and were casually found by the nurse. They all united quite readily.—The PRESIDENT said that this case raised the question of the pathology of softening and fragility of bone. The sarcomatous disease could scarcely have been present at eleven years of age, when the fracture first occurred. He had seen during the last year three cases of mollities ossium, all in single women. In one under his care at the present time the patient was a young woman who was admitted with a fracture of both femora, and afterwards the humerus was fractured as the result of a slight muscular effort. The fracture of the humerus had united readily. In the other two cases there were numerous fractures of bones which did not unite, and post mortem in both sarcoma was found. He wondered if the sarcoma was a separate disease superadded to the fragility, or whether they bore any relation to each other. In locomotor ataxy it had been demonstrated that there was a great diminution of the phosphatic salts of bone—from 48 to 11 per cent.—Dr. L. BENHAM inquired if the bones were rarefied. He remarked on the frequent association of malignant disease with osteitis deformans.—Mr. LANGTON remarked, in reply, that for sarcoma to have been quiescent or latent for many years was most uncommon, and, again, the majority of the affected bones presented no malignant infiltration. The case was particularly interesting on account of disunion occurring so many years after sound repair had taken place, and of the patient being able to walk many miles in comfort on the ununited fracture.

Dr. ALTHAUS related the details of a case of Brain Tumour successfully Healed by Internal Medication. The case was that of a female aged thirty-nine, in whom unmistakable symptoms of a tumour in the right cerebral convolutions became developed in 1882. The chief signs were severe headache, cranial tenderness, and tympanitic sound on percussion, a change in her manner, drowsiness in the daytime, epileptiform convulsions, paresis of the left side of the body with increased tendon reflexes, optic neuritis, impaired memory and inability to think, and sickness and vomiting. The first symptoms had appeared after parturition, and there was a history of a severe blow on the head many years ago, but no syphilitic infection. Treatment by full doses of mercury and iodide of potassium caused rapid improvement and total disappearance of the principal symptoms in six weeks. Several relapses happened in the course of the following years, at variable intervals, and these yielded to the same treatment as readily as the first attack. The last serious relapse occurred in 1888, and a very slight one, with few symptoms, in September, 1892. Since then the patient had remained quite well and able to enjoy life. Dr. Althaus remarked upon the unusual rapidity with which the therapeutic results were produced in this case, both in the beginning and in the relapses which took place, showing a truly specific action of the drugs employed. He had in similar cases seen satisfactory results from a similar treatment, but the latter had generally been more protracted than in the present instance. He thought the tumour might have been a glioma, but as it was, fortunately for the patient, never seen and handled it was impossible to determine its nature. With regard to the diagnosis he stated that there was no other disease which would produce the whole group of symptoms which had been present, while one and all of these could be easily accounted for by the presence of a growth in the affected portion of the brain. He concluded by remarking that a case like the one related—in which such ominous symptoms as optic neuritis, epileptiform convulsions, and loss of mental power were traced to their origin and removed by acting upon the seat of the malady—not only tended to give a physician confidence in his power over disease, but also furnished a very clear reply to that therapeutic nihilism which was so frequently paraded by those who did not know how to use the remedies which were at their disposal.—Mr. LUNN said that he made the post-mortem examination of a woman aged twenty-five, in whom softening of the cerebrum on the right side anteriorly was found. This proved on microscopical examination to be a glioma. When aged ten the patient had fallen downstairs and sustained a fracture of the base of the skull, but made an uneventful recovery from that accident. In another case he had found a cerebral tumour at the seat of an old fracture. He had never heard of a glioma disappearing under the influence of drugs.—Dr. WILSON (Leytonstone) related the case of a boy aged twelve who complained of frontal headache, pain in the temporal region, and inflammation of the tympanum. Optic neuritis developed, the knee-jerks became exaggerated, ankle-clonus was present, the gait was staggering, and the lower extremities became paralysed. Under mercuric chloride and iodide of potassium he got worse, but improvement set in directly the patient was moved to the seaside. After five months he recovered and was now in perfect health.—The PRESIDENT said that the great point in the case was whether the patient was syphilitic or not; if not, the case was certainly a very remarkable one. He had seen several cases in which he had diagnosed cerebral tumour and had given mercury and iodide of potassium vigorously by routine, and in some of these cases the patients had improved so much that he had almost concluded that they might be syphilitic. They, however, had not continued to improve, and after death glioma had been found. The same experience held good with certain cases of malignant disease of the tongue and of the œsophagus. It was also to be remembered that if a case of tumour of the brain recovered under treatment one was apt to come to the conclusion from that result that it was syphilitic. He was not so sanguine as was Dr. Althaus that syphilis could be absolutely excluded in any case.—Dr. ALTHAUS, in reply, maintained that syphilis could be absolutely excluded. He thought that the original injury must have been the starting-point of the trouble.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—General Meeting.

A MEETING of this society was held on Nov. 6th, Dr. F. H. CHAMPNEYS, President, being in the chair. The following specimens were shown:—

Dr. CULLINGWORTH: Necrotic Change in a Small Uterine Myoma occurring in a Young Subject.

Dr. GALABIN: Œdematous Fibroid Tumour of Uterus associated with Pregnancy.

Dr. REMFRY: Tubal Gestation removed before Rupture.

Dr. LEITH NAPIER: Solid Ovarian Tumour, probably Fibromatous.

A special general meeting was then held, at which certain of the laws as revised were discussed and adopted.

LIVERPOOL MEDICAL INSTITUTION.

Suppurative Meningitis due to Chronic Otorrhœa.—Exhibition of Specimens.

A MEETING of the Pathological Section of this society was held on Nov. 7th, Mr. G. G. HAMILTON being in the chair.

Mr. C. G. LEE read notes of a case of Suppurative Meningitis due to Chronic Otorrhœa occurring in a boy aged twelve. In this case the mastoid antrum was opened and the lateral sinus exposed; pus was found in the antrum, but the sinus appeared healthy. The patient received no benefit from the operation and died some three days after it. The necropsy revealed extensive suppurative meningitis, the pus lying chiefly in the neighbourhood of the cerebellar fossæ and around the medulla. On section of the petrous bone pus was found in the labyrinth.

Mr. NEWBOLT showed a specimen of Necrosis of the Jaw from a Polar Bear aged one year. Injury at the time of capture was doubtful; the lateral incisors were carious.

Dr. BARENDT showed sections from a case of Xanthelasma which was associated with jaundice.

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Mr. THOMAS exhibited sections from Mr. Parker's case of Coccygeal Tumour; also specimen and sections of a Tumour of the Leg. The primary growth was removed from the skin of the leg of a man aged twenty-two. The growth, which had apparently begun between the epithelium and the corium, consisted of large epithelial cells arranged in long alveoli, and was not pigmented. The secondary growths in the groin had a similar structure, but were deeply melanotic. He considered the growth to be a carcinoma arising from the abnormal cells of a mole.

Mr. PAUL showed a beautiful series of lantern slides illustrating the Structure of Villous, Adenomatous, and Carcinomatous Tumours of the Rectum, and a further series illustrating his view as to the Nature of Axillary Breast Tumours (four cases).

Professor BOYCE and Dr. ALEXANDER showed a specimen of Dermatolysis removed by Dr. Alexander from a young woman. She had been under observation for very many years, and it was probable that the tumour was congenital or started in early childhood. It had steadily increased in size and at the time of operation formed huge pendulous folds from the side of the neck and chest. Microscopic examination showed that the tumour consisted of a neoplasis of the cutis vera, which in some places reached an inch in thickness. The tissue was composed of delicate but firm fibrous tissue containing very numerous thin-walled vascular sinuses. There was very marked atrophy of the epithelium and of the sebaceous and hair follicles. Owing to the overgrowth of the corium the sweat glands were far removed from the skin, but preserved their relationship to the sub-areolar tissue, which was normal; the glands were undergoing degeneration. This case of overgrowth of the corium was compared with the other forms of elephantiasis and molluscum, where the neoplasis commenced as a perineural (elephantiasis neuromatosa), a perivascular, or a perilymphatic growth, or consisted in overgrowth of the fibrous bundles in the areolar tissue. It was an instance of the limitation of growth to a special tissue system.—Dr. ALEXANDER, Mr. HAMILTON, Mr. MURRAY, Mr. PARKER, Mr. PAUL, and Professor BOYCE took part in the disussion which followed.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Hemiplegia produced by Embolism of the Left Middle Cerebral Artery.

A MEETING of this society was held on Nov. 7th, the President, Dr. PORTER, being in the chair.

Dr. CUFF showed a young man the subject of Congenital Syphilis with Congenital Malformation of both Radii. In each arm the diaphysis of the radius was absent. The epiphysis of the head could be easily felt on both sides below the external condyles. The epiphysis of the carpal end, small in size, could be distinctly made out on the left side; on the right side an indistinct bony mass abutting on the shaft of the ulna probably represented the carpal epiphysis dislocated towards the ulna. The position of the hands was peculiar, each hand being dislocated towards the radial side and displaced upwards.

Dr. SINCLAIR WHITE showed a successful case of Estlander's Operation.

Dr. ARTHUR HALL showed a case of Lupus Vulgaris which had been treated by tuberculin injections with satisfactory results.

Mr. PYE-SMITH showed a large Carcinomatous Tumour of the Right Ovary which he had recently removed by ovariotomy from a woman aged forty-seven. There were extensive adhesions to the bowels and uterus, but no secondary infiltrations or deposits. The left ovary was free from disease. The patient survived the operation thirty hours.

Mr. PYE-SMITH also showed a Right Upper Canine Tooth which had been driven up by a kick at football two years before and embedded in the anterior wall of the maxillary antrum. A year after the injury a sinus formed in the cheek and had remained open ever since. Recently the lad consulted Mr. West Jones, who discovered the tooth and sent him to the Royal Hospital. The lingual aspect of the tooth was anterior; the fang, which was not quite completely formed, projected upwards.

Dr. PORTER showed an Aneurysm of the Ascending Aorta which had pressed upon the right bronchus. There was a curious defective condition of the cartilaginous rings in both bronchi (congenital).

Dr. CUFF read the notes of a case of Hemiplegia produced by Embolism of the Left Middle Cerebral Artery. At the necropsy there were found recent vegetations on the aortic and mitral valves, general meningitis, an embolus blocking the left middle cerebral artery at its commencement, and consolidation of the apex of the right lung.

The PRESIDENT, Dr. KEELING, Mr. KNIGHT, Mr. PYE SMITH, Dr. SAMSON MATHEWS, Mr. GARRARD, Dr. SINCLAIR WHITE, Dr. BURGESS, Dr. WILKINSON, Dr. ARTHUR HOLT, and Dr. CUFF made remarks on the cases and specimens.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Successful Case of Porro's Operation.—Papilloma of the Bladder, complicated with Hæmoglobinuria.—Vesiculo-bullous Dermatitis.—The Utility of testing for Indican in the Urine.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 1st, Mr. MAYO ROBSON, President, being in the chair.

Mr. MOYNIHAN read a paper on a Successful Case of Porro's Operation. The patient, a dwarf forty-nine inches in height, had been in labour for twelve hours. Müller's modification of Porro's original procedure was adopted. Both patients did well.—Mr. BROWN mentioned three cases of Cæsarean section which he had performed, and said that in considering the failure and success resulting from all operations of this kind it must be borne in mind that the cases usually occur in poor people living in insanitary conditions. He thought Porro's operation infinitely preferable to craniotomy or Cæsarean section.—Dr. KILNER CLARKE had performed Porro's operation twice, and laid stress on the importance of after-nursing.—The PRESIDENT considered craniotomy unjustifiable except where the child was already dead. Porro's operation was infinitely simpler, and had the great advantage of preventing a future pregnancy.—Mr. MOYNIHAN, in replying, said that the condition of some osteomalacic patients had improved after the operation.

Mr. ATKINSON read a short paper on a case of a Papilloma of the Bladder complicated with Hæmoglobinuria. A man aged fifty-seven years began early in the present year to pass blood-coloured urine at intervals. The attacks, which at first occurred about two or three weeks apart, were painless, and not preceded by nausea, chill, or any malaise; they came on suddenly and departed gradually. The urine was dark and porter-like, even turbid at times, with chocolate-coloured sediment. After two or three days it became clear and normal. Mr. Atkinson first saw it in April and found much albumin, but no blood discs. Paroxysms occurred at decreasing intervals up to June. In July the patient passed bloody urine, the urethra being at times blocked with clot. In August Mr. Atkinson, suspecting stone, sounded with a negative result, but on passing the catheter later withdrew a shred of villous-like tissue in the eye of the instrument, brisk hæmorrhage following. On Aug. 23rd the bladder was explored through a suprapubic incision, and a fimbriated papilloma with broadish base attached to, and about, the trigone was found, and removed with forceps and finger-nail. The patient made a good recovery and was out on the eighteenth day, and is now perfectly well. It should be remarked that five years ago he passed a small stone, and that he is the subject of syphilitic taint of many years back, now indicated by occasional patches of psoriasis.—The PRESIDENT wished to know whether there was any return of hæmoglobinuria.—Mr. ATKINSON replied in the negative.—Dr. CHURTON mentioned a case of hæmoglobinuria complicated by syphilis which was improved by calomel.—Dr. BARRS refused to believe that there was any connexion between syphilis and hæmoglobinuria.—Mr. LAWFORD KNAGGS related a case of a child having syphilitic periostitis, interstitial keratitis, and its knees full of fluid. Hæmoglobinuria appeared five years later.

Dr. BARRS reported the case of a girl aged seventeen years, who, after three separate attacks of dropsy due to chronic Bright's disease, developed an almost universal Vesiculo-bullous Dermatitis, and ultimately died in coma. At the necropsy the kidneys showed advanced parenchymatous nephritis. The eruption appeared three weeks before death

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and was accompanied by intense pains in the feet, which were most affected. The plantar and dorsal surfaces of the feet were covered by one enormous blister, the fluid contents of which had an offensive odour. Dr. Barrs believed that the bullous form of uræmic dermatitis had not previously been recorded in this country.—Mr. SOLLY (Harrogate) thought that extensive skin diseases might cause damage to the kidneys; and, on the other hand, that kidney disease gave rise to skin diseases, mainly of the pruritic character.—Dr. CHURTON had for years looked in vain for skin diseases in uræmic cases.—In his reply, Dr. BARRS joined issue with Mr. Solly on both his statements.

Dr. CHURTON read a paper on the Utility of Testing for Indican in the Urine. Indican in the urine meant that the putrefactive product was circulating in the blood and tissues and poisoning them either by itself or by its associated toxines. It was easier to test for indican than to inquire into the probability of this toxæmia by questions as to constipation or diarrhœa, colon flatulence, &c. Dr. Klein had found that indol is formed by the bacillus coli in meat broth at 37° C., and that a variety of this bacillus produced a toxine extremely fatal to guinea-pigs. It had also been shown that some pathogenic microbes can form their poisons only when products of putrefaction are present. It was not correct to say that disease of any kind involving the intestines is attended by indicanuria. Dr. Churton had demonstrated its absence in some cases of prolonged constipation, typhoid fever, and strangulated hernia. He doubted the existence of persistent, even slight, indicanuria in perfectly healthy persons. As examples of the utility of finding indican in the urine he briefly described cases of delirium with convulsions, cholera nostras with collapse, delirium with spasm of certain muscles, supposed typhoid fever (proved by treatment based upon the discovery of excessive indicanuria to be merely fæcal toxæmia), diarrhœa, probably from subacute colitis, and gout—in all of which, as in many others, the indicanuria entirely governed the treatment—namely, removal of the contents of the colon and the use of antiseptics. Washing out the colon (very cautiously if ulceration was suspected), calomel in small doses, salol, a milk diet variously modified, and stimulants if required were the means usually employed. The colon was washed out even when (non-inflammatory) diarrhœa was a leading symptom, as in the cases of English cholera, for instance.—Dr. TREVELYAN spoke of the importance of examination of the urine for various poisons. Typhoid fever bacilli had been found in the urine. Cases of tetany—recorded in association with gastric dilatation—and many cases of migraine so often seemingly due to stomach derangements might be caused by poisons absorbed.

The following patients and specimens were shown:—

Dr. CHURTON: Blood from patients with Typhoid Fever showing absence of Leucocytes.

Dr. DE BURGH BIRCH: A Simple Form of Microtome.

Dr. ADOLPH BRONNER: Case illustrating Mr. Victor Horsley's Method of Operating in cases of Extensive Disease of the Mastoid Process.

Mr. W. H. BROWN: Two cases of Dislocation of the Astragalus, one with fracture.

Dr. T. WARDROP GRIFFITH: Specimens from two cases of Hæmorrhage into the Pons Varolii. In both cases there were very extensive kidney disease and much cardiac hypertrophy. In one case the vessels throughout the body were atheromatous, while in the other most careful examination failed to reveal any naked-eye disease of the vessels.

Mr. LAWFORD KNAGGS: Case of Double Glaucoma in a Young Man following Influenza.

Mr. NUNNELEY: Brain and Temporal Bone from a case of Middle-ear Disease with Lateral Sinus Phlebitis.

Mr. LITTLEWOOD: (1) Calculus (weighing four ounces) with Kidney removed by Abdominal Nephrectomy; (2) case of Dupuytren's Contraction treated by dissecting out the Contracting Band; and (3) large Bursa Patellæ.

Mr. SECKER WALKER: (1) Specimens from a case of Middle-ear Disease complicated by Cerebellar Abscess and Phlebitis of Lateral Sinus; and (2) a Temporal Bone from a patient operated upon two years ago for extensive Disease of the Mastoid Process. The whole of the process had been hollowed out by ulceration, and, having been scraped and cleaned, a flap of skin was dissected from the back of the ear and turned into the cavity and pressed by a dressing against the bony floor. Ultimately the whole cavity became lined with epithelium continuous with the open air through the mastoid opening.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Treatment and Causes of Cold in the Head.

A MEETING of this society was held on Nov. 5th, Dr. ADOLPH BRONNER, the President, being in the chair.

Dr. J. H. CRAWFORD gave a Microscopical Demonstration of Malignant Tumours, the specimens illustrating not only the different varieties of sarcomata and of carcinomata, but also the various stages of malignancy of tumours.

Dr. SHIACH showed a patient suffering from Melanotic Sarcoma affecting the skin of the abdomen below the umbilicus, the inguinal glands being also enlarged. The patient was a man aged fifty with no family history of new growth and with no signs of secondary deposits elsewhere.—Mr. HORROCKS discussed the question of operation, and was of opinion that it would not be of any good in this case.

Dr. H. BRONNER showed a specimen from a case of Kidney Disease due to Double Calculus. The patient was a man aged fifty-eight, of steady habits, who worked till five days before admission into the infirmary. He complained of diarrhœa, vomiting, and loss of flesh. The urine was of sp. gr. 1009, and contained a small quantity of albumin, but no casts; the quantity in twenty-four hours was 72 ounces. No signs of malignant disease were found. The symptoms whilst under observation were melæna, purpuric eruption on arms, legs, and body, and dyspnœa. On post-mortem examination calculi were found in each kidney; the left ventricle of the heart was hypertrophied and the aorta thickened.—The case was discussed by Dr. A. BRONNER, Dr. RABAGLIATI, and Dr. MAJOR.

Dr. RABAGLIATI showed a specimen of an Ovarian Tumour which he had recently removed; there were no adhesions found at the operation, and the patient made a good recovery. The question as to the side from which the tumour springs in these cases was discussed.—Dr. RABAGLIATI also showed a Stomach with Two Perforations. On abdominal section he had experienced great difficulty in stitching up a perforation of the posterior wall of the stomach, the one on the anterior wall not having been noticed at the time of the operation and only discovered post mortem.—Mr. HANDCOCK, Dr. CRAWFORD, Mr. HORROCKS, and Dr. H. J. CAMPBELL made remarks, and Dr. RABAGLIATI replied.

Dr. BAMPTON read a paper on the Treatment and Causes of Cold in the Head, of Influenzal Origin. The usual methods of clothing the head and the feet were criticised and suggestions made, especially as regards the covering of the head. The treatment which he had found advantageous for the symptoms met with in influenza was given, stress being laid on rest in bed, warmth, and stimulation.—Dr. MAJOR, Dr. RABAGLIATI, Dr. GOYDER, Mr. FARRER, and Dr. S. LODGE, jun., discussed the paper, and Dr. BAMPTON replied.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

President's Address.—Exhibition of Cases and Specimens.

THE first meeting of the seventy-fifth session was held on Nov. 6th, Dr. CRAIG, Vice-President, being in the chair.

Dr. GIBSON read a letter from Dr. CLOUSTON, the President, in which he regretted his unavoidable absence through illness. Dr. Gibson then read the President's Valedictory Address. No member of the Medico-Chirurgical Society now living, Dr. Clouston said, could, he believed, take the President's chair without a deep sense of his inferiority in mind and attainments to many of the men who had sat there before him. The society had been presided over in the past, not only by great physicians and surgeons, but by great men. Brain power seemed to come to mankind in waves, and surely as students of heredity we were entitled to anticipate that the race which bred those great men in the past would again procreate men like unto the former generation. Physic was not alone in the trough of the wave. Politics, literature, journalism, law, and divinity were alike crying out for leadership. But was there no compensation for this state of matters? If no one man made extraordinary advances, were there not ten making moderate acts of progress, and the sum total of our work might be comparable in its usefulness to mankind to that

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of the great inventors and discoverers? During the last two years the society had been doing good work, and medicine and surgery had on the whole been the better for the meetings. The muster-roll of the society reached now 360 members. What a vast mine of experience did this imply. He thought enough was not made out of cases in ordinary practice for the benefit of the society. He sketched what to his mind was an ideal medico-chirurgical society, where no man should prose and no man go into unnecessary detail, every meeting being so interesting and instructive that members should look upon it as a hardship to be kept away by necessary business. The discussions during the past sessions on Cranial Surgery and on Cardiac Therapeutics would serve as landmarks to show exactly the Edinburgh practice and theory on those questions at the time. Professor Fraser's communication on Immunity from Snake Poisoning was no doubt the most original, pregnant, and far-reaching discovery that had been communicated to them, and the society might well congratulate him, as well as feel proud that the tradition of the profession was still as strong as ever, that any man who had made a great discovery or had arrived at the result of any important investigation in Edinburgh came at once to the Medico-Chirurgical Society to announce it. Dr. Clouston pointed out that he was the third specialist who had sat in the President's chair, and, as a specialist, he naturally regarded most questions from his own standpoint. Repeatedly in the discussions questions had struck him as a specialist in the nervous system. From the chair he looked on all the proceedings with a mind filled with one idea. Every case, every opinion expressed, was observed by him from the cortical and mental standpoint. The brain cortex was the Pharaoh whose throne towered above all else, whose will was law, who represented everything, in whom all his subjects centred and ended. He dwelt eloquently and at considerable length on the preponderating influence of the nervous system in disease. During the President's term of office the society had lost several members by death. Three of these were high types of the best qualities of the profession. No more marked individuality than Dr. Thomas Keith ever walked the streets of Edinburgh or contributed, as he did, so brilliantly to the work of the society. How well they all could picture his keen, nervous face, the "far-away" look in his honest eyes, the head set forward, the anxious attitude, and the deep, earnest voice. Dr. Brakenridge had passed away too — a powerful clinical teacher, a high-minded, earnest man, a subtle, accurate thinker, and a loyal friend. Dr. Thomas A. G. Balfour had been a frequent attendant at the meetings of the society. He was a man beloved by his many patients, and, beyond a doubt, exerted a powerful influence for good during his long and useful life. If family medical attendants were all such as he was how well should the profession stand with the public.—On the motion of Dr. JOSEPH BELL, seconded by Dr. JAMES CARMICHAEL, a hearty vote of thanks was accorded to the President for his address.

Dr. STEWART STIRLING showed a case of Erythema Multiforme (Papulatum). When first seen the spots, which nearly covered the trunk, had a raised erythematous appearance, the redness disappearing on pressure. After treatment with tar and calamine lotion lichen papules appeared combined with the erythema. The eruption now consisted of numerous irregular spots and patches over the trunk, of a deep-red colour. There was an entire absence of scales and itching. No case exactly similar had been reported. Hutchinson had described cases of a somewhat similar kind, but there were points of distinct difference.

Dr. STIRLING also showed a case of Lupus Erythematosus of the Scalp.

Dr. NORMAN WALKER showed a boy suffering from Erythema Multiforme. He and his two elder sisters had the rash, which began as small round spots spreading in a circinate manner over the forearm and back of hand. A spot had been excised and showed the well-known features of great cell proliferation around the vessels. Quinine did good when exhibited in very large doses.

Dr. JAMES CARMICHAEL showed a specimen of Double Intussusception from a child aged nine years who was admitted to the Royal Hospital for Sick Children suffering from diarrhœa and extreme asthenia of six weeks' standing. There was an enormous polapse of the rectum. There was no obstruction of the bowels or distension. He sank and died. Post mortem the ileum was found invaginated into the cæcum, and the cæcum into the transverse colon. The mass occupied the left hypochondrium. There was no obstruction. Probably the intussusception had taken place shortly before death.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Abdominal Hysterectomy.—Anencephalic Fœtus.

THE first meeting of this society was held in the Faculty Hall on Oct. 23rd, the Honorary President,. Sir JOHN WILLIAMS, Bart. (London), being in the chair.

The PRESIDENT made a suitable reference to the death of Dr. Thomas Keith, who was one of the honorary Fellows of the society, and proposed that an expression of their regret at the loss the profession had sustained, and of their sympathy with his widow and family, should be entered in the minutes of the society, and that an excerpt from the minutes should be sent to Mrs. Keith. The President reported, as supplementary to his address on the occurrence of Tetanus Neonatorum in the island of St. Kilda,[1] that antiseptic precautions are now being observed in the treatment of the umbilical cord, and that the two children born in the island since he read his paper last year have escaped an attack and are still living.

Professor MURDOCH CAMERON read notes on a successful case of Abdominal Hysterectomy for Myomata of the Uterus complicated with Pregnancy of five months' duration. The patient was thirty-six years of age and had not previously been pregnant. A small tumour about the size of a hen's egg had been observed on the left side about eight years ago. This gave no trouble, and remained stationary till she became pregnant last February. When she was first seen on July 16th the abdominal distension suggested a pregnancy at full time. On account of severe pressure symptoms abdominal section was performed on July 22nd, and the whole of the pelvis and left iliac and lumbar regions were found to be occupied by the tumour masses, the uterus being displaced to the right side. It was found to be necessary to remove the whole of the uterus with the tumour. The parts removed weighed 27 lb. Recovery was uninterrupted.

Dr. MALCOLM BLACK showed an Anencephalic Fœtus.

[1] See Glasgow Medical Journal for March, 1895.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next examination for the medical certificate will be held in December. Those who are competing for the Bronze Medal and Prize must send in their essays to the president, Dr. Nicolson, Broadmoor Criminal Asylum, on or before May 30th, 1896. Particulars on both subjects can be obtained from the registrar, Dr. Spence, Burntwood Asylum, Lichfield.

INSANITARY BOARD SCHOOLS AT PORTSMOUTH.—The Portsmouth School Board has now quite completed, at a cost of £2,700, what is practically an entirely new system of drainage. Two or three cases of sickness in April last led to inquiries which showed a most dangerous state of affairs, and the medical officer of health having had his attention drawn to the drains at the schools in the particular district in which the sickness occurred, notice was served on the board to put them right. When the ground was opened it was found that many pipes were broken or that the joints had entirely perished. The whole system was taken up and replaced with more modern improvements, proper inspection chambers and ventilating shafts being fixed. The matter did not end here. All the other schools in the town were visited by the medical officer, and just before the long holidays the board had notice to put the whole of the drains in complete and proper order. In some of the older schools the sanitary arrangements were found to be very defective. They were provided under the supervision of the sanitary authority of a former day, but the use of clay joints and the frequent absence of means of inspection and ventilation left the arrangements far behind modern requirements. Broken pipes abounded, probably as a result of the drains having to be uncovered in order that they might be inspected. The ratepayers object to a big bill in excess of the usual half-yearly estimate, but, considering the especial danger from ill-ventilated drains in such a position, it is far cheaper than an epidemic of sickness among the poorer children would probably have been.

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Reviews and Notices of Books.

The Deformities of the Human Foot, with their Treatment. By W. J. WALSHAM, M.B., C.M.Aberd., F.R.C.S.Eng., Senior Assistant Surgeon, Surgeon in Charge of the Orthopædic Department, and Lecturer in Anatomy, St. Bartholomew's Hospital; and WILLIAM KENT HUGHES, M.B.Lond., M.B.Melb., M.R.C.S.Eng., L.R.C.P.Lond., Orthopædic Surgeon, St. Vincent's Hospital, Melbourne; Assistant Surgeon, Children's Hospital, Melbourne; Surgical Tutor, Trinity College, Melbourne; sometime Clinical Assistant in the Orthopædic Department, St. Bartholomew's Hospital, &c. London: Baillière, Tindall, and Cox. 1895. Price 18*s.*

FROM the preface to this work we learn that it was written at the request of the students of St. Bartholomew's Hospital and is chiefly founded on the demonstrations given in the Orthopædic Department on cases under treatment. Of course, in order to make the account sufficiently full and complete the authors have gone more thoroughly into anatomical and pathological points as well as the treatment of severe cases of deformity than can ever be the case with experience founded simply on the treatment of out-patients. The first chapter is devoted to the Anatomy and Mechanism of the Normal Foot, and these are considered very fully by the authors. The various forms of club-foot are then described and discussed, and afterwards deformities of the toes, such as hallux valgus, varus, and dolorosus (or rigidus), hammer-toe, and deformities of the smaller toes are dealt with. The largest amount of attention is given, as would be expected, to talipes equino-varus, especially the variety of congenital origin. Its pathological anatomy is fully treated of; then follows the treatment (*a*) before the child has walked, and (*b*) in the child who has walked, and in the adult, under the various heads of: (1) manipulative treatment; (2) mechanical treatment; and (3) operative treatment. In the section devoted to mechanical treatment many forms of surgical apparatus are described, and we fear the student will find it difficult to make a selection without more definite instructions than are given. This part of the book is, however, valuable for reference for those engaged in hospital work. The authors speak very cautiously about the usefulness of Phelps's operation, but although there is much in the objections to it which they put forward we think that the experience of others is decidedly in favour of it for severe cases of deformity. With careful after-treatment most satisfactory results have been shown. In the treatment of acquired flatfoot the authors speak very strongly in favour of the "tip-toe movements," as recommended by Mr. Ellis, which are undoubtedly curative in the milder cases. Throughout the work much prominence is given to the use of plaster-of-Paris bandages, and in the severer forms of flatfoot the bandage is applied after wrenching the foot into position. This method proved so successful that it was only considered necessary to perform one operation involving a section of the bone in about 1500 cases. The authors say: "But our contention is, and we hold that this contention is fully justified by the large experience we have had in the treatment of several grades of the affection, that although the outward contour of the foot and the extreme rigidity may lead us to infer that advanced bone changes have occurred, these may not exist. Under an anæsthetic the deformity may be found to be due to little more than displacement," &c. This quite agrees with the general experience of surgeons in other London hospitals. We think the authors attach too much importance to the use of apparatus after operation for the holding down of the toes in talipes cavus; in the same way apparatus applied for the correction of hallux valgus and hammer-toe usually fails to effect any benefit, and in both these conditions, when they are severe enough to make the patient apply for relief, it is usually best to perform some operation. As regards the etiology of the hammer-toe no sufficient evidence is given that the condition depends on a primary contraction of ligaments; we grant that they are contracted, but hold that this is secondary to displacement of the phalanx. The illustration of a dissected toe conveys no impression of the real pathological condition; the changes in the head of the bone, which prove such an impediment to the success of methods of treatment other than excision of the head, are not shown, nor are they clearly pointed out in the text. The book is well and clearly printed, there is a sufficient index, and the illustations are very numerous and usually clear and adequate. Some might, however, be changed with advantage in another edition, and we do not like to see the name of the instrument-maker so often in the illustrations of the more common apparatus.

Altogether the book places before us the modern methods of treatment and the theories of causation, as well as the results of investigations into the pathology, of these deformities in a manner which renders it a valuable addition to the surgeon's library.

Gunshot Injuries: their History, Characteristic Features, Complications, and General Treatment, with Statistics concerning them as they have been met with in Warfare. By Surgeon-General Sir T. LONGMORE, C.B., Q.H.S., F.R.C.S., late Professor of Military Surgery in the Army Medical School, Officer of the Legion of Honour, Associate of the Society of Surgery of Paris, Corresponding Member of the Academy of Medicine of France, &c. Second edition. Illustrated by twenty-eight woodcuts. London and New York: Longmans, Green, and Co. 1895. Price 31*s.* 6*d.*

IT is seventeen years since the first edition of this work appeared, and its author lived to see the publication of a second edition, on the preparation of which he had spared neither time nor trouble in his conscientious endeavours to incorporate all the information which he could gather together and subject to his careful consideration, analysis, and arrangement. Military surgery and military surgeons are to be congratulated on the fact that the author of this elaborate treatise was enabled before his lamented death in the present year to witness and pass in review all the remarkable changes that have been brought about in modern warfare, and especially in the firearms and projectiles of the leading armies of the world. It enabled him in a measure to calculate and forecast the probable effects these would have upon wounds and injuries in the wars of the future. There are many people who still cling to the hope that international disputes will ere long be settled by other methods, but they can find no ground, unhappily, for a realisation of their hopes in the records of modern history and in the events of which they hear and read. It must be confessed that wherever we look in the map of the world as it exists at the present time the picture is a disquieting one and gives no assured prospect of peace. Setting aside the recorded observations and experiences of pre-Crimean times, what a vast number of observations have been accumulated since then and within the lifetime of the late Sir Thomas Longmore—during the Crimea, the Indian Mutiny, the wars with China, Abyssinia, Ashanti, Afghanistan, and Egypt—in which this country and India were engaged—besides the numerous wars in which other countries have taken part, some of which have been on a vast scale and attended by stupendous results. This treatise consists of eleven sections and an appendix, and embraces such subjects as gunshot injuries and the means by which

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they are produced, the causes which influence their nature, characters, progress, and ultimate issues, their features and distinguishing signs, and the primary symptoms and complications, with their ulterior consequences and disabling effects, their treatment in field practice, and the administrative arrangements in time of war, with the statistical results and ratios of casualties in different wars. Notwithstanding the painstaking care and labour which the author has bestowed upon his work in order to bring it up to the very latest dates, and the fact that we seem to have about reached the limits of deadly effectiveness in our modern rifles, there is, and there can be, no finality about our knowledge of a subject on which the inventive faculties and ingenuity of man are constantly being exercised, while the nature of the propelling forces and of the weapons and the dimensions, weight, velocity, and range of the projectiles employed in war are consequently being changed in accordance with our progress in inventive and experimental discovery and skill. Antiseptic surgery and Listerism have, moreover, profoundly affected the surgery of war and our practical aims in this respect. Still, the objects to be attained and the principles and indications on which the action of a medical service in modern war must always be based will probably remain much the same that they are now.

It is impossible to review a work of this size and importance within a reasonable space, and we do not think that there is any occasion for doing so in regard to the second edition of a treatise with which all who are interested in the subject are probably already well acquainted. The revolution, moreover, which has taken place of late years in the modern rifle has introduced changes which have excited universal attention in connexion with the surgery of war. There is no work with which we are acquainted that gives such an amount of information on the subject generally as that about which we have been writing.

LIBRARY TABLE.

Archives de Physiologie Normale et Pathologique. Fondées par Brown-Séquard. Publiées par MM. Bouchard, Chauveaux, et Marey. No. 4. October, 1895. Paris: G. Masson.—The more important papers published in this number are—(1) M. G. Gérard on the Existence of Arterio-venous Anastomosis; (2) on the Morphological and Pathogenic Varieties of the Agent producing Surgical Purulent Infection, by MM. S. Arloing and E. Chantre, with two plates; (3) an Apparatus for Measuring Respiratory Exchanges, by M. F. Laulanié; (4) Researches on the Amylolytic Ferment of the Blood (Hæmodiastase), by M. A. Tcherevkoff; (5) Variation of the Gaseous Exchanges of a Muscle, removed from the Body, for some days after its Extraction, by M. J. Tissot; (6) on the Antitoxic Action of Organs, by M. J. E. Abelous; (7) Introduction to the Study of the Disturbances of the Temperature under the Influence of Bacterial Toxines, by MM. S. Arloing and F. Laulanié; (8) on Experimental Hepatic Lesions caused by Diphtheritic Toxine, by MM. J. Courmont, M. Doyon, and M. Paviot; (9) Experimental Study of the Action of Sparteine and Oxysparteine in Chloroform Anæsthesia, by MM. P. Langlois and G. Maurange; (10) on the Saline Digestion of Gelatine, by MM. A. Dastre and N. Floresco; (11) the Influence of Variations of the Intra-hepatic Lymphatic Circulation on the Anti-coagulating Action of Peptone, by MM. E. Gley and v. Pachon; (12) Researches on the Cerebral Pulse in its Relation with the Attitudes of the Body, with Respiration, and with Psychical Acts, by MM. Binet and P. Sollier (interesting); (13) on the Variation of the Volume of the Limbs in connexion with the Respiration, by M. E. Wertheimer; (14) Fresh Researches on the Vaso-constrictor Action on the Pulmonary Vessels of the Sympathetic Trunk, by M. Ch. A. François-Franck; (15) Autopsy and Death of an Agastric Cat, by MM. J. Carvallo and v. Pachon; (16) on the Toxicity of the Serum of the Blood in Dogs subjected to Thyroidectomy; (17) on Trophic Troubles accompanying Syringomyelia, by MM. J. Dejérine and Ch. Mirallié; and (18) on the Poisoned Arrows of French Soudan, by MM. Ferré and Busquet.

The Seventy-fifth Annual Report of the Dundee Royal Asylum. June, 1895.—The directors report that the institution is now in a prosperous condition. This is satisfactory, and much credit is due to the able and conscientious management of Dr. Rorie, considering that only quite recently the asylum was greatly crippled financially. The Mansion House of Gray, in the immediate neighbourhood, has been obtained on lease and is now occupied by private patients, thus releasing part of the main building for the accommodation of the increasing numbers of pauper insane. There were 163 admissions during the year, 51 recoveries, and 55 deaths; the total number under treatment was 579. It may be noted that one of the three resident clinical assistants was a young lady.

Dental Materia Medica and Therapeutic. By JAMES STOCKEN. Fourth edition, revised by LESLIE M. STOCKEN and J. O. BUTCHER. London: H. K. Lewis, 136, Gower-street, W.C. 1895.—There are a fair number of drugs in general use in the practice of dental surgery the descriptions of which are not included in the ordinary text books on materia medica. For this reason a small work dealing with these special drugs is really called for. It is intended that this book should fill that gap, but unfortunately it can hardly be said to do so at all adequately. Many drugs of value are not included: for instance, we find no account of beta-napthol, gallic acid, trichloracetic acid, peroxide of soda, pyrogene, and oxide of zinc. The subject-matter is divided under three headings, of which the first deals with Materia Medica, Pharmacology, and Therapeutics, the second is devoted to a description of the various drugs, while the last contains a therapeutic index of diseases, drugs, and prescriptions. Speaking generally, the description of many important drugs is far too meagre. Useful remedies like tincture and liniment of iodine are mentioned only by name, and no account is given of their strengths and the modes of their preparation.

JOURNALS AND REVIEWS.

Archiv für Verdauungs-Krankheiten (Archives of Diseases of Digestive Organs). Berlin: S. Karger. London: Williams and Norgate. Annual subscription, 16*s*.—This journal, of which the first part is before us, is edited by Dr. J. Boas of Berlin, and is to appear quarterly. The contents of this first number may be taken to indicate its scope. The editor opens with an article on the Aims and Methods of the Pathology of Digestion; Professor O. Rosenbach of Breslau follows with a paper on Hepatitis Simplex, with remarks on Abdominal Plethoric and Hæmorrhoidal Conditions. Professor C. von Noorden of Frankfort writes upon the Therapeutical Importance of Researches in Metabolism; and Dr. Reichmann of Warsaw contributes results of his Experimental Researches upon the Direct Influence of Sodium Bicarbonate on the Secretion of Gastric Juice. A review of current literature for the second *semestre*, 1894, under the several headings of—(1) Œsophagus; (2) Stomach; (3) Intestine; (4) Liver; (5) Spleen; (6) Pancreas; (7) Mesentery, in Germany contributed by Dr. P. Cohnheim, and of similar writings in Russia and Poland contributed by Dr. Grundzach, in Hungary by Dr. S. Pollack, in Scandinavia by Dr. L. Wolff, and in Denmark by Dr. C. Jürgensen—followed by a bibliographical summary of such literature in all

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countries for the first quarter of 1895, compiled by Dr. Roth, librarian of the University Library at Halle, form a prominent feature of the *Archiv*. Reviews of Dr. Lennander's monograph on Appendicitis, and of Dr. A. Pick's Lectures on Diseases of the Stomach and Intestines, complete the number.

The Popular Science Monthly.—By far the most interesting paper in the October number of this journal is Professor Michael Foster's article on Huxley. Mr. Herbert Spencer continues his papers on Professional Institutions, or rather under this heading he continues to show how all education was at first coexistent with the sacred ministry of whatever nation or religion he treats of.

The Medical Magazine.—Mr. David Wallace contributes an interesting paper upon Cystoscopy to the October number. He mentions the use of a Higginson syringe for introducing the solution, but we prefer a simple tube and funnel, for by this means the amount of pressure can be more easily gauged. Mr. Nelson Hardy's paper on the Doctor's Holiday is amusing. He went to D——shire to take another man's work and was astonished to find that the country aristocracy, instead of being bold, bad baronets, were actually humane. The Ladies Rose and Cicely, for instance, looked after the parish nurse, and the local baronet sent his phthisical footman to a convalescent home. So far have we advanced since the days of Lady Southdown and Podger's pills. The November number has two interesting papers by Dr. Withington—the one about the medical man who was sent by Pope Alexander III. as *Legatus a latere* to Prester John; the other a delightful paper upon Strange Medicines, from which we extract the following, commending it to sundry ecclesiastical authorities: "There is nothing better for that dangerous disease, lethargy, than to put fleas in the patient's ears, as I have seen done with happy success to my lord the Earl of Shrewsbury in England."

Bristol Medico-Chirurgical Journal. September. — The quarterly organ of the Bristol Medico-Chirurgical Society has among other articles Mr. H. P. Symonds's presidential address at the annual meeting of the Oxfordshire Branch of the British Medical Association, on the Advances in Surgery during the last Twenty-five Years. Dr. Fawcett contributes a paper on a Method of Localising the Foramina at the Base of the Skull, which we recommend all those struggling with their "bones" to read and digest. There is a paper by Dr. Michell Clarke on the Diagnosis of Cancer and Simple Dilatation of the Stomach, and Remarks on the Administration of Ether, founded on 400 cases, by Mr. Freeman.

The Medical Chronicle.—This, the medical magazine of the Owens College, Manchester, contains amongst others Mr. Treves's paper on the Surgical Aspect of Tuberculosis, published in our issue of Oct. 26th. There is an excellent article on Bakehouses by Dr. Niven, the medical officer of health of Manchester.

Dublin Journal of Medical Science.—The original communications to this quarterly comprise a paper on Internal Strangulation by Mr. W. Thomson, one on Osteotomy for aggravated Equino-varus by Mr. R. L. Swan, and an interesting paper on Old Herbal Remedies by Dr. Purdon.

The *Humanitarian* for November contains two articles by medical men, one on Cycling for Ladies, which does not add to our medical knowledge on the subject, and one, a mere note, on Drink and Insanity, which exaggerates, to our mind, the evil connexion between the two. With Mr. F. H. Walmsley's opinion that it should be a question for consideration whether the law should not be amended so that such (habitual) inebriates, instead of being committed to prison for short terms, should be detained and treated for lengthened periods in special institutions, we are in full accord; but when he says that "half the misery ar wretchedness of human life . . . is the outcome of a abnormal state of mind and morals produced by drink w believe that he overstates his excellent case.

The *Practitioner* for November contains several interestin papers, among which we may mention for special attentio an historical note on Conical Cornea by Mr. Anderso Critchett and a communication on the subject of Deaf Mutism by Mr. Bertram Thornton. Mr. Thornton say definitely, in answer to a question that is still under som discussion: "It is almost equally certain that con sanguineous marriages are responsible for a considerabl proportion of children who are born deaf." The othe "certainty" to which this is equivalent is the influence o heredity.

The *Strand Magazine* for November contains a story ir the second series of "The Diary of a Doctor," which is in this respect better than many of its predecessors that its medical element has nothing to do with the interests. The part played by the medical man is not scientific but accidental, and medical treatment or diagnosis forms no essential of the narrative. A paper on the Signature of Napoleon is a real argument for seeing something sound in the "science" of calligraphy.

The *Australian Medical Journal* for September contains, among other useful and readable matter, notes by Dr. S. D. Read, the resident surgeon at St. Vincent's Hospital, Melbourne, of two cases in which an erroneous diagnosis was made owing to symptoms, in the one case due to intestinal obstruction and in the other to hydatids, being ascribed to the presence of ascaris lumbricoides in the intestinal tract. In each case a round worm had been vomited, and subsequent symptoms, due to different pathological conditions, had been considered the result of the parasite. The patient with a hydatid cyst made a good recovery, but the patient with intestinal obstruction died without surgical interference, the difficulty of diagnosis being further complicated by the fact that her bowels were moved after admission to the hospital.

Science Progress for November is interesting because of two biographies which it contains. Dr. William Stirling contributes an admirable *résumé* of the work of Carl Ludwig, the Professor of Physiology in the University of Leipzig; and Dr. Sims Woodhead tells exhaustively and with learned appreciation the story of Pasteur's life and scientific work.

The *Birmingham Medical Review*.—The November number attains the usual standard of excellence. Dr. Foxwell's paper on the Value of Cold Water Enemata in Uræmia is exceedingly interesting and contains a timely warning.

Blackwood's Magazine.—The Village of Perfect Health is described by an enthusiastic writer. It is an upland Swiss village near Aigle, and seems a veritable earthly paradise. Mr. W. B. Harris has a delightful paper on Kurdistan. He found the Kurd charming, and from personal experience we can agree with him.

The monthly magazines are of more than ordinary interest to a medical audience this month, and among others tha may be mentioned are the *Westminster Review*, in whicl Mr. Gilbertson writes on Immoral Ethics; the *Health News* which contains a Plea for Public Abattoirs, by Dr. Stephe Smith; *Sanitation in the West*, which prints an article o the connexion between Gymnastics and Hygiene; and th *Quirer*, wherein may be read a good paper upon East-en Doss-houses.

A DISTRIBUTION of the prizes to the Voluntee Ambulance School of Instruction will take place at Crosby hall, Bishopsgate-street, E.C., on Saturday, Dec. 7th, a 7.30 P.M. Lieutenant-General G. H. Moncrieff will present th prizes on this occasion, and a smoking concert will follow.

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Analytical Records
FROM
THE LANCET LABORATORY.

STEARNS' MEAT JUICE.

(FREDERICK STEARNS AND CO., DETROIT, MICHIGAN; WM. A. RICHARDSON, 25, LIME-STREET, LONDON, E.C.)

WHEN it is known that a fluid consists practically of the juice of fresh, lean, uncooked beef expressed in the cold, its value as a nutrient does not require emphasising, for it will contain the albuminous constituents of the meat unchanged, besides also the stimulating extractive principles. This accurately describes Stearns' meat juice, which is a dark red liquid, turning semi-solid on the application of heat from coagulation of the albumin. The coagulum, which is the most important nourishing constituent, amounted at least to one-sixth of the total dry matter, the latter being equal to 44 per cent. The mineral matter consisted, of course, principally of soluble phosphate and a not excessive quantity of common salt. The taste is agreeably fresh and "beefy" and such that invalids would take it without reluctance. The preparation, judging from these results, should serve admirably where a vigorous nutrient is needed.

LYSIDINE (NEW URIC ACID SOLVENT). NOSOPHEN, ANTINOSINE, AND EUDOXINE (THREE NEW IODINE ANTISEPTICS).

JEYES SANITARY COMPOUNDS CO., LIMITED, 64, CANNON-STREET, E.C.

Recent clinical literature (chiefly German) has given records of the value of these comparatively new compounds which in the interests of curative medicine cannot be passed by. Lysidine, for example, has been employed, it is said, with remarkable success as a solvent for gouty concretions. Owing to its pre-eminently hygroscopic character it is conveniently obtained in the form of a 50 per cent. aqueous solution. It is an organic base, $C_4H_8N_2$, occurring amongst the products of distillation of ethylene-diamine, from which piperazine was derived. It is stated to possess, however, five times the solvent power on uric acid of piperazine, and sixty times the solvent power of carbonate of lithium. Lysidine is best administered in aerated water, although we read in a translation of a paper by Dr. E. Grawitz in the *Deutsche Medicinische Wochenschrift*, 1894, No. 41, that (referring to a series of cases of gout in which the treatment was followed by excellent results) "the remedy was administered to these patients dissolved in aerated water"! Nosophen is tetra-iodo-phenol-phthalein, containing in combination 61·7 per cent. iodine. Its internal administration (five to eight grains) is unaccompanied by toxic symptoms, but its chief important use appears to be as a substitute for iodoform, being free from odour and containing iodine in a more firmly combined state. The bismuth salt of nosophen is known as eudoxine, which has been employed for catarrh of the stomach and intestines, the presence of bismuth favourably modifying its action. Lastly, antinosine is the sodium salt of nosophen, which, while non-toxic and non-irritant, possesses greater antiseptic powers than iodoform, and has been used with advantage in rhinology and in the treatment of ear, mouth, and throat affections, and also in catarrh of the bladder.

MATÈ OR PARAGUAY TEA.

(A. CUMBERLAND, CATFORD HILL, S.E.)

It is an interesting fact that the leaves of the Ilex Paraguayensis, or Brazilian holly, were sought out by man, much as tea was, for the preparation of an infusion of peculiar restorative and "staying" powers, and that subsequently it was proved that the active principle of matè was identical with theine, which was, however, at first called paraguaine. Chemically, the composition of the infusion of the Paraguay tea-leaf resembles that of leaves of ordinary tea, Thea Sinensis (Camelliaceæ); but in certain important respects, from a dietetic point of view, the constituents exhibit markedly different properties. This is especially the case with the tannin principles. It is not correct to say that Paraguay tea contains no tannin; some chemists have reported as much as 15 per cent., an amount which is considerably in excess of most teas, or, at any rate, of mixed teas. In the sample of matè recently submitted to us we found by the lead method of Mr. Allen 8 per cent., and by the copper acetate method 7·76 per cent. This tannin, however, has very different properties from the tannin of tea. It does not, for example, coagulate gelatin or, what is the same thing, tan hides. This is probably a fact of great physiological or dietetic importance, since it is the astringency of ordinary infusions of tea which leads to disturbances of the digestive function either by acting prejudicially on the walls of the stomach or by rendering the nitrogenous principles of food tough and hard of digestion. Matè tea possesses the advantage, therefore, of being a refreshing and restorative beverage, due in a large measure to the theine it contains, without the evil effects of astringency. The liquor is pleasantly leafy and fragrant to the taste, somewhat resembling tea, but not of the same fulness and roundness of character, while its colour is pale straw. Nor does it possess that attractive, delicate aroma and flavour which in a good tea infusion are ascribed to essential oils. On analysis we obtained the following results: extractives, 35·60 per cent.; insoluble matters, 64·40 per cent.; moisture, 8·40 per cent.; mineral matter, 5·00 per cent., alkalinity of which was equal to 0·88 per cent. K_2O; tannin, by lead method 8·00 per cent., by copper acetate 7·76 per cent.; and theine, 0·45 per cent. The simple experiment of adding infusions of the same strength of matè tea and ordinary tea to a solution of gelatin—the former producing no coagulum, while the latter produces an abundant curd—is instructive, and would appear to indicate that matè tea may be taken with advantage by those with whom tea disagrees, while at the same time they would secure the refreshing and invigorating properties of the same active principle in its natural condition, the alkaloid of tea—theine.

PALATINOIDS OF PEPTONATE OF IRON AND SULPHATE OF MANGANESE.

(OPPENHEIMER, SON, AND CO., LTD., 14, WORSHIP-STREET, E.C.)

Palatinoids, consisting of two air-tight jujubes of watch-glass shape joined edge to edge, offer an excellent means of preserving unstable bodies from the deterioratīng influences of air and moisture. A recent addition to an already valuable and long list is the palatinoid of peptonate of iron (one grain) and sulphate of manganese (one grain). This combination has been found very serviceable in the treatment of chlorosis and anæmia.

TERRŌL.

(THE TERRŌL CO., 30, 32, AND 34, DEVONSHIRE-ROAD, FOREST HILL, S.E.

The introduction of a refined hydrocarbon oil as a substitute for cod-liver oil in, as it is asserted, diminishing waste in phthisis and in other conditions demands the attention of the profession. Once accepted that it is the oil that is the remedy, then the theory of the active principles of cod-liver oil must break down, and the only explanation of the well-known therapeutic value of carefully extracted cod-liver oil that remains must be its peculiar digestibility. The purity of terrōl is, at any rate, a very important factor in its favour as regards internal administration. It is a bland, perfectly tasteless and odourless hydrocarbon of the vaseline type. It is viscid at 16° C., but slight warming suffices to convert it into a clear, yellow, and highly fluorescent oil having a specific gravity of 0·864 at

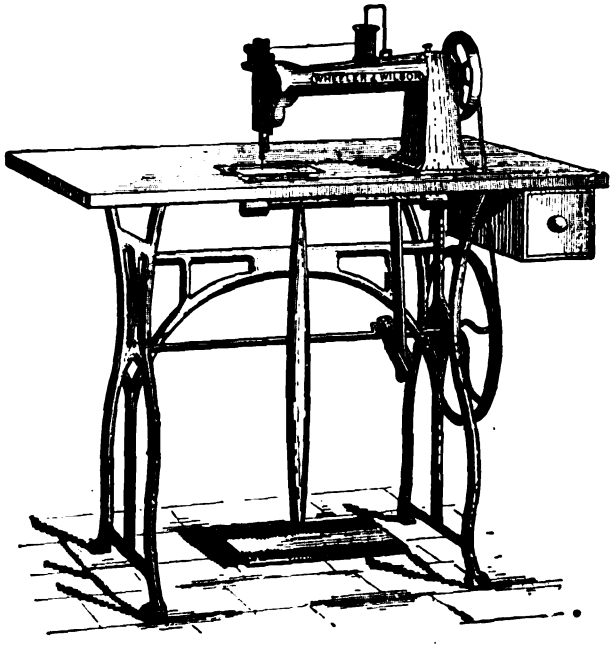
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100° F. It is said to have been used with excellent effect in the relief of chronic bronchial catarrh, and in ministering to the waste of pulmonary and other diseases and in affording an easily assimilated nutrient in cases of faulty nutrition. Terrōl is proof against prejudicial oxidising influences, and, unlike vegetable oils or those of animal origin, never becomes rancid. It possesses a high degree of purity, which is imperative in all preparations, and especially hydrocarbon oils, intended for internal administration, and its absolute tastelessness is a very important feature.

New Inventions.

AN IMPROVED MOTOR FOR SEWING MACHINES.

SEWING machines adapted for useful general work are invariably driven by a treadle to which either one or both of the feet may be applied. The ordinary treadle answers well for the stitching of exceptionally stout materials and for the purposes of various machines driven with the foot by men such as turners or printers, but for average sewing machine work it has the drawback of requiring more effort than is necessary. This extra fatigue is a serious consideration in the case of females employed all day long at the machine, but an ingenious modification of the ordinary treadle has now been introduced by which the labour of the worker will be greatly economised without any sacrifice of efficiency. As is well known, the ordinary treadle is horizontal when at



rest and has to be forcibly depressed by the foot in order to turn a fly-wheel by means of a crank. In the new system the fly-wheel and crank are retained, but the horizontal treadle is replaced by a vertical one which is hinged to the under side of the table on which the machine rests, and hangs down almost to the floor, where it ends in a horizontal platform for the foot. The worker's foot is not moved up and down to drive the machine by pressing the treadle, but produces the same effect with less labour by a gentle swinging of the foot backwards and forwards. The muscles chiefly employed are the flexors and extensors of the knee-joint, and the weight of the foot and leg is, of course, supported by the platform on which the foot rests. An important advantage is that the continual movement of the thigh, inevitable under the present system, is so diminished as to be hardly perceptible. The "Hygienic Motor" is the appropriate name of the new invention; its principle is sound and the details are extremely simple. The ordinary treadle is employed to most advantage when the fly-wheel is comparatively heavy and the operative stands at the machine; but for seamstresses who sit all day long at the machine the to-and-fro movement of the foot is less exhausting than the alternate upward and downward movement which has hitherto been required. The new system can be readily adapted to any of the existing kinds of sewing machine, and is manufactured by the Hygienic Motor Company, Grafton-chambers, 120, Tottenham Court-road.

A NEW CARRYING CHAIR.

MR. JOHN CARTER, of New Cavendish-street, Portland-place, has brought out a new carrying chair which appears to possess certain advantages worthy of the recognition of the profession. It is constructed of iron cased with wood,



with two leading wheels, and is suitable for the conveyance of invalids under most circumstances. It could be at once rendered serviceable either for use in a house with a difficult staircase or in case of accident in the street, on rail, on ship-board, or for military purposes as a stretcher, and, in addition, the price is moderate.

AMBULANCE FIRST AID.—Mr. Casper R. Laurie, L.R.C.P. Lond., M.R.C.S., of Redruth, honorary surgeon of the Redruth St. John Ambulance Brigade, has presented the brigade with a solid leather case containing all the appliances necessary on rendering first aid to the injured.—The members of the Featherstone local railway branch of the St. John Ambulance Association have presented a gold ring to Dr. Steven, the lecturer to the class.

THE CARDIFF INFIRMARY.—At a meeting recently held at Cardiff in connexion with the infirmary it was stated that at present there were 120 in-patients in the infirmary, and when the new wards had been opened the number would be increased to 180. This extension had cost £14,000, and £7000 of this were required. The new wards could not be opened for lack of funds. Lord Windsor's proposition that a bazaar should be held to pay off the debt of £7000 was unanimously carried.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 16, 1895.

THE annual general meeting of the Fellows and Members of the Royal College of Surgeons of England, which took place on Thursday, Nov. 7th, was by far the most interesting and important general meeting which has been held at the College for several years. There was a marked improvement in the attendance and in the tone, temper, and speeches of the Members of the College, whilst the resolutions proposed in the interest of the Members were of a moderate and practical character. There was an air of genuineness about the proceedings which has been lacking on some former occasions, and the unanimity of opinion which prevailed was admirable and has materially advanced the cause championed by the Society of Members. As a matter of tact, taste, and good feeling it would probably have been better if no objection had been raised to the adoption of Surgeon-Major INCE's usual motion according the thanks of the meeting to the Council "for the interesting and important report presented," but there was nothing churlish or offensive in the mode in which the amendment to pass to the next business was proposed by Mr. GEORGE BROWN and seconded by Mr. BRINDLEY JAMES, and it was natural that in view of the solid business on the agenda paper there should have been a strong desire not to waste the time or fritter away the energies of the meeting. The points emphasised in the motion standing in the name of Mr. JOSEPH SMITH were the most vital points of reform which could have been selected, and professional opinion generally would be found to lean in a preponderating force in favour of the propositions therein embodied. In its original form the motion ran as follows: "That this meeting requests the Council to take steps to obtain an amended Charter which shall contain the following provisions: (*a*) that no alterations in the constitution and external relations of the College shall be effected without the consent of the body corporate, convened to discuss such alterations; (*b*) that the present annual general meeting be made statutory, and that the report of the Council shall be submitted for formal adoption; (*c*) that the members of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council."

On the suggestion of the President this tripartite motion was formally divided into three separate resolutions, each of which was proposed by Mr. JOSEPH SMITH and seconded by Mr. DICKINSON, and carried all but unanimously. The first resolution involves a principle which has been recognised by the Council, but not to the full extent of its signification, and has certainly not always been acted upon by that body. The exclusion of the Apothecaries' Society from the Conjoint Examination and the whole arrangements for that examination were effected by the Council without reference to the body corporate, and the proposed coöperation with the University of London was decided upon by the Council first, and then brought before the Fellows and Members for discussion. The second resolution embodies a point for which we have always contended—viz., that the annual meeting of Fellows and Members should be statutory and not left as at present to the good pleasure of the Council to hold or to withhold as that body may please. It is for the good of the institution that the management of the College should be submitted every year to the criticism of the Fellows and Members, and that all temptation to the Council to interfere with its continuity should be removed. Moreover, if the meeting were statutory, the Fellows and Members would have a freer hand, and the conduct of the meeting would be brought more into line with the conduct of other general meetings elsewhere. The third resolution, providing for the addition to the Council of eight representatives of the Members of the College, affirms another principle for which THE LANCET has long striven, and gives effect to that principle in the way which is open to the least objection, inasmuch as it would deprive the Fellows of no real privilege which they at present possess, and would leave them to all intents and purposes still in undisputed possession of the control of collegiate affairs. All that it would take away from the Fellows is the *exclusive* right of electing members to the Council, and this is a perquisite which undoubtedly a large number of the Fellows would rejoice to be able to abandon. The whole history of the present century is a history of successful struggles for the destruction of the exclusive privileges possessed by particular classes in the community. Disabilities have been removed from Roman Catholics and Jews, close boroughs have been abolished, municipal bodies reformed, and the franchise extended to the working classes, and by all these reforms the State has been enormously strengthened. Reasons of a similar character to those which were urged in favour of these changes can be adduced fo the removal of disabilities in the medical profession. How greatly would the Royal College of Surgeons of England gain in power and influence by the contentment and elevation of its grand constituency of members. Accidental circumstances have delayed this concession of representation to the Members and the consummation of an act of good policy and justice, but these reforms cannot be much longer delayed without seriously weakening the institution and rendering still more critical the present critical state of its finances. Elected as the Council of the College at present is by the Fellows alone, it could not of its own good pleasure and mere motion at once accede to the request of the Members—the Fellows of the College must first be consulted. It may be said that the Fellows were consulted some years ago and that the answer was not favourable to the claims of the Members, but the circumstances under which they were consulted were widely different from those prevailing at the present time, and the mode in which they were consulted was so oracular and ambiguous that it was not a fair test of the balance of opinion; and yet even under such adverse conditions the number of the Fellows prepared to do justice to their fellow Members was considerable. Moreover, the present proposal is in a form which

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deprives the main objection to the original proposals of all its force. The cry then was that the Fellows would be swamped at the poll, and that the Members of the Council would be elected no longer by the Fellows but by the Members of the College. This cry cannot be uttered again. So that now there is every reason for consulting the Fellows of the College again, and if the Council puts the matter on one side and takes no action whatever, a grave responsibility will be incurred. There were many Fellows at the annual general meeting, and but one was found to hold up his hand against the third resolution, and several Fellows there were who held up their hands in its support. A gradual process of conversion is proceeding amongst the Fellows of the College, and if the Council of the College were now again to consult them, either by circular or at one of the half-yearly meetings, we should be greatly surprised if the opposition to the concession of representation to the Members of the College did not prove altogether insignificant.

About the question of the admission of women to the examinations for the diploma of the College, which occupied the remainder of the time of the meeting, little need be said, for the adverse decision of the Fellows of the Royal College of Physicians of London had deprived the discussion of any immediately practical importance. The result of the voting showed that opinion on this subject is nearly equally divided, and it was curious to note that the fact that so many portals had been opened to women for obtaining medical and surgical diplomas was used as an argument both in favour of admitting women and in favour of excluding them from the examinations for the diploma of Member of the Royal College of Surgeons of England. For the time being the question is probably settled, but so great has been the change of opinion in the profession on the general question that when the next application to the two Royal Colleges of London is made by the London School of Medicine for Women no one need be surprised if the present decision should be reversed at both institutions.

THE medical officer of health does not lie on a bed of roses, but his object is to make his district sweet and healthy. His pride must be to have it in such a sanitary condition as will compare favourably with that of other districts similar in size, situation, and population. His powers under recent Acts are certainly great and admit of being used in a way which to some, especially to the owners of property, may seem harsh and tyrannical. But his responsibilities are great. The law has recognised this and has made it the interest of large communities to pay such salaries to their medical officer as to make him independent of private practice, and has still further secured his independence by making his dismissal by the sanitary authority conditional on the consent of the Local Government Board. Preventable disease, as His Royal Highness the Prince of WALES said, ought to be prevented. The prevalence of it is the opprobrium of the sanitary authority, and ultimately of the medical officer of health, on whose advice chiefly the sanitary authority acts. The Acts under which such powers are conferred are comparatively new. The property in regard to which they are used is for the most part old. Hence it is not difficult to understand that a serious collision of feeling is apt to happen between the sanitary authority in its intolerance of preventable disease and the owner of property that answered all the old-fashioned purposes of property, and especially that of returning a good rent to its owner, but which is capable of harbouring or emitting poisons which either kill outright or tend to degrade the health and *morale* of the inmates.

A sharp collision of this kind may be studied at the present moment in the case of Islington. Mr. ERNEST EDWARDS, Secretary of the Metropolitan House Investment and Agency Company, Limited, has addressed a letter, which we publish in another column, to every member of the Vestry of St. Mary, Islington, to the vestry clerk, and to the *Islington Gazette*, complaining bitterly of the way in which the sanitary authority of Islington and its medical officer are using the powers conferred on them by the Public Health Acts. Mr. EDWARDS shows that his company owns 68 houses in the parish, and collects the rents of 51 other houses, making in all 119 houses, of the aggregate net annual ratable value of £3500, or thereabouts, and representing an invested capital of £40,000. He states that all the houses are in excellent repair, and all let to most respectable tenants, the rentals varying from £30 to £50. He complains of the constant demand of the sanitary authority on the company to have the drains entirely relaid, ventilation shafts erected, &c. The cost of such alterations is from £20 to £35. Mr. EDWARDS alleges that the houses of the company are made the special objects of the sanitary authority's attention and demands in a way in which other property is not. But he may be comforted in this respect by a similar complaint addressed to the *Islington Gazette* by Messrs. NOKES and NOKES, who manage ouses in Islington and other parts of London for various lients, and who allege that the demands of the sanitary authority are "far more numerous" than in any other parish. These gentlemen go so far as to suggest that a petition should be presented to the Local Government Board asking for an inquiry to be made into the management of the sanitary department of the Islington Vestry. The same grievance is expressed in the same paper by Mr. C. J. GARD on behalf of the "Central Property and Investment Company." He declares that owing to the fads of the sanitary authority property in Islington is hardly worth having. He makes a still more serious charge, which the Islington authorities would do well to call on him to establish, that they serve notices to do work "on people which the department knows it cannot enforce by law."

We cannot pretend to decide between parties whose point of view and whose interests are so different—our sympathies are naturally with all reasonable attempts to make houses fit places to live in. Toleration of ill-laid drains or inadequate and defective waterclosets on the part of landlords is next thing to a crime. They convert the house, which ought to be a means of life and health, into a source of disease, and possibly into a death-trap. We have no sympathy with mere "fads," or with mere gratuitous exactions from owners of property. In all conscience local rates are high enough, and local indebtedness is increasing

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fast enough, without giving any encouragement to the wanton use of great powers conferred only for grave public purposes. But do these letters establish any such case against the Islington authorities? We think not. Two things strike us in the letters—firstly, they are written by the representatives of companies, and companies are apt to look very much to their own interests, and to be out of sympathy with the tenant's view and case; and, secondly, they are reticent as to the health of the tenants. They do not tell us whether they have had sickness on the premises or other reason for complaint. Now this omission is radical. But it is supplied by Mr. HARRIS, the medical officer of Islington, in a letter to the Local Government Board on Mr. EDWARDS'S letter. Mr. HARRIS says that "in every instance the premises were visited either by reason of the occurrence of infectious disease or through complaint having been made to me of their insanitary condition." The alterations may have been excessive, but unless this statement can be refuted we must assume the contrary. £30, or £35, may seem a large sum to owners of property; but it does not seem a large sum to make faulty houses permanently sound in a sanitary sense. The contest is an interesting and an inevitable one, but public sympathy will be with the law that requires a landlord to put his house into such a condition that it shall not endanger life or even health. Islington is the most populous parish in England, and sanitarily compares favourably with most other metropolitan parishes, and even with some rural ones. The general death-rate of Islington and the death-rate from zymotic disease are markedly less than in any of the great groups of sanitary areas as given in the last quarterly return of the Registrar-General (July, August, and September). This, in the long run, must be in the true interest of the parish and of its property owners.

THE report of the last quarterly meeting of the town council of Lowestoft includes a discussion on public health matters which would afford amusement to many were it not that the interests of health and life are involved. Lowestoft had a heavy rate of mortality during the month ending Oct. 19th; it reached no less than 50·18 per 1000, 19 per 1000 being due to measles and 10·3 to diarrhœa. Monthly rates are not often of much value, but this one is so excessive that it called for investigation, and the medical officer of health did his duty in reporting on it to the sanitary committee. This led to the chairman of that committee condemning the principle of such reports being "reduced to writing" and hence becoming known to the public, with the result of damaging what he calls "the general interests of the borough." If this chairman means that visitors are thus temporarily prevented from visiting Lowestoft, then his suggestion as to privacy pending an epidemic of measles is one so intolerable that we trust it will be resented by his own constituents. Can he possibly mean that he wants, by a policy of secrecy, to attract families with young children to a place where they will run an exceptional risk of death? But we cannot take this chairman *au sérieux* in view of his next statements. First, he announced that the medical officer's views as to the cause of this exceptional mortality were wrong; they were, indeed, "but the opinions of one man," whereas he (the chairman), who disclaimed all medical training, though "but one man," had had his "own experience," which enabled him to "trace a disease." The results of his etiological investigations were next propounded by means of an announcement, which he saw no objection to make quite public, to the effect that the sewers of Lowestoft were inadequately ventilated and gave forth offensive odours, and "were a fruitful cause of disease." The public will note this frank declaration of the chairman of the sanitary committee, who evidently will have no secrecy when his views as to the state of the sewers are in question, and they will not forget what the medical officer of health says as to the condition of the middens in relation to a diarrhœa death-rate of 10·3 per 1000 of the population.

The next point discussed was a definite proposal to include measles among the notifiable diseases, the proposer reminding the council that both the present and former medical officer of health had advocated it. But it seems to be the practice of some in Lowestoft to deal with health questions in a spirit of levity, for a second councillor immediately urged that such a recommendation should "not be taken too seriously," especially as it related to a "comparatively innocent" disease—one, he forgot to add, that kills from 11,000 to 16,000 of the population of England and Wales every year—and then this authority on public health actually announced that "he did not know a town n which measles was included in the list of notifiable diseases." We cannot, of course, take him "too seriously" as to this, otherwise his constituents might suggest to him to learn the elements of his duties before he next addresses an audience on a matter so serious as that relating to public health. Fortunately, the Mayor diverted the discussion into a serious groove and announced that if notification of measles could stay such a grave mortality "it was worth any expense, no matter what.' For his information we may say that the question of the notification of measles is a difficult one. Where the notification has been properly used at the onset of an epidemic by strictly preventing children from going to school from infected houses it has achieved excellent results; where that early stage has been allowed to pass without careful attention to the question of school attendance in every case, the expenditure on notification has been wasteful, and the subsequent closure of schools often useless.

Indeed, the question whether in a given place exclusion from school of infected scholars or total closure of schools should be practised must be a matter for medical judgment. No general rule can be laid down as to the inclusion of measles as a notifiable disease. It mainly depends on the use to which the newly acquired knowledge will be put; but it also depends on other local circumstances. The whole matter is, we are informed, being studied by the Medical Department of the Local Government Board, but the problems involved are numerous. One thing we believe to be certain—namely, that if properly used in a place like Lowestoft, such notification ought substantially to save life and prevent needless interference with elementary education.

THE Bradshaw Lecture, delivered by Dr. BRADBURY before the Royal College of Physicians of London, and

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published in another column of our present issue, forms an interesting record of the extension of investigations over ground which has already attracted many experimental workers. The possibility of influencing the size of the arterioles, and of thus regulating the supply of blood to the capillaries, has long fascinated experimental physiologists, while the evils of high tension have been more grudgingly allowed in some directions by clinical observers. It has been freely admitted that some cases of angina pectoris were benefited by employment of nitrite of amyl and of nitro-glycerine, and these substances have been freely employed in various ways. The gains from nitrite of amyl have often been found to be evanescent, although it has the advantage of rapidity of action, while nitro-glycerine, although its effects last somewhat longer, has often given rise to headache, and even now it can scarcely be said to have found general acceptance at the hands of the medical profession. The fact is that the nitrites already known and nitro-glycerine agree in being at once too powerful in action and too transient in effect, and more recent researches have been directed towards the discovery of some substances able to produce a prolonged fall of blood pressure. Dr. BRADBURY mentioned the work of previous investigators—LEECH, MATTHEW HAY, and LAUDER BRUNTON—and he indicated the reasons which had led him to work more particularly with the nitrates of the higher alcohols and their allies. It is needless here to follow his account of the preparation and properties of the bodies with which he chiefly experimented—viz., erythrol tetranitrate and mannitol hexa-nitrate—but the experiments by which he has determined their pharmacological actions will be found to be careful extensions of the methods of previous workers, and they appear to prove conclusively that these substances possess an action similar to that of nitro-glycerine, but that their effects are weaker, though more prolonged. He employed the perfusion method of LUDWIG to determine the purely local action of these bodies, and he found that for practical purposes the general effects were the same when the experiments were conducted with the organs of warm-blooded or cold-blooded animals. These experiments were confirmed by blood pressure tracings from rabbits under the influence of urethane, and further by pulse tracings from actual patients. One of the most interesting features of the lecture was the exhibition of a diagram showing the relative effects of the various members of the "nitrite group," in which the nitrates of erythrol and mannitol were shown to be inactive during the period immediately following their administration, while their effect, which was gradually produced, was markedly prolonged.

The practical outcome of these experiments, the application of these new vaso-dilators to suitable cases of disease, must naturally form the most attractive feature of this series of experiments, and here Dr. BRADBURY appears to tread upon less certain ground. It will be noted that he speaks of diseases in which these drugs *might* prove useful, instead of giving details of cases in which they have already established their claim to consideration. Admitting all that can be said in favour of "diminishing the work of the heart and the pressure upon each unit of area of the artery," we imagine that most practitioners might feel some hesitation about the advisability of attempting "to keep the tension constantly below a certain level." It is possible that angina-like pains may be not only relieved by nitro-glycerine and nitrite of amyl, but even averted by the longer acting remedies such as erythrol nitrate, and that in this direction the new vaso-dilator may find its future scope of usefulness. But Dr. BRADBURY himself admits that many cases of cardiac pain are better treated with morphine than with vaso-dilators, while for others he notes the value of purgatives and of attention to the general health. With regard to chronic Bright's disease, the condition which beyond all others is associated with a high tension pulse, it is possible that many of the troublesome symptoms—headache, mental ineptitude, weariness, and the like—may be relieved by the new vaso-dilator, but it must not be forgotten that many observers claim that the high tension in this disease is the result of conservative changes in the vascular walls, which tend to protect the tissues from an impure condition of the blood; while relieving symptoms, therefore, by the administration of vaso-dilators, it must be remembered that simultaneous measures must be taken to rid the blood of impurity so far as possible. The other conditions enumerated by Dr. BRADBURY—aneurysm, Raynaud's disease, various forms of dyspnœa, the headache of high tension and various forms of nervous diseases—may perhaps be found to offer more suitable fields for employment, but this is for the future to determine. Dr. BRADBURY is certainly to be congratulated upon the introduction of new drugs which will keep down the blood pressure for a length of time; but their future employment will depend largely upon the view taken of the evil effects of high arterial tension. Meanwhile, although in their infancy, it is satisfactory to find that no evil effects have yet followed their administration; but it is disappointing to learn that they do not produce certain results in all cases and that some individuals are insusceptible to their action.

Annotations.

"Ne quid nimis."

MUNICIPAL HONOURS TO MEDICAL MEN.

IT is not every medical man, however much he may desire to do so, who can find time to attend to the manifold duties involved in the office of mayor, but in few other capacities as a citizen does the medical man possess more power for good than as the occupant of the civic chair. As a medical man he should be fully acquainted with the sanitary and hygienic needs of his borough, and the position of mayor offers excellent opportunities for seeing that the necessary reforms are properly carried out. We are sorry, therefore, to note that the list of medical mayors this year falls considerably below the average. Up to the present we have only been notified of four: Dr. E. Jepson, Mr. Richard R. Daglish, Dr. T. W. Thursfield, and Mr. H. F. Townshend Chambers. Of these the first three have been re-elected. Alderman E. Jepson, M.D. Durh., &c., was elected mayor of Durham last year and re-elected this year for another term of office. He has rendered good service to his borough by endeavouring to

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educate his fellow townspeople in sanitary needs, by urging the provision of a hospital, and by having the Notification of Diseases Act adopted. He has repeatedly agitated for better dwellings for the working classes, the homes of such people in the ancient city of Durham being about the worst to be found in the kingdom. He has been a town councillor for about eight years and has just been raised to the aldermanic bench. Alderman R. Daglish, J.P., M.R.C.S., &c., the mayor of New Romney, was elected to the office of chief magistrate in 1885, when the borough received a new charter. He was re-elected in the following year and in 1888. Last year he was again chosen to occupy the civic chair, and has been re-elected this year. Alderman T. W. Thursfield, M.D. Aberd., F.R.C.P. Lond., &c., was born at Kidderminster in 1839. He is a Justice of the Peace for the county of Warwick and for the borough of Leamington. Fourteen years ago he entered public life as a member of the Free Library Committee of Leamington, and two years afterwards he became a member of the town council for the north-east ward of the borough, which constituency he has represented ever since. In November of last year he was elected mayor of Leamington and has now been re-elected. Mr. H. F. Townshend Chambers, L.R.C.P. Edin., &c., settled in Wareham in 1892, was elected councillor in 1893, and elected to the office of chief magistrate in the present year. He holds a commission as surgeon-lieutenant in the 1st V.B. Dorset Regiment. To these gentlemen who have been chosen as the recipients of the highest municipal honour which their fellow citizens can bestow upon them we offer our congratulations.

A TEACHING UNIVERSITY FOR LONDON.

THE movement in favour of establishing a Teaching University in London is again showing signs of activity. A meeting of the teachers in the medical schools will be held on Wednesday next (the 20th inst.) to urge the Government to push forward a Bill, on the lines of Lord Playfair's Bill, for the appointment of a Statutory Commission to deal with the recommendations of Lord Cowper's Commission. The delegates from the various institutions affected by the recommendation will meet at Burlington House on the next day to arrange for a deputation, which Lord Kelvin will introduce, to wait on the Duke of Devonshire and Sir John Gorst. The deputation will be received either at the end of November or early in December.

MEDICAL PRACTICE AND PUBLIC CONFIDENCE.

SOME stories are so preposterously realistic that it is only after some hesitation that we give doubt the benefit, and the tale is treated as a serious joke. To this class belongs a curious report which, if true, illustrates in a truly diagrammatic manner the wrong-headedness of some patients respecting the scope of medical skill and duty. A man had been operated upon by a well-known surgeon. Two days afterwards a revolver was found under his pillow and removed. Questioned by his nurse, the patient explained that he had secreted the weapon, intending, had his wound proved troublesome, to shoot, first the surgeon, then himself. Perhaps the story is a mere fiction. For the patient's credit we may charitably hope it is. A more pitiable instance of childish vindictiveness and ingratitude it would be very difficult to discover. Perhaps it might not be impossible, however, to quote instances of a somewhat similar folly. Mistaken violence is the natural weapon of ignorant and passionate natures when confronted by danger or misfortune. It is unfortunately by no means peculiar as might be supposed, to savage peoples, though it may very properly be regarded as an evidence of moral reversion. The usages of civilisation, having better sources of inspiration, are as a rule more orderly. Commonly, too, they are more intelligent, but not always. Even under the light of modern science the practice of medicine remains to most persons a book which, though not sealed, is largely illegible. Still, therefore, it claims the confidence of mankind as an essential to its beneficent operation, and this trust has been freely accorded to the profession by the common consent of most rational persons. We will also take it upon us to say that it has been treasured and safeguarded by the recipients with special devotion to the public interest. Under no system, however, can we expect to arrive at perfection, and we need not feel greatly surprised to find that a certain cautious reserve often accompanies the actual working of this agreement. It must, after all, be remembered that in individual cases confidence comes largely by experience. On the other hand, there are those in whom the tendency to self-concern is unduly developed. This is more especially true of some who possess a slight though imperfect acquaintance with medical principles. Beguiled by their partial knowledge, they occasionally display their independence of qualified medical authority in ways which are highly objectionable. Sometimes we find them posing as quasi-professional authorities on their own account and recklessly distributing supposed "cures" of uncertain character. Should they at any time submit themselves to the guidance of a duly instructed practitioner their submission is really a delusion. Easily dissatisfied, impatient, incapable of reasoning correctly, they are continually interfering to alter their modes of treatment according to the teaching of some newly imagined system. Their sense of indebtedness is in keeping with their conduct generally, and, like the misguided individual whose revolver was so timely removed, they not uncommonly attribute the inevitable ills of disease to the supposed error or neglect of medical attendants. Patients of this ignorant and ungrateful type are, happily, exceptional in medical practice. We have seen that they illustrate in an eminent degree the bad qualities of self-confidence and distrust of others, which practitioners with whom they come into contact can best disarm by a constant and close adherence to the straight line of professional duty, a course which cannot fail to be attended by the proofs of capacity.

CORONERS' JURIES AND VIEWING BODIES.

AT the quarterly meeting of the Lancashire County Council at Preston on the 7th inst. the subject of the reform of coroners' inquests was dealt with. The Finance Committee reported that after consultation with the coroners they had agreed to the proposed abolition of the viewing of bodies by the jury, and that the jury should be reduced from twelve to seven or eight. Both these changes, it should be remembered, will require the amendment of the Coroners Act, 1887, Sections 3 and 4. We cannot see any reason why the number of jurors should not be reduced to the same number as those in a county court, which is five. The viewing of the body by the jury or its abolition is a much more debatable point. If every coroner were by his medical training and experience competent to perform this duty it might suffice to have the body viewed by him and the relative or other person who could swear to its identification. Or if the verification of the body should ever form an integral part of our death registration system, the viewing of the body by the jury would cease to have its present value, but in the existing state of our present system registering deaths and burying bodies the only deaths really verified are those concerning which inquiries are held by coroners. The Finance Committee of the Lancashire County Council also suggested that a medical report should be supplied at a fee of 5s. when required by the coroner; they are kind enough, however, to add that "this fee would,

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of course, not include that for a full post-mortem examination"! During the past year there had been 1764 inquests, mostly formal, but requiring the attendance of 21,168 jurymen. With reference to the payment of 5*s*. for a medical report, we may remark that a guinea is always paid for such a report made in Scotland to the procurator-fiscal, a guinea extra being paid for a necropsy. As such a medical report may have the effect of dispensing with the formality of an inquest, we cannot expect that the medical practitioners in Lancashire and elsewhere will be satisfied with so shabby a remuneration as 5*s*. Considering the number of inquests, the circumstance that they were mostly formal, and the fact that the Lancashire county coroners are, with two exceptions, all legal coroners, we would observe that probably many of these inquests were altogether unnecessary. Mr. Oliver Pemberton, the able medical coroner of Birmingham, who succeeded a legal coroner, has reduced the number of inquests very considerably, while at the same time perfectly safeguarding the public interests. Nor is this surprising. To decide whether an inquest shall or shall not be held is a matter which comes home to a medical coroner from the moment of his appointment; it can only be acquired by a legal coroner after years of experience and, we may add, of painful experiment.

PAYMENT AND CHARITY IN HOSPITALS.

WE have always maintained that medical systems of charitable relief can be justified only by the necessitous condition of those whom they are intended to assist. They confer no privilege or gratuity upon any one class. Poverty alone constitutes a title to such aid wherever it supplants the ordinary method of remuneration for services rendered. It is idle to talk of hospital privileges in connexion with any one section of the community. Not even the artisan population can lay claim to them as in any sense a natural inheritance. Many ailments of greater, as well as of less, importance occurring among members of this class are capable of efficient and economical treatment at home, and there they ought to be treated in accordance with the ordinary rules of medical practice. The club member's penny a week is in its way a protest, though a most inadequate one, against indiscriminate giving. This system of payment, however, though conceivably capable of development, is still but a stunted growth if its expected fruits are those of mutual advantage. Its frequent abuse is notorious. Even more unfair, both as regards the giver and receiver, is the novel practice on the part of some hospital authorities of conceding with the same generosity as they do to the poor the best efforts of medical and surgical skill to persons accustomed to live in comfort and even in affluence. Naturally enough this more recent movement has been watched with some anxiety by general practitioners. These gentlemen, it must be remembered, are entitled to expect that in placing their energies unreservedly at the service of the sick they will at least be secure against needless interference. More especially may they expect to receive due consideration from those of their medical brethren who hold office on the staffs of hospitals. We cannot admit that recent developments of the hospital pay system have reflected this ideal of justice. The miscarriage of charity, possible under any circumstances, is almost an essential part of that arrangement which proposes to admit as ordinary inmates of the wards at a small inclusive weekly charge persons in the middle ranks of life and well able in many cases to pay the usual fees of medical practice. We do not forget to allow for domestic difficulties. The stranger travelling, the bachelor in lodgings, the invalid in a family every member of which follows an occupation—these and others would recognise the advantages of admission to hospital. No less would those to whom they must otherwise look for the comforts and attentions of home life. We admit all this, but we maintain that the pay hospital does not provide the best answer to the question what to do. What such an invalid requires is not that he should be taken over by the hospital as a sort of universal provider at a minimum, we might be paradoxical enough to say at less than a minimum, cost. He requires only that the present and actual emergency of illness should be adequately met. In many cases attendance at home is quite sufficient. There may be no great expense entailed in treatment, and the patient, though necessarily a constant inmate, is not a heavy burden on the care of his neighbours. Where his removal is absolutely necessary an invalid home conducted somewhat on the hotel system may best receive him. Such establishments are already in existence. The object of those who enter them for the purpose of treatment is not mere economy, nor is it the supposed advantage of greater medical skill; it is that they may divest others of the responsibilities which their illness entails, without forfeiting the comforts of home, such nursing attendance as may be required, or the needful supervision of the medical adviser whom they may select. This arrangement has really, beyond a superficial resemblance at first sight, nothing in common with the hospital system. The latter has arisen and grown up in the name of charity, it has been employed until recent years avowedly in the interest of the poor alone, and it has not appealed except on behalf of the poor to the well-to-do classes. Any other course of action must involve a a dilemma. Either charity and economy must be equally lost sight of, and professional service, whether of practitioners or nurses, added to the cost of residence, will leave the patient where he was before admission, or we must accept an alternative which is in its way more generous than just. In this case an economy must be effected somewhere. If it be not at the expense of the means of treatment themselves it must be at that of practitioner or nurse. If at the cost of either of the latter, then members of the hospital staff are brought into a state of unbecoming rivalry with their comrades in the work of healing outside the hospitals. We cannot, indeed, see wherein the necessity lies for this inconvenient system of payment by hospital patients or what are its advantages. An arrangement such as that we have above suggested is clearly preferable, since it secures for the sick the same benefits, while it should not injure the just interests of any whom it may concern.

THE JACKDAW.

MR. W. J. C. MILLER, the Registrar of the General Medical Council, is wont to amuse himself *procul negotiis* by making and writing very charming studies of bird-life, as all our readers know. In this art he ranks with Phil Robinson, with E. H. A., and the writer of "The Tribes on My Frontier," for he sees and notes down all the little ways of his much-loved subjects. His last contribution to *Nature Notes* is on the Jackdaw—a fellow of infinite fancy, like all his tribe. Less malignant in his mischief than the raven and infinitely more gentleman-like than the crow, who is the rough of bird society, the jackdaw has afforded material for a variety of tales and stories. Mr. Miller refers to the one of Rheims, to Cowper's, for whom, as rendered into Latin by "Vinny" Bourne, we conceived a violent distaste in our school days; but he does not mention the fact that to see *one* jackdaw was a presage of woe worse than one magpie. When the present Clifton Suspension Bridge was in course of erection, a jackdaw daily sat upon the one chain which for some time was the sole representative of the bridge. The workmen noticed this, and very shortly after one of them was killed. However, as a set-off

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against this we have the jackdaw—if cornix can be taken thus—in Ovid:

"Tarpeia quondam predixit ab ilice cornix
Est bene, non potuit dicere, dixit erit,"

a prophecy which delighted Thomas Fuller. One word more of thanks to Mr. Miller: he describes a delightful haven of rest on the south coast and mercifully does not say where it is. So it will remain unspoiled by the tripper.

HIGH TEMPERATURES.

WE have received a reprint of a paper by Dr. A. Jacobi of New York relating the case of a man who received an injury to the head and whose rectal temperature upon two occasions registered 148° F. Dr. Jacobi gives most careful notes of his case, but for all that we do not believe that the temperature shown by the thermometer was really the temperature of the man. Temperatures of 113° to 115° have not infrequently been recorded *after death*, when there can be no suspicion of fraud; but we should be very sceptical of the genuineness of any over 111° during life. Undoubtedly cases in which every care has been taken to obviate fraud of any kind have been recorded in our columns, but where the thermometer sometimes registered 117°. Dr. Jacobi's patient was a typical neurotic, who after he had heard any symptoms talked about generally managed to exhibit the same. For instance, the notes say:—

"Hates the day nurse, who is sceptical, and has no attacks in six days; has them after the night nurse comes on, who takes elaborate notes, which the patient is allowed to read.
"Has cataleptic spasms after having been told what the visiting physician expects of him.
"Conscious during temperatures of 117° and 132°.
"Pulse very irregular, while but slightly increased in frequency.
"Difficulty in passing urine.
"Loss of memory complained of.
"Frothing of mouth tinged with blood. Is stopped after he heard one nurse telling the other that such things were often done by biting the lips."

Dr. Jacobi puts down the high temperature as being caused by a paralysis of the inhibitory faculty of the heart centre It may be so, but we are still unconvinced.

THE LORD CHIEF JUSTICE ON LEGAL AND MEDICAL EDUCATION.

WE must leave to the authorities of the legal profession the responsibility of answering the serious charges made by the Lord Chief Justice against the present system of legal instruction. It certainly is a grave impeachment, coming from so high a quarter, and might be expected to take effect had not similar impeachments failed out of the mouths of still more weighty authorities in days past, such as Lord Westbury and Lord Selborne. Lord Russell was unsparing in his demonstration of the insufficiency of the present teaching, either in its theoretical or practical parts, and showed that a young gentleman with the aid of a "crammer" could go through all the needed legal education in eight months and become a fully fledged member of the Bar of England. His great demand is for a school of law which could be attached hereafter as a legal Faculty to a Teaching University in London whenever that much-needed institution shall emerge out of the chaos of our metropolitan educational condition. We notice two points in the Lord Chief Justice's speech. He not only insists on more thorough preliminary education and more careful systematic instruction in the principles of law, but insists, as authorities on medical education do, on good practical training. He says: "Nor will any system dispense with the need of practical study in the chambers of a working lawyer, which, however, may well (in the case of students for the Bar) be postponed to a later stage, and which, probably, may usefully occupy those earlier years of professional life when professional work is insufficient for full occupation." It is flattering to the medical profession, and especially to the General Medical Council, that the Lord Chief Justice finds in the development of medical education under the Council's influence an example and an argument for the guidance of the Inns of Court and other legal authorities in extricating themselves from inadequate and antiquated methods of teaching. His words are worth noting. "Indeed, the history of medical education in recent years, from the time when the College of Physicians and the College of Surgeons commanded the principal avenues to the profession to the changes wrought by the legislation of 1858 and 1886, affords an instructive example of the improvements that may be effected under a body such as the General Medical Council, clothed with public responsibility and broadly representative in its character."

UNION IN THE MEDICAL PROFESSION.

WE have constantly urged in these columns the need for greater union among members of our profession, and we are glad to see that our exhortations are followed in many parts of the world. We are led to make these remarks by the receipt of a paper read by Dr. Bayard before the Canadian Medical Association in August last. Concerning the club question, Dr. Bayard's remarks are so much to the point that we are tempted to quote them:—"A word about fees. I assume that each district has a code of fees, governed by custom or regulation. The competition is such that some may be induced to give their services for less than the minimum rate. This would be a grave mistake, for by so doing they proclaim that their services are not worth much, and their patients will naturally take them at their own valuation. The same may be said of the club doctor, who makes a trade of his profession and a slave of himself for a consideration that would be refused by the cab-driver who conveys him to his patient." These words are as applicable to the conditions which obtain here as they are to Canada, and a bond of union such as exists at Eastbourne and Bexhill is the only method of preventing the degradation of the hardest-worked and worst-paid profession in the world.

ARMY REORGANISATION.

WE have had the farewell order of the late Commander-in-Chief, and that of his successor on assuming the command of the army; and Lord Wolseley has since made an important speech at the Clothmakers' Company, in which he sounded the keynote of his future policy. We now await the issue of the Order in Council for an official declaration of how things are to stand as regards the duties of the Commander-in-Chief and the military members of the War Office staff. It will not, we think, be very difficult, after the speech of the War Minister at the Lord Mayor's banquet, to surmise what that Order in Council will most probably be. It goes without saying that the aim and object of Lord Wolseley, as announced by himself—namely, of putting the profession of arms on the same plane and platform as other professions, of making the army of the future a really effective fighting machine, and of selecting as far as possible the best and most highly qualified men to fill the various posts in it,—are principles and propositions which in the abstract commend themselves to the public mind. If the present Commander-in-Chief succeeds in applying those principles regardless of the interest of the privileged classes and of all party interests, and promotes men to various posts solely on account of their recognised ability and fitness for them, he will do an enormous amount of public good. That he will occasionally make mistakes is unavoidable, but these will inflict no permanent injury on his reputation so long as the general spirit and trend of his administration point in the right direction. It is abundantly clear

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that His Royal Highness the Duke of Cambridge had the esteem of the army and was for many reasons very popular, but it is fully recognised that he only consulted his own dignity and the public interest in vacating the post he had so long held. The time had really come for a change and for a new order of things. Rumour is, naturally, full of the remodellings, reorganisations, and changes which are to take place, but these are of course mere conjectures. That the present Commander-in-Chief had a brother in the Army Medical Service, and that he had, and still has, a strong personal attachment to several members of that service, are pretty well known facts. We can only hope that if any changes are to take place in the medical service—and it seems to be anticipated that there will be—Lord Wolseley will strive to make it a really effective service for war and peace purposes alike, and that he will endeavour to act up to the principle he has enunciated with regard to all the other branches of the service. He seems to have a firm grasp of what was Lord Cardwell's intention in bringing about the present organisation and in attempting to weld together the whole of the land forces of this country into that mutual and harmonious action which must be an essential aim of any future organisation; he has, in addition to his own large personal experience, made a study of war in all its modern aspects and results, and has eminently the courage of his opinions. It now remains for him to give effect to his ideas with thorough integrity of purpose as regards the nation and the good of the army, and a keen sense of justice to all. He has set up a high standard for himself, and time will show how nearly he has reached or how far fallen short of it in the proud and prominent position that he now occupies.

THE TREATMENT OF ATRESIA VAGINÆ.

THE October number of the *American Journal of Obstetrics* contains an account by Dr. J. C. Webster of two interesting cases of atresia of the vagina, with some remarks on the treatment appropriate for this somewhat rare abnormality. In the first case there was an abdominal swelling felt reaching a little above the umbilicus; bimanual examination showed that the uterus was enlarged and only slightly movable, and that there was a cystic swelling, the size of the fœtal head, to the left of it. It was decided to perform abdominal section. The swelling to the left was then found to be the distended left Fallopian tube, somewhat extensively adherent to surrounding parts. It was removed as completely as possible with the corresponding ovary, and the uterine appendages on the right side were also removed. The patient did well for some weeks, and then died from septic peritonitis. At the post-mortem examination it was found that there was not complete absence of the vagina, but that the atresia involved the lower fourth of it only. In this case, although the uterus was over four inches long, there was no distension of the uterine cavity. In the second case the uterus was certainly distended, and reached to the umbilicus and was fixed. In this case Professor Simpson dissected through the atresic vagina to the uterus, and evacuated a quantity of dark, thick fluid. The patient did well, and menstruated twice after this operation. More than a year afterwards she returned with her old symptoms; it was found that the opening into the uterus had closed. Examination showed that the uterus was distended to the size of a cricket-ball, and that there was another cystic mass behind and to the left of it. The uterus was again aspirated, and diminished in size, but the other swelling remained the same. Some months later abdominal section was performed and the cystic mass partly excised. "The patient is now in the best of health." In this case there was complete atresia of the vagina, and the presence of a well-developed uterus in combination with this defect is noteworthy, as in such cases the uterus is generally rudimentary or absent. Dr. Webster considers that these cases go to show that *double operation* is the right treatment, that abdominal section with removal of the dilated tubes should first be performed, and that an operation for opening up the atresic vagina should be undertaken subsequently.

THE HEALTH OF HOP-PICKERS.

NOTWITHSTANDING the sultry weather of the late summer, the report of the medical officer of health of the Rye rural district (Dr. E. W. Skinner) on the health of the foreign hop-pickers during this season is most favourable. The picking commenced with the month of September and lasted about four weeks, the weather being bright and fine during the whole of the period. In eight parishes—Iden, Rye Foreign, Peasmarsh, Beckley, Northiam, Brede, Udimore, and Icklesham—temporary lodgings were found for some 1900 strangers, of whom 787 were children, a decrease of about 430 when compared with the influx of the previous season. They were variously lodged in permanent huts, vans, tents, and "lodges"—i.e., barns, stables, outhouses, &c., temporarily fitted up for the reception of the workpeople. There were 525 lodgings in all, each accommodating on an average rather less than four persons. "On the whole they were as comfortable, dry, and warm as could be expected. The water-supply in all cases was sufficient for their modest requirements, and of good quality." There was almost a total absence of sickness, Dr. Skinner reports, and not a single case of infectious disease. One infant died in a van from convulsions. Dr. Skinner adds, however, that while the authority's suggestion to place partitions in the various "lodges" was very generally adopted, in very few cases did another proposition—the provision of latrines and cooking shelters—receive any attention. He expresses a fear that, until these suggestions become by-laws, this will continue to be the case. The sanitary inspector's report was equally satisfactory.

THE ACTIVE AGENT IN SURGICAL PURULENT INFECTION.

MM. S. ARLOING and EDOUARD CHANTRE in 1893 published a note in the *Comptes rendus de l'Académie des Sciences*, in which they stated they were in accord with the observations of Heiberg, Baumgarten, Cornil and Babes, and others establishing experimentally that surgical purulent infection, now of extremely rare occurrence, can be produced by the ordinary pyogenic agents, to the exclusion of all septic microbes. In the case observed by them the infectious agent was the streptococcus pyogenes. They have now sought the cause which occasions this microbe to leave its primary focus, where it so often remains quiescent, and disseminate itself through the system to form metastatic abscesses. Their experiments have satisfied them that without formally excluding the influence of the organism of the patient, the streptococcus owes its invading power to a particular state of virulence into which it may pass. This state is the same as that which it presents in puerperal septicæmia, and not that in simple phlegmon or erysipelas. A series of comparative inoculations on the guinea-pig and rabbit made in different ways has enabled them to formulate the following conclusions. The essential agent of purulent surgical infection is one of the ordinary microbes of suppuration, and is, in the case observed by them, the streptococcus. If other microbes are frequently found in the lesions they may complicate the purulent infection, but they are not necessary to its development. To produce purulent infection the streptococcus must acquire the virulence that it possesses in the acute and grave forms of puerperal septicæmia, and not that which it exhibits in erysipelas or simple phlegmon. There exist close etiological relations between surgical purulent

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infection, puerperal septicæmia, and erysipelas, but we are still ignorant of the place and the mode in which the streptococcus acquires the pathogenic properties which cause it to produce the one or the other of these several states. They find that the micrococci have a disposition to form bacilli in conditions still unknown or badly determined either within or without the organism. The virulence of the bacilli is liable to the same variations as that of the streptococcus. Lastly, it is not necessary to conclude that there is a mixture of a pyogenic agent with a foreign microbe when bacilli are found commingled with streptococci, for the bacilli may only be modified streptococci.

THE USE OF DRUGS.

ADDRESSES before medical societies usually lean in one of three directions—the literary, the speculative, or in the direction of comparison of the past with the present and the future. The practical side is but seldom treated in these formal addresses. As will be seen by a letter which we publish elsewhere, the Willesden and District Medical Society determined—as an outcome of an address by Dr. Gowers on the Use of Drugs—that there should be a discussion on the question—"What drugs are considered most useful in general practice?" Every member of the association was asked to send in a list, and from this list the following drugs have been selected—iodide of potassium, antipyrin, liquor arsenicalis, tinctura digitalis, and liquor strychniæ. We trust that calomel and opium are so universally considered useful as to be without the pale of discussion, otherwise their omission seems strange. Collective investigations of this kind ought to give rise to valuable results, and we congratulate Dr. Gowers—whose address we shall publish shortly—on his having been the means of initiating such investigation by a local society.

PULMONARY ACTINOMYCOSIS IN A SHEEP.

HITHERTO instances of actinomycosis in the ovine species have been rarely, if ever, recorded, the animals in which it has been commonly observed being those of the ox tribe and sometimes the horse. In a recent issue of the *Zeitschrift für Fleisch- und Milchhygiene* Herr Gripps, veterinary surgeon at Stettin, gives the description of a sheep which was killed at the abattoir of that town, and in which the whole of the anterior moiety of the left lung was transformed into a hard, dense mass, nodulated on the surface, and varying in tint from a greyish blue to a dirty yellow or grey. On the surface and also on section there were somewhat brighter-coloured granules, the largest of which were about the size of a hempseed. The bronchial lymphatic glands, as well as those in the mediastinum, appeared to be free from these minute bodies. These, when examined by means of the microscope, were found to be composed of masses of small cells of various dimensions in a stroma of wide-meshed connective tissue. The centre of these masses was occupied by clusters of actinomycetes, large and small; some of the largest were surrounded by a zone of epithelioid and giant cells. The case, apart from its rarity, is very interesting.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

AT the last meeting of the Board Mr. Sharp presented the annual report of the School Attendance Committee, which dealt with, among other matters, the question of medical certificates. First of all, let it be clearly understood that by a pious fiction the School Board never asks for, or even wants, a medical certificate; that attack upon the liberty of the subject is the work of the wicked and hard-hearted magistrate, but the Board, not being able to trust ordinary medical men, has appointed its own, to help the magistrates. We may remind our readers that not so very long ago it tried hard to get its own magistrates, too, the ordinary magistrate not being good enough. The report of the School Attendance Committee is somewhat querulous: 1. Sometimes there was no medical certificate at all. 2. Sometimes the certificate simply stated that the child was "ill." In our opinion there is no reason why the certificate should state anything more. The Board would not know the meaning, say, of "tuberculous meningitis" unless it condescended to ask its own medical officer, whose opinion it has ignored all through this controversy, and, besides, the illness of a child is a confidential matter between the parents and the medical man. 3. Sometimes children thus certified had been found playing in the streets or at work. The Board, of course, does not know that in some illnesses—chorea, for example—playing is not harmful, when going to school would be. 4. The committee could not understand why the action of the Board had been objected to, but the objectors had probably been instigated by others. We are sorry that we do not seem to have made ourselves clear, but we refer the committee to our issues of June 8th, July 6th and 20th, and Aug. 3rd of the current year. Medical men—and even a medical man has feelings—do not like the cases in which their certificates are "considered by the divisional superintendent to be doubtful"[1] examined by other medical men behind their backs. That is all.

INTERNECINE LITIGATION.

AT the Manchester assizes on Nov. 6th the case of Brooks *v.* Eatough came before Mr. Justice Collins and a special jury. The parties were members of a firm of medical practitioners in Mossley, and the plaintiff sued the defendant for slander in that he (the defendant) had gone to a lady patient of the plaintiff and made statements to her, in the presence of another lady, reflecting on his professional skill and moral reputation in his treatment of the said lady. We need not give any details, but we may say that the lady in question gave evidence as to the defendant's statement to her, and also said that he had asked her to give evidence against the plaintiff, but that she declined. Eventually the jury found a verdict for the plaintiff, with £300 damages. The action, it appears, was only taken after unsuccessful efforts had been made to dissolve the partnership, and we may remark that it is a great pity for professional men of any sort to carry private quarrels into a public court, although perhaps in this case there was no other way out of a difficult position. A case of this kind is a sort of nine days' wonder. All the details are seized upon and gloated over by prurient minds, and a great deal of scandal is thereby caused. It is a matter for congratulation, however, that the medical profession is, as a rule, singularly free from scandals of this kind, and long may it be so.

ARTERIO-VENOUS ANASTOMOSES.

M. G. GÉRARD of Lille, in an article which appeared in the *Bulletins de la Société de Biologie* of Paris (No. 1) at the beginning of the present year, announced that he, with M. Ch. Debierre, had discovered an anastomosing vessel passing directly from the external iliac artery to the external iliac vein. Since that date he has continued his investigation in the adult and in infants by means of general and local injections, by dissection, and by microscopic examination, and has communicated the result at which he has arrived in the October number of the *Archives de Physiologie*. He has arrived at the conviction that there exist in many parts of the body communicating vessels between arteries and veins which may be easily followed and dissected. Such anastomoses are

[1] Mr. Sharp's answer to Mr. A. Riley, June 27th, 1895.

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particularly common at the points of flexion of the joints—such, for example, as at the axilla, elbow, groin, and popliteal region. In infants the anastomoses were most common in the following order of frequency in fourteen subjects: groin, 5; popliteal space, 4; axilla, 3; elbow, 3; and between the aorta and vena cava, 1. In adults he had only the opportunity of examining nine subjects, in whom he found four anastomoses, all situated in the lower limbs. In the majority of cases the anastomosis was directed from the vein to the artery, running from above downwards. He was unable to discover any intra-muscular anastomoses, though he took much pains in searching for them. The length of the anastomosing vessel varied from 4 mm. to 45 mm., the average length being from 15 mm. to 30 mm. In infants the vessel is infundibuliform at the points where it opens into the artery and vein, and is narrowest near the middle of its course. In adults it is nearly uniformly cylindrical, and the walls are very thick. The calibre of the vessel varies according to its state of repletion from 0·4 mm. to 3 mm. From a physiological point of view M. Gérard regards these vessels as belonging to the nutritive circulation of Claude Bernard, but in addition considers that they fulfil a certain *rôle* in regulating variations of tension and pressure.

DUBLIN UNIVERSITY PARLIAMENTARY ELECTION.

PROFESSOR WINDLE, Dean of the Medical Faculty of Mason College, Birmingham, having written as an elector to Mr. Lecky, now a candidate for the University representation, calling his attention to certain points in connexion with the medical profession, has received the following reply:—

"It would be very unpardonable of me if I did not take a deep interest in the Irish Medical School, for there is certainly no other profession in Ireland which has produced during the present century so many men who have justly won a European reputation, and it is, I am afraid, only too true that a profession which cannot appear prominently on platforms or in Parliament is apt to be neglected by politicians. Should I be elected to Parliament I would consider it to be my duty to look carefully into any grievance under which Irish doctors may suffer, and to use any influence my position might give me to have them redressed. The regulations of English hospitals are, of course, not within the cognizance of Parliament. As to any disabilities or disadvantages under which Irish doctors suffer and from which English doctors are exempt, they ought, if possible, to be remedied. I should be glad if I could do anything to further the work. I may also add that I will do everything in my power to support any measure which may have the effect of improving the condition of the Irish Poor-law medical officers, and I shall also use every effort to have any legitimate grounds of dissatisfaction with present arrangements which may exist amongst the members of the Army Medical Staff removed."

We never interfere in politics from a party point of view, but as we have similar things to say in this case of each candidate, we have no hesitation in commending Mr. Lecky's attitude to the favourable notice of a large body of his constituents—viz., the medical electorate, for there is about these words a ring of sincerity differentiating them from mere electoral promises. Mr. Lecky appears to understand the hardships he is asked to pledge himself to attempt to redress, while his words that "a profession which cannot appear prominently on platforms or in Parliament" runs a risk of being neglected by politicians come home to us closely, for we know them so well to be true. Mr. Wright, Q.C., has expressed himself in similar terms to a constituent, so that we may congratulate the medical graduates of the University on the fact that they cannot choose the wrong man.

THE annual dinner of the staff and past and present students of the Dental Hospital of London will be held on Saturday, Nov. 30th, at the Café Royal, under the presidency of Mr. Frederick Canton. Gentlemen either now or formerly connected with the hospital or medical school who may, through inadvertence, not have received special notice, and who desire to be present, are requested to communicate with the Dean, at the Dental Hospital, 40, Leicester-square, W.C.

DR. PATRICK MANSON will take the chair at the November dinner of the Aberdeen University Club, London, which will take place on the 20th inst., at 6.45 P.M., in the Holborn Restaurant. Members intending to be present at the dinner should communicate with the honorary secretaries, Mr. J. Gerard Laing, 1, Elm-court, Temple, E.C.; and Dr. James Galloway, 21, Queen Anne-street, W.

THE opening by the Duke of Devonshire of the new Home built by Mr. Passmore Edwards at the colony of the National Society for the Employment of Epileptics at Chalfont St. Peters, which was postponed from Aug. 7th last owing to his Grace being summoned to Osborne on that day, has now been fixed to take place on the 26th inst. at 2.45 P.M.

THE Edinburgh University Club held its quarterly dinner on Wednesday, Nov. 13th, at the Holborn Restaurant; Mr. W. Watson Cheyne, F.R.S., was in the chair. Among the guests were the President of the Royal College of Surgeons of England (Mr. Christopher Heath) and Mr Yarrow.

PROFESSOR CURNOW, M.D., will resign the office of Dean of the Faculty of Medicine of King's College, London, at the end of the present year, after twelve years' service, and will be succeeded by Sir Hugh Beevor, Bart., M.D.

THE ASHANTI EXPEDITION.

IT is a somewhat singular and lucky coincidence that the accession of Lord Wolseley to his present appointment as military head of the army should have occurred at the time when an expedition to Ashanti was about to take place. The Commander-in-Chief and the headquarters staff have been busily engaged of late upon the plans for the operations from the African West Coast against Ashanti, and great activity prevails at the Government manufacturing and supply departments. Sir Francis Scott, having made all his arrangements with the War Office in this country, will, it is understood, leave for Accra on the 22nd inst. The contingent of British troops from this country have received their orders, but the number of these will be very considerably less than it was in the last expedition in 1873–74 under Sir Garnet Wolseley. The force of European officers and men was then over 2500, whereas it is reported that on this occasion the British troops sent from this country will be under 300 at present. With this addition, there is, it is believed, a sufficient force of seasoned troops already present on the spot or on the West Coast of Africa, in the West India regiments and the Houssas, for the work of the campaign. The view entertained locally on the West Coast, however, appears to be that we are in this country rather underrating the strength of the force necessary for the coming expedition. Be this as it may, reliance may be safely placed upon the results of our previous experience and that of Lord Wolseley and Sir Francis Scott, who possess a thorough knowledge of the country and of the different nature and increased efficiency of the weapons that are now employed in warfare. Whatever may be the losses from wounds and injuries received in the forthcoming campaign, we may safely assume that there must be a certain amount, and possibly a large amount, of inefficiency and sickness from malaria and climatic causes. The low-lying country between the coast and the highlands is difficult and unhealthy; but the amount of sickness to be anticipated very greatly depends upon the selection of the best season for the march to Kumassie, the nature of the supplies, the adequacy of the transport, and the foresight that is exercised generally in providing for the troops. In all these respects the authorities may be safely guided by the results of their previous experience. The rainy season is very unhealthy. The healthy season is the dry one from December to March, when an

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expedition can be undertaken with considerably less risk to health, with far greater facilities, and better prospects of success than during the rains. The mortality of the force which marched to Kumassie under Sir Garnet Wolseley from disease and loss in action was only 3·14 per cent. of the strength disembarked. On the present occasion the force will almost entirely consist of acclimatised troops; the European portion of it will be composed of matured soldiers and seamen from the Royal Navy; the ammunition and supplies will be provided and packed with a view to facility of transport; and the march will be undertaken at the end of the rainy season. Special attention having, no doubt, been paid to the exceptional circumstances of the expedition, and all that foresight can do having probably been done, we may now confidently hope to reap the results of the precautions taken.

HOUSE PROPERTY IN ISLINGTON AND THE VESTRY OF ST. MARY, ISLINGTON.

WE have received from Mr. A. E. Harris, the medical officer of health for Islington, a copy of a communication which has been sent to every member of the Islington Vestry by Mr. E. Edwards, secretary of the Metropolitan House Investment and Agency Company, Limited, and also a copy of a letter which he (Mr. Harris) has addressed to the Secretary of the Local Government Board. The letters are as follows:—

I.

[COPY.]

The Metropolitan House Investment and Agency Company, Limited,
16, Eastcheap, London, E.C.,
5th November, 1895.

Dear Sir,—I wish to draw your attention to the enormous expense and loss which is being occasioned to owners of house property in the parish of St. Mary, Islington, by the manner in which the sanitary department of your vestry are at the present time enforcing the powers conferred upon them by the Public Health Acts.

I will preface my remarks by informing you that this company owns 68 houses in the parish, and collects the rent of 51 other houses, as agent for the respective owners, making a total of 119 houses of the aggregate net annual ratable value of £3500 or thereabouts, and representing an invested capital of £40,000. If so requested, I will in confidence give the addresses of all the houses to any member of the vestry, but for obvious reasons I do not care to furnish this information in this letter. All the houses are in excellent repair and are let to most respectable tenants, the rentals averaging from £32 to £50 per annum. They are all situated in good streets, and, with the exception of nine houses (all in one street), none are let to weekly tenants. During the period from Jan. 1st, 1894, to the present time notices have been served by your sanitary department on no less than fifty-three of the above-mentioned houses, necessitating in all but two or three cases the entire relaying of the drains and erection of ventilation shafts &c. As you are no doubt aware, the minimum cost of complying with these notices is £30 per house, and where there are two waterclosets £35. I have, therefore, expended on sanitary works alone in such fifty-three houses upwards of £1600 in a period of one year and nine months, quite exclusive of the usual expenditure for decorative and structural repairs. The effect of this expenditure means that if the company's estate was confined to the parish of Islington it would have been impossible to have paid our investors any interest on their capital during the past two years. I need not remind you that this continuous outlay renders house property in your parish almost worthless, as you can see for yourself by perusing the results of sales, or attempted sales, of Islington houses at the auction mart.

I do not suppose that the property of this company has been singled out for attack, but it is an extraordinary thing that wherever this company owns or manages a house a notice is sure to be served sooner or later, whilst, so far as I have been able to ascertain, adjoining houses are seldom treated in the same manner. For instance, in New North-road the only four houses in which the company is interested have all been entirely redrained under the orders of your vestry, whilst only one other house in the same block (about forty in number) appears to have been served in the same way; and the same thing occurs in Stavordale-road, where only two houses are owned, but upon both of which notices have been served. That this proportion of notices to number of houses is the usual thing seems incredible, but if it be so your medical officer and his staff evidently have in view the entire reconstruction of all private drains in the parish. If the vestry are with Dr. Harris in this, it would surely be more honest and straightforward to make an order for the testing of all private drains and for reconstruction of all that prove defective. Owners would then know what to expect, and could make their arrangements accordingly. I would remind you that to do this throughout the parish would involve the outlay of some millions of money. I also find that in cases where (under the recent decisions of the judges) the onus of reconstructing the drains is thrown upon the vestry, every effort is made to compel the individual owner to do the work, and should he, in ignorance of the law, carry out the same, your vestry have refused to refund any portion of the expense. I allude particularly to the drainage of Nos. 47, 49, 51, 53, and 55, Queen's Head-street, and 13A and 14A, John-street, reconstructed by me at a cost of over £100.

Owing to the frequency with which these notices have been served upon the company's property, my directors some time since resolved that no more houses should be purchased in your parish, and notwithstanding the fact that this company has since purchased £50,000 worth of property in London, not a single house has been bought in Islington, and this policy will be continued until the present arbitrary enforcement of your vestry's powers is very considerably modified. Several of the largest buyers of house property in London are associated with the company in this decision. The company own over 300 houses in other metropolitan parishes, and the proportion of notices served in those parishes does not amount to 3 per cent. per annum on the number of houses owned.

I am sending a copy of this letter to each member of the vestry, to the vestry clerk, and to the *Islington Gazette* for publication.

Yours truly,
(Signed) ERNEST EDWARDS, Secretary.

II.

[COPY.]

The Vestry of St. Mary, Islington.
Vestry Hall, Upper-street, N.,
7th November, 1895.

The Secretary, Local Government Board,
Whitehall, S.W.

SIR,—Herewith I beg to forward you a copy of a circular letter which has been addressed to every member of the Vestry of St. Mary, Islington, which authority I have the honour to serve as its medical officer of health, by the secretary of the Metropolitan House Investment Company.

The letter has been sent, I have no doubt, with the object of deterring me from discharging my duty to this parish, and with a hope that it might bring me into trouble and difficulty with my authority. I need hardly say that it will not have the first-mentioned effect, whatever it may have with respect to the latter, because, being placed in a position of comparative independence by Section 108 (c) of the Public Health (London) Act, 1891, I shall fearlessly continue to perform my duties in a manner consonant to the regulations laid down by the Local Government Board for my guidance.

My chief object in forwarding you this document is to place before you a very strong argument why medical officers of health should be appointed to their positions, to use the words of the above-mentioned Act, "not for a time only." If such a practice as that adopted by this company were to become universal a new terror would be imported into the lives of all medical officers of health who are periodically elected to their positions; for naturally they would be more or less timorous in zealously performing their duties, having before their eyes the troubles which such a document as the enclosed is calculated to entail on them.

I might say, as regards the note itself, that the writer is very careful to avoid libelling either myself or any member of my staff, and also he omits to state, although cognisant of the facts, that in every instance the premises were visited either by reason of the occurrence of an infectious disease or through complaint having been made to me of their insanitary condition.

I am, Sir, your obedient servant,
(Signed) ALFRED E. HARRIS,
Medical Officer of Health.

We have commented upon these letters in a leading article, and agree with Mr. Harris that the life of the medical officer of health would become terrible if such methods were often employed against him when engaged in the honest discharge of his duties.

THE BACTERIOLOGICAL EFFICIENCY OF FILTERS.

IT is well known that bacteriology has introduced a means of discrimination between filters which are worse than useless and those which may be depended upon to offer an effective resistance to the passage of pathogenic organisms. The test is severe, but not unreasonably so when it is considered what may be the results of employing a filter for domestic purposes which does not possess this high degree of filtering efficiency. In this connexion the following report, sent to us by Dr. Klein, upon the bacteriological efficiency of the Silicated Carbon Pressure Needle Filter, of which we took a favourable view in a notice which appeared in our issue of July 21st, 1894, is of interest.

The testing was in all cases carried out in the following manner:—The filter as a whole (with metal case) was, for each operation, sterilised in the autoclave at a temperature of 120° C. for thirty minutes; it was then allowed to cool. By means of a sterilised india-rubber plug it was fixed in an upright position in the mouth of a sterile flask, which, for the object of air exhaustion by means of a pump, was provided with a lateral opening. From a fresh, active culture of the various microbes presently to be mentioned, grown on the surface of solid medium (agar or gelatine, as the case may be), a small particle was taken and distributed in 100 c.c. of boiled, and then cooled, distilled water contained in a sterile flask. By shaking the water a complete and uniform distribution of the microbes in the water was effected. By means of plate

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cultivation the number of microbes in this distribution was ascertained prior to subjecting it to the filter; in all cases five cubic millimetres, or $\frac{1}{200}$ cubic centimetre, were used for each plate, and after incubation the number of microbes was counted. The remainder of the distribution was pumped through the filter, and of the filtrate 250 cubic millimetres (or $\frac{1}{4}$ cubic centimetre) were used for each plate; this was then incubated and the result watched.

Proceeding in this way the following results were obtained:—

1. *Filtration of a distribution of bacillus prodigiosus.*—This microbe was chosen on account of the easy detection of the colonies by their bright crimson colour. The number of microbes in the distribution ascertained by agar plates was 44,800 per 1 c.c. The agar plate made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

2. *Filtration of a distribution of staphylococcus aureus.*—This microbe is also easily recognised in agar plates by the bright-yellow colour of its colonies. The number of microbes in the distribution ascertained by agar plates was 56,600 per 1 c.c. The agar plate made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

3. *Filtration of a distribution of spores of bacillus anthracis.*—The colonies of bacillus anthracis are easily identified. The number of spores in the distribution ascertained by gelatine plates was 32,000 per 1 c.c. The gelatine plate made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

4. *Filtration of a distribution of bacillus of typhoid fever.*—This bacillus is also easily identified. The number of microbes in the distribution ascertained by gelatine plates was 151,000 per 1 c.c. The gelatine plate made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

5. *Filtration of a distribution of vibrio of cholera.*—This is also easily identified. The number of microbes in the distribution ascertained by gelatine plates was over 126,000 per 1 c.c. The gelatine plate made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

6. *Filtration of a sample of drinking-water.*—This water had been submitted to Dr. Klein for bacterioscopic examination, in order to ascertain whether it could be recommended for drinking purposes. The number of microbes present in the water, ascertained by gelatine plates, was 30,416 per 1 c.c. Gelatine plates made with $\frac{1}{4}$ c.c. of the filtrate produced no colonies.

Conclusions.—It follows, then, from these experiments that of the distributions of the various microbes in sterile distilled water in no case did any of the microbes pass the filter. It will be noticed also that, although the number of microbes present in the water prior to filtration was very large, and although as much as $\frac{1}{4}$ c.c. of the filtrate was used per plate, in no single instance was any growth produced from this latter, the filtrate being absolutely sterile. These results justify the conclusion that the filter completely removes microbes from water, and is therefore absolutely reliable.

Tabular Statement of Results.

Nature of the fluid.	Number of microbes prior to filtration.	Number of microbes in the filtrate.
A. Bacillus prodigiosus in distilled water	44,800 per 1 c.c.	None.
B. Staphylococcus aureus in distilled water	56,600 per 1 c.c.	None.
C. Spores of bacillus anthracis in distilled water	32,000 per 1 c.c.	None.
D. Typhoid fever bacillus in distilled water	151,000 per 1 c.c.	None.
E. Cholera vibrio in distilled water	over 126,000 per 1 c.c.	None.
F. Drinking-water	30,416 per 1 c.c.	None.

LITERARY INTELLIGENCE.—Mr. H. K. Lewis will shortly issue in his "Practical Series" "The Treatment of Pulmonary Consumption, a Practical Manual," by Dr. V. D. Harris and E. C. Beale.—"Science for All," a cyclopædia of popular science, written by eminent men in simple language, profusely illustrated, and edited by the late Dr. Robert Brown, has hitherto been issued in five volumes at 9*s.* each, but in order to bring it within universal reach Messrs. Cassell and Company have arranged to publish it in twenty monthly parts at 6*d.* The first part will be published on Nov. 26th.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Council of the Metropolitan Hospital Sunday Fund met in the saloon of the London Mansion House on Thursday, Nov. 7th, to receive a second report from the Distribution Committee of the Fund. Sir JOSEPH RENALS, Bart., the ex-Lord Mayor, presided.

Since the awards for the year 1895 were made additional subscriptions amounting to £16,000 have been placed in the hands of the Lord Mayor, and the Council were asked at the present meeting to sanction the distribution of the extra sum among the various hospitals and dispensaries that participated in the previous distribution, 5 per cent. of the total amount to be, as usual, reserved for the purchase of surgical appliances.

The minutes of the previous meeting having been read,

Dr. GLOVER (who gave notice at the last meeting of the Council that he intended to move for the appointment of a sub-committee to investigate the statistics of the out-patient departments at the various hospitals) said it would be scarcely fair to ask this Council, which had nearly come to the end of its year of existence, to go into the question of out-patients. He therefore asked leave to postpone the matter till another meeting. This was granted.

Sir SYDNEY WATERLOW, in rising to propose the adoption of the Committee's report, said it was very gratifying to him, and he was sure they would all sympathise with him as chairman of the Distribution Committee, that the funds placed in the hands of the Lord Mayor made it necessary to call another meeting of the Council for the purpose of confirming a second report. This was the twenty-third year that a collection had been made, and never had a collection approached the sum that had been reached this year. They had always been struggling to reach £50,000, and now, owing to the energy of a large number of gentlemen, they were able to announce a collection of over £61,000. Immediately he learned that a further sum had been placed in the hands of the Lord Mayor he called a meeting of the Committee of Distribution, because the principle upon which the Fund had always been administered was to give the benefit of the money collected in the year to the sick poor of the metropolis without delay, and not to put any by. They had already distributed £45,000, and it was proposed to ask this meeting to confirm the second report, which recommended that a further sum of £15,850 should be divided amongst the several hospitals as set forth in the schedule. Before closing his remarks he wished to say that part of the proceedings of the Committee of Distribution had not been entered upon the report. The Committee felt that they ought to express to Mr. Burdett their best thanks, and he hoped that the Council would include those thanks in any resolution they might pass to-day. It should also not be forgotten that the funds collected this year had been greatly increased by the very deep interest that the Lord Mayor had taken in the Fund ever since he had been in office, and he was sure that Sir Joseph Renals felt quite as strong a feeling of gratitude that the public had recognised so largely his efforts to increase the Fund. He, therefore, begged to move that the second report of the Distribution Committee be approved.

Lord KNUTSFORD, in seconding the resolution, which was unanimously agreed to, heartily concurred in all that Sir Sidney Waterlow had said.

His Eminence Cardinal VAUGHAN then proposed for the Council's adoption a series of resolutions passed by the Committee of Distribution thanking Mr. Burdett for the great interest he had taken in the Fund for many years past, and especially for obtaining subscriptions raising the present collection to the unprecedented sum of over £60,000; Mr. B. I. Barnato, Daniel Marks, and friends for their handsome and generous contribution of £10,000; and Messrs. Burdett and Harris and Messrs. Pym, Vaughan and Company for obtaining £3400 from members of the Stock Exchange. He did not ask them to merely confirm these resolutions, but to adopt them as their own. He felt that it needed no words of his to commend these resolutions to the acceptance of the meeting. Inasmuch as they were all deeply interested in the great work of ministering to the corporal necessities and wants of the poor in this great metropolis, they must feel all the deeper gratitude to these gentlemen who had helped to raise the sum for hospital

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distribution to the large amount recorded. They were bound to record their high appreciation of the time, influence, and money which had been placed at their disposal by these gentlemen for the benefit of the poor so that the general public might understand how such services are appreciated, and he called upon all to imitate the noble example set before them.

Mr. R. B. MARTIN, M.P., seconding the motion, thought that a vote of thanks ought particularly to be passed by this Council because not only had the gift of money raised the income of the Fund, but it showed what an enormous amount of good could be done by individual efforts. These gentlemen had worked among their own circle of friends, and he thought the Council could not do less than record their names.

The motion having been heartily agreed to,

Mr. H. C. BURDETT said that it would be wrong for him not to acknowledge that the work he had done this year had been performed at considerable personal cost both of energy and time; but he felt that, however natural and however proper it might be for them to desire to personally thank him, still, the less the individual was brought forward on this occasion the better. There was no way they could help the hospitals better than by showing what a measure of success the Fund could obtain. The unit of confidence was the Committee of Distribution; had it not been for them it would certainly have been quite impossible to raise the amount of money which they had raised this year. There were people who criticised the methods of distribution—and he himself in early years was among the number of the critics, but as he had grown older he had come to the conclusion that it would pass the wit of man to devise a scheme that would not lay itself open to the criticism of somebody. Knowing that the members of the Committee are independent and not connected with any hospital, he thought he might say that they owed an immense debt to the Committee, and that there was every confidence to be placed in their methods. Sir Sydney Waterlow was the acting spirit and head of the Committee, and it was only right to regard that Committee as the platform from which it had been possible to raise the fund to £61,500. With reference to the question of personal services, eight good friends, one of them a member of the Council—he had been forbidden to mention names—felt that they might have a little syndicate in the cause of charity amongst themselves, and he wished the point to be remembered that in thanking him the Council were thanking those friends. The resolution covered all those who had helped to raise the money. The figures representing the congregational collections showed an increase approaching £5000, and there was a deep debt owing to the clergy and ministers of all denominations. It would be invidious to single out names, but it was impossible to forget the special services which the Archdeacon of London had rendered this year, nor could they forget the Archbishop of Canterbury, the Dean of Westminster, the Chief Rabbi, Canon Fleming, and Dr. Ridgeway. There were a great number of people who, desiring to help hospitals, felt some difficulty in deciding what hospital to give to, and the Hospital Sunday Fund afforded a means to these people of placing the money in the hands of the Lord Mayor, knowing that it would be distributed among the hospitals according to their respective needs and merits. On this occasion he could not omit to mention the personal services of the present Lord Mayor, and he doubted very much the possibility of raising the money had it not been for him. The Lord Mayor's secretary, too (Mr. Soulsby), had taken a great amount of trouble on behalf of the Fund, and had also devoted a great amount of time to it. There had been several individual donations of £1000. The Stock Exchange list included some 400 individuals and Mr. Barnato's list some 500. From £27,000 the total annual receipts of the Fund had gone up to £61,500, and he believed that that sum would never decrease. It was not an impossible conception that in the future the sum reached might be £100,000; it was a very hopeful conception, and he thought that the encouragement they had received this year proved that he could express reasonable confidence in this view. It was to one man more than to any other, he believed, that they owed Hospital Sunday in London. He alluded to the late Dr. James Wakley (whose work had since been taken up by his brother, Mr. Thomas Wakley, to whom they were all so much indebted), and the success they had attained would be a measure of great satisfaction to him if he could know it.

Mr. BURDETT then proposed a resolution to the effect that the cordial thanks of the Council be conveyed to the Press on behalf of the medical charities of London for the special support that they have so cordially rendered in raising the fund to the magnificent and unprecedented total this year; and that a copy of the resolution signed by the Lord Mayor be sent to the editors of all papers. They owed much of their success to the press. Had it not been for the kindness of the proprietors of the *Graphic* in placing their artist at his disposal it would have been impossible for him to have brought out the special number of the *Hospital* with illustrations. Then again there was Mr. Arthur Walter of the *Times*, who, setting aside all precedents, gave way on a point in the interests of the Hospital Sunday Fund which he had never given way on before by admitting blocks into the columns facing the leaders. He thought it was right he should mention this fact because it was a very material contribution towards the results which had been attained. All the other editors had rendered material support, and, passing by his own paper, he could not sit down without specially thanking, and asking the Council to thank, THE LANCET. It had devoted to the cause of Hospital Sunday an amount of space which he knew must have cost several hundred pounds, and it was to THE LANCET that this year they owed a special Hospital Sunday Supplement which was circulated throughout the churches, and of which 125,000 copies were printed for gratuitous distribution. He asked the Council to pass this resolution, not in a formal manner, but in a manner which they knew was vital to their interests.

Mr. HOSKIER seconded, and the vote was heartily accorded.

The CHIEF RABBI proposed that the cordial thanks of the Council be given to the Right Hon. Sir Joseph Renals, Bart. for his efforts in making the present year a record year of the Fund.

Canon FLEMING seconded, and the motion was unanimously carried.

The LORD MAYOR, in acknowledging the vote, said it was quite in the true fitness of things that almost the last meeting at which he should preside in this Mansion House should be one so deserving of the sympathy of every Englishman as the Hospital Sunday Fund. They all believed that this fund was gradually growing upon the public and he hoped that ultimately even the figures suggested by his friend Mr. Burdett might be increased. If in the years to come he could help the fund in his small way he should be only too happy to do so, and among the pleasant memories of the Civic Chair that he should leave behind him none would be more pleasant than the fact that during his year of office the the Metropolitan Hospital Sunday Fund had risen to an amount it had never done before.

The proceedings then terminated.

There were present: The Right Honourable Sir Joseph Renals (President and Treasurer) Sir Sydney H. Waterlow (Vice-President), his Eminence Cardinal Vaughan, D.D., the Very Rev. Chief Rabbi Dr. H. Adler, the Venerable W. M. Sinclair, D.D. (Archdeacon of London), Rev. Canon Fleming, B.D., Rev. J. Monro Gibson, D.D., Rev. Dr. Marks, Rev. S. B. Burnaby, M.A., Rev. Andrew Crombie, Rev. C. H. Grundy, M.A., Rev. W. H. Harwood, Rev. E. E. Jenkins, D.D., the Right Hon. Lord Knutsford, G.C.M.G., Sir George B. Bruce, Sir Richmond Cotton, Mr. R. B. D. Acland, Mr. Henry C. Burdett, Mr. Thomas Christy, F.L.S., Mr. Alfred L. Cohen, Dr. J. G. Glover, Mr. J. H. Hale, Dr. C. J. Hare, Mr. Albert G. Sandeman, Mr. Wakley, F.R.C.S., Mr. H. Cosmo O. Bonsor, M.P., Mr. James Cundy, Mr. Herman Hoskier, Mr. Richard B. Martin, M.P. (Honorary Secretary), and Mr. Henry N. Custance (Secretary).

Letters of apology for absence were read from: Sir Edmund Hay Currie, Mr. Thomas Bryant, Captain Palliser, Mr. Howard Potter, the Bishop of London, Canon Ingram, Sir Savile Crossley, Mr. John Mackerel, Rev. C. J. Ridgeway, Lord Charles Bruce, Mr. Carr-Gomm, Mr. Richard Foster, Mr. Alfred Willett, Dr. Munro Gibson, and others.

THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE autumn meeting of this association was held in the International Hall of the Café Monico on Tuesday, the 12th inst., and was followed at 7 P.M. by the annual dinner. The President, Dr. Phillips-Conn, was in the chair, supported by

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one of the largest gatherings in the history of the association. The guests were numerous and included the Lord Chief Justice of England, Mr. Justice Mathew, Lord Battersea, the Bishop of Newport and Menevia, Sir F. Osborne, Mr. Yarrow, Dr. Nicolson (medical superintendent of Broadmoor), Dr. Frederick Roberts, Mr. Thomas Smith, Dr. Stephen Mackenzie, the Rev. Dr. Gwynne, Dr. Robert Anderson, Captain Whiffin, R.M.A., Mr. W. H. Battle, and Mr. Percy B. Dunn.

The Association will thus be seen to have fully maintained its character for hospitality. Sir Walter Foster, M.P., proposed "The Guests," and the Lord Chief Justice of England replied. "The Association" was proposed by Mr. Justice Mathew in an able and amusing speech, which was responded to by the President of the Association. "The Services" was proposed by Dr. Richard Heath, who referred to the position which Irishmen held in the Army at the present time, and Inspector-General W. H. Lloyd, R.N., replied for the Navy. "The Learned Professions" was proposed by Dr. A. Macalister, F.R.S., Professor of Anatomy in the University of Cambridge, who pointed out the important posts now held in these professions by Irishmen resident in this country as a proof that it was possible for them to attain the very highest appointments if they had only the necessary ability. Responses were made by the Bishop of Newport and Menevia, Mr. Charles Cagney and Dr. Frederick Roberts. The Lord Chief Justice proposed the health of the Chairman, who briefly replied, and then proposed the toast of the Secretaries, Dr. James Cagney and Surgeon-Major Carte, to which the former replied. During the evening songs were sung by Messrs. Daniel Price, Martin, and Edward Branscombe. An unexpected pleasure was afforded by Dr. Frederick Roberts, who, in response to a unanimous request, sang "The Anchor's Weighed."

HOSPITAL ABUSE AT BRIGHTON.

WE have received for publication the following letter, which has been sent by its medical signatories to the chairmen and committees of the various charities in Brighton and Hove, and which, as will be seen, supports the contention of certain of our recent correspondents:—

Nov. 4th, 1895.

GENTLEMEN,—We, the undersigned medical men, beg to call your attention to the gross and increasing "hospital abuse" in Brighton and Hove by a class of people well able to pay for private medical attendance. To no section of the community is this better known than to the general practitioner, who is constantly coming across people in well-to-do circumstances who do not hesitate to admit that they have had tickets for either in-door or out-door treatment at the various charities in the town. That 38,113 patients were attended at these charities during 1894 are figures which speak for themselves. This is quite independent of the workhouse and sanatorium, which would greatly add to the number. Of the 3704 births during 1894, a little over one-third were attended by the West-street Lying-in Institution. In addition to this, there were some attended in the unions, and others by the society for helping young women in their first fall. To many this would appear incredible, and we are sure that all will agree that it demands immediate explanation from that institution. We are given to understand that many of the patients are insured in the various benefit societies, where they receive a sum of money at the birth of each child, to help defray expenses. We are fully convinced of the fact that the institutions most abused are the general dispensary and those hospitals which are devoted to the treatment of special diseases. As medical men we are fully alive to the needs of the poor, who, in the hour of sickness or injury, require skilful and merciful attention; but we are also convinced of the fact that nothing is more demoralising than charity misapplied.

In conclusion, we appeal to the committees of the different charities in Brighton and Hove to use their best endeavours to put a stop to the abuse, which is not alone an injustice to the medical profession, which does so much gratuitous work for the poor, but at the same time is an injustice to the subscribing public, who have a right to demand that their generosity is not abused.

HAROLD A. BAINES.
E. HARGRAVE BOOTH.
ASHLEY C. BRIDGES.
ERNEST BURCHELL.
ARTHUR H. DODD.
WALTER H. DODD.
ERNEST O. GILKES.
C. F. GOODE.
VIVIAN TUDOR GREENYER.
CHAS. J. JACOMB HOOD.
EDWARD HUSSEY.
DAVID W. LIEBSTEIN.
W. H. NICHOLLS.
C. B. RICHARDSON.
DOUGLAS M. ROSS.
EDWARD IRWIN SCOTT.
GEORGE SHAW.
EBENEZER SNELL.
W. J. TREUTLER.
EUGENE J. TULK-HART.
JAMES TURTON.
ALFRED UPTON.
FRANCIS J. A. WARING.

To the Chairmen and Committees of the various Charities in Brighton and Hove.

The importance of the general principle involved, as affecting not only Brighton but also every other large centre of population in the kingdom, can scarcely be overrated, and has for a long time past been pressed on the attention of our readers. A careful study of the question has convinced many that the ultimate remedy, or at least the most promising means of reducing the evil, is to be found in concerted and dignified action on the part of the honorary medical staff of the institutions whose beneficent charity has been curiously perverted into a means of introducing the lower middle class into the seductive paths of gratuitous relief. Becoming habituated to the out-patient room, and being inwardly convinced that their ailments entitle them to advice and medicine free of cost other than the hours of waiting spent in the society of like-minded sufferers, their honourable feelings of self-reliance and independence are discouraged, and under the pressure of loss of employment or increased illness the descent is easy to the relieving officer and the parish dole. It is unlikely that hospital committees and governing bodies will of their own initiative take any effectual steps to reduce the throng of applicants which besets their doors. From a managerial point of view it is very gratifying to produce at the annual meeting a report and statistics indicative of the popularity of the institution and holding out a prospect of an enlargement of the field of charity in the near future. Over and over again have we been told that the circumstances of applicants are investigated and that only a minute percentage of actual patients are in a position to pay something for medical attendance. The fact remains that, notwithstanding the great development of the medical departments administered by the Poor-law authorities, and the multiplication of medical charities and relief agencies of all sorts, the old-established hospitals show no substantial reduction in the numbers of those who are admitted to their benefits, and there is overwhelming evidence that such recipients of gratuitous medical aid bear no inconsiderable proportion to the general population. The question, in fact, is of urgent social importance, and our professional brethren will not misunderstand us if we express the opinion that the regrettable diminution of their patients in consequence of this "charitable" competition is an evil of less magnitude than the gradual habituation of the masses to the idea that thrift and self-reliance are matters of secondary importance.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6228 births and 4492 deaths were registered during the week ending Nov. 9th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 19·1 to 21·9 per 1000, further rose to 22·1 last week. In London the rate was 21·2 per 1000, while it averaged 22·7 in the thirty-two provincial towns. The lowest rates in these towns were 13·2 in Croydon, 14·7 in Huddersfield, 15·0 in Birkenhead, 15·9 in Leicester, and 16·6 in Nottingham; the highest rates were 26·3 in Plymouth, 29·5 in Salford, 33·4 in Wolverhampton, and 37·6 in Blackburn and in Liverpool. The 4492 deaths included 606 which were referred to the principal zymotic diseases, against 583 and 590 in the two preceding weeks; of these, 187 resulted from measles, 105 from diarrhœa, 100 from diphtheria, 90 from "fever" (principally enteric), 68 from whooping-cough, 54 from scarlet fever, and 2 from small-pox. No fatal case of any of these diseases occurred in Huddersfield; in the other towns they caused the lowest death-rates in Brighton, Croydon, Plymouth, and Nottingham, and the highest rates in Bradford, Liverpool, Salford, Wolverhampton, and Blackburn. The greatest mortality from measles occurred in London, Wolverhampton, Liverpool, Salford, Oldham, and Blackburn; from whooping-cough in Liverpool, Bradford, and Cardiff; and from "fever" in Bradford, Salford, Sheffield, and Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 100 deaths from diphtheria included 75 in London and 4 in Wolverhampton. One fatal case of small-pox was registered in London and 1 in West Ham, but not one in any other of the thirty-three large towns. There were 78 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 9th inst., against 119, 114, and 106 at the end of the three preceding weeks; 14 new cases were admitted during the week, against 7, 14, and 29 in the

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three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2847, against 2838, 2833, and 2841 on the three preceding Saturdays; 349 new cases were admitted during the week, against 241, 269, and 215 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 235 and 366 in the two preceding weeks, further rose to 447 last week, and were 55 above the corrected average. The causes of 66, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Oldham, Leeds, Sunderland, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Sheffield, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 and 20·5 per 1000 in the two preceding weeks, further rose to 21·4 during the week ending Nov. 9th, but was 0·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·9 in Greenock and 16·3 in Edinburgh to 25·6 in Dundee and 29·2 in Perth. The 617 deaths in these towns included 23 which were referred to diarrhœa, 21 to whooping-cough, 10 to scarlet fever, 9 to "fever," 8 to diphtheria, 6 to measles, and not one to small-pox. In all, 77 deaths resulted from these principal zymotic diseases, against 65 and 69 in the two preceding weeks. These 77 deaths were equal to an annual rate of 2·7 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The 23 fatal cases of diarrhœa were within 2 of the number in the preceding week, and included 10 in Glasgow, 4 in Edinburgh, and 4 in Dundee. The deaths referred to whooping-cough, which had been 11 and 19 in the two preceding weeks, further rose to 21 last week, of which 12 occurred in Glasgow, 3 in Dundee, and 3 in Aberdeen. The 10 fatal cases of scarlet fever were within one of the number in the preceding week, and included 8 in Glasgow. The deaths referred to different forms of fever, which had been 12 and 6 in the two preceding weeks, rose again to 9 last week, of which 3 occurred in Glasgow, 3 in Leith, and 2 in Edinburgh. The 5 fatal cases of diphtheria, which had been 6, 9, and 5 in the three preceding weeks, rose again to 8 last week, and included 3 in Glasgow, 2 in Edinburgh, and 2 in Leith. Of the 6 deaths from measles 4 were recorded in Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 130 and 136 in the two preceding weeks, further rose to 173 last week, and exceeded by 7 the number in the corresponding week of last year. The causes of 43, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·7 and 31·5 per 1000 in the two preceding weeks, declined again to 24·3 during the week ending Nov. 9th. During the past six weeks of the current quarter the death-rate in the city has averaged 24·8 per 1000, the rate during the same period being 18·5 in London and 17·7 in Edinburgh. The 163 deaths registered in Dublin during the week under notice showed a decline of 48 from the exceptionally high number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against numbers declining from 29 to 14 in the four preceding weeks; of these, 4 resulted from "fever," 2 from diarrhœa, 1 from diphtheria, 1 from whooping-cough, but not one either from small-pox, measles, or scarlet fever. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 5 and 2 in the two preceding weeks, rose again to 4 last week. The fatal cases of diarrhœa, which had declined from 17 to 4 in the four preceding weeks, further fell to 2 last week. The mortality from diphtheria and from whooping-cough corresponded with that recorded in the preceding week. The 163 deaths in Dublin last week included 27 of infants under one year of age, and 58 of persons aged upwards of sixty years; the deaths of infants showed a marked decline from the number recorded in the preceding week, while those of elderly persons considerably exceeded those recorded in any recent week. Four inquest cases and 2 deaths from violence were registered; and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 18, or more than 11 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during October in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 14·5 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 11·6, 9·9, and 12·4 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. James Westminster, Hampstead, Bermondsey, Wandsworth, Lewisham, and Woolwich; while they showed the largest excess in Chelsea, Strand, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, and Greenwich. The prevalence of small-pox in London showed a marked decline during October, the 59 cases notified during the month including 14 in Camberwell, 9 in Bethnal Green, and 4 in Mile End Old Town sanitary areas. The Metropolitan Asylum Hospitals contained 103 small-pox patients at the end of October, against 232, 331, and 227 at the end of the three preceding months; the weekly admissions averaged 15, against 49, 57, and 27 in the three preceding months. The prevalence of scarlet fever in London showed a further marked increase during October; this disease was proportionally most prevalent in Chelsea, Strand, Holborn, Bethnal Green, Whitechapel, Mile End Old Town, St. Saviour Southwark, Rotherhithe, and Lambeth sanitary areas. The Metropolitan Asylum Hospitals contained 2727 scarlet fever patients at the end of October, against 2340, 2435, and 1845 at the end of the three preceding months; the weekly admissions averaged 243, against 263, 292, and 333 in the three preceding months. The prevalence of diphtheria in London also showed a considerable further increase during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, St. Saviour Southwark, St. Olave Southwark, and Greenwich. There were 661 diphtheria cases under treatment in the Metropolitan Asylum Hospitals at the end of October, against 680, 666, and 664 at the end of the three preceding months; the weekly admissions averaged 103, against 103, 80, and 101 in the three preceding months. The prevalence of enteric fever in London showed a further increase upon that recorded in recent months; this disease was proportionally most prevalent in Hackney, St. Martin-in-the-Fields, City of London, Shoreditch, St. George-in-the-East, and Poplar sanitary areas. Erysipelas was proportionally most prevalent in St. Pancras, St. Giles, Holborn, Bethnal Green, and Mile End Old Town sanitary areas. The 24 cases of puerperal fever notified during October included 4 in Greenwich, 3 in Marylebone, 2 in Hackney, 2 in Bethnal Green, and 2 in Battersea sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, Nov. 2nd, the deaths of 7377 persons belonging to London were registered, equal to an annual rate of 17·5 per 1000 of the population, against 21·0, 16·9, and 16·0 in the three preceding months. The lowest death-rates during October in the various sanitary areas were 10·4 in Stoke Newington, 10·6 in Lewisham (excluding Penge), 12·2 in Hampstead and in Wandsworth, 12·3 in St. George Hanover-square, 13·1 in St. Martin-in-the-Fields, and 13·2 in Plumstead; the highest rates were 23·5 in Shoreditch, 24·3 in St. Saviour Southwark, 24·9 in Whitechapel, 26·6 in St. Luke, 27·7 in St. George-in-the-East, 30·8 in Limehouse, and 33·5 in St. Olave Southwark. During the five weeks of October 1133 deaths were referred to the principal zymotic diseases in London; of these, 327 resulted from diarrhœa, 307 from diphtheria, 214 from

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—OCTOBER, 1895.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,392,346	59	3153	1572	3	581	13	24	703	2	6110	14·5	6	214	112	307	70	2	95	—	327	1133	2·7	7377	17·5	156
West Districts.																										
Paddington	122,756	—	76	28	—	16	—	—	14	—	134	11·4	—	—	1	4	1	—	1	—	16	23	2·0	163	13·8	202
Kensington	167,671	—	103	64	—	12	—	—	29	—	208	12·9	—	8	4	14	4	—	2	—	11	43	2·7	237	14·7	151
Hammersmith	108,429	—	70	26	—	5	1	1	8	—	111	10·7	—	1	3	11	3	—	—	—	7	25	2·4	145	13·9	123
Fulham	117,745	—	62	54	—	12	1	—	13	—	142	12·6	—	6	4	9	4	—	2	—	13	38	3·4	232	20·6	180
Chelsea	99,930	—	107	51	—	17	1	—	12	—	188	19·6	1	—	4	7	—	—	3	—	10	25	2·6	146	15·2	151
St. George Hanover-square	74,037	—	52	7	—	6	1	—	8	—	74	10·4	—	1	2	4	—	—	3	—	4	14	2·0	87	12·3	88
Westminster	54,003	—	43	10	—	4	—	—	3	—	60	11·6	—	6	2	1	—	—	—	—	6	15	2·9	102	19·7	134
St. James Westminster	23,149	—	10	3	—	3	—	—	2	—	18	8·1	—	—	—	1	1	—	1	—	1	4	1·8	40	18·0	82
North Districts.																										
Marylebone	137,392	1	95	37	—	19	—	3	23	—	178	13·5	—	1	3	8	1	—	3	—	11	27	2·0	242	18·4	155
Hampstead	77,592	—	32	19	—	11	—	1	3	—	66	8·9	—	—	—	3	—	1	3	—	5	12	1·6	91	12·2	122
St. Pancras	233,543	—	135	82	—	27	1	1	50	—	296	13·2	—	42	7	26	6	—	6	—	21	108	4·8	440	19·5	179
Islington	335,929	1	253	100	2	45	—	1	42	—	444	13·8	—	3	4	23	4	—	4	—	15	55	1·6	495	15·4	147
Stoke Newington	35,234	—	27	7	—	6	—	—	4	—	44	13·0	—	—	1	—	—	—	—	—	1	2	0·6	35	10·4	73
Hackney	215,623	—	181	90	—	57	1	2	40	—	371	17·9	—	14	4	11	2	—	8	—	15	54	2·6	330	16·0	141
Central Districts.																										
St. Giles	37,654	—	25	6	—	2	—	—	12	—	45	12·5	—	2	2	2	—	—	1	—	3	10	2·8	78	21·6	108
St. Martin-in-the-Fields	13,536	—	9	—	—	4	—	—	1	—	14	10·8	—	1	1	—	—	—	—	—	—	2	1·5	17	13·1	357
Strand	22,586	—	25	10	—	5	—	—	2	—	42	19·4	—	—	1	2	—	—	—	—	1	4	1·8	48	22·2	73
Holborn	32,188	—	33	8	—	1	—	—	8	—	50	16·2	—	3	1	1	1	—	—	—	—	6	1·9	65	21·1	196
Clerkenwell	65,036	—	54	22	—	10	3	—	11	—	100	16·0	—	18	1	5	2	—	2	—	6	34	5·5	127	20·4	190
St. Luke	40,763	—	26	11	—	6	—	—	8	—	51	13·0	—	3	1	3	—	—	1	—	6	14	3·6	104	26·6	196
City of London	33,824	—	30	3	—	11	—	1	2	—	47	14·5	—	2	—	1	—	—	3	—	3	9	2·8	70	21·6	167
East Districts.																										
Shoreditch	122,932	3	97	27	—	24	—	—	22	—	173	14·7	—	4	5	11	7	—	2	—	15	44	3·7	277	23·5	227
Bethnal Green	130,061	9	141	76	—	23	1	2	55	—	307	24·6	2	9	7	12	3	—	5	—	9	47	3·8	271	21·7	219
Whitechapel	75,820	2	82	38	—	6	—	—	10	—	138	19·0	—	2	4	5	3	—	3	—	6	23	3·2	181	24·9	197
St. George-in-the-East	45,227	1	34	26	—	10	—	—	10	—	81	18·7	—	2	3	9	—	—	1	—	6	21	4·8	120	27·7	139
Limehouse	56,885	1	49	33	—	10	—	—	10	—	103	18·9	1	2	1	9	—	—	4	—	7	24	4·4	168	30·8	260
Mile End Old Town	108,443	4	100	61	—	10	—	—	36	—	211	20·3	—	2	5	10	1	—	4	—	6	28	2·7	227	21·8	164
Poplar	171,230	2	127	79	—	34	1	—	35	—	278	16·9	—	7	5	15	9	—	5	—	10	51	3·1	341	20·8	199
South Districts.																										
St. Saviour Southwark	26,570	—	24	14	—	3	—	—	3	—	44	17·3	—	—	—	2	3	—	—	—	1	6	2·4	62	24·3	124
St. George Southwark	60,168	—	57	10	—	8	—	1	8	—	64	11·1	—	3	2	1	2	—	1	—	7	15	2·6	123	20·1	131
Newington	119,358	3	75	30	—	14	—	1	12	—	135	11·8	—	18	2	5	—	—	5	—	10	40	3·6	230	20·1	206
St. Olave Southwark	13,065	—	8	7	—	—	—	—	2	—	17	13·6	—	1	—	2	2	—	—	—	2	7	5·6	42	33·5	225
Bermondsey	83,861	—	40	16	—	5	—	1	10	—	72	9·0	—	19	3	3	—	—	1	—	8	33	4·1	175	21·8	177
Rotherhithe	40,713	2	38	9	—	3	—	—	9	—	61	15·6	—	2	—	4	1	—	1	—	1	9	2·3	68	17·4	117
Lambeth	284,883	3	220	65	—	33	1	1	57	1	421	15·4	—	9	9	11	4	—	5	—	20	58	2·1	426	15·6	121
Battersea	165,130	3	135	49	1	23	1	2	31	—	245	15·5	1	1	2	12	—	1	5	—	15	37	2·3	226	14·3	157
Wandsworth	185,956	3	73	34	—	17	—	—	23	—	150	8·4	1	3	—	6	2	—	6	—	7	25	1·4	217	12·2	101
Camberwell	252,737	14	136	117	—	38	—	1	23	1	335	13·8	—	15	8	12	3	—	4	—	19	61	2·5	382	15·8	150
Greenwich	176,183	3	110	188	—	27	—	1	23	—	355	21·1	—	2	5	30	1	—	1	—	6	45	2·7	259	15·4	116
Lewisham (excluding Penge)	82,410	—	31	23	—	5	—	1	6	—	66	8·4	—	—	1	3	—	—	—	—	4	8	1·0	84	10·6	85
Woolwich	42,768	—	28	6	—	—	—	—	4	—	38	9·3	—	—	2	—	—	—	1	—	4	7	1·7	75	18·3	100
Lee	38,832	1	41	4	—	4	—	—	5	—	55	14·8	—	1	1	2	—	—	—	—	1	5	1·3	61	13·7	94
Plumstead	61,494	3	39	22	—	6	—	—	7	—	77	13·1	—	—	—	7	—	—	—	—	8	17	2·9	78	13·2	123
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 37 cases of membranous croup.

† Including deaths from membranous croup.

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measles, 112 from scarlet fever, 95 from enteric fever, 70 from whooping-cough, 6 from small-pox, and 2 from typhus. These 1133 deaths were equal to an annual rate of 2·7 per 1000; the lowest zymotic death-rates were recorded in Hampstead, Islington, Stoke Newington, St. Martin-in-the-Fields, Wandsworth, Lewisham, and Lee; and the highest rates in St. Pancras, Clerkenwell, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, St. Olave Southwark, and Bermondsey sanitary areas. Six fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being only 2; of these 6 fatal cases, 2 belonged to Bethnal Green, and 1 each to Chelsea, Limehouse, Battersea, and Wandsworth sanitary areas. The 214 deaths referred to measles were 57 above the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in Westminster, St. Pancras, Clerkenwell, St. George Southwark, Newington, and Bermondsey. The 112 fatal cases of scarlet fever were 27 below the corrected average number; this disease showed the highest proportional fatality in Chelsea, St. Giles, Strand, Bethnal Green, Whitechapel, St. George-in-the-East, and Mile End Old Town sanitary areas. The 307 deaths referred to diphtheria were 109 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Hammersmith, St. Pancras, St. George-in-the-East, Limehouse, St. Olave Southwark, Rotherhithe, Greenwich, and Plumstead. The 70 fatal cases of whooping-cough were 49 below the corrected average; this disease showed the highest proportional fatality in Shoreditch, Poplar, St. Saviour Southwark, and St. Olave Southwark sanitary areas. The 95 deaths referred to enteric fever slightly exceeded the corrected average number; among the various sanitary areas the highest proportional fatality of "fever" was recorded in Hampstead, City of London, Limehouse, and Newington. The 327 fatal cases of diarrhœa were as many as 136 above the corrected average; this disease was proportionally most fatal in Paddington, St. Luke, Shoreditch, St. George-in-the-East, and Limehouse sanitary areas. In conclusion, it may be stated that the mortality in London during October from these principal zymotic diseases was more than 26 per cent. above the average.

Infant mortality in London during October, measured by the proportion of deaths under one year of age to registered births, was equal to 156 per 1000, and slightly exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. James Westminster, Stoke Newington, Strand, Lewisham, and Lee; and the highest rates in Paddington, St. Martin-in-the-Fields, Shoreditch, Bethnal Green, Limehouse, Newington, and St. Olave Southwark.

THE SERVICES.

The Ashanti Expedition.

The senior medical officers who are ordered to take part in the forthcoming Ashanti Expedition are Surgeon-Colonel W. Taylor, as Principal Medical Officer, and Brigade-Surgeon-Lieutenant-Colonel E. Townsend. The other medical officers have not yet been definitely selected. We understand that the troops will be provided with ten large portable Pasteur filters.

Movements of the Medical Staff.

Surgeon-Colonel Catherwood has arrived at Gibraltar in succession to Surgeon-Major-General Lewer, retired. Surgeon-Colonel Wilson has arrived from India, and has taken up the duties of Principal Medical Officer, York. Brigade-Surgeon-Lieutenant-Colonel O'Farrell has been appointed to the Home District on return from Egypt. Surgeon-Lieutenant-Colonel Allen has arrived from India to take command of the Depôt Medical Staff Corps, Aldershot. Surgeon-Lieutenant-Colonel Langridge, Surgeon-Major Dugdale, and Surgeon-Captain Cockerill have arrived from India on completion of a tour of service. Surgeon-Lieutenant-Colonel Powell and Surgeon-Major Donovan have embarked for India. The following officers have embarked for service in Bermuda:—Surgeon-Majors MacNeece and Baker, and Surgeon-Captain Corkery. Surgeon-Captain Ritchie has arrived from Malta on completion of a tour of service. Brigade-Surgeon-Lieutenant-Colonel Mackinnon (retired) has been appointed to Reading; Surgeon-Lieutenant-Colonel James to Canterbury; and Surgeon-Captain Elliott to the Women and Children's Hospital, Chatham.

Army Medical Staff.

Surgeon-Colonel John B. Hamilton, A.M.S., obtains promotion to the rank of Surgeon-Major-General, consequent on the recent retirement of Surgeon-Major-General Lewer.

India and the Indian Medical Services.

The services of the undermentioned officers (Bengal) are replaced at the disposal of the Government of the North-West Provinces and Oudh:—Surgeon-Major F. D. C. Hawkins, Surgeon-Captain W. G. P. Alpin, Surgeon-Captain W. Vost, Surgeon-Captain J. Chaytor-White, and Surgeon-Captain H. B. Melville. The services of the undermentioned officers (Bengal) are replaced at the disposal of the Government of the Punjab:—Surgeon-Captain C. H. James and Surgeon-Captain D. T. Lane. The services of the undermentioned officers (Bengal) are replaced at the disposal of the Government of Bengal:—Surgeon-Major F. S. Peck, Surgeon-Captain E. H. Brown, Surgeon-Captain F. O'Kinealy Surgeon-Captain B. C. Oldham, and Surgeon-Captain B. H. Deare.

Naval Medical Service.

Fleet-Surgeons: R. M. Loftie to the *Medea;* R. G. Brown to the *Medusa.* Staff-Surgeons: E. R. Dimsey to the *Phœbe,* when recommissioned; J. L. Bagnall Oakley to the *Sappho;* Ernest E. Bray to the *Thunderer.* Surgeons: H. St. D. Griffiths to the *Swallow;* R. Hickson to the *Vivid;* Johnston H Acheson to the Cape of Good Hope Hospital; Francis H. A. Clayton to the *St. George;* and Percy H. Bayden to the *Thrush.* Surgeon and Agent: J. E. Webb, M.B., retired Surgeon, R.N., at Looe and Polperro.

Volunteer Corps.

Rifle: 1st Volunteer Battalion the Lancashire Fusiliers: Arthur Peel Nuttall, M.B., to be Surgeon-Lieutenant. 1st Surrey (South London): Louis John Gerard Carré, M.D., to be Surgeon-Lieutenant.

Volunteer Infantry Brigades.

Essex Brigade: Surgeon-Major E. Shedd, 2nd Volunteer Battalion the Essex Regiment, to be Brigade-Surgeon-Lieutenant-Colonel.

The Japanese Army Medical Service.

That the Japanese are a most intelligent and enterprising people has been long known, but recent events have shown that they are a really remarkable nation as regards their courage, energy, thoroughness, and power of organisation. Surgeon-Colonel W. Taylor gave a very interesting account of the medical military arrangements of the Japanese army in the field at Aldershot on Tuesday last. In the absence of the Duke of Connaught, the chair was taken by Major-General Sir William Butler. It will be remembered that Surgeon-Colonel Taylor was sent out by the British Government during the Chino-Japanese War to observe and report upon the field medical arrangements, and that what he had to say at Aldershot was therefore based upon the results of his personal experiences and observations. He described the medical regulations of the Japanese service as being very full and complete, and declared that they were carried out to the letter and most successfully. So excellent was their system and so modern in its conception that he did not believe that a single life was lost that could have been saved, and he went on to add that Japan had little or nothing to learn from Germany or England in respect of her hospital service arrangements. This is enthusiastic and, as we believe, well-merited praise. In the discussion that subsequently ensued Surgeon-Major-General Paterson remarked that from all he had heard he inferred that the organisation of our own military medical service was not so advanced as that of Japan. General Butler, the chairman, declared that the descriptions given in the lecture were a revelation to them. It was a triumph of organisation, and no doubt a good deal of it was to be explained by the fact that the Japanese had adopted the German system.

The French Expedition in Madagascar.

The large amount of sickness that prevailed among the French troops in Madagascar, followed, as it was, by heavy losses in mortality and invaliding, continues to attract the attention of the French press. The expedition was, no

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doubt, for various reasons one of unusual difficulty, and the amount of sickness from malaria and other causes was probably in a large measure unavoidable and far greater than had been expected; but it must be confessed that there seems to have been a lamentable want of foresight as well as mismanagement in arranging and providing for the requirements of the campaign, especially in regard to the supplies, transport, hospital, and hygienic arrangements for the troops, who seem to have been too largely composed of young and unseasoned soldiers. The Ribot Ministry has fallen and been succeeded by another Government, and we shall probably never learn now the whole extent of the French losses. General Duchesne and his troops have achieved a great military success in Madagascar, but at a cost of life which we sincerely regret.

On Nov. 6th the *Britannia* brought ninety-seven cases from India to Netley for admission to the wards of the Royal Victoria Hospital.

Correspondence.

"Audi alteram partem."

"THE BRITISH MEDICAL BENEVOLENT FUND."

To the Editors of THE LANCET.

SIRS,—I shall be glad to avail myself of your kindness to acknowledge in your columns the sums already received in answer to my appeal of last week, and to thank most heartily those who have so promptly come to our relief. In several cases members of the British Medical Association have sent us the half of their subscriptions returned after paying the expenses of the meeting in London last summer, and we should have reason to be very grateful if this example were followed by others. The present embarrassed state of the fund is caused, not by a falling off in the subscriptions, but by the non-arrival of large donations, which are always an uncertain source of income. Besides these may be mentioned a donation of £21 from Mr. France, a member of the committee, £5 from Mrs. Cæsar Hawkins (in addition to a previous donation of £10 10*s.*), and £10 10*s.* from the Treasurer.

Subscriptions and donations may be sent to the Treasurer or to the Hon. Financial Secretary, Dr. Samuel West, 15, Wimpole-street.

I am, Sirs, yours faithfully,
W. H. BROADBENT.

84, Brook-street, Grosvenor-square, W., Nov. 13th, 1895.

The following subscriptions have been received:—

	£	s.	d.
Sir Joseph Lister	20	0	0
Dr. Horrocks	2	2	0
Dr. Bowlan	0	10	6
Mr. Lennox Browne ...	2	12	6
Dr. Douglas Powell ...	10	0	0
Mr. Patmore Sheehy ...	20	0	0
Mr. T. Charteris White	1	1	0
Dr. Kelly	5	5	0
Dr. Barnes	10	0	0
"Beta"	10	10	0
Brigade-Surgeon Clarke	1	1	0
Messrs. Curtis and Co. (subs.)	1	1	0
"A Grateful Patient of Mr. Jabez Hogg" ...	5	0	0
Mr. T. D. Ransford ...	5	5	0
Dr. Haviland	10	0	0
Dr. Swain Scriven... ...	1	1	0
"One who has Benefited," per Dr. Swain Scriven	0	5	0

UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—In consequence of the circular issued by the late Home Secretary, Mr. Asquith, to those borough and city councils which had not hitherto appointed police surgeons, many new appointments have been made. Notices of some of these have been sent to us, and in each case a nomination paper has been sent. But there may have been some gentleman appointed of whom we have not heard and who may wish to join this association, of which Sir H. D. Littlejohn is the President, which has already done so much to promote the interests of police surgeons.[1] Will you kindly allow us to state that we shall be most happy to send a printed form of application for membership to any newly appointed police surgeon who is not already a member?

We are, Sirs, yours faithfully,
FRED. W. LOWNDES,
40, Knight-street, Liverpool;
H. CULLIFORD HOPKINS,
6, Bladud-buildings, Bath;
Nov. 11th, 1895. Hon. Secretaries to the Association.

[1] THE LANCET, Nov. 9th, 1895, p. 1177.

VARICOCELES AND THE SERVICES.

To the Editors of THE LANCET.

SIRS,—In what way does a varicocele—excluding those very rare cases of excessively large varicoceles—incapacitate a man? I suppose nineteen men out of every twenty have a small varicocele, yet they do their work and live to a good old age and never know they are suffering—no, not suffering—are the subjects of this all-important—in the eyes of the Government, at any rate—complaint. Why then, I ask, are young men wishing to enter one of the Services compelled first to undergo an operation if they happen to be the possessors of varicoceles? But what I most object to is that hospitals—we are constantly getting them at the one I am connected with—have to admit these fine, healthy young lads and board them for three weeks. If the Government will insist on observing this regulation it ought certainly to pay for the board of these cases. It is hardly fair to use subscribers' money to feed perfectly healthy young patients, but as the regulations at present stand we cannot refuse to admit these cases and so fit them to earn their livelihood in one of the services.

I am, Sirs, yours faithfully,
C. F. WIGHTMAN, F.R.C.S.Eng.

Chichester, Nov. 12th, 1895.

*** Varicocele is without doubt a condition very frequently met with, but we are inclined to think that it is by no means so frequent as our correspondent suggests. It is probable that its presence, in the slighter forms at least, is not the cause of any pain or uneasiness even after severe exertion, but it has been found that men in the army or navy are very prone to complain of pain in a varicocele when they are required to undertake any unusually great exertion, such as a long march; therefore, it has been deemed advisable to decline to enlist any men suffering from this condition, not because the variocele in any way really interferes with the due performance of a soldier's or a sailor's duties, but because it proves a fruitful source of malingering. The cost of curing a man with variocele should fall, if possible, on the man himself, but if, as is usually the case, he be unable to defray this expense, then it is not unreasonable that hospitals as charitable institutions should assist him. The Government can hardly be expected to afford pecuniary help to enable a man who wishes to enlist to comply with the conditions of enlistment.—ED. L.

THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—There is a time-worn story to the effect that, when Stephenson was engaged in pushing his first Railway Bill through the House of Commons, he met with strenuous opposition from some of the older members. One of these, thinking to give him a poser, suggested that a cow might get on the line in front of a passing engine. "Well," said Geordie, with a twinkle in his eye, "so much the worse for the coo." Now, Sirs, it is with no little concern that one sees the Colleges to which one belongs taking up the position of Stephenson's "coo." No one who can read the signs of the times can doubt that women have made up their minds to study medicine. It is equally obvious, from the way in which they succeed in practice, that they have the support of the public. This being the case, it is plain that if the Colleges persist in standing in the way of this movement they will do no damage to the women, but will certainly damage themselves. Surely, after so many thousands of years' experience of the respective merits and

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demerits of the two sexes, the public may be allowed to judge for itself whether women are fitted to become its medical advisers or not. This is for the public to decide, and not the Colleges. Their province ought to begin and end with their professional qualifications and that which pertains to them. But when the public has expressed a demand for medical women it is an abuse of the privileges of the Colleges, and a shirking of duty, to refuse to put their hall-mark on those who come up to their standard. For my own part, I believe that women are not so well qualified by nature for the work of our profession as are men. But I cannot conceive how anyone can now bring this forward as an argument for refusing them a diploma. The only ground which would render such an action justifiable would be that the diploma is not worth receiving. I am not of that way of thinking myself. I believe it is not often that anyone passes the examinations who is not medically fit to be trusted with the lives of his fellows. But it is for just this reason that women, even more than men, ought not to be denied these tests. Neither does it seem quite reasonable to refuse to remove an obstacle to their progress on the score that they are already handicapped by nature. One effect of this short-sighted policy of the Colleges will be to give a quite artificial spurt to the medical education of women. I suppose it will be impossible for all women to henceforth work up for the degrees of the London University. If they do, it will be a fine revenge on the Colleges to altogether ignore them in the future. But what will undoubtedly happen will be that more women will be driven to seek their education elsewhere than in London, and more will enter for the London degrees. This latter alternative means that the women will acquire a value in the eyes of the public altogether disproportionate to that of the same number of men; for the public estimates its medical men mainly according to their professional qualifications and attainments, all other considerations being secondary. In fact, this action of the Colleges will act as persecution always does. It will strengthen the influence of the persecuted, and weaken that of the persecutors.

To a reader of the report of the discussion in THE LANCET of Nov. 9th it looks very like a covert sneer at the President for one to say that women do not make good surgeons, while another dreads lest they become Fellows and Presidents! Is it possible that the Fellows and Presidents are always chosen from among the most incapable of the profession? I am sure I am not alone when I say that I shall heartily welcome the election of a woman President if she deserve it. Such questions as this ought to be decided on no other ground than that of merit, and not according to the cut of the clothes, the shape of the face, or other peculiarities of sex. In fact, the report reads like a chapter from the writings of Swift; and there is a deal of unconscious irony in the fear that was expressed lest the College should fall under petticoat government. The debate of the physicians was apparently more dignified in tone; but it is sad to see the names of so many honoured leaders of the profession on the side of such ultra-conservatism.

In conclusion, Sirs, I should like to explain that I do not desire to set up as the champion of the women, who have shown that they can very well take care of themselves, but I wish to protest against the action of the majority at these two meetings, seeing that it is calculated to bring the Colleges into contempt. I am, Sirs, yours truly,

Reading, Nov. 9th, 1895. HASTINGS GILFORD.

To the Editors of THE LANCET.

SIRS,—I should like to say a few words on this subject of admitting women to the examinations of these corporations. One of the lay papers speaks of the refusal of the Royal College of Physicians of London to admit women to their examinations as being "the extreme of pettiness,"[1] since the Royal Colleges of Edinburgh and Dublin have opened their portals to women. As members of the medical profession we cannot too clearly express our thanks to the Censors of the London College for having refused their growing demands to be admitted where they are neither required nor wanted, and we do sincerely hope that the Royal College of Surgeons will follow such an example by a very much larger majority. Surely, because other corporations have committed a great error this is no argument why we should seek to copy such evil examples. We do not seek to decry the abilities of some women. But from a physical, physiological, and moral point of view we would urge women not to seek to still further unsex themselves. When women first claimed to enter the medical profession they put forward as one of their strong arguments the sad condition of the women of India, who were not allowed to be attended by male practitioners. We now have the very weighty statement of no less a distinguished member of our profession than Sir Joseph Fayrer, who stated at the meeting of the Royal College of Physicians of London that "so far as his experience went there was no difficulty in the way of medical men entering the *most jealously* guarded harem when there was need for their services." There is one very important point which seems to have been lost sight of, and that is, if women are admitted to the Fellowship of the Royal Colleges of Physicians and Surgeons of London, what is to prevent their occupying the various professorial chairs? We should then have the glaring anomaly of women teaching the men. This is no fancy picture, for with their ever-increasing demands it would only be a matter of time. Dr. West justly says: "What had they done for midwifery, which for a century and a half was entirely in their hands?" I would go a great deal further, and say that the modern medical women are doing more to degrade and lower the standard of the profession than any body of medical men have ever done, for they are at the present time seeking to attend midwifery for a fee of 5*s*., and for aught I know for even less than that. Does this show that there is any great and growing demand for the services of medical women even for members of their own sex? And from a recent glaring case we have distinct evidence that women from their teaching and practices are prepared to inculcate acts of direct and open immorality. From a physical point of view I know of nothing that is more arduous or trying for the powers of a *strong* man than is a large midwifery practice; and yet it is just this particular branch of the profession which the women claim as peculiarly their own. There is a great deal more which I could say against their claims, but I will not trespass further upon your space. I would, however, urge upon the Council of the Royal College of Surgeons to reject this application by every means in their power. I feel perfectly certain in my own mind that if the 16,000 members of the Royal College of Surgeons had their just demands conceded to them of voting on matters of vast importance which affect the Members so deeply, the vote on the present occasion would be such an overpowering majority that the application of these women would be emphatically refused; and if the other Royal Colleges had been in a similar position women would never have gained a footing into our profession at all.

I am, Sirs, yours faithfully,

London, Nov. 4th, 1895. ALBERT S. MORTON.

[1] The Queen.

HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—Two cases have come under my notice which show what large sums the poor are able to pay in order to obtain free treatment at a hospital. One, an agricultural labourer living near Stockbridge, attended Moorfields Hospital for myopia from May, 1890, to June, 1893, and paid altogether twelve visits to the hospital. The other, a woman from this neighbourhood, also suffering from myopia, attended Moorfields Hospital from July, 1890, to November, 1893, during which time she paid sixteen visits to the hospital. The man must have spent about £6 and the woman about £8 in travelling expenses alone, not counting the loss of time, and as they were each using atropine drops and taking Donovan's solution during the whole time of their attendance they must have cost the hospital an appreciable sum. It thus appears that the charitable treatment of these two cases (and they are probably typical of a large class) involved a greater expense than is usually incurred by well-to-do persons who pay fees for advice. I am, Sirs, yours faithfully,

Southampton, Nov. 11th, 1895. J. F. BULLAR.

"CHRONIC NASAL OBSTRUCTION."

To the Editors of THE LANCET.

SIRS,—The connexion, pointed out in your last issue by Mr. Mayo Collier, between nasal obstruction and a high-arched palate is one of the most remarkable facts in

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pathology. Since Mr. Collier first drew my attention to it, now some two or three years ago, I have had repeated opportunities of verifying it, and I can have no doubt that the vast majority of high-arched palates are due to nasal obstruction. But in what way? The explanation given by Mr. Collier, though not mentioned in his letter, appears to be the right one. It is that nasal obstruction leads to a diminution of the atmospheric pressure within the nasal passages—a fact that can be experimentally demonstrated—and that the pressure on the under surface of the bony palate being thus during several years of developmental life, when it is plastic and yielding, greater than that on the upper surface, it is driven upwards, producing a narrow, high arch and all the numerous secondary effects referred to by Mr. Collier. These considerations accentuate the importance of operating on all cases of "adenoids" without delay.

I am, Sirs, yours faithfully,

Devonshire-street, W., Nov. 11th, 1895. HARRY CAMPBELL.

THE USE OF DRUGS.

To the Editors of THE LANCET.

SIRS,—As a result of Dr. Gowers' address on the Use of Drugs, delivered before the Willesden and District Medical Society at the inaugural meeting of the present session on Oct. 11th, the executive of the society have decided that there shall be a discussion at a subsequent meeting on a few of the drugs considered to be most useful in general practice. Each member was asked to send in a list, and from these lists the following drugs have been selected: iodide of potassium, antipyrin, liquor arsenicalis, tinctura digitalis, and liquor strychniæ. Dr. Samuel West has kindly promised to open the discussion, which will, it is hoped, take place on Friday, Dec. 20th. I am, Sirs, yours truly,

Harlesden, Nov. 12th, 1895. ALFRED BINDLEY, Hon. Sec.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1157.)

MEDICAL ETHICS AND THE DISPENSARIES AT HULL.

THOUGH the medical profession is not as united and as unanimous as might be desired at Hull, still the actual state of affairs here is far more favourable to the cause of union than in the neighbouring and rival town of Grimsby. At least, there is at Hull a local medical society, and nearly all the practitioners of the town are members of that society. It was founded in 1889, and it was originally called the Medical Ethical Society of Hull. At that time about fifty medical men belonged to the local branch of the British Medical Association, and it was thought that this organisation was not strong enough to deal with matters of ethics. To exercise wholesome influence on such questions a purely local society, it was imagined, would be able to gather together a larger number of practitioners. Therefore, the Medical Ethical Society of Hull was formed, and its objects were (1) the discussion of scientific subjects, and (2) the promotion of a closer union between the members of the profession by the holding of at least two general meetings annually to decide between medical men any ethical questions that might be pending. Some ethical rules were framed and accepted, and these forbade the employment of agents to solicit practice, advertising, the distribution of handbills, &c. Unfortunately, there was a good deal of backsliding. Though the enormous majority—more than 90 per cent.—of the local practitioners are absolutely unanimous on these points, it sufficed that two or three medical men should prove false to the cause to upset the whole combination. For instance, it was agreed that no practitioner should accept any club practice at less than 4*s.* per member per annum. This rule was loyally adhered to by all except one, who secretly agreed to take club members at a smaller figure. By this means he secured such a large number of clubs that suspicions were awakened, whereupon the other members of the profession engaged in club practice, in hot haste and in self-defence, abandoned the 4*s.* minimum. This prevented all the clubs going to the one man. The spirit of competition, however, was let loose again. Practitioners soon began to underbid each other, till the payments for contract work dropped from 4*s.* to 2*s.* 6*d.* At first the Medical Ethical Society of Hull did a great deal of good; but later it was discovered that two of its members were distributing handbills. The society invited them to appear before the society's council, but the medical men in question simply sent in their resignations. The society thus lost all jurisdiction over them. It is true that complaints were made to the licensing bodies from which the practitioners in question had received their qualifications, and the latter were duly warned, and it is believed that they have not issued any further handbills. In the meanwhile, however, they had fully profited by whatever advantage such publicity can bring. I made a point of calling on one of the medical men in question, feeling that it would be very useful to know what were his arguments and views on the point at issue. I was courteously received, and the conversation that ensued was of a most interesting character.

The practitioner in question was, I found, very bitter against friendly societies and against charitable dispensaries. He urged that the dispensary at Hull organised by the friendly societies was opposed to trades-unionism. He marvelled at the inconsistency of the members of these friendly societies, who for the most part were themselves trades-unionists and yet acted against the spirit of trades-unionism. He thought that a trades-union strove to keep each man to his trade and should not allow a trades-unionist to employ his leisure moments in "blacklegging" some other trade. What would be said, he urged, if the practitioners of the town were to combine to open a butcher's or a grocer's shop? This observation was, however, somewhat wide of the mark. Many trades-unionists are very active coöperators. At the trades-unionist congresses delegates from coöperative congresses have often been heard and received as honoured guests. Trades-unionists are not opposed to such coöperative efforts as tend to eliminate the middleman or tradesman and bring the consumer in more direct relation with the producer. I take it the case may best be put in this manner: In the study of chemistry and of dispensing, in the practice of dissecting, in the performance of operations and the dressing of wounds, medical men have to acquire a facility of delicate manipulation which befits them for many skilled handicrafts. Therefore many medical men could with ease employ their leisure moments in some sort of productive industry, as the making of scientific instruments, works of art, photography, &c., and could thus compete, undersell, or "blackleg" in some of the productive industries with which trades-unionists are concerned. As matters now stand, and viewing the economical side of the problem, the medical man has this advantage over the artisan engaged in a productive industry, that he is in direct communication with the "consumer," and that, as a rule, no factory owner and tradesman step in between his work and the patient he attends to take a portion of the money paid for such work. The point now at issue is whether this favourable state of affairs is compromised by the action of the dispensaries which the friendly societies have established. They certainly compete with the druggists' trade. Do they pay trades-union wages to their dispensers or do they profit by the want of organisation among dispensers to pay the lowest competition rate of wages? Do they not also pay a low competition rate of salary to their medical officers, sweat a profit out of their labour, and employ them in a manner that by competition must tend to reduce the rate of remuneration given to all medical men who do contract or club work? If so—and but little doubt can be entertained on this point—then the dispensaries established by the friendly societies are not in harmony with the principles generally advocated by the trades-unionists of this and of all other countries. As so many members of these dispensaries are trades-unionists this is certainly a point that must be kept well in view and that will be of great use in the effort which should be made to reform these institutions.

The medical man on whom I called claimed that if anyone had a right to organise medical aid it was the medical men themselves. He had, therefore, resolved to establish a medical club of his own, but he found that medical etiquette clipped his wings and handicapped him heavily in his efforts to compete against medical clubs organised by laymen. Close at hand a number of workmen and tradesmen, persons who had nothing whatsoever to do with the medical profession, had opened what was practically a druggist's shop

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and a medical consulting-room. They could issue handbills, they could employ agents and solicit practice and do anything they chose, however unprofessional it might be, because they were laymen. The medical men they employed were merely their servants and had no power to prevent such practices. Thus the dispensaries organised by the friendly societies had great advantages when competing against the dispensaries organised by medical men. Undoubtedly it was *infra dig.* for medical men to advertise or to issue handbills, but then dispensaries managed by laymen should also be debarred from employing these tradesmanlike methods. But dispensaries founded by laymen were not only unmindful of professional dignity and etiquette, they were equally unmindful of professional interest. What was the question of wage limit to them? It did not affect them in the least. It was not a loss to a friendly society that a large number of their members should be in receipt of good incomes; if anything, this was an advantage rather than a disadvantage. The clubs would not impose a wage limit; the profession alone would do this. At present he knew one man, living in a villa worth £50 a year in rent, who was suffering from hemiplegia and who had been constantly under medical care though he only paid 3*s.* a year. He had retired from business, was enjoying ample means, and yet still resorted to the services of the club officer. Then, again, to obtain a medical practice it was necessary to compete, not only against friendly societies, insurance companies, and other commercial speculations that organised medical aid, but also against hospitals and public charities that were likewise grossly abused and gave gratuitous medical aid to people who could well afford to pay. The employers of labour in Hull often shirked their responsibilities by subscribing to the infirmary or the Hull Dispensary, both endowed charitable institutions. If an accident happened, the employer gave a ticket to his injured workman. The profession thus lost a paying patient, and the sufferer's condition was often aggravated by the time required to remove him to the infirmary. In minor cases the cost of the cab fare to the infirmary would have paid the medical attendant's fee. The manner in which subscribers indiscriminately gave tickets for charitable institutions was a grave abuse; and these institutions, which took away so many of the patients who should go to the profession, were allowed to advertise to any extent and to canvass for charitable donations. Thus, in one way or another, canvassing and advertising were constantly employed to the disadvantage of the private and independent practitioner, with the result that it took away many of his most likely patients; but the private practitioner was not allowed to use the same weapons in self-defence. He was quite willing to condemn such means, but thought they should be condemned all round. With regard to the distribution of tickets for hospitals and endowed charitable dispensaries, he thought these should be left in the hands of the profession. None knew better than medical men themselves what patients they were willing and able to attend and whether such patients could afford to pay. The town of Hull was overrun with charities that pauperised the people, undermined their sense of independence, and created such a competition against private practitioners that they lowered the tone of the entire profession. As a remedy for the deplorable situation thus created, he suggested that the distribution of tickets for charitable institutions should be transferred from the givers of donations to the members of the profession. With regard to friendly societies and club practice generally, he thought that, in spite of the keen competition between the medical men at Hull, it would be feasible to follow the example given at Eastbourne and amalgamate all the club practice in one great organisation managed by the members of the medical profession themselves. Then, and then only, would it be possible to enforce something like a wage limit.

Such, as far as I was able to gather, were the main arguments of one of the medical men who withdrew from the Medical Ethical Society of Hull. It will be seen that they were not devoid of force; and I could not help thinking that such secessions are due, not to any disapproval or opposition to the ethical base it is sought to establish, but rather to a lack of faith in the ability of the medical societies to carry out their principles. In other words, if the medical unions were stronger, their discipline more firmly enforced, and their activity greater, there would be less tendency among the members to secede. It must, however, be confessed that the Hull Medical Society, as it is now called, perhaps because it was not very successful in enforcing its ethical principles, is somewhat weak-kneed. Another practitioner, who also resigned from this body, has established dispensaries in Hull on such a thoroughly commercial basis that it was the general opinion that the profession should break off all relations with him and refuse to meet him in consultation. Acting according to this opinion, one well-known practitioner did refuse to meet the medical man in question, but the latter had only to cross the street and he at once found another consulting physician who readily accepted the call. The attempted action thus broke down. Yet nothing would better shake the confidence of people who subscribe to the dispensaries of advertising medical men if it was known that eminent men in the profession would not meet such practitioners in consultation. This is the one effective weapon the profession possesses. The difficulty, however, is to persuade the consulting physicians to take an active part in the movement. The struggling practitioner, the young medical man who is vainly looking about for a good opening, feels, and feels keenly, all these grievances, but the senior members of the profession would sometimes seem to take only a passive interest in the question—it rarely touches their pockets. Several practitioners to whom I spoke urged that the heads of the profession were the greatest sinners. "We must have a good example from above," they exclaimed. "What are we to do when a consulting physician visits a patient three times for a guinea, and men who have been fifty years in the profession will drive miles out into the country for a 5*s.* fee?" The principal grievance at Hull would have been nipped in the bud if the consulting physicians had acted in harmony with the general and freely expressed opinion of the profession and had refused to meet one or two medical men whose conduct was unanimously condemned. The Hull Medical Society now numbers eighty-five members, and, even including the house surgeons at the infirmary, &c., there are barely 100 practitioners in the town. So numerous an organisation should be master of the situation, but it is no use uniting if when united no action is taken. In two grave instances mentioned the offending members were allowed to have their own way. On the other hand, it must be said that these incidents occurred some years ago, when the necessity of making a stand was not keenly appreciated. After all, a great deal of preparation must precede the adoption of active measures. These can never be enforced till their wisdom and their usefulness are approved and understood. Now, however, the time has come when the need of firm and united action is impressing itself upon the minds of an ever-increasing number of medical men. There is good ground to hope for a better future.

Hull, Nov. 3rd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday and Saturday in Liverpool: the Annual Meetings.

AT the annual meeting of the supporters of the Hospital Sunday collections, on the 4th inst., the committee reported with regret that the depression which began to affect the Fund in 1892 had not shown any sign of lifting, the Fund having declined gradually from £6973 in 1891 to £6155 in 1895. A hope was expressed that the recent improvement in trade and manufacture might reasonably be expected to react upon the Fund and that a better result might be looked for in 1896. All things considered the committee were well pleased that so large a sum as £6155 had been realised. It was not considered desirable to change the date, as had been proposed. At the Hospital Saturday meeting on the 6th inst. it was stated that the fund was increasing year by year, the total collected this year being over £5000. The Lord Mayor, who presided, remarked that it was creditable to the working men of Liverpool that they had taken up the movement so earnestly.

Rabies in Lancashire.

A number of persons were fined at Prescot Police-court on the 5th inst. for having their dogs insecurely muzzled. As justifying the rigorous enforcement of the muzzling order it was shown that between April 25th and Oct. 16th there had been in the county 25 certified rabid dogs, which had

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bitten 13 persons. There had also been 3 deaths from hydrophobia, while 84 persons had been bitten by dogs not certified to be rabid.

A Black Assize.

The commission for the autumn assizes of South-west Lancashire, always held in Liverpool, will be opened on the 14th inst. The calendar is a very heavy one, there being already 82 prisoners for trial, which number will be increased during the interval between to-day and the discharge of the grand jury. The charges comprise 7 against prisoners charged with murder, 2 with attempted murder, 8 with manslaughter, 15 with wounding, and 15 with criminal assaults. Mr. Justice Henn Collins is expected to preside in the Crown Court.

The Liverpool Crematorium.

If one may judge from the large number of citizens, medical and lay, who express their approval of cremation as a mode of disposal of the dead, the success of the new city crematorium, which is rapidly approaching completion, ought to be assured. The manager's house, with waiting-room and office, are expected to be ready for occupation about the end of the year, and the acting sub-committee propose shortly to appoint a resident manager and to prepare for undertaking public cremation.

How Typhoid Fever is Spread.

At the St. Helens Police-court on the 11th inst. a farmer was summoned for failing to furnish the Corporation with the names and addresses of his customers, infectious disease having been attributed to milk supplied by him. The facts were that at the beginning of last week the medical officer of health received seven notifications of cases of typhoid fever, and found on inquiry that all had been supplied with milk from the defendant's farm. The usual notice was served upon him requiring him to give a list of his customers, but he failed to do so. His solicitor, however, furnished a list on his client's behalf, and on undertaking to pay the costs the charge was withdrawn. It was stated that the defendant himself was now laid up with typhoid fever, the fever having been most probably caused by the filthy state in which his premises were kept.

Lord Derby and the Infirmary for Children.

Following a time-honoured custom, the Right Hon. the Earl of Derby, the newly elected Lord Mayor of Liverpool, attended Divine service at St. Peter's Cathedral Church on Sunday, when a sermon was preached and a collection was made on behalf of the Bluecoat Hospital, the oldest city charity. Following a more recent but well-established custom, his lordship also visited the Infirmary for Children, being accompanied by Lady Derby, and visiting all the wards, attended by members of the committee and of the medical staff.

Nov. 12th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary, Newcastle-upon-Tyne.

AT a quarterly court of governors held in the above-named institution on Thursday, Nov. 7th, Miss Emily Aston was appointed matron; Mr. Page was reappointed surgeon for a further period of fifteen years; Mr. Morrison, assistant surgeon; Mr. Markham, dental surgeon; and Professor Bedson, analytical chemist—each for a further period of seven years. Dr. Drummond resigned the office of pathologist, which he has held for fifteen years, and was cordially thanked for his valuable services. The deputy mayor, who was in the chair, announced that the income for the year up to the present date showed an increase of £1283, and that there was a balance in favour of the institution in the banker's hands. This is quite an unusual financial position for the infirmary to occupy at this time of the year. A most significant and gratifying fact is the marked increase in the subscriptions from the workmen. Their contribution, so far, amounts to £2000, being an increase of nearly £500. The workmen are fully represented on the committee of management, and take a very active part in the administration of the infirmary. The committee has been enlarged; the workmen will in future send twelve representatives, and the city council two. The members of the consulting staff are also made members of the committee, and these additions raise the number to thirty-seven, a somewhat large body.

Mayor's Sunday.

Yesterday, being the first Sunday after Nov. 9th, the mayor, sheriff, aldermen, magistrates, and councillors, according to custom, went in state to St. Nicholas' Cathedral, Newcastle-upon-Tyne, where the Rev. Canon Gough, the vicar, preached a sermon in aid of the medical charities of the city—an eloquent and scholarly sermon to which it was an intellectual treat to listen. It is sincerely to be hoped Canon Gough may preach on many similar occasions, but the translation of the late vicar, Canon Lloyd, to the Bishopric of Thetford, warns us that we may not be able to keep amongst us our present able and eloquent vicar. Formerly the whole of the offertory on Mayor's Sunday used to be given to the Infirmary, but in the year 1870 the Hospital Sunday movement was adopted in Newcastle, and since then there has been a common fund for the medical charities. Nearly £90,000 have been raised by the Hospital Sunday Fund during the twenty-five years of its existence, and a special appeal having been made this year it is anticipated the yield will be larger than on any former occasion.

South Shields: a Good Example.

On the occasion of the election of the new mayor at South Shields the retiring mayor, Alderman R. Redhead, handed to his successor, Councillor John Bowman, a cheque for £105, saying, "Before the completion of his year of office as mayor he should like to do something towards an extension of the Ingham Infirmary at South Shields."

Children in Workhouses.

There are some 500 Roman Catholic children in workhouses in the north of England. With a commendable anxiety for the betterment of these children, a bazaar on an extensive scale was held last week in Olympia, the largest public building in Newcastle-upon-Tyne. The object is to raise money with which to build homes, where, under Roman Catholic influences, these children may be trained and educated. The feeling that this is a better way of bringing up children than in a workhouse is not confined to Roman Catholics, for upon the bazaar committee, in addition to the names of many influential Roman Catholics, are those of some well-known Protestants. When the Protestants follow so good an example and make an effort to remove their children from workhouses, no doubt the Roman Catholics will in like manner lend their aid—one good turn deserves another. The bazaar was closed on Saturday night by the right worshipful the Mayor, Mr. Riley Lord, and the sheriff, Mr. G. Harkers, this being their first public function since their election. It is announced that a sum of some £3000 has been raised by this most successful effort.

The Durham College of Science.

This college continues to thrive at Newcastle, and many gratifying pieces of intelligence are contained in the principal's report just issued. The number of students taking regular courses and giving their whole time to the college during the past year has increased and reaches the respectable figure of 219. The total number of students, day and night, male and female, last year was 1370, and there has been a considerable increase in the number of students presented at the University of Durham for the A.Sc. and B.Sc. degree. To finish this magnificent college, and there is certainly no finer in the United Kingdom, some £40,000 are required, and it is to be hoped that at no distant period this somewhat large sum of money will be forthcoming and the valuable educational institution, so ably presided over by the energetic principal, Professor Gurney, completed.

Ill-treatment of Children again: Exemplary Punishment.

At the instance of Inspector Appleton, the vigilant officer of the Society for the Prevention of Cruelty to Children, a labourer named Harken was last Friday brought before the Newcastle-upon-Tyne magistrates charged with cruelly ill-treating two of his children by kicking them. The inspector stated "the boys were in a most shocking state." The chairman said "the case was one of the most grievous he had ever had before him," and sentenced the prisoner to six months' hard labour. What will become of these unfortunate boys and the three other children while their father is being clothed and fed and housed at the public expense during the winter? It is to be feared they will have to live on their

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mother's scanty earnings, which means that they will be ill-fed, ill-clothed, and ill-housed. Had the law allowed it, the court might have awarded Harken a sound flogging, a punishment he richly deserves, and one which would go far to deter other parents from kicking their children till their bodies are covered with bruises.

Death of Mr. W. C. Blackett.

At Ripon, last week, at the age of sixty-four, died a much-respected member of the medical profession, Mr. W. C. Blackett, M.R.C.S. Mr. Blackett practised in Durham and took a leading part in city matters. In 1888 he was elected mayor of Durham. The *Newcastle Daily Chronicle*, in a notice of his career, says: "We do not think that any other mayo of the present generation did such signal service to the city as Dr. Blackett, for it was mainly and in a very large degree owing to his efforts that the railway extension from Sunderland to Durham Elvet was brought to a successful issue."

Newcastle-upon-Tyne, Nov. 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medico-Chirurgical Society.

THE opening meeting of this society for the winter was held on Wednesday of last week. A few patients and specimens were shown, and thereafter the valedictory address of the President, Dr. Clouston, was read by the Secretary. Dr. Clouston, although recovering, is still forbidden to perform any public duties. An abstract of the address and account of the meeting is given elsewhere. Dr. Argyll Robertson was elected President, in succession to Dr. Clouston; Dr. James Carmichael was elected a Vice-president; and Dr. Graham Brown was appointed Secretary to succeed Dr. Gibson, who resigned; Dr. Hodsdon was reappointed Senior Secretary, and Dr. McKenzie Johnston Treasurer.

Glasgow Pathological and Clinical Society.

At the November meeting of this society the following cases and specimens were submitted. Two children the subjects of sporadic cretinism, one of whom had greatly improved under treatment by thyroid extract, as was evident by comparing photographs of her original condition with her present appearance, were shown by Dr. G. S. Middleton and Dr. R. Barclay Ness. Dr. Finlayson gave an account of a case in which cancer of the lung had been followed by enormous secondary developments in the liver, which weighed nearly twenty pounds; specimens from the case were submitted to the society. Dr. Ebenezer Duncan showed the thoracic viscera from a case in which pericarditis had been associated with pleurisy and thrombosis in the left subclavian vein.

Glasgow University.

The autumn graduation ceremony took place on the 8th inst. Amongst the graduands were twenty-four gentlemen who received the degrees of M.B. and C.M., and ten the higher degree of M.D. Amongst the latter the following were awarded "commendation": Geo. H. Edington, M.B., C.M. (thesis: Bile Salts in relation to the Excretion of Urea); A. Davies Hughes, M.B., C.M. (thesis: Anchylostomiasis); and Hamilton C. Marr (thesis: Myxœdema and the Functions of the Thyroid Gland, with notes on the Treatment of certain Cases of Insanity by Thyroid Preparations).—At the inaugural meeting of the Queen Margaret Medical Club Professor McKendrick demonstrated a series of experiments in Acoustics, the members meeting for this purpose in the physiological laboratory.

New Nursing Homes.

The Royal Scottish Nursing Association has established a branch at Dumfries.—The honorary presidency of the newly-formed nursing association for the Irvine district has been accepted by the Countess of Eglinton and Winton.

Defying the Medicine Stamp Act.

A chemist and druggist in Glasgow has, at the instance of the Inland Revenue authorities, been fined £42 for selling "corn solvent" without a Government stamp on the package. The same individual was on a former occasion penalised to the extent of £70 for a similar offence.

Nov. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Dublin University Election.

MR. LECKY, who is one of the candidates for the Parliamentary representation of the University, has written asking for information in reference to the grievances of the Irish Poor-law medical officers. Sir William Stokes, a past-president of the Irish Medical Association, stated in his reply that so far as the medical profession went there was a practical unanimity on the subject, especially as to the desirability of establishing retiring allowances or pensions for those members of the service who were incapacitated from doing their work by age or infirmity. After considering the matter Mr. Lecky has declared himself in favour of the proposed remedial legislation. "I fully recognise," he says, "the grievance, and shall be glad if I can do anything towards procuring retiring pensions for old and incapacitated Poor-law medical officers, and generally remedying any grievance under which Irish medical men may labour."[1]

Sir W. Thornley Stoker.

The dinner which was given by about 150 of the professional friends of the President of the Royal College of Surgeons of Ireland was held at the College on Nov. 2nd, and proved a very great success. The use of the large hall of the College was specially voted by the Council for the purpose, but proved insufficient to accommodate the large number of medical men who wished to avail themselves of the opportunity of congratulating the President on his receipt of the honour of knighthood.

Notification of Infectious Disease.

The case of Mason *v.* Hadden is again at hearing in the Exchequer Division, before the Lord Chief Baron and Mr. Justice Andrews. An application is now being made on the part of Dr. Hadden for an order to set aside the former verdict, by which the plaintiff was given damages of £100 for the alleged negligent treatment of a girl in his employment. The case is of great interest to the medical profession, and the result of the appeal will probably have far-reaching consequences.

Hospital Sunday in Dublin.

Last Sunday, Nov. 10th, was Hospital Sunday in Dublin, and eloquent sermons were preached in many of the churches in the city. In the Chapel Royal an anthem, composed for the occasion by Dr. Culwick, was sung by an augmented choir, while the sermon in aid of the collection was preached by the Dean. The returns have not yet been made out, but it is feared the inclement weather of Sunday may seriously and injuriously affect them.

The Private Hospital Case.

This case, which caused so much interest in Dublin some months ago, has been again at hearing during the past week in the Appeal Court, before the Lord Chief Justice, Lord Justice Fitzgibbon, and Lord Justice Walker. An attempt is now being made to set aside the order made by the Vice-Chancellor in April, granting an injunction by which the defendants have been restrained from carrying on the business of a private hospital in the house, 28, Fitzwilliam-square. The case is still being argued.

Application of the Sixty-five Years of Age Rule to Queen's College Professors.

A remarkable development of the attempt to apply the age limit to presidents and professors of the Queen's Colleges has taken place. Your readers are aware that the first step on the part of the Government was to inform the authorities of the Colleges that for the purpose of applying the rule the Colleges would be regarded as departments of the Civil Service, and that presidents and those of the professors whose incomes were over £350 a year should resign on reaching the age of sixty-five, unless it could be shown that their retirement would be prejudicial to the public service, and that in any case they should retire absolutely at the age of seventy. This innovation was strenuously and for the time being successfully opposed. President Moffett of Galway was compulsorily retired, but owing to the strong representations made the late Government referred the whole question to the Lord Chancellor of England. His decision was in favour of the

[1] The letter itself will be found in another column.—ED. L.

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contention of the Colleges, and President Moffett was duly reinstated. So pleased were the students and people of Galway at the result that they turned out in large numbers and gave President Moffett a royal welcome on his return to the College. Meantime the Treasury officials would seem to have been occupied devising means for ignoring the charters of the Colleges with regard to all future appointments, and whilst the controversy was occupying public attention all new arts professors appointed received warrants in which a clause was inserted requiring them to retire at sixty-five years of age if called on to do so, and even as good terms were not meted out to new medical professors. They were simply appointed for seven years and would have to take chance as to whether they would be re-appointed at the end of that period. Not satisfied with those arrangements, the Government issued a departmental commission, consisting of Lord Playfair, Lord Welby, and Sir Mathew White Ridley, "to consider the desirability of a fixed age for the compulsory retirement of professors serving under the Crown." The commissioners reported: "We are of opinion that when a professor reaches sixty-five years of age the president of the College should be bound to report to the Government the condition and efficiency of the teaching. If these are and continue to be satisfactory, the professor need not be superannuated till seventy, but at this age his retirement should be absolute." Some of the witnesses urged on the commissioners the importance of all the medical professors being granted pensions on the same terms as the arts professors, but the commissioners urged that they could not entertain that matter, as it did not come within the scope of their inquiry. As the result of the report of the commissioners the Lord-Lieutenant has communicated to the three colleges his intention of altering the statutes of colleges so as to adopt the recommendation of the commissioners quoted above. I believe it is the intention of the professors of the colleges to send a deputation to his Excellency on the subject, for the purpose of pointing out how hostile to the interests of the colleges the proposed changes must prove to be. The great majority of the professors hold their appointments "at the pleasure of Her Majesty," a phrase which has always been interpreted as meaning that a professor could hold office as long as he is capable of discharging his duties efficiently. The professors rightly think the Crown ought to show a good example to the subjects of these realms by observing solemn contracts of the kind. But what can be said with regard to those of the medical professors who, owing to their being allowed to take private practice, are not entitled to pensions? Are the contracts with them not only to be broken, but are they to be dismissed at a definite age without any recompense whatsoever? Such treatment of a rural postman would be condemned by the public, and it is to be hoped public opinion will equally condemn any attempt at doing an injustice to the medical professors of our colleges.

The Prescribing of Medicines by Druggists.

At an inquest held in Belfast on Nov. 5th in reference to the death of a child aged two years it came out in the evidence that the mother, finding the child was suffering from whooping-cough, asked a druggist for something to relieve the cough. He gave her a bottle and told her to put flannel and wadding on the child and to take it to a medical man. She was to rub the contents of the bottle on the child's chest, which she did. The father of the child, in his evidence, said the druggist told him he would not prescribe for the child, and that the whooping-cough would have to take its course. The child was not taken to any medical man. The coroner, in summing up, said he would report the case to the Attorney-General or the Commissioner of Police and allow them to investigate the matter. He commented on the action of druggists in the city, who were not properly qualified, prescribing medicine, and he thought the Act of Parliament with reference to the matter was a dead letter as far as Belfast was concerned, and he considered that those who should see that the Aot was carried out were neglecting their duty. In their verdict the jury strongly condemned the action of any chemist, druggist, or other persons prescribing medicines for the sick poor. At the opening meeting of the Ulster Medical Society, on Nov. 7th, attention was drawn to the above remarks of the coroner, who has always shown himself most friendly to the medical profession, and it was unanimously decided to refer to the council of the Society the consideration of this growing evil of prescribing and advertising druggists in Belfast. The Council is to bring up a report at a future date before the society, when it is certain that the whole subject will be fully discussed.

The Treatment of Rabies.

The Newry guardians having sent some persons to a man named McGovern for treatment (they having been bitten by rabid dogs), the Local Government Board have written pointing out that McGovern's residence is not a hospital within the meaning of Section 7 of the Act 25 and 26 Vict., cap. 83. If any expenditure from the union rates is contemplated with cases of persons bitten by a rabid animal an extraordinary meeting of the guardians will have to be summoned. It was finally decided by the board of Newry guardians not to pay McGovern's bill until it should be seen how the patients got on.

The Ulster Medical Society.

The first meeting of the Ulster Medical Society for the session 1895-96 was held on Nov. 7th, when the incoming president, Professor Sinclair, F.R.C.S., delivered before a crowded audience of the profession his inaugural address. After thanking the members for the great honour they had done him, all the more appreciated by him as it was unanimous, Professor Sinclair took as his subject the relationship between medicine and surgery in diseases of the Chlyo-poietic Viscera. He discussed the treatment of ulcer, dilatation, and cancer of the stomach, diseases of the intestines, appendicitis, &c., and gave a most judicious, suggestive, and practical address. At its termination he was awarded a very hearty vote of thanks, proposed by Dr. McKeown, and seconded by Professor Byers. The council have decided to hold the annual dinner on Nov. 28th, when it is expected there will be a very large attendance.

The Night Nursing in the Lisburn Workhouse.

An inquest was held in the Lisburn Workhouse on Nov. 11th in reference to the death of a man aged fifty, who was found dead in his bed on the morning of Nov. 10th. He had been sent into the infirmary by Dr. Alexander of Knocknadona Dispensary, suffering from intestinal obstruction. He arrived between three and four o'clock P.M. on the 9th, and was seen by the nurses in charge at different times, but the medical attendant at the workhouse was not sent for. It came out in the evidence that there is only one night nurse, who is about sixty years of age, and she has charge of seven wards containing between sixty and seventy patients. The jury added a rider to their verdict calling the attention of the board of guardians to the inadequacy of the night nursing. Dr. Mackenzie (medical attendant of the workhouse) said that before his appointment there was no night nurse. The present night nurse came to the workhouse as a scrubber, and he recommended the guardians to appoint her, but he could not say he looked upon her as a competent nurse, and he thought the jurors were quite justified in appending the rider they did.

Royal Hospital Sunday.

At a special meeting of the clergy it was decided that the second Sunday in February be Hospital Sunday for the time to come in Belfast. There are in the city of Belfast 138 congregations, and only 58 of these made a collection for the Hospital last year. It is hoped many more, if not all, will make a collection this year.

Nov. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Foreign Practitioners in Paris.

FROM an analysis of the last census, published recently by M. Bertillon, it appears that the profession that attracts the most foreign votaries to Paris is that of medicine. There are, in fact, established in this city no fewer than 521 foreign medical men. This figure constitutes rather more than a sixth of the total number (2922) of Paris practitioners. The number of foreign residents in Paris being 180,000, the proportion of foreign medical men to foreigners is about 3 per 1000, whereas that of French practitioners to the strictly Parisian population is only 1 per 1000.

A Monument to Pasteur.

The administrative council of the Pasteur Institute, at a recent meeting, presided over by M. Bertrand, Permanent Secretary of the Académie des Sciences, decided to appoint a subscription committee, with a view to the erection of an international monument to perpetuate the memory of Louis Pasteur.

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Medical Ministers.

In this land of political instability, where a Cabinet Minister may awake and find himself one fine morning suddenly relegated to the enjoyment and freedom of private life, it is perhaps gratifying to find that our French *confrères* who mix in politics frequently advance themselves into the front rank. Thus in the Ribot Ministry, lately defunct, there were two members who could write M.D. after their names. The present Ministry also has two medical men in its ranks—viz., Dr. Viger and Dr. Combes. Dr. Viger is, indeed, becoming quite "an old Parliamentary hand," having already exercised twice his present functions of Minister of Agriculture. He is, I believe, a most competent authority on things agricultural, and his energy in visiting country districts must be highly appreciated by farmers. Dr. Combes, when the Ministry was in the first throes of construction, held for a few hours only the portfolio of Public Works; but he has since assumed the duties of Minister of Public Instruction. We may almost count M. Berthelot, the eminent chemist, and now Minister of Foreign Affairs, as one of our own body. In the last Ministry of which he was a member he was a Minister of Public Instruction. By the way, Caran d'Ache has a most amusing series of caricatures in one of the daily papers. In them are illustrated in his usual comic manner the contortions of various foreign diplomats at a dinner given by the new Foreign Minister. The last caricature supplies an explanation of the horrible sufferings of the guests. M. Berthelot's cook had unwittingly made use for culinary purposes of pans, &c., that had been until quite recently doing duty in his eminent master's chemical laboratory.

Experimental Congenital Malformations.

MM. Charrin and Gley[1] have for the last five years been conducting in the country a series of experiments calculated to throw light on the influences of viruses on the offspring of the recipients. The experiments have been varied in such a way that either the male and female have been inoculated with the bacillus of blue pus or of its toxines, or only one of the animals has been inoculated. The results have not been uniform; most frequently there ensues sterility, abortion, or the birth of progeny that dies immediately. In rare instances the offspring survive; more rarely still they are healthy. Until recently fœtal deformities have not been noted, although certain rabbits born in these conditions remained dwarfed, and the bones of these undeveloped animals were provided with enormous epiphyses, the diaphyses being shortened. MM. Charrin and Gley are now, however, able to speak with authority on the malformatory power of cultures. They showed two rabbits born of a couple of which the male alone had received inoculations of sterilised cultures. Five rabbits were born, of which two were normal, and a third, whose ears were rudimentary, died in a few days. In the remaining two now shown to the Academy the ears comprised only fragments with jagged upper edges; the tails are only 2 centimetres long; the external orifice of the vagina (one rabbit is a male and the other a female) is oblique; and one of the limbs, the hinder in the male and the fore in the female, is much shorter than its fellow, the difference being 4 centimetres. The shortened limb ends in a kind of stump, there being no proper foot or toes. It is interesting to notice the analogy between the degenerative effects of these cultures and the syphilitic virus, even when only the male progenitor is under its influence. The experiments go to prove that there is no special transmitted influence inherent in the virus of syphilis, seeing that other poisons have identical effects on the offspring. The experiments further elucidate the problem of heredity, and demonstrates the influence on the progeny of the modified cell, whose attributes are thus transmitted to the next generation.

Nov. 12th.

[1] Académie des Sciences, Nov. 4th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Admission of Women to Medical Examinations

ACCORDING to an article by Mrs. Bluhm, M.D., published in the *Deutsche Medicinische Wochenschrift*, there are only seven female medical practitioners in the whole German Empire, of whom four are in Berlin and one respectively in Munich, Leipsic, and Frankfort. Some of the ladies are in good practice. They are, however, not permitted to take German degrees, but they have to go abroad—usually to Switzerland—for the purpose of graduation. From a legal point of view their diploma is of no value, and they are nominally unqualified, but they are nevertheless allowed to attend patients, as unqualified practitioners are not interfered with unless they pretend that they are in possession of legal diplomas. As I explained in my article on "Medical Study in Germany," which appeared in THE LANCET of Sept. 14th, 1895, it is only pupils of the gymnasia who are allowed to become medical students; and before going to a university they have to pass the *Abiturienten-Examen*. Hitherto there has been no gymnasium for females, and therefore the university portals have been closed to all ladies who could not afford to go abroad. A gymnasium for females has, however, now been established by private means in Berlin, and possibly its pupils will be allowed to pass the prescribed *Abiturienten-Examen*. Moreover, by special order of the Minister of Public Instruction a young lady who applied for examination at the Liegnitz gymnasium has lately been admitted, and she will probably be the first recognised female medical student in this country. During last Parliamentary session the same Minister stated that the Government was considering the conditions under which ladies could enter on an academical career, and the advocates of the higher education of women are accordingly full of hope.

Poisoning by Phenylhydroxylamine.

The following case is described in the *Deutsche Medicinische Wochenschrift* of Oct. 14th by Dr. Hirsch and Dr. Edel, physicians to the Municipal Hospital of Charlottenburg, Berlin. A student of the technical academy, while working in the chemical laboratory, broke a bottle containing an alcoholic solution of phenylhydroxylamine (C_6H_5NHOH), which saturated his clothes and flowed over his abdomen and the inner side of his thigh. He felt at once an intense burning of the skin and retired to the lavatory to apply a cold-water bandage. About fifteen minutes afterwards he was found there in an almost helpless condition, being comatose and pulseless, with stertorous respiration and no reflexes of the cornea or pupils. When he was brought to the hospital the physicians believed him at first to be moribund. The alteration in the colour of the skin was very singular. The lips and mucous membrane of the mouth were greyish-blue, and the skin of the extremities was of an intense blue colour, which contrasted peculiarly with the cadaverous aspect of the other regions. There were also numerous reddish-brown spots on the hands, thighs, and abdomen, which did not disappear on pressure with the finger. Respiration was deep and regular, but the cardiac action was extremely weak. Injections of camphor, a hot bath, and other excitants having no visible effect, venesection was performed, and 300 c.c. of dark-brown, chocolate-like blood were drawn off. An intravenous injection of one litre of a solution containing 0·3 per cent. chloride of potassium and 0·4 per cent. bicarbonate of potassium was given immediately afterwards, whereupon the pulse and respiration rapidly improved, and the patient in course of time regained consciousness. He vomited a large quantity of brown-coloured mucous fluid. During the first hours no urine was passed, and the catheter had to be used; the urine thus evacuated contained much albumin and a rather large quantity of casts. During the first day the skin retained its peculiar colour. The patient passed a comfortable night, and on the following day, though still very weak, he felt quite well. The pulse became better, the urine was voided spontaneously, and the albumin and casts disappeared on the following day. The lips were now of a pale-rose colour, the skin was very pale, and on the third day the normal aspect was restored. The patient soon recovered and was able to leave the hospital. Microscopical examination of the blood proved that the form of the red blood-corpuscles was not changed, but that the hæmoglobin had almost completely left them, and the spectroscope showed that the hæmoglobin was altered into methæmoglobin, to which was due the brown colour alike of the blood, the vomited matter, and the little spots on the skin. The case is very like one of poisoning by nitrobenzol, from which phenylhydroxylamine is derived. The alterations of the colour are characteristic of both drugs, but nitrobenzol never acts as quickly as the other. In the cases of nitrobenzol poisoning hitherto described the full toxic action

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did not appear before one or two hours; but in the present case the patient was in a helpless state in fifteen minutes, the poison having been absorbed by the skin only and not by the stomach. The characteristic smell of oil of bitter almonds was also absent. Phenylhydroxylamine is, therefore, a violent poison, which rapidly acts on the blood, the heart, and the kidneys.

New Regulations for Private Lunatic Asylums.

The irregularities in private lunatic asylums which were disclosed by the Mellage trial, mentioned in THE LANCET of June 15th, 1895, and some other serious charges made by the lay press against these institutions, have induced the Government to issue new regulations, the principal feature of which is that no patient may be received into an asylum without a certificate from the medical officer of health of the district (Kreisphysicus). In cases of emergency any other physician may give this certificate, the district officer of health being informed of the fact within forty-eight hours, so that he may examine the case and decide whether the patient shall remain in the asylum or be released. Notice is also to be given to the district court of law in order that the formal "declaration of insanity" (Entmündigung) required by the civil law may be executed. For the release of violent lunatics the consent of the district medical officer is required, and he is responsible for his decision. No medical man may in future superintend an asylum unless he possesses a special knowledge of lunacy. In every asylum containing more than fifty patients a resident physician is to be appointed; if there are more than a hundred patients a second resident medical man is required. The proprietor of the asylum, if he is not himself a medical man, may not exercise any authority in medical questions. Asylums are to be inspected without previous notice twice a year by the district officer of health, and once a year by the Visiting Commission, consisting of medical men and lawyers. It is doubtful whether public uneasiness will be allayed by these regulations, for some of the most serious charges were made not against private but against public asylums, and to these the regulations do not extend.

Attempted Murder of a Medical Officer by a Lunatic.

Dr. Schäfer, chief medical officer of the provincial lunatic asylum at Lengerich, Hanover, was recently, during his morning visit, attacked in the wards by a patient and seriously wounded in the neck with a knife. It is not yet certain if Dr. Schäfer's life will be saved.

Nov. 13th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Red Cross Extension.

RATHER more than two years ago a Congrès International de Samaritains was in contemplation with the object of extending to civil calamities the organisation and resources of the Red Cross for military ones. The project had many sympathisers and supporters not only in the lay but in the professional journals. THE LANCET of Sept. 2nd, 1893, took part in the discussion and asked very reasonably: "Is it only in war that men are injured *en masse*, that human life is endangered so as to require immediate succour on an unforeseen scale, that villages and even towns are visited by disaster, social as well as physical, that in a night or in an hour whole populations may be made homeless or subjected to frightful privations? Are there no such things as mining accidents, as earthquakes, as inundations, as famines, as epidemics, as long-continued cold or heat, or conflagrations, or the thousand and one casualties by which the one-half of a city or countryside may be suddenly thrown on the active sympathies and benevolent aid of the other?" To such questions the answer was all too immediate, but the mode of meeting the situation they pointed to was not so easily settled. The utilisation of the Red Cross Societies, local and central, at first seemed a ready way out of the difficulty, but the proposal was met by the determined opposition of the magnates of the Red Cross itself—nowhere more than at its headquarters in Geneva. The civil communities, they practically said, must look after their own "wounded" and expect no reciprocity of aid from a service which is constituted solely to mitigate the horrors of war. So effective was this opposition that the contemplated Congress, whose seat was to have been Vienna, never met at all; but, nevertheless, the discussion which grew out of the proposal was not without its fruits. Italy, which justly claims priority in the conception, if not the actuation, of the Red Cross, had already taken the initiative in the direction desiderated; and her White Cross, instituted tentatively some seven years before, assumed fresh life and energy from the renewed ventilation of "How to relieve the sufferers in that social warfare ever waged between man and circumstance." Some account of the development of this movement, particularly in Upper Italy, was given in these columns as recently as Oct. 19th, and to-day I have to add a further indication of the vitality it is exhibiting. This month, in Rome herself, there has been opened an "arruolamento" (enrolment) of fifty "volontari sanitari" for service under the White Cross, subject to the conditions laid down in the "Statuto" of the society. After an "alunnato" (pupilage) of six months these sanitary volunteers will be entitled to enrolment in the effective "Corpo dei Volontari," and will enjoy all the rights of the society, including those of the "Cassa di Previdenza" (mutual relief fund). The uniform of the volunteers, an effective garb of cloth and linen (*panno e tela*), is furnished gratuitously from headquarters, and a number of privileges are attached to the service, which, besides its humanitarian attractions, must tend to recruit its ranks from honourably aspiring citizens. Full particulars of the organisation and objects of the White Cross, for all who are interested in the movement, may be obtained from the Secretary, at the society's headquarters in Rome, Via delle Zoccolette, No. 62.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Russian Medical Societies.

THE number of medical societies in Russia is considerable, and is constantly being added to. Seven years ago there were only 80 such societies, now they number some 120. There is scarcely a town of any size or importance which does not possess one at least. In Moscow there are eleven; in St. Petersburg sixteen; the Caucasus has its Imperial Caucasian Medical Society, founded in 1864 and meeting two or three times a month in Tiflis, as well as three lesser societies; the Terek Medical Society in Vladikavkaz (the capital of the Northern Caucasus) founded in 1891; the Medical Society in Kutais, a year younger; and the Society of Medical Practitioners in Baku, instituted only last year. Even Siberia possesses eight medical societies. The oldest of these, the Society of Medical Practitioners in Eastern Siberia, meeting in Irkutsk, dates from 1863, although it had existed unofficially for five years before that date. In 1864 the Physico-Medical Society was formed in Tobolsk; eight years later the Society of Vladivostok Naval Surgeons came into existence; in 1883 the Omsk Medical Society; in 1886 the Society of Practitioners in the Yenisei Government, meeting in Krasnoyarsk; in 1889 the Society of Biologists and Medical Practitioners in the University of Tomsk; in 1892 the Society of Medical Practitioners in the South-Ussuri region, meeting in Vladivostok; and, finally, in the same year the Transbaikal Medical Society was inaugurated in far-away Tchita, close to the Mongolian borders. The oldest institution of the kind in European Russia is the Physico-Medical Society in the University of Moscow, dating from 1804. Only one year younger is the Imperial Vilna Medical Society, instituted when Vilna still possessed that University of which she was forcibly deprived later as a punishment for the part she took in the famous rebellion of 1833. Another Polish society, the Warsaw Medical Society, can boast a respectable age, dating back to the year 1821. In St. Petersburg the oldest is the German Medical Society, the Deutscher Aërztlicher Verein, formed in 1819. Last session this society had but 6 honorary and 25 ordinary members. Many times larger is the Society of Russian Medical Practitioners, numbering 70 honorary and 230 ordinary members, founded in 1833, and now under the presidency of Professor Popof. This, it may be noted in passing, is one of the very few medical or other learned societies whose date of foundation falls within the thirty years of the Emperor Nicholas's reign (1825-56). During that reactionary period all intellectual initiative was sternly discouraged. Only two other medical societies—

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one in Kief (1840) and one in Odessa (1849)—date from his reign. The failure of the Crimean War and the death of Nicholas were followed by a revival of intellectual activity and freedom of thought. A number of medical societies still existing were founded in the late fifties and early sixties. Of these may be mentioned the Society of Naval Surgeons in St. Petersburg, instituted in 1858; similar societies in Cronstadt and Nikolaef in 1859; the St. Petersburg Society of Medical Practitioners and the Society of Russian practitioners in Moscow in the same year; and societies founded in Nijni-Novgorod, Kharkof, and Yaroslav in 1861; in Tula and Kursk in 1862; in Archangel, Mogilef, and Orel in 1863; and in fifteen other towns between the last-named date and 1870. Many of these early societies had dispensaries attached to them for the free treatment of the poor, and were quite as much philanthropic institutions as learned societies. This is the case even to the present day with some Russian medical societies. Two other peculiarities of, at least, some Russian societies are worth mention: these are the admission of the lay public to the meetings, and the appearance in the lay press of reports of the societies' discussions. The advantage, or propriety, of these practices is strongly questioned by some members, even of societies in which they prevail. The annual subscription to Russian medical societies varies considerably—the lowest is 3 roubles,[1] the highest (that of the Moscow Surgical Society) is 25 roubles; either 5 or 10 roubles is the usual subscription. Almost all Russian medical societies publish their Transactions (*Protokolui* or *Trudui*) annually, or more often in paper-covered volumes.

Prevalence of Infectious Disease in St. Petersburg.

There has been an unusual prevalence of zymotic disease in St. Petersburg during the past few weeks. The municipal authorities have hospital accommodation for 2570 patients, but at the present moment they have no less than 3258 cases on their hands, of which some 1500 are said to be suffering from typhoid fever. Scarlet fever and diphtheria are also unusually prevalent. To provide for the excessive influx of patients the authorities have converted an unoccupied building which was at their disposal into a temporary hospital, to which cases of more or less chronic character have been removed.

The Force of Example in Suicide.

The "infectiousness" of certain forms of suicide is well known, and has been curiously illustrated recently in this city. In the month of September three young girls threw themselves from high windows on to the pavement intending to kill themselves. It is a remarkable fact that though one threw herself from the third storey, one from the fourth, and one from the fifth, all have recovered from their injuries. These were naturally severe, including fractures of the wrists, legs, and jaw and concussion of the brain. The youngest of the would-be suicides was aged twelve and the eldest nineteen.

The Proposed Changes in the Russian M.D. Degree.

With regard to the proposed changes in the Russian M.D. degree, the statement in my last letter[2] that the Medical Council had decided to make those changes was rather premature. No final decision has yet been come to, and the scheme has been again referred to the Army Medical Academy, who will discuss it at a meeting to be held to-morrow.

St. Petersburg, Oct. 27th (Nov. 8th).

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

THE daily bulletin of yesterday gives the whole number of cases since the beginning of the outbreak as 584, and of these no less than 443 died. Since yesterday there have been 24 new cases to be added to 65 already under medical care, and 24 cases have died in the various ambulance hospitals, besides 28 deaths in private houses. News from some of the districts takes two or three days to reach Cairo, because of the absence of telegraphs. The cholera is still entirely confined to Damietta and to one neighbouring village, and to the province of Dakahlieh, in which there are several infected villages. The disease has not spread to the large towns in the vicinity, and the nearest distance from any infected area to Cairo is about 100 miles, or at least twelve hours by express train and steamer. I specially mention this because letters and telegrams are constantly arriving from England asking whether the cholera still exists and whether visitors may safely arrive. The disease, since it was first taken seriously in hand, has shown no tendency to spread during the last fortnight, and the increase in the number of cases is entirely due to the energy of the English medical men on the spot, who are searching out every possible case. In times of epidemic it is obvious that many deaths from ordinary causes are reckoned as cholera, but, on the other hand, the slight cases of the disease are not recognised, and therefore do not go to swell the statistics. It is obviously better that too many, rather than too few, of the doubtful cases should be officially returned as cholera. All observers agree that this outbreak, both clinically and bacteriologically viewed, is remarkably mild, and, in view of the energetic means taken for stamping it out, it must shortly cease to exist from lack of material. So long as it continues to slumber and to make no headway against the abundant and pure water-supply, and so long as it continues to be confined to its present localised area, where only the poorest inhabitants furnish victims, I see no reason why European and American visitors should not carry out their intention of coming to Egypt. The general health of Cairo and of the rest of Egypt, as shown by the death returns, was rather better last month than in the month of October of previous years. The resident families are all returning from Europe, and a considerable number of tourists have already arrived.

Cairo, Nov. 6th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Antitoxin as a Preventive of Diphtheria.

THE report of the New York Board of Health on the treatment of diphtheria with antitoxin, just published, covers the first nine months of the present year and the corresponding portions of the four preceding years. In 1895 antitoxin has been manufactured in the department's laboratory and has been extensively, though by no means universally, used as a remedy for the disease. In the preceding years it was, of course, not used. Statistics in the report show that in the four years before the introduction of antitoxin the percentage of cases of diphtheria terminating fatally ranged from 30·67 to 37·34, and averaged 34·63, while in 1895, under partial treatment with antitoxin, it fell to 19·43. That is, there was a reduction of the death-rate by 43·94 per cent. Had antitoxin been used, therefore, in the four preceding years with such effect as in 1895, more than 3000 lives would have been saved. A peculiar feature of the report is its statement of the enormous increase in the number of cases of diphtheria—or of diphtheria and croup, for the report covers both—during the last two years. In 1891 there were 3686, in 1892 4156, and in 1893 4721. The last was the largest number up to that date and showed the highest death-rate—viz., 37·34 per cent.; but in 1894, when antitoxin was being experimentally used, the number of cases rose to 7446, and the death-rate fell to 30·67, and in 1895, with the new remedy extensively administered, the number of cases rose still further to 7921, and the death-rate fell to 19·43. The only explanation of this would seem to be that since the introduction of antitoxin a great many children suffering from light and trifling attacks have been treated and reported as suffering from actual diphtheria. They have recovered as they would have done without antitoxin and thus have given that remedy credit which it does not deserve. This view is strengthened by the fact that the actual number of deaths during nine months of 1895 has been 1643, or only a trifle less than the average of the four preceding years, which was 1734.

Sanitary Management of Cholera in Japan.

A New York reporter gives the following account of the management of an outbreak of cholera in a village of Japan by the sanitary police. A large plain box lined with zinc was brought. The body was hastily placed in it, a liberal supply of quicklime was pitched in, the lid was screwed

[1] A rouble is equivalent to rather more than 2*s*.
[2] THE LANCET, Oct. 26th, 1895.

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down, and away the cart and its load went. Meantime disinfectants had been brought up. The poor wife and three children were divested of their scant clothing, hurriedly washed with some anti-microbe preparation, wrapped in fresh cotton kiminos, and sent to a place of care and detention in the neighbourhood. The work of burning every particle of clothing and bedding and matting then began in the back-yard, a bonfire being made for the purpose. Every particle of excrementory matter on the premises was thrown upon this blazing pile. Then the whole premises were thoroughly saturated with disinfectants of the most approved character, the house was closed, and a policeman was left in charge to keep the people off the premises. The officer in charge stated that if the epidemic had been showing a disposition to increase this house would have been burned to the ground. The scant furniture and belongings of a Japanese house of the poorer class enable the police to carry out their regulations at no very great cost. The latest figures officially touching cholera in Japan place the total number of cases to date at 48,129, and the total number of deaths at 32,848.

Report on Vivisection.

At a recent meeting of the American Humane Association there was a report of a medical committee which for several months has been engaged in sounding public sentiment in regard to vivisection. Over 2000 expressions of opinion were obtained from leading physicians, teachers in medical colleges, authors, clergymen, college professors, and presidents. Of these only about one-eighth were in favour of unrestricted experimentation upon living animals, the large majority being for absolute prohibition, or for such restrictions by law as should limit vivisection to painless operations or those having a definite relation to the treatment of human ailments. A preponderance of sentiment appeared to be favourable to a statement of opinion which declared "that only a great and definite advantage to the interests of humanity can justify vivisection at all," and which condemned as cruel and wrong "the infliction of torment upon living animals, simply to illustrate well-known physiological facts, or as a method of research into curious physiological phenomena which have no conceivable relation to the cure or treatment of disease."

Important Order of Government in relation to the Exportation of Meats.

The Secretary of the Interior has issued the following order:—"It is ordered that from and after Sept. 16th, 1895, all beef offered for exportation, whether fresh, salted, or canned, corned or packed, shall be accompanied by a certificate showing that the cattle from which it was produced were found free from disease, and the meat sound and wholesome, by an inspector of this department. And in order that it may be determined whether all beef exported has been so inspected and found to be sound and wholesome it is further ordered that the meat of all other species of animals, which for any reason does not bear the inspection tags and stamps of this department, shall be packed in barrels, cases, or other packages, which are legibly marked in such a manner as to clearly indicate the species of animal from which the meat was produced. Meat which is not so marked, and which is not accompanied by a certificate of inspection, will be classed as uninspected beef, and will not be allowed exportation. Notice is hereby given to all exporters of meat, whether said meat is fresh, salted, corned, packed, or otherwise prepared, and to owners and agents of vessels upon which said meat is exported, that no clearance can be given to any vessel having on board said meat until the provisions of this order are complied with."

Oct. 26th.

FOOTBALL CASUALTIES.—Last week the following accidents occurred:—In a match, at Chichester, between two local junior clubs, the left forward of one of the teams fractured his left clavicle. While playing against the Weston-super-Mare team, the Bristol wing three-quarters fractured his nasal cartilage. During a game, at Langton, Staffordshire, a youth received injuries from which he died a few days later. In a match between the Addlestone and Guildford Reserve teams, the Guildford goalkeeper dislocated his humerus. On Saturday last, while playing in a Scottish League match at Greenock, the Renton Club centre half-back fractured his leg. A similar accident occurred to the right wing forward of Motherwell, and in another match a player of the Linthouse team fractured his clavicle.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council was held on the 14th inst., the President, Mr. Christopher Heath, being in the chair.

The PRESIDENT reported to the Council the proceedings at the annual meeting of the Fellows and Members, and stated that in addition to eighteen Members of the Council there were present forty-six Fellows and seventy-eight Members.

The consideration of the resolutions in favour of an Amended Charter was deferred.

The Council proceeded to the further consideration of the Memorial from the London School of Medicine for Women, and it was resolved that—

"The Council of the Royal College of Surgeons of England, although in favour of granting the petition of the officers and teachers of the London School of Medicine for Women, do not see their way to admit women to the Conjoint Examination in face of the adverse vote of the meeting of the Fellows and Members of this College and the expressed opinion of the Royal College of Physicians."

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on Monday, Nov. 11th, viz.:—

Henry Brunton Angus, L.R.C.P. Lond., M.R.C.S. Eng., University of Durham College of Medicine; Albert Edwin Hayward Finch, L.R.C.P. Lond., M.R.C.S. Eng., and Henry Talbot Sidney Areline, L.R.C.P. Lond., M.R.C.S. Eng., University College, Bristol; Robert Forsyth, M.B., R.U.I., Queen's College, Belfast, and Owens College, Manchester; Joseph Faulkner Dobson, Yorkshire College, Leeds; Herbert Alexander Bruce, Toronto University; and Howard Henry Congreve Dent, Masons College, Birmingham and St. Bartholomew's Hospital.

Thirteen gentlemen were referred for six months.

Tuesday, Nov. 12th:—

Albert Paling, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng., and Frank Mannington, Middlesex Hospital; Robert Earle Newton, M.B., M.S. Glasgow, L.R.C.P. Lond., M.R.C.S. Eng., Glasgow University and St. Bartholomew's Hospital; James Batterby, St. Mungo's College, Glasgow; John Mooney, Owens College, Manchester; James Midleton Graham Swainson, Westminster Hospital; Percy Edgar Tresidder, L.R.C.P. Lond., M.R.C.S. Eng., Guy's Hospital; and Evan Richard Frazer, London Hospital and Oxford University.

Twelve gentlemen were referred for six months.

Wednesday, Nov. 13th:—

Edwin Gilbert Emerson Arnold, L.R.C.P. Lond., M.R.C.S. Eng., St. Thomas's Hospital and Durham University; Cyril Wace, L.R.C.P. Lond., M.R.C.S. Eng., and Robert Macnamara Cowie, King's College, London; Harold Wilson Bruce, William Tayler Milton, Ferdinand Stanley Batchelor, Guy's Hospital; Thomas Caldwell Litler Jones, William Joshua Harding, and Egbert Coleby Morland, St. Bartholomew's Hospital; John Edwin Ford Palser, London Hospital; and Reginald Cecil Bligh Wall, London Hospital and Oxford University.

Nine gentleman were referred for six months.

The following are the arrangements for the Final Fellowship, for which forty-two gentlemen have entered their names:—

Monday, 18th.—Written Examination, 1.30 to 5.30 P.M., at Examination Hall.
Tuesday, 19th.—Clinical Examination, 2.30 to about 6.30 P.M., at Examination Hall.
Wednesday, 20th.—Operations, 1.30 to about 6 P.M., at Examination Hall.
Tuesday, 21st.—Surgical Anatomy, 2 to 4 P.M., at Examination Hall.
Friday, 22nd.—*Vivâ voce* Examination, 5 to 9.15, at Royal College of Surgeons.
Candidates will be required to attend on each of the above-mentioned days.

THE Duke of Westminster has forwarded a cheque for £600 to the Chester Infirmary, the amount of fees paid by visitors for viewing Eaton Hall.

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CHRIST'S HOSPITAL: PEEK'S PRIZE ESSAYS.—It will interest some of our readers to know that more than one hundred and twenty copies of the book, "The Christ's Hospital Controversy," have been applied for by intending competitors for these prize essays, recently advertised in our columns, and which are to be sent to Messrs. Causton and Sons, Eastcheap, before the end of the year.

UNIVERSITY OF OXFORD.—The Regius Professor of Medicine gives notice that both the examinations for the Degree of Bachelor of Medicine will commence at 10 A.M. on Friday, Dec. 6th, in the Examination Schools. The secretary to the Boards of Faculties will receive the names of candidates—either by letter or from the candidates in person—at his office in the Clarendon-building, Broad-street, at any time not later than 10.30 A.M. on Friday, Nov. 22nd.

THE BOROUGH HOSPITAL, BURTON.—The new Borough Hospital for Infectious Diseases, Burton, was formally opened on Nov. 6th by Mr. Parker, the Mayor. The site, which is freehold, contains an area of about nine acres, and is called Outwoods Hill Field, one of its sides forming the borough boundary. The buildings for the accommodation of patients comprise a scarlet fever pavilion and an isolation block. The former contains two wards, each 60 ft. long, 26 ft. wide, and 13 ft. high, providing space for ten beds, and having in addition a small room for a patient who may require separate accommodation. Twenty-two beds for scarlet fever are thus provided. The isolation block contains two wards of three beds each and two wards of two beds each, well isolated from each other, so that either cases of a doubtful nature or two different classes of infectious disease may be placed in them. The other buildings are (1) the administrative block, which is two storeys high, and contains the committee-room, dispensary, kitchen, linen room, and accommodation for the matron and nine nurses, besides the servants; (2) a block comprising the laundry, disinfecting room (with Washington Lyon's high-pressure steam apparatus), the mortuary, post-mortem room, &c.; (3) the discharged patients' bathroom; and (4) the entrance lodge. The Local Government Board has authorised the raising of a loan of £11,500, being the estimated cost of the nine acres of land and the buildings when finished.

THE SIXTH INTERNATIONAL VETERINARY CONGRESS.—The Sixth International Congress of Veterinary Surgeons was held at Bern, Switzerland, from Sept. 16th to the 21st, when some conclusions were arrived at with regard to animal diseases of a contagious kind, which have a particular importance now so much attention is directed to the subject. One of the subjects discussed was the necessity for instituting an international veterinary sanitary service and the publication of an international bulletin on the contagious diseases of the domestic animals. This was unanimously adopted. The employment of mallein in the diagnosis of glanders was considered, and it was decided by 49 votes against 39 that this substance is an excellent means for ascertaining the existence of the disease in suspected cases, and that its systematic application in infected stables is the best measure for ensuring the extinction of glanders. Professors Nocard and Bang proposed that as tuberculin is a valuable means for diagnosing the existence of tuberculosis in animals and may render the greatest service in combating that malady, its employment should not be abandoned on the pretext that it may aggravate it, this being adopted by a large majority, while another proposal by Professor Nocard, to the effect that Governments should prescribe the use of tuberculin in places where tuberculosis is present, was carried by 73 votes against 25. It was decided that preventive inoculation is an indispensable measure in the suppression of the destructive swine plague. With regard to the use of the flesh of animals affected with tuberculosis it was decided—(1) that measures should be adopted for controlling the issue of flesh derived from tuberculous animals, and that if such flesh be seized compensation ought to be made to the owners if they have submitted to the sanitary measures; (2) that seizure should take place when the tuberculous lesions, by their extent and their character, render the flesh dangerous (adopted by 89 against 8 votes); (3) that this flesh should not be sold if it is that of an emaciated animal, appears to be unhealthy, if the lesions extend to the muscles, or important lesions are found in several of the viscera; (4) that it is desirable that the flesh of tuberculous animals recognised as fit or consumption as food shall only be exposed for sale in special stalls and have a notification of its character, or shall have been submitted to efficient sterilisation; and (5) that the different Governments should favour as much as possible the institution of apparatus for sterilising flesh. It was also decided that the various countries officially represented should have their attention directed to the necessity of everywhere making general the inspection of meat. In connexion with the latter decision it was also accepted, by 80 votes against 8, that in each country there should be a commission appointed to determine precisely in what cases the abattoir inspectors shall allow to be sold or seize a portion or the whole of the carcase of an animal in which the existence of tuberculosis has been discovered on examination. In view of the unsatisfactory condition of veterinary anatomical nomenclature, the section of the congress detailed to give an opinion as to the necessary steps to be taken to remedy it, reported that the *Nomina Anatomica* of His be recognised as a basis for an international Latin nomenclature of veterinary anatomy, and that the work of adaptation, as well as the creation of new Latin denominations, should be allotted to certain anatomists of the countries represented, with the right of co-optation. This recommendation was unanimously adopted, and gentlemen were appointed to undertake this task, these being MM. Müller of Berlin, Arloing of Lyons, Lorge of Brussels, Sussdorf of Stuttgart, Schmalz of Berlin, Martin of Zürich, Rubeli of Bern, and Szakall of Pesth.

THE DIFFUSION OF SMALL-POX.—With the advent of autumnal weather the small-pox now for a long time endemic in London has not hitherto shown much disposition to spread, but in the two weeks ended with last Saturday there was some increase over recent preceding weeks, the cases removed to hospital having been 29 and 14, and thus more than the total of the three weeks preceding, wherein the removals had been severally 9, 7, and 14. The attacks were diffused over the weeks unequally; thus we hear of 4 cases one day, followed by none on the next day, then 6 and 5 on succeeding days, and so on. The total of cases remaining under treatment is, however, steadily declining. The number on Saturday last was only 78, a fall from 106 in one week, and from upwards of 200 in early October. There was 1 death registered in each of the two weeks on board the hospital ship *Atlas*, one being that of an unvaccinated girl who came from Battersea, and the other that of another unvaccinated girl aged twenty-four years who came from the Newington sanitary area. In the borough of West Ham there has of late been some amount of small-pox, the cases occurring there largely augmenting the admissions to the ships down the river, and in the two weeks under review there have been 2 deaths there. The number of defaulters in the district has largely increased during recent years, information now coming to hand showing that in two districts in the union there have been, in one 6191 defaulters under the Vaccination Acts in five years, and in another 2163 defaulters in less than two years. In Wiltshire there has been an outbreak of small-pox at Barford St. Martin, 3 cases occuring in two adjacent houses, the initial attack being in a woman who had been residing in Bristol, the infection being apparently carried to her neighbour, and later to his infant daughter. Two empty cottages, far removed from dwellings, were at once rented by the Wilton Rural District Council, and the patients removed thither, vaccination being enjoined on the public. In Derby the medical officer of health has just published a report on the two small-pox outbreaks of the present year, the 89 cases being divided into 62 vaccinated non-fatal cases, and 27 unvaccinated cases, with 8 fatalities, or just on 30 per cent. of attacks among the unvaccinated patients. The vaccinated cases remained on an average 31 days in hospital, and the unvaccinated 46, or more than a fortnight longer. The small-pox outbreak at Trawden has now subsided, there being at the beginning of this month only 3 patients in the hospital at Catlow. At Bacup a case has arisen in a young man, whose fellow lodger has been revaccinated and placed in quarantine; the patient himself has been isolated in the Sourhall hospital. During the last quarter there were in England and Wales 99 deaths from small-pox, of which 31 belonged to London, 17 to Oldham, and 21 to the West Riding of Yorkshire. In Ireland in the same period the deaths from small-pox, which had been 98 and 24 respectively in the two previous quarters, further fell to 14, and of these 12 were in the Dublin registration district. In the last two completed weeks of last month the admissions to Dublin hospitals had

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been six in all, and there was one death—namely, that of an unvaccinated infant. On the several Saturdays of the four weeks ended with Oct. 26th the patients remaining under treatment were 27, 24, 24, and 18, and in the week next succeeding the admissions were 3, the discharges 4, and 1 death occurred (that of a vaccinated adult), leaving 16 cases in hospital, so that the disease, whilst still lingering in the city, makes no headway.

THE ALEXANDRA HOSPITAL AT RHYL.—A deputation of the Rhyl Urban District Council on Nov. 11th laid before the Duke of Westminster a request that the hospital should be erected on a site in the Marine Drive instead of the present site on the Promenade. In order to induce the Hospital Committee to accept the proposal the council offered £2600 and the owners of adjoining property a further sum of £800. The Duke of Westminster pointed out that the council's offer was not very liberal, and that by accepting it the committee would sustain a loss of several hundred pounds; the matter would, however, be considered.

ROYAL INSTITUTION.—The Christmas course of lectures adapted to a juvenile audience at the Royal Institution will be delivered this year by Professor John Gray McKendrick, M.D., LL.D., F.R.S., Professor of Physiology in the University of Glasgow, and formerly Fullerian Professor of Physiology in the Royal Institution. The subject will be Sound, Hearing, and Speech, and the lectures will be experimentally illustrated. The first lecture will be delivered on Saturday, Dec. 28th, at three o'clock, and the remaining lectures on Dec. 31st, 1895, and on Jan. 2nd, 4th, 7th, and 9th, 1896.

DIPHTHERIA IN LONDON.—In London proper and the suburban districts forming the "Greater London" of the Registrar-General, there were registered last week no fewer than 103 deaths from diphtheria, and of these the county of London contributed 75, the totals for the county in preceding weeks having been respectively 76, 61, and 72. Last week the number exceeded the corrected average for the forty-fifth week of the years 1885–94 by 32 deaths, and thus manifested an increase of nearly 75 per cent. The seriousness of this continued state of things cannot be gainsaid. As usual, all but a very few of the deaths occurred in young persons between the ages of one and twenty years, and the sanitary areas furnishing the largest numbers were Islington with 7, and Kensington, St. Pancras, Chelsea, and Greenwich each with 6 deaths. The admissions were again little over 100 cases in the week, a quite disproportionate number, having regard to the amount of the disease throughout the metropolis; and the number of patients remaining under treatment on Saturday last, 683, was but slightly in advance of previous totals—namely, 675 and 671. Of the 18 deaths in the outer ring, 7 took place in persons belonging to Edmonton, and 3 in residents in Wimbledon districts. The malady is apparently affecting suburban localities on all sides of London, and we hear of it from time to time in more remote parts of the home counties.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, F. E., M.D., M Ch. Irel., D.P.H. Camb., has been appointed Medical Officer of Health for the combined Sanitary Districts, Hertford.

ANDERSON, D. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Cuckfield Sanitary District, Teesdale Union.

ARCHER, H. R., M.D. Lond., L.R.C.P., M.R.C.S., has been reappointed Medical Officer for the No. 1 Sanitary District of the Royston Union.

BERLYN, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgical Officer to the Children's Hospital, Birmingham.

BEVAN, R., L.R.C.P. Lond., M.R.C.S., D.P.H., has been reappointed Medical Officer to the No. 1 Sanitary District of the Romney Marsh Rural District.

BRUCE, W. J., L.R.C.P. Lond., M.R.C.S., has been appointed First Assistant Medical Officer of the Gordon-road Workhouse and the Infirmary, Parish of St. Giles, Camberwell.

CHILD, E., M.R.C.S., has been reappointed Medical Officer of Health to Malden Urban District Council.

CLARKE, T. H. M., B. A., M.B., B.Ch., B.A.O. Dub. Univ., has been appointed Senior Resident Surgeon to Jervis-street, Hospital, Dublin.

DAIN, H. G., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Children's Hospital, Birmingham, vice Hickinbotham, resigned.

DUNCAN, ROBERT BRUCE, M.D., B.S., B.Hy. Dunelm., has been appointed Medical Officer for the Bradninch District of the Tiverton Union.

GILFILLAN, S. J., M.A., M.B. & C.M. Edin., has been appointed Second Assistant Medical Officer to the Norfolk County Asylum, Thorpe.

GOADBY, A. L., L.D.S.R.C.S., has been appointed Consulting Dentist to the Royal Berks Hospital, Reading.

HARDY, C. M., M.B., B.S. Durh., has been appointed Medical Officer of Health for the Darlington Rural Sanitary District.

HAYWARD, J. W., M.R.C.S., has been appointed Medical Officer to the Whitstable Urban District Council.

JONES, C. A., L.R.C.P. Lond., M.R.C.S., has been appointed Second Assistant Medical Officer at the Gordon-road Workhouse and the Infirmary, Parish of St. Giles, Camberwell.

KNOX, J. J., M.B., B.C. Camb., F.R.C.P. Lond., has been appointed Medical Officer to the East and West Molesey District Council.

LEES, E. LEONARD, M.D., C.M. Edin., M.R.C.S., has been appointed Physician to the Hospital for Sick Children and Women, Bristol, vice W. Barrett-Roué, resigned.

LOVEDAY, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed Deputy Medical Officer for the Second Sanitary District of the Ware Union.

MACGREGOR, D. A., M.B., C.M. Edin., has been reappointed Medical Officer of Health to the Clayton Urban District Council.

MCNAUGHT, JAS., M.D. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Rawtenstall Town Council.

MATHEWS, T. G., M.B., M.S. Edin., has been appointed Medical Officer for the Sixth Sanitary District of the Mansfield Union, vice W. A. Stamford.

MONK, H. G. H., M.R.C.S., D.P.H., has been appointed Public Analyst to the Leicester Town Council.

MORSE, EDWD., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health to the Torrington Town Council.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Popesdown Urban District Council.

PARTRIDGE, SAMUEL, M.R.C.S., has been reappointed Medical Officer of Health to the Darlaston District Council.

PEARCE, J. P., M.R.C.S., has been reappointed Medical Officer of Health to the Lewes Town Council.

PHILLIPS, J. N., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health to the Cannock Urban District Council.

RANDELL, R. M. H., M.D. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Beckenham Cottage Hospital.

ROUSE, E., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health to the Bideford Rural District Council.

ROWAN, JOHN, M.B., C.M., has been appointed Assistant Ophthalmic Surgeon to the Glasgow Ophthalmic Institution, Glasgow Royal Infirmary.

STANLEY, ARTHUR, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Fourth Resident Medical Officer to the Sussex County Hospital, Brighton, vice Hood, resigned.

SYMMERS, W. ST. CLAIR, M.B., M.S. Aberd., has been appointed Assistant Medical Officer to the London Western Fever Hospital.

TEMPLEMAN, CHAS., M.D., C.M. Edin., D.Sc., has been appointed Medical Officer of Health for Dundee.

TEW, JAS. S., M.D., B.S. Durh., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the West Kent Combined Sanitary Districts.

TUXFORD, J. E., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Boston Town Council.

WILKINSON, J., M.B., C.M. Edin., has been appointed Medical Officer of Health to the Boston Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and apartments in the hospital.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

BRADFORD INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane square, Chelsea, S.W.—Honorary Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £20 per annum, with board, washing, and residence in the house.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum (increasing to £125 after twelve months' service), with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician (non-resident) for three months. Also Assistant Physician to take charge of out-patients.

HOSPITAL OF ST. PETER PORT, Guernsey.—Two qualified Surgeons (non-resident), for one year. Salary £75 each per annum currency (vaccination included), in addition to which a certain vaccination allowance.

KING'S COLLEGE, London.—The Sambrook Surgical Registrarship.

LEICESTER INFIRMARY.—Honorary Ophthalmic Surgeon.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer at the Monsall Fever Hospital for twelve months, unmarried. Salary £100 per annum, with board and residence.

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NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician, for six months. Salary at the rate of £60 per annum. Also Junior House Physician, for six months. Board and lodging (including washing) provided.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Clinical Assistant, for six months.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and lodging. Stimulants and washing not provided.

STOKE NEWINGTON, CLAPTON, WEST HACKNEY, AND DALSTON INFIRMARY, 189, High-street, Stoke Newington, N.—Resident Assistant House Surgeon. Salary £50 per annum, with board and lodging.

SWANSEA GENERAL HOSPITAL.—House Surgeon. Salary £50 per annum, with board, residence, washing, and attendance.

THE GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, residence, and washing.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London, W.C.—House Surgeon to out-patients (non-resident) for six months. Salary 25 guineas.

THE VICTORIA UNIVERSITY, Manchester.—External Examiners in Pharmacology and Therapeutics, and in Surgery.

TIVERTON INFIRMARY AND DISPENSARY.—House Surgeon and Dispenser, unmarried. Salary £105 per annum, with lodgings, attendance, fire, and lights.

WESTMINSTER GENERAL DISPENSARY, Gerard-street, W.—Honorary Surgeon.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House Surgeon. Salary £80, rising £10 annually to £100, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ALFORD.—On Nov. 11th, at Royal-crescent, Weston-super-Mare, the widow of the late George Ernest Alford, M.R.C.S., L.R.C.P. Edin., of a son.

BORROWMAN.—On Nov. 9th, at Dunreggan, Elie, the wife of Philip G. Borrowman, M.B. Edin., of a daughter.

CARTER.—On Nov. 8th, at Gloucester-row, Weymouth, the wife of R. W. Carter, M.D., Deputy-Surgeon-General, Army (retired), of a daughter.

WARDE.—On Nov. 9th, at Knowsley, Prescot, the wife of Wilfrid Brougham Warde, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

BULLOCK—WILLETT.—On Nov. 6th, at Christ Church, Folkestone, Henry Maurice Bullock, M.R.C.S., L.R.C.P., of Heatherley, Hounslow, to Nina Maude Dacre, youngest daughter of the late Edmund Sparshall Willett, M.D.

JÄGER—DOWDING.—On Nov. 7th, at St. John's, Kingston-on-Thames, by the Rev. Arnold Letchworth, M.A., Harold J. Jäger, M.R.C.S. Eng., L.R.C.P. Lond., A.K.C., to Lucy Adelaide (Missie), only daughter of the late Rev. Chas. Dowding, Rector of Priston, Somerset, and Mrs. Dowding, of Surbiton.

JEROME—TAYLOR.—On Nov. 7th, at the Parish Church, Sutton Coldfield, by the Rector, the Rev. W. C. R. Bedford, George Percy Jerome, M.B. Lond., third son of the late J. S. Jerome, Esq., Holland House, Sutton Coldfield, to Edith Sarah, fourth daughter of S. A. Taylor, Esq., The Hollies, Four Oakes.

SIMPSON—TAYLOR.—On Nov. 6th, at the Parish Church of St. Mary, Bocking, Essex, by the Rev. Trevor Evershed, curate of Mundham, Sussex, Charles Shackleton Simpson, L.R.C.P., M.R.C.S., of 2, Portland-road, Hove, second son of Thomas Simpson, Esq., of Shipstreet, Brighton, to Lily, elder daughter of Thomas Taylor, Esq., M.R.C.S., of Bocking, and niece of the late J. H. Partridge, Esq., J.P., of Colchester.

THANE—BEATTY.—On Nov. 7th, at St. Matthias' Church, Richmond, Philip Thornton Thane, L.R.C.P. Lond., &c., of Yass, N.S.W., fourth son of Geo. D. Thane, M.D., to Pauline Willis, the fourth daughter of J. Guinness Beatty, M.D., of Grosvenor-terrace, Prince's-park, Liverpool.

DEATHS.

BISSILL.—On Nov. 7th, at Sleaford, in the 79th year of his age, John Henry Bissill, F.R.C.S.

COCK.—On Nov. 6th, at 1, Porchester Houses, W., Frederick Cock, M.D. Edin., M.R.C.P. Lond., aged 67.

FORD.—On Nov. 5th, at Cheltenham, Frederick Thomas West Ford, M.R.C.S. Eng., aged 73, for nearly thirty years Chief Medical Officer to the Police Force of Victoria, Australia.

JEFFERYS.—On Nov. 10th, at St. Augustine's-road, N.W., William Edward Jefferys, M.R.C.S., in the 71st year of his age.

KOUGH.—On Nov. 11th, at his residence, Albany-grove, Monkstown, county Dublin, Edward Kough, M.B., M.Ch. T.C.D., in his 58th year.

PRICE.—On Oct. 10th, at 136, Priory-street, Carmarthen, South Wales, of scarlet fever, Eleanor Maud, youngest daughter of R. G. Price, M.D., aged eight years.

ROSE.—On Nov. 7th, at Edgehill House, Ipswich, Caleb Rose, F.R.C.S., M.R.C.P., aged 75.

SMITH.—On Sept. 3rd, at Kamara, St. Kilda, Melbourne, Australia, Louisa Janet Smith, only sister of Surgeon Albert O. Bobardt, R.N., H.M.S. *Dart*, Australian Station.

SWETE.—On Nov. 10th, at Castle-hill, Fishguard, Pembrokeshire, Charlotte Bayley (Lillie), the loved and loving wife of Horace Lawton Swete, L.R.C.P. Lond., and daughter of the late C. Fryer Lyall, Esq., of Bath and Barbadoes.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Mr. Edmunds: Cystic Accessory Thyroid.—Mr. Targett: Classification of Sarcomata connected with Bladder.—Mr. Marriott: Acute Tuberculosis of Spleen; Removal by Operation.—Dr. Rundle: Primary Epithelioma of Ureter.—Mr. D'Arcy Power: Diffuse Lipoma of Hand and Fingers. Card Specimens: Dr. Claremont: Extensive Ulceration of the Œsophagus.—Dr. Walsham: Meckel's Diverticulum with an Attachment to Mesentery.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Mr. John Eliot: On the Origin of the Cold Weather Storms of the year 1893 in India, and the Character of the Air Movement on the Indian Seas and the Equatorial Belt, more especially during the South-west Monsoon Period.—Mr. Charles Davison: The Diurnal Variation of Wind Velocity at Tokio, Japan. Mr. W. H. Dines will show his Experiment illustrating the Formation of the Tornado Cloud.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Mr. M. J. Michael: Numerical Aperture Reconsidered.—Mr. F. Chapman: Foraminifera of the Gault of Folkestone.

SOCIETY OF ARTS.—8 P.M. First Ordinary Meeting. Opening Address by Major-General Sir John Donnelly.

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Cases.

THURSDAY.—MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND (11, Chandos-st., Cavendish-square).—2 P.M. Council Meeting. 4 P.M. Dr. W. Gilmore Ellis: Latah.—Dr. Morrison: Short Notes of a few cases of Epilepsy affecting Special Nerves and their Associated Mental State. 6.30 P.M. Members dine at the Café Royal.

HARVEIAN SOCIETY.—8.30 P.M. Mr. Juler: The Pathology and Treatment of some forms of Iritis.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Introductory Address by the President. Mr. Richard Lloyd: Six Hours' Administration of Chloroform in a case of Cumulative Poisoning by Hypodermic Injection of Strychnia.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Clinical Evening. Mr. W. A. Lane: Cases of Excision of the Temporo-Maxillary Joint in Children.—Dr. Harry Campbell: A case of Premature Puberty and a case of Rheumatoid Arthritis confined to the Elbow-joints.—Dr. R. Hingston Fox: A case of Meningocele.—Mr. J. H. Morgan: Double Penis and Malformation of Genitals, Hare Lip and Cleft Palate, with Deformity of Ear and Face, and with Auricular Appendage.—Dr. Buzzard: A case of Charcot's Joint Disease.—Dr. Colman: Mother and Child with Idiopathic Muscular Atrophy.—Mr. O. Paget (introduced by Mr. S. Paget): A case of Myositis Ossificans.—Mr. H. H. Clutton: Two cases of Deficiency of Tibiæ.—Mr. C. S. Wallace: A case of Ligature of the Femoral Artery and Vein for Secondary Hæmorrhage.—Dr. F. R. Walters: A case of Myxœdema.—Mr. W. H. Battle: A Modified Incision for Removal of the Vermiform Appendix.—Mr. Makins: A case of Ligature of both External Iliac Arteries by the Transperitoneal Method.—Mr. H. Paterson: A case of Extensive Skin Grafting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Tinnitus and Vertigo.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: General Paralysis of the Insane.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—Dr. C. Y. Biss: Hæmoptysis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Pustular Dermatitis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Swinford Edwards: Rectal Surgery.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st., 3.30 P.M., Mr. Donald Gunn: Ocular Evidences of Hereditary Syphilis.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Tooth: Hemiplegia.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. Bryant: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Erysipelas and Suppuration.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Puerperal and Lactational Insanity.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Parasitic Diseases (Animal).

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 14th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 8	29·95	S.W	54	53	61	58	52	0·22	Raining
,, 9	29·65	W.	54	53	79	57	53	0·37	Overcast
,, 10	29·77	S.W.	54	52	70	58	49	0·02	Cloudy
,, 11	29·28	S.W.	52	51	87	57	51	0·20	Cloudy
,, 12	29·22	S.W.	48	45	58	51	44	0·09	Cloudy
,, 13	29·52	W.	45	44	80	56	44	0·04	Fine
,, 14	29·81	S.W.	49	47	83	57	45	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

PUBLICITAS PUBLICITATUM, OMNIA PUBLICITAS!

WE take the following from the *Educational Times*:—

> The seats of St. Margaret's, Westminster, were thickly strewn, on the last Sunday in October, with pink leaflets to the following effect: "Tastefully printed and bound in cloth, gilt lettered, price 2s. 6d. Four Foundation Truths: a Message to Churchmen of To-day. Containing"—four essays by four M.A.'s—"with a preface by the Very Rev. ——, Dean of ——."

Is there to be no day or place of rest from the pushing hawker? asks our contemporary, whose query, we hope, may catch Canon Eyton's eye.

Mr. L. Barry.—We agree with all our correspondent says, but the grievance has so often been ventilated that we cannot suppose that any people remain in ignorance, while the actual culprits are not likely to be deterred by anything which appears in our columns or in those of any other journal.

Mr. James Dingley.—We regret that we can afford no information beyond that which may occasionally be derived from our advertisement columns.

DIURETIN KNOLL.

To the Editors of THE LANCET.

SIRS,—I shall be glad if any of your readers will give me any information with regard to the use and therapeutic and tonic actions of Diuretin Knoll. The dose is a minimum of eighty grains per diem. I ordered this dose for a patient suffering from chronic nephritis, but when she had taken forty-five grains in the manner prescribed on the bottles she became deadly faint, with partial loss of consciousness, violent palpitation of heart, and low blood-pressure. Nausea followed, and lasted with faintness and insomnia for twenty-four hours.

I am, Sirs, yours truly,

Ingatestone, Nov. 11th, 1895. E. CLOETE SMITH.

"THE KOMICAL KALENDAR."—A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a statement quoted in this week's issue of THE LANCET. I beg to deny that I ever made such a statement, and to affirm that the mention of my name in this instance, as in many others, is entirely without my knowledge or sanction.

I am, Sirs, yours faithfully,

Hill-street, Berkeley-square, W., Nov. 9th, 1895. ROSSON ROOKE.

"PROTONUCLEIN" IN CANCER.

A CORRESPONDENT asks for information respecting what he terms the "new cure for cancer"—namely, "protonuclein"—introduced by Professor Schweitzer and used by Dr. Rork Conner and Dr. Wills of New York. We think that we may safely say that this remedy has not been tried in this country, and we frankly confess that its very existence was unknown to us. We are acquainted with a paper on "Nucleins," published in the *New York Medical Record* of Sept. 28th, in which the writer (Dr. Bleyn) speaks of different preparations from ova of animals which, he says broadly, he has used "in cancers, fevers, and phthisis," but his statements are far too general to permit of much attention being paid to the subject. Of course, it may be different with the authors noted by our correspondent; but we would impress upon him the fact that the evidence must be very complete and circumstantial before the medical profession will recognise that a remedy has been found which can *cure* malignant disease. Perhaps he would kindly acquaint us with the sources of his information on "protonuclein."

M.D.—The question is not absolutely settled; nor can it be until a careful record of a large number of cases is put in evidence by persons in a position to trace out the family ramifications and to be familiar with the family taints. THE LANCET of March 13th, 1875, summed up the situation generally, while an exhaustive paper by Dr. William Robertson, which appeared in THE LANCET of Sept. 8th, 1894, dealt with the subject of deaf-mutism in this connexion. Our correspondent is also referred to an article in the current number of the *Practitioner*. It must be remembered that consanguinity in marriage raises heredity to its highest power, so that the offspring would have a double chance of inheriting a taint that might with probability be present in each parent. Deaf-mutism is believed to be the commonest defect met with in the children resulting from the marriage of cousins.

F. F. and R. H. M.—The British Medical Benevolent Fund, the Royal Medical Benevolent College, the Society for the Relief of Widows and Orphans of Medical Men, and THE LANCET Relief Fund.

"PRACTICAL DISINFECTION OF ROOMS."

To the Editors of THE LANCET.

SIRS,—I see in this week's issue of THE LANCET an Annotation on the "Practical Disinfection of Rooms" and the uselessness of relying on sulphur fumes. I venture to send you a copy of a little work I have compiled, in which, appreciating the probability that sulphur will soon have to be dethroned from its position, I have tried to pave the way for a change of opinion by giving the statements against it and showing that other means must be used, such as complete disinfection of clothes, bedding, and person, and washing of all washable surfaces with corrosive sublimate in addition, for safety.

I should like to have said more, but as I found on inquiry that so many medical officers of health and professional disinfectors pinned their faith upon sulphur, and having nothing to take its place, I was constrained to leave it for the present, hoping to find another means by the time if ever a second edition is required.

I am, Sirs, yours faithfully,

Putney, Nov. 11th, 1895. JOHN GAY.

*** Mr. Gay sends us a copy of a most useful little pamphlet of which he is the author and which the National Health Society publishes at the modest price of a penny. The book is a little compendium of practical directions for the use of disinfectants, and among those mentioned is sulphur, and the efficacy of its vapours is questioned. We hope that the second edition Mr. Gay is preparing for will soon be required.—ED. L.

"THE INTERNATIONAL MEDICINE."

THERE is a paper which appears monthly, and which is known as the *International Medicine*, its sub-titles being, "Monthly Paper, Medical and Pharmaceutical, Analytic Review." Its price is low and its paper poor; but it is the quality of its English which we desire to comment upon, having regard to its aspiration towards international character. The first article is called "Localisation of the Muscular Sense in the Skin of the Brain"; but whether by the term "skin" the *pia meter* (*sic*) is meant or the superficial layer of brain structure does not clearly appear. The finest specimen—out of many, however—of English as she should not be written is the title of an article upon a fatal case of fat-embolism, which appears as "Mortal Greasy Embolism." There may be a want of a medical organ for the international expression of professional feeling and dissemination of medical knowledge; but there can be no scientific or social need for a sheet like the *International Medicine*.

Mr. Theo. G. H. Nicholson is thanked for his interesting communication. The method he advocates has been previously recommended by Mr. Foy and others.

Mr. Thomas Taylor.—We regret to be unable to give our correspondent any precise information.

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"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—In my former letters to you on this interesting subject I refrained from telling a story which puts the question of "James Barry's" sex beyond all doubt, being under the impression, as I was, that the narrator would himself communicate it to THE LANCET. He has not, it appears, chosen to do so; but as he laid no restraint on me I shall now place his account before your readers.

I met the colonel commanding a northern sub-district at mess shortly after the publication of "A Modern Sphinx" in 1881, and taking me aside he gave me the following startling information, and which, so far as I can remember them, I will tell in his own words:—"I was quartered as a subaltern in Trinidad while Dr. Barry was serving there in the capacity of principal medical officer. One day a friend of mine, an assistant surgeon, asked me to walk with him into Port-au-Prince. 'The P.M.O.,' said he, 'is down with fever at the house of a lady friend, but has given strict injunctions to us not to visit him. Nevertheless, I feel bound to call and see how he is. Will you come with me?' On arrival my friend entered Barry's bedroom, while I remained on the verandah. In a few minutes he called me excitedly into the room, exclaiming, as he flung back the bedclothes, 'See, Barry is a woman!' At that moment the P.M.O. awoke to consciousness and gazed at us bewilderingly. But she quickly recovered presence of mind and asked us in low tones to swear solemnly not to disclose her secret so long as she lived. As a matter of fact," added the colonel, "I have never till now mentioned the subject."

I have been given to understand that the photograph mentioned in one of my former letters as being kept under lock and key in the medical officers' mess at Netley has been sent to you. You will



INSPECTOR-GENERAL JAMES BARRY.
[From a photograph kindly lent to us by the Netley Mess.]

observe the unmistakable female characteristics of Barry's features. But what struck most people who knew her as still more remarkable was the manner in which she carried her arms—with elbows *in* instead of *outward*. In conclusion, I may add that in view of the great interest revived by this correspondence I shall without delay bring out a cheap edition of my novel, "A Modern Sphinx."

I am, Sirs, yours faithfully,

Savage Club, Oct. 29th, 1895. E. ROGERS, Lieutenant-Colonel.

P.S.—The assistant surgeon referred to died quite recently. I enclose extracts of letters from General W. Chamberlayne and Colonel R. Wilson (formerly of the 3rd West India Regiment), which will, I feel sure, be an interesting supplement to the correspondence.

General Chamberlayne writes:—"The lady doctor you allude to, I suppose, is Dr. Barry. I knew him, or her, in Jamaica. I think the account published in *All the Year Round* was pretty nearly correct, as far as I remember the general history. I do not think he, or she, wore a ring. The hair was light—I think dyed—but very thin and cut close. Spectacles were not worn, but high-heeled boots were. One peculiarity was a strictly vegetable diet—no meat, or even wine or other liquor; and a dislike of medical men. A queer fondness for animals, keeping several cats and dogs very happily; rather bombastic in speech and repellent in manner, but kind and anxious to do good to those who were never likely to become intrusive, or familiar, or troublesome to her. I must retain the feminine gender, for I believe that is only too true. When I think of the anxiety, care, and trouble she must have experienced for years to keep up the assumed character, possibly first undertaken for the love of some man, and then subsequently retained perhaps for the sake of his character as well as her own, it seems surprising how she could have possessed so many good points, for I saw a great deal of her in Jamaica. I believe her manner and speech were assumed to repel inquisitive associates. It must have been a life of great misery to have been obliged to be continually acting a part so repellent to her better feelings."

Colonel Wilson writes:—"You know almost all about Miss Barry, or nearly so. I recollect that she, like most women, loved attending weddings, christenings, &c. Also, when I was fort-adjutant in Jamaica, I used frequently to meet her at dinner at General Ashmore's, and we were all much amused at the outrageous stories she used to tell, making herself out quite a lady-killer. Also at balls, or parties of any kind, she was certain to tack herself on to the finest and best-looking woman in the room. You may remember she dyed her hair red, but had not a hair on her face, and never had. You can make all you like out of what I have now told you."

I have had letters on the subject from other correspondents, but I fear to trespass further on your space.—E. R.

TREATMENT OF SPASMODIC ASTHMA.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Harveian Society on the 7th of this month, had time allowed, I should have mentioned a remedy for spasmodic asthma which, I believe, does not exist in any pharmacopœia and which I should much hesitate to recommend, but which, with one patient, proved most effectual.

A lady of position, aged twenty-two, married, and possessed of ample means, consulted many of the most eminent men in England and on the Continent for her asthma. These celebrities did her but little good, consequently she lost all faith in medical men and adopted a treatment of her own, which, I was told, never failed. Her plan was to shut herself up in a small room about 9 ft. square, allowing the gas (unlighted) to escape, and in three minutes her maid, who stood sentinel outside the door, came in and fetched her out. The patient was always in a semi-dazed state, but in a few minutes became quite herself, with free and easy breathing.

As the Extra Pharmacopœia contains many useful, many useless, and not a few dangerous remedies even in skilled hands, it might be as well in the next edition to include light carburetted hydrogen and its combinations.

I am, Sirs, yours truly,

Park-terrace, Regent's-park, Nov. 11th, 1895. EDMD. WHITE.

LUPUS AND INOCULATION BY TUBERCLE BACILLI.

To the Editors of THE LANCET.

SIRS,—I should be glad of information on the precise clinical and experimental observations (with references) where lupus has been proved to be produced by inoculation of tubercle bacilli.

I am, Sirs, yours faithfully,

Nov. 12th, 1895. "WALLACE CRAIGIE."

CHARGES FOR MEDICINE.

Justitia.—The model system of charging is to charge principally for visits and advice, making such additional charges for medicine as cover their cost and the cost of their dispensing. They should not figure in medical accounts. The Medical Act says: "Every person registered shall be entitled to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the cost of any medicines or other medical or surgical appliances rendered or supplied by him to his patients." An account constructed as is our correspondent's rather invites the criticism of which he complains, though there is nothing very unreasonable in the charges.

During the week marked copies of the following newspapers have been received:—*Manchester Courier, Walsall Advertiser, Northern Whig, Birmingham Gazette, Bath Journal, Glasgow Herald, Irish Times, Liverpool Express, Wellington Journal, Hull News, Leicester Daily Mercury, Sussex Daily News, Sheffield Independent, Newcastle Leader, City Press, Manchester Guardian, Provincial Medical Journal, Journal of Gas Lighting, Medical Record, Brighton Gazette, Essex County Standard, Weekly Dispatch, Sanitary Record, Lymington and South Hants Chronicle, The Sun, Glasgow Daily Record, Warrington Observer, Ashbourne News, Buckingham Express, Weekly Free Press and Aberdeen Herald, Mining Journal, West Middlesex Standard, Local Government Chronicle, Reading Mercury, Liverpool Daily Post, Builder, Bristol Mercury, Times of India, Surrey Advertiser, Leeds Mercury, Architect, Clapham Observer, Yorkshire Post, Pioneer Mail, Hertfordshire Mercury, Galignani Messenger, Guy's Hospital Gazette, Yorkshire Herald, Local Government Journal, Mallon Gazette (Stirling), Saturday Observer, Border Counties Gazette, Ashton-under-Lyne Reporter, Craven Herald, Accrington Observer, Cambridge Express, Widnes Weekly News, Wellingboro' News, Liverpool Courier, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. F. P. Atkinson, Surbiton; Mr. S. Aldred, Gt. Yarmouth; Mr. R. R. Anderson, Carmarthen; Accountant, Lond.; Alpha, Warwickshire.

B.—Dr. G. A. Bannatyne, Bath; Dr. C. L. Birmingham, Sheffield; Mr. A. C. Butler-Smythe, Lond.; Mr. J. P. Brown, Paisley; Mrs. L. A. Brooks, Lond.; Messrs. Bowen and McKechnie, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. C. Barry and Co., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Blackie and Son, Lond.; Blackburn Infirmary, Sec. of; Bonâ Fide, Lond.

C.—Dr. Harry Campbell, Lond.; Mr. C. A. Clouting, Lond.; Mr. T. Cleall, Dalston; Messrs. Crossley, Moir, and Co., Lond.; Messrs. J. & A. Churchill, Lond.; Messrs. A. J. Cox & Co., Brighton; Cortland Wagon Co., Lond.; Caretaker, Lond.

D.—Mr. R. R. Douglas, New Romney; Mr. W. Dendy, Aylesbury; Dental Hosp., Lond., Dean of.

E.—Messrs. H. and T. C. Edwards, Lond.; East London Hosp. for Women, Sec. of.

F.—Prof. George Fleming, Combe Martin; Prof. Ferrier, Paris; Mr. J. Farncombe, Brighton; Mr. T. McC. Foley, Scarborough; Mr. J. Forbes, Bothwell; Messrs. Farrer and Sons, Reading; Messrs. Fletcher, Fletcher, and Co., Lond.

G.—Dr. W. R. Gowers, Lond.; Dr. A. D. Ghiselin, Pattonville, Missouri, U.S.A.; Mr. F. J. S. Gray, Walsall; Rev. T. Given-Wilson, Lond.; Mr. J. W. Graves, Lond.; Messrs. J. and W. Griffin, Walsall; Glasgow Obstet. and Gynæcol. Soc., Reporting Sec. of; Gloucester Infirmary, Sec. of.

H.—Dr. W. S. Hedley, Brighton; Mr. W. V. Herbert, Lond.; Mr. J. Heywood, Manchester; Mr. J. Harrison, Bradford; Messrs. P. Harris and Co., Birmingham; Hosp. for Diseases of the Throat, Golden-square, Sec. of; Humanitarian League, Lond., Sec. of.

J.—Sir George Johnson, Lond.; Dr. G. F. Johnston, Lond.; Mr. W. C. James, Kensington; Justitia, Leighton Buzzard; J. M. D., Lond.

K.—Dr. Kelynack, Manchester; Mr. A. F. Stanley Kent, Lond.; Mr. R. C. B. Kerin, Lond.

L.—Dr. Victor Lenobel, Vienna; Mr. T. Laffan, Cashel; Mr. H. K. Lewis, Lond.; Mr. C. Lamond, Inverness; Mrs. Lee, Kew.

M.—Dr. G. H. Mackenzie, Edinburgh; Dr. R. Martin, Adelaide; Dr. U. C. Mukerjee, Dibrugharh, India; Mr. J. H. Morgan, Lond.; Mr. J. Milne, Lond.; Mr. S. K. Mukerji, Orai, N.W.P., India; Mr. J. Menzies, Worksop; Mr. J. Moore, Thornton Heath; Mrs. L. Mathews, Cavan; Messrs. Maple and Co., Lond.; Messrs. Mather and Platt, Lond.; Messrs. Macmillan and Co., Lond.; Maltine Manufacturing Co., Lond.; Manchester Royal Infirmary, Sec. of; Medical Publishing Co., Philadelphia; M.D., Blackpool; M.B., London; M.O.S., Lond.; M.B., Upper Norwood; Medicus, St. Austell.

N.—Mr. A. W. Neate, Newbury; National Society for Employment of Epileptics, Lond., Sec. of; *North Carolina Medical Journal*, Editor of.

O.—Mr. E. B. Owen, Lond.; Messrs. Orridge and Co., Lond.

P.—Dr. W. Pasteur, Lond.; Dr. J. B. Pike, Loughborough; Mr. T. F. Pearse, Southsea; Mr. Y. J. Pentland, Edinburgh; Mr. A. W. Penniman, Lond.; Proprietress, Winchelsea.

Q.—Queen's Faculty of Medicine, Glasgow, Dean of.

R.—Dr. J. Ramage, Lond.; Mr. J. S. Rensum, Yardley; Messrs. H. and J. Reading, Lond.; Messrs. J. Robinson and Co., Norwich; Roy. Min. Water Hosp., Bath, Sec. of; R. C. W., Lond.

S.—Dr. H. Snow, Lond.; Dr. L. E. Stevenson, Penrith; Dr. Scheurer, Java; Mr. A. Stenhouse, Glasg.; Mr. J. Sampson, York; Mr. J. D. Staple, Bristol; Rev. J. Spittal, Ryde; Messrs. Stubbs, Lond.; Messrs. Sampson, Low, Marston, and Co., Lond.; Messrs. Smith, Elder, and Co., Lond.; Simpson Memorial Hosp., Edin., Sec. of; Surgeon, Lond.; Scoliosis, Lond.

T.—Dr. W. A. Turner, Lond.; Dr. G. B. Todd, Hillhead; Dr. A. O. Tirado, Ovalle Coquimbo, Chili; Dr. W. Travers, Lond.; T. H., Lond.; Theta, Lond.; T. H. C., Lond.

V.—Mr. Egidis Vitali, Lond.

W.—Dr. F. J. A. Waring, Cliftonville; Dr. R. B. Wild, Greenheys; Mr. H. Wilson, Lond.; Mr. L. Wainwright, Folkestone; Mr. G. E. Weir, Lond.; Mr. C. F. Wightman, Chichester; Mr. C. J. Walker, Lond.; Messrs. W. Williamson and Co., Lond.; Messrs. Walton and Lee, Lond.; Messrs. Waterlow and Sons, Lond.; Messrs. Willing and Co., Lond.; Westminster General Dispensary, Lond., Secretary of; Wimbledon Home Hosp., Lady Supt. of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. E. Appleton, Stockton-on-Tees; Atlantic, Lond.; Alpha, Lond.; Assistant, Lond.; Alpha, Edinburgh.

B.—Dr. G. F. Blandford, Lond.; Dr. A. C. Bobardt, Queensland; Dr. C. Broyer, Carlton, Melbourne; Dr. N. Burns, Ayr; Dr. P. H. Boyden, H.M.S. *Thunderer*; Mr. H. Butterfield, Northampton; Mr. J. Beal, Brighton; Mr. J. S. Buck, Eaton Socon; Mr. H. Birmingham, Queensland; Mr. C. W. Buck, Settle; Mr. H. C. Bevan, Blaina; Mr. J. Brooks, Brightling; Mrs. Brooks, Grays; Messrs. T. Browne and Co., Lond.; Messrs. Bedford and Co., Lond.; Brighton, Hove, & Sussex Throat and Ear Hosp., Sec. of; Bradford Infirmary, Sec. of; *Birmingham Daily Post*; Beta, Lond.; Beth, Lond.; Branch, Lond.; B. A. B., Lond.

C.—Dr. W. H. Corfield, Lond.; Dr. W. Carter, Liverpool; Dr. H. E. Cook, Margate; Dr. F. W. Cock, Lond.; Dr. J. Clark, Nagrakata, India; Mr. A. E. Couzens, Westbury; Mr. H. Case, Southport; Mr. J. Crowther, Lond.; Mr. H. Case, Ulverston; Mr. J. Carter, Lond.; Mrs. E. Crossman, Lond.; Messrs. Condy and Mitchell, Lond.; Chester Gen. Infirmary, Sec. of; Children's Hosp., Pendlebury, Sec. of; Clayton Hosp., Wakefield, Sec. of; Coppice, The, Nottingham, Sec. of; Confidence, Lond.; Cœlebs, Lond.; Congo, Lond.; Cicero, Lond.; Cricoid, Lond.; Coach, Lond.; Consultant, Lond.

D.—Mr. T. J. Davenport, Lond.; D.P.H., Lond.; Domus, Lond.; Dama, Lond.; Diplomate, Lond.

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The Action and Use of Some New Synthetic Remedies.

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SINCE the first communication on Dermatol, appearing in No. 24 of the *Berlin. Klin. Wochenschrift*, 1891, many reports on the new remedy have been published both at home and abroad. Further investigations in various directions seem not only to have established many of the early claims made for Dermatol, but also to have indicated fresh fields of usefulness for it.

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In gynæcological practice it is attracting a great deal of attention, in view of the reports presented to the Bonn Gynæcological Congress. Remarkably satisfactory results were reported to have been obtained by its use in the treatment of laparotomy wounds, prevalent carcinomata, myomata, deep-seated tuberculous peritoneal abscess, and in infectious catarrhs of vagina, cervix, or endometrium. This report referred to, after calling attention to the superiority of Dermatol over Iodoform, concludes: "Dermatol is absolutely unirritating, powerfully antiseptic, astringent, odourless, stable, and non-hydroscopic."

In dermatological practice it is highly recommended in the form of a 10 per cent. ointment with Lanoline for eczema in children, intertrigo mammæ, and intertrigo ani. It has been tried with excellent results as a dusting powder in dysidrosis of the hands and feet, in balanitis, in operations for phimosis, and, in alternation with antiseptic and stimulating remedies, in the treatment of bubo. For burns the 10 per cent. Lanoline ointment above mentioned is highly recommended.

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An Address
ON
THE USE OF DRUGS.

Delivered before the Harlesden Medical Society on Oct. 11th, 1895,

BY W. R. GOWERS, M.D. LOND., F.R.S.,
CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, ETC.

MR. PRESIDENT AND GENTLEMEN,—I am glad to have an opportunity of exchanging some thoughts with members of the branch of the profession to which I have not the honour to belong. The chief line of cleavage which runs through the profession is that which separates the many, whose work is primarily to apply knowledge, and the few, whose work is primarily to advance knowledge, and also to bring from the front, when needed, the greater particular knowledge which less wide work has permitted them to obtain. I use the word "honour" advisedly, because I hold that of the two branches the work of the general practitioner is the more deserving of honour. His work is, perhaps, not more arduous, and perhaps, on the whole, has a more adequate practical reward, but it is destitute of the incentive which science supplies to those who serve her with pure heart and earnest endeavour, and which makes the labour, at least for such, its own reward. I have also used advisedly the word "particular" in contrast to the word "general." The accurate antithesis would be "special." But this word now involves other conceptions. I think, indeed, that those who are strong in their objection to specialism in medicine scarcely realise how inevitable it is. It begins as soon as the boundary of general practice is passed. The division of medicine from surgery is specialism. But this subject is too commonplace for me to waste your time by dwelling on it—the necessity of restriction of range of work in order to secure depth, or the mistake that is made when specialism is confounded with exclusivism. Yet I must, in passing, mention and emphasise one important fact: that the special implies the general, and that no man can be a specialist who has not an adequate practical acquaintance with the whole range of at least one of the two great branches of professional knowledge. Indeed, he must go further. I had occasion lately to point this out to a class of students when lecturing on a case of paraplegia from compression of the spinal cord in consequence of vertebral caries. Caries of bone is regarded as a purely surgical affection; whatever its effects, the treatment it needs, apart from operative procedure, is the same. Yet, as soon as the caries of the spine influences the spinal cord, the case is transferred not only to the physician but to the physician who devotes his attention chiefly to one class of diseases, those of the nervous system. A few days ago I found that a patient had been admitted into the National Hospital for the Paralysed and Epileptic, under my care, who presents an illustration of this which may be termed an *extensio ad absurdum*. He has caries of the spine, but he has no nerve symptoms, nor has he had. He was sent there apparently because his disease *might* cause paralysis. The fact is an unquestionable compliment to the Hospital, but if the practice were extensively adopted—as, for instance, in Bright's disease, heart disease, &c.—the capacity of the Hospital would have to grow and multiply exceedingly. Diseases of the nervous system, however, abound in illustrations of the degree to which the special involves the general. In the case of sudden lesions of the brain, hæmorrhage or softening, the treatment needed is only, in a small degree, treatment of the nervous system. For the most part, it is treatment of the vascular system, or of the heart, or of the general blood state; and any good that can be done is to be effected only through a knowledge of all these morbid states and of their treatment. As a matter of fact, diseases of the nervous system so called are widening out in ever-increasing degree. The extent to which symptoms apparently of purely nervous nature depend primarily upon blood states and constitutional conditions is becoming more and more apparent, and compels not only wider knowledge, but wider familiarity with such diathetic states and their indications. Some of them are only disclosed by their effect upon the nervous system. There is no part of medicine in which a nerve specialist must not be at home. I have sometimes thought that those who look widely through a narrow aperture may see more distinctly than those whose gaze ranges equally over the whole landscape. Light may hinder vision as well as aid it. But this is certain: no part of pathology is, or can be, isolated. Unless special work is based upon general and thorough knowledge it is unsafe.

It is of great importance that these facts should be recognised by practitioners. Consultants are, for the most part, that which practitioners, by their action, decide. With rare exceptions, a physician is not "run after" by the laity unless he has first received the stamp of general professional approval. Besides this indirect influence, the total amount of direct power in the hands of general practitioners is enormous. They are apt to complain of evils for which they are themselves really responsible. They too often condone in action that which they condemn in words.

It may occur to you that, in speaking of the general practitioner, I am speaking of that of which I know little. But I am not quite ignorant of general practice. It is indeed probably true that the members of the two great branches of the profession—the general practitioners and the consultants—are less able than they were formerly to understand each other, and to enter into each other's modes of thought and limitations of action. Neither has taken part in the practical life of the other in the way through which alone it can be thoroughly understood. I count myself fortunate in having entered the profession by the path which so few now tread—that of apprenticeship to a country practitioner. The changing times, the increased demands of the curriculum, and the long period of formal work, have made this method for the most part impracticable. No doubt the change is wise. The first two years are now more profitably spent. And yet I learnt much which I would not willingly forego during the period in which my professional work consisted of making up pills and bottles of medicine, sometimes rising to the dignity of assisting at an operation, of watching a child in convulsions, or of pulling out myself a tooth that was very loose. I learned something from these processes. In fact, I learnt much from the dispensing work. These things, moreover, left me time to work up, almost afresh, for the matriculation of the University of London. I also learned to love Tennyson and to worship Ruskin, while my summer afternoon rambles enabled me to do that which I have found most useful—to learn much of practical British botany. Botany stands low among the subjects of medical study. With that I have nothing to do. But of this I am certain—there is no part of science which is indirectly of so much service to the practitioner as practical British botany. The process of the identification of plants by the descriptions, the training it involves in accurate observation, in careful comparison, and in giving the proper relative weight to different features, is essentially the same as that which is needed in the diagnosis of disease. No subject affords mental training quite so effective for the practitioner's work. But my wandering path has taken me away from the lessons for which I introduced the subject of apprenticeship.

I gained two perceptions of the work of the practitioner which I have never lost. The first is the narrow limit which circumstance sets to the therapeutical scope of the average practitioner. By "average practitioner" I mean the practitioner whose work represents that of the majority, the work which lies among the lower classes or among the lower middle classes—among the poor, commonly so called, and among those middle classes to whom the present day has brought the poverty involved in augmented needs and lessened means. If the work of the practitioners of this country were measured by statistics, would not these classes make up at least four-fifths of it? Of such work is not the following statement true? With the exception of the cases of acute disease, in which the means are more varied by which the sufferer may be kept in life and conducted back to health, the therapeutical means the practitioner can employ are almost limited to the administration of drugs. Are not his means almost restricted to the method of treatment to which it is now customary to refer in terms not far removed from those of contempt? Where is the room in such practice for the many measures of which we hear so much in the present day—

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measures which are developed in such elaboration of detail, and described in even a greater elaboration of terms descriptive and commendatory? These systems of treatment pass in waves of fashion across the surface of suffering humanity with well-filled pockets. The rise and fall of these must be watched from afar with feelings allied to wonder by those practitioners whose lot is cast in places less happy and whose patients belong to classes less favoured. The second fact that was impressed upon me was that this method of treatment by drugs does, in most cases, not only a definite but a great amount of good. This impression was derived from observation of the effects of the routine mixture and the routine pill, devised for those whose life led to like suffering and could be relieved by like measures. I have never lost the impression, and it has been deepened by my own subsequent observations.

The physician's experience of the use of drugs is acquired under conditions not altogether favourable. It is his task to deal with cases that have resisted the efforts of practitioners who are often wise, persevering, and equipped with knowledge in a degree increasingly adequate and effective. Success in treatment by drugs, after such antecedent efforts, seems to me to testify to the undeveloped capacities in the means employed. However this may be, I am convinced that the method of treatment to which the average practitioner is chiefly restricted now, as he was in the past, to which he is limited by a compulsion not less at the present time than in former days, has not only a power that can be realised now but also a potentiality yet to be developed.

It has, therefore, been with great interest that I have seemed of late to see more clearly why this should be. When I say "I have seemed to see it," I do not mean that it is not conspicuous to many. The scepticism regarding the use of drugs to which I have referred is, I think, less now than a few years ago. One favourite foothold was the statistical demonstration of inutility—as, for instance, that the average duration of acute rheumatism was the same whatever treatment was employed or when no agents were used. That is no longer possible, since we have sought help from the willow which casts its shadow on the damp places in which there thrive the bane and antidote. Since the salicylates were employed I fancy the significance of the loss of this convenient argument has been felt. Then, moreover, the empirical advice, "Try all things; hold fast that which is good," to which in the hands of peasants we owe many of our most precious aids, has been applied to the results of modern chemistry, and every tangible achievement of science has been seized by the "advanced pharmacy" of the present day.

But can we discern the reason why drugs are useful? Consider. I show you two tubes. Each contains a small quantity of a white powder—about half a teaspoonful. Each consists of the same elements. One is practically harmless; the other contains within it the power of death to 1000 men. The one is quinine; the other is aconitia[1]—the alkaloid which makes so deadly the plant whose flower our ancestors called "monkshood" in the far-off days when the original was always before their eyes. It is an almost startling fact that in this minute quantity of powder, hardly visible to those at a distance, there is such a potentiality of death. Picture to yourselves 1000 men. That which is in this tube would end the life of every one of them. There is a latent power within this powder beside which the lightning flash is feeble, and to which the earthquake might give place, so far as the comparison depends on lethal certainty. But the resemblance in the aspect of these two substances is not all. As I said, each consists of the same elements: each is made up of carbon, nitrogen, oxygen, and hydrogen. Each consists of the elements which compose air and water, with some carbon added — soot, if you like. Why is one almost harmless, and the other a most deadly poison? I might have chosen for the lower term of the comparison a simple food, but then the amount of nitrogen would have been less, and the resemblance in construction less close. The answer may be given, "It depends upon the chemical constitution." True, but this takes us a very little way. When we discern that the difference depends upon the way in which the atoms of the elements are arranged in molecules, and the molecules are grouped together, we are no nearer an explanation. We see a little more, however, when we realise that chemical constitution means that energy is held "latent" (as it is said) ready to be released when the elements can form simpler, closer compounds, and that on the same kind of constitution and the same kind of simpler union, and similar release of energy, in the constituents of the living tissues seems to depend all vital function. As far as we can see all the energy which is released in the animal body is released in consequence of chemical union under the mysterious influence of life. When such union and such release are going on, the process may be changed entirely by the contact of molecules of allied constitution, with latent energy on the point of release, so held as to blend with that which is being set free as living tissue. Blending with this it may augment or oppose it. Remember that a difference in chemical constitution means a difference in the readiness with which the elements separate and re-unite, and on this depends the effect exerted by the energy they bear. I have recently endeavoured to explain this in a small book,[2] in which you can, if you desire, pursue these conceptions.

Nerve force, as far as we can see, is the result of such chemical change occurring under the influence of life in the molecules which compose nerve tissue. Chemical compounds may come into relation with the substance in which the change is occurring without exerting the slightest influence upon it. But another substance may come, even in amount inconceivably minute, whose molecules are so arranged as to fit in, as it were, with the changing molecules of the living tissue. The energy the new molecules bear seems to blend with that which is in process of ordered release in the living tissue, and to blend so suddenly and so effectively as to derange it entirely. The various nerve tissues which compose the centres seem to us the same, but they must differ in their precise chemical nature and in the precise chemical action which their life-work involves. This fact is revealed to us only by their different response to different chemical agents, but the revelation is often a startling one. The difference in response is certain, the uniformity in the nature of the agent is certain, and therefore the difference in result must be due to a difference in that on which the agent acts. Although we have no other evidence of this, consider the absolute significance of such facts as that atropine acts first upon the nerve substance of the eye, and strychnia upon that of the spinal cord. Such an influence as I have spoken of seems to be almost universal in the case of aconitia. Its contact with any acting nerve structure seems to be, as it were, so direct, instant, and precise as to generate, as it were, an avalanche of energy, sweeping all before it, or opposing the process of liberation of energy with a momentum that involves a sudden stillness among the whirling atoms whose throb is far below the range of human sense. Among the nerves thus influenced may be those on which depends the action of the heart, and with a sudden spasm or a sudden stillness the heart stops and life is ended. That which so acts we call a poison. Widely different from this as is that vehicle for energy which we call a food, the difference is one of degree. Every form of food is such by taking to the tissues new energy in fresh molecules. Between the two—the poison and the food—there is an almost infinite gradation of substances whose influence is exerted in like way by chemical compounds upon the chemical processes of life, upon the state of nutrition, and upon the mode of action of the living tissues. It is in this intermediate region that there is the range of therapeutic influence conveyed by the vehicles we call drugs. The difference is of course in part one of quantity. But it is by the relation of the latent energy of the agent to the energy being released in the tissue, and to the secondary effect of the action thus produced upon nutrition, that one wide scope for the influence of drugs can be readily perceived. There are others, but they are different aspects of the same influence, and the facts may, I think, be best epitomised by the statement that treatment by drugs would be correctly named "dynamical therapeutics."

Although I believe that it is generally true that what we call "matter" is only effective, whether it be employed as food, medicine, or as poison, because it is a vehicle for energy, some apparent exceptions should be at least mentioned. In the functional action of all structures in the body, molecules are constantly passing off which, having formed with oxygen lower compounds and having

[1] For the opportunity of showing these specimens I am indebted to Mr. W. Martindale.

[2] The Dynamics of Life. London: J. & A. Churchill, 1894.

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yielded their latent energy, are useless, and these are constantly being replaced by others formed under the influence of life from the material which the plasma has brought to the vicinity of the structure. It is possible that the molecules of some poisons may enter into the constitution of the tissues in abnormal amount, and thus disturb function by deranging the release of energy. There are also some cases in which atoms of some different element seem to enter and replace normal atoms, and thus derange. Whenever arsenic is brought in contact with the nerve elements, whatever be its combination, it induces not only functional but also structural changes in these, leading ultimately to their degeneration. We can only explain this by supposing that atoms of arsenic are taken up by the nerve substance in the course of the molecular renewal which attends functional action, and it is reasonable to suppose that this is due to its close relation to phosphorus, which we know is a constituent of the nerve material. It is possible that such substitution may take place in a slight degree without any injurious consequences, and even, in morbid states, with benefit. The influence on the nutritional process may be actually beneficial when this is already in some way deranged. It may promote the subsequent due assimilation of phosphorus, and make this more adequate and effective. Of course this is only a speculation. It is sometimes a help to conceive how that may be which we cannot but perceive as a fact.

These remarks have reference, of course, only to the medicinal agents which act through the blood. There is a considerable scope for thought regarding the action of agents which do not pass into the blood, which act only upon the surface, or on that portion of our real exterior which is within us, as the alimentary canal. In this region, moreover, there is some room for bringing conception to the test of experiment. Many purgatives, of course, act through the blood, but chemical processes seem to take less part in the operation of saline aperients. These act rather by "flushing out," the liquid in which the salt is dissolved being merely added to by osmosis and exciting contraction. The subject, indeed, requires more special study than it has received. The great service of salines seems to me to be effected by removing that which would be in part reabsorbed.

One other phase of modern therapeutical thought is to me a mystery. It is the contrast which is often drawn between the empirical and the rational in the use of drugs, and the disparagement of the former in comparison with the latter. Possibly it is a result of the influence of the scientific training which now dominates medical education. Beneficial as this training is, its influence may acquire a momentum that carries the effect too far, and, indeed, its influence may spread too widely for the good of those whose life is to be devoted to the hard and often routine work of applying knowledge. The intense love for pure science begotten in the better class of medical students of the present day, warm with the ardour of youth, makes them slow to sink into the grooves to which they are predestined, and hinders their perception of that which they might gain and see therein. They yield at once to the distinction between the rational in therapeutics and the merely empirical. It is all very well to esteem the rational, but we have, I hope, seen that this esteem should not be allowed to cause an aversion from that which is precious, and yet cannot be called "rational" in the common narrow sense of the word. The antithesis of the empirical and the rational is itself an error. It is an instance of a common tendency to put a positive conception into a negative word. Because the empirical is not the rational it is conceived as irrational—the only simple negative we have, but one that implies far more than simple absence of the quality excluded. The "irrational" should be merely the "not rational," but in effect it carries us as far beyond neutrality as does "unreasonable." No one means by "unreasonable" a simple absence of the quality of reasonableness. We are so accustomed to the use of the mere negative for the opposite positive that an effort may be necessary to perceive the real meaning of the words. Not only is the empirical not positively irrational: it is doubtful how we are justified in considering that a truly rational element is absent from the empirical. The term "rational therapeutics" is applied to treatment in which a drug is given with success in accordance with preconceived ideas or with a theory. The theory may turn out quite wrong, although the result is the same. What, then, becomes of the rationality? In empirical therapeutics a drug is given because it is found by experience that in the particular condition it does good. Often we cannot even guess why. But the fact remains, and surely to act upon observed experience is as truly a rational proceeding as is action upon a theory which may be incorrect. After all, the medicinal treatment which can be based upon any definite theory is small. How seldom, moreover, can we use a drug to advantage which was discovered save by the purest empiricism. In not one drug in twenty, perhaps not one in fifty, of those of most certain service, can the use be traced to anything except unguided experiment. Our knowledge of these drugs, derived from the past—and often from the distant past—must be assumed to be the result of experiments innumerable, perhaps continued through the long tens of centuries in which the human race has lived among surroundings which alike compelled and suggested endeavours to counteract disease by every available means. The need for food must itself have led men to a knowledge of the physiological action of most herbs of the field, especially when domestication brought the habits of animals under observation, habits such as must have had the power of example. It is probable that since man became able to observe and to reason, every common herb of the field and fruit of the tree has been at some time tested, and thus by slow degrees the knowledge of a physical good and evil has been acquired.

It is strange, indeed, to note how far back goes the use of the drugs on which we most rely. Most of them can be traced into the mists of the popular knowledge which it is so easy to sneer at and would be so difficult to do without, or until they are lost in the bluer mists in which the distance shrouds alike the hills of Greece and deserts of Arabia, or to the time when the world learnt its wisdom from the land where now only the sculptured symbols of man's thought stand silent in the cold moonlight of a long dead past. We smile at the popular herbal remedies. But it is to these that we owe the majority of our most useful drugs. I cannot conceive a therapeutist surveying a list of the chief drugs on which we depend in our daily work—and do not depend in vain—without a sense of wonder and perhaps of humiliation. We disinfect our rooms with burning sulphur; and so men did before the time of Homer. We purge sometimes with rhubarb, especially when some subsequent astringent influence is desirable, and so did the old Arabians for the same special reason. The value of castor oil in its chief use was familiar, probably for ages, to the natives of the East and of the West Indies before it was made known in Europe by a physician from Antigua 150 years ago. Aloes was employed in the same way long before the time of Dioscorides and Pliny. The knowledge of the influence of ergot in parturition we owe to the peasants of Germany, and the use of male-fern for tapeworm goes back to the old Greeks and Romans. The employment of mercury in syphilis by inunction and fumigation, which our nineteenth-century therapeutists regard with such satisfaction, seems to go back to the time of the Crusades, and it is said that its use can be traced in Malabar as far back as the ninth century. Podophyllum as a purgative we owe to the North American Indians. If we go through all the drugs on which we most rely we find the same story. Even in the case of those which are the latest additions to our resources, we find that, with very few exceptions, their use arose from what we must regard as pure empiricism. It was by accident that the local anæsthetic influence of cocaine was discovered. The unexpected results of simple experiment afforded us the chief use of antipyrin; and that which is perhaps the greatest practical discovery of modern times in the influence of drugs on disease—the use of bromides in epilepsy—was the result of a chance observation of its use on an allied state—also empirical. To this day we are without any rational perception of its mode of action or of the reasons for its use in given cases. I yield to no one in my sense of the importance of the rational in therapeutics; but we need to be careful lest, in contrasting the rational and the empirical, we allow our esteem for the one to induce a depreciation of the other. We can afford to despise no source or kind of help, or to permit our estimate to be lessened by the many warping influences to which our thought is liable.

I have, indeed, tried to frame a definition of rational therapeutics which I could illustrate by examples. I will not say that I have wholly failed, but my success is not sufficient to let me submit it for your consideration. But the attempt has impressed me with a doubt as to the propriety of considering that a theory, to explain an empirical discovery, makes the therapeutics rational. It is very easy to frame a theory of the action of a drug, and it is

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easy to extend this theory to the nature of the disease in which the drug does good, and at the same time to ignore the many other possible ways in which the effect may be produced, and so to build from a small and uncertain foundation an edifice which some new knowledge may reduce to that which most builders call "rubbish." When I recommend a drug I am often asked, "How does it act?" Occasionally I can give some inadequate reason, but I am generally compelled to answer, "I do not know; it is often useful in this condition." Sometimes I can add, "There are several ways in which it may act." Sometimes I am obliged to say, "I have no idea how it does good." It has not been my privilege to add much to our therapeutical resources, but the few agents I have recommended have been based on pure empiricism. A few days ago I received a pamphlet from a distinguished French physician, Dr. Féré, who confirms the statement which I made sixteen years ago regarding the occasional service of borax in epilepsy, a confirmation which many others have furnished. In inveterate cases which do not yield to bromide, borax sometimes does good that is definite and distinctly greater than that which bromide produces in those cases. But I cannot say why. It was one of many things I tried, simply as a peasant might try in succession a number of herbs. Further, the diminution in the tendency to the distressing pains in locomotor ataxy which is caused by the regular administration of chloride of aluminium is so distinct that I have little doubt that the time will come when this drug will find a place in the Pharmacopœia. But I had no better reason for trying it than the fact that arsenic is a metal and so is aluminium. Of the rational we have here no trace, although I should take objection to the difference involved in the application of the epithet "irrational."

There is much more I should like to say for which time fails. I must content myself with expressing the hope that you will *use* this address. By this I mean that you will utilise it, even though the process involves tearing it to shreds. I should much like you to discuss the statement from which I started—the relation of the use of drugs to the work of the general practitioner. But I should also like you to go further—to endeavour to answer the problems that underlie my statement. I feel sure that such a society as yours cannot do more for its members, and cannot in any way do more for the profession outside, or for yourselves, than by carefully considering what drugs are found, by the personal experience of each one, to be of real use, by combining the results of personal observation, and by endeavouring in the future to organise mutual help in respect to the new therapeutic agents which the earnestness and energy of others, disinterested or interested, bestow upon us. I count it a high privilege to teach, but a privilege far higher to help men to teach themselves. It is easy to lose that which is merely received. That which is acquired is persistent. Knowledge personally gained becomes part of a man's mental self—not only as knowledge, but as power. It rises in its influence into every branch of the complex activity of practical life, and it becomes effective through its indirect effect even where we cannot trace its presence.

[*Note.*—I am glad to learn, from a letter in THE LANCET of last week, that the above suggestion is bearing fruit. I think that local medical societies would benefit by such discussions. It would be especially useful to take some related drugs, such as the antipyrine group, or the gentler hypnotics, and arrange, at a preliminary discussion, points for observation, the results to be compared and considered on another occasion a few months afterwards. Observations under these conditions would have a special value. Even in a small society—far more in a number of societies—it would be interesting to know the deliberate voting on the drugs of the Pharmacopœia that are believed, from personal experience, to be of definite value.]

CHICHESTER INFIRMARY.—The annual meeting of the governors of Chichester Infirmary was held on Nov. 14th, the Mayor presiding. The report showed that the income of the institution is insufficient to meet the expenditure, and the trustees have been requested to sell out £400 Consols. A legacy of £500, bequeathed by the late Miss Wetherstonhaugh, will be paid over before long, but an increase of at least £200 in the permanent income is required.

THE PHARMACOLOGY OF THE IPECACUANHA ALKALOIDS.[1]

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THE active principle of the ipecacuanha root "emetine" has been known to chemists since the early part of the present century, and its physiological action has been investigated by Magendie and many subsequent observers. The experimental results have in some cases been discrepant and at times even contradictory, so that doubt still exists as to the precise nature of the so-called "emetine" and its action upon the tissues. Considerable light has recently been thrown upon the cause of these discrepancies by the researches of Paul and Cownley,[2] who have shown that the ipecacuanha root contains at least two distinct alkaloids and that these exist in variable relative proportions in different varieties of the plant. They have also shown that the so-called "emetine" previously obtained by different chemists was not always the same substance, that obtained by Glenard[3] consisted of one of the two alkaloids, while other methods yielded variable mixtures. Paul and Cownley have succeeded in separating two bases, the one soluble and the other insoluble in caustic alkalies, and have named them cephæline and emetine respectively; the latter is identical with the emetine of Glenard. These alkaloids have been prepared in a pure state, carefully analysed, and their salts studied. They possess a definite composition agreeing with the formulæ $C_{14}H_{20}NO_2$ for cephæline, and $C_{15}H_{22}NO_2$ for emetine; the latter alkaloid is thus the methyl compound of the former, the chemical relation between them being similar to that existing between morphine and codeine or between caffeine and theobromine. It is important to determine whether both of these alkaloids are active principles, and if so whether their action is the same or different in kind or in degree.

The following experimental investigation of the comparative action of cephæline and emetine upon certain tissues and organs was carried out in the pharmacological laboratory of the Owens College. It is by no means exhaustive, but it affords some information as to their relative activity and gives some indications of their probable therapeutic value. It also affords another example of the effect of introducing a methyl group into a physiologically active compound, and may therefore add something to our increasing knowledge of the relation of chemical constitution to physiological action. In all cases the hydrochlorides of the alkaloids were used for experimental purposes, and I have to thank Mr. Paul for kindly placing a sufficient quantity at my disposal. I desire, also, to express my indebtedness to Professor Leech, and to Mr. J. N. Platt who has taken many of my tracings.

CEPHÆLINE HYDROCHLORIDE.

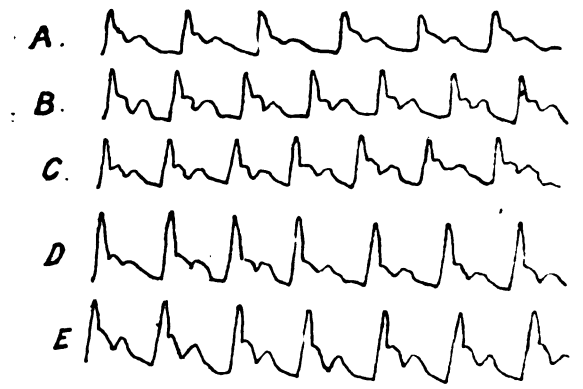
General action.—Various doses of the drug were taken by myself and two volunteers, to whom my sincere thanks are due. In some cases the drug was taken on an empty stomach, in others after meals; in the latter case the previous meal was of the same character in experiments with the two alkaloids, and the drugs were administered after the same interval of time. The effect of 5 milligrammes (about one-twelfth of a grain) taken by myself was to produce nausea, giddiness, salivation, and slight retching, but no actual vomiting. The onset of the first symptom was about twenty minutes after a dose taken on an empty stomach, and nearly an hour when the stomach contained food. The effect was also greater in the former case. Pulse tracings showed a fall in arterial tension, which reached its lowest point about an hour after the administration, and the pulse had almost regained its normal character in two hours. The duration of the nausea varied from an hour to four hours. A dose of 10 milligrammes (about one-sixth of a grain) produced slight nausea in twenty-five minutes; this rapidly increased, with retching, giddiness, salivation, and an intense feeling of illness, until vomiting occurred about an hour after the administration. The nausea and other symptoms then

[1] A paper read before the Manchester Medical Society on Nov. 6th, 1886.
[2] Pharmaceutical Journal, August and November, 1886.
[3] Annales de Chimie et de Physique, [illegible], vol. viii., p. 233.

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improved, but returned half an hour later for a short time; in two hours after the administration there was no feeling of illness. Pulse tracings showed a slight fall of pressure, which preceded the actual vomiting. In other persons 5 milligrammes (one-twelfth of a grain) caused either a

FIG. 1.



Pulse tracings taken by a Dudgeon's sphygmograph. A, Normal pulse before taking the drug. B, 55 minutes after cephaline hydrochloride 10 mg. (⅙ gr.), and before vomiting; much nausea. C, 63 minutes after cepaæline hydrochloride 10 mg., and after vomiting. D, 77 minutes after cephæline hydrochloride 10 mg. E, 110 minutes after cephæline hydrochloride 10 mg.

similar effect to that observed in myself or else the severe vomiting, which in my own case only occurred after a larger dose.

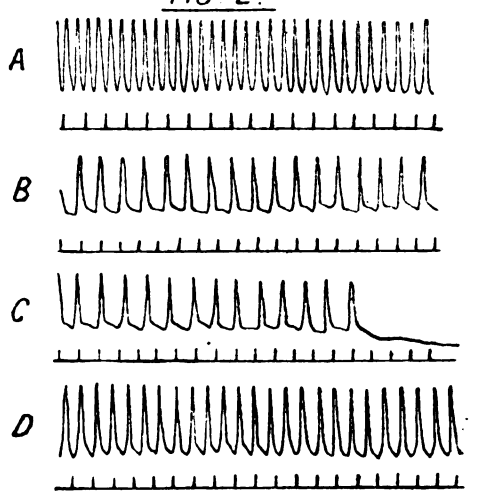
From the results of a number of experiments the chief points to be noted were: 1. The variations in the dose required by different individuals to produce vomiting; five milligrammes in one person produced an effect as severe as that obtained from ten milligrammes in another person. 2. The slow action of the alkaloid. In no case did vomiting occur within forty-five minutes after the drug had been taken. Larger doses would, perhaps, act more quickly, but the effect of ten milligrammes (one-sixth of a grain) was sufficiently violent to deter one from increasing the dose. 3. The secondary onset of nausea, and sometimes actual vomiting, which appeared after the first attack had passed off, in one case after an interval of two hours. It is not unlikely that this may be due to an excretion of the drug into the alimentary canal and reabsorption. Further experiments are requisite to determine this point. 4. The very marked salivation which preceded the vomiting, and which also occurred when vomiting was not produced. 5. The depressing effect upon the pulse. This was in some cases more marked after a small dose when vomiting did not occur than after a larger emetic dose. 6. Occasionally increased intestinal peristalsis was noticed, followed by a loose motion. 7. There was no noticeable effect upon the nasal mucous membrane, upon the skin, or upon the secretion of urine. The experiments did not give any information as to whether the drug acted upon the liver, save the fact that no excess of bile was present in the vomited matter.

On voluntary muscle.—The experiments were conducted by immersing the gastrocnemius muscle of a frog in a saline solution and stimulating it at regular intervals. The apparatus used was that previously described by me in a paper upon the Action of Quinine on Contractile Tissues.[4] The muscle was connected with a lever writing upon a smoked drum, the latter being either stationary during the contraction or rapidly revolving, according as it was desired to study the effect of the drug upon the vitality and power of the muscle or its effect upon the individual contractions. Cephæline hydrochloride in saline solutions containing 1 in 1000 of the drug acted as a moderately powerful muscle poison, and caused death of the tissue in from one to two hours. There was slight initial rise in the height of contraction, probably due to irritation of the motor nerve endings. There was no alteration in the shape of the muscle curve. The duration of the latent period was not affected until the muscle began to lose its vitality. Solutions containing a smaller amount of the drug produced less marked effects of the same character.

On the walls of the bloodvessels.—Pithed frogs and decapitated water tortoises were experimented upon. A cannula was inserted into one of the systemic aortæ, the other aortic trunks were ligatured, and the heart having been removed the outflow from the divided venous trunks was collected and measured at regular intervals. Saline solution (0·75 NaCl) was circulated at a constant pressure, and when the rate of flow had become fairly regular a similar solution containing the drug was substituted for a certain period of time, and then replaced by the unpoisoned saline. It was found that 1 in 5000 of cephæline hydrochloride produced a moderate contraction of the vessel walls, as shown by the diminished rate of flow. Return to or near the normal was easily effected when the poison was washed out with the pure saline, and the experiment could be repeated several times before the tissues lost their vitality. Solutions containing 1 in 10,000 and 1 in 20,000 had no contracting effect; in one experiment a slight dilatation occurred, but it could not be again obtained, and was probably not due to the action of the drug.

On the isolated frog's heart.—The heart of a frog was prepared in the usual manner with the cannula of a Williams' heart apparatus in the ventricle, and arranged to be fed with a saline solution (Professor Ringer's formula), while the beats were recorded on a slowly revolving drum. When pure Ringer's solution was replaced by one containing 1 in 20,000 of cephæline hydrochloride there was no immediate effect; a gradual slowing and diminution in the height of the individual beats was observed, and the heart stopped beating suddenly forty-six minutes after the perfusion of the poison was commenced. The pure Ringer's solution was then allowed to run through the heart in order to wash out the poison, and after four minutes it recommenced to beat, regularly and almost as powerfully as at first, but rather more slowly. After

FIG. 2.



Isolated frog's heart. Cephæline hydrochloride 1 in 20,000. Williams' apparatus. A, Beat with normal Ringer's solution. B, 35 minutes after cephæline hydrochloride 1 in 20,000. C, 46 minutes after cephæline hydrochloride 1 in 20,000; sudden stop in diastole. D, Recovery, 15 minutes after the poison had been washed out and the heart perfused again with normal Ringer's solution. Time marker, marking every 5 seconds.

about forty minutes the experiment was repeated with a similar result as regards the slowing and loss of power; the rhythm then became irregular, and the heart stopped after twenty-two minutes' perfusion of the poison. There was no recovery after the second arrest. Similar experiments with a solution containing 1 in 10,000 of cephæline hydrochloride presented the same phenomena, but more rapidly induced and more marked in degree; the rhythm became irregular, and diastolic arrest occurred twenty minutes after the administration of the poison. Recovery was effected after twenty minutes' washing out with the pure Ringer's solution, and the beats were powerful, somewhat irregular, and double beats were present for about ten minutes. No more of the poison was given, but the contractions gradually

[4] Brit. Med. Jour., vol. ii. 1887.

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became more feeble, and the heart died in a diastolic condition sixty-five minutes after the first administration of the drug.

On the blood pressure.—In order to test the action of cephæline upon the blood pressure a cat was anæsthetised by chloroform, tracheotomy performed, and a tube inserted connected with an apparatus for administering ether continuously during the whole of the experiment. A glass cannula was inserted into the right carotid artery and connected in the usual manner with a Ludwig's kymograph writing upon a slowly revolving drum. Cephæline hydrochloride, 20 milligrammes (one-third of a grain), was administered by hypodermic injection, a slight fall of blood pressure (two to three millimetres of mercury) occurred after a few minutes, and the new level was maintained until a further dose of 10 milligrammes (one-sixth of a grain) was again followed by a fall of two to three millimetres, the latter fall being recovered from after fifteen minutes. The rhythm and rate of the heart were not affected by the drug and the animal lived for over two hours after the administration of the poison, and was finally killed while still under anæsthesia. No vomiting or attempts at vomiting were made, and it appeared that under complete anæsthesia the drug had hardly any effect upon the vomiting centre, the vasomotor centre, or the heart, in the doses administered.

EMETINE HYDROCHLORIDE.

General action.—A dose of 5 milligrammes (about one-twelfth of a grain) produced either no appreciable effect or after the lapse of half an hour slight nausea, giddiness, and salivation; pulse tracings showed lowering of tension during the period of nausea, and in one hour and a half recovery was complete. Doses of 10 milligrammes (one-sixth of a grain) produced similar but more marked effects with retching, but, in myself, no actual vomiting. With a dose of 15 milligrammes (one-quarter of a grain) giddiness, nausea, and retching came on in twenty-five minutes, rapidly increased, accompanied by great salivation and watery secretion from the nasal mucous membrane; in forty-seven minutes vomiting occurred and again a few minutes later. The nausea improved after the vomiting, but the feeling of illness and exhaustion continued, and remained some time after the nausea had entirely disappeared, some two hours from the administration of the drug. The pulse tracings showed marked lowering of the arterial tension, and this was at its maximum some time before vomiting occurred; it was partially recovered from before vomiting, but remained below the normal for some hours.

FIG. 3.



A, Normal pulse before taking the drug. B, 15 minutes after emetine hydrochloride 15 mg. (¼ gr.). C, 34 minutes after emetine hydrochloride 15 mg., much nausea, before vomiting. D, 42 minutes after emetine hydrochloride 15 mg., before vomiting. E, 50 minutes after emetine hydrochloride 15 mg., after vomiting.

About two hours after the administration a distinct increase of intestinal peristalsis was noted, with borborygmi and a desire to empty the bowels; this culminated in a loose motion. There was no noticeable effect upon the skin or upon the secretion of urine, nor did the vomited matter contain excess of bile.

On voluntary muscle.—Emetine was less poisonous to muscle than cephæline; a solution containing 1 in 1000 of the hydrochloride was fatal in about three hours. The shape of the curve was unaltered, and the irritation of the nerve endings was much less than with cephæline; contracture was scarcely present.

On the walls of the bloodvessels.—Emetine was more powerful as a vessel contractor than cephæline; 1 in 20,000 caused well-marked contraction; also 1 in 10,000 and 1 in 5000; after the stronger solution recovery was less complete than after cephæline in the same strength. Emetine, like cephæline, acted equally well, whether the spinal cord was intact or destroyed.

On the isolated frog's heart.—The effect of emetine was very similar to that of cephæline, both in kind and degree; the variations which occurred in different experiments were not greater than are usually found in a series of heart experiments when a number of frogs are used of varying vitality and power.

On blood pressure.—The effect of emetine hydrochloride upon the blood pressure of the anæsthetised cat was the same as that of cephæline—viz., a slight lowering after subcutaneous injection in doses of 10 milligrammes (one-sixth of a grain). No attempt at vomiting was made and the beat of the heart was unaffected. In one experiment 20 milligrammes (one-third of a grain) injected into the jugular vein produced death by failure of the heart in forty-five seconds.

SUMMARY.

Both cephæline and emetine possessed a powerful emetic action; the emetic dose of the latter was, however, about double that of the former. In non-emetic doses the degree of nausea produced by cephæline was also about double that produced by emetine—e.g., the intensity and duration of the nausea following 5 milligrammes of cephæline was much the same as that following 10 milligrammes of emetine. Both alkaloids lowered the arterial tension, and little difference was apparent in small doses, but the depression produced by the emetic dose of cephæline was less than that produced by the larger emetic dose of emetine; cephæline appeared, therefore, to be distinctly preferable where a non-depressing emetic was desired. Both alkaloids caused contraction of the bloodvessels after destruction of the brain and spinal cord, but emetine was distinctly more active than cephæline: 1 in 10,000 of the latter produced little if any effect, while 1 in 20,000 of emetine was followed by marked contraction. On the heart no appreciable difference could be made out, both produced slowing, weakening, and diastolic arrest of the isolated organ; recovery was easily effected when the poison was removed. It is doubtful whether the drugs in the doses administered to men would affect the heart directly; but the fact that 1 in 20,000 caused diastolic arrest in forty-six minutes renders caution necessary in giving larger doses of the alkaloids. Both acted as muscle poisons, but cephæline had the greater toxic power, and also caused irritation of the motor nerve endings and contracture. On the secretions, salivation was well marked wherever there was nausea. Emetine caused a flow of watery mucus from the nasal mucous membrane when a full dose was given; this was not noticed after cephæline. It is possible that the expectorant action of ipecacuanha is due to a similar action of emetine upon the other portions of the respiratory mucous membrane. Intestinal peristalsis and a loose motion at times followed the administration of either alkaloid; there was never any marked purgation. No effect was noticed upon the secretion of the skin or upon the amount of urine.

Assuming the view that emetine is methylcephæline to be correct, it would seem that the chief effect of the addition of the CH_2 group was to markedly reduce the action of the compound upon the convulsive or vomiting centre in the medulla oblongata, and also to diminish the irritating effect upon motor nerve endings. The methyl compound had, on the other hand, a more powerful action as a local vaso-constrictor. The addition of the methyl group did not appear to affect the other actions of the alkaloid. With regard to therapeutic use, only accumulated clinical experience can determine their relative positions. It seems probable that in cephæline we have a powerful and certain emetic, singularly free from depressing effects when given in doses of from [illegible] to ten milligrammes (from one-twelfth to one [illegible]); its action, however, is too slow to prove [illegible] of poisoning, but in all other [illegible] it appears well worthy of trial. [illegible] conditions, as an expectorant [illegible] of

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ipecacuanha where vomiting is not desired, emetine in small doses seems likely to prove of considerable value, and also as an emetic in larger doses of from ten to twenty milligrammes (from one-sixth to one-third of a grain) when a more depressing action is required. The powerful local constricting effect upon bloodvessels may also prove useful in hyperæmic and inflammatory conditions.

The wide variations in the activity of the pharmacopœal preparations of ipecacuanha may not unlikely be due to variations in the quantities and relative proportions of the alkaloids which they contain, and the use of the pure alkaloids may render one of our most valuable remedies of still greater service.

Manchester.

CONSIDERATIONS IN RESPECT TO "RETURN" CASES OF SCARLET FEVER.[1]

BY T. W. THOMPSON, L.R.C.P. EDIN., M.R.C.S. ENG.,
INSPECTOR, LOCAL GOVERNMENT BOARD.

[AS is known to our readers, we never use the term "scarlatina," but always "scarlet fever." In the MSS. "scarlatina" was used throughout, it being the official habit of the Local Government Board to employ that term and not "scarlet fever."—ED.L.]

THE subject of this paper is that of so-called "Return" Cases of Scarlet Fever, by which I understand fresh cases of the fever occurring in previously invaded households under circumstances which lead to their being attributed to the return thither of recently discharged patients from isolation hospitals. The circumstances attending the so-called "return case" appear to be somewhat as follows. A household becomes newly invaded by scarlet fever, and the person first attacked is removed to hospital. During the eight or so weeks of his detention there the household frequently, though not invariably, remains free from further invasion by the disease. A few days after his return home, however, a fresh case—the so-called "return" case—occurs, and is regarded as being due to the arrival in the dwelling of this patient from hospital. In a certain proportion of instances, though by no means in all, the recently returned hospital patient is now found, upon examination, to exhibit some evidence of desquamation, or to be suffering from discharge from the nose or ears — a discovery which is naturally held to strengthen the belief in his having reintroduced infection into the household. Such, then, is a brief outline of the history of the ordinary "return" case. Theoretically, no doubt, the subject should be dealt with upon a wider basis, since it constitutes a branch of the more general subject of the dissemination of infectious diseases by discharged hospital patients. For not only do "return" cases probably occur in connexion with other diseases—at all events, it would so seem, in connexion with diphtheria—but it sometimes doubtless happens that discharged hospital patients initiate disease in households other than their own, and that they are also the means, perhaps, of introducing disease into schools and kindred institutions. Practically, however, it will perhaps now suffice to consider "return" cases of scarlet fever, for while on the one hand it is in connexion with this disease that most experience exists in regard to cases of the sort in question, on the other hand the subject, even as thus limited, will, I think, afford as many etiological problems as may be profitably referred to within the limits of this paper.

The subject of "return cases" of scarlet fever appears to be daily attracting increased attention, both among those engaged in public health administration and also among those responsible for the administration of isolation hospitals. That it is one of some importance will, I anticipate, be generally conceded, for if it is true that the return home of patients from isolation hospitals results in any appreciable number of instances in the reintroduction of scarlet fever to their households, to that extent, it would seem, are we at present failing to obtain what, on theoretical grounds, is to be regarded as the full benefit of isolation procedures. It is clearly of importance, then, that we should endeavour to ascertain the extent of our failure in this respect, and, if possible, the means by which it may be remedied. In regard to my treatment of the subject, however, I am not prepared to bring forward the results of anything approaching to an exhaustive statistical or other study of the matter. My purpose, indeed, is rather to seek information than to give it. Having upon one or two occasions been brought into official relations with the subject, I have become impressed with the need for its more systematic study, and it seemed to me that the mutual deliberations of those interested in the matter would form a valuable preliminary to such study—in the sense, at least, of tending to clear the ground and of thus leading, perhaps, to some approach to agreement as to the general aspect from which so-called "return" cases should for the most part be regarded; and this appeared to me the more desirable in view of the diverse mental attitudes from which the subject has hitherto often been approached. Lastly, it seemed to me that of all societies the Epidemiological Society should be especially fitted to throw light upon the matter, comprising as it does among its members not only many medical officers of health, some of whom must have been brought into contact with "return" cases of scarlet fever in their public health aspect, but also not a few medical superintendents of isolation hospitals who have had experience—and doubtless anxious experience—of such cases from the hospital standpoint; while the society also of course numbers many members who, having paid special attention to general etiological questions, might be expected to throw light upon some of the more obscure problems which, as I venture to think, are not improbably involved in the subject under consideration. So far as I am concerned, therefore, my main purpose is to endeavour to set out, as a basis for discussion, the several considerations which have occurred to me as being probably bound up with this matter, and to indicate, by the way, the particular points which have appeared to me as being especially deserving of attention.

I have spoken of the subject of "return" cases of scarlet fever as daily attracting increased attention, and that such is the fact is, I think, sufficiently evident from the comparative frequency with which communications respecting it have recently appeared in the medical journals and in the annual reports of medical officers of health. I do not infer from this fact that the hospital isolation of cases of scarlet fever was in earlier years unattended by mishaps of the kind, and, indeed, it appears certain, from such inquiries as I have been able to make, that such was not the case. Nor does it seem likely that any general increase has of late years occurred in the proportion of cases of a kind that might be regarded as "return" cases to the number of patients isolated. It may, therefore, I think, be surmised that the increased attention which the matter is now attracting is due partly to the absolute increase in the number of such cases consequent upon the general growth of isolation procedures and partly to the closer scrutiny into the origin of new cases of scarlet fever which has resulted from more complete sanitary organisation, and which has been especially facilitated by the compulsory notification of infectious diseases, the result being that not only are "return" cases now absolutely more numerous, but that such as do occur are more likely to be brought to light. With respect to the growth of hospital isolation as a method of dealing with scarlet fever, it appears, from a return made to the Local Government Board in the year 1879, that only some 18 per cent. of the sanitary authorities in England and Wales had at that time made isolation provision of any sort, and I learn from Dr. Thorne Thorne's report upon the "Use and Influence of Hospitals for Infectious Diseases" that the provision made even by such authorities amounted in many instances to provision only in name. According to a further return made to the Board in 1893 it appears, however, that the proportion of the total sanitary authorities then in possession of isolation accommodation of one or another kind was practically double that of 1879. During recent years, moreover, considerable improvement has taken place in the character as well as in the amount of isolation accommodation available, and it is certain that this has largely contributed to the increased use of isolation hospitals by the public. As a general result, then, of the increase in the number of isolation hospitals, and of the improvement in their character, a considerably larger proportion of the total cases of infectious disease occurring in the country are now removed to hospital than was formerly the case; and that this is especially true in regard to scarlet fever is, I think, evident from the fact

[1] A paper read before the Epidemiological Society on Friday, Nov. 15th, 1895.

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became more feeble, and the heart died in a diastolic condition sixty-five minutes after the first administration of the drug.

On the blood pressure.—In order to test the action of cephæline upon the blood pressure a cat was anæsthetised by chloroform, tracheotomy performed, and a tube inserted connected with an apparatus for administering ether continuously during the whole of the experiment. A glass cannula was inserted into the right carotid artery and connected in the usual manner with a Ludwig's kymograph writing upon a slowly revolving drum. Cephæline hydrochloride, 20 milligrammes (one-third of a grain), was administered by hypodermic injection, a slight fall of blood pressure (two to three millimetres of mercury) occurred after a few minutes, and the new level was maintained until a further dose of 10 milligrammes (one-sixth of a grain) was again followed by a fall of two to three millimetres, the latter fall being recovered from after fifteen minutes. The rhythm and rate of the heart were not affected by the drug and the animal lived for over two hours after the administration of the poison, and was finally killed while still under anæsthesia. No vomiting or attempts at vomiting were made, and it appeared that under complete anæsthesia the drug had hardly any effect upon the vomiting centre, the vasomotor centre, or the heart, in the doses administered.

EMETINE HYDROCHLORIDE.

General action.—A dose of 5 milligrammes (about one-twelfth of a grain) produced either no appreciable effect or after the lapse of half an hour slight nausea, giddiness, and salivation; pulse tracings showed lowering of tension during the period of nausea, and in one hour and a half recovery was complete. Doses of 10 milligrammes (one-sixth of a grain) produced similar but more marked effects with retching, but, in myself, no actual vomiting. With a dose of 15 milligrammes (one-quarter of a grain) giddiness, nausea, and retching came on in twenty-five minutes, rapidly increased, accompanied by great salivation and watery secretion from the nasal mucous membrane; in forty-seven minutes vomiting occurred and again a few minutes later. The nausea improved after the vomiting, but the feeling of illness and exhaustion continued, and remained some time after the nausea had entirely disappeared, some two hours from the administration of the drug. The pulse tracings showed marked lowering of the arterial tension, and this was at its maximum some time before vomiting occurred; it was partially recovered from before vomiting, but remained below the normal for some hours.

FIG. 3.



A, Normal pulse before taking the drug. B, 15 minutes after emetine hydrochloride 15 mg. (¼ gr.). C, 34 minutes after emetine hydrochloride 15 mg., much nausea, before vomiting. D, 42 minutes after emetine hydrochloride 15 mg., before vomiting. E, 50 minutes after emetine hydrochloride 15 mg., after vomiting.

About two hours after the administration a distinct increase of intestinal peristalsis was noted, with borborygmi and a desire to empty the bowels; this culminated in a loose motion. There was no noticeable effect upon the skin or upon the secretion of urine, nor did the vomited matter contain excess of bile.

On voluntary muscle.—Emetine was less poisonous to muscle than cephæline; a solution containing 1 in 1000 of the hydrochloride was fatal in about three hours. The slope of the curve was unaltered, and the irritation of the nerve endings was much less than with cephæline; contracture was scarcely present.

On the walls of the bloodvessels.—Emetine was more powerful as a vessel contractor than cephæline; 1 in 20,000 caused well-marked contraction; also 1 in 10,000 and 1 in 5000; after the stronger solution recovery was less complete than after cephæline in the same strength. Emetine, like cephæline, acted equally well, whether the spinal cord was intact or destroyed.

On the isolated frog's heart.—The effect of emetine was very similar to that of cephæline both in kind and degree, the variations which occurred in different experiments were not greater than are usually found in a series of heart experiments when a number of frogs are used of varying vitality and power.

On blood pressure.—The effect of emetine hydrochloride upon the blood pressure of the anæsthetised cat was the same as that of cephæline—viz., a slight lowering after subcutaneous injection in doses of 10 milligrammes (one-sixth of a grain). No attempt at vomiting was made and the beat of the heart was unaffected. In one experiment 20 milligrammes (one-third of a grain) injected into the jugular vein produced death by failure of the heart in forty-five seconds.

SUMMARY.

Both cephæline and emetine possessed a powerful emetic action; the emetic dose of the latter was, however, about double that of the former. In non-emetic doses the degree of nausea produced by cephæline was also about double that produced by emetine—e.g., the intensity and duration of the nausea following 5 milligrammes of cephæline was much the same as that following 10 milligrammes of emetine. Both alkaloids lowered the arterial tension, and little difference was apparent in small doses, but the depression produced by the emetic dose of cephæline was less than that produced by the larger emetic dose of emetine; cephæline appeared, therefore, to be distinctly preferable where a non-depressing emetic was desired. Both alkaloids caused contraction of the bloodvessels after destruction of the brain and spinal cord, but emetine was distinctly more active than cephæline: 1 in 10,000 of the latter produced little if any effect, while 1 in 20,000 of emetine was followed by marked contraction. On the heart no appreciable difference could be made out, both produced slowing, weakening, and diastolic arrest of the isolated organ; recovery was easily effected when the poison was removed. It is doubtful whether the drugs in the doses administered to men would affect the heart directly; but the fact that 1 in 20,000 caused diastolic arrest in forty-six minutes renders caution necessary in giving larger doses of the alkaloids. Both acted as muscle poisons, but cephæline had the greater toxic power, and also caused irritation of the motor nerve endings and contracture. On the secretions, salivation was well marked wherever there was nausea. Emetine caused a flow of watery mucus from the nasal mucous membrane when a full dose was given; this was not noticed after cephæline. It is possible that the expectorant action of ipecacuanha is due to a similar action of emetine upon the other portions of the respiratory mucous membrane. Intestinal peristalsis and a loose motion at times followed the administration of either alkaloid; there was never any marked purgation. No effect was noticed upon the secretion of the skin or upon the amount of urine.

Assuming the view that emetine is methylcephæline to be correct, it would seem that the chief effect of the addition of the CH_2 group was to markedly reduce the action of the compound upon the convulsive or vomiting centre in the medulla oblongata, and also to diminish the irritating effect upon motor nerve endings. The methyl compound had, on the other hand, a more powerful action as a local vaso-constrictor. The addition of the methyl group did not appear to affect the other actions of the alkaloid. With regard to therapeutic use, only accumulated clinical experience can determine their relative positions. It seems probable that in cephæline we have a powerful and certain emetic, singularly free from depressing effects when given in doses of from five to ten milligrammes (from one-twelfth to one-sixth of a grain); its action, however, is too slow to prove of much service in cases of poisoning, but in all other cases where emesis is desired it appears well worthy of trial. In acute catarrhal and febrile conditions, as an expectorant and for all the uses of

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and without doubt, the period at which those processes have ceased to operate—in other words, the exact time at which a person has ceased to be infective; and (3) that patients who are capable of disseminating infection a week or so after their return home were necessarily, and in all cases, also infective at the time of their leaving hospital. However, these appear to be very large assumptions—assumptions, indeed, which involve certain important but difficult considerations in regard to the natural history of scarlet fever—to which I propose to refer presently. Similarly, notwithstanding that "return" cases have doubtless sometimes been due to imperfect arrangements at hospitals for the disinfection of the patients' effects, or to the fact of patients having been allowed, through careless administration, to take with them on returning home some infected book or toy, yet the circumstance that "return" cases occur in connexion with hospitals which, judged by our present standards, must be regarded as efficiently equipped and administered, makes it impossible, so it seems to me, to ascribe all cases of the sort to culpable negligence in these respects. The practice, indeed, of allowing patients on admission to bring nothing with them but a night garment, which is destroyed at the hospital, fresh clothes being sent from the home on the day of, and for the purpose of, their discharge, does not seem to entirely prevent the occurrence of "return" cases, even though such fresh clothes are sent direct to a suitably constructed discharging house, or "out-bathing place," and though every practicable precaution is apparently taken, short of the absolute sterilisation of the discharge nurse, to prevent these clothes from becoming infected on the hospital premises. Further, as far as I am aware, no relation has at present been made out between the character of the procedures adopted at different hospitals in regard to the discharge of patients therefrom and the occurrence in connexion with such hospitals of so-called "return" cases. Indeed, so far as importance can be attached to a single observation extending over a comparatively short space of time, the experience of Glasgow in this respect is of some interest; for it appears from the paper by Dr. Chalmers, to which I have already referred, that during the year 1894 the percentage of "return" cases to dismissals was practically identical at the two principal isolation hospitals there, notwithstanding that, as he shows, "patients dismissed from Belvidere are subjected to a carefully designed system of bathing in a separately constructed 'clearing house.' ..... At Parliamentary-road Hospital there are no discharging-rooms, and the ward bath-rooms (which are to some extent liable to harbour infection) have to be used." It would by no means be safe to infer from this experience that a properly arranged discharging-house involves a needless expenditure and that it does not in some measure tend to diminish the occurrence of "return" cases. I have quoted the experience only as being consistent, as far as it goes, with the view that defective administration of the sorts in question hardly affords an adequate explanation of any large proportion of the total of "return" cases met with. The kindred suggestion which ascribes "return" cases to insufficient bathing of the patients during the later weeks of their detention in hospital or to the omission of the frequent application to their bodies of solutions believed to possess some disinfecting quality, must for the present, it appears to me, be put aside on similar grounds. I am not aware of any sufficient evidence that the occurrence of "return" cases has been prevented by the use of any particular application of the kind, and it can hardly be suggested that the generally admitted need for frequent bathing is systematically neglected at our best fever hospitals, or that the employment of any practicable means of ridding the surfaces of the body of infective material would not be adopted were any such means known of.

Coming next to the explanations of the other class to which I have referred, there can be little doubt that the occurrence of a fresh case of scarlet fever in a household shortly after the return of a patient from hospital is sometimes a mere coincidence, the fresh case being really due to other causes, such as defective disinfection of the dwelling by the sanitary authority, or to some outside source of infection; and that such may be not infrequently the case seemed to me to be indicated by an experience which recently came under my own notice. In that instance a relatively serious number of so-called "return" cases of scarlet fever occurred during a particular period in connexion with a country isolation hospital; so many, indeed, as to at first sight represent hospital isolation, as there carried out, in a very unfavourable light in regard to the limitation of the spread of the disease as compared with home isolation. The information obtained, however, sufficed to show that during the period in question the households within this hospital district from which patients were sent to hospital suffered as a class much more heavily from secondary invasion—apart altogether from the so-called "return" cases—than the households in the same district in which patients were retained at home throughout the whole period of their illness—a fact, no doubt, partly due to the circumstance of the former being households of a less well-to-do kind than the latter, and in part also to the further circumstance that the hospital class of households comprised on the average a larger proportion of persons at susceptible ages than the home isolation class. Certain facts, however, appeared to indicate that neither age distribution nor social condition sufficiently accounted for the greater incidence of secondary invasion, of kinds independent of hospital operations, upon the hospital class of households than upon the home isolation class—the inference from which would seem to be that some other factor or factors of scarlet fever production had operated more actively upon the former class than upon the latter. And, so far as the information went, it afforded the suggestion that one factor of the kind in question had perhaps been furnished by attendance at particular schools. On the whole it appeared to me probable that some unknown proportion of the so-called "return" cases had in this instance been due, not to the return of the patients from hospital, but to the cause or causes which had contributed to the excessive incidence of secondary invasion generally upon households of the hospital isolation class. This, I venture to think, is an aspect of the matter that is worthy of further study as opportunity offers, and in this connexion the possible influence of school attendance in its relation to alleged "return" cases is perhaps especially deserving of attention. The possibility of alleged "return" cases being part and parcel of a milk outbreak should also of course be borne in mind.

Proceeding with my review of the several explanations to which I have referred, it may, I take it, be concluded that some few of the so-called "return" cases are attributable to the unpacking of some imperfectly disinfected garment in preparation for the return of the patient from hospital—perhaps, as has been suggested, some comparatively new garment which had been intentionally withheld from disinfection lest it should be damaged by the process. But so far as my experience goes it has not appeared to me that variations in the occurrence of "return" cases are so closely related to variations in the efficiency with which the disinfection of dwellings and their contents is carried out as to suggest that such cases account for a large proportion of alleged "return" cases. Thus in the instance to which I have just referred as having recently come under my notice, the largest number of "return" cases occurred during the first of three succeeding years. At the end of the first year considerable improvements were adopted in one of the constituent districts of the joint hospital district concerned in regard to the measures taken for household disinfection. A steam disinfecting apparatus was provided, and, as I was informed, very special care was taken to secure the thorough disinfection of all articles which could be thought of as having possibly been infected by patients prior to their removal to hospital. Subsequently to the adoption of these precautions a considerable diminution occurred in the number of "return" cases heard of in this constituent district, which might certainly at first sight have been attributed to improved household disinfection; but that the whole of this diminution was not so brought about seemed clear from the fact that a diminution in the number of "return" cases occurred coincidently in the other constituent districts where similar improvements in disinfection procedures had not been carried out. On the whole, then, there can, it appears to me, be little doubt that a proportion of alleged "return" cases are really due to infection in some way reintroduced into the dwelling by the returned hospital patients themselves, and I must confess to having some doubt as to whether the view that such patients operate merely as mechanical carriers of infection by lodgment of infected material in the hair or by retention of such material in the lungs or the aural or nasal passages can be regarded as sufficient explanation of the facts as observed. At all events, at the joint hospital I have just alluded to I was assured that special care was taken in regard to frequent washing of the hair, and in order to minimise the risk of recently discharged patients infecting other persons by means

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of infective material mechanically carried in their lungs or elsewhere it was the practice for all patients to pass a fortnight prior to their leaving hospital in a detached convalescent block specially provided for the purpose, except in cases where arrangements could be made for sending them to reside for a period in cottages in which there were no children. Finally, when they did return home a printed notice was given to their relatives warning them that the patients should for a time, as far as possible, be kept apart from other persons.

No doubt the "infective breath" theory presents difficulties, since it is impossible in the present state of knowledge to estimate its influence; but, while admitting its probable operation in an unknown proportion of cases, it would, I venture to think, be straining it unduly to regard it as a sufficient explanation of "return" cases generally.

If I am right in the views I have expressed, it follows that some share of so-called "return" cases owe their origin to the actual infectiveness of recently returned patients from isolation hospitals, though it seems to me unlikely, for the reasons I have stated, that the fact of such patients returning home in an infective condition can, as a general rule, be attributed to culpable negligence on the part of the medical officers of such institutions; and if that is so it indicates very clearly our need for further knowledge in regard to the pathology of the infectiveness of scarlet fever. Only in proportion as the processes by which infection is given off are clearly understood will it be possible to recognise the termination of those processes. According to a time-honoured and widely distributed belief, the infectiveness of scarlet fever is mainly associated with the process of desquamation. This belief, which is still generally held by the medical profession, recently received support from the Report of the Committee appointed by the Clinical Society of London to investigate the Periods of Incubation and Contagiousness of certain Infectious Diseases, in which it is laid down as regards scarlet fever that "infection certainly persists as long as there is any desquamation." That a belief so widespread, not only among the public, but also among those specially trained in the observation of disease processes, is without foundation seems in a high degree unlikely. There appears, however, to be a growing tendency among certain experienced observers to attach less importance to this source of infection, especially during the later stages of convalescence. That apparently susceptible persons do not necessarily contract disease upon being associated with desquamating scarlet fever patients is well illustrated by the significant experience recorded by Dr. Priestley in a paper read by him before the Epidemiological Society in March last, from which I learn that, owing to an outbreak of small-pox at Leicester, "not less than 120 children in various stages of desquamation after scarlet fever were sent to their homes," and that "no single second case occurred at any of these houses," although Dr. Priestley, in his capacity of medical officer of health, "carefully watched them for three months"; and many of us have probably met with experiences of an allied character, though on a smaller scale. It would be rash indeed to conclude from such negative evidence that the process of desquamation is never attended by infective property, especially in view of the weight of opinion and experience on the other side, and I would not for a moment countenance any relaxation in our present custom of urging isolation so long as any desquamation exists, pending at least a fuller knowledge of the pathology of infectiveness in this disease. But it does appear to me that the whole matter requires very careful study, and it seems at least likely that, whatever may be the part played by desquamation in this respect, we have hitherto underrated certain other modes by which the infection of scarlet fever is disseminated. I refer especially to catarrhal conditions of the nose, ears, and especially of the throat. In so far as it is safe to attach importance to the analogies between scarlet fever and diphtheria, it would appear not improbable that the throat plays an important part in the spread of the former disease, and the fact of this channel of infection not apparently being kept more prominently in view may possibly be due to an exaggerated importance attached to desquamation. For instance, it is not unlikely that in endeavouring to trace the origin of fresh cases of scarlet fever the discovery of traces of desquamation upon a recently recovered patient is often in itself regarded as a sufficient explanation of infectivity, and no further sign is sought, whereas, had examination been extended to the throat, other evidence of infectiveness might have been detected. This appears to be a matter that should be carefully borne in mind in connexion with the study of "return" cases of scarlet fever.

In view, also, of recent researches in connexion with enteric fever, the possible infectivity of the urine of scarlet fever patients would appear to be deserving of attention.

As regards practice, it is easy, however, to say that infectiveness must be presumed to exist so long as any desquamation or any catarrhal condition of the nose, ears, or throat remains; but so far as the prevention of "return" cases is concerned this dictum is by no means altogether satisfactory, for not only are some of the lesions in question apt to become so chronic that the continued isolation of the patient is obviously impracticable, but experience, unfortunately, seems to show that they sometimes recur, and may not, perhaps even then be without powers of infectivity. This possibility of a recurrence of lesions which may possess infectivity is one of considerable importance in connexion with the subject of "return" cases, and is one which should be carefully held in view in passing judgment upon questions of hospital administration in this connexion. Whatever may be the significance of the fact in regard to the infectiveness of scarlet fever, there can, I think, be little doubt that the process of desquamation, although apparently complete, may be again renewed. And the same appears to be true in regard to the other lesions enumerated. Unfortunately, there seems to be little immediate prospect of bacteriology affording that measure of assistance in determining the infectivity or otherwise of such recurrent manifestations in the case of scarlet fever that it promises in regard to diphtheria, but that appears to be an additional reason for close study of the matter in its clinical aspects, and the subject is one upon which I would especially invite the opinions of members of the Epidemiological Society.

I should next wish, by way of suggestion, to briefly direct attention to certain considerations which may perhaps have a bearing upon the occurrence of "return" cases of scarlet fever. In the series of cases to which I have already on several occasions referred there appeared to me to be some indication of the operation of a seasonal influence, the "return" cases occurring most frequently, relatively to the number of dismissals, in connexion with patients who had been discharged during the latter half of the year. I also noted that, relatively to the number of dismissals, such cases occurred most frequently during the rise of the epidemic. It would be unsafe, of course, to draw definite conclusions from experiences of so limited a character, but, so far as they go, they are not inconsistent with the notion that the occurrence of "return" cases may be in part regulated by variations in the infectivity of scarlet fever, or the receptivity of individuals at different times; including perhaps cyclical variations extending over considerable periods such as those to which Dr. Whitelegge has so ably directed attention in respect of certain indigenous diseases. In any case these appear to be questions worthy of attention in the future study of "return" cases of scarlet fever.

A matter of more immediate practical importance upon which also more extended observation is required is the possible operation of overcrowding of hospital wards as a factor in the production of "return" cases. As a result of his investigations in Glasgow Dr. Chalmers appears to have been led to the conclusion that sustained overcrowding of wards does conduce to the occurrence of such cases, and I have myself seen reason to regard overcrowding with suspicion in this respect. Whether its operation, if it does operate in the direction suggested, is due merely to the circumstance that the lungs of the patients leaving overcrowded hospitals are charged with more highly infective air than would otherwise be the case, or whether the surcharging of the ward atmosphere with infective material tends in some way or other to prolong the period of infectiveness of patients residing therein, owing perhaps to their undergoing slight reinfections, as suggested by Dr. Boobbyer, are difficult questions. In regard to the matter Dr. Chalmers remarks that "it would appear that, apart from the possible return of readily recognisable conditions such as desquamation, &c., after dismissal, there is a constitutional effect produced which renders the discharged convalescent a danger to susceptible persons who may be brought into close contact with him. That this results from saturation of the system is, I think, clear; but whether it is due simply to delayed elimination or to constant breathing of a saturated atmosphere by the convalescent, is matter for conjecture." Dr. Chalmers further refers to the fact, brought out by Dr. Sweeting, as to the increased frequency in the occurrence of albuminuria which

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results from the aggregation of acute cases of scarlet fever as perhaps bearing indirectly on the point in question.

Before concluding there is one point in regard to the investigation of "return" cases upon which the opinions of members of the Epidemiological Society would be very helpful. I have frequently referred to such cases as occurring shortly after the return of patients from hospital. In statistical inquiries into the matter, however, it will usually be necessary to fix some time limit within which cases occurring after the return of patients may be reasonably classified as possible "return" cases, those occurring later being excluded on the ground of their being more probably due to fresh sources of infection; and the question is as to the time limit that should be adopted. This has sometimes been fixed as twenty-one days, and I think it will be agreed that if we err in adopting that period we err on the side of liberality. I observe that 93 per cent. of Dr. Chalmers' cases, which seemingly included all cases heard of, occurred within a fortnight after the dismissal of the patients from hospital; and it has also to be remembered that the period of incubation of scarlet fever is usually less than three days, and practically always less than eight. On the other hand, it of course by no means follows that a fresh case became infected immediately on the arrival of a hospital patient in the dwelling, especially if such case resulted from a recurrence of infectivity on the part of the hospital patient. On the whole, therefore, I am disposed to think that the period of twenty-one days, if somewhat liberal, is perhaps a not unreasonable one for statistical purposes. But, besides what I may call this "far-time limit," a "near-time limit" will also be required. In this respect it would perhaps be sufficient to exclude all alleged "return" cases occurring on the day of arrival of the patient from hospital.

Briefly summarised, the view which I have endeavoured to introduce is that, although a certain proportion of "return" cases may of course at divers times and places be due to carelessness in the discharge of patients or to some other form of culpable maladministration, whether on the part of the hospital officials or of those responsible for the disinfection of the patients' dwellings and effects, there are nevertheless in all probability some more obscure factors at work—factors perhaps closely bound up with the natural history of scarlet fever.

ON THE CAUSES OF BRADYCARDIA.

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PHYSICIAN TO OUT-PATIENTS, GREAT NORTHERN CENTRAL HOSPITAL; PHYSICIAN TO THE ST. MARYLEBONE GENERAL DISPENSARY.

IT is not unusual to find the importance of disordered action minimised as merely symptomatic of some recognisable diseased condition. Inasmuch, however, as apparently identical conditions may be associated with quite different manifestations of disordered action the latter may deserve separate study. In no branch of medicine is this more so than in the associated diseases and disorders of the heart. The action of that organ may be abnormally retarded, accelerated, or irregular in cases in which the chief local lesion appears to be the same. This disordered action, it may be, in such cases threatens life, and attention to a "mere symptom" may then become the paramount duty of the physician. A correct appreciation of the influence of such disordered action upon collateral phenomena may also lead to a right interpretation of the latter and of the action of remedial agents. Thus the character of the pulse in angina pectoris will be found to vary according as the cardiac action is quickened or retarded. The abnormally slow pulse under these circumstances will usually be found to be associated with an abnormally full left ventricle, and the retarded action of the latter, with the projection into the arteries at rare intervals of a large quantity of blood, which may impart fulness and a degree of softness even to an atheromatous vessel, which, less filled, would convey the impression of hardness and smallness. The peripheral effect may then be due to the action of the central organ and the modification of the pulse by medicines—a result of remedies acting directly upon the heart and not influencing it solely by changes in the peripheral circulation.

It is not my object in this paper to discuss all the questions of scientific and practical interest bearing upon abnormal retardation of the heart's action, but, limiting myself to the etiology of that condition, to endeavour to arrive at the present position of the question of bradycardia and the most probable lines upon which its further elucidation is to be sought. Our own countrymen, Stokes and Adams, were pioneers in this field; to a German (Grob) we owe the term "bradycardia," now generally adopted; and valuable contributions to the subject have been made in France. My own experience of the condition has accidentally been considerable, and has evoked the interest which I take in the matter.

Although statistics, to be of value as such, require to represent a large number of carefully considered facts, the *sexual element* in persistent bradycardia appears to be important. Of 37 cases which I have examined 31 occurred in males. This is not a large number to have examined, but the preponderance of the male sex which they show in those thus affected agrees with the results obtained by Grob,[1] who also found that in 140 cases of bradycardia of all kinds, persistent and transient, with and without symptoms, no less than 131 occurred in males and only 9 in females. Riegel[2] also notes this disparity. The belief is, therefore, justifiable in the meantime, until statistics prove the contrary, that the constitution and circumstances of the male more frequently result in bradycardia than do the like conditions in the female. Nor is this in accordance with the general liability of the sexes to cardiac disease, for statistics on a large scale (*vide* the Registrar-General's reports) show that woman is, on the whole, more prone to heart disease than man. In this respect the sex ratio of bradycardia resembles that of angina pectoris, which is considerably more common among men than among women. The *age* of patients suffering from persistent bradycardia in the cases collected by me was as follows:—

Under 20 years, 1 case.	Under 60 years, 6 cases.
,, 30 ,, 2 cases.	,, 70 ,, 10 ,,
,, 40 ,, 2 ,,	,, 80 ,, 7 ,,
,, 50 ,, 7 ,,	,, 90 ,, 1 case.

Thus, of the 36 cases in which the age was stated 29 occurred in the thirty years from the age of fifty, when average humanity may be said to be well past the meridian of life, to eighty, when the majority have terminated their existence. This is the period of gradually exhausting energy and of organic degeneration. The age of a man has been stated to be just that of his arteries, and the examination of a series of sphygmograms from youth to age exhibits a normal retardation of pulse, with heart-force increasing to meet the rising arterial pressure and then flagging under the burden of the increased labour, as shown by intermission in its action and other evidences of nerve and muscle failure. It is likewise of interest to examine more particularly cases occurring *before* the fiftieth year. Of such in the series noted by me there were six. The case under twenty—fifteen years of age—was one recorded by Strübing.[3] With the exception of being a little short-breathed as compared with some of his companions, the patient, a boy, was regarded in all respects as healthy. The commencement of his persistent bradycardia was immediately preceded by a long run to save time in going to school. Of the two cases under thirty, one, that of a man twenty-four years of age, also recorded by Strübing,[4] occurred in a subject who had undergone his military service without accident, but in whom bradycardia followed immediately upon hard work as a smith—work, however, it may be noted, which he had probably performed for some time, and quite as arduously, without apparent injury. The other case, occurring in a patient under thirty years of age, was that of a young woman aged twenty, the subject of laryngeal syphilis, recorded by Mr. Pugin Thornton.[5] Of the 2 cases in patients under forty one recorded by Strübing[6] was that of a labourer thirty-four years of age who suddenly became unconscious at work when twenty-eight years old, and who, with bradycardia, exhibited evidence of dilated heart. The other, recorded by Dr. Bristowe,[7] and occurring in a man thirty-one years of age, was regarded by him as a case of syphilis of the heart. A case

[1] Deutsches Archiv für Klinische Medicin, Band xlii., 1888.
[2] Zeitschrift für Klinische Medicin, 1890, p. 240.
[3] Deutsche Medicinische Wochenschrift, 1893.
[4] Loc. cit.
[5] Transactions of the Clinical Society, vol. viii., p. 95.
[6] Loc. cit.
[7] THE LANCET, March 7th, 1885, and Sept. 22nd, 1894.

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mentioned by Tripier,[8] which recovered under the use of iodide of potassium, also had a syphilitic history and occurred in a male forty years of age. The same writer[9] likewise mentions the case of a man forty-five years of age who died from syncopal bradycardia, whose necropsy gave a negative result, and who had abused alcohol. The factors apparently playing a causal *rôle* in the case of these comparatively young subjects are those, therefore, which one would expect to find—namely, physical over-exertion and the degenerative influence of venereal disease and the abuse of alcohol.

As regards the *local conditions* associated with cardiac overstrain, it is permissible, in the absence of clinical evidence of gross and permanent disease, to argue from the ultimate recovery of patients that a heart, healthy as to its muscle, may become acutely dilated. In such cases, if muscular disease be excluded, the condition must be attributed to failure from undue expenditure in any form of nervous energy; but Leyden's observations[10] should render us very cautious in adopting this view. Of four cases examined by him after death—cases of acute dilatation from over-exertion in men previously considered healthy, and whose ages ranged from twenty-eight to thirty-five—in three there was fatty degeneration of muscular fibre, and in one fibrosis of the heart. These four cases of acute dilatation were not, however, associated with bradycardia, but with quickened action of the heart, a fact which causes me to remark that none of the anatomical changes associated with bradycardia either in tissue or mechanism is of itself sufficient to account for the retardation of pulse occasionally associated with them. It is much more common to find pulsation quickened than retarded under these circumstances.

Of pathological conditions in the intrinsic, spinal, cerebral, and sympathetic nerves of the heart unfortunately very little is known. In Mr. Holberton's case,[11] which was attributed to injury of the neck sustained in the hunting-field, Liston, who made the post-mortem examination, describes the pneumogastric nerves as being very large, the middle cervical ganglion on the right side as unusually developed, and the medulla oblongata as small and unusually firm. The last observation is interesting in view of other facts mentioned—namely, that the antero-posterior diameter of the foramen magnum was diminished and the atlas ossified to the occipital condyles. M. Huchard,[12] in commenting on this case, suggests that bradycardia may be dependent upon the state of the medulla oblongata. This is, of course, a mere surmise, and it must be remembered that in this case the patient was a gouty *bon-vivant* with an enlarged and dilated heart. M. Huchard further states, with a positiveness which, so far as I know, is not at present justifiable, and with a completeness of generalisation which is picturesque and pleasing rather than convincing, that, "localised in the heart, arterial sclerosis may cause symptoms of angina, in the bulb those of Stokes-Adams disease (bradycardia), in the kidneys those of interstitial nephritis, and so forth."[13] In short, arterio-sclerosis has only to be located anywhere to rule supreme, and he designates the condition "cardio-bulbar arterio-sclerosis" one of the manifestations of his *hypertension artérielle* which all the world has for long known to be an important factor in disturbances and degenerations of the circulatory apparatus, but the recognition of which M. Huchard claims as a special glory. In emphasising his claims in this respect he very amusingly deprecates that *orientation étrangère* which, I presume, is French for the recognition of the work of others.[14] Dr. (now Sir William) Stokes of Dublin, who with his *confrère*, Mr. Adams, may justly be regarded as having first drawn attention, so far as is known, to the occurrence of abnormally slow pulse (and whose priority M. Huchard acknowledges with an *orientation étrangère* which surprises me) from his original observations,[15] was inclined to associate bradycardia with a systolic basic bruit in the aortic area indicative of an atheromatous state in that position. To this view Sir Richard (then Dr.) Quain took exception in his memorable paper on Fatty Degeneration of the Heart,[16] and Dr. Stokes later,[17] referring to Dr. Quain's criticism, states that he had no intention of regarding the aortic conditions as alone causal of slow pulse, but rather that the cause was to be sought in the whole condition of which such atheroma was a frequent expression. While reverently criticising this qualification of the original statement of this great clinician it may be remarked, however, that it is quite possible that the virtual or actual stenosis at the aortic orifice, due to dilatation of the left ventricle or change in the aortic cusps, or to these conditions combined, may have an influence throughout or at some stages of the case in inducing bradycardia. The behaviour of the over-full ventricle of aortic stenosis differs from that due to aortic reflux. In the latter case its action tends to quicken. In this opinion I am supported by Grob,[18] who quotes von Dusch and Marey as believing that such stenosis has an influence in inducing a retardation of the pulse, the latter believing that the heart contracts more rarely the greater the impediment to an evacuation of its contents. In face of impediment it appears to be a law of hollow extrusive muscles like the uterus and the heart to pause, at least for a time, in their action, then to attempt to surmount the obstacle by increased effort, and finally to lapse, if unsuccessful, into sluggish and waning attempts. A study, moreover, of the increasing resistance of the vascular system, which comes with age, shows that the retarding influence of vascular impediment may in a sense be regarded as a general stenosis. The examination of a series of sphygmograms of advancing age makes this very clear, although to induce true and persistent bradycardia other conditions besides senility must be present. While the degenerative cardiac change most frequently observed in the bradycardia of the aged appears to be fatty in character, this clinical sign has also been found associated with the fibrosis of chronic myocarditis. Grob[19] quotes some such cases from various sources. It is known, however, that these changes are much more frequently associated with an acceleration of the heart's action. Finally, the general habit of body of the patient—that is, whether he be stout or lean, whether his abdomen be protuberant or normal—does not seem to influence bradycardia directly, although, like the failure of thoracic, impediment to abdominal respiration may be a subsidiary factor in the case.

Failing, therefore, to find in grosser lesions a sufficient explanation of bradycardia, I shall shortly examine the physiological conditions in which it has been observed. In 3578 cases examined as to pulse-rate Grob[20] found bradycardia to be habitual and normal—that is, physiological—in 6 cases, or in 0·17 per cent. All these occurred in men, whose ages varied from twenty-five to sixty-five and their pulse-rate from 44 to 58 or 60. An habitual pulse-rate of 60 is scarcely bradycardial, but is below the average rapidity. It is of incidental interest to mention in this connexion, as Comby[21] does on Corvisart's authority, that Napoleon I. had a habitual pulse-rate of 40. The occasional epileptiform seizures which he is stated to have experienced may, in view of this fact, have been cardiac and syncopal rather than truly epileptic. Among physiological conditions associated with bradycardia, Grob and others mention the well-recognised case of lying-in women, but inasmuch as this condition occurs likewise in women who have merely aborted, it is probable that bradycardia in these cases may be in great measure the result of reflex inhibition of the heart. It must be remembered, moreover, that the lying-in or pregnant woman has, although the fact is not generally admitted, some normal hypertrophy of the heart, and that pulse tension and tonic contraction of the uterus are post partum directly related. The slow pulse has also, under these circumstances, been hypothetically attributed to the absorption of fat from the involuting uterine muscle. Finally, fasting has been observed to cause a retardation of the pulse.[22] Certain poisons, again, it is well known, produce bradycardia, and the mechanism of this form of pulse retardation is with great probability due primarily to their action upon the nervous system, however much muscular contractility may be ultimately involved.

The predominant *rôle* of the *nervous system* in influencing the pulse-rate is also argued by clinical experience as shown by the acceleration or retardation, the rhythmical or irregular, and the partial or complete, arrest for the moment of the heart's action. In many, although not in all, such cases, there is reason to believe that the cardiac muscle is healthy.

[8] Revue de Médecine, 1883.
[9] Loc. cit., p. 1002.
[10] Zeitschrift für Klinische Medicin, Band xi., 1888, p. 105 et seq.
[11] Transactions of the Royal Medical and Chirurgical Society, 1841, p. 76.
[12] Maladies du Cœur, 1893.
[13] Op. cit., p. 316.
[14] Op. cit., p. 797.
[15] Dublin Quarterly Journal, 1846.
[16] Transactions of the Royal Medico-Chirurgical Society, vol. xxxiii., 1850.
[17] Stokes: Diseases of the Heart and Aorta.
[18] Loc. cit., p. 599.
[19] Loc. cit., p. 597.
[20] Loc cit., p. 577.
[21] La Semaine Médicale, 1892, p. 265.
[22] Grob, loc. cit., p. 576.

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Under normal circumstances cardiac inhibition and acceleration balance one another, and it is thus that the constant variations in arterial tension due to posture, temperature, food, and other agencies are equalised. Under abnormal circumstances it will also be admitted that notable acceleration of the heart's action is a more frequent phenomenon than its retardation. By a succession of short quick strokes the organ endeavours to effect what it cannot normally do with a smaller number. Acceleration may, therefore, be regarded on the whole as a phenomenon of action and redress. Unusual *retardation*, on the other hand, is very rarely physiological, and must be regarded as syncopal in tendency, whether it be transient or persistent. That is to say, the factors, or some of them, which are capable of accelerating the heart's action, are depressed or in abeyance. These factors are a certain character and quantity of blood, a certain state of the coronary circulation and of the cardiac muscle, a certain condition of arterial tension, and a certain state of cardiac innervation and reserve force. Now it is known that a dilated ventricle with an increased blood weight may pulsate rapidly, and that this may occur in the young and in the old alike, in the anæmic and in those whose blood is of normal character. It is known, also, that the heart may be accelerated when the myocardium is degenerated, when the ventricle is dilated and hypertrophied, and when the coronary circulation is unobstructed or partially obstructed. It is known, on the other hand, that certain poisons always retard the heart's action at a certain period of their action through the agency of the nervous system, and it is likewise known that experiment has demonstrated both retardation and acceleration to be directly due to the stimulation of certain nerves. It is, therefore, I think, permissible to conclude that unknown, but not necessarily unknowable, changes in the nervous endowment of the heart are primarily causal of both transient and persistent bradycardia. This conclusion does not, however, exclude the probable correctness of the opinion, based on clinical observation, that with a normal nerve tissue, and even with a normal nerve power, the blood weight and muscular condition of the heart may be such as to prevent that ready response which occurs under more normal circumstances. It is quite conceivable that cases may occur in which the nervous supply of the heart is more damaged than the cardiac muscle and bradycardia be then more dependent upon the state of the former than of the latter; again, that the alteration in the nerve structures may be of such a character and degree that the aid of cardiac muscular degeneration is necessary to produce bradycardia; and, moreover, that the factors in cardiac movement may be so balanced that tachycardia may occur under circumstances in which it would not have surprised us to find bradycardia. Clinical observation renders such an assumption to my mind both plausible and probable, but it is only by a more accurate knowledge of the changes in all these factors, a knowledge which we do not at present possess, that these interesting and important questions can be determined. If, therefore, there be in the intrinsic or extrinsic nerve-supply of the heart any barrier to the normal action of the accelerant nerves, one can conceive a cumulative distension of the chambers of the heart and insufficient activity of its motor nerves settling down into a persistent bradycardia syncopal in tendency, the natural consequence of which is the usually sudden death which closes the record of most cases of this disorder. I am aware of the unsatisfactory character of this largely hypothetical line of argument, but, however unsubstantial surmises of this kind may be, thought usually precedes action, and conception fruition, and, in so far as these remarks may be suggestive of the direction in which an answer to these problems is to be sought, I respectfully offer them for consideration.[23]

Professor Dehio of Dorpat, in an interesting and practical paper on Bradycardia and the Action of Atropin on the Sound and Diseased Human Heart,[24] came to the conclusion from a study of the effects of atropin in what he terms "cardial and extra-cardial bradycardia" that the explanation of slow pulsation has to be sought in the heart itself, as the inhibitory function of the vagi must be supposed to be abolished by the atropine. He admits that we are at present ignorant of the nature of that which causes the bradycardia, but suggests that it is due to nutritional changes in the automatic nerve centres in the heart, dependent in all probability upon local sclerosis of the branches of the coronary arteries leading to such centres. Inasmuch, however, as persistent bradycardia is met with at an age when the presence of such coronary sclerosis is highly improbable, his explanation only covers a certain number of cases. It must, however, be remembered that it is not only atropine which fails to accelerate such hearts, but that trinitrine, exertion, and other stimulants are equally ineffectual and that in the case of the latter agents there is no reason to believe that the vagi are placed out of action. I prefer, under these circumstances, to state vaguely and generally that the fault may lie in the accelerant as well as in the inhibitory system of the heart, and that the elucidation of this fault will require a patient investigation of the accelerant and motor tracts from their origin to their termination and in their relation to the semi-independent intrinsic nervous system of the heart. Cardiac neurology has probably as brilliant a future as neurology in general, and its increased investigation by pathologists is much to be desired. Parenchymatous changes resembling those in peripheral neuritis have been found by Vincent in the cardiac plexus in a case of heart failure after diphtheria—a failure of the heart which I have known to be bradycardial before the final syncope—but the record of such investigations is too rare.[25]

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[23] Since writing the above I find in Pflüger's Archives for Physiology (Band lx., p. 491) gratifying experimental corroboration of these surmises, based upon clinical observation by myself and others. As the general result of experiments on rabbits, Dr. H. E. Hering is led to the conclusion "that the increase in the frequency of the heart's action during muscular exertion is chiefly connected with the integrity of the accelerator nerves, and that the increase of irritability of the heart-hastening nerves which occurs in normal animals is assisted by a simultaneous decrease in the irritability of the heart-slowing nerves." May not the converse also be true?

[24] St. Petersburger Medicinische Wochenschrift, No. I., 1892.

[25] THE LANCET, March 23rd, 1895.

A CASE OF MYCOSIS FUNGOIDES.

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PERHAPS there is no cutaneous disease in which we meet so many phenomena strange and not understood as in mycosis fungoides. The rarity of its occurrence, its apparent chronic innocent benignness passing into swiftest malignancy, our ignorance of the nature of the disease and the means of controlling it, the pathological problems which arise from it—these are not merely fitted to awaken scientific curiosity, but impose on those who are privileged to observe them the duty of contributing something, if possible, to their elucidation.

The patient, a spinster, was admitted into the Royal Infirmary, Liverpool, under my care on Nov. 5th, 1894. The only fact of etiological importance in her family history was that both her mother and sister had died from phthisis. Her mind was too dull and confused to give any clear, intelligible account of herself and the disease. Lately her strength and nerve had been severely tried by nursing her father, who was bedridden, suffering from paraplegia with incontinence of urine and fæces. The first appearance of her skin disease was referred by her somewhat indefinitely to four or five years ago, when a moist eruption appeared on the left arm, which resisted all treatment and eventually disappeared spontaneously. Later, redness and swelling were noticed in the right leg, and later still on the right wrist, where a "boil" developed which was lanced, with subsequent relief. This irregular state of cutaneous health continued till about the beginning of 1894, when the head and face became affected with a moist eruption. The patient was treated for eczema, but with no benefit. During the year the entire cutaneous surface became affected with a dry, pruritic, desquamative dermatitis. About three or four weeks before her admission to the infirmary small tumours, mistaken for boils, arose in various parts of the trunk, arms, and face. Her health was failing when by medical advice she came under my care on Nov. 5th, 1894. Inexact and obscure as this history is, we may note that during the early years of her illness the skin lesions were superficial, apparently benign, and took the form of a dermatitis. This is the rule in mycosis fungoides. The pre-tumour "eruption" is polymorphous—erythematous, eczematoid, and lichenoid. Philippson's

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histological researches on the nature of these "eruptions" show that they are not at all of the nature of a dermatitis, but are veritable intradermic neoplasms confined to the papillary and subpapillary layer of the derma and associated with some increased cell activity in the epidermis. On admission the patient was found to be a fairly well-nourished woman of medium height, but in poor health. The skin over the entire body, head, and limbs was changed in respect of colour, density, integrity of parts, and configuration. The scalp was covered with excoriated spots, and much hair was lost; what remained was dry and lustreless. The surface of the scalp was desquamating freely. The face was red and moist, the condition resembling a weeping eczema; the discharge stiffened linen. The eyelids of the left eye were red and swollen, and could only be partially opened. A livid-coloured tumour extended from the outer canthus of the left eye to the left ear, part of the auricle of which it involved (Fig. 1). It was hemispherical in shape, slightly irregular, ulcerated in parts, moist with discharge, and soft and elastic to the touch. A flat tumour the size of a florin was situated on the forehead;

FIG. 1.



Showing left side of face; a livid-coloured tumour extends from outer canthus of left eye to left ear.

its margins sloped into surrounding unhealthy-looking skin. The discolouration of the trunk resembled, somewhat, that of a typhus skin, and was covered with fine scales harsh to the touch. The right breast was in part red and covered with scabs; several tumours, varying in size from a hazel nut to a pigeon's egg, arose discretely from the front and back of the trunk. The neoplasms arose gradually out of the surrounding skin and sloped upwards to a flattened apex, somewhat like a cushion pushed up in the centre. They were dull red in colour and soft and elastic to the touch; some were discharging an offensive-smelling pus, and others were ulcerating. There were numerous scab-covered points scattered all over the back of the trunk. The skin of the arms was thickened and rough, with numerous scab-covered papules. There was induration of the skin of the fingers, which were bent on the palm, and also considerable hyperkeratosis of the palms. (Fig. 2.) The nails were more or less affected by loss of lustre, flattening of convexity, and prominent longitudinal ridges. Both hands had a withered, dried-up appearance. The legs were considerably swollen and eczematoid in appearance; the skin was indurated and covered with thin scabs of yellowish colour. There was well-marked œdema of both dorsal surfaces of the feet which were covered with thin scabs; the outer side of the right foot was excoriated. The nails of the toes were much deformed and partially destroyed. Itching was very severe at times, but seemed to be intermittent in its attacks. The cutaneous lymphatic glands were not enlarged. The pulse was 100, the temperature 99·8° F., and the respiration 18. There was no cough or expectoration. The urine was slightly alkaline, of a specific gravity of 1022, with a slight cloud of phosphates on boiling.

To those acquainted with the features and natural history of this disease the diagnosis in this particular case presented no difficulty. The difficulty of diagnosis occurs in the early stage, when the pruritic "eruption" is apt to be mistaken for eczema, psoriasis, or pityriasis. If circumstances permit of the suspected eruption being microscopically examined, as Philippson suggests, the embryonic cellular, fibrillar condition of the upper layer of the derma, with numerous mitoses, is sufficient, according to this observer, to diagnose the disease even in this early stage.[1] The patient lived two months after admission to the

FIG. 2.



Showing withered, swollen hands, with bent fingers.

Infirmary. During this time the temperature fluctuated in a manner very similar to that of chronic pulmonary tuberculosis. There were intervals of exacerbation or exaltation of temperature, with periods of depression when the temperature was normal or subnormal. The temperature rose in the evening and fell in the morning. During the last month the patient had a moist cough and complained of great pain in the right side. Sleep was broken and disturbed a good deal by the feeling of heat and flushing, especially in the head, by paroxysms of itching, and by pain more or less constant. The condition of the tumours was constantly fluctuating; indeed this is one of the most remarkable features of the disease. Growth of the swiftest sort was followed by involution equally rapid. Thus the tumour on the left side of the face was the size of a large orange at the time of her admission. In sixteen days it formed a huge tumour involving the entire side of the face and part of the scalp, and almost smothering the nose. Its involution was very rapid, and just before death it disappeared completely, leaving no cicatrix and but few traces of its previous

[1] For exact histological details of this stage see the original article by Philippson. Annales de Dermatologie et de Syphilographie, 1892, p. 581.

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existence. Some of the tumours on the trunk suppurated, some ulcerated, and others involuted without breaking. The growth and involution of the larger tumours were accompanied by a profuse discharge with an extremely offensive odour. Another remarkable feature about the case—as, indeed, about every case of mycosis fungoides—is that no drug seemed to have any influence over its career. Carbolic acid lotion (1 in 20) was injected into several parts of the largest tumour to the extent of one drachm. It produced shrinkage and sloughing in the area injected; but as it seemed rather to aggravate the offensive discharge, which constantly oozed from the tumour, the "remedy" was soon abandoned. Pyrogallol was applied in ointment form to some of the smaller tumours, but with no benefit. A temporary amelioration of the general or diffused condition of the skin of the trunk and limbs was brought about by the change in the patient's mode of living. When removed from the fatigue and anxiety of nursing, a few days' rest in bed, with daily warm, mild, sulphur baths, had the effect of diminishing the eczematoid symptoms very considerably. Opium was given on account of the pain and uneasiness. Administered by the mouth it had but little effect, but more when morphia was injected subcutaneously. Six days before death the whole of the left arm, from the wrist to the shoulder, suddenly became swollen, hot, and of a livid colour. There was a small tumour in the axilla. The following day the swelling had gone. On the morning of Jan. 8th, 1895, the temperature suddenly rose to 103·6°, and a few hours later the patient quietly died in a state of unconsciousness.

Necropsy.—At the post-mortem examination, performed by Dr. Abram twenty-three hours after death, the body was found to be emaciated. The skin over the whole body was dry and shrunken—as it were, mummified—and of a dusky hue. There was no trace on the face of the tumours which had previously existed there. The lymphatic glands were not enlarged either in the integument or in the mesentery. There was no enlargement of lymphatic follicles in the stomach or in the ileum. The spleen weighed 5 oz. The kidneys were slightly injected. The liver weighed 52 oz. and was paler than normal. In the right lung there were pleural adhesions posteriorly, and the pulmonary tissue was emphysematous. There were some pneumonic patches breaking down in the right apex. The weight of the lung was 38 oz. The posterior surface of the left lung was covered with tough lymph, and the parietal pleura was injected. The lower lobe contained a large cavity with a smooth lining filled with puriform blood-stained fluid. Cover-glass impressions stained with fuchsin and methyl blue showed abundant tubercle bacilli. The heart was normal except for a little atheroma of the mitral valve. The necropsy confirmed what was known before—namely, that this neoplasm does not form secondary growths in the interior of the body. It is essentially a disease of the derma arising from the connective tissue cells by active proliferation. The tuberculous lesion of the lung must be considered as a coincidence and probably caused the fluctuating temperature.

What is the nature of mycosis fungoides? Is it produced by a definite micro-organism? These questions intrude again and again on our ignorance and have been variously answered. I shall briefly relate my own experience and then allude to the results of others. During life a small portion of the large tumour was excised, and inoculations were made by Professor Boyce in the following way. The surfaces of the piece of tissue were sterilised by a red-hot cautery, and a sterilised fine-pointed glass tube was pushed into the interior, some juice sucked up, and then transferred to four peptone agar and two agar beer-wort (artificial) tubes. The peptone agar tubes were placed in an incubator at 36° C., and the two latter in another incubator at a temperature varying from 25° to 30° C. After two months growth was found in only three of the six tubes, but these three contained specimens of the same organism. To the naked eye they resembled the staphylococcus albus, a vegetation which, when grown on nutrient gelatine, looks like a drop of white paint. The organism in question, however, differed from all the pus organisms in respect of its rate of growth, which was exceedingly slow. In two months the vegetation attained at 36° C. a diameter of 2 mm., and at 30° C. less than half this. The fungus in question was a micrococcus 0·5 to 1 μ in size, not forming zoogloear masses while living, but isolated or attached in twos and threes, and exhibiting active Brunonian movement. Blood examined before death did not contain cocci. It was taken from a finger tip remote from the tumour. I am inclined to regard this micro-organism as adventitious and not pathogenically connected with the disease. There is very little uniformity in the results of other investigators. Rindfleisch found streptococci within the vessels, but the value of this evidence is vitiated by the fact that his patient died from septicæmia. Hochsinger and Schiff purport to have found micro-organisms within the cells of the neoplasm. Without disputing the trustworthiness of their observations (although such observations are attended with the greatest difficulty on account of the granular condition of the protoplasm) we require evidence, which now is wanting, before we can accept their conclusions regarding these organisms. On the other hand, many observers have failed altogether to discover, after careful and proper research, any micro-organisms either in the blood or in the cells of the neoplasms. This was the case in Unna's patient, investigated by Philippson, and to this negative list may be added the names of Payne, Köbner, Dönitz, and Lassar.

With regard to the histology of the case it should be noted:—

1. *Skin free from tumour and forming seat of "eczematoid eruption."*—The portion of skin was taken from the outer side of the thigh. The primary and essential changes had taken place in the papillary body (including the portion immediately beneath the papillæ). This portion of the derma was differentiated from the subjacent part by a sharp line, and after hæmatoxylin staining became striking and conspicuous. The normal fibrous tissue had been replaced by a cellular neoplasm, not by cell infiltration, for there was not a trace of inflammatory action, consisting of cells derived from the pre-existing connective tissue cells, round or oval in shape and nucleated. The fibrillæ were sparse and delicate. The papillæ were narrower and a little longer than normal. The most conspicuous feature in the pars reticularis was the rhomboidal meshwork of hypertrophied elastic tissue. This was very noticeable even without special staining. The elastic meshwork was filled with a granular matrix which stained with carmine. The white fibres were inconspicuous. The connective tissue corpuscles were increased. The epidermis was slightly altered. The cones were broader and a little longer than usual in this position and the corneous layer somewhat thicker. The sweat glands appeared to be normal. There were no follicles in the piece of tissue examined.

2. *Skin from the palm in which the epidermis was very much hypertrophied, but throughout the whole clinical history was free from "tumour" formation.*—(*a*) *Epidermis:* This was about three times the average thickness; the hyperplasia was noticeable in all the layers. The germinating layer consisted of two or three rows of cells whose nuclei were more deeply stained than those of the superjacent cells. The granular layer was increased in thickness. The prickle cells were swollen and granular; the intercellular spaces were a little wider than normal. The horny layer was enormously hypertrophied and had some peculiar features; the cells in the lower two-thirds of the stratum were enucleated and swollen and separated apparently one from another by shining and refractile clefts. In addition to these intercellular clefts there were numerous irregularly shaped spaces filled with some granular material fixed with absolute alcohol and stained blue by hæmatoxylin. Some of these spaces measure 60 μ in length and about 20 μ in breadth, others were much smaller than this, and others, again, considerably longer. Probably these represented intra-epidermic vesicular collections of fluid, but whether œdematous or inflammatory I could not determine from the microscopical appearance. (*b*) *Papillary body:* The connective tissue cells were much increased, but the fibrillar element was still apparent; it was not so highly cellular as in the specimen taken from the thigh. There was a total absence of cell infiltration. The capillaries were distended and more numerous than in the specimen from the thigh. (*c*) *Derma:* The pars reticularis was not so obvious or the elastic fibres so large as in the specimen from the thigh. The connective tissue corpuscles were much increased in number. Strands of spindle-shaped cells ran horizontally through the derma; they seemed to invest capillaries.

3. *The scalp.*—A portion was selected free from tumour, but otherwise unhealthy. The epidermis was rather thinned than hypertrophied. The papillary body was more or less cellular. The follicles were considerably affected so far as

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concerned the papillæ and fibrous investments; these participated in the cellular change which affected the papillary body. There was some wasting of the bulb and pilogenic cells, but otherwise the epithelial portions of the follicle appeared normal. A noticeable feature was the very oblique direction of the follicles, which was greatly in excess of the natural obliquity. This oblique direction was likewise taken by the epithelial cones and dermal papillæ. Caustic potash solution had the effect of more or less completely correcting this obliquity. The reticulate arrangement of the elastic fibres was well seen.

4. *Tumour in early stage.*—Elastic tissue enters very largely into the construction of both the early and the late fungating tumours, but I found it rather more plentiful in the young tumours. It was disposed in the form of a meshwork which became very noticeable after maceration of sections in a solution of caustic potash. The only real distinction between the early and late tumours seemed to consist in the closer packing of the embryonic cells in the latter. Bloodvessels were scarce and formed in this respect a notable contrast with sarcomata. As regards the epidermis, my sections did not show the passivity and thinning which Philippson describes. On the contrary, there was a highly irregular hypertrophy of the epithelial cones consisting of granular and unhealthy cells. In some places the cones were enlarged and in others entirely effaced. Cup-shaped depressions in the horny epidermis filled with corneous tissue were noticed in the sections of the fungating tumours.

It must be confessed that the facts of mycosis fungoides are among the dark writings of pathology, and that we wait expectant of the coming interpretation. Viewing my case in the light of the now extensive literature of the subject, it seems that we may deduce the following propositions: 1. There is neither clinical nor histological unity in the picture of mycosis fungoides, but variations of which the limit is not yet fixed. 2. From beginning to end the disease is neoplastic and not inflammatory, the so-called eczematoid lichenoid eruptions are neoplasms *en nappe*.[2] 3. That the papillary body is *conspicuously* differentiated from the derma proper, that the origin of the disease is probably in the papillary body, and that the change consists in an over-multiplication of the pre-existing connective tissue corpuscles. 4. That the rest of the derma is overcellular and that there is an increase in the reticular elastic tissue which is obvious without special staining or maceration. 5. That the disease from the point of view of its evolution and anatomy presents suggestive analogies with embryonic cutaneous tissues and embryonic processes—e.g., rapid evolution followed by rapid involution. 6. That the term "granuloma," being vague and generic, is not a wisely chosen substitute for the name "mycosis fungoides." 7. That there is at present no evidence worthy of confidence for believing in the microbic origin of the disease. 8. That, while the disease is allied clinically to sarcoma cutis, there are many notable differences—thus, the mycosis tumours involute very commonly, and may disappear entirely, leaving a disorganised skin but absolutely no scar; they do not spread into the interior by the veins or by the lymphatics. The chief seat of mycosis is the papillary body, but in sarcomata, according to Funk, we find the densest cell masses in the subpapillary layer, the papillæ, however, being free. 9. That mycosis differs from lymphadenoma (*lymphadénie cutanée* of the French authors) by the fact that the lymphatic glands and spleen are not generally affected, and may be absolutely free from beginning to end of the disease.

Liverpool.

[2] This was first pointed out by Philippson.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of the present session was held in the new building of the Institution of Civil Engineers on Wednesday evening, the 20th inst., Mr. R. Inwards, F.R.A.S., President, being in the chair, when a paper by Mr. J. Eliot, F.R.S., was read on "The Origin of the Cold Weather Storms of the Year 1893 in India, and the Character of the Air Movement on the Indian Seas and the Equatorial Belt, more especially during the South-west Monsoon Period." This was really a discussion of the data contained in the "Indian Monsoon Area Charts," the publication of which was sanctioned by the Indian Government for the two years 1893–94.

A NOTE ON

THE THERAPEUTICS OF SALINE LAXATIVE MINERAL WATERS.

BY THOMAS D. SAVILL, M.D. LOND., M.R.C.P.

1. *Habitual constipation.*—When first I took charge of the 250 patients in the Sick Wards of the Paddington Workhouse one of the chief difficulties I had to contend with was the troublesome constipation among them. It was of a very widespread and obstinate kind, apparently the result of some cause or causes acting in common, and after careful investigation the chief of these causes appeared to me to be the routine administration of compound rhubarb pill, which had been distributed wholesale by the attendants. This medication after temporarily relieving the constipation was usually succeeded by constipation more pronounced than before: a chronic constipation which by-and-bye, in the course of a few months, defied all but the most violent purgatives. Of these the following pill is the chief example:—Croton oil, 1 minim; resin of podophyllin, 1 grain; calomel, 2 grains; and extract of Barbadoes aloes, 1 grain. It was known as "pilula fortissima."

This result — succeeding constipation — has been met with in my experience after almost every form of vegetable purgative such as is usually administered in the pill form. The bowels will act two or three times on the next day, and this expenditure of energy is followed by two or three days' inaction. Now this objectionable torpor of the intestines does not, as far as my experience goes, follow the use of natural saline purgatives. For this reason, amongst others, I have largely prescribed them both in hospital and in private practice; and after a course of two or three weeks its effect seems to be to regulate the bowels so that they acquire a habit of acting without artificial stimulation. Indeed, so much more simple and efficacious is this method of treatment that it is a matter of surprise to me that the habit of taking pills should continue to hold the wonderful sway it does in the mind of the general public.

2. *Plethora.*—This method of treatment seems to be specially useful in persons of a full habit of body, who suffer, perhaps, also from the effects of living too well, and under these circumstances it may be continued for long periods of time with none but beneficial results. The habitual administration of a natural saline laxative water in such cases does not produce the irritating effects on the gastro-intestinal mucous membrane which invariably follow constant recourse to pill purgatives. It may be necessary in such cases to administer larger doses, which can be done without fear, and possibly twice a day, continuously.

Nearly a year ago a gentleman aged thirty-four years consulted me for a most alarming epistaxis which had occurred on two occasions. He had for some years been subject to headaches, and these had been particularly severe just prior to the attacks of epistaxis. After careful investigation I could ascertain absolutely no cause except a plethoric habit of body, of which he presented a very marked example. I therefore placed him on a course of matutinal libations of Hunyadi Janos water (half a tumblerful) for a month. He has continued the treatment off and on ever since, and now he declares that he feels quite another man: he is free from both headaches and epistaxis and is much better in health, fitter for work, and lighter in spirits, though his mode of life in other respects has not materially changed. One is tempted to ask why such patients should be sent to Carlsbad and similar places when the treatment could, with the coöperation of the patient, be quite as efficiently carried out at home.

3. *Liver disease and portal congestion.*—"Hæmorrhoids," even in the absence of actual disease of the liver, constitute one of those troublesome minor ailments which may be relieved entirely by this method of treatment, and the soft, easy evacuation which is the invariable result is a great source of comfort to the patient. Congestion of the liver, so frequent in the Anglo-Indian, and which also arises as a consequence of cardiac or long-standing pulmonary disease, often gives rise to uneasiness in the region of the liver, which prevents the sufferer from lying on the right side and may even determine recurrent gastric derangements and transient jaundice (non-obstructive, the stools are even darker than natural). These [illegible] very readily to

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the same method of treatment. Even in the early stages of cirrhosis of the liver much good may be done by such treatment, which relieves the portal congestion very markedly. I have also employed the same method frequently in cases of catarrhal jaundice, and here it seems to act very beneficially on the mucous membrane of the stomach and duodenum. There is, of course, a very large element of gastritis in such cases, and an appropriate mineral water appears on this account to possess very marked advantages over the use of artificial saline or pill purgatives. Given early in the morning it clears the stomach and the alimentary canal in general of any irritants or undigested food which may be present, and at the same time seems to allay the irritability of the stomach and intestines.

4. *Dyspepsia.*—In atonic dyspepsia the food which escapes complete digestion from day to day undergoes fermentative changes resulting in the production of various irritating products, which not only act as local irritants but may be absorbed into the blood and determine general disturbances of a more or less serious kind. These products of incomplete digestion may be swept out each morning and the irritability of the mucous membrane allayed in the manner just mentioned.

5. *Lithæmia.*—This condition is probably due either to an imperfect elaboration of food in the first stages of digestion in the alimentary canal or to imperfect nitrogenous metamorphosis in the liver, or occasionally, no doubt, to both these causes in association. It is manifested by the habitual deposit of lithates in the urine, and a characteristic headache, on which the researches of Haig have thrown so much light. There are also present a general disinclination for sustained worked, pains in the limbs, irritability of temper, and generally dyspeptic symptoms. In my experience all these symptoms may be markedly relieved by a course of some natural laxative and saline mineral water taken in the morning, combined with the administration of a mixture of bark with dilute nitro-hydrochloric acid, taken half an hour before meals during the day. The one clears out undigested food of the day before, while the other promotes digestion and gives a tone to the alimentary tract.

6. *High arterial tension.*—Reference has already been made to the value of this class of remedy in cases of cardiac disease attended by passive congestion of the liver, but the beneficial effects are not less marked in cases associated with heightened arterial tension, which may be a very prominent symptom in other conditions. As an instance I may mention a man aged forty-five years suffering from breathlessness and with a pulse remarkable for its high tension, who consulted me about six months ago. He had lived freely, but had suffered no illness. The area of liver dulness was slightly increased, the enlargement being apparently due to temporary congestion, seeing that it rapidly subsided under treatment. Transient albuminuria in a urine otherwise normal also suggested simple congestion of the kidneys. The arteries were not notably thickened. There was slight increase of the cardiac area to the left, with a too forcible impulse, indicating hypertrophy of the left ventricle. No murmur was present. The patient complained of more or less persistent headaches. I ordered him bark and alkalies for three days, together with a course of Hunyadi Janos water (one-third of a tumblerful twice a day), and since that time he has taken the water daily in the morning. The results of the treatment were that in the course of a week the blood-pressure fell to normal, and the albuminuria and his other disagreeable symptoms entirely disappeared, not to return up to the present time. He states that he is now in better health than he has been for years past, but he writes to me saying that if he ceases to take his morning dose of water for a day or two the headache returns. It seemed probable that the heightened arterial tension in this patient was due to cardiac hypertrophy, but cases of arterial fibrosis, granular kidney, and gouty and other conditions in which high arterial tension is a prominent feature may be similarly relieved by the same treatment. The most reasonable explanation of its action in this respect is that it dehydrates and purifies the blood.

The value of this method of treatment in various impure conditions of the blood cannot well be over-estimated. The loss of energy so characteristic of prolonged town life is most probably due to deficient oxygenation within the tissues of the body. As a consequence of this a number of excretory or waste products are retained within the body which, if properly oxidised, would be readily excreted. If these imperfectly elaborated products be constantly augmented by incompletely digested food-stuffs retained within the intestines and partially absorbed therefrom, a great additional strain is thrown on the oxidising functions of the body. By the treatment suggested not only can these be swept out of the intestines, but by dehydration of the blood, the blood itself, especially that of the portal system, is purified.

7. *Anæmia.*—Pupils of the late Sir Andrew Clark will remember that he used to regard constipation as the main cause in this disease. As a result of the costiveness, ptomaines and several imperfectly formed products of digestion were absorbed into the blood and overtaxed the oxidative processes of the body. At any rate, cases of chlorosis are often greatly improved by free relief of the bowels even without the administration of iron.

8. *Method of administration.*—As to which of the various natural saline laxative waters is the best to accomplish these ends there may perhaps be different opinions. The three mineral waters chiefly available for the above purposes are Carlsbad (Sprudel being the favourite spring), Friedrichshall, and the Hungarian water Hunyadi Janos. The analysis of these three waters is here given for comparison in terms of grains per gallon, only the principal ingredients being given:—

—	Carlsbad (Sprudel).	Friedrichshall.	Hunyadi Janos.
Sulphate of sodium	200	465	1578
Sulphate of magnesium	—	395	1568
Bicarbonate of sodium	90	—	47
Bicarbonate of calcium	20	—	55
Chloride of sodium	87	611	119
Chloride of magnesium	—	302	—
Sulphate of calcium	—	103	—
Silica	10	3	—
Analysis by	Gottl.	Liebig.	Bunsen.

All three contain a small quantity of CO_2 when first drawn from the source. Carlsbad water I have found useful in cases of genuine gouty or rheumatic affections of the joints, probably on account of the relatively large proportion of alkaline carbonates and sodic chloride contained. The dose, however, must be one or two tumblerfuls once or twice a day. Neither the Sprudel nor the other spring is very strong in laxative salts (about 13 grains of sulphate of soda in a tumblerful), and it has not proved so efficacious in the various conditions referred to as either Friedrichshall or Hunyadi. Friedrichshall contains a higher proportion of the sulphates of soda and magnesia (60 grains to the tumblerful), and is more suited to the present purpose; but it contains practically none of the alkaline carbonates and a very high percentage of the chlorides of sodium and magnesium. It is probably on this account that one cannot give sufficient of it to have a decided laxative effect without producing unpleasant thirst and dryness of the mouth. The usual dose is a wineglassful to half a tumblerful, and this hardly has the desired effect in clearing out the contents of the bowels. It contains, moreover, a fair proportion of sulphate of calcium, which has, if anything, a constipating counter-effect. I have never felt satisfied of the therapeutic value of this last-named salt, though I have had an extensive opportunity of trying it.[1] Friedrichshall water has generally seemed to me to be most useful in renal and urinary cases. Hunyadi Janos water is very rich in laxative salts, containing nearly 200 grains to the tumblerful, or twice and a half as much as Friedrichshall, and thirteen times as much as Carlsbad. It is, I think, the saline laxative mineral water most suitable for the various conditions above mentioned. It is prompt and certain in its action, and does not leave behind it a torpid condition of the alimentary tract. About one-third of a tumblerful or more, adapted to individual requirements, with or without warm water, taken each morning on waking, is generally sufficient to produce a loose, comfortable evacuation of the bowels within two hours, and without the griping which often attends other purgatives. Patients say it is less disagreeable than other waters. It also contains a fair proportion of sodic chloride and the two alkaline salts, which seem to impart to it a mild diuretic action, thus increasing excretion in both directions. It is probably the bicarbonates of soda and lime

[1] St. Thomas's Hospital Reports, vols. xiii. and xiv., 1884–85.

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which have the beneficial effects mentioned on the mucous membrane of the alimentary canal, and their proportion is just sufficient not to impair the laxative action of the other salts. It is the bicarbonate of lime which seems most beneficial in this respect. To get this local effect on the stomach and intestines about a quarter of a tumblerful with warm water should be given twice a day, always on an empty stomach.

Remarks.—It is not claimed that there is anything very new in the foregoing. The matter is referred to and these experiences are recorded because in my opinion a deeply rooted habit has in this instance been the means of obscuring an improved method of treating several minor but inconvenient ailments, and some more serious ones in their earlier stages. The advantages to be gained by the mineral water treatment over that by pills much more than counterbalance the convenience of carriage, which is the only one that can be urged for the latter; as a matter of fact, it is only on a few occasions that this can be allowed to have any weight.

Upper Berkeley-street, W.

SARCOMA OF SACRUM OBSTRUCTING LABOUR.

BY J. FERGUSON LEES, M.B., C.M. GLASG.

ON Monday, April 22nd, 1895, I was sent for to see a married woman aged twenty-five years, who was suffering from retention of urine, vomiting, and diarrhœa. The patient was in a condition of extreme emaciation and prostration, and obviously very ill. The tongue was slightly furred, the temperature normal, and the pulse-rate 110. The skin was moist, and she complained of cold, clammy sweats. The lungs were healthy. She stated that she was in the ninth month of her pregnancy and had already had three children, the last one having been born fourteen months before. During her previous labours, beyond the fact that they were tedious, nothing worthy of note had occurred. Since the birth of her last child she had not been in good health and had suffered at intervals for the last three months from attacks of vomiting and diarrhœa with colicky pains. She also complained of having partial loss of power in the lower limbs and of suffering from what she described as "sciatic pains" in her legs. The paresis had been first noticed about four months previously, but she had been suffering from the pains in her legs for about eight months. For some days she had had great difficulty in micturition, and during the previous twenty-four hours had been unable to pass any urine. On passing a catheter about two pints of reddish-brown urine, which was highly alkaline and of an offensive odour, were drawn off. She had had some slight difficulty in micturating for the last six weeks, having had to "strain" very much each time urine was passed; but it had only been within the last week that the difficulty had become very great. The patient's health had been very good previously to her marriage, but since the birth of her first child she had always been ailing. The family history was good. On inspection the abdomen was seen to be of a peculiar shape and elongated in a transverse direction, and on palpation the fœtal head was found occupying the left iliac fossa, whilst the body of the child lay almost transversely across the uterus. Per vaginam I found a non-fluctuating, uniformly hard mass lying just within the vulva. This mass occupied the whole cavity of the pelvis, and it was only with difficulty that the finger could be passed between it and the symphysis pubis. The posterior vaginal wall could be traced from the perineum up, in front of the mass. Per rectum the tumour was felt lying behind the rectum and firmly adherent to the sacrum. On April 24th, as labour pains had commenced in the evening, Dr. Ainsley was called in consultation, and on examining per vaginam under chloroform the os was found to be dilated to about the size of half-a-crown. Cæsarean section was determined upon, and the patient was advised to go into the Hartlepools Hospital. She was admitted to the hospital at 3 A.M. on Thursday morning under Dr. Ainsley's care, when she was found to be in a very unfavourable condition for operation, but as the pains were strong and increasing no time was lost in making preparation. The abdomen was rapidly purified, a drachm and a half of liquid extract of ergot were given by the mouth, and five minims of liquor strychniæ were injected subcutaneously. Chloroform was administered and the abdomen opened by the usual incision, six inches long, from above and to the left of the umbilicus to two inches above the symphysis pubis. The abdomen round the uterus having been packed with sponges, an incision about five inches in length was carefully made into the uterine wall, Dr. Macgregor, the house surgeon, pressing on the flanks and sides of the abdomen and pushing the uterus up against the wound and sponges. A slight gush of blood showed that the placenta was beneath the incision. A finger was pushed between the placenta and the uterine wall, and on it the tissue was divided by scissors to its full extent of five inches. A hand was then passed through the placenta and membranes, a foot seized, and the fœtus rapidly extracted and handed to an assistant for him to deal with. The placenta and membranes were swept out, and the uterus was grasped firmly between two sponges, little blood having been lost. The uterine walls were attenuated and flabby, and this, with the absence of contraction, led us to discard the idea of leaving the uterus *in situ*. Dr. Ainsley therefore applied a whipcord ligature low down, put on a Keith's clamp, and cut off the body three-quarters of an inch above the clamp. As an extra precaution the ovarian and uterine arteries were ligatured. The abdomen was sponged out, the stump placed in the lower angle of the incision, and the peritoneum arranged round it. The abdominal wound was sutured and the stump dressed with iodoform and boracic acid. The patient was put to bed in a collapsed condition. A nutrient enema was given and liquor strychniæ injected subcutaneously. The patient never rallied, however, but died four hours after the operation.

Necropsy.—Permission was only obtained to "look at" the tumour. It was found, as had been diagnosed, growing from, and firmly attached to, the front of the body of the sacrum, between the periosteum and the bone. It was rounded and almost the size of a fœtal head. The space between the tumour and the symphysis pubis would scarcely admit a finger, and this small space contained the rectum and vagina, the bladder being pushed up above the pelvic brim. The tumour consisted of a thick, firm outer portion forming a capsule, within which was contained softer matter of brain-like consistence. A microscopic examination showed the tumour to be a small spindle-celled sarcoma.

Remarks.—There was no possibility of removing the tumour and curing the patient, and next to no chance of her surviving abdominal section; but for the sake of the fœtus, and because of the axiom in midwifery "that no woman should die undelivered," the operation was undertaken. That the patient was delivered of a living child in the natural way fourteen months previously showed extremely rapid growth of the tumour, and it is probably well for the infant, who is strong and healthy, that the mother's condition was not recognised earlier.

Hartlepool

REMARKS ON TWO CASES OF ACUTE BULBAR PARALYSIS.

BY J. P. TILDESLEY, M.B., L.R.C.P.LOND., M.R.C.S.ENG.

THE following description of two cases which have come under my notice is worthy of record on account both of the fact that few uncomplicated cases have hitherto been recorded and also of certain instructive symptoms and pathological conditions which were observed. The patients whose cases I describe were seen in private practice, so that it was possible for me to obtain a post-mortem examination in only one instance.

CASE 1.—A man aged thirty-five had been in fairly good health for twelve months previous to the attack. There was no history of syphilis, nor could I find anything prejudicial in the family history. He had had no previous paralytic symptoms, no muscular atrophy, and no signs indicating relationship to amyotrophic lateral sclerosis, during the course of which diseases the lesion may occur. There was no history of rheumatism and there were no signs of endocarditis. In following his trade he was exposed to cold and damp The attack came on with great suddenness and with no prodromata of any kind, with the exception of slight headache during the day. I saw him an hour after the attack and found paralysis of the lips, tongue, and jaw,

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and of the arm and leg of opposite sides. The paralysed arm and leg lay quite helpless; the other limbs were unaffected. He could not articulate. He could swallow, but with great difficulty. He had not lost sensation, and his hearing was unimpaired. The pulse was 130 and irregular, and the temperature was 101·4° F. The severity of the symptoms gradually increased; the temperature rose to 104°; swallowing became so difficult that he could scarcely gulp down his saliva, which frequently dribbled from his mouth. It became necessary to inject beef-tea and peptonised milk into the stomach. The attacks of suffocation became more frequent, and death occurred on the third day. At the necropsy a small left-sided hæmorrhage was found in the lower part of the medulla. The position of the hæmorrhage accounted for the "crossed paralysis" present, the lowest pyramidal fibres being destroyed just before the point of decussation, and also the highest decussated fibres on the same side.

CASE 2.—This case, though rapid in its progress, was not so sudden as the above. The patient was a man thirty-nine years of age, and there had been premonitory symptoms for several days previous to the attack. These consisted of headaches, dulness, and slight thickness of articulation of the labials. Paralysis of the limbs soon supervened, and his speech became more entangled and queer, so that he was unable to be understood; swallowing solid or liquid food became alike impossible, only thick foods and soups could be taken, and within ten days from the onset of the symptoms the tongue was apparently completely paralysed, the patient, in order to swallow, having to throw back his head and hold his hand before his mouth in order to prevent the food being pushed out again by the efforts at deglutition. There was no deafness or tinnitus. Motor paralysis of the soft palate was very marked, and in consequence saliva and food were apt to pass into the air passages during attempts to swallow. There was marked facial diplegia, the face being symmetrical but expressionless. Respiratory troubles supervened, with attacks of asphyxia and cyanosis, and the patient died from exhaustion on the twelfth day.

Remarks. — In the above cases, as contrasted with the much more frequent form of progressive paralysis which is due to "pigmental atrophy of the large cells contained in the nerve nuclei of the medulla, associated with circumambient sclerosis," the points to notice are: (1) the suddenness of the attack; (2) the accompanying paralysis of the limbs, due to the lesions not being limited to the motor nerve nuclei; (3) that hæmorrhage, although infrequent in the medulla, appears to be the most common cause of acute bulbar paralysis; (4) that the lesion is more frequent in the lower half of the medulla, affecting primarily the nuclei of the hypoglossal nerve and thus occasioning the difficulty of articulating the linguals, the hypoglossal being the motor nerve to the extrinsic muscles of the tongue and the depressors of the hyoid bone; (5) that the vagus and spinal accessory nuclei are necessarily implicated, the nucleus of the latter nerve being a continuation downwards of that of the former; thus are explained the bronchial expiration and weakened phonation from want of innervation of the muscle of Reissen and the muscles of the larynx. Vomiting, dysphagia, intermittent pulse, glycosuria, and diabetes may also be met with as results of damage to the centres; (6) the motor paralysis of the palate and uvula is accounted for by the fact that the cells of origin of the motor branch of the fifth nerve descend in the medulla as low as the tubercle of Rolando and are necessarily damaged; and (7) a fact noted by Duchenne which I observed in the latter of the two cases described above—viz., that when the tongue was raised with my fingers the patient could depress it forcibly, thus proving that the "depressors of the tongue were not all paralysed."

Willenhall, Staffs.

A CASE OF DISLOCATION BACKWARDS OF THE PENIS.

BY L. G. FISCHER, M.B., C.M. EDIN.,
SURGEON-CAPTAIN, INDIAN MEDICAL SERVICE; CIVIL SURGEON, MORADABAD, NORTH-WESTERN PROVINCES, INDIA.

I HAVE ventured to publish this case because, as far as I can discover, it is the only one on record, and I have been obliged to give it the above somewhat extraordinary title for lack of a better term to describe it. A Mahomedan child aged five years was brought to hospital in March, 1895, suffering from infiltration of urine, the result of a fall under a cart sustained four days previously. He was seen at this time by my assistant surgeon, Dr. Jwala Pershad. The perineum, scrotum, and lower part of the abdomen were distended with urine, and gangrene was threatening. Cock's operation was at once performed, and the scrotum, &c., were incised in various directions. Little notice at this time was taken of the state of the penis, which appeared to be normal. The case improved; a fistulous opening formed above and to the left of the pubes, from which the urine passed, and the parents of the child, becoming tired of prolonged treatment, as so often happens, removed him from the hospital. On Aug. 21st he was again brought to hospital, when I saw him for the first time. At first sight the penis appeared to be normal, though shrivelled; it allowed the passage of a catheter for a certain distance, but attempts to pass the instrument into the bladder failed. The urine came from a small opening above and to the left of the pubes in a *full jet* towards the left shoulder, and the extraordinary point, which was at once noticed, was that it could be stopped and expelled at will. The patient was placed under chloroform, and, after various attempts had been made to pass the catheter through the penis, and then through the fistulous opening, into the bladder, without success, I introduced a director into the fistula and slit it up to an extent of some two inches and a half. The glans penis then came into view at the lower end of the incision and at the base of the apparent penis, which was seen to consist of the mere outer covering of the organ. A catheter was now passed without difficulty through the glans into the bladder, and Fig. 1, from a photograph taken at the time with the patient on the operating-table, shows very fairly the condition of affairs. I now carefully dissected out the glans and corpora, which had become firmly fixed in their present position, drew them well forward, and, slitting up the "skin" penis along the dorsum, and paring the end of the prepuce, brought it together round the corpora and fixed it in position with horsehair stitches. The fistulous opening and incision were then closed accurately with horsehair stitches, and dry dressings were applied. Healing went on uninterruptedly, with the exception of slight suppuration in the upper wound, and urine was passed naturally from the penis on the day after the operation. On Sept. 1st, when the wound was nearly healed, the parents were permitted to take the child home. On Sept. 5th they brought him again to hospital, when Fig. 2 was taken, which shows clearly the result of the operation—viz., a perfectly useful organ. There can be no doubt that the penis must have been in some way severely wrenched at the time of the fall, and either the skin and prepuce were caught by the cart under which the boy fell and pulled violently forwards, or the corpora and glans were in some manner violently torn back out of their covering. The result, of course, was extravasation of urine into the surrounding tissues, treated successfully in the first instance by Dr. Jwala Pershad, who may be pardoned for not discovering the real nature of so extraordinary an accident at the time.

Moradabad.

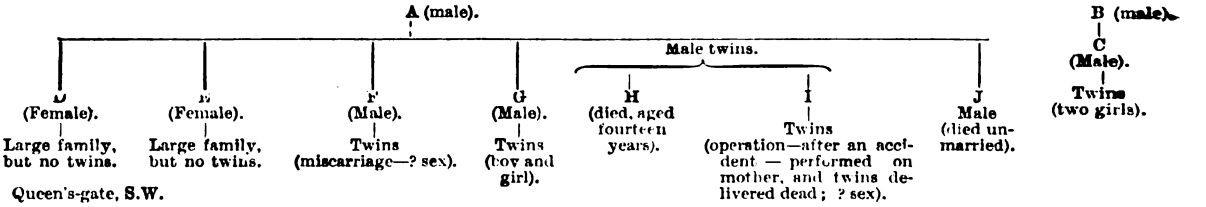
THE INFLUENCE OF INHERITANCE ON THE TENDENCY TO HAVE TWINS.

BY THOMAS WAKLEY, JUN., L.R.C.P. LOND.

THE statistics with reference to the birth of twins, published by Dr. Cory under the above heading in THE LANCET of Nov. 2nd, lead me to think that a rather remarkable history of twin births which has recently come to my knowledge is worthy of being placed on record. The accompanying table would seem to afford very strong presumptive evidence of the hereditary influence of the male members of a particular family with regard to the birth of twins. Unfortunately I have not been able to trace back the family history beyond the brothers "A" and "B." It will be noticed that "B" had but one child, a male, whose wife bore twins—two girls. "A," on the contrary, had a fairly large family, the two female members of which, although bearing many children, had no twins; whilst as regards the five males (two of whom were themselves twins) there is a history of twins among the offspring of three of them, the other two having had no opportunity of showing of what they were capable in respect to this peculiar procreative

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predisposition. Although I have not been able to ascertain the family histories of the wives, it is obviously very improbable that four women, not related to each other, had also in their respective families a tendency to the development of twins. There is one other point which is, I think, worthy of attention. Dr. Cory says: "When the inheritance comes from the father's side the twins seem to be always of the same sex, so far as the present observations go. This is interesting, for it is generally known that when the twins are joined together they are always of the same sex, and we may, therefore, reasonably suppose that this result is brought about by some abnormal potentiality of the spermatozoa—that is, this form of abnormality comes from the paternal side." It will be seen, however, from the table that, notwithstanding the striking evidence of the inheritance coming from the father's side, "G's" twins were not of the same sex, but a boy and a girl (both of whom, by the way, are living and healthy). I may add that the facts have been communicated to me by "G," of whose intelligence and veracity I have the highest opinion. Knowing that he had twin children, and being interested in the question as to whether the male or the female parent was usually responsible for the abnormality of twin births, I inquired into his family history. It proved to be sufficiently noteworthy, especially in connexion with Dr. Cory's observations, to deserve record.



Queen's-gate, S.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

THREE CASES ILLUSTRATING THE MORE SEVERE COMPLICATIONS OF MIDDLE-EAR DISEASE; REMARKS.

(Under the care of Mr. C. W. MANSELL MOULLIN.)

THE publication of cases such as the following, which show the results of operation for conditions which have only of recent years been quite understood, is of great importance. The few that reach our hospitals enter as emergencies, and the necessary operation is performed as soon as possible; therefore they are not brought under the direct notice of any large number of students. The fact that pyæmia due to ear disease may be cured is hardly grasped as yet by many of those who are called upon to see these cases for the first time in private. Only too often patients are sent for hospital treatment when they are almost past surgical help, being nearly exhausted by repeated rigors, high fever, loss of sleep, &c. Quite lately we saw such a case. The girl had been under daily observation at home for a fortnight, suffering from nearly all the symptoms of a septic thrombus in the lateral sinus. Early operation would have saved her life—it was now unsuccessful. Cases 2 and 3 show the mode of onset of the disease, but in each of them some of the more usual and important symptoms were wanting; there were no swelling or tenderness over the upper part of the neck along the internal jugular vein, no swelling of the glands, and no marked tenderness over the mastoid foramen. There is, however, one symptom to which we draw attention as very rare, and that is the external strabismus in Case 2; its occurrence is worth remembering, as its presence in an obscure case of inflammation of the cerebral meninges is rightly regarded as pointing to tubercle as the cause of the symptoms. The site of the thrombus in Case 3 was unusual, and we refer our readers to Mr. Moullin's remarks on the case.

CASE 1.—A boy fourteen years of age was admitted into the London Hospital on May 18th, 1894, in a semi-comatose condition. For about seven years he had had a discharge from the right ear. There was no history of pain or of earache, but he was almost deaf on that side. Three weeks before admission the right temporal region became swollen and tender; at the same time he began to suffer from severe attacks of pain in the right ear and eye. There was no history of injury. He had been sick and delirious, but was said not to have had any shivering fits. On admission he lay upon his left side with his arms and legs drawn up and his hands protecting his face from the light. He was only partially conscious and seemed to be in great pain, frequently uttering shrill cries. The right temporal region was swollen, œdematous, and excessively tender. The temperature was 102° F. and the pulse and respiration both much hurried. There was no optic neuritis. Two hours after admission the patient was anæsthetised and an incision two inches in length made over the temporal region a little below the temporal ridge. The temporal muscle was sodden and acutely inflamed, a large amount of bloodstained serous fluid escaping from it as soon as it was incised; and the same was the case with regard to the periosteum, which was partially detached from the bone beneath, but no pus was found. The incision was then carried backwards over the ear on to the mastoid process, and a circle of bone was removed with the trephine from over the lateral sinus. As this was found not to be affected, and as there was no evidence of increased intracranial tension or of suppuration between the dura mater and the bone, the circle that had been removed was replaced and the posterior part of the incision carefully sutured. The anterior part was drained and dressed separately. The next day the temperature began to fall, and the boy regained consciousness. Two days afterwards he was almost free from pain and perfectly rational, and the temperature was normal. The posterior part of the wound had healed, but there was still an offensive discharge from the ear in spite of frequent syringing. A fortnight later the squamous portion of the temporal bone, where the periosteum had been incised, was still bare, and there was a small collection of pus in the temporal fossa, causing a rise of temperature for a day or two. At the end of the month the bone was completely covered in; the wound had healed except a small button of granulations, and the boy was discharged.

CASE 2.—A young man nineteen years of age was admitted into the London Hospital on Sept. 19th, 1895, with pyæmia consecutive to an attack of acute otitis media. There had never been chronic otorrhœa. His illness had commenced suddenly sixteen days before with violent pain in the right ear and head. There was no facial paralysis, no swelling or tenderness over the mastoid, and no pain on percussing the bones of the head. The membrana tympani had been recently perforated, and on syringing the meatus a good deal of stringy, bloodstained pus was washed out. The pupils were normal; there was no optic neuritis. The temperature on admission was 104° F., and there was a history of several rigors having occurred already. The next two or three days the temperature remained exceedingly irregular, rising on two occasions to 106°. There was no headache or drowsiness, but a certain amount of stiffness was complained of in the muscles at the back of the neck. Then paralysis of the external rectus of the opposite eye suddenly made its appearance. The left shoulder, too, became painful and seemed to be slightly swollen. As the pyæmic symptoms were becoming more and more marked, in spite of the free discharge from the ear, the patient was anæsthetised and a circular disc of bone removed with the trephine from over the lateral sinus. On

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exploring this it was found to be plugged with clot. There was no pus or sign of inflammation on the outer surface of the dura mater. The bone on either side of the trephine opening was cut away with Hoffmann's forceps, the sinus laid open, and the softened clot cleared out until the blood flowed freely. The jugular vein was then exposed in the neck and tied; it was not thrombosed. The same evening the patient had a rigor, the temperature rising to 105·2°, and the next morning the shoulder was much more swollen. Two days afterwards two rigors occurred, and then for the next four days one daily, gradually diminishing in severity. The last sudden rise of temperature (without shivering) was on the fourteenth day after operation. In spite of the rigors, however, the patient's appearance began to improve at once; the pulse became stronger and slower, he slept better, and the wounds healed well. The swelling of the left shoulder disappeared, and at the time of his discharge, five weeks later, the left external rectus had almost regained its power.

CASE 3.—A man thirty-one years of age was admitted into the London Hospital on June 5th, 1895. There was a history of otitis media with discharge from the right external meatus and partial deafness for some years. A week before admission he had received a blow upon the ear. This was followed by swelling over the mastoid, intense pain shooting into the temporal region, cessation of the discharge, high fever, and general drowsiness. There was no paralysis; the pupils were normal, and there was no optic neuritis. A rigor occurred the day after admission; it was uncertain whether there had been one before. The ear was syringed out, and the next day, as the symptoms did not subside and the drowsiness was deepening into partial coma, an incision was made over the mastoid process, and the mastoid antrum and cells thoroughly cleared out. A small quantity of pus was found under the periosteum and in the bone, but none on the inner surface under the dura mater. The lateral sinus was laid bare a little further back, through a separate trephine opening, and incised freely. There was no evidence of thrombosis, so the wound was plugged with iodoform gauze to stop the bleeding. The jugular vein was also exposed in the neck, but appeared to be perfectly free. The temperature, which was 103·2° F. at the time of the operation, fell the same night, but the relief was of very short duration. A rigor occurred the next day and at frequent intervals afterwards. The patient's condition rapidly went from bad to worse. Pleurisy and pericarditis set in, and death ensued eight days after admission. At the post-mortem examination there was abundant evidence of pyæmia. The emboli had started from the lateral sinus, which was filled with softened and partially decolourised clot beyond the spot where it had been opened, nearer to the middle line. As the lateral sinus on the right side was plugged with gauze the emboli must have been detached at the torcular and carried down the opposite jugular vein. The clot had, in all probability, been present at the time of the operation, and the blood which flowed freely when the sinus was opened had regurgitated from the jugular vein and the smaller sinuses.

Remarks by Mr. MANSELL MOULLIN.—These cases are good examples of the results that follow neglected otitis media, and form a striking illustration of the value of the treatment described by Ballance.[1] In the first case the infection spread forwards; there was acute inflammation of the temporal muscle and of the squamous portion of the temporal bone, limited, fortunately, to the external surface. The cerebral symptoms were very suggestive of intra-cranial suppuration; but as they subsided as soon as the pericranium was incised and the bone trephined they were probably caused by increased tension and hyperæmia, like those that occur in diffuse cellulitis of the scalp. It is noteworthy that the nutrition of the circle of bone removed with the trephine was not in any way impaired. It had united firmly in its place some time before the boy was discharged. In the second case the pyæmic symptoms, as in several cases previously recorded, were already marked; but apart from the knowledge of what must have been going on in the ear, the only evidence of local thrombosis was the stiffness in the muscles at the back of the neck, and even this was only complained of after inquiry. There was no tenderness, œdema, or swelling over the mastoid. The infection must have spread directly to the sinus, along the veins, without implicating the bone or the extra-dural lymphatic spaces. The paralysis of the external rectus of the opposite eye, which developed one day suddenly and painlessly, may have been due to some secondary pyæmic affection or to direct extension of inflammation along the dura mater. There was no evidence one way or the other. In the third case, which unhappily terminated fatally, there can be little doubt but that the septic infection spread between the dura mater and the bone until it involved the wall of the lateral sinus and led to thrombosis. The actual path taken could not, however, be made out. It is clear that it did not involve the nearest part of the sinus, for this was laid open and was perfectly free. In some way it must have missed this and reached the wall beyond; for the part that extended towards the torcular was filled with offensive, softened débris. Had the operation been carried further and a much larger portion of bone removed, it is possible that the result would have been different. Then the condition of the sinus could hardly have escaped observation; but there was no indication in the symptoms that pointed to this.

[1] THE LANCET, May 17th and 24th, 1890.

WESTMINSTER HOSPITAL.

SECONDARY SUTURE OF THE PATELLA, WITH RESECTION OF THE QUADRICEPS EXTENSOR TENDON.

(Under the care of Mr. WALTER G. SPENCER.)

THIS case serves to emphasise the importance of suturing the patella in suitable cases as soon after the accident as possible and not leaving it until the extensor muscles are shortened and contracted, and the separated upper fragment adherent. The difficulties of secondary suture are often considerable and the contraction of the extensor tendon very difficult to overcome. In similar cases where the upper fragment has not been adherent, this shortening of the muscles has been remedied before operation by tenotomy, or by gradual extension after the fixation of a wire to the upper fragment. The exact method of division of the quadriceps extensor when the operation is completed at one sitting varies somewhat; the one adopted by Mr. Spencer was very successful.

A soldier was thrown at football and injured his knee. He was treated in bed for a month, lotions being applied, and six weeks after the accident was discharged from the army, his limb being useless. Seven months after the accident he came under Mr. Spencer's care. The upper fragment of the patella was firmly fixed to the femur between five and six inches above the lower fragment, the space between being filled with softish masses. The quadriceps extensor muscle was much wasted, as were also to a less extent all the other muscles. The most striking feature was the complete want of power in the whole lower limb. He could only swing it by the action of the psoas and iliacus. The quadriceps extensor had been put out of action and the antagonistic flexors were equally powerless as in complete wrist-drop, so that the knee-joint was rendered loose and no weight could be put on the limb without it bending. After the application of an elastic band above, a rectangular flap was turned *downwards* and the wound further enlarged by a vertical incision upwards from the outer and upper angle in order to reach the upper fragment. A brownish-yellow fatty mass of organised blood clot filled the joint and had to be removed first of all as in arthrectomy. No connexion between the fractured ends even of a membranous nature was met with. The fractured surfaces were refreshed, and the upper fragment was separated from its connexion with the femur. But no approximation of the fragments could be obtained even when the thigh had been flexed to a right angle with the trunk with the knee fully extended. The quadriceps extensor tendon was, therefore, resected as follows. The aponeurosis of the tensor fasciæ femoris and that of the external vastus were divided, muscle fibres only being left; the rectus tendon was advanced by dividing it obliquely upwards and backwards, so that elongation was obtained without any actual gap; finally, the thin aponeurosis of the internal vastus had to be cut through. Two strong pieces of silver wire having been looped round the two fragments antero-posteriorly, as in Mr. Barker's plan for primary suture, and with the use of considerable force, the fragments were brought well together. The remaining muscular portion of the quadriceps extensor stretched sufficiently as the limb was held flexed to a right angle with the trunk. It was only after some days that gradual extension at the hip was allowed.

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The elastic band was not removed until after the application of the bandage. Healing took place with sound bony union. There was some oozing of blood, occasioned, no doubt, by the removal of the masses of organised blood clot, and the edge of the flap at its upper and inner angle sloughed a little from want of sufficient blood. The faradaic current and massage were used for the wasted muscles.

Remarks by Mr. SPENCER.—Eight months after the accident the man had a strong leg free from all pain. He is at work and can go upstairs easily. He can move his knee-joint a little, but I have not yet encouraged him to do so, for the quadriceps extensor is still shrunken. Although, therefore, this case is thoroughly satisfactory as one of secondary suture, yet it falls short of what might have been obtained by the very much less severe operation of primary suture.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cystic Accessory Thyroid.—Classification of Sarcomatous Tumours of the Bladder.—Macrodactyly due to Diffuse Lipoma.—Acute Tuberculosis of Spleen.—Hydronephrosis from Malignant Disease of Ureter.—Card Specimen.

AN ordinary meeting of this society took place on Nov. 19th, the President, Mr. BUTLIN, being in the chair.

Mr. EDMUNDS described a specimen of Cystic Accessory Thyroid. The tumour was of a globular shape between 4 and 5 cm. in diameter. It consisted of one large cyst; in the cyst wall on one side was a solid substance about the size of an almond. The cyst contained a pale-brown glairy fluid. Into the cavity of the cyst there projected two vegetations, the smaller of which was removed for examination. Microscopic examination of the solid substance showed it to resemble thyroid tissue; it consisted mainly of vesicles, some of which contained colloid secretion; it differed, however, from normal thyroid in (1) the existence between the vesicles of a considerable amount of lymphoid tissue consisting of small deeply-staining cells embedded in a fibrillar network containing bloodvessels, and (2) in the majority of the vesicles containing no colloid, but being wholly occupied by large cells formed by the multiplication of the secreting cells lining the vesicles. Examination of the vegetation showed it to consist internally of a coarse fibrous tissue, externally to that of a layer of fibrous tissue and again external, and constituting the lining of the cyst of a layer consisting of large thyroid secreting cells, among which was some colloid secretion. The tumour was removed during life from below the angle of the jaw and was not connected with the thyroid body, which seemed normal. The patient was a man aged twenty-eight who had noticed the growth some months.—Mr. BERRY remarked that most of the cases which had been described under this heading could be divided into one of three classes. 1. True masses of thyroid tissue distinct from the main gland; these were extremely rare. 2. Tumours connected with the main gland more or less definitely by pedicles or prolongations of capsule; these, as a rule, lay either above the gland in the line of the lingual duct or at the upper or lower end of the lateral lobe; they were frequently found post mortem. 3. Tumours originating in the normal gland, which, as they grew, stretched the capsule and became separated from the gland. He showed the photograph of a tumour which was situated near the angle of the jaw, and at the operation for its removal the thyroid gland was not distinctly seen. A post-mortem examination was performed on the same case shortly afterwards, and it was then found that the tumour had been directly continuous with the upper part of the lateral lobe of the thyroid gland.—Mr. TARGETT said there was one large specimen in the museum of the Royal College of Surgeons of England where the tumour, which was as big as a lemon, pressed on the bronchus. The tumour in parts was dense and contained calcareous matter and cysts.—Mr. BARKER asked if there was any difference in the microscopical characters of the three varieties Mr. Berry had described.—Mr. BERRY said that practically the structure was the same in all.—The PRESIDENT added that often at an operation no obvious connexion was seen between the tumour and the thyroid gland, and surgeons would not as a rule feel inclined to search for such connexion.—Mr. EDMUNDS briefly replied.

Mr. TARGETT read a paper on the Classification of Sarcomatous Tumours connected with the Bladder, and illustrated his remarks by numerous specimens, microscopic sections, and lantern plates. He said that during the past few years the subject of sarcomata of the bladder had been ably dealt with by Messrs. Southam, Fenwick, and Barling. The classification of the vesical tumours proposed by the last-mentioned writer was compared with that given by the text-books of surgery and pathology in present use. Exception was taken to the use of the terms mucous and fibrous polypus in respect of bladder growths, and many preparations were shown illustrating the chief anatomical and histological differences in the polypoid formations of the bladder. It was proposed to adopt in the main a clinical classification of the growths variously styled fibro-myxoma, myxo-sarcoma, myo-sarcoma, &c., grouping them all under the head of sarcomata, and then arranging them as those belonging to childhood and those belonging to middle age onwards. These two groups were then subdivided by anatomical considerations as to the primary seat of the disease, and examples of each subdivision were exhibited and described. In conclusion the malignancy of the growths occurring in childhood was discussed from a clinical and pathological standpoint.—Mr. HURRY FENWICK claimed to have pointed out that the so-called myxomata of children were not really myxomata but sarcomata. They often looked like nasal polypi, and this was due to a gelatinous translucency of their surface caused by the pressure of the growth upon the venous circulation of the bladder. A true myxoma in the adult was to be found in the Leipsig Museum.—Mr. SHATTOCK defended the term "mucous polypus" as a name for some of these bladder growths in children. They resembled precisely the mucous polypus of the nose; there was no invasion of the muscular tissue, no metastases, and Virchow had shown that in some parts they were often distinctly cellular. In the nose the diffuse form was represented by the hypertrophy of the mucosa of the middle turbinated bone.—Mr. D'ARCY POWER held that in discussions upon growths of this kind the whole of the genito-urinary tract should be considered together. The specimen which he had recently shown as affecting the vagina was almost identical with some of the bladder growths exhibited; they agreed also in their polypoid shape, with surface œdema, in the absence of metastasis, and in the rarity of gland infection. He asked whether the chondro-sarcoma of the bladder which had been shown was a primary or a secondary growth.—Dr. SNOW said that the pathological classification of these growths at the present time was one of distinction without difference and might with advantage be much curtailed. A so-called "polypus" might be produced by the mechanical detachment of a small piece of mucous membrane, the submucous tissue of which afterwards underwent thickening. Nearly all the tumours of the bladder tended ultimately to become polypoid, and papilloma was commonly only a stage of early malignant growth.—Mr. TARGETT, in reply, said that in the specimen of chondro-sarcoma the secondary mass noticed was in the glands and only appeared after the primary growth had been long in existence. Some of the myxomata of the bladder were mucoid degenerations of sarcomatous growths.

Mr. D'ARCY POWER showed a case of Macrodactyly due to Diffuse Lipoma. The child was originally under the care of Dr. Hugh Jones of Dolgelly, and the specimen was shown for Mr. Robert Jones of Liverpool. It consisted of the greatly enlarged right thumb and index-finger of a girl aged eighteen months. The thumb was widely abducted and its ungual phalanx was hyper-extended. The forefinger and the hand were deflected to the ulnar side. The nails of the two enlarged digits were normal. The swelling was noticed at birth, and it increased slowly until the hand became useless. The enlargement involved the thenar side of the hand upon its dorsal as well as upon its palmar aspect. The skin over the affected parts was a little redder than upon the sound side, but it was smooth, soft, elastic, and not lobulated. Amputation of the thumb and index-finger was performed by Mr. Robert Jones, and the child now had a useful hand. Subsequent examination showed that the swelling was due to an overgrowth of the normal subcutaneous adipose tissue. The blood-supply was not increased, and there did not seem to be any change in the lymphatics of the part. The adipose tissue had infiltrated the voluntary muscle, and it was more abundant upon the flexor than upon the extensor aspect.—Mr. POWER, in commenting upon the case, said that it was

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one of true macrodactyly, and that it agreed with the majority of the cases recorded in the fact that it occurred sporadically in the family, that it was unilateral, and that it did not affect all the digits. It differed in the fact that it was truly congenital, whereas in most cases the enlargement was only noticed some time after birth. He then called attention to the likelihood of assuming that such enlargements were of lymphatic origin, and he urged that they should be treated more actively, for they consisted of a surely if slowly growing form of connective tissue.

Mr. MARRIOTT described a case of Acute Tuberculosis of the Spleen in which splenectomy was followed by recovery. The patient was a woman aged thirty in whom an abdominal tumour had been noticed two years previously. There was neither history nor sign of syphilis, nor were the lymph glands enlarged. The tumour steadily increased in size and caused no pain; latterly, as it enlarged more rapidly and as the diagnosis was doubtful, an exploratory abdominal section was performed, and an enlarged spleen was removed. The patient made a good recovery and was in good health eight months after the operation. The spleen was uniformly enlarged, measuring 8 in. long, 5 in. from side to side, and 3 in. in thickness. The natural outline of the organ was preserved, but the convex aspect of the spleen was studded with coarse, round nodules, closely resembling a hob-nailed liver. On section the spleen pulp was stuffed with yellowish-white, slightly raised deposits. Microscopically these contained numerous grey tubercles, clustered for the most part, thus explaining the nodules above described. There was very little caseation. A chronic vulvar ulcer which had been excised was looked upon as the source of infection, but there was no clinical evidence of any other organ than the spleen being infected.—Dr. COUPLAND remarked on the extraordinary size of the spleen for a case of tuberculosis. He inquired if there was evidence of tubercle elsewhere.—Mr. TARGETT replied in the negative.

Dr. RUNDLE showed a specimen of Hydronephrosis due to Malignant Disease of the Ureter. The patient was a man aged forty-six, who was admitted into the Royal Portsmouth Hospital in April, 1895, with a history of a swelling in the abdomen of a year's duration. This was diagnosed as hydronephrosis connected with malignant disease of the bladder. Post-mortem examination showed that the disease probably started at the vesical end of the right ureter and spread upwards along the ureter, below into the wall of the bladder, and laterally into both vesiculæ seminales. The secreting portion of the kidney, as a result of the obstruction, became first dilated and afterwards destroyed, and the kidney converted into a series of sacs.

Dr. WALSHAM showed, as a card specimen, Meckel's Diverticulum with an attachment to the Mesentery.

OPHTHALMOLOGICAL SOCIETY.

Three Cases of Exophthalmic Goitre with Severe Ocular Lesions.—The Treatment of Detached Retina.

AN ordinary meeting of this society was held on Nov. 14th, Mr. EDWARD NETTLESHIP, President, being in the chair.

Mr. JESSOP read an account of Three Cases of Exophthalmic Goitre with Severe Ocular Lesions. Case 1: A married woman aged forty had extreme proptosis of both eyes; she had never been pregnant and had always menstruated irregularly; there was no enlarged thyroid. The operation of partial tarsorhaphy was performed on both eyes. Four days afterwards swelling of the right conjunctiva developed, followed by crescentic ulcer of the cornea and chemosis of the left eye. Both eyes then ulcerated, and the corneæ necrosed, notwithstanding active treatment. The corneæ were reduced to Descemet's membrane and perforated. At present there were staphyloma of both corneæ and extreme swelling of the conjunctivæ. The patient is still alive, but very weak. Case 2: A woman aged thirty-five, under the care of Mr. Power, with extreme proptosis of both eyes; both corneæ sloughed. The right eye was excised. The patient became insane and died. Case 3: A woman aged twenty-four, under the care of Mr. Vernon, with extreme proptosis; the right eye sloughed and was excised; in the left eye there were recurrent attacks of superficial corneal ulceration. Reference was made to 25 recorded cases, 7 males and 18 females. The results in the 7 males were more severe and included 4 deaths; the ages were between thirty-eight and fifty-six. Of the 18 females 2 died and 10 lost both eyes; the ages were between eighteen and fifty-two. The results of 3 cases of partial tarsorhaphy in women were that 2 lost both eyes and 1 recovered with good vision, though there was superficial corneal ulceration.—Dr. LITTLE said he had never seen any case bad enough to require suture of the lids. The eye had been removed in Mr. Power's case on account of continued pain and discomfort, which he thought might have been due to something behind the eye. The ulceration, he thought, was not necessarily caused by exposure, as it was not an uncommon thing to see no ulceration in eyes which were never closed even in sleep.—Dr. MCKENZIE DAVIDSON described a case under his care in which both corneæ sloughed; the patient became insane, but afterwards recovered. In another case he performed tarsorhaphy, and the corneæ were preserved. In a third case the surface of the cornea was entirely destroyed.—Mr. LANG said he had performed the operation in one case, but the stitches gave way and the cornea perished. The stitches did no harm.—Mr. JOHNSON TAYLOR was of opinion that the suturing should be complete and not partial, and should be carried out as soon as the cornea showed signs of injury.—Mr. LAWFORD recorded one case in which there were great proptosis and ulceration of the cornea. The lids were sutured in the centre instead of at the canthi, and the result was very good. The union of the lids was a great safeguard.—The PRESIDENT recorded five cases of damage to the cornea in Graves' disease. He was in favour of suturing the lids firmly with wire sutures. Bad results followed imperfect attachment. In one case, a man aged fifty-two with extreme proptosis and ulceration of one cornea, a good result followed suturing. All cases were intolerant of lotions or bandaging.—Mr. JESSOP, in reply, asked that all cases might be put on record, as very few had been hitherto reported.

Mr. WRAY read a paper on the Treatment of Detached Retina. The results of treatment in a case in which the distorted vision began in 1885 were demonstrated. The patient was seen for the first time in January, 1893. The left eye had barely perception of light, and the right eye contained a large detached retina involving about half of the fundus. The tension was decidedly raised, but the patient was, and had been, quite free from pain. As the other eye was quite blind from a penetrating wound, and had been so for many years, it was removed in the interest of the good eye. No more was seen of the case until January, 1895. The eye, under ophthalmoscopic examination, was found to contain a very large detachment, considerably larger than on the occasion of the last visit; so large, in fact, that although the media were clear it was almost impossible to obtain a view of the disc. The tension was still markedly raised and the cornea slightly hazy. Vision was reduced to perceiving hand movements at a distance of from four to six inches. The case was subsequently exhibited at the Ophthalmological Society. On April 7th the patient was operated on by tapping the detachment and a quantity of dark-yellowish fluid evacuated. He was then put to bed, atropine was freely used, and the eye firmly bandaged. Daily injections of pilocarpin were ordered, but had to be discontinued on the third day on account of the patient's intolerance of the drug. A week later ophthalmoscopic examination showed there still existed a detachment of very considerable size, though the vision was improved to seeing fingers three or four metres distant. After allowing a few days for the patient to recuperate, a second operation was done, with the result that vision improved to $\frac{6}{24}$ in a good light, and the sight had fluctuated between that and $\frac{6}{36}$ ever since. The retina now appears in perfect apposition, and there exists, as is usual in such cases, a certain amount of choroido-retinal atrophy, with pigmentation at the seat of the original detachment. The fields are much contracted, doubtless from the tension. The case proves that good may result from operative treatment even in very severe cases of several years' duration. Little was to be expected from pilocarpin, and especially in elderly people and those suffering from cardiac disease. As the perfect rest, treatment with atropine and bandage entailed confinement to bed for at least three or four weeks under almost insupportable conditions, and with the prospect of almost inevitable failure, it would seem better to operate at once, especially as the operation is almost free from risk under proper surgical precautions, and most surgeons do eventually operate after the failure of the simple treatment. As regards recent cases speedy reattachment was necessary to prevent loss of function. If the sub-retinal fluid existed in any amount several weeks would be required to obtain absorption and reapposition, whereas anatomical union was desirable, and

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probably the absence of this latter explains many relapses. In chronic cases there will be even less tendency to rapid absorption, and therefore it would seem reasonable to tap at once, so that the period of confinement to bed is spent in promoting an actual adhesion of the retina to the choroid. Cases unsuitable for operation are those where the macula is detached, where the vitreous contains numerous bands of contractile tissue, vascular membranes, large hæmorrhages, &c., and where the detachment is almost total, or the tension of the eye as low as – 3. A good result has been published in which the operation was done in a recent case with tension – 2. Clavelier's experiments proved that currents of five milliampères could be used for a minute without causing anything beyond transient opacity of the vitreous, and one operator had published eleven cases in which he used electrolysis and obtained three ameliorations and two cures. As such currents cause only a transient opacity of the vitreous and leave no ophthalmoscopic changes behind, it is just possible that the beneficial results after electrolysis were due to leakage around the positive pole during the protracted period the needle was *in situ*. Constitutional remedies directed against gout, rheumatism, syphilis, &c., are slow in their action, usually depressing, and after long trial have not yielded results to warrant persistence in their use as therapeutic agents for an emergency, but should undoubtedly be used later.—Mr. DEVEREUX MARSHALL did not think it probable that tapping the detachment would assist the diagnosis by examination of the fluid evacuated in the case of tumour, as this would not be broken up by tapping.—Mr. JESSOP stated that in his experience the detachment returned or became worse after tapping. He had one case in which the retina had become restored to its place after treatment by rest and pilocarpin; considerable pigmentation occurred in the re-attached area.—Dr. LITTLE had had two cases in which complete permanent cure was effected, and he had seen no recoveries without.—Mr. SECKER WALKER recommended the injection of normal saline solution into the vitreous after withdrawal of the fluid from the detached area. In one case a temporary glaucoma had ensued, but the retina remained attached five weeks.—Mr. LANG cited two cases of cure under simple treatment by rest. He had tried puncture in various ways without success.—Mr. TWEEDY had operated by every possible method, but had never seen a permanent cure—only some improvement. He doubted the diagnosis in cases of cure. Scleral puncture he considered right. In one case of a myopic patient, vision which had been reduced to perception of hand movements was restored to J. 1 with rest and pilocarpin, and the improvement lasted some time.—The PRESIDENT was able to give the further history of the case; he had seen her seventeen months later, when she was quite well and there was no sign of detachment.—Mr. POWER cited a suggestion that fresh vitreous from a cat or dog should be injected into the vitreous chamber to replace the retina by pressure.—Mr. JOHNSON TAYLOR asked if any member had used elaterium.—Mr. GRIMSDALE had seen Mr. Frost attempt to inject vitreous, but it had been found impossible to make it flow through a syringe.

HARVEIAN SOCIETY OF LONDON.

Spasmodic Asthma.

A MEETING of this society was held on Nov. 7th, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Dr. GOODHART read a paper on Spasmodic Asthma. Referring to various opinions as to the pathological changes in this condition, he said his own inclined to the hypothesis of muscular spasm; but, dealing with the cause, there could be no doubt that the disease was a purely nervous phenomenon. As proof of this he adduced the suddenness of onset of the attacks, their association as an early incident in diseases which especially affect the nervous system, such as malaria and influenza, and its alternation with trophoneuroses, such as eczema, urticaria, and psoriasis. Of all these points illustrations were given. Dr. Goodhart then pointed out that the subject was unduly complicated by including such conditions as hay fever and the asthma of bronchitis. He thought, however, that paroxysmal sneezing was due to the same form of nervous instability. Allied to both were other neuroses, of which he instanced Raynaud's disease and the gastro-pulmonary fever of childhood. Asthma, he said, was largely a disease of childhood. This was contrary to the general belief. His own experience and Hyde Salter's statistics showed this; 73 cases out of 121 of the author's cases began before maturity. Turning to the treatment of asthma, Dr. Goodhart believed that the most important thing was to direct their measures to cure the underlying nervous condition, remembering always that they had to deal with a paroxysmal neurosis comparable to epilepsy, migraine, and insanity. It belonged to all of these that the more they came the more they stayed, and the essential indication was to prevent and so break the vicious habit. It should be encountered early—in the child—and by measures of two kinds, whether drugs or other—the one directed to changing the environment, the other to increasing the resistance of the subject. In later life the common practice is to relieve the paroxysm by the inhalation of fumes, and this being done on the patient's own responsibility the malady itself is neglected, while he is left in a worse state than before by the use of his temporary remedy, the lung trouble being increased thereby, and often dilatation of the heart could be ascribed to indulgence in "fumes." The rational treatment of asthma should begin, if possible, with the child. The first thing, and a difficult one, is to find and secure a favourable climate—in any event to oppose the system of coddling and in-door cultivation. A bracing open-air life, reasonable care in diet, and healthy recreation gave the best results. Amongst drugs arsenic was extolled. The treatment of the paroxysm must be guided first by the cause which seemed to induce it; thus, if it followed a meal, an emetic might serve. Iodide of potassium, combined with ethereal tincture of lobelia, seemed to be useful when an attack was impending: when actually in progress a subcutaneous injection of morphia might be given, or the patient made to inhale chloroform. Dr. Goodhart then dealt with the treatment of the asthmatic diathesis in adults, and pointed out the measures to which resort might be had in different cases.

Dr. ILLINGWORTH showed the analogy which existed not only between asthma and epilepsy, but also between it and migraine, angina, and flatulent colic, the symptoms in all being fundamentally similar—collapse, with feeble, fluttering pulse, low temperature, and heavy, dull pain. He grouped these together as venous disorders named the "anginal group." The accepted pathology he regarded as wrong. The symptoms point to venous congestion with consequent effusion of carbonic acid gas into the air cells. Hence the short inspiratory efforts, prolonged expiratory ones, and the relief felt on putting the head low down, allowing this heavy gas to flow out. All these disorders are benefited by nitrites, but especially by belladonna in large and frequent doses. The relief from potassium iodide is from its fluidising effect on the stagnating blood. Antifebrin acts well also in the same way. As stimulants the best effects are got from belladonna, ether, and the nitrites, the former and latter also acting as peripheral vascular dilators. Hay asthma he stated to be rapidly curable by inhalations and douches of warm biniodide of mercury solution of the strength of 1 in 1000.

Mr. PARKER YOUNG congratulated the council on having secured Dr. Goodhart to read a paper on so important a subject, and said the number of members present testified that when they were able to hear such a subject discussed a much larger number attended than usual. He came to the meeting to try to learn if there was any fresh remedy or treatment, as he (like many other members) suffered from the complaint, and out of the remedies suggested he had found that the most efficacious were fumes of saltpetre dissolved in blotting-paper and the inhalation of chloroform. He stated his attacks came on from hurrying, and in going up a hill the attacks of dyspnœa were very severe. Formerly he also found that addressing public meetings, excitement, &c., affected the nervous system, the pneumogastric nerve playing an important part, relief coming from vomiting, sleep, or exciting the mucous membrane of the nasal organs to copious secretion. He thought there was much yet to learn in the disease, and his experience of drugs as suggested by various speakers was not as satisfactory as he could wish. They had been tried by his friend sitting on his right, who was a fellow sufferer, with not very beneficial results.

Dr. EDWARD SQUIRE was disposed to question whether asthma is more particularly a disease of the upper strata of society. As to age, he asked whether the preponderance of children might not be partly explained by the fact that asthmatic children are brought to the medical man in the hope that the disease may be cured before they grow up, whilst

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the adult asthmatic, despairing of cure and having found some remedy which eases his attack, treats himself with his favourite "fume" or powder. Dr. Squire unhesitatingly expressed his preference for the "fresh air" over the "hot-house" treatment. Undue "coddling" was in his opinion harmful. With regard to localities suitable for asthmatics nothing could be said in general terms; each patient must find out for himself what locality suits him best. Some asthmatics are better in the open country, and some are most free from attacks in the smoky atmosphere of a manufacturing town. A student at University College used, on the onset of an attack, to take a tramcar towards Hampstead, and when a certain distance on the way the attack went off. On the other hand, a child living in the fresher air in the neighbourhood of Hampstead was brought on to the Metropolitan Railway, and in the atmosphere between Baker-street and Gower-street stations the attack passed off. This might be an instance of treatment by "fumes." As to drugs, Dr. Squire had found such satisfactory results from iodide of potassium in large doses (ten grains to twenty grains three times a day) that he generally prescribed this for adults. He had often seen patients who had had frequent attacks before admission keep free from them for the six weeks or more whilst in hospital. The iodide cannot, however, be considered a cure for the disease, as the attacks generally return when the remedy is discontinued. Chloroform inhalation is sometimes useful during an attack, but requires to be used with care. Dr. Squire had seen alarming collapse follow chloroform inhalation during an asthmatic attack. Morphine hypodermically will always give relief. The various "fumes" are undoubtedly useful in many cases. Dr. Squire advocated examination of the nose in asthmatic patients. He had had cases in children where removal of adenoids had cured asthma. He considered the prognosis good in children, but the disease is much more intractable in adults.

Dr. GREVILLE MACDONALD, in remarking on the association of intra-nasal disease with spasmodic asthma, regretted that his experience had perhaps been hardly sufficient to justify his drawing any definite conclusion, and, remembering the views arrived at by some admitted to be authorities, he felt the more diffident in urging the points concerning which he wished to make a few remarks. Of thirty cases of nose disease associated with asthma he had had twenty manifestly relieved by local treatment, while of these twelve might be quoted as tantamount to complete cures. Of the twenty, four were cases of obstruction due to septal deformities, six were of vascular engorgement or hypertrophy of the inferior turbinated bodies, four were of polypus, and four of adenoids, while the remaining two were instances of that curious œdematous swelling over the upper and anterior portion of the triangular cartilage so often associated with paroxysmal sneezing. The remaining ten cases unrelieved were all due to polypus. He believed that the latter condition was more often associated with chronic bronchitis than with simple spasmodic asthma, and must be considered as a concomitant of rather than as responsible for the bronchial symptoms. From these cases he purposely excluded hay asthma, for he regretted to have to confess that he had but seldom found this symptom relieved by intra-nasal operation, although, so far as the more severe symptom—the sneezing—was concerned, he was greatly encouraged by the results of treatment. Dr. MacDonald then gave particulars of three cases of complete relief of severe spasmodic asthma which had been treated by himself, the results of operation being so immediate and so emphatic that there could be no doubt that the *post hoc* was *propter hoc*. He believed that spasmodic asthma, together with paroxysmal sneezing, was more frequently seen in the out-patient departments than ten years ago, and that they could no longer be considered as among the privileges of the upper classes. Possibly the fact was to be explained by the increasing excellence of primary education or on the supposition that the upper classes were more commonly frequenting the hospitals.

EPIDEMIOLOGICAL SOCIETY.

Return Cases of Scarlet Fever.

A MEETING of this society was held on Nov. 15th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Mr. T. W. THOMPSON, medical inspector of the Local Government Board, read a paper on Return Cases of Scarlet Fever, or those appearing in a family so soon after the return home of a convalescent from the hospital as to be deemed the result of infection from the returned patient. We print this paper in full on pp. 1277–81 of our present issue. Mr. Thompson said that 3 per cent. on the total admissions was a probable average of such cases, and the public assumed negligence on the part of the medical officers and hospital authorities and premature discharge of the patient, while they in their turn were inclined to find an explanation rather in independent sources of infection—as schools, imperfect disinfection by the sanitary authority, or the evasion of the process in the case of clothing. The class of house seemed to have more influence than any other single factor, pointing rather to the surroundings and thoroughness with which home precautions were carried out. Cases occurring after the patient had been quarantined for a fortnight in a pure air were due to the fact that we could not say when each individual ceased to be infective.

Dr. GOODALL considered the inquiry one for medical officers of health, since a large number of return cases from being taken to other hospitals were not recognised as such. Many patients were infectious after desquamation and all visible catarrhs had ceased. He related the case of a child who was admitted from the workhouse owing to a subsequent attack of measles, and after being detained in hospital for six months conveyed infection to the relatives to whom she went on her discharge, with not a garment or toy from her former home. At the same time disinfection, even by the sanitary authorities, was not always satisfactory, people constantly secreted their best clothes, &c., lest they should be spoiled, so that secondary cases, not returns, frequently followed after a week to a month without any communication with the hospital. It must, however, be remembered that we could not disinfect a person as we could a garment; nature only could eliminate the poison in course of time.

Dr. PARKES asked why they did not hear of return cases of diphtheria, a disease in which the bacillus often remained long after convalescence and throat symptoms recurred, and still less of returns in small-pox?

Dr. SWEETING and Dr. PRINGLE upheld the "old clothes" theory and the apathy of the poor, who were terrified by small-pox, in which, too, the effect of re-vaccinations should be considered.

Dr. DOWNES, Dr. PARSONS, Dr. BOND, Dr. BULSTRODE, Dr. G. BUCHANAN, and Dr. SIDNEY DAVIES continued the discussion, calling attention to the influence of school attendance.—Dr. Buchanan would limit the return cases to those occurring within eight days, and insisted on the greater persistence of the scarlatinal poison, though return cases of diphtheria were not unknown. They agreed as to the need for exhaustive investigation of the bacteriology of the skin, throat, and urine, with the view of determining the means and duration of infection.

HUNTERIAN SOCIETY.

Congenital Ataxia.—Exhibition of Cases.

AN ordinary (clinical) meeting of this society was held on Nov. 13th at the London Institution, the President, Mr. C. J. SYMONDS, being in the chair.

Dr. F. J. SMITH read for Mr. MCDONNELL the notes of a case of Congenital Ataxia in a boy six years of age.

Mr. TARGETT showed a boy aged five in whom he had excised one temporo-maxillary articulation for Ankylosis following Otorrhœa.

Dr. J. H. SEQUEIRA showed a case of Nystagmus with Facial Paralysis in a girl aged eleven, present since the age of two.

Dr. ETTLES showed—(1) a case of Horizontal Nystagmus cured by correction of the astigmatism present; (2) a case of Distension of the Left Frontal Sinus in a woman aged fifty-eight; and (3) a case of Hyperexophoria with Divergent Strabismus and without Diplopia.

Dr. F. J. SMITH showed a case of Paroxysmal Hæmoglobinuria with Local Syncope and Asphyxia.

Mr. OPENSHAW showed a girl aged seventeen with patches of Local Asphyxia on Toes and Heels.

Sir HUGH BEEVOR showed two cases of Cervical Herpes followed by severe pain, and a case of Fibroid Phthisis of the Right Lung in a boy four years old.

A case was shown for Dr. GLOVER LYON of Imperfect Development of the Pinna of the Right Ear.

Mr. COTMAN showed a man with peculiar Thickening of

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the Left Ankle, arising from traumatism, but with no pain or other sign except the thickening of the tibia and fibula at the joint.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held in the Great Northern Central Hospital on Nov. 14th, Mr. CHARLES KING being in the chair.

Mr. G. MOWER WHITE showed three cases of Fracture of Bones having points of interest. The first was an ununited fracture of the humerus occurring in a woman forty-seven years of age, in whose history no evidence of syphilis was ascertained. On account of failure to obtain union in the first instance, the ends of the bone were fastened together by means of ivory pegs. After a considerable period of immobilisation union had not resulted, and the portions of ivory in the tissues had become absorbed. The next method of treatment adopted was securing the ends of the bone by short rods of nickel. As bony union still failed to occur, the ends of the fragments were exposed and portions of fresh rabbit's bone were placed within the periosteum. Union still failed to be brought about, and the speaker said that he seemed to have arrived at the end of the justifiable methods of treatment.—Mr. C. KING, Mr. CRESSWELL, and Dr. GALLOWAY discussed the case, and all concurred in the opinion that syphilis might possibly have something to do with this remarkable failure of union.

Mr. WHITE then showed two cases of Fractured Patella, the one treated by means of a back splint and approximation of the fragments by kneecaps and bandaging, and the other treated by means of wiring the fragments. The superiority of the latter method was readily appreciated, both in the character of the result obtained and in the great shortening of the period of convalescence.

Dr. E. C. BEALE brought forward the case of a young girl about twelve years of age who had suffered from repeated attacks of Gastro-enteritis. The stools showed numerous flecks of hæmorrhage, and at the same time the child had suffered from attacks of purpura. At present she was in a period of quiescence, so far as the gastro-enteritis was concerned, but the purpura was still to some extent visible; the skin showed numerous papules on the sites of the original purpuric spots. Dr. Beale felt inclined to ascribe all these symptoms to poisoning by faulty ingesta, and that the enteritis was in this case an inflammation of the mucous follicles, as evidenced by the numerous minute hæmorrhages present throughout the stools.

Dr. JAMES GALLOWAY showed a patient suffering from Chronic Phthisis who had for five years been the subject of a curious variety of Lichen Planus. The eruption, mainly on the extremities, was of the circinate variety, and in many respects resembled some of the later superficial syphilides. This patient had been treated for nearly ten months with guaiacol in the form of the carbonate and also as a solution of the pure product. The tuberculosis had passed into a quiescent condition, and the skin eruption was better than it had been during the last five years.

Cases of Embolism of the Arteria Centralis Retinæ associated with Albuminuric Retinitis, and a case of almost complete Optic Atrophy following a blow on the head were also demonstrated.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Adjourned Discussion on Gastric Ulcer.

A MEETING of this society was held on Nov. 15th, Dr. A. SYMONS ECCLES, President, being in the chair.

Mr. KEETLEY said that in cases of perforation not diagnosed early enough it was clear that confusion with colic or "stomach-ache" seldom arose, and that, though peritonitis was recognised, the mistake was made of not at once determining the cause and dealing with it.

Mr. MCADAM ECCLES laid stress on the value of drainage in cases of escape of the gastric contents, and for this purpose he makes a second opening lower down, which he keeps open for twenty-four to thirty-six hours.

Dr. CLIPPINGDALE discussed the etiology of gastric ulcer and assigned a leading place to local constriction in women by corsets and in men by belts.

Mr. SWINFORD EDWARDS raised the question of the value of gastric endoscopy for diagnosis previously to perforation, and narrated a case of a middle-aged man who had a copious discharge of bright-red blood from the rectum. No gastric symptom was present, but at the necropsy perforation of the right gastro-epiploic artery was the only lesion found.

Mr. R. W. LLOYD discussed the dietetic and medicinal treatment, and called attention to the varied localisation of pain in the cases where perforation afterwards occurred.

Dr. ALDERSON thought that local counter-irritation was a valuable adjunct to treatment.

Mr. BIDWELL referred to the operative treatment in non-perforating cases. He mentioned a case where operation had been performed for persistent symptoms, and others where the symptoms were due to adhesions either within or without the stomach in consequence of the cicatrisation of an ulcer. Considering the uncertainty of the diagnosis of perforation, he held that an operation ought to be performed unless the physician can assure himself that the case is not one of gastric ulcer.

Mr. SNAPE asked the opinion of surgeons present as to the advisability of operating in severe cases before perforation.

Mr. BRUCE CLARKE, in reply, said that in cases of hæmorrhage threatening the life of the patient he would follow the ordinary surgical indication and cut down on the bleeding points.

Dr. ABRAHAM called attention to a singular appearance in Dr. Alderson's case—i.e., that the stomach walls appeared microscopically to be infiltrated with cells somewhat resembling those of a pigmented sarcoma.

Dr. LAWRENCE urged the value of albuminate of iron.

Dr. PEARSON thought that some cases of gastric hæmorrhage in girls might be assigned to vicarious menstruation.

The PRESIDENT summed up briefly, and regretted that no speaker had been able to distinctly define the various indications for operation.

LIVERPOOL MEDICAL INSTITUTION.

Is Cancer Curable by Surgical Operation?—Successful case of Cholecystotomy.

AN ordinary meeting of this society was held on Nov. 14th, the President, Mr. CHAUNCY PUZEY, being in the chair.

Dr. DAVIES—in opening the discussion on Is Cancer curable by Surgical Operation?—said that evidence goes to prove that cancer is something far other than a mere local disease. In fifty-three cases of uterine cancer submitted to the operation of complete hysterectomy there was early recurrence in almost every instance. Numberless authorities advocate and describe partial or complete hysterectomy, but their writings do not contain the facts as to the actual benefit derived from the operation. In his opinion patients with recurrence of the disease suffer more acutely than those in whom it has never been touched. He thought that cancer was most probably a micro-parasitic disease in the blood. In his opinion alimentary cancer was as unsatisfactory as the uterine form, and more reliable details of results were much needed. He also thought that the subsequent and remote results of operation on breast cancer were very bad, notwithstanding that the operation was becoming more and more severe, with clean sweeping of the axilla and even removal of the arm. Statistics, immediate and remote, would be a great help. There was no evidence that cases of non-recurrence were also examples of early operation. Patients ordinarily live for two or three years whether treated by surgery or left alone. When cases live for ten or twenty years after operation the question to determine was whether the case was ever one of cancer at all. Dr. Davies, in concluding, advocated the serial and methodic investigation of a large number of cases, extending over many years, such investigation to be duly audited by a competent committee.

Mr. PAUL said that he had no intention of advocating either side of the debate, but hoped to state his views impartially. He thought there was no such diversity in *practice*, as had been suggested by Dr. Davies, amongst the leaders in surgery. Having given the facts upon which his views were based, he expressed the opinion that cancer was local in origin, but could only occur in tissues favourably

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predisposed to its growth, and that it could be cured in the same sense that a tuberculous joint could be cured by excision. He then proceeded to give the results of surgical treatment in cancer of the alimentary tract. The best successes quoted were in cancer of the lip, gums, cheek, rectum, and anus, but he believed the colon and pylorus would yield equally good results in time. Finally, he considered that surgical success depended upon—(1) early recognition, (2) thorough extirpation, (3) inherent favourable tendencies in the tumour, and (4) judicious constitutional after-treatment.

Mr. BANKS dwelt more particularly on cancer of the breast. He said that he could well remember the time when cancer was held to be an absolutely constitutional disease, but later many veered round to the opposite opinion and alleged that it was purely a local malady. He believed in a cancerous diathesis, but thought that some local irritation was necessary to start the disease; if, however, the portion of the economy so affected could be clean scooped out, "like the bad bit out of an apple," there was no absolute reason why the disease should not be eradicated. If once it is admitted that cancer is a purely diathetical disease, the surgeon may give up all attempts at its removal, for, whatever is done, it will return locally or at a distance; on the other hand, if he believes too implicitly in a mere local focus which spreads and affects the system, he will often be led away into rash and futile operations which can never, in the nature of things, succeed and which do serious harm by prejudicing certain operations in the minds of the public, both medical and lay. Mr. Banks confessed that the only remedy at present, if one was employed at all, was the knife, and that admittedly a very poor one. When a student he was taught that if there was secondary infiltration of the glands this was a bar to all operative procedure, but about eighteen years ago he had begun to practise a much more free local removal of the breast, accompanied by a clearing out of the axilla. He believed that if this could be thoroughly done it was a perfectly justifiable operation. He thought that if they could only get people to come early enough with their breast tumours and have them removed they might save one out of four from further invasion. While, therefore, he deprecated reckless and useless operation, he would regard anyone who should refuse absolutely to remove breast cancers on any consideration as a person perfectly devoid of reason and common sense.

Mr. W. S. CRAWFORD advocated the treatment of certain cases of mammary cancer by surgical means. He gave particulars of four cases, microscopical sections of which had been shown. In one the patient died five years after he operated and without any return of the cancer; the second case was now living, three and a half years after operation, with no apparent return; the third case died three and a half years after operation from other causes; and in the fourth a different form of cancer attacked the second breast three years after the first one was removed.

Dr. IMLACH said that, according to some modern "localists," out of 500 operations for cancer 100 remained free from recurrence, while, according to Sir James Paget, perhaps only one individual would remain free. He was surprised at the meagre information which was supplied by the supporters of hysterectomy for cancer. Surgeons generally complained that patients with cancer are not sent to them sufficiently early, but he believed, with Dr. Davies, that cases of non-recurrence were very seldom examples of early operation. If any hospital committee, disappointed with the results of cancer surgery, desired an inquiry into results they should carry it out for themselves, with the aid of medical assessors.

Dr. ALEXANDER admitted that the results of operation for cancer were not satisfactory, but there could be no doubt that surgery was sometimes a "cure" for the disease, and he cited some cases from his practice to prove this point. Apart from "cures," surgery gave distinct relief, especially in cancer of the tongue and rectum, where recurrences took place outside the alimentary tract and killed the patient by exhaustion without the terrible agonies experienced by those who died unrelieved by operation.

Mr. BRIGGS, Mr. J. D. CRAWFORD, Mr. ROBERT JONES, Dr. WALLACE, Dr. CARTER, Dr. RAWDON, and Mr. RUSHTON PARKER also took part in the debate.

Mr. CLEGG showed a female patient aged twenty-six years from whom he had successfully removed several Stones from the Gall-bladder.—Dr. RAWDON and Dr. O'HAGAN made remarks on this case.

MANCHESTER MEDICAL SOCIETY.

Cervical Pachymeningitis.—Pulsating Orbital Swelling.—Abscess of Spleen.—Ipecacuanha Alkaloids.

A MEETING of this society was held on Nov. 6th, the President, Mr. F. A. SOUTHAM, being in the chair.

Dr. LEECH showed a case of Cervical Pachymeningitis. The patient came under his care nineteen years ago, being then fifteen. He was suffering from loss of power over both arms and the left leg. Prior to the paralysis he had suffered from an abscess at the back of the neck, and from a sinus it left a piece of bone of considerable size had been discharged. Soon after admission into the Infirmary power was entirely lost in the arms and legs, the muscles were rigid, the deep reflexes much exaggerated, and tremors were easily produced. The muscles of the upper extremity were wasted, and there was characteristic deformity of the hands. He had incontinence of urine, and some anæsthesia. The boy remained completely paralysed for many months, yet he eventually recovered. He could not stand for two years, and three years elapsed before he could walk. For sixteen years he has remained well and able to work. The right hand is a little deformed, and the reflexes are unduly marked—otherwise he is in good health.

Mr. JONES showed a case in which both Common Carotid Arteries had been tied for a Pulsating Swelling in the Right Orbit. The patient, a woman aged twenty-four, was confined in January, 1891, after a tedious labour of thirty-six hours. Immediately after the birth of the child the patient noticed a peculiar noise in the head, which she compared to a loud knock at the door. This sensation was most noticeable on the right side of the head, and it was not attended with any pain. Fourteen days later both eyes became swollen, but the condition did not persist in the left eye. A little later the right eye began to protrude, and after two months the protrusion was most noticeable. She was under treatment for a few weeks, which consisted of rest in bed and intermittent pressure on the right carotid artery, no benefit being derived. She was admitted into the infirmary in December, 1891. The symptoms usually associated with orbital aneurysm were present in a more or less marked degree. Ligature of the right common carotid artery was practised in August, 1892, after a further trial of digital compression of the artery had been resorted to. The patient made a good recovery, and there was a marked improvement in her condition for a time until a violent attack of coughing, which was attended with much straining. Pulsation and the other symptoms returned in the orbital swelling. Her condition remained stationary for many months, when she received an accidental blow from a child's elbow, and an aggravation of the symptoms followed. She was readmitted last January, and as it was found that the pulsation in the swelling could be controlled by pressure on the left common carotid artery this vessel was secured. The benefit accruing from this operation was of a very temporary character. Her condition now is very much what it was when she first came under observation, and the question was discussed whether injection of coagulants into the dilated pulsating veins would not be a justifiable proceeding. If the patient gives her consent she will be again admitted for further treatment.

Mr. JOSEPH COLLIER mentioned a case of Abscess of the Spleen in a woman aged forty-five years, married, with no history of injury, who had never lived abroad, and who was admitted into Crumpsall Hospital with signs of left pleurisy. Later there existed a high temperature, much pain in the left side, and afterwards bulging in the left hypochondrium, which increased, was fluctuant, and slightly pulsating. Abscess of spleen was diagnosed, with hæmorrhage from the splenic substance into its cavity. The patient was in a very low condition; the abscess was opened, and over a pint of blood-stained pus, blood-clot, and broken-down spleen substance was removed; the hæmorrhage from the remaining portion of the spleen was easily controlled by pressure with a sponge towards the hilum; the remainder of the spleen was scraped out with a lithotomy scoop. The cavity was packed with iodoform gauze. There was no further bleeding, but the patient died from collapse in twenty-five hours. At the necropsy no peritonitis was found, but the peritoneum was pushed down by the abscess; there had been no hæmorrhage into the large abscess cavity. Left basal pleurisy was

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present, with some clear fluid in the cavity. No other abscesses were found, nor was there any endocarditis, any evidence of pyæmia, tuberculosis, or syphilis, or any pyelophlebitis. The abscess was apparently idiopathic.

Dr. R. B. WILD read a paper on the Pharmacology of the Ipecacuanha Alkaloids (a full account of which is given on pp. 1274-77 of our present issue), in which were detailed the results of a number of experiments upon emetine and cephæline, the two alkaloids recently described by Paul and Cownley.

EDINBURGH OBSTETRICAL SOCIETY.

President's Address.—Atresia Vaginæ.—Teratogenesis: an Inquiry into the Causes of Monstrosities.—Election of Office-bearers.

A MEETING of this society was held on Nov. 13th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

The PRESIDENT in his Valedictory Address reviewed the work of the past session and referred to the loss sustained by the decease of some of the members. Regarding the work of Dr. Thomas Keith, few to-day could realise what it meant to persevere with the operation of ovariotomy when success was doubtful and in face of hostile prejudice until it was established as an operation above criticism. He was a pioneer who dared to go where no one had gone before. He had indomitable spirit, and combined with it a womanly consideration for the well-being of his patients. Dr. Leishman, Dr. Goodall, Dr. T. A. G. Balfour, Dr. D. Wilson, and M. Pasteur were also referred to.

Dr. R. C. BUIST (Dundee) read notes and showed a specimen of a case of Atresia Vaginæ. The patient died at forty-three, and had been operated on in her teens for retained menses, and again later; but she had not been able to work after thirty. She had menstruated regularly, and had suffered from a severe flooding in January of this year. Post mortem the uterus was found to be of normal consistence, seven and a half centimetres long; the cervix was small and opened into a small vagina three and a half centimetres long and of the same width, and funnel-shaped. On passing a probe down the vagina it appeared at the bottom of a deep pit in the urethra; and it was from this that the patient menstruated. The labia were normal, and on separating them a mass of cicatricial tissue could be felt. The tubes and ovaries were normal; below the left ovary a small fish-bone was found embedded.

Dr. J. W. BALLANTYNE commenced a series of papers on Teratogenesis: an Inquiry into the Causes of Monstrosities. Part I.: The Theories of the Past—(1) Supernatural Causes: (2) Physical Causes; and (3) Mental Influence. The subject had been engaging his attention during the last eight years, and he had examined 160 cases of monstrosities. Some of the views held by the ancients regarding their cause had long since been abandoned, and are now to be met with only amongst savage races; others are still accepted by the popular mind; and some have received a degree of justification by clinical and pathological investigations. Modern experimental research in the artificial production of monstrosities has done more than any other method to give a rational explanation for their causes. 1. Supernatural Causes.—Some ancient peoples ascribed monstrous births to the gods they worshipped; other races, who had divided their pantheon into good and evil deities, put the blame sometimes upon the former and sometimes upon the latter; whilst others connected their births with the positions and combinations of the stars and heavenly bodies. In succeeding ages the different deities, Satan, and evil spirits as well as the stars were alleged as the cause of monstrous births. According to some the gods were amusing themselves, or exhibiting their creative powers, or were angry with men, or chastising individuals or countries. The belief soon followed that these births were portents of good or evil fortune. The Chaldean astrologers soon advanced the opinion that such a babe of doubtful sex meant an approaching calamity to the land, whilst one with an imperforate anus proclaimed a famine. Similar beliefs held sway in Europe in the Middle Ages combined with the Satanic origin of such progeny. The mother of such a child strove to show the cause was in the stars, or a death at the stake awaited her and her "Devil's brat." In the earliest ages, on the hypothesis that these infants might be gods themselves or their progeny, it is easy to account for the teratological appearance of nearly all the heathen gods and goddesses. Many are unlike the cases of monstrosity seen now, but probably the artificer was never an eye-witness of the appearance and only received distorted details from those unacquainted with anatomical figures. Yet malformations well known at the present day can be recognised in the two-headed, many-breasted gods of the East—in Ptah of the Egyptians, in the Cyclops of the Greeks, and in the fauns and satyrs of the Romans. According to some Jupiter was amusing himself, and Pliny stated that nature creates monsters to astonish us and amuse herself. This idea is still implied in "freaks of nature" or "sport" in botany. Further on, the birth of a deformed fœtus was a divine warning, and with this was associated the necessity for propitiating the deity, and so the infant was sacrificed. In Europe almost all were immediately killed in the Early and Middle Ages, and the mother was fortunate if she escaped. Lucan relates that Arnus, chief of the Etruscan diviners, ordered the slaughter and burning of all monstrous infants at the time of the overthrow of the Roman Republic. The idea that monstrous births predicted disaster held its ground in Europe till the close of the seventeenth century. At other times they were regarded as a punishment of sins committed. In early French history Robert II. married his cousin and was excommunicated by the Pope. His wife gave birth to a malformed fœtus, evidently with webbed digits. She was divorced and the king took another wife. Another idea was that teratogenic power was specially the possession of an evil spirit. Du Chaillu, in his work on the Vikings, states that every child "which is born so deformed that the mother cannot give strength to it, shall be carried to a beach and buried where neither man nor cattle go—that is, the beach of the Evil One." In the early Christian era such fœtuses were looked upon as the progeny of Satan, and to destroy them was to destroy his family. In the sorcery and witchcraft trials in the Middle Ages "coitus cum diabolo" was always inquired into, and in many cases torture wrung most revolting confessions from the accused. Something of this view was in existence at the time of Luther; and as recently as 1893 a notice appeared in a newspaper concerning the birth of a hirsute and otherwise deformed infant supposed to be the result of incautious remarks about the Evil One made by the mother in her pregnancy. An astrologer of the second century not only stated the astral conditions under which terata were born, but also mentioned the nature of the malformation expected. A Danish astronomer, who was also a medical man, ascribed them to comets, and regarded them as tumours scattered throughout the firmament and precipitated on earth in this form. About the year 1200 a cow gave birth to a calf said to be half human, and the shepherd was accused of an unnatural crime and was condemned to be buried alive. Albert the Great saved him by stating that it was due to a certain constellation. Such beliefs were dispelled by the advancement of scientific knowledge, but traces of these early superstitions are to be found not only amongst savage races, but also in our own land and in the popular mind.

The following office-bearers were elected for the ensuing session:—President, Dr. A. Ballantyne (Dalkeith); Vice-Presidents, Dr. Halliday Croom and Professor A. R. Simpson; Treasurer, Dr. Craig; Secretaries, Dr. J. W. Ballantyne and Dr. F. W. N. Haultain; Librarian, Dr. Milne Murray; Editor of Transactions, Dr. J. W. Ballantyne; Members of Council, Dr. Lucas, Dr. Menzies, Dr. Stewart Stirling, Dr. Keppie Paterson, Dr. A. H. F. Barbour, Dr. James Ritchie, Dr. Andrew Balfour, and Dr. J. Jamieson.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Treatment of Phthisis Pulmonalis.

AT the third meeting of this society, Dr. ALEXANDER RANKIN in the chair, a paper on the Treatment of Phthisis Pulmonalis was read by Dr. EBENEZER DUNCAN, detailing the treatment he had employed in 38 cases of phthisis pulmonalis under his care in the Victoria Infirmary, Glasgow, during the past year. Excluding 2 patients moribund on admission, of the remaining 36, 4 recovered, 9 were greatly improved, 16 improved, 6 remained *in statu quo*, and 1 became worse. The most important therapeutical factors were pure air (air washed and filtered before entering the wards) and an equable temperature. Medicinally, counter-irritation and antipyretics (if necessary) were employed in

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the acute stage; later, inhalation frequently of a mixture of creasote, eucalyptol, and pinol in equal proportions. Internally, carbonate of guaiacol and beechwood creasote were exhibited. Beginning with small doses, 60 to 90 gr. of guaiacol were administered four times daily without detriment, and of creasote 25 minims in olive oil. Creasote had also been given as a suppository. Pure guaiacol had no advantage over the carbonate; applied to the skin (20 minims in flannel covered with oiled silk) it brought down the temperature—in one case to 96° F., with symptoms of collapse. Phenol was found in the urine when the maximum dose was reached, without impairing the renal functions. In one case in which there was acute nephritis the blood and albumin disappeared while the patient was taking large doses of the carbonate of guaiacol. There was no gastric disturbance with either drug. When a large cavity existed, intra-laryngeal injections of menthol (15 per cent.) and guaiacol (4 per cent.) in olive oil—the patient lying on the affected side—had been employed with benefit. Cod-liver oil and a generous diet completed the measures.

In replying after the discussion which followed Dr. DUNCAN advocated the erection of a hospital in Glasgow by the municipal authorities for the treatment of tuberculous diseases.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Colotomy.

A MEETING of this section was held on Nov. 8th, Sir W. THORNLEY STOKER, President, being in the chair.

Mr. WHEELER read a communication upon Colotomy, recommending it prior to excision of the rectum for cancerous disease in cases where there were much rectal irritation, diarrhœa, pain, and consequent nervous exhaustion. He considered anterior colotomy preferable and safer, although the lumbar operation had its own place in surgery. As the peritoneum not infrequently surrounds the entire bowel, one of the advantages claimed for the lumbar operation cannot always be upheld. He recommended the parietal peritoneum to be sutured to the wound and a needle armed with a suture passed through the mesentery and then carried through the parietal peritoneum on each side—the gut having previously been drawn through the wound; he sutured back the mesentery at the distal side of the gut to the parietal peritoneum sufficiently to prevent procidentia, which plan was much preferable to drawing the intestine in quantity outside the abdomen and ultimately cutting it off, a procedure sometimes inadmissible; when there was a short mesentery, in addition to the above he passed a sterilised bougie through the mesentery below the suture and allowed it to rest across the wound external to the abdomen; this helped in the formation of a more perfect spur so essential for the after-comfort of the patient. He deprecated the practice of dividing the gut, suturing the lower end, and then dropping it into the abdomen, enumerating the disadvantages and dangers. He described a transverse colotomy for obstruction at the splenic flexure of the colon which was ascertained by an exploratory incision and believed at the time to be malignant, but the patient is at present alive and well, nearly three years after the operation. He also described a left inguinal colotomy for cancerous prostatic disease causing obstruction; the patient died thirteen months after the operation.

Mr. HENRY GRAY CROLY read a paper on Left Lumbar Colotomy, and stated that he had, during the past twelve years, performed that operation eighteen times. With one exception, the operations were performed for cancer of the rectum, and the cases were unsuited for excision; no death occurred from the operation. Two of the patients (notwithstanding careful antiseptic precautions) were attacked with erysipelatous inflammation and septic or erysipelatous pneumonia, but recovered. In each case great relief was afforded to the sufferers. The patients lived from a few months to over two years; one man worked for nearly two years after the operation as a labourer. All the patients became fat and expressed themselves as grateful for the relief afforded to their sufferings. Mr. Croly said he did not intend to compare the lumbar operation with the now more fashionable inguinal operation, but thought it his duty to place on record brief notes of the cases. He adopts the oblique incision of Bryant, and in his hospital practice marks out the crest of the ilium, last rib and erector spinæ muscles; he has invariably found the colon half an inch behind the centre of the crest. He opens the intestine at once and makes an opening not longer than half an inch, thus preventing the prolapsus which occurred in some of his early cases. On one occasion the gut was collapsed and the kidney presented, but the intestine was soon found; in two cases the distance between the crest of the ilium and the last rib was very short, and consequently the wound was deep. He claimed for lumbar colotomy its extra-peritoneal advantage, and he considered the position of the artificial anus in the loin less unpleasant to the patient than the inguinal.—The PRESIDENT expressed surprise that lumbar colotomy should be advocated at the present time.—Sir WILLIAM STOKES said that the more experience he had of lumbar colotomy the more highly did he think of it, although he did not think ill of the anterior operation. One advantage of the lumbar over the inguinal operation was that, as the patient had to lie on his back for a considerable period after the operation, there was a better chance of fæcal drainage. The anterior operation had, however, the advantage of the greater facility and comfort by which the toilet of the patient could be performed.—Mr. KENDAL FRANKS said that the extended use of excision of the rectum, especially by the trans-sacral method, was gradually turning colotomy out of the field, so that colotomy, he believed, would soon become a very exceptional procedure.

Reviews and Notices of Books.

Lectures on Diseases of the Spinal Cord. By Dr. PIERRE MARIE. Translated by MONTAGU LUBBOCK, M.D., F.R.C.P. Lond. London: The New Sydenham Society. 1895.

THE French school of neurology, which was practically founded by the late M. Charcot, has achieved much, not only through the additions to science that have proceeded from it, but also from the impetus it has given to systematic study of diseases of the nervous system all over the world. This widening of interest in a subject abounding in matter for observation has been in large measure due to the methods and style of presentation of it by Charcot and his pupils, among the most eminent of whom is the author of the work before us. The clinic of La Salpêtrière furnished M. Charcot abundant material for study, and the volumes of his lectures will always remain as among the most exact as well as the most lucid expositions of the various phases of nerve disorders. Dr. Pierre Marie has in these lectures, which the New Sydenham Society has done well to place in its series, followed the lines laid down by his master, and has produced a work which is worthy to rank with those of Charcot. The volume consists of thirty-eight lectures, which cover the ground of diseases of the spinal cord, each topic being treated with a fulness and precision that leave little to be desired. Opening with a lecture devoted to the consideration of the anatomy of the pyramidal tract, the author next proceeds to describe in turn the subjects of secondary degeneration of the pyramidal tract, of descending degeneration consecutive to transverse lesions of the cord, ascending degeneration consecutive to lesions of the nerve-roots, and to transverse lesions of the cord. Two lectures are devoted to the interesting subject of degeneration of the nerves and spinal cord after amputation of a limb, and, after a discussion of the various conflicting views as to the cause of such secondary changes, the author himself suggests that they are of the nature of an ascending neuritis through the absorption of "some morbific agent" at the extremity of the divided nerve. This explanation, he admits, is as hypothetical as any of the others, but thinks that it receives some support in the analogy of sympathetic ophthalmia. The clinical description of the diseases

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of the cord begins with spastic paraplegia, and full recognition is made of the writings of the late Dr. Little, which preceded by many years the observations of neurologists. Its congenital character, and its frequent occurrence in children of premature birth, point to the dependence upon some defect in development, and this has been reasonably supposed to be an arrest of growth of the pyramidal tract, often due to injuries inflicted at birth or fœtal inflammation of the meninges or the brain. The author distinguishes between the "true spastic paraplegia" and the "tabetic spasmodic conditions," the former being those due to mere arrested growth, the latter those due to injury and inflammation and associated with mental defects—epilepsy or other sign of cerebral lesion. In spite of the apparent hopelessness of remedying a condition dependent on the non-development of the pyramidal tract, Dr. Marie says that much may be done to excite normal function in those fibres that have formed, and he points to the results achieved by Bourneville at the Bicêtre by gymnastics, massage, &c., carried on with perseverance, as showing that "much improvement may be obtained in cases of spasmodic cerebral pseudo-paralysis, even when complicated by more or less pronounced idiocy." The lectures upon "Insular Sclerosis" recall the memorable picture of this disease given by Charcot in the first volume of his "Leçons." It is treated here in a systematic manner, and the opinion is expressed that this affection really arises from the action of infective agencies. The distribution of the sclerosed patches suggests a vascular origin, and this may be of the nature of embolism, caused by the influence of several infectious diseases. The *pièce de résistance* of the book is undoubtedly to be found in the chapters dealing with the subject of Tabes Dorsalis, which is treated with remarkable detail, and illustrated by a wealth of clinical and pathological facts. The symptomatology of this common yet remarkable affection are described in regular sequence under the heads of Motor, Sensory, Reflex, Trophic, and Visceral. The trophic disorders comprise a very full account of tabetic arthropathy, and an especial description of the "tabetic foot," besides many another lesion of nutrition that keen observation has caused to be added to the list. Lastly, it is instructive to note that Dr. Marie agrees with those who assign to syphilis the chief agency in the causation of tabes—not, be it noted, as affecting the interstitial substance, but as a direct intoxication of nerve cells, for he says, "It is only in this way that we can explain the fact that cells, as distant from each other as are those of the spinal and peripheral ganglia, are simultaneously affected by the same morbid process and in the same special elective manner." The subjects of Friedreich's disease, combined lateral and posterior sclerosis (ataxic paraplegia), spinal paralysis (infantile and adult), infantile paralysis, and amyotrophic lateral sclerosis are also dealt with. The translation of the work has been admirably rendered by Dr. Montagu Lubbock, and an index is added which forms in itself an excellent digest of the contents of the book. It is to be regretted that many of the figures in the text—and their whole number is commendably large—should have apparently suffered so much in reproduction.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. XLIV.: Paston—Percy. London: Smith, Elder, and Co. 1895.

SIR ROBERT PEEL, the statesman, is probably the most notable figure in this well-stored volume. An estimate of his eminent public services rendered during a political career of nearly forty years would be out of place in the columns of a medical journal; it may be sufficient to observe that he was born in Lancashire in 1788, entered the House of Commons in 1809, was Chief Secretary for Ireland from July, 1812, to August, 1818, and Prime Minister from August, 1834, to June, 1846. He died in London in July, 1850, from injuries received by falling from his horse a few days previously. His father, Sir Robert Peel, the first baronet, was a partner in a calico-printing firm in Blackburn. He represented Tamworth in the House of Commons, and in 1802 carried the Act which was the forerunner of all factory legislation—"an Act for the preservation of the health and morals of apprentices and others employed in cotton and other mills, and cotton and other factories."

No fewer than twenty-three medical men are included among the subjects of biography, several of them being honoured with titular distinctions and positions of dignity in their profession. Thomas Pellett was born in Sussex about 1671, graduated as M.D. at Cambridge in 1705, and resided in Henrietta-street, Covent-garden. He was elected a Fellow of the College of Physicians of London in 1716, was Censor in 1717, 1720, and 1727, and President from 1735 to 1739. The Harveian Oration delivered by him in 1719 is remarkable as the only published one which is partly in verse. He died in 1744. Sir Lucas Pepys was born in London in 1742, studied medicine at Edinburgh, obtained from Oxford University a pre-graduation licence to practise, and became physician to the Middlesex Hospital in 1769. He graduated as M.D. at Oxford in 1774, was elected a Fellow of the College of Physicians of London in 1775, was Censor in 1777 and three subsequent years, Treasurer from 1788 to 1798, and President from 1804 to 1810. In 1777 he was appointed Physician Extraordinary to King George III. and attended him during his mental disorders of 1788–89 and 1804, spending two days a week at Kew with the King, from four in the afternoon till eleven the next morning. He had a large practice and was an active supporter of the National Vaccine Institution, but his only published work was the Latin preface to the London Pharmacopœia of 1809. He was created a baronet in 1784 and died in 1830. Sir Christopher Pegge was born in London in 1765, graduated as M.D. at Oxford in 1792, was knighted in 1799, and in 1801 was appointed Regius Professor of Physic in Oxford. He was elected a Fellow of the College of Physicians of London in 1796, delivered the Harveian Oration in 1805, and became a Censor in 1817. He died in 1822. Sir Isaac Pennington was born in Lancashire in 1745, graduated as M.D. at Cambridge in 1777, and in 1793 was appointed Regius Professor of Physic there. He was elected a Fellow of the College of Physicians of London in 1779 and delivered the Harveian Oration in 1783. He was knighted in 1796 and died in 1817, leaving munificent bequests to St. John's College, Cambridge. Robert Perceval was born in Dublin in 1756, studied medicine in Edinburgh, and graduated there as M.D. in 1780. In 1785 he was appointed the first Professor of Chemistry in Dublin University and retained the office till 1805. In 1785 he took an active part in founding the Royal Irish Academy and was for a long time its secretary. In 1793 he received the degree of M.D. from Dublin University. In 1799 a committee of the Irish House of Lords was appointed to inquire into the application of the funds left by Sir Patrick Dun, and Perceval in the course of his evidence declared that he did not think that the King and Queen's College of Physicians, of which body he was a Fellow, had faithfully discharged its trust in this matter. On the report of this committee the "School of Physic Act" was passed in 1800, and Sir Patrick Dun's Hospital, built from the surplus funds of Dun's bequest, was opened in 1808. Perceval was elected President of the King and Queen's College of Physicians in 1799, but vacated his Presidency and Fellowship under a subsequent regulation, promoted by himself, according to which no University or King's professor could remain a Fellow of the College. He afterwards became an active member of the "Prison Discipline Society" and was called "the Irish

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Howard "; he published several unimportant works, but was a successful physician. He died in 1839. Granville Sharp Pattison, born in Glasgow in 1791, received the diploma of the Faculty of Physicians and Surgeons of that city in 1813, and in 1820 was appointed to the chair of Anatomy, Physiology, and Surgery in the University of Maryland in Baltimore. He returned to England in 1827 and for a short time was Professor of Anatomy at the University of London (now University College). This post he relinquished in 1831 and in the same year became Professor of Anatomy in the Jeafferson Medical College, Philadelphia, where he received the degree of M.D. He was appointed Professor of Anatomy in the University of New York in 1840, and continued to hold office till his death in 1851. He edited various American medical periodicals, and published "Experimental Observations on the Operation of Lithotomy." The most conspicuous scientific worker among the medical men noticed in this volume was Thomas Bevill Peacock, who was born at York in 1812, his parents being members of the Society of Friends. In 1833 he came to London, studied medicine at University College and St. George's Hospital, spent some time abroad, and graduated at Edinburgh University as M.D. in 1842. In 1849 he became assistant physician to St. Thomas's Hospital, in 1850 he was elected a Fellow of the Royal College of Physicians of London, and in 1865 he delivered the Croonian Lectures there on Some of the Causes and Effects of Valvular Disease of the Heart. A dispensary originated by him in the City of London ultimately developed into the present Victoria Park Hospital for Diseases of the Chest, to which he was physician from its commencement. He was also one of the founders of the Pathological Society of London in 1846, and filled the offices of Secretary in 1850, Vice-President in 1852–56, and President in 1865 and 1866. Besides his Croonian Lectures above mentioned, he published treatises on the Influenza or Epidemic Catarrh of 1847–8, on Malformations of the Human Heart, and on the Prognosis in Cases of Valvular Disease of the Heart. He contributed numerous papers to the transactions of various medical societies, and was awarded a gold medal by the Royal College of Surgeons of England in recognition of his valuable additions to their museum. In May, 1882, while walking in St. Thomas's Hospital, he became suddenly unconscious, and died on the following day. George Pearson, born in Rotherham in 1751, studied medicine in Edinburgh and graduated there as M.D. in 1773. In 1784 he was admitted a Licentiate of the Royal College of Physicians of London, and in 1787 became physician to St. George's Hospital, where he lectured on chemistry, materia medica, and the practice of physic. He was among the first to recognise the value of Jenner's discovery of vaccination, and in 1799 a vaccine pock institution, with which Jenner had no connexion, was established by his efforts at 5, Golden-square, but when Jenner was rewarded by Parliament for his services Pearson was ignored, and subsequently took every opportunity of denouncing Jenner. He was physician to the Duke of York's household and a scientific chemist of much ability; the designation "uric acid" is said to be due to him. He died in 1828. John Pechey, admitted a Licentiate of the Royal College of Physicians of London in 1684, was admonished by the College in 1688 for distributing handbills and displaying a signboard; being recalcitrant, he was fined £4, and on a subsequent occasion £8. He published several works, the best known being an English translation of Sydenham's writings, which reached its eleventh edition in 1740. He is supposed to have died in 1716. Surgeon-General Saville Marriott Pelly was born in 1819 and passed the most active years of his life in India. The biographical notice of him is somewhat meagre, but readers of THE LANCET will find a full account of his career in that journal for April 20th, 1895. Christopher Robert Pemberton was born in Cambridgeshire in 1765 and graduated as M.D. at Cambridge in 1794. He was elected a Fellow of the Royal College of Physicians of London in 1796, was Gulstonian Lecturer in 1797, was Censor in 1796, 1804, and 1811, and delivered the Harveian Oration in 1806. He was physician to St. George's Hospital from 1800 to 1808, and physician extraordinary to the King. He was the author of a work entitled "A Practical Treatise on Various Diseases of the Abdominal Viscera," containing some important contributions to medical knowledge, and he died in 1822. Henry Pemberton, born in London in 1694, graduated as M.D. at Leyden in 1719, was appointed Gresham Professor of Physic in 1728, and from 1739 to 1746 was employed in the preparation of an edition of the London Pharmacopœia. He was, moreover, so accomplished a mathematician that he was engaged by Sir Isaac Newton to superintend the third edition of the "Principia," published in 1726. He was an industrious writer on a variety of subjects and died in 1771. Thomas Percival, born in Warrington in 1740, studied medicine in Edinburgh and Leyden, and graduated at the latter university in 1765. In 1767 he settled in Manchester and devoted much of his energies to the advocacy of sanitary improvements and factory legislation. The Manchester Literary and Philosophical Society was founded at his house in 1781, and he filled the office of President almost continuously from 1782 till his death in 1804.

Dorothy Wyndlow Pattison, daughter of a Yorkshire rector, and sister of Mark Pattison of Oxford University, was born in 1832. In 1864 she became, in opposition to her father's wish, a member of the Sisterhood of the Good Samaritan at Coatham, in Yorkshire, and adopted the name of Sister Dora. In 1865 she was sent to a small cottage hospital established at Walsall by the sisterhood, where she soon became familiar with the treatment of wounds and fractures, and acquired some knowledge of anatomy through regularly attending the post-mortem examinations. In 1877 she was placed in charge of the Municipal Epidemic Hospital at Walsall, occupied chiefly by cases of small-pox, but cancer had already shown itself and carried her off in the end of 1878. Patrick, the famous patron saint of Ireland, was born in Scotland in the year 373, his father being a magistrate in Dumbarton, which was at that time a fortress held by a Roman garrison. In 389 the youth was captured in a raid and carried off to Ireland, where he was sold as a slave, but after six years he escaped to France and spent several years there, probably with St. Martin of Tours. Having been consecrated a bishop, he commenced his mission to the heathen Irish probably in 405. The date of his death may be reckoned as 463, and, according to St. Bernard, he was buried at Armagh. Another evangelist of the heathen in our own generation was John Coleridge Patteson, first missionary bishop in Melanesia, who laboured among the South Sea islanders from 1865 until 1871 when he was killed by natives of the island of Nukapu in revenge for an outrage committed there by some Englishmen a few months before.

LIBRARY TABLE.

Outlines of Practical Physiology: being a Manual for the Physiological Laboratory, including Chemical and Experimental Physiology, with reference to Practical Medicine. By WILLIAM STIRLING, M.D., Sc.D., Edin, Brackenbury Professor of Physiology and Histology in Owens College and Professor in Victoria University, Manchester; Examiner in Physiology in the Universities of Edinburgh and London. Third Edition, revised and enlarged, with 289 Illustrations. London: Griffin and Co. 1895. 6s.—This is the third edition of an excellent manual which is admirably adapted for work in the physiological laboratory. While its essential features remain unchanged the subject matter has been rearranged in the present edition, and a considerable number of additions have been made, including a short appendix on

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recording apparatus. The work is profusely illustrated, a large number of the illustrations being new and several of the woodcuts being from original drawings. The design is well conceived and the method and arrangement are good, and no pains seem to have been spared by its author to make it a sound and instructive handbook and guide for the student of science and medical practitioner.

A Woman's Words to Women on the Care of their Health in England and in India. By MARY SCHARLIEB, M.D., B.S. Lond. London: Swan Sonnenschein and Co., Limited. 1895.—This is a very good little book dealing wisely and well with a number of details which are necessary to be known in regard to the hygiene and health of women and children in this country and abroad. It is clearly and practically written, and will prove especially useful to those who are proceeding to India and the colonies. A large amount of preventable ill-health and discomfort is produced by the want of some knowledge of physiology and the laws of health and the exercise of a little timely care and foresight, and this want the book in question is calculated to supply.

Tours in the West Indies.—This is a handy little pocket guide giving the itinerary of the tours arranged for the winter service of the Royal Mail Steam Packet Company. In addition to the itineraries there are some useful notes on the chief points of interest attaching to the various islands, and there is a good map showing the routes taken by the company's steamers. Those who contemplate wintering in this part of the New World will find the guide, which is well illustrated, of service.

On Appendicitis and Perforation of Gastric and Duodenal Ulcer. Being the Ingleby Lectures for 1895. By GILBERT BARLING, F.R.C.S. Eng. Birmingham: Cornish Bros. 1895.—The subjects treated of in this little book have been so much to the fore of late that a clear exposition of diagnosis and treatment, with the appended catena of cases operated upon, both successfully and the reverse, is of great value. The impression left upon the reader is, undoubtedly, that operative interference is imperative the moment that there is reason to suspect the formation of pus. The necessity for freedom of drainage is also insisted on. Though, as the author says in his preface, there is nothing very new in his remarks, yet the clear way in which his facts are set forth make these lectures a valuable addition to the literature of the subject.

Vorlesungen über die Zelle und die einfachen Gewebe des Thierischen Körpers. Von Dr. R. S. BERGH, Docent der Histologie und Embryologie an der Universität Kopenhagen. Wiesbaden: C. W. Kreidel. 1894. (Lectures on the Cell and Simple Tissues of the Animal Body. By Dr. R. S. BERGH, Teacher of Histology and Embryology at the University of Copenhagen. Wiesbaden: C. W. Kreidel. 1894). London: Williams and Norgate. Pp. 262. Price 7*s.*—These lectures constitute an introduction to the study of histology which is fully abreast of the discoveries of modern research. They are clearly written and abundantly illustrated with figures, most of which are reproduced from the works of leading authorities on the subject. Commencing with a description of unicellular organisms, the morphology of the cell is given in detail. It is stated *en passant* that the disappearance of the nucleus from the cell—as in the red blood corpuscle—is to be regarded as a mark of degeneration, and hence the brief existence of such corpuscles. The finely fibrillar structure of cell substance is well illustrated, and the remarkable constitution of the nucleus, one of the most striking additions to knowledge made by microscopical investigation, is dwelt upon. The essential functions of the cell are summed up as consisting in movement, irritability, and metabolism, the two first-named properties being possessed by the cell substance, and the last named by the nucleus as well as the protoplasm. Then comes a description of the direct and indirect processes of cell division, the mechanism of fertilisation, and lastly the formation of deposits in and around cells. The rest of the work is concerned with an account of the animal tissues, epithelial (including glandular), muscular, nervous, and connective.

Physiology. By A. MACALISTER, M.D., F.R.S., &c. London: Society for Promoting Christian Knowledge.—This unpretending little book is one of a series of manuals of elementary science published by the Society for Promoting Christian Knowledge and the collocation of the publishers, and the subject is, we think, a happy one. It commences with a short and clearly put account of metabolism, diet, and cookery, leading to digestion and assimilation, and the author then passes by an easy transition to the circulation of the blood, which in its turn leads to respiration. Then follows an account of the tissues and the excretory glands as well as the ductless glands. The latter part of the book treats of the nervous system and the special senses, finishing with a few words upon life and death. Short as the account necessarily is, the subject is well and clearly handled.

JOURNALS AND REVIEWS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. London: J. & A. Churchill. August, 1895. Pp. 174. Price 10*s.*—This part contains four articles, none having special bearing on medicine. 1. Edward T. Browne, B.A.: On the Variation of Haliclystus Octoradiatus, with a plate. 2. George Bidder: The Collæcites of Heterocœla, with a plate. 3. Henry Bury, M.A.: The Metamorphosis of Echinoderms, with seven plates. 4. Gilbert C. Bourne, M.A.: A Criticism of the Cell Theory, being an answer to Mr. Sedgwick's article on the Inadequacy of the Cellular Theory of Development. Mr. Browne found in 154 specimens of Haliclystus 120 normal and 34 abnormal specimens, the variations affecting the colleto-cystophors, the genital bands, and the number and position of the groups of tentacles. The criticism of Mr. Bourne on Mr. Sedgwick's article is ably written.

The *Journal of Comparative Pathology and Therapeutics* for the current quarter contains an article by Mr. F. Hobday entitled "Some Minor Operations in the Dog and Cat," which many of our readers who have four-footed friends dependent upon them will be interested to read. For, *pace* the rabidity of certain anti-vivisectionists and their organs, many medical men love dogs and cats and desire that they should live happy and healthy lives.

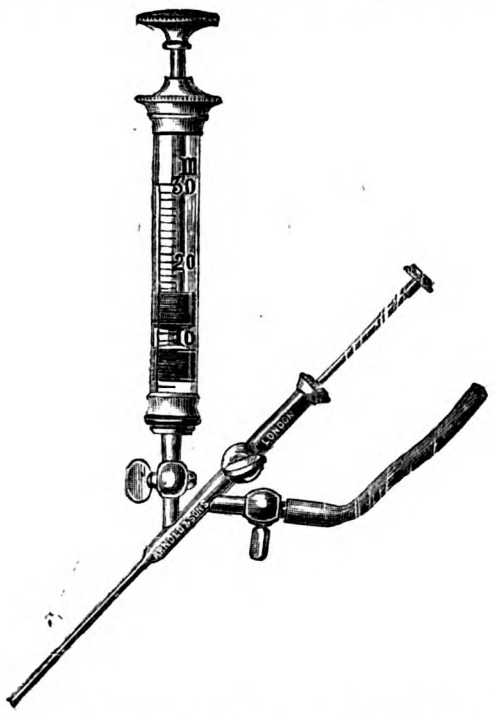
New Inventions.

PARACENTESIS NEEDLE FOR USE WITH HYPODERMIC SYRINGE.

FOR some years back I have used the paracentesis needle represented in the accompanying engraving, which has been made for me by Messrs. Arnold and Sons, London, and several medical friends who have seen it have procured similar ones for themselves. The instrument has one arm for a hypodermic syringe, and another arm to which indiarubber tubing can be attached; the central tube carries a fine needle. The advantages of the little contrivance are that a very small and not alarming instrument is used for the exploratory puncture, and that fluid if found can be removed at once. A word on the mode of use may not be amiss. The instrument having been carefully sterilised, the trocar in place, the stopcocks open, and the syringe filled with hot water, the water is driven through the instrument till only a drop or two remains in the syringe. The arm for the indiarubber tubing is now closed by the stopcock, the puncture made, the needle withdrawn, and the central stopcock closed. The couple of drops of warm water remaining in the syringe if

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now pressed out will sufficiently dilute any thick fluid that may be found to allow it to flow through the needle when the piston is withdrawn. If fluid is found, the indiarubber tubing connected with an exhaust bottle can be attached at once. Should the needle get blocked, the simplest way to remove the obstruction is by injecting a little warm water



from the hypodermic syringe, which of course should have again been sterilised. This description sounds rather complicated; but a simple glance at the instrument even without any description would make clear the mode of use to anyone acquainted with its purpose.

WILLIAM R. HUGGARD, M.R.C.P. Lond.
Davos Platz, Switzerland.

AN IMPROVEMENT IN THE CONSTRUCTION OF GRATES AND STOVES.

To partially obstruct the lower part of the chimney immediately over the fire with parallel plates of zigzag iron would by most people be considered an absurdity. Yet this is practically the principle of an invention which we have recently inspected and examined, and which is claimed to consume smoke and to prevent the waste of heat up the chimney. It may be stated at once that the latter is to a very large extent ensured, since obviously, the draught being greatly reduced, the heat is not carried away in the rapid way that it is in the case of an ordinary grate, where the burning fuel is immediately underneath the wide opening of the flue. At first sight, however, it is difficult to see how such a device could possibly consume the smoke, but indirectly and to some extent it does so. The smoke issuing from the top of the chimney, serving as a flue to the stove we inspected, was quite destitute of the murkiness and sooty character of ordinary smoke, and a plug of cotton-wool placed in the flue within about 5 ft. of the fire was browned not, as it proved on testing, with tarry matters or soot, but chiefly with mineral matters containing largely oxide of iron. This was shown on treating the plug of wool with ether, which, on evaporation, yielded no tarry residue. On burning another piece of the wool the darkened portion did not disappear, but remained eventually as an indestructible brown ash. The arrangement of zigzag or corrugated metal plates, which serves in a measure to screen the smoke from its carbonaceous particles, and which, being caught in these plates, gradually burn away as the plates get hot, may be thus described:—The plates, preferably formed of cast iron, are arranged parallel to each other above the fire and under the entrance to the chimney, and are not flat, but of zigzag or corrugated form, the corrugations extending horizontally from front to back. The corrugation does not extend to the top of the plate, the upper part being left flat. A large gap is also left in the back edge of each plate, and a cast or wrought iron plate is placed at the back of the grate between the side plates fitting into this gap. A long bolt passes through the side plates and the plate at the back to secure the latter in position. A flange is provided on one side at the top of each plate. These flanges have the effect of keeping the plates at a suitable distance apart, and form also a series of narrow parallel channels, sloping slightly upwards, and serving as outlets for the products of combustion into the chimney after they have passed between the plates. The channels between the plates are narrowed as the soot accumulates, but a clear passage is always maintained, since as the plates get hot the soot appears to be slowly consumed. The plates in any case can be readily brushed clean when desired. The inventor claims that the soot so deposited plays an important part in absorbing any incomplete products of combustion which eventually disappear with the soot. This we have not established. Still, we found that the smoke issuing from the fire is robbed very considerably of its blackness and murk, and the products eventually gaining outlet into the air are free from the reproach which can be justly levelled against the outpourings of the majority of chimneys in London. Analysis showed that only traces of carbonic oxide, sulphuretted hydrogen, and unburnt hydrocarbons existed in these products. The invention does not aim directly at the perfect combustion of the fuel, but rather at removing the greater part of the sooty particles in the smoke; consequently it can be applied to any grate. It would be an excellent thing if every coal fire in London had some such device attached to it, since it would tend to minimise to an important extent the blackness which befouls the air of the metropolis, and which is largely responsible for the prevalence of the detestable and unhealthy "solid" fog in the winter season.

The grate which we examined was working in a small room at the offices of Messrs. Clarke and Bracey, 64, Coleman-street, E.C.

CARSON'S "ANTI-STOOP."

THE "anti-stoop" is an appliance for preventing or curing stooping habits. It consists of two steel arms connected at the back by a cross-piece and passing up the back of the wearer to within about three or four inches of the neck, where they branch out on either side and come over the



shoulders. At the extremity of the arms are attached padded blocks, which press gently and uniformly upon the shoulders, gradually forcing them into their proper position. The parts of the body best fitted to bear pressure are the ones, and the only ones, on which the pressure falls; these parts are the centre of the back and the front of each shoulder. The excoriation and abrasion of the skin caused by the pressure and friction of straps passing under the arms are entirely avoided. Owing to the elasticity of the steel it will give way to any sudden movement of the wearer, instead of breaking or cutting into the flesh as shoulder straps do. It can be put on and adjusted by the wearer in less than three minutes, and once adjusted can be put on without assistance in almost as few seconds, there being no straps or bands to buckle at the back. It is made in sizes to fit ladies, gentlemen, and children.

Messrs. Arnold and Sons, West Smithfield, London, are the sole agents for the sale of this appliance.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 23, 1895.

IT is doubtless á disappointment to the members of the General Medical Council not to be able to meet in their new council chamber on Tuesday next. But they have every reason to believe that the hospitality of the Royal College of Physicians of London will reduce the inconvenience of such a state of matters to a minimum. We were never sanguine that the alterations would be completed in time, and unexpected causes of delay, usual in such cases, have combined to confirm our views. It does not follow that the officials of the Council are to blame, and we believe that the President has done everything that was possible in the circumstances to fulfil the original hopes and designs of the Council. In one point he is certainly right, and that is in summoning the meeting at the usual time. The functions of the Council are too grave to be postponed for slight reasons, and though there seems to be a notion abroad that there is no serious business to be transacted we do not share the feeling. Certain gentlemen were left at the last meeting in a state of suspense as to their professional position. It is right that their cases should be defined and settled. In another important case an appeal to the Council for restoration to the Register, or even for a reconsideration of the whole facts, was referred to the Solicitor of the Council and may have to be dealt with. These cases ought not on the one hand to occupy much more of the time of the Council, but they must not on the other hand be disposed of with raw haste. The character of every registered practitioner is of consequence to the medical profession, and the principles which are at stake in such cases are of still more consequence. There is some reason to fear that for the present the Council will not have the usual assistance from the Medical Defence Union in the preparation and presentation of cases. It may be remembered that at the last meeting a case broke down from the fact that the same witnesses made opposite statements when appealed to by two sets of persons. Some members of the Council reflected on the indefatigable secretary of the Medical Defence Union. The secretary declared it was impossible to prevent such things or to cope with them until they had the power to summon witnesses and submit them to cross-examination. And we learn that the society which he represents so far agrees with him as not to intend to assume a prosecuting position at the present meeting. The Council cannot well initiate prosecutions or prepare them. It cannot be both accuser and judge. Some way must be found out of this difficulty. The Medical Defence Union and the London and Counties Medical Protection Society have done admirable service in the past at great cost, and until the Public Prosecutor becomes a more palpable and effective functionary than he is at present the withdrawal of defence societies from the work of prosecution may be a serious misfortune for the profession.

The Council will be asked by the Apothecaries' Hall of Ireland to appoint Examiners in Surgery, the Royal College of Surgeons in Ireland having withdrawn from conjunction with the Hall for purposes of giving a full qualification as required by the Act of 1886. This matter is a very important one and deserves careful attention. It is known that the Conjoint Examinations in question were considered so unsatisfactory that the Council, on the motion of Sir DYCE DUCKWORTH and Mr. BRYANT, resolved to report them to the Privy Council. What result the answer of the Privy Council will have on the action of the Council remains to be seen. But the Act of 1886 gives it power, *if it see fit*, to appoint assistant examiners to enable any corporation, otherwise unable to do so, to hold a qualifying examination under the Act. At the June meeting, on the motion of Dr. MACALISTER, seconded by Dr. MCVAIL, it was resolved: "That the Examination Committee be instructed to prepare for the consideration of the Council at its next session a series of specific recommendations embodying the results set forth in the summary of their reports." The ever-growing multiplicity and complication of examinations give an additional importance to their inspection and visitation and make it incumbent on the Examination Committee to extract any lessons it can from the inspections in the interest of the candidates and of the public. It has never appeared to us that this serious and costly part of the Council's work received the measure of attention which it merits. The motion of Dr. MACALISTER, allowing as it did six months for its consideration by the Examination Committee, leads us to expect "a series of specific recommendations" that will deal closely with the whole subject of final examinations. If ever inspections are to be utilised and made instructive it must be at the end of a complete series of them, and now, consequently, is the time for any suggestions that would improve examinations as tests "of the possession of the knowledge and skill required for the efficient practice of medicine, surgery, and midwifery."

Besides these various subjects to the consideration of which the Council is committed, there will doubtless be others arising from the motions of individual members, of which we cannot know till the appearance of the programme of business. The profession will expect to hear something of the progress made in the preparation of a new Pharmacopœia. At its last meeting the British Medical Association passed resolutions requiring its council to bring before the General Medical Council various matters of interest to the profession—notably the subject of the constitution of the General Medical Council, the inadequate amount of instruction in practical midwifery required by the Scottish medical authorities, and the objections to the creation of medical, surgical, or midwifery practitioners other than those registered under the Medical Acts. The British Medical Association does not now ask the General Medical Council to move in procuring an increase in the direct representation of the profession on the Council, but gives it notice that it is about to do so. The Council has already intimated that it will consider any Bill for the amendment of the Medical Acts introduced by the Government. We think the time is favourable for asking the Government for some very much needed amendments in the Medical Acts, including some extension of the principle of direct representation. It is to be regretted

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that the Council has not shown more sympathy with the principle. It has been beaten once on this subject, and it may be beaten again. But the prospect of success will depend on the sense of moderation and proportion which is shown in the demands for amendment. Be this as it may, the Council seems to be likely to be fully occupied for four or five days.

THE view, which is becoming more and more widely accepted, that the complex of symptoms—ocular, nervous, and cardio-vascular—which characterise Graves's disease depend upon perverted or excessive function of the thyroid body has not only afforded a fairly satisfactory explanation of its varied phenomena, but has likewise led to the advocacy of such a radical measure of treatment as thyroidectomy, complete or partial. Apart from the severity of this measure in comparison with the different kinds of treatment which have been based on symptomatic grounds—such as the prescription of digitalis or of belladonna, of galvanism of the sympathetic, and such like—there always remains the problem as to the natural cause of the disease. We meet with all forms of the disorder, from the comparatively mild or abortive types ("forme fruste" of MARIE) characterised by slight vaso-motor disturbances, tachycardia and tremors, and without appreciable proptosis or even obvious thyroidal swellings, to the extremely severe forms with exaggerated nervous symptoms, including mental derangement, cardiac dilatation and its results, a thyroid tumour which threatens life by compression of the air passages, and a high degree of exophthalmos. Happily these severe cases are not very common, and for them perhaps any method of treatment is justifiable. But so uncertain and indefinite is the progress of the affection that spontaneous amelioration or entire recovery may ensue, even in cases which at one time appear to be most serious. Hence there are few diseases in which the question of prognosis is more involved in difficulty, or concerning which so much difference of opinion exists. If hospital returns are alone to be relied on, it might appear that fatal cases of Graves's disease are of great rarity; that the majority of the patients, after some months' rest and hospital treatment, pass out with their symptoms relieved or practically unaltered, whilst complete recovery is as rare as, or rarer than, death. The question is essentially one which can only be solved by the collocation of facts from the large body of general practitioners. The specialist or the hospital physician, although personally seeing far more examples of the affection than any individual general practitioner, is far less well informed as to their course after they have passed from his care. The mortality statistics are, therefore, both very diverse and very indecisive, ranging from 50 to 10 per cent.

In an address on the subject lately given by Professor PIBRAM of Prague,[1] attention is drawn to these divergent opinions, the author remarking that in his own thirty years' experience he was only able to recall three deaths in hospital and one death (from diabetes) among a large number whose history had been traced for several years after they had left the hospital. In the great majority the cardinal signs of the affection gradually disappeared—a recovery which was known to have lasted for many years (in some cases even as long as twenty years) and which therefore might be regarded as complete and permanent. Moreover, his favourable results are not based upon the observation of what may be termed the milder forms, for he gives particulars of some which were of the most severe type, associated with grave signs of cardiac failure and yet eventuating in recovery. One object of Professor PIBRAM'S paper was to check the tendency to resort to such a grave measure as thyroidectomy, and it may be remarked that the attribution of the phenomena of the disorder to primary thyroid change does not *per se* call for so radical a remedy. There is no reason why under less strong measures, or simply in the natural progress of the case, the gland should not of itself pass back from the abnormal to the normal state of activity. If it be true that the thymus gland has properties antagonistic to those of the thyroid, then a comparatively simple remedy may be found which may be as potent in Graves's disease as thyroid extract is in myxœdema.

This question of prognosis in Graves's disease, upon which so much turns, seems to be one peculiarly fitted for investigation; and it might be well worth consideration by one of our medical societies whether an inquiry for the object of determining the after-history of cases could not be instituted. There are many points that require elucidation. Thus, it would be valuable to know the order of onset of the various phenomena, their relative preponderance, the degree of cardiac derangement, and the kind of complications. Then in tracing out the later lives of those who have at one time or another shown symptoms of the affection, it would be important to ascertain not merely the duration of those symptoms or the time that had elapsed since their disappearance, but the subsequent history of the patient's mental and physical health. What proportion of those persons who have had "Graves's disease" are permanently invalided—by anæmia, by cardiac enfeeblement, or by more serious disturbances? Does the liability to tachycardia entirely disappear under all circumstances? In how many cases do actual relapses take place? What proportion are subject to pulmonary disease; or is there any special proclivity to organic affections, such as tuberculosis or cancer, albuminuria or diabetes? Do any of those who have had Graves's disease in early life suffer later from atrophy of the thyroid gland and myxœdema? What, in fact, are the prospects of health and of the duration of life in one who has been the subject of this affection? There can be no doubt that as regards many, if not most, of these questions we have comparatively little definite information, and yet there must be ample material ready to hand to supply the answers if only it could be collected.

THE preparations for the Ashanti Expedition go on apace. Some of the troops, with a considerable quantity of stores and equipment, have already been embarked at Liverpool and started for the Gold Coast, and others will shortly follow. The composition of the force, as it stands at present, will be: 600 of the West India regiment, 400 of the 2nd West Yorkshire, and 200 of the composite battalion—with the

[1] Wiener Klinische Rundschau, 1895, No. 44.

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addition of fifteen or sixteen hundred made up of the Houssas and local native corps, and a contingent possibly from the Royal Navy. The Houssas have the reputation of being capital soldiers, especially for bush warfare. It is a very noteworthy and fortunate circumstance that nearly all the military authorities at headquarters, from Lord WOLSELEY downwards, who have been engaged in making the preparations for the forthcoming expedition, have a knowledge of the country acquired from actual service in it during the 1873-4 campaign, and have therefore had a personal experience of what are the necessary requirements now. Sir FRANCIS SCOTT, who goes in command of the expedition, is peculiarly fitted for the post, for he is an officer of long and distinguished service with the 42nd Highlanders in the Crimea, the Indian Mutiny, and in the Ashanti War of 1874, and subsequently, since his appointment as Inspector-General of Constabulary on the Gold Coast, he has successfully conducted two little campaigns in defence of the States under the British Protectorate.

Previously to the Ashanti Expedition under Sir GARNET WOLSELEY in 1873-4, and almost up to the very time of its being undertaken, the results of our experience of campaigns in that climate had been very unfortunate and even disastrous. We can well remember the gloomy forebodings that were indulged in at the time. It was prophesied that in a campaign undertaken by white troops in that climate the force would probably perish from sickness in a futile attempt to penetrate inwards to Kumassie, and people pointed to the results of previous expeditions in corroboration of the opinions they freely expressed. But it was altogether lost sight of that such expeditions had always been undertaken at the wrong season, and that the troops had already been deteriorated in health from residence in bad and insanitary garrisons, and had been very badly provided for and equipped for service in the field; whereas a careful consideration and survey of all the facts warranted the belief that if an expedition were undertaken in, and its operations confined to, the dry and healthy season, and if proper sanitary precautions were taken and the troops were provided with fresh instead of salt provisions and properly equipped, and if the campaign were conducted with all practicable celerity, there was every prospect of its being successful. That was the view entertained and expressed in THE LANCET at that time. The "ifs" were all discounted by the arrangements that were then made, and the result is a matter of history. It was called a doctors' and engineers' war. The stations on the seaboard were relatively few and unhealthy from sanitary neglect, the soil and climate—especially of the dense bush and low-lying portions of the country—were notoriously malarious, and fevers and dysenteric affections were very prevalent. But the climate of the Gold Coast is not of the same character all the year round, and all parts of it are not equally unhealthy; in the dry season these diseases are not only much less common, but less grave. In an expedition by the Government of the Netherlands to Kwassie-Kron in 1869, for example, the troops were healthy. Anyone who cares to turn to the medical history of the Ashanti War of 1873-74 by [illegible]. D. HOME, V.C., will find a very full and graphic account of the military expeditions in the Gold Coast Protectorate of that and previous years. Sir ANTHONY HOME states that much of the loss formerly accruing to such expeditions had been due to causes quite preventable, and he adds that this consideration no doubt greatly influenced the opinion expressed by the then Director-General (Sir WILLIAM MUIR) on the sanitary prospects of the last expedition. With regard to the detailed sanitary instructions and the equipment of this expedition he says that every point connected with it had been studied with special attention to the circumstances of an exceptional kind of campaign, and untrammelled by restrictions springing from the view that what had done before might do again; and he adds that no so carefully-provided-for expedition had ever left the shores of this or of any other country. There is no reason to suppose, therefore, that anything will be lost sight of as far as sanitary considerations are concerned on the present occasion. The older expeditions, in addition to being badly organised and supplied, just got far enough into the interior to incur all the risks of the worst places without ascertaining if things were better further on.

The route from Cape Coast Castle by the River Prah is the most direct one, but the country about Accra possesses some roads, and is much more open and hilly than that in the vicinity of Cape Coast, although the route from Accra to Kumasi—a distance of about 250 miles—is a more circuitous one. The Akropong Hills are on the direct road from Accra to Kumasi, and there seems to be no reason why some of our troops should not hereafter be quartered there or in some healthy locality in the uplands, instead of occupying the unhealthy stations they do at present on the sea coast. Be this as it may, we are chiefly interested at the present moment in the medical and hygienic aspects of the forthcoming campaign. There is no animal transport in the country, and a large force of native bearers will consequently have to be organised and everything adapted with a view to facility of transport. War is costly at any time, and small wars are disproportionately so, but that will be found the most economical procedure in the end which anticipates and provides for all reasonable contingencies. There is, of course, no doubt about the malarious and unhealthy nature of the climate, and this being so we may anticipate a good deal of sickness without necessarily a corresponding rate of mortality. But what we contend is that the sickness is mostly of a preventable character. There were only eighty-one deaths from disease and loss in action in 2587 officers and men of the European force that marched to Kumasi under Sir GARNET WOLSELEY: the mortality at the end of four months after the country had been left was 3·14 per cent. of the strength disembarked. As regards diseases, malarial fevers and dysentery are those most likely to be encountered. New comers are liable to be attacked with a climatic form of fever of short duration—the so-called seasoning fever. Quinine is now supplied in the form of tabloids and can be easily carried. We may incidentally remark that the hydrochlorate is the most soluble and efficacious form of quinine. Outbreaks of small-pox occasionally occur, but small-pox is much more likely to prove dangerous to the enemy than to a well-vaccinated army. We understand that a supply of

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Pasteur-Chamberland filters will be sent with the force, and, we suppose, alum for water clarifying purposes. Ample supplies of ice are absolutely essential for the sick, and, we may add, for the comfort of the healthy also. On the occasion of the last campaign a large man-of-war, the *Victor Emmanuel*, was fitted up as a hospital ship, and the late Professor PARKES said that such a floating hospital had never, he supposed, been sent out before, and he especially extolled the ingenuity, completeness, and simplicity of the plans by which all the hospital requirements had been met. A full and critical description of this vessel was published in THE LANCET of Nov. 22nd and Dec. 6th, 1873. On this occasion the Peninsular and Oriental steamer *Coromandel*, of 4499 tons and 4500 horse-power, has been selected for the purpose, and is now in the Royal Albert Dock undergoing the necessary changes to fit her for the special work in view. We may assume that some arrangement will also be made for providing some kind of base hospital and depôt on shore at which the sick and invalids coming from the front can be received, rested, and furnished with food and supplies generally pending their embarkation on board the hospital ship. Some provision will also be made, no doubt, for the periodical transport of invalids to this country, or elsewhere if deemed necessary. We do not see why some method could not be devised for supplying soldiers on the march to Kumasi with a certain amount and variety of portable food to be used in case of need and on a forced march.

Sir WILLIAM MACKINNON, the present Director-General of the Army Medical Service, was the Principal Medical Officer of the force during the latter part of the campaign and at the taking of Kumasi in 1873–74, and his experience will therefore be valuable. Surgeon-Colonel TAYLOR is going as Principal Medical Officer of the force and he will have an opportunity of comparing and contrasting the field medical arrangements in Ashanti with those of the Japanese in the late Chino-Japanese War, at which he was present, and of which he has so recently given us a graphic account. It goes without saying that one of the great secrets of administrative success in war, especially as far as the medical service is concerned, consists in the provision and arrangement of stores and supplies ready and available for use, and in the organisation and preparedness of everything at the base; and there will be time for the accomplishment of this before the force starts and the field operations commence.

FLOODS IN BRISTOL.—Owing to the recent heavy rainfall a culvert in Montpelier, Bristol, has recently burst. This has happened on several occasions, the last time being a year ago. The damage then caused was extensive, walls being demolished and household goods destroyed, for which, although legally tested, the sufferers were unable to obtain compensation. These unfortunate scenes were repeated on this occasion. A year ago the Sanitary Committee officially submitted a remedial scheme, but beyond this nothing whatever has been done. The Bristol Sanitary Authority should at once take steps in this matter, as in addition to the great destruction of property, it is stated that illness, and even death, have been caused through the effects of these inundations.

Annotations.

"Ne quid nimis."

"RETURN CASES" FROM INFECTIOUS HOSPITALS IN THE METROPOLIS.

SO-CALLED "return cases" of scarlet fever—by which are meant cases occurring in a household shortly after the return home of a patient discharged in ordinary course from an infectious hospital—have attracted much notice of late. Something more is required to explain them than want of care and precaution in discharging the patient from hospital on the one hand, or omissions in the disinfection of his clothing at the time of removal on the other. The problem is one for consideration together with wider questions of the infectiveness of scarlet fever, and at the Epidemiological Society on Nov. 15th Mr. T. W. Thompson read a very instructive paper (which is published in full in our present issue) from this point of view. In the discussion which followed, the reality and importance of these cases were hardly called into question by any of the medical superintendents or medical officers of health who took part in it. Some doubt, however, is thrown upon the frequency of occurrence of return cases by a recent report of a sub-committee of managers of the Metropolitan Asylums Board. This sub-committee applied to the several medical officers of health of the metropolitan district for information of outbreaks of illness in households after the return home of recovered patients from the Board's fever hospitals, and report that only 165 cases of alleged infection are recorded, and in many of these there is probably no connexion of the occurrence with the return of the patient. Of these 165 cases 49 occurred in 1895, 10 from 1890 to 1891, "leaving 106 cases for the two years 1893 and 1894, during which time 30,227 patients who had been suffering from scarlet fever and diphtheria were discharged from the hospitals of the Board"—giving one alleged case of infection for every 285 discharges. From the small proportion thus shown the sub-committee conclude "that there is no evidence to show that any appreciable number of patients admitted to the Board's hospitals during the past two years have contracted infection from patients previously discharged therefrom." This conclusion is reassuring, but the figures upon which it is based should be received with some caution. It will be noticed that the 30,227 discharges were cases of diphtheria as well as of scarlet fever. Now return cases of diphtheria have not been heard of in at all the same proportion as similar cases of scarlet fever, and the number of them actually reported to the sub-committee, although not stated, is probably insignificant. Obviously return cases should have been compared with discharges for each disease separately; any proportion obtained by combining the two is misleading. Again, as regards the 165 cases reported, the appendix to the report shows that these are communicated by only twenty-six out of fifty-two metropolitan medical officers of health. For the other twenty-six some, like the medical officer of health of Bethnal-green, report that a number of cases have occurred, but do not supply details; others reply that they have no evidence bearing on the subject, and where such replies as these have been received for a district the sub-committee appear to have reckoned that district as having had no return cases at all. Further, no less than 93 of the 165 cases are reported from five sanitary districts alone, and while the sub-committee appear to find an explanation of this circumstance in faulty methods of disinfection practised in some of these areas, it is difficult to discover their grounds for this conclusion when the details given in the appendix are studied. On the other hand, the way in which the

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figures have been compiled gives a ready explanation of this anomalous incidence. That the frequency of return cases of infectious illness may have been somewhat exaggerated is not unlikely, and that the experience of the metropolis in regard to them would be of the greatest value is certain. The subject well deserves further investigation by the Metropolitan Asylums Board, who might entrust it with advantage to inquirers possessed of some acquaintance with statistical methods.

A "DOCTORS' WAR."

WE have despatched a special correspondent to the seat of the war, as it is clear that the success of our military operations may turn largely upon the health of the expeditionary force. That our representative himself thinks so will be gathered from a short article, which appears from his pen on page 1314, wherein he draws upon a large experience of Ashanti to give a few details as to the medical, sanitary, and hygienic precautions that should be taken by Europeans upon the West Coast of Africa.

A JUDGE ON EPIDEMIC CRIME.

THERE is no doubt that Mr. Justice Wills entered upon the Hampshire autumn assizes with feelings of the most unmitigated disgust. Nearly one-third of the cases, he said, were of "a disgusting and filthy nature." The county at the present time, he said, seemed to be infected with a sort of epidemic of indecency, and during his long experience he had never been on any circuit where there had been such an outbreak as now presented itself, except, perhaps—and the statement was of particular interest—on the first circuit after the discussion of the articles in the papers which led to the passing of the Criminal Law Amendment Act. The outbreak, he thought, might be in some measure due to the events which had lately occurred in London, and probably when they had been forgotten the epidemic might die away, and he hoped this would be the case. Apparently he could not find strong enough phrases in which to refer to one case—a most gross charge against a county magistrate and a policeman. In this case his lordship had a long correspondence to read, which he says included letters "perfectly incomparable in their depth of degradation," showing "an amount of degradation and shame which was really inconceivable." He selected the two worst letters—both written on a Sunday and intermixed with pious phrases—which he said he hoped would suffice for the jury. There is no doubt that there is a great deal of truth in Mr. Justice Wills's remarks.

THE "NEUROSES OF CULTURE" AND THEIR REMEDIES.

WHAT Carlyle calls "diseased developments" are all too certainly caused by unhealthy literature, resorted to, as it is apt to be, for vicious excitement or sensational "distraction." We lately commented on the enactment of certain Swiss cantons by which reports of suicide are excluded from their press, these reports having been found to have a contagious effect on individuals already disposed to self-destruction. The recent charge of one of our own judges in delivering sentence on two juvenile murderers pointed so far in the same direction as to convey a strongly worded *caveat* against indulgence in the literature of crime. There are, moreover, other forms of mental deterioration induced by printed matter, less deadly, indeed, but tending to disastrous results, some of which have not inaptly been described as "neuroses of culture." This was incidentally illustrated the other day in an exceedingly vivacious and instructive lecture by Mr. Frederick Harrison on "The Choice of Books"—a subject of increasing importance, as he demonstrated, to the busy man. "Evil communications," indeed, may exert their power to "corrupt" in literature as well as in life, and the lecturer was but confirming the remark of educationists like Dr. Arnold when he referred to the sinister effect of such ill-chosen company as often finds its way into the home circle from the lending library. Idle reading is the fruitful source of idle thinking, which culminates in incapacity for thought, from which a further step in the intellectual down-grade is inability to sustain attention or even collapse of the reasoning power. "Fatty degeneration of the brain" is the definition Mr. Harrison draws from the language of pathology for the commonest results of idle reading, and there is no doubt a condition of the mental instrument which corresponds to the pathological state referred to. Mr. Harrison seeks a counter agent to the idle reading he deprecates in a sound choice of books, and a steady, intelligent mastery of their contents. The suggestion is a good one, but a better seems to us practicable. Let the busy man cultivate, or even create for himself, a subject of interest apart from that of his daily employment—a subject, be it scientific, or mechanical, or artistic, to which he can turn in his leisure hours for mental distraction and exhilaration. Let him pursue this systematically with or without the aid of others also interested in the subject, and it is astonishing how quickly his familiarity with it makes it a source of solace and relief amid other cares. Biography teems with instances of men who, as "busy" as Mr. Harrison's busiest man, have in this way found time to enrich the stores of science, of literature, of art—of knowledge, indeed, in every department. It is one of the mental occupations which are "twice blest," primarily as regards the individual, secondarily as regards the outside world. Resorted to in youth, it becomes the healthy distraction of middle life and old age, till it sometimes brings to him who practises it a reward in the present and a recognition from posterity which the formal business of his life may have failed to win.

THE PECULIAR PEOPLE AND THEIR TENETS.

AN interesting case was heard by Mr. Justice Hawkins at the Essex Assizes held at Chelmsford last week. William Cable, a member of the Peculiar People, residing at Rayleigh, was charged by the National Society for the Prevention of Cruelty to Children with having wilfully neglected certain of his children in a manner likely to cause them unnecessary suffering or injury to their health. It appears that in June and July last diphtheria was prevalent at Rayleigh, and, Cable's family being attacked, four of his children died within six weeks. One of the religious tenets of this sect being that medical advice should not be sought in case of illness, no medical man was called in to attend the patients. The question for the jury to decide was whether this was wilful neglect causing unnecessary suffering to the children. The facts were not disputed, and the prosecuting counsel acknowledged that Cable did not intend to act cruelly to his children and that he bore the reputation of being a most humane man. In addressing the jury the judge said that practically everybody had agreed to give the defendant the character of a man of great respectability, great humanity, and one extremely fond of his home and children. But if the circumstances of the case were such as would have made it imperative for the defendant to call in a medical man if he had not been a member of the Peculiar sect, then the fact of his being a member of that sect would not protect him from the obligation to do that which other persons would be obliged to do. But the jury would have to consider the case without taking into consideration the views of the Peculiar People; they must deal with it as if the defendant were an ordinary labourer. The jury, after a very short deliberation, acquitted the prisoner of wilful neglect, a verdict in which the learned judge entirely concurred. The result of this trial will be looked forward to with great interest by the coroners and

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medical officers of health throughout the county, since this peculiar tenet is the cause of numerous otherwise unnecessary inquests, and on many occasions infectious diseases have been spread owing to persons of this sect who had charge of sufferers being ignorant as to the true nature of the illness. Diphtheria is regarded as simple sore-throat or mumps, scarlet fever as a "bilious attack" or German measles, and the medical officer to the Maldon rural district council, during a recent epidemic of typhoid fever, found one of these "people" suffering from this disease complicated with pneumonia, who was said to have "one of his usual attacks of bronchitis." As it is usually impossible to prove that the true nature of the disease is known to the sufferer or those in charge of him, prosecutions under the Notification of Infectious Diseases Act are futile, and such cases as the above may escape detection and serve as foci for epidemics. If it be legal to allow people to die without obtaining medical treatment, such a death should at least be illegal unless a medical man has been called in to ascertain during life the true nature of the disease. The Notification of Infectious Diseases Act undoubtedly requires amending, and a penalty should follow for neglect of notification when it can be proved that reasonable means have not been taken to ascertain the true nature of the disease. The Peculiar People are, no doubt, in their way a simple and God-fearing people, but this should be no excuse for permitting them to spread infectious diseases amongst the general community.

MR. HERBERT SPENCER ON LORD SALISBURY.

IN the *Nineteenth Century* for November Mr. Herbert Spencer takes Lord Salisbury to task for his address as President of the British Association for 1894. In that address, as our readers will remember, Lord Salisbury criticised unfavourably the doctrine of evolution, and especially the theory of natural selection. Mr. Spencer thinks the Premier confuses these two ideas and fails to recognise that even if the influence of natural selection could be disproved the doctrine of organic evolution would remain standing on other evidence. "Whether it were shown that natural selection is inoperative, or whether it were shown that though a partial cause it is inadequate to explain all the facts (the inheritance of functionally wrought modifications being a coöperative cause), or whether it were shown that no cause hitherto alleged is adequate—the general doctrine that organisms of all kinds have arisen by the continual superposing of modifications upon modifications would maintain its place, though it would not be fortified so strongly. Lord Salisbury, however, in common with the immense majority of men, assumes that the hypothesis of organic evolution must stand or fall with its alleged causal agencies." In reply to Lord Salisbury's objection that "no man or succession of men have ever observed the whole process [i.e., of natural selection] in any single case, and certainly no man has recorded the observation," Mr. Spencer points out that the alternative hypothesis—viz., special creation—is equally destitute of direct proof. "Supposing the two hypotheses—special creation and evolution by natural selection—are to be tested by the directly observed facts assigned in their support, then, if the hypothesis of evolution by natural selection is to be rejected because there are no directly observed facts which prove it, the hypothesis of special creation must be rejected for the same reason. Nobody has seen a species evolved and nobody has seen a species created." The fact is, that when once we have clearly realised what is meant by the theory of the evolution of species, the demand that anyone should have directly observed the process is an absurdity. Such an observation is *ex hypothesi* impossible. The case between the two rival hypotheses of evolution and special creation is, however, very different, according to Mr. Spencer, when we look at the indirect evidence. The more the earth's strata are examined the more they testify that organic forms have arisen by modifications upon modifications. It has been shown that the bird type is derived by intermediate forms from the reptile type. The four-toed Orohippus of the eocene strata leads by easily recognised gradations of Mesohippus, Miohippus, Protohippus, and Pliohippus to the modern horse. Fossils reveal a general law of great importance—viz., that early types of creatures in any class display the commonest or most general traits of structure, and that later types of the same class are more specialised. The facts of classification favour the evolutionary hypothesis. The relations of classes, sub-classes, cohorts, orders, genera, species, and varieties are intelligible only on the assumption of a common descent. The facts of the distribution of animals in space point in the same direction. In various regions there are alliances between the present fauna and the past fauna found fossil; though different, they are near akin. "The fact that in Australia, long cut off from the other continents, all the indigenous mammals are of the implacental type and that the fossil mammals found there are also exclusively implacental, illustrates these connexions very closely." Finally, there are the wonderful confirmations of evolution afforded by embryology. "Von Baer found that in its earliest stage every organism has the greatest number of characters in common with all other organisms in their earliest stages; that at a stage somewhat later its structure is like the structures displayed at corresponding phases by a less extensive multitude of organisms; that at each subsequent stage traits are acquired which successively distinguish the developing embryo from groups of embryos that it previously resembled, thus step by step diminishing the class of embryos which it still resembles; and that thus the class of similar forms is finally narrowed to the species of which it is a member." It is for opponents of evolution to suggest any explanation of these remarkable facts comparable in simplicity and probability to the doctrine of evolution. Mr. Spencer protests against Lord Salisbury's apparent assumption that evolution is concerned only with animals and plants, remarking that "a doctrine which alleges evolution for the animate and assumes creation of the inanimate world is absurd. Evolution, if alleged at all, must be alleged as coextensive with all existence, save that which is undergoing the reverse process of dissolution." The doctrine of evolution "has for its subject-matter the entire cosmic process, from nebular condensation down to the development of picture records into written language, or the formation of local dialects, and its general result is to show that all the minor transformations in their infinite varieties are parts of one vast transformation, and display throughout the same law and cause—that the infinite and the eternal energy has manifested itself everywhere and always in modes unlike in results but ever like in principle."

DEFECTIVE HEARING IN SCHOOL CHILDREN.

DR. WEHMER, in an admirable work on school hygiene recently published, expresses his conviction that while defects of vision among children in schools have attracted much attention of late, those of hearing have not received nearly so much as they deserve. Weil found 35 per cent. of the pupils in the schools in Stuttgart, and Moure 17 per cent. of those at Bordeaux more or less deaf in one or both ears. The degree of deafness is very easily determined by requiring the child to repeat words uttered at a measured distance in a quiet room, and unilateral deafness by closing one or other ear with the finger. Much will, of course, depend on the clearness of articulation

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and the pitch, loudness, and volume of the speaker's voice; but Dr. Wehmer considers that words spoken in a man's ordinary conversational tone should be recognised without difficulty by anyone whose hearing is normal at a distance of fifteen to twenty metres—say, sixty feet. Any child whose hearing is defective or doubtful should be examined by a medical expert as to the state, not only of the ears, but also of the tonsils and naso-pharynx. Those suffering from chronic catarrhs or adenoid hypertrophies of the naso-pharynx may be recognised by their staring stupidly at the teacher while others follow the instruction intelligently, and their power of hearing varies with the weather. Their infirmity is often mistaken for mental deficiency or culpable inattention; and while diseases of the ear itself if neglected may lead to permanent and total deafness, or even to fatal meningitis, those of the naso-pharynx render the child specially susceptible to the infection of diphtheria, and in the opinion of some authorities tend to produce the enfeebled intellect which at first they only simulate. The sooner such cases are submitted to surgical treatment the better for the children, both physically and mentally. Such children are a drag on the work of a school, and even if the ultimate consequences to themselves are less grave than those we have mentioned, they are heavily handicapped through life, growing up into comparatively useless and unsuccessful members of society. The matter is one of really national importance as regards the future of the rising generation, and furnishes an argument in favour of the appointment by the school boards of medical inspectors in their several districts, men who should be competent to detect errors of accommodation and other defects of vision and to use the laryngoscope and rhinoscope, and familiar with the early diagnosis of infectious diseases and the essentials of practical sanitation, as well as with the methods of anthropometry. It is scarcely possible to overrate the scientific and social results that might be achieved by such systematic observations.

THE WATER-SUPPLY OF BRIGHTON.

FOR years past Brighton has held its own amongst the other large towns in the United Kingdom, and it will not be for the want of attention on the part of the corporation if the town does not continue to hold such a satisfactory position in the future. The *raison d'être* is, it is well known, to be found in its excellent sanitation and water-supplies. It is with regard to the latter that we wish to call attention at the present moment. By leaps and bounds Brighton is growing into a town of enormous size, and at no distant date another source of water-supply will be needed for it and the district within the corporation limits. Very wisely, the corporation have not waited till the want of an additional supply stares them in the face, they having on Thursday, the 7th inst., agreed to purchase the Shoreham and District Waterworks Company's undertaking. The source of this company's supply is a very large spring within a stone's-throw of the town of Shoreham, which is five miles only westward of Brighton. Simple everyday experiments made by Dr. Fuller of Shoreham led to the formation of the company in the year 1870. After a few years Dr. Fuller became chairman of the directors, which office he holds at the present time. For the first five years no dividend was paid at all, but from 1876 it has been a commercial success. In 1887 the full statutory dividend of 10 per cent. was paid, and this has been continued ever since, a feat due in a great measure to the admirable tact displayed by Dr. Fuller and his co-directors. The mere fact that a great town like Brighton has acquired the undertaking is more than sufficient proof that the water is of the very best and the supply abundant. Bearing in mind statements made in the House of Commons in 1878, it is a somewhat strange coincidence that Brighton has now acquired the Shoreham spring as a reserve source of supply. A private company applied for statutory powers to supply a portion of the Shoreham company's district. The Shoreham company naturally opposed this, and won the day. Dr. Fuller was a witness before the Select Committee on Private Bills, and in the course of a lengthy cross-examination by the counsel for the private company Dr. Fuller remarked that the spring was sufficient to supply the whole of Brighton. Questioned as to the abundance of the supply, the answers of Dr. Fuller led counsel to ask: "Do you draw your water from the sea, then?" "We draw our water from something which is equivalent to the sea," was Dr. Fuller's reply, "a large underground sea of fresh water." An eminent engineer at that time, also a witness for the Shoreham company, after examining the spring, said, "Well, there's enough here to supply Brighton." The total sum the council have agreed to pay for the undertaking is £56,700, and the directors have consented to receive this amount in Brighton Corporation Stock amounting to £47,250, representing at a quotation of 120 per cent. a cash equivalent of £56,700. In other words, the shareholders will receive exactly the same from the Corporation Stock as they are receiving now from the company. The cost to Brighton ratepayers will be nothing, inasmuch as the income of the company will pay the interest upon the purchase money. With its existing sources, added to which is the spring at Shoreham, Brighton should have no fear as regards its water-supply for years to come.

THE DISINFECTION OF PUBLIC CONVEYANCES

A CASE which is not without interest to the medical profession as a whole was heard at Westminster before Mr. Shell in the early part of this week. A medical man was summoned by the driver of a hansom cab for the recovery of £1 for loss consequent upon his vehicle having to undergo disinfection in accordance with the provisions of the Public Health Act. The facts in connexion with the case appear to be as follows. A child was taken by the mother to the Chelsea and Brompton Dispensary, Sloane-square, and was seen by Mr. J. J. Marsh, who diagnosed diphtheria and filled in a notification form to that effect, at the same time telling the mother to take the child home at once and to leave the notification form at the Chelsea town hall on the way. At the woman's request Mr. Marsh instructed the porter of the institution to call a cab, and, without being informed from what the child was suffering, the cabman was told by the porter to drive his fare to the town-hall. Here the party encountered the officials of the Chelsea vestry, who forthwith, with commendable vigilance, took the number of the cab and instructed the cabman to return there after depositing his fare, inasmuch as the child was suffering from diphtheria and the cab would have to be detained for disinfection. It must be related here that a statement to the effect that the mother tendered the cabman his fare was not challenged. As a consequence of the detention of the cab the driver lost two days' work, and he elected to take proceedings against Mr. Marsh for compensation. Why he did this is not quite clear, save that he appears to have considered the gentleman in question best able to bear the brunt of the expense. Mr. Marsh fought the action on purely public grounds, submitting that it would be a serious thing for medical men generally if a kind action in having a cab called for a patient should render them liable to such charges as this. The magistrate, having heard the case, was naturally satisfied that Mr. Marsh was not liable, but out of pity for the cabman intimated that possibly the case might be one for the court to relieve; and it should be stated that Mr. Marsh, having obtained the decision, generously offered to compensate the cabman. Doubtless, therefore, the driver

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will not suffer, but it appears to us that Section 70 of the Public Health (London) Act might have something to say in the matter, and it is on the whole to be regretted that either an ambulance was not sent for or the woman was not told the serious penalties which she incurred by riding with an infected child in a public conveyance. We wonder what conveyance was used on the journey to the dispensary. The difficulty in cases such as these is as to where an infected person is to be housed prior to the arrival of an ambulance.

ACCIDENT INSURANCE FOR WOMEN.

So long as woman led the comparatively inactive life which until recent years custom imposed upon her, the insurance against accident of females, except in special or rare cases, was not called for to any extent. To neglect the precaution was venial. But in these days of feminine activity, when the sight of a woman alighting from a moving omnibus or riding *à l'homme* along the crowded thoroughfares on a bicycle is common, it is not surprising that the National Accident Insurance Company should have added to their tables one relating to the accidents likely to befall the gentle sex. This table, which includes the zymotic diseases, provides for accidents resulting in death, permanent or temporary total disablement, and the loss of the various members of the body, a special table being provided for hazardous occupations. Time was when woman was content to be the tutelar deity of the household, but *nous avons changé tout cela*, the female spirit yearns for equality with the male; is ever, indeed, striving to eclipse him, and not without success in some directions. Under these circumstances women stand the same risks of accident as men, and their addition to the tables of an insurance company is a manifestation of the spirit of the times.

ADULTERATION OF DRUGS.

THREE druggists have been charged at the instance of the Islington Vestry, before Mr. Bros of the North London Police-court with selling unguentum hydrargyri not containing the full amount of mercury. The deficiency was in one case 66·2 per cent., in another 11·3 per cent., and in the third 13·3 per cent. In the first case, where the deficiency was so great, the druggist defended himself curiously. He said druggists were to use their discretion—that was the reason they pass examinations. Unguentum hydrargyri, according to him, is only used as a basis for other articles. Druggists as a rule sell the weak ointment, which in the older pharmacopœias was called unguentum hydrargyri mitius. In the third case the ointment supplied was a mixture composed partly of some on hand and partly of some got from a neighbour. This neighbour was in turn asked for the same ointment, and had to apply to a third neighbour, who it was said had procured it from a wholesale druggist. Mr. Harris, the medical officer of health, would not acknowledge that the ointment was but rarely supplied by druggists. He said surgeons frequently employed unguentum hydrargyri for adults where mercury could not be given internally. One of the defendants had learnt from Mr. Martindale that in 25,000 prescriptions it had been mentioned only thirteen times in the United Kingdom and thirty times in the colonies. In the first and the third cases Mr. Bros considered the druggists had given an ointment with less than the proper amount of mercury, and required them to pay the costs, 12*s*. The second druggist, or rather his assistant, had sent out for the preparation, and that was all he could do. The ointment was not of full strength, but it was no fault of his. Perhaps the magistrate was right in letting the druggists off easily. The latter do not seem to have acted dishonestly. The theory of discretion is not applicable here. The druggist should have supplied what was prescribed. There is but one unguentum hydrargyri in the Pharmacopœia, and a medical man's prescription covered the druggist's responsibility. In the other two instances the ointment was not of the full strength, and it is unsatisfactory that the real culprit has not been ascertained. Possibly the wholesale druggist was to blame. On the face of it he was so. But nothing is proved. It would be well for the sanitary authorities to give a little attention to their preparations as well as to those of retail druggists.

COLSTON DAY IN BRISTOL.

ON Nov. 13th the usual Colston anniversary was observed in Bristol. The celebration this year was of more than common interest owing to a statue of Colston being unveiled by the Mayor. The Colston Hall, the Colston Hospital Schools, the window in the Cathedral, and now the statue all serve to keep the memory of Bristol's greatest philanthropist before the citizens. In the evening the members of the various Colston societies held their annual dinner; the collection made afterwards for the various charities amounted to £3375, being in excess of the sum received last year.

SANITATION IN SUSSEX.

ON Oct. 22nd the quarterly meeting of the sanitary committee of the East Sussex district council was held, when Dr. Leonard Wilde, D.P.H., &c., was appointed consulting medical officer to the committee at a salary of £105 per annum and travelling expenses. The appointment is for one year. At a meeting of the council held on Nov. 12th the decision of the committee was confirmed. Mr. Henriques referred to the assistance which Mr. Edgar Crookshank had afforded the committee in their selection of a candidate. We are glad to see this recognition of Mr. Crookshank's help, more especially as it affords one more instance of how valuable it is for deliberative and executive bodies concerned with the well-being of the people to number a medical man among their members.

INFANTILE PALSIES.

IN a recent number of the *Neurologisches Centralblatt* there appeared an abstract of an interesting paper by Dr. Muratoff, the original of which was published in the *Deutsche Zeitschrift für Nervenheilkunde*. Six cases of diplegia in children were observed, in two of which death took place. In one of the two the clinical condition comprised idiocy, weakness of all four extremities, and spastic and athetoid movements, with contracture and atrophy of the right upper extremity. In the brain there was found after death widespread destruction of the central convolutions and the temporal region, while the frontal and occipital regions remained unaffected. In the cervical region of the cord there was atrophy of the cells of the anterior horns, especially on the right side, and there was descending degeneration in the right pyramidal tract in the dorsal and lumbar cord. The second case was that of a microcephalic idiot with complete paralysis of all four limbs. At the necropsy there was found atrophy of both central convolutions and of the paracentral lobule on both sides, and microscopical examination of these parts showed complete disappearance of the cells. There was also in the spinal cord a simple atrophy of the pyramidal tracts without degenerative changes. Whilst in the first case, besides the symptoms of paralysis, there was also evidence of gross irritation, due no doubt to the destructive inflammatory process, in the second case there was an obsolete inflammatory process, with consequent atrophy of the central convolutions and simple atrophy of the conducting fibres, the whole to be regarded as probably the result of a developmental

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defect. Dr. Muratoff concludes that (1) in spite of the similarity of clinical appearances the various forms of diplegia in children may be the result of different pathological processes; (2) the congenital form is the result of meningeal hæmorrhage and consequent atrophy of the central convulsions (the secondary changes in the pyramidal tracts are probably simple, not inflammatory, but depending upon interference with development); (3) in acquired forms the secondary degeneration is probably the result of a destructive lesion; and (4) a sub-division of the various cases of diplegia is necessary, such a classification being required as will take account of physiological and pathological changes.

THE ORIGIN OF HOSPITALS.

A CORRESPONDENT writes:—"Lately in a local paper a discussion has been raised as to the date of the origin of hospitals, and correspondents have settled the point to their own satisfaction in more ways than one. As a matter of fact the point is involved in obscurity. It is doubtful whether before the Christian era there were hospitals such as existed after. The evidence in favour of the existence of establishments for the sick amongst the Greeks is small, although Suidas mentions νοσοκομεῖον (hospital); but as the word itself does not appear until the fourth century A.D. it does not add much weight to the contention that they were in vogue before Christianity, and it seems likely that the institutions before then more partook of the nature of convalescent homes. The Romans had a valetudinarium for sick soldiers, and there is no room for doubt that the Romans possessed a medical staff, as evidenced by monuments found in Britain. But, as a matter of fact, one of the first hospitals of which anything is really known was that founded by Gallus in Cæsarea 370–80 A.D., and about the same time one was built at Rome by Fabiola. The origin of hospitals as they are now is certainly monastic. As the monks were the pioneers and patrons of arts and sciences, so they were in the founding of institutions for the sick. Every monastery had its infirmary, as every monastery had its school. The first distinct record of a hospital in England is mentioned in the life of Lanfranc, Archbishop of Canterbury, who in 1080 founded one, a part of which was set apart for leprosy and the remainder for general diseases. The hospitals remained in the hands of the monks until the Reformation, when they went the way of the rest of the monastic establishments and passed for the most part into the hands of laymen, their revenues being taken away. It may be said that several of the existing London hospitals owe their foundation to the zeal of the monks, notably St. Bartholomew's and St. Thomas's."

THE PENALTY OF INSANITATION.

A FARMER named Henry Winstanley of Ravenhead Farm, near St. Helens, was summoned to the St. Helens Police-court on Nov. 12th for failing to furnish the authorities with the names and addresses of all his customers, as infectious disease had been attributed to milk supplied by him. The town clerk prosecuted, and the defendant was represented by his solicitor. This summons was withdrawn, as the defendant in the meantime had supplied the list requested; but there was another summons charging him with keeping swine in a cowshed used by him for keeping cows in. The medical officer of health had visited the premises and found pigs and cows kept in the same shippon, contrary to the provisions of the Milkshops Order. The premises generally were in a filthy condition, and that, coupled with the notifications, made it clear that in all probability typhoid fever was being spread by the defendant. The town clerk stated that under ordinary circumstances he should have asked the bench to mark their sense of the very serious character of the offence by imposing the maximum penalty, but since the previous Friday a much heavier penalty had fallen upon the man than the magistrates could have inflicted—he himself was suffering from typhoid fever. The bench, owing to the circumstances, allowed the summons to be withdrawn, the defendant's solicitor undertaking on his behalf that the offences should not be repeated. It is useless for us to enlarge on the enormity of the offences here charged, because it has been proved over and over again that the milk-supply is a common source of the diffusion of typhoid fever and scarlet fever. Cases similar to these do, however, show how necessary it is for sanitary authorities to jealously watch the supply of milk to towns and enforce by all the means in their power the law which enables them to punish those who wilfully or carelessly transgress the sanitary laws.

THE BLOOD IN CHRONIC DISEASES OF THE STOMACH.

AMONGST the several diagnostic criteria serving to differentiate chronic ulcer of the stomach from cancer of that viscus may perhaps be reckoned the results of examination of the blood, although there are cases of the former class which apparently exhibit as profound a degree of anæmic cachexia as does malignant disease. Dr. Blindermann[1] is, however, convinced that hæmatological examination suffices to establish a difference, and publishes the results of a certain number of observations he has made in each class of cases. He concludes that it is possible by this means to differentiate between cancer and other chronic diseases of the stomach, including chronic catarrh, ulcer, and gastrectasis, although he admits that in the case of ulcer some exceptions do occur. One main difference is that in the case of cancer the hæmoglobin diminishes progressively, whereas in ulcer the rapid loss in the amount ensuing on hæmatemesis is soon regained. The exceptions to this rule are to be found in those cases of gastric ulcer in which, as Rosenstein has shown, pernicious anæmia develops, and where there also occurs diminution in the number of red corpuscles as well as the appearance of poikilocytes, microcytes, and macrocytes. Chronic gastric catarrhs, with marked dilatation, cause no manifest change in the composition of the blood.

EXAMINATIONS IN ANATOMY.

PROFESSOR FAWCETT of University College, Bristol, has drawn attention in our issues of Oct. 19th and to-day to the uncertain results of the first and second examinations in anatomy at the Conjoint Examining Board in England. He reiterates the strictures which we and others have so frequently and so fruitlessly made in regard to these examinations. *Viva-voce* examinations can only be fairly carried out when the examiners know the result of the written examination and have a fair amount of time for testing the knowledge of the candidate. An absolute time limit of ten minutes is absurd and often inflicts a grievous injustice on a student who would have passed if more thoroughly examined. It is also detrimental to the public interest, for often a candidate with a plausible manner passes, when a little further examination would show that his knowledge was very superficial and insufficient for the daily work of the profession. In fact, in setting only a small number of questions and in limiting the *viva-voce*, regard is given to the convenience of the examiners rather than to fair play for the candidate. The only excuse for the system of the Conjoint Board is that it is found by experience that roughly speaking, the results are in accordance

[1] Wiener Medicinische Blätter, 1895, No. 44.

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with the knowledge of the candidates. No system can be so perfect as to admit of no mistakes, but one which would almost seem to be deliberately devised for making them should be altered. At the University of London the examination in anatomy is much more severe and thorough, but is much fairer to the student. More questions are set, and the *vivâ-voce* is not limited. The examiners have before them the marks of each candidate and can give a longer or a shorter time to his *vivâ-voce* as they may deem necessary. They can thus as readily examine six students in an hour as if they were confined to a ten minutes' time limit for everyone. Professor Fawcett urges an alteration in the examination in elementary anatomy. We agree with him that as now conducted it is useless and proves a hindrance rather than an assistance to the student. The amount of knowledge which is required is insufficient to occupy the student during his first winter session, and in consequence he too frequently wastes much of his time. We should prefer the abolition of this examination to its improvement; but if it be continued it requires much alteration, and on the lines suggested by Professor Fawcett. We understand that this abolition is contemplated by the Royal Colleges, and if this is decided on the subjects of study during the first year will require further alteration.

THE FRIEND OF HUMANITY—NEW VERSION.

WE have received from a correspondent to whom we give our thanks a copy of a lithographed letter sent out to publishers, signed by Edward Curtice, Managing Director of the Newspaper Exchange, &c., of which we append a copy:—

To the Editor of ————.

SIR,—Dr. Allinson, the well-known Hygienic Physician, is desirous of spreading the knowledge of the laws of health and his books. He proposes that you put in your columns each issue (weekly) *the enclosed advertisement*. In return for this he will supply you with *a popular medical article every week*. We need not enlarge on the benefits your paper will receive from this regular contribution from Dr. Allinson's well-known pen. You will find it will make old readers cling to you and also bring in a new set. The people are thirsting for this knowledge. It is well known to the Dr. that one paper—to which he has been attached for ten years—has at least 10,000 who take the paper for his articles alone. The knowledge imparted is in popular language and understood by ordinary readers, all medical terms being rendered into plain English.

We are entering into this arrangement with newspapers. ONE *in each district*. We therefore suggest you should secure our offer at once. It is only made by the Dr. because he wishes to educate the people and to save unnecessary suffering and premature deaths.

If agreeable, please sign the accompanying form and return it to us and oblige,

Yours truly, on behalf of the Union.
EDWARD CURTICE, Managing Director.

This is the "form" referred to:—

To the Managing Director of the
Newspaper Exchange and Advertisement Clearing House.
(Mr. Edward Curtice.) 359, Strand, London, W.C.

SIR,—On the undertaking you have given, the undersigned agree to insert (weekly) the advertisement of Dr. Allinson's books free of charge—the understanding being that the Doctor undertakes to supply a popular medical article for insertion in the ..... weekly. A fortnight's notice, in writing, on either side, will bring this arrangement to a close if desired.

Name .....
Title and address of newspaper .....
.....
Date ..... 189 . .....

"Dr." Allinson, with the candour and modesty so characteristic of true genius, does not attempt to disguise the commercial side of his nature. He is "desirous of spreading the knowledge of the laws of health *and his books*" (these italics are ours). We observe, though, that further on the agent says the offer "is only made by the doctor because he wishes to ..... save unnecessary suffering and premature deaths." The picture of the old readers clinging to the editor of the paper selected is eminently touching, and calculated to appeal to that large class whose ideas of sentiment and religion centre in cheap German lithographs and the pictures of the late John Martin, but it would be somewhat embarrassing. Fancy the editor of the "paper well known to the Dr." with 10,000 old readers clinging to him. It would make an admirable statuary group as a pendant to the Laocoon. "All medical terms are rendered into plain English." This is as well, for even the educated medical man would be puzzled by such terms as "Feton," "Fedicull," and "Peorlagis." "Medical Essays" (the contents bill of one volume of which we append) is, it will be seen, a comprehensive work. There are five volumes, and one volume costs 1*s.* 2*d.* It is to the advertisement of the five volumes that the lithographed letter refers:

MEDICAL ESSAYS Vol. IV.
For Postal Order for 1s. 2d.
It contains Articles on Hardening, Work and Over-work, Sugar and its Abuse, Milk as Food, The Tomato, Poultices, Quinine, Against the Knife, Arsenical Poisoning, Tonics, Against Stimulants in Disease, About Swallowing Pins and other Articles, Also Cure of Sunstroke, Dog Bites, Pains in the Back, Fedicull or Lice, Chickenpox, Synovitis or Inflammation of the Joints, Tonsilitis or Quinsy, Herpes (Tetter or Shingles), Erysipelas, Ulcer of the Stomach, Epidemic Influenza, Sciatica, Peorlagis or English Leprosy, &c.

The correspondent who sends us these interesting documents says: "It will show you how things are done." It does.

THE DANGERS OF SERVICE SUPPLIES.

THE past twelve months, as we have more than once pointed out,[1] have been somewhat remarkable in furnishing practical evidence of the unpleasant and serious consequences which may and do arise from defects in connexion with all three public service supplies—gas, water, and electricity. The risks of accident from water-supply are of course totally different from those of gas and electricity. True, a leakage of water may be sufficiently large to cause damage to property, but it is seldom likely to lead to personal injury. On the other hand, an escape of gas may be undetected for some time; and it only requires, as was exemplified in the street explosions which happened in the electric main boxes about this time last year, a discharge of electricity—i.e., the production of a spark—to determine an explosion. At an inquiry into the causes of these explosions the gas officials said they were due to the overheating of the electric mains, which produced inflammable gas from the insulating material and afterwards an explosion. The electrical companies declared it to be due to defects in the gas mains. There was no question of electricity having any share in the disastrous gas explosion which occurred in the Strand a few weeks ago. In this case it would appear that the water service was the seat of the mischief. From the evidence of expert witnesses at the inquest on the body of fireman Sprague last Monday it seems clear that the soil under the gas main had been washed away by a leakage of water, so that the gas main after a time formed a bridge over a gap—a condition of things which must have exposed it to severe strain, especially at the joints. The jury could not attribute blame or negligence to any person, and their verdict was "Accidental death." Service supplies are a necessity of modern existence which are bound to involve risks of a degree in accordance with the nature of the thing supplied. The origin of the mischief in the instances just quoted was the same, and may be summed up in one word—leakage. It is obviously desirable, therefore, that every conceivable precaution should be made to obviate such defects, but we imagine that those we trust for a supply of water, electricity, or gas would, in their own interests, take every precaution to avoid leakage and to prevent waste.

EXCREMENT CONSERVATION AND ENTERIC FEVER IN SHEFFIELD.

Dr. HARVEY LITTLEJOHN, the medical officer of health of Sheffield, has recently presented to the health committee

[1] THE LANCET, Nov. 2nd, 1895.

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of the City Council a special report upon the prevalence of enteric fever in the district. Apparently there has been some misunderstanding upon the subject, and the committee have felt it desirable to publish Dr. Littlejohn's report. Enteric fever, it is pointed out, is unfortunately always with the people of Sheffield, and since the adoption of notification in November, 1890, no month has passed without some cases being reported. Dr. Littlejohn points out that this disease has its autumnal rise in Sheffield as elsewhere, and that this rise may in some cases be early in the autumn, in others late; and that, therefore, a rise such as is at present being experienced is not altogether an unexpected event. As an illustration of the point in question the notification returns for each month of the last five years are published in the report, the total annual figures being as follows: 354, 197, 452, 347, and 382 (up to Nov. 14th, 1895). Having thus explained to the public some points in the natural history of enteric fever, Dr. Littlejohn rightly observes that the fact of this autumnal prevalence is no argument against every endeavour being made to limit the spread of the disease in Sheffield, and he then passes on to consider the causes of its incidence on the district. Milk and water as factors in the Sheffield causation are exonerated, and Dr. Littlejohn is only able to offer one explanation of the prevalence of the disease, an explanation which he has frequently urged before—i.e., the present system of refuse and excrement disposal. The offensive and insanitary condition of the privy-middens, which fosters the accumulation of filth and tends to the pollution of the soil, is, Dr. Littlejohn considers, the chief factor in the spread of enteric fever in Sheffield. In his annual report for 1893 he went fully into the question of the connexion between privy-middens and enteric fever, and he showed the frequency with which cases recurred in certain parts of the town and also in yards with privy-middens used in common, and he now states that subsequent experience has confirmed the conclusion he then formed. The risk that these privy-middens involves form, it is pointed out, a strong additional reason for the removal of cases of enteric fever to hospital, and in this connexion reference is made to the increased chances of recovery which patients isolated in hospital possess as compared with those treated at home. We trust that the Sheffield city council will not fail to take action on Dr. Littlejohn's report.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund will be held at the Mansion House on Monday, 25th inst., at 3 P.M. The principal business will be:—To determine the report of the Council for the year 1895 and to order its publication; to revise the list of the Council for 1896; to order the convening of the next annual general meeting of constituents, and to consider what day of 1896 shall be recommended to the constituents for next Hospital Sunday.

HIS ROYAL HIGHNESS THE DUKE OF CAMBRIDGE presided at a dinner in aid of the Building Fund of the Royal Hospital, Richmond, on Monday last, at the Star and Garter Hotel, Richmond Hill. £1500 being required to complete the extensions, Mr. George C. Rowland, the secretary, submitted to His Royal Highness a list of donations amounting to £1000, whereupon Mr. Andrew Pears rose and offered the remaining sum of £500.

WE are informed by the secretary of the New Decimal Association that the metric system will be introduced into the new edition of the British Pharmacopœia. This is an important advance in the direction of the general adoption of metric weights and measures in this country, which step, it will be remembered, was recently recommended by a Select Committee of the House of Commons.

IN furtherance of a decision of the council of the Royal Medical and Chirurgical Society to devote one or more evenings in each session to a discussion of some subject of special interest, it has been arranged to hold a discussion next Tuesday upon the Possibilities as to Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c. The President, Mr. Hutchinson, will open and define the scope and aims of the discussion, Dr. Washbourn will introduce the Bacteriological Aspect of Latency, Dr. Kingston Fowler will speak on Tuberculosis, Dr. Abraham on Leprosy, and Mr. Ernest Lane on Syphilis. It is anticipated that a discussion of much practical interest will follow.

THE deputation of the delegates of the institutions interested in the formation of a new Teaching University for London will be received by the Duke of Devonshire, Lord President of the Council, on Thursday, Nov. 28th, at 12 noon.

MR. ARTHUR DACRE, the well-known actor, whose death under very sad circumstances has been recently reported, was at one time a practising member of the medical profession.

THE annual dinner of the Harveian Society of London will be held at the Café Monico on Thursday, Nov. 28th, when the President, Sir John Williams, Bart., will be in the chair.

DR. JAMES GEMMELL, Dunoon, has been appointed an Honorary Sheriff-substitute of Argyllshire.

THE CLIMATE OF ASHANTI.

(BY OUR SPECIAL WAR CORRESPONDENT.)

AS we are just now entering upon a new little war in Ashanti, and as the operations connected therewith are to be carried out at, or at any rate adjacent to, the coast-line of the Bight of Benin, between the parallels of 6 and 8 N. lat., long. 0 E., and therefore not far removed from the equator, it will be just as well to remind the readers of THE LANCET of a few peculiarities of the climatic conditions under which our European officers and men will be called upon to live, and possibly fight against, the warriors of the defiant African chieftain.

Now to say that the coast-line of this Bight is the "White Man's Grave" is as exaggerated and erroneous as to affirm that in this expedition little or no risk whatever to health or life is involved. A great deal must depend upon circumstances and how far precautionary measures are taken to prevent and check diseases in the pestilential regions. On the West Coast of Africa there are two distinct seasons—a wet and dry one. The former commences in April and lasts until the end of October, when the latter (the dry season) sets in. During June and July the rains are continuous and very heavy, accompanied by thunderstorms and violent tornadoes, the mean temperature at this season being 80° F. in the shade, and that of the water 79°. At the commencement of the dry or summer season the rains gradually abate and the weather is fine during the greater portion of the day; but dense, heavy fogs are experienced in the mornings and evenings, the temperature then rising to a mean of 82° in the shade, while that of the water will nearly touch the same point. One curious fact in connexion with this subject is that the temperature of shallow and deep water varies considerably—i.e., the temperature of the sea in shoal water will be found to be only 75·5°, while an instrument plunged into it a few miles out will register as high as 81°, showing a difference of 5·5° between them. The specific gravity of the sea at a depth of about three fathoms has been found to be about 1002. It is impossible now to go deeply into the subject of diseases prevalent in these low- [redacted] may say that

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coast fever, intermittent fever, colic, and dysentery are sure to be encountered.

For an illustration of the ordinary coast fever I subjoin a typical case taken from my note-books and written during service upon the coast some years previously:—

1 P.M. Nov. 6th: A seaman aged thirty years, of stout muscular form and phlegmatic temperament, complains of headache, dorsal pain, heat of stomach, nausea, with fulness in gastric region. Countenance anxious; tongue moist; pulse small, 84. States he has felt bad for a day or two. Temperature 102° F. 9 P.M.: Diaphoresis general over body, after medicine prescribed; bowels opened, headache relieved; pulse softer, less frequent; temperature 101°.

Following morning: Symptoms the same, tongue dry in centre, moist at edges, but he complains of pain in legs; pulse 80, soft. 9 P.M.: Rigors, with heat of skin; says he is very thirsty; restless in bed; slight strangury.

Next day, 9 A.M.: Now complains of great pain at back of head; pulse 80, soft and regular; stools dark and watery. Asks for food and has taken some tea. 9 P.M.: Idem.

Following morning, 9 A.M.: Very uneasy during past night; is oppressed; countenance pallid; tongue softer and cleaner; bowels open; temperature 102°. 10 P.M.: Countenance still more palid, but otherwise the same; urine very high coloured.

Next day, 9 A.M.: More fever and incoherent; does not feel any pain; pulse soft, 84; temperature 102°. A yellowness of both conjunctivæ has set in; very restless; temperature 104°.

From this date to the 17th, or twelve days from date of seizure, he gradually became worse, the pulse rising to 110°; the tongue was loaded, but moist; while his countenance assumed the most cadaverous hue. He died in low delirium.

From the experience gained by medical officers who know the coast well, and whose testimony can be confidently trusted, it may be inferred that it will be rather late in the day to try to cure patients out there when disease in the shape of dysentery and fever has fairly got the victims in its grip. Our professional motto ought rather to be "Semper paratus," recognising the truth of the old adage that "Prevention is better than cure." Many of the surgeons who have served on the West African Coast have learnt to their cost how prolonged and how doubtful the issue of the case is whilst a patient remains exposed to the malarial influence of the locality where he or she has contracted the disease, and how futile medicinal treatment proves in arresting the progress of the complaint. They have felt convinced at last that nothing short of a speedy removal of the patient from the coast to be placed under the invigorating influence of the south-east trade-winds at sea will ever have any effect in checking or curing the depressing ailments of those who unhappily have been attacked by the baneful climate's scourge.

If the various diseases prove so refractory to medicinal treatment, are they preventable?—that is the question which now confronts us. To a certain extent they are, and measures should therefore be taken accordingly. Some few years ago the loss of health, or even life, amongst our sailors and soldiers serving in Western Africa was out of all proportion compared with that of those serving on other stations, but, happily, conditions then existing do not now obtain. The water, food, and clothing served out to our troops are much better than they were, whilst the adoption of greater cleanliness, to say nothing of the free use of modern antiseptics, has gone a great way to ward off diseases which have decimated regiments in the past. A fairly liberal supply of fresh, pure water is always essential for the well-being of any service corps, and should be obtainable even if a distilling apparatus have to be requisitioned to provide it. Polluted water stored in casks which were left standing on deck under a blazing tropical sun did its work sooner or later in those days; and water perhaps eagerly drunk from a pestilential swamp without restraint or remonstrance from an officer by some thirsty soul was formerly a potent source of mischief, originating dysentery, the *bête noire* of this much-dreaded Bight.

Now as regards the food to be served out to the men doubtless it will be, as it was in our late Soudan campaign, excellent in quality and ample in quantity, but whilst inwardly blessing our stars that the days of weevily biscuits and tainted meat and foul water have for ever disappeared, we may dismiss the subject of food from further notice by simply reminding those who do go out that they may at times have even too much of a good thing, and by too hearty a meal of excellent meat bring on a complaint they, by eating less animal food and more vegetables or ripe fruit, might easily avoid.

The subject of dress is one that needs special notice and consideration, and it should always be as light and as easy-fitting as possible. What has to be guarded against in Africa is a sudden chill, in view of the fogs and mists that are ahead of us. The present clothing of our troops marks a distinct advance upon what it used to be. No longer are our men required to march under a blazing tropical sun with tightly buttoned-up tunics and stiff stand-up stocks compressing the venous circulation and placing the wearers in the most favourable condition for courting apoplexy or sunstroke. The marches in any coming attack will probably be undertaken between the hours of 3 and 9 A.M., after the men have partaken of an early cupful of coffee or cocoa and a mouthful or two of good biscuit. Then, too, at the midday halt, unless actually in the presence of the enemy, they may possibly be permitted to loosen their clothing, so as to give their chests a freer expansion, or even be allowed to enjoy the comforts of a brief siesta during the heat of the tropical midday sun. That will be all very well; but it should ever be remembered that as soon as the sun wanes the fog sets in, and a distinct chilliness creeps over nature and must be guarded against at all costs. Now is the time for flannels, and they ought to be put on if disease is to be avoided. The cool evening air is very refreshing, no doubt, but it is laden with mischief, as every African traveller knows. With a liberal supply of good water, avoidance of excess in eating as well as in drinking, and with great care on the part of the men not to expose their overheated bodies to any sudden chill, there is, I think, no reason why this expedition, so well equipped as regards medical officers and their requirements, should not return little the worse for campaigning in Ashanti-land.

A TEACHING UNIVERSITY FOR LONDON.

ON Wednesday, Nov. 20th, a general meeting of the teachers in the medical schools of London was held at the Examination Hall, Victoria Embankment, to consider a resolution pressing the Government to appoint a Statutory Commission to deal with the recommendation of the Gresham University Commissioners. The meeting may fairly be said to have represented, as Dr. Norman Moore happily suggested, the medical faculty of any future university in London, and consisted of a representative gathering of both experienced and quite young teachers, together with several ladies. At the commencement of the proceedings it seemed as if the members of the meeting were not altogether in harmony, for after the first resolution, subsequently unanimously agreed to, had been moved—

"That the Government be requested to introduce, at an early date, a Bill similar to Lord Playfair's London University Commission Bill, 1895, appointing a Statutory Commission to carry out the recommendations of Lord Cowper's Commission; but with an added clause giving (in accordance with precedent Acts of similar tenor) to all institutions or persons directly affected by any statute or ordinance proposed by the Statutory Commission a right of appeal to the Privy Council for the disallowance or alteration thereof, previous to such ordinance being laid before Parliament for confirmation"—

Dr. Isambard Owen pointed out that whilst the delegates of the medical schools had at their last meeting agreed to a resolution pressing the Government to appoint a statutory commission to "deal with" the recommendations of the Gresham University Commissioners, these words had only been inserted in the invitation, and that in the resolution before the meeting the words "carry out" had been substituted for "deal with." The resolution and the invitation were not in accord, for the one meant, and was intended to mean, much more than the other. Professor Curnow stated that all the signatures from King's College had been obtained under the idea that the wider signification was intended, and that this was indicated by those who had signed their approval. Professor Ramsay of University College, who said that he was largely responsible for the wording of the resolution, expressly stated that the objects aimed at by Dr. Owen and Professor Curnow were quite appreciated by the framers of the resolution, and were met by the phrase "similar to Lord Playfair's London University Commission Bill, 1895," and on

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this explanation the protest was withdrawn. The following formal resolutions, on the motions of Dr. F. Payne and Dr. Mitchell Bruce, respectively, were then passed:—

"That all teachers be asked to sign the preceding resolution, as 'approved' or 'not approved,' and that the chairman be requested to forward a copy of the resolution, with the signatures obtained, to the Lord President of the Council, and other copies of the resolution to the Prime Minister and the President of the Council of Education."

"That the appointed delegates of the medical schools of London be requested to attend, with the representatives of other institutions concerned, a deputation to the Lord President of the Council, and to convey to him the wishes of this meeting as expresed in the first resolution."

A vote of thanks to the Committee of Management of the Conjoint Board for England for the use of the hall, and the usual courtesies to the chairman terminated the proceedings.

The occasion is noteworthy, as it is the first meeting of medical teachers in London which can be called a representative one, and we are glad that a unanimous resolution was passed. However much we may differ as to methods, we cordially hope that this meeting will prove an efficient stimulus in the renewed agitation on behalf of fair degrees for London medical students.

LEGISLATION FOR HABITUAL DRUNKARDS.

DEPUTATION TO THE HOME SECRETARY.

ON Friday, the 15th inst., the Home Secretary was waited upon by a deputation to urge the need for amending the law relating to habitual drunkards.

Dr. Norman Kerr, President of the Society for the Study of Inebriety, in introducing the deputation, announced the receipt of letters, approving of its object and expressing regret for their unavoidable absence, from the Duke of Westminster, Sir Richard Quain (President of the General Medical Council), Sir William Broadbent, and Dr. Long Fox (ex-President of the British Medical Association); also from the following members of Parliament: Messrs. Lees Knowles, Edmund Boulnois, and W. Johnston.

Dr. Kerr said that the solid mass of habitual drunkards, on which efforts of legislation, philanthropy, and religion had made little impression, with the increasing proportion of diseased inebriates, especially female, constituted a menace to public order. Regarding police-court inebriate offenders, it was now generally agreed that the existing procedure was a miserable failure, and neither deterred nor reformed them. Scientific students of the subject held that there was a physical as well as a moral aspect of inebriety, while the curative treatment of habitual drunkards had been recommended by no less than six State reports. Objection had been raised, on the ground of expense, to any alteration of the present system, but the money spent on the present system of imprisonment was worse than wasted. As to the non-criminal habitual drunkards, the existing Acts had done some good, but they required certain amendments. At present the habitual drunkard had to make a declaration before two justices before he could be admitted to a curative retreat. It was difficult to get the male, and still more difficult to get the female, inebriate to face such an ordeal, and one justice might be less formidable than two, or, he suggested, the declaration might be made, as in America, before a statutory commissioner, and entrance to such retreats should be facilitated. The term habitual drunkard should be so extended as to apply to persons addicted to the excessive habitual use of such narcotics as morphine, chloral, and cocaine, alcoholic drunkenness being only one form of inebriety. Another important defect of the existing Acts was that they only applied to those who could afford to pay. There were a few homes for inebriate women supported by philanthropy, but none for poor inebriate men. Provision for the curative treatment of poor inebriates of both sexes was required. As to the objection that it would be a new departure in English jurisprudence to subject to compulsory seclusion and curative treatment inebriates who had not broken the law, such an objection was fallacious, seeing that existing laws authorised analogous treatment of insanity, of which disease inebriety was practically a form. Provision could be made against any possible abuse of the power suggested, although no abuse of it had occurred in countries where it existed. Medical men did not desire to administer the proposed law, but to act under judicial authority and support the liberty of the subject.

Cardinal Vaughan said that further power was required to commit habitual drunkards to homes, where some 8 or 9 per cent. had been cured.

The Rev. Canon Duckworth, representing the Homes for Inebriates' Association, advocated fresh legislation in the direction indicated, maintaining that it would not be in advance of public opinion. Those for whom he spoke were as zealous for the liberty of the subject as anyone, but could not see why the liberty of the inveterate sot should be more respected than the welfare and liberty of his family.

Sir W. Charley, Q.C., suggested the restoration of the compulsory clauses of the Bill of 1877, the voluntary clauses of which had become law, with the result that patients who could pay had been treated in homes, the cures being many like 30 per cent. than the 8 or 9 per cent. mentioned by Cardinal Vaughan. As to the "liberty of the subject," where was it under the existing system in such a case as that of Jane Cakebread, who had been committed nearly 300 times? Magistrates should have the option of sending such cases to homes instead of to prisons.

Dr. Danford Thomas, coroner, pleaded for the proposed changes on behalf of the poor, he being a daily witness of the misery caused among them by habitual drunkards. During an experience of twenty years as coroner not a day had passed but he had held inquiry into a death due directly or indirectly to drunkenness. Nearly all the existing homes for inebriates were beyond the means of poor people, and the few that existed for poor women would not suffice to accommodate one case in a thousand requiring treatment. It was no more an interference with the liberty of the subject to place inebriates under compulsory treatment than to send cases of infectious diseases to hospitals. The cost would be covered by the saving the change would effect in the present outlay upon inebriates in workhouses, prisons, &c.

Mr. C. J. Maddison, Reformatory and Refuge Union, concurred.

The Home Secretary (Sir Matthew White Ridley), in reply, said that it did not require such an influential deputation to convince him of the importance of the question, but the difficulty of dealing with the non-criminal habitual drunkard was very great, as was shown by the reception with which the carefully drawn Bill of his predecessor in office had met. As to the analogy between the treatment of lunatics and the proposed treatment of inebriates, the former might soon recover and could be released, while it took, as he understood, twelve months or more to cure inebriates. With regard to the liberty of the subject and the remark that victims of infectious diseases were sent to hospital, he held that inebriety, although bad, was not so fatal to the community as infectious disease; but he could not ignore the reports of the committees to which reference had been made, and it would be of the greatest importance to the country if he could extend the system of curative treatment while safeguarding the liberty of the subject. He understood that some 6000 female inebriates were at present imprisoned. He quite agreed that something should be done in the case of criminal inebriates, and that it would be a saving to the country to cure them. Some of the proposals of Mr. Asquith's Bill might serve as a basis for tentative legislation. Regarding the difficult problem of the non-criminal inebriates, he would look into it and would be glad to see cured people who were a curse to society, and he favoured tentative efforts rather than heroic legislation.

Dr. Norman Kerr having thanked the right hon. baronet, the proceedings terminated.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on Nov. 13th, at 25, Grosvenor-street, W. Mr. Holmes, Vice-President, occupied the chair, in the unavoidable absence of the President, Mr. George Pollock. The minutes of the last meeting were read and confirmed. The honorary secretary (Mr. Percy Dunn) reported that, as it had been found impossible to summon the members of the Association for the annual general meeting as arranged at the

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previous meeting of the committee, it had become necessary to fix a later date, and for that purpose, as well as for the preparation of the agenda to be submitted to the members, he had called the committee together. After some discussion it was agreed that a meeting of the committee should be called for Dec. 4th, and that the annual meeting should be definitely fixed for Dec. 11th, 1895.

A letter was read from Major-General Graham, secretary of the Civil Rights' Defence Committee, asking the association to appoint a representative to act on his committee, and requesting the committee of the association to receive a deputation from the Civil Rights' Defence Committee. A letter was also read from Mr. R. B. Anderson in support of the foregoing application from Major-General Graham, and containing a short statement of the main facts of his case. A resolution was passed unanimously agreeing to receive the deputation aforesaid, and the honorary secretary was instructed to write to Major-General Graham to this effect, and at the same time to state that the committee would be prepared to receive the deputation at 5.30 P.M. on Dec. 4th, at 25, Grosvenor-street.

Mr. Anderson having expressed to the honorary secretary a desire to join the association, he was proposed, seconded, and unanimously elected a member of the association. After some discussion upon Mr. Anderson's case the following resolution was agreed to: "That the committee of the Association of Fellows beg to express their warm appreciation of the action taken by the Council of the Royal College of Surgeons as representing the College in the matter of Mr. Anderson's attempt to vindicate his legal rights as a Fellow of the College. They sympathise entirely with Mr. Anderson, and intend to bring his case before the association with a view to appoint a delegate to act on their behalf on the Civil Rights' Defence Committee." The honorary secretary was instructed to forward a copy of this resolution to the secretary of the College for the purpose of its being laid before the Council at their next meeting.

With reference to the appointment of a representative of the association on the Civil Rights' Defence Committee it was decided that, as this would be a new departure, it would be advisable to defer the consideration of the subject until the annual general meeting of the association on the 11th prox.

This concluded the business of the meeting, and the committee adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Enteric Fever at Widnes, by Dr. R. BRUCE LOW.[1]—This report, which was compiled some months ago, deals with a sustained prevalence of enteric fever in the borough of Widnes. The deaths from fever for the three years ending with 1894 were 26, 32, and 24, the population being somewhat over 30,000. There occurred also during the same years the following deaths from diarrhœa and English cholera—viz., 18, 48, and 15 respectively. And, again, in the five years ending 1894, during which time there was notification of infectious diseases in the borough, there occurred 587 attacks of continued fever, 566 being returned as "enteric" or "typhoid"; there was also a tendency to increase at each autumnal season. The different parts of the borough suffered unequally, the ward known as West Bank, which is not the most densely populated, having the highest fever attack rate. The water-supply for the borough seemed excellent as regards its source, and well cared for in its distribution; the question of milk as a vehicle of infection did not arise; neither was there any evidence that sewer air had had any real share in the distribution of the disease. But when we read Dr. Low's description of the means of excrement disposal in the borough we find ample justification for the belief that this excremental disease was provided with just the means which it requires for its propagation and distribution. It is unnecessary for us to describe the midden-privy with which the bulk of the Widnes houses is provided. The diagrams attached to Dr. Low's report suffice to show not only, as he says, that "it has nothing whatever to recommend it," but that it is altogether faulty and opposed in its construction to every sanitary principle. Oddly enough, it is locally called the "modern convenience"; but it has nothing modern about it, unless, indeed, it is the production of ignorance during comparatively recent years. "In a word," writes Dr. Low, "the air round the dwellings in Widnes is habitually fouled by emanations from collections of human filth stored close to the houses under very unfavourable conditions, and the tainted atmosphere that is breathed by the inhabitants cannot fail to have an injurious effect upon them." The truth is that owing to the filthy contrivances in question Widnes was found to possess precisely the conditions such as are known everywhere and, we had hoped, by everybody "to greatly favour the diffusion of enteric fever." Happily, we learn that this system is condemned by the sanitary officials, and that efforts have for some time past been made to get rid of it. It has probably been an expensive burden thrown on Widnes, for it has had an important share in producing one of the most costly and wasteful of diseases—one that attacks the bread-winners and young adults during the period of life which is most remunerative, and it has cost the people many valuable lives. We can only hope that this lesson has now been fully learnt; but it is somewhat disheartening to find so often that English people have not yet grasped the simple fact that to accumulate large quantities of excremental filth close to houses, where it lies decomposing and fouling the air that has to be breathed, is utterly opposed, not only to decency, but also to public health.

[1] Eyre and Spottiswoode, East Harding-street, London, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. 1895. Price 6d.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Manchester Urban Sanitary District.—Dr. James Niven has issued his first annual report as to the health of Greater Manchester. The report relates to the year 1894, and a perusal of it is sufficient to show that the health of the largest provincial city in England is in safe keeping, and that its statistics will be turned to excellent account. The marriage-rate of Manchester has gradually declined from 24·2 per 1000 in 1871 to 16·0 in 1893, while the birth-rate has been reduced from 40·0 per 1000 in 1876 to 31·8 in 1894. Dr. Niven dwells fully in his report upon the effect these diminutions may be held to have upon the mortality-rates. The general death-rate for 1894 was but 19·8 per 1000—i.e., 3 per 1000 less than in any year since 1871. The reduction of the death-rate was more marked in the township of Manchester than in either the north or south division of the city, a fact which Dr. Niven thinks may be due in some degree to the improvement of dwelling-houses in the older parts of the city. The reduction in infantile mortality during 1894 was very remarkable, and the reduced general death-rate is due in no small degree to the diminished mortality from summer diarrhœa. The infantile mortality in 1894 was but 158·5 per 1000 births, as compared with rates of 191·7, 178·2, and 201·3 in the preceding three years. The chances of survival in Manchester of legitimate and illegitimate children is shown in the annexed table:—

Percentage of illegitimate to total births.		Proportion of deaths under one year per 1000 births.		
		Total.	Legitimate.	Illegitimate.
1891	4·23	192	184	375
1892	4·10	178	170	367
1893	3·72	201	190	498
1894	4·42	159	150	338

In connexion with the general death-rate of Manchester it is interesting to note that a far higher proportion of deaths occurred in public institutions during 1894 than ever before, and this increased tendency to resort to institutions, where care and treatment are better than at home, may have a material effect in the diminution of the general death-rate of Manchester. On comparing the mortalities of the different divisions of the city it is found that Manchester township exceeds that of South Manchester, which in its turn exceeds that of North Manchester. Although in these differences there is a general relation

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between a high density of population and a high death-rate, Dr. Niven, by a very thorough analysis of the mortality of the several districts in the city, shows clearly that there are other local factors which in large part override that of density. It is this part of Dr. Niven's report which is especially worthy of careful perusal. The Manchester figures in regard to enteric fever show that this disease is not more prevalent in those districts where the summer diarrhœa incidence is high. The causes of enteric fever are, Dr. Niven considers, much more complex than those of diarrhœa. In the report before us is a table giving the death-rates of enteric fever per 1,000,000 of the population in England, London, Manchester, Prussia, and Berlin for many years past, its object being to show that Manchester has not shared in the diminished mortality from this disease which has been manifest in the other places referred to. In connexion with this question of diminished enteric fever mortality, Dr. Niven has procured statistics as to the fatality-rate of enteric fever in some of the largest fever hospitals in England and Scotland, but these fail, it appears, to show that the general diminution of the disease is to be attributed in any marked degree to improved methods of treatment. With two important matters contained in Dr. Niven's report we have already dealt—i.e., small-pox and "an occurrence of milk infection," the latter of which was contained in a special article by Dr. Niven;[1] and we can only add that the report before us contains a very able dissertation upon back-to-back houses in which the subject is treated with considerable originality. Dr. Niven devotes himself in the main to a consideration of the fallacies which may attend conclusions on back-to-back house figures, and after a very thorough analysis of the figures and facts relating to Manchester he agrees with the general results obtained by Dr. Tatham and Mr. Herbert Jones—i.e., "that back-to-back houses by their mode of arrangement produce a direct injury to health which, however, so far as death-rates are concerned, is most manifest in early life and at advanced ages." These pages of Dr. Niven's report will be read with much interest by all medical officers of health, and, in conclusion, we heartily congratulate him upon his first annual report for the city of Manchester.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6291 births and 3876 deaths were registered during the week ending Nov. 16th. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 19·1 to 22·1 per 1000, declined again last week to 19·1. In London the rate was 17·9 per 1000, while it averaged 19·9 in the thirty-two provincial towns. The lowest rates in these towns were 10·0 in Huddersfield, 12·2 in Brighton, 13·0 in Derby, 13·2 in Leicester, and 14·6 in Plymouth; the highest rates were 23·7 in Wolverhampton, 25·0 in Salford, 26·2 in Bolton, 30·8 in Liverpool, and 36·4 in Blackburn. The 3876 deaths included 522 which were referred to the principal zymotic diseases, against 590 and 606 in the two preceding weeks; of these, 163 resulted from measles, 107 from diphtheria, 83 from diarrhœa, 66 from whooping-cough, 64 from "fever" (principally enteric), 38 from scarlet fever, and 1 from small-pox. No death from any of these diseases was recorded last week in Plymouth; in the other towns they caused the lowest death-rates in Leicester, Brighton, Croydon, and Derby, and the highest rates in Liverpool, Salford, Wolverhampton, and Blackburn. The greatest mortality from measles occurred in Liverpool, Wolverhampton, Salford, Oldham, and Blackburn; from scarlet fever in Gateshead; from whooping-cough in Liverpool, Newcastle-upon-Tyne and Wolverhampton; and from "fever" in Salford, Oldham, Burnley, and Sunderland. The 107 deaths from diphtheria included 61 in London and 8 in West Ham 5 each in Wolverhampton, Birmingham, and Liverpool, and 4 each in Manchester, Salford, and Newcastle-upon-Tyne. One fatal case of small-pox was registered in West Ham, but not one in London or in any other of the thirty-three towns. There were 86 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Nov. 16th, against 114, 106, and 78 at the end of the three preceding weeks; 23 new cases were admitted during the week, against 14, 29, and 14 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2845, against 2833, 2841, and 2847 on the three preceding Saturdays; 298 new cases were admitted during the week, against 269, 215, and 349 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 366 and 447 in the two preceding weeks, declined to 340 last week, and were 84 below the corrected average. The causes of 50, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, Hull, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, and Leicester.

[1] THE LANCET, Jan. 19th, 1895.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 18·9 to 21·4 per 1000, declined again to 18·5 during the week ending Nov. 16th, and was 0·6 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·2 in Leith and 15·9 in Dundee to 22·5 in Aberdeen and 26·8 in Greenock. The 535 deaths in these towns included 18 which were referred to whooping-cough, 11 to diarrhœa, 9 to scarlet fever, 5 to measles, 5 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 52 deaths resulted from these principal zymotic diseases, against 69 and 77 in the two preceding weeks. These 52 deaths were equal to an annual rate of 1·8 per 1000, which was 0·8 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 11 to 21 in the three preceding weeks, declined to 18 last week, of which 14 occurred in Glasgow, and 3 in Aberdeen. The 11 deaths referred to diarrhœa showed a considerable decline from those recorded in recent weeks and included 5 in Glasgow. The fatal cases of scarlet fever, which had been 10 and 11 in the two preceding weeks, declined again to 10 last week, of which 3 occurred in Glasgow and 3 in Edinburgh. The 5 deaths from measles were within one of the number in the preceding week, and included 3 in Greenock. The fatal cases of diphtheria, which had been 5 and 8 in the two preceding weeks, declined again to 5 last week, of which 2 occurred in Glasgow. The 3 deaths referred to "fever" were considerably below the number recorded in any recent week, and included 2 in Edinburgh. The fatal case of small-pox occurred in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 136 and 173 in the two preceding weeks, declined to 134 last week, and were 21 below the number in the corresponding week of last year. The causes of 40, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·5 and 24·3 per 1000 in the two preceding weeks, further declined to 23·1 during the week ending Nov. 16th. During the past seven weeks of the current quarter the death-rate in the city has averaged 24·6 per 1000, the rate during the same period being 18·4 in London and 17·6 in Edinburgh. The 155 deaths registered in Dublin during the week under notice showed a decline of 8 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against numbers declining from 29 to 8 in the five preceding weeks; of these, 2 resulted from small-pox, 2 from "fever," 2 from diarrhœa, but not one from measles, scarlet fever, diphtheria, or whooping-cough. These 6 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 2·6 in London and 1·5 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 4 in the two preceding weeks, declined again to 2 last week. The fatal cases of diarrhœa, which had declined in the five preceding weeks, from 17 to 2, were again 2 last week. The 2 fatal cases of small-pox exceeded the number recorded in any week during the current quarter. The 155 deaths in

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Dublin last week included 23 of infants under one year of age, and 33 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers recorded in the preceding week. No deaths from violence were recorded and only one inquest case was registered; and 46, or nearly a third, of the deaths occurred in public institutions. The causes of 11, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

THE ASHANTI EXPEDITION: MOVEMENTS OF THE MEDICAL STAFF.

WE understand that the hospital ship which is now being fitted out for the Ashanti Expedition will be in the Medical Charge of Brigade-Surgeon-Lieutenant-Colonel E. Townsend, and that he will be assisted by Surgeon-Majors Porter and Dodd. Surgeon-Major Wilson and Surgeon-Captain Eckersley have received orders to embark for Cape Coast Castle on the 23rd inst. Surgeon-Major Wolseley, who is also under orders for Ashanti, will be in command of the detachment, Medical Staff Corps, and Surgeon-Captain O'Callaghan will be his second in command. Surgeon-Majors Hickman, Bartlett, and Hughes, and Surgeon-Captains Beevor, Hilliard, Josling, and Barker are also under orders to join the expedition. The Nursing Staff on board the hospital ship will consist of Nurse Gray (Acting Superintendent) and Sisters Potts and McCordy.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel John Maturin, F.R.C.S.I., to be Surgeon-Colonel, vice J. B. Hamilton, M.D. Brigade-Surgeon-Lieutenant-Colonel Charles White is placed on retired pay. Surgeon-Lieutenant-Colonel George D. N. Leake to be Brigade-Surgeon-Lieutenant-Colonel, vice J. Maturin, F.R.C.S.I. Surgeon-Lieutenant-Colonel Poole R. Gabbett to be Brigade-Surgeon-Lieutenant-Colonel, vice H. W. A. Mackinnon, D.S.O., retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson (Bengal) is granted the temporary rank of Surgeon-Colonel whilst officiating as Inspector-General, Civil Hospitals, North-West Provinces and Oudh, during the absence on leave of Surgeon-Colonel W. P. Warburton. Surgeon-Captain J. M. Cadell, Officiating Civil Surgeon, on completion of special duty, is to take Civil Medical Charge of the Dehra Dun District as a temporary measure.

The following officers have embarked for a tour of service in India:—Surgeon-Lieutenant-Colonel Charlesworth, Surgeon-Majors Lane, Ellis, and Donovan, Surgeon-Captain Reade, and Surgeon-Lieutenant MacMunn.

The *Army and Navy Gazette* says that a general redistribution of medical officers in India will take place now that the Chitral force is completely broken up. The British General Hospital at Cherat having closed, only the Station Hospital remains, with Surgeon-Major Saunders and Surgeon-Captains Butchell and Brogden. Surgeon-Captains Swan, Hathaway, and O'Donnell, on return from Chitral, are posted to Peshawur; Surgeon-Captains Aplin and Vost resume duty with the Civil Department, North-West Provinces. Brigade-Surgeon-Lieutenant-Colonel Anthonisz goes to Jubbulpore, Surgeon-Major Carleton to Bellary, Surgeon-Majors Roy and Adams to Neemuch, Surgeon-Captain Thurston to Bareily, Surgeon-Captain Pilcher to Lucknow, Surgeon-Captains Jameson and Tyrrell to Rawul Pindi, and Surgeon-Captain Bunn, Army Medical Service, is re-posted to Bareily."

YEOMANRY CAVALRY.

Surgeon-Captain G. R. T. Phillips to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Cumberland: George Martin, gent., to be Surgeon-Lieutenant. *Rifle:* 1st Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant W. Vernon resigns his commission. 2nd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Captain J. Martin resigns his commission.

THE ASHANTI PREPARATIONS.

The daily papers have given pretty full accounts of the preparations that are being made for the Ashanti expedition, and there has been of late great activity at the War Office. Time is always an important element in a matter of this kind, and happily there has been sufficient time allowed on the present occasion to make the necessary arrangements and preparations. According to the published accounts in the *Times* and other papers of the stores and supplies these would seem to be very complete and suitable for a campaign in such a climate. Trial is to be made of Maconachie's tinned ration of mutton, vegetables, and gravy; and also of "emergency rations," consisting of chocolate and solidified beef-tea. Cocoa, chocolate, and tea will, of course, be freely supplied; and we are not, on the whole, sorry to see that there will be an issue of rum. If this be given in moderate quantities with food towards the end of the day and after marches it will be found to be beneficial and not injurious to the troops; soldiers on the march enjoy and look forward to the daily issue of a spirit ration. The provision of tobacco for soldiers in the field is also a wise and good one in our opinion. For such a climate a lighter kind of tobacco than that which the soldier uses at home is, however, desirable. The water procurable commonly contains a good deal of suspended matters and vegetable débris, and the use of alum—of which a quantity will be supplied—is to be advocated as an excellent water clarifier. As regards the *personnel*, it is understood that some twenty medical officers and about 100 men of the Army Hospital Corps have already been placed under orders, with a number of lady nurses. It is, we believe, intended that the Army Hospital Corps will be divided into three sections—one for the base and lines of communication, another for the hospital ship, and the third for service in the field with the advancing troops. The difficulty on this occasion, as on others, has not been to obtain officers, non-commissioned officers, and men of all branches of the service, for all ranks are ready enough to volunteer for this and every other campaign, but to select the requisite number out of those desirous of going.

"THE SANITARY CONDITION OF ALDERSHOT."

Under the above heading a correspondent who signs himself "E. F." writes to the *Morning Post* of Nov. 19th making some grave charges respecting a subject we have repeatedly called attention to in the columns of THE LANCET. "Two or three months ago," he says, "a young Artillery officer was sent home from Aldershot suffering from scarlet fever arising from the insanitary condition of his quarters, where the sewage came up through the boards, the excuse being that it would cost £5000 to remedy the evil. During the illness of the officers the place was examined and reported to be thrown down. You will scarcely believe that after their return to quarters the officers were again put into that unhealthy den, but such is the case. On Monday last my young friend was again sent home, sickening for typhoid fever, and now lies under the care of two doctors and two nurses. Others of his companions may be suffering in the same way. The regiment is to go to India next year. Is it to prepare them for India that they are put into fever dens?" If such a condition of things really exists at Aldershot it is certainly time that some drastic measures should be taken by the Government to free this question from the red-tapeism in which it has been too long entangled.

THE MALARIA PARASITE.

The *Times of India* of the 26th ult. contains a lengthy communication descriptive of the results of Surgeon-Lieutenant-Colonel Lawrie's observations and experimental researches on this subject. It is well known that this officer, as the result of some 200 observations made on healthy and malarial and other diseased blood, denies the existence of the plasmodium in the blood of malarial patients. While a considerable number of experiments seem to have been made on stained specimens, but little mention is made as to the results of the examination of fresh blood. But we have not yet seen any printed report of these observations, and it would, therefore, be quite premature at present to form any conclusion in regard to them.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Lieutenant-General G. H. Moncrieff will present the prizes of this school at 7.30 P.M. at the Banqueting Hall, Crosby Hall, E.C., on Saturday, Dec. 7th. Among those who have accepted the invitation of the Staff to be present are Brigadier-General W. H. Gatacre, D.S.O., recently commanding the third brigade of the Chitral Expeditionary Force. Captain Sir Alfred Jephson, R.N., Secretary-General

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of the Order of St. John of Jerusalem, and Colonel Sir Herbert Perrott, Secretary of the Order. Past and present members of the school can obtain tickets for the distribution and concert by making early application to Mr. C. J. Downer, Fairfield, Willesden-park, N.W.

THE NAVAL EXAMINATION.

The under-mentioned gentlemen who recently competed for appointments as Surgeons in the Royal Navy have been granted commissions:—

C. H. J. Robinson	2634	H. H. Gill, M.B.	2289
H. Huskinson, M.B.	2579	W. D. Adams, M.A., M.B. ...	2244
E. S. Tuck	2548	W. R. Trythall	2233
H. G. T. Major	2529	E. G. E. O'Leary	2188
M. P. Jones	2372	J. C. Rowan, M.B.	2155
A. W. B. Livesay, M.B. ...	2344	R. A. Ross, M.B.	2042

THE CLARENCE SMITH CASE.

We learn from the Indian papers that the commission appointed to investigate the facts connected with the case of Surgeon-Major Clarence Smith of the Indian Medical Service, to which, it will be remembered, we have already referred, have terminated their inquiry, but the result has not been promulgated.

We are informed by a correspondent that the common iliac artery was tied through a median laparotomy at Dover Castle Station Hospital on Sunday last for a very large diffuse aneurysm involving the common femoral and external iliac arteries. Reports made up to date state that the patient is doing well. The operation was performed by Brigade-Surgeon-Lieutenant-Colonel W. F. Stevenson, assisted by Surgeon-Major Whitehead and the officers of the hospital. We hope to give a full report of the case later.

The Secretary of State has sanctioned the amalgamation of the three branches (Bengal, Madras, and Bombay) of the Indian Medical Service into one service under the administrative control of the Government of India, and has also accepted a proposal that the Surgeon-General with the Government of India should be the head of the amalgamated service under the designation of Director-General of the Indian Medical Service.

A dinner was given on the 11th inst. by the officers of the Army Medical Staff at Shorncliffe to Brigade-Surgeon-Lieutenant-Colonel J. H. Reynolds, V.C., who will shortly retire from the service.

Correspondence.

"Audi alteram partem."

THE "PRIMARY" EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In sequel to a letter *re* the "Elementary Examinations in Anatomy" in THE LANCET of Oct. 19th of this year, I propose to say a few words about the Second Examination or "Primary." This is an examination in which candidates are expected to have a fair knowledge of human anatomy and physiology. The candidate is not admitted to it unless he has previously passed an examination in elementary anatomy, biology, chemistry and practical chemistry, materia medica, and physics. I think I have shown pretty clearly that the examination in elementary anatomy is practically a useless one, or worse than that, one which instead of being a real help to the student is a drawback, and one which might readily be dispensed with as it is in the London University examination, because in the majority of cases it causes a student to waste much valuable time in his first winter and, worse than that, demoralises him. The Second Examination is really a good all-round one, so far as its requirements go, though its results are often startling and unaccountable; but that one can be prepared for to some extent in any examination which is conducted by an examining board when the members of which for the most part know nothing of the college work of the student. These results, as I have before said, are sometimes startling, many students sometimes passing who scarcely ought to pass, and many others failing who ought certainly to pass.

In an examination partly conducted by teachers such results could scarcely come about because one examiner at least knows what the candidate knows by what he has done in the class examinations he has from time to time as a teacher conducted; but in such an examination as that held by the Royal College of Surgeons, and especially in the *vivâ-voce*, which lasts only ten minutes, some grave errors are constantly committed. The element of luck largely enters into such examinations, and thus the most ignorant student may pass, and frequently does, whilst the hard-working, plodding, and conscientious student, who often is nervous because he thinks he may be questioned on knotty points which the more ignorant man never heard of, gets "ploughed." I am not speaking theoretically here—I speak from a large experience of both kinds of students. It may, of course, be urged that London University students suffer the same disadvantages, but that is not so: they have two papers on anatomy with usually not less than six or seven questions on them, and these are followed by a two hours' examination on practical anatomy, giving a student a much better chance of showing what he knows than when he has one "paper" of four or five questions followed by ten minutes' questioning. In the latter case a candidate is very much more the possible victim of circumstance. His examiner not knowing him may be curt, petulant, angry, sarcastic, tired, or indifferent, any of which conditions may upset the mental balance of the wretched candidate, especially if he be of the nervous type I have mentioned—and unfortunately the nervous men are, in the main, distinctly above the average, according to my experience, the most jaunty being usually the most ignorant—and he fails. He has worked well from beginning to end, and is naturally discouraged on knowing that his easy-going fellow student has passed. No one knows better than the teacher the injustice of the thing, and no one better than the provincial teacher. It seems to me that the provincial student labours under a greater disadvantage than the London student, for the latter has at least the satisfaction of knowing that there is a possibility of his teacher examining him, or at least being present during the examination (I do not by this cast the slightest insinuation of favouritism, but I mean that the student who is examined by his teacher must have a better chance of passing creditably than one who is not, because that teacher cannot but know something of the student's history).

It is unfortunate that so many of the examiners belong to London when so many of the candidates are drawn from the provincial schools. There are ten such schools in England alone, and I believe that there are only two examiners drawn from them. The regulations at present debar men who do not possess the qualifications of the Royal College of Surgeons of England, which means that the majority of provincial teachers are excluded, although they are for the most part entirely occupied with the teaching of anatomy. If these regulations are unbreakable, much still can be done. A certain amount of information as to a student's career could be obtained by so remodelling the "forms" for admission to the examination and adding to them a clause to the effect that the candidate's application must be backed up by a report of his work, along with the marks he has obtained in the "class examinations" held during the time prescribed for study. At present he is supposed to have attended "class examinations," but it seems to be a matter of indifference as to whether he obtained 1 or 100 per cent. in them. Obviously such a clause, as it at present exists, is useless.

Then there is another point which is of vast importance both to the teacher and the student. At present when a student passes the Primary Examination he passes, and there is an end of it. He may make 100 per cent. or he may make a modest 50; in either event he is neither better nor worse than his fellow, and he is none the wiser. There certainly ought to be some improvement here. I do not know what powers the Board possesses, but it seems to me that it would be a simple matter to add to a man's pass certificate, "with credit," or "with great credit," if the giving of "honours" be impossible. I think I am right in saying that this is now done in the triple qualification of Scotland. Could this be done it would alter the state of affairs completely. At present, as matters stand, the good student who has resolved on taking the "qualification" of the Conjoint Board has no inducement to do more than a certain amount of work, and the lazy student's mind is chiefly occupied with making the marks necessary to pull him through. It is very considerate of the College to regard

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all the holders of its qualifications as being of equal intelligence; but it is an idea which is on the face of it untenable, and it has a bad effect on all concerned. Many a man would work with pleasure to pass his examinations "with credit" could he do so, and there is little doubt but that he would the more readily find employment after doing so, but as things are he knows that fifty marks are of as much value to him as a hundred, and he consequently directs his studies accordingly, not trying to get up as much knowledge as possible, but puzzling his brains chiefly with a view to finding out how much knowledge he will require to display in order to make the necessary fifty marks, and he is a clever teacher who can persuade a student to read in order to make fifty-one marks when fifty will suffice. We who have passed our examinations and are becoming fogeys, so to speak, find it easy to say that it is a student's fault if he does not make the most of his opportunities, but if we think for a moment of our student days I think we will admit that our enthusiasm for work was largely regulated by the opportunities we had of obtaining some definite recognition of that work. The seriousness of the question arises most impressively to the "newly qualified" man who seeks employment. Ninety-nine men out of a hundred have nothing by which they can claim greater recognition than their fellows. They can only say they have the necessary legal qualifications just as hundreds more have, and as to testimonials, the less said of them the better. It is a high ideal, no doubt, to suppose that every man possessing the M.R.C.S., L.R.C.P. is as good as his fellow M.R.C.S., L.R.C.P., but in these matter-of-fact days ideals are little more than ideals, especially where employment and the making of daily bread are concerned. If there be any objection at all in the giving of a student credit for the work he does, it is in giving it at the time when he does that work; in other words, when he passes his examination. To be more precise, it may be argued that it is a bad thing to indicate to a student that he has obtained credit in a certain subject at the time of passing that examination, because it may cause him to specialise in one subject to the neglect of the other. That is certainly a serious objection, but one that could easily be got over by announcing at the time of passing the Final Examination the subjects in which the student has distinguished himself. I am sure that this is a proceeding which would give the greatest satisfaction to all candidates for the M.R.C.S. and L.R.C.P. and to medical men requiring assistants; in fact, many members of both classes have assured me that they would hail with the greatest possible satisfaction such an innovation. I feel very strongly that the much-vexed questions of "a degree for London students" and "a Teaching University for London" are the outcome of an honest desire on the part of qualificates of the Royal Colleges of Surgeons and Physicians to show something more for their work than the mere letters M.R.C.S. and L.R.C.P.; and I feel sure that there would not be the unseemly squabbling over who is to be called "Dr." and who not if men could obtain a diploma of which they might be proud, one which would be a certificate either of ability or hard work, or of both.

I am, Sirs, yours faithfully,

EDWARD FAWCETT, M.B. Edin.,
Professor of Anatomy, University College, Bristol.

Nov. 5th, 1895.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—I have read with great interest the two letters that have appeared in THE LANCET of Nov. 16th in reference to the question of women being admitted to the examinations of the Royal Colleges. Having been present at the general meeting of Fellows and Members of the Royal College of Surgeons of England on the 7th inst., I heard the views expressed on both sides, and I think that Mr. Hastings Gilford's letter represents as a whole the general feeling of the Fellows, and that of Mr. A. S. Morton the consensus of opinion among the majority of the Members who were present. The latter's remarks are quite in keeping with those made by the Members who spoke on that occasion, and it seems to me not a little surprising that the antagonists of the ladies are not able to advance any more sound or cogent reasons for their opposition than have hitherto been expressed. One Member remarked that it was a horrible sight to see women operate, to which he received the immediate answer that it was also a horrible sight to see some men operate. Again, he said that women were incapable of arresting hæmorrhage by reason of their tendency to faint at the sight of blood, and ingeniously added that *he* had never seen a man so affected. To this I may say that those who have had long experience at our medical schools know that men often faint at the sight of blood, whereas nurses rarely if ever do.

Such statements as the above quoted are evidently made at random, and Mr. Morton also falls into the error of thinking that mere assertion is argument. For instance, he says that ladies are "neither required nor wanted" (*sic*) on the roll of the Royal Colleges, but surely this is no reason for their non-admittance; for are there not many men yearly obtaining diplomas from the said Colleges who in the present overcrowded state of the profession may equally be considered as "neither required nor wanted"? Nevertheless, on this plea we do not bar their way. In another part of his letter he asks, apparently with fear and trembling, "What is to prevent women, in the event of their taking the Fellowship of either College, from occupying the professorial chairs?" adding that in that case we should have the "glaring anomaly of women teaching the men," and pathetically exclaiming, "This is no fancy picture." On this point, I fear, there is little consolation to offer him, for if women ever attain a greater amount of knowledge than men it would surely be more glaringly anomalous were the latter to refuse to profit by their teaching on the trivial question of sex. Again, he asserts that "from a recent glaring case women, from their teaching and practices, are prepared to inculcate acts of direct and open immorality." Must we infer from this that Mr. Morton is not more logical than to generalise from an individual instance?

If no sounder reasons than the above can be advanced against the women's claim methinks it were more comely to preserve silence on the subject, since the only construction that can be put upon these views is that they arise from mere dread of competition. Indeed, that this fear is the main reason for the hostile attitude displayed by the opposition party I have no doubt whatever.

It were regrettable if these gentlemen have come to such a pass that they should strive to do away with so great an incentive to progress. Is it not the very competition that we are open to that creates within us a spirit of emulation—that inspires us to achieve greater things! To fear competition, then, and to be jealous of a neighbour's chance of success, is verily an acknowledgment of weakness. On the other hand, to defy competition by manfully keeping abreast of the times by an ever-constant pursuit of knowledge is surely a more worthy course to follow for the purpose of safeguarding and preserving professional status than to resort to the baser means of barring the doors to new-comers.

In conclusion, I would say that if the body of Members wishes to have a voice in the management of the Royal College of Surgeons of England, it must see that its representatives are able to decide questions of importance without prejudice or jealousy, and so show themselves possessed of that width of learning and depth of general culture so essential to those who hold the reins of government.

I am, Sirs, yours faithfully,

W. ERNEST MILES, F.R.C.S. Eng.

Kensington, W., Nov. 18th, 1895.

To the Editors of THE LANCET.

SIRS,—I rather fancy that Sir Walter Scott was to blame in having had his share in the production of the "new woman," for was it not he who sowed the medical seed in the female mind by commenting, in an unguarded moment, upon the value of woman in the sick room? It is natural to suppose, however, that the "ministering angel" of his imagination came armed only with the average feminine attributes, rather than brandishing a medical diploma in one hand and a catheter in the other. In any case, it certainly seems strange that the medical profession—and by this I mean the actual practice of the profession as distinguished from nursing—should attract women; but no doubt it is, as Mr. Gilford remarks in his letter, one of the signs of the times, for the new woman is, *par excellence*, a morbid product, and it is, therefore, quite intelligible that she should wish to study morbid anatomy.

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We shall one day have a reaction and find women anxious to resume their time-honoured *rôle* of "guardian angel," and then, perhaps, they will invade the pulpit, where, after all, they will be less out of place than in the Presidential Chair of the Royal College of Surgeons of England. They are far more suited in every way to be our moral and spiritual than our physical advisers. Mr. Morton has grasped all the salient points of the question, and in his letter has ably set them forth. He has shown that female physicians are now no longer a necessity in India, and he has politely implied that they are a luxury that England can dispense with. He has pointed out the absurd possibility of women occupying professorial chairs. In this connexion one cannot help calling to mind that graceful and fantastic and withal prophetic satire, "The Princess," which Mr. Gilford would not consider up to date, seeing that the Laureate depicted his ideal woman as being "not learned save in gracious household ways," and as one who cares not "to walk with Death and Morning on the silver horns."

In conclusion, I think the profession owes a debt of gratitude to the London Colleges for their joint verdict, and I regret that my own colleges should have succumbed to a spirit of gallantry.—I remain, Sirs, faithfully yours,

Reading, Nov. 19th, 1895. CLAUDE A. P. TRUMAN.

To the Editors of THE LANCET.

SIRS,—Having taken a personal part in the controversy at the annual meeting of Fellows and Members of the Royal College of Surgeons, *re* the admission of women to the Membership of the College, I beg to avail myself of your valued columns to emphatically refute a floating assertion that the majority of general practitioners view with favour the proposed admission of women, not only to the functions of the general practitioner, but also to those of the consulting surgeon and operator. Ask the majority of British husbands and fathers, comprising as it does the majority of general practitioners, whether they would desire to behold their wives or daughters performing surgical operations. Do we not daily encounter men, clear-headed in danger, generously ready to risk their lives for a good cause or to save that of a fellow creature, yet who sicken at the thought of even witnessing, still more performing, an excruciating surgical operation? We do not blame their humane lack of firmness. Do we, then, wish to see the gentler sex surpass even many a gallant soldier in sensibility? Divine wisdom has obviously assigned certain walks of life to the sterner, others to the fairer, moiety of our race; and when at the above meeting I seconded Mr. Joseph Smith's resolution I maintained, and do so still, that a woman who undertakes the revolting though beneficent duties of the operating surgeon unsexes herself thereby. In this country at least—nay, in all the long-established nations of Europe enriched with a practical experience of ages still lacking to newly constituted communities of colonial origin—we see the law still keeping its portals closed to aspirant female practitioners, the Church still more peremptorily denying the gentler exercise of its ministry to women, because the consensus of ages is that, however admirable her mental endowments in many respects, even the Christian pastorate, still more so the acrimony of forensic debate (itself repulsive in many criminal cases to her innate modesty), do not offer her own special good qualities a suitable field of labour. Her sphere is home—it is nothing, a mere empty sound, without her to adorn it. The more genuine she is, the more man looks up to her; and, when compelled to earn an intellectual living, at least let her eschew duties from which a courageous and strong man may be excused for recoiling. I am, Sirs, yours faithfully,

J. BRINDLEY JAMES,
Surgeon, Municipal Throat and Ear Infirmary.
Bridge-road, Hammersmith, W., Nov. 18th, 1895.

To the Editors of THE LANCET.

SIRS,—More than a century ago the spurious doctrine of "Égalité" promulgated by Hobbes and Rousseau was, to a certain extent, a factor in hastening on the Revolution of 1789. Men are not equal intellectually, physically, morally; and so far as the individual possesses these attributes singly or collectively in excess of his fellow men, so far will the gulf which divides them widen. Now, Sirs, as concerning medicine, a worse doctrine than the above presents: as men are unequal, how much more is this inequality shown by the admission of women into the profession, and by the fact of such admission placing them upon the same footing as men and acknowledging them as equally fitted to perform the duties of practitioners. From all points of view, as has been already expounded in your journal, they are from their constitution unfitted to practise medicine, and their admission into the profession will only tend to cheapen and degrade what is already an overcrowded calling. There are many men who would be only too glad to give up practising in open surgeries and dispensaries in exchange for higher fees &c. were it not that they are compelled to live by their profession. The Royal Colleges in London have acted wisely in refusing, by their late decision, the admission of women to their examinations, and it is the duty of those who are responsible to keep up the traditions which have been handed down. I remain, Sirs, yours faithfully,

Nov. 18th, 1895. M.R.C.S.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,— I have much pleasure in replying to Mr. Fotheringham's courteous letter in THE LANCET of Oct. 12th. The point about which he desires some further explanation is the nature of the influence exercised upon the natural functions of the body by the opposition of similar magnetic poles. Mr. Fotheringham says: "Granting for a moment that no more complex result might be expected from the opposition of similar magnetic poles, is it reasonable to suppose that such a radical change of direction as the one under consideration could take place without causing some very distinct modification of the natural functions of the body? The fact that no such modification actually occurs when the living body is introduced into the most powerful magnetic field—no matter in what position the one may be placed in relation to the other—would appear, I think, to tell very strongly against the validity of Dr. Shettle's theory." In discussing this question I would first call attention to the fact that all the constituent elements of the body are polar—i.e., they manifest magnetic or diamagnetic properties; and, secondly, I would point out that chemical action, by which the various processes of life are naturally maintained, is identical with electric action and is essentially a polar force. The question to be considered, therefore, is why, and to what extent, are these polar forces capable of being modified by external force of the same description without changing the character of the phenomena? A brief reference to some experiments which I made upon bar magnets some years since may throw light upon what takes place in magnetic atoms when subjected to force from various directions.

Taking two bars of steel, as equal in magnetic power as I could render them, I placed them together in every sort of position, and by watching the behaviour of fragments broken from the pointed ends of needles I examined and tested the lines of magnetic force in every instance. To make a long story short, one result of these experiments was to prove that the cause of the poles of a bar magnet not being situated respectively at its extreme ends, but at some little distance short of them (as determined by the late Astronomer Royal), is due to the effect of lines of reactionary force which pass from the ends of the bar to meet those which come from the equator, the polar line marking the position where these forces collide and are ejected from the bar. It is absolutely necessary that I should explain how I arrived at this conclusion, because it has a very important bearing upon the cause of magnetism. When two similar poles of bar magnets of equal power were approximated the needle points, which had been placed on the line of the magnetic pole of each bar, fell, and they could not be made to resume their more or less vertical direction until they were placed over the line of contact of the two bars; if the magnets were of unequal power the polar line would be found on the stronger bar, and in proportion to the disparity of force between the two magnets it would be at a greater or lesser distance from the bar end. The other positions assumed by the needle points as they approached the new polar line from either direction were identical with those which they took on a single bar magnet when moved in the direction of the polar line. On the other hand, when two dissimilar poles were placed together almost all polar manifestations

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vanished, and the phenomena at the point of contact then tended to become like those at the equator of a single bar magnet; and they might be compared to the magnetic phenomena which are exhibited by a copper wire whilst conducting an electric current. By these and other experiments I have satisfied myself that one of the distinguishing differences which exist between magnetic and diamagnetic matter resides in the property which magnetic matter possesses, by the induction of reactionary force from the bar ends, of throwing outwards from its poles the force which has traversed it from the equator to the poles, which property diamagnetic matter does not possess, although a diamagnetic copper wire, as I have stated above, *whilst transmitting a current* is magnetic transversely to its axis.

In my letter of Sept. 28th I drew attention to the supposition that the molecules of soft iron are magnetic, but that they do not manifest polar phenomena because they have no definite arrangement, the polarity of one molecule neutralising that of another. Now this has a very important connexion with the condition of the columns of blood as they traverse the body. That this is so is readily recognised when we consider that the blood is composed of corpuscles and liquor sanguinis. The corpuscles in both the venous and arterial states are magnetic (as proved by Dr. A. Gamgee), but they float in a highly diamagnetic medium, and, as I have shown, they are more highly magnetic in the arterial state in proportion to the oxyhæmoglobin which they contain. Consequently, the blood columns may be compared to soft iron, with this difference—in soft iron the molecules have great capacity for magnetism and are closely packed together, whilst in the blood they are at most but feebly magnetic and are also comparatively widely separated. They are, moreover, during life undergoing *very rapid motion*, and therefore are but little liable to retardation from any influence which might be exercised upon them by the strongest magnetic poles. Again, if the blood is in the same state as soft iron there would be no definite arrangement of the molecules so long as they remain in the larger vessels. But when they are passing through the capillaries each corpuscle is most intimately associated with the terminal nerve fibres, and still more closely with the lines of terrestrial magnetic force, and the magnetic energy of the moving body in proportion to its intensity would promote action and reaction with these lines of terrestrial magnetism. Unless, therefore, we set aside one of the fundamental principles of magneto-electricity, it is obvious that these corpuscles are bound to originate currents of energy in the nerves in proportion to their magnetic force; and this notwithstanding the fact that the general direction of the polarity of the molecules aggregated into a mass may be modified by external force. I thus show that the magnetic force—i.e., the specific energy—of the blood corpuscles is manifested in the power which resides in them of inducing current energy in the nerves, or of doing work upon them, through the influence of the terrestrial magnetic force, when they are most widely separated from each other but most intimately associated with the nerves in the capillaries, and therefore at a time when they would be as little as possible subject to the influence of external force of the like nature.

I have now to consider the relations which exist between the molecules of matter in the liquor sanguinis, which are not of the nature of blood corpuscles, and an external magnetic force. Unquestionably the polarity—i.e., the specific energy—of each of these molecules must be elicited to the largest extent under this inductive influence; but here again I think there is abundant evidence that no such change in the condition of the molecules as Mr. Fotheringham supposes would occur, but rather that the natural powers of tissue formation would be increased. Thus:—1. Every molecule, in proportion to its specific energy, would tend to modify the direction of the artificial force. 2. The extent of this modification would depend (*a*) upon the number of molecules engaged in its production, (*b*) upon their state of aggregation, and (*c*) upon the state of rest or motion in which they existed. Now the parts of a body which would be principally affected by any artificial polar influences to which it was subjected would be primarily the formed structures, which are stationary and in which the molecules have been converted into solids of greater or less density, instead of fluids in which the minute molecules are freely suspended and float about more or less widely separated. Again, each of these tissues would continue to exercise the specific energy of its constituent molecules in definite lines, only with greater intensity in proportion as they are more closely packed and are subjected under such conditions to the polarising influence of the magnetic field in question. The molecules in the nutrient fluid would be similarly affected, and greater energy—or power to point in a definite direction—would be imparted to them, both by the influence of the artificial magnetic field and by the energy of the formed tissues. Thus each molecule would acquire its precise character and would be deposited in its normal situation whilst it was subjected to an abnormal amount of polarising force from these two sources, both of which must, more or less perfectly, coincide, and in proportion to any excess of artificial energy derived from an external source the tissue formation would be more compact and its energy greater. Therefore in all respects the abnormal force would be productive of beneficial rather than of injurious results. In substantiation of these views being correct I will refer to the process of crystallisation. In this process the molecules of several forms of matter may be held in one solution, and yet each form of matter will be attracted and deposited upon exactly that part of its primary crystal as will ensure oneness of matter and of form in each. Now it is very difficult to perceive how the original crystals exercise their natural powers in this manner until we recognise that each molecule exercises its specific energy through its specific polarity; and, further, that the whole of the elements engaged in the work are immersed in a magnetic medium. Then the whole process becomes clear enough, for as soon as some slight molecular motion has been set up and the magnetic field has been thereby disturbed the specific polarity emanating from the already formed crystals is exercised upon the adjacent molecules, and through them upon the molecules at a distance, with the effect of attracting and depositing some molecules upon their surfaces and of repelling others; thus the exact form of the original crystal is maintained. Now, the fact is well known that apparent rest of the mother liquor is essential to the formation of perfect crystals, and that matter of any kind when thrown into rotation tends to take the spheroidal instead of the angular form. The cause of this modification is, of course, due to the rotation, and I think that the conclusion is equally logical that the cells of the living body take the spheroidal form owing to the motion to which they are persistently subjected whilst they are being converted into the various tissues under the attractive and polarising influences emanating from the formed and forming tissues.

I think I have thus shown good and sufficient grounds for the view which I hold that neither the magnetic nor the diamagnetic forms of matter which compose the living body could be injuriously affected by subjecting it to the influence of the strongest magnetic field. I wish further to state that I had two objects in view when I added my quota to the correspondence in THE LANCET upon the Physiology of Death by Electric Shock. One was to explain the cause of the arterial system being comparatively emptied and the venous system gorged with blood; the other was to show that the force which, by its intensity, causes death is identical with that which, when its action is regulated by the motion of the particular forms of matter engaged in building up the material body, maintains the phenomena of life.

I am, Sirs, yours faithfully,

Reading, Oct. 19th, 1895. RICHARD C. SHETTLE.

P.S.—Since writing the above I have read in THE LANCET of Oct. 26th Sir George Johnson's letter. From the manner in which Sir George Johnson refers to my statement "that the absence of oxyhæmoglobin in the blood after death by electric shock is a fact beyond dispute," it would appear that he understood my words to imply that such a condition of the blood is only produced by electric shock. I did not intend to convey this idea, for this state of the blood is also produced by the prevention in any way of the due aeration of the blood, and, moreover, it is the natural result of the blood's normal circulation through the system. I regret that any want of clearness in expression on my part should have given rise to this misconception. My views as to the effect of the electric shock upon the oxyhæmoglobin may be best explained by reference to a very simple experiment—viz., the synthetic production of water by passing an electric spark through a mixture of the gases oxygen and hydrogen. When this is done the oxygen and hydrogen are combined and condensed into the highly diamagnetic liquid water, the magnetic character of the oxygen being temporarily suppressed. In my opinion, a physical change which is in character almost identically the same occurs in the

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blood under the influence of electric shock; for oxygen is instantaneously combined with a carbon and diamagnetic substance is formed, and the oxyhæmoglobin simultaneously disappears. With regard to the interest which centres in "What is Life?" I would remark that the cause and nature of animal life are as essential to scientific medicine as a knowledge is to the engineer, for the proper construction of his mechanisms, of the natural forces by which those mechanisms will perform their work. In a very few words I will endeavour to render my meaning perfectly clear. It is well known that in steam and electricity we have two great forces, and by a careful consideration of their nature forms of mechanism have been invented capable under their power of doing almost any kind of work. In the foregoing letter I have endeavoured to show the manner in which the arterial blood does work upon the force of terrestrial magnetism, and terrestrial magnetism upon it, and how in this way that great natural force is utilised so as to cause the evolution of those phenomena which are natural to the living body. But the mechanism of the living body is constantly being impaired by the introduction of material impurity, and therefore it is that a full knowledge of the mode in which matter is productive of its effects, and also a knowledge no less full of the essential nature and conditions of that life the establishment of which in its truest environment and most perfect state is desired, become of such vast interest to the physician as well as to the human race in general.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—Our "Battle of the Clubs" here has reached this stage—that there are four outside competitors against the present holder—no local man is contesting. There have been other candidates, but they have been induced to withdraw. The present holder refuses to take infants and girl juveniles under 4*s*. per annum. May we ask your assistance in appealing in the columns of THE LANCET to these men, urging them to withdraw? I may, perhaps, add that the outside men have tendered for the infants and other juveniles at 2*s*. 6*d*., 2*s*., and 1*s*. 6*d*. per annum. There is absolutely nothing personal against the present holder. This battle was brought on by the Loyal Benevolent Lodge requiring him to attend infants from three months and juveniles of both sexes to fifteen years for 2*s*. 6*d*. per annum. The local profession is united to a man. If we can only win this fight there are many other reforms open to us with every chance of success. I am, Sirs, yours truly,

FREDERICK PEARSE, Hon. Sec.

Portsmouth Medical Union, Pembroke-road,
Portsmouth, Nov. 17th, 1895.

To the Editors of THE LANCET.

SIRS,—Your Special Commissioner has hit upon one of the chief difficulties in dealing with the club question at Hull. When the medical aid system was first imported into —— it was almost unanimously condemned by the resident practitioners. Its first medical officer undertook his duties knowing that so far as —— was concerned he would have no support from his professional brethren. The result was that this gentleman obtained a free hand, without competition, amongst several thousand people, and could always obtain a consultant from other towns when the nature of his cases required a second opinion. Our united action was therefore inoperative, and gave the suspicion that we were actuated entirely by selfish and personal motives in our repudiation of an institution of a philanthropic character, supported by the tacit approval of the leading members of the profession in the district, and by many influential and respectable townsmen. Finding also that in a case of grave emergency it was difficult to adhere to our resolution we abandoned our position, not because we considered it unjustifiable, but because we were advertising an institution whose methods we disapproved. At present consultants are little touched by this contract question, though it will doubtless affect them in their turn if they countenance the present system of provident medical aid. The snake which they warm will sting them in the pocket. Sir Dyce Duckworth said plainly at Southampton what he thought of medical aid ethics, but the thing goes on in spite of his and other protests, and will go on until we learn that it is the common interest of the profession to protect itself from the imposition of a pauperised public. Many a consultant who would tremble to meet a homœopath does not hesitate to throw the mantle of his protection over the covering of a lay committee in practice for gain by a medical man, whom they make absolutely their servant, and whom they sweat or dismiss at their own sweet will. While this is the case combination to regulate club practice is impossible.

I am, Sirs, your obedient servant,

J. B. PIKE.

"INFANT CRIMINALS."

To the Editors of THE LANCET.

SIRS,—On your most valuable Annotation in THE LANCET of Oct. 26th last, on the above subject, I beg to offer a few remarks. The family medical practitioners' duties, of necessity more than any other class of the community, compel them to observe the daily domestic lives of mothers and children. The accurate information, stated in your remarks to be so much needed, can only be obtained from the general practitioner who has almost daily opportunities of observing from birth the different phases of existence. Looking at this vital question from a domestic and clinical aspect, I am of opinion that we are too conventional in our ideas of heredity, skull and face formations, and I fear these stand in the way of realising the full importance of infant mental management. We who have lived long enough have over and over again seen the cruel, lying, selfish, and vicious child of the fat, dirty, lazy, and fatuous mother sent to the infant school, where the ethical law has been habitually and objectively hammered in, and, despite the surroundings, not only has the child passed on into becoming a good mother of a family, but also by precept and example taught her children in the way they should go. What are much needed, as I have advocated in your columns and in other journals, are fixed laws for the homes, bearing the stamp of coöperation and authority. We who have so long moved among the masses feel what influence an applied system would have, and how willingly many would carry out rules of guidance while dealing with infant development and abnormalities. Further, while acting on "the hygienic imagination" with a "time-table" hung up in the homes, we know how much in the decent ordering of life dormant ethical law can be aroused and appreciated.

I am, Sirs, yours faithfully,

Londonderry, Nov. 2nd, 1895. WALTER BERNARD.

*** Dr. Bernard forwards to us with his letter a "time-table" to be hung up in cottage homes as a regulation of domestic affairs. There is no doubt that the orderly and accurate observance of the simple rules of health and cleanliness that he enjoins in the document would conduce to a sanitary and also a happy home.—ED. L.

"THE PICRIC ACID TEST FOR SUGAR IN THE URINE."

To the Editors of THE LANCET.

SIRS,—Pressure of work in connexion with the opening of my session and otherwise has hitherto prevented a reply to the recent letter of Sir George Johnson. I stated that if a solution of caustic potash and about an equal quantity of a saturated solution of picric acid be added to perfectly normal urine, a reddish colour is produced in the cold, and that when this solution is boiled the fluid assumes a deep claret colour. The same result ensues if the picric acid solution and the caustic potash solution be added to saccharine urine in the cold. On boiling, a deeper colour results in the latter case, the intensity of the colour depending entirely on the amount of glucose present. If the amount of glucose be small the colouring is not deeper at first than that which results in the case of perfectly normal urine. In this sense the picric acid test is, in my opinion, fallacious. Further, the solution gradually becomes of a darker colour on exposure. That Sir George Johnson himself maintains that the intensity of the carmine colouring is due to the proportion of sugar is evident from his recommendation of the picric solution as a quantitative test, the proportion of glucose being determined by the varying shades of colour. Sir George Johnson states that "the reddish colouration with picric acid and potash at the ordinary temperature in urine, whether normal or saccharine, is due entirely to

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kreatinin, the strongest solution of glucose having when cold no reducing action on picric acid and potash until after an interval of at least an hour." I agree that glucose alone has no reducing action on picric acid solution and caustic potash in the cold, hence I agree with Sir George Johnson that when a certain reducing action takes place in the cold, as above, the reducing agent is some other than glucose; but whatever this reducing agent be it causes as deep a colouring on boiling as the glucose does in small quantity. I further stated that if the urine be rich in uric acid the colour produced on boiling with picric acid solution and caustic potash is deeper than in the case of ordinary urine, and to this Sir George Johnson assents, only Sir George Johnson contends that the greater intensity of the colouring is due to kreatinin. All I would say on this point is that my investigations have not satisfied me that kreatinin has anything whatever to do with the colouration in question, the colouring produced, as above, on boiling being as deep without as with it. Under these circumstances I consider myself entitled to maintain that the picric acid test for sugar in the urine is an "eminently fallacious" one.—I am, Sirs, yours faithfully,

D. CAMPBELL BLACK, M.D.,
Professor of Physiology in Anderson's College Medical School.
Nov. 2nd, 1895.

"THE THERAPEUTIC VALUE OF INTESTINAL ASEPSIS."

To the Editors of THE LANCET.

SIRS,—As the therapeutic value of intestinal asepsis has formed the subject of some recent communications to THE LANCET, would you permit me to draw the attention of your readers to a method I suggested some time since[1] of administering, as an intestinal antiseptic, sulphurous acid in combination with other antiseptics and disinfectants? Dr. Emerson Reynolds, F.R.S., Professor of Chemistry in the University of Dublin, announced to the Royal Dublin Society in 1889 that if sulphur dioxide gas is brought into contact with camphor, the latter can liquefy the gas without any pressure whatever. The sulphur dioxide gas, he ascertained, could be kept in this liquid form in an ordinary well-corked bottle, at mean temperature, without sensible change; but was evolved freely and in relatively enormous volume from it when the liquid was exposed to the air. Recognising the importance of such a solution as a disinfecting agent, he further increased its efficiency as such by the addition to it of other volatile bactericides, such as benzoic acid, phellandrene (a terpene contained in Australian eucalyptus oil), &c. The resulting combination is patented under the name of Thiocamf. It is a unique, non-poisonous liquid, and although at present rather an expensive preparation for general use as a disinfectant, it has been largely employed as such, particularly, I believe, in the Library of the House of Commons during the influenza epidemic of 1891. For the last two and a half years I have given Thiocamf in a number of cases in which a gastric or an intestinal disinfectant was indicated, and with satisfactory results. It has been well tolerated, which cannot, as Dr. Leonard Williams remarks,[2] be always said of some of the most frequently used intestinal antiseptics. In the treatment of enteric fever Thiocamf, in my experience, is of much value. It appears to clear the tongue, relieve the intestinal distension, diminish the fetor of the fæces, and altogether to influence favourably the general course of the fever. I now prescribe it in gelatine capsules, each of which contains either one minim or two minims of Thiocamf, mixed with about eight minims of olive oil. The capsules may or may not, as required, be coated with keratine. I usually order one capsule three or four times a day. In some gastric cases in which an immediate action on the stomach or its contents is indicated the keratine coating may be dispensed with. Thiocamf is non-toxic. It is, I believe, a powerful germicide; and to this property, as well as to the probability, when given in keratine-coated capsules, of its reaching the intestine in a state in which its *volatility* may have some direct action, I would attribute the good effects of the drug. In addition to the advantages of Thiocamf as an intestinal antiseptic I may state that, as far as I know, the experience of those who have made a trial of it, internally and externally, in such cases as I suggested its employment in my preliminary note on its use, has on the whole been favourable. Satisfactory results have especially been noted when Thiocamf was given as a gastric antiseptic and antifermentative agent, and also when employed locally (in a 4 to 6 per cent. solution in olive oil) as a dressing for ulcers, &c., and as an antiparasitic application in the treatment of diseases of the skin, such as scabies and the tineæ.

I am, Sirs, yours faithfully,

GEORGE F. DUFFEY, M.D. Dubl.,
Physician to the City of Dublin Hospital; Professor of Materia Medica, Royal College of Surgeons in Ireland.
Dublin, Nov. 18th, 1895.

*** Dr. Duffey's letter raises an intricate question in regard to "patent medicines" and medicaments which are "patented." On general grounds it is manifestly inexpedient that the preparation of drugs for internal use should not be open to all chemists.—ED. L.

[1] Dublin Journal of Medical Science, May, 1893.
[2] THE LANCET, Oct. 26th, 1895.

THE LONDON SCHOOL BOARD AND MEDICAL CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—Since the School Board's resolution of May 30th, 1895, to appoint medical men "to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful" was passed, letters from no less than six London hospitals, including four hospitals for children, have, I believe, been sent to inform the board that medical certificates will in future be refused by the staff of such hospitals should the board's resolution be carried into effect. These letters from a large number of experts on the diseases of children, protesting against having the value of their certificates questioned by an ignorant school board superintendent, and possibly upset by medical men who for half-a-crown may be willing to undertake the duty, have been contemptuously ignored by Mr. Sharp of the School Board Attendance Committee.

Putting aside the question of medical etiquette involved (with which, by the way, Mr. Sharp has said the School Board has nothing to do), we may ask whether he and his colleagues are justified in treating the London hospitals with gross ingratitude. For many years the staff of hospitals, and of children's hospitals in particular, have rendered gratuitous and willing services to the School Board, both by keeping away children who might carry various forms of infectious diseases to school, and also by sending children there who but for them would be kept away by their parents. It is admittedly the case that parents will often keep children from school on a false plea of illness, and then when pressed by the board will bring them to the hospitals in hope of getting certificates of unfitness for school. Numbers of certificates for such children are daily refused by hospital physicians and thus the children get sent to school. These services to the board now turn out to be as thankless as they have been gratuitous. As regards children who are kept from school by medical men's orders, Mr. Sharp does not choose to know that a child may be well enough to run the streets and even to pick up a few pence for his poverty-stricken parents, and yet not be well enough to attend school.[1]

A child, according to Mr. Sharp, is a thing which must go to school unless it is ill enough to be kept in bed. The subjects of phlyctenulæ or of eye-strain and frequent torturing headaches; those with weak chests or irritable bladders; incipient choreics who, if neglected, may ruin their hearts and lives—are not within the ken of Mr. Sharp. If not in bed they must go to school, where they may be caned for having chorea, and if incontinent are not allowed to leave in order to obey the calls of nature. Cases of suspected epilepsy must be sent to school at the risk of becoming confirmed epileptics or imbeciles. Even imbeciles are not exempt, for quite recently attempts have been made to force to school a boy aged eleven who does not know that two halfpennies are worth a penny. The early symptoms of over-pressure—sleep disturbed by arithmetical nightmares; babbling of dates and capitals, and screams of fright; the causeless fits of passion or floods of tears; unwonted timidity and general nervousness—which are danger

[1] Report of Attendance Committee, Nov. 8th, 1895.

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signals to medical men, have no significance for Mr. Sharp. If the children are able to be in the streets they are able to be at school. Children whose intellects are naturally stunted through ancestral causes must still go to school and be dragged from standard to standard, for Mr. Sharp's educational wine must be poured into brain bottles hereditarily cracked without reference to the result. Worse still are the cases of precocious intellects, which may be wrecked by allowing their possessors to learn too fast. Rich people's children can be protected from this evil, but the children of the poor are denied a similar privilege. They are children, therefore they must go to school.

What is the reason of this zeal on the part of the board? We learn from Mr. Sharp himself that it is purely a question of £ *s. d.* In his report of Nov. 8th he points out that an increase of 1 per cent. in the average of attendances per year means an increase of nearly £4000 in the Imperial grants. Hence it is that the maimed, the halt, the imbecile, and the blind must be forced to school in order to provide the board with money to fritter away on fads and fancies or on the decoration of their stately palace on the Embankment with, for instance, stained-glass portraits of the members. All children are baits for Government grants, and lest the supply should fall short, medical certificates given by competent men are to be rendered valueless at the dictate of school board inspectors. It is not likely that men who may be willing for half-a-crown to become the board's medical servants will run counter to their masters' views and protect children whom they are called upon to condemn. Surely it is time that the voice of the profession generally should be raised against the intolerable persecution of defenceless children and parents by the board in the name of education. The School Board bids fair to become a very Juggernaut.

I am, Sirs, yours faithfully,

Nov. 18th, 1895. HOSPITAL PHYSICIAN.

MEASLES AND THE CLOSING OF SCHOOLS.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me whether I, as medical officer of health, have the power of closing parish schools for an epidemic of measles, or must it simply be a recommendation on my part?

I am, Sirs, yours faithfully,

A CONSTANT READER,

Nov. 20th, 1895. Medical Officer of Health.

*** The law, as prescribed in the Code of the Education Department as regards all schools receiving an annual Parliamentary grant, is as follows:—"The managers must at once comply with any notice of the sanitary authority of the district in which the school is situated, or any two members thereof, acting *on the advice of the medical officer of health*, requiring them for a specified time, and with a view to preventing the spread of disease, or any danger to health likely to arise from the condition of the school, either to close the school or to exclude any scholars from attendance, but after complying they may appeal to the department if they consider the notice to be unreasonable."—ED. L.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1257.)

MEDICAL ETHICS AND THE DISPENSARIES AT HULL.

THE friendly societies' dispensary at Hull was founded by eight lodges of the Hull and District Manchester Unity of Oddfellows. These eight lodges put down £1000 for that purpose. There were, however, four other lodges of the same society belonging to the Hull district who refused to take part in the forming of a dispensary. The reason they gave is all-important. They argued that it was against the rules of the Oddfellows' Society to employ the funds of the society for trading purposes. Thus four out of the twelve lodges that compose the Hull district of the Manchester Unity recognised that the opening of a dispensary was a trading enterprise. It is, therefore, at least an open question whether these friendly society dispensaries are not a distinct infringement of the rules of the societies by which they are established. Certainly, if a profit is made out of the services of the medical officers and the sale of the drugs, such dispensaries may well be considered as trading establishments. Perhaps the eight lodges of Hull would have hesitated to embark on such a venture had they foreseen that the four other lodges would not support them. But I was given to understand that financial responsibilities had already been incurred, and the large house in Saville-street, where the dispensary is established, had already been taken. All this occurred some twenty years ago, and several medical men with whom I discussed this matter admitted that some club officers had, by their neglect of club patients, brought upon themselves the creation of the friendly societies' dispensary. One of the leading physicians in Hull eloquently pleaded that the neglect of club patients was very wrong in itself, and that it was also a most short-sighted policy. Certainly it was very difficult to give proper attendance to patients who only paid 2*s.* 6*d.* a year. There would always be a tendency to neglect such patients, particularly if at the same moment there was a call from a private patient who paid proper fees. But, on the other hand, it was quite reasonable to suppose that the club patient, finding himself more or less neglected, would be tempted to join the movement for the creation of dispensaries where the medical officers would be employed by the members of the clubs, paid a fixed salary, and debarred from engaging in private practice. It is of no use to disguise the fact, mentioned to me at Lincoln, and forcibly insisted upon at Hull and elsewhere, that the creation of dispensaries by the friendly societies was a counter move against the club medical officers, who did not treat their club patients with the care and consideration to which they thought themselves entitled. A club officer at Hull told me he knew of clubs that paid their medical men only 2*s.* per annum per member, and he had himself had many members who paid him not more than 2*s.* 6*d.* a year. But—and this struck me as being a very significant declaration—he added that he always sought to impress upon them that they ought to pay more. In the rough and familiar form of argument, which can best be understood by that class of people, he was in the habit of pointing out that they could buy calico for underwear at a little more than 2*d.* a yard; but they all knew it was cheaper in the long run to pay about 4*d.* a yard. Nevertheless, the argument seems to be better appreciated when dealing with calico than with medicine; for the medical man in question had only the other day lost a club appointment because he wanted 3*s.* instead of 2*s.* 6*d.* a year per member. For my part, I could not but think such argument very degrading. The medical profession ought to place itself far above all such commercialism, and the attendance given to a patient should depend wholly and solely on his physical condition and not on the amount he pays. If once medical men lower their profession to the commercial level, then there is no reason why they should not be subjected to the laws of supply and demand and become liable, like other workers, to be ground down to mere starvation wages. The example of the highly educated and refined lady governesses who have so overstocked the market that they cannot earn as good wages as ordinary, uneducated cooks and chambermaids stands before the medical profession. If practitioners are going to compete against each other as to who can run a club at the lowest rate, the rate will soon reach that of starvation wages. Indeed, when I find on calculation that club medical officers give consultations and pay visits at 2*d.* and 3*d.* each, starvation does not seem far off. From all this it is only natural to conclude that great harm has been done by treating club patients hastily and neglectfully because they were only club patients and paid very little. Every conversation I have had on the subject has helped to show that, under all circumstances, the patient must be treated with every possible care and kindness. This is necessary, first and foremost, for the sake of humanity and the honour of the profession, and, secondly, because it is by far the wisest policy. Starting from this basis, club members must be made to pay much higher subscriptions if such practice is accepted as a means of livelihood; but it may be justifiable to accept club practice at a much lower rate of subscription if it be clearly understood that the work is to be undertaken as one of charity. In these cases it is absolutely indispensable to establish a wage limit.

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On the other hand, by taking club patients on the principle of giving them only scant attendance in exchange for scant pay, the medical officer discredits himself and his profession and helps to justify the formation of dispensaries by the friendly societies.

The Hull dispensary started by the six lodges of the Oddfellows' Society was very fortunate in the selection of its first medical officer. This gentleman gave great satisfaction to the patients, and consequently the number of members increased rapidly. But still the six lodges were not enough, so it was decided to take in other societies. Any friendly, trade, or other society within a three miles' radius was admitted on the payment to the funds of the dispensary of a sum of not less than 3*s.* per member per annum. Individual members were also admitted on payment of an entrance fee of 6*d.* and an annual subscription of 3*s.* 6*d.* The wives and families of this institution are admitted on the payment of 4*s.* 6*d.* for the wife and 5*s.* for the children, irrespectively of their number, if they are under eighteen years of age. No member, unless he be a widower, is allowed to subscribe for his children unless he also contributes for his wife. Widows whose children are entitled to medical aid at the time of the husband's death are charged only half the usual subscription, and if the mother also dies her orphan children are entitled to medical aid till they attain the age of eighteen years free of all cost. Juvenile branches, however, have been formed, consisting wholly of members under eighteen years of age, and they are only charged 1*s.* 6*d.* per annum per member. Such are the principal conditions of membership. As for the duties of the medical officer, he must have both medical and surgical qualifications and reside at the dispensary, where, however, he lives rent free. He is responsible for the state of the laboratory, surgery, and waiting-rooms, which are situated on the ground floor below his private dwelling; he must keep these places clean and in good order. Then he must submit to the secretary of the dispensary a list of all drugs and medicines required and check all bills. The rules further stipulate "that the medical officer or any other to be appointed shall not engage in private practice, professionally or otherwise, either with or without remuneration, shall devote the whole of his time to the sick members of this institution, and shall provide all necessary surgical instruments." The medical officer has not only to attend to the sick but he must examine all candidates desirous of becoming members of the institution.

Under the first medical officer the income of the dispensary rose to from £600 to £700. What became of this income? The annual income has fluctuated considerably according to the popularity of the medical officer, and I was informed that at one time it fell as low as £350. Doubtless a portion of the money balance has been spent on improvements of the property, and there are the expenses of delegates to congresses &c. But, on the other hand, the committee works gratuitously. The committee consists of one delegate for each hundred members of the different lodges. This makes a very numerous and unwieldy committee. Nevertheless, this committee has been wise enough to augment the salary of the medical officer whenever the number of members subscribing has notably increased. Thus the medical officer participates in the prosperity of the institution. The interest of both the medical officer and of the institution is to increase the number of healthy members and to decrease the drug bill and the prevalence of sickness. No sort of attempt, however, has been made to establish a wage limit. Families in receipt of incomes amounting to several hundred pounds a year are treated at this dispensary for an annual subscription of a few shillings. In some cases expensive drugs have to be employed, such as morphia &c. Some rich members are treated for very trivial ailments, slight indigestion for instance, and want doses of pepsine, which very soon exceed in cost the 3*s.* a year they pay. Counting the cost of attendance actually given to a well-to-do family, members of the dispensary, it was shown that at 2*s.* 6*d.* a visit, medicine included, this would amount for the year to £25; yet this family only paid subscriptions to the amount of 9*s.* 6*d.*, and in this case expensive drugs were necessary. Many other such cases could be given. Indeed, Dr. Cameron, the secretary to the Hull Medical Society, told me he knew many smack-owners who belonged to medical aid clubs, and that, in his opinion, 20 per cent. of the members of such clubs could afford to pay fees. Nor was this a haphazard assertion. Dr. Cameron has been medical officer to many clubs, some of them numbering as many as 1200 members, so that his estimate is based on an extensive experience. It was but a few weeks ago that he refused the post of medical officer to a "female lodge" of a large Benefit Society on the ground that the "whole system tended to defraud the medical practitioner."

At the dispensary of the Hull friendly societies the medical officer enforces a rule which acts as a check upon the wealthier members of the society. He absolutely refuses to see anyone out of his turn. If someone is in a great hurry and asks to pass before his turn he is told it does not concern the medical officer; it is a matter which the patients must settle between themselves, and if anyone wishes to see the medical officer out of his turn he must obtain permission from the others who are waiting and not from him. This is a very good system, and, short of a positive wage limit, nothing would better help to keep rich men away from these dispensaries than their treatment on a strict equality with all the other members. But this is not always done. As already described, very special privileges are given at one town to wealthy members, though they do not pay a penny more than the poor. Then I have made another and very interesting discovery, though I must not betray my informant by stating in what town I was told of the fact. Suffice it to say that it was not at Hull. Originally club practice was a means of establishing a reputation and obtaining private practice. Then the friendly societies combined and opened in a great number of towns dispensaries where they employ medical men at fixed salaries, but on the condition that they shall devote all their time to the dispensary and have no private patients. Now, I have just discovered that private practice is like the traditional lover; you may throw him out of the door, but he will come in again by the window. One club officer, at least, has confessed to the soft impeachment, and I have not the slightest doubt that many others are guilty of the same little failing. Of course they have no private patients, but they privately receive extra fees. Not a few wealthier members of friendly societies desire better attendance, longer consultations, and more elaborate, expensive, and carefully prepared medicaments than can be given in the rough and quick practice of a dispensary. To secure these advantages from the club officer, game, Christmas turkeys, small cases of wine, or even direct fees in money are forthcoming; and thus the dispensary officer can create for himself a sort of private practice, which, however, must be conducted strictly "under the rose." This discovery appeared to me to be highly edifying. It seemed like the triumph of a natural law over the artificial law enacted by the friendly societies' dispensaries. These institutions tell their medical officer that, however much he may distinguish himself, however popular he may become, he shall still continue to give the best of his abilities for an average pay of 2*d.*, 3*d.*, or 4*d.*, as the case may be, per visit or consultation. It is true that the yearly salary may be raised if the society prospers, but this implies more members, more work, and therefore such increase only represents more pay because more work is done; it does not mean better pay. According to the sixteenth annual report of the Friendly Societies' Medical Alliance in 1894 there were 4000 members of the Hull dispensary, and 20,000 medical consultations were given and 7000 visits paid. For these 27,000 consultations the medical officers were paid £208. This sum is equal to 199,680 farthings, which, if divided by 27,000, shows the pay given for the medical service only amounted to a very small fraction above seven farthings per consultation! I am not responsible for these figures, I quote them; they are printed by the friendly societies themselves, and they are evidently too evenly rounded off in thousands to be absolutely accurate; but a farthing more or less added to the average remuneration earned by the medical man per consultation would not in any way affect the principle at issue. The fact remains that the pay is miserably, shamefully insufficient, and it is only natural that medical officers, by hook or by crook, should occasionally obtain more. That they sometimes succeed I have been assured by at least one among them.

Hull, Nov. 12th.

MEDICAL MAGISTRATE.—Dr. Arthur Flint of Westgate-on-Sea, J.P. for the Cinque Ports, has been placed on the Commission of the Peace for the county of Kent, on the nomination of Earl Stanhope, Lord Lieutenant.

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MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Workhouse Dietaries.

THE Chorlton guardians have been experimenting for about seven months with a view to improve their diet tables. The old people often leave their food for want of a little change, and now it is to be varied by rice pudding and bread pudding. The young men have always had gruel, but are to have tea and bread-and-margarine occasionally, and the children are to have jam and fruit instead of margarine. The old dietary sanctioned by the Local Government Board cost 2*s.* 3*d.* per week for the old men, as against 2*s.* 3¾*d.* for the dietary now recommended. For the old women the cost will be increased from 2*s.* 1¾*d.* to 2*s.* 2¾*d.* For the young men the cost will be reduced from 2*s.* 4¾*d.* to 2*s.* 4¼*d.*, while for the young women it will be raised from 2*s.* 1¾*d.* to 2*s.* 2¼*d.* The chairman said the increase of cost was very little, while the variations in the dietary were considerable. One of the lady guardians said she "had heard the old people particularly say how pleased they were with their new dietary. The health of the inmates was considerably improved by a little variety."

Completion of the Gorton Sewage Scheme.

The purification of the sewage of the watershed of the Mersey and Irwell is slowly progressing. Gorton, with a population of 17,000 to 18,000, is a suburb continuous with Manchester, and until recently the drainage of the district went untreated into Gorton brook and Gore brook. But the Mersey and Irwell Joint Committee served the local board with notice to treat the sewage properly within a given time, and a scheme for so doing was prepared by Messrs. Lomax of Manchester. Land was bought near the Belle Vue Gardens, and the first sod was cut in 1893. The works comprise two detritus tanks with a total capacity of 110,000 gallons, and three precipitating tanks with a combined capacity of 1,079,000 gallons. The sewage on entering the works passes into the sludge or detritus tanks, having first received sufficient ferrozone to throw down the heavier suspended matter. It then flows into the three precipitating tanks, where the lighter suspended matter is deposited. Having thus been clarified, the sewage is conveyed by channels to six polarite filter beds having a superficial area of 2663 square yards, and the effluent at length finds its way into the brook. The works are designed to serve for an increasing population, and are capable of dealing not only with the sewage, but with a half-inch rainfall over the entire area built upon. At some future time it is intended to deal with the sludge deposited in the detritus tanks by means of filter presses, but that will be another undertaking. The present scheme has cost about £40,000. When the public opening took place on the 7th inst. the works had been in operation for three days, and the engineer said that on the previous night over a million gallons of sewage had been dealt with. "The effluent was remarkably clear, but they might yet have some impurities to contend with. If the polarite acted up to its reputation the organic matter would be reduced to a minimum." A gold key was presented to Dr. MacArthur, the chairman of the district council, from Mr. F. Candy, the managing director of the International Sewage and Water Purification Company, whose scheme has been adopted.

Baby Farming in Manchester.

An inquest was held on the 16th inst. on the body of an illegitimate child fifteen months old. The mother had placed the infant in the care of a woman in Hulme about twelve months before, paying 6*s.* a week and seeing the child once a month. This woman put the child into a burial club, but said she knew she would not be entitled to draw the money if the latter died while the mother was living. She had "minded" nine young children, of whom seven were illegitimate. Six out of the seven were insured by her, and three of them had died. She had had two to nurse at one time, and held no licence to nurse illegitimate children. Dr. Ashby, who made a necropsy, said the body was well nourished, but the bones were rickety, and the child died from asphyxia suddenly produced—as in spasm of the glottis. A neighbour gave the woman a good character, but no information was given as to the feeding and general management of the child, or as to the sanitary or insanitary condition of the surroundings. The coroner said it was dangerous practice to take in illegitimate children with proper authority, because if the medical man had not been satisfied that death had been due to natural causes the jury would have thought it, to say the least, a very suspicious case in view of the deaths of the other children she had had under her care. Whatever blame may attach itself to a girl with an illegitimate child to keep, her position is pitiable, for she can seldom earn her living while the infant is with her; if placed in the hands of one of these women the chances of the child living through infancy are small. Closer inspection and control are needed if the frightful mortality of these waifs is to be reduced.

National Association of Master Plumbers.

The first half-yearly meeting of the above association was held in Manchester the other week, and there was a large attendance of members. The President said that the former gatherings at Leeds and Sheffield had been concerned with the establishment of the association, but that the present meeting would be directed to an effort to remove the evils long known to exist in their craft. "Science represented by the medical world, had at last acknowledged that the plumber's work, thoroughly carried out under the guidance and direction of a competent plumber, was one of the most essential requirements for the sake of the public health." It is delightful to see "the craft" concerning which the medical world has often had something to say waking up apparently to a sense of responsibility for the public health. But if the public is to have good plumbing it must be prepared to pay more than the heavy charges often borne for bad work, for the address goes on to say "This recognition had brought forward so much more individual talent with special training and long study as entitled *bonâ-fide* master plumbers to be ranked among the professions, and entitled them to an equivalent for the increased confidence of the public and an increased remuneration for their work." This sentence seems a little mixed, but evidently the recognition of the fact that plumbing has an important bearing on health is to carry with it an elevation of the social status of the master plumbers, who are to rank with the lawyers, medical men, and divines, and to receive increased pay. In all events it will be satisfactory if from henceforth they prove themselves worthy of the increased confidence of the public. The chief paper read, with the discussion that followed, was intended to prove that corporations ought not to engage in plumbing work, and counsel's opinion was to be taken as to its legality. It appears that the membership of this new association is "spread over fifty-one cities and towns and sixteen branches." After this plumbing will surely cease to be a by-word and a reproach. In the poorer districts of Manchester the "pail system" is still in vogue, but some time since a resolution was passed in the city council in favour of making water carriage universal. The proposition, however, was not well received at a recent town meeting. The objections were various, cost being one. Much correspondence has appeared in the papers, and in addition to the cost, the great discomfort and inconvenience to all, the least, suffered by numbers during the long frost of last winter from the freezing-up of the waterclosets are brought forward as objections. Large numbers of the new closets are outside, and indeed the smaller houses are seldom adapted to their being placed inside, so that every winter the same trouble may be expected. It seems that the plumbers have not yet outlived their old reputation, for one writer dreads the consequences of the whole city being given over to "the plumber fiend." This is a strong term and no doubt undeserved. The plumber is powerful for good or evil, and it may be hoped that he will in the future always do good and conscientious work even when it is hidden.

Nov. 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Presence of Visitors in the Operating Theatre.

IN the Durham University Journal attention was recently called to the crowded condition of the area of the operating theatre at the Royal Infirmary, Newcastle-upon-Tyne. It was stated that the students could not in consequence see the operations. Visitors are always most welcome at operations,

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and it is to be hoped they always will be so; but there should be no crowding round the table so as to obstruct the view of those who occupy the benches or to inconvenience the operator. It would seem hardly necessary to add that neither visitors nor anyone else should carry on an irrelevant or other conversation during a surgical operation, or in tones sufficiently audible to be heard by the surgeon make remarks of any kind upon the steps of the operation, or describe what has been done on similar occasions by some one else. Silence is asked for during operations, and surely those senior members of the profession privileged to occupy the area should strictly observe the regulation. Example is better than precept, and silence cannot be looked for from young and eager students if a bad example is set them by those older than themselves, who ought to know better.

Drink and Crime.

In charging the grand jury on Monday at Newcastle-upon-Tyne Mr. Justice Grantham said he "doubted very much if there was any city in England with the population of Newcastle which at the present time could present such a clean bill of health to one of Her Majesty's judges when he came down for the purpose of assisting them in the administration of justice. He could not suppose, of course, that Newcastle was free from the vice of intemperance entirely, but it certainly did speak a great deal for the temperate character of the people that no crime which had its origin in drink was to be brought before them." The late Mayor of Newcastle published statistics showing that for its size Newcastle was the most drunken city in England, and these statistics have never been shown to be incorrect. Most people who have gone into the question tell us that drink is the great cause of crime, and there can be no doubt whatever that drink is a great demoralising influence; but is it the chief cause of crime? If so, Liverpool should be ten times more drunken than Newcastle, for there Mr. Justice Collins has to try seven cases of murder and eight cases of manslaughter, while here there are only three criminal cases to be tried—a burglary, a larceny, and an offence under the Criminal Law Amendment Act.

Newcastle-upon-Tyne, Nov. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

AT the meeting of managers of the Royal Infirmary on Monday the treasurer submitted a statement of the income for the financial year which ended on Sept. 30th. The ordinary income amounted to £31,086, showing an increase of £1400 over the preceding year. The various increases and decreases were specified and satisfaction was expressed that the church collections had increased as the result of the special appeal made to the various ecclesiastical bodies. The average number of patients in hospital had been 711. There had been a considerable decrease in expenditure in several directions, mainly in various articles of food, but also in dressings and medical appliances.

University College, Dundee, and St. Andrews University.

At a meeting of the council of University College, Dundee, held this week, the question of the future relations of the College to St. Andrews University was discussed. It was decided to write to Her Majesty's Commissioners pointing out that the original agreement, which had been submitted to, and approved of by, all the interested parties, and which had been adopted after careful consideration on both sides, had always been regarded by, the College authorities as just and fair. The council were willing to consider any suggestion which might be made by the Commissioners with a view to remove the difficulties which at present existed between the two bodies, and they were prepared to meet the Commissioners or the University Court to discuss anew any proposals which might form the basis of a new agreement.

Stirling Royal Infirmary.

The annual meeting of the subscribers to this institution was held this week. The report showed that the number of in-patients during the year had been 282. The income had been £1106, and the expenditure £1173.

The Edinburgh Obstetrical Society.

This society held its first meeting for the session 1895–96 on Wednesday of last week. Dr. Barbour gave a short valedictory address, and some other communications followed. Dr. Ballantyne (Dalkeith) was elected President in succession to Dr. Barbour.

Notification of Infectious Diseases Act.

An action of a somewhat unusual character has recently been brought against Dr. James Stewart of Maryhill, Glasgow. The pursuer alleged that when he was lying ill in a public lodging-house suffering from pneumonia and under the care of another medical man Dr. Stewart became aware of his illness and notified to the sanitary authorities that he was suffering from small-pox. As a result of this he was removed to Knightswood Hospital, where, he contends, he acquired typhus fever. For the loss of time and personal annoyance and risk he claimed the sum of £200 as damages against Dr. Stewart. The sheriff, however, has dismissed the action without allowing it to go to proof. His lordship remarks that no malice is alleged by the pursuer, and contends that any member of the public, whether a medical man or not, is entitled to give information to the authorities of the existence of any case of infectious disease. The position of the public towards such cases is, according to the sheriff, the same as their relation to any criminal offence. For these and other reasons he decides that the pursuer, even on his own statement, has no valid ground of action against Dr. Stewart. The action having terminated in this fashion, the defender had no opportunity of stating his own position. In a letter in the public prints Dr. Stewart explains that he received a request to call at the lodging-house, where he found the pursuer suffering from typhus fever, and he at once notified the case. The patient was removed to hospital, where at first he was regarded as suffering from malignant small-pox; afterwards, however, the disease was recognised as typhus fever. Dr. Stewart is naturally indignant at the absurd suggestion that he obtruded himself upon the patient for the sake of the small statutory fee payable by the local authorities.

Stranraer Cottage Hospital.

The usefulness of this institution has now been demonstrated by a three years' experience, and the annual report for the present year gives a favourable account of the condition of the hospital from all points of view. The financial statement shows a balance on the right side of the account. Sir Mark Stewart, M.P., is the President of the Hospital Committee.

Medical Preliminary Examination in the Scottish Universities.

The Joint Board of Examiners for the Scottish Universities have issued a statistical report showing the passes and failures in the recent preliminary examinations in arts, science, and medicine in the four universities. The results of the medical preliminary examination are as follows: In Edinburgh University, of 128 candidates 72 passed and 56 failed; in Glasgow University there were 41 passes out of 92 candidates; in Aberdeen University, of 26 candidates 14 proved successful; and in St. Andrews University the entrants numbered 7, of whom 4 passed.

Bacteriological Laboratory in Glasgow.

The health committee of the town council has decided to establish and equip a complete bacteriological department in the sanitary buildings now in course of erection. The laboratory is to be in charge of an expert in bacteriology.

Greenock Eye Infirmary.

At the annual meeting of the trustees on the 14th inst. Dr. Cluckie reported that there had been 3151 patients during the year, an increase over last year of 307. This number included 185 in-patients. Dr. Cluckie expressed the opinion that the eyes of school children were often overtaxed and complained of the action of the School Board officials in bringing pressure to bear on children to attend school when rest had been ordered by the medical adviser. The report by Dr. Robert Fullarton showed a record of 127 cases of diseases of the throat, 71 cases of diseases of the nose, and 542 cases of ear disease. The treasurer's statement for the year gives a balance of £40 in favour of the hospital, the total income being £810 8*s.* 9*d.*

Outbreak of Swine Fever.

A somewhat serious outbreak of swine fever has occurred in the neighbourhood of Greenock. At the instance of an inspector from the Board of Agriculture eighty pigs have been destroyed in one district and sixty in another. It is to be hoped that these vigorous measures will have stamped out the disease.

Edinburgh Royal Medical Society.

The following gentlemen were elected office bearers: Presi-

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dents: J. E. Bowes, M.B., C.M.; W. M. Taylor, M.B., C.M.; Kenneth Maclean, M.B., C.M.; H. J. F. Simson, M.B., C.M. Secretaries: J. Brunton Blaikie and Scott Carmichael, M.B., C.M. Chairman of Finance Committee: Edwin Bramwell. Curator of Library: Henry Fowler. Curator of Museum: T. Anderson. Chairman of Public Business Committee: W. T. Ritchie. Editor of Transactions: W. A. G. Alexander, M.B., C.M. Treasurer: J. R. Young. Sub-librarian: A. P. Ormiston.

Nov. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Regius Professorship of Surgery at Dublin University.

THE appointment of a successor to the late Sir George Porter as Regius Professor of Surgery was delayed for a very long time owing to the fact that the two candidates, Sir William Stokes and Dr. Charles Ball, had each received an equal number of votes from the eight members of the Trinity College Board. The question was referred to the Academic Council, who declared in favour of Dr. Ball, cancelling the objection to his nomination, which had been made on the ground that he filled the office of University Anatomist. The Board met again on Saturday, the 16th, and settled the matter at last by electing Dr. Charles B. Ball Regius Professor of Surgery. Much interest was taken in the result of this election for many reasons, including the fact that the appointment of Sir William Stokes would have entailed his resignation of the Professorship of Surgery at the Royal College of Surgeons, for which last position there would have been many applicants.

The late Dr. Edward Kough.

The death of Dr. Edward Kough, which took place on the 10th inst. at his residence, Albany-grove, Monkstown, is fully recognised as a serious calamity, not alone to society in the district in which he lived, but also to the general public of Monkstown and Blackroch. Dr. Kough, who was a graduate, scholar, and M.A. of the Dublin University, practised originally at Windlesham, Surrey, but has for some years resided near Dublin, filling the position of vice-chairman of the Commission of the Blackroch township. His funeral, which took place on the 14th inst., was very largely attended.

Dublin University Experimental Science Association.

Mr. A. C. O'Sullivan, M.A., F.T.C.D., the recently appointed University Lecturer on Pathology, delivered the opening address at the inaugural meeting of the association held on Monday evening, the 11th inst., the Provost occupying the chair. He chose as his subject "Scientific Education" and in a short paper advocated strongly the importance of early training in practical experimental work as distinguished from training by books.

Mater Misericordiæ Hospital.

The metal anastomosis button introduced into surgery by Dr. Murphy of Chicago has not apparently commended itself very highly to Dublin surgeons, for although Dr. Murphy was good enough to demonstrate its action on the dead subject here during the summer, no case in which it has been employed has as yet been reported in Ireland. The following note is therefore of interest. A delicate woman aged fifty-five was recently admitted to the Mater Misericordiæ Hospital under the care of Mr. Coppinger suffering from pain and tumour in the right iliac region. An exploratory incision was made and the presence of a narrow stricture at the commencement of the ascending colon discovered. On account of the patient's general condition immediate excision of the diseased intestine was considered inadvisable. On the other hand, the obstruction being situated beyond the ilio-cæcal valve rendered the case an apparently suitable one for the use of some rapid method of relieving the symptoms. A button of large size and constructed of aluminium was accordingly employed, and a lateral anastomosis of the ileum with the transverse colon established without difficulty or delay. The operation took place on Tuesday, the 12th; there was no subsequent shock or elevation of temperature, and the patient now seems well and expresses herself as much relieved. The bowel has been emptied twice, but there has been no appearance of the button up to this (the eighth) day. The case is novel and interesting, for as the intestine was not closed the button may unfortunately drop back into the ascending colon and become engaged in the stricture at its commencement or may pass into the ileum and be thus carried to the stricture.

Belfast Royal Hospital.

The annual meeting of the supporters of the Belfast Royal Hospital was held on Monday, Nov. 18th. From the report I learn that the number of patients treated in the hospital during the year amounted to 2655, while during the same period there were 22,956 extern patients. The expenditure for the year has been £9073 18*s.* 6*d.*, and the receipts £8731 16*s.* 8*d.* The expenditure has, therefore, exceeded the receipts by £342 1*s.* 10*d.*, but as there was a balance in favour of the hospital at the end of the preceding year the actual debt at the end of this year is £142 4*s.* 10*d.* Attention is again called to the increase in the subscriptions of the working classes. From the medical and surgical staff report I learn that of the cases admitted into the wards 968 were medical and 1097 surgical, while in the extern department 4831 were medical and 16,173 surgical. One hundred and thirty-eight students attended in the wards for clinical instruction during the winter and one hundred and ten during the summer session. Special reference was made at the meeting to the great loss sustained by the hospital by the death of Dr. Ross. One of the speakers drew attention to the fact that the item of wines and spirits and aerated waters in their expenditure was £137 19*s.* 8*d.*, and that the sum spent in medicine and instruments was £1108, or, in other words, that the cost of wines, spirits, and aerated waters amounted to one-eighth, or 2*s.* 6*d.* in the £, of that of medicines and instruments. The secretary of the medical staff, in reply, stated that in round numbers about £100 was spent in spirits and wine, and he believed that was the smallest sum spent in that way by any hospital, taking the numbers into account, in the United Kingdom. The sum was gradually diminishing; thus, in the previous year it was £150, and when he joined the staff first the stimulants cost £435 per annum. The actual amount spent in aerated waters, whisky, wine, beer, and everything of that kind amounted to about ½*d.* per day per patient in that institution. Stimulants were used only in critical and severe cases.

Belfast Medical Students' Association.

At the first general meeting of this society, held on Nov. 15th, Dr. Donnan, who was in the chair, suggested that a letter of sympathy should be sent to Mrs. Ross in reference to the death of her husband, Dr. Ross. This was unanimously approved of. The following officers were elected for this session:—President: Dr. Magowan. Vice-presidents: Dr. Drummond, Dr. Fullerton, and Dr. Donnan. Hon. Secretary: W. A. Rice, B.A. Assistant Secretary: R. Hilton. Treasurer: O. E. McCutcheon, B.A. Committee: J. McCully, A. B. McMaster, M. L. Rowan, G. Stevenson, Miss Collier, R. J. Johnstone, B.A., A. Knight, D. Brown, Miss Tate, and G. Anderson.

Changes in the Belfast Royal Hospital Staff.

The death of Dr. Ross, senior physician to the Belfast Royal Hospital, will occasion considerable changes in the staff. Dr. Strafford Smith will have no opposition in being promoted from the assistant physicianship, and it is thought Dr. W. Calwell, who for the past two years has discharged most effectively and to the entire satisfaction of the whole staff the duties of registrar, will be appointed assistant physician. There will be a good many candidates for the registrarship—a post which is in the gift of the staff.

Lunatics in the Newry Workhouse.

At a meeting of the Newry guardians, held on Nov. 16th, a report was read from Mr. O'Farrel, Inspector of Lunatics and Commissioner of Control, Dublin, in reference to his inspection of the workhouse on Nov. 2nd, 1885, in which he states that the greatest blot on the arrangements is the survival of those cold and cheerless idiot cells, which have been repeatedly condemned since 1843. Any patient, the inspector says, who needs a separate cell is not a fit subject for detention in a workhouse, and he or she should be removed, not as a dangerous lunatic, but on a house form to the lunatic asylum of the district. As this question of the suitability of workhouses for the treatment of lunatics is so constantly being discussed at present it is felt by many that a commission should be appointed to inquire into the whole matter.

Nov. 23rd.

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PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Dr. Dujardin-Beaumetz's Laboratory.

THE therapeutical laboratory attached to the wards of the above-named distinguished therapeutist will, at the request of Dr. Albert Robin, be forthwith transferred from the Hôpital Cochin to the Hôpital de la Pitié. This transference includes the annual subvention of 2000 francs allowed by the Municipal Council.

The Diagnosis of Infectious Diseases.

The Municipal Council of Paris has decreed that the diagnosis of diseases caused by the invasion of known micro-organisms shall henceforth be undertaken by the bacteriological laboratory of the city, any practitioner plying his art in the capital or in the Department of the Seine being entitled to send specimens for the purpose.

The Weight Development of Prematurely Born Children.

In a thesis for the M.D. degree of the Paris Faculty (July, 1895) Dr. Potel supplies some instructive information on this subject. His researches bear upon 173 infants, born between the periods of six and a half to eight months of gestation, and who left the Paris Maternity alive and well after an average sojourn for the six-and-a-half month children of eighty-two days and for the eight-month children of twenty-eight days. Of the fifty-six children born at six months and a half eleven survived (mortality 80·4 per cent.). The average daily gain in weight was 9·4 grammes. Of 131 infants born at seven months 41·9 per cent. survived, the average daily gain of weight being 11·5 grammes. Of 53 children born at seven months and a half 69·9 per cent. survived, and the average daily gain of body weight was 13·8 grammes. Finally, of 110 children born at eight months 64·5 per cent. survived, and the average daily weight-gain was 22·8 grammes. The following table shows the average body weight at birth :—

1408	grammes	at	6½	months.
1700	,,	,,	7	,,
1900	,,	,,	7½	,,
2150	,,	,,	8	,,

The loss in weight during the first three days of extra-uterine existence is not more marked than in infants born at term, but it constitutes a serious event in these prematurely-born beings, for restoration to the original weight is a more prolonged business, and it is precisely during this period that the mortality is the heaviest. The offspring of parents free from hereditary taint are, however, more resisting. The gain in weight begins later and proceeds at a slower pace the more prematurely the child is born. Thus in six-and-a-half-month children a gain in weight is frequently noted only after the first fortnight. The nearer to full term the infant is born the closer does the progress in weight approach that of the normal child. The artificial means employed to sustain vitality in the prematurely born—incubators, sterilised milk, "gavage"—enables us to save many a life.

Foreign Students and the Paris Faculty.

The *Bulletin Médical* is responsible for a piece of information that will prove unpleasant reading to foreign students who, wishing to begin their medical curriculum at the Paris Faculty without having to pass the examinations for the *baccalauréat* (these being the equivalent of our preliminary or matriculation examinations) ask for the *équivalence*, or, in other words, to be excused the *baccalauréat*. It is notorious that many foreigners—principally Russians, Roumanians, and Greeks — have hitherto been granted the *équivalence* on the strength of having undergone in their own country examinations in general education which cannot compare as a test with the French *baccalauréat*. A special commission appointed some months ago by the Minister of Public Instruction has just reported on the question. All students asking for the coveted *équivalence* have accordingly been told that this indulgence can only be granted in view of their extra curriculum being pursued at a provincial faculty. Interviewed on the subject, Professor Brouardel, the Dean of the Paris Faculty, is said to have remarked that such an extreme measure has been forced on the authorities by circumstances. He states that the faculty is organised for the education of only 3000 students, whereas the number of students is actually 6300, of whom a fifth last year were foreigners. Subjects for dissection are becoming scarce, and overcrowding is interfering materially with the efficiency of the teaching. In the interest of native students the measure just taken was inevitable. The new regulation means that any Englishman or other foreigner unprovided with a diploma in medicine who may be desirous of studying in the Paris Faculty must, despite his matriculation or preliminary examinations passed in his native country, either obtain his *baccalauréat* or be content to pursue his studies at a provincial faculty.

Nov. 19th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Paralysis.

AN interesting lecture on the Etiology of Paralysis was delivered by Dr. Hirschl at a meeting of the Society for the Study of Neurology and Mental Diseases. His observations were made on 200 cases, in 50 per cent. of which the existence of syphilis was ascertained, in 25 per cent. it was regarded as probable, in 12 cases there were objective symptoms of syphilis, and in 19 per cent. the exciting cause was not discernible. 175 men affected with paralysis procreated 233 living children, of whom 154 died at an early age; the wives miscarried 106 times. The uniformity of the appearances of the disease, which was represented by diffuse interstitial encephalitis and by peri-encephalitis, suggested an etiological connexion, and the fact that all factors except syphilis were excluded pointed to syphilis as being the primary cause. Dr. Hirschl laid much stress upon the anatomical conditions in paralysis and their relation to the pathology of syphilis. The anatomical lesion of paralysis is, as a rule, described as cortical encephalitis beginning with chronic atrophy of the cortex. Some symptoms of paralysis occur only in tabes, a disease which is of syphilitic origin. Immobility of the pupils is a symptom met with after syphilis of the brain, and may also be observed in paralysis and in atrophy of the optic nerve. In some cases mercurial treatment produces an improvement. Paralysis is, therefore, a result of syphilis just as gumma is, and the occurrence of paralysis in children without antecedent primary disease resembles the occurrence of tertiary symptoms without antecedent primary and secondary manifestations.

The Sanitary Report for 1892.

According to the report of the Statistical Commission the number of Austrian hospitals in 1892 amounted to 625, with 38,496 beds, and 371,811 patients were admitted. Of these, 85·9 per cent. were discharged recovered or improved, 5·1 per cent. were incurable, and 9 per cent. died. The report mentions 27,892 cases of syphilis and 18,879 cases of tuberculosis. In twenty-eight public and six private lunatic asylums there were 17,936 patients in 1892, against 16,583 in 1891. Of these, 8·2 per cent. recovered, 19·8 per cent. were incurable, and 10·1 per cent. died; 14·2 per cent. suffered from mania, 10·7 per cent. from melancholia, 30 per cent. from paranoia, 26·6 per cent. from idiocy, 10·6 per cent. from mental disorder with paralysis, and 7·9 per cent. from mental disorder with epilepsy; 56·4 per cent. were unmarried, 36 per cent. married, and 7·6 per cent. widowed. As to religion, 92·4 per cent. were Roman Catholics, 1·8 per cent. Protestants, and 4·9 per cent. Jews. 10,013 children were admitted to the foundling hospitals, and of these 6·02 per cent. died. There were 1543 persons in seventeen asylums for the deaf and dumb. The number of institutions for the blind amounted to ten, with 795 inmates, of whom 14·9 per cent. had been born blind. Cretins numbered 17,541. For each 100,000 of the population there are 78 lunatics, 119 deaf-mutes, 66 blind persons, and 74 cretins. The report also mentions 239 bathing institutions, which have been resorted to by 250,692 persons. There were 4082 qualified and 2472 unqualified medical practitioners and 1531 surgeons of the old school. There were 3042 deaths per 100,000 of the population, the highest mortality having been registered in Galicia. Of 100,000 cases of death, 26 resulted from small-pox, 38 from measles, 58 from scarlet fever, 57 from enteric fever, 77 from dysentery, 72 from whooping-cough, and 120

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from diphtheria. Cholera caused 125 deaths, of which 120 occurred in Galicia, 3 in Lower Austria, and 2 in Styria.

Dissolution of the Municipality of Vienna.

Dr. Lueger, the famous leader of the Anti-Jewish Party, who, as I have already reported, was elected mayor, has not been acknowledged by the Crown. A second election having yielded the same result, the Government dissolved the municipality and appointed an official to administer its functions. Among the medical profession this fact has caused general sstisfaction, Dr. Lueger, who is a lawyer, being very unfavourably disposed towards medical men, in proof of which I may quote his well-known saying: "Any woman who gathers herbs is to be preferred to the medical men, for they poison people with drugs."

The Relation between Recent Syphilis and Jaundice.

Professor Neumann has contributed to the *Medicinische Presse* an article on the occurrence of jaundice in cases of recent syphilis. French authors, such as Gubler, have supposed jaundice appearing in recent syphilis to be due to an exanthem of the intestine and the biliary passages. During the last three years Professor Neumann has observed fourteen cases; in eight of them jaundice and exanthem occurred at the same time, and in three cases after the eruption. One of these patients died, and post-mortem examination showed numerous prominences of a yellowish colour on the surface of the liver; the peripheral parts of the lobules were green, and the central parts reddish. He believed jaundice in these cases to be due to changes in the wall of the vessels.

Medical Advertising.

Last week the Medical Chamber summoned before it the gentlemen who continue their advertising in the lay press in spite of the fact that it has been declared dishonourable in a professional sense. Seventeen delinquents attended in response to the summons and were reprimanded by the president, but appealed to the Government, which will now decide the question.

Cholera in Galicia.

During last week 66 cases of cholera with 41 deaths were reported from the districts of Czortkow, Husiatyn, Kamionka, Trembowla, and Tarnopol, making a total of 303 cases with 192 deaths since the commencement of the outbreak. In the preceding week there were 57 cases and 32 deaths.

Nov. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

An Academico-Clinical Odyssey.

DR. BACCELLI, in his capacity of Minister of Public Instruction, has just made a tour of some of the minor seats of learning in the Peninsula, beginning with Ravenna, which, though not an academic town, is in its monuments and its Biblioteca Classense full of academic interest, and thence proceeding to Ferrara and Modena, at both of which universities he made a minute examination of their teaching, particularly their clinical resources, and addressed their professorial and undergraduate *personnel* in words of hope and encouragement. His countrymen delight to regard his Excellency as an ideal Education Minister, for not only are his attainments of the highest academic order, extending to an enlightened love of the classics, but he interests himself in fine art and in physical development, and, as a primary condition of all healthy and sound work, in the hygienic amelioration of school and college, private dwelling and public institution. At Ravenna he had much of practical advice to give as to its water-supply and the *risanamento* of its neighbourhood; at Ferrara he had not only to expatiate on the sanitary defects of the sombre mediæval town, but also on the rehabilitation of the University and the reinforcement of its teaching power, while at Modena an inspection of the backward state of the laboratories and clinical wards drew from him a promise to enlist Government support in their behalf. "Minor seats of learning" these historic capitals doubtless are, but they are not on that account without their honourable record in the annals of the healing art, and Dr. Baccelli was able, from his great command of medical history, to enumerate their contributions to the common fund of professional knowledge. Modena, for example, could boast of the epoch-making Francesco Torti, whose classic work on "Febres Periodicæ Perniciosæ" was the first to put their description and therapeutics on a rational and truly Hippocratic basis. It was through him that cinchona bark in malaria scored its first decisive victory. Other names (Ramazzini, for instance) were given by Modena to medicine, and yet more hardly less distinguished might still be added if the resources of the school were equal to the educational demands on them. But this is a perennial subject of complaint in Italy, by no one more eloquently set forth than by Professor Angelo Celli, whose inaugural address at the opening of our academic year put in striking relief the inferiority of even the Roman school to the humblest of its class in the English provinces.

A Touching Tribute to the "Martyr Nurse."

Readers of THE LANCET of Nov. 24th, 1894, can hardly have forgotten the thrill of horror with which, just a year ago, the assassination of Suor Agostina in the Santo Spirito was received. On the 13th inst. a tablet was unveiled in her memory in the Cappella del Crocefisso in the church attached to the hospital. It is surmounted by a medallion presenting a finely modelled bust in bas-relief of the Sister, and bears the following inscription:—

D. O. M.
A Maria Agostina
Suora di Carità di S. Vincenzo De Paoli
Angelo d'innocenza, di pietà, d'amore
La cui vita fu tutto un sacrifizio
La cui morte un martirio
Uccisa per odio al sacro abito
Con sette pugnalate da mano assassina
Nell'Ospedale di S. Spirito in Sassia
Il dì 13 Novembre 1894
Da tutta Roma compianta
Seguita da immenso popolo alla tomba
Il comitato parrocchiale di S. Pietro
in Vaticano
a perenne memoria della martire
della carità, del dovere
P.

(To God Allgood and Almighty. To Maria Agostina, sister of Charity of Saint Vincent De Paul, an angel of innocence, of piety, of love, whose life was all one sacrifice, whose death was a martyrdom, slain as she was, through hatred to the holy uniform, with seven stabs by a murderer's hand, in the hospital of the S. Spirito in Sassia, 13th November, 1894, lamented by universal Rome, followed by an immense crowd to the grave, the parochial committee of S. Peter on the Vatican have placed this monument to the undying memory of the martyr to love and duty.) This admirable specimen of epigraphy, showing as it does how modern Italian lends itself almost as felicitously as ancient Latin to the literature of "storied urn and animated bust," sins in one particular and one only, in its reference to the object that directed the "mano assassina." That object was not "odio al sacro abito" (hatred to the holy uniform), but, as THE LANCET pointed out at the time, resentment on the part of the murderer (Romanelli) against the sister for having reported him for bad conduct. The Padre Ronzina, who composed the inscription in the presence of the whole *personnel* of the hospital, including all the nuns directly or indirectly employed in it, and who acted as spokesman at the unveiling, cannot but have been misinformed of the circumstances under which Suor Agostina was done to death.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera Intelligence.

DURING the past seven days there have been 83 new cases admitted into the twelve ambulance hospitals, while the deaths have numbered 72 in hospitals and 85 in private houses in the villages. The ignorant peasants have a rooted objection to the fresh air and cleanliness of hospital huts under English superintendence, and do their best to hide their sick and make difficult all sanitary measures. Five cases have been reported from one newly attacked hamlet of 300 inhabitants, the first case having been imported from a neighbouring village where cholera existed for a fortnight, but is now apparently no longer present. The disease has also appeared in a village half-way between Damietta and Mansoura, probably from being in free intercourse by canal

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with an infected village. Three fresh importations have taken place at the inspection stations outside Mansoura. But in spite of these new attacks the disease is still confined to the same districts as before, and the measures for dealing with it when discovered continue, so far, to be wonderfully successful, and the disease is still about 100 miles distant from Cairo. Some experiments have been made by Dr. Kauffmann to test the virulence of this comma bacillus. In the first series the guinea-pigs became slightly ill after being injected, but did not die. Since then a guinea-pig has been injected with an extra-strong culture, prepared with unusual care, and he died in twenty hours.

Precautions in Infected Districts.

Sixteen inspection stations on the Nile and on the principal canals are now in very good working order and are yielding excellent results. Besides these there are eighteen medical inspection stations for land traffic dotted about the various villages. All travellers from the infected area are still examined at their destination by a medical man specially told off for this purpose, and then they are visited for the five ensuing days at their new address in order to be certain that they remain in good health. The bulk of the sanitary *personnel* is in the infected area, but, of course, if the disease spreads to any of the chief towns, such as Mansoura or Zagazig, some change will have to be made and a fresh disposition of the forces may be required. The native officials are all quite willing to work, but are incapable of initiating any reform, though they can be made to do excellent work by any energetic Englishman who understands their incapacity and their language. It is significant that we hear nothing just now of the unpopularity of the English in Egypt. On the contrary, seven millions of people are content to look on and do nothing, while less than a dozen Englishmen are wrestling to keep them free from cholera.

General Precautions in Egypt.

The tourists who are already coming here in considerable numbers will find this country preternaturally clean this winter, for during the last month a general scavenging and whitewashing have taken place, and every Mudir has trembled in his shoes lest his province should be weighed in the balance of hygiene and be found wanting. Especial attention has naturally been paid to the chief towns of the Delta, but in Cairo itself a sanitary commission has been working hard to deal with all matters of pressing need. The streets have never been so clean before, and the sweepings, instead of being thrown into a disused canal which may some day be built upon, are now taken outside the town to fill up a large pond. The water company has undertaken to put up hydrants for the supply of pure water gratis in the poorest quarters, such as Boulak and Old Cairo, where cholera would be most likely to appear. Sites are being chosen for much-needed public latrines, and many smaller improvements have been already effected. Any true sanitarian, of course, wishes his work to be permanent, but it is the tendency of the financial official mind to lavish money when in presence of an epidemic, but to jealously tighten the purse-strings the moment the danger no longer threatens. The municipality of Alexandria has voted £4000 for the sanitation of the city, and £300 have been granted to improve the laboratory of the sanitary inspector, who is now building a house for the installation of his zoological pets, and arranging rooms for micro-photography. The city has been very well cleaned superficially, and an artesian well is being sunk, 100 ft. deep, for supplying gratis water to the poor.

Water-supply.

A concession for the supply of water to the three important towns of Tantah, Zagazig, and Mansoura has been given by the Government to a rich company, who have already found most excellent soft water by a boring 100 ft. deep on an estate of thirty-five acres outside the town of Tantah. From this free fountains are now running for two hours a day.

Quarantine against Egypt.

It is felt here that visitors will be kept away not so much by the fear of cholera as by the dread that they may not be able to leave this country when they wish to do so. At present there is no quarantine against Egypt in any country excepting Greece.

Cairo, Nov. 13th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Further Developments in the "Dean Case."

CONSIDERABLE sensation has been caused by recent proceedings in connexion with the remarkable case of alleged poisoning at Sydney, a summary of which was given in THE LANCET of Aug. 17th last. In answer to a question in the Legislative Council, the Attorney-General said that Sir Julian Salomons, counsel for the prosecution in the case, had informed him that Mr. Meagher, solicitor for the defence, had admitted that he knew absolutely that Dean was guilty, as the latter had confessed that he had administered both arsenic and strychnine together to make more certain of poisoning his wife, and that the druggist who sold the poisons had never been asked, although he gave evidence, whether he sold the poisons. Mr. Meagher vehemently denies that he made any such admission to Sir Julian Salomons, whom he accuses of mental aberration, while his partner more than insinuates that the whole story is a pure invention. All the principals in the affair are prominent politicians, and, with a view probably of removing the case from the political sphere, the last development is that Dean and his solicitors, Messrs. Meagher and Crick, have been arrested on a charge of conspiring to defeat the ends of justice.

Dispute at the Adelaide Hospital.

For some months past the columns of the Adelaide papers have been deluged with correspondence and articles on a comparatively trivial dispute about a nurse's appointment at the Adelaide Hospital. About eight months ago the board of management made an appointment to the post of night superintendent of nurses on the recommendation of Dr. Perks, the medical superintendent, who said that a Miss Gordon was the only nurse in the hospital suitable for the position. This opinion was intended by the superintendent to be confidential, but it got into the press, and also a statement that the lady recommended was a relative of a public official, whose sanction to any appointment or dismissal by the board is required. The nurses complained to the board in somewhat forcible and ill-advised terms; the press took the matter up and clamoured for an independent inquiry, and finally a Royal Commission was appointed. In the meantime the nurses themselves, with two exceptions, withdrew from their position and apologised to the board, Dr. Perks giving the assurance that no reflection was cast on their capabilities. The Commission practically exonerated everyone, and suggested a *status quo ante*. The board, however, declined to reinstate the two nurses who had not apologised, as that would be subversive of discipline. However, the board had to submit in the case of one of them, as her suspension had not been sanctioned by the Chief Secretary. On the other hand, as the other nurse's appointment had never been confirmed by the Chief Secretary the board declined to reappoint her. So the matter stands, and will probably end. A special meeting of the South Australian Branch of the British Medical Association was held recently to consider the position, and it was unanimously resolved that the meeting entirely approved of the attitude adopted by the board of management during the recent trouble with the nursing staff; and placed on record its high appreciation of the valuable services of Dr. Perks in his position as medical superintendent, and its strongest sympathy with him in the gross and unfounded charges made against him in the evidence of certain witnesses before the Royal Commission.

Election of the Staff of the Women's Hospital, Melbourne.

The medical staff of the Women's Hospital is elected every four years by the subscribers to the hospital on the same plan as in the case of the Melbourne Hospital, the election taking place a month subsequently. The election does not create so much public interest, however, and is conducted more quietly. On this occasion some new offices were competed for. Many years ago the institution was essentially a lying-in hospital, and was so designated, and the staff consisted of four honorary medical officers and a resident officer. Out-patients suffering from pelvic disease, however, were seen, and a few beds were reserved for such cases. With the progress of gynæcology more and more cases of diseases peculiar to women were found to demand operative treatment as

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in-patients, and the hospital was enlarged by building a practically new hospital in the same grounds, devoted solely to midwifery cases. A new staff, honorary and resident, was elected to take charge of the midwifery department, the old staff retaining charge of what was now termed the infirmary department of the Women's Hospital. The latter department has again been found inadequate, and a new wing is in process of construction, and four new positions of out-patient surgeons have been made, with a view of lightening the work of the in-patient staff. The result of the election held on Sept. 30th was as follows:—

INFIRMARY DEPARTMENT.

Dr. O'Sullivan	851	Mr. Dunbar Hooper	749
Dr. Adam	845	Dr. Rowan	534
Dr. F. Meyer	834		

MIDWIFERY DEPARTMENT.

Dr. Mackay	730	Dr. Loosli	549
Dr. Downie	631	Dr. Martell	489
Dr. Nyulasy	589	Mr. Branson	371
Mr. Cuscaden	553	Mr. Wheeler	360

FOR OUT-PATIENTS.

Mr. Morton	870	Dr. Joske	396
Dr. Horne	858	Mr. Lynch	390
Mr. Anderson	722	Mr. Clayton	352
Dr. Fetherston	697		

The first four were elected in each case.

Laparotomy for Intussusception in very young Children.

In a paper read before the New South Wales Branch of the British Medical Association Mr. C. P. B. Clubbe detailed seven cases of intussusception in children under six months old, all operated on, with four recoveries, a percentage that compares very favourably indeed with those previously recorded, and has led Mr. Clubbe to conclude that the operation, which is easy, should be performed early in all cases, however young the child, if rectal injection or inflation fails.

Appointments.

Dr. A. Jarvie Hood has been elected physician to the Sydney Hospital in place of the late Dr. Huxtable. Dr. Gordon MacLeod has been appointed assistant ophthalmic surgeon at the Sydney Hospital. Dr. W. H. Goode has been appointed official visitor to the Hospitals for the Insane at Gladesville and Callan Park, and Dr. Alfred Shewen as omcial visitor to the Hospital for the Insane at Paramatta.

Obituary.

HENRY GRACE, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

MR. HENRY GRACE died very suddenly last week. On Nov. 11th, in the best of spirits, he left Kingswood for Honiton, where he intended to have a few days' shooting with an old schoolfellow. On the 13th, whilst shooting, he had a stroke of paralysis, and expired before any of his family had time to reach him. Mr. Grace was the eldest member of the well-known Grace family and was born at Downend in 1833. He was educated at the Bristol Medical School, and after taking the London qualifications he settled in practice at Kingswood. Mr. Grace was a typical country surgeon—his duty to the sick was his first consideration, and in his large practice he was held in the highest esteem. This practice was probably the largest country practice in Gloucestershire; in addition to being medical officer of health of Kingswood and surgeon to the Stapleton Workhouse, he was medical officer to most of the local friendly societies. He took a keen interest in all that concerned the welfare of the neighbourhood. Like other members of the family, he was an ardent sportsman, and in his younger days earned some distinction as a cricketer. He was interred last Saturday at Downend Churchyard in the presence of a large concourse of people. The "Doctor," as he was generally termed, will be sadly missed at Kingswood, and much sympathy is felt for his widow and family, which consists of four daughters, three of whom have married members of the profession, and one son, who is in practice in Derbyshire.

RICHARD ROSS, M.D. ST. AND., L.R.C.S. IREL.

THE announcement of the death of one of the oldest and most respected of the medical practitioners of Belfast, Dr. Richard Ross, which took place at his residence on Wednesday morning, Nov. 13th, was received with great regret by a numerous circle of friends. Dr. Ross's death came as a great surprise to the people of Belfast, as, although he was sixty-eight years old, he had been busy at work almost up to a week before his decease. It would appear that on the afternoon of Nov. 5th he was seized with sudden weakness while out, and on the following day a rheumatic attack with heart complications developed, which terminated suddenly in death from heart failure on Nov. 13th. Dr. Ross was born in county Monaghan and was the son of a Presbyterian clergyman. Through the influence of an uncle who was a physician in Rostrevor, with whom he spent a considerable portion of his boyhood, Dr. Ross decided to enter the medical profession and went to study in Dublin. He became qualified in 1848 as a Licentiate of the Royal College of Surgeons of Ireland, and in 1850 he took the degree of M.D. at St. Andrews University, having previously become a Licentiate in Midwifery of the Coombe Hospital, Dublin. When a student he was a clinical assistant at the Meath Hospital, Dublin, and soon after completing his college course he went to the west of Ireland, where he had considerable experience in dealing with an epidemic of cholera. In the year 1850 he commenced practice in Belfast, and he was one of the first five medical gentlemen elected as dispensary medical officers for Belfast under the present Poor-law system. This post he held for about twenty years, when he retired from the office on being elected physician to the Belfast Royal Hospital, an appointment which he held until the time of his death, up to which he was not only senior physician but also the senior member of the entire staff. He was also consulting physician to the Hospital for Diseases of the Skin and to the Hospital for Consumption and Diseases of the Chest, and he was the local consulting physician in Belfast for some of the best-known life assurance companies. He was one of the oldest members and also a former president of the Ulster Medical Society. Dr. Ross for a lengthened period had one of the very best medical practices in Belfast; his extremely kind disposition and his wonderful skill in prescribing caused him to be regarded by his patients not only as an able physician but also as a beloved personal friend. He was an extreme favourite with the members of his own profession, and many of them now in prominent positions in Belfast recall with the utmost gratitude his kindly advice and assistance in their early career. Dr. Ross was a man who never did a dishonourable action or said an unkind word. He leaves a widow, a daughter, and a son (now a clergyman of the Church of Ireland) to mourn their loss. His brother, the late David Ross, Q.C., who was Recorder for Belfast and county court judge for county Antrim, in his will left the residue of his estate to his brother Richard (Dr. Ross), "to whose wonderful kindness and aid when they required it he and his other brothers owed so much."

HUGH LANE, M.R.C.S. ENG., L.R.C.P. EDIN.

MR. HUGH LANE, a well-known and respected Bath practitioner, died at his residence in Bush-street on Thursday, Nov. 14th. He contracted diphtheria, and this terminated fatally after a short illness. The deceased received his medical education at Guy's Hospital, and became L.R.C.P. Edin. in 1882 and M.R.C.S. Eng. in 1883. He held the appointments of honorary medical officer to the Royal United Hospital, Bath, and physician to the Eastern Dispensary, Bath.

PITHECANTHROPUS ERECTUS.—A special meeting of the Anthropological Institute will be held on Monday, Nov. 25th, at 8.30 P.M., at 3, Hanover-square, when Dr. Dubois of the Netherland Indian Army will exhibit the curious skull and bones found by him in Java, regarding which opinions differ as to whether they belonged to a man or an ape.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session was held in the medical library of University College, Bristol, on Nov. 13th, Mr. A. W. Prichard being in the chair. Mr. Morton showed a patient with a Cyst of the Antrum, and a patient with sarcoma of the superior maxillary bone who had been treated by injections of erysipelas toxine.—Dr. J. Michell Clarke read a paper on Huntington's Chorea and Senile Chorea, and exhibited a case of the former affection.—Dr. F. H. Edgeworth showed a series of lantern slides in connexion with cases of Exophthalmic Goitre.

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Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the M.B. examination in October:—

FIRST DIVISION.

Abrahams, Bertram Louis, B.Sc., University College.
Barnard, Harold Leslie, London Hospital.
Blake, Victor John, University College.
Brook, Sydney Wilkinson, Owens College and Manchester Royal Infirmary.
Bull, Stanley Arthur, Westminster Hospital.
Cook, Albert Ruskin, B.Sc., Cambridge University and St. Bartholomew's Hospital.
Cook, John Howard, University College.
Crookshank, Francis Graham, University College.
Despard, Rosina Clara, London School of Medicine for Women.
Dimsey, Alfred, University College.
Every-Clayton, Leopold E. V., Guy's and London Fever Hospitals.
Gillies, Sinclair, St. Bartholomew's Hospital.
Handley, William Sampson, Guy's Hospital.
Hopton, Ralph, Yorkshire College.
Playfair, Ernest, King's College.
Pugh, William Thomas Gordon, Middlesex Hospital.
Rodocanachi, Amb. John, B.Sc., University College.
Salter, Alfred, Guy's Hospital.
Shaw, Harold Batty, University College.
Sowry, George Herbert, St. Bartholomew's Hospital.
Thomas, Thomas Morrell, Guy's Hospital.
Walton, Herbert James, St. Bartholomew's Hospital.

SECOND DIVISION.

Allan, Edward Buller, University College.
Belcher, James Arthur, University College.
Blenkinsop, Frederick Linton, University College.
Bodman, John Hervey, University College, Bristol, and St. Bartholomew's Hospital.
Brown, Joseph Norwood, University College.
Byrne, Peter Kevin, B.A., University College.
Carter, Felix Bolton, University College.
Coleman, James Jordan, Guy's Hospital.
Coutts, Francis James, University College.
Crace-Calvert, George Alfred, St. Bartholomew's Hospital.
De Segundo, Charles Sempill, St. Bartholomew's Hospital.
De Steiger, Adèle Isabella, London School of Medicine and Royal Free Hospital.
Dove, Percy William, St. Bartholomew's Hospital.
Eastes, George Leslie, B.Sc., Guy's Hospital.
Edmunds, Percy James, B.Sc., University College.
Ferraby, Henry Percival, Guy's Hospital.
Gibbons, Arthur Philip, London Hospital.
Gurney, Alexander Cecil, St. Bartholomew's Hospital.
Hardenberg, Edward Fras. H., Guy's Hospital.
Hardman, Richard Smith, Owens College and Manchester Royal Infirmary.
Harnett, Charles John, Guy's Hospital.
Haylett, Peter Henry, Guy's Hospital.
Hora, Julian, Guy's Hospital.
Hull, Charlotte Elizabeth, London School of Medicine and Royal Free Hospital.
Hunnard, Arthur, University College.
Hunt, Tom Harold, Owens and Yorkshire Colleges.
Jenkins, Arthur William, University College.
Jewell, William Henry, Guy's Hospital.
Kingsford, Bertram Harold, St. Thomas's Hospital.
Kirton, Reginald Gower, London Hospital.
Knight, Ernest, Owens College and Manchester Royal Infirmary.
Miskin, Ernest, St. Thomas's Hospital.
Nicholson, Thos. Goddard, B.Sc., St. Thomas's Hospital.
O'Hea, James Patrick, St. Bartholomew's Hospital.
Pearson, Maurice Grey, B.Sc., St. Bartholomew's Hospital.
Scharlieb, Herbert John, University College.
Schofield, Samuel Robert, University College.
Sinigar, Harry, Mason College.
Smellie, John Clementson, St. Mary Hospital.
Smith, Frank Addinsell, St. Bartholomew's Hospital.
Spillane, James Charles, London Hospital.
Stoney, Florence Ada, London School of Medicine for Women.
Traill-Christie, Margaret Marion, London School of Medicine and Royal Free Hospital.
Vellacott, Philip Northcott, Guy's Hospital.
Wilks, Morris, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on Thursday, Nov. 14th, viz.:—

Charles James Heaton, L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital; Charles Ryall, L.R.C.P. Lond., M.R.C.S. Eng., Westminster Hospital and King's College, London; Richard Truman FitzHugh and Arthur John Cleveland, Guy's Hospital; Alexander Gordon Wilson and George Hutcheson, London Hospital; Avery Wynn Dickson, St. Bartholomew's Hospital; Sidney Herbert Berry, Charing-cross and St. Bartholomew's Hospitals. Eight gentlemen were referred for six months.

ROYAL COLLEGE OF PHYSICIANS OF DUBLIN.—The following gentlemen have passed the examination for the Conjoint Diploma in State Medicine:—

E. G. Annis, M.R.C.S. Eng., G. W. Dawson, L.R.C.P. and S.I., W. J. Greer, F.R.C.S.I., J. J. Goodlatte Murray, L.R.C.P. and S. Edin.

FOREIGN UNIVERSITY INTELLIGENCE.—*Buda-Pesth:* Dr. L. Török has been recognised as *privat docent* in Dermatology.—*Giessen:* Dr. Strahl of Marburg has been appointed to the chair of Anatomy in succession to Dr. Bonnet.—*Freiburg (Baden)*: Dr. Gaupp and Dr. Nagel have been recognised as *privat docenten* in Anatomy and Physiology respectively.—*Heidelberg:* Dr. Ernst Göppert has been recognised as *privat docent* in Anatomy. A Dental Institute has been established under the direction of Dr. Jung.—*Prague (German University):* Dr. J. Gad of Berlin has been appointed to the chair of Physiology in succession to Dr. Hering.—*Strassburg:* Dr. Schenerlen has been recognised as *privat docent* in Hygiene and Bacteriology.—*Vienna:* Dr. S. Fuchs has been recognised as *privat docent* in Physiology.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of the society was held on Oct. 30th, Dr. Mutch, President, being in the chair. The inaugural address for the session 1895-6 was delivered by Dr. G. V. Poore, Physician to University College Hospital, on "The Soil in its Relation to Disease and Sanitation." The origin, constitution, and properties of the soil were fully dealt with; some of the common disease germs present in the soil were alluded to, and also the power of the soil to assimilate dead organic matter, and render pathogenic bacteria harmless. Conditions of drought and moisture were considered in their relation to disease, and the evil consequences likely to result from allowing large tracts of land to go out of cultivation were commented on. A cordial vote of thanks to Dr. Poore was passed on the motion of Dr. Handford, seconded by Dr. Lamb.

AN UNFORTUNATE SCHEME.—The scheme of the Newport (Monmouthshire) Corporation to obtain a supply of water from Wentwood, about ten miles from the town, has been most unfortunate. The report of the two geological experts upon the site was presented to the committee last week. This recommends the abandonment of the scheme on the ground that, if the works were completed, in their opinion the reservoirs would not hold water. The experts exonerate the committee of the council, who had chosen the site, from all blame, as it would have been impossible to have said until the present stage had been reached that the geological formation was unsuitable. The amount of the contract was about £100,000, and the committee had been given power to borrow £250,000. The scheme has already cost £40,000. At present no further progress will be made with the works, although some other experiments may be carried out.

A NEW COTTAGE HOSPITAL AT FARNHAM.—The new Bishop of Winchester (Dr. Davidson) last week opened a cottage hospital erected under the bequest of the late Mr. George Trimmer and adequately endowed for the future. A site was given by the testator's two sons, Mr. R. G. Trimmer and Mr. C. E. Trimmer, Mr. J. A. Eggar presenting the designs. The hospital has a southern aspect, and the male and female wards (each containing three beds) open on to a long verandah, each ward being 21 ft. by 14 ft. There is an accident ward and a small operating room, the whole on the ground floor. Upstairs the only patients' room will be a day ward for convalescents. The cost of the building, exclusive of the furniture, was £2000. The honorary medical staff will include Mr. S. G. Sloman, jun., Mr. H. Sloman, Dr. C. E. Tanner, and Mr. J. Lorimer. There will be but one nurse, with a probationer and domestics.

WORKHOUSE ACCOMMODATION AT CARDIFF.—During the last few years the population of Cardiff has increased so rapidly that the present workhouse accommodation has been found insufficient. Last winter there was an excess of 100 male inmates over the proper number, and at present the workhouse is much overcrowded. The guardians then endeavoured to find some building which might be used for temporary accommodation, and also made applications to other unions to receive some of their inmates, but without any success. Two inspectors from the Local Government Board met a committee of the guardians last week, when it was stated that no further addition to the present number of inmates could be allowed. The committee have therefore decided to procure a site of about twenty acres, in the neighbourhood of Ely (Glam.), which will be suitable for new temporary, and eventually for permanent, buildings.

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THE DIFFUSION OF SMALL-POX.—Last week, for the first time for sixteen weeks, there were no deaths registered from small-pox in the metropolis, although there was one in the suburban district of West Ham.

GUY'S HOSPITAL. — The treasurer of Guy's Hospital has received a cheque for £1000 from Mr. A. L. Cohen for the endowment of a bed in memory of his late son, H. A. Cohen.

THE NEW SOMERSET COUNTY ASYLUM.—At the last meeting of the Somerset County Council a contractor was appointed to build the Cotford Asylum, near Taunton, The cost of this new asylum, including furniture and fittings, will be £132,480. The contractor states that it is impossible to complete the building under two years, but it is thought that a portion may be completed and occupied before then.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this society was held at "Stanley's," Lavender-hill, S.W., on Nov. 13th, when a paper was read by Dr. Charles W. Chapman on Heart Disease in the Young. Stress was laid upon etiology, prognosis, and treatment, and an interesting discussion ensued, in which the President, Mr. T. S. Howell, Dr. A. D. Roe, Mr. A. E. Dodson, Mr. B. Duke, Mr. T. A. J. Howell, and others took part.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—A new wing of the Birmingham and Midland Eye Hospital was opened on Nov. 9th by Viscountess Newport. It contains a special department for the treatment of children, together with rooms for nurses and members of the staff. The out-patient rooms have also been enlarged, and a large ward for male patients has been constructed. The hospital was erected eleven years ago at a cost of £20,000, and a sum of £5000, has been expended in the recent alterations and additions. Last year there were 1100 in-patients and 24,000 out-patients.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The November meeting of this society was held on Saturday, Nov, 16th, at the Lewisham Infirmary, the President, Mr. J. R. Lunn, F.R.C.S., in the chair. Dr. Toogood, Medical Superintendent of Lewisham Infirmary, exhibited cases of Ununited Fracture of Femur cured by operation; Traumatic Gangrene of Foot; Multiple Perineal Fistulæ cured by External Urethrotomy; Symmetrical Paralyses caused by Lead Poisoning; Acute Conjunctivitis produced by Malingering; Pelvic Sarcoma; Exophthalmic Goitre; Malignant Myopia; Tubercular Synovitis following Acute Rheumatism; Malignant Tumour of Kidney; large Calcified Fibroma of Uterus. The President congratulated Dr. Beaumont, Dr. Quarry, and Mr. Spurrell on obtaining their appointments, and a vote of thanks to Dr. Toogood for his interesting series of cases concluded the proceedings.

LUNACY IN YORKSHIRE.—The best means of providing increased accommodation for lunatics in the West Riding was considered at a conference held on Nov. 11th in the Town Hall, Wakefield. Colonel Spencer Stanhope, C.B., chairman of the Asylums Committee, presided, and the company included representatives of nearly all the boards of guardians of the Riding and the chairman of the West Riding County Council. Colonel Stanhope said that the number of patients in the three asylums of Menston, Wadsley, and Wakefield in the year 1885 was 3858, and in 1894 it had risen to 4774, being an increase of 916 in ten years. The Asylums Committee were desirous of ascertaining whether suitable accommodation for harmless cases might not be provided in the workhouses, where the cost of maintenance was undoubtedly less than in the asylums. A separate asylum for the treatment of chronic cases would effect very little saving, as a special staff of officials would be required. After some discussion it was arranged that the subject should be considered by the individual boards of guardians, and the Conference adjourned.

BOOKS, ETC., RECEIVED.

ALCAN, FELIX, Paris.
L'Opération du Trépan. Par F. Terrier et M. Péraire. 1895. pp. 283.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
A Text-book of Veterinary Obstetrics. By Geo. Fleming, C.B., LL.D. Glasg., F.R.C.V.S. Illustrated. Second Edition. 1896. pp. 758. Price 25s.
A Manual of Physics. By William Peddie, D.Sc., F.R.S.E. Second Edition. 1896. pp. 573. Price 7s. 6d.

BALE, J., AND SONS, Great Titchfield-street, Oxford-street, London, W.
School Gymnastics on the Swedish System. By Allan Broman. 1895. pp. 105. Price 3s. 6d.

BLACKIE AND SON, Old Bailey, London, E.C.
Blackie's Science Text-books: Earth Knowledge, a Text-book of Physiography. By W. J. Harrison, F.G.S., and H. R. Wakefield. Ninth Edition. Part I. 1895. pp. 266.
Elementary Inorganic Chemistry, Theoretical and Practical. By A. H. Sexton, F.I.C., F.C.S., M.I.M. & M. Fourth Edition. 1895. pp. 366. Price 2s. 6d.
Food and Its Functions; a Text-book for Students of Cookery. By James Knight, M.A., B.Sc., F.C.S., F.G.S., 1895. pp. 282. Price 2s. 6d.

CASSELL AND COMPANY, London.
Injuries and Diseases of the Genital and Urinary Organs. By Henry Morris, M.A., M.B. Lond., F.R.C.S. Illustrated. 1895. pp. 478. Price 21s.
Cassell's Family Magazine, 1895. Illustrated. pp. 952.

CHURCHILL, J. & A., New Burlington-street, London.
Year-Book of Pharmacy, from July 1st, 1894, to June 30th, 1895. 1895. pp. 455.

HODDER AND STOUGHTON, Paternoster-row, London, E.C.
A History of the University of Aberdeen, 1495-1895. By J. Malcolm Bullock, M.A. 1895. pp. 220. Price 4s. 6d.

LEWIS, H. K., Gower-street, London.
Transactions of the Dermatological Society of Great Britain and Ireland. 1894-95. Vol. I, 1895. pp. 91. Price 5s.
An Essay on Malaria and Its Consequences. By R. Lindsay, A.M., M.B., F.R.C.S.E. 1895. Price 4s.

MACDOUGALL, ALEX., Mitchell-street, Glasgow.
Transactions of the Glasgow Pathological and Clinical Society. Vol. v. Session 1893-95. Edited by J. H. Carslaw, M.A., M.D. 1895.

MACMILLAN AND CO., London.
The Cambridge Natural History: Peripatus. By A. Sedgwick, M.A. Camb., F.R.S.—Myriapods. By F. G. Sinclair, M.A. Camb.—Insects, Part I. By D. Sharp, M.A. Cantab., M.D. Edin., F.R.S. 1895. pp. 584. Price 17s. net.

OLIVER AND BOYD, Edinburgh.
Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S. Edin. Fourth Edition. 1895. pp. 180. Price 2s. 6d.
The Transactions of the Edinburgh Obstetrical Society. Vol. XX. Session 1894-95. 1895.

PENTLAND, YOUNG J., Edinburgh and London.
Physical and Natural Therapeutics. By Georges Hayem, M.D. Edited by H. A. Hare, M.D. Illustrated. 1895. pp. 426.
The Science and Art of Obstetrics. By T. Parvin, A.M., M.D., LL.D. Third Edition. Illustrated. 1895. pp. 685.
Disorders of the Male Sexual Organs. By R. Fuller, M.D. 1895. pp. 241.
A Text-book on Nervous Diseases. By American Authors. Edited by F. X. Dercum, A.M., M.D., Ph.D. Illustrated. 1895. pp. 1056.
Epidemic Ophthalmia: Its Symptoms, Diagnosis, and Management, with Papers upon Allied Subjects. By Sydney Stephenson, M.B., F.R.C.S. Edin. 1895. pp. 271.

RIVINGTON, PERCIVAL AND CO., King-street, Covent-garden, London.
Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation. By C. J. Cullingworth, M.D. Durh., 1895. pp. 75. Price 12s. 6d.

STOCK, ELLIOT, 62, Paternoster-row, London.
The Gillmans of Highgate, with Letters from Samuel Taylor Coleridge. Illustrated. By Alex. W. Gillman. pp. 53.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London, E.C.
Text-book of the Embryology of Invertebrates. By Drs. E. Korschelt and K. Heider. Translated from the German by E. L. Mark, Ph.D., and W. McM. Woodworth, Ph.D. Part I. 1895. pp. 484.
Outlines of Pyschology. By Oswald Külpe. Translated from the German (1893) by E. B. Titchner. 1895. pp. 462. Price 10s. 6d.

UNWIN, T. F., Paternoster-square, London.
The Riviera, Ancient and Modern. By Chas. Lenthéric. Translated by C. West, M.D. With Maps and Plans. 1895. pp. 465.

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.
Leitfaden der Hygiene. Von Dr. Aug. Gärtner. Zweite Auflage. 1896. pp. 407. Price 7s.
Geschichte der Volksseuchen. Von Dr. B. M. Lersch. 1896. pp. 455.

The Auscultatory Signs, &c., of Mitra. Stenosis: a Statistical Inquiry by Graham Steell, M.D., F.R.C.P.; reprint; 1895 (John Heywood, Manchester and London).—The Life of Kate Marsden; by H. Johnson; second edition; 1895 (Simpkin Marshall, Hamilton, and Co., London); price 1s.—The Ethnology of Buchan: Report on Preliminary Ethnographical Observations; by the Buchan Field Club; reprint (David Scott, Printing Works, Peterhead).—Manuals of Elementary Science: Physiology; by A. Macalister, LL.D., M.D., F.R.S., F.S.A.; 1895 (Society for Promoting Christian Knowledge, Northumberland-avenue, London, W.C.); price 1s.—The Student's Pocket Prescriber; by H. A. Husband, M.B.; third edition; 1895 (E. & S. Livingstone, Edinburgh); price 1s. 6d. net.—Saunders' Pocket Medical Formulary, with an Appendix; by W. M. Powell, M.D.; third edition; 1895; price 7s. 6d. net.—Invalid Feeding; by Florence Stacpoole (Walter Scott, Paternoster-square, London); price 6d.—The Care of Infants and Young Children; by Florence Stacpoole (W. Scott, Paternoster-square, London); price 6d.—A Variety of Useful Diaries for 1896 (from Wm. Collins, Sons, and Co., Publishers, Bridewell-place, London, E.C.).—Medical Ethics; by G. B. Elliott, M.D., F.R.C.P.; reprint; 1889 ("Eastern Morning News" Company, Whitefriar-gate, Hull).

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ABRAHAM, PHINEAS S., M.A., M.D., B.Sc., F.R.C.S.I., has been appointed Assistant Surgeon to the Hospital for Diseases of the Skin, Stamford-street, S.E.

ANDERSON, D. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Cuckfield Sanitary District of the Teesdale Union, vice G. E. Vivian.

BARBER, GEORGE WALTER, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Kalgoorlie (Hannan's) Hospital, West Australia.

BODEN, J. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital, London.

BOUSFIELD, A., B.A., B.Sc., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital, London.

BURRIDGE, H. A., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital, London.

DAVIES, ALBERT BARNES, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Stroud General Hospital.

HARDWICKE, E. W., M.B., B.C. Camb., has been appointed Medical Officer of Health by the Quarry Bank Urban District Council.

HARRIS, H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Bacup Sanitary District of the Haslingden Union.

LANSDOWN, G. H., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to the King's College Hospital, London.

LE TALL, W. J., M.R.C.S., has been appointed Medical Officer of Health for the Rotherham Rural Sanitary District.

LITTLE, E. G. GORDON, M.D. Lond., B.A. Cape Univ., M.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant Physician to the East London Hospital for Children, Shadwell.

MCGACHEN, F. W. D., L.F.P.S., L.M. Glasg., D.P.H. Eng., has been appointed Medical Officer for the Markyate Sanitary District of the Luton Union, vice C. W. Beresford, resigned.

MELLERSH, W. FRANCIS, L.D.S. R.C.S. Eng., has been appointed Honorary Surgeon Dentist to the Thames Ditton Cottage Hospital.

MOORE, THOS., M.R.C.S., L.M., has been appointed Medical Officer of Health for the Hazel Grove District by the Stockport Rural District Council.

NUTTING, H. S., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Warsop Urban Sanitary District.

PACKER, HARRY D., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Resident Medical Officer to the East Riding Lunatic Asylum, Bury, Yorks.

PLAYFAIR, E., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant House Accoucheur to King's College Hospital, London.

SPENCER, EDWARD, M.B., Ch.B. Vict., L.S.A., has been appointed Resident Medical Officer and Assistant Vaccinator to the Colonial Hospital, Perth, West Australia, vice Wm. Elgee, resigned.

THOMAS, D., M.D. Edin., L.R.C.S. Edin., has been appointed Medical Officer of Health by the Ystadgynlais Rural District Council.

THURESSON, E. M., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Second Sanitary District of the Parish of St. George-in-the-East, Whitechapel.

TRIBE, P. U. E., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital, London.

TROUP, J. McD., M.A., L.S.A., has been appointed House Surgeon to King's College Hospital, London.

TUXFORD ARTHUR, M.D. Edin., has been appointed Medical Officer of Health to the Boston Town Council, the Port Sanitary Authority, Boston, and the Sibsey Rural District, vice W. Clegg, resigned.

VACHER, F., F.R.C.S., M.R.C.P. Edin., has been appointed Medical Officer of Health for the County of Cheshire.

WATSON, J. K., JUN., M.B., C.M. Edin., has been appointed House Surgeon to the Essex and Colchester Hospital, Colchester, vice P. Coleman, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-inn-road, W.C.—House Surgeon.

CITY OF LIVERPOOL.—Assistant to the Medical Officer of Health. Salary £350 per annum, subject to a contribution of £5 per cent. to the Corporation Superannuation Fund. Applications to the Town Clerk, Town Clerk's Office, Liverpool.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

COUNTY BOROUGH OF BOLTON.—Medical Officer of Health and Public Analyst. Salary £400 per annum. Applications to the Town Clerk, Town Hall, Bolton.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

GLASGOW EYE INFIRMARY.—Resident Assistant House Surgeon. Salary £50, with apartments and board.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London, W.C.—House Surgeon to out-patients (non-resident) for six months. Salary 25 guineas.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician (non-resident) for three months. Also Assistant Physician to take charge of out-patients.

HOSPITAL OF ST. PETER PORT, Guernsey.—Two qualified Surgeons (non-resident), for one year. Salary £75 each per annum currency (vaccination included), in addition to which a certain vaccination allowance.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer. Board, washing, and residence provided.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer at the Monsall Fever Hospital for twelve months, unmarried. Salary £100 per annum, with board and residence.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician, for six months. Salary at the rate of £60 per annum. Also Junior House Physician, for six months. Board and lodging (including washing) provided.

OWEN'S COLLEGE, Manchester.—Junior Demonstrator in Physiology and Histology. Annual salary £100.

ROYAL BERKS HOSPITAL, Reading.—House Surgeon and House Physician. Salary in each case £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer. These appointments for six months.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London, W.—Resident Medical Officer. Salary £100 per annum, with furnished apartments, coals, and lighting. Also Physician.

SWANSEA GENERAL HOSPITAL.—House Surgeon. Salary £50 per annum, with board, residence, washing, and attendance.

WARNEFORD HOSPITAL, Leamington.—House Surgeon for six months. £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On the 14th inst., at Church-end, Finchley, the wife of James Barrington Baker, M.D. Durh., of a daughter.

CHEPMELL.—On the 14th inst., at Dyke-road, Brighton, the wife of Charles Chepmell, M.D. Brux., of a son.

COOK.—On the 15th inst., at Newport-road, Cardiff, the wife of Herbert G. Cook, M.D., F.R.C.S., of a son.

EVELYN.—On the 14th inst., at Micklegate, York, the wife of W. A. Evelyn, M.D. Camb., of a daughter.

HAYES.—On the 10th inst., at Dunster, the wife of Francis George Hayes, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

HUGHES.—On the 17th inst., at Eastbridge, Croydon, the wife of Morgan Hughes, M.R.C.S., L.D.S., of a son.

RUNDLE.—On the 13th inst., at Southwick, near Fareham, Hants, the wife of Frank Carlyon Rundle, L.R.C.P. and S., Edin., of a daughter.

SANKEY.—On the 16th inst., at Boreatton Park, Baschurch, the wife of E. H. O. Sankey, M.A., M.B., B.C. Camb., of a daughter.

TAYLOR.—On the 12th inst., at Duke-street, Glasgow, the wife of William Taylor, L.D.S. Glasg., of a son.

MARRIAGES.

HALSE-FRANCIS—TRAINER.—On the 5th inst., at St. Michael's Church, Stockwell, Ferdinand Henry Halse-Francis, M.B. Durh., B.S., L.S.A., of Victoria Lodge, West Norwood, to Charlotte Trainer of Edinburgh.

HOLCROFT—CRISP.—On the 19th inst., at St. Mark's, Leamington, Edgar Holcroft, M.A., M.B., B.S. Melb., third son of Thomas Holcroft, J.P., C.C., of Wolverhampton, to Olive Elizabeth Crisp, sixth daughter of the late Thomas Crisp, Solicitor, of Melbourne.

LIDDON—RATTRAY.—On the 14th inst., at St. Michael's Church, East Teignmouth, Devon, Edward Liddon, M.D. Edin., of Silver-street House, Taunton, to Jessie Florence, widow of the late Thomas Alexander Rattray of Dookie, Victoria, and Tiverton, Devon.

MUDD—PRICE JONES.—On the 13th inst., at St. Mark's, Surbiton, Barrington William Mudd, M.B. Aberd., of Ewell, Surrey, to Evelyn, daughter of the late Wm. Price Jones, M.D., of Surbiton.

DEATHS.

JAMIESON.—On the 17th inst., at Elmhill, Aberdeen, Robert Jamieson, M.D. Edin., Consulting Physician to the Royal Lunatic Asylum, Aberdeen, aged 78.

LANE.—On the 14th inst., at Brock-street House, Bath, Benjamin Hugh Lane, M.R.C.S., L.R.C.P. Edin., younger son of Brigade-Surgeon B. Lane, late A.M.S., of Priory-street, Cheltenham, aged 35.

LANGHORNE.—On the 5th ult., at Mount Gambier, South Australia, Thomas Grant Langhorne, M.R.C.S. Eng., L.R.C.P. Edin., eldest son of the late Alexander Grant Smith Langhorne of Holland Park-gardens, W.

MENZIES.—On the 12th inst., at the Royal Naval Hospital, Portland, John Duncan Menzies, Surgeon, R.N., aged 34.

TIMMS.—On the 14th inst., at Cornwall-mansions, Regent's Park, Godwin William Timms, M.D., M.R.C.P., M.R.C.S., &c. (formerly of Wimpole-street), late Senior Physician (twenty-five years) North London Hospital for Consumption, aged 75.

VINCENT.—On the 12th inst., at East Dereham, Henry Bird Vincent, M.R.C.S., L.S.A., aged 44.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 21st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 15	30·02	S.W.	46	44	64	61	44	0·05	Hazy
,, 16	29·70	S.W.	61	58	97	65	46	0·25	Cloudy
,, 17	30·07	S.W.	50	48	75	55	48	...	Fine
,, 18	30·38	S.W.	40	39	52	49	39	...	Foggy
,, 19	30·20	S.E.	43	41	67	50	40	...	Hazy
,, 20	29·91	S.	48	47	54	54	43	...	Overcast
,, 21	29·99	S.E.	48	47	60	50	47	...	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Edmund Owen: The Operative Treatment of Cleft Palate.—Dr. C. E. Beevor: The Distribution of Motor and Sensory Symptoms after Injury to the Brachial Plexus.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Special Discussion: "The Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c." Introductory Remarks by Mr. Jonathan Hutchinson (President). Bacteriology of Latency, introduced by Dr. Washbourn; Latency of Tuberculosis, Dr. J. Kingston Fowler; Latency of Leprosy, Dr. Phineas Abraham; Latency of Syphilis, Mr. J. Ernest Lane.

WEDNESDAY.—SOCIETY OF ARTS.—8 P.M. Second Ordinary Meeting. Mr. H. H. Cunynghame: Locomotive Carriages for Common Roads. HUNTERIAN SOCIETY.—8.30 P.M. Dr. G. E. Herman: Vaginismus and Allied Affections.—Dr. Arnold Chaplin: The Effect of Physiological Rest upon the Lung in Phthisis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Tinnitus and Vertigo.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Insanity with Cardiac Disease, Phthisis, Gout, &c.

WEDNESDAY.—HOSPITAL FOR CONSUMPTION, &c. (Brompton).—Dr. J. Mitchell Bruce: Asthma.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Psorospermosis Cutis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Cheatle: Surgical Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-street, 3.30 P.M., The Surgical Registrar: Pathological Demonstration.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Mr. Victor Horsley: Surgery of the Nervous System.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Tetanus, Rabies, and Cholera.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Lunacy Law.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Diseases of Nails.

During the week marked copies of the following newspapers have been received:—*Macclesfield Courier, Manchester Evening News, Leicester Daily Post, Durham Chronicle, Birmingham Gazette, Gloucester Journal, Sussex Daily News, Eastern Daily Press, Sheffield Independent, Beverley Recorder, East Anglian Daily Times, Preston Herald, North Walsham Post, North Star, Belfast News Letter, Newcastle Chronicle, Western Morning News, Hastings Times, Family Churchman, Liverpool Mercury, Educational Review, Brighton Gazette, Man of Ross, Hotel, Brighton Examiner, Galignani Messenger, Doncaster Gazette, Oban Express, Oban Telegraph, Grimsby News, Truth, Hexham Herald, Ormskirk Advertiser, Berrow's Worcester Journal, Daily Argus, Lowestoft Standard, Medical Record (New York), Kent Messenger, Isle of Wight Express, Framlingham Weekly News, Manchester Guardian, &c., &c.*

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"IMPORTANT NOTICE."

TWO CORRESPONDENTS enclose to us copies of the following handbill—

Important Notice.—W. E. Hailstone, Cash Price Chemist, 152, Camberwell-road, S.E., begs to announce that he has arranged with Mr. Stafford Allen, R.D.S., Dental Surgeon, to attend daily at the above Address. Artificial Teeth at Moderate Prices. A Single Tooth from 2*s.* 6*d.*; A Complete Set from a Guinea. Repairs to Sets completed in two hours if required. Perfect Fit and Natural Appearance Guaranteed. Extractions: By Gas, from 6*s.* 6*d.*; Painless, from 2*s.* 6*d.*; Ordinary, from 1*s.* Stopping, from 2*s.* Scaling from 1*s.*

Dr. Morris Jenkins, M.R.C.S.Eng., L.R.C.P.Lond., attends daily. Hours of Consultation: Morning, 12 to 1; Evening, 8 to 9. Midwifery attended.

Note the Address—152, Camberwell-road, S.E.

Mr. Morris Jenkins must know that to have his name, address, and qualifications disseminated in this way is incorrect conduct.

Dr. Wm. Wallace.—Our correspondent should apply to any dealer in chemical apparatus. We believe that Messrs. Baird and Tatlock of 14, Cross-street, Hatton-garden, London, E.C., supply spirit lamps of the Bunsen or Argand type suitable for the purposes mentioned. Coal gas, again, may be had compressed in steel tubes. For incubation ordinary night lights are useful, placed at some distance beneath the incubator, the temperature being also regulated by the number used.

Cortex is recommended to write direct to one of the four Inns where he will get all particulars. The expense is chiefly the expense of living in London, and can therefore be made whatever a man pleases.

Mr. Arthur Franklin and *O. A. P.*—We never recommend individual practitioners.

Mr. S. S. Ashmore-Noakes's eulogy is one which we can endorse.

WILLIAM III. AND HIS PHYSICIANS IN 1700.

To the Editors of THE LANCET.

SIRS,—The following, taken from Law's "History of Hampton Court Palace," vol. iii., may interest your readers. In a letter dated June 11th, 1700, King William III. is reported to have had given him "a dose consisting of ale impregnated with the leaves of ground ivy, fir tops, hart's tongue, and wild carrot seed." At a consultation held between the physicians Sir Thos. Millington, Dr. Radcliffe, and Dr. Lawrence, "the first two doctors agreed in nothing, neither as to the disease nor as to the remedies. Dr. Radcliffe thought the swelling in the King's leg was little less than dropsy, and advised 'purging and asses' milk.' Millington, on the other hand, said both such remedies were contrary to the King's constitution, and he was for the King's taking garlic. 'That,' said Radcliffe, 'will destroy such weak lungs as the king's.' 'Weak lungs!' cried Millington in answer, 'why his lungs are the soundest part about him.'" On the night of Wednesday, June 26th, 1700, the King took a pill that the physicians gave him, composed of "pillula stomachicacum cum gummis, the volatile salt of hartsho n, and the syrup of violets." At the same time they prescribed "twenty drops of the tincture of the salt of tartar to be taken every day, and the juice of thirty hog-lice at 6 o'clock at night." It is surprising to learn that "the next day he looked very well

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and was cheerful." But the success of a rival's remedy could carry no conviction to the minds of the other worthy medicos, and Lawrence, who sided with Millington, announced that he "had determined not to relinquish his own prescription of garlic." On June 27th John Locke, the philosopher, was sent for, and had an audience of the King. Whilst there he seems to have been asked as a scientific man to "take a diagnosis of the King's condition," and he was able so far to endorse Millington's opinion as to state that in his view, "if the King had a dropsy he would not have so fresh a colour." Thus fortified with the philosopher's pronouncement, Millington and Lawrence proceeded to treat his Majesty after their own fashion, and on the 23rd he was ordered "2 grains of scammony sulphurated, with 26 grains of the stomachic pills to be taken at night." In Vernon's account of an interview he had with the King a few days after he says: "I was at Hampton Court this morning, and the King seeming a little heavy I asked him if he were out of order; he said he should be very well if they would leave off giving him remedies, and that he had taken something that had put his stomach out of order." The writer says: "But the hour of his escape both from England and from the antagonistic remedies of his physicians had now arrived." Not yet, however, for we read further on: "Up to the last moment the doctors would not relax their hold on his Majesty. That same night a consultation was held and they prescribed a glyster." "I hope," says Vernon, "the King will be better when he is out of their hands at Loo." Next day, at six o'clock in the morning, he left for Margate, on his way to Holland. The night of his return to Hampton Court he was given "half a dram of the cream of tartar twice a day; a ptisane (?) to be taken at pleasure, of the clarified decoction of barley, after a warm infusion of eryngo roots condited, sal prunellæ, and the spirit of black cherries." "The frequent use of tablets made of the species de Althæa, with sal prunella, loaf sugar, and mucilage of tragacanth." A few days after the treatment was changed to "Nynsichtius' elixir vitrioli and spa water." These were followed in quick succession during the next month by "gentian, centaury, tartar vitriolated, salt of wormwood, salt of steel, balsamic syrup, Epsom salts in chicken broth, crabs' eyes, steel prepared with sulphur, hogs' lice, chalybeate pills, elder flowers, after which recourse was again had to the old prescriptions." Was it to be wondered at that the King at last succumbed?

I am, Sirs, yours truly,

East Molesey, Oct. 17th, 1895. W. W. HARDWICKE, M.D. St. And.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Can you give me the titles of any books, monographs, or other papers dealing with the subject of surgical interference in cases of pulmonary cavities, together with the names and addresses of the publishers? Yours faithfully,

Nov. 18th, 1895. H. G. A.

*** THE LANCET, vol. ii., 1880, contains an account of a debate at the Royal Medical and Chirurgical Society upon this subject. Monographs on the operative treatment of pulmonary cavities will also be found in many issues of THE LANCET, the references to which will be found in Dr. Neale's excellent "Digest." Dr. R. Douglas Powell's book, "Diseases of the Lungs" (H. K. Lewis, 136, Gower-street, W.C., third edition, 18s.), also gives much information.—ED. L.

THE *Secretary of the Vegetarian Society* has yet to learn that editors are not responsible for the opinions of their correspondents.

Parish Council is requested to restate his query more fully, giving names and places.

Mr. W. F. Dale is thanked for his communication.

"THE BRITISH MEDICAL BENEVOLENT FUND."

To the Editors of THE LANCET.

SIRS,—May I ask you to be kind enough to allow me to add the following names to the list of contributions to the British Medical Benevolent Fund?

Dr. Ryding Morse	...	£0 10	6	Dr. Ogier Wood	... ...	£0 10	6
Dr. Connel	... ...	1 0	0	Dr. Finlayson	... ...	10 0	0
Mr. Satchell	... ...	2 2	0	Dr. Luff	... ...	1 1	0
Dr. Duffin	... ...	5 5	0	Sir James Paget	... ...	10 10	0
Mr. Butlin	... ...	2 0	0	Surgeon-Major Gardner		5 5	0
Mr. C. A. Aikin	... ...	2 12	6	C. G. E.	... ...	0 10	6

I am, Sirs, yours faithfully,

Brook-street, W., Nov. 20th, 1895. W. H. BROADBENT.

MEASLES IN DOGS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give any information as to whether dogs (or other animals) have been known to suffer from measles? I have been attending some twenty odd cases of measles, one of my patients being in my hospital in which I live. I know my dog (fox terrier bitch) has been into this particular child's room. For the past few days the dog has evidently been very unwell, refusing her food, &c. Yesterday I noticed a rash on her abdomen identical with the eruption of measles in appearance. If this is true measles, are there any other instances known? I am, Sirs, yours truly.

Nov. 18th, 1895. M. H.

A STORY.

THE following anecdote has a somewhat *trovato* flavour, but the original narrator vouches for its authenticity:—

At a certain military station a newly-fledged assistant-surgeon who inhabited one of the "pill-boxes," as the quarters assigned to the medical staff were profanely designated, found himself unable to sleep one night in consequence of the persistent coughing of an unfortunate soldier who was doing sentry-go hard by. Perhaps philanthropy may have been the motor; but, at any rate, the wakeful surgeon left his warm couch, and proceeding to the adjoining dispensary compounded a powerful, if somewhat nauseous, draught, which he confidently believed would overcome the most inveterate cough that was ever pumped from bronchitic lungs. Armed with this potent weapon, and wrapping himself up carefully—for it was very cold—the would-be philanthropist made his way to the sentry-box, and ordered its astonished occupant to take the medicine forthwith. The man objected; but the officer was peremptory, and at length, amidst much spluttering and objurgation, the physic was swallowed. Needless to say, it acted like a charm (physic always does under similar circumstances), and from that moment until the rising sun once more awoke the multifarious noises of the camp not a sound disturbed the solemn stillness. Next day at the breakfast-table, while dilating on the marvellous qualities of his cough-no-more specific to an admiring circle of subalterns, who one and all advised him to have it patented, the complacent young gentleman, to his great surprise, received a summons to the orderly room.

"What is the meaning of this, Mr. Blank?" said the colonel, with an expression wherein sternness and amusement strove for mastery. "Here is Private Rooney, who says you forced him to drink some stuff last night which he believes was poison, for he has felt very ill ever since."

"I simply cured his cough for him, sir," replied the assistant-surgeon proudly, "and he ought to be grateful, instead of trying to trump up such a preposterous charge."

"Tell the officer what you complain of," said the colonel, addressing the late sentry.

The *patient malgré lui* had a brogue you might cut with a knife, as the saying is. "I beg your pardon, sorr," he exclaimed in response to the C.O.'s request; "shure it's the truth, and nothing but the truth, I'm afther tellin' you. The doctor he comes out all wrapped up in a blanket, wid a glass in his fist, and he says, says he, 'Dhrink this, me man; it'll do ye good.' 'Is it whiskey, sorr?' said I, for I had me doubts. 'Whiskey, ye drhunken spalpeen ye,' says he—savin' your presence, sorr—'no, it ain't whiskey, it's good medicine, that's what it is, an' ye'd better be afther tossing it down the red lane widout makin' any more fuss.' 'Not me, sorr,' says I; 'shure, if it's medicine yez'll be wantin' it for the poor min in hospital.' But it warn't no use. 'Av ye doesn't take it this instant minute,' says the doctor in a thunderin' rage, 'I'll clap you in the guard room.' And so I had to swallow the bastely stuff."

"Well, the beastly stuff cured your cough, at all events," said Mr. Blank, when decorum once more resumed its wonted sway. "You had been barking away for an hour or more, and I did not hear you cough once afterwards."

"Faix, then, it warn't me ye heard barkin' at all," cried Private Rooney triumphantly. "It wor Bill Smith, whose place I hadn't tuck more'n two minutes whin you come wid the poison."

Secretary.—The General Medical Council do not, it is understood, object to unqualified assistants being employed by practitioners when resident in or near their employers' houses, but the Council will not allow unqualified persons to conduct branch practices or dispensaries which are situated at a distance from the principal's house and are not under his immediate supervision. A notice to this effect appears in our advertisement columns weekly.

MEDICAL ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—A few weeks ago, having a small practice to dispose of, I wrote particulars to a local agent. A person presented himself, and examined my books and became acquainted with the nature of my practice. He left, promising to see me again. I next hear of his prowling about the village, canvassing my patients for a club, and next that he has taken rooms and on his own account commenced practice. Such conduct amongst gentlemen needs no comment—it is too low, and disgusts one. But I think it a serious matter for agents, and I have no doubt a strong one would find some legal remedy for such conduct. It may be warning, however, to others; and I should advise practitioners to be very careful, and not regard so much their testimonials as to require information with respect to their personal character.

I remain, Sirs, yours truly,

Nov. 18th, 1895. PRACTITIONER.

*** It is not the first time that this mean and disgraceful trick has been brought to our notice. In every case where a vendor has been treated in this way he should write a full account of the occurrence to the agent.—ED. L.

ERRATUM.—We regret that by an unfortunate error "gramme" was printed for "grain" in all the figures of the pulse-tracings illustrating Professor Bradbury's Bradshaw Lecture in our last issue.

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Communications, Letters, &c., have been received from—

A.—Dr. W. B. Addison, Tenterden; Mr. S. S. Ashmore-Noakes, Nice; Mr. Aldred, Great Yarmouth; Mons. J. Astier, Paris; A. H. F., Lond.; Alpha, Lond.; Alpha, Edinburgh.

B.—Dr. D. C. Black, Glasgow; Dr. G. S. Buchanan, Lond.; Dr. C. Bodon, Budapest; Dr. Roman Baracz, Lemberg, Austria; Mr. L. A. Bidwell, Lond.; Mr. Wm. Berry, Wigan; Mr. H. W. Blenkinsop, Warwick; Mr. W. Burton, Ramsgate; Mr. C. A. Burnham, Santa Elena, Ecuador; Mr. C. Birchall, Liverpool; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Blondeau et Cie, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Bristol Medico-Chirurgical Society, Hon. Sec. of; Borough of Bolton, Town Clerk of.

C.—Dr. E. Cautley, Lond.; Dr. W. S. Colman, Lond.; Dr. H. A. Claridge, North Canes; Mr. F. C. Carver, Lond.; Messrs. Coleman and Co, Norwich; Messrs. Crossley, Moir, and Co., Lond.; Cortland Wagon Co., Lond.

D.—Dr. R. Dawson, Arundel; Mr. W. F. Dale, Welling, Kent; D. E. C., Lond.

E.—Dr. G. F. Elliott, Hull; Dr. A. S. Eccles, Lond.; Mr. A. R. Edwards, Boulogne-sur-Mer; Messrs. Evans, Lescher, and Webb, Lond.

F.—Dr. A. Flint, Westgate-on-Sea; Dr. C. R. Francis, Lond.; Mr. J. L. Firth, Bristol; Mr. R. D. Farnworth, Blackburn; Mrs. Firey, Latcham; Messrs. M. B. Foster and Sons, Lond.; F. B., Lond.; F. B., Lond.

G.—Mr. F. J. S. Gray, Walsall; Mr. P. D. Gunning, Lond.; Mr. T. W. H. Garstang, Knutsford; Globe Advertising Co., Aston Clinton; Glasgow Eye Infirmary, Sec. of; General Medical Council, Lond., Registrar of; Gamma, Lond.

H.—Surg.-Capt. Holmden, Edenbridge; Mr. T. G. Horder, Cardiff; Mr. R. Hartley, Thirsk; Mr. J. Heywood, Manchester; Mr. W. V. Herbert, Lond.; Mr. J. C. Humphreys, Ticehurst; Messrs. P. Harris and Co., Birmingham; Helena Public Library, Montana, U.S.A.

I.—Dr. C. R. Illingworth, Lond.

J.—Sir George Johnson, Lond.

K.—Dr. Kelynack, Manchester; Dr. G. C. Kingsbury, Blackpool; Dr. C. S. Kirton, Leigh; Herr L. A. Klepzig, Leipzig Gholis; Kensington, Lond.

L.—Dr. E. G. Gordon Little, Lond.; Mr. T. Laffan, Cashel; Mr. J. P. Llewelyn, Lond.; Mr. Gebrüder Lüdeking, Hamburg; Mr. M. Lawrie, Weymouth; Messrs. Ledger, Smith, and Co., Lond.; Messrs. B. G. Lennon and Co., Lond.; Lewisham Union Infirmary, Med. Supt. of; L.R.C.P., L.R.C.S., London.

M.—Dr. R. F. Merwanji, Hyderabad; Mr. R. Mosse, Lond.; Mr. A. G. Merron, Fraserburgh; Mr. K. C. Macdonald, Chorley; Mr. J. Milne, Lond.; Mr. A. S. Morton, Lond.; Mons. G. Masson, Paris; Messrs. Minsballs and Parry-Jones, Oswestry; Messrs. May-Davis and Co., Lond.; Maltine Manufacturing Co., Lond.; Monkwearmouth Hosp., Sunderland, Hon. Sec. of; M.R.C.S., Godalming; M.D., London; Medical, Harringay.

O.—Messrs. O'Brien, Thomas, and Co., Lond.; "Our Dogs," Manchester, Manager of.

P.—Dr. A. B. Price, Folkestone; Mrs. Protheroe, Clifton; Mrs. Pechey, Hope; Messrs. Prideaux and Allen, Lond.; Price's Patent Candle Co., Lond., Sec. of; Pons, Lond.

R.—Mr. M. Robinson, Honiton; Messrs. Ross and Cameron, Inverness, N.B.; Royal Societies Club, Lond., Sec. of.

S.—Dr. H. Snow, Lond.; Dr. D. J. Sherrard, Hailsham; Dr. E. W. Selby, Doncaster; Dr. R. H. Shaw, Ballymahon, co. Longford; Dr. J. B. Spence, Burntwood; Dr. Sternthal, Brunswick; Surg.-Capt. R. R. Sleman, Lond.; Mr. W. Sykes, Gosport; Mr. D. R. Stavert, Edin.; Mr. F. W. Sears, Lond.; Mr. T. Smith, Lond.; Mr. P. F. Sturridge, Kendal; Mr. H. Simpson, Colwyn Bay; Messrs. Shelley and Co., Lond.; Messrs. Stubbs, Lond.; Messrs. Squire and Sons, Lond.; Messrs. Stubbs, Sheffield; Messrs. Street and Co., Lond.; Messrs. St. Leger, Bunnett, and Co., Lond.; Sussex County Hosp., Brighton, Sec. of.

T.—Mr. T. W. Twyford, Hanley; Mr. A. G. Tait, Sidcup; Mr. C. Taylor, Higher Dittisham; Mr. C. A. P. Truman, Reading; Mr. S. Torbett, Walkden; Throat Hosp., Golden-square, Dean of; Thorn-Hill, Lond.

U.—Mr. G. Underhill, Cookley.

V.—Mr. G. R. Vicars, Yorkshire; Vegetarian Society, Manchester, Sec. of.

W.—Dr. W. Whitla, Belfast; Dr. J. E. Woodbridge, Youngstown, Ohio, U.S.A.; Dr. Wm. Wallace, Rugby; Mr. S. Walpole, Lond.; Mr. C. P. A. Wimberley, Chard; Mr. H. Williams, Lond.; Messrs. W. Wood and Co., New York; Messrs. Walton and Lee, Lond.; Messrs. West, Newman, and Co., Lond. Warneford Hosp., Leamington, Sec. of; West Yorkshire Iron and Coal Co., Sec. of.

X.—X., Lond.

Y.—Dr. W. M. Yeoman, Skipton.

Letters, each with enclosure, are also acknowledged from—

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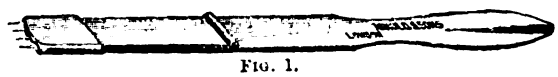


FIG. 1.

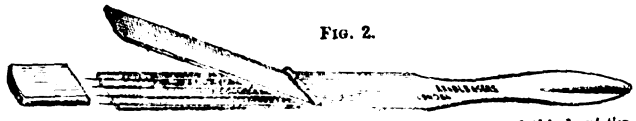


FIG. 2.

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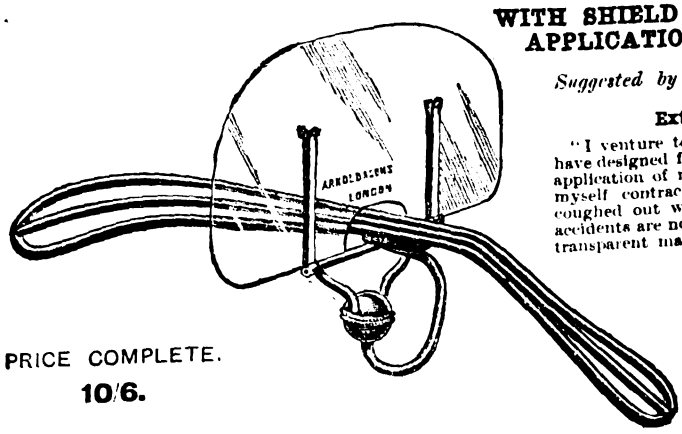
Extract from the BRIT. MED. JOURNAL, Sept 21st, 1895:—

"Mr. J. Iredale, Mablethorpe, sends us a description of a new Vaccinator which has been made for him by Messrs. Arnold & Sons. Fig. 1 shows the instrument closed, ready for use. Fig. 2 shows the part with grooves and needles *in situ* raised from a hinge joint; the other end is a blunt lancet with a shallow groove for the reception of lymph. As needles can be had in every house, the advantage of this vaccinator will be easily seen, this being a great improvement on the old type of vaccinator of this description, when the needles are permanently fixed and the great difficulty is keeping the points

NEW TONGUE DEPRESSOR.

(REGISTERED)

WITH SHIELD FOR PROTECTING THE FACE DURING APPLICATIONS TO THE THROAT IN DIPHTHERIA.



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Suggested by ALEX. W. W. DOWDING, M.D., M.S.

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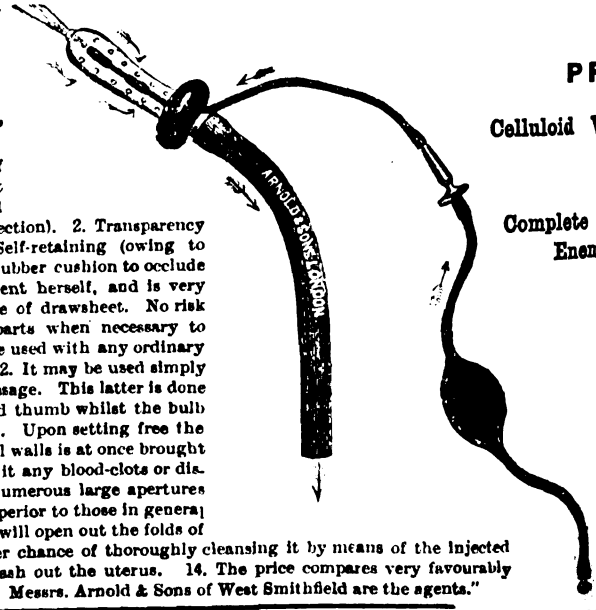
"I venture to bring to the notice of the profession an [illegible] have designed for the protection of the face during the application of remedies to, the throat in cases of diphtheria. I myself contracted diphtheria on two occasions from a patient coughed out whilst examining in the usual way, and as such accidents are not uncommon, it occurred to me to introduce a transparent material, and I found that mica or talc answered exceedingly well, and I am now able to [illegible] tion to make a careful examination in comfort. The tongue depressor is well curved and has a [illegible] the face shield is of mica, the carrier being [illegible] ball and socket joint, and sliding backwards [illegible] a bar or under surface of the depressor, and [illegible] is freely movable and can be used for [illegible] By removing the carrier the depressor can be [illegible] ordinary way. Being of mica the shield is [illegible] parent, and easily kept clean. To prevent [illegible] cold weather it may be warmed before use. [illegible] ficial illumination throughout the shield is [illegible] candle, lamp, or Mackenzie's laryngoscopic mirror. Messrs. Arnold & Sons of West Smithfield are the makers."

NEW CELLULOID VAGINAL DOUCHE.

(PATENTED.)

Suggested by R. H. RAINS, M.R.C.S.

(Vide BRITISH MEDICAL JOURNAL, July 6th, 1895.)



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Complete with Seamless Enema, **10/6.**

Extract from THE LANCET, May 25th, 1895:—

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An Address

ON

URINARY CALCULI: THEIR FORMATION AND STRUCTURE.

Delivered at the Summer School of Medicine for Qualified Practitioners in Cambridge, in June, 1895,

BY SIR GEORGE MURRAY HUMPHRY, M.D. CANTAB., F.R.S., &c.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF CAMBRIDGE.

GENTLEMEN,—Having commenced my medical career as an apprentice at Norwich and as a pupil at the Norwich Hospital, my thoughts were early directed to the subject of urinary calculus, particularly in its practical bearings; and for many years subsequently I had much experience in the treatment of stone in Addenbrooke's Hospital. It is not, however, my intention to take you at any length over the well-trodden ground of the treatment of this malady, but rather to discuss for a short time the structure and mode of formation, or building up, of stones in the bladder and some of the forms they assume, matters which, I think, have some interest and some difficulties, and which have not received much attention. I do not mean the microscopical constitution or the chemical composition, but rather the more obvious physical structure, of calculi. For this purpose I have gone, more or less carefully, over nearly all the collections in London as well as that in Norwich and that in our own museum here. I do not wish by this to raise your expectations of what I have to say, for I must confess to being not very proud of my results in ascertaining the causes of the peculiarities which some calculi exhibit, and I am reluctantly obliged to leave many of these points to the more fertile reflections of yourselves and others.

Let me first draw your attention to a few remarkable specimens. I show you here one of the largest calculi which has been found in the human bladder, and which presents some points of historic and collegiate, as well as of clinical, interest. According to an account of it by Dr. Heberden given in the Philosophical Transactions[1] it weighed thirty-three ounces and three drachms, and was taken after death from the wife of a locksmith at Bury St. Edmunds. It was shown to Charles II. at one of his visits to Newmarket, "when at least half an ounce was broken off before the king to show him that it was formed in the manner animal stones usually are." It was of an "oval shape, flattened on one side and its surface smooth." The specific gravity was 1·75. It was presented to Trinity College, Cambridge, by Mr. Samuel Battely, Member of Parliament for Bury St. Edmunds, about the middle of the reign of Queen Anne, and was preserved in the library of that College, together with other calculi, a human skeleton, and a curious assortment of animal and other specimens, indicating that the studies at the College were not limited to books and stars, philosophy and casuistry, but were to be extended, practically, to the various regions of science. Reminders of this, and also of the fact that libraries were the only museums of that time, are still given by a human skeleton in the library at Queen's College and by one in the library at Jesus College. About thirty years ago the calculus and its companion specimens were transferred to the pathological museum of the university. It is of clinical interest forasmuch as we learn that "the woman had felt much less pain than might have been expected from so large a stone, and might probably have lived much longer with it had she not thought herself well enough to attempt a journey on horseback; for while she was riding she was suddenly seized with violent pains that obliged her to be taken off the horse immediately. After this she could never make water unless the stone was first moved, and she continued in great agonies till her death." This corresponds with the fact that the stone is of very compact structure, composed chiefly of concentric layers of uric acid with some oxalate of lime and a thin coating of fusible calculus. It measures 15 in. by 13½ in.[2] It formed, no doubt, very slowly during many years (we cannot tell how many, for estimates as to the rate of growth of calculi are little more than guesses) in the bladder which gradually became accustomed to it and did not resent its presence or object to its weight. Hence the comparatively little suffering and the long duration of life. In the Norwich collection there is a six-ounce phosphatic calculus which was less meekly tolerated by the female bladder, for it is said to have been ejected spontaneously through the urethra. A still larger stone, weighing forty-four ounces, taken after death from the bladder of Sir Walter Ogilvie, is in the museum of the Royal College of Surgeons of England. He had paraplegia, and the stone is phosphatic. A calculus in St. Thomas's Hospital museum weighing twenty-five ounces was, at about the same date as the large one I have shown you, taken after death from Sir Thomas Adams, the philanthropist, draper, Lord Mayor of London, president of St. Thomas's Hospital, and the intimate friend of Charles II., to whom he contributed large sums of money, and who created him a baronet, and for his loyalty to whom he was imprisoned in the Tower. He was educated at Cambridge and founded the Professorship of Arabic in this University in 1632. The calculus resembles the one I have shown you, being composed of compact and regularly laminated uric acid formed around an oval nucleus of more porous uric acid. It appears to have caused little pain or inflammation of the bladder or disturbance of the general health, and, finally, to have proved fatal in consequence of a fall which the worthy baronet had, at the age of eighty-one, in descending from his carriage. It presents a groove dividing it into two unequal parts. This groove, which was probably caused by the projecting hinder edge of the trigone of the bladder, is deep and with defined edges on what we may suppose to have been the under part of the stone, and becomes shallower and gradually disappears towards the upper part. In a sermon preached "at the solemnity of his [Sir Thomas Adams's] funeral" on March 10th, 1667, the groove is described as being, "as it were, a paved way, or rather a channel cut through the stone, for his water to pass," otherwise "the stoppage of it must of necessity have very much added to his smart and lessened his days." The stone is rather uneven and slightly rough on the exterior, being covered, as these large calculi not infrequently are, with a layer of more porous uric acid or urate of ammonia. This coating extends over the groove as well as over the rest of the calculus. A drawing of the calculus, with other particulars respecting it and Sir Thomas Adams, is given in Vol. XXI. of the Transactions of the Pathological Society by Mr. Charles Williams of Norwich, to whom I am indebted for a loan of the sermon.

The largest stone which has, I believe, been removed entire and successfully by the lateral operation is in the Norwich collection. It weighs fifteen ounces and was extracted by Mr. Harmer, a Norfolk surgeon, in the presence and with the aid of Gooch, who gives a representation of it in his work on Surgery. A urinary fistula remained, which Gooch says was kept clean by a little dog licking the part, which gave the patient more ease than any application his surgeon furnished him, and as long as he lived (five years) the dog was his surgeon and kept the wound tolerably clean and easy. The next largest, so far as I know, removed successfully and entire by the lateral operation is in the museum at St. George's Hospital. It weighs eleven ounces, is composed in its middle of uric acid and some oxalate of lime, with a thick coating of compact, concentrically marked phosphate of lime. It was extracted from a man aged forty-three, with much difficulty, by Mr. Warrington Haward, in St. George's Hospital, who found it necessary to extend the incision into the rectum. A fistula remained, in this case as in the preceding one, but the man was alive and, with that exception, well some years afterwards. In the museum at Guy's Hospital is one weighing thirteen ounces extracted successfully by Mr. Mayo of Winchester, but it broke and was removed in fragments. One in the same museum weighing nine ounces was successfully removed by Sir A. Cooper, and another weighing sixteen ounces was also removed entire by the same surgeon, but the patient sank. In the museum of the Royal College of Surgeons of England there is a still larger calculus, the largest, I imagine, which has been removed by the lateral

[1] Philosophical Transactions, 1752, vol. xlvi.

[2] See analysis and drawings by Professor Cumming in the first volume of the Cambridge Philosophical Transactions.

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operation. It was dragged through the perineum by Cheselden and weighed seventeen ounces, but the patient sank the next day. One weighing thirteen ounces failed to be extracted by Mr. Dalrymple of Norwich. The largest which I have seen extracted is the uric acid calculus I show you, weighing eight ounces, which I removed, by means of a strong scoop, through the perineum of a man in the neighbourhood of Newmarket. He recovered without a bad symptom.

On looking over the Norwich collection one is struck with the number of large calculi which have been removed successfully by the lateral operation and which bear testimony to the reputation as lithotomists which the surgeons of that city have long held. Most of them are sound, hard, uric-acid stones, and, so far, tell of the sound constitution of the patients, contrasting with these nine calculi from India, sent us by a former pupil, which, though containing uric acid and oxalate nuclei, are, for the most part, composed of phosphates. There is a phosphatic calculus from a negro in the museum of King's College Hospital, and a calculus weighing three ounces and a half, apparently phosphatic, with curious projecting knobs, in the museum of St. George's Hospital. It was removed by the lateral operation from a man who had spent the greater part of his life in India. He did not recover. In the museum at St. Mary's Hospital there is a phosphatic calculus from India, with two concentrically marked, apparently uric acid nuclei as large as filberts joined by a band like the Siamese twins. There are, however, in the museum of St. George's Hospital two oxalate of lime calculi from India, and in the Royal College of Surgeons of England there is a collection of many calculi, removed by operation from Hindoos and Afghans, which are composed apparently of uric acid; they are compact and present the usual concentric rings. Thus we see that the inhabitants of that region of the world, who are mostly vegetable-eaters, are liable to the same varieties of calculus as our own countrymen. The oxalate of lime is said by Castor to be a more frequent nucleus than uric acid in India, and is attributed by him to the vegetable character of the diet.[3] This fine bristling specimen of oxalate of lime weighing four ounces—a good example of the calculus spinosus of Celsus—was successfully removed by myself from a middle-aged man. The largest example of this variety of calculus which I have seen weighed eight ounces. It is in the Royal College of Surgeons of England and was removed from a man in Norfolk aged sixty, who appears to have gone on well for six weeks, but then to have become depressed and sank. These results of the lateral operation pale, however, in interest since the revival, under antiseptic advantages, of the supra-pubic method, by which great stones have recently been removed with success and without much difficulty. In the Royal College of Surgeons of England there is a calculus weighing thirty-four ounces and a half, six inches long and four inches in diameter, which was removed at Cairo by Mr. Milton, by the supra-pubic operation, from an Egyptian fellah, aged sixty, who was at the time in bad health. The operation is described as one of "laparotomy," for the peritoneum, as well as the bladder, was opened above the pubes. The man lived two months and a half and then died from kidney disease.[4] In Ashhurst's "International Cyclopædia of Surgery," vol. vi., p. 162, a case is quoted in which a stone weighing forty ounces and a half, and measuring seventeen inches in circumference, was removed from a man aged thirty-nine, by the supra-pubic method, by a Brussels surgeon, the patient dying eight days afterwards. This is probably the largest stone ever removed from the living human bladder. It is somewhat strange, and not particularly creditable to me, that, having tested this method in 1848 on a lad aged fourteen who had shown symptoms from birth,[5] I should not again have resorted to it till within the last few years, when it had been revived by others, especially as the case taught me that I over-estimated the ill-effects that were likely to result from extravasation of urine into the loose tissue about the bladder. I carefully emptied that viscus before the operation, instead of washing it out, and perhaps filling it with antiseptic fluid, as is now done. Yet, in spite of my precautions, when I cut into the bladder, to my dismay a considerable quantity of urine (pent up, I suppose, in the ureters, as may be seen to have occurred in a specimen in the Middlesex Hospital, where, with a calculus in the bladder, the ureters, pelves, and calices of the kidneys are enormously dilated) flowed out and soaked into the surrounding tissues; yet no ill resulted. The thickened bladder had misled me somewhat as to the size of the stone which, as you see, is not very large, and weighed only 750 grains. The lad made a good recovery; and some time afterwards I extracted by the lateral method a stone which had formed upon and was adherent to the cicatrix of the former operation.

The nucleus.—The nucleus, which is the incipient or foundation, and usually the central, part, is obviously the most important part of a calculus, that to which attention has been most especially directed. It commonly forms in the kidney and consists of uric acid, oxalate of lime, or cystine—of the first most frequently, of the last rarely. Its formation depends upon one or both of two causes: first, an unusual quantity of one of the more easily precipitable constituents of the urine (uric acid or oxalate of lime), when a very slight cause will lead to the precipitation and union of the crystals, which may take place in the uriniferous tubes or in the calices of the kidney; secondly, a slight increase, or alteration in the quality, of the mucus in the secreting tubes or calices of the kidney may exert what is known as a colloidal influence upon the forming crystals, modifying their shape or reducing the crystallisable material to a more or less amorphous and cohesive condition, in consequence of which they adhere together into masses or calculi. This alteration in the mucus may possibly, in some cases at least, be caused by the abnormal presence of crystals in the kidney, the two conditions thus acting and reacting on each other and combining in the production of calculus. That the mucous condition is a very important feature in the process is shown by the well-known experiments of Mr. Rainey, followed by the observations of Dr. Ord;[6] and it is maintained that without this colloidal influence the crystals have very little tendency to adhere together. Streaks of the granular or amorphous uric acid and of dumb-bells of calcium oxalate formed under this influence are not uncommonly found in the uriniferous tubes, especially in infants and young children, constituting the "uric acid infarction" of Virchow. Many years ago a medical man about sixty, of gouty diathesis and sensitive temperament, who was liable to attacks of pain in a kidney, told me that after each attack he was conscious of something passing along the ureter into the bladder, and, being apprehensive of the formation of calculus, he used to watch on each occasion for the passage with the urine of what he called a "bleb of mucus." His apprehensions were realised, for after one of these attacks the looked-for "bleb" did not appear, a stone formed, and I subsequently lithotrised him. He recovered from this, but died subsequently from some kidney disease. When two or more calculi find their way into the bladder they usually, I believe, come from the same kidney; and in the Transactions of the Pathological Society[7] two instances are recorded by Dr. Harley, in each of which numerous small calculi were found in one kidney (in one case in the left kidney, where they were of triple phosphate, and in the other instance in the right kidney, where they were of uric acid), the opposite kidney being quite free. Here the formation of the calculi evidently depended upon some peculiarity, probably in the mucous secretion, of the kidney. The importance of this view of the pathology of calculus with regard to the investigation of the causes of the disease in particular districts and to the measures to be taken for its prevention must be borne in mind. It gives some support to the principle involved in Dr. Yellowby's idea that the Norfolk dumplings and the indigestion resulting from them were *a* cause, if not *the* cause, of the prevalence of calculus in that county. The porous character of the nucleus, as compared with the layers formed upon it, which may often be observed, accords with its mucous origin. Two or more nuclei are not very infrequently found in a calculus. These are usually of uric acid or urate of ammonia. In this specimen (Fig. 1) there are four nuclei; and in one in University College five uric acid nuclei are embedded in a mass of phosphates, forming one large stone. In some instances they are small, and in

[3] Ashhurst: International Encyclopædia of Surgery, 160.
[4] THE LANCET, Sept. 16th, 1893.
[5] See Provincial Medical and Surgical Transactions, vol. xvii.
[6] The Influence of Colloids upon Crystalline Form and Cohesion, 1879.
[7] Transactions of the Pathological Society, vol. xv., p. 167.

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me flattened by apposition. The junction of such may ve taken place in the kidney, though I am not aware that nal calculi have been found with multiple nuclei. Now and en one sees two nuclei united by a band (as just mentioned) e Siamese twins and enclosed in a common envelope—

FIG. 1.

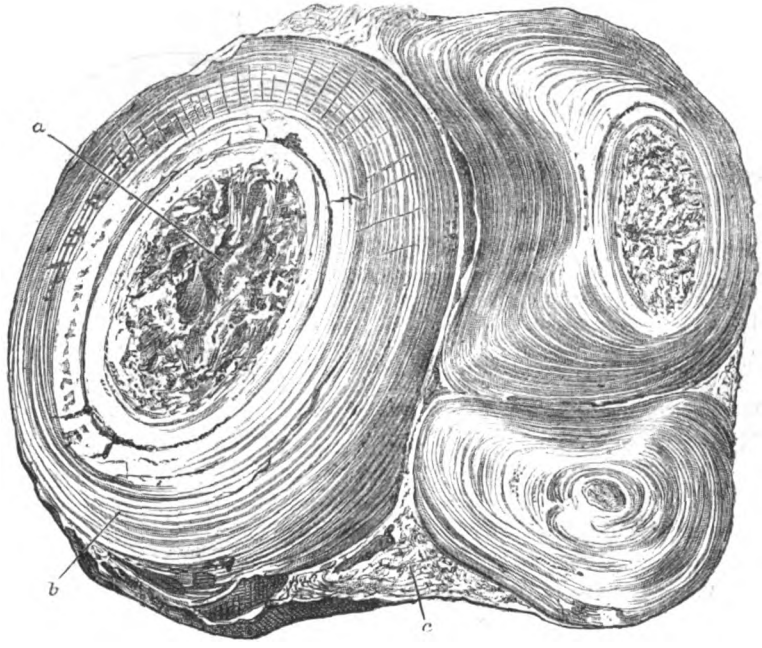


Four nuclei in one calculus. (Cambridge collection.)

deed, a large number of small calculi may be united by osphates into a single stone, as in a specimen examined y Dr. Beale.[8] Occasionally larger stones are thus joined ogether, the uniting medium being commonly phosphatic, nd two or more calculi, lying in apposition in the bladder, may ecome covered over and cemented by phosphatic material. n one specimen two good-sized, cone-shaped calculi, with eir bases apposed but not in contact, are enveloped in a ass of porous, apparently phosphatic, material. In a specimen in King's College Hospital a small porous uric acid stone is appended to, and united by phosphates with, a large, compact, uric acid stone which has an oxalate nucleus. The most remarkable example of such union is presented by the large seventeen-ounce calculus removed by Cheselden and represented in Fig. 2, taken from the catalogue of the Royal College of Surgeons of England (Plate III., Fig. 1). In it three large uric acid calculi, but little adapted to one another and not very closely approximated, are united by earthy phosphates. The central part of each of the three consists of porous uric acid or urate of ammonia, and the surrounding concentrically marked and more compact uric acid looks as if the calculi had lain in apposition, and that some shifting of them upon one another had taken place before they became united by the phosphatic deposit. The multiple nuclei are, as I have said, commonly composed of uric acid or urates. The oxalate calculi are usually single, and rarely have more than one nucleus; and, indeed, this material is seldom passed in the form of gravel. There is, however, in the museum in Guy's Hospital a specimen in which four nodulated nuclei of oxalate of lime, as large as beans, are united by urates and surrounded by layers of uric acid, forming a large stone; and in the museum of the London Hospital there is a large calculus composed of two calcium oxalate calculi of unequal size enclosed in a mass of phosphates. When nuclei remain separate they form multiple calculi which, by apposition and mutual friction, commonly become faceted, and often in a manner rather difficult to account for. This, however, is not always the case. In the museum in Guy's Hospital there are sixteen calculi taken from a bladder after death; they are nearly as large as walnuts and are spherical and smooth on the surface. Here, also, are sixteen spherical, smooth calculi of rather smaller size. In the Norwich collection there is a large cuboidal calculus with four facets, upon each of which is applied a flattened calculus faceted on one side, the whole forming a nearly spherical mass which resisted the attempts to remove it by the lateral operation. The portions came away separately subsequently, through the wound, into the bed, but the patient did not recover.

When the nucleus or the calculus has reached the bladder it does not comport itself quite like an ordinary foreign body. The latter, as we know, whether it be a piece of bougie, a hairpin (as in this specimen), a mass of soap (as in two specimens in the Royal College of Surgeons of England), or any other substance, becomes encrusted with phosphates consequent on the irritation caused by it in the bladder, the only exception to this that I have known being the specimen in the Royal College of Surgeons of England in which a needle is the nucleus of a uric acid stone, whereas a calculus usually increases by the addition of material like that of which it is composed. The reason of this difference must be that the calculus causes less irritation than a foreign body, which perhaps we should scarcely have expected. That a hairpin should be a source of considerable worry may easily be believed, but we should not have thought that a piece of bougie would have proved a greater irritant than a spinous oxalate calculus. True, the calculi may, and often do, become coated with phosphates. Usually, however, the addition to a calculus of uric acid, oxalate of lime, or cystine does not consist of phosphates, but of uric acid, oxalate of lime, or cystine, as the case may be. It is somewhat remarkable that this should be so, and should sometimes go on steadily for many years, as in the instance of the woman whose large

FIG. 2.



Three large uric acid calculi united by phosphates. (Catalogue of the Royal College of Surgeons.)

[8] Urinary Deposits, 1869, p. 419.

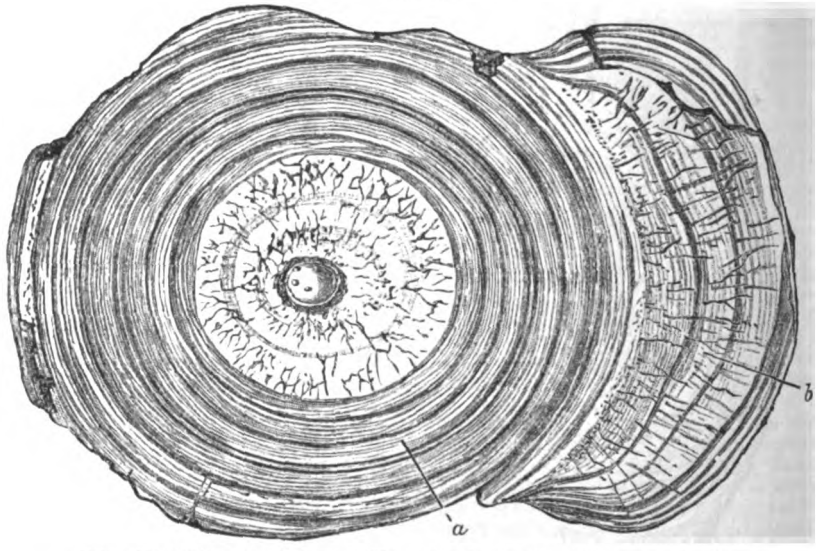
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stone I have shown you, in that of Sir Thomas Adams and in others, especially when we remember that oxalate of lime or oxalic acid and cystine are not commonly present in the urine at all, or indeed in the blood,[9] and that uric acid is present in small quantities, about six to ten grains only being passed in the four and twenty hours, and it does not exist in a free state in the urine, but is held in solution by an alkaline base from which it must be liberated before it can settle on a calculus.

Increase of calculi in size.—The addition to a calculus is probably effected by the same means as that by which the nucleus is formed—that is to say, by the influence of the mucus in the urine. This, where in contact with the stone and resting in the interstices of its surface, attracts, sets free, and modifies the uric acid, increasing its cohesive quality and causing it to settle upon the stone, and the quality of the uric acid thus added will depend upon the amount and quality of the mucus. When the latter is in small quantity the acid crystals will be little altered and will be slowly deposited, constituting the compact material of which the greater number of large, slowly forming calculi are composed. When the mucus is more abundant the uric acid is deposited in greater quantity, more quickly, and in more granular amorphous form and more irregularly, constituting the porous variety of which many stones are entirely, or in varying degrees, composed. The porous and the compact materials often vary in different periods of the formation of the same calculus, not infrequently succeeding one another and telling of successive periods of greater or less irritation of the bladder. The same remarks apply probably to the oxalate and cystine calculi, though variations in density in different parts of these are not so common as in those composed of uric acid.

Form of calculus.—Each variety of calculus takes its own form, the uric acid being oval and flattened (which is also commonly the case with the cystine), and the calcium oxalate being spherical. This cannot depend upon the surroundings, for the form differs in the two cases and each assumes its particular form from the first—that is, when the stone is small. In the calcium oxalate the form may be given by the crystals radiating from the centre in needle-like lines and shooting out into the spines or tubercles on the surface; and in the uric acid calculus it must likewise be some disposing property in its particles which gives the flattened oval shape and which also causes the tubercles often seen on the surface and the lamination in its structure. Though the predominant form of the uric acid calculi is a flattened oval, especially when the substance is compact, it is liable to great varieties. Often it is prolonged in certain directions by the deposit upon it of the porous uric acid or urate of ammonia, or of the two combined, the particles of which, being more or less deprived of their crystallising quality, lose proportionately their form-determining property. It not uncommonly happens that the calculi are prolonged at one or both ends of the oval; and in Sir Henry Thompson's cabinet in the Royal College of Surgeons of England there is the curious instance of a square-shaped calculus in which the four angles have been prolonged by porous uric deposit upon each, the whole being covered over by more compact uric acid, as though, for a given and short period, the irritation of the bladder by the four corners had determined the presence of mucus upon them, with the consequent porous condition of the uric acid. Occasionally, as in the specimen represented in Fig. 3 from the catalogue of the Royal College of Surgeons of England, a uric acid calculus is capped at one end with a thick layer of compact striated uric acid. The smooth groove on the surface between the two parts in this stone has suggested that the one part may have been formed in a cyst and the other part in the bladder, but, in addition to the fact that encysted calculi are usually phosphatic, there is a specimen in the College in which there is a similar cap at each end. A calculus in the museum at St. Mary's Hospital has a small cap of the like material at one end, and the whole is covered with a layer of phosphate. A specimen in Sir Henry Thompson's cabinet looks as if a number of small uric acid calculi had settled upon and adhered to an elongated stone of the same material, this being, I suppose, in reality, an exaggeration of the granular or tuberated condition not uncommon in uric acid calculi. The nucleus may be at one end, the calculus having been prolonged in the opposite direction into a finger-like form by compact or porous uric deposit, as in this specimen. Here is a triangular flattened calculus; and in a specimen in the museum at St. George's Hospital a calculus has acquired an hour-glass shape from increase at both ends, the nucleus being in the middle. This, I should say, is thought to have been due to the solution of the middle part by the urine, which can scarcely have been the case, for the calculus presents the same smoothness and character of contour over its whole surface. Such constrictions or grooves dividing a calculus into two or more equal or unequal parts are occasionally seen (Fig. 4) and they are commonly attributable to projections, into the bladder, of the hinder edge of the trigone or some other bands which have impressed the calculus. They are generally smooth, as smooth as, or smoother than, other parts of the surface of the calculi. Occasionally, but more rarely, the constriction has been caused by the formation of one part of the stone in a cyst and of the other part in the bladder, and represents the narrow orifice of communication between the bladder and the cyst. In such cases, as I have said, the

FIG. 3.



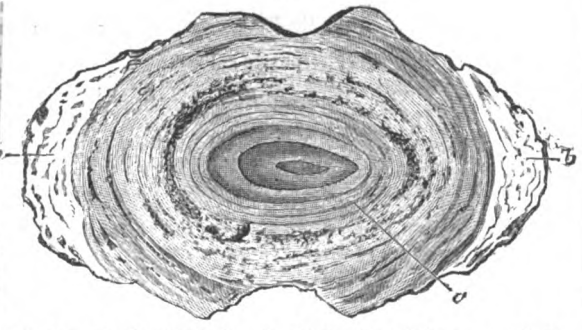
Uric acid calculus capped at one end by compact uric acid. (Catalogue of the Royal College of Surgeons.)

[9] Dr. Beale found cystine continuously present for a long time in the urine of a young man who was otherwise healthy.—Urinary Deposits, 1869, p. 384.

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calculi are, so far as I have seen, phosphatic.[10] Various forms are given by the addition of lime salts, and it is to be remarked that these are often deposited upon the ends of the oval uric acid calculi, extending their long axes and leaving the rest of their surfaces uncovered, of which Fig. 4 is an

FIG. 4.



Calculus with phosphatic deposit at both ends and deep groove in the middle. (Cambridge collection.)

illustration. Does this indicate that the salts have a tendency to settle upon the ends or more prominent parts of the calculi, as in the instance of the square uric acid calculus before mentioned, in which a collection of porous uric acid is seen in each of the four corners? This large calculus, the other half of which is in St. Bartholomew's Hospital, is partially covered by thick, defined, irregular bands of phosphates, the intervening parts of the surface being free. The cause of this irregularity in the deposit I cannot tell. The calcium oxalate calculus is less liable to varieties of form than the uric acid, perhaps because the needle-like radiation of its crystals is a more determined factor, and leads to the more definitely spherical shape. In Guy's Hospital, however, there is a square calculus of this material, also a cast (I believe) of one which is elongated, one of large size marked by a deep groove, and others of different shapes. In the museum of St. Thomas's Hospital there is an example of several faceted calcium oxalate calculi quite smooth on the surface and nearly colourless, both these peculiarities being very rare, for this variety of calculus is usually single and dark-coloured. In that museum also is an instance in which knobs of oxalate have formed upon a uric acid calculus.

Concentric and radial fissuring and fragmentation of calculi.—There is in the uric acid calculi, evinced more particularly when they have become dry, a tendency to crack into layers and also to split radially, such as may be seen in the transverse section of the branch of a tree. This probably depends upon the concentric and radially fibrillar arrangement of the particles of the calculus, resembling that which was noticed by Mr. Rainey in the small calcium carbonate spheres resulting from the action of gum upon ammonium carbonate. It facilitates probably the breaking up of the stone under the lithotrite and may possibly, under certain conditions, such as some change in the cementing material of the calculus, lead to the spontaneous division of the stone into fragments in the bladder. A supposed example of this is represented in Plate XII., Fig. 10, of the catalogue of the Royal College of Surgeons of England, taken from a specimen in the museum at St. Bartholomew's Hospital, in which a portion of the outer layer of a calculus has become detached. One cannot but suspect that such a fragment may have been broken off in sounding. There do not appear to be any other fissures in the calculus, and it is difficult to see how it can have been spontaneously detached in the bladder. The same remarks apply to the two cases mentioned by Mr. Southam;[11] and in the third case, communicated to him by Mr. Luke, the lithotrite had been used and the stone had twice slipped from under it. Instances of supposed spontaneous disintegration of calculi are also given by Dr. Ord.[12] Mr. Coulson[13] mentions a case in which fragments of the shell of a medium-sized uric acid calculus were spontaneously detached and passed from the bladder. The detachment was judged to have been caused by the violent contact of two stones during severe attacks of bladder irritation.[14]

Colour and concentric colour markings.—Each variety of calculus acquires its particular colour. The uric acid attracts the urochrome of the urine, which gives it, whether in the form of gravel or stone, a reddish-brown or fawn colour. Owen Rees is said to have seen one perfectly white.[15] The dark colour of the calcium oxalate has been attributed to an admixture of the colouring matter of the blood; but its uniform diffusion seems rather to point to its depending upon some modification of the colouring matter of the urine which takes place during the formation of its crystals. I have already mentioned an instance in which the colour was absent. The oxalate so rarely passes as gravel that we have not much opportunity of determining its colour under those circumstances. The disposition of the colour in alternating deeper and fainter lines shading into one another, and giving the concentric markings common in compact uric acid calculi, is not quite easy to account for. The lines are usually in complete circles, though varying in depth and definiteness in different parts of the circumference and in different parts of the thickness of a calculus: Yet in this thirty-two-ounce stone they have evidently been formed in fairly regular order through many years. Such colour-markings are by no means peculiar to uric acid calculi. They are sometimes seen faintly in the oxalates and in the harder phosphates; though in the latter they may have relation to admixture with uric acid or calcium oxalate in certain of their layers. They may be discernible in gall-stones, and are often strongly marked, as in this specimen, in the stones composed mainly of carbonate of lime, found in the intestines of horses, and also in other instances. Are we to suppose, in the case of uric acid calculi, that they depend upon alternating changes in the urine which indicate subtle changes in the system not otherwise evinced, such as might be caused by changes of food, changes of temperature as in the rings in trees, or other influences? They are not numerous enough to be diurnal and they are too numerous to be annual. Or do they depend, like the concentric rings in bone, which exhibit, and are caused by, the arrangement of the bone corpuscles, upon some determining quality in the material itself? The frequently occurring calculi in which layers of compact and porous uric acid exist in super-imposed layers with varying amounts of urate of ammonia, also the "alternating calculi" composed of uric acid, calcium oxalate, and phosphate of lime occurring and recurring in varying layers, must depend upon corresponding changes in the urine and form an argument in favour of the former hypothesis. At any rate, a question of some interest in pathology and physiology is opened up by these markings and other alternations observable in calculi.

I have mentioned that the more porous uric acid substance differs from the compact in the greater contingent of mucus, which gives to it a more or less granular or amorphous character, and that it does not acquire the regular colour markings just described. It does, however, often present a radially coarse fibrous structure with traces of concentric layers. In this specimen (Figs. 5 and 6) the radiating bars are crossed and connected by tiers of concentric strata; and the two have the effect of dividing up the calculus in such a manner as to enclose regular squares or elongated spaces or small chambers with defined walls and angles. How the curious arrangement came about I cannot tell. The porous calculi usually conform to the flattened oval uric acid type, and when the porous is added to the compact uric acid it commonly does the same; but, as I have before said, it may be limited to some part or parts of the surface, perhaps to the more projecting parts, as the ends, and give in that case an elongated form to the calculus.

Erosion of calculi in the bladder.—I have not been able to

[10] There has been lately added to the museum at Cambridge the bladder, with cystitis and thickened wall, from a lad who died in Addenbrooke's Hospital. The ureters were dilated, and there was hydronephrosis on both sides. On the left side of the bladder, near the entrance of the ureter, but separate from it, are two small orifices of sacculi, each of which was filled by a phosphatic calculus nearly the size of a walnut, of hard structure and with concentric laminæ. These two sacculi displaced and stretched the ureter, and must in some degree have obstructed the passage of urine through it. On the right side, also near the ureter, but not interfering with it, is a small sacculus which did not contain a calculus. There was no calculus in the bladder, and it is not easy to decide what determined the formation of the sacculi and the formation of the calculi in the two sacculi on the left side.

[11] Brit. Med. Jour., Jan. 4th, 1868.

[12] Op. cit., p. 93.

[13] Transactions of the Pathological Society, vol. xv., p. 143.

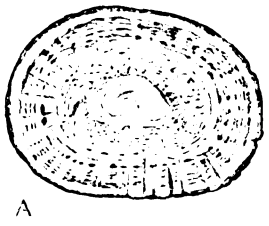
[14] See also Case of Spontaneous Fracture of Uric Acid Calculi, by Dr. Plowright, and discussion at a meeting of the Pathological Society of London, in THE LANCET of Oct. 19th, 1895.

[15] Ashhurst, loc. cit., vol. vi., p. 165.

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satisfy myself of any clear evidence of the solution or erosion of calculi in the bladder. The grooves on the surface often attributed to that cause are usually smooth and crescentic or circular, and are obviously due to the projection of rugæ or bands from the internal surface of the bladder, which have interfered with the deposit upon the stone where they embraced it. The calculus is not uncommonly thus modified,

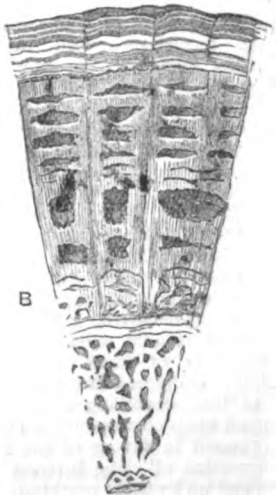
FIG. 5.



Porous uric acid calculus, showing radial and concentric disposition of fibres. (Cambridge collection.)

acquiring an hour-glass shape or being constricted in various ways. The hinder edge of the trigone, as seen in Sir Thomas Adams's stone, may be the cause, or the pressure of the urethral orifice upon a calculus which projects into the more yielding prostatic part of the urethra. These supposed evidences of erosion are most common in compact uric acid calculi, which one would not judge most likely to undergo solution. The coloured rings may now and then be seen to be incurved at the grooves, but they more commonly stop

FIG. 6.



Section of above, magnified, showing more or less rectangular chambers enclosed by the radial and concentric fibres.

short and terminate in rounded ends at the margins of the grooves (as seen in Fig. 4); or they may terminate even more abruptly so as to give some countenance to the erosion theory, not, however, enough to counterbalance the facts that the grooves are smooth; and in some instances, even where the rings terminate, as I have mentioned, the grooves are known to have been caused by constricting bands, and the remainder of the surface of the calculus gives no indications of a solvent action. Further, in some a coating of deposit, uric or phosphatic, has formed over the whole surface, including the grooves, which scarcely accords with the view of erosion of any part. The rough, sharply defined depressions or holes seen upon some calculi are more suggestive of erosion, but they probably depend upon irregularity in the phosphatic or other deposit rather than upon erosion. There is in the museum at St. Thomas's Hospital a large uric acid calculus resembling that from Sir Thomas Adams, and with a similar constriction or groove. The exterior is described as being "water-worn and the colour washed out." It presents to me more the appearance of being coated with a layer of rather lighter material than the rest of the stone, intermixed probably with some phosphates, which had been deposited in an irregular or tuberculated manner, so as to give the impression that the surface had been acted on by the urine or "water-worn." One is rather at a loss to know by what ingredients in the urine the solution whether of uric or phosphatic calculi, could be effected. It is possible that certain changes in the urine, acting upon the cementing material of the surface of the calculus, as suggested by Dr. Ord[16] with reference to the disruption of calculi, might lead to the removal of particles which pass away with the urine; but the whole subject is, I think, still *sub judice*.

Phosphatic calculi.—Phosphatic calculi do not assume any regular or special form, like the uric or oxalate calculi. When added on to other calculi the phosphatic concretion commonly continues the form of that upon which it is laid, or, as I have already said, it may prolong it in certain directions or be deposited in various ways; and it is said not to possess the property of cohering into a calculus upon a calculus, except in the presence and under the colloidal influence of mucus or pus. In the museum of St. Mary's Hospital there is a uric acid calculus with phosphatic deposit on one side only, as though the stone had rested quietly on one surface in the bladder and the phosphate had been limited to the uncovered or exposed part. In the museum is also a curious pyriform phosphatic calculus composed apparently of eight faceted pieces accurately adapted to one another; and a finger-like process which extended into the urethra is marked off from the remainder by a deep constricting groove formed by the neck of the bladder. It was taken after death from a man who had for many years suffered from the effects of fracture of the spine. In the same museum there are also two disc-shaped faceted phosphatic calculi of the size of beans, removed from the phimosed prepuce of an old man who died from hydronephrosis. They are said to have caused retention of urine. It is often stated that phosphatic deposit, being due to inflammation of the bladder and consequent decomposition of the urine, is a final deposit upon a calculus and is not followed by any other material. This, however, is disproved by numerous specimens in which rings of uric acid and calcium oxalate are seen encircling the phosphatic formation or alternating with it. In such examples the alternating and waving disposition of the oxalate presents a variegated and pretty section, not unlike, as was remarked to me, for a lady's brooch. In the museum example at the Royal College of Surgeons of England a phosphatic calculus with a considerable projection at one part is encircled by a waving line of calcium oxalate. In these cases the phosphate is usually compact, indicating that the bladder inflammation upon which it depended was not very severe. I do not think that the looser, softer phosphatic substance, the result of more active inflammation, is followed by other deposit—at least, I have not met with an instance in which it was so.

Bone, teeth, and hair in the bladder.—These portions of bone with teeth and hair, covered with phosphate of lime, were removed through the urethra from the bladder of a woman who quite recovered from the operation. The finger introduced into the bladder did not discover any other stone. The supposition is that the masses originated in the ovary, probably in a congenital cyst, and found their way into the bladder, after the manner in which an extra-uterine fœtus or the bones of one—occasionally travels into the rectum. In University College there is a phosphatic calculus elongated at one end where there is a fœtal tibia which formed the nucleus of the stone. After the death of the patient other remains of a fœtus were found in the right iliac fossa. Dr. Beale mentions an instance in which hairs that had escaped from an ovarian cyst into the bladder formed the nuclei of calculi, and gall-stones are said to have been passed from the urinary bladder, having found their way into that viscus in consequence of a communication found between it and the gall-bladder.[18]

[16] Op. cit., p. 97.
[17] Urinary Deposits, 1869, p. 419.
[18] Ashhurst, loc. cit., vol. vi., p. 164.

PRESENTATION.—Mr. Thomas James Henry, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Warialda, New South Wales, has been presented by the residents, on the occasion of his leaving the district, with an illuminated address as a token of esteem and admiration for services rendered during the past seven years both as a medical officer and private citizen.

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ON SOME OF THE IMMEDIATE RESULTS PRODUCED BY CASTRATION IN CASES OF ENLARGEMENT OF THE PROSTATE.

BY C. W. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.,
SURGEON TO THE LONDON HOSPITAL; EXAMINER IN SURGERY IN THE UNIVERSITY OF OXFORD.

A GREAT deal of evidence has been collected in the last year or two upon the question of the influence exerted by the testes upon the growth and nutrition of the prostate. Orchotomy for enlargement of the prostate has now been performed more than a hundred times, and it may be regarded as proved that it is practically always followed by atrophy of the gland. The wasting does not, it is true, set in with equal rapidity in all cases alike; in one it is said to have been upwards of a year before there was distinct diminution in size; and the extent to which it is carried varies, depending probably upon structural differences, for, while it is well established that both glandular overgrowth and stroma undergo fatty degeneration and disappear, it is not so clear what effect is produced upon true myomata (as distinguished from the common form of localised nodular overgrowth) or upon a gland in which the tissues have already undergone fibroid transformation. But almost without exception, whenever a definite result has been recorded, there has been a more or less conspicuous reduction in size. So far as the enlarged gland is concerned the evidence is mainly clinical, it is true; but there are three instances in which it has been confirmed by post-mortem examination. One, eighteen days after operation, has been recorded by Griffiths;[1] a second, eleven days later, by myself;[2] and the third by Professor White of Philadelphia,[3] in which the patient died on the evening of the second day. In the first of these three cases fatty degeneration followed by disintegration and ultimate disappearance of all the cell elements, epithelial, connective tissue, and muscular alike, was described. In the second, the microscopic examination of which was made for me by Mr. A. B. Roxburgh, the surgical registrar of the London Hospital, although there was distinct reduction in size (as shown by the wrinkled state of the mucous membrane), and especially in consistence, no histological change could be made out. The epithelial cells preserved their columnar shape and normal appearance, and there was no evidence of proliferation. In the third the report states that "the stroma of the gland shows beginning proliferation of the connective tissue cells, but especially of the muscle cells. The acini tubules are also becoming filled with proliferated columnar cells, and here and there some fine granular matter may be seen in the tubules; some of the cells appear to contain fine granules, which have not taken the stain, evidently fat. The changes are typical of beginning atrophy." It is true that there is here a certain amount of discrepancy, the results of the microscopic examination in my case not confirming what was found in the others, although in respect of duration it stands almost midway between them. But no great weight can be attached to this, as it is well known that in the case of the normal prostate, in animals as well as in men, several instances are on record in which atrophic changes have been delayed for a singularly long time after the performance of orchotomy. The point, however, to which I wish to draw attention is not so much the ultimate result as the strange and unexpected effect upon micturition that has frequently been noted as occurring within a few hours of the operation, an effect so unexpected that in many of the cases it has been neglected altogether as an unaccountable accident and in others has been received with polite but unmistakable scepticism. Recovery of voluntary power over the bladder is recorded in many instances as having occurred as early as the fifth or sixth day—in several, within a few hours. Sometimes it has been permanent; more frequently, and especially in those instances in which it has been regained within a few hours, it has been lost again for a time, and then, at the end of a week or so, gradually and finally been restored. Several of these cases have been under my own observation, and I think the circumstances under which they have occurred throw a certain amount of light upon the causation. In one case orchotomy was performed for prostatic retention. Undoubtedly this had been immediately occasioned by congestion and œdema; but before the operation was performed the patient was kept in bed for a fortnight under the usual treatment suitable to such cases, so that the congestion might have time to subside. During that fortnight there was but little change for the better; the day after the operation it was distinct and marked. More progress had been made in twenty-four hours than in the preceding fortnight. In a second, in which the most prominent symptom was a most intractable cystitis, the patient himself noticed a decided improvement in the size and the strength of the stream on the same evening. In a third case in which I was consulted no urine had been passed, except by catheter, for a considerable time. Two hours after the operation urine was passed naturally, and this continued for five days. Then retention occurred again, and a catheter was required at frequent intervals for about three weeks, when voluntary power began to return once more and this time continued. This case I regard as especially significant; for Mr. A. Hunt of Wolverhampton, under whose care it was throughout, wrote to me that for some time after the operation the muscles around the anus were exceedingly irritable, so that the finger, when introduced for the purpose of examining the condition of the gland, was tightly gripped, whereas previously the orifice had always been patulous and the patient had suffered from the ordinary difficulty of retaining the motions so common in cases of prostatic enlargement. Similar experiences have been noted by other surgeons. In a case recorded by Gavin,[4] in which there was absolute retention, the catheter having to be introduced every four hours day and night, voluntary micturition took place eight hours after the operation, the first time for three weeks. The next day the catheter was needed again; the third day it was passed for the last time, micturition henceforth being entirely voluntary. In another case, under the care of Lilienthal,[5] there was no improvement after six weeks' palliative treatment. Twenty-four hours after the operation there was slight, but distinct, remission of symptoms. The third day all the improvement was lost, and then, on the fifth, it began again and this time continued steadily. And Watson[6] records another case of almost complete retention, the patient being only able to void spontaneously an ounce or two of urine in the twenty-four hours, drop by drop, in which all treatment, including the use of the catheter, was stopped immediately after the operation. Palliative measures had been tried without improvement for five days. Orchotomy was performed. In the first twenty-four hours, although the bladder filled considerably, it did not become over-distended, and the patient voided at each urination more than he had done previously; and at the end of thirty-six hours the pain and desire to urinate ceased, so that he could sleep for two hours without being disturbed.

Various explanations have been suggested for the rapidity with which this improvement sets in. Clearly, even when recovery of the power of voluntary micturition is delayed for so long as a week, it cannot be accounted for by any organic change. In spite of the fact that in Professor White's case there was evidence of cell proliferation, such as precedes atrophy, by the evening of the second day, it must be admitted that no fatty degeneration or absorption can be so speedy as to produce a tangible effect upon the diameter of the prostatic urethra within the space of eight, and still less of two, hours. For this reason I cannot accept the explanation that has been offered by Professor White.[7] He suggests that the rapidity may be accounted for by changes taking place in a valvular median lobe. Very little alteration in such a structure might produce a noticeable amelioration of obstructive symptoms; but, slight as these changes need be, there is no time for them, and, even if the immediate improvement could be accounted for on this theory, it entirely fails to explain the relapse which, as I have shown, so frequently follows within the first few days. Organic changes, such as cell proliferation and the like, are quite out of the question; the only possible explanation for such rapid alternations is to be found in the condition of the circulation through the part. I do not, however, in

[1] Brit. Med. Jour., March 16th, 1895.
[2] Transactions of the Clinical Society, 1895, p. 193.
[3] Annals of Surgery, July, 1895.
[4] Boston Medical and Surgical Journal, May 2nd, 1895.
[5] New York Medical Record, April 20th, 1895.
[6] Boston Medical and Surgical Journal, April 18th, 1895.
[7] Loc. cit.

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the least agree with those who attribute the improvement to the disappearance of congestion and œdema under the influence of rest and palliative treatment. As I have shown in the above cases, rest and palliative measures had been tried in many of them, if not in all, for days and even for weeks before the operation, without producing the least effect. The reduction in size of the enlargement cannot be explained by this. No doubt it is due immediately to the diminished amount of blood circulating through the gland, but this diminution is brought about, not by the cessation of congestion, but by the active spasmodic contraction of the walls of the vessels. The exciting stimulus is not the removal of the testes, but the sudden ligature of the spermatic plexus of nerves in the cord. This is a factor in the operation the importance of which has apparently not attracted attention. The circulation through the prostate, there is no doubt, is under the control of a part of the nervous system that is directly connected with the testes through the spermatic plexus. Ligature of these nerves causes reflex constriction of the vessels in the prostate, and a corresponding diminution in size. Then, later, as the effect passes off, the walls of the vessels relax again, the congestion returns, and all the symptoms come back for a while, to disappear finally when the atrophic changes have advanced sufficiently to produce a permanent reduction in size. Such reflex muscular spasm after operations of this kind is no exceptional phenomenon. As can be well understood, it is not equally manifest in all cases alike; the conditions preceding the operation are in all probability somewhat stringent. Sometimes it affects the walls of the bloodvessels entirely or mainly; sometimes it involves other muscles as well. In Mr. Hunt's case, for example, the sphincter ani was conspicuously affected; and in one recorded by Hayden[a] not only this muscle but the compressor urethræ was involved, and there was such severe spasm for twenty-four hours after the operation that a catheter could not be passed and the bladder had to be aspirated. Fortunately the muscular spasm is rarely so severe or so widely spread as this, but it seems that not infrequently it is sufficiently general to produce a material effect upon the swelling of the mucous membrane that lines the prostatic urethra. Whether this explanation is correct or not—and it seems to me to fit in with the ascertained facts, and with all of them, much better than any other that has been suggested—the occasional occurrence of immediate improvement after orchotomy, usually of a temporary character, with or without spasmodic contraction of the sphincter ani or of the compressor urethræ, or of both together, is not a matter that can be questioned.

Wimpole-street, W.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; DEATH ON THE SECOND DAY FROM PERFORATION OF A SECOND ULCER.

BY E. W. SELBY, M.B., B.S.LOND., F.R.C.S.ENG.,
SURGEON TO THE DONCASTER INFIRMARY.

A DOMESTIC servant aged seventeen, was suddenly seized, at 3.50 P.M. on Nov. 6th, 1895, while working in the kitchen, with severe pain in the abdomen. She screamed out with the severity of the pain, sank down on to the floor writhing in agony, and vomited. The bowels had acted naturally in the morning, and the last food taken before the attack was dinner at 1 P.M., a meal ordinary in quality, but meagre in amount from lack of appetite. A medical man, who happened to be passing the house at the time, was called in, and found the girl collapsed, with cold extremities and rapid, feeble pulse. She said the pain started in the left hypochondrium, spread quickly over the whole abdomen, shot through to the back, up the back of the neck, and down both legs to the feet. He put the patient to bed and ordered her to have nothing by the mouth but milk and soda-water by teaspoonfuls. Hot bottles were put to the feet, and brandy and a quarter of a grain of morphia administered hypodermically. He saw the patient again at 9 P.M. She had then rallied from the state of shock, was flushed, had a full pulse of 110 to the minute and a temperature of 100° F. She had vomited once only since the initial emesis, the vomit consisting of a little curdled milk. There was slight distension of the abdomen and acute tenderness over the whole of it. As the pain was still very severe half a grain of morphia was injected under the skin. I saw the patient forthe first time at 10.30 A.M. on the following morning, Nov. 7th. She was extremely anæmic. She lay on her back in bed with both knees drawn up, and complained of pain all over, but especially in the abdomen and in the back of the neck. Her temperature in the mouth was 102·6°, and the pulse 120, full and bounding. There was slight general distension of the abdomen, which was acutely tender all over. The tongue was clean, moist, and very pale. The respiration was purely thoracic—45 to the minute. There was resonance over the whole abdomen and also over the situation of the liver, the liver dulness being altogether absent. There were hæmic murmurs in the chest, and a loud venous hum in the neck. The pain had kept her awake all the night. She had vomited a little more curdled milk. The urine had been passed naturally, and a natural motion had been voided in the early morning. The act of defecation caused great increase in the pain, and the ingestion of even a teaspoonful of water had invariably been followed by a sharp stab of pain in the left hypochondrium, so severe that the patient preferred to bear the intense thirst that resulted rather than take anything into the stomach. The patient had not complained of any symptoms of illness before the present attack, but on questioning a history of increasing pallor, with headache, lassitude, shortness of breath, palpitation, and swelling of the feet and legs, extending over a period of twelve months previous to the present trouble was obtained, with amenorrhœa of five months' duration. For three years she had suffered more or less constantly from pain in the epigastrium and middle of the back after meals, followed occasionally, although rarely, by vomiting, which afforded relief to the pain. These symptoms had been much worse during the six months previous to the present illness, but the patient had concealed her symptoms in order to avoid losing her situations. There had never been any hæmatemesis. The bowels had been costive, but had acted daily or every other day. The appetite had been very poor for the last six months. With this history the diagnosis of perforated gastric ulcer was almost certain, and although many valuable hours had been lost, and peritonitis was well established, operation was urged as giving some, albeit a very slender chance of recovery. The patient was carefully moved into the Doncaster Infirmary, but owing to a delay in obtaining the consent of the relatives, who lived at a little distance, the operation could not be undertaken till 3.30 P.M. on Nov. 7th, nearly twenty-four hours after the occurrence of perforation.

Operation.—Under A.C.E. mixture an incision was made at the outer edge of the left rectus, commencing half an inch below the costal margin, vertically downwards along the edge of the muscle for four inches, the lower end reaching a little below the level of the umbilicus. Hæmorrhage having been arrested and the peritoneum carefully opened throughout the whole length of the wound, on retraction parts of the stomach, tranverse colon, and small intestine were exposed, with patches of lymph covering them. No perforation was seen in the part of the stomach-wall exposed, but on manipulation curdled milk escaped, and on passing the finger up beneath the ribs a smooth round hole could be felt high up on the anterior surface of the stomach near the small curvature, a little below and to the left of the position of the cardia. As it was impossible to reach the perforation through the wound made the incision was prolonged upwards and inwards obliquely across the upper part of the rectus muscle, close to the margin of the thorax, to the left side of the ensiform cartilage, the superior epigastric artery being divided on the posterior aspect of the rectus, after that muscle had been cut through. The length of this second incision was about five inches and a half. Both hands could now be introduced, and the upper part of the front wall of the stomach drawn up near the surface. The left lobe of the liver was exposed and seen to be covered with patches of lymph. The perforation in the stomach was a smooth round hole, of such a size as just to admit a pea, and the peritoneal coat around it was much thickened for a radius of an inch by firmly adherent lymph. The wall of the stomach around the perforation was excised in elliptical fashion, at a distance of from one-eighth to a quarter of an inch from its margin, and the opening thus made was closed by a row of eight Lembert sutures,

[a] New York Medical Record, May 18th, 1895.

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two at each end extending beyond the aperture. Fine silk was used for the sutures, and after the closure of the first row four additional stitches were inserted to secure tight closure of the opening. Just after the sutures were tied the patient retched, and no leakage occurred. The whole peritoneal cavity was then thoroughly flushed with several gallons of hot boiled water, the lymph being peeled off the peritoneal surface of the intestine as far as possible, particular attention being paid to the left hypochondriac region and the flanks. The lower end of the wound was prolonged for about an inch to enable the flushing to be done more thoroughly. When the abdominal cavity appeared clean it was carefully dried with lint sponges, and the wound was then sewn up without drainage. The operation lasted an hour and a half, and was followed by very little shock and no sickness. A hypodermic injection of a quarter of a grain of morphia was given after recovery from the anæsthetic. The pulse immediately after the operation was 144 and of good strength. The after-treatment consisted in the administration of enemata of two ounces of liquid peptonoids with a tablespoonful of solid beef peptones in suspension every four hours, half an ounce of brandy being added to the first three injections. Nothing was given by the mouth except hot water, a teaspoonful at a time, in just sufficient quantity to moderate the intense thirst. At 11 P.M. the temperature had fallen to 100·6°, the pulse remaining at 144 and of fair strength. There was slight distension of the abdomen below the bandages, but the pain was much diminished and the patient expressed herself as feeling much better. One-sixth of a grain of morphia was injected, and the patient slept well all night. On Nov. 8th the temperature was 101° and the pulse 144 and good. The patient said there was no pain, only a feeling of soreness about the wound. The bowels had acted early in the morning painlessly, and the abdominal distension had subsided. At 11 P.M. the temperature was 100°, the pulse maintaining its rate and other characters. The bowels had acted again naturally and without pain. There had been no nausea since the operation and the nutrient enemata were well retained. The patient said she felt she was getting better, and asked for something to eat. The hot water relieved the thirst. She slept well through the night. On Nov. 9th, at 8 A.M., the patient complained of more pain, quickly fell into a state of collapse, and died at 9.30 A.M.

Necropsy.—A post-mortem examination was made twenty-seven hours after death. The stomach, liver, and intestines were adherent to each other and to the wall of the abdomen beneath the wound by recent lymph. There was a small collection of turbid fluid in front of the stomach. The rest of the peritoneal cavity was dry. The line of suture in the anterior wall of the stomach could be seen, but the stitches were embedded in lymph. On removing the stomach a second perforation, a smooth, round hole nearly as large as a threepenny piece, was found on its posterior wall, exactly opposite the first on the anterior wall, near the upper border, and nearer to the cardia than to the pylorus. The peritoneal coat of the stomach around the second perforation was quite smooth and glossy, destitute of lymph, but intensely injected over an area of about an inch in radius from the margin of the opening. The peritoneum forming the small bag showed no sign of inflammation. The seat of suture was tested by pinching together the posterior perforation with the fingers, after ligature of the pylorus, and then filling the stomach with water under pressure through the cardiac orifice; it was found to be quite watertight. On opening the stomach the ulcer on the posterior wall was seen to extend in the mucous membrane from one-sixteenth to an eighth of an inch beyond the margin of the perforation. It was thus sharply conical and obliquely so, the internal ulceration extending an eighth of an inch beyond the peritoneal perforation on one side and only one-sixteenth of an inch on the other. There were no other ulcers in the stomach.

Remarks.—The following appear to be the principal points of interest in connexion with the case. 1. The question as to the advisability of operating after peritonitis was established. The severity of the symptoms in this case was not such as is usually met with in cases where a gastric ulcer has perforated when the stomach is full of food. The comparatively good condition of the patient, and the fact that the symptoms of perforation set in nearly three hours after the last meal taken, at a time when it might be hoped the stomach was empty, encouraged me to operate, even in the presence of acute general peritonitis. That the stomach was empty at the time of perforation was shown at the operation, the material extravasated consisting only of curdled milk (taken after the onset of the symptoms) mixed with the gastric secretion. 2. The position of the incision. I selected the lateral in place of the median incision, under the impression that better access to the whole of the anterior surface of the stomach would be obtained through a wound situated over the middle of that organ than by means of one over its pyloric end, the localisation by the patient of the stabs of pain produced by the ingestion of liquids in the left hypochondriac region assisting me in the decision, although the localising value of such pain as indicating the situation of the perforation is perhaps doubtful. The upper part of the rectus muscle had to be cut across in prolonging the incision; but if a median incision had been made originally, a free transverse cut close below the costal margin would have been necessary to obtain free access to the part of the stomach wall implicated, which would have weakened the abdominal wall more. The whole of the stomach was easily accessible through the wound made. 3. The satisfactory progress of the case after operation. The pain was greatly relieved, the tenderness and distension of the abdomen disappeared, the temperature fell from 102·6° before operation to 101° twelve hours and to 100° twenty-four hours after; the aspect of the patient improved, and she expressed herself as feeling much better. The only unfavourable symptom was the pulse, which, although its force remained good, maintained a frequency of 144 to the minute. Apart from the second perforation, nothing was found at the post-mortem examination incompatible with recovery, the peritonitis which persisted being limited to the exudation of plastic material over the viscera beneath the wound, which would, no doubt, had recovery ensued, have become converted into fibrous adhesions. 4. The unusual cause of death—perforation of a second ulcer. That this posterior perforation was quite recent and had occurred only a few hours before death was shown by the smooth, glossy condition of the peritoneal coat of the stomach around it, which, although intensely injected, was entirely devoid of lymph. The exact moment of its occurrence was not precisely indicated clinically as was the onset of the first perforation; but the patient complained of a return of the pain, and said she felt much worse on awaking at 8 A.M. on Nov. 9th, and it is reasonable to suppose that she was awakened by the occurrence of perforation, which will therefore have taken place within two hours before death.

Doncaster.

ADENOID GROWTHS IN THE PHARYNX.[1]

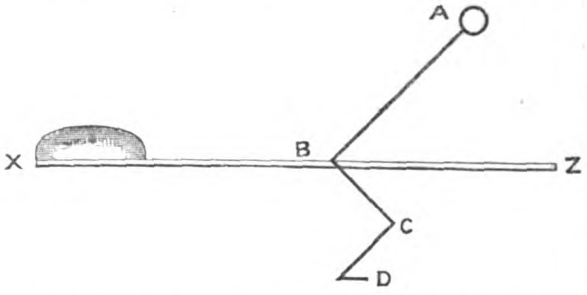
BY SIR WILLIAM B. DALBY, F.R.C.S. ENG.,
CONSULTING AURAL SURGEON TO ST. GEORGE'S HOSPITAL.

IN an article on the above subject, published in THE LANCET of Oct. 2nd, 1886, I suggested the use of a "steel finger nail" (a woodcut of which was appended) for the removal of adenoid growths and the complete clearance of the pharynx under an anæsthetic. Since this article was written the practice of removing these growths under an anæsthetic has become much more general than it was at that time (I do not for a moment imply in consequence of the article), and I notice in a recent work that the instrument which I there depicted is referred to as "*the* steel nail," so it may be assumed that it is favourably regarded and employed by other surgeons. I was especially careful at the time to explain the position in which the patient should be placed in order to ensure the impossibility of any blood being inhaled or trickling down the larynx and to avoid by this position any danger of asphyxia. It is even now worth while drawing attention to the fact that the position of the patient, as the pharynx is being cleared, is represented by two right angles, A to B being the head and trunk, B to C the pelvis to the knee, and C to D the knee to the foot, each leg being on either side of the narrow couch X to Z, on which the patient has been given ether before he is raised into the rectangular position. An admirably depicted drawing of a patient in this position was given in a paper by Dr. Hewitt and Mr. Sheild quite recently at the Royal Medical and Chirurgical Society. Why, therefore, it may be said, be guilty of repetition in

[1] Sequel to an article that appeared in THE LANCET of Oct. 2nd, 1886.

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referring to this attitude apparently now recognised? Because unquestionably in consequence of malposition whilst removing adenoid growths several accidents (if such a term is allowable) have occurred, death being due to asphyxiation from the entrance of blood into the trachea. Also because after employing this rectangular position with the valuable aid of Mr. Braine for over nine years, both he and I can confidently say that no blood has ever been inhaled. In so saying there is no suggestion that this is the only position which is free from danger, as I am of course aware that several leading surgeons, who would permit no avoidable risk to a patient, employ two other positions which preclude any inhalation of blood. It is, however, natural that I, in advocating perfect safety to life, should select for emphasis the method which I have successfully employed and found more convenient than any other. The steel nail should, I think, always be used in patients after eight or nine years of age. In many children, when it is necessary to clear the pharynx before that age, and



especially before the age of five or six years, the growth is usually so soft that it is broken up and removed readily by the forefinger, using the natural finger nail for the purpose. This is, however, subject to exceptions. Thus, there is no doubt that adenoid tissue becomes the seat of hypertrophy in some children with a determined predisposition to it very soon after birth. I have occasionally seen children three or four years of age in whom the pharynx has been so filled with adenoid growth that in sleep they not only heavily snored but seemed in danger of choking, and when not asleep, especially when eating, snuffled and snorted in the most unpleasant manner. With them I have found that the adenoid growth was of the most tough consistence, and by no possibility could be removed with the finger nail. With them, also, it is not easy, owing to want of space, to move at once the steel nail around the pharynx, so that I have first passed into the pharynx the "curved ring knife"[2] and cut away large hard lumps of growth: then finished the clearance with the space thus obtained by the steel nail.

There is still another condition which requires mention, and which must have come under the observation of those who deal considerably with these matters. It is the greatly enlarged pharyngeal tonsil which occasionally alone occupies the pharynx, unaccompanied by adenoid growths, and exhibiting to the sensation of touch something quite different from the pharynx filled with adenoid growth, something of itself with a smooth surface, but none the less requiring removal in early life from its effects on nasal respiration. This also is very tough tissue and requires cutting away rather than scraping or scooping. Further knowledge derived from experience, information from varied sources, published accounts, or even hearsay, has so increased the interest in this subject that what was unknown in 1868 was recognised by a few in 1881, was then chiefly removed by Löwenberg's forceps in many sittings, and was subsequently removed in various ways under an anæsthetic, is now not only generally recognised by the medical profession, but talked about familiarly by the public as "adenoids." In short, the aspect of this matter is so changed that there is an appreciable risk of its becoming regarded by those who have no real knowledge as a universal inheritance of man. This idea of adenoids must have become very general with the public when children (in whom they are absent) are brought for their removal to relieve stammering and stuttering, or imperfect articulation due rather to failure in hearing or imperfect brain development. I have even known a lady over sixty years of age in whom it was proposed to "scrape her pharynx" for sub-acute catarrh of the middle ear. If an imagination can be so active as to suggest adenoids in an instance we may reasonably infer that some pharyn may, in the exuberance of zeal, be submitted to measures with questionable advantage.

Whilst regarding the abnormal amount of adenoid as a true hypertrophy which requires removal becau its interference with nasal respiration and as an exc cause of middle-ear disease, together with the fact the disappearance of this tissue commences and prog to completeness after the age of puberty, it naturally be anticipated that when the pharynx is at about the age of from ten to twelve years there be an end of the matter, and this is so. Now, if hypertrophy exists in a moderate degree in much life, the mischievous increase often takes place rapidly few months, and the exciting cause of the rapid is frequently an attack of measles, scarlet fever, diphth or whooping cough. Also, when in very early life the is cleared absolutely there will occur sometimes either or without these exciting causes a renewed activity. I we occasionally find a child, say, five years old, in wh growths have been removed, remaining perfectly fr several years, and active growth again commencing time before the arrival of puberty. These are the only cases in which a second operation becomes necessary, a is desirable that this occasional necessity be understo as to dispel any idea of an imperfectly performed opera

Savile-row, W.

[2] Vide THE LANCET, Oct. 2nd, 1886.

THE TREATMENT OF ACUTE INFLAMMATION OF BONE AND ITS JOINT COMPLICATIONS.[1]

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THERE are few diseases which require greater accuracy observation and promptitude in treatment than the acute inflammation of the bones which occurs in children five years of age, and in those above that age when epiphyses have not yet united. I must touch briefly on diagnosis of the condition; its recognition is of the utmost importance, as the longer the inflammation continues without appropriate treatment the greater will be the local destruction of affected parts, the greater the tendency to involvement of the joint, and the greater the liability to pyæmia. Clinically three groups may be recognised. 1. Those cases which are almost certainly fatal from the first, owing to a general infection of the system, accompanied by high fever, great prostrlessness, and inability to sleep, with delirium, and the supervention of the typhoid state. If life is prolonged more than three or four days the bone inflammation is localised, as the signs of it have time to develop, for sometimes the bone disease is only found on careful search after death. 2. Those cases of a mild type in which the symptoms of bone inflammation are locally very evident, but the general disturbance is slight, and in which under appropriate treatment recovery ensues without any operation. The bone may, however, become thickened in the region of the epiphysis, and lengthening may follow in consequence of overgrowth. 3. To the third group I would include by far the largest number of cases, although they present great differences when a number are compared together. These cases may be sub-divided into other groups, but with little advantage. The great feature about them is this, that treatment may be successful in apparently the most severe. There is in all them a great danger of pyæmia, but much can be done to prevent it. In the worst cases there is the danger of infection, of involvement of more than one bone, of extensive necrosis of the bones attacked, and of death from hectic or from amyloid disease caused by the prolonged suppuration. The patients are, however, young, and it is often possible to save both life and limb in apparently desperate cases. W

[1] Abstract of a paper read before the Islington Medical Society Oct. 23rd, 1895.

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acute necrosis of bone is spoken of it generally refers to those included in this group.

The most marked symptom is pain accompanied by fever. This pain is not, perhaps, easily localised at first, but gradually increases in intensity at night so that the child cannot sleep, or, indeed, move or permit anyone to approach without a cry of apprehension in the more severe cases. Swelling and œdema soon follow and are most marked near the epiphysis. The tenderness is acute, and delirium soon sets in. In severe cases the aspect of the child is one which I have never seen in any other illness, but so characteristic that it alone has enabled me to diagnose the disease correctly. There is a look of such utterly hopeless misery and suffering that the pale, drawn face, with sunken eyes, looks years older than it should do. The diagnosis is considerably helped by recollecting the character of the pain, especially its increased severity at night, for it is out of proportion to the pain met with in any other disease with which it may possibly be confused. I have seen cases sent to hospital for treatment for acute bone inflammation when there was nothing more serious than erythema nodosum, lymphangitis, or cellulitis present; but a fault more commonly committed is that of mistaking it for acute rheumatism and keeping the patient under treatment with anti-rheumatic remedies until almost irreparable mischief has been done. As a rule the character of the pain in acute bone inflammation, and the presence of swelling and tenderness over the bone and not over the joint, will suffice to establish the diagnosis, especially as there are none of the sour-smelling sweatings of the rheumatic state. Greater difficulty will sometimes be met with when a joint is involved early in the illness, but there will still be the œdematous swelling, the great pain, and unusual tenderness over the bone in which the mischief began, whilst the inflammation will be usually limited to one joint and its neighbourhood. When suppuration has occurred there is no longer any question as to the nature of the illness. The condition of joint disease which most closely simulates an acute inflammation of bone, with secondary involvement of the joint, such as that which I am considering, is gonorrhœal arthritis; but that is an affection of later life.

Having once come to the conclusion that the case is acute inflammation of bone, no time should be lost before energetic treatment is commenced. Leeches to the part, followed by hot fomentations, the application of a splint to the limb, and the administration of a sharp purgative, will relieve, if not arrest, the disease. If the patient is not seen until suppuration has undoubtedly set in, or if the previous treatment has not answered expectations and there is increased tenderness accompanied by swelling, an incision should be made over the most tender spot through the periosteum. Usually there will be a spurt of turbid fluid or pus, but if not it will be well to separate the periosteum in the direction of the epiphysial line, when similar fluid may escape. Fluctuation should never be waited for. In many recorded instances the application of a trephine to the end of the diaphysis has been most advantageous. All incisions should be made with antiseptic precautions; personally, I always wash out the wounds with 1 in 40 chloride of zinc solution, using perchloride dressings, and, if necessary, splints. Not only will early operation limit or even prevent necrosis of the bone, but it will also at times prove effectual in saving the neighbouring joint from invasion.

CASE 1. *Acute inflammation of humerus; early incision; recovery without necrosis.*—In the case about to be described the movements of the joint are perfect, the upper end of the bone is normal, and had it not been for the scar along the front of the shoulder, which is partly fixed to the bone beneath, it would have been difficult to understand that the patient had had a severe attack of periostitis. When aged fifteen he was under my care in the Royal Free Hospital for a month from May 4th, 1891, and this is the history of the case. Five days previously he had been throwing a cricket ball and felt a pain in the right shoulder. He went to work next day, but was obliged to give up as the shoulder was so painful. He had also had cold shivers and been unable to sleep at night in consequence of the pain. On the day of his admission he was carrying the right arm as a patient does who has a fracture of the clavicle. The shoulder was much swollen and very tender, and the outline of the joint was lost. He could hardly bear to be touched, but it was elicited that the greatest point of tenderness was at the upper epiphysial line of the humerus. He had walked to the hospital, but was pale and evidently suffering. His temperature was 101°F. Six leeches were ordered, also a good purge. The pain was less next morning, but returned towards midday, and he perspired freely. The arm was more swollen, the swelling extending nearly to the elbow. The most acutely sensitive spot was to the outer side of the upper part of the bicipital groove; here the skin was œdematous and shiny. There was also a pink flush extending up and down the arm for a considerable distance. An incision was made through the deltoid, and at the spot of greatest tenderness the periosteum was found to separate with unusual ease from the bone. Immediately above this, at the upper end of the diaphysis, an abscess containing about one drachm and a half of pus was opened. The bone was bare and rough at this part. The drainage-tube was removed on the 19th, and a rapid recovery was recorded. Considerable thickening was present over the upper end of the humerus when he left.

In most instances, when a patient is affected by this disease, it has its origin in the shaft of a long bone, usually the tibia, and the attachments of the periosteum to the epiphyses above and below prevent extension of the pus into the neighbouring joints. When the inflammation attacks the innominate bone in the neighbourhood of the hip there is not the same chance of limitation of the mischief, and early operation is imperative if the joint is to be saved. I think I may claim that early operation saved the joint in the following case.

CASE 2. *Acute inflammation of ilium; recovery without necrosis or involvement of joint.*—A girl aged fourteen years was sent to St. Thomas's Hospital on June 12th, 1889, and admitted under the care of Mr. Mackellar. It was stated that she had hurt her hip by falling against some railings a fortnight before, but on being questioned more closely she could not state that there had been no uneasiness about the part before that. She had been confined to bed for a few days with pain about the hip which was worse at night and on exertion. There was a decided fulness behind the left hip-joint on comparing the two sides, and much tenderness, this being most acute about an inch above and behind the hip-joint on the dorsum ilii. The femur could be gently moved and rotated without pain, but voluntary movement was very limited, and quick movements caused the joint to be fixed and the patient to complain at once. There was thus considerable resemblance to joint inflammation. At night the temperature was 103° F., and she suffered much pain. The morning after her admission I cut down on the most tender spot, divided the periosteum, lifted it with an elevator for a short distance towards the joint, and let out about half a drachm of pus. The bone was roughened at the site of the abscess. There was some discharge from the wound, and a drainage-tube was employed until July 9th. By July 30th the wound was soundly healed and the patient went home well. The case of a girl aged twelve years, who was brought to the out-patient department at St. Thomas's Hospital this year, further bears out my contention. She was taken ill two days before with pain about the left hip, and the only complaint was of pain in this situation when I saw her. There was no complaint of headache or anything else. The parts around the hip felt hot to the touch, and when the hip was moved she complained of pain, but gentle movement of the joint was well borne. There was considerable tenderness on pressure above and behind the joint over the dorsum ilii, but no fluctuation could be felt. She was sent into hospital at once on that day (March 19th), but no operation was performed until the 22nd, when fluctuation could be easily made out and pus was evacuated through an incision. The ilium was found to be carious. She left the hospital for a convalescent home on April 9th, the wound not having closed. She was sent back again on the 27th with septic arthritis of the hip-joint, for which excision was performed on the 29th, and she left the hospital again, well, on June 22nd.

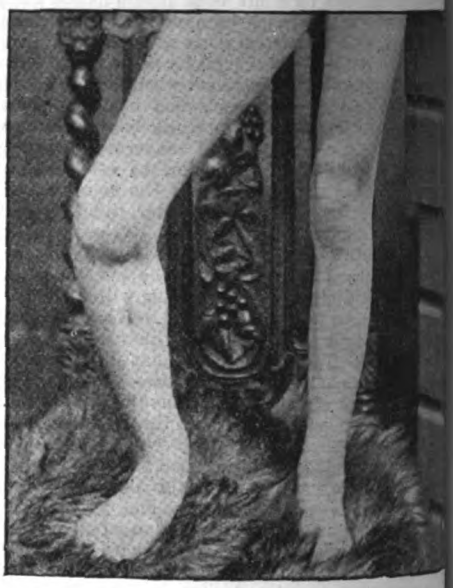
CASE 3. *Acute inflammation commencing in pelvic aspect of acetabulum; early incision of abscess; extension of disease into hip-joint; dislocation of head of bone; excision.*—When the inflammation has its commencement on the pelvic side of the acetabulum the condition in its early stage is not only very difficult to diagnose but extremely difficult to treat. A little boy aged five years came under my notice in the out-patient department at St. Thomas's Hospital two years ago, and was at once admitted. Two days before admission, on Feb. 13th, he was noticed to be

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restless in the evening; next day he had great pain across the abdomen and in the left hip, and was unable to put the left foot to the ground. The pain was becoming worse. The only history of injury was that of a slight fall on the day on which the illness began. Examination revealed nothing definite. There was pain on movement of the hip, but not severe, and some general tenderness, but not localised. He kept the thigh flexed and limped when walking. His temperature was over 101° F. Two days after admission, the patient being under chloroform, it was possible to discover fluctuation in a swelling situated about the point which corresponded to the acetabulum on the brim of the pelvis. His general condition had not improved. On the following day I made an incision above Poupart's ligament in its outer half, and opened the abscess by Hilton's method; it contained about an ounce of pus, but was a long way from the surface. From Feb. 20th to March 2nd the temperature was normal. Great difficulty was experienced in keeping the tube clear and the sinus open, and after March 2nd the temperature became more irregular, but never high. On the 13th it was found that pathological dislocation of the hip had occurred, and at the operation of excision of the head performed on the same day the acetabulum was found to be nearly filled with granulation tissue. As the disease had evidently spread through the bone, the bottom of the acetabulum was freely removed and a communication made with the pelvic abscess. A tube was passed through this opening from the old wound to the new. Here the extension of disease which was feared took place in spite of operation, and I regret to say that the boy died from pleuro-pneumonia of septic nature on April 10th.

The long period of rest which is necessarily enforced in this disease is usually followed by some stiffness of the joints of the limb affected. This is, however, easily overcome by passive movement and massage. Sometimes, without an actual invasion of the joint, inflammation may spread through the epiphysis, which becomes fixed, and if movement is not practised early and with perseverance a true ankylosis will ensue. The following case is a striking example of the difficulty which the treatment of such joints may present.

CASE 4. *Acute inflammation of tibia ending in necrosis; suppuration in tibio-fibular joint; sequestrotomy; ankylosis of knee.*—The patient, a girl aged five years, was admitted to St. Thomas's Hospital under the care of Mr. Mackellar on Feb. 21st, 1887, and remained in hospital until Oct. 11th of the same year. She began to complain of pain in the right leg on Feb. 16th, five days before admission, and swelling soon came on, which the mother had poulticed without affording relief. When she was admitted there were vivid redness and fluctuation over the upper half of the tibia, which was extremely tender, the patient being very intolerant of examination, and screaming on the slightest touch. She was flushed and feverish, with a temperature of 101·4° F. The same evening an incision three inches in length was made over the upper and inner part of the tibia and a large quantity of pus evacuated, which looked healthy and was without odour. The upper end of the diaphysis was completely stripped of periosteum for five inches. The line of the epiphysis presented a worm-eaten appearance. There was abundant discharge for some days, and the leg continued to be a good deal swollen and tender. On March 8th an abscess was opened behind the head of the fibula, and on April 13th another was incised behind the tendon of the biceps femoris. The superior tibio-fibular joint was evidently invaded. Two months after the commencement of the illness I removed the upper third of the diaphysis of the tibia after section of the bone with a chain saw. The upper end easily separated from the epiphysis. Although there had been great improvement in the condition of the patient, and she was able to eat well and had put on flesh, the amount of new formation of bone was very slight at that time. After extraction of the sequestrum a long hollow trough remained in which pus would have collected constantly, so a drainage-tube was passed from the bottom of it through the inner side of the limb. At first the leg was placed in a MacIntyre splint, but in the course of a few days it was found that in consequence of the softening of the ligaments of the tibio-fibular articulation, due to the suppuration in that joint, the muscles were causing a shortening of the leg, so an extension apparatus was applied above the ankle with a weight of one pound, and the new bone when formed took exactly the shape of the normal tibia, being moulded by the muscles, but it was a long time before this became united to the epiphysis. It was feared that ankylosis between the lower end of the femur and the tibial epiphysis might take place, so in June, before the 25th, when the union of the epiphysis and diaphysis of the tibia appeared to be firm, the patient was placed under chloroform, and an attempt made to move the knee-joint. This proved to be very difficult, for the epiphysis of the tibia formed a mere disc which could be moved by considerable pressure of the thumbs, but only to a limited degree, and attempts to utilise the leverage afforded by the shaft were useless, as the line of junction yielded at once. Movement was, however, carried out a few times before the patient was taken away by her father. He promised to bring her up to hospital regularly for this treatment, but it was only after his death, two months later, that she was again brought. The knee-joint was then firmly fixed, but in a good position. This girl was again under my care this year for a deformity of the leg, which is shown in the accompanying engraving (taken from a photograph). The limb was shorter by two inches than its fellow, and it was necessary to perform osteotomy of the tibia and fracture the fibula before the condition could be improved. The section of the tibia was made through the upper end of the diaphysis, and I took advantage of the occasion to excise the thin, adherent scar which is shown, and unite the subcutaneous tissue and skin in one long line over the raw surface left. The result is all that can be desired.



Condition before operation in 1886

No surgeon would view without great concern suppuration of a neighbouring joint during the progress of a case of acute inflammation of bone. It is a most serious complication. I am not sure, however, that a surgeon is not occasionally responsible to a certain degree in his supervision of the patient when this happens, for when the disease has extended across the epiphysial line and the part is bathed in pus, often of a septic character, a slight increase in the pressure of diaphysis against epiphysis will certainly lead to greater local destruction, and this ulcerative process may extend through the epiphysis into the joint. It is not necessary to apply an extension apparatus, but it is advisable to see that the limb below the seat of mischief is placed in such a position that its weight does not fall towards the weak point. Either by perforation of the epiphysis or by extension through the periosteum along the surface of the epiphysis, or by some other process, when a joint is invaded, the case should not be given up to amputation, but an attempt should be made to save the limb. In saying this I grant there are cases in which it would be advisable to amputate at once instead of trying more conservative treatment. But all cases should be looked upon as hopeful unless the condition of the patient, locally or constitutionally, is manifestly too bad to enable him to stand the drain of the necessarily prolonged suppuration. Even then the joint should be aspirated and the fluid drawn off-

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t, this should always be first tried; sometimes it will ficient to cure: as in a case of inflammation of the tibia my charge this autumn, when the left knee-joint was ed, no reaccumulation of the fluid took place after apping. As the upper end of the tibia and the lower f the femur are the most common seats of this acute ive inflammation, the knee-joint is the one which is to be most often invaded. More than one joint however, suffer in the same patient, but the case d not be given up simply for that reason. patients who are sufferers from this acute bone mation will stand an amount of exhausting sup- ion which would kill an adult. So long as the ite continues good, the patient sleeps well, and emperature is not of more than a mild hectic type, the easing emaciation and apparent feebleness may be dis- ded. Some day the weary head will be lifted to h another child playing with his toys; it will be known the corner has been turned, and a rapid convalescence ensue. As the knee-joint is the one which is most ently affected, I should like to dwell more fully on the ment of the joint when suppuration has taken place in f the first aspiration has not been successful and fluid umulates, the aspiration may be repeated, but it must e expected that it will be curative; it will be merely a s of postponing the more serious operation of opening nd draining the joint. To do this most thoroughly al incisions should be made, and in some cases a rior incision also. The lateral incisions should be d on each side of the upper part of the joint, com- ed just behind the lateral extensions of the synovial h, and carried forward so that when a drainage-tube has passed across the joint it will form a segment of a without any irregularity or ledge on which pus can ct. Every case does not require a posterior incision, nany do require it, and whenever the temperature does all to a reasonable extent, and the local condition does apidly improve, it will be far the best plan to make one. incision at the back of the knee which I prefer is one h is carried down to the joint in the interval between the head of the gastrocnemius and the inner hamstrings. his incision all the structures really divided are the the subcutaneous tissue, and the posterior ligament e knee-joint—it is the line of safety. The reason why line was chosen by me in the first place was that I had nder my care for a time (in 1883) a man with suppura- of the knee-joint; the pus pointed in the position which nlarged semi-membranosus bursa usually occupies, only r down and nearer the tibia. After an incision into this which gave exit to a large quantity of pus, there was eed for further incision, as the pus discharged through opening, and the patient got well. I have had under my also a boy with traumatic suppuration in this joint, and s case, when I expected no further trouble, as the front ne joint was doing well and his general state was good, oscess formed and required opening in the situation just cated. There was no doubt in my mind that an earlier ion would have saved some days' illness. I could give r examples, but this will suffice. The mere making of ions will not of course do away with the need of other ment. The joint should be irrigated. Antiseptic sings are required and appropriate splints should be ied. The limb should be immobilised as much as ible and care taken that there is no undue movement of oint or limb when it is advisable to change the dressings. change of dressing should be made as seldom as ible, and with many children who are easily frightened upset it is a good practice to give a whiff of chloroform revent pain from startings of the limb, and also for any ipulation or incision likely to cause much mental distress haustion. It is well also in hospital practice to have consent of the parents to give chloroform whenever it be thought desirable without further reference to them. ne case this anæsthetic was given no less than twenty s. I have used the continuous bath with benefit to the ent, but do not like it, and only use it very exceptionally; position in which the limb is placed is awkward, the bath ires much attention, and the limb becomes œdematous, ested, and sodden.

is not often that a sound and movable joint can be ined when it has been drained for the relief of suppura- , but this should of course be the aim of the surgeon. the case of the boy present at the meeting the is perfect except for the presence of scars. Full flexion is permitted: the limb is well developed and without shortening.

CASE 5. *Acute inflammation of the tibia; involvement of knee joint; drainage of joint; sequestrotomy; acute inflammation of fibula; obscure cardiac symptoms; recovery.*—A boy aged eight years was admitted under my care to the East London Hospital for Children, Shadwell, on Sept 30th, 1890, and continued in that institution until the middle of January of the following year. He first complained of pain in his right ankle on Sept. 25th and said that it had been hit by a stone the day before. The ankle was swollen, but he was not taken to the hospital until two days later. Nothing definite was made out except that he could not fully flex the foot. It was placed on a back splint with a foot piece and an evaporating lotion applied. On the 29th it was thought that the bandage had been applied too tightly, as there was more swelling. That night he was delirious, and when he was admitted next day the swelling was much more extensive. At 5 P.M. the whole limb was much more swollen and red, the swelling being marked over the malleoli, and everywhere the tibia was exceedingly tender. There was thought to be some fluid in the knee-joint. Several incisions were made. As far as could be discovered the entire diaphysis of the tibia had been stripped of periosteum; there was also bare bone over the lower end of the diaphysis of the fibula. The next day he was much easier, but was tender all over, and a systolic murmur was present at the apex. The limb was placed in a carbolic bath. On Oct. 2nd he complained of pain about the left ankle, but nothing could be found to account for it; however, an abscess over the outer malleolus had formed and was incised within thirty-six hours afterwards. The drainage-tubes were taken out of the incisions in the right leg on the 4th. He was a little delirious during the day, and it is stated that a friction sound was heard over the cardiac base and that there was some increase of dulness to the upper border of the third rib and to just beyond the middle of the sternum. On the 7th there was some fulness over the right hip, with tenderness, but it was also noted that the abnormal dulness in the cardiac area and the friction sound had disappeared. The tenderness of the hip gradually subsided in two or three days, and his progress was satisfactory until the 20th, when the knee-joint became affected and had become so painful that it was aspirated the same evening and an ounce of turbid fluid removed. Aspiration was again performed on the 23rd and an ounce and a half of pus withdrawn. On the 24th the joint was drained through lateral incisions, a tube being placed across from side to side; this tube was removed four days later at the first dressing, but had to be replaced in a few days' time. The dead bone was removed from the tibia on Nov. 8th. It had been thought that a necrosis of the whole diaphysis had taken place, but only the anterior half of the shaft was dead. Dr. Eustace Smith examined the chest for me on Nov. 18th and considered the cardiac murmur to be a hæmic one. On the 25th all splints were left off. On Dec. 6th some small sequestra were removed from the right tibia and from the left fibula. By the end of that month no cardiac murmur could be heard. When the patient left in January of the following year he could voluntarily flex the right knee to a right angle. The cardiac symptoms were of much interest, for they are often of serious moment in acute inflammation of bone and imply a bad prognosis.

I would add a word of caution to those watching a patient with early suppuration in the knee-joint. Careful examination should be made from day to day to see if the area of the swelling is extending. Sometimes, as in the case the notes of which are appended, the upper margin of the synovial membrane will be found to be thickened, this line of thickening will be found extending further up the thigh, and the tension of the joint will be less; ulceration of the synovial membrane is taking place, and there is now an absolute necessity for incisions, as the pus will otherwise diffuse under the quadriceps extensor of the thigh. Occasionally the swelling of the knee will disappear rather suddenly, and, unless the surgeon is wary, he will think the patient better until he is confronted by a huge abscess of the thigh. This is not speaking too strongly, for I have myself had to open such abscesses on one occasion. The patient, a woman, had pyæmia, and when admitted both thighs were enlarged in front, and the abscesses extended from under the patella up to the hip-joint on both sides, and contained an enormous quantity of pus. The patience and amount of treatment which these patients may require, as well as some of the

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important complications occasionally met with, are exemplified by the following case, which was under treatment for 299 days on the first occasion.

CASE 6. *Acute inflammation of tibia and os calcis; suppuration in knee, ankle, and big-toe joints; drainage of joints; sequestrotomy; albuminuria; recovery.*—A boy aged fifteen years was admitted to St. Thomas's Hospital under the care of Sir W. MacCormac on Jan. 2nd, 1888, and left on Oct. 7th. For three months he had had some starting pains and cramp in the left leg, chiefly at night, but there appears to have been no serious complaint until Dec. 25th. On that day he got down from an omnibus when it was going at full speed, and, although he was not aware of any injury at the time, in a few hours he noticed that the left ankle was swelling, and he experienced great pain in it. On his admission to hospital there was found to be a suppurative periostitis of the tibia, chiefly in the lower three-fourths, and two incisions were required to give exit to the pus, one in front of the inner malleolus, the other half-way up the tibia on the inner side. His temperature was 104° F. Ten days later there were sickness and diarrhœa, a good deal of discharge, but not much pain until about the 29th, when it was found that there was some evidence of suppuration in the ankle, and incisions were made which gave exit to pus. He also developed suppuration in the metatarso-phalangeal joint of the big-toe of the same limb. He did not at first obtain much benefit from these incisions, and they were enlarged. After this he improved until on March 31st sequestrotomy was performed and necrosed bone removed from the tibia. At various times sequestra of small size were removed from the os calcis and tibia without any ill effect; but on June 3rd, the day after an operation, a sharp attack of erysipelas developed. Until this date there had been no affection of the knee-joint, but soon afterwards, on the 8th, the knee was found to be very much swollen and tender, and an ounce of pus was withdrawn on aspiration. As the temperature was of a mildly hectic type and there was no starting of the limb, aspiration was repeated on the 12th and 15th, when six ounces and seven ounces were removed on the respective occasions. Although the general and local symptoms remained much the same, it was evident that the normal limit of the synovial membrane no longer formed the barrier to extension of the pus along the front of the thigh, and a firm raised line could be felt; ulceration had evidently taken place, and the abscess was spreading. Lateral incisions were made, as also one behind in the line of the semi-membranosus bursa, on June 7th, a tube being placed across the joint between the lateral incisions, and another in the popliteal one. The patient complained of a good deal of pain on the following day, but within ten days the temperature was normal, and on July 7th there was no pain when the dressing was changed. On July 15th the urine was smoky and albuminous, and mixed hyaline and granular casts were present, with blood cells. He had a pasty appearance, and there was still discharge from the various wounds and from a splint sore under the heel, but the last tube had been removed on the 7th. The evidences of renal disease passed away, and on Sept. 13th there was no albuminuria. The wounds were healed, although the limb continued to be enlarged, and the os calcis and tibia were thickened. He was readmitted in the following year, and a cavity in the upper part of the tibia, which had not then closed, was scraped and afterwards healed by granulation. The knee was kept slightly flexed and was quite ankylosed.

CASE 7. *Acute inflammation of femur; suppuration in hip-joint; excision of hip; sequestrotomy; disease of humerus; recovery.*—A girl aged twelve years was admitted to St. Thomas's Hospital under the care of Sir W. MacCormac on Nov. 28th, 1885, and remained in the ward until April 5th, 1886. On Nov. 19th she had made a false step in going upstairs and jarred her hip. The upper part of the thigh had gradually swollen and become very painful on attempted movement, and she had been unable to sleep. The signs were those of an acute suppuration of the hip with well-marked fluctuation. Her temperature was 104° F. The patient was very ill. On the morning of the 30th her condition was as follows. She had slept very little either night since admission and was very restless and delirious, talking constantly. She was quite sensible during the day. The tongue was furred and dry. There was no sickness, and she took liquid nourishment fairly well. She looked pale. Her temperature in the morning was 102·8° There was no rigor. The pulse was 116 and full. The right hip-joint was flexed, with marked outward rotation, and there was great swelling around the whole upper third of the femur. The iliac fossa was free. There was fluctuation over the front of the hip, with extreme tenderness on pressure over the great trochanter. The pain was great, but not so great as on her admission. The left elbow was flexed, with very moderate swelling; pain and great tenderness existed over the lower end of the humerus, in the posterior aspect of the elbow, and spreading up the arm. There was a sharply marginated bright red-patch. She also complained of pain in the right shoulder, where there was a little swelling with some tenderness, especially in the posterior aspect. Langenbeck's hip incision was made on the 30th, much pus flowing away before the capsule was incised. I could pass my finger quite round the neck of the bone, which was bared, especially on the anterior aspect, and for four inches down the shaft. The joint contained very little pus. The upper end of the femur was removed after section below the great trochanter. Incision was also made above the left elbow, and some pus evacuated which came from a cavity, at the bottom of which was bare bone, extending a short way up the shaft. On Dec. 10th the right elbow was painful, and there were slight swelling about the lower epiphysis of the humerus and some bright redness over the elbow, with pain on movement. A splint was adjusted. On March 1st a large sequestrum was removed from the upper end of the femur. When she left the hospital there were from two to two and a half inches of shortening; there was free voluntary movement at the hip, which was in a good position, with slight outward rotation of the femur. There had been no necrosis of the humerus on either side, and the wound was healed.

The majority of the cases have done well after incision, and there has been no complication of importance. Ulceration of an artery caused by the pressure of a drainage-tube was met with in one case and nearly proved fatal. It is certainly an accident to be guarded against, especially at the ankle-joint and lower part of the thigh.

CASE 8. *Acute inflammation of tibia; suppuration in ankle-joint; incisions; hæmorrhage from posterior tibial artery; sequestrotomy; recovery.*—A little girl aged nine years was admitted under the care of Mr. Mackellar to the Elizabeth Ward of St. Thomas's Hospital on Oct. 15th, 1886, and was discharged on June 1st of the following year. The illness commenced definitely on Oct. 8th with lameness owing to pain in the ankle and shivering fits; her appetite failed, and she was unable to sleep. Hot fomentations were applied by direction of her medical attendant, and she had been kept quiet, but swelling and redness of the lower part of the leg showed themselves, and she was admitted with well-marked osteo-periostitis of the right tibia, with suppuration limited below by the epiphysial line of the bone. Incisions were made the same day and the pus was evacuated. The lower three-fourths of the bone were denuded of periosteum to a varying extent. On the 27th there was pain in the right ankle-joint and she was very fretful at night, but on Nov. 11th there was suppuration in the joint, which was opened on each side, and a drainage-tube was passed across, some pus being evacuated. The condition of the joint improved, but on the 22nd there was profuse hæmorrhage into the dressings, which were saturated, and the patient showed the effects of the loss of blood severely, being sick and restless, with a low temperature. The wound was plugged, and on the following day when she had rallied I ligatured the posterior tibial artery at the ankle above and below a large opening into it. Before ether was administered her pulse was 180. Sequestrotomy was performed on Jan. 16th, 1887, and on April 6th a small piece of bone was removed. The big-toe was very stiff and partly flexed on the latter date, so it was forcibly straightened and afterwards kept in position by a loop of drainage-tube, which was also passed round the ankle. She left for a convalescent home when there was merely a small sinus. The ankle was fixed in a plaster-of-Paris splint, which she wore for some time. When seen a few months later there was some ulceration of the scar tissue over the lower end of the tibia, but she could walk very well.

I have purposely refrained from discussing the somewhat difficult question of diagnosis from pyæmia; the relationship between the two diseases is very close, and the discussion of the subject would take more time than I have at my disposal. It is in my experience not unusual to find a patient complaining of pain in a joint distant from the seat of the

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bone inflammation, which becomes red, swollen, and œdematous, but does not suppurate, and in time recovers without any incision.

I must express my thanks to the surgeons whose names have been mentioned for their permission to treat, and now to publish, the cases which have been noticed.

Mansfield-street, W.

WHY IS THE ABDOMEN OPENED IN THE MIDDLE LINE?

BY F. WINSON RAMSAY, M.S. DURH., F.R.C.S. EDIN.

IN text-books on abdominal operations the linea alba is always recommended as the proper site for the incision, or, in default, the linea semilunaris. From this fact and from the unanimity of opinion which appears to be held by operators on the subject, one would naturally suppose that there must be some great advantages to be obtained from opening the abdomen in one or other of these situations. On inquiry I find they are as follows: (1) vascularity is low in the middle line, and therefore the hæmorrhage is less; (2) there are fewer and less important structures to cut through; and (3) there is greater facility of access to all parts of the abdominal cavity. As regards (1) this advantage is imaginary and is really a disadvantage, for, although the abdominal wall is more vascular in other situations, yet there is never any hæmorrhage in incising the abdominal wall elsewhere but what can be easily and speedily controlled, and, moreover, it is this absence of vascularity which tends to delay rapid and permanent healing, and therefore predisposes to hernia. (2) is also a disadvantage, for the whole depth of the incision being through tendinous or fibrous layers having a great similarity to one another renders it difficult, especially to young operators, to know exactly the depth of the incision. This is especially the case when there has been inflammatory action. It is difficult to get the layers exactly together again, and they always cohere, so that the depth of the scar when formed is barely one-eighth of an inch thick. This is noticed especially when making an incision through the scar of a previous incision. (3) is the only valid argument that can be used in favour of the median incision, and, as I can show, is theoretical rather than practical.

A disadvantage of the median incision is that should it be necessary to extend it upwards the umbilicus comes in the way, and as it cannot be rendered aseptic with certainty it has to be avoided and the incision deflected, while some operators remove the umbilicus entirely. This being so, is there any situation in the abdominal wall which offers further advantages without these disadvantages? I think so, and that the ideal incision for abdominal section is one vertically through the middle of the rectus muscle on either side, and for the following reasons: (1) although the parts are vascular there is no hæmorrhage; if the epigastric artery is cut, it is easily secured, and this vascularity tends to rapid and efficient healing; (2) there is no injury to the muscle, for after the fascia is divided the muscular fibres are easily separated with a director and retracted; (3) the incision can be made in any part of the muscle and continued up to the ribs or down to the pubes in the same manner; (4) the umbilicus gives rise to no inconvenience; (5) the layers are so well marked that it is impossible with ordinary care to wound the viscera; (6) access to all parts of the abdominal cavity is just as easy as in the middle line (this I have found from experience, whilst in some cases, where tubal or ovarian disease is known to be only on one side, it is an advantage to have the incision slightly on that side); (7) the scar left looks as if there had been a skin incision only—it does not pucker or dip in like the ordinary scar, and the separate layers are not coherent; and (8), most important of all, if the wound is properly closed the risk of hernia is reduced to the least possible minimum. The best method is to close the wound with silkworm-gut sutures, running through all the layers. These are placed *in situ* and held by forceps; then the peritoneum and posterior layer of fascia are brought together with fine silk sutures, either continuous or interrupted, and then the anterior layer of fascia in the same manner. This brings the muscle firmly together, making the passage through its fibres valvular, restores the natural thickness of the abdominal wall, and prevents coherence of the fascial layers, leaving the abdominal wall in as good a condition as before the operation. Should temporary drainage be essential, the necessary sutures should be placed *in situ* and marked with knots. They can then be drawn and tied accurately when the tube is withdrawn. Even if drainage has to be continued for some time, the track running through a thick wall will close better and more firmly and be less likely to give way afterwards. I have adopted this incision during the past two months in five cases—viz., two ovariotomies, one tubal gestation, one pelvic abscess, and one cholecystotomy—and have found that these advantages claimed are real and practical. I am convinced that if some surgeons of higher standing than myself would give this matter their careful consideration this incision would be generally adopted, and that students would be taught that the one place to be avoided in opening the abdomen is the linea alba.

Bournemouth.

A SEVERE CASE OF FOOT-AND-MOUTH DISEASE OCCURRING IN A BOY.

BY WILLIAM BLIGH, M.D., B.S. LOND.,
LATE HOUSE SURGEON, GUY'S HOSPITAL.

UNFORTUNATELY, this case was not seen until the fifth day of the disease, the history up to that time gleaned from the mother being as follows. The patient, a healthy schoolboy aged thirteen years, was quite well until July 18th. On the morning of that day he complained, while eating, of some soreness of the mouth; he did not feel ill, and went to school as usual. On the 19th the soreness was worse, and the mother noticed some swelling of the lips, with "little lumps" on their insides; the eyes also became inflamed. On the 20th blisters were noted in the mouth and a few itchy spots appeared on the hands; the mouth was very sore, and the patient was given alum and water to wash it with. On the 21st and 22nd the mouth became more painful and more spots came out on the hands. Up to this date the boy was feeling fairly well; but on the 23rd he became feverish, dull, and listless, and I was asked to see him. I found him in the following condition. He was evidently very ill—pale, listless, and apathetic. The pulse was markedly slowed (fifty-four per minute); the temperature at 5.30 P.M. was 104° F. The lips were considerably swollen and covered with ruptured vesicles showing bases grey with heaped-up epithelium. The tongue was thickly coated with grey epithelium, which on being scraped away showed irregular, raw patches. The tongue itself was not swollen. The hard and soft palate showed circular grey patches with surrounding injection; these patches had coalesced on the hard palate, forming an irregular serpiginous outline like one sees in herpes affecting this region. On the left of the swollen uvula there were two, and on the right one, such circular patches, and a few also on the anterior pillars of the fauces. The gums, pharynx, and insides of the cheeks were free. There was great fœtor of breath and constant dribbling of serum and saliva. The eyelids presented an appearance closely resembling an ordinary eczematous blepharitis, there being dried muco-pus adherent to the margins and conjunctivitis limited to the neighbourhood of the lids. At the junction of the skin and mucous membrane at the left ala nasi there was one vesicle, but the mucous membrane of the nares was unaffected. On each hand there were many vesicles, mostly about the size of a goosequill in section, containing clear serous fluid, and each surrounded by a narrow zone of hyperæmia. They were distributed almost entirely on the palms of the hands, palmar surfaces of the fingers and backs of the two distal phalanges. The coronæ were especially affected, the vesicles here being smaller and tending to run into each other, while beneath the thick courticle of the palms and palmar surfaces of the fingers they were very numerous, but discrete and not raised. The backs of the hands were quite free, and there were none on the wrist or forearm of the left hand, but the right wrist had three on its flexor and one on its dorsal aspect.

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The number of vesicles may be judged by the fact that I counted forty-seven on the right hand alone. The toes were quite free, but there were two or three scattered vesicles over the metatarsals on either side. The rest of the body was free. There was no glandular enlargement and no abnormal physical sign to be discovered in any organ. The urine was normal. The patient was given a mixture containing perchloride of iron, sulphate of quinine, and chlorate of potash, the mouth ordered to be frequently washed out with dilute Condy's fluid, the eyes to be bathed with boric acid solution, and some yellow oxide of mercury ointment to be smeared along the lid margins. He was ordered plenty of fluid nourishment, with two glasses of port daily. On the morning of the 24th he presented a most striking clinical picture, plunged in sleep so profound that he was with difficulty aroused, the lips swollen and pouting, saliva constantly dribbling from the mouth, and muco-pus exuding from the eyelids. He, however, took nourishment freely on being awakened, but immediately relapsed into deep sleep. The morning temperature was 102·6° and the pulse 56 per minute. He was ordered a purge and the local treatment to be continued energetically. Three capillary tubes were filled from some of the vesicles on the hands and forwarded to the Clinical Research Association for bacteriological investigation. (Their report is added.) On the 25th drowsiness was still marked, two or three of the vesicles on the fingers had become hæmorrhagic; the bowels had acted well and the breath was less offensive. The morning temperature was 102° and the pulse 55. On the 26th there was slight improvement generally, the tongue tending to clean; the appetite was returning, and the boy began to take some interest in his surroundings. The morning temperature was 100° and the pulse 55. On the 27th there was marked improvement, the lips were showing healthy granulations, and the tongue was clean, showing islets of intact epithelium standing out on a raw background. The vesicles on the hands, where situated beneath thin skin, were becoming opaque, and where beneath thick skin were drying. The morning temperature was 99° and the pulse was still only 54 per minute. On the 28th the lad was quite bright; the lips and tongue were healing; slobbering only took place during sleep; the vesicles on the hands were drying up without suppuration, and the eyes were nearly well. The temperature was 99° and the pulse 52. Convalescence was now rapid, and in a few days he was quite well, the slow pulse being almost the last symptom to disappear. The diagnosis presented no difficulties; if one makes a list of the various diseases characterised by vesicles we should have variola, varicella, vaccinia rash, syphilis, herpetic fever, foot-and-mouth disease, eczema, herpes, erythema bullosum, pemphigus, cheiropompholyx, scabies, traumatism, and hand-and-mouth disease of Hutchinson. From amongst these, foot and mouth disease is picked out by the distribution and character of the rash, its life history, the association of hand and mouth, the absence of prodromal fever, a history of previous varicella, and, finally and conclusively, by the results of the bacteriological investigation. The source of infection remains a mystery. The cows on the estate on which the boy's father lives and those belonging to the dairy from which the family's milk supply is obtained were alike free from disease, and no sheep, pigs, or donkeys in the neighbourhood were, as far as I could ascertain, affected, nor had the boy been employed in looking after any such animals.

[The following is the report of the Clinical Research Association:—

"Microscopic examination of the serum in the three tubes submitted to us after appropriate staining gave the following results. In two of the tubes the serum contained cocci, arranged in pairs and as staphylococci, but with some few streptococci. In the third, however, the streptococci preponderated. These organisms were isolated by means of plate cultivations, when the staphylococcus was found to present no marked differences from the staphylococcus epidermidis albus described by Welch as being a common inhabitant of the skin. The streptococcus presented the following characteristics. The organism grew well, though rather slowly, on all nutrient media except potato (on which the growth was extremely scanty). The growth in streak cultures consisted of minute, transparent, jelly-like, spherical colonies, not confluent, and not making their appearance until forty-eight to sixty hours after inoculation. Microscopically, it occurred in long, wavy chains of from thirty to fifty members, the individual cocci being grouped in pairs and somewhat smaller than the ordinary streptococcus erysipelatosis. It stained well with the aniline dyes and was not decolourised by Gram. From a consideration of these points we have no doubt that we are dealing with the particular pathogenic streptococcus Klein described as being the cause of the foot-and-mouth disease among cattle, &c.—CHAS. H. WELLS, Secretary."

Caterham Valley.

NOTES ON A CASE OF

HÆMOPTYSIS AS A COMPLICATION OF TYPHOID FEVER; RECURRENCE AND DEATH.

BY A. G. M. CREAGH, M.R.C.S. ENG., L.S.A.,
MEDICAL OFFICER, CAPE COPPER COMPANY, LIMITED.

THE occurrence of severe and fatal hæmorrhages from the lungs in a non-phthisical patient during the course of typhoid fever is apparently a rare complication, no mention of it being found in the last edition of "Quain's Dictionary of Medicine" or in the works of Hilton Fagge, Burney Yeo, or Bristowe. The notes of the following case may therefore be of interest as occurring in the course of a disease so widespread as enteric fever.

The patient was a man aged thirty five years, healthy and well developed, who had had no serious illness with the exception of an attack supposed to have been rheumatic fever, contracted in Norway. There was no evidence of cardiac enfeeblement or abnormality. He was first seen on Sept. 15th at 1.30 P.M., with a temperature of 102·3° F., accompanied by shivering and malaise. On Sept. 16th and 17th the temperature ranged between 101·5° and 102·2°. On the 18th the temperature at 10 A.M. was 101·2°, and at 8.30 P.M. 101·8°. A slight amount of bronchitis in both chest fronts was present, and inspiratory and expiratory sounds were loud and rough. On the 19th, 20th, and 21st the evening temperature reached 103·8°, falling in the mornings from half to three-quarters of a degree. The pulse ranged from 118 to 120, and the respiration was 24. There was no increase of vocal resonance, dulness, or bronchial breathing in any region, but a limited expectoration of a glairy, sticky nature, occasionally slightly tinged with blood. There was a thick mucoid accumulation in the nostrils, which was removed by the patient's efforts with great difficulty, and which at times consisted of blood clots, arising from a congested state of the mucous membrane. On the 21st there were gurgling and tenderness in the right iliac fossa, followed by gradually increasing abdominal distension. On the 24th (the tenth day of the illness) rose-coloured spots appeared on the abdomen, and considerable meteorism was present. The evening temperature was 103·8°. On the 25th the morning temperature fell to 101·2°, rising in the evening to 102·4°. At 2 A.M. on the morning of the 26th the first attack of hæmoptysis occurred, consisting of about two ounces of bright aerated blood. A second attack took place at 5 A.M., and a third and more severe hæmorrhage at 8 A.M., when the temperature fell to 98·4° and the patient became cyanosed, with respiration 38 per minute and the pulse 120 and feeble. The seat of hæmorrhage appeared to be chiefly in the right front, gurgling in the bronchi being heard over a large area of the right lung and less so over the left. The hæmorrhages were checked by turpentine, ergot, sulphate of alum, and dilute sulphuric acid. The patient's condition was most critical, and at my request he was seen in consultation by two neighbouring practitioners. Ice was given freely by the mouth, digitalis was added to the medicine, the usual routine treatment of hæmoptysis was pursued, and the administration of turpentine and digitalis continued every four hours. During the day the patient rallied, his temperature rising to 101·2° at 9 P.M. and the pulse slowing to 98. The respiration was 28. At 1.15 A.M. on the 27th I was called and found that a fourth attack of hæmoptysis had set in with increasing dyspnœa: not more than one ounce and a half of blood were expectorated. The remedies previously successful were again administered and a hypodermic injection of ergotin was given but without effect, and the patient, choked by the bleeding, died at 2.15 A.M. The treatment throughout the case was by Dr. Burney Yeo's mixture, with the addition of small doses of wine of ipecacuanha. Two scruples of salol in powder were given in twenty-four hours, together with a diaphoretic cough mixture, during the early part of the illness when the bronchitic symptoms were most troublesome.

Remarks.—Although epistaxis is so common a symptom in typhoid fever, hæmoptysis appears to be very rare. Doubtless they both depend upon the lessened coagulable power of the blood in this disease, and in forming one's prognosis it is well to bear in mind the possibility of such an occurrence amongst the many other complications to be feared. The

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above case was neither phthisical nor a hæmophiliac. There is strong evidence to prove that the disease was conveyed through the milk-supply coming from an infected house where there were four cases of typhoid fever. The milk was not boiled before use, and a second inmate of the patient's house also contracted enteric fever. Some others to whom the milk had been supplied were protected by previous attacks; in other cases the milk was regularly boiled. In these latter no bad results have appeared as yet, a point in favour of the advisability of boiling milk.

Ookiep, Cape Colony.

THE MORTALITY FROM EMPYEMA IN CHILDHOOD.

BY J. P. WIGHTMAN, M.R.C.S. ENG., L.R.C.P. LOND.,
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IN this condition, a serious and not uncommon one, a favourable prognosis may be given, providing that the diagnosis is made in the early stages. What can be more sad than a mother bringing her child, worn out by prolonged hectic due to a discharging empyema, for advice? The rapidity of convalescence, averaging from six to eight weeks, and the usual cure, no trace of the disease remaining, add a special attraction to a condition which, if left alone, must almost always produce a fatal result. The subject of this disease and its treatment has been brought forward in the various medical journals, this paper being in part a *résumé* of the various views and methods of treatment.

Signs of a recent attack of scarlet fever (desquamation &c.) are by no means uncommon in patients seeking relief at a children's hospital. With regard to this, it is remarkable that among 1008 cases of scarlet fever, mostly in children, recorded in THE LANCET during the year 1891 empyema is not even mentioned as a complication; nor is this the case in a paper on Scarlet Fever published in Vol. XXI. of the St. Thomas's Hospital Reports. This naturally leads one to infer that empyema is most likely to occur if a case of scarlet fever is neglected. Various statistics of mortality are on record. The younger the patient the greater the risk of a fatal termination. The sooner the purulent effusion is removed the quicker the recovery. Rupture of an empyema through the chest wall or into the lung is a grave complication, though the latter occasionally leads to spontaneous cure. Apart from the above, danger to life is chiefly threatened by the onset of complications—viz.: (1) pericarditis (among 29 fatal cases at the Liverpool Children's Infirmary[1] pericarditis occurred 12 times, in 10 it was of the suppurative form); (2) peritonitis; and (3) septicæmia.

As regards the effect that different methods of treatment have, taken as a whole, I do not think resection of rib renders the chance of cure either greater or less, except in certain cases. At the Hospital for Sick Children, Great Ormond-street, from 1880 to 1892, 214 cases were treated. Of these, 85 were treated during the earlier period by incision, with 16 deaths, and 129 afterwards by resection of rib, with 23 deaths, the mortality, as will be seen, being nearly the same in each case.[2] Mr. Godlee published in 1886 the result of 36 cases. The majority (19) were treated by resection, the remainder by incision or aspiration. Of these cases only 1 was fatal. In THE LANCET of May 5th, 1894, I published the results of 118 cases, classifying all treatments together, with 23 deaths. In the same journal[3] Dr. F. E. Batten of London published the results at the Hospital for Sick Children, Great Ormond-street, for the year 1893-94. Of 43 cases treated by resection, 5 were fatal. In THE LANCET also he asserts strongly that resection is the only treatment for empyema, a statement which I think cannot be accepted without much reserve. Dr. E. Cautley of London, at a meeting of the London Medical Society,[4] in a paper based upon a series of 86 cases treated by various methods, gave a mortality of 16·6 per cent. The rate of mortality was the same after resection as after incision, with the exception that 5 out of 6 cases under two years old, treated by resection, were fatal. His opinion was that resection ought only to be had recourse to in cases in which the tube could not be inserted without, when drainage was imperfect, or for the cure of an old sinus. Dr. Morison of Hartlepool (34 cases, 2 deaths) upholds incision.[5] By the courtesy of Mr. Jordan Lloyd of Birmingham I am able to publish the treatment and results at the Birmingham and Midland Children's Hospital for the last five years. The total number of cases treated was 123; of these, 99 were cured, 20 were fatal, and of 4 there are no records. Among children of three years of age and under there were 43 cases; of these, 18 ended fatally. In the 99 cases cured the average stay in hospital was seven weeks and a half, the shortest stay eleven days, and the longest 164 days. Resection of rib was performed in 6 cases. I am indebted to Mr. H. G. Davis, house surgeon of the hospital, for taking much trouble in the preparation of the hospital statistics.

The routine treatment is incision and drainage as soon as pus is determined. Resection of rib is exceptional as a primary procedure.

If the above figures are put together they number 656 cases of empyema in children, with 104 deaths, giving a death-rate of 16 per cent.

The extreme gravity of empyema in a young child may be seen by the following:—

Mortality from Empyema in Children three years old and under.

	Cases.	Deaths.
Dr. Goodhart (Guy's Hospital Reports)...	29	19
Birmingham Children's Hospital	43	18
Liverpool Children's Hospital	35	18

These figures give a death-rate of a little over 50 per cent.

Rawdon, Leeds.

[1] THE LANCET, May 5th, 1894.
[2] Mr. Bernard Pitts: THE LANCET, Sept. 9th, 16th, 23rd, and 30th, and Oct. 14th, 1893.
[3] THE LANCET, June 2nd, 1894.
[4] THE LANCET, Feb. 2nd, 1895.
[5] THE LANCET, Sept. 29th, 1894.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

CHRONIC RIGHT-SIDED PLEURISY WITH CONSTRICTION OF THE SUPERIOR VENA CAVA SIMULATING INTRA-THORACIC TUMOUR; REMARKS.

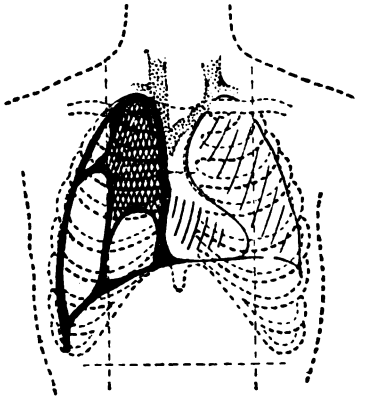
(Under the care of Dr. H. SAINSBURY.)

THE symptoms to which malignant growths of the chest give rise are very variable, depending upon the starting-point of the disease, whether pleura, bronchial tubes, or lung tissue. As these symptoms may be for a long time only those of a simple inflammation of the part attacked, this difficulty in diagnosis will be readily appreciated. The results which inflammation in its several stages and manifold incidence may bring about constitute an almost infinite variety of combinations. Here is an instance in which the diagnosis of intra-thoracic tumour, probably new growth, was made with some confidence, and yet the result of the post-mortem examination proved this to have been a mistake. The changes produced by the inflammation were unusual and extensive, but they were in no way the result of tumour formation.

A woman aged sixty-two was admitted into the Royal Free Hospital on Nov. 22nd, 1894, suffering from dyspnœa (of the variety orthopnœa), with much cyanosis and cough. She stated that she had suffered from winter cough for some years, that her present cough had been worse since the taking of a chill some six weeks before admission, and that her breath had become very short, especially of late. Two weeks before entering the hospital she said that she had noticed some blood mixed with the expectoration. Since the chill—i.e., during a period of six weeks—she was conscious of having wasted and lost strength. On examination the evidence of fluid in the right pleura was found; but though the chest on the right side was dull and

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resisting from top to bottom both back and front, the position of the heart's apex beat showed little, if any, sign of displacement of the mediastinum. The liver edge was felt well below the costal margin, but upon this as a sign of depressed diaphragm one could, of course, not rely. Accordingly the dulness in degree and extent seemed to be in excess of that which an effusion could account for. The cyanosis mentioned was marked and accompanied by a pronounced anastomotic enlargement of the veins over the anterior surface of the trunk. Clearly there was obstruction of the superior vena cava. The chest was tapped and a small quantity of dark, sanguineous fluid withdrawn. The quantity which came away, under fifteen ounces, was wholly inadequate to relieve a distended pleura, but it was all that would flow off by syphon action, and, under the circumstances, all it was thought wise to try to get. The relief obtained was but slight, and in the course of a week or ten days paracentesis was again performed, with a similar result, but a rather smaller withdrawal; the fluid removed had the same dark, sanguineous character. The dyspnœa and cyanosis increased, the patient grew progressively weaker, and she died on Dec. 22nd, one month after her admission. Throughout her stay in hospital the temperature curve was apyrexial. There is nothing of importance to add in the way of history. The patient had scarlet fever when aged fifteen years and rheumatic fever when aged twenty. The family history threw no light on the case. At the necropsy, which was held on Dec. 24th, the right pleural sac was found to be converted into a cavity with thickened, rigid, almost cartilaginous walls, in which the same sanguineous fluid was found which on two occasions had been withdrawn in small quantity. Both layers of the pleura, parietal as well as visceral, were equally affected, and the mediastinum towards its dexter aspect shared in the thickening. The right lung pressed upwards,



inwards, and backwards, and, occupying perhaps one-third or one-fourth of its normal dimensions, was tied at two or more spots to the parietal pleura by stout cord-like processes of cartilaginous consistence. Towards the apex, in the vertebral groove and against the upper half of the mediastinum, the lung was adherent. Tracing the large veins from the root of the neck downwards into the chest, their dilated channels were found to maintain their patency till at their confluence in the superior vena cava where they entered the mediastinal thickening. The constriction here was such that the channel was reduced to a narrow, slit-like aperture admitting about a No. 5 catheter. Nothing in the shape of a tumour was discovered, and the mediastinal sclerosis causing the constriction was exactly similar in character to, and in no sense demarcated from, the general pleural thickening. The rigid-walled right pleural cavity could not have been under any tension from the fluid it contained, and it is more than probable that the exudation was a passive one from the congested intercostal veins, which followed, but scarcely pressed upon, the receding lung, as its thickened capsule (peripulmonitis) contracted upon the lung sponge work. The reason for the inadequate tappings now became quite evident: it would have been as feasible to drain a full beer barrel without a vent-peg as to empty this cavity by single aspirating puncture. No disease was found in the carnified tissues of the right lung, but the expanded left lung, which projected slightly across the mid-line, showed a hard knot on the outer surface of its upper lobe, with some surrounding puckering; there was no caseous centre to it.

Remarks by Dr. SAINSBURY.—It may be well to summarise the chief points upon which the diagnosis in the above case rested; they were the age of the patient, the latency of origin of the symptoms or their insidious onset, the accompanying loss of flesh and strength, the presence on at least one occasion of some blood in the expectoration, the dulness in excess of the evidence of fluid, the sanguineous character of the exudation, and, above all, the evidence of intra-thoracic local obstruction to the venous circulation. This group seemed to warrant the conclusion which was arrived at—viz., intra-thoracic tumour, probably malignant, with secondary implication of the pleura. Dr. Walshe, I am told, used to say on occasion that he had given up guessing; he probably did not mean this; but, face to face with the innumerable possible combinations of disease, even a shrewd guess may at times hardly be hazarded.

NORTH-EASTERN FEVER HOSPITAL.

A CASE OF SCARLET FEVER; OTORRHŒA; THROMBOSIS OF THE LATERAL SINUS; PYÆMIA AFFECTING RIGHT ELBOW AND LEFT HIP; RECOVERY.

(Under the care of Dr. F. M. TURNER.)

SEVERAL cases have been recorded during recent months of septic thrombosis of the lateral sinus occurring during an attack of acute suppurative otitis media. As a rule in such cases there is a history given of a chronic discharge from the ear, or of an offensive smell which is found to depend on old-standing disease without the escape of an appreciable quantity of discharge. In this case operation was required within a month after the discharge commenced. It is also remarkable for the few signs which were present at the time of the operation on the sinus, more especially the absence of any swelling, fulness, or tenderness over the jugular vein in the neck, although there was an increase of discharge from the opening in the bone on pressure over the vessels. There can, we think, be little doubt that the suppuration in the joints was pyæmic and resulted from the ear complication. The suppurative arthritis of scarlet fever usually shows itself about the third or fourth week, and although in more than one of the fatal cases thrombosis of the internal jugular vein has been noted it has not resembled that which is described here. The pain in the mastoid preceded the rigor, and the joint complications appeared the day after the operation, possibly caused by disturbance of clot during the necessary manipulations. The advantages of early incision of the joints are shown by the result. There is no doubt that a free incision with washing out is the best treatment for a pyæmic joint, and that harm is done by delay.

A slightly built boy aged six years was admitted to the North-Eastern Fever Hospital on Jan. 31st, 1895, suffering from scarlet fever. He developed the first symptoms on Jan. 27th, and the rash on the following day. During the whole of February he remained in a very serious condition, with a foul throat, swollen cervical glands, a nearly continuous high temperature, a small amount of albumin in the urine, and great muscular weakness. He became extremely emaciated though he took a fair quantity of fluid food. Feeding was very troublesome owing to his bad throat, but forced feeding through a tube did not become necessary. Otorrhœa developed on the right side on Feb. 8th, and on the left a few days later. Towards the end of the month his temperature was rather lower, but very irregular. On the 26th it remained below 100° F. the whole day, and Dr. Turner thought he had slightly improved in strength and seemed more comfortable. On March 2nd, however, the temperature again rose to 104°, and he vomited three times. He complained of pain in his right ear; he had hardly spoken a word the whole time he had been in hospital, and this was the first occasion he gave any useful information. Two days later he had a rigor lasting ten minutes, with a temperature of 104·8°. The pupils were unequal and remained so for some weeks later. The optic discs were normal, and there was no further vomiting. The diagnosis lay between two diseases, either of which would produce the symptoms observed: (1) acute interstitial nephritis or septic nephritis, a form which frequently accompanies the cases of scarlet fever complicated with

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excessively foul throat; or (2) mastoid disease with intra-cranial extension, probably thrombosis of the lateral sinus. The first of these is often present without producing any great change in the urine, only a trace of albumin being found, and in particular without suppression or marked diminution of the quantity excreted. On the other hand, such symptoms as headache, vomiting, strabismus, drowsiness, irritability, head retraction, convulsions, &c., which point to cerebral disease, are sometimes produced by it, though subsequent post-mortem examination shows either no cerebral disease or else simple œdema. In this case the rise of temperature on March 2nd, vomiting, pain in one mastoid, and the rigor on the 4th, as well as the unequal pupils, were thought sufficient signs of mastoid disease to justify operation. At this time both ears were freely discharging pus which smelt offensively in spite of treatment. Neither pressure nor percussion on either mastoid was painful, nor did there seem any tenderness on pressure over the great vessels on either side of the neck. The only point which determined the side to be operated upon was the pain previously complained of behind the right ear. On the following day (March 5th) ether was given and the right mastoid antrum opened with a gouge. It lay about half an inch deep and did not contain pus, nor did it seem in any way abnormal. The bone, however, exposed in the posterior part of the hole was dark coloured. On working backwards the discolouration increased until the sigmoid groove was reached. On opening this a gush of dirty-brown fluid escaped, with a fetid odour not unlike that of fæces. Similar fluid continued to escape, at times with regular pulsation, and at other times in irregular gushes, the cause of which Dr. Turner did not at once perceive, but after a time he noticed that they depended on pressure being made on the neck, thus showing a communication between the fluid in the exposed intra-cranial cavity and the jugular vein in the neck. On discovering this, further pressure was avoided in that region as far as possible, for fear of driving septic material into the collateral veins. At first the accumulation was thought to be extra-dural, but it was subsequently found that it was in the cavity of the sinus itself. The sigmoid groove was first exposed at the bend, and at the anterior part of this the bone was not covered by dura mater. The posterior part, however, showed a layer of dura mater with a free edge running vertically and rather thickened; the most anterior part was almost black, but a little further back the membrane was adherent to the bone, and when exposed was of a red colour. The cavity was found to contain nothing beyond the brown fluid and a small loose slough or two composed of tough fibrous tissue; on exploring with a probe it led only in two directions, corresponding to the anatomical direction of the sinus—viz., from the bend of the sigmoid almost straight backwards for an inch, and from the lower end of the wound downwards and inwards as far as the jugular bulb. The dura mater forming its floor was ragged, but no opening into the posterior fossa could be found. At the later stages of the operation blood oozed up from the lower track, especially after accidental pressure on the neck. Owing to the pulse beginning to fail and the length of time already spent (over an hour and a half) the idea of ligaturing the jugular vein was abandoned, and the operation was completed by removing some bone between the antrum and the sinus and snipping off the above-mentioned black edge of the dura mater with scissors. The middle fossa had been exposed while opening the antrum and was seen to be healthy. The wound was gently syringed and dressed. On the night of the 6th he complained of pain in the right elbow, and on the next morning it was very swollen. On the following afternoon (March 7th) the right internal jugular vein was exposed and tied opposite to the cricoid cartilage. It was perfectly healthy as far as was exposed in the wound. The mastoid wound was then re-examined; some more bone was removed in order to lay it more freely open, after which some clot, together with a little yellow pus and dirty fluid similar to that seen before, was taken out. Finally, the elbow was opened by a long incision, syringed out with perchloride of mercury lotion (1 in 2000), and drained. On the 8th he complained of pain in the left hip, but the signs of pus were not sufficiently definite to make an operation advisable until the 12th. Though there was some fulness around the joint it was impossible to make a thorough examination owing to his serious condition, and movement was so free that the presence of pus was doubted. When it was at length decided to operate every arrangement was made for sewing up the wound should the capsule of the joint be found not distended. On the evening before the operation, although the patient screamed with fright if one attempted to touch the leg, yet he could be induced to move it himself through an angle of nearly 90°. However, on the 12th the joint was opened by the anterior incision, and a good deal of turbid and flaky fluid evacuated. The joint was then syringed and drained. On the next day the right gluteal region was found swollen, and Dr. Turner's colleague, Mr. F. C. Ford, let out an ounce or two of fæcal-smelling pus from an abscess cavity between the glutei. Owing to his serious condition no anæsthetic was given. The elbow healed very quickly. The tube was removed on March 18th, eleven days after the incision, and the wound was closed on April 9th. There was at no time after the operation any limitation of movement, and the joint is absolutely as good as before his illness. The hip, however, gave much trouble, whether from the pus having lain four days in the joint instead of twelve hours as in the case of the elbow, from the dressings getting fouled several times, or from imperfect drainage through an anterior incision it is difficult to say. Dr. Turner was forced to make a counter-opening posteriorly on March 28th, and to operate again on April 13th for inefficient drainage, and healing was not complete until June 2nd. Meanwhile, dorsal dislocation had appeared. A weight extension could not be used until seven days after the operation and had several times to be omitted, on one of which occasions dorsal dislocation came on insidiously. The last time that dislocation occurred was on May 10th, previously to which the joint had been in good position for a week or two without any support of extension. To prevent relapse he wore a Thomas's splint for twelve weeks. The course of the mastoid wound was interesting. The floor of the cavity, consisting of dura mater, came forward and gradually obliterated it, but caused retention of pus in the track formed at the lower end of the sigmoid sinus. On May 20th about a drachm of pus was let out and a tube rather more than an inch long passed down this track until stopped by bone. The next day it was found that pressure over the anterior triangle of the neck caused pus to flow freely from this tube. This observation was repeated the following day, but owing to the risk of driving pus into collateral channels it was not afterwards repeated. The abscess, however, eventually emptied itself without any counter-opening. The wound made for the ligature of the vein had already healed by first intention. On May 25th a further operation was required on the mastoid to remove several pieces of dead bone which had not become loose. The wound finally healed on June 22nd. Although syringing through from the antrum to the middle ear was quite free and was regularly performed for more than a month after the first operation, the otorrhœa returned immediately after the channel closed up, and persisted in spite of the total loss of the membrane and ossicles. He was last seen on Aug. 4th, having worn the splint until two days previously. He could walk well, and there was no sign of dislocation of the hip and no shortening. Movement was free in all directions. Both ears were discharging. He had got quite fat—a great contrast to his previous condition.

Remarks by Dr. TURNER.—The points in this case which strike me as being most unusual are—(1) the very slight signs which accompanied so extensive and acute an intra-cranial lesion; (2) the destruction of much of the wall of the lateral sinus, causing its contents to simulate an extra-dural abscess; (3) the healing of a long tortuous abscess by drainage through the mastoid wound, although it extended through the jugular foramen into the neck; and (4) the large amount of voluntary motion retained in the hip when distended with pus. Several of my colleagues helped me in dealing with the difficulties of this case, but I must specially thank Mr. J. E. Beggs and Mr. F. C. Ford for assisting at the numerous operations and for giving valuable advice.

ROYAL BRITISH NURSES' ASSOCIATION.—The first sessional lecture of the season was given on Friday, Nov. 22nd, at 8 P.M., at the offices, 17, Old Cavendish-street, W., by Dr. Louis C. Parkes, on the Importance of Breathing Fresh Air. The annual conversazione will be held on Monday, Dec. 9th, at 8.30 P.M., at the Institute of Painters in Oil Colours, Piccadilly.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c.

AN ordinary meeeting of this society was held on Nov. 26th, the President, Mr. HUTCHINSON, being in the chair.

The PRESIDENT introduced the discussion, defining its scope and aim. He began by remarking that the brilliant discoveries which have rewarded the labours of experimental pathologists during the last twenty years have opened to the clinical observer many new trains of thought. Amongst them undoubtedly one of the most important is the recognition of parasitic germs as the causes of disease in a far wider sphere of action that was formerly believed; maladies which our predecessors were content to ascribe to constitutional proclivities, inherited tendencies, or to external influences quite unconnected with infection have now been shown to be attended by parasitic organisms. It has been proved in many instances that these organisms are capable when inoculated of producing the malady in question. The natural assumption has been that in most instances these organisms are introduced into the blood or solid tissues only shortly before beginning to manifest their presence. This conclusion has, however, seemed somewhat inconsistent with a considerable class of observed facts which would suggest that what we witness is often the result rather of matters which had been laid up in the tissues than of new contagion. It has therefore appeared to the council of this society that it might be opportune to discuss the whole question of possible latency. To prevent misconceptions it may be well to explain that the term "latent" is intended to apply only to periods during which, presumably, no vital activity is displayed. It is not to include incubation periods, and still less stages during which prodromata or early symptoms are present. A homely, or more correctly a rural, illustration will, said the President, if you will allow me to use it, best convey what is meant. For some years I had a field under cultivation in which poppies always grew amongst the corn. This field was laid down in grass, and during the eight years that it was pasture not a single poppy ever appeared upon its turf. Lastly, a part of the middle of this field was ploughed up and planted with trees. The ploughing was in winter, but next summer, without the possibility of the introduction of a single new seed, the whole plot grew a beautiful crop of poppies. Clearly the seeds had been latent for eight years; they had during that period retained their life, but had manifested no vital activity whatever. It was, indeed, in this absolute suspension of all attempt at development that their safety had existed, for had they once commenced to germinate they would infallibly have died. The process of growth once commenced could not have been arrested with impunity. Now, making all allowance for the wide difference between the seed of a flowering plant and the spore of a microscopic fungus, it is wished this evening to ask whether there is any reason to believe that parasitic microbes which infect the human body can in any way imitate the conduct of the poppy seeds, and under conditions not favourable to their growth retain their vitality in a state of absolute quiescence and, as far as observation from without is concerned, of latency. If such latency be possible, what are its limits in each instance, what are the conditions which favour it, and what are those which bring it to an end? In the instance of the poppy seed we know that nothing more than the advent of adequate warmth and moisture is required to start germination, whilst the final result may be modified by many other conditions, such as the constituents and character of the soil. Have we before us any facts, or any hints as to probable facts, in respect to parallel agencies in the case of infective microbes? Such is the inquiry before us to-night. It is scarcely necessary to remark that our topic is one of the utmost importance. Upon our knowledge in respect to the possible latency of germs will often depend the measures which we take for the prevention of infection, as well as those by which we hope still further to repress their activity. It may be, indeed, that a very large fallacy underlies much of our present creed as to infection, and that in many instances what we attribute to fresh infection is really consequent upon some change in the conditions of the subject which have favoured the development of pre-existing germs. Those who have worked most in the matter will, I suspect, be the readiest to admit that we are as yet but on the threshold of our knowledge as to the relationships which may exist between the cell elements of the body and parasitic germs or their products. If, in the instance of tuberculosis and erysipelas respectively it should in future seem probable that the germ elements necessary to their causation may remain long latent in the tissues, and may in such condition be transmitted from parent to child, important light will have been thrown on the accidents which follow vaccination. Without doubt both erysipelas and scrofulous affections do not infrequently seem to be set going by that, in itself, trifling procedure. It may be that we have been too much in the habit of accusing an unclean lancet or accidental infection of the pock, when all the while the disease was hidden in the infant's tissues and waiting only for suitable conditions to develop its activity. I wish to anticipate the criticism that we have taken too wide a field for this discussion. Without doubt diseases which are by no means closely cognate have been placed together in our list, and equally without doubt any one of them might have furnished sufficient material in itself for a debate. It has been thought, however, that as the subject is comparatively a novel one it was better in its first instance to approach it broadly, in the hope that facts supplied by one topic might throw light on those of others. Thus, from the consideration of hydrophobia we obtain one very remarkable fact, that whilst in most instances the poison begins to show its effects within six weeks of its introduction, in a few it may remain latent for eighteen months or possibly for several years. I am justified, I think, in using the term "latent" here, instead of speaking of a prolonged incubation period, for the facts favour the supposition that the poison is absolutely quiet during almost the whole of the period for which in certain cases the appearance of the disease is delayed. The real incubation period is probably the same in all, and in these cases does not commence until long after the introduction of the poison. It becomes of great interest, with this recognised fact in mind, to ask whether any similar instances of delay are ever observed in syphilis or other diseases due to inoculated specific poisons. Respecting syphilis itself I must not anticipate what Mr. Ernest Lane will presently bring before us, excepting on a very few points. I feel sure that he will pardon me for saying the problems in respect to it are of exceptional difficulty. At the same time I am sure that they place some of the facts as regards the possible latency, not only of active and living germs, but of cell tendencies originated by them but persisting long after their death, in a most instructive light. I may suitably, in connexion with syphilis, ask permission to introduce a distinction between true latency and a latency which is only apparent. It is highly probable that many children born with taint never show any evidence of it, and that some also of those who acquire syphilis never exhibit anything but the primary sore. In the case both of the infant and the adult thus apparently escaping there is probably no real latency, but only an absence of obvious phenomena. In each instance the blood changes are experienced, and in each there will ensue a liability to tertiary phenomena. It would be an instance of true latency if in such cases it were possible for the patient to manifest for the first time, at the end say of two or three years, an outbreak of secondary symptoms, but such facts are probably unknown. Leprosy finds itself in our list because of certain important facts which have been observed as to the length of time which may sometimes intervene between the date of its subject having left the place of presumed acquisition and the first appearance of outward phenomena. That this interval may be one of many years appears to be an established fact. Dr. Abraham has been good enough, at the request of the council, to undertake to bring before the society a critical examination of the evidence and to discuss its bearings. Although there is yet much difference of opinion as to whether leprosy arises from articles of food or solely from contagion, there is none as to the general fact that it does not now take origin in our own land. We are entitled, then, to assume, when a man who has lived in a leprosy district and having subsequently

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resided many years in England in a state of health ultimately shows signs of the disease, that in some way the implanted germs or the induced proclivity, phrase it as we may, has really been existent in a latent condition during the interval. It must, however, be clearly understood that the facts with which Dr. Abraham will have to deal are probably very exceptional. The close relationship which probably exists between leprosy and tuberculosis makes all that can be proved as to the former of great value in reference to its more common, and for us in Britain more important, congener. Dr. Kingston Fowler will explain to us the facts and possibilities in respect of this latter topic, and the council regards itself as fortunate in having secured the assistance of one so well qualified for the task. Presuming, however, from his synopsis that Dr. Fowler will restrict himself very much to the physician's aspect of the question, I may venture to remark that much light may also be hoped for from certain groups of facts which are more likely to fall under the cognisance of the surgeon. Most especially is it desirable to enlist the coöperation of those engaged in the observation of diseases of the skin. To them opportunities will occur for observations of a kind which can be equalled in no other department of practice. Tuberculosis of the skin can be studied in all its stages and in its very various forms more easily than tuberculosis of any other structure. I will, if you will permit me, very briefly advert to some of the lessons which lupus vulgaris appears to teach. Everyone will, I suppose, admit that this malady is in some way associated with the tubercle bacillus. Now, it would appear that there is in the very beginning of lupus vulgaris a stage of active self-infectiousness. During this stage the patient may develop patches of lupus on various parts of the body at great distances from each other. This stage, however, is short; a few months or a year, and after that the liability never recurs. The patient may go through life with one or more patches of lupus steadily aggressive at their borders, but apparently wholly without power of infecting distant parts. This, it will be seen, is the exact reverse of what occurs in cancer, in which the infecting area is usually for some time solitary, and multiplicity goes on increasing with the progress of the disease. It cannot be said, however, even in cases in which single patches of lupus remain single through a long life (and such are common enough), that the germs which infect are absolutely quiet or that they are really latent. Their presence is throughout obvious enough, and they still exhibit the power of infecting the tissues in close contiguity to them. More than this, however, they cannot do, and it seems clear that they have undergone some modification which in some marvellous manner restrains their activity of development. No dermatologist fears for his patient with one or more patches of lupus vulgaris of long standing that they will either induce visceral tuberculosis or cause additional outbreaks on the skin; a sort of half-latency appears to have been attained. I cannot but think that these facts may prove of great assistance in reference to our speculations as to tuberculous processes in general. Lupus has, however, yet more to teach us in reference to the laws of latency. We encounter certain cases in which the disease has been cured by treatment in early life, and in which recurrence takes place in old age. Two such I may mention as examples. In each a young lady had been cured, by the vigorous use of caustics, of lupus affecting the nose. In each the cure was complete so far as external appearances went, nothing but the healthy scar remaining. In each instance the patient married, became the mother of children, and passed through life in good health and without any tendency to recurrence of the lupus. In both, after the lapse of more than thirty years in one case and nearly forty in the other, the disease did finally again develop itself in close proximity to the original patch. Is it reasonable in such cases to suppose that a second infection had taken place? Is it not much more probable that germinal matter—bacilli in some sort of cell partnership—had remained undestroyed, and that when in senility the vital forces again became enfeebled they were able to again assert their vital powers? We seem here to have proof of latency of infective material during very prolonged periods. To complete the picture I may add that in both these cases the recurred lupus was well characterised, and proved, as lupus in old persons often does, very intractable. Allusion has already been made to erysipelas and to the possibility of its microbe being long latent, and even transmissible. As we have no one in the list of those who will open this debate who has undertaken to deal with this topic, it is perhaps desirable that I should add somewhat to what I have already suggested. It is much to be desired on many of the topics to be mentioned this evening that the experience of the clinical observer should be carefully collated with the facts ascertained in the laboratory, but in none is this more requisite than in respect of the maladies which go under the name of erysipelas. The streptococcus discovered by Fehleisen has been cultivated by many and used for inoculations repeatedly, not only on animals but on the human subject. That it is capable of producing an erysipelatous type of inflammatory action there can be no doubt. What its relation may be to the various forms of disease which the clinical observer recognises as erysipelatous is, however, a very difficult question. According to Fehleisen, the period of incubation is exceedingly short, often only a few hours, and this fits in with what is observed when in surgical practice contagion can be traced, and particularly with outbreaks of erysipelas in vaccination practice in which, the arm of the vaccinifer being inflamed, disease is conveyed to many infants at the same time, and in all shows signs of development within twenty-four hours. There does not appear to be any evidence that the incubation period of inoculated erysipelas is ever protracted; far less that there is ever any stage which could be considered one of latency. The numerous instances of erysipelas after vaccination which reveal themselves on the ninth day or later are to be referred to exciting causes other than poisoning at the date of the operation, and in support of this it may be stated that they are usually isolated. The facts which suggest the belief that the erysipelas microbe may assume latency belong, not to its original introduction, but to what happens to the patient long after the first attack. Some of these are strongly suggestive of the belief that this virus, once admitted, comes to stay. It would appear that in some cases those who have had erysipelas once are liable to it ever after. So long as their tissues are exempt from injury they are free, but at any time an abrasion, an operation wound, or even possibly exposure to heat, cold, or chemical irritants may bring on an attack. Thus it may develop after a carefully conducted operation, and beneath complete antiseptic dressings. It is difficult to believe that in all the cases of this kind which have been observed fresh contagion had occurred. The creed that they are rather instances of the survival of latent germs derives support from another and yet more numerous group of facts. In elephantiasis the first attack of œdema is often ascribed to erysipelas from some slight injury, and unquestionably the patient continues ever after liable to recurring brief febrile attacks attended by all the local phenomena of a mild erysipelas. The same statements are true of not infrequent cases of recurring inflammation of the face which result in solid œdema. Some doubt will possibly be felt as to the suitability of discussing the natural history of such a disease as ringworm in company with diseases so different as are most of the others on our list. It is possible, however, that although the fungus here concerned is of a higher class and of very different development, yet the laws concerning its growth and possible latency may not be wholly dissimilar. Most dermatologists, I think, now hold that alopecia areata is in all probability, in at least some of its forms, a cryptogamic disease and a close congener of true ringworm. Now it is well known respecting this latter that the hair may grow again and fall again at long intervals, the cause of its falling having apparently a tendency to submit to conditions of absolute quiescence. Other observers go so far as to believe that alopecia is a result of ringworm, and that it usually begins after many years during which the parasite has been wholly latent. Although these are for the present little better than mere conjectures, yet they supply, I think, in relation to other parts of our subject, material for instructive comparison. Nor is it without probability that were we to pass on from ringworm to the fungal parasites which attack other vegetables and dead animal matter, we might learn other important lessons as to the modes of life of this class of plants. It would not, I believe, be at all difficult to show that under many circumstances it is customary for them to pass into conditions of quiet and inactive existence which may be very prolonged. I must not, however, venture on this theme, nor must I occupy any more of your time. It is proposed that at the end of this meeting the discussion shall be adjourned, and that it shall be concluded at our next. This evening we hope to take all the introductory papers which have been announced, and if this is accomplished, on the second evening the debate will be in the hands of the Fellows. It will be

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considered that all the subjects mentioned in the programme are open for consideration and comment.

Dr. WASHBOURN said that two points in the life history of bacteria were of interest in connexion with latency. The mode of growth of certain bacteria in broth was analogous to the varying incubation period in specific diseases; under favourable conditions growth occurred at once and rapidly reached its maximum, but with the reverse conditions the growth was deferred. The next point was in reference to the resistant forms assumed by bacteria under unfavourable conditions. Spores were well-known examples, but even sporeless bacteria were capable of producing resistant forms. As an example he quoted the pneumococcus. Probably bacteria when latent in the body existed in this phase of their development. He believed some of the clubbed shapes assumed by the diphtheria bacillus represented resistant forms. The pathogenic bacteria protected themselves against the bactericidal influences of the body by means of their toxines. Saprophytic bacteria were devoid of this means of defence, and were easily destroyed when introduced into the body. The experiments of Wyssokowitch were quoted. Saprophytic bacteria injected into the veins of animals at once disappeared from the blood and accumulated in the organs, and in twenty-four hours were completely destroyed. The resistant spores of the hay bacillus, however, remained alive in the organs as long as seventy-eight days after inoculation. The difference between "toxic" and "septic" diseases was described. In toxic diseases the chief aim of the body was to protect itself against the action of the toxines, while in septic diseases the object was to destroy or hinder the growth of the bacteria. Both factors were present in all cases of immunity whether natural or acquired, but either may be the principal mode of defence in either type of disease. The tissues of the fowl were poison-proof to the tetanus toxine, and hence the bacilli were destroyed like saprophytes. In animals immunised to diphtheria and tetanus the antitoxic substances developed in the fluids of the body annulled the effects of the toxines, but had no influence over the growth of the bacteria. It was for this reason that diphtheria bacilli could remain latent in the throats of healthy individuals without producing harm. The body was poison-proof, but the bactericidal properties were not sufficient to destroy the bacteria. Sometimes, especially in animals immunised to septic diseases, the bactericidal properties were much increased without a corresponding increase in the antitoxic properties. He quoted the example of hog cholera. Pathogenic bacteria when introduced into the tissues of immune animals were sometimes rapidly destroyed, the pneumococcus in forty-eight to sixty hours in the experiments of Emmerich. But as a rule destruction was more tardy. A number of instances were given. Trapeznikoff found living anthrax spores in the tissues of a frog 100 days after inoculation, and Welch found living typhoid fever bacilli in the gall-bladder of a rabbit four months after intravenous inoculation. Latent bacteria were either englobed in cells or prevented by a barrier of cells from gaining access to the rest of the body. An attempt to shut off the bacteria from the circulation was made even in the case of highly susceptible animals, as in the experiments of Werigo. In relapsing fever the spirilla were shut up in the cells of the spleen during the apyrexial stage. The reason why latent bacteria were often missed by microscopical examination might be because they were converted into forms which were not easily recognised. The transformation of cholera vibrios into oval-shaped bodies in Pfeiffer's experiments was quoted as an example. The return of activity of latent bacteria was discussed, and the investigations of Trapeznikoff and of Baumgarten mentioned; also the effect of tuberculin and mallein in awakening into activity latent tubercle and glanders. Dr. Washbourn mentioned his own experience with latent forms of rabbit septicæmia which were brought into activity by inoculation with other bacteria. The bacteriological evidence of latency of germs in the human body was then discussed and a number of examples given. Diphtheric bacilli, pneumococci, streptococci, gonococci, and tubercle bacilli had been found on the mucous membranes of healthy individuals without producing any ill-effect. Babes had reported a case of acute glanders probably contracted six years previously; and Schnitzler one in which the staphylococcus aureus had apparently remained latent in a bone focus thirty-five years. Some of the cases were possibly due to a reinfection, but this interpretation was excluded in cases where living typhoid fever bacilli had been found in osteomyelitic foci long after recovery from an attack of typhoid fever. Several instances were quoted, of which the most notable were those of Sultan and Burchke. In the one case six years, and in the other seven years, after an attack of typhoid fever living bacilli were found in bone abscesses.[1]

MEDICAL SOCIETY OF LONDON.

The Operative Treatment of Cleft Palate.—Distribution of Motor and Sensory Symptoms after Injury to the Roots of the Brachial Plexus.

AN ordinary meeting of this society took place on Nov. 25th, Sir JAMES CRICHTON BROWNE, President, being in the chair.

Mr. EDMUND OWEN read a paper upon the Operative Treatment of Cleft Palate, based upon five cases which he had operated on in private in the early summer of this year. One operation was on an infant aged eight months whose cleft implicated the back of the hard as well as the soft palate. The result was perfectly successful. He urged that the operation for cleft palate should be performed at the earliest available moment, so that the voice might be harmed as little as possible. Of one of the reported cases he showed a plaster cast as well as a water-colour drawing. The former demonstrated the fact that in front of the soft palate the cleft measured seven-eighths of an inch in width; the latter revealed through the cleft the presence of an enlarged pharyngeal tonsil, constituting the disease known as adenoids. This tonsil was cleared away before the palate was operated on, but there was a failure in securing union of the soft palate. All the other operations turned out successfully. (We propose to publish Mr. Owen's paper in full in a subsequent number of THE LANCET.)—Mr. J. H. MORGAN said that he cordially agreed as to the precautions of an antiseptic nature which it was advisable to take in cases of cleft palate, but the wound was of necessity so exposed to the atmosphere that an aseptic condition could not be maintained. He discussed the question of the age at which operation should be undertaken. Mr. Clutton's paper had prompted him to operate upon clefts of the soft palate at an earlier period than he had been hitherto accustomed to do. His experience of this early operation was confined to three cases, and, unlike Mr. Owen, he had not met with success. He was therefore still inclined to advise that in clefts of the soft palate the operation should be deferred until after the eighteenth or twenty-fourth month, because before this the child was usually weakly and could not easily absorb nourishment, which had to be administered by artificial means. Then the troubles associated with teething had to be taken into account. He preferred not to operate until the canine teeth had erupted, and he chose the period between this and the time of molar eruption. If this period were not chosen the surgeon should wait until after the molars were through. With careful instruction the bad habit of speech could be corrected after closure of the palate later in life, and he quoted a case which illustrated this. As to closing the hard palate, the operator must take his chance, selecting the first favourable period after the completion of the first dentition. Formerly the time chosen was between the sixth and seventh year, but now probably the average age was from three to three and a half years. It was remarkable how much more successful these operations were in private practice, the frequent breaking down of the wounds in the hospital being probably due to the germ-laden condition of the hospital air. The dry accretions of mucus on the pharyngeal wall would serve as resting-places for micro-organisms, and they should therefore be removed.—Mr. CLUTTON did not think that the time of closure should depend upon whether the hard or soft palate was affected, as it was easy to close both. The height of the palate should rule the question of early operation, for if the palate were high it would come together much more easily than a horizontal one. The thick palates united far better than the thin ones. He preferred to do the operation at about six months of age, and at any time after this up to the age of three. Nothing was gained by waiting after this, though he had operated at the age of twenty-six. The improvement in the voice would depend greatly upon the total antero-posterior length of the palate when closed. He advocated fishing gut and horsehair rather than silver wire

[1] The report of this interesting debate will be continued next week.

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for suture. A large amount of failure was due to want of relieving tension by free incision at the sides of both the hard and soft palates. He never opened the child's mouth until a week after the operation, and he always removed all the stitches, giving an anæsthetic for this purpose if the child was under the age of twelve months. He had seen the stitch-holes become larger if the sutures were left.—Mr. D'ARCY POWER asked what was the best operation to be done in very flat arches. He had adopted the method described by Mr. Davies-Colley, but with an unsatisfactory result. The private cases probably did better because the children were of better stamina.—Mr. DAVIES-COLLEY said that he operated much earlier than the age given by Mr. Morgan; he preferred operating at the age of fourteen months, using the flap method he described eighteen months ago. His further experience of this operation was that he got union of the hard palate readily, but it was not so favourable for the soft palate. He had never found any difficulty in drawing over a flap in the low-arch cases. Since he read his paper before the Royal Medical and Chirurgical Society he had operated on three cases aged between fourteen and seventeen months. He obtained in two complete union of the hard palate and considerable union of the soft. The third case was difficult, as the child had been operated on for harelip previously, and the mouth was very small; he unfortunately cut the base of the triangular flap, which afterwards melted away. He only used the ordinary operation for older children now. If the operation was done early the cleft was not only closed before the child began to talk, but deformity of the face, with wide separation of the cheek bones, was avoided.—Mr. ARBUTHNOT LANE said the important principle in operating in these cases was to have plenty of room, and for this reason the harelip should be left till after the palate had been closed. He had often split a united harelip to get more room. He had devised a gag which kept the mouth well open and gave a maximum of room.—Mr. WALSHAM said that he made a lateral incision, separated the inner periosteum rapidly with an aneurysm needle, and pared the edges last. He held that the ateral structures should be very freely divided until the palate hung perfectly flaccid. He made it a rule not to look into the mouth until the end of a week.—Mr. KELLOCK said that he had observed many such children both before and after operation. At the Hospital for Sick Children the patients were usually admitted five to seven days before operation in order to allow them to get accustomed to their surroundings. The accumulation of hard secretion on the back of the pharynx was favoured by mouth breathing. He related a case in which a cleft palate was associated with single kidney. The opposite organ was slightly hydronephrotic, and the child died after operation from suppression of urine. Children were worried by rectal feeding, and it was better if they could swallow to feed them by the mouth. The improvement in speech after operation was often very slow.—Mr. OWEN briefly replied.

Dr. BEEVOR described two cases of Injury to the Roots of the Brachial Plexus. In the first case a man aged twenty-five was caught by the right hand in the strap of a gas engine and thrown off his feet on to his back two years ago, and was paralysed directly after in all the muscles of his right arm, excepting the small muscles of the hand and the flexors of the thumb and fingers. When seen three months later he had also lost some power in the latissimus dorsi, serratus magnus, and pectoralis major, and had lost sensation along the outer surface of the arm and forearm, extending from the shoulder to the hand, and involving the thumb, including the thenar eminence and the posterior surface of the index finger and its metacarpal bone. In the other case a man aged forty was, last June, pitched off a cart on to his right shoulder and side of his head, and experienced violent pain. He lost power in the right upper limb in all the muscles except the small hand muscles and the flexors and extensors of the wrist, with anæsthesia along the outer surface of the limb, but less extensive than in the former case and not involving the index-finger. The lesion was considered to be in the cervical roots of the brachial plexus. The muscles affected, when compared with the lists of other authors, of the cervical roots were such as would be caused by a lesion of the fifth, sixth, and seventh cervical in the first case and of the fifth and sixth cervical in the second case, and these roots were considered to have been damaged. The prognosis was considered to be much better for lesions of the root than of the cord, so that treatment could be persevered with in the former, with a hope of recovery, even two years after the injury. The distribution of the muscles supplied by a root of the brachial plexus was considered to be of an anatomical and not a physiological nature.—The PRESIDENT remarked that if the centres for movements in the brain were grouped physiologically it was curious that in the cord and nerve roots the grouping should be anatomical.—Dr. BEEVOR replied that he admitted that the grouping in the spinal cord was physiological, but, in the light of the two cases narrated, he now believed that the arrangement in the nerve roots was an anatomical one.

CLINICAL SOCIETY OF LONDON.

Excision of Temporo-maxillary Articulation.—Rheumatoid Arthritis of Elbow-joints.—Meningocele.—Double Penis and Malformation of Genitals.—Charcot's Joint Disease.—Myositis Ossificans.—Deficient Tibiæ.—Ligature of Femoral Artery and Vein for Secondary Hæmorrhage.—Modified Incision for Removal of Vermiform Appendix.—Ligature of both External Iliac Arteries by Transperitoneal Method.—Premature Puberty.—Harelip and other Deformities.

AN ordinary meeting for the exhibition of clinical cases was held on Nov. 22nd, the President, Dr. BUZZARD, being in the chair.

Mr. ARBUTHNOT LANE showed photographs, taken before and after operation, of four children whose Temporo-maxillary Joints he had excised. The history of these cases had been previously related to the Society.

Mr. A. E. BARKER likewise showed a girl on whom he had performed Excision of the Temporo-maxillary Joint.

Dr. HARRY CAMPBELL showed a woman aged sixty-seven years who presented the lesions of Rheumatoid Arthritis limited to the Elbow-joints, though there was also grating in the wrists and temporo-maxillary joints. The affection began three years ago and was accompanied by much pain. The ends of the bones were much enlarged, and there was considerable swelling of the soft parts. He had aspirated the joints, but no fluid was discovered.

Dr. HINGSTON FOX showed a female infant aged twelve months who presented at the age of three months a small round Tumour in the centre of the Anterior Fontanelle, which the mother said had been noticed six weeks previously. The cranium was well formed, the circumference being 15⅝ in. There was no history of injury. The tumour had gradually increased in size, and measured 1¾ in. across and 1¼ in. in height. It did not pulsate and was irreducible. It did not vary with the respiratory movement. It was not tender or painful; in fact, the infant liked to have it handled. The cranium now measured 17½ in. The optic discs were normal. The child was intelligent, could walk a little, and had four teeth.

Mr. JOHN H. MORGAN showed an infant eighteen months old who presented the following Abnormalities of the External Genitals. On each side there was a large and well-formed mass of scrotal tissue containing well-formed testes, with spermatic cord and vas deferens. These were separated from each other at their upper extremity by two well-formed penes, which measured about three-quarters of an inch in length, the left being rather longer than the right. In each the frænum was absent, and the corona was but slightly marked. There was no urinary meatus in either. Each was attached to the ramus on either side, the pubic rami and symphysis being apparently normal. Below the root of these two organs was another prominent mass of tissue about three-quarters of an inch in length, consisting of a pouch of skin and subcutaneous tissue, in the centre of which was a firm and more fibrous body which was attached immediately below the two penes, lying midway between the two scrotal prominences, there being a deep sulcus on each side between it and these. Posteriorly to this finger-like process was a mass of skin and subcutaneous tissue covered by epithelium resembling that of skin except upon its posterior surface, where it was more like mucous membrane. This projected forward about half an inch and looked like a small mamma on which was a prominent bluish nipple. The left part of it was a small pedunculated body which stuck out like a small pea and was attached to the finger-like body. Below this, lying in the middle of the perineum and in front of the anus, was a prominent mass of mucous membrane measuring about one inch and a quarter from before backwards and three and three-quarter inches from

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side to side. This was very red and vascular, and protruded when the child cried. Along its right attachment was a slit about half an inch long which admitted a probe into a long narrow cavity passing vertically upwards for about two inches, in which the probe could not be moved laterally. This was evidently the mucous membrane of the bladder, as the urine drained from this surface when the child was at rest, and when it cried was driven in jets from the orifices of the ureters, which could then be seen. Behind this protruding mucous membrane lay the anus, which easily admitted the little finger, but no abnormality could be detected in the rectum. The child presented no other abnormality except that at the upper part of the lobule of each ear there was a small fibrous prominence. Nothing abnormal could be discovered on auscultation of the heart, but the limbs became much cyanosed when it cried.

The PRESIDENT showed a woman aged thirty-eight years with symptoms of Tabes Dorsalis. Twenty months ago the right foot became severely swollen without pain. The mobility of the tarsal joint was interfered with, and the joint evidently contained fluid. Six months ago the whole of the *left* lower extremity became enormously swollen after an unusual amount of exercise, again without any pain. At present the left knee was greatly enlarged. There was great laxity of the ligaments of the joint, permitting lateral movement. The interest of the case lay in the fact that it was probably a very early stage of Charcot's disease, no destructive changes having as yet made their appearance. It belonged to the class described by Charcot as benign.—Dr. SANSOM asked whether the President had met with many cases of Charcot's disease accompanied by great pain, and thus simulating rheumatoid arthritis.—The PRESIDENT replied that he could call to mind a few cases with a certain amount of pain, but never to any great extent.

Mr. OWEN PAGET showed a child five years of age without first phalanges to the great toes, the metacarpal bones articulating directly with the second phalanges. The thumbs were apparently normal. The pectorales were ossified at their insertion, the latissimus dorsi was also ossified along its outer border, there was a similar condition of the sterno-mastoid muscle on both sides, and of a lymphatic channel in the left axilla. On the right side there was a node fixed to one of the ribs and another on the forehead. There was no history of any like disease in the family and no direct history of any rheumatic or gouty affection.

Mr. CLUTTON showed a boy aged fifteen years who had no right tibia, the fibula being the only bone in the leg. The foot, which had only three toes, articulated at right angles with the fibula. There was unusual development of the condyles of the femur, which were usually pointed in the absence of the tibia. The patella was well formed. Both hands were bifid, the middle fingers appeared to be absent, and the metacarpal bones on each side of the cleft were fused together. The boy was able to separate the digits to an abnormal degree. Mr. Clutton also passed round a photograph of similar deformity in a boy who likewise had extra fingers. The other patient he showed was a girl aged eight whose feet were at right angles with the fibulæ. The patellæ were small. One foot had four and the other five toes. She could get about with great facility either by a sort of amble or by short jumps.

Mr. C. S. WALLACE showed a man aged twenty-nine who had fallen a distance of twenty feet on to some railings, one of the spikes penetrating the inner side of the thigh, where it made an extensive lacerated and contused wound. It did not injure the femur, but it compressed the artery and vein. The wound was cleansed, but a day or two later it became septic, and on the fifth day the artery gave way and was ligatured above and below. Soon after the vein gave way also and was tied. The man had made a perfect recovery.—Mr. MAKINS remarked that the cause of the secondary hæmorrhage was the septic condition of the wound.—Mr. THOMAS SMITH said that formerly such a limb would have been amputated owing to the fear of gangrene supervening upon ligature of both artery and vein.

Mr. BATTLE showed a patient aged eighteen years on whom he had operated for Relapsing Appendicitis. He had modified the usual incision in order to prevent the subsequent formation of a hernia, which was so frequent a sequel of this operation. He made the incision one inch and a half to the inside of the linea semilunaris, and divided the anterior layer of the sheath of the rectus. The rectus muscle was then drawn to the inner side, and the posterior layer of the sheath and transversalis fascia exposed and divided, the inner incision not corresponding precisely to the external. The peritoneum was then divided. He was able to get at the appendix very well through this incision, and the result appeared to him to justify the slightly longer time it took. The layers were sutured from behind forwards, and as the rectus was allowed to return to its place it was thus interposed between the internal and external wounds in the abdominal wall. This procedure seemed, he thought, to hold out better hope of avoiding subsequent hernia.—Mr. CLUTTON thought it did not much matter where the incision was made, provided it did not pass exclusively through fibrous structures. He had not ordered a belt in these cases for two years and had seen no hernia result. Another method employed was to split each muscular layer in the line of its fibres.—Mr. BARKER said the procedure was not new; moreover, though he had operated on quite a number of these cases and had carefully looked out for the subsequent hernia, he had never seen one. The great thing was to make the opening as small and as short as possible, making it through muscle. It was desirable to get at the appendix wherever situated by the most direct route.—Mr. BATTLE, in reply, said he had seen several instances of the subsequent formation of hernia after the usual operation, though the patients themselves might not have been aware of the fact.

Mr. MAKINS showed a man aged thirty-four who went to him three years ago with a large Ilio-femoral Aneurysm. As he could not be sure of room enough to ligature the external iliac artery he made his incision through the semilunar line, not exclusively through fibrous tissue, and managed to ligature the external iliac artery. The patient was up and about by the forty-seventh day. Within three months he went back complaining of pain in the groin on the opposite side, where there was a pulsating swelling not so large as the previous one. He (Mr. Makins) took it to be due to gummatous arteritis, and repeated the operation. This time the patient got well much more rapidly than on the first occasion, the collateral circulation being established more promptly. This he attributed to the ligature of the other external iliac artery having dilated the vessels to some extent. He mentioned that he had tied the epigastric artery because it led directly into the sac. The patient had worn a belt ever since and had no hernia, though he was a carpenter and worked hard.—Mr. THOMAS SMITH asked Mr. Makins whether, if he were free to choose between the two operations, he would deliberately choose the transperitoneal operation.—Mr. MAKINS said, in reply, the operation through the peritoneum was the easier of the two, but if he knew for certain that he could get at the artery without cutting through the peritoneum he would prefer to do so. His reason for operating thus, in the first instance, was that he could not be certain of being able to ligature the external iliac and might have been obliged to tie the common iliac. On the second occasion, as the patient had done well after the first operation, he thought it best to repeat the procedure.

Dr. HARRY CAMPBELL showed a lad fourteen years of age who had been under observation for upwards of ten years. When he was only fifteen months old his mother noticed that hair was beginning to grow upon the pubes and that the external genitals were abnormally large. At two years of age they were fully developed, and had not materially altered during the last ten years. He had at times manifested great sexual excitement. Between four and seven years of age he had frequent discharges of seminal fluid, but Dr. Campbell had never been able to satisfy himself of the presence of spermatozoa. His muscular development was remarkable; in fact, he had the muscles of a man aged twenty-five or thirty. He had been in the habit of getting shaved for the last few years. His education was defective because no school would ever take him in. He had had the gruff voice of a man since the age of two.

Mr. MORGAN showed a child aged three years and a half with well-marked Harelip and Cleft Palate, together with defective development of the left side of the face, and abnormal formation of the left external ear, of which the meatus was wanting. In addition, he presented a curious band of skin in the left trapezius region in which no muscle could be felt. On the opposite side the trapezius was hypertrophied, and there was a large mass of bone, probably representing a rotated cervical vertebra. Mr. Morgan had endeavoured to unite the palate, but had been obliged to desist owing to the hæmorrhage.

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BRITISH GYNÆCOLOGICAL SOCIETY.

Porro's Operation for Labour complicated by Uterine Fibroids.—Unusual Complications in Two Cases of Removal of the Ovaries and Fallopian Tubes.—Glycosuria complicating an Ovarian Tumour and Ovariotomy.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 14th, Dr. CLEMENT GODSON, President, being in the chair.

Dr. MUTCH (Nottingham) read for Dr. GEORGE ELDER (Nottingham), in his absence, a paper on a Case of Porro's Operation for Labour complicated by Uterine Fibroids. The patient was a primipara aged thirty-five years. The fibroid had not been observed till labour set in, when it was found occupying the pelvis; the uterus was jammed against and above the symphysis. An attempt to elevate the obstruction was quickly found to be useless. Porro's operation was therefore performed. The child was delivered alive. The stump of the uterus was secured in the usual extra-peritoneal fashion. The patient made a good recovery.—The PRESIDENT observed that of late Porro's operation had been heard of less often owing to the success which Cæsarean section had achieved. He believed he was the first to perform a successful Porro's operation in Great Britain, but still he would now perform Cæsarean section in preference if the case permitted.—Dr. HEYWOOD SMITH said that fibroids generally ceased to grow during pregnancy, becoming flattened and often atrophied.—Dr. LEITH NAPIER believed the reverse was the case, and that fibroids usually grew during pregnancy, sharing also in the subsequent involution.—Dr. MACNAUGHTON JONES said there were many cases on record of large fibroids continuing to grow but still remaining undiscovered up to a late stage of pregnancy. He had recorded such a case himself, in which the birth of triplets further complicated the labour.—Dr. CRICHTON (Twickenham) remembered a case in which he turned the child and then found a fibroid the size of a fist which had not been observed before. It apparently disappeared during involution; for in a subsequent pregnancy it could not be found.

Mr. SKENE KEITH read a paper on Unusual Complications in Two Cases of Removal of the Ovaries and Fallopian Tubes. The first case was one of a patient aged thirty-two years suffering from chronic disease of the appendages, which had greatly reacted on the general health. At the operation, when the right ovary had been freed from adhesions and removed, it was found that there was a distinctly localised irregular swelling, as large as a hen's egg, behind the head of the colon. His hope was that it was inflammatory, his fear that it was sarcomatous. In either case he did not think it right to interfere. Six months later there was no swelling to be felt on examination, but there was a little tenderness. This also had disappeared two months later. The second patient was aged thirty-five years. Three years ago, after an abortion, she had "inflammation in every organ of her body," as she expressed it. Pain in the right side caused her to walk as if lame; an unusual symptom was that as soon as she took food she invariably and instantly felt nauseated. The right-sided pain occupied two distinct areas, the one in the usual position of a pain caused by disease of the ovary, the other in that caused by disease of the appendix. At the operation the appendix, though healthy, was closely involved in a mass of adhesions round the enlarged ovary and tube of the right side. The feeling of nausea disappeared at once, and six months later the patient was in perfect health.

Dr. J. HALLIDAY CROOM read a paper on a case of Glycosuria complicating an Ovarian Tumour and Ovariotomy. It referred to a patient aged fifty-three years who had noticed an abdominal tumour for five months. Being excessively corpulent, the early growth was probably masked. When she presented herself at the ward of the Royal Infirmary, Edinburgh, her appearance was extraordinary. Her height was 5ft. 4½in., her weight without clothes over 17st., and the girth of the abdomen was 60 in. Her complexion was pale, lips cyanosed, and she had a distinct growth of hair on the upper lip and chin. The urine was not increased in quantity; its specific gravity was 1047, and it contained blood, a little albumin, and much sugar; the urea was normal or diminished. All other signs and symptoms of diabetes were absent. The case was regarded as one of glycosuria, probably caused by the tumour. Codeia and morphia had no effect on the amount of sugar, and as the growth was increasing and dyspnœa urgent, laparotomy was performed. There was found a colloid tumour implicating each ovary; the two together weighed 56½ lb. The sugar remained practically unaltered after the operation for eleven days. At the end of this time a course of morphia was resumed, which had an immediate effect in reducing the sugar. After ten days the morphia was stopped and the diet rigidly restricted. For a fortnight no difference in the sugar was observed; then there was a rapid diminution. Ten days later she was sent home, the urine containing a mere trace of sugar. Two months later a specimen was examined and found to be quite free from sugar. The paper concluded with a discussion of the etiology of the glycosuria.—Dr. MACNAUGHTON JONES reviewed the possible causes of the presence of sugar, whether in ovarian tumour or pregnancy, and after ovariotomy or labour. He considered pressure on the portal vein a likely cause. The interference with the hepatic circulation in the one case, and sudden release of pressure in the other, might cause glycosuria. He thought the hepatic a more likely explanation than the pancreatic, though both might coexist.—Dr. LEITH NAPIER thought the paper most valuable and suggestive. Briefly, there were were two classes of causes of glycosuria, the mechanical and the nervous; disturbances in these factors caused variations of metabolism. Morphia and its allies answered well in diabetes, but in glycosuria the group of the bromides was much more efficacious.

Mr. SKENE KEITH showed a very large Ovarian Tumour, successfully removed. It weighed over 100 lb., and was one of the largest that had been successfully removed. The patient was fifty-five years of age. The tumour was first noticed eleven years ago; for some time it so resembled a fibroid that it was diagnosed as such by seven different physicians in London at different times, and operation was not advised. Lately it had grown much, and Mr. Keith saw the patient. The cystic character was then plain. Owing to the enfeebled general condition and cardiac irregularity, he first tapped the cyst, removing 75 lb. weight of fluid; and ovariotomy was performed some days later. There were hairs in the cyst, and the second ovary was the seat of a dermoid. For a week the patient's condition was so bad as to require digitalin in $\frac{1}{70}$ gr. doses every two hours for the whole of that time. It was now six weeks since the operation, and the patient was doing well.—The PRESIDENT, Dr. LEITH NAPIER, and Mr. GEORGE KEITH addressed the meeting.

Dr. HEYWOOD SMITH showed a specimen of Ectopic Gestation at four months. The patient, aged thirty-eight, had had four children, the youngest six and a half years previously. This illness came on with the characters of a miscarriage; and when Dr. Heywood Smith saw her there was a tumour nearly filling the pelvis. On abdominal section it turned out to be an extra-uterine gestation.—Dr. T. W. EDEN, who had examined the specimen, reported that the placenta was enormously enlarged by hæmorrhage into its substance, and that the fœtus was of a development corresponding to the beginning of the fourth month. There was a curious adhesion of the head of the fœtus to the amnion.

Dr. LEITH NAPIER showed a Uterus removed by Vaginal Hysterectomy for Menopastic Endometritis becoming Sarcomatous.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A National System of Registration of Sickness.

A MEETING of this society was held on Nov. 21st, Mr. VACHER, President, being in the chair.

Dr. NEWSHOLME opened a discussion on a National System of Registration of Sickness by observing that it was through the impulse it had given to the provision of hospitals, disinfecting stations, &c., that the notification of infectious diseases had been most useful, for the mere tabulation of cases was of no possible service, and to compare the mortality from such diseases in a town before and after the adoption of the Act, or, as Mr. Biddle did, in towns in which it was in operation with those in which it was not, without taking all other differing conditions into account, was most misleading; whilst such short periods of observation as four years might easily be made to

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include two epidemic years in one term, and to exclude such recurring prevalence from another. It was only by notification of every case that that knowledge of the causes of a disease is acquired which must precede measures for its prevention, and there were preventable diseases other than the infectious. Of these the most important was tuberculosis, the extinction of which would effect a greater reduction in the death-rate than would that of several infectious diseases put together, and which might be banished as completely as leprosy had been. Acute rheumatism, pneumonia, and others appeared from their greater frequency in some localities and in certain occupations to be more or less preventable. Industrial diseases—as anthrax, arsenic, lead, and other poisonings—should be notified, but always to the medical officer of health in the first instance, and not, as enjoined by Section 29 of the Factory Act of 1895, to the chief inspector of factories only; the preliminary inquiry implied in the wording of the clause as to whether the disease was, or was not, caused by the conditions of the trade or factory should devolve on the medical officer of health and not on the practitioner attending the operatives. Compulsory notification of a number of diseases deemed preventable though not all communicable, either immediately or periodically according to their nature, had for some years worked very successfully in Germany and Scandinavia. The Statistical Yearbook of the city of Berlin was a mine of information with which our Registrar-General's reports would not bear comparison, though as regards infectious diseases only, those of the Metropolitan Asylums Board were excellent. But in England it was impossible to obtain any extension of the system unless immediate benefits could be assured on account of the additional expenditure, and gratuitous notification would be resisted by the medical profession unless they could obtain in exchange the legal protection against irregular practitioners enjoyed by their Continental brethren. Returns might, however, be at once requisitioned with little cost or trouble from all Poor-law surgeons, from asylums, prisons, workhouses, schools, hospitals, and dispensaries, the police, and other public services maintained wholly or in part by imperial or local taxation or by voluntary subscriptions, as well as from friendly and benefit societies, the numbers and ages of members or inmates being also furnished as a basis. Medical officers of health, if they would not be regarded as merely a higher grade of sanitary inspector, must convince the public that their functions and usefulness are not confined to sanitation and infectious diseases.

The PRESIDENT reviewed the history and legislative aspect of notification, and gave some of his experience in the North of England.

Dr. WOODFORDE, Mr. LOVETT, and Dr. YARROW attached little value to the diagnoses of parish and club medical officers, or rather of their unqualified assistants, and Dr. Yarrow deprecated the practice among a certain class of duplicate notification, which he thought might be discouraged by the payment of 1*s.* or 6*d.* for notifications after the first. His objection to the notification of erysipelas was that simple erythemas and swollen faces were described as such, an abuse that might be checked by making them liable to removal to hospital.

Dr. O. FIELD did not think club statistics more untrustworthy than those of diphtheria, and believed that in both errors corrected themselves in the mass.

Dr. SYKES held this view as to the doctrine of averages in respect of diphtheria, the unrecognised cases being probably quite as numerous as those erroneously reported, but adduced the authority of Mr. Neison and Sir E. Chadwick on the fallaciousness of club statistics. He insisted on the importance of a practical recognition of the difference between those preventable diseases, whether communicable or not, which were dangerous or benign, and of frequent or rare occurrence. Measles, for example, was an almost trivial disease, but caused more deaths than the invariably fatal hydrophobia and glanders. The immediate benefits to be derived from the notification of arsenical and lead poisoning would render its adoption easy. He considered that in Germany statistics were pushed to an extent which in this country would be neither desirable nor practicable.

Dr. LEGG defended the accuracy and utility of German statistics, and described the systems of notification in force in several Continental countries.

Dr. WILLOUGHBY expressed his entire agreement with all that Dr. Newsholme had urged, especially as to the importance and preventability of tuberculosis, but would call his attention to the difficulties arising from the inevitable repeated notification of chronic diseases in which it would be impossible to prove the identity of the individual. A tuberculous patient would be attended successively by a private practitioner and at several hospitals or dispensaries in London and then perhaps sent to the seaside, when the same repetition would be continued. Then at many institutions letters were renewable every month, and each was entered in the report as a fresh case. The prevalence of such a disease would be enormously exaggerated, and the death-rate or case mortality proportionately under-estimated.

Dr. NEWSHOLME, in his reply, admitted the difficulty, but confessed himself quite unable to suggest such a remedy as would render the returns available for statistical purposes.

SOCIETY OF ANÆSTHETISTS.

President's Address.—Strychnia Poisoning by Hypodermic Injection.

A MEETING of this society was held on Nov. 21st, Dr. GEORGE HEWLETT BAILEY, President, being in the chair.

The PRESIDENT delivered his introductory address, in which he commented upon the large number of chloroform fatalities reported in the journals during the present year. He suggested that the meetings of the society should be occupied more in the discussion of clinical cases, and trusted that thereby the society might gather valuable information tending to diminish the present alarming mortality from chloroform administration.

Mr. RICKARD W. LLOYD, in introducing Notes on a Case of Strychnia Poisoning by Hypodermic Injection in which he administered chloroform for upwards of six hours, quoted from the address of Professor Horatio C. Wood on Anæsthesia at the International Medical Congress, Berlin, 1890: "For many years chloroform has been used in practical medicine as the physiological and practical antagonist to strychnia, and it seems rather odd that strychnine should not have been employed as the practical antagonist to chloroform." Professor Wood said also that strychnia had a marked influence in increasing respiration and some effect upon the circulation. To anæsthetists great importance attaches to the influence of chloroform in strychnia poisoning, and *vice versâ*. The hypodermic injections of strychnia were administered in medicinal doses every four hours during a period of fifty-two hours as part of the treatment of a patient aged thirty-six suffering from puerperal septicæmia. Three and a quarter hours after the last injection, and shortly before another became due, the patient complained of a little difficulty in opening the mouth, with a peculiar feeling in the head not unlike impending faintness. Bromide of potassium was given at intervals, but ten hours after the last injection the symptoms became so severe, with opisthotonos, terrified expression, impaired respiration, dilated pupils, rapid pulse, and convulsive spasms, that the administration of chloroform was commenced and continued for two hours. After one hour's interval the chloroform had to be recommenced on account of the recurrence of severe symptoms, and continued for another two hours, and subsequently was administered for shorter periods—in all for six hours and seven minutes during the space of nine hours and five minutes. Nine and a half ounces of chloroform were used. The chloroform was sparingly administered upon lint held about four inches from the face, and it was remarkable how little was necessary to keep off the spasms. There was no vomiting. The patient recovered from the strychnia very soon, and ultimately from the septicæmia. Several recorded cases of strychnia poisoning treated by administration of chloroform were referred to. The difficulty or inability to swallow and the promptness with which rectal injections are expelled in cases of strychnia poisoning render medication by hypodermic injection and inhalation of vapour especially valuable methods of treatment; and, therefore, when the strychnia has been swallowed apomorphia by hypodermic injection is a most suitable emetic, and chloroform by inhalation another most applicable antidote when the spasms are severe. Having no experience of the effect of strychnia in chloroform poisoning he could only surmise that it would not be proportionately of inverse value.—Mr. JOSEPH WHITE referred to the great benefit which frequently attended the prolonged administration of chloroform in tetanus, and alluded to a number of cases of traumatic tetanus in which the use of chloroform during the more acute spasms, and extending at intervals over

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many hours, had proved of the greatest advantage.—Dr. SILK thought that Mr. Lloyd's paper was of great value to anæsthetists as raising the whole question of the use of strychnia in cases of exhaustion or "shock" under anæsthetics. Dr. Silk had no experience of the antidotal action of chloroform in cases of strychnia poisoning; but with regard to the value of strychnia in the conditions of "shock" to which he had already alluded he had a very high opinion. He had employed hypodermic injections of strychnia in this condition with increasing frequency since Professor Wood of Philadelphia had drawn attention to its action at the Berlin Congress, and of late had been in the habit of injecting one-sixtieth of a grain hypodermically immediately after anæsthesia had been induced in cases in which there was reason to anticipate any serious degree of exhaustion from whatever cause, repeating the dose if need be towards the end of the operation. Dr. Silk had seen no cumulative effects following this use of the drug, but in the face of Mr. Lloyd's experience this was obviously a possibility to be borne in mind. From some few cases which had come under his notice Dr. Silk was further inclined to think that the drug was of value in preventing after-sickness, but he should not like to speak with certainty upon this point, although Mr. Lloyd's case rather supported the view.

Dr. DUDLEY BUXTON regarded the right time to use strychnine as an antagonist to chloroform to be just before the administration of the anæsthetic was commenced. If used when dangerous symptoms had occurred it was of less value, probably because it was imperfectly absorbed. The best method of its exhibition was by hypodermic injection.—Mr. EASTES recalled to mind a case where prolonged inhalation of chloroform had produced bronchitis.—Mr. TYRRELL said it would be interesting to know what dose of strychnine was given, and whether it was given every four hours night as well as day.

PLYMOUTH MEDICAL SOCIETY.

Cerebral Irritation.—Exhibition of Cases and Specimens.

AT a meeting of this society, held on Nov. 13th, Mr. SQUARE, President, being in the chair, the following cases and specimens were shown:—

Mr. J. R. ROLSTON showed a child eighteen months old with a Hard Primary Sore on the Right Upper Eyelid, Enlarged and Hard Parotid Lymph Glands, and Mottled Rash on Front of Trunk. No history could be given.

Mr. C. E. RUSSEL RENDLE exhibited (1) a woman aged fifty years from whose Left Auricle he had removed a Cirsoid Aneurysm of the Lobule which commenced to grow after the latter had been "pierced" for earrings; (2) a man aged fifty-six years with old Subcoracoid Dislocation of the Right Humerus for which no cause was assigned; suppuration in the subacromial bursa first brought this patient under treatment, and the abscess had been opened and drained seven months previously; owing to the man's age and brittle arteries any attempt at reduction was deprecated; and (3) a boy with Specific Keratitis of Right, and Choroiditis of Left, Eye.

Mr. WOOLLCOMBE (for Mr. SWAIN) showed two examples of Charcot's Joint Disease. 1. A man aged forty-three years in whom lightning and girdle pain had commenced four years previously and ataxic symptoms for the last two years; thirteen months ago the right knee enlarged painlessly, sexual desire was lost, and some difficulty of micturition occurred. For nine months he had worn a poroplastic splint, fitted after tapping and compression of joint by a rubber bandage. For ten weeks he was kept on arsenic, strychnia, and belladonna. There was no history of syphilis or alcoholic excess. Ataxic symptoms had been in abeyance for the past nine months. 2. A man aged forty-six years whose right knee began to swell three months and a half ago, when ataxia developed; he had had lightning pains for two years in both legs and in the left biceps, and was never free from them for long. The leg below the affected knee also swells, and a few inches above the adductor tubercle there is a hard, elongated periosteal node.

Mr. WEBBER exhibited a young woman aged twenty-five who, when nine years old, began to lose her finger-nails, this being preceded by swelling and tenderness of the finger-tips; she was healthy-looking, well-grown, and without any signs of organic disease. The nails least atrophied are those of each ring-finger; those of each great and second toes are small, brown, and thickened; the nail and matrix of the third fingers are absent; the hands are cold, and on the fingers there are scattered papules like chilblains. Treatment now consists of the administration of 10 gr. of thyroid substance daily.

Mr. C. E. RUSSEL RENDLE showed Splints made by the skipper of a Danish schooner for Fractured Femur and Humerus in one of his crew. The fractures were kept up three days before the patient's admission into hospital, and have since done excellently.

Mr. ELLIOT SQUARE demonstrated the results of Needling Zonular Cataract in a Young Boy.

Mr. WOOLLCOMBE showed—(1) Portions of a Fibroid Tumour of the Anterior Lip of the Cervix removed per vaginam by "morcellement"; the mass filled the vagina, causing retention of urine and œdema of the extremities, but there had been no menorrhagia or metrorrhagia; and (2) Fallopian Tubes removed on the day of the meeting from a woman aged thirty-eight; for eight weeks the abdomen had enlarged, and for the past two weeks the evening temperature had ranged from 101° to 103° F. The intestines were found matted together and studded with miliary tubercle; the fimbriated ends of both tubes were glued to the back of the uterus, and their ostia were filled with caseous points.

Dr. FOX read notes of the case of a boy aged seventeen years who was admitted under Dr. Clay's care with symptoms of Cerebral Irritation. Death took place eight days after the onset of the illness, and post mortem all the ventricles were found to be distended with blood-clot accompanied by hæmorrhage into the upper end of the spinal cord.

Dr. FOX also demonstrated a Large Glioma at the Base of a Brain removed from a young man aged nineteen years.

Mr. LUCY exhibited one of two Calculi, weighing over an ounce, removed from the bladder of a man aged sixty-three who three years before had had prostatectomy performed and three-fourths of an ounce of gland tissue removed, with excellent effect, which lasted for two and a half years, when the wound reopened and discharged urine, death taking place twelve days after removal of the calculi; the ureters were found to be enormously dilated, with a "date-stone" calculus blocking the lower end of the right ureter; the kidneys were shrunken, with commencing cavities in the pyramids. No return of the prostatic overgrowth had taken place

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Notes on a Paris Hospital Visit.

THE second ordinary meeting of this society was held on Nov. 20th, at the Medical Institute, Birmingham, Dr. T. EDGAR UNDERHILL, the President, being in the chair.

Mr. J. T. J. MORRISON showed a specimen of Exostosis of unusual size, which he had removed from the lower end of the left femur. The patient was a man aged twenty-two who had been aware of the swelling for sixteen years. It had not interfered with locomotion or caused any pain, but it had led to his rejection as a candidate for the police force. Mr. Morrison briefly discussed the etiology of cancellous exostoses springing from epiphysial cartilage, and remarked on the advantage of operating by the bloodless method and of dressing the wound without drainage before removing the Esmarch tube. In the present case the bony pedicles had been chiselled through. The deep wound had healed in a few days by first intention, and the patient is now active on police duty.

Dr. LESLIE PHILLIPS showed: 1. A case of Lymphangioma Circumscriptum Cutis in a girl aged seventeen years. The patch is situated over the right scapula and was stated to have been of six months' duration. It is the size of a small hand, fawn or straw-coloured, and consisted of aggregated, raised, flattened, resisting vesicles almost verrucous in character. Over much of the eruption vascular tufts are seen, giving it an ecchymosed appearance in places. The vesicles when punctured exude lymph. There are no subjective symptoms. The patient has red hair, and the angles of the mouth are scarred. The exhibitor expressed doubt as to the reliability of the reputed duration of the disorder. As the eruption was out of sight and did not give rise to inconvenience it is probable that its onset was not accurately observed. 2. A man with Lichen Ruber Planus of three

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months' duration; it is notable that it began acutely as an eruption indistinguishable from patchy erythemato-squamous eczema—a character which still persists in some of the lesions.

Dr. MALINS showed a large Cystic Ovarian Tumour the chief peculiarity of which was two broad pedicles. The ovaries were firmly united, probably from pelvic pressure in early growth. They had increased rapidly in size, one large cyst reaching up to the liver on the right side. The patient was single, aged thirty-six, and was in good health up to June. A week before admission to hospital she had been tapped, eighty ounces of fluid of sp. gr. 1019 being evacuated from the cyst on the right side. The pedicles were tied in several divisions with prepared silk; recovery was without incident.

Mr. HEATON showed for Mr. LAW WEBB a Dermoid Ovarian Cyst removed from a woman aged forty. The cyst when removed contained the usual pultaceous fatty material found in such cysts. Attached to the cyst wall at one point was a portion of a jaw having four well-formed teeth firmly fixed in it. They resembled the incisor and præmolar teeth of a child six years old. From another point in the cyst wall there grew a tuft of fine silky hair some four or six inches in length.

Mr. PROSSER showed a patient with a Purpuric Eruption covering the entire body.

Mr. GAMGEE showed a specimen of Ruptured Tubal Pregnancy. The patient, aged thirty-nine, has had five children born alive and one miscarriage, the latter seven months ago. Since then she menstruated regularly every five weeks; she lost some blood on Sept. 18th, this being the time when she expected to menstruate. On Sept. 19th she had some abdominal pain, and on Sept. 22nd felt sudden violent abdominal pain, vomited, and became collapsed. Laparotomy was performed twelve hours after onset of the symptoms. The pelvis and lower part of abdomen were full of blood. Left tubal pregnancy, which had ruptured, was found. The broad ligament was ligatured with silk, and the tube removed. The abdomen was cleaned by sponging. Following the operation the patient had a severe attack of bronchitis, but had no abdominal symptoms, and was discharged recovered on Oct. 24th.

Mr. WM. THOMAS read a paper entitled "Notes on a Paris Hospital Visit." The hospitals visited were the Hôtel-Dieu, Laennec, and one of the hospitals for sick children. He described the wards, and contrasted them somewhat unfavourably with those of English hospitals. He spoke with approval of the system of "consultations" instead of out-patient practice, and described several operations which he saw performed, noting some points which might give rise to discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Cancer of the Bowel.—Ovariotomy.—The Treatment of Heart Disease.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 21st, the President, Dr. PORTER, being in the chair.

Mr. SNELL introduced a woman aged sixty-one years with a Malignant Tumour, probably epitheliomatous, involving the outer half of the left upper eyelid. It appeared to have commenced two years previously.

Dr. T. H. MORTON read the notes of an obscure and doubtful case of Cancer of the Bowel. There was a slimy bloody discharge in which spheroidal cells were revealed by microscopical examination.—Dr. MORTON also exhibited Bones which he readily and successfully amputated by his Serrated Pliers.

Dr. CLAPHAM showed a large Ulcer of the Stomach adherent to the Pancreas and Liver. Two months before death what was equivalent to a perforation occurred, and the resulting inflammation was indicated by fine connective tissue adhesions all over the under surface of the liver and a milky coating on the transverse colon. Death was caused by hæmorrhage. An open artery of considerable calibre was conspicuous on the base of the ulcer.

Dr. BURGESS showed a Tumour of the Left Optic Thalamus. There was paralysis of the right side of the face and right arm, but not of the right leg, and there was no hemianæsthesia.

Dr. CUFF demonstrated Microscopic Specimens.

Dr. KEELING gave the details of a case of Ovariotomy for removal of a Suppurating Fibroid Tumour of the Ovary. In separating adhesions the small intestine was wounded in two places, and after the operation partial paralysis of the right arm and hand and of the left leg was found to have occurred. In spite of these mishaps rapid recovery took place. The tumour appeared from microscopical examination by Dr. Wilkinson to be simply fibrous with a rugged cavity at the top from which a pint and a half of pus were removed at the operation.

Dr. HUNT read a paper on the Treatment of Heart Disease. He related cases in which he had used baths to strengthen the heart and reduce its velocity. Though his own experience did not warrant him in coming to any very definite conclusion, he was persuaded that a bath colder than the temperature of the body strengthened and slowed the pulse. The good effects of rest and certain cardiac tonics were briefly referred to. In conclusion, Dr. Hunt drew attention to the excellent results he had obtained in cases of high arterial tension by the use of nitrites.—The PRESIDENT, Mr. PYE-SMITH, Mr. ARTHUR JACKSON, Dr. SAMSON MATHEWS, Mr. KNIGHT, Mr. MAKEIG JONES, and Mr. RICHARD PAGE took part in the discussion.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Enterotomy and Enterectomy.—Exhibition of Specimen.

A MEETING of this society was held on Nov. 20th, Dr. MUTCH, President, being in the chair.

Mr. CHICKEN read a paper entitled "Enterotomy and Enterectomy." With reference to abdominal incisions he advocated making them as far as possible through muscular substance, as the usual incision in the linea alba left a weak scar which conduced to ventral hernia. The first step in looking for the site of intestinal mischief should be to examine the cæcal region; if no local inflammatory mischief were found there, the state of distension or otherwise of the cæcum was a guide as to whether the obstruction was below or above that viscus. The best method of finding the colon when the operation of colotomy was being performed was discussed, and the necessity of leaving a good "spur" insisted on. In uniting divided bowel he preferred to use Murphy's button to tedious suturing. The whole rectum as high as the promontory of the sacrum might be excised with facility by means of Cripps' method. It was important to operate early in cases of cancer before the surrounding tissues were infiltrated. The treatment applicable to rectal prolapse and occlusion respectively was also discussed.—Dr. MICHIE thought if pain was localised near the umbilicus or somewhat higher it indicated obstruction of small intestine, while fixed pain elsewhere indicated obstruction of the large intestine and its seat.—Mr. GRAY, Dr. HUNTER, and Mr. ANDERSON also discussed the subject.

Dr. MICHIE showed a portion of Large Intestine affected by a Carcinoma, which he had excised from a patient who had had complete obstruction for twelve days.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Exhibition of Specimens.

A MEETING of this society was held on Nov. 13th, Dr. HUTTON, President, being in the chair.

The PRESIDENT showed the Heart from a case of Congenital Heart Disease in a child six months old. The malformations consisted of: (1) patency of the foramen ovale and ductus arteriosus; (2) incomplete formation of the septum between the ventricles; (3) dilatation of the aorta from which vessel it was probable the pulmonary artery arose; and (4) thickening and small vegetations about the tricuspid orifice (fœtal endocarditis).—The PRESIDENT also showed the Brain and Microscopic Sections from a case of Glioma of the Right Side of the Pons (pressing on the medulla) occurring in a girl four years of age. The symptoms had been observed for only eleven weeks, and consisted of right internal strabismus, optic neuritis (latent), loss of power of coördination, and slight paralysis of the limbs.

Mr. EDWARD ROBERTS and Dr. J. GRAY CLARKE showed a Tumour removed from the Orbit of a girl aged [illegible] years. The tumour, of the size of a [illegible]

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under the inner angle of the orbit, was enclosed in a firm capsule, and was easily removed. Its structure was that of a spindle-celled sarcoma, with large lymph spaces running through it.

Dr. WILLIAMSOM showed for Dr. DRESCHFELD preparations from a case of Acromegaly, and also exhibited a patient suffering from the disease.

Dr. KELYNACK showed specimens from a case of Intestinal Obstruction due to Distension of a Cancerous Gall-bladder.

Reviews and Notices of Books.

Skiascopy and its Practical Application to the Study of Refraction. By EDUARD JACKSON, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic. With twenty-six Illustrations. Philadelphia: The Edwards and Docker Company. 1895. Pp. 112.

THE author claims for this method of examination, which is familiar to most ophthalmic surgeons, that it is independent of the patient's coöperation, and that it is accurate, quickly completed, simple, and opens a path for further investigation of the refraction of the eye. To study the test, he remarks, one should as far as possible start with known conditions of refraction, with lenses of known strength, with the eye at a known distance, and should observe the character of the movements of light and shadow in the pupil which belong to these known conditions. After discussing the best term to be applied to this test, Dr. Jackson gives the reasons which have induced him to prefer that of skiascopy, which he defines as a method of measuring myopia—either the myopia originally present in the eye or that produced by a lens of known strength for the purpose of measurement. He recommends the student to familiarise himself with the appearances presented by an artificial eye such as that devised by Mr. Frost, and to use a plane mirror for reflecting the light. He points out that in emmetropia and hypermetropia with the plane mirror the image of the fundus is "erect" from whatever distance the eye is viewed, because the rays emerging from the eye are either parallel or divergent; whilst in myopia the emerging rays, being convergent, are focussed at some point in front of the eye corresponding to the degree of myopia—corresponding, in fact, to the far point of such an eye. This point he terms the point of reversal, beyond which the image is inverted. "The distance of the point of reversal from the eye being the distance from the eye to its far point is the focal distance of the lens required to correct the myopia. So that to ascertain the amount of myopia we have only to determine the point of reversal and then measure its distance from the eye." He shows by easily understood diagrams why with the plane mirror the real movement of light on the retina is with the mirror—i.e., with the area of light on the face generally in all states of refraction, and this is true for all distances of the light from the mirror, or of the light and mirror from the tested eye. With the concave mirror, on the other hand, the real movement of the area of light on the retina is against the mirror and against the light on the face in all states of refraction. "If, however," he goes on to say, "the original source of light be brought so close to the mirror that the rays from it are not rendered convergent, but continue to diverge after reflection, the immediate source of light will be a magnified image of the lamp flame situated behind the mirror, as in the case of the plane mirror; and the movement of the retinal light area will be precisely the same as with the plane mirror." Dr. Jackson dwells on the importance of securing the conditions of accuracy in the application of the skiascopy test, such as thorough darkening of the room and the use of a paraffin candle, the incandescent electric light being inapplicable except it be placed behind a piece of ground glass. Next to the candle he finds the heavy mineral oils to be the best illuminant, then gas flames reinforced with the richer hydrocarbons or used on the Welsbach mantle, and after these the ordinary gas flame. The position of the light and its proper focussing on the retina according to whether a plane or a concave mirror is used, as well as the distance of the surgeon from the patient, are also points of importance that require attention and are fully and satisfactorily discussed. Various instruments are described, and the author's practice is to employ in the great majority of cases atropine, believing it to be requisite to secure precision, in which opinion we fully coincide with him. The work as a whole is very creditable, and the practitioner who takes the trouble to master its contents will know all that can be said of this very excellent, speedy, and satisfactory mode of determining the nature and degree of both common and uncommon errors of refraction.

Twentieth Century Practice. Vol. I.: *Diseases of the Uropoietic System.* Edited by THOMAS L. STEDMAN, M.D., New York City. London: Sampson Low, Marston, and Co. 1895.

IN the first volume of a series which is to extend to twenty volumes are contained seven articles dealing with the urinary tract. Of these seven only one (Diseases of the Kidneys) is purely medical; the rest, if we may except the curiously misnamed article, Diseases of the Urine, are surgical.

The first article, by Dr. Delafield of New York, deals with the medical side of Renal Disease, including, however, some remarks on new growths. Dr. Delafield's system of classification (p. 19) is very clear and founded on a sound basis. The article is copiously illustrated with well-reproduced micro-photographs.

Surgical Diseases of the Kidneys and Ureters are undertaken by Mr. Reginald Harrison. Special attention is given to the subjects of injuries and obstructions of the ureters. To the same writer is allotted the article on Diseases and Injuries of the Bladder, commencing with rupture of that viscus. The difficulties of diagnosis in this condition are specially dwelt upon, prominence being given to Dr. Weir's test by injecting the bladder with water. In this connexion it is interesting to call to mind the discussion at the Royal Medical and Chirurgical Society on June 11th, 1895, when Mr. Walsham related a successful case of suture of a ruptured bladder when the diagnosis was established by inflating the bladder. Foreign Bodies in the Bladder, Cystitis, and Extroversion of the Bladder are next treated. With regard to the last condition, which the writer justly calls "one of the most distressing deformities to which the human body is liable," he thinks that the most likely method of affording relief is to establish a lumbar fistula in connexion with one kidney, preferably the right, and when this is permanently established to remove the other kidney. After this procedure the bladder surface being no longer contaminated with urine may be closed in. This idea is, it seems to us, eminently practical. The diagnosis and treatment of vesical calculi are very fully gone into, prominence of course being given to Bigelow's operation. Mr. Harrison does not seem very favourably impressed with the operation of litholapaxy in children, except in the case of very small stones, preferring lithotomy. The remainder of the paper deals with cystotomy, both perineal and supra-pubic. Dr. Frank G. Lydston of Chicago contributes two articles, the first on Diseases of the Prostate, the second on Diseases of the Male Urethra. Hypertrophy of the prostate naturally claims a large proportion of the space allotted to this gland, and in the writer's opinion operative measures are as a rule delayed too long, and consequently when they are undertaken have but little

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chance of success. Concerning the most recent operation for the relief of the results of prostatic hypertrophy—namely, castration—Dr. Lydston speaks very cautiously. The article on Diseases of the Urethra is almost entirely devoted to gonorrhœa and its consequences. For treatment rest in bed and attention to diet are insisted on as being of paramount importance. Mr. E. Hurry Fenwick contributes an article called, we do not know why, "Diseases of the Urine." True, in the text of the paper the writer talks of morbid conditions of the urine—a title which is correct. Mr. Fenwick lays stress on the value of electric light cystoscopy, and the employment of this method has certainly been the means of clearing up the diagnosis in a vast number of cases which would otherwise have had to be left undecided. Hæmoglobinuria, paroxysmal and otherwise, are to be treated of in a separate article. The final section of the volume, by Dr. Howard A. Kelly of Baltimore, deals with Diseases of the Female Bladder and Urethra. The chief point in the paper is a full account of Dr. Kelly's very ingenious and simple method of examining the interior of the bladder by means of a straight speculum, a hand mirror, and an electric lamp. By this means the whole of the interior of the bladder can be easily seen and the ureters catheterised so as to obtain urine from either kidney separately. The value of this article is not enhanced by the introduction of many of its illustrations, which are hardly needed for the elucidation of the text. The printing and get up of the work are exceedingly good. There is a full index, and a bibliography is appended to every section.

The Law and Chemistry of Food and Drugs. By H. MANSFIELD ROBINSON, LL.D. Lond., and CECIL H. CRIBB, B.Sc. Lond., F.I.C. London: F. J. Rebman, 11, Adam-street, Strand. 1895.

WITH the prospect of the Food and Drugs Act undergoing shortly very distinct and much required modification in several of its sections, as the result of the inquiry of the Food Products Adulteration Committee, we are not sure that the publication of this work is not premature. This, however, in no way affects its merits under the present *régime*. It is written by an able solicitor—a Doctor of Laws of London—who has had considerable experience of the working of the Acts—and by the analyst who conducts the public analyses of the Strand district. The pages of Part I. (the Law of Food and Drugs) are edged with red colouring, and those of Part II. (the Chemistry of Food and Drugs) with yellow colouring, an arrangement which facilitates reference, and a device which is typical of the originality and enterprise of the publisher. The introductory chapter might well have been written for no other object than to enlist first and foremost the indignation of the lay reader at the fraudulent practices which it is said still obtain. It is certainly a black view of things. Thus he is told that the total annual consumption of milk in England and Wales is 1,740,000,000 quarts, costing £29,000,000, and that there are bought annually 20,880,000 quarts of water, which are added to this commodity, and for which the public pays £348,000. Butter is even worse, the loss to the public owing to the addition of margarine being equal annually to £609,000. Similarly, £303,000 is paid yearly for water under the name of spirits. Total amount of money sterling thrown away, £1,260,000! The pernicious effects on health due chiefly to the watering down of milk are then emphasised in similar strains, till flagrant instances, as in the making of a sum of £1200 a year by adulterating pepper, are quoted in evidence of the unscrupulous practices of the wholesale and retail trade. The writer's indignation attains a maximum in the concluding paragraph of the chapter, in which he says that owing to the free use of antiseptics being allowed in this country, while it is prohibited abroad, we are liable to be [illegible] with all kinds of abominations in the form of sausages and preserved meats made from semi-putrid materials dosed with preservatives. "*England in this respect will soon be regarded as the dust-bin of Europe, and receive all its refuse, both of meat and drink.*" [The italics are ours.] "Many of these things find their way abroad again, and when attention is called to the matter England receives the blame, and her reputation has to suffer." The scientific reader will wonder whether the writer is serious, while the lay reader will pass on with avidity to learn how law and science propose to grapple with and stifle this threatened evil, and thus gloriously save our reputation. Elsewhere, however, occurs the statement—and it is somewhat reassuring—that there is deceit, not death, in the pot, and the public are now rather swindled than poisoned. Revelations and things of a startling order aside, the legal portion of the work is well done and provides information of equal service and value to the public analyst, the lawyer, and the trader. The second part of the work, dealing with the chemistry of food and drugs, is not so much intended as a practical guide to the detection of adulteration as to enlighten the reader as to the composition of various foods and the food value of the components, and to help him to understand the principles upon which the methods employed for the detection and estimation of adulterants are based. The chapters are sensibly written, clear and free from ambiguity and exaggeration, affording a valuable and indispensable collection of material to those engaged in the operations of the Food and Drugs Act, 1875.

LIBRARY TABLE.

Furs and Fur Garments. By RICHARD DAVEY. London: The International Fur Store and The Roxburghe Press. 3*s.* 6*d.*—From the earliest times the skins of animals have been used by man to protect him from the inclemency of the weather and it is not surprising that as the art of dressing the skins became more perfected and man more civilised furs should have been used for ornamental purposes as well. Among ancient nations, and on the Continent during the Middle Ages, fur was lavishly used by the opulent, and some of our own kings and queens used it with an extravagant hand. Of a purely English fur trading company the earliest record is in 1578, when an expert was sent out to New Zealand to seek for furs, leading to the first settlement in that colony. Since that time the trade has grown to enormous proportions, but it was not until the conquest of Canada that England became firmly established in the great fur regions. To this trade one of the richest families of the present day owes the foundation of its wealth, for in 1808 John Jacob Astor founded the American Fur Company, and thus laid the corner-stone of a gigantic fortune. The book under notice is illustrated with pictures of the animals from which the different kinds of fur are obtained, and with portraits of some of the notable persons of history who have conspicuously used fur as an ornament of dress. Among the portraits is a reproduction of "The Constable de Bourbon" by Titian, one of the earliest pictures in which fur is painted with anything like realism, while the frontispiece represents Her Majesty in her magnificent ermine-trimmed coronation robes. If after reading the book we have anything to regret it is that the author has somewhat shaken our faith with regard to two stories which were the delight of our childhood. Quoting from other writers he tells us that the slipper which Cinderella dropped on the palace stairs was not made of glass at all, but that the translator mistook the word *ver*, a contraction of *ménu-ver*, the heraldic *vair* (fur), for *verre* (glass).

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and that the story of the Golden Fleece is nothing more than an allegory connected with the early fur traders.

The *Edinburgh Medical Journal* for November has a paper on Congenital Nervous Disease, by Dr. W. Ireland; Dr. James Smith and Mr. C. W. Cathcart report two successful cases of Laparotomy for Appendicitis; and Dr. John Strachan has an admirable paper on Health Conditions in School Life which we commend to the notice of the London School Board. Dr. R. F. Leith contributes his paper on Ruptures of the Pancreas which recently appeared in our columns, and there are sundry other papers and articles of interest.

Clinical Sketches for November.—This comparatively young periodical is so full of appreciation of ourselves that we are chary of saying anything about it. However, we may refer to the three original articles; on Melasma, by Dr. Sansom; on Cholera, by Mr. Wynter Blyth; and on the Chalk Beds of the Thames and their Influence on Mortality from Cancer, by Mr. Arthur Haviland. There is a paper upon Fractures of the Upper Third of the Femur, referring to that of Sir William Stokes read at the recent meeting of the British Medical Association. The illustrations, which are very good, were drawn on wood by Mr. Noble Smith. We must give the editor our thanks for his appreciative paragraph about our articles, "The Battle of the Clubs."

CHRISTMAS NUMBERS.

Black and White leads off with an illustration by Bernard Partridge of "Cantat nunc Io, chorus angelorum," which has caught some of the spirit of the old religious painters. There are stories by Anthony Hope and Barry Pain which stand out among modern Christmas literature for having no reference to unhappy marriages, suicide, or adultery. Mr. Arthur Morrison obliges with a suicide, and Mr. H. D. Lowry with a more or less happy love story.

Yule Tide, Cassell's Christmas annual, has a good story by "Q." We should like to know if Ia Rosemundy's songs are real gipsy ones or "Q.'s" composition, for they have the curious wandering sad melody of the Roumanian folk songs. There are a number of coloured plates besides the big supplement, "Prisoners of War." One is called "I'll be well by Christmas." We should say this hope would not be fulfilled, for the unfortunate child who makes the remark is obviously suffering from advanced mitral regurgitation and a nutmeg liver.

The Christmas number of the *Girl's Own Paper*, entitled the "Herald Angels," has a number of stories and papers. The two most interesting are an account of "Popular Christmas Festivities in Naples" and "A Girl's Ride into Upper Butain."

The *Pall Mall Magazine's* Christmas number is excellent. Lord Ernest Hamilton contributes a thrilling story of a secret society. Hilda Johnson, a very powerful and sombre story called "Κέραμος," remarkable, too, for the excellence of its illustrations, especially the last. John J. Waller writes on Behind the Scenes at Monte Carlo, giving balance-sheets of the Casino Company, in which appear the following interesting items: "Bishop, clergy, educational and religious bodies, £12,000; the viaticum for assisting losers, £5000; number of suicides for the year, five."

It has been arranged to hold a public meeting with the object of furthering the movement for the establishment of voice-training as a branch of education. The subject has been growing in interest of late, and with a good chairman, the Bishop of Stepney, who is strongly in favour of the movement, with Sir Dyce Duckworth and other speakers, some practical result ought to follow. The meeting will take place at Cadogan House, 162, Sloane-street, on Wednesday, Dec. 4th, at 3 P.M.

New Inventions.

THE DUNLOP PNEUMATIC TYRE FOR VEHICLES.

THE subject of pneumatic tyres for vehicles of all kinds must be one of no small interest to the medical profession. There is probably no one who would more appreciate such a luxury than the country practitioner, who has to spend many hours daily in his carriage travelling over roads which are—well, not quite so smooth as asphalt, and which, from their generally bad condition, add not a little to the annual cost of repairs to his vehicle, and considerably shorten the life of his horse.

Great as has been the popularity of cycling since the introduction of pneumatic tyres, and the consequent lessening of that vibration and liability to sudden jerks with which the rider of the now almost extinct "solid" was only too familiar, it is not too much to say that the general use of pneumatic tyres in the construction of our public conveyances, such as cabs, omnibuses, &c., would be even more welcome, and would add much to their popularity. As things are at present, the iron-bound wheel goes down every hole, runs up every corresponding ascent, and jumps over every obstruction, with the most disastrous results to the "fare" and to his nerves. Not so with the pneumatic tyre. Instead of acting in like manner, the air in the inner tube is simply displaced, and the tyre absorbs, as it were, all obstructions, and keeps the vehicle steady. And, then, what a revolution such a tyre would effect in the din and noise of our streets, if it could only be applied generally. There would then be no further need to put down more of wood-paving which is now almost a necessity in all large towns with heavy traffic, for the purpose of deadening the sound, and our streets would become almost perfect "silent highways." We have said "almost" advisedly, because we should still have to reckon with the itinerant vendor of bird-whistles, &c., and with the host of urchins whose vocabulary consists of half-a-dozen words, of which "Speshul!" and "All the winners!" are most generally in use.

For carriages used by invalids and for ambulances pneumatic tyres are obviously nowadays a necessity, and for every one who uses a carriage they are most desirable. The carriage is rendered absolutely noiseless, and the ease is so great that it is possible to write comfortably in a brougham so fitted, whilst conversation can be easily carried on. But it is not only the occupant of the carriage that reaps the benefit: the draught is lessened considerably, the horse goes much more freely, and, it is claimed, retains his action far longer. Although the initial outlay for these tyres is rather high, yet they appear to be an undoubted economy, owing to the saving of wear to the carriage and the lighter work for the horse. New wheels can be supplied fitted complete with these tyres, or existing wheels can easily be altered in a few days. The company have every faith in the tyre, and guarantee to repair free of cost any carriage tyres, wheels, or rims supplied by them which shall fail within twelve months, provided, of course, that they have received fair treatment. This appears to be a very fair offer, and is made on the strength of the experience of the company that it is almost impossible to puncture their carriage tyres. Certainly the tyres of the company's own cart, which we examined, and which have been in daily use for the past five months doing business in all parts of London, did not show the slightest signs of wear, nor could we discern any cuts in them. Should, however, a puncture penetrate the inner tube, it is claimed that the vehicle could still be used for many miles without in any way damaging the tyre, and this certainly seems feasible, looking to its solid construction. An examination of the method of manufacture

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reveals that the vital part of the tyre is very carefully "wrapped up" by the rubber lining, the canvas fabric, and the outer cover.

The company invite an inspection of their showrooms at 14, Regent-street, where may be seen all classes of carriages, ambulances, &c., fitted with the pneumatic tyres.

A NEW TEA INFUSER.

WE have received from Messrs. Marshall, Arthur, and Co., 180, West Regent-street, Glasgow, a teapot fitted ith a new contrivance as an infusor, and having given it trial are able to report favourably upon it. It consists of an ingenious arrangement, made obvious by inspection of the accompanying illustration, for separating



the spent tea-leaves from the hot infusion, and without opening the pot, so that the tea can be kept hot for any length of time without becoming bitter—so that, in fact, the tea is an infusion and not a decoction. We have before now noticed in these columns, and with favour, con trivances having this object in view, but the "Marguerite" teapot appears to us to be as efficacious as any, while it is one of the neatest designs in the market. The required amount of tea is placed in the strainer and the pot filled with boiling water. After the necessary time has elapsed to complete the infusion (from two to ten minutes according to the hardness of the water or taste as to strength) the knob of the lid is depressed and the leaves are separated from the water. This occurs because the under side of the knob when pressed opens a valve and permits the air previously confined in the bell-shaped vessel beneath the strainer to escape. This vessel is immediately filled with fluid in lieu of the displaced air, and the level of the fluid consequently sinks in the pot to a point below where the leaves rest. As we have said, the invention is a particularly neat one, and our practical trials have given very satisfactory results. One small thing may prove inconvenient to housekeepers. If the pot is not filled to the brim the contrivance is clearly useless, and sometimes a full pot is not wanted.

NORTH-WEST LONDON CLINICAL SOCIETY.—A clinical meeting was held at the North-West London Hospital on Nov. 20th, Dr. J. H. Stowers being in the chair. Dr. R. F. Gill read notes of a case of Pleuritic Effusion and Pulmonary Cancer. Mr. C. G. Brodie showed a case of Nævus treated by Electrolysis, and one of Congenital Dislocation of the Hip; Dr. Guthrie, a case of Plumbism and Monoplegia; Dr. Cagney, a case of Telangiectasis of the Face undergoing treatment; Mr. W. H. Battle, cases of Bullet Wound of Skull and Intestinal Obstruction by a large Gall-stone; Dr. Stowers, a case of Epithelioma of the Back, and one of Tinea Versicolor; Mr. Mayo Collier, a series of cases of Nasal Obstruction; and Mr. Jackson Clarke, Hallux Valgus and Hammer-toe.

THE ASHANTI EXPEDITION.

A LARGE detachment of officers, non-commissioned officers and men left Liverpool last Saturday for Cape Coast Castle to take part in the forthcoming expedition to Kumasi. We may assume that, whether there is to be fighting or not, there will be an expedition to Kumasi in any case. Sir Francis Scott made some very pertinent remarks before he embarked for the Gold Coast as to the differences between the conditions that existed in the 1873–74 campaign and those which obtain at the present time. We know much more about the country than we did on the last occasion; we have not now to deal with a powerful confederation of tribes, but, on the other hand, the Ashantis are better armed than they were. There is time for the organisation of a large force of native bearers for this expedition and for the arrangement of everything at the base, which will be Cape Coast Castle; and it is anticipated that the force will reach Kumasi at the end of about three weeks after starting from the base. Sir Francis Scott hopes to reach the capital in any case before the end of January, which will leave time for the return march before the rainy season sets in. The route from Cape Coast consists of thick bush, but there is a fair road to the River Prah, although there are places where there is only a narrow track and where there will be heavy work in cutting away the bush. It is expected that the expedition will advance at the rate of about eight miles a day. The accounts published by different special correspondents present on the Gold Coast in 1873–74 were highly corroborative of the truthfulness of the descriptions given by previous explorers of its climate, topography, and scenery, and of the characteristics of the tribes and races inhabiting that country. Bowdich's narrative of the mission to Ashanti in 1817 gives, for example, a very graphic and accurate description of the country and people. The Ashantis are a fine, warlike race, very superior to the other West Coast natives. The Fantis, for example, on whom they were constantly making inroads and attacks, are the reverse, for they are a weak and timid people, who cannot be trusted as bearers or transport, and invariably drop their loads and run away on being attacked. The chief difficulty to be overcome is the commissariat, and the transport of supplies for the force, and it is very probable that a store depôt will be formed on the present occasion at the River Prah where it is crossed by the troops in their advance on Kumasi. The Ashantis, as we have said, are a brave race, as our own experience has proved, but we strongly suspect that we shall have more to fear from the climate and dense bush than from the fighting qualities of the Ashantis, if they are really determined on opposing the advance of the British force. The right season has been selected for the expedition, and all practicable safeguards appear to have been taken about its preparation and arrangements in this country, and we may now safely wait events. The battalion recently disembarked at Gibraltar from the *Malabar* is now awaiting orders for Ashanti. As we have already announced, the medical arrangements for the expedition are now almost complete, and, as has been stated, Surgeon-Colonel Taylor will act as the principal medical officer. He leaves Liverpool to-day (Saturday) accompanied by five other officers of the Army Medical Staff Corps. In addition to those already named, the following officers of the Army Medical Staff Corps have been detailed for the expedition—Surgeon-Lieutenant-Colonel Blennerhasset, Surgeons-Major Hughes, Wolseley, Wilson, Beatty, Bartlett, and Hickman, Surgeons-Captain Beaver (Scots Guards), O'Callaghan, Josling, Eckersley, Corcoran, Burke, Wilson, and Maher, and Surgeon-Lieutenant Spencer.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 30, 1895.

ON Tuesday afternoon the General Medical Council got well into business. It was occupied chiefly with the Address of the President; the motion of Sir WALTER FOSTER for consideration of the petition of the British Medical Association in favour of an increase in the direct representation of the profession; and a motion by Dr. GLOVER asking the Council to refer to the Executive Committee the subject of the disciplinary powers of the qualifying bodies and the General Medical Council, with a view to bringing them into more harmonious and efficient action. A discussion also took place *in camerâ* on the case of Mr. THEOBALD, who sought unsuccessfully a rehearing of his case and restoration to the Register. Mr. THEOBALD thinks himself to have been very hardly used. It will be remembered that his name was taken off the Register for publishing and circulating a book entitled "Electro-Homœopathic Medicine," in which are contained a description and recommendation of the so-called electro-homœopathic cures and medicines of one Count MATTEI, and in which it was suggested by Mr. THEOBALD, as a registered medical practitioner, to persons suffering from disease that they should adopt such so-called cures and medicines as were therein stated to be practised and used by him. Previous to the action of the General Medical Council he had been deprived of his diploma by the Royal College of Surgeons of England—the only qualification he possessed. The Council declined to re-hear the case or to restore his name to the Register. It is difficult to say how it could do otherwise, seeing that he is no longer possessed of any qualification that would give him a title to registration. It is within the power of the Royal College of Surgeons of England to restore his qualification, but so far there has been no indication of a disposition to that course. The question at issue is not one of therapeutical opinion, but of the right of a registered medical man to give his professional sanction to a quack medicine bearing the name of a non-medical man and alleged to consist, according to chemical tests, of distilled water and a little cork. Removal from the Register seems to us a proper punishment for such an offence. How long it should continue is a matter for the qualifying body to determine rather than the General Medical Council, especially in this case.

Direct representation is not popular in the Council. Its members are quite respectful to the five elected gentlemen who represent that principle, and it is admitted that they have shown no revolutionary dispositions. But the principle is, nevertheless, cordially disliked, and before Sir WALTER FOSTER had the chance of moving his resolution in favour of an increase in the number of direct representatives, the President, in his very interesting opening address, had expressed some of the well-worn arguments against the principle. These arguments did not avail to prevent the adoption of the principle, and they are not likely to be always effective against a reasonable extension of it. Sir RICHARD QUAIN quoted with great effect the striking words of Lord RUSSELL of KILLOWEN, as we have already done. But he will not deny that these words of praise have reference quite as much to the Council as reformed in 1886 as to its original constitution. In spite of the President's arguments the motion of Sir WALTER FOSTER had two or three more adherents than it had on the previous occasion.

A motion brought forward by Dr. GLOVER, and seconded by Mr. WHEELHOUSE, based on a petition of the general meeting of the British Medical Association in favour of a more adequate recommendation of the Council as to the requirements of the qualifying bodies in the matter of practical instruction in midwifery, encountered a curious and unexpected fate. The petition mentioned in Dr. GLOVER'S motion had not been formally adopted and forwarded by the Council of the Association, as contemplated in the resolution of the annual meeting. The miscarriage was eagerly seized on by the opponents of the amendment so reasonably and yet so urgently demanded by those who have studied this subject from a practical point of view. Comparisons and distinctions were made between the resolutions of the general meetings and those of the Council of the British Medical Association as if they were out of harmony, and in the end the resolution had to be withdrawn. The subject cannot always be allowed to remain in its present form. It is not tolerable that a body of the authority of the General Medical Council of Education, consisting of all the qualifying medical bodies in the kingdom, should give out that an attendance on twelve cases of labour is a sufficient practical education in midwifery. It is not the direct representatives who will be discredited by this recommendation as it stands, and as it must some day be submitted to even a higher authority than the General Medical Council.

Dr. GLOVER was more fortunate in his motion, seconded by Dr. THORNE THORNE, for instructing the Executive Committee to revert to the consideration of the subject of the disciplinary functions of the qualifying medical authorities and of the General Medical Council, of the best means for conferring and extending them, and of bringing them into harmonious and effective coöperation. The ends aimed at in this resolution would tend to save the Council's time and money, and would impose on the qualifying bodies primarily the duty of regulating the professional conduct of their own diplomates. Such a function is fundamental in our conception of the relation of bodies that license men to practise the profession of medicine. The Executive Committee, under the lead of the late Mr. MARSHALL, did good work in initiating this inquiry. The present President and Sir JOHN SIMON have frequently urged its importance. It rests now with the Executive Committee to complete work that has been well begun and not finished.

The greater part of Wednesday was occupied in considering the reply of the Privy Council to the resolution of the Council, representing to the Privy Council "that in the opinion of the Council the standard of proficiency in medicine required from candidates at the qualifying examinations held by the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin, after four special inspections, has been found insufficient." The chief incident in the

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discussion was a graceful acknowledgment by Mr. WHEELHOUSE of his error in saying that a candidate had been passed into the profession who had really only passed certain subjects of his final examination. The whole subject was on that day left unfinished. The Council declines to alter its report to the Privy Council, and has postponed to a later day consideration of the request to appoint surgical examiners to coöperate with the medical examiners of the Hall.

SOME confusion seems to exist, both in the profession and amongst the public, regarding the merits and demerits of the south coast—by which expression we designate, for brevity's sake, the English littoral from the Thames to the Severn—as a winter resort. On the one hand, it is often quite ignored by many who too hastily assume that only the most distant resorts can benefit the more serious cases, especially those of pulmonary disease; while, on the other hand, extravagant claims have in recent years been put forward, and we are invited to contemplate the folly of those who undertake long and toilsome journeys to secure climatic advantages which are already at hand on the Cornish and Devon coast. We venture to say that both these extreme views reveal a large ignorance of the elements of the subject, and that such confusion of things essentially different and contrasted can only bring discredit and contempt upon climatology as a branch of scientific medicine. The south coast is a most admirable and useful resort for certain cases, but from the meteorological point of view its analogy with the Riviera or Davos or Egypt is remote indeed, and such loose statements as have found currency in certain quarters are much to be regretted and reprehended. Let us contrast the south coast with a well-known district regarding which we possess fairly complete information—viz., the Riviera. The mean winter temperature of Falmouth (one of the warmest places on the coast) varies from 48° to 52° F.; that of Cannes varies from 55° to 61°. Torquay has about nineteen or twenty rainy days (by which it is understood a day on which 0·01 inch of rain falls) per month during the winter season, Ventnor about 16 or 17, while Nice has only 5 or 6. The number of bright sunny days in winter is three or four times as great on the Riviera as on the south coast. The mean relative humidity of Falmouth during the winter months varies from 82 to 88 per cent.; that of Mentone from 70 to 74. Sea-fogs and mists are common on the south coast; they are practically unknown on the Riviera. It often freezes during the day time on the south coast; very rarely on the Riviera.

We do not draw attention to these facts with any design of unduly exalting the Rivieran climate, which has certain grave disadvantages, especially the prevalence of cold winds. Still less do we wish to make light of the many climatic advantages of the south coast, of which we are fully sensible; but we plead for some scientific accuracy in these matters, and we deplore the confusion of things radically different. What, then, are the leading features of the climate of the south coast? They may be summed up as follows with substantial accuracy. The climate is one of considerable mildness and equability. Sudden changes and extremes of temperature are very rare. The amount of sunshine is large compared with the average of these islands—the winter average of sunshine on the south coast is three times that of London. The prevailing winds (except during some of the spring months) are from the south-west, and are mild and humid. In many places the local protection is good. The soil is in some places—e.g., Bournemouth, Ventnor, and the Isle of Thanet—very favourable for the purposes of a health resort. The local differences of climate—e.g., those between Cornwall and Sussex—though considerable, are much less than might be expected. To a large extent the climate is determined by the Gulf Stream, of which the influence is felt as far as the North Foreland, and, as a matter of fact, the sea is almost as warm off Ramsgate as off Penzance; still, it remains true that as we come from south-west to south-east the net influence of the climate becomes bracing and moderately tonic instead of being soft and relaxing, but the differences are probably less than is usually assumed. The climate of North Devon is practically as warm as that of South Devon, but is generally regarded as more tonic in character. The most bracing climate on the south coast is that of the Isle of Thanet, especially Margate. The south coast forms an admirable resort for many cases of anæmia, dyspepsia, and debility, impaired convalescence after acute disease and operation, tropical cachexia, some varieties of bronchitis, asthma and gout, and certain types and stages of phthisis, as well as other forms of tuberculous disease. It is not generally suitable for rheumatic and nervous affections, though to this rule there are exceptions. We cannot, of course, do more than throw out a few general hints regarding the large questions of therapeutics which these statements raise. As a general rule, where there is much irritability the Devonshire and Cornish seaboard should be preferred, while if a distinctly bracing quality is desired Sussex and Kent should be selected. The Isle of Wight occupies, both geographically and climatologically, an intermediate position. Margate, Broadstairs, Ramsgate, Dover, and Brighton are types of the most bracing resorts, while Hastings, Torquay, Falmouth, and Penzance represent various grades of the soft and soothing type of climate. Bournemouth has in some respects a unique climate, and is decidedly sedative without being relaxing. It owes its peculiar characters to the dry soil, abundance of pine forest, and proximity to, with shelter from, the sea.

The question of phthisis is, of course, the most important as it is also the most difficult in this connexion, and most of the controversies which have arisen regarding the merits or demerits of the South Coast have had relation to this disease. It cannot be said that any part of the South Coast affords an ideal resort for phthisical patients. The amount of sunshine is deficient, the number of cloudy and rainy days is too large, the relative humidity is too high, and the amount of wind and fog is too great. Still, it is undeniable that many cases of the disease do well at Hastings, Ventnor, Bournemouth, Torquay, and Penzance. These cases belong usually to one of two classes—first, incipient cases with limited and quiescent lesions; and, secondly, advanced cases where only some slight palliation and mitigation of symptoms is to be expected. The excellent accommodation, good diet, and general comfort of the south-coast resorts are

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powerful auxiliaries to their considerable climatic advantages. Making every allowance, however, for the above facts, it is, we think, most undesirable to put forward any high claim for the south coast as, speaking generally, a sanatorium for phthisical patients. The results obtained, though often gratifying and even surprising, will not compete with those yielded by Egypt, Davos, South Africa, or Colorado. But many patients, especially young women, cannot or will not undertake distant journeys, and to such persons the south coast may often be recommended with excellent results. We must, however, again repeat our *caveat* against claims that are unsound and comparisons that are in every way fallacious and misleading.

THERE is a lower depth than medical aid associations to which medical men may fall if they once suffer themselves to be exploited by bodies of commercial laymen. We refer to the case of gentlemen who accept office as the servants of commercial companies. There are several of these companies in existence, as is evidenced by our Special Commissioner in his account of "The Battle of the Clubs," and the fact happily seems to be leading in some towns to the unanimous combination of the profession by way of protest and resistance. There is reason to believe that these companies are getting into their service a great number of medical men and are making a wholesale attempt to commercialise the matter of medical attendance on the poor throughout the country. We have spoken of medical attendance on the *poor*, but it is of the very essence of such a system not to be too particular as to any fine lines of demarcation between the well-to-do and the poor. These companies work essentially by a system of canvassing. With ordinary canvassers, paid a percentage on the work they do and the members they draw into the net, and with no hindrance from any sense of medical etiquette, canvassing is done on a very comprehensive scale. As our Commissioner showed in the case of Eastbourne, the better the social condition of the persons entrapped by the company's medical schemes, the better the insurance business done and the more the profit to the canvasser. It may easily be imagined how the private patients of medical men are approached and inveigled by such a system and carried off wholesale to the company, to be attended by its nominees on terms altogether incommensurate with their duty to the profession and the ability of the patients to pay. This seems to us a very serious matter indeed, and one to which the profession in all parts should direct its attention and against which it should enter its emphatic protest. We repeat that the system seems already to have taken considerable hold of the profession and of the people. From the accounts which reach us there can be little doubt that hundreds, or perhaps thousands, of medical men are becoming the servants of commercial companies hailing from Manchester, London, Liverpool, &c., and parties to the methods of business companies. It seems intolerable that commercial companies should so unblushingly intervene between medical men and the people, and it is unintelligible that any number of educated men should be found ready to lend themselves to such a system.

We can do nothing with the companies. They are not amenable to reason, authority, or the traditions of the profession. They have to make 5 per cent. for their shareholders and as much more as possible, and they have found out that the health of families can be brought into the great market out of which dividends can be extracted. The old club system was a personal transaction between an established practitioner and the people among whom he lived—probably had lived for years—and whose family attendant he was. The medical aid associations have been shown to be sweating systems, abused by mayors and councillors and men of wealth in their respective communities, and in which the working men of England, individually generous, are made to exact labour from a learned profession on terms which do not remunerate it and which do not permit of due attention to patients. Still, even so, the persons treated by the medical officers have been neighbours, open to the neighbourly influences which make for consideration and fairplay. But the intervention of commercial companies in medical business, dominated by commercial men living at a distance, and carried on for purely commercial purposes, is a new point of departure which cannot be too soon or too severely criticised by those who object to the degradation of the profession. The attendance on the working classes by the profession has been for ages a matter of consideration and accommodation. When medical education was not half so long and arduous, and not half so expensive as it is now, medical men were found to attend, on the whole faithfully and kindly, to the working classes on such terms as they could afford. With the evolution of society working men have become richer and with a strange inconsistency propose to be more exacting and less generous to medical men. In their clubs, or even perhaps in their local medical aid associations, we have some control over them, some chance of appeal to their sense of what is due to men of high education and of the need of some leisure if they are not to become mere machines for prescribing stock mixtures; but with commercial companies in Manchester or London or Liverpool coming between medical men and their honest neighbours the profession should hold no intercourse. It should do in every place what the medical profession in Eastbourne and Bexhill has done—that is, combine firmly and unanimously to form its own local provident dispensaries, admitting all medical men to the staff who care to join.

But it must go further: it must give clear instruction to gentlemen who have interest in this alliance with commercial companies that that alliance is an unholy and an unpermissible one. The great temptation offered to very young men is to accept this alliance as an easy introduction to practice. We fear, from the accounts we receive, that this bait has not been altogether unsuccessful in its appeal to men of standing in the profession with good private practices of their own. Let anyone who doubts this get the lists of the officers of such societies. As we have said, we have no control over companies; commercial men will act commercially; but we have control over medical men. They cannot resist an appeal to reason and the traditions of the profession; they cannot, *in curia conscientiæ*, acquit themselves of complicity, as servants of these companies, in canvassing. They

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would not themselves think of canvassing for the patients of other men, but they are parties to it by accepting office in such companies. They may have acted inadvertently, but the fact remains, and we ask them to ponder well over what it means for the profession, of whose honour they are in this matter the guardians.

Annotations.

"Ne quid nimis."

KITCHEN BOILER EXPLOSIONS.

THE constant apprehension of an explosion, which to many householders—especially ladies—greatly detracts from the comfort derivable from a complete hot-water system, and goes far to hinder its extension to the warming of the dwelling as a whole, would, we believe, be removed and the actual risks of such a catastrophe obviated if people generally understood the real causes of these accidents. The ordinary low-pressure service which is most in use consists of a closed kitchen boiler supplied through a ball valve from a feed cistern, and a hot-water cistern on one of the upper floors, the circulation being maintained between these by means of two pipes, through the upper of which the heated water rises, to return somewhat cooled through the lower, while a vent pipe rising from the cistern gives exit to any steam and effectually prevents a rise of pressure in every part of the apparatus. The danger of the low-pressure system lies in the stoppage of both pipes by the gradual accumulation of the crust of lime salts which forms especially in bends and angles and dependent parts of their course, or by the freezing of the water in any part of both pipes after the fire has gone out. The former condition may be anticipated when a constant difficulty, not to be accounted for by leakage from taps, is found in heating the water in the cistern. The latter is not likely to occur so long as water in open vessels in the rooms or passages traversed by the pipes does not freeze, and should the pipes be exposed to the risk of freezing it may be prevented by making up the kitchen fire at night. This is the cause of explosions in churches and buildings in which the heating is intermittent, the fires being allowed to go out for two or three days together. If one pipe only be blocked the circulation of the water is interrupted, and that in the boiler being somewhat superheated, large bubbles of steam rising and collapsing in the cistern produce a regular succession of loud reports, decidedly alarming though not indicative of danger. But the greatest misery is that inflicted on themselves by timid householders who deprive themselves of the necessary convenience of the kitchen fire so long as, by freezing of the cold-water cistern, bursting of pipes, or shutting off of the supply at the main, the hot-water service is suspended. There is, however, no danger whatever in allowing the residual water in the boiler to boil away, or in keeping up a fire beneath an empty boiler for a few days, if only care be taken to effectually prevent the entrance of water from the feed cistern while the boiler is hot. Not, indeed, that even this would cause an explosion, but the sudden contact of cold water with iron at nearly a red heat might cause even the soundest plates to crack, with a result like that of upsetting a kettle on the fire, and necessitating the fixing of a new boiler. Once more, kitchen boilers do explode with fatal consequences, but only from the closure by encrustation or by freezing of both pipes, when, no exit being left, the pressure of the steam rises until the boiler plates give way with a force proportional to their strength and soundness. A safety valve, which should be so placed as to be easily inspected from time to time with the view of ascertaining that it is in working order, would prevent such an occurrence. We are glad to learn that a circular letter was last week addressed by the Board of Trade to the various water companies and local authorities calling attention to the necessity for adopting some such precautions as we have just indicated during periods of severe frost.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

MR. SHARP'S astounding statement at the meeting of the School Board on Nov. 14th, "that the great body of medical men approve of the action of the Board with regard to medical certificates," has elicited a dignified reply from Dr. J. G. Glover, who in a letter which appeared in the *Times* of Nov. 25th, entirely repudiates this statement. Dr. Glover has a right to speak for the profession at large, for he is one of the direct representatives of the profession for England and Wales on the General Medical Council. Mr. Sharp writes to the *Times* of Nov. 28th in reply, which reply mainly consists of a reprint of a letter addressed to the chairman of the committee of the Royal Westminster Ophthalmic Hospital. In the *Times* of Nov. 28th are three letters, all from medical men, including a second from Dr. Glover disposing of Mr. Sharp's contention. Mr. Kesteven takes Mr. Sharp's excuses one by one and pulverises them, and "A Hospital Surgeon" thinks it is unreasonable for the School Board to insist on poor parents obtaining a certificate. It is curious how widespread is the delusion that the Board demands certificates. *It never does*; the only people who demand certificates are the magistrates. So the Board says, and yet it has a printed form of its own for a medical certificate. We have fought this question of certificates ever since June 8th, and now that our powerful contemporary has opened its columns to the matter we hope to see Mr. Sharp and his committee retire from their untenable position.

THE SCHEME OF SEA-WATER SERVICE SUPPLY TO LONDON.

ON reflection the idea of bringing a supply of sea water into the metropolis opens some very interesting and important possibilities from a public health as well as from an economic point of view. That the project is no mere dream is evident from the fact that a Bill is being prepared for presentation in the next session of Parliament for powers to provide London with a supply of sea water direct from the south coast, near Lancing, in Sussex. Were the scheme sufficiently comprehensive, it is probable that its application would affect the question of London's future water-supply. It seems to us that if sea water could be substituted for fresh water for the purpose of flushing our drain and sewer systems, a very important economy in the supply of water for drinking purposes would result. The amount of water used for merely removing waste and offensive matters from our midst is, in proportion to that used for consumption, very considerable, and the demands, therefore, for potable water as London's first necessity of life would be very materially reduced. Assuming, for example, that each individual uses two gallons of water for flushing purposes per diem, this alone would mean a saving for the drinking supply in London of at least 10,000,000 gallons a day if sea water were substituted for this purpose. Is there, then, any necessity to go further afield, as, for example, to Wales, for an additional supply of water for drinking purposes, and to incur such enormous expense, when within fifty miles of the metropolitan area sea water may be had in inexhaustible quantity, the equivalent of

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which would be saved for drinking, cooking, and cleansing purposes? On the face of it, it is an absurd piece of extravagance that the same water which we drink, and which, therefore, is purified with great care, should be used for the mere conveyance of sewage, and thereby immediately grossly contaminated. Further, it is also evident that, if sea water were used in our sewers, an important aid to the detection of sewage contamination of water-supplies and to the establishment of leakage would be afforded, since obviously a preponderance of saline matter could be easily ascertained by chemical analysis, which would decide the question of pollution. Again, sea water serves to arrest the putrefactive processes for a time, and acts very prejudicially on the germ of typhoid fever, so that it is probable that the offensive and unhealthy character of sewer emanations would be favourably modified. All these are facts which should lead us to consider the scheme of sea-water supply to the metropolis with very great care, for the proposal has, we venture to think, a much more important bearing on public affairs and London's future history than at first sight appears.

ENLARGEMENT OF THE CHALFONT COLONY FOR EPILEPTICS.

ON Tuesday last a new home to accommodate eighteen male epileptics was formally opened by the Duke and Duchess of Devonshire. The cost of erecting the home has been defrayed by Mr. Passmore Edwards, and it will be called by his name; and it was announced that he has also generously undertaken the erection at his own expense of a home and school for epileptic children. The committee have already in hand the addition of a home to accommodate a score of epileptic women, and a laundry in which they may be employed, so that it will be seen that the scheme has already passed the experimental stage; and the satisfactory results obtained, and the number of applicants still awaiting admission, indicate that further extension of the operations of the society will be required before long. The colony was opened in July, 1894, with nine colonists. In August of this year the committee were able to take thirty-six, and it is probable that by this time next year the numbers will be doubled. The colonists have been employed mainly at market gardening, and a few of them at occupations, such as carpentering, which they followed before their admission. Lack of funds has up to the present hindered the provision of other employments such as basket-making, netting, rope-making, &c., which will provide more variety and allow more scope for differences of capacity on the part of individual colonists. Hitherto there has been no medical man resident at the colony, but the committee have most prudently determined to erect a building for a resident medical officer, with a residence of such a character that patients of a superior class may be taken, whose payments at a higher rate may cover the extra cost to the colony. No one who knows anything of the accidents, the occasional explosive outbursts of mental excitement which are sure to arise from time to time in such an institution, will question the urgent necessity of having a medical officer of experience on the spot. The medical reports on the working of the colony show that with improvement in the colonists' surroundings there has not only been extraordinary improvement in their physical health, but a definite amelioration of the disease—fits have been less frequent and less severe in almost all cases, and except in a few instances mental deterioration has been arrested. The healthy out-door life, abundance of plain food and fresh vegetables, and steady occupation have no doubt largely to do with the result; but we understand that in all cases the physicians have found it necessary to continue treatment by drugs. Not a single case of serious illness apart from epilepsy has occurred among the colonists. But to equip the colony properly a large amount of money must still be expended, and the constant expenditure for maintenance is a severe strain on the resources of the institution. We hope that the eloquence of the Duke of Devonshire and the example of Mr. Passmore Edwards will result in a most liberal response from the wealthy members of the community. We have often commended the enterprise in these columns as deserving of public confidence and support. The executive committee is composed not only of ladies and gentlemen well known for philanthropic enterprise, but also of such representative medical men as Sir James Crichton Browne, Sir William Broadbent, Dr. Buzzard, Dr. Ferrier, and Dr. Tooth; and the visiting physicians, Dr. Fletcher Beach, Dr. Colman, and Dr. Aldren Turner, are associated with the three hospitals in London at which special provision is made for epileptics. Able-bodied, sane epileptics are admitted if found medically suitable without distinctions of creed or locality. Forms of application can be obtained from the secretary, Mr. G. Penn Gaskell, National Society for the Employment of Epileptics, 12, Buckingham-street, Strand, W.C., to whom subscriptions can also be sent.

THE FRENCH SURGICAL CONGRESS.

WHEN towards the latter end of autumn the principal business meeting of a congress is fixed for 8 A.M. on the morning succeeding a banquet it is scarcely to be wondered if the attendance should be scanty. The general assembly of the French Association of Surgery took place under these prohibitive conditions, and so fatal was their influence that when the officials put in an appearance half an hour after the appointed time only fifty-two members out of a possible 300 were present to inaugurate the proceedings. As may be supposed, such unbridled somnolence on the part of the staff gave rise to a good deal of criticism, more or less serious. One very well-known and witty commentator began by frankly confessing that at the unearthly hour selected for the reunion all self-respecting Parisians were still snug in bed, and then gravely went on to remind the secretarial sluggards that punctuality is the politeness of kings. Now, of course, the ancient apophthegm may be perfectly germane in such a connexion with our neighbours on the other side of the silver streak, for is there not another ancient adage regarding the better management of things in France? Far be it from us to so much as hint that the Gallic organisers of congressional functions are not the monarchs of all they survey; but assuredly their congeners with us could never justify so regal a simile, being unfortunately more akin to slaves than sovereigns—in fact, an army of veritable martyrs to science. The subject, however, is too knotty to be discussed within reasonable limits, and, moreover, the Congress demands attention. Two candidates for the presidentship, MM. Terrier and Le Dentu, having obtained 27 and 25 votes respectively, the latter withdrew from the contest, whereupon M. Terrier was elected almost unanimously. The vice-presidency fell to Professor Gross of Nancy, M. Broca remains treasurer, and the joint secretaries are MM. Baudouin, Mauclaire, Coudray, and Reblaud. The financial position of the Congress was shown to be most flourishing, so much so, indeed, that for the future the transactions are to be produced independently instead of being, as heretofore, entrusted to an outside publisher. The business proceedings ended, Professor Bousquet of Clermont-Ferrand proposed in his own name, as well as on behalf of several leading members, that general meetings should always be held in the afternoon; but apparently all power is in the hands of the Conseil d'Administration, and no decision was arrived at. Professor Bousquet also drew attention to the

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unsympathetic attitude of the Parisian hospital surgeons towards the members of the Congress. In no case did they offer the slightest encouragement to strangers to attend their operations or visit their wards. The general secretary replied that the above complaint was fully justified. He had done his best to remedy the defect, but, unfortunately, could not succeed. When a visitor arrived at New York and manifested a desire to witness operations the utmost *empressement* was exhibited to afford him every information by telegraph. No matter where he might be sojourning, every morning messages would arrive containing detailed statements of all the operations it was proposed to perform that day, together with time-tables and route instructions. It would be very easy for the Parisian surgeons to imitate their New York *confrères*, and thus remove the grievance to which Professor Bousquet alluded. All that was necessary was a little goodwill, but, unfortunately, that was precisely what was not forthcoming. Possibly these gentlemen had very good reasons for their apparent churlishness, but if so it was strange that similar reasons should be non-existent across the Atlantic. The banquet the previous evening, notwithstanding its alleged absentee-producing effects, seems to have been rather a dull affair. The chairman, M. Eugène Boeckel, presided with effect; M. Delorme returned thanks for the army medical officers; M. Demons for the provincials; and Professor Jonnesco pronounced a discourse wherein he dwelt upon the intimate scientific union which exists between Roumania and France. "I have mentioned Roumanian surgery," exclaimed the enthusiastic delegate; "but I should rather have said French surgery in Roumania. Living at the gate of the Orient, we are all of us the indefatigable pioneers of French science and French civilisation." Finally, M. Monod proposed the health of the organisers of both Congress and banquet, and M. Picqué having responded briefly the proceedings terminated. The commentator already alluded to[1] concludes his article in the following words: "The reunion struck us as being a little colder than usual; perhaps we should try to find something more novel than a banquet. Is this impossible? We do not think so. We are not altogether destitute of ideas on the subject, but first of all it must appear whether or no a change is desired."

PRIMITIVE MAN.

AT a special meeting of the Anthropological Institute held at 3, Hanover-square, on Monday evening, Nov. 25th, Dr. Eugène Dubois from Holland read a paper describing his explorations in Java, and gave a demonstration of the interesting fossil remains discovered by him during six years' residence there. Most attention was attracted by the remains of a human-like femur, an anthropoid skull, and two molar teeth found alongside various extinct species in a pliocene stratum on the banks of a river in Java. As these specimens were found within an area of fifteen metres, Dr. Dubois considers that they all belong to one skeleton. He holds that these form the strongest evidence yet adduced in favour of the doctrine of man's progressive development along with the apes from a common progenitor, for he asserts that these indicate a transitional and intermediary form between man and the anthropoid ape, a creature measuring about five feet and a half in height, maintaining an erect posture, to which he has given the name Pithecanthropus erectus. The individual bones have given rise to much discussion in the scientific world since Dr. Dubois published a short monograph some months ago describing the find, and on Monday evening he related the various divergent opinions held by authorities who have examined the specimens. The femur presents all the characteristics of a human thigh-bone, and, strange to say, shows rare pathological changes, myositis ossificans having affected the insertions of muscles on the upper third of the shaft. Dr. Dubois, however, thinks that he discerns some distinctive features, especially in the popliteal surface; this triangular space between the divergent supra-condylar lines is seen to be convex instead of being flat as in the human bone. Some of the anatomical authorities hold that this apearance is the result of the pathological process. Whatever difference of opinion exists regarding the femur, the skull is quite unique, and approaches more nearly the simian type than the famous Neanderthal skull, being much more ape-like in the sinciput, the supra-orbital ridges being very prominent, with a marked flattening over the frontal bones; but, on the other hand, its larger cranial capacity of about 1000 c.c. places it higher in the scale than any of the known anthropoid apes. The teeth, the distinguished lecturer maintained, belong to the skull and are very human-like in appearance, but the wearing away of the surface of the crowns points more towards the ape than to Homo sapiens. After the demonstration many distinguished zoologists and anatomists took part in the discussion, including Sir William Flower, Sir John Lubbock, Sir William Turner, Professor Thomson, Dr. Garson, Mr. Sutton, Dr. Keith, and others. If Dr. Dubois' thesis be adopted that these specimens belong to the same individual, then we are bound to admit the existence at an early period of an ape more anthropoid, or a man more pithecoid, than any remains have hitherto revealed, thus constituting an important link in tracing man back to an early form, which probably existed in the Archipithecus in the eocene or pliocene periods, whence he became differentiated from the simians, gorillas, &c. If, on the other hand, the bones belong to two individuals, then we have evidence of man being contemporaneous with an ape at a very early period having a skull more resembling his own in form and capacity than any now existing. The truly scientific attitude is to wait for further researches by the palæontologists before we attempt to formulate our opinions.

[1] Dr. Marcel Baudouin, secretary of Le Progrès Médical.

REDUCTION OF AN INVERTED UTERUS AFTER FIVE DAYS.

IN the New York *Medical Record* of Oct. 26th is a very complete and interesting account of a case of inversion of the uterus of five days' standing and of its successful reduction. The patient was twenty-eight years old, a primipara, and was delivered with forceps after a labour of about eighteen hours. The extreme rarity of this accident leads us to give a few particulars. The perineum and vagina were much torn, and the removal of the placenta was followed by severe hæmorrhage. After the physician had left for a distant place pelvic pain and symptoms of collapse appeared, and a neighbouring physician did what he could to help the patient through the night. The next day fever and retention of urine occurred. The catheter was used once. The following two or three days passed, with uterine pains and more or less temperature. On the fourth day the temperature was 103·4° F., and she again changed medical hands and came under the care of Dr. A. A. Davis. The symptoms were somewhat misleading. The face was pale and the expression anxious. There had been no sleep since delivery, and though there was no great pain there was restlessness. There was a tender swelling of the hypogastrium reaching to the umbilicus. As urine had passed in considerable quantities since catheterism on the second day it was concluded that this swelling was due to a hæmorrhage, but a vaginal examination was not made. The next day Dr. Davis proceeded to, as he thought, clear the uterus of clots, and, after forty-eight ounces of urine had been drawn off, came upon a mass which, but for

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the hypogastric tumour, he would have considered inverted uterus. But after consultation with Dr. Pickard, and further catheterisation yielding fifty ounces more, it was easy to feel that there was no uterus in the abdomen, and the diagnosis of inverted uterus was confirmed by further vaginal examination. The tumour was the size of a child's head, just inside the vulva and completely filling the cavity. The surface was moist with lochial discharge of normal odour, covered here and there with films of coagula. As a mass the tumour was pale and anæmic from diminished blood-supply due to contraction of the cervix. Felt through the abdomen it seemed to be a hard and round surface in the pelvis, with no cupping of the cervix. Under etherisation the walls became soft and completely relaxed. The process of reduction was slow, and the steps of it are given with great and interesting detail. At the end of an hour Dr. Pickard's hand was so benumbed that he had to resign the work to Dr. Davis. It was noticed that under steady pressure from below, and with increasing dilatation of the cervix, the uterus was slowly returning itself, not by movement at the fundus, *but at the cervix, the tissues nearest the cervix returning first*. There was fear lest the patient, who was pale and apathetic at the beginning of the operation, should be unable to bear it, but she was as well at the end of it as at the beginning. For ten days after her state was very precarious. She then improved for some days. But after this she became worse, and rapidly sank from peritonitis and metritis about twenty-one days from the time of delivery. The case is full of lessons. Happily few practitioners see such cases. Braun states that of 250,000 births in the clinics under him and Spaeth, not a single complete inversion had come to their notice.

THE MEDICO-MILITARY ARRANGEMENTS OF THE JAPANESE ARMY.

WE have already alluded to the graphic report which Surgeon-Colonel Taylor has given of the medico-military arrangements of the Japanese army in the field during the War of 1894–5 between China and Japan. The progress which the Japanese have made during the last thirty or thirty-five years is remarkable. About that time ago very little indeed was known of Japan. Its people held little or no intercourse with other nations, and it was with some difficulty and only as a great favour that officers of our fleet were allowed to land and make themselves acquainted with the place and its people, and but few indeed of the Japanese had up to that time visited Europe. Things have entirely changed now. The Japanese have visited this and other countries, have made themselves well acquainted with modern arts and sciences, and have returned to their own country and applied all the knowledge they have acquired with wonderful skill and sagacity. Their bravery and patriotism, their aptitude for war, their capacity for organisation and administration, their patience and painstaking, and their mastery of detail are now well known and generally recognised. As far as their medical regulations and the application of the latest results of surgical science to war purposes went the Japanese were remarkably successful. The last thing which nations seem to learn, however, is that which is necessary to be known and put in practice everywhere and at all times—namely, the ordinary principles of sanitary science and practical hygiene. This was not to be wondered at, perhaps, as far as the Japanese are concerned, for it is only of recent years that this country has paid any regard to sanitation and the laws of health. Surgeon-Colonel Taylor in his report states that the Japanese had no regulations for ensuring satisfactory sanitary conditions, and that in practice the same want of thought of all sanitary precautions, even of the most ordinary kind, was evident. He gives several striking illustrations of this drawn from his own observations, and speaks of the universal indifference to the mos insanitary surroundings as incomprehensible, but as, nevertheless, an undeniable fact that existed at the beginning of the war and until very near the end of the campaign. The Japanese being an eminently practical and receptive people, however, learnt the vast importance of army sanitation before the campaign was over, and made strenuous exertions towards its close to improve existing conditions and introduce sanitary measures.

BOARD SCHOOLS: MANNERS AND ANATOMY.

BOARD schools exist, like the Apocrypha, for "example of life and instruction of manners," but their efforts are not always successful, as is apparent from the following story. A teacher in a Board school has been giving some girls instruction in elementary anatomy to point the evils of tight-lacing. Thereupon she received the following letter from the mother of one of her hearers: "Dear Miss ——,—Please don't tell our Lizzie anything more about her inside. It is not nice, and frightens her. Besides, it's rude." Tight-lacing is nowadays almost a thing of the past since athletics have come to form so large a portion of women's amusements, but anatomy and common-sense are alike powerless against the dictates of fashion. If fashion decreed that, instead of wearing the products of diseased molluscs in their ears, women ought to carry bones through their noses or discs of wood in their lips they would do it. A light, well-fitting, and yielding corset is almost a necessity, and it is only the more silly of the fair sex who enclose themselves in an iron grip.

A NEW METHOD OF STAINING FLAGELLA.

LÖFFLER'S method of staining flagella is probably the one most commonly employed. It is, however, rather troublesome and the manipulation required difficult. Dr. Pitfield of Philadelphia has introduced a new and easier one.[1] It consists in the use of but a single solution, which is at once mordant and stain. The solution should be made in two parts, which are filtered and mixed—(*a*) saturated solution of alum, 10 c.cm., and saturated alcoholic solution of gentian violet, 1 c.cm.; and (*b*) tannic acid, 1 grm., and distilled water, 10 c.cm. The solutions should be made with cold water, and immediately after mixing the stain is ready for use. The cover-slip is to be carefully cleaned, the grease being burned off in a flame, and after it has cooled the bacteria are spread upon it well diluted in water, care being taken to exclude culture medium. After the preparation has been thoroughly dried in the air it should be held over the flame with the fingers, as Löffler has directed. Afterwards the stain is gradually poured on the slip and heated gently, the fluid being brought almost to boiling point; the slip covered with the hot stain should then be laid aside for one minute, washed in water, and mounted. Upon examination the bacteria, both isolated and in clumps, will, if mobile, be found to have the flagella clearly and delicately defined. In the middle of the cover-slip, as well as round the edges, the bacteria will be found equally well stained, the clumps being surrounded by a zone of delicate fringing flagella, each being well stained and distinctly outlined from its fellows. If a clear preparation is desired, the stain, after mixing, may be filtered; but Dr. Pitfield has found that the most reliable method is to use the unfiltered stain. In the case of the former a clear fluid is produced without the detritus &c. being precipitated on the glass around the micro-organisms, and all the flagella are stained, but not so distinctly as with the unfiltered solution. If the filtered stain is used a second stain of aniline water containing gentian

[1] Medical News, Philadelphia, No. 10, vol. lxvii.

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violet had better be used, which should be applied but a moment and then washed off, thus leaving a clean field, showing only the bacteria lightly stained, with their flagella still more lightly coloured. In examining the different bacteria Dr. Pitfield found that the bacillus of typhoid fever, the colon bacillus, the cholera bacillus, and the bacillus of hog cholera each stained well by this method and without the addition of any acid or alkali to the mordant such as Löffler uses. The bacillus of typhoid fever showed the flagella most beautifully, and there seemed one flagellum to each cell that stained more deeply than the others and appeared larger and stronger.

CHARING-CROSS HOSPITAL MEDICAL SOCIETY.

WE are glad to notice that the Charing-cross Hospital Medical Society, which for several years has been allowed to drop into unmerited obscurity, has been set on foot once more with every prospect of a successful session before it. The first meeting was held on the 20th inst., when several members of the school and hospital staff and a large number of students were present to listen to an instructive paper on the Abuse of Athletics by Mr. C. D. Francis Burney. An interesting discussion followed the reading of this paper, in which Dr. F. W. Mott, Dr. M. S. Pembrey, Mr. Morgan, Mr. Carter-Braine, and others took part. Mr. Burney replied in suitable terms. A vote of thanks to the chairman, Mr. C. Gibbs, F.R.C.S. Eng., brought the proceedings to a close. These meetings are to be continued once a fortnight throughout the winter session, and it is hoped that every student of the hospital will take the opportunity of attending what is likely to be a very instructive and helpful course.

THE UNQUALIFIED ASSISTANT.

AT an inquest held on Nov. 8th by Dr. Wynn Westcott at the Shoreditch Coroner's Court, a special verdict was given with reference to the employment of an unqualified assistant at a branch practice. The deceased was an infant who had been in good health till Nov. 1st. The mother took him next day to Mr. Currah's surgery at 92, St. John's-road, Hoxton, and there saw a gentleman whom she supposed to be a qualified medical practitioner. He prescribed a powder which was duly administered, and on Nov. 4th he prescribed a powder and mixture. At a late hour on that day the patient became worse and the mother returned to the surgery, but it was closed, and no one was resident there. Another medical man was sent for and came at once, but the child died before his arrival; he made a post-mortem examination and gave evidence at the inquest that the cause of death was croupous pneumonia of both lungs, and that the body was well nourished and free from signs of injury. The evidence of the prescriber was as follows: "I am employed by Dr. Currah. I am a dispenser of medicine. The mother came to me on Saturday morning, and I gave her a powder; she came again on Monday, and I gave her a mixture of ipecacuanha and ammonia. ..... I have no legal qualifications. Dr. Currah's name is on the door; he lives close by; neither of us lives on the premises. ..... I have been twenty years an unqualified practitioner, and it is very hard to be prevented from practising." The jury returned a verdict of "Death from acute pneumonia," adding an emphatic expression of opinion that unqualified men should not be permitted to prescribe and dispense as qualified men. So far the case does not materially differ from many which are from time to time recorded, and which have occasionally proved a source of trouble to the legally qualified associate in the business. The employment of unqualified assistants is not unlawful, and under proper supervision their services may be not only useful to their principals but advantageous to themselves, as for instance when they happen to be young men on the point of entering the profession. Mr. Currah, however, in seeking to justify himself, gave the matter an entirely new and reprehensible aspect. His evidence was as follows: "I am a registered medical practitioner; I have a branch practice at 92, St. John's-road; I employ Mr. [illegible] to dispense there and prescribe for trifling cases; I am frequently there. He is told to call me whenever necessary. An unqualified man takes less wages; and unqualified men are better than some young qualified men; but a person who pays only sixpence for medical attendance does not expect to have medical attendance from a qualified man." Mr. Currah's remarks were probably made in haste, and intended only for the limited audience of a coroner's court in a poor neighbourhood; on further consideration must satisfy him that they will stir of a highly unfavourable interpretation. His suggestion that the efficiency of medical services, by whomsoever rendered, may be estimated according to the fee paid by the patient is one which cannot be too promptly and strenuously repudiated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the recent clinical examination for the Fellowship a number of interesting cases were brought together, and, as usual, many Fellows of the College attended in order to see them. The cases provided for these clinical examinations for the Fellowship form the best collections of clinical cases to be seen in London, for patients presenting surgical conditions typical or rare are sent from all the London hospitals. In fact, it is probable that nowhere else in the world can such an assemblage of remarkable cases be seen. The clinical examinations, like all the other examinations of the College, are open to all the Fellows. Of course, it must happen that great variations occur in the value of the cases shown, and on this occasion they were not quite up to the average. Two of the cases deserve mention. One was that of a little girl, eight years of age, with congenital absence of tibiæ, but she was able to "walk" fairly on the ends of the femora; as in all these cases, the fibulæ were hypertrophied. The other case was that of an infant with a translucent fluctuating swelling over the right parietal bone; it appeared after an injury, and was probably what has been called a "traumatic meningocele" or a "cephalhydrocele"; in this case there was no pulsation.

JURIES AND OVERLAYING.

THE commendable zeal shown by coroners in dealing with cases of overlaying is clearly of little practical value unless it be supported by the intelligence and good sense of their jurymen. Unfortunately for the public interest it is not always thus aided. In order to prove this we need only refer to an incident which lately occurred in the Lambeth Court. The case was that of a woman, the mother of four children of whom two had died in succession from being overlain. At the examination on the first occasion the woman had been carefully warned against having a young child in bed with her. She had nevertheless persisted in this practice, and another death within twelve months was the result. Mr. Braxton Hicks pointed out these facts to his jury. He also informed them that 500 children had in this way been done to death during the last ten months in London alone. What was then the decision of these twelve interpreters of justice? Accidental death, purely accidental. Well might the coroner describe the process of legal inquiry under such irrational direction as a "perfect farce." After the warning conveyed to this mother and impressed by experience on a former occasion, the least that was compatible with sound judgment or consicence in a matter of public duty was a verdict of neglect. It is impossible even

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to allege in excuse the difficulty of providing separate sleeping accommodation for a young child. A box and a couple of chairs will suffice for an extemporised cot. Such means are daily used for this purpose among the intelligent poor, and if the ignorant or the careless do not regard them this fact only adds force to our argument. The mother in the case quoted was not ignorant. She was thoughtless and negligent, and the only possible decision respecting her conduct was one which would so describe it. It is to be hoped that coroners' juries in future will not be so deceived as to confirm a verdict which in its feeble pity for the heedless parent is so cruel towards the child. It is to the loyal exercise of a sound and simple judgment in such matters that we must look if we desire to avoid the necessity for special legislation in cases of this kind. Unless the exercise of this faculty can be relied upon, as it ought to be wherever twelve rational persons meet together, we can see no other alternative but to include the "accident" of overlaying within the list of indictable offences.

A HUMANE POLICE CLUB.

FROM America comes an account of a new weapon for the use of the police. To quote from the descriptive pamphlet, "it is strong and effective, safe, humane, and nearly indestructible. In its use the human brain is not injured, the normal skull fractured, the skin broken, nor blood brought except at the nose. It may break an arm or blacken an eye. Experiments on cadavers, animals, and violators of the law confirm these claims. It stuns and stupefies temporarily, with rapid and complete recovery. Such claims cannot be made for any other effective police club. This policeman's club is 'composed of a central core-piece and an elastic envelope constructed in an integral piece and wholly enclosing said core.'" A variety of testimonials appear in the pamphlet, from which we select the following as being simple and as throwing a new light upon the way in which the supply of police is kept up: "Glasgow, Scotland, April 1st, 1895. I will put it into the hands of an experienced officer for trial. What do you charge for them?" The club is the invention of a Dr. Nelson, who claims for it that its use will stun a man without doing him permanent injury. Successful experiments appear to have been made upon dogs and calves, but though doubtless it would not cut like a wooden club we doubt whether the concussion effects would be any less than when the old club is used.

QUININE AS A PROPHYLACTIC OF INFLUENZA.

DR. C. GRAESER of the German Hospital at Naples points out[1] that the timely and continuous administration of quinine during influenza epidemics may undoubtedly prevent infection, and cites in support of this opinion—in holding which he does not stand alone—his experiences with regard to a regiment of hussars stationed at Bonn during the epidemic wave of 1889–90. He has previously published these facts, but again refers to them in consequence of an article which appeared this year in a Paris medical journal,[2] stating that experiments on rabbits showed quinine to be inactive against the infection of influenza. His facts are simply these: that for a period of twenty-two days he administered to each man of one of the squadrons of the regiment 0·5 gramme — i.e., about 8 grains — of quinine hydrochlorate, and that the numbers attacked by influenza in this squadron were far smaller than those who succumbed in each of the other squadrons, even in those occupying the same quarters. Thus, during this period there were attacked in the first squadron twenty-two men, in the second seven, in the third nineteen, in the fourth forty-two, and in the fifth thirty-two. Now it was the second squadron that underwent the quinine treatment, and of the seven men attacked three fell ill on the first day of the trial, two on the third day, and one on the fourth and fifth days respectively. After that no cases arose in this squadron, although fresh attacks continued to occur in other detachments. Dr. Graeser is persuaded that this *experimentum crucis* justifies the conclusion that quinine has a specific action in influenza, and that when administered at the appropriate time and in sufficient dose it may prevent an attack in a person exposed to infection. Such an experience, he holds, is of more weight than any experimental results in animals.

[1] Wiener Klinische Rundschau, 1895, No. 45.
[2] Revue de Médecine, 1895, No. 3.

THE HUXLEY MEMORIAL.

ALTHOUGH Professor Huxley's life and work have so stamped his personality upon the nation that he will never be forgotten, yet it is fitting that some tangible memorial of so great a mind and so charming an individuality should be established. On Nov. 28th the general committee appointed to further such a memorial met in the Museum of Practical Geology. Literature, art, and science were all represented, and it was decided that the memorial should take the form of (1) a statue to be placed in the Natural History Museum; (2) a medal in connexion with the Royal College of Science; and (3) that the surplus should be devoted to the furtherance of biological science, the manner to be determined by the committee, dependent upon the amount collected. It was also announced that Messrs. Macmillan were prepared to publish at their own risk a collected edition of Professor Huxley's scientific papers, and would defray the cost of editing. The total sum promised and received is £544.

METROPOLITAN HOSPITAL SUNDAY FUND.

ON Monday last, Nov. 25th, the Council of the Metropolitan Hospital Sunday Fund assembled in the Venetian Parlour of the Mansion House to determine the report of the Council for 1895, to revise the list of Council for the coming year, and to recommend a convenient day for the Hospital Sunday collection in 1896. As previously announced,[1] the twenty-third year of collecting the Fund has resulted under the presidency of the late Lord Mayor, Sir Joseph Renals, in an unprecedented total of over £60,000, and the report gives prominence to the Council's desire to place on record its indebtedness to the persons mentioned in a series of resolutions adopted at the last meeting of the Council. The large sum collected this year will, we hope, be always maintained, if not exceeded, and the auspicious words with which Colonel Sir Walter Wilkin, the new Lord Mayor—who by virtue of his office presided at the Council meeting on Monday as President of the Fund—give us every reason to believe that such will be the case. "I am very gratified indeed," he said, "to find that the amount realised this year has reached so large a sum, and I trust that during the coming year you will assist me, and I will do all I possibly can, to at least maintain these figures." Hospital Sunday in the metropolis has always been fixed as near as possible to the middle of June, and in accordance with this precedent the next annual general meeting of the Fund will be asked to sanction June 14th as the date for Hospital Sunday, 1896. To fill the vacancies on the Council caused by death or resignation the following names are recommended: The Rev. Canon Graham, the Rev. David Anderson, the Rev. M. R. Neligan, the Rev. H. Russell Wakefield, Sir Joseph Renals, Bart., the Earl of Stamford, Alderman Faudel Phillips, and Mr. John Astley Bloxam, F.R.C.S. Eng. During the proceedings some discussion took place on a question raised by Mr. Acland with reference to the position

[1] THE LANCET, Nov. 16th, p. 1248.

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of St. Thomas's Hospital in regard to the Fund and its non-participation in the awards. The matter will be fully discussed at a meeting of the constituents in the early part of next year. The annual general meeting will be held at the Mansion House, on Wednesday, Dec. 18th, at 3 P.M.

THE BATTLE OF THE CLUBS.

WE published last week a letter from Dr. T. Frederick Pearse, honorary secretary of the Portsmouth Medical Society, stating that the present holder of certain clubs at Portsmouth having refused to undertake the care of infants and girl juveniles under a charge of 4*s*. per annum, four medical men from other places had tendered for the clubs at a lower figure. The local members of the profession stood solidly by the holder of the clubs, refusing to compete against him by accepting lower terms, and we rejoice to say that the tactics of unanimity have prevailed. The present holder is confirmed in his appointment by 168 votes against 65, 31, and 11 given for the three outside competitors.

THE CASE OF DR. WIGHT.

As our readers are probably aware, the trial of Dr. Wight at the Central Criminal Court, on an indictment charging him with the manslaughter of Mrs. Fletcher by alleged unskilful treatment, took place on Monday and Tuesday of the present week, and resulted in a verdict of "Guilty" and a sentence of three months' imprisonment without hard labour. Medical evidence was given by Mr. Hannah after the verdict, but before sentence was passed, that the prisoner's health had been failing for some time, and Mr. Hannah is reported as having said that he did not think the prisoner was in his right mind. This evidence appears to us an important feature in the case, and, indeed, it seems to have been so considered by the judge, for he ordered that the prisoner should be placed under the care of the medical officer of the prison till the directions of the Secretary of State were received. Of course, if the medical opinion above mentioned as to the state of Dr. Wight's mind is correctly reported, and if this opinion should be corroborated, it is unfortunate that it should not have been produced for the consideration of the jury before they gave their verdict. Dr. Wight would in such case appear to have been entitled to an acquittal on account of the state of his mind. Most probably the Home Secretary, under the circumstances, will obtain independent medical opinions in this matter before deciding whether or not the sentence pronounced shall be carried into effect, and we feel sure that everything that is submitted to him on this aspect of the matter will receive the consideration it deserves.

THE RELATION BETWEEN ADENOIDS AND TUBERCULOUS CERVICAL GLANDS.

AN interesting pamphlet has recently been published by Dr. J. H. Nicoll of Glasgow giving his impressions derived from a study of 500 cases of enlarged glands of the neck. Some of his conclusions are rather startling and so far opposed to received teaching that he would have made his paper more convincing if he had entered with greater detail into a consideration of the facts which led him to his conclusions and given a description of the methods of investigation pursued by him. He believes that caries of the teeth no more affects the glands of the neck than caries of the tarsus affects the glands of the groin. He admits that cutaneous eruptions cause enlargement of the glands, but that they are never tuberculous. Chronic enlargement of the cervical glands he believes to be due in 80 per cent. of the cases to tuberculous infection from the tonsils and naso-pharyngeal mucous membrane. On this ground he practises and enthusiastically recommends the removal of the tonsils and erasion of the naso-pharyngeal mucous membrane whether there be enlargement of the tonsils and adenoid vegetations or not, as a preliminary to excision of the glands. He maintains that in most tonsils removed in this way tubercle bacilli may be discovered under the microscope even when there is no evidence of tuberculous disease to the naked eye. No drawings of sections are given, and we are often obliged to rely on the dogmatic assertions of the writer instead of being able to consider the evidence on which he has arrived at his conclusions.

THE INCONSISTENCIES OF ANTI-VIVISECTIONISTS.

MR. BURFORD RAWLINGS, in a letter to the *Times* of Nov. 27th, points out with great force the injury which the unreasoning and illogical attitude of the anti-vivisection clique is inflicting upon hospitals. Mr. Rawlings quotes a list of "bequests to societies amounting to some £60,000, of which the large majority were for the benefit of animals other than man—horses, dogs, &c.—while the institutions which are supreme in their beneficence and utility were conspicuously absent. The explanation was found in a legacy of large amount bequeathed to an 'anti-vivisection society,' and, without for a moment seeking to lessen the full liberty of a testator, hospital workers may be permitted a protest when they believe the exclusion of their institutions is brought about by reckless mis-statement. The animus exhibited in the provisions of this particular will is remarkable chiefly because of its increasing frequency, and we may well ask what is the result these assailants of our hospitals have set themselves to achieve." Whatever be the result they wanted to achieve, the one which they actually do achieve is to lessen the number and amount of subscriptions, and so compel the closing of wards. Mr. Rawlings points out the inconsistency of members of anti-vivisection societies who, when ill, at once employ a medical man and a nurse, both of whom have been trained in an institution which the sick man has been in the habit of vilifying both by word and action. We take it that the most bigoted anti-vivisectionist, if he had an aneurysm or a wound in an artery and was told that he could be cured by the ligation of the vessel, would submit, and yet the feasibility of such procedure was established by experiment on the living animal. Hospitals, as the writer of the letter we comment on says, are not responsible for the practice of vivisection, and it is equally cruel and foolish of the opponents of that practice to try to make them so.

A SESSIONAL meeting of the Sanitary Institute will be held at the Parkes Museum on Wednesday, Dec. 11th, at 8 P.M., when Sir Douglas Galton, Vice-President of the society, will open a discussion on the Lessons to be Learned from the Experimental Investigations by the State Board Health of Massachusetts upon the Purification of Sewage.

LUCKLESS Christ's Hospital! There are now under treatment in the infirmary of the school cases of measles, scarlet fever, and diphtheria, and the parents of the boys have, we understand, been informed that they can remove their sons if they wish to do so, and can do it without risk to other members of the family, before the end of the term.

"INFECTIVE and Tubercular Osteitis as Causes of Arthritis, and the Importance of their Early Treatment" is the title of the Bradshaw Lecture to be delivered at the Royal College of Surgeons of England on Dec. 5th at 5 P.M. by Mr. C. N Macnamara.

THE Milroy Lecturer at the Royal College of Physicians of London for 1896 will be Dr. Edward Seaton.

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LORD KELVIN is to retire from the Presidency of the Royal Society, and Sir Joseph Lister has been nominated as his successor. Sir Joseph Lister will be the first practising surgeon who for many years has occupied this exalted position, and the profession will join us in heartily congratulating him upon his merited attainment thereto.

THE Harveian Lectures on "The Heart in its relation to Pregnancy, Parturition, and the Puerperal State" will be delivered before the Harveian Society by Dr. M. Handfield-Jones, on Dec. 5th, 12th, and 19th, at 8.30 P.M., at the Stafford Rooms, Tichborne-street, Edgware-road, W.

DEPUTY-INSPECTOR-GENERAL RICHARD DOMENICHETTI has been appointed Honorary Physician to Her Majesty the Queen; and Surgeon-Major-General C. D. Madden and Surgeon-General H. T. Reade, V.C., C.B., have been appointed Honorary Surgeons to Her Majesty.

HIS ROYAL HIGHNESS THE PRINCE OF WALES has promised to take the chair at the festival dinner in aid of the funds of Guy's Hospital, which is announced to take place in May next.

ABUSE OF MEDICAL CHARITIES.[1]

BY C. A. GRIFFITHS, F.R.C.S. ENG.,
LATE RESIDENT MEDICAL OFFICER, GENERAL AND EYE HOSPITAL, SWANSEA;
AND
T. G. HORDER, M.R.C.S. ENG., L.R.C.P. EDIN.,
EX-PRESIDENT, CARDIFF MEDICAL SOCIETY.

BEFORE referring to the inquiry we have made into the medical charities of Cardiff it may be as well briefly to state what has been done in reference to this question in other towns and also to refer to a Conference of the Charity Organisation Society which met at Oxford in the year 1890 and discussed the question of organisation of medical relief. From the report of the Medical Charities Committee of the British Medical Association which was presented to the members at the annual meeting held in Birmingham in 1890, we extract the following: "The committee recommend an immediate reform of the in-patient departments of medical charities as an urgent necessity, and would especially emphasise the fact that it is difficult fro provident or other thrift movements to compete successfully against medical charities which bestow relief on all applicants without any inquiry, or against those which, by charging a fee from 1*d.* to 2*d.*, try to undersell any provident system. They would also add that the reform of provident dispensaries and sick clubs is necessary." To carry out these proposals the committee consider that a reform of the abuse of the out-patients' departments would be best attained by some modification of the Manchester system, which is set out in the appendix. To this end they would recommend that the following "wage limit" should be adopted: single man or woman, 14*s.* per week; man and wife, 18*s.* per week, and 1*s.* 6*d.* for each child (19*s.* 6*d.*, 21*s.*, 22*s.* 6*d.*, 24*s.*, 25*s.* 6*d.*, 27*s.*, 28*s.* 6*d.*, 30*s.*, &c., per week). The above "wage limit" is one that cannot be adopted universally. On this basis they recommend that the following cases should be considered ineligible for outpatient hospital relief otherwise than as accident and urgency cases.

1. All those earning over the "wage limit." Letters of recommendation from subscribers to medical charities, Hospital Saturday and Sunday Funds, ought to carry no weight unless the person so recommended for relief conforms to the "wage limit" clause. No subscriber should be permitted to receive any benefits for himself or his household. Each subscriber who recommends an ineligible patient should have forwarded to him by the hospital clerk or secretary a form like the following:—

SALFORD ROYAL HOSPITAL.

Name .....
Residence .....

The circumstances of the above-named person recommended by you have been carefully inquired into, and it is found that he is not a proper case to be admitted as a patient of this charity.

To Mr. .....

Full particulars may be obtained at the hospital.

G. H. Larmuth, Secretary.

2. That all those who are in receipt of Poor-law relief and those who are members of friendly societies possessing a surgeon shall be ineligible for out-patient relief, except with a recommendation from the surgeon in attendance to show it is a case requiring consultation. To inquire into the social circumstances of applicants for relief an inquiry officer should be appointed at each hospital with a view to prevent the abuse of charity by improper objects, and a notice to this effect similar to that in use at the London Hospital should be placed in the waiting-halls. This will act as a deterrent to those who try to impose on charity, and will therefore lessen the work of the inspector.

Notice to Governors and Patients.

1. With a view to prevent the abuse of charity by improper objects a waiting-hall inspector will be employed to ascertain whether any patients presenting governors' letters are able to pay the fees of consulting physicians or surgeons or (not being urgent cases) of local practitioners; or should be referred to recognised provident institutions (wherever existing) or being in receipt of parish relief should be required to attend Poor-law dispensaries.

2. In order to ensure that renewed attendance is granted solely to such patients as require the continuous advice of experienced hospital physicians or surgeons, a governor's letter will not entitle to more than one attendance unless the medical or surgical officer on duty may decide to prolong such attendance, and he is not at liberty to continue in force any ticket unless in his professional opinion further treatment be necessary or desirable, in which latter case attendance may be prolonged without renewal.

[The Manchester Royal Infirmary system for checking out-patient hospital abuse was then cited. This system consists, in brief, of the employment of an inquiry officer and a wage limit. Letters were then quoted from the hospitals of St. Bartholomew and the London, and the Manchester Royal Infirmary, stating their methods for checking abuse of the charity by out-patients. They all consisted in the employment of an inquiry officer.]

As to the organisation of medical relief, Mr. Timothy Holmes of London, in speaking on this subject at Oxford in 1890, made some valuable observations which are well worthy of attention.

[A portion of Mr. Holmes' paper was then quoted as well as some remarks of Mr. Smith of the Manchester and Salford District Provident Society.]

The result of much deliberation was the establishment of a number of provident dispensaries in various parts of Manchester and Salford, and a system of investigation into the circumstances of applicants for relief at the free medical charities. Those charities who fell in with the scheme abolished to a great extent the system of subscribers' recommends and agreed to treat all cases upon application. The names and addresses of the patients are then sent on to the District Provident Society, whose officers visited their homes and inquired into their circumstances; those who were found to be able to pay medical men's fees were refused further charitable relief, and those able to pay the provident dispensary charges were referred to these institutions for further treatment, whilst those whom it had been necessary to take into the hospital as in-patients were required to contribute according to their circumstances to the charity at which they were being treated. This may be said to be the system of medical relief now in vogue in Manchester and Salford, and although a few of the medical charities have not seen their way to become affiliated, still they have individually adopted some similar scheme of visitation and investigation, and have benefited much thereby. In 1875, when the system was first applied, the percentage of applicants to the affiliated medical charities who were found to be ineligible for free treatment, and who were in consequence referred to the provident dispensaries or told to engage private practitioners, was 43·32, in 1880 it was reduced to 14·76, in 1885 to 13·57, and in 1889 to 6·89.

[1] An abstract of a paper read at the meeting of the South Wales and Monmouthshire Branch of the British Medical Association on Nov. 19th, 1895.

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Thus, as far as Manchester and Salford are concerned, it may now be said that the once oft-heard cry, "abuse of medical charities," is a thing of the past.

Having obtained the permission of the committee we visited the out-patient department of the Cardiff Infirmary on several occasions; in all, we interviewed 129 patients attending the medical, surgical, ophthalmic, and aural departments. At the request of the committee Mr. Munday was present at each visit. The particulars we endeavoured to obtain from the patients were: (1) name; (2) age; (3) address; (4) occupation; (5) income of family; (6) number of family at home; (7) nature and duration of illness; (8) amount paid for rent; and (9) name of employer. The answers given to us were recorded in a book at the time, and we wish particularly to say that any conclusions we have arrived at have been drawn from those answers. In several cases where we were of opinion that further information was desirable we sought for, and obtained, the assistance of the Cardiff Charity Organisation Society. Before giving details we wish to say that the secretary's attention is called to cases where the income of the patients is stated on their letters to be above the "wage limit" adopted by the committee. It is only right that you should be acquainted with the regulations which are printed on the back of the out-patients' letters.

[The Rules were then quoted.]

In connexion with the "wage limit" we are informed that in 1891 a committee was appointed to consider means for the better organisation of medical charities in Cardiff, and that this committee, which consisted of representatives of the infirmary, the provident dispensary, and the Charity Organisation Society, made the following report:—

A meeting of the Joint Committee for the Better Organisation of Medical Charities was held at the infirmary on Thursday, Aug. 13th, 1891, at 5 P.M. Present: Dr. Sheen (in the chair), Mr. Charles Thompson (representing the infirmary), Mr. T. H. Stephens (representing the provident dispensary), and Mr. H. M. Thompson (representing the Charity Organisation Society). The following recommendations were unanimously adopted:—

1. With a view to prevent the abuse of the charity by improper objects a paid officer should be appointed to inquire into the circumstances of out-patients presenting governors' letters and applying for medical relief.

2. That a "wage limit" for out-patients at the infirmary be adopted, the following being suggested as applicable to Cardiff: Single man or woman, 18*s.* per week; man and wife, 22*s*; and each child, 1*s.* 6*d.*; and that all applicants for out-door medical relief whose wages shall be found on investigation to be in excess of this limit (unless for special reasons it seems to the out-patient medical staff desirable to retain them as patients) shall be referred to the provident dispensary or refused attendance, as the case may be.

3. In order to insure that renewed attendance is granted only to such patients as require it a governor's letter will not entitle to more than one attendance, unless the out-patient medical officer for the day may think it desirable that further attendance should be given.

4. No person in receipt of parish relief or belonging to a club with medical attendance, or being a member of the provident dispensary, shall be deemed eligible for relief, except for the purpose of a consultation on the recommendation, in writing, by the respective medical officers.

5. Any domestic servant in service presenting an out-patient letter to be referred to the provident dispensary after one attendance.

6. That minor accidents and urgent cases be attended to in the first instance without inquiry, but referred to club doctor, provident dispensary, or private practitioner subsequently, as the case may be, if not eligible for treatment under the rules here suggested.

7. That a board should be placed in a conspicuous position containing the following information:—

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY.

This institution is a charity for the medical relief of the necessitous poor only.

Out-patient Department.

Patients are seen daily (Sundays excepted) at 3 P.M., on presentation of a governor's letter if they are suitable objects.

There are special departments for eye and ear cases and dentistry.

The ophthalmic surgeon attends on Monday, Wednesday, and Friday, at 3 P.M.

The dental surgeon attends on Tuesday and Friday, from 9 to 10 A.M.

Accidents and urgent cases are attended to at any time without a governor's letter.

Persons in receipt of parish relief, or belonging to a club with medical attendance, or to the provident dispensary, are inadmissible as out-patients, except on the recommendation of their respective medical officer for the purpose of consultation.

This report was presented to the infirmary committee on Oct. 14th, 1891, but was not evidently adopted as presented, for we find that the "wage limit" clause was altered, that the allowance for each child was altered from 1*s.* 6*d.* to 2*s.*, and, most important of all, that the recommendation of the committee to appoint an inquiry officer to investigate the circumstances of the out-patients was not carried out. We also found that the rule forbidding the treatment of persons receiving parish relief or belonging to clubs having medical officers has not been carried out. The growth of the out-patient department is worth recording, especially as we are given to understand that the infirmary is urgently in want of funds to enable the committee to open the new wards for in-patients. In the year 1885 the population of Cardiff was 97,034, and the number of out-patients was 7385. In 1895 (to June 30th) the population was 155,637, and the number of out-patients was 6455. It will be as well here to give the figures connected with the membership of the provident dispensary. In the year 1885 (ten months) the receipts from members were £277 6*s.* 10*d.* In 1894, with a membership of 1586, the receipts were £705 18*s.* 4*d.* On analysing those patients whose cases we had an opportunity of inquiring into we found that there were seven whose incomes amounted to 30*s.* per week, three to 31*s.*, two to 35*s.*, one to 38*s.*, one to 39*s.*, one to 48*s.*, two to 43*s.*, one to 49*s.*, one to 51*s.*, one to 74*s.*, and one to 58*s.* per week. That the condition of some of the patients should be better estimated we give particulars of those who were found to have a "wage limit" in excess of the infirmary standard, and also a list of those who, we have good grounds for believing, were in receipt of such an income as would not entitle them to charitable relief. The following cases appear to us from the statements made by the patients themselves to be outside the "wage limit" fixed by the infirmary committee:—

List I.

No.	Rent.	Income of family.	Number of children.
1	14/- (shop)	58/- (estimated)	Seven (two only not at work).
2	7/-	74/-	Six (three not at work).
3	4/6	51/-	Five (three at work).
4	6/-	48/-	Six (two at work).
5	7/-	43/-	Four (two at work).
6	10/-	43/-	Five (two at work).
7	5/6	51/-	Four (one at work).
8	4/-	35/-	None.
9	(?)	32/-	(?)
10	17/-	31/-	(?) One.
11	14/-	30/-	None.
12	7/-	30/-	Two (one at work).
13	5/6	38/-	Four (one at work).
14	5/6	30/-	Two.
15	6/-	32/-	Four.
16	10/-	(?) 30/-	Three.

= ¼ of the whole number examined.

In the following list are given the particulars of cases where we have good reasons for believing the wages stated by the patients to be below those usually earned by men of the same trade:—

List II.

No.	Trade.	Wages as stated.	Wages believed to be earned.
1	Coal trimmer	20/- to 40/-	40/-.
2	Marine engineer	£4 a month	£8 a month.
3	Hair-dresser	25/-	28/- (and commission).
4	Collier	7/-	(?) Average 30/-.
5	Tailor	12/- to 20/-	Much too low.

We have only to add that concerning all these cases we are in a position to give more information should it be desirable.

Turning our attention to the nature of the complaints for which the out-patients sought relief, we found that in a very large number of cases the illnesses were of a trivial nature, and such as could easily be relieved by a few bottles of medicine. We wish, however, to state that in some of the cases we could only make a shrewd guess as to the nature of the complaints; in the majority the nature of the illness had been diagnosed by the medical officers of the infirmary. The prevailing diseases were: anæmia, 11; disorders of the lungs (including cough, phthisis, and chronic bronchitis), 15; dyspepsia, 6; chronic rheumatism, 5; stomach disorders, 5; diseases of the skin, 5; and diseases of the eye, 18. The occupation of the patients or of their parents included the following: colliers, coal trimmers, warehousemen, tailors, boiler-makers and their assistants, marine engineers, hair-dressers, gardeners, masons, moulders, lodging-house keepers, outfitters,

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bill-posters, policemen, dock pilots, publicans, fitters, dressmakers, domestic servants, and labourers. It was noted that there were several persons in the receipt of parish relief, some were in the receipt of club pay, and some were domestic servants in situations. In sixteen cases we were not able to ascertain the income of the patients and their families, and in eleven cases the heads of the families were out of work.

In summing up, we are decidedly of opinion—(1) that the "wage limit" at the Cardiff Infirmary is too high; (2) that a considerable number of persons obtain letters who could well afford to pay private practitioners; (3) that a very large number of persons obtain letters who could well afford to pay the small fees of the provident dispensary; (4) that a large proportion of the cases attending the out-patient department are of a very trivial nature and could easily be treated in other ways; and (5) that the only satisfactory way to discover these persons who are not entitled to receive the benefits of the charity is to appoint an inquiry officer whose sole duty it would be to make personal investigations into the circumstances of the patients after they have received one attendance. We think it right to state that patients seeking relief in the ophthalmic department can hardly be dealt with in the same way as patients in the medical and surgical departments. Some of those attending the ophthalmic department could very well afford to pay the fees of a specialist; but, on the other hand, it cannot be denied that the majority could not afford to pay those fees. It is difficult to suggest a remedy unless the ophthalmic surgeons could see their way to arrange to see patients on a certain day at their own houses at a reduced fee. We are given to understand that the ophthalmic surgeon at the infirmary has from time to time refused to attend certain out-patients, believing that they were well able to afford to pay the regular fees. From the very large number attending this department it must be almost impossible for the medical officers to make any sort of inquiry into the circumstances of those coming before them. We think that the appointment of an inquiry officer would tend to reduce very materially the number attending the ophthalmic department.

Through the courtesy of the committee of the Cardiff Provident Dispensary we were enabled to inspect the list of the members and to make any other inquiry we thought fit. This institution was established in 1884, and has an acting medical staff consisting now of eleven practitioners. The following is the number of patients on the roll for the years 1890 to 1894: 1890, 1517; 1891, 1482; 1892, 1456; 1893, 1547; and 1894, 1586. There is a "wage limit" for members, and it is as follows: Single man or woman, 21*s.*; married men, 25*s.*; each child, 2*s.*; and limit for man and wife and five children, 35*s.* The two points to which we directed our attention were: (1) whether persons were admitted as members who could reasonably be supposed to be able to pay the ordinary fees of private medical practitioners, and (2) whether systematic canvassing for members took place or not. We are satisfied that every possible precaution is taken to prevent well-to-do people becoming members.

With regard to canvassing for new members, we are informed that this takes place. It seems to us that medical men who are not on the staff have good grounds for objecting to canvassing. The chief cause of complaint to the lay medical aid associations is the fact that they canvass for members, and what is objectionable in a medical aid association must necessarily be objectionable in a provident dispensary. General practitioners who have no connexion with the dispensary are liable to lose patients. Such a system is apt to lead to reprisals on the part of private practitioners, and for this reason, if for no other, it should be dispensed with. We think with the committee of the dispensary that the sphere of usefulness of that institution might be considerably enlarged if the committee of the dispensary effected a closer alliance with the out-patient department of the infirmary. We have no hesitation in asserting that the vast majority of the out-patients we saw at the infirmary were in a position to afford the small subscription necessary for joining the dispensary. If ever such a close alliance came about it would be necessary, however, to increase the staff of the dispensary and also to establish subsidiary branches in the outlying districts. A model provident dispensary would be one that included on its staff every registered medical practitioner who had resided in the town for a period of twelve months, and who had been recommended by his brother practitioners already on the staff.

The *Hamadryad* Seamen's Hospital is supported by contributions from vessels belonging to the port. Patients are admitted on the order of their captains. In the case of foreign ships the Consul's order is also accepted. Sailors not belonging to the port are admitted on the payment of 3*s.* a day. Destitute sailors are frequently attended as out-patients without the production of an order. The order from the Consul or the captain is a contract that they will either contribute towards the hospital or pay 5*s.* a day during the period of treatment.

In conclusion, we think it right to state that the result of our inquiry merits the serious attention of the committee of the Cardiff Infirmary, and we feel sure that if they would only deal with the abuses which are pointed out they will have the support of all those people who believe that a charity like this should be restricted to the necessitous poor.

Cardiff, Nov. 18th, 1895.

AERIAL SPREAD OF DISEASE—IN CHANCERY.

AFTER occupying the Chancery Court for six days, an action heard by Mr. Justice Kekewich was concluded on the 20th inst. which, by its medical evidence, illustrates the still unsettled state of professional opinion as regards the aerial spread of small-pox, and which also illustrates the increasing difficulty which sanitary authorities have in finding an unopposed site for the erection of a small-pox isolation hospital, at least in the southern counties.

The Guildford, Godalming, and Woking Joint Hospital Board have at present provided a cottage, and propose to erect a small hospital with some ten or fifteen beds for small-pox, on Whitemoor Common in Surrey, where there is a population consisting of only 20 inhabitants living within a radius of a quarter of a mile, and a total of 103 within a half-mile radius of the hospital site. But some of the inhabitants around, headed by the owner of an estate whose mansion is just outside the half-mile radius, sought to obtain an injunction to restrain the combined Hospital Board from using the cottage or erecting a small-pox hospital there, on the ground that it would become a "nuisance" and a danger to themselves and their property. The hospital would be enclosed in about two acres of land, 100 yards across, and surrounded by a double wall enclosing a belt of trees. The site is surrounded on all sides by a common consisting of marshy ground which is utilised for the feeding of cattle and geese. Children are in the habit of playing on the common, and one of the plaintiffs keeps cows and earns his livelihood by selling milk and butter. Another is a market gardener whose house is about 170 yards from the proposed hospital, and others reside at distances of 200, 250, 335, and 450 yards.

There was an array of seven medical witnesses on each side, and the verdict practically turned on the scientific evidence for and against the theory of aerial convection. Dr. Thorne Thorne, Dr. Bruce Low, Dr. Alexander Collie, Dr. Russell, Dr. Morton, Dr. Wilson (Hastings), and Dr. Sanderson were subpœnaed by the plaintiffs.

Dr. Thorne Thorne, after protesting that it was not in the interests of the public service that he and Dr. Bruce Low should be called, gave evidence as to the danger of the proximity of a small-pox hospital. He expressed his firm conviction that the contagion of small-pox could be conveyed through the air in some way as yet undiscovered to a great distance—under certain circumstances to a distance of at least a mile. He admitted, however, that it was upon his advice, and explained on what grounds, that the Local Government Board had adopted the present regulations for sanctioning the sites of small-pox hospitals. In a letter to the Joint Hospital Board the Local Government Board had stated that it was not their practice to sanction any loan for the erection of a small-pox hospital which would have within a quarter of a mile of it 150 to 200 inhabitants, or within half a mile of it 500 to 600 inhabitants—numbers which largely exceeded the number of inhabitants around the proposed site.

Dr. Bruce Low gave similar evidence, and referred to the Hastings epidemic of 1894, in which he believed aerial convection played an important part.

Dr. Collie thought that the hospital grounds were not large enough. But in a long cross-examination by Mr. Cozens Hardy, Q.C., he would not commit himself to the view that small-pox could be spread through the air to any great distance. He admitted that the immunity of the Darenth Asylum adjacent to the small-pox camp, and other similar instances, were against that view, finally stating that isolation in his view meant the avoidance of corporeal contact. The plaintiffs' other medical witnesses supported the theory of aerial convection.

For the defendant board, Dr. Gayton, Dr. Savill, Dr. Orme Dudfield (whose evidence was taken on commission on

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account of ill-health), Mr. Wellington Lake (the medical officer of health of Guildford), Mr. Collins (Kingston), Mr. Howlin (Woking), and Dr. Reginald Dudfield (Paddington) were called.

Dr. Gayton, after an experience of small-pox extending over nearly a quarter of a century in the hospitals of the Metropolitan Asylums Board, did not agree that a very large area around a hospital was necessary. He thought aerial convection was a theory which was not worthy of much practical consideration, and the facts on which it was based were capable of other explanations.

Dr. Savill, from his inquiry at Warrington on behalf of the Vaccination Commission, and elsewhere, believed that a sufficient belt of space around a hospital was very desirable, but solely for the purpose of efficient ventilation, not to avoid aerial convection, to which theory he could not subscribe. It was universally conceded that free fresh air was the best known natural germicide, and he failed to understand how it could become the vehicle for carrying contagion to such distances as had been alleged. There were also other grounds for disbelieving that it could take place. Cross-examined by Mr. Warrington, Q.C., on the plans of Whitemoor Common, he thought the site a good one. He admitted that infection could be taken within the limits of an ordinary room or ward by a person who simply breathed the patients' respiratory impurities, but not beyond this limit in presence of fresh air.

Dr. Orme Dudfield's evidence dwelt on the necessity of proper administration within the hospital in preference to a large area around it as the best means of preventing spread.

The other medical witnesses for the defence gave similar evidence.

Mr. Justice Kekewich, in the course of a long and elaborate judgment, first excluded from his consideration such points as the alleged greater suitability of other sites, and the accessibility of this one. The question was, "Is there here a real apprehension of real danger to the inhabitants or damage to their property or their trade?" If the existing cottage, and arrangements as now made, were used for small-pox patients the evidence went to show that there would be danger by reason of direct infection. In that sense, therefore, it constituted a "nuisance," and the plaintiffs were entitled to a verdict so far as the present arrangements were concerned. But the plaintiffs also sought to restrain the defendant Board from erecting a suitable small-pox hospital on this site. It had been shown in evidence that a properly built and administered hospital could be erected here, and the only question which remained was concerning the area of uninhabited space around, and whether small-pox could be contracted by persons frequenting and dwelling on the adjacent land. The real question, then, was, "Is aerial convection a theory sufficiently established to enable the Court judicially to say this constitutes a source of danger against which the defendants have to provide?" But his lordship had not been satisfied by the evidence before him that such a theory had been conclusively proved to exist, nor that the "particulate matter" referred to by one medical witness could be conveyed a mile, half a mile, or even a quarter of a mile. Under such circumstances it would be entirely wrong to grant an injunction against the defendants erecting this hospital, which would be an advantage to the public, because some learned men, whose opinions were entitled to great respect, came to the conclusion, though they could not prove it, that small-pox was the subject of aerial convection. The case came before him almost as a *res integra*, for his lordship had not found any reported case to assist him in coming to a conclusion.[1] But on the evidence he was of opinion that he should be going much too far in saying that there was any real apprehension of a real danger. The verdict would therefore be for the defendant board upon their undertaking (as they had consented to do) not to use the existing cottage and site for small-pox patients until a proper hospital had been erected; but, as each side had failed in part of the action, no order would be made as to costs.

[1] The case of Hill v. Metropolitan Asylums Board was finally concluded by arbitration.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A MEETING of the Comitia of the Royal College of Physicians was held on Friday, the 22nd inst., the President, Sir J. Russell Reynolds, Bart., being in the chair.

The President announced that he had nominated Dr. J. F. Payne as Harveian Orator for 1896. He also reported to the College that at a meeting held on the previous day at the University of London, Sir James Paget presiding, delegates of various bodies concerned in the question of the reconstruction of the University were selected to attend a deputation to the Duke of Devonshire on Nov. 28th. The delegates of the Royal College of Physicians were the President, the Registrar, Dr. Norman Moore, and Dr. Allchin.

The College seal was set to a deed declaring and accepting on the part of the College the Weber-Parkes prize trust.

A letter of thanks was received from the Cambridge Antiquarian Society for permission to photograph certain objects of interest possessed by the College.

A letter was read from the secretary of the Royal College of Surgeons reporting the proceedings of its Council.

A letter was read from Sir Arthur Watson resigning the office of standing counsel, which he had held since 1872. On the motion of the Registrar, seconded by the Senior Censor, Sir A. Watson's resignation was accepted, and a cordial vote of thanks passed to him for his valuable services.

On the motion of Dr. J. K. Fowler, seconded by Dr. Poore, permission was renewed to the Fellows' Club to dine in the College.

The report of the delegates of the two Royal Colleges on the proposed third and fourth examinations under the five years' scheme was received. The Registrar reviewed the various steps taken in the framing of the original scheme, and stated that the present revised plan was almost exactly the same as that which had been recommended in 1871 by the delegates of the College on the Committee of Management. The scheme, which would come into force in January, 1896, established the third examination (medicine, surgery, and midwifery) at the end of the fifth year, with certain extensions over the present examination; and permitted the examination in midwifery to be passed at any time after the completion of the fourth year of professional study, provided one year has elapsed since passing the anatomical and physiological examination. It also established an examination in pharmacology to be passed at any time after the completion of the fourth year of professional study, provided that the anatomical and physiological examination has been passed. Amongst other matters it recommended that the subject of elementary anatomy be eliminated from the first examination. Considerable discussion arose upon the desirability of instituting a separate examination in pharmacology, in which Dr. Curnow, Dr. Payne, Dr. Church, Dr. Fowler, Dr. S. West, Dr. I. Owen, Dr. Ewart, Dr. Poore, Dr. Cayley, Dr. Coupland, and Dr. Taylor took part. Eventually it was moved by Dr. Church, seconded by Dr. Curnow, and carried, that the report of the delegates be adopted, but that the Royal College of Surgeons be informed that this College would regard it as an improvement if the subject of pharmacology were included with the other subjects of the medicine examination, and not made a distinct examination by itself. Dr. Griffiths moved, and Dr. Playfair seconded, that the subject of midwifery and diseases of women be placed on the same footing as medicine and surgery—i.e., relegated to the end of the fifth year. The motion was negatived by sixteen votes to nine.

On the motion of Dr. Champneys, seconded by Dr. Playfair, a committee was appointed to prescribe the proper conduct of a practitioner when brought into relation with a case of acknowledged or suspected criminal abortion. The committee consists of the four censors, the mover and seconder, and Dr. Black.

A TEACHING UNIVERSITY FOR LONDON.

AT a meeting held at the University of London, on Thursday, the 21st inst., Sir James Paget, Bart., in the chair, and attended by delegates from institutions named in the report of the Royal Commission on the Gresham University, by members of that Commission and of the earlier Commission on a Teaching University for London, and by others interested in the establishment of a Teaching University, the following resolution was unanimously passed:—

"That the Government be requested to introduce, at an early date, a Bill, similar to Lord Playfair's London University Commission Bill, 1895, appointing a Statutory Commission to carry out the recommendations of Lord Cowper's Commission, but with an added clause giving [in accordance with precedent Acts of a similar tenor] to all institutions or persons directly affected by any Statute or Ordinance proposed by the Statutory Commission a right of appeal to the Privy Council for the

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disallowance or alteration thereof, previous to such Ordinance being laid before Parliament for confirmation."

A second resolution was passed to the effect that a deputation in favour of this resolution should wait upon the Duke of Devonshire at the Privy Council Office.

This deputation, which waited upon the Duke of Devonshire on Thursday, Nov. 28th, was introduced by Lord Kelvin.

The following representatives of institutions explain the object of the deputation: Professor Rücker, for the Senate of the University of London; Dr. Allchin, for the Royal College of Physicians; Mr. Heath, for the Royal College of Surgeons; Sir George Young, for University College; Dr. Wace, for King's College; Dr. Frederick Taylor, for the Medical Schools; the Rev. Principal Whitehouse, for the Theological Colleges; Sir Henry Roscoe, for the Professorial University Association; Professor Silvanus P. Thompson, for the Annual Committee of Convocation; and Mr. James Anstie, for the Committee of Graduates.

In replying, the Duke of Devonshire said he would not commit either himself or the Government to any definite decision, but would lay the whole matter before his colleagues. At the same time he urged them by every possible means to inform those who opposed the scheme from misunderstanding of its true nature, in order that there might be as little opposition as possible should a Bill come before Parliament.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric Fever at New Delaval, by Dr. Sweeting [1]—New Delaval lies in the Tynemouth rural district, about ten miles north-west of Newcastle-upon-Tyne, and it has a population of 1975 with 331 houses. The report refers to 129 cases of enteric fever in the six months August, 1894, to January, 1895, in addition to certain cases that were not notified and to a synchronous prevalence of diarrhœa. Dr. Sweeting discusses the outbreak at considerable length, and the reader is materially assisted by a lithographic plan of the place, in which the houses affected with the fever are specially marked in their relation to the local drainage system. He also describes the general sanitary circumstances of New Delaval. The place is provided with midden-privies having all the worst faults of this offensive system, and the water-supply is derived from a spring issuing from the sandstone at the foot of a declivity. Thence it is piped by ordinary field pipes to a collecting well, called a "tank," which further receives the overflow from an open dipping well or trough. Previously to Dr. Sweeting's visit the tank was open to contamination; indeed, the ground around it was early this year found to be the ordinary defecating place for tramps and others; the latter apparently preferring the open air to the stinking midden-privies. A drainage theory of causation had obtained local support, but after a careful analysis of all the circumstances involved Dr. Sweeting is unable to accept it as a definite cause. On the other hand, the localisation of the disease over other areas than New Delaval, but having the same water-supply, gave special force to the view that the water had served as a means of conveying the infection. The actual source of the prevalence at its onset was not a matter that admitted of demonstration; but, given its importation, the local conditions of unwholesomeness, including the risks of the excremental pollution of the water service, amply sufficed to explain its subsequent diffusion. And even importation would not be far to seek in an area which has long had much enteric fever. This report is well compiled and deserves careful reading by those who are interested in etiological investigations.

Diphtheria at Potterne, by Dr. S. MONCKTON COPEMAN.[2]—For some years antecedent to 1893 diphtheria had been practically unknown in the parish of Potterne, which lies in the Devizes rural district and has a population of nearly 1200. By the third week of July, 1893, the disease had led to 18 attacks; the schools seemed to be identified with its spread and they were closed, but the disease was maintained through August. It then abated, and had practically disappeared in December. Several attacks, however, occurred again in the period January—March, 1894, but there being comparative freedom from the disease, the schools were opened in April. Within ten days there were 3 fresh cases; and, some subsequent cases occurring, the school work was again suspended on June 1st. The disease, however, soon spread, and other cases occurred right up to a time when the reopening of the schools was once more permissible, on Aug. 20th. In fact, 143 cases of diphtheria were notified in Potterne in sixty-five households from July 18th, 1893, to Oct. 6th, 1894, and yet not a single case occurred among the large number of children of the better-class residents in the parish. The origin of the disease remains undetermined; indeed, Dr. Copeman found all trace of source lost amongst certain cases of so-called "sore-throat." As to its spread, a number of conditions commonly regarded as having to do with its diffusion are set aside; but it seems clear that at certain stages the aggregation in school of susceptible persons was concerned with it, and that, apart from this, personal infection came largely into play. The school was badly ventilated, one class-room was distinctly "fusty," and the flooring and foundations were not so constructed as to avoid damp and ground air getting into the building. These are conditions which, though they may not explain the onset of the disease, are such as would certainly tend to its diffusion amongst the school attendants, if not do more by producing a condition of unhealthiness in the fauces such as would render the individual particularly susceptible to receive the infection. Dr. Copeman reports that these conditions have now been remedied in accordance with his advice, and we may hope that no further prevalence of the same sort may arise.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Lancashire County Sanitary District.—Mr. Edward Sergeant estimates the population of the administrative county of Lancashire for 1894 as 1,870,141. The general death-rate of the county for the year in question was but 16·16 per 1000—i.e., 16·42 in the urban and 14·87 in the rural districts. Mr. Sergeant reports that during 1894 medical officers of health have been more careful to take into account the deaths of persons belonging to their districts but occurring in outside institutions. It appears, however, that a not inconsiderable number of the deaths in the county still remain unappropriated, and the writer of the report somewhat significantly remarks: "It may be observed that the tendency to put the best complexion on the statistics is more noticeable in residential districts and in certain districts desirous of acquiring reputations as health resorts." The infantile mortality for 1894 was a low one, being but 134 per 1000 registered births, as compared with a rate of 177 in 1893. In connexion with infantile mortality several of the district medical officers of health refer to the necessity for limiting the use of the feeding-bottle in the manufacturing towns. In the matter of small-pox an interesting instance of the influence of tramps on the spread of disease is given in the report before us, one tramp being instrumental during his wanderings in infecting directly or indirectly no less than twenty-six persons. During the year the Chadderton, Royton, and Crumpton joint hospital district was formed under the provisions of the Isolation Hospitals Act, 1893; but in connexion with the subject of isolation accommodation we regret to see that the Prescott urban sanitary district has requested its medical officer of health to refuse admission into the local fever hospital unless the guarantee of the payment of a guinea a week is forthcoming or the patient is provided with a magistrate's order. We shall not be surprised if the hospital in question goes down to posterity as one that did not fulfil its purpose. The supervision of dairies, cowsheds, and milkshops still seems in a backward condition in the county, although in some districts these places are conscientiously inspected. The smoke nuisance has been specially inquired into during 1894, and as a result of a recommendation on the part of a public health committee of the county council some attention seems to have been paid to the matter. It is, nevertheless, true that Section 91 of the Public Health Act, 1875, is not

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 6d. 1895.

[2] Eyre and Spottiswoode, East Harding-street, London, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 1s.

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very far from being a dead letter in the administrative county. Mr. Sergeant speaks highly of the energy displayed by the Lancashire Watershed Committees, and the effects of their labours will, he thinks, soon be apparent in an improved condition of the rivers.

St. Pancras Urban Sanitary District.—Dr. Sykes comprises in his annual report for 1894 the very interesting paper which he presented in May of that year to the St. Pancras Public Health Committee upon the causes of increased diphtheria mortality in London, and which we noticed at some length in a leading article in THE LANCET of July 14th, 1894. In that article we carried on Dr. Sykes' figures to the years 1892 and 1893, and we showed that the inferences which were apparently to be drawn from his report were not borne out by the figures which had been published since. In his present annual report Dr. Sykes has himself continued his observations so as to include the 1894 figures, and the whole paper now forms a highly valuable contribution to the literature of the subject. The St. Pancras Family Shelter was in use during the whole of 1894, and altogether 39 persons took advantage of it. In his report Dr. Sykes gives a summary of the isolation provision of the metropolis, and refers to the great inconvenience which has hitherto accrued from the absence of a fever ambulance station at Hampstead. The delay to the St. Pancras patients has been considerable owing to the fact that it has been necessary to send either to Fulham or Homerton to obtain an ambulance.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6311 births and 3863 deaths were registered during the week ending Nov. 23rd. The annual rate of mortality in these towns, which had been 22·1 and 19·1 per 1000 in the two preceding weeks, further declined last week to 19·0. In London the rate was 17·7 per 1000, while it averaged 20·0 in the thirty-two provincial towns. The lowest rates in these towns were 12·6 in Brighton, 13·1 in Norwich, 13·2 in Croydon, 14·9 in Bristol, and 15·7 in Preston; the highest rates were 24·7 in Birkenhead, 26·2 in Oldham, 27·2 in Liverpool, 27·3 in Salford, and 32·3 in Blackburn. The 3863 deaths included 548 which were referred to the principal zymotic diseases, against 606 and 522 in the two preceding weeks; of these, 208 resulted from measles, 111 from diphtheria, 69 from diarrhœa, 55 from "fever" (principally enteric), 54 from whooping-cough, 50 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases occurred last week in Plymouth; in the other towns they caused the lowest death-rates in Brighton, Bolton, Croydon, and Derby, and the highest rates in Oldham, Wolverhampton, Burnley, Salford, and Blackburn. The greatest mortality from measles occurred in Liverpool, Salford, Burnley, Oldham, Blackburn, and Wolverhampton; from scarlet fever in Birkenhead; from whooping-cough in Cardiff; from "fever" in Salford and Sunderland; and from diarrhœa in Blackburn. The 111 deaths from diphtheria included 69 in London, 8 in Birmingham, 6 in West Ham, 4 in Salford, and 3 each in Manchester, Birkenhead, Bristol, and Newcastle-upon-Tyne. One fatal case of small-pox was registered in West Ham, but not one in any other of the thirty-three large towns. There were 89 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 23rd inst., against 106, 78, and 86 at the end of the three preceding weeks; 20 new cases were admitted during the week, against 29, 14, and 23 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2807, against 2841, 2847, and 2845 on the three preceding Saturdays; 296 new cases were admitted during the week, against 215, 349, and 298 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 447 and 340 in the two preceding weeks, further declined to 327 last week, and were 119 below the corrected average. The causes of 69, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Bristol, Leicester, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·4 and 18·5 per 1000 in the two preceding weeks, further declined to 18·1 during the week ending Nov. 23rd, and was 0·9 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·5 in Leith and 13·7 in Perth to 18·9 in Paisley and 23·3 in Aberdeen. The 521 deaths in these towns included 15 which were referred to diarrhœa, 12 to scarlet fever, 10 to whooping-cough, 8 to "fever," 3 to diphtheria, and not one either to measles or small-pox. In all, 48 deaths resulted from these principal zymotic diseases, against 77 and 52 in the two preceding weeks. These 48 deaths were equal to an annual rate of 1·7 per 1000, which was 1·0 below the mean rate last week from the same diseases in the thirty-three large English towns. The 15 fatal cases of diarrhœa exceeded by 4 the number in the preceding week and included 11 in Glasgow. The deaths from scarlet fever, which had declined from 11 to 9 in the three preceding weeks, rose again to 12 last week, of which 7 occurred in Glasgow and 3 in Aberdeen. The fatal cases of whooping-cough, which had been 21 and 18 in the two preceding weeks, further fell to 10 last week, and included 6 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to different forms of "fever," which had been 9 and 3 in the two preceding weeks, rose again to 8 last week, of which 5 occurred in Glasgow. The 3 fatal cases of diphtheria showed a further decline from the number recorded in recent weeks, and included 1 each in Edinburgh, Dundee, and Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 173 and 134 in the two preceding weeks, further declined to 123 last week, and were 19 below the number in the corresponding week of last year. The causes of 28, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 31·5 to 23·1 per 1000, rose again to 23·9 during the week ending Nov. 23rd. During the past eight weeks of the current quarter the death-rate in the city has averaged 24·5 per 1000, the rate during the same period being 18·3 in London and 17·5 in Edinburgh. The 160 deaths registered in Dublin during the week under notice showed an increase of 5 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against numbers declining from 29 to 6 in the six preceding weeks; of these, 5 resulted from diarrhœa, 3 from "fever," 2 from scarlet fever, and not one either from small-pox, measles, diphtheria, or whooping-cough. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·0 in Edinburgh. The fatal cases of diarrhœa, which had been 2 in each of the two preceding weeks, increased to 5 last week. The deaths referred to different forms of "fever," which had been 4 and 2 in the two preceding weeks, were 3 last week. The 2 fatal cases of scarlet fever exceeded the number recorded in any recent week. The 160 deaths in Dublin last week included 34 of infants under one year of age, and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded the numbers recorded in the preceding week. One inquest case and 3 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 10, or more than 6 per cent., of the deaths were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

IN addition to the names which we published last week the following officers complete the list of those proceeding with the expedition to Ashanti:—Surgeon-Lieutenant-Colonel Blennerhassett, Surgeon-Major Beatty, Surgeon-Captains Burke, G. Wilson, Corcoran, and Cummins, and Surgeon-Lieutenant Spencer. The following officers have arrived from India on relief:—Surgeon-Major Smythe and Surgeon-Captain Bullen. Surgeon-Major-General Hamilton

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has arrived from the Cape and been appointed to the Western District. Surgeon-Major Truman has been posted to Dublin. Brigade-Surgeon-Lieutenant-Colonel Knox and Surgeon-Majors Maunsell, Maconachie, and Dixon have left India on completion of a tour of service. Surgeon-Colonel T. Maunsell will succeed Surgeon-Major-General Inkson as Principal Medical Officer at Malta.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Mathew D. O'Connell, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice C. White, retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain F. E. Swinton is appointed Personal Assistant to the Principal Medical Officer, Bombay Command. Surgeon-Lieutenant MacDonald is appointed to the Officiating Medical Charge of the 14th Bombay Infantry. Brigade-Surgeon-Lieutenant-Colonel G. W. R. Hay has taken charge of the office of the Superintendent of Matheran. Surgeon-Lieutenants Gibbs and Rivers have been transferred from Bombay District to the Sind District.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Surgeons: J. Dowson to the *Basilisk*; W. G. Stott, M.B., to the *Victory* for the *Duke of Wellington*.

VOLUNTEER CORPS.

Artillery: 5th Lancashire: Thomas William Butcher, M.B., to be Surgeon-Lieutenant. 4th Durham (Western Division, Royal Artillery): Harry Harte Gourley, M.B., to be Surgeon-Lieutenant. *Royal Engineers:* 1st Middlesex: Surgeon-Lieutenant-Colonel M. Baines, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement. *Rifle:* 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Captain D. F. Flinn to be Surgeon-Major. 2nd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant-Colonel J. E. Foster resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant J. Mason to be Surgeon-Captain.

THE REORGANISATION OF THE WAR OFFICE.

The new Order in Council for the reorganisation of the War Office has been published, and it proves to be very much what was anticipated. The principles laid down in the report of the Hartington Commission have in the main been followed, but certain modifications have been beneficially made and introduced. The recommendation for the appointment of a chief of the staff has, for instance, been set aside. The future administrative machinery and the details of the new system are plainly set forth in the Order and its accompanying explanatory memorandum. A greater division, and consequently a corresponding curtailment, of labour has been effected, but the commander-in-chief exercises a general power and authority over the whole organisation. With a military board containing Sir Redvers Buller and Sir Evelyn Wood, in conjunction with the other members, under the presidency of Lord Wolseley, there should be no practical difficulty in working the new system. It will be seen that the new order of things is to some extent a compromise, but we do not on that account see why it should not work efficiently and well; the commander-in-chief is, and always must be, something more than *primus inter pares*. The quartermaster-general deals, as heretofore, with all supplies, transport, the movement of troops and their equipment, and with all sanitary questions relating to the army. Among the military departments which report to the commander-in-chief, the adjutant-general or the quartermaster-general is the director-general of the Army Medical Department who is charged with the administration of the medical establishments of the army, the Medical Staff Corps, the preparation of medical, sanitary, and statistical returns, and the supply of medical stores to the army. This states, in other words, that the functions of a director-general are general medical direction, just as those, to parody another well-known definition, of an archdeacon are archidiaconal.

THE FRENCH IN MADAGASCAR.

The latest reports of the French in Madagascar are more satisfactory, and things appear to be quietly "settling down" in that country. According to all accounts nothing could have been better or more humane and orderly than the conduct and discipline of the French force after the capture of Antananarivo. The sickness and suffering among the French soldiers have been very great in this expedition, and they have borne these with great fortitude. We can only hope that they are now at an end, and that when the new Treaty between Madagascar and France has been finally settled affairs in Madagascar may be greatly improved. The great defects and mistakes of the campaign seem to have been the youthfulness and immaturity of so many of the troops sent out to Madagascar, the deficiency of supplies and transport, the employment of young soldiers in road-making in a highly malarious and hot climate, and the relative absence of hygiene. The sickness and loss of life entailed by the road-making would most probably have been altogether avoided if the French had taken care to have organised a large force of native bearers and speedily pushed on to higher and healthier localities and to the capture of the capital. It is pitiable to read the descriptions of the physical weakness and anæmic condition of so many of the French soldiers on their arrival at Antananarivo, and it says much for their discipline and powers of endurance that they persevered in the way they did in prosecuting the campaign to a successful issue.

SANITARY COMMISSIONERSHIPS IN INDIA.

We notice in the Anglo-Indian papers that it is proposed by the Indian Government to abolish a number of the sanitary commissionerships in order to raise funds for the establishment of a bacteriological institute at Agra. Although we fully recognise the importance of bacteriological researches, and have advocated the establishment of bacteriological laboratories in India, we regard it as a false and retrograde step to decrease the numbers of the present sanitary staff in that country. There is a quantity of detailed sanitary work of a practical kind to be carried on in India, the necessity of which has, first of all, to be urged upon the attention of the authorities and then the work itself has to be supervised and inspected, if the hygienic conditions of India are to be improved. We do not see how this is to be done without the aid of a sanitary staff, and that which exists at the present time is not upon such a liberal scale as to admit of its being curtailed. By all means establish bacteriological institutes in India, but see that the practical sanitary work of the country, such as that which devolves upon the health officers and the Medical Department of the Local Government Board of this country, is carried out at the same time. Bacteriological researches and other scientific work are but necessary means to an end, and the two have to go on together if practical results are to be reaped.

THE SUCCESSORS TO SIR THOMAS CRAWFORD, SIR THOMAS LONGMORE, AND SURGEON-GENERAL IRVINE.

The *London Gazette* of Nov. 26th announces the following appointments: — Surgeon-Major and Honorary Deputy-Inspector-General Richard Domenichetti, M.D., retired, late Army Medical Department, to be Honorary Physician to the Queen, vice Surgeon-General J. Irvine, M.D., retired pay late Medical Staff, deceased (dated Nov. 27th, 1895). Surgeon-Major-General Charles Dodgson Madden, retired pay late Medical Staff, to be Honorary Surgeon to the Queen, vice Director-General Sir T. Crawford, M.D., F.R.C.S.I., K.C.B., retired pay late Medical Staff, deceased (dated Nov. 27th, 1895). Surgeon-General Herbert Taylor Reade, V.C., C.B., retired pay late Medical Staff, to be Honorary Surgeon to the Queen, vice Surgeon-General Sir Thomas Longmore, Knt., F.R.C.S. Eng., C.B., retired late Army Medical Department, deceased (dated Nov. 27th, 1895).

DEATHS IN THE SERVICES.

Surgeon-Major Dobson, F.R.S., of the Army Medical Service, at West Malling, on the 26th inst., after a long illness. The deceased officer was born in 1848, and was educated at Trinity College, Dublin, where he graduated in 1866, and entered the Army Medical Department in 1868, from which he retired after twenty years' service. He was a man of very considerable scientific attainments and the author of many works and original researches in zoology and comparative anatomy. Surgeon-Major Dobson was for a long time at Netley, where he did good work in connexion with the museum. He retired from the service many years ago in consequence of ill-health.

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The *Army and Navy Gazette* prints the following records of Surgeon-General J. O'Nial, C.B., retired pay, and Surgeon-Major-General J. Warren, who have been awarded good pension rewards. Surgeon-General O'Nial has taken part in five campaigns—the Kaffir War, 1852–53; the North-West Frontier of India campaign, 1863; the Afghan War, 1880; the Soudan expedition, 1884–85; and the Soudan, 1885–86. For Afghanistan and the Nile expedition he was mentioned in despatches, and for the latter promoted Surgeon-General. Surgeon-Major-General Warren took part in the Afghan War, 1878–80; the Egyptian expedition, 1882; and the Soudan expedition, 1885, and for the last-mentioned was mentioned in despatches.

A committee consisting of Brigade-Surgeon-Lieutenant-Colonel King, Superintendent of the Royal Botanical Garden, Calcutta (President); Surgeon-Lieutenant-Colonel McConnell, Professor of Materia Medica and Clinical Medicine, Medical College, Calcutta; Dr. George Watt, Economic Reporter to the Government of India; and Rai Bahadur Kanny Lall Dey, has been appointed to consider the whole question of Indian drugs.

Surgeon-Major-General Cleghorn, surgeon-general with the Government of India, has left Simla on tour, proceeding to Agra and Bombay.

Correspondence.

"Audi alteram partem."

THE EXAMINATIONS AT THE LONDON COLLEGES.

To the Editors of THE LANCET.

SIRS,—When it was decided that the medical student's course of study should extend over five years, hopes were entertained in many quarters that, whatever else might happen, the two London Colleges would at last take care to bring the clinical part of their examinations up to a high standard of efficiency. It must be with feelings of surprise and disappointment that those who cherished this hope now find how trivial, when compared with the high importance of the subject, is the place given to the clinical examinations in the most recent proposals of the delegates, to whom the Colleges have entrusted the consideration of the arrangements of the examinations. Here is the proposal of the delegates in their own words: "That the time of the clinical part of the examination in each subject (medicine and surgery) be extended to thirty minutes." *Extended* to thirty minutes! What must this examination have been when it did not cover even thirty minutes! Will anyone have the courage to say, that within the space of thirty minutes a medical student can be examined clinically in such a way as to give him a fair chance of showing what he knows of clinical medicine or of clinical surgery? To make such an examination what it ought to be, the student should be invited to enter the ward of a hospital, and there, with abundance of time at his disposal, should be asked to give the examiners an insight into what he knows of the conditions of disease shown in the cases in the ward. Were some such system of clinical examination as is here indicated adopted by the two Colleges and thoroughly carried out by them, it would soon be admitted on all hands that men who went into practice with the qualifications of the Colleges were as efficiently equipped for the most important of the daily duties of the medical practitioner as newly qualified men could be.

In these days, when examinations are believed to play so important a part in barring the entrance to professional life against incompetent men, a very important and significant discovery has been made. I have spoken to several examiners of large experience with a view to ascertaining whether or not they are agreed in accepting it as a fact that there are men who have a special aptitude for passing examinations, and who, nevertheless, show less than ordinary ability in efficiently dealing with the affairs that make up the work of the practitioner of medicine. This is the discovery which, I say, has been made, or at all events emphasised, by the outcome of examinations; and I do not remember that any one of the examiners with whom I discussed the matter denied the truth of this discovery, or contradicted the assertion that no examination scheme has yet been devised which can be trusted to keep incompetent men out of the medical profession. I do not say that the system of clinical examination indicated in this letter would keep incompetent men out of our profession, but I do say it would be vastly more efficient for this purpose than the mass of paper work which now forms the bulk of the final examination for the qualifications of the Colleges. Not the least of the advantages of a clinical examination, properly conducted on the lines mentioned above, is that it would be impossible to "cram" students for such an examination.

Objection may be taken to the scheme here suggested on three grounds. In the first place, it may be said that sufficient time could not be given by the examiners for the thorough carrying out of such a scheme. A second objection might be, that the examiners' fees would amount to an impracticably large sum. And, lastly, it might be asked, Where is a sufficient number of examiners to be found? There are to be found among the Fellows of the two Colleges plenty of men perfectly well qualified, and able and willing to give the time necessary for the efficient carrying out of such a clinical examination as is here outlined; and I should be greatly surprised if the question of fees, when it came to be looked at closely, were to prove an insuperable obstacle.

I know there are men of the highest standing in the profession of medicine who are entirely at one with me in the views I have here expressed, and I venture to hope that they and others will not allow this matter to drop until clinical examinations are made, as I contend they ought to be, the most important and the most thorough of the tests to which medical students have to submit themselves.

I am, Sirs, yours truly,

Nov. 26th, 1895. G. A. HEBON.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Many of the arguments brought against the admission of women to the London Colleges shew very plainly that those who advance them have no acquaintance whatever with medical women and no knowledge of the extent to which the movement in their favour has progressed during the last few years. Mr. Truman tells us that the profession owes a debt of gratitude to the London Colleges for their verdict; it is difficult to see why. If their decision had involved the entire exclusion of women from the profession his position would be comprehensible, but in all probability not a single woman who wishes to will be debarred from entering. Those who do not take the L.S.A. or the M.B. Lond. will merely go to the Scotch Colleges instead of the London ones, or very possibly to the Scotch Universities (let London diplomates who dislike the competition of Scotch M.D.'s note the fact), and probably the only people who can really congratulate themselves are some of our Northern friends who see more grist brought to their mills by the action of their less astute London brethren. But, say the opponents of the women, by all means let them go anywhere else than to our Colleges. Meanwhile, however, we shall have to reckon with public opinion, which year by year is being more emphatically expressed in favour of medical woman. Note the action of our representative bodies: the Government gives a woman a medical appointment at the Post Office, the London County Council appoints one as assistant medical officer at the Claybury Asylum, the Metropolitan Asylums Board puts one on the staff of the North-Western Fever Hospital, and the governing bodies of hospitals and infirmaries all over the country are constantly adding to the number of women who fill responsible hospital posts; in fact, if some of your correspondents were to see a complete list of appointments obtained by medical women during the last few years it is difficult to say whether astonishment or jealousy would be their predominant emotion. In addition, the women have founded and fully officered a hospital of their own, where they successfully deal with the gravest cases both medical and surgical. And yet—let us hope in ignorance of all this—we are told that women faint at the sight of blood and are unfit both physically and morally to practise medicine. Those who are brought into contact with them in teaching and examining are surely best qualified to judge on these points, and I believe all who have had such opportunities favour their claims. Even an afternoon spent at the *Royal*

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Free Hospital or at the New Hospital for Women in Euston-road would dispel many fallacies in the minds of those who argue on theoretical premises only. Of course all must agree with Mr. Brindley James's rhapsody on women and home, although he is above troubling himself as to whether all can find homes; but a personal knowledge of medical women would probably teach him that many of them would grace the profession even more than the domestic circle. We must beware of arguing merely from averages and of thinking that because most women are unsuited for medical work that therefore all are. The same fallacy has been exposed in regard to mathematics. A few years ago I was no friend to the movement, but an acquaintance with the women students, their earnestness, their power of work, and, above all, their practical ability, have forced me to believe in their claims.

Mr. Morton, glancing with prophetic insight into the future, draws an appalling sketch of women teaching men. A few years ago an equally terrible picture would have been drawn of men teaching women, and yet for years many of us have done so, we hope without serious moral injury, and certainly without social or professional ostracism, and I fail to see any material difference between the two if a woman should happen to be a more competent teacher than a man. Let the opponents of the women rejoice over their pyrrhic victory while they may. But would not the party of reform at the Royal College of Surgeons be well advised to make friends with them; they might find them valuable and congenial auxiliaries in their crusade against the Council? They must know themselves—if they will only face the facts — that a cause which has made such tremendous strides during the last few years in the face of prejudice and opposition; a cause which has already obtained the admission of over 200 women into the profession and the establishment of a fully-equipped medical school in London with about 150 students with a large, well-arranged hospital for their training; a cause which is approved by the Council of the Royal College of Surgeons and was nearly carried at the Royal College of Physicians, despite a strong whip-up on the other side, is not likely to be long retarded by the conscientious prejudices of an expiring generation or by the efforts of those whose very arguments conclusively prove that they have no adequate knowledge of the subject.

I am, Sirs, yours faithfully,

Cavendish-place, W., Nov. 26th, 1895. J. WALTER CARR.

INFANTRY SWORD EXERCISE AND THE RECENT HANDBOOK FROM THE WAR OFFICE.

To the Editors of THE LANCET.

SIRS,—The letter from Dr. Chepmell and Dr. Savage, which appeared in your issue of July 27th, 1895, has excited a good deal of comment, and it is evident that the Italian system of sword exercise, now officially introduced, is not wanting in defenders. It may be well, therefore, to urge again, and with greater precision, the objections to the system, based on anatomical and physiological grounds. The chief of these are that the muscles mainly concerned in bringing about the offensive and defensive movements are unduly exerted, and made to act at an unnecessary mechanical disadvantage; rapidity and delicacy, and, in a great degree, range of movement, are sacrificed to an endeavour to obtain increased power in certain directions. If the position of "on guard" is considered it will be seen that some of these statements are at once justified. Here the feet are more widely separated than in the French position. The weight of the body, which is maintained upright, tending to act directly downwards, more exertion is obviously required to keep the knees properly bent than when the feet are brought nearer together, as in the French attitude of "on guard." The extensors of the legs on the thigh are concerned in preserving the prescribed Italian attitude, aided by the muscles which pass from the pelvis to the upper part of the thigh, principally the gluteals. The French attitude selects a position adapted to give the widest possible range of movement while departing as little as possible from the natural equilibrium of the body in the upright position. The "advance" and "retire," it is evident on anatomical grounds, can be made more rapidly in the French and with less expenditure of energy than in the Italian attitude; so, too, can recovery to the first position with the heels aligned, or the extension forward as in the lunge. Place two men of equal physique side by side, one in the Italian and the other in the French "on guard" position, and it will be found that fatigue ensues earlier in the former. The differences in the rapidity of movement between the two are, no doubt, extremely slight, but in sword play very minute fractions of a second have to be taken into account.

Next, as to the position of the hands and arms in the Italian "sword in line" or "on guard" positions. Here the arm is extended to a right angle with the vertical line of the trunk, so that the point of the sword, the hand and the shoulders are all in the same straight line. In this attitude of the arm the deltoid is exerting itself to the utmost. Any further raising of the arm would be accomplished mainly by the trapezius acting as the continuation of the deltoid. The triceps is acting to the utmost, the forearm being fully extended. The pronators are again acting to the utmost, for the hand is fully pronated. No further movement of pronation or extension of the forearm is, therefore, possible, and any advantage in sword play to be gained by these movements is therefore thrown away at the outset. Rapidity of movement is also sacrificed. The greatest possible speed and delicacy of movement is obtained when two such opposing muscles, or groups of muscles, are both acting and nearly balance each other. Thus with the hand completely pronated the initial act of supination must be slow. A fully-stretched muscle is not able to act quickly or advantageously. When the hand is midway between pronation and supination not only is a greater range of movement in either direction secured, but the greatest initial rapidity of action is rendered possible. The same applies to the extreme extension of the arm. Before the biceps and brachialis anticus can act with the best mechanical efficiency as flexors there must be relaxation of the triceps and slight flexion of the arm. That the deltoid is acting at the greatest possible mechanical disadvantage is obvious enough. Again, the French position of "on guard" fully recognises all these points, and the most restful possible position is coupled with infinite possibilities in the way of rapid movement. Again, let two men stand side by side, one in the Italian and one in the French attitude, and the arm of the former will tire much more rapidly than the latter, with the effect that the point of his sword will either drop or be raised.

Next as to the "lunge." The essential difference between the Italian and the French systems is that the body is thrown forward out of the vertical in the former and is maintained upright in the latter. There can be no question that greater power of thrust is obtained by the Italian lunge. Speaking, however, from the medical point of view, it appears to be a matter of little consequence whether a sword thrust goes many inches through the body or only a few. The anatomical disadvantages, however, of the Italian lunge are chiefly shown by the difficulty of recovery. In the *Broad Arrow* of Oct. 5th, 1895, a letter appeared over the signature of "On Guard" defending the Italian system, but employing arguments with which no anatomist could for a moment agree. In condemnation of the French lunge, as compared with the Italian, the writer states that there are two forward movements, that of the foot and that of the body; in the Italian system only one, that of the foot. Surely, the writer forgets the extension of the arm that takes place in the French lunge. With regard to the recovery, "On Guard" urges that the recovery must be quicker in the Italian system, for there is a double movement in recovering, "the direct backward swing of the body assisting enormously the muscles of the leg in executing the movement, not only by relieving the leg (the left) of some of its work, but also by increasing the rapidity of the movement." This view appears to be based on an anatomical misconception. In recovery from the Italian lunge, the centre of gravity being thrown far forward, the trunk has first of all to be straightened on the legs—that is, brought to a more or less vertical position. This has to be effected by the gluteal muscles, which, again, owing to the attitude, act at great mechanical disadvantage, and therefore act only slowly. The "backward swing" of the body, indeed, so far from assisting the rapidity of recovery, must inevitably retard it. Once the body has begun to swing back it may facilitate recovery to "on guard," but the initial movement, regarded from the purely mechanical point of view, must be slow and involve very powerful contraction of a single muscle in order to take place at all. Any attempt to recover merely by bending the left leg in the Italian lunge would cause the

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lunger to fall forward. The French system fully recognises that the most rapid possible action and the greatest delicacy of movement is insured when opposing groups of muscles are simultaneously in action and the part on which they act, hand, arm, trunk, or leg, is midway between the positions that can be brought about by their extreme contraction. Further—and this seems a point of the greatest importance—this mid-position is one of comparative rest. The same considerations, though in a minor degree, apply also to the exaggerated "feather-edge" attitude prescribed in the Italian system. If in sword exercise rapidity and delicacy of movement, combined with good balance and adequate power of cut or thrust, are desirable, it is to be regretted that a system based on sound scientific principles should be replaced by one that possesses no such advantages.

I am, Sirs, yours faithfully,

Nov. 27th, 1895. C. T. DENT.

"CONSIDERATIONS IN RESPECT TO 'RETURN' CASES OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—I have read with much interest Mr. T. W. Thompson's very able paper in THE LANCET of Nov. 23rd on so-called "return" cases of scarlet fever. In all probability it will have the effect of drawing the attention of our metropolitan medical officers of health to the subject, and as the result we shall have all cases of such nature carefully noted and reported. During the time I was assistant medical officer at the Stockwell Fever Asylum—a period extending over five years—I had an opportunity of observing these so-called "return" cases, and came to the conclusion that with every care on the part of the fever hospital and sanitary authorities such cases would from time to time appear. With regard to the very important question—What is the explanation of these "return" cases?—when we consider the tenacity of the poison, the existence at times of recurrent desquamation, and that the patient may come from the fever hospital ward to his own home, it is hardly surprising we should have some "return" cases. I agree with Mr. Thompson that the throat is in all probability a factor in the propagation of the disease; often the chief stress of the malady is located there, and I think the importance of the spray and antiseptic gargles is sometimes overlooked. With reference to the desquamating cuticle being a powerful agent in its diffusion, Dr. Priestley's cases would not appear to support this view. The recurrent desquamation may be counteracted by the daily warm antiseptic bath, so often neglected by the parents on the return home of the patient. I incline to the opinion that some "return" cases may owe their origin not only to articles of clothing or otherwise escaping the action of the home disinfection, but also in some instances to the chemical agent employed, the action of chlorine appearing to be of a more reliable nature than sulphur. The desirability of keeping a child fresh from a fever hospital apart from healthy children, either by residence at a convalescent home or separation at its own home when it can be carried out, would be a wise precaution. The school influence also must not be lost sight of.

I am, Sirs, yours truly,

St. Leonards, Nov. 25th, 1895. SAMUEL LEE, M.D. St. And.

SAINT PATRICK.

To the Editors of THE LANCET.

SIRS,—In the review of the "Dictionary of National Biography" in THE LANCET of last week, it is stated that "Patrick, the famous patron saint of Ireland, was born in Scotland in the year 373, his father being a magistrate in Dumbarton, which was at that time a Roman fortress held by a Roman garrison." I should like, with your permission, to say that many Welshmen affirm that the saint was born in Wales, but most Irishmen believe that the place of Patrick's nativity was neither in Scotland nor in Wales, but in Armoric Gaul. This is the opinion of the learned Lanigan and of other Celtic or Irish historians of authority, who narrate that Patrick was born at Bononia, now Boulogne, part of the territory of ancient Armorica. Patrick's parents were respectable Roman citizens of Gaul. His father's name was Calphurnius, and his mother (Conchessa) was nearly related to St. Martin, the celebrated Bishop of Tours. According to Usher, Ware, Colgan, and other authorities, Patrick was born either in the year 372 or 373, and died on March 17th, 493, in the 120th year of his age. Lanigan, however, places his death in the year 465.

In the great and successful introduction of Christianity into Ireland two characters stand out prominently in the fifth century, namely, St. Patrick and Niall, the monarch of Ireland. It is a circumstance which so intimately connects Niall with Patrick that it is that it was Niall who took Patrick into Ireland. Niall was a famous warrior and made numerous military expeditions into neighbouring countries. In one of these expeditions into Gaul he made many captives, among whom was a youth who ultimately became the celebrated St. Patrick. The young man was sold as a slave to a chief named Milcho who possessed a district in that part of Dalaradia now the southern part of the county of Antrim, where he tended the flocks of his master beside Slieve Mis mountain. Patrick after a captivity of seven years, effected his escape and returned to his family in Gaul. Subsequently to this he spent several years in the monastery of St. Martin's at Tours also under St. German at Auxerre, and became eminent for his great piety. In the year 432 Patrick was consecrated bishop and appointed to be the successor to Palladius on the Irish mission. Palladius, it appears, was not quite a year in Ireland, having been compelled to quit the country in 431, the year of his arrival.

Patrick landed in Ireland in the year 432, and on Easter Sunday in the following year he preached the Gospel before the monarch Laoghaire, son of Niall, and a large assembly of chiefs, Druids, and people at the royal residence of Tara, and on Easter Monday he also preached before many distinguished chiefs at Tailten, another royal residence. From Tara Patrick journeyed from place to place in the execution of his mission, which extended over many years. He converted to the Christian faith nearly the whole of the people of Ireland, consecrated more than 300 bishops, with a great number of presbyters, founded many hundred churches, and having served the Christian Church—of which he was a shining light—well and faithfully he died full of days at Saul, near Downpatrick. St. Patrick was a man of small stature, but of immense energy and activity of mind and body. In all his intercourse with the Irish people he was affable, agreeable and polite, and to the Irish princes he invariably paid the greatest deference and respect, on account of their learning, their many virtues, and their manly and lofty bearing. St. Patrick gave a stimulus to the more general study of the Latin language in Ireland, but the educated Irish had a good knowledge of several languages as well as their own written language centuries before the time of St. Patrick. Indeed few nations made so much use and such good use of written language as the ancient Irish. Although St. Patrick is generally looked upon as the great Apostle of the Irish people, nevertheless the Gospel was preached in Ireland long before the time of Palladius or of St. Patrick. The old Irish annalists record three remarkable persons who became converts to Christianity before the missions of Palladius and Patrick—namely, Concovar MacNeasa, the king of Ulster in the first century; Moran, the famous judge or chief Brehon of Ireland, in the beginning of the second century; and the renowned Cormac, monarch of Ireland, who reigned in the middle of the third century.

I am, Sirs, yours truly,

WILLIAM O'NEILL, M.D., M.R.C.P. Lond.

Lincoln, Nov. 25th, 1895.

"A CASE OF DOUBLE PHLEGMASIA ALBA DOLENS IN A YOUNG VIRGIN."

To the Editors of THE LANCET.

SIRS,—I have just seen a recent note in THE LANCET of Oct. 5th from Dr. Herman on an interesting case of white swelling of both legs in a young anæmic girl, the anæmia being the only apparent accompaniment and cause of the phlegmasia. In 1891 I came in charge of a case which was almost literally identical in every clinical detail with that described by Dr. Herman, the only material difference being that the disease was confined to the right leg, though I remember now that I often felt doubtful whether the oedema found in the left ankle was not something more than that usual in severe anæmia, but then double phlegmasia alba in an unmarried girl aged sixteen seemed quite

too unlikely; the albumin, too, in the urine was so small in quantity and variable that throughout the case one as often as not failed to detect any presence of it, and when demonstrable it was never more than a decided trace. There was intense anæmia, with all the usual accompaniments, as the first condition, the white swelling appearing when the anæmia was well established, and at first it was regarded by the patient as an aggravation of the œdema of the ankle to which she had become accustomed, but it rapidly assumed all the appearances of an ordinary bad white swelling of the leg, the thigh up to the groin being the principal seat of complaint, and the pain being very severe.

Both the anæmia and the phlegmasia yielded in quite the ordinary way to treatment, but the cure occupied three months, including some six weeks in bed with light bandaging. During the ensuing eighteen months she had three relapses of diminishing intensity, anæmia first showing itself and the phlegmasia regularly developing in the course of a few weeks. At first she postponed treatment until the leg compelled her to lie up; but taught by a fourfold experience, she consented on the fifth occasion to treat her anæmia on its first appearance and more thoroughly, with the result that she has had no recurrence since. I was greatly interested and puzzled by the case at the time, and made notes for offering to THE LANCET, with the usual result and the usual self-excuse that it was sure to turn out the commonest of complaints described in dozens of "Transactions" and familiar to every other of your contributors. Now Dr. Herman's article has encouraged a hope that the condition may be sufficiently unrecognised to make the record of any case of interest or even useful.

I am, Sirs, yours truly,

CAMERON KIDD.

Bromsgrove, Worcestershire, Nov. 21st, 1895.

THE DIAGNOSIS OF TONSILLITIS.

To the Editors of THE LANCET.

SIRS,—I wish to inform you that we have had cases in the parish of Fulham very like diphtheria in its early stage, but most distinctly different in most important respects, for the symptoms pass off in less than a week, generally in from two to three days. It is a kind of tonsillitis arising perhaps from some condition of the air or from the sewer openings in the streets. We have reasons for knowing that, although the Klebs-Löffler microbe may be present, this disease is not diphtheria. The trouble and expense which may arise if mistakes are made by practitioners in these cases leads me to make objection to the course Mr. Wynter Blyth has taken.

I am, Sirs, yours truly,

Nov. 27th, 1895. ROBERT LEE.

THE NEED FOR MEDICAL MISSIONARIES.

To the Editors of THE LANCET.

SIRS,—Saturday (St. Andrews Day) is the day set apart for special intercession for missions. May I, as Provost of the Guild of St. Luke, draw attention to the demand that exists for medical missionaries. Of these about sixty are employed by the Church of England Missionary Societies, a third of whom are our associates. Several colonial bishops, members of the Guild, are urgently calling for helpers; the Bishop of Bloemfontein, himself a Fellow of the Royal College of Physicians, is now needing a medical missionary, so is the Archdeacon of Mashonaland, the Universities Mission in Central Africa, and the Chota Nagpur Mission in India. The salaries offered vary from £100 to £300 a year. The stations in which they are needed are not always unhealthy, although the demand is naturally greatest where disease is most rife. The call "to heal the sick" is as incumbent upon us as to "preach the Gospel" throughout the world, and we may fain hope that volunteers will come forward for this work. Men possessing knowledge of medical sanitation and tropical hygiene are specially needed. If our missionary societies could secure the services of one imbued with the spirit and the knowledge of Edmund Parkes, who would see that the mission stations were freed from every removable source of danger, who would select sites for new stations and arrange hospital accommodation for sick natives and convalescent missionaries, many valuable lives unnecessarily sacrificed would be preserved. The Archbishop of Canterbury has promised to preach for the Guild next year. Every loyal Churchman in the profession should be stirred to do what he can to promote our cause.

I am, Sirs, yours truly,

E. SYMES THOMPSON, M.D., F.R.C.P. Lond.,
Provost of the Guild of St. Luke.

Cavendish-square, W., Nov. 28th, 1895.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I should be glad to be allowed to correct two slight errors in the report of some remarks of mine at the Leeds and West Riding Medical Society on Nov. 1st.—1. The blood from a patient with typhoid fever showed (not absence of, but) diminution in the number of leucocytes, a condition alleged to distinguish this from the other specific fevers. 2. I have looked in vain for four years—i.e., since hearing Dr. Lancaster's paper at the Clinical Society—for any distinctive uræmic rash; and I related a case in which universal pemphigus did not follow, but immediately preceded, nephritis, the latter disease appearing after recovery from the pemphigus and being attributed by the patient to chill consequent upon the removal of lint, ointment and bandages from the body generally. With the nephritis she had endocarditis and capillary bronchitis, but recovered in three or four weeks. The cure of the pemphigus, after some weeks' duration, was very rapid, as often happens; it followed saturation of the blood with carbolic acid applied in a lotion to ulcers on the legs. A recent, but less severe and earlier, case has also recovered with equal rapidity (two or three days) under the same treatment; but I have seen a sudden recovery when no carbolic acid has been (known to be) used.

I am, Sirs, yours faithfully,

Leeds. T. CHURTON, M.D.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Breeching Straps for Horses.

A CASE of some interest to medical men who drive daily rounds was lately discussed at the coroner's court. A coachman while driving in one of the principal streets was thrown from his box and killed on the spot. The horse had shied, got beyond the driver's control, and owing to collision of the brougham with a coal cart the accident happened. The coroner at the inquest laid great stress upon the horse being driven without a breeching strap. It was stated that there was a good break upon the brougham, and that breeching straps were seldom used either here or in London when carriages were driven. The danger was pointed out by the coroner in spite of the assertion of witnesses that the custom of doing without one prevailed, and a verdict of "Accidental death" was returned.

Level Crossing Accidents.

Two accidents of a preventable kind have lately occurred, in each of which a valuable life was lost, on a level railway crossing. In one at Water Orton the place is described as a death-trap. A young girl aged nineteen was run down by an express and killed instantly. The night was windy and a storm raging, but no extra provision for safety was made by the railway authorities. A previous death on the same spot occurred some years ago. In the second instance the body of a boy aged fifteen was found cut to pieces. Some precaution and protection necessary in such dangerous places; no doubt, where possible, level crossings should be done away with entirely, even though the right of way may present some difficulties, but in all cases it should be made apparent on the spot that great risk is taken by choosing a short cut.

Ambulance Competition.

The second annual competition for the silver challenge shield in connexion with the Birmingham corps of the St. John Ambulance Brigade took place at the Athletic Institute on the 18th inst. before a large assembly. It was stated that there were now 1157 members in the Ambulance Brigade, and that during the year ending June 30th 1457 cases occurred in which these members rendered valuable first aid. As the competition proceeded the skill and aptitude of the members evoked much applause. The tasks to which the competitors were submitted were an oral

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examination and practical demonstrations, embracing stretcher-carrying, application of splints and bandages, arrest of hæmorrhage, and other departments of ambulance work. The results were—City Police, 334 marks; Great Western Railway, 310; and Midland Railway, 301. It was a very interesting exhibition, being thoroughly appreciated.

Adulteration.

The alleged sale of cassia as cinnamon was lately the cause of a prosecution at Hanley; the article was bought in Birmingham. The case was adjourned at first for two weeks to allow of an independent analysis. It was now stated that this was so expensive an undertaking that it could not be carried out efficiently. The defendant was fined 20*s.* and costs, £7 1*s.* in all. The moral is that an objection to the prosecution to be effective must be complete in all its details if it is to carry success or refutation.

Vegetarians in Conference.

At a recent conference held in this city a speaker said that in dealing with cancer vegetarianism was an important factor in treatment and cure. Another said that cancer was unknown among the natives in the presidency of Bombay. No doubt too much meat is eaten by the majority of our population, but two blacks do not make a white, nor does the use of meat carry its condemnation by being abused by indiscreet people ignorant of the elementary details of nature's laws.

Nov. 25th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Lord Derby and the Royal Southern Hospital.

LORD DERBY, in his capacity of Lord Mayor, followed the example of his predecessors in the civic chair during many years past and attended divine service at St. Michael's Church on Sunday last, when a sermon was preached and collection made on behalf of the Royal Southern Hospital. The collection amounted to £137, a marked improvement on the last few years. After the service Lord Derby, accompanied by members of the committee and other gentlemen, walked to the hospital and, with the Countess of Derby, made an inspection of the building, the house surgeons, Mr. J. A. Craig and Mr. G. R. Thompson, with Miss Mary Gordon, being among the guides. The wards were made bright by beautiful flowers which were presented by Mr. W. Gilbert Moss, a member of the committee. After the tour of the wards had been completed the following entry, made by his lordship and signed by him and the Lady Mayoress, was placed in the visitors' book:—"I have had great pleasure in visiting this hospital to-day. It gives every evidence of attention, skill, and good management. Notwithstanding the large number of patients everything seems to be done in an orderly and quiet manner, and it is interesting to see what kindly feeling seems to exist between the patients and nurses and other members of the staff of the hospital."

The Assizes: Drink and Murder.

Many years ago the late Mr. Baron Martin, who had often presided in the Crown Court at previous assizes, described a case of murder following a drinking bout as a "regular Liverpool case." Though fully twenty-five years have elapsed since that remark was made it is sad to find Mr. Justice Collins lamenting in his charge to the grand jury the many cases in the calendar which were plainly due to intemperance. Two cases of murder were tried on the 25th inst. each ending with a of verdict guilty and the dread sentence of death. In the first case the prisoner was a militiaman who had just been discharged from his annual training at Warrington. The deceased was a domestic servant to whom he had been paying attentions and whom he had treated with the greatest kindness up to the day which ended so fatally for her and so disastrously for him. On that day (July 29th) the prisoner, the deceased, and others were drinking together. One of the company, a married woman, let fall out of her pocket a razor which she had kept to prevent her husband doing harm to himself or anyone else. The prisoner picked it up and put it in his pocket, saying that he would take care of it for fear of danger. Later the prisoner, who had pawned his coat to pay for more drink, became annoyed because the deceased refused to come downstairs when he called her, and going up, he forced the door, dragged her downstairs, and with the razor cut her throat. The medical evidence showed that the wound must have been inflicted with considerable violence; there were two cuts penetrating to the spine, severing all the large vessels, and causing almost instantaneous death. Mr. Beamish, the medical officer of H.M. Prison, Walton, where the prisoner had been since his committal, stated that there were three depressions on the right side of his head and that such persons were more susceptible to drink than ordinary people. After he had received his death sentence the prisoner said: "Can I speak, may I have my body and head examined at the infirmary?" As the learned judge took no notice of this, the prisoner continued: "When I am hanged and finished with, will you let my body and head be examined at the infirmary, and put it in the paper what is to do with my head?" The other case was the sad ending to a court row in the city on Aug. 18th. The deceased and the prisoner were both working men and were drinking together when they quarrelled, the quarrel extending to their neighbours, and the row becoming general. The police stopped this, but next morning it was renewed, and ultimately the prisoner threw bricks from the top of his house at the deceased, who was leaning out of a window. One of the bricks struck the deceased on the head, and he fell out of the window on to the court below, a distance of thirty feet. On being taken to the East Dispensary, which was not far away, Mr. Leitch, the house surgeon, found him to be living, but he died a minute after his arrival. Blood was flowing from three wounds on his head. One of these divided the right ear entirely, the substance of the ear being jammed into the skull, which was fractured. There was a second wound on the back and near the top of the head, and beneath this a depressed fracture two inches in length. From this depression there was another fracture extending to the right out of the forehead. In charging the grand jury the judge observed that if the brick were thrown with the intent to do grievous bodily harm this was murder, and there was nothing to show such provocation on the part of the deceased as to reduce it to manslaughter.

The Murder of a Detective at Wigan.

Mr. Justice Collins tried to-day William Kearsly and Elijah Winstanley for the murder of Robert Kidd, a railway detective, on Sept. 29th last. The medical evidence was given by Mr. C. R. Graham of Wigan, who was called to the railway station on the night of the murder. He found the clothes of the deceased spattered with blood, his hands, face, and head were covered with blood, and there were nine incised or punctured wounds on the head, face, and right side of the neck, three being mortal wounds. One was below and in front of the right ear, and the other two were immediately lower down on the jaw and neck. The wounds were inflicted by a sharp instrument, such as the knife produced. The outside of the tip of the left index-finger was cut off also by a sharp instrument. Mr. Roocroft, police surgeon at Wigan, who made the post-mortem examination in conjunction with Mr. Graham, was of opinion that the deceased must have been on his left side when the fatal wounds were inflicted. Death resulted from hæmorrhage. The prisoner Winstanley's right thumb was swollen and bruised when examined three days after. The prisoner Kearsly had cuts across the back of the left little finger and the right middle finger, and scratches on other fingers. He was also bruised on the left arm, and there were other marks which, in his opinion, arose from direct violence two or three days previously. Both prisoners were convicted and sentenced to death.

Nov. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary, Newcastle-on-Tyne.

FOR the important post of pathologist there are two candidates—Dr. T. Beattie and Dr. G. R. Murray. Dr. Beattie is one of the ablest medical graduates the University of Durham has produced. He has been educated entirely at Newcastle, and has recently left the Infirmary, where he filled in succession the offices of house surgeon and junior and senior house physician, in all of which he has given entire satisfaction. Dr. Murray studied in Cambridge, London, Berlin,

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and Paris. He is a distinguished graduate in arts and in medicine of Cambridge. He has been in practice as a physician at Newcastle for five years. He is the Heath Professor of Bacteriology and Comparative Pathology and an Examiner for degrees in Hygiene in the University of Durham, and for some years has been the Pathologist to the Hospital for Sick Children in Newcastle. It is a source of great regret that the services of these two eminently well qualified men cannot be secured by the Infirmary on the present occasion. The election of one of them to the post of pathologist is watched with keen interest by the profession here. The great importance of the present appointment consists in the well-founded belief that whoever is fortunate enough to be elected will in all probability succeed to the next vacancy as full physician at the Royal Infirmary, and as, under present circumstances, a second vacancy cannot be expected for some ten years, one of these gentlemen must be excluded for a long term from office. Newcastle is fortunate in having two such candidates, and most unfortunate in not being able to secure the services of both.

Sub-warden of the University of Durham.

Archdeacon Watkins has been appointed to this important office in place of Professor Pearce, who succeeds the late Canon Whitley as rector of Bedlington. The University has now two very active church dignitaries at its helm. Dean Kitchin is the warden, and Archdeacon Watkins the sub-warden. One of these days, should it be legally possible, it is to be hoped the sub-warden may be a layman.

Tyne Port Sanitary Medical Officer.

Dr. Harper has received this appointment. He is a pupil of Dr. H. E. Armstrong and has quite recently vacated the office of house surgeon at the Royal Infirmary, in which capacity he gave great satisfaction and made numerous friends. It remains to be seen whether Dr. H. E. Armstrong will be offered the appointment of consulting medical officer to the Tyne Sanitary Authority and if so whether he will accept the post. It is certainly very extensively hoped that his connexion with the Authority may be continued. He has done most valuable work and deserves well of that body.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Laboratory of the Royal College of Physicians, Edinburgh.

THE Royal College of Physicians of Edinburgh has purchased property for the purposes of a laboratory. The premises at present occupied belong to the Royal Infirmary, and will shortly be required for infirmary extension. The property acquired is at the corner of Bristo-street and Forrest-road, and cost considerably over £7000.

Edinburgh Royal Physical Society.

At the opening of this society, last Friday, Dr. William Russell, the retiring vice-president, delivered an address on the Light Thrown on some Biological Processes by the Investigation of Disease. Professor Struthers occupied the chair.

Glasgow University.

The new anatomical and physiological laboratories for Queen Margaret College were formally opened by Principal Caird on the 18th inst.

Medical County Councillors.

Amongst the successful candidates in the recent election for the Lanarkshire County Council are Dr. Stewart, Carluke; Dr. John Cowan Wilson, Stonefield; and Dr. Jno. Colville, Motherwell.

Glasgow Medico-Chirurgical Society.

At a meeting of this society, on the 22nd inst., the principal business was a paper on Aprosexia, Convulsions, and Adenitis, dependent on Pathological Changes in the Faucial, Lingual, and Pharyngeal Tonsils, read by Dr. Walker Downie. A case of Gumma of the Iris was shown by Dr. Rowan; and Dr. C. O. Hawthorne showed three patients, members of a family, in which there is a history of Hereditary Syphilis, the patients manifesting varied evidences of the inherited taint. A number of photographs representing the teeth in inherited syphilis were also shown.

Philosophical Society of Glasgow.

Dr. Ebenezer Duncan, physician to the Victorian Infirmary, has been elected President of the Society. At a meeting of the Society held on the 20th inst. Professor Joseph Coats read a paper on Immunity to Infectious Diseases; a Pathological Study in View of Recent Researches.

West of Scotland Consumptive Hospital.

Some time ago a proposal to establish a hospital for the treatment of phthisis was made by a gentleman well known in philanthropic circles and prominently associated with homes for orphan and destitute children. At the recent annual meeting in connexion with these homes it was stated that a sum of over £12,000 had already been subscribed, but little or no information appears to have been given as to how this money is to be applied, or how the proposed hospital is to be managed. Dr. Ebenezer Duncan, in seconding the adoption of the report, stated that the deaths in Glasgow from pulmonary tuberculosis in 1894 numbered 1550, showing an increase over previous years. He calculated that there were in the city something like 15,000 sufferers from the disease, and expressed an opinion that it was the duty of the municipality to deal with so vast a public evil just as they dealt with the existence of other infectious diseases.

Glasgow Hospital Sunday.

At a meeting of the executive committee on the 20th inst. it was intimated that the sum received last year, which was the first year of a local Hospital Sunday, was £3640. Dec. 1st has been fixed as the day on which collections are to be made for the present year.

The Health of Greenock.

In the report of Dr. J. Wallace, the medical officer of health, for the five weeks ending Nov. 2nd it is stated that during that period the ascertained cases of infectious diseases numbered 399, of which no less than 366 were cases of measles. It is conjectured that at least one-third of these were without medical attendance. Since the outbreak of measles commenced in April 1345 cases have been reported; the fatal cases number 45.

Glasgow Coöperation for Trained Nurses.

This organisation, which was established with a view to secure for nurses the full financial return for their services, has now completed its second year and presents a very satisfactory report. The balance in favour of the coöperation is £72 11*s.* 6*d.* There are forty-six nurses on the staff, and it was stated at the recent annual meeting that one of these during the past year had earned £84, five had made from £70 to £80 each, four from £60 to £70, and the lowest sum earned by any nurse was £49. The management is in the hands of an executive committee composed partly of medical men and partly of nurses; there is a central home where the nurses reside when they are not employed.

Dundee Royal Infirmary.

At a meeting of the directors on the 21st inst. a letter was read from Mr. W. Ogilvey Dalgleish, of Errol Park, the chief partner of Messrs. Baxter Bros., Dundee, offering £3500 towards the erection of a nurses' home in connexion with the infirmary. The offer was gratefully accepted.

Nov. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Hospitals for Infectious Disease for Dublin County.

I STATED some weeks ago my opinion as to the probable fate of the proposed scheme for the establishment of one or more large hospitals in the neighbourhood of Dublin for the treatment of infectious disease, and for closing all the existent city hospitals to typhoid and other fevers. The matter was fully discussed at a recent conjoint meeting of the Section of Medicine and State Medicine of the Royal Academy of Medicine in Ireland, after which Sir Charles Cameron, the originator of the scheme, promised to advise its abandonment in favour of the measures suggested at the meeting: viz—that a hospital for the treatment of epidemic small-pox or cholera outside the city be proceeded with, and that isolated convalescent homes be also established.

City of Dublin Hospital.

There have been many candidates for the surgeoncy to-

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this hospital, vacant by the retirement of Dr. H. Fitzgibbon, including Dr. Charles Ball, who withdrew his name on his election to the Regius Professorship of Surgery to Trinity College. The Medical Board met on Nov. 22nd, and sent forward three names—those of Mr. Boyce, Mr. Johnson, and Mr. Gordon—to the general committee of the governors of the hospital, with whom rests the ultimate election.

Important Action against a Dublin Medical Man.

The case of Mason *v.* Hadden, of which a full notice appeared in the issues of THE LANCET of May 18th and 25th, and in which a verdict was given against Dr. Hadden of Rathmines for alleged negligence in having reported as small-pox a case which turned out to be of a different nature, the full Court of Exchequer, having decided that in their opinion there was no case to go to the jury, and that the plaintiff should have been non-suited at the trial, reversed to-day (Nov. 26th) the judgment against the defendant, and expressed their unanimous opinion that upon the evidence of the plaintiff's own medical witnesses there was no negligence. This decision will be hailed with great satisfaction, not alone by the friends of, and sympathisers with, Dr. Hadden, but by the profession at large, by whom the former verdict was looked upon as a most serious blow to the notification of infectious disease in Dublin.

Extension of the Ulster Eye, Ear, and Throat Hospital, Belfast.

I understand that the lease of the new ground has been received from the solicitors of the Belfast Charitable Society for signature, and that the foundation-stone of the main part of the extension is to be laid in January, 1896, just a quarter of a century since the foundation of the hospital, which was on Jan. 21st, 1871. The funds available for the new premises are beween £1400 and £1500.

The Condition of Ballyclare.

It would seem that the insanitary state of Ballyclare and the prevalence of typhus fever have occasioned the Antrim board of guardians considerable anxiety. They requested the Local Government Board to send down their medical inspector and engineer in order, if practicable, to devise some means of getting the town of Ballyclare improved, but in reply the Board stated that it was not their practice to send their inspector or engineer to inquire into such matters, and they said it was open to the guardians to obtain the necessary professional advice and assistance on the subject. The Antrim board of guardians, feeling their want of legal powers to ensure the isolation and disinfection of the typhus fever patients at Ballyclare, are to consider a notice of motion to adopt the Infectious Diseases Prevention Act of 1890. They have also resolved to suggest to the Local Government Board to send down their engineer to meet the guardians' engineer, in order to consult about and recommend some method to improve the present wretched sanitary state of Ballyclare, as they (the guardians) have already adopted the best scheme recommended by their own engineers which the Local Government Board have refused to allow to be executed.

Sad Death of Mr. W. J. Kisby, L.F.P.S. Glasg., L.A.H. Dub.

An inquest was held on Nov. 22nd with reference to the greatly lamented death of Mr. Kisby, medical officer of Corduff Dispensary, Carrickmacross Union, which occurred on Tuesday night, Nov. 19th. It would appear from the evidence that after going to bed on that night two messengers came with a "red ticket" (urgent) for him to attend a poor dispensary patient at her confinement. Getting up, Mr. Kisby took an umbrella and a lamp (the night being dark and stormy) and set out, having previously sent on the messengers with his obstetric bag. Two hours later the men returned who had come for him to say that the poor woman was better and that he was not wanted. Mr. Kisby's wife, becoming alarmed that her husband had not appeared at the sick woman's house, set out early in the morning with a neighbour, and was horrified to find her husband's body at the bottom of a drain nine feet deep. From the medical evidence it seems that there was a large wound extending from the bridge of Mr. Kisby's nose to behind the left ear, leaving the bone bare, with an extensive fracture of the skull. It would appear that at a short distance from his house, he turned off from the principal road into a by-road leading to the place where the woman was ill, and after going a short way he must have missed his footing and fallen into a stream (where his body was found) flowing at the side of this lane. The night was very stormy, and the [illegible] which he was carrying was probably extinguished. It [illegible] that there is a great want of proper fences along the [illegible] in this district, and it is said that a short time ago [illegible] men owing to this cause lost their lives in the neighbourhood by falling into a boghole. It was ascertained this [illegible] eight feet below the level of the road there was a projecting sharp stone with blood on it, and in his fall Mr. Kisby's head seems to have struck this, and in this way he received the very serious head injuries which alone probably caused death, though the end may have been hastened by the fact that the body was found lying face downwards in the water. Mr. Kisby was fifty-one years of age, and the greatest sympathy is felt for his bereaved wife and children.

Belfast Royal Hospital.

At the quarterly meeting of the Belfast Royal Hospital held on Nov. 25th, it was stated that at the end of the year the hospital was in debt to the amount of £846 [illegible]. Dr. Houston was appointed house surgeon for the [illegible] department in place of Dr. Whitaker, promoted to the [illegible] work.

The Samaritan Hospital.

A strong appeal is made in the Belfast papers for [illegible]—say £500—to build a spacious ward at the rear of the Samaritan Hospital for the accommodation of advanced [illegible] cases.

A Case of Small-pox at Ennis.

A police-sergeant named Dunlea has been removed to the Ennis Union Fever Hospital suffering from small-pox, and active measures have been taken with a view to prevent the spreading of the disease. The clothes and bedding [illegible] been burned, and the room that had been occupied by the patient at the barracks has been disinfected and locked up. Mr. Greene, medical officer of Ennis Dispensary, informed the guardians he thought there was no doubt it was a case of small-pox. Dr. Clements, medical inspector of the Local Government Board, was sent to make inquiries and render all the assistance in his power to the local authorities. He found the patient progressing very satisfactorily, and neither he nor Mr. Greene has been able to trace the source of contagion. The other constables in the barracks are kept under strict observation in order that any other cases which they occur, may be dealt with promptly.

Cork Young Men's Society.

Last Tuesday evening Dr. Henry Corby, Professor of Midwifery in Queen's College, Cork, delivered a lecture to the society, wherein he ably traced the rise of commercial prosperity in different nations to the amount of attention paid by the nation to technical education.

Nov. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Materia Medica and Therapeutics: the Old and the New.

A PRACTITIONER of, say, twenty-five years' standing who had happened to stray into the amphitheatre of the Paris Faculty during the delivery of Professor Landouzy's opening lecture on the above-named subject would probably have been considerably surprised at the matter thereof. For sero-therapy only was spoken of, and, what is more, it was announced that sero-therapy and its therapeutical applications would form the subject of Professor Landouzy's winter course of lectures to the exclusion of the current medication by means of drugs. After passing in review the deplorable state of surgery in the pre-Listerian epoch—a state which his old master Denouvilliers summed up in this significant and warning sentence, "Quand vous aurez une amputation à faire, regardez-y à [illegible] fois, car, quand nous décidons d'une opération, [illegible] souvent nous signons un arrêt de mort"—Professor Landouzy evoked the glorious memory of Pasteur and the fecund practical genius of our own Lister, who, working towards the same end, made surgery the marvellous science it now is. Nélaton once remarked that whoever succeeded in "delivering us from pus" deserved a golden statue, and assuredly these immortal co-workers merit such a recompense. Pushing his researches [illegible] Pasteur opened up the path of sero-therapy [illegible] Kitasato, and Maragliano.

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of Pasteur is to have invented a method which touches the *pourquoi* of disease more closely than any other known method. Alongside of sero-therapy, Professor Landouzy stated that opo-therapy (ὀπός, juice) — a method due to the late Brown-Séquard's insight into the value of the internal secretion of glands — would be considered in its details. But, believer as he is in the future of sero-therapy and opo-therapy, Professor Landouzy warned his audience of the impotence of any such methods in the treatment of disease accompanied by spoilt or degenerated organs. Here the *rôle* of the observant, watchful, and resourceful clinician will find full scope in enabling the sufferer to live on good terms with an incurable lesion of such vital organs as the heart or the kidney.

The Treatment of Orchitis at St. Louis Hospital.

The method of treatment adopted by Dr. Du Castel at the Hôpital St. Louis of this common and painful affection is as follows. The scrotum is exposed to a spray of methyl chloride, and the testes are then supported by an ordinary suspensory bandage, which covers a layer of cotton-wool, itself covered by a sheet of oiled silk. Every other day the process is repeated, the patient taking ordinary exercise in the intervals of the dressings. The average duration of the treatment is from twelve to fifteen days, considerably shorter than under the old antiphlogistic *régime*, which kept the sufferer on his back for several days.

The Collége de France.

The winter session at this venerable institution will open on Dec. 2nd. It may interest your readers, in whose minds the College is intimately associated with such workers as Claude Bernard, Marey, Ranvier, and Brown-Séquard, to know the subjects of the courses of lectures delivered within its walls. I therefore transcribe them. Medicine—M. d'Arsonval (the successor of M. Brown-Séquard): The Medical Applications of Electricity. Natural History of Organised Bodies—M. François-Frank (for M. Marey): Experimental Criticism of Published Works bearing upon the Innervation of Blood-vessels. Comparative Embryology — M. Henneguy: The Genesis of the Reproductive Elements. General Anatomy—M. Ranvier: Experimental Studies on the Regeneration of Tissues. Experimental and Comparative Psychology—M. Pierre Janet (for M. Th. Ribot): The Psychological Conditions of Personality. Persons who have not pushed their wanderings for some few years as far as the neighbourhood of the Collége de France would now hardly recognise the locality. Ancient houses that stood there only three or four years back have been replaced by palatial constructions such as the new Sorbonne, the Académie des Sciences, and the new Lycée Louis le Grand. Facing the Boulevard St. Germain aspect of the College there is still standing the statue of Claude Bernard, no anti-vivisectionist iconoclast having as yet dared to attempt its destruction. In the small garden close by is the bronze statue of Voltaire, whose cynical expression contrasts forcibly with—*pardon, mesdames les anti-vivisectionnistes*—the benevolent look of Claude Benard.

The Mortality from Tuberculosis in the Towns of France.

In his work "Le Phthisique et son Traitement Hygiénique," Dr. Petit gives the following figures relating to the ravages of tuberculosis amongst the urban populations in this country. The table is based upon the statistics of 662 towns.

Towns.	Population.	Mortality (tuberculous) per 100,000 inhabitants.
In 11	100,000 to 430,000	363
,, 46	30,000 ,, 100,000	305
,, 50	20,000 ,, 30,000	288
,, 127	10,000 ,, 25,000	271
,, 332	5,000 ,, 10,000	216
,, 95	below 5,000	181

The preceding figures bring into relief the influence of agglomeration. In Paris the proportion of deaths from this cause is 490 per 100,000 inhabitants. In the department (of the Seine) in which it stands, and whose population numbers over three millions, the average mortality from tuberculosis, traversing the period comprised between 1889 and 1893, is 14,565.

Photographic Passports for Paris Practitioners.

A practice already in operation in Berlin and in certain cities of the United States is about to be adopted in this capital, the Prefect of Police having consented in deference to a wish expressed by the Council of the Medical Societies of the Arrondissements of Paris. Each practitioner registered in the official list published by the Prefect of Police will have delivered to him a card of identity, containing on one side his photograph and on the other his name and address together with the certificate of the Prefect. This card, shown to a policeman, will suffice to procure for the holder facilities of circulation within Paris denied to the ordinary base mortal. In order to obtain this card, medical men who are members of any *société d'arrondissement* may send their names and addresses *plus* the sum of 1 fr. 25 centimes to the secretary of their society. Non-members must apply to the general secretary of the Council of the Societies. A notice will appear later specifying the days on which the applicant may undergo the painful process of photography at the hands of M. Pirou. An anæsthetic would be a comfort during the *pose*.

Nov. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Diphtheria of the Skin.

THE following rare case is described in the *Berliner Klinische Wochenschrift* by Professor Flesch of Frankfort. A girl, aged two and a half years, was scalded with boiling water on Aug. 3rd, nearly the whole left side from the lips to the umbilicus being involved. On the places where the clothes had retained the hot water the effect was very severe, whilst it was superficial on the face and neck. The whole of the injured surface was covered with 2 per cent. salicyl vaseline and cotton wool, the dressing being changed daily. The child on the first evening had a temperature of 39·6° C., but felt quite well the next day. On the seventh day the superficial scalds of the neck and face were covered with fresh epidermis, so that the dressing was no longer necessary there, and the mother, overjoyed at this improvement, kissed the girl's neck just on the limit where the deep wound was beginning to granulate. On the following day the mother suddenly complained of pains in the throat, and in the evening an obviously diphtheritic inflammation of the tonsils was visible. She and the child's aunt, who was seized with the same disease, were therefore isolated, and the child's father, who felt ill the following day, had apparently a slight sore-throat, the diphtheritic nature of which was very probable. Both ladies were treated with injections of Behring's anti-toxin and subsequently developed hæmorrhagic nephritis, but quickly recovered. On Aug. 13th the spot where the child had been kissed showed a very remarkable alteration. The skin was covered by a grey mass and was much swollen, the œdema extending as far as the eye, while the edge of the spot was irritated and somewhat elevated. The child was, therefore, treated with Behring's antitoxin, and on bacteriological examination of the grey mass Dr. Benario found an abundance of Löffler's bacilli and cultivated them on agar. On the third day the grey mass disappeared, together with the œdema, but was replaced by an ulceration, which healed after a short time. Some time afterwards a slight paresis of the palate appeared, but there was no other complication, the throat of the child being unaffected. Professor Flesch states that diphtheria of the skin usually occurs only in the neighbourhood of tracheotomy wounds, and is very rarely found in other parts. As the diphtheria attacked the new epidermis but spared the granulations he concludes that the moist granulations hindered the disease from spreading over the whole surface of the body, but that newly-formed epidermis is favourable to the growth of Löffler's bacilli.

The Influence of Antitoxin on the duration of Laryngeal Intubation.

Dr. Bókai of Budapest has published statistics showing that the duration of laryngeal intubation is shortened by the use of antitoxin. He successfully treated 215 intubated cases without antitoxin, the average period of intubation being seventy-nine hours. Since the introduction of the antitoxin treatment he has had 45 successful cases of intubation, the average duration of which was sixty-one hours — being a reduction of eighteen hours.

Honours to Professor Lewin.

Professor Georg Lewin, the senior of the Berlin syphilographers, on Nov. 12th celebrated the fiftieth anniversary of his nomination as M.D., and in honour of the event the

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Berlin Dermatological Association, of which he is the chairman, held a special meeting at which a congratulatory address was read by Professor Lassar, the vice-president of the association, and a collection of twenty-two treatises, written for that purpose by former and present assistants and pupils and other friends of Professor Lewin, was presented to him. The principal essays were: on Syphilophobia, by Dr. Benda; on Gummata of the Eye, by Professor Hirschberg; on the Principles of the Treatment of Eczema, by Professor Lassar; on the Relations between Hereditary Syphilis and Nervous Diseases, by Professor Mendel; and on Piedra Nostras, by Professor Unna. Professor Virchow read a paper on the Antiquity of Syphilis, mentioning that very remarkable alterations of the bones had lately been found both in Egyptian mummies and in the figures on pottery made by American races before the time of Columbus. Professor Leyden then read a paper on the Internal Complications of Gonorrhœa, and after the meeting there was a social gathering in Langenbeck House.

Nov. 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The New Istituto Clinico at Pisa.

OF all the Italian medical schools, that at Pisa boasts (at least in the century now drawing to a close) the greatest number of English-speaking graduates. This fact, taken in connexion with its European renown under the Medici (particularly Lorenzo and Cosimo) and its having produced in Galileo a pioneer, conjointly with Bacon, of the modern inductive method, would of itself suffice to interest your readers in yesterday's ceremony—the inauguration of a new clinical institute in furtherance of the efficiency of the school. Its indefatigable professor of clinical medicine, Dr. Giovanni Battista Queirolo, has subscribed largely to this new foundation, and to him, aided by the "Consorzio Universitario" and the munificence of King Humbert, it owes its completion as one of the best cliniques in the peninsula. This adjunct to the resources of Pisa comes not a moment too soon. Italy is on the eve of passing a law which will sanction the struggle for existence among her Universities in general, and her medical schools in particular, and Pisa, if only to keep abreast of younger, and in some respects better-circumstanced, rivals, requires as a *conditio sine quâ non* a clinique worthy of the stage now reached by the healing art. I will only add that the amphitheatre of the institute, which (so to speak) "crowns the edifice," is commodious, finely proportioned, and well adapted both for lecturer and auditory, while the ornamentation, contributed gratuitously by the ablest artists of Pisa, culminates in a very fine bust of Morgagni, the "creator of pathological anatomy." May the work of the clinique be carried on in the spirit and with the success of its *genius loci*.

The Disinfecting Establishment in the Aventine.

We have now, in a completed state and in working order, what has long been a desideratum in Rome—a special establishment for the disinfection of wearing apparel and all such articles as may be contaminated by infective or contagious diseases. Annexed to the Lazzaretto di Santa Sabina on the Aventine, it was instituted by way of experiment in 1893 for the instruction of the *personnel*. Last year it added to its resources a crematory furnace, constructed from the designs of Professor Angelo Celli, for the destruction of all such articles as could not be sterilised. The whole establishment, which for some months had been in a state of suspended animation, has now come under the supervision of Professor Mario Panizza, of the Public Health Department, and may be regarded as another safeguard for the Roman population, resident and migratory, against the risks of infective disease.

Health of the Red Sea Colony, Civil and Military.

"Eminently satisfactory" is the official report from Massowah as to the health of soldier and civilian in the Colonia Eritrea. There are only ten patients in the civil hospital at Massowah, none of them seriously ill, and some approaching convalescence. In the military hospital, where all the patients of the garrison are accommodated besides those belonging to the section for non-combatant natives, there are forty under treatment for various maladies, fourteen of them being syphilitic cases and six suffering from traumatic lesions. No case of epidemic disease has been reported throughout the entire colony.

Nov. 25th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Reappearance of Cholera in St. Petersburg.

RUMOURS that cholera had reappeared in St. Petersburg have been current for the past three or four weeks, and they are now confirmed by an official announcement from the municipal authorities. The earliest cases of sickness suspiciously resembling cholera occurred on Oct. 10th (22nd). Between that date and Oct. 25th (Nov. 6th) there were 27 such cases with 12 deaths. The following are the statistics of the outbreak up to the present:—

				Cases.	Deaths.
From noon on	Oct. 25th	to noon on	Oct. 26th	—	1
,, ,,	Oct. 26th	,, ,,	Oct. 27th	3	—
,, ,,	Oct. 27th	,, ,,	Oct. 28th	2	2
,, ,,	Oct. 28th	,, ,,	Oct. 29th	2	—
,, ,,	Oct. 29th	,, ,,	Oct. 30th	8	3
,, ,,	Oct. 30th	,, ,,	Oct. 31st	6	5
,, ,,	Oct. 31st	,, ,,	Nov. 1st	4	1
,, ,,	Nov. 1st	,, ,,	Nov. 2nd	2	2
,, ,,	Nov. 2nd	,, ,,	Nov. 3rd	5	3
,, ,,	Nov. 3rd	,, ,,	Nov. 4th	6	2
,, ,,	Nov. 4th	,, ,,	Nov. 5th	5	5
,, ,,	Nov. 5th	,, ,,	Nov. 6th	6	1
,, ,,	Nov. 6th	,, ,,	Nov. 7th	4	2
,, ,,	Nov. 7th	,, ,,	Nov. 8th	9	2
,, ,,	Nov. 8th	,, ,,	Nov. 9th	2	3

(All the dates in the table are Old Style dates.)

At present there remain under treatment 28 cases with choleraic symptoms. These cases are distributed in the Alexander Hospital in memory of Botkin, the Obuchovski, the Petropavlovski, and the Mary Magdalene Hospitals, and the Hospital in memory of the Emancipation of the Serfs.

St. Petersburg, Nov. 10th (22nd).

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Medical Department of the National Guard.

THE special committee of surgeons appointed to discuss the needs of its medical department and make suggestions decided not to concur in a recommendation that the medical corps be made a separate organisation. It was proposed, however, to increase the number in the hospital corps to twelve for each regiment, six for battalions, and two for separate companies. Of the twelve in the regimental corps three are to rank as corporals and two of the battalion corps likewise. It was decided to recommend that each of the corps be provided with an instrument case and a revolver, and each corps with a surgical and medical outfit. It was voted that to procure competent hospital stewards they be paid $50 a year in addition to pay for duty.

Use of Intoxicants.

The *Journal of Inebriety* estimates the total number of drunkards in America at 1,600,000. There being about twenty-five millions of adults in this country, this means that one person out of every fifteen drinks to excess, and is consequently more or less of a drunkard. The journal thinks that this estimate is a very modest one and rather under the mark than above it.

Suits for Damages against a Railroad.

Over sixty suits for damages, aggregating nearly $1,000,000, have been begun against the New York and Sea Beach Railroad by sufferers in the wreck on the road on Labour Day, when about seventy people were injured. The first suit is for $25,000 damages. Another action is that of a family, the father of which died from his injuries a week after the accident. The sixty suits call for damages in varying amounts. The lowest is for $2000. There are a score of plaintiffs who demand $5000, and as many more who think that $10,000 is none too much to make them whole. The road's defence will be that it was not guilty of negligence, and therefore not responsible for damages.

Diminished Number of Immigrants.

The Superintendent of Immigration reports a marked diminution in the number of immigrants during the past year. The total number of steerage passengers landed at this port during 1894-95 was 216,724, which was only 14,987

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less than the total number landed during the previous year (231,711), but the decrease in the number of alien steerage passengers landed amounted to 28,118. The cause, he states, is to be found in the correspondingly larger number of United States citizens who returned in the steerage during the fiscal year 1894–95 (25,796) than in 1893–94 (12,665). He recommends that the inspection be extended to cabin passengers and to all vessels from foreign ports without exception. He also recommends increased accommodation of the immigrants at quarantine.

Nov. 19th.

Obituary.

ROBERT JAMIESON, M.D., L.R.C.S. EDIN.,

CONSULTING PHYSICIAN, ROYAL LUNATIC ASYLUM, ABERDEEN.

BY the death of Dr. Robert Jamieson on the morning of Nov. 17th Scotland has lost her oldest asylum superintendent. A gentleman much esteemed in the locality, of marked intellectual power and independent character, with handsome physical appearance, firm in discipline, but with genuine kindliness of heart, Dr. Jamieson was an ideal asylum superintendent, and in the course of a long life must have had a strong influence for good. Dr. Jamieson was born in Aberdeen in 1818, and was the son of a leading jeweller in the city; he became M.A. Aberd., M.D., L.R.C.S. Edin. in 1839; was appointed medical superintendent of the Royal Lunatic Asylum, Aberdeen, in 1840, but on his marriage in 1846 resigned and engaged in private practice; he was at this time Lecturer on the Practice of Medicine and Medical Jurisprudence and Medical Examiner for Degrees, King's College, Aberdeen; in 1853 he was unanimously re-elected superintendent of the asylum, with accommodation according to his requirements, and held the post till, in 1881, Dr. William Reid was appointed his coadjutor; but the weight of years telling rapidly on his seemingly stalwart frame, he was released from all active responsibility in 1884, but remained in his previous residence as consulting physician. On his appointment as superintendent in 1840 the daily number in residence at the asylum was 144; at present it is 730; and the history of the asylum presents a continuous series of enlargements and improvements, evidencing the increasing care bestowed on the comfort of those mentally afflicted, as also the increase under our modern civilisation of this class, the improvements being never more marked than at the present moment, when the extensive buildings of the new hospital just await completion. In a contemporary notice we find him credited, together with Dr. Hutchings of Glasgow, with introducing the non-restraint system of treatment in Scotland; but that he was no mere theorist his own words from his first report in 1841 will show: "In regard to the subject of coercion we find ourselves called upon, in justice to the managers and to the friends of the patients under our charge, to make a short statement of our practice in this important particular, and it shortly is this, that we act on the principle of *non-restraint* as far as the construction and economy of the establishment will allow; but we have no desire to obtain the notoriety of being non-restrainers at the expense of what we conscientiously deem to be for the safety and advantage of our patients. That there are cases in which mild restraint is both judicious and humane every physician who is unprejudiced must admit who has ever witnessed the unbridled violence of an outrageous maniac exhausting the excited vigour of an enfeebled constitution and extinguishing the hope of recovery for ever. We have no more hesitation in such cases, when other means have been useless, in applying the waist-belt or the muff than we would have in applying leeches or a blister against the will of the individual. ..... It is scarcely requisite, now that the public mind entertains less prejudiced notions on the treatment of the insane, to notice that threatening and abusive language and harsh measures of every description are not only found to be unnecessary but are strictly prohibited among the attendants and made the occasion of reprimand or dismissal when discovered." As Lecturer on Medical Jurisprudence at King's College Medical School Dr. Jamieson devoted eight lectures to insanity, commented on at the time as remarkable for their fulness and ability. These appear in the *London Medical Gazette*, 1850, and will well repay the attention of the specialist. His lecture on the opening of King's College Medical School, 1850, may also be perused with both profit and pleasure. A discourse on Mind and Body,[1] read before the Philosophical Institute of Aberdeen, shows him dealing with his subject in a more popular manner, and in especial evidencing a regard for higher considerations than those merely physical. Dr. Jamieson was predeceased by all his family. Known privately as a gentleman of cultivated tastes, with special musical talent, he had the personal ambition in early life to become a painter. He was a liberal patron of Scottish art, of which his valuable collection is testimony, and had himself sat to three Academicians—Sam Bough, John Pettie, and Sir George Reid.

MEDICAL TRIAL.

THE trial of George Wight, M.B. Edin., charged with the manslaughter of Gertrude Fanny Fletcher at Holloway, was heard at the Central Criminal Court on Monday and Tuesday last before Mr. Justice Wright.

Defendant pleaded "Not Guilty."

Mr. Charles Mathews, Mr. Biron, and Mr. H. T. Hewitt conducted the prosecution; Mr. Carson, Q.C., Mr. Geoghegan, and Mr. Bruce defended.

Mr. Mathews, in opening the case, outlined the details which were elicited at the inquest at Folkestone (reported in THE LANCET of Sept. 28th) and at the police-court proceedings. Witnesses were called on the part of the prosecution, and the Treasury evidence was concluded on the first day of the trial. On Tuesday Mr. Mathews summed up the case for the prosecution, no witnesses being called for the defendant. He contended that Dr. Wight was not in a fit condition to deliver the woman when he attended the deceased. Dr. Wight was grossly, and therefore culpably, and therefore criminally, negligent in the performance of his duty. Be it granted that there was an error in attributing the prisoner's condition to drink. The prisoner in his evidence before the coroner said that he was suffering from giddiness and swimming in the head and that he took bromide on the Saturday; that at 2 o'clock on the afternoon of Sunday, Sept. 8th, he took a strong dose of chloral; and that on that Sunday when he attended he might have been suffering from the effects of the chloral. If a man were not in a condition to perform his duty, and that unfit condition was produced by his own act, although morally they might draw a distinction between a man suffering from the effects of drink and a man suffering from the effects of other narcotics, the criminal responsibility was not changed.

Mr. Carson, Q.C., for the defence, said that he was pleading the cause of a man who for thirty years had practised his profession with skill and distinction and who by his kindness to his patients had won the hearts of all who knew him. He denied that there was any negligence on the part of Dr. Wight. Dr. Wight had had very great experience in midwifery, having attended 5000 confinements. Each of the medical witnesses had stated that the prisoner had had very great experience and that he was thoroughly well acquainted with the use of instruments. The medical evidence had shown that if the forceps slipped, it might cause the injury. If the injury was not caused by negligence but by the accidental slipping of the forceps, then the jury ought to return a verdict of "Not Guilty." With regard to Dr. Wight's condition at the time, no one seriously believed that he was under the influence of drink. The nurse who was present did not say that he was under the influence of drink, and none of the medical men said that he was under the influence of drink. The latter permitted him to take part in the operation of delivering the child. Dr. Wight suffered from insomnia and took narcotics for the purpose of inducing sleep. If a man had to take medicine to improve his physical condition and anything happened afterwards in the conduct of his business, the man ought not to be held criminally responsible. Mr. Carson, in view of the medical testimony, denied that there was any evidence on which to base a charge of criminal negligence.

Mr. Justice Wright, in summing up, remarked that it might be quite right for a man to stupefy himself with chloroform, chloral, or similar medicine for the treatment of disease, but if he did so he must not while in that state take a case of childbirth.

The jury returned a verdict of "Guilty."

Mr. Carson said he had a number of letters from patients of Dr. Wight, all telling the same tale as that which had been related of the devotion and attention to his patients. He need scarcely remind his lordship that Dr. Wight's position and means of livelihood had been entirely destroyed, so that he had already been to a large degree punished. He had a large family, and there was the fact that an action claiming damage arising out of the same matter had been commenced by the husband of the deceased. That action was practically determined by the verdict in this case, and the accused was anxious to settle that action, and to compensate the husband. Under these circumstances, would his lordship feel justified in postponing sentence until next sessions, in order that the civil action might be settled.

Mr. Justice Wright thought there was no ground for postponing sentence.

Mr. Frederick R. Hannah, L.R.C.P. Edin., was called and gave evidence as to the accused's health.

Mr. Justice Wright, in passing sentence, said the jury had discharged a very painful duty, and the one he had to perform was not less painful. He must deal with the case in the first instance entirely on legal and public grounds, and the sentence which he must pass must be a substantial one. If the case had arisen from intoxication, or if the maltreatment of the patient, such as the jury very properly found proved in this case, had resulted from intoxication, a sentence of not less than probably a year's hard labour would have been passed. This was a different case, and he should sentence Dr. Wight to three months' imprisonment. Having regard, however, to the obvious consequences and the absence of bad intention on the part of Dr. Wight, he should not order hard labour. He should direct that until the instructions of the Secretary of State for the Home Department were received the prisoner should be placed under the care of the medical officer of the prison.

[1] Phrenical Action of the Cerebrum: Jour. Psychol. Med., 1858.

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THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE fifty-ninth session of the General Medical Council was opened on Tuesday last under the presidency of Sir Richard Quain and with unwonted surroundings, for the Council are meeting this year in the buildings of the Royal College of Physicians of London pending the completion of the building arrangements of their own home in Oxford-street.

With regard to these same arrangements the Council do not appear to be in a very happy position. The freehold of their premises had been purchased, the new designs had been approved of, and the architect had entered into negotiations with the owners of the adjoining premises for the purpose of arranging the contemplated alterations, and all appeared to be going well. When the contract had been signed, when the building proceedings were well under way, when the chief surveyor of the Office of Works had inspected the premises and stated his readiness to report favourably as to the interference by the building with the occupant of 16, Hanover-square, there was found on a copy of the sub-lease to the tenant of the same house, in addition to the conditions safeguarding the usual rights and privileges, an exceptional clause providing that the Office of Works must not "increase or permit to be increased the height of the building situate at the rear of the messuage or demesne or premises hereby demised now occupied by the Council of Medical Education ..... without the consent in writing of the said tenant." Thereupon the Council were informed that permission could not be given to them by the Office of Works to make the proposed alterations save after arrangement with the tenant. The negotiations with the tenant having failed, the plans have now been modified, and though the amended building may not be as architecturally acceptable as the original design had promised, its warming and hygienic arrangements should be perfect, as they have been supervised for their fellow councillors by Dr. R. Thorne Thorne and Mr. Teale.

We congratulate the President upon his vigorous appearance. Sir Richard Quain having recently made public allusion to his age, we make bold to compliment him upon his brightness and alertness in the chair and upon his close grasp of the subjects brought before him at the deliberations of the Council.

Tuesday's proceedings were marked by the unqualified rejection by the Council of the motion, proposed by Sir W. Foster and seconded by Mr. Wheelhouse, that the resolution of the British Medical Association, to the effect that direct representation of the profession on the General Medical Council should be increased, should receive some notice at the hands of the Council. There were found to support Sir W. Foster and Mr. Wheelhouse only five other members of the Council.

Wednesday's proceedings were largely made up of a debate upon the position of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin. It will be remembered that in June last Sir Dyce Duckworth, Chairman of the Examination Committee, presented a report on the examinations of this Board (now defunct save for the use of some few recent students), whose tenour may be indicated by the fact that he asked the Council to find that the standard of proficiency in medicine was insufficient. This motion was carried by 17 votes to 4, and a representation upon the strength of it was made to the Privy Council. The Privy Council having put certain queries to which the General Medical Council have replies ready, a motion by Dr. MacAlister was adopted to the effect that the Privy Council should be informed that as long as these examinations are deemed "qualifying" under the Medical Act, the General Medical Council will be unable to maintain a due standard of proficiency save by repeated inspection.

TUESDAY, NOV. 26TH.

Sir RICHARD QUAIN, Bart., President, in the chair.

Opening of the Session.

The General Medical Council met in the hall of the Royal College of Physicians of London in Trafalgar-square, this being their fifty-ninth session. There was almost a full attendance of members, Dr. Haughton and Dr. Kidd being the only absentees.

The President's Address.

The PRESIDENT (Sir Richard Quain) in formally opening the session commenced by expressing his sense of the indebtedness of the Council to the Royal College of Physicians of London for the readiness and courtesy with which they had offered the use of their Library. He then briefly stated the reason for the delay in the improvements at the Council's own premises, which, he stated, were due to the fact that the plans could not be carried out without arrangement with the tenant of 16, Hanover-square, with whom negotiations so far had failed.

"I have pleasure (Sir Richard Quain continued) in informing the Council that considerable progress has been made in the preparation of the new edition of the British Pharmacopœia. The members of the Pharmacopœia Committee met on three days in July (24th, 25th, and 26th), and on two during the current month (22nd and 23rd). The several valuable suggestions made by the medical authorities in this country have been carefully considered, including points of construction in the Pharmacopœia, alterations in the various classes of preparations, as well as in many individual preparations. The whole of the large number of suggested additions and omissions have been considered. The suggestions of the Indian and other colonial authorities have also, so far as possible at present, been dealt with. A committee of the Pharmaceutical Society has aided, and is aiding, the Council in the production of the work. The editor reports satisfactory progress in all its sections, some portions of the work having been already set in type, printed, and placed before the Pharmacopœia Committee. The co-operation of referees, as stated in the report of the committee in June last, has been invited and cordially rendered. In pharmacology, Dr. Lauder Brunton, Professor Fraser, and Dr. Walter Smith are prepared to render their assistance; in chemistry, Dr. Thorpe, with Professors Tilden and Emerson Reynolds; and in botany, Mr. Thiselton-Dyer and Mr. Holmes. We may thus anticipate that though the period for the production of the Pharmacopœia may be somewhat postponed, the delay will be compensated for by satisfactory results.

I have caused to be printed, for the convenience of the Council, in a separate form important documents in connexion with the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Ireland, which include the representation made by the Council to the Privy Council on the subject of deficiencies in the examinations of this Board, together with the observations on the subject addressed to the Privy Council by the College and the Hall: also a letter from the Lord President of the Council, in which his Grace points out that, the Conjoint Board having ceased to exist, it was unnecessary to take further action in the matter. A further communication to the Privy Council, from the secretary of the late Board, has indicated the apparent necessity for a continuation of the proceedings of the Board for the examination of candidates who might, by their previous arrangements, have a claim to be examined. The opinion of the legal advisers of the Council will be submitted, together with the documents. It will be seen also that the Apothecaries' Hall of Ireland, regarding the Conjoint Board as having ceased to exist, makes an application to the Council for the appointment of assistant

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examiners in surgery in accordance with the provisions of Clauses 3–5 of the Medical Act, 1886."

[Sir Richard Quain then briefly referred to the penal cases, which happily on this occasion are but few, and then passed to the real gist of his address an exposition of the duties and limitations of the Council. He continued :]

"Communications, which will be found in the programme of business, have been addressed to the Council on matters in which the constitution and functions of the Council are concerned. It seems to me that, in my capacity as President, it is my duty to notice, however briefly, some of the suggestions which, not for the first time, have been made in regard to these subjects. For instance, it is suggested that an increased number of direct representatives of the medical profession should be elected on the Council, and that certain functions, in which such direct representatives would have a special interest, might then be assigned to, or undertaken by, the Council.

Firstly, with reference to the functions of the Council, we must remark that this Council is the creation of the Crown, acting on the advice and with the consent of both Houses of Parliament, as expressed in the Medical Acts, and created primarily in the interests of the public to secure for that public competent professional aid. The protection of the interests of the public is the first duty assigned to the Council, as instanced by the means taken to secure the efficient education and competent skill of the members of the medical profession.

The Council has also had assigned to it the duty of forming an accurate register of competent practitioners and of keeping that register free from all unworthy elements. The Council has also the duty of preparing and publishing the British Pharmacopœia. There are many very estimable persons who would call on the Council to undertake other duties, such, for example, as taking cognisance of matters of professional etiquette and improper conduct and action, whether in relations of the profession to the public or amongst members of the profession itself, and without question many of these grievances may be deserving of investigation and censure. The duty of investigating the subjects to which I refer should come under the notice of the licensing authorities which have conferred the licence to practise on the individual complained of. Several of these bodies can, and do, exercise these controlling powers, and what some do all should be induced to do. By this action on the part of the medical authorities, by putting in force their by-laws and regulations, many of the grievances which our profession justly complain of might be remedied. The duties of the Council are of a far higher and a more important character, which promise every year to become of yet greater public importance, and I am satisfied that were the Council to interfere in these matters of ethical detail it would but lose its authoritative influence with the Government and would give only doubtful satisfaction to the public.

Secondly, with reference to the *constitution* of the Council, an argument in favour of the election of additional direct representatives is deduced from the practice of, amongst other bodies, the Incorporated Law Society. Now, it must be observed that this society, which is very similar in its constitution to the British Medical Association, though chartered, is a purely voluntary association, comprising amongst its members only a portion of the qualified practising solicitors. They each subscribe one guinea per annum. This body can, and does, institute inquiries into the conduct of members of the profession against whom complaint has been made by any member of the public; if the council of the Society is satisfied that a case is made out, they appear in support of it before a Common Law judge, who gives a decision upon it. This system contrasts very much in favour of our Council, which is itself empowered to investigate charges made against delinquent members of the profession, and itself to pass upon them a judgment from which there is no appeal. It is said in favour of the election of additional direct representatives that the medical practitioners, who contribute by their registration fees to maintain the Council, should have a larger share in its constitution. Again, a comparison may be made with the profession of solicitors. Solicitors pay large apprenticeship fees, and they have to render prolonged unpaid service to the solicitors to whom they are articled, they pay fees for education and examination, and, before being admitted to practise, they are required to pay stamp duties to the Inland Revenue authorities amounting to £110. They also pay annual fees for a licence to practise in London of 9 guineas each, and for the privilege of practising in the country of 6 guineas each. Observe that over the expenditure of these contributions they have no control whatever. The facts just mentioned clearly indicate that members of the medical profession, who pay only one inclusive fee for life of £5 for technical admission to the Medical Register, should not be discontented with their position as compared with that of the legal profession, so far as the payment of fees and the control of the expenditure are concerned. According to my experience, an increase in the number of members of the Council, which is not a legislative, but a deliberative and administrative body, would only tend to embarrass and delay its proceedings. The members of the Council are elected and appointed under the most varied representative conditions, but they all tend to secure the high character and ability of its members, with a result which cannot be denied.

Before concluding these observations I am tempted to quote, from a recent address by the Lord Chief Justice of England on the subject of the improvement of legal education, an observation which has special reference to the work and constitution of our Council. His lordship says: 'Compare our legal system with the elaborate care and training in the medical and surgical schools. As has recently been well said by Sir Edwin Arnold, the labours of educational preparation for these professions grow, year by year, harder and harder—and so they ought. To be up to the high-water mark of proficiency, a young doctor must to-day be a chemist, physiologist, botanist, mechanician, and many things besides. Indeed, the history of medical education in recent years, from the time when the College of Physicians and the College of Surgeons commanded the principal avenues to the profession to the changes wrought by the legislation of 1858 and 1886, affords an instructive example of the improvements that may be effected under a body such as the General Medical Council, clothed with public responsibility, and broadly representative in its character.'"

On the motion of Mr. WHEELHOUSE, seconded by Sir WALTER FOSTER, the President was cordially thanked for his address.

Service Examinations.

Mr. W. J. C. MILLER, clerk to the Council, handed in tables showing the results of competitions: (*a*) for commissions in the Naval Medical Service, held on Nov. 4th, 1895; (*b*) for commissions in the Medical Staff of the army, held on Aug. 2nd, 1895; and (*c*) and (*d*) for commissions in the Indian Medical Service, held in February and August, 1895.

The Report of the Public Health Committee.

Dr. THORNE THORNE, Chairman of the Public Health Committee, called attention to the fact that the consideration of the report of the committee had been erased from the provisional programme of business, and moved that it be restored and the subject dealt with during the present session. It was certainly the case that there still remained two bodies to be visited and reported upon, but he did not think that a sufficient reason for further postponing this subject for six months. The committee thought it most desirable that the bodies should know at once what it was the Council desired in connexion with these examinations.

Sir WILLIAM TURNER said he was sure the Business Committee would be glad to listen to any suggestion Dr. Thorne Thorne had to make on this subject, and in these circumstances the formal motion was unnecessary.

Dr. THORNE THORNE pointed out that the subject had been deliberately struck out of the programme.

The PRESIDENT assured Dr. Thorne Thorne that there would be no difficulty in having it restored.

With this assurance Dr. Thorne Thorne withdrew his motion.

The Case of Mr. Thomas Richards.

The Council proceeded with the adjourned consideration of the case of Mr. Thomas Richards, registered as a Member of the Royal College of Surgeons in England, 1886, and Licentiate of the Royal College of Physicians of London, 1888, who at the November session last year was found to have committed the offence of covering an unqualified person at Llanhilleth, in the county of Monmouth. On that occasion the Council adjourned the further consideration of the case until the present session.

The PRESIDENT, in introducing the subject, said there was a general feeling in the Council last year that the punishment of removal from the Register would be too severe, and was not called for. Therefore, the further consideration of

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the case had been postponed. Mr. Richards had not been called upon to attend, and it would not be necessary to move any resolution.

Dr. GLOVER thought the gentleman should now be informed by letter that the case was closed, and a notification to that effect should be placed upon the minutes.

Dr. MACALISTER agreed that something should be done, thinking it unfair to suspend anyone indefinitely.

Sir WALTER FOSTER moved a motion to the effect that the Council, having received satisfactory evidence that Mr. Richards had amended his conduct as required by the Council after his case was heard, resolve that his name be not removed from the Register.

This motion was at once accepted by the Council.

The Society of Apothecaries of London.

Mr. BRUDENELL CARTER read a letter from this society, dated July 11th, 1895, intimating that the society had determined to discontinue its examination in arts as from the end of the current year. He thought the Council would receive this notice with gratification, and he moved that the letter be received and entered on the minutes.

Dr. MACALISTER, seconding this motion, said he was sure the Council would desire to express their appreciation of the dignity and courtesy of the communication.

The motion was adopted by the Council.

Direct Representation.

Sir WALTER FOSTER moved:—

"That a committee be appointed to consider the resolution of the British Medical Association respecting the increase of the direct representation of the profession on the General Medical Council, and to report thereon to the Council at this session."

The resolution in question, which was passed at one of the general meetings of this Association in August last, was to the effect that the council of the Association should be instructed to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council. He thought it desirable that this resolution of the British Medical Association should receive some notice at the hands of the Council. As the matter stood at present the council of the British Medical Association was pledged more or less to proceed with this resolution and embody as much of it as was wise in a Bill to be placed before Parliament, and he should be sorry to see any conflict between this body and the British Medical Association in the arena of Parliament. He did not think it would be desirable in the interests of either party, and he hoped that the medical profession might attain what it desired without having to go through that very costly and tedious process. There was beyond all doubt a growing feeling among the medical profession that something should be done, not to convert this Council into a body entirely to protect medical interests, but rather to develop the body and give the general profession a little more confidence in it.

Mr. WHEELHOUSE, seconding the motion, said that when he was present at the meeting of the British Medical Association he saw how extremely strong the feeling was that the profession was not sufficiently represented in this Council. He did his best to explain what the feelings of this Council were on this point, but he was overborne. The opinion was so decided, that nothing would satisfy the meeting but that a strong resolution should be forwarded to this Council, and that this Council should be asked definitely to consider it. In these circumstances he thought the best course was to appoint a committee to go carefully and deliberately into the matter, and then to ask the Council to come to a definite conclusion.

Dr. MACALISTER opposed the motion. This, he said, was no communication to the Council; it was a threat, a pistol held at the head of the Council, and nothing could be more undignified than to proceed as was proposed. The answer of this Council could only be, "Let them go to Parliament."

Mr. BRUDENELL CARTER took the same line, saying that this Council owed no duties or responsibilities to the British Medical Association. His advice to the Council was just let them be doing, and he would vote against the proposed committee.

Dr. GLOVER said he was sorry to hear the last two speeches. The resolution of the Association was a most temperate one, and well worthy of consideration by this Council. Mr. Carter said that this Council owed nothing to the British Medical Association, that was an unfortunate statement.

Mr. BRUDENELL CARTER, interposing, said his statement was that this Council owed no responsibilities or duties.

Dr. GLOVER, accepting the correction, said that this could not be regarded as a satisfactory attitude for the Council to hold towards the British Medical Association, which included the majority of the medical profession. He thought that they had some responsibility to so large a body of the medical profession.

A vote was then taken, when 7 members voted for the motion and 21 members voted against it. The motion was accordingly rejected.

Instruction in Practical Midwifery.

Dr. GLOVER moved:

"That the Medical Council, having before it the petition of the British Medical Association at its late annual meeting on the inadequacy of the recommendation of the General Medical Council, in regard to instruction in practical midwifery, which petition is printed in the minutes of the Executive Committee, Nov. 25th, 1895, resolves that in the judgment of the Council no medical authority should require less from candidates for its qualification than attendance on thirty cases of labour, under the supervision of a registered medical practitioner; or three months' attendance on the practice of a lying-in hospital or maternity charity under the same supervision."

Dr. Glover also moved that the petition referred to be received and entered on the minutes. Its terms were:

"That we, the members of the British Medical Association, while anxious to improve the training and supervision, and if need be to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing.

"That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their final examination who present a certificate stating that they have 'conducted personally' only three, and 'been present at' only nine, confinements; and as the General Medical Council has refused in November, 1890, to alter this recommendation, we instruct our council to petition the General Medical Council to recommend that no student be admitted to his final examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner."

Dr. MACALISTER thought this communication should not be entered on the minutes. It seemed that the council of the British Medical Association had been instructed to petition this Council, but it had not taken the trouble to do so; it had merely sent on the resolution of the general meeting. Until this Council had a proper petition before them he did not think they could do anything.

Sir WALTER FOSTER confessed that there had been an omission somewhere with reference to the petition.

Dr. GLOVER differed from Dr. MacAlister in this matter. He respected the 15,000 members of the British Medical Association even more than he respected the thirty members who constituted the council of that body.

Dr. GAIRDNER said that while he respected the British Medical Association as a great association of practitioners, he differed entirely from the view that they should attach more importance to a vote taken at the general meeting than to a decision of the council arrived at after mature consideration. If the council had not prepared a petition he did not think they could proceed with the matter.

Dr. GLOVER said that he was anxious to present this subject without prejudice to the Council, but he could not consent to the withdrawal of his motion without a protest.

The motion was thereupon withdrawn.

Information for Local Registrars.

Dr. GLOVER asked whether the President had heard finally from the Registrar-General since his promise to consider the question of forwarding to the local registrars a notice of the erasure of any name from the Medical Register.

Mr. MILLER (the Registrar) said that a letter had been received from the Registrar-General stating that he would consider whether he would grant the Council's request that the list of erasures from the Medical Register be communicated from time to time to all registrars of births and deaths. That letter was dated June 21st. Another letter on the subject had been received from the Local Government Board. It had been written at the direction of Sir Walter Foster, then Parliamentary Secretary to the Board, and stated that if the annual cost of supplying the local registrars of births and deaths with the Medical Register would be £600, Sir Walter Foster was disposed to agree with the Secretary of the Treasury that the expense was excessive.

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Sir WALTER FOSTER asked Mr. Miller if he had any estimate of the probable cost.

Mr. MILLER replied that he had made up a statement which showed that the number of local registrars was about 2500, and the cost of supplying them with the Medical Register would be about £250 and an additional £100 for postage.

Sir WALTER FOSTER said that when this subject was raised at a previous meeting he was a member of Her Majesty's Government, and he was very willing that the Council's suggestion should be given effect to. On putting the matter before Sir John Hibbert, that right hon. gentleman had expressed a very kindly feeling towards the proposal; but, some objection being afterwards taken on the score of expense, he had forwarded the letter from the Treasury to Mr. Miller to get the estimate of cost corrected. Then the Government, he thought, went out of office, and he had had no opportunity of receiving or sending the revised estimate to the Treasury. He thought the best thing the Council could now do would be to send a letter to the Treasury showing that the cost would be only about half the amount of their estimate.

Mr. TEALE thought it should be pointed out that the £100 for postage went to the Government, and that the actual outlay would be £250.

Dr. HERON WATSON said the county-court judges as well as the local registrars had been mentioned at the time the matter was discussed, and perhaps that accounted for the larger sum named by the Treasury.

Dr. GLOVER thought that after what had taken place they might now get a more satisfactory reply from the Registrar-General.

In the course of further discussion it was suggested that a cheaper and perhaps the better, way of obtaining the object in view would be to print for distribution lists of the names of persons erased from the Register. Ultimately, on the motion of Dr. GLOVER, seconded by Sir WALTER FOSTER, it was resolved unanimously that the President be requested to communicate further with the Registrar-General with the view of ensuring that local registrars should be informed of the erasures of any names from the Medical Register.

Disciplinary Functions of Qualifying Medical Authorities.

The next business on the paper was the following notice of motion in the name of Dr. Glover, viz.:

"That it be an instruction to the Executive Committee to revert to the consideration of the subject of the disciplinary functions of the qualifying medical authorities and of the General Medical Council, and to report to the Council at its next meeting on the best means of further defining and confirming these functions and bringing them into harmonious and efficient coöperation."

Dr. GLOVER asked that this proposal should stand over till Wednesday. He had been speaking a good deal already, and he respectfully submitted that it would be better for the Council to proceed with a notice standing in the name of Dr. Heron Watson.

Sir WILLIAM TURNER pointed out that the motion just referred to was not quite ready for discussion. He suggested that Dr. Glover should go on.

Dr. GLOVER said he felt his case was a very hard one, but he hoped the Council would feel all the more disposed because of that to accept his proposal. The subject dealt with in his resolution was an old one. It had been very fully dealt with by their late President, Mr. Marshall, and if they would turn to vol. xxv. of their Minutes they would see that it contained documents on the disciplinary powers of not only the qualifying authorities, but also of the General Medical Council. The general result of Mr. Marshall's inquiry was to show that more or less these qualifying bodies had disciplinary powers, and particularly the supreme power of taking away the diplomas they had given. Some of them also possessed the power of restoring them after they had been taken away, but that power was not so general as was the power to withdraw them. On the result of the inquiry coming before the Council, the subject was referred to the Executive Committee, and the volume of the Minutes for 1889 (vol. xxvi.) contained the resolution of the Executive Committee, which was to the effect that the Council's legal advisers should be advised to frame certain resolutions with the view of facilitating procedure in penal cases. That was the last thing done; the matter ended with the suggestion of a committee for penal cases. If they looked at the expenditure of time and money on penal cases dealt with since that committee was suggested, they would feel convinced that it had not brought into harmony the procedure of the qualifying bodies, and that there now existed the same want of harmony that existed at the time of Mr. Marshall's inquiry. In his opinion the time had therefore come for the further consideration of the subject with the view of securing some uniform powers on which the several bodies might act. The penal committee had not made any difference in the amount of the disorder, or the amount of reliance the Council could place on the individual bodies. There still was the same want of harmony, certainty, and uniformity in the individual bodies. Some of these bodies did not have disciplinary powers. For instance, the Apothecaries' Society at Blackfriars did not have it, but had expressed a willingness to possess it. Most of such bodies as had the power of withdrawing names did not possess the power of restoring them. In their new by-laws the Royal College of Surgeons of England included not only the power of removing but also of restoring names. If the disciplinary power was inherent in these bodies, that should be made clear. Its existence had been recognised by the Medical Act, and if it was made clear that all bodies had the power of withdrawing and also of restoring names he firmly believed that the mischief of which they now complained would be corrected at its beginning.

Dr. THORNE THORNE, in seconding the motion, said that he had endeavoured to make himself acquainted with the powers and duties of the Council, and if there was one impression made upon him deeper than another it was that the penal powers the Council exercised were about the most unsatisfactory. He had seen them spending two or three days in investigating the conduct of a medical man whom everybody had felt deserving of punishment for doing wrong, but who had escaped because his conduct did not happen to be the infamous conduct in a professional respect that the Council could deal with. It seemed to him that it would tend very greatly to raise the tone of the profession if the several bodies were able to call up people and warn them at an early stage of offensive conduct rather than when it had become more mature. A small body could deal with offenders judicially and warn them, but in this General Medical Council it took some days for a body of thirty men to come to no conclusion whatever. He himself did not feel competent to discuss this question fully, but he had great pleasure in seconding the motion in order that it might be fully discussed.

Mr. BRYANT thought the qualifying bodies should have a certain control over their own Licentiates, but anyone who would read Mr. Marshall's report must feel how utterly hopeless it was to get the universities and other bodies to look at it in that light. He had gone over the report in a careful way not long ago, and he thought some of these bodies might be willing to accept help from this Council in defining what their position was. If an Act could be obtained which would give, if not all that was wanted, at any rate the power to remove names, it would be a great step in the right direction.

Mr. TEALE said they were hampered by the fact that when they took a name off the Register there were certain bodies that could not restore it. That, he thought, was the great difficulty. At the same time they could not expect the universities, which dealt with many sorts of degrees, to have special privileges for any one class of their graduates. But universities had not the machinery to go into matters of this kind. Still, if it were possible to get a general Act which empowered the universities to remove names taken off the Register by the General Medical Council, he thought they would not refuse to exercise that power.

Sir WILLIAM TURNER said that on the last occasion Dr. Glover brought this matter before the Council he asked him (Sir William Turner) if he could say what the Scotch universities would be likely to do. He had in reply told the Council that he would bring the matter before the Commission which was then sitting. He had remembered that promise, and he thought he might say that with Dr. Heron Watson's assistance the whole case was fully stated to the Scottish Universities Commissioners. What resolution these gentlemen might come to he could not say. He suggested that Mr. Miller might see if there were left any copies of the Bill on the subject drafted during the former inquiry, and if there were that these should be distributed among the members of the Council.

Dr. LEECH thought that all universities might so act as to get the power to remove names.

Sir JOHN BANKS had great pleasure in supporting the motion. The two universities of Ireland, he said, were most anxious to have the power to remove black sheep.

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Dr. HERON WATSON remarked that the Royal College of Surgeons of Edinburgh were most anxious to carry out this disciplinary power, and they were advised that they had it already and might exercise it in regard to the Fellows. Still, the difficulty was to get agreement amongst the bodies, and the matter altogether was one that required very careful consideration before any action was taken.

Mr. BRUDENELL CARTER said that although they all sympathised with the object, yet the executive would have many difficulties to consider and clear away. He hoped that if the executive took the matter in hand they would devote to it sufficient time to look at it from all points of view.

Sir WALTER FOSTER hoped the resolution would be carried. When Mr. Marshall started the inquiry the hope was that the Council might get the qualifying bodies to do many of the duties that fell on this Council. He (Sir Walter Foster) did not see any chance of transferring to those bodies the discipline of the profession, but the motion was an inarticulate cry for more discipline and more means for discipline.

Dr. GAIRDNER was thoroughly in sympathy with Dr. Glover's object. Whatever could be done in this direction should be done. As had been pointed out, the difficulty in regard to the universities was really the deficiency of machinery.

Sir WILLIAM TURNER suggested that they might now take the vote, and perhaps Dr. Glover's motion was as wise as any other.

The motion was unanimously adopted.

The Case of Mr. R. M. Theobald.

The Council proceeded to discuss in private the application of Robert Masters Theobald for a rehearing of his case. On the public being readmitted,

The PRESIDENT informed the applicant that the attention of the Council had been very carefully directed to his case, and the result of their deliberation would be announced by Mr. Muir Mackenzie.

Mr. MUIR MACKENZIE said that the first head of the application was that the former proceedings in the case should be declared null and void. The Council had declined to do that. The second head of the application was that the applicant's name should be restored to the Register. The Council declined to make any order.

Mr. THEOBALD asked if there was any avenue by which he might take further action.

Mr. MUIR MACKENZIE said he could comply with the standing orders.

Mr. THEOBALD said that he had already made application under the standing orders. He had fulfilled all the conditions under the standing orders. Why could he not be restored?

Mr. MUIR MACKENZIE: The matter has been considered and decided upon.

Mr. THEOBALD: I ask, Why?

Mr. MUIR MACKENZIE said that it was a condition precedent to applicants obtaining restoration under the standing orders that he should obtain restoration under the Act, that he should be in possession of a qualification or diploma, and he was not in possession of any diploma entitling him to restoration.

Mr. THEOBALD believed the Council had the power of restoring his qualification whether he had a diploma or not. He asked whether it was a condition precedent that he should obtain restoration from the Royal College of Surgeons.

Mr. MUIR MACKENZIE: Yes.

Mr. THEOBALD then asked that the Council should give him a certificate to fortify him in his application to the Royal College of Surgeons.

The PRESIDENT: Mr. Muir Mackenzie says this case is at an end. It would not be in the power of this Council to make any recommendation.

Mr. THEOBALD: I am very sorry. I think you are entirely wrong.

The PRESIDENT: We are advised that it is not so.

The Council adjourned.

WEDNESDAY, NOV. 27TH.

The Council met again to-day, Sir RICHARD QUAIN presiding. In revising the minutes of the previous sitting the Council decided to insert that Dr. Glover withdrew his motion on the ground that the petition of the British Medical Association had not reached the Council.

The Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin.

Mr. WHEELHOUSE asked leave to make a correction in the speech he delivered during the debate last June on the examinations of the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin. In moving the adoption of the report on this occasion he said that he had visited the last two examinations of the board, and had found that great improvements had been made, and that he and Dr. Duffey were tolerably satisfied except with regard to the examination in medicine. He went on to say that the candidate to whom they took exception, although well versed in theory, knew nothing about practice, and then, unfortunately, he added the words that he had now passed as a qualified man. It had since been brought to his notice that this was entirely incorrect, and that the gentleman was not passed as qualified—that he was not a qualified man at this moment. Though he had passed through medicine, as they described in their report, he had previously been stopped in pathology and also in surgery. It had been said that this statement of his prejudiced the Council against the Board and also the Privy Council. He did not think it could be so. He imagined that the Privy Council had had the report before it and had discussed it purely on its merits, as this Council had done. But what he desired to do was to apologise to the Conjoint Board for the mistake he had made.

The PRESIDENT suggested that there should be some reference to this matter in the minutes.

Sir PHILIP SMYLY (who represents on the Council the Royal College of Surgeons of Ireland) asked to be allowed to make a statement at this point.

Sir WILLIAM TURNER thought that a discussion now would be extremely irregular.

Sir DYCE DUCKWORTH (chairman of the Examination Committee) said that little slips of this kind had happened before, and it could not be pretended that this single statement had materially influenced the decision of the Council.

Sir PHILIP SMYLY submitted that this supposed passing of this man was the only point upon which the examination was considered insufficient.

Sir DYCE DUCKWORTH said it was absolutely grotesque to suppose that the Council made its representation to the Privy Council on the strength of this little *lapsus*.

The PRESIDENT pointed out that there had been four special inspections of the examination and that the condemnation was general.

The Council then proceeded to consider the position with regard to the Conjoint Board.

The PRESIDENT suggested that the Board should continue to exist as before until a fitting opportunity had been given to the remaining candidates to come forward for examination.

Sir PHILIP SMYLY said he did not think his College would recombine with the Apothecaries' Hall except for this special purpose. The report to the Privy Council had nothing whatever to do with their separating from the Apothecaries' Hall. They had given their notice to separate considerably before there was any report to the Privy Council, and the two things were perfectly distinct.

The Clerk then read the following two letters received from the Privy Council, viz.:

"Privy Council Office, Whitehall,
"August 10th, 1895.

"SIR,—Referring to your letter of the 13th June last containing a copy of a Resolution of the General Medical Council to the effect that the standard of proficiency in Medicine required from candidates at the Qualifying Examinations held by the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin is insufficient, and enclosing a copy of Reports of the Council's Inspector and Visitor on the subject, I am directed by the Lord President of the Council to transmit to you the accompanying copies of replies to the same which have been received from the Council of the Royal College of Surgeons in Ireland and the Governor and Council of the Apothecaries' Hall, Dublin, respectively. I am directed by the Lord President to state, for the information of the General Medical Council, that it appears to be unnecessary for the Privy Council to come to any decision as to the insufficiency or otherwise of the examinations in question under Section 4 of the Medical Act, 1886, inasmuch as it appears from the documentary evidence before His Grace that the Conjoint Board is no longer in existence.

"I am, Sir, your obedient servant,
"C. L. PEEL.

"To Sir Richard Quain, Bart., M.D.,
"President of the General Medical Council."

"Privy Council Office, Whitehall.
"October, 1895.

"SIR,—Referring to my letter of the 10th August last, stating that it appeared to the Lord President of the Council unnecessary for the Privy Council to come to any decision as to the insufficiency or otherwise of

the Examinations of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Dublin, inasmuch as from the documentary evidence before His Grace (see paragraph 2 of letter from Royal College of Surgeons in Ireland of the 27th July, 1895), it appeared that the Conjoint Board was no longer in existence, I am directed by the Lord President to state for the information of the General Medical Council that a letter (16th October, 1895), copy of which is enclosed, has been received from the Secretary of the Council of the Royal College of Surgeons in Ireland, from which it will be seen that although, as he states, the scheme has ceased for new entries, the Conjoint Board will continue for some time to come to carry on examinations. Under these circumstances the Lord President will be glad to be informed how long these Conjoint Examinations are likely to be continued, and also whether the General Medical Council have any observations to offer on the explanations submitted to His Grace by the Royal College of Surgeons and the Apothecaries' Hall, Dublin, which were forwarded to you with my letter of the 10th August last. I have the honour to be, Sir, your obedient servant,

"Sir Richard Quain, Bart., M.D., C. L. PEEL.
"President of the General Medical Council."

The Clerk also read a letter from Mr. Robert H. Woods, Secretary of the Council of the Royal College of Surgeons of Ireland, containing the following passage:—

"The Conjoint Committee, to whom the matter has been referred by the Council of the Royal College of Surgeons, report that the total number of candidates who have entered under the scheme since its inception is 159; that of these 97 have passed the Final Examination, and the remainder, 62, have not yet completed their course. This latter number includes four qualified practitioners who were rejected at the Final, two candidates who, having been rejected, entered and passed under other qualifying examinations and are now on your Register, and an unknown and unknowable number of other candidates who have given up medicine as a profession, or entered under other schemes.

"It will be necessary to continue the examinations as long as any of these candidates present themselves."

Sir WILLIAM TURNER suggested that the Council should now consider the question how long these conjoint examinations were likely to be continued.

Mr. BRUDENELL CARTER put forward the idea that there might be a limit of time.

Sir PHILIP SMYLY explained that in the precedent of the Royal Universities in Ireland there was no limit of time and the two systems were carried on alongside. At the same time he thought five or six years would suffice for all practical purposes.

Dr. MCVAIL said that in the case of the Scottish Universities there was no time limit. In Glasgow five years ago a degree had to be given under the regulations which were in force before 1858.

Sir PHILIP SMYLY thought that if there was a time limit it should be made by this Council and not by the bodies.

Dr. MACALISTER, seconded by Sir WILLIAM TURNER, moved a resolution to the effect that the Conjoint Board be requested to furnish the Council with a list of the names and dates of admission of the candidates who have already passed some of the examinations, but who had not at July 1st, 1895, completed the series of examinations for the Board's qualifications.

This was at once agreed to, as was also a resolution to the effect that the President be requested to inform the Lord President of the Privy Council that the Council were legally advised that the Conjoint Board has not ceased to exist, so far as regards students who have entered for the examination of the Board before July 1st, 1895; that it appeared to the Council that all existing claims for admission to the examination should be exhausted within six years from the present date; and that the Council understood that the two bodies constituting the Conjoint Board were prepared to carry out the arrangements necessary for meeting these claims to examination, of which there were probably about sixty.

The CLERK, at the request of Sir WILLIAM TURNER, read the following condensed statement prepared by Mr. Woods of the Royal College of Surgeons of Ireland, viz.:

"The Council confidently hopes that it has not merited this condemnation for these reasons:—

"1st. That the report has not been seen by the Council at all when the Medical Council passed judgment.

"2nd. That the Council of the College was entitled to have time for the consideration of the report and the preparation of a reply, and that no time was given for these purposes.

"3rd. That the report on the subject of medicine is based upon a difference of opinion between the Examiners and the Visitor and the Inspector, and the Council points out that the Examiners were entirely competent and experienced.

"4th. That the judgment of the General Medical Council was influenced by emphatic statements which have been shown to be absolutely without foundation.

"5th. That the union known as the Conjoint Scheme of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Ireland, has ceased to exist, and that when the General Medical Council reported the examination to the Lords of the Privy Council as insufficient, it knew that the scheme was within a few days of terminating."

He also read the following statement by Mr. Charles R. C. Tichborne, Governor of the Apothecaries' Hall of Dublin, viz.:

"The Hall therefore submit:—

"(1) That any imperfection in the conduct of the examinations has been due to causes which can be remedied and to difficulties which can be overcome.

"(2) That their undertaking to maintain a sufficient standard of medical examination should be accepted, and assistant surgical examiners be appointed by the Medical Council.

"(3) That nothing has been done by the Hall meriting disfranchisement. In several respects the examinations have been commended, and the only point of unfavourable comment in the last report of the visitor and inspector has arisen from what seems to be an error.

"If there is anything in the case on behalf of the Apothecaries' Hall as embodied in this letter, and the accompanying Appendices 1 and 2, which does not clearly afford a complete answer to the representation made by the General Medical Council to the Privy Council, the Hall would ask your Grace's permission to be heard by counsel on their behalf before the Privy Council."

Sir PHILIP SMYLY said that the Royal College of Surgeons of Ireland had always supplied good and efficient examiners, and in the last two reports the examination in medicine was declared satisfactory and only insufficient upon the question of marking.

Sir DYCE DUCKWORTH pointed out that the two bodies combined for this examination, and there could be no division of responsibility in the matter.

Dr. MACALISTER moved a resolution in effect that the President of this Council be requested to inform the Lord President of the Privy Council that the opinion of this Council as to the standard of proficiency in medicine required by the Conjoint Board was based on the results, not of one inspection only, but of four special inspections and visitations, and that the remarks made in the communications of the bodies had been considered by the Council, and the Council saw in them no reason for altering their opinion as to the standard in question.

Dr. CHARLES MOORE, the representative of the Apothecaries' Hall of Dublin, addressed the Council at some length. The Hall, he said, had suffered peculiar difficulties in obtaining examiners in medicine owing to the opposition of the Royal College of Physicians of Ireland. If a man attempted to examine for them he had no prospect of promotion from the Royal College of Physicians. He was prepared to prove that.

Dr. ATTHILL: Will you give the name?

Dr. MOORE: I will not give any name.

Dr. ATTHILL: Then I say it is not a true statement.

Dr. MOORE concluded by moving an amendment: "That the printed reports of the General Medical Council do not justify a condemnation of the conjoint bodies of Surgeons and Apothecaries, inasmuch as several other bodies have been pronounced insufficient in most important particulars, but have not been condemned."

Sir PHILIP SMYLY undertook to second this amendment.

The amendment, however, received no other support than the votes of its mover and seconder, and the motion proposed by Dr. MacAlister was carried.

It was also agreed that the Lord President be further informed that if and so long as the Conjoint Board's examinations continue to be deemed by the Privy Council to be qualifying examinations under the Medical Act the General Medical Council is unable to secure the maintenance of the standard of efficiency otherwise than by continuing inspection and visitation.

Dr. HERON WATSON moved that these findings of the Council be conveyed to the Lord President by deputation.

Sir DYCE DUCKWORTH seconded the proposal.

On a division only four voted for the motion, which was accordingly lost.

Application for Appointment of Examiners.

The next business on the paper was consideration of the following application from the Apothecaries' Hall of Dublin for the appointment of assistant examiners in surgery:—

"Dublin, November 21st, 1895.

"DEAR SIR,—I am directed by the Governor and Court of Apothecaries' Hall, Ireland, to petition the Council to appoint two Examiners in Surgery, under the provision of the Medical Act, 1886, as their conjunction with the Royal College of Surgeons, Ireland, has ceased in July, 1895. If permission is granted, the Court herewith submit two names for the approval of the Council, or will receive two names from the Council if so directed. I am requested to ask you to place the above before the Council at ensuing meeting.

"The Governor and Court beg to submit to the General Council the following names as suitable Examiners in Surgery, and they have intimated their willingness to act.

"Francis T. Heuston, M.D. R.U.I., F.R.C.S., and M.C.R.C.S., Surgeon to the Adelaide Hospital.

"F. Conway Dwyer, M.B., Bac. Surg. T.C.D., Surgeon to Jervis-street Hospital.

"Faithfully yours,
"ROBERT MONTGOMERY, M.R.C.S., Secretary.

"To Sir Richard Quain, M.D., Bart.,
"President of the General Council."

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Dr. BATTY TUKE asked whether the body making this application had fulfilled all the conditions laid down in Section 5 of the Medical Act of 1886. There was no evidence on the face of the letter that they had exhausted all the means in their power to obtain examiners in Ireland.

Dr. MACALISTER wished to say further that, as the Council had agreed that the Conjoint Board was not extinct, it was impossible for them to appoint examiners for the Apothecaries' Hall separately. They were barred by the statute from making any appointment.

Dr. GLOVER said he should like to hear the lawyers before accepting Dr. MacAlister's dictum. He moved that they proceed no further with the application until they obtained the opinion of their legal advisers on the subject.

Sir PHILIP SMYLY seconded this motion.

Sir WILLIAM TURNER said it would be very satisfactory if Dr. Charles Moore could tell the Council whether the Apothecaries' Hall had exhausted all the means of forming a combination with the Irish Universities and corporations.

Dr. CHARLES MOORE replied in the affirmative. When combination with the College of Physicians was suggested, it was pointed out to them that combination of the Apothecaries' Society with that College would be like a case of a lady marrying a lady. The University of Dublin had replied to their letter that they did not see their way to unite with the Apothecaries' Hall, and the Royal University of Ireland had sent them the same answer. These replies had been received within the last few weeks.

Sir WILLIAM TURNER said that in that case the Council ought to have from the Secretary of the Apothecaries' Hall a distinct statement in writing. Without such a statement they could not determine whether there had been compliance with the Act

Dr. MCVAIL thought the Council should accept the specific statement of the accredited representative of the Apothecaries' Hall.

The PRESIDENT reminded Sir William Turner that the Council were constantly accepting assurances from its own members.

Dr. HERON WATSON's view was that the answers made to the Apothecaries' Hall should come from the representatives of the Irish Universities rather than from the representative of the Hall. If they had no information from these representatives they ought to have documentary evidence that the Apothecaries' Hall had made this application, and that the Universities had answered it.

Dr. BRUCE said that no such written evidence as was wanted here was required some years ago in the case of the London Apothecaries' Society's similar application.

Mr. CARTER looked upon it as a new and startling opinion that the assurance of one of their members was to be taken as of less importance than the statement of the secretary of the body he represented. Those who had raised the question had, no doubt quite unintentionally, cast a slur on the dignity of the General Medical Council. He, for one, was perfectly satisfied with the statement made by his colleague on the Council.

Dr. LOMBE ATTHILL said Dr. Charles Moore's statement was quite sufficient for him.

Dr. MCVAIL directed attention to the opinion of counsel as before them during the previous subject of consideration. He pointed out that Mr. Muir Mackenzie laid it down that the General Medical Council "could not, as long as the two corporations agree to continue examinations for the existing students in combination, refer any such student to a board consisting of the Apothecaries' Hall assisted by examiners in surgery appointed by the General Medical Council. The power to appoint assistant examiners only arises where a corporation represents that it is unable to combine, and here the Hall is not unable to enter into the combination so far as the existing students are concerned." He (Dr. McVail) did not think that opinion blocked the way of the Council in the appointment of examiners, but in view of the opinion that candidates who entered after July last "would have to be examined by a board formed by the Hall, with examiners nominated by the General Medical Council under Section 5 of the Act," he thought there was force in the view expressed by Dr. MacAlister.

Dr. MACALISTER would like to have advice as to whether they could go on under Section 5. He proposed that Mr. Muir Mackenzie should be asked to advise the Council whether, under Section 5 of the Act of 1886 or other legal provision, the Council had power to appoint additional examiners in surgery in respect of students entering after July 1st, 1895.

Dr. GLOVER, withdrawing his own proposal, seconded the motion, which, after some remarks by Sir P. SMYLY and WALTER FOSTER, was unanimously carried.

Sir WILLIAM TURNER thereupon remarked that the Council could not now come to a decision that [illegible] ventured to ask Dr. Charles Moore to write to Dublin [illegible] letters of the two universities definitely refusing to [illegible] with the Apothecaries' Hall. It was important the [illegible] should have these documents before them, because [illegible] step they took in this case would be carefully watched [illegible] they must therefore be wary in their procedure.

Dr. CHARLES MOORE, remarking that it had been [illegible] intention of the secretary to send the documents to [illegible] agreed to write for them.

Further consideration of the matter was then [illegible] to Friday.

The Medical Register.

Dr. HERON WATSON directed attention to certain [illegible] of the Medical Act relating to registration. He said [illegible] provisions implied that there were no less than five [illegible] required. There was the General Register, which [illegible] of some thirty volumes, and was kept in the office [illegible] Council; then there were three branch registers, [illegible] for England, Scotland, and Ireland; and then there [illegible] printed copy of the General Medical Register, which [illegible] issued on Jan. 1st in each year. Of these [illegible] only that in the hands of the Council's Registrar [illegible] to be complete. The Medical Register could [illegible] correct at the time it went to press, and as the year [illegible] it must become more and more inaccurate. The [illegible] changes made in 1894 were 11,000, or upwards of [illegible] every month. That showed that very little [illegible] could be placed on the Register as the year drew [illegible] end, and much inconvenience must be felt in Scotland [illegible] Ireland when there was any inquiry as to a newcomer [illegible] district or a practitioner who was not well known. The [illegible] increased by the fact that the changes made in the [illegible] Register were not communicated to the branch registrars [illegible] for England and Scotland. These registrars were [illegible] to send to the Council's Registrar twice a month a list [illegible] changes made in their local registers, and he thought [illegible] should be reciprocity and that these registrars should [illegible] informed once a fortnight of the changes made in the [illegible] General Register, so that the Scottish and Irish registers [illegible] should be kept in touch with the changes made in the [illegible] Register fortnight by fortnight. He therefore moved "That [illegible] the Council direct that the changes made by the Registrar in [illegible] the General Register, whether as respects the addition [illegible] moval of names, or the alteration of names or of residences [illegible] be communicated twice in every month to the [illegible] registrars in Scotland and in Ireland, and that a like [illegible] munication of alterations in Scottish and Irish registers [illegible] communicated to the Scottish and Irish branch registrars [illegible] respectively, with a view to such alterations being entered [illegible] them in an interleaved copy of the printed Medical Register [illegible] supplied to the branch registrars when such issue of the [illegible] Register is annually made."

Sir WILLIAM TURNER seconded the motion.

The REGISTRAR (Mr. Miller) expressed the opinion that [illegible] the proposal could be given effect to, and whatever the [illegible] Council ordered should be done.

The motion was unanimously agreed to.

The Council, after sitting for a few minutes in private, [illegible] adjourned.

THURSDAY, NOV. 28TH.

The Council met and dealt with the case of Mr. Geo. [illegible] Francis McCarthy (registered as Lic. Midwif. [illegible] K.Q. Coll. Phys. Irel.; Mem. R. Coll. Surg. Eng. [illegible] who at the June meeting was found to have committed [illegible] the offence of covering an unqualified person in a practice [illegible] South London. Mr. McCarthy attended, and the President [illegible] addressed to him a number of questions as to the manner [illegible] which he has been employed since June. He gave the [illegible] Council an emphatic assurance that he would never [illegible] employ in his practice an unqualified assistant. The decision [illegible] of the Council was not to withdraw Mr. McCarthy's name [illegible] from the Medical Register.

Thereafter the Council proceeded in committee to consider [illegible] and discuss the specific recommendations made by the [illegible] Examination Committee in regard to the results of various [illegible]

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and inspection of the final examinations in medicine, surgery, and midwifery of all the licensing bodies. Our issue next week will contain a report of what was done.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Abbott, James Edward, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Ash, Percy Roberts, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Ashwin, Richard Hamilton, L.R.C.P. Lond., Guy's Hospital.
Aubin, Emile Dupont, L.R.C.P. Lond., Middlesex Hospital.
Barron, Thomas Ashby, L.R.C.P. Lond., Bt. Bartholomew's Hospital.
Beadles, Arthur Harry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Belcher, George Clement, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Bell, Thomas Dobson, L.R.C.P. Lond., University College and Hospital.
Bernstein, Matthias Max, L.R.C.P. Lond., University of Moscow.
Bodman, John Hervey, L.R.C.P. Lond., St. Bartholomew's Hospital.
Bostock, Eustace Bernard, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Bowes, Tom Armstrong, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Boyton, Arthur James Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Breton, Lancelot Moyle, L.R.C.P. Lond., St. Thomas's Hospital.
Bradley, William Inglis, M.D. McGill, McGill College, Montreal.
Brown, Ralph Charles, L.R.C.P. Lond., Melbourne University and Westminster Hospital.
Bull, Harry Ashworth, L.R.C.P. Lond., St. Thomas's Hospital.
Caglieri, Guido Enrico, L.R.C.P. Lond., St. Ignatius College and California University, and Genoa University.
Campbell, Archibald John, L.R.C.P. Lond., St. Thomas's Hospital.
Cant, Arthur, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Carden, William Alfred, L.R.C.P. Lond., Guy's Hospital.
Cawley, George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Child, Gerald Alfred, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Clark, Richard Foster, L.R.C.P. Lond., Guy's Hospital.
Connell, Arthur Mayers, L.R.C.P. Lond., University College and Hospital.
Cooke, Arthur, L.R.C.P. Lond., Oxford University and London Hospital.
Cooke, Martin Alfred, L.R.C.P. Lond., St. Bartholomew's Hospital.
Coutts, Francis James, L.R.C.P. Lond., University College and Hospital.
Cox, Henry Procter, L.R.C.P. Lond., King's College and Hospital.
Creasy, Laurence Eliot, L.R.C.P. Lond., University College and Hospital.
Crosby, Arthur Henry Pascal, L.R.C.P. Lond., Middlesex Hospital.
Crossley, Samuel, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Dempsey, Patrick Joseph, L.R.C.P. Lond., Master Misericordiæ Hospital and Catholic University, Dublin.
Dhingra, Behari Lal, L.R.C.P. Lond., University College and Hospital.
Dudley, Arthur Dudley Parr, L.R.C.P. Lond., University College and Hospital
Dun, Robert Craig, L.R.C.P. Lond., Edinburgh and Berne Universities.
Dyball, Brennan, L.R.C.P. Lond., St. Thomas's Hospital.
Eames, Charles William, L.R.C.P. Lond., Edinburgh University, Yorkshire College, and General Infirmary, Leeds.
Evans, Evan Laming, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Fairbairn, John Shields, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Farmer, William Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Fincham, Ernest Charles, L.R.C.P. Lond., St. Bartholomew's Hospital.
Fleming, Wilfrid Louis Remi, L.R.C.P. Lond., Westminster Hospital.
Fletcher, Roland Henry, L.R.C.P. Lond., University College and Hospital.
Flower, Arthur Frederick Ashbrook, L.R.C.P. Lond., St. Bartholomew's Hospital.
Frazer, William Dyer, L.R.C.P. Lond., St. Thomas's Hospital.
Ganner, Joseph, L.R.C.P. Lond., Mason College, Queen's and Gener Hospitals, Birmingham.
Genge, George Frederick Saunders, L.R.C.P. Lond., Westminster Hospital.
Giblin, Wilfred Wanostrocht, L.R.C.P. Lond., St. Bartholomew's Hospital.
Gilmour, Richard Withers, L.R.C.P. Lond., St. Bartholomew's Hospital.
Gross, Charles Frederick, L.R.C.P. Lond., King's College and Hospital.
Hardcastle, William, L.R.C.P. Lond., Charing-cross Hospital.
Hardy, Frank Samuel, L.R.C.P. Lond., Firth College, Sheffield, and University College and Hospital.
Harris, Norman MacLeod, L.R.C.P. Lond., General Hospital and University, Toronto.
Hartley, Thomas Sidney, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Hay, John, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Hayden, George Alfred Thomas, L.R.C.P. Lond., London Hospital.
Hearnden, Hamilton, L.R.C.P. Lond., Guy's Hospital.
Heptinstall, Robert Hollings, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Hewetson, Henry, L.R.C.P. Lond., Guy's Hospital.
Hill, Ernest Gardiner, L.R.C.P. Lond., St. Mary's Hospital.
Holme, Crampton Whitaker, L.R.C.P. Lond., Edinburgh University.
Hora, Julian, L.R.C.P. Lond., Guy's Hospital.
Hubert, William Arthur, L.R.C.P. Lond., St. George's Hospital.
Huckle, Arthur Henry Headley, L.R.C.P. Lond., Guy's Hospital.
Hughes, Leonard Sonstadt, L.R.C.P. Lond., University College and Hospital.
Humphris, Francis Howard, L.R.C.P. Lond., Edinburgh University and University College and Hospital.
Jones, Edward Francis, L.R.C.P. Lond., London Hospital.
Joyce, Robert Dwyer, L.R.C.P. Lond., Mater Misericordiæ Hospital and Catholic University, Dublin.
Kent, Percy Wheeler, L.R.C.P. Lond., St. Thomas's Hospital.
Lambe, Thomas, L.R.C.P. Lond., University College and Hospital.
Lelean, Percy Samuel, L.R.C.P. Lond., St. Mary's Hospital.
Leon, John Temple, L.R.C.P. Lond., St. Mary's Hospital.
Lermitte, Edward Augustus, L.R.C.P. Lond., Durham University and St. Bartholomew's Hospital.
Lincoln, Charles Hope Septimus, L.R.C.P. Lond., Madras Medical College and Guy's Hospital.
Loud, Frank, L.R.C.P. Lond., Guy's Hospital.
Lydall, Wykeham Tracy, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Mackenzie, Alexander, L.R.C.P. Lond., Cambridge University, Yorkshire College, and General Infirmary, Leeds.
Macmillan, Niel Harrismith, L.R.C.P. Lond., Edinburgh University.
Madden, Francis Brian, L.R.C.P. Lond., St. Bartholomew's Hospital.
Manby, Walter Edward, L.R.C.P. Lond., Cambridge University and King's College Hospital.
Marshall, Gerald Seymour Sankey, L.R.C.P. Lond., Middlesex Hospital.
Martineau, Alfred John, L.R.C.P. Lond., St. Thomas's Hospital.
Mayne, Bertie James, L.R.C.P. Lond., Middlesex Hospital.
Miller, George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Muggleton, Ferdinand Charles Harry, L.R.C.P. Lond., London Hospital.
Murray, John Hanna, L.R.C.P. Lond., University College and Hospital.
Myrtle, George Yule, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and St. Mary's Hospital.
Nott, Herbert Walter, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Nuthall, Alex Wathen, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Ormerod, Ernest William, L.R.C.P. Lond., University College and General Hospital, Bristol.
O'Sullivan, Daniel, L.R.C.P. Lond., London Hospital.
Pearse, Joseph Steele, L.R.C.P. Lond., Middlesex Hospital.
Penny, William Reginald, L.R.C.P. Lond., Westminster Hospital.
Pepper, Henry William, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Perkins, George, L.R.C.P. Lond., Madras Medical College and University College Hospital.
Perry, Walter Dymock, L.R.C.P. Lond., Middlesex Hospital.
Pritchard, Harry Washington, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Ransome, Arthur Cyril, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Rawson, William Foster, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Rees, David Charles, L.R.C.P. Lond., Charing-cross Hospital.
Roger, Arthur Anderson, L.R.C.P. Lond., St. Bartholomew's Hospital.
Rundle, Claude, L.R.C.P. Lond., St. Mary's Hospital.
Savin, Lewis, L.R.C.P. Lond., Middlesex Hospital.
Sears, Alfred Ernest, L.R.C.P. Lond., London Hospital.
Shelley, Percy Wilfred Graham, L.R.C.P. Lond., St. Bartholomew's Hospital.
Shepheard, Henry, L.R.C.P. Lond., St. Thomas's Hospital.
Shoppee, Sidney Edward, L.R.C.P. Lond., University College Hospital.
Simpson, Cecil Butler, L.R.C.P. Lond., St. Thomas's Hospital.
Smith, Frank Addinsell, L.R.C.P. Lond., St. Bartholomew's Hospital.
Sparrow, George Randal, L.R.C.P. Lond., University College, and Royal Infirmary, Liverpool.
Stamper, Geoffrey Cooke, L.S.A. Lond., Guy's Hospital.
Stonehouse, Henry, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Stuart, Walter Lea, L.R.C.P. Lond., Guy's Hospital.
Thornton, Frank Butler, L.R.C.P. Lond., St. Thomas's Hospital.
Trotter, Robert Hale, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Tyson, Wilson, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Wakefield, Christopher Frank, L.R.C.P. Lond., Guy's Hospital.
Watson, Frederick James, L.R.C.P. Lond., Cambridge University and St. George's University.
Wilde, Alfred Neville, L.R.C.P. Lond., St. Bartholomew's Hospital.
Williams, Fenwick D'Arcy More, L.R.C.P. Lond., University College, and Royal Infirmary, Bristol.
Willmore, William Southwick, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Wilson, Horace Bagster, L.R.C.P. Lond., University College and General Hospital, Bristol, and Mason College, Birmingham.
Wolfenden, Henry Charles, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham.
Wood, Robert Moorsom, L.R.C.P. Lond., King's College, London.
Worthington, John Vigers, L.R.C.P. Lond., London Hospital.

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SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects :—

Surgery.—F. R. Baker, London Hospital; G. P. Y. Hulbert, Birmingham; P. G. Lodge, Leeds and St. Thomas's Hospital; D. Pettigrew, Glasgow and Sheffield; W. O. Piper, Westminster Hospital; E. A. B. Poole, Birmingham; E. H. Tipper, Guy's Hospital; J. B. Wall, St. Mary's Hospital; I. Watts, Manchester; H. C. Wimble, St. Bartholomew's Hospital; J. Winder, St. Mary's Hospital.
Medicine, Forensic Medicine, and Midwifery.—W. Benton, Charing-cross Hospital; E. G. Frederick, King's College Hospital; R. B. Jones, Liverpool; J. A. K. Renshaw, Cambridge and Manchester.
Medicine and Forensic Medicine.—F. E. Bromley, London Hospital; C. W. Moorshead, Guy's Hospital; E. H. Tipper, Guy's Hospital.
Medicine and Midwifery.—F. R. Baker, London Hospital.
Medicine.—W. H. Reed, Bombay and King's College Hospital.
Midwifery.—R. P. H. Whitmarsh, St. Thomas's Hospital; J. G. Owen, Charing-cross Hospital.

To Messrs. Hulbert, Lodge, Moorshead, Pettigrew, Poole, Reed, Renshaw, Tipper, Watts, and Whitmarsh was granted the diploma of the Society entitling them to practise Medicine, Surgery, and Midwifery.

NATIONAL DENTAL HOSPITAL.—Under the presidency of Sir Dyce Duckworth, past and present students of the National Dental Hospital gathered in the Holborn Restaurant on Nov. 22nd on the occasion of their annual dinner. Among those supporting the chairman were Sir James Crichton Browne, Mr. James Maughan, Mr. George Cunningham, Mr. Christopher Heath (President of the Royal College of Surgeons of England), Mr. W. R. Humby, Mr. H. J. Relph, and Mr. Sidney Spokes (Dean of the College). An exceedingly encouraging report was presented. Sir Dyce Duckworth referred to the wonderful change that had come over the profession of dentistry in the past quarter of a century, and compared the social position and scientific attainments of those who practised the calling nowadays with the status they occupied then. As matters now stood, a very fair field was opened to all who entered the profession. In a humorous speech Sir J. Crichton Browne said he thought there ought to be a definite scale of charges for dentists, so that people might not be as apprehensive about the extraction of the fee as the extraction of the fang. The recent association between hairdressing and dentistry was a striking testimony to the gullibility of the public, and now that ferocious and unscrupulous barbers had taken to teeth-scaling there was no reason why bootmakers should not claim to be able to treat their customers for gout, or why hatters should not diagnose the softening of their clients' brains while measuring them for their headgear. During the evening the prizes were presented to the successful students.

THE DIFFUSION OF SMALL-POX.—The week ended Nov. 23rd was, like its immediate predecessor, free from fatal small-pox so far as London was concerned. Indeed, the only one of the Registrar-General's thirty-three great towns in which a death was registered from the disease was West Ham. In that borough there has been a continuance of cases diagnosed as small-pox, and some of these have been returned from the hospital ships of the Metropolitan Asylums Board as not being small-pox. Including cases arising in West Ham, there were last week 20 admissions to the ships as compared with 29, 14, and 23 in the three preceding weeks. The close of last week found 89 patients remaining under treatment in the ships as against 106, 79, and 86 on the three previous Saturdays. No cases were heard of in the suburban districts. A few cases of small-pox have occurred recently at Fugglestone St. Peter, in the neighbourhood of Salisbury, but all are now convalescent, having been treated in a temporary hospital resorted to in the emergency. In the west, a case has developed in the Barton Regis Workhouse, near Bristol, the infection being thought to have been conveyed by some visitor. In Dublin, in the week ended Nov. 16th, there were three admissions to hospital, 4 discharges, and 2 deaths, leaving 11 cases under isolation, as compared with 18, 16, and 14 on the three Saturdays preceding. Of the deaths 1 occurred in a vaccinated and 1 in an unvaccinated adult. In Glasgow there have of late been several cases, and many of them have been traced to the spread of infection by mild and unrecognised cases of the disease in the city. The cases were found to have no apparent connexion one with the other. This circumstance led to inquiry, with the result of discovering that cases had arisen which had been considered to be chicken-pox. The medical men of the city have been apprised by the town council of the fact that there is a mild type of small-pox difficult to differentiate from chicken-pox.

NEWPORT (MON.) INFIRMARY—A MUNIFICENT OFFER.—For a considerable time past it has been felt by medical men and others connected with the Newport (Mon.) Infirmary that the site was very unsuitable for a hospital. Still, from time to time costly additions have been made. Now the necessity for further extension has been recognised, and, deeming the moment opportune for considering the question of removal, Dr. and Mrs. Garrod Thomas, the former of whom is honorary physician to the institution, have offered to give £5000 towards the erection of a new building. The offer is conditional upon £15,000 being subscribed by the public apart from the site. Not only does the offer remain open for three years, but the munificence of Dr. and Mrs. Thomas is not absolutely dependent upon the whole amount being raised. For every clear £3000 raised £1000 will be added by Dr. and Mrs. Thomas.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—On Tuesday, November 19th, the students' annual dinner was held at the Criterion Restaurant, under the presidency of Mr. Spencer, the dean of the school. A large company were present. Besides past and present students many of the hospital staff attended, including Dr. de Havilland Hall, Dr. Donkin, and Mr. Bond. After the usual toasts had been proposed and responded to several members of the company sang or recited. The recitation of Captain Cato, one of the guests, descriptive of the career and character of Napoleon, was very effectively rendered; and a humorous sketch given by Mr. Glassington afforded much amusement. Mr. Ormsby's song, "The Doctor," took immensely, as did also "I Can't Change It," which he sang in response to an encore. Mr. Riley's song, "The Four-horse Char-à-banc," was received with loud applause. The dinner was a decided success, and the vote of thanks was no merely formal one which was passed to the honorary secretaries of the dinner, Messrs. Scott and F. J. Bond, for the excellent arrangements which they had made.

BEQUESTS AND DONATIONS TO HOSPITALS.—Sir Frederic Wigan has contributed £500 to Guy's Hospital, London, in response to the recent urgent appeal for funds. Mr. Charles Morrison has also sent a donation of £1000, and Messrs. Glynn, Mills, Currie, and Co., London, have likewise contributed £500.—The late Mr. Charles Overton of Croydon has bequeathed £1000 to the Croydon General Hospital.—The Goldsmiths' Company has made a grant of £100 to Queen Charlotte's Lying-in Hospital, Marylebone-road.—The Fishmongers' Company has granted a donation of 50 guineas to the Royal Westminster Ophthalmic Hospital.—The late Mr. John Lysaght of Bristol has bequeathed £250 each to the Bristol Royal Infirmary, the Bristol General Hospital, and the Bristol Dispensary, Castle-green.—Mr. D. J. MacRae, the editor of the *Financial Times*, has contributed £250 each to the following institutions—namely, the University College Hospital, the *Dreadnought* Seamen's Hospital, the Brompton Hospital, the Cancer Hospital, the East London Hospital, the National Hospital for the Paralysed and Epileptic, and the Jewish Hospital.—The Goldsmiths' Company has contributed £100 to the Extension Fund of the Miller Hospital and Royal Kent Dispensary.—Mr. Henry Harben, J.P., has presented £1000 to the funds of the North London Hospital for Consumption at Hampstead.—The late Mr. Charles Mitchell of Newcastle-on-Tyne has bequeathed £1000 to the Walker Hospital or Infirmary (not the Fever Hospital lately built by the Newcastle-on-Tyne Corporation).—Mr. C. E. S. Cooke, late of Doncaster, has bequeathed £1000 to the Doncaster Infirmary and £500 to the Scholfied Convalescent Fund.—Mr. Cecil Rhodes has given a donation of £1000 to the funds of a new sanatorium at Kimberley.—The late Mr. George Charles Benn of Rugby has bequeathed £1000 to the Northampton Infirmary and £500 each to the Midland Counties' Home for Chronic and Incurable Diseases at Leamington, the British Home for Incurables, the Birmingham and Midland Counties' Eye Hospital, the Birmingham General Hospital, and the Royal Hospital for Incurables.—An anonymous donor has given £1000 to the Royal Portsmouth Hospital.—Major A. W. Holmes, late of Derby, has bequeathed to the Derbyshire Royal Infirmary £100.—The treasurer of the Metropolitan Hospital, Kingsland-road, has received £140 as the result of the concert recently given at the Highbury Athenæum.—Mr. James Stables, J.P., of Horsforth, has sent a donation of 100 guineas to the Leeds Dispensary.

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A NEW ROUTE TO EGYPT.—The International Sleeping Car and European Express Trains Company, 14, Cockspur-street, S.W., announce the organisation of a new weekly service *de luxe* from London *viâ* Ostend and Vienna to Trieste for Alexandria. The train will be composed exclusively of sleeping and dining cars and through baggage vans, and will run through from Ostend to Trieste without change. At that port it will connect with one of the steamers of the Austrian-Lloyd Company. The service will leave London every Sunday at 10 A.M., Trieste every Tuesday, and will arrive at Alexandria every Saturday at 4 P.M. On the return journey the steamer will leave Alexandria every Saturday at 9 A.M. The train *de luxe* will leave Trieste every Wednesday on arrival of the steamer, and will arrive in Ostend and London every Friday. The first departure from London will be on Sunday, Dec. 1st, and from Alexandria on Saturday, Nov. 30th.

LIVINGSTONE COLLEGE.—Livingstone College was opened at Bow in 1893 for the purpose of giving to missionaries who intend to labour in uncivilised countries an elementary knowledge of medicine and surgery. It is not intended to train "medical missionaries," and the students are prohibited from taking this title or otherwise assuming the position of qualified medical men. The object of the teaching given at the College is that they may be in some degree enabled to care for their own health and that of their fellow missionaries when far from medical aid, and to deal with the more simple diseases of the natives among whom they may be working. The original building having become insufficient for the number of students, a large double-fronted house was acquired at 31 and 33, Hamfrith-road, Stratford, E., and was formally opened on Nov. 22nd in the presence of a numerous company. In addition to systematic lectures the course of instruction includes clinical instruction at West Ham, Poplar, and the Seamen's hospitals. The bankers are Messrs. Barclay and Co., Lombard-street.

DIPHTHERIA IN LONDON.—The amount of diphtheria occurring in London during recent weeks has shown much increase, as evidenced by the records now to hand for the four-weekly period ended Nov. 2nd. In that period the notified cases in the county of London totalled to 1305, or a weekly average of 326 cases, as compared with 1178 in the preceding like period, with its weekly average of 295 attacks. In the earlier period there were 41 of the forty-three sanitary areas invaded, and in the later period forty-two districts notified attacks—the nine areas with upwards of 50 attacks notified respectively in the earlier period, with their total of 682, giving place to eight such districts in the later period, with a total of 655 attacks. Six of these eight districts were south of the Thames or in the east of London; but the northern districts of St. Pancras and Islington were both heavily affected, but, of course, they are large and populous areas. During the week ended Nov. 16th the registered deaths fell from their high total of the previous two weeks, being 61, against 61, 72, and 75 in the three weeks preceding. All of them were in persons aged under twenty years, and in their aggregate exceeded the decennial average for the forty-sixth week of the years 1885–94 by 21. There were 7 deaths credited each to St. Pancras, Mile End Old Town, and Camberwell sanitary areas. In the outer ring of London there were other 11 deaths from the disease, and of these 8 occurred in the West Ham District. The admissions to London hospitals in the week numbered only 104, as against 115, 102, and 112 in the three previous weeks, but these were, of course, greatly below the cases newly arising in London, and show that very large proportions of the attacks are simply left in the houses where they arise. In the week ended Saturday, Nov. 23rd, the registered deaths from diphtheria in London rose again to 89 in number, and were 27 in excess of the corrected decennial average for the particular week. As many as 9 were in persons belonging to Poplar, 6 to St. Pancras, and 5 each to Kensington and Greenwich sanitary areas, and the disease was once more in its fatal aspect almost wholly confined to children and young persons under twenty years of age. The admissions of diphtheria patients to hospital during the week numbered only 103, and those remaining under treatment at its close (688) were but slightly in excess of previous weekly totals. In Greater London the diphtheria deaths registered were 15, West Ham district claiming 8 of these and Edmonton 3, the remainder belonging to southern and western suburban districts.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following gentlemen having passed the necessary examination have been admitted Fellows of the College: Mr. Thomas Eaglesón Gordon and Mr. George Ainslie Johnston. The following gentlemen passed the primary part of the examination: Mr. Patrick Joseph Fagan and Mr. David Alexander M'Curdy.

FOOTBALL CASUALTIES.—While playing recently in a match at Bristol, in the Junior Cup ties, a member of the Waverley Football Club sustained a compound fracture of his leg, and was admitted to the Bristol Royal Infirmary.—A young man aged twenty years died last week in the Bristol Royal Infirmary from injuries received to his head in a match recently played between the Edmondes Trust Old Boys' Club and the Unity Club.—On the 16th inst., a youth, during a game in Christ Church Meadow, Ware, dislocated his ankle and fractured his leg, and was removed to the Hertford General Infirmary.—A young man, a student at the Queen's Engineering Works, Bedford, was found dead in bed on Sunday morning last. He received a kick in the head while playing in a match on the previous day, but as the injury was not regarded as very serious he continued playing for some time afterwards and had no medical assistance.

ANNUAL MEETING OF UNIVERSITY COLLEGE, BRISTOL.—The annual meeting of the governors of University College, Bristol, was held last week, the Bishop of Hereford (Dr. Percival) presiding. It was unanimously decided to confer the chair of Emeritus Professor of Medicine, Midwifery, and Surgery upon Dr. Shingleton Smith, Dr. J. G. Swayne, and Mr. N. C. Dobson, F.R.C.S., respectively. The council in their report show an adverse balance of £950 for the past year, and a total debt of £6000, this debt being chiefly due to building. The endowment of the College is £75, and the only sources of income besides tuition fees are the Government grant of £1200 and the sustentation fund. The annual subscriptions have been reduced by deaths and other causes from £1200 to £500. The council suggest that an earnest appeal should be made, with the double object of relieving them from the existing debt and of restoring the sustentation fund to the original amount—that is, to an equality with the Government grant. It was stated that the council had received offers of liberal support from some citizens, and it is thought that others will be glad to have an opportunity of helping to place the finances of such an excellent institution as the College upon a sound basis. The annual distribution of prizes to the students of the medical school in connexion with University College, Bristol, took place on Nov. 20th, when Mr. N. C. Dobson, Emeritus Professor of Surgery, delivered an address on the Relation of the Medical Man to his Patients, to the Public, and to his Profession. The Bishop of Hereford also spoke.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BRAKENRIDGE, F. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BURGOYNE, J. T., L.R.C.S. Irel., has been appointed Medical Officer to the Helensburgh Coal Mine, New South Wales, vice Lovegrove, resigned.

CONFORD, G. J., B.A., M.B., B.Ch. Oxon, L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

CORNWALL, J. W., M.A., M.B., B.C. Cantab., has been reappointed Clinical Assistant in the special department for Diseases of the Throat at St. Thomas's Hospital.

CROUCH, H. C., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

DALE, FREDERIC, M.D. Cantab., F.R.C.S. Eng., has been appointed Honorary Consulting Surgeon to the Scarborough Hospital and Dispensary.

DAVIS, H. J., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

DIXON, W. B., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

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DYBALL, B., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the special department for Diseases of the Ear at St. Thomas's Hospital.

EASBY, WM., M.D. Brux., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health by the Peterborough Rural District Council.

FARMER, GABRIEL WILLIAM STAHEL, M.A., M.B., M.Ch. Oxon., F.R.C.S., Radcliffe Travelling Fellow, has been appointed Examiner in Human Anatomy at Oxford University, vice Professor A. Thomson.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

GEDDES, JOHN W., M.B., C.M. Edin., has been appointed Junior Assistant Medical Officer to the Durham County Asylum.

GENGE, G. G., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

GIBBES, JOHN M., M.D. Aberd., M.R.C.S. Eng., has been appointed a Public Vaccinator at Serviceton, Victoria, Australia.

GILES, H. O'H., M.B., Ch.B. Adel., has been appointed a Public Vaccinator at Werribee, Victoria, Australia.

HALL, F. W., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Honorary Assistant Physician to the Sydney Hospital, New South Wales.

HARDY, C. M., M.B. Durh., B.S., has been appointed Medical Officer of Health by the Croft Rural District Council.

HEDLEY, CHARLES, M.B. Ch.B., Melb., has been appointed Visiting Surgeon to the Grafton Gaol and Government Medical Officer for the District of Grafton, New South Wales.

HOME, A. L., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

KELYNACK, T. N., M.D. Vict., M.R.C.P. Lond., has been reappointed Pathological Registrar to the Manchester Royal Infirmary.

KENT, P. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the special department for Diseases of the Ear at St. Thomas's Hospital.

KNOCKER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the special department for Diseases of the Skin at St. Thomas's Hospital.

LAYTON, F. G., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

MACBURNEY, R., M.D. Edin., L.R.C.P., L.R.C.S., has been appointed a Medical Officer for the purposes of the Leprosy Act, Queensland.

MAGILL, MARTIN, M.B., Ch.B. Melb., has been appointed Government Medical Officer and Vaccinator for the District of Moree, New South Wales.

MANNING, GUY E., L.R.C.P. Lond., M.R.C.S., has been appointed Resident House Physician to the Sunderland Infirmary, vice Burdon Cox, resigned.

MOSS, WM. J. A., M.B. Melb., has been appointed a Public Vaccinator at Kensington, Victoria, Australia.

NICHOLLS, J. W., M.D., Ch.M. Irel., has been appointed a Public Vaccinator for Port Germain, South Australia.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

READ, G. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for New Norfolk, Tasmania.

ROBERTSON, J. A., M.D., C.M. Glasg., has been appointed Medical Officer of Health by the Stilton Rural District Council.

SAUNDERS, E. A., M.A., M.B., B.Ch. Oxon, L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

SECCOMBE, P. J. A., M.A. Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

STONE, W. G., M.A., M.B., B.Ch. Oxon, L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

STROVER, H. C., L.S.A., has been appointed Medical Officer for the Tempsford Sanitary District of the Biggleswade Union.

THORNELY, W., B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the special department for Diseases of the Throat at St. Thomas's Hospital.

THORNTON, F. B., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

THURSTON, E. O., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

TOOMBS, H. G., L.R.C.P., M.R.C.S., has been reappointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

WADD, H. RANDALL, M.R.C.S. Eng., L.R.C.P. Lond., has been reappointed Resident House Physician to the Great Northern Central Hospital, Holloway-road, N.

WALSH, DAVID, M.B., C.M. Edin., has been appointed Physician to the Western Skin Hospital, London, W.

WALLACE, L. A. R., B.A., M.B., B.Ch. Oxon, L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

WILLIS, W. MORLEY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Bristol Hospital for Sick Children and Women, vice W. Ledingham Christie, resigned.

WILMOT, ROBT., F.R.C.S. Edin., M.R.C.S. Eng., has been appointed Health Officer for New Norfolk, Tasmania.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-inn-road, W.C.—House Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

GLASGOW EYE INFIRMARY.—Resident Assistant House Surgeon. Salary £50, with apartments and board.

LONDON COUNTY ASYLUM, Claybury, Woodford, Essex.—A Lady Assistant Medical Officer, unmarried. Salary, £120 per annum, increasing by £5 per annum to £150, with board, lodging, and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer. Board, washing, and residence provided.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

NORFOLK AND NORWICH HOSPITAL.—House Physician and House Surgeon (unmarried) for two years. Salary £50 per annum each, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Junior House Physician for six months. Board and lodging (including washing) provided. Also Ophthalmic Surgeon. Applications to the Secretary, City Office, 27, Cannon-lane, E.C.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Physiology and Histology. Annual salary £100.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Brighton.—Surgeon and Assistant Surgeon.

ROYAL BERKS HOSPITAL, Reading.—House Physician and House Surgeon for six months. Salary £60 each per annum, with board, lodging, and washing. Also Assistant Medical Officer for six months. Board, lodging, and washing provided.

ST. MARK'S HOSPITAL, City-road, London, E.C.—House Surgeon. Salary £50 per annum, with board and lodging.

WARNEFORD HOSPITAL, Leamington.—House Surgeon for six months. Salary £100 per annum, with board, lodging, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

WEST RIDING ASYLUM, Menston, near Leeds.—Fourth Assistant Medical Officer. Salary to commence at £100, rising £10 annually to £150, with board and apartments.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary £100 a year, with board, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

BATES.—On Nov. 21st, at Church-road, Upper Norwood, the wife of J. Curling Bates, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

BARLOW.—On Nov. 23rd, at Dalston-lane, N.E., the wife of Thos. Geo. Barlow, L.R.C.P. Edin., of a daughter.

CLARKSON.—On Oct. 31st, at Nasik, Bombay, the wife of Surgeon-Lieutenant-Colonel J. W. Clarkson, of a son.

EAST.—On Nov. 25th, at St. Clare, Great Malvern, the wife of C. E. East, M.D. Durh., of a daughter.

EVELYN.—On Nov. 14th, at 24, Micklegate, York, the wife of W. J. Evelyn, M.D., of a daughter.

HICKS.—On Nov. 19th, at Wymeswold, Leicestershire, the wife of Edward Harman Hicks, M.R.C.S., of a daughter.

MENZIES.—On Nov. 23rd, at Brook House, Godalming, the wife of D. J. Menzies, M.B., C.M., L.R.C.S. Edin., of a daughter.

SIMPSON.—On Nov. 25th, at The Avenue, Eastbourne, the wife of W. Simpson, M.D. Aberd., M.R.C.P. Lond., Calcutta, of a son.

SLAUGHTER.—On Nov. 25th, at Darwen Bank, Darwen, the wife of J. W. Slaughter, Surgeon R.N., H.M.S. *Hibernia*, Malta, of a son.

STEVENSON.—On Nov. 22nd, at The Crescent, Teignmouth, the wife of W. D. Stevenson, Surgeon, late of Wonston, Hants, of a son.

WYNNE.—On Nov. 22nd, at East Kirkby, Notts, the wife of Fred. J. Wynne, M.B. Dubl., of a son.

MARRIAGES.

ADAMS—PRINCE.—On Nov. 21st, at Christ Church, Westminster, Alfred Adams, M.B., B.C.L. Oxon, son of the late Rev. John Adams, Vicar of Stockcross, Newbury, Berks, to Maud Muriel Prince, daughter of the late Dr. Prince, of Great Bedwyn, Wilts.

BARNES—ALLAN.—On Nov. 21st, at St. Augustine's Church, Honor Oak, S.E., Leonard Stewart Barnes, M.R.C.S., L.R.C.P. Edin., of Watford, Herts, to Emily Allan, elder daughter of the late Charles Harrison Allan, of St Catherine's Villa, Tyson-road, Forest Hill, S.E.

COLLINS—CROSSLEY.—On Nov. 20th, at St. James's, Armside, Arncliffe, Ward Collins, M.B. Vict., of Ulverston, to Florence, second daughter of the late John Crossley, of Beechwood, Arnside, Westmorland.

DAVIDSON—LEWER.—On Nov. 20th, at St. Thomas's, Portman-square, Surgeon-Captain John Stewart Davidson, M.B. Aberd., Army Medical Staff, eldest son of A. Davidson, M.D., F.R.C.P.I., of Edinburgh, to Ethel Caroline May, eldest surviving daughter of Surgeon-Major-General Lewer, Army Medical Staff (retired).

PARSONS—GILL.—On Nov. 25th, at Holy Trinity Church, St. Kilda, Melbourne, Australia, Harry Compton-Parsons, M.R.C.S. Eng., L.R.C.P. Lond., of Kalapoi, Christchurch, New Zealand, to Lucretia Halley, second daughter, of the late G. E. Gill, of Batchacre Lodge, Hampton Wick. (By cable).

PATERSON—AITCHISON.—On Nov. 18th, at the British Consulate, Vienna, by the Rev. W. H. Hechler, Embassy Chaplain, James V. Paterson, M.A., M.B., C.M. Edin., to Susie, second daughter of the late John Robert Aitchison, India Office, London.

WILKINS—SLEAP.—On Nov. 19th, at St. Philip's Church, Sydenham, Thomas Herbert Wilkins, L.R.C.S. Irel., L.A.H.I., of Limesdale-road, Clapham-common, S.W., to Theresa, youngest daughter of Charles Sleap, of Longton-grove, Sydenham, S.E.

DEATH.

BREMNER.—On Nov. 25th, at Streatham, Canaan-lane, Edinburgh, Bruce Allan Bremner, M.D., L.R.C.S. Eng., late of Bombay, in his 78th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 28th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 22	30·19	S.W.	52	51	58	55	48	...	Foggy
" 23	29·77	N.	41	39	53	47	39	0·23	Cloudy
" 24	30·21	N.E.	40	39	54	45	39	0·03	Stormy
" 25	30·20	N.E.	43	41	50	45	39	...	Stormy
" 26	30·15	S.E.	40	38	50	43	38	...	Overcast
" 27	29·99	S.E.	43	42	49	49	38	...	Foggy
" 28	29·85	E.	45	44	47	47	43	0·02	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Mr. L. Matheson: A few Practical Points. Casual Communications:—Professor Miller (of Berlin): The Transparent Zone in Dentine.—Mr. Henry L. Albert: A Case of Fracture in a Replanted Tooth.

SOCIETY OF ARTS.—8 P.M. Mr. W. Worby Beaumont: Mechanical Road Carriages. (Cantor Lecture.)

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Adams: A new form of Steriliser and Incubator.—Dr. Rolleston: (1) Adenoma of the Sebaceous Glands; (2) Dilatation of the Œsophagus.—Mr. Hutchinson, Jun.: (1) Gall-stone impacted in Small Intestine; (2) The formation of Intra-abdominal Bands; (3) Traumatic Separation of Epiphysis of Great Trochanter.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Papers:—Mr. J. Bland Sutton: On a case of Tubo uterine Pregnancy; Primary Intra-peritoneal Rupture; Recovery.—Dr. A. E. Giles: A case of Uterus Didelphys, with Remarks on the Clinical Importance of this Malformation.—Dr. Remfry: The Effects of Lactation on Menstruation and Impregnation.

SOCIETY OF ARTS.—8 P.M. Third Ordinary Meeting. Mrs. Anna Lea-Merritt and Prof. W. C. Roberts-Austen: Mural Painting, with the Aid of Metallic Oxides and Soluble Silicates.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Dr. M. Handfield-Jones: The Heart in its Relation to Pregnancy, Parturition, and the Puerperal State. (Harveian Lecture.)

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road).—8.15 P.M. Clinical Meeting. Cases and Specimens by Drs. Herschell, R. K. Brown, Morgan Dockrell, Ezard, Messrs. Johnson Smith, Poland, the President, and others.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Clinical Evening. Dr. Taylor: (1) Myxœdema; (2) Deformity of Pinnæ.—Mr. Keetley: (1) Radical Cure of Hernia with Undescended Testicle; (2) Loss of Memory associated with Ovarian Tumour.—Mr. Paget: (1) Resection of Elbow; (2) Fracture of Sacrum.—Dr. Abraham: (1) Primary Chancre in a Child aged eighteen months; (2) Congenital Syphilis.—Mr. Bidwell: Sclerosis of Superior Maxilla.—Mr. Eccles: Multiple Exostoses.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—LONDON SKIN HOSPITAL (Fitzroy-square, W.).—8 P.M. Mr. James Startin: Alopecia Areata Parasitica.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Hector Mackenzie: Thoracic Aneurysm.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Neuroses of the Skin.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Seymour Taylor: Cardiac Affection in Children.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Adenoma Sebaceum.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"HOUSE PROPERTY IN ISLINGTON AND THE VESTRY OF ST. MARY."

To the Editors of THE LANCET.

SIRS,—I have, in common with all owners of London house property, read with great interest your article on the present serious difference of opinion between the medical officer of health for St. Mary, Islington, and the principal ratepayers of that parish. I quite agree with you that the medical officer's chief object should be to make his district sweet and healthy, and it is quite possible for him to secure this object by a wise and temperate use of the powers given to him by the Public Health Acts without undue friction between himself and the inhabitants and house owners of his district. But at the present time the provisions of the Acts, coupled with the by-laws of the London County Council and the local by-laws, are being drastically enforced in Islington to the very letter of the law.

In order to remove any erroneous impression from the minds of your readers, I wish to make it plain that it is not suggested for a moment that the company owns property of the class generally known as "insanitary." All our houses are in wide streets, with gardens in front and rear, and I have been informed by Mr. Leggatt, the superintendent of the Sanitary Department, that during the recent house-to-house inspection of the parish no complaint was found in respect of any of our houses, nor as a result of that inspection was a single nuisance notice served on our property. Therefore, so far as we are concerned, we only suffer on the question of re-drainage; and here I must beg to join issue with Mr. Harris on the statement contained in his letter to the Local Government Board that "I am cognizant of the fact that all notices served were so served in consequence of infectious disease or through complaint." As a matter of fact, no intimation whatever is given to me of the reason a notice is served, and in cases where I have pressed for information the answer has been "a complaint was lodged at the Vestry Hall," but the name of the complainant and the nature thereof is refused.

In cases where I have succeeded in discovering the cause to have been "infectious disease on the premises" the following are fair specimens:—(1) At No. 43, Ronalds-road the infectious disease was a slight case of scarlet fever certified on the day the patient (a lodger's child) entered our house, and although I pointed out to Mr. Harris that owing to the period of incubation the disease must have been contracted elsewhere I was compelled to entirely reconstruct the drainage of that house. (2) At 19, Dean-street a man living at the house cut his hand whilst working at his trade, slight erysipelas supervened (another infectious disease), and I was compelled to entirely reconstruct the drainage. (3) At 22, Langdon-road a lodger (undertaker's coachman) had his foot trodden on by his employer's horse, again slight erysipelas, and entire reconstruction of drainage.

It is customary in Islington to require the owner to erect a 4-in. "ventilating shaft and a new soil-pipe in the event of any repair or alteration to a w.c. (if the repair is only putting a new pan to the closet), and this shaft is insisted upon, whether the drain is intercepted or not. It is, in my opinion, a positive danger to health to erect ventilating shafts which, in the absence of an intercepting trap, are in direct communication with the sewers, and in this view I am supported by many sanitary engineers and medical officers. I also complain that when it is proposed to test a drain notice is never given to the owner, and he has no opportunity of being present when the test is applied.

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On two occasions I refused to do the works until the tests had been applied in my presence, and in one of these cases the result was so faint as to be almost imperceptible, and in the other there was no result obtained.

I understand that the chemical test now used exercises greater pressure and is far more penetrating than sewer gas can possibly be, and from my experience it is evident that no drain constructed more than ten years ago (unless laid at great depth) will stand the present severe test without giving some slight result. It appears to be Mr. Harris's custom to have the test applied whenever a case of infectious disease (however trivial) or a complaint from any person (whether living in the house or not) is notified to him, and if any result, however slight, is obtained the reconstruction of the whole drain is insisted on. No existing ventilating shaft is allowed to stand unless it is (1) 4 in. in diameter; (2) composed of cast-iron of the weight specified in the bye-laws. I have recently had to demolish perfectly sound iron shafts because they were only 2½ in. in diameter, and zinc shafts (although of the proper size) because they were zinc. No drain (when once any part of it is exposed) is allowed to remain unless it is composed of glazed earthenware pipes with cement joints, and, as it was not until the last few years that these materials have been generally used, it follows automatically that every time I fit a ventilating shaft or soil-pipe to a house built over twenty years ago, thereby exposing the upper end of the drain, the whole drain is condemned and has to be reconstructed, although it may have stood the chemical test before being exposed.

I have never in a single instance in Islington been allowed to repair a drain; it is always total reconstruction. These regulations are enforced by the staff of inspectors, and I believe Mr. Harris seldom personally inspects the nuisance complained of. The notice served generally allows seven days to carry out the work, which, if started the day of service, could not be completed in three weeks, and the inspectors are only too ready to issue a summons in the police-court if the slightest delay occurs. I have found the demands of the inspectors as unalterable as the laws of the Medes and Persians, and it is useless to appeal to Mr. Harris for reconsideration of any item of the notice when it has once been served.

Then as to the "complaints" received by the medical officer. These complaints are generally made by dissatisfied tenants or their lodgers. In one case (53, Almorah-road) a lodger was ejected by our tenant for non-payment of rent, and in revenge, after he had left the house, he complained that the drains were out of order. In this case the drain stood the test, but I was compelled to refit two w.c.'s, to put new soil-pipe and ventilating shaft to an unintercepted drain, expending about £15. I can quote numerous other similar cases. In fact, in Islington the sanitary authority has become a perfect "Bogey man." It is impossible to distrain for an arrear of rent because if I do so a complaint is lodged, the drain tested, and I am put to an expense of £30 to £40. If I give a tenant notice to quit I am at once threatened with this dreadful bogey, and in one case the complaint was lodged because I declined to have the paintwork of a parlour grained and varnished to put my tenant on an equal footing with her sister-in-law who lived on the other side of the road, and whose parlour was grained and varnished! My refusal cost me the usual penalty; the inspector was called in, and the drainage entirely reconstructed.

In my experience of the various sanitary bodies in London I find the spirit at the head permeates the whole body, and I am sure if Mr. Harris would assume a more conciliatory attitude towards the house owners, and endeavour to limit his requirements to the abatement of actual nuisances dangerous to health, we should all be anxious to assist him. Depend upon it, Sirs, when the task of providing homes for the working classes ceases to return a fair interest upon the capital invested, the work of the medical officer will be increased tenfold, for the houses will get into the hands of jobbers and brokers, whose only object will be to exact the highest rent and do little or no repairs. The resolution of this Company (concurred in by many of the largest property owners in London) to purchase no more houses in Islington was not taken without very serious consideration.

I shall esteem it a great favour if you can find space in your columns for this letter, as the discussion of the matter in your journal has awakened the widest interest throughout the property market and amongst owners of house property in London.

I am, Sirs, your obedient servant,

ERNEST EDWARDS.

The Metropolitan House Investment and Agency Co., Ltd.,
Eastcheap, E.C., Nov. 22nd, 1895.

To the Editors of THE LANCET.

SIRS,—In your issue of the 16th inst., page 1238, you state that "He [that is, myself] declares that owing to the fads of the sanitary authority property in Islington is hardly worth having. He makes a still more serious charge, which the Islington authorities would do well to call upon him to establish—that they serve notices to do work 'on people which the department knows it cannot enforce by law.'" I still assert the same fact, and have ample evidence to prove my statement. But in to-day's *Standard* we have still more evidence in support of my statement. I refer to the case of the Duke of Devonshire and others *v.* the Islington Vestry, in which evidence was given that "on 13th May, 1894, defendants gave plaintiffs notice, under the Public Health Act, 1891, to expose their drain for examination." This is distinctly a false pretence on the part of the vestry. There is no section in the Public Health Act, 1891, under which sanitary authorities can enforce such an illegal notice. The fact that damages amounting to £[illegible] besides (the at present) unassessed consequential damages, were awarded to the plaintiffs to be paid by the Islington vestry proves the existence of a state of things that certainly requires consideration and inquiry on the part of some higher authority in our system of parish management. It was proved in the case now under review that the vestry itself was guilty of improperly laying down a drain; yet its officers with all the assurance possible, prosecute other people for exactly similar offences. I understand that the attention of the Local Government Board is being directed to this case, with a request that the district auditor may surcharge the members of the Public Health Committee with the damages and costs of this action, as provided by the 2[illegible] Section of the Public Health Act, 1891.

In my opinion, no one should be allowed to act as a medical officer of health unless he has experience of building construction and possesses the D.P.H. degree.—I am, Sirs, yours truly,

C. T. GORD,
(For the Central Property and Equity Investment Co., Ltd.)

Ironmonger-lane, E.C., Nov. 21st, 1895.

To the Editors of THE LANCET.

SIRS,—Referring to your article on the sanitary condition of [illegible] and the action of our medical officer, the following example among many that have occurred—will show how expenses are run up. I resided in one of the first insanitary houses dealt with by Mr. [illegible]. He ordered various alterations in the sanitary arrangements; these had to be done *no less than three times*. The builder simply defied orders. On my remonstrating with him for bringing the [illegible] ventilator round the bedroom windows I was told no medical [illegible] could make him alter its position. Subsequent events proved to the owner's cost the fallacy of this statement and the folly of trying to [illegible] unsatisfactory work passed. Good sanitary work can never be [illegible] but it will be found less expensive than abortive attempts to [illegible] lawful authority in Islington.

I am, Sirs, your obedient servant,

Nov. 20th, 1895. A GRATEFUL RECIPIENT.

ADVERTISING.

To the Editors of THE LANCET.

SIRS,—The enclosed bills are circulated freely. Is such advertising within the limits of professional etiquette? A reply will oblige.

Yours faithfully,

Canonbury. INQUIRER.

*** The following is the text of the enclosed bill in English, a [illegible] counterpart being attached to it:—

"DEAR MR. "20, Horndon[illegible]

"I have the pleasure to inform you that I have obtained the full medical qualifications of this Country and all the rights and privileges attached to them.

"Yours very faithfully,

"MATTHIAS MAX BERNSTEIN,

"Member of the Royal College of Surgeons of [illegible].
"Licentiate of the Royal College of Physicians of [illegible].
"Doctor of Medicine of the University of Moscow.
"Diploma in Public Health of the University of [illegible].

"*Note.*—Special Hours for Diseases of Women: Wednesdays and Saturdays, from 3 to 5 P.M. Confinements attended to."

Many more offensive circulars are issued; but Mr. Matthias Max Bernstein should know that the "full medical qualifications of this country" carry with them obligations, one of which—the obligation not to advertise—is broken by his open letter to persons who are other practitioners' patients.—ED. L.

Observer, who writes upon the subject of "Bulletin Signing," has omitted to enclose his card. We cannot publish a communication of such a nature unless accompanied by evidence of the identity of the writer. We agree with "Observer" in thinking that the source of the degrees should be indicated, and that the publication of bulletins should not involve anything in the nature of an obtrusive advertisement of the practitioners in attendance.

South Africa.—Our correspondent's question is rather vague. In the settled portions of the country would probably offer the best opening, but the life is not an easy one. Application might be made to the Agents-General for Natal, Cape Colony, &c., at the Colonial Office, Downing-street.

Curette.—We regret that we can be of no assistance.

PHOSPHATE OF POTASSIUM IN BRONCHOCELE.

To the Editors of THE LANCET.

SIRS,—In Dr. Gordon Holmes' article in THE LANCET of Nov. 9th he says: "At the German Congress Kocher spoke very highly of thyroid gland and phosphate of potassium." As I have some cases in which I should like to try this treatment, I shall be obliged if you would give further particulars of it. Phos. pot. I can find no reference to in Squire, and I have not at hand Brunton, and I suppose as it is not mentioned in Squire it would not be in Brunton. What is his dose and how given, &c.? Any information would much oblige a thirty years' subscriber.

I am, Sirs, yours faithfully,

Nov. 22nd, 1895. [illegible]

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TESTICLE *v.* SWEETBREAD.

To the Editors of THE LANCET.

SIRS,—Having occasion a few days ago to suggest some light food for a patient recovering from enteric fever, I ordered him a sweetbread. On my visiting him the following day I was informed that the butcher had sent in "a very nice pair." As I was not aware of the existence of the said organ in pairs, I asked to see them. The nurse thereupon presented a dish on which were two creamy, fleshy, ovoid masses, which had been bisected, and which on inspection I found to be two testicles (sheep's). The dish and its contents were banished; and I think the patient enjoyed the laugh evoked almost as much as he had anticipated enjoying the "nice pair of sweetbreads."

Never having met with "testicular sweetbreads" before, will you inform me if it is usual for the one organ to do duty for the other in domestic economy, although such a reciprocity is not possible in the physical economy? I am, Sirs, yours truly,

South Lambeth-road, Nov. 25th, 1895. J. MILLER.

SUBLUXATION OF THE PENIS.

To the Editors of THE LANCET.

SIRS,—The case related by Surgeon-Captain Fischer of Moradabad is interesting, as there are but few recorded. A few years ago an officer's horse reared and fell backwards with him on the drill ground. I saw him within half an hour in a state of collapse from the injury. On recovery he tried to pass water, but failed. An attempt to pass a catheter also failed. The penis had disappeared; there was only an empty bag of skin. I made an incision over the pubes, reclaimed the lost organ, pushed it through its sheath, circumcised the long prepuce, and stitched the ragged mucous collar surrounding the glans, after fastening its edges, to the skin. The whole united perfectly. He has since married. I am, Sirs, yours truly,

T. WHITEHEAD REID,
Surgeon to the Kent and Canterbury Hospital.

Canterbury, Nov. 23rd, 1895.

THE PHONENDOSCOPE.

To the Editors of THE LANCET.

SIRS,—Will some of your readers who have made a trial of the "Phonendoscope," an instrument of auscultation lately advertised in your paper, be good enough to publish in your columns the results of their experience with it. The firm advertising the instrument decline to allow a trial, but write me that they have sold some to medical men "of all kinds" (*sic*), who are quite pleased with it. Remembering the great advance the binaural stethoscope was over the old wooden instrument, one would gladly welcome any trustworthy mechanism that would still further intensify our aural powers of diagnosis, but it is not likely that practitioners who know anything of the world will play the "game of confidence" with even a reputable firm of druggists, in spite of the fact that "the outlay is not serious."

I am, Sirs, yours faithfully,

Nov. 27th, 1895. W.

"THE BRITISH MEDICAL BENEVOLENT FUND."

To the Editors of THE LANCET.

SIRS,—I am happy to state that we have been able to make grants amounting to £161 at the meeting of the committee to-day, and I have still to acknowledge with very grateful thanks the following donations.

Dr. Travers	£5	5	0	Mr. Edmund Owen ...	£2	2	0
Mr. John King (per Dr. Travers	50	0	0	Mr. Brook	0	10	6
				Mr. Wilfred Thomas ...	0	10	6

I am, Sirs, yours faithfully,

Brook-street, W., Nov. 26th, 1895. W. H. BROADBENT.

DIET IN GOUT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me from what source, *re* his diet, must the subject of hereditary gout anticipate the worst results? Do meats vary in the amounts of "nuclein-products" derivable from them in a goutily disposed individual? Does the "boiling" of meat (any meat) lessen the probability of the formation of such products? Is there generally admitted ground for the prohibition of beef from the diet of those whose urine contains a constant excess of uric acid?

I am, Sirs, yours faithfully,

Nov. 11th, 1895. CONSTANT READER.

WANTED, A HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of an establishment where a patient disabled by osteo-arthritis in hip and shoulder would be eligible for admission? The man in question is an ex-soldier, and his wife is able to contribute something towards his support.

I am, Sirs, yours faithfully,

Nov. 27th, 1895. J. SCOTT CHALLICE, L.S.A.

WANTED, A MILK STERILISER.

To the Editors of THE LANCET.

SIRS,—Can any reader supply me with the name of the maker of a cheap milk steriliser, one to contain several small bottles preferred?

I am, Sirs, yours faithfully,

Nov. 28th, 1895. ENQUIRER.

A SELF-THREADING SHUTTLE.

OUR attention has been called by Mr. Joseph Harrison, L.R.C.P. & S. Edin., to a new shuttle which has been introduced into this country from America by Mr. C. H. Holdsworth of Bradford. In the end of the shuttle, which contains the feed-eye, but in the front of it, is cut a narrow groove or recess, and this groove acts as a channel to guide the thread to a twisted copper wire so arranged that the mere looping of the thread over the wire and a slight backward pull are sufficient to bring the yarn up through the feed-eye. The cost of the invention will not add more than a penny to the price of the shuttle, and in view of the fact that a great deal of suffering and disease will be prevented by its use it should be adopted by all textile manufacturers. In the old style of shuttle the thread is sucked through its eye by the operator's mouth, thus furnishing a means of transmitting disease from one person to another. A further reason for its adoption is the lessened liability of the operatives contracting pulmonary disease by the inhalation of fluff from the shuttle.

F. A.—We never recommend individual practitioners. Our correspondent is suffering from a very common malady, upon the proper treatment of which every qualified medical man can advise him. If he requires further assistance, he should ask his regular attendant to recommend him to a consulting opinion.

Dr. Chas. Gross.—The paragraph in question is so ridiculous that it does not need contradiction in our columns, but only in places where it could by any possibility be believed and so work to the detriment of the profession.

Mr. P. F. Sturrage.—We regret that our correspondent's statement has been mislaid. If he will kindly repeat it we shall be glad to answer his inquiries.

"IMPORTANT NOTICE."—AN EXPLANATION.

To the Editors of THE LANCET.

SIRS,—My attention having been drawn to a paragraph in your issue of the 23rd inst., referring to a handbill in which my name appears, I shall be glad if you will publish the following explanation.

Early this month I engaged a consulting room at Mr. Hailstone's and made arrangements to attend at the hours specified. I had nothing whatever to do with the publication of the circulars, the simple fact being that Mr. Hailstone was then about to announce the arrangement he had come to with a dentist, and concluded he could equally well announce the opening of my consulting room at the same address. I repeat that I had no part either in the drafting of the handbill or its distribution, and so soon as I became aware of its existence I requested Mr. Hailstone to withdraw it from circulation, which was done at once.

I am, Sirs, yours faithfully,

Camberwell-road, S.E., Nov. 28th, 1895. MORRIS JENKINS.

WANTED, A LANTERN AND SLIDES.

To the Editors of THE LANCET.

SIRS,—Where can I obtain a magic lantern and slides to illustrate a lecture on the protozoa and the life-history of a sponge?

I am, Sirs, yours faithfully,

Nov. 27th, 1895. J. H. T.

*** In THE LANCET of Feb. 9th, 1895, p. 387, will be found the names and addresses of several firms from whom "J. H. T." will obtain all that he requires.—ED. L.

ERRATUM.—We regret that in Dr. Alexander Morison's article on "The Causes of Bradycardia," in last week's number, page 1282, the words "Dr. (now Sir William) Stokes" were printed instead of *Dr. Stokes*.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Drogheda Conservative, Border Counties Gazette, Warwick Times, Electrical Review (New York), Eastern Daily Press, Norfolk Standard, Newtownards Chronicle, Hampshire Post, Hastings Observer, South Wales Daily News, Lincoln Gazette, Sheffield Independent, Scotsman, Manchester Evening Mail, Kidderminster Shuttle, Bedford Standard, Bradford Observer, Leicester Daily Post, Sussex Daily News, North Star, Newcastle Courant, Lynn Advertiser, Brighton Gazette, Times of India, Pioneer Mail, Builder, Architect, Liverpool Daily Post, City Press, Leeds Mercury, Belfast News Letter, Cheltenham Chronicle, Hull Daily News, Buchan Observer, Morning Post (Allahabad), Colchester Mercury, Westmoreland Gazette, Retford Herald, Mining Journal, Reading Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, St. Bartholomew's Hospital Journal, Truth, Local Government Journal, Surrey Times, Australasian Medical Gazette, Guy's Hospital Gazette, Surrey Advertiser, Essex Weekly News, Buckingham Express, Whitehall Review, Le Courrier de la Presse, Acton and Chiswick Gazette, Hunts County News, Pullen's Kent Argus, Essex County Standard, Bristol Mercury, Leeds Weekly Citizen, Boston Independent, Craven Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. L. Archer, Lond.; Mr. P. J. Atkey, Lond.; Messrs. Armour and Co., Lond.; Messrs. Arnold and Sons, Lond.; Athenæum Chambers, Plymouth, Sec. of; Apothecaries' Hall, Lond., Sec. of; A. F., Lond.; A. B., Lond.

B.—Dr. P. M. Braidwood, Bucks; Dr. T. H. Bryce, Glasgow; Mr. C. A. Ballance, Lond.; Mr. L. A. Bidwell, Lond.; Mr. W. Brown, Swansea; Mr. S. Boyd, Lond.; Mr. T. B. Browne, Lond.; Mr. C. A. Burnham, Santa Elena; Mr. W. Brooks, Lond.; Mr. E. C. Birt, Lond.; Miss Brain, Lond.; Messrs. Brady and Martin, Birmingham; Messrs. A. and C. Black, Lond.; Braintree Rural Sanitary Authority, Medical Officer of; Bed Support Co., Coventry; Beta, Lond.

C.—Sir Charles A. Cameron, Dublin; Dr. A. E. Cordes, Geneva; Mr. J. W. Carr, Lond.; Rev. W. H. Cleveland, Gateshead; Messrs. G. Curling and Co., Lond.; Messrs. A. Cohen and Co., Lond.; Messrs. T. Cook and Son, Lond.; Messrs. Coleman and Co., Norwich; Messrs. J. and A. Churchill, Lond.; Messrs. Crossley, Moir, and Co., Lond.; Cortland Wagon Co., Lond.; Charing-cross Hosp., House Physician of.

D.—Mr. W. G. Dickinson, Windsor; Mr. T. Dixon, Lond.; Rev. H. A. Dalton, Felsted.

E.—Miss Elworthy, Cork.

F.—Mr. W. L. Fox, Falmouth; Mr. S. Farrant, Taunton; Messrs. Fannin and Co., Dublin.

G.—Dr. W. H. Gilbert, Baden Baden; Globe Advertising Co., Aston Clinton; G. L. M., Lond.; Genuine, Lond.

H.—Sir George Humphry, Cambridge; Dr. C. Highet, Ayr; Dr. W. W. Hardwicke, East Molesey; Dr. J. Hinshelwood, Glasgow; Mr. J. Heywood, Manchester; Mr. J. H. Heale, Lond.; Mr. W. V. Herbert, Lond.; Mr. F. N. Heygate, Wisboro' Green, Billingshurst; Messrs. Hayes and Son, Lond.; Harvard Co., Lond.; Housekeeper, Lond.

I.—Mr. P. Irvain, Plymouth; Insurance Co., Bristol, Sec. of; Indoor, Lond.

J.—Sir George Johnson, Lond.; Dr. G. F. Johnston, Lond.; Mr. F. S. Jackson, Wilmslow; J. C. T., Lond.

K.—Dr. T. N. Kelynack, Manchester; Dr. O. J. Kauffman, Birmingham; Mr. H. C. Kidd, Bromsgrove; Messrs. Kerin and Lynam, Lond.

L.—Dr. E. S. Lee, St. Leonards; Livingstone College, Lond., Sec. of; London Temperance Hosp., Sec. of; Liq. Carnis Co., Tring.

M.—Mr. H. Milner, Lond.; Mr. R. G. Minshall, Northampton; Mr. A. S. Morton, Clapham; Messrs. Macniven and Cameron, Edinburgh; Middlesex Hosp., Lond., Sec.-Supt. of; Metropn. Police Surgeons' Assoc., Lond., Sec. of; Medicus, Lond.; M. A. B., Lond.

N.—Dr. J. H. Nicoll, Glasgow; Norfolk and Norwich Hosp., Sec. of; National Provident Institution, Lond., Sec. of.

O.—Mr. Edmund Owen, Lond.; Mr. T. Ogden, Liverpool.

P.—Dr. G. V. Poore, Lond.; Dr. R. D. Powell, Lond.; Mr. H. Porteous, Lond.; Mr. G. D. Pollock, Lond.; Mr. G. Pim, Dublin; Mr. P. P. Park, Fisherville, Ontario; Miss M. C. Pincoffs, Somerset; Messrs. Powles and Vizard, Monmouth; Pneumatic Road Skate Co., Lond., Sec. of; Pneumatic Tyre Co., Lond., Sec. of; Pudor, Lond.

R.—Dr. L. Roberts, Liverpool; Dr. H. S. Reynolds, Manchester; Dr. A. Ruda, Alexandria; Mr. B. Roth, Lond.; Messrs. J. Richardson and Co., Leicester; Rheophore, Lond.

S.—Dr. C. B. Savory, Pembrokeshire; Dr. J. C. Syson, Beith, Ayrshire; Dr. J. N. Seymour, Kent; Mr. T. Smith, Lond.; Mr. J. D. Staple, Bristol; Mr. N. Stephenson, Lond.; Mr. J. T. Segrue, Lond.; Mr. F. F. H. Smith, Farningham; Mr. A. T. Slade, Lond.; Messrs. F. Stearns and Co., Lond.; Messrs. Stubbs, Lond.; Sanitary Institute, Lond.; Soc. of Anæsthetists, Lond., Hon. Sec. of; Sanitas Co., Lond.; Special Position Advertising Co., Lond., Sec. of.

T.—Mr. F. Treves, Lond.; Mr. C. B. Taylor, Nottingham; Mr. J. H. Thompson, Mytholmroyd; Mr. S. Torbet, Oldham; Mrs. B. Thomson, Ilkley; Taunton and Somerset Hospital, House Surgeon of.

V.—Mr. Egidio Vitali, Lond.

W.—Dr. Weaver, Aylesbury; Dr. R. B. Wild, Manchester; Dr. H. Whittome, Lond.; Mr. H. Wallingham, Lond.; Mr. W. M. Wills, Lond.; Mr. T. H. Warren, East Dereham; Mr. A. B. Wynter, Lond.; Westminster Hospital Medical School, Sec. of; West Riding Asyl., Menston, Clerk of; Warneford Hosp., Leamington, Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. Adamson, Hetton-le-Hole; Dr. E. Allen, Hawes; Mr. E. Appleton, Stockton-on-Tees; Ancoats Hosp., Manchester, Sec. of; Assistant, Lond.; Absolute, Lond.; Alpha, Sheffield; Alpha, Lond.; Addiscombe, Croydon; A. H. F., Lond.

B.—Dr. D. C. Black, Glasgow; Dr. L. C. Bremner, Edinburgh; Dr. Bartley-Broker, Australia; Mr. A. M. Barford, Wokingham; Mr. J. S. Buck, Eaton Socon; Mr. H. Brice, St. Austell; Mr. D. T. Bostell, Lond.; Mrs. Budge, Crediton; Messrs. Blondeau et Cie., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Beta, Lond.; B. B., Lond.; B. O. Z., Lond.; Bona Fides, Lond.

C.—Mr. H. B. Condy, Lond.; Mr. A. E. Couzens, Westbury; Mr. T. Champness, Rochdale; Clerical and Medical Bank, Bristol, Manager of; Cœlebs, Lond.; Clavis, Lond.; Craddock, Lond.; Cannula, Lond.

D.—Mr. T. Dixon, Lond.; Messrs. Downie, Aiton, and Aiton, Glasgow; Dacre, Lond.; D. E. C., Lond.

E.—Dr. W. A. Evelyn, York; Miss S. M. Elworthy, Cork; Messrs. Evans, Lescher, and Webb, Lond.; Ergot, Lond.

F.—Dr. J. Findlay, Penport; Fides, Lond.; F. B., Lond.

G.—Dr. W. H. Gilbert, Baden Baden; Mr. W. Gent, Oundle; Messrs. Gilyard Bros., Bradford; Gamma, Lond.

H.—Dr. S. H. Habershon, Lond.; Dr. W. Hosegood, Cannock; Mr. W. Hughes, Lond.; Mr. R. Hill, Lond.; Mr. G. Hermann, jun., Lond.; Mr. J. Heywood, Manchester; Mr. W. A. Hardiker, Brymbo; Mr. E. P. Hoyle, El Toro, Orange County, California; Messrs. J. C. Humphreys, Ltd., Lond.; Messrs. Haddon and Co., Lond.; Haydock Lodge, Newton-le-Willows, Sec. of; Hygiene, Lond.

I.—Messrs. Ingram and Royle, Lond.

J.—J. C. T., Lond.

K.—Mrs. Kelly, Kingstown; K. Z., Lond.

L.—Dr. E. S. Lee, St. Leonard's-on-Sea; Messrs. T. Lewins and Co., Lond.; L. L. H., Nottingham; Locum, Leicester.

M.—Dr. J. McDonald, Belford; Dr. D. Macaulay, Whiteinch; Dr. J. Macnab-Obbe, N.B.; Messrs. Marshalls and Parry-Jones, Oswestry; M.D., Lond.; Minus, Lond.; Medicus, Forest Gate; Medicus, Lowndes-sq.; Medicus, Lond.; Medical, Lond.; Martin, Lond.; M.B., Birmingham.

N.—Mr. E. Nicholson, Tickhill; North Cambs. Hosp., Wisbech, Sec. of; Newcastle-on-Tyne Union, Clerk of; Naylor, Huddersfield; N.B., Lond.

O.—Miss Orme, Lond.; Messrs. Oppenheimer, Son, and Co., Lond.

P.—Mr. E. S. Paterson, Edinburgh; Mr. T. Protheroe, Bristol; Mr. W. C. C. Perrott, Fermoy, co. Cork; Miss Plant, Stafford; Philipps, Camberwell; Privacy, Lond.; Physician, Lond.

R.—Mr. A. T. Rimell, St. Briavels; Mr. T. E. Rice, Newton Abbot; Messrs. J. and E. Rodwell and Co., Grimsby; Roy. Alexander Hosp. for Sick Children, Brighton, Sec. of.

S.—Dr. R. C. Shettle, Reading; Dr. W. Shand, York; Dr. H. Skelton, Townend; Mr. W. Stephenson, Lond.; Mr. G. H. Simpson, Glasgow; Messrs. Squire and Sons, Lond.; Sir P. Dun's Hosp., Dublin, Sec. of; Supellex, Lond.; Scotus, Lond.; Scrutator, Lond.; S. A. C., Kington.

T.—Mr. J. Thin, Edin.; Mr. T. W. Twyford, Hanley; Thornhill, Lond.; T., Lond.

U.—University College, Bristol, Medical School, Sec. of.

V.—Vendor, Lond.

W.—Mr. A. Walker, Urmston; Mr. B. Walker, Manchester; Mr. T. E. Williams, Talgarth; Miss Webb, East Croydon; W. R. H., Lond.; W. W., Lond.

Y.—Mr. R. S. Young, Brynmeddyg.

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Six Months	0 16 3
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One Year	£1 14 8
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Subscriptions (which may commence at any time) are payable in advance.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to Mr. CHARLES GOOD, Manager, THE LANCET Office, 423, Strand, London.

ADVERTISING.

Books and Publications	... Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6
First Page (under Contents) (Books only)	when space available Five Lines and under	0 5 0
	Every additional Line	0 1 0
Quarter Page		1 10 0
Half a Page		2 15 0
An Entire Page		5 5 0

Terms for Position Pages and Serial Insertions on application.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to fictitious names or initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnieres, Paris.

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The Action and Use of Some New Synthetic Remedies.

ANTIPYRIN.

(PHENYL-DIMETHYL-PYRAZOLON.)

THE question regarding the importance of the therapeutic action of antipyrin and other drugs allied to it in action and in structure was referred last year to the Therapeutic Committee of the British Medical Association. Their report indicated that a large amount of practical experience had been obtained concerning the nature and action of Antipyrin and its harmlessness when administered with due regard to dosage and case. Upon its first introduction it was mostly used as an antipyretic, but a consensus of later opinion showed unmistakeably that its principle therapeutic value lay in its effects as a minimiser or remover of pain.

Though the information which the committee obtained regarding the nature of any ill effects of this drug was of the greatest importance theoretically, practically the objections to its use were of slight moment, being due principally to an excessive physiological action of the drug induced probably by errors in its administration.

Antipyrin is a drug capable of relieving intense neuralgic pains of functional origin with a completeness which demonstrates that it possesses a very powerful action on the nervous system and through that on the metabolic processes of the body. As an analgesic it is specially active in relieving those pains caused by nerve storms or which occur in paroxysms. It proves an active analgesic when pain is due to alterations in the posterior column of the spinal cord as it is in the severe lightning pains of Locomotor Ataxia. It is not accurately ascertained how this action comes about, but it has been supposed that Antipyrin acts by distributing sensory impulses over a greater number of brain cells so that the initial impulse which gives rise to the pain is, as it were, modified by being spread over a larger receptive area and is thus diminished or even lost.

Other pains of a spasmodic character—such, for instance, as sciatica, megraine, colic, and some forms of dysmenorrhœa characterised by spasmodic paroxysms of pain—are greatly ameliorated by the action of this drug.

Another group of diseases which come under its influence includes those which are dependent upon nervous irritation or excessive excitability of the motive nerve centres, such, for instance, as croup, chorea, and whooping-cough, in all of which Antipyrin has a sedative action on the irritable nerve cells. In combination with the bromides its effect is said to be enhanced in such disorders as Enuresis. Other nervous disorders of the bladder have also been successfully treated by the administration of Antipyrin.

As a febrifuge, Antipyrin reduces febrile temperature with great rapidity when it is not due to inflammatory processes. It dilates peripheral cutaneous vessels, and thes increases radiation. It also lessens the production of heat, and further diminishes temperature by allowing radiation and by the evaporation of the perspiration which it produces on the skin. It does not, however, act powerfully as a sudorific, but slightly increases the blood pressure. The temperature will remain reduced under the action of Antipyrin for from one to twenty hours. Any subsequent recrudescence of fever is not accompanied by marked rigor. Antipyrin is of great value in many of the specific fevers especially in typhoid and phthisis, but it has also a powerful effect in reducing the temperature in erysipelas, surgical fever, and in many cases of pneumonia.

Antipyrin has been used also as a hæmostatic in a solution of 4 to 5 per cent. It can be injected subcutaneously in half its weight of water, and seems to have a special action on the fifth nerve in severe facial neuralgia. It gives a deep red colour with a solution of perchloride of iron, is incompatible with spiritus ætheris nitrosi or nitrites with which it forms an inert bluish green compound. It is also incompatible with Quinine, it liquifies with Butyl-chloral-hydrate, Salicylate of Soda and B. Naphthol.

It is very conveniently administered in the form of "Tabloids," which are prepared of two strengths—5 grains and 2½ grains. The 2½ grain "Tabloids" are sugar-coated and supplied to the Medical Profession in bottles of 24 and 100 at 8d. and 2s. 1d. each. 5 grain "Tabloids" in bottles of 25 and 100 at 1s. 1d. and 3s. 11d. each.

AGATHIN.

(SALICYL-ALDEHYDE-Â-METHYL-PHENYL-HYDRAZONE.)

Since it was originally discovered by Dr. Ross this drug has been tried with much success as an anti-neuralgic and anti-rheumatic, and found effective when other agents have failed. Recent testimony proves undoubtedly that Agathin may be administered with advantage in Sciatica, in obstinate cases that have resisted other treatment, the pain being speedily and permanently removed. In both articular and muscular rheumatism, also, Agathin has been prescribed with very satisfactory results when Salicin, Salicylates, Sulphur, and the usual run of remedies produced little or no effect. "Tabloids" of Agathin, containing four grains each, are a convenient form of prescribing this drug, two "tabloids" thrice daily being a fair average daily dose for adults. Supplied in 1 oz. tins at 9s. 3d. per oz.; also in 4 gr. "Tabloids," in bottles of 24 and 100 at 2s. 8d. and 10s. each.

ALUMNOL.

(ALUMINIUM-NAPHTHOL-SULPHONATE.)

The physiological action of Alumnol is that of a harmless, odourless, antiseptic astringent, which is capable by reason of its solubility, of exerting a penetrating effect. It may thus be advantageously substituted for the antiseptic astringents hitherto in vogue—for example, nitrate of silver—which are effective only at the surface of contact, because they form insoluble compounds with the albumen of the uppermost cellular layer of the exudation. Alumnol is the aluminium salt of a naphthol-sulphonic acid, containing 15 per cent. of sulphur in the form of the sulphone group and about 5 per cent. of aluminium. It forms a white powder which is very readily soluble, even in cold water (40 per cent. solutions may be made without separation of the salt as standing); it is also taken up by glycerine and hot alcohol, the solution in the latter solvent exhibiting a beautiful blue fluorescence. Alumnol supplied to the Medical Profession at 1s. per oz.; also in 4-gr. "Tabloids" at 8d. and 1s. 6d. per bottle.

BENZOSOL.

(GUAIACOL-BENZOATE.)

It is odourless and tasteless, and yet retains all the valuable properties of Creosote; it must, therefore, be regarded as a real and important step forward in the medical treatment of tuberculosis. The results obtained by Benzosol have been at least equal, if not superior, to those yielded by Creosote. The action of the drug is shown by the relief and decrease in violence of the tormenting fits of coughing; expectoration is lessened in quantity and hectic perspirations disappear. Appetite and the general condition of health steadily improve. Benzosol may, therefore, be regarded as an agreeable and harmless substitute for Creosote, beneficially influencing the general nutrition, and consequently increasing the resistance of the patient to the disease. Benzosol is supplied to the Medical Profession at 3s. 3d. per oz., and in 5 gr. "Tabloids" in bottles of 24 and 100, at 1s. 4d. and 4s. 8d. each.

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(MONOCHLORAL-ANTIPYRIN.)

Fifteen grains of this substance have been found equal in hypnotic effect to 7½ grains of Chloral Hydrate. It is nearly tasteless and devoid of qualities irritating to the mouth or stomach. It is considered an unrivalled soporific when insomnia is the result of pain or of mental excitement, incipient delirium tremens, or chorea. It is supplied to the Medical Profession at 2s. 11d. per oz., also in 5 gr. "Tabloids" in bottles of 24 and 100 at 1s. 2d. and 4s. 4d. per bottle.

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Action and Use of Some New Synthetic Remedies.

ANTIPYRIN.

(PHENYL-DIMETHYL-PYRAZOLON.)

THE question regarding the importance of the therapeutic ...on of antipyrin and other drugs allied to it in action and ...tructure was referred last year to the Therapeutic Com...ee of the British Medical Association. Their report in...ted that a large amount of practical experience had been ...ained concerning the nature and action of Antipyrin and ...harmlessness when administered with due regard to dosage ... case. Upon its first introduction it was mostly used as ...ntipyretic, but a consensus of later opinion showed un...takeably that its principle therapeutic value lay in its ...cts as a minimiser or remover of pain.

...hough the information which the committee obtained ...arding the nature of any ill effects of this drug was of the ...atest importance theoretically, practically the objections ...ts use were of slight moment, being due principally to an ...essive physiological action of the drug induced probably ...errors in its administration.

...ntipyrin is a drug capable of relieving intense neuralgic ...ns of functional origin with a completeness which demon...ates that it possesses a very powerful action on the nervous ...tem and through that on the metabolic processes of the ...dy. As an analgesic it is specially active in relieving those ...ns caused by nerve storms or which occur in paroxysms. ...proves an active analgesic when pain is due to alterations ...the posterior column of the spinal cord as it is in the ...ere lightning pains of Locomotor Ataxia. It is not accu...ely ascertained how this action comes about, but it has ...n supposed that Antipyrin acts by distributing sensory ...pulses over a greater number of brain cells so that the ...rial impulse which gives rise to the pain is, as it were, ...odified by being spread over a larger receptive area and is ...s diminished or even lost.

...Other pains of a spasmodic character—such, for instance, ...sciatica, megraine, colic, and some forms of dysmenor...ea characterised by spasmodic paroxysms of pain—are ...eatly ameliorated by the action of this drug.

...Another group of diseases which come under its influence ...ludes those which are dependent upon nervous irritation ... excessive excitability of the motive nerve centres, such, ... instance, as croup, chorea, and whooping-cough, in all of ...hich Antipyrin has a sedative action on the irritable nerve ...ells. In combination with the bromides its effect is said to ... enhanced in such disorders as Enuresis. Other nervous ...sorders of the bladder have also been successfully treated ... the administration of Antipyrin.

...As a febrifuge, Antipyrin reduces febrile temperature with ...eat rapidity when it is not due to inflammatory processes. ...dilates peripheral cutaneous vessels, and thes increases ...diation. It also lessens the production of heat, and further ...minishes temperature by allowing radiation and by the ...aporation of the perspiration which it produces on the skin. ...does not, however, act powerfully as a sudorific, but slightly ...creases the blood pressure. The temperature will remain ...duced under the action of Antipyrin for from one to twenty ...ours. Any subsequent recrudescence of fever is not accom...anied by marked rigor. Antipyrin is of great value in many ...f the specific fevers especially in typhoid and phthisis, but ... has also a powerful effect in reducing the temperature in ...rysipelas, surgical fever, and in many cases of pneumonia.

...Antipyrin has been used also as a hæmostatic in a solution ...f 4 to 5 per cent. It can be injected subcutaneously in half ...s weight of water, and seems to have a special action on the ...fth nerve in severe facial neuralgia. It gives a deep red ...olour with a solution of perchloride of iron, is incompatible ...vith spiritus ætheris nitrosi or nitrites with which it forms ...an inert bluish green compound. It is also incompatible ...vith Quinine, it liquifies with Butyl-chloral-hydrate, Sali...ylate of Soda and B. Naphthol.

It is very conveniently administered in the form of "Tabloids," which are prepared of two strengths—5 grains and 2½ grains. The 2½ grain "Tabloids" are sugar-coated and supplied to the Medical Profession in bottles of 24 and 100 at 8d. and 2s. 1d. each. 5 grain "Tabloids" in bottles of 25 and 100 at 1s. 1d. and 3s. 11d. each.

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For Infants Invalids and the Aged

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The Bradshaw Lecture

ON

INFECTIVE AND TUBERCULAR OSTEITIS AS CAUSES OF ARTHRITIS IN CHILDHOOD, AND THE IMPORTANCE OF THEIR EARLY TREATMENT.

Delivered before the Royal College of Surgeons of England on Dec. 5th, 1895,

BY N. C. MACNAMARA, F.R.C.S. ENG. AND IREL.,
SURGEON TO THE WESTMINSTER HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—I propose in this lecture to consider how it is that the extremities of the long bones entering into the formation of various joints are peculiarly liable during childhood to become the breeding ground of certain forms of micro-organisms, and so become affected with osteitis, and then to inquire by what means we can best dislodge such parasites before they have destroyed the osseous tissues among which they may have taken root. It will be necessary to confine my remarks to a typical example of acute and of chronic inflammation of bone produced by two well-defined microbes, and to illustrate the subject by reference to disease of the knee. This joint, being one of the largest and most superficial articulations of the body, affords us a favourable opportunity for determining the nature of any morbid action taking place in the bones entering into its formation. The condyles of the femur at each step we take have to bear the weight of the body, which in like manner is supported on the upper surface of the head of the tibia, so that these opposing portions of bone are constantly subjected to considerable pressure and to concussion. This pressure, in consequence of the comparatively soft condition of the osseous tissue in childhood, is largely distributed throughout the trabecular tissue contained within the extremities of the bones which enter into the formation of the joint. The trabecular network within the extremities of the long bones is also subjected to traction, especially at the point of union between ligaments and tendons with the bones; so intimate is this union that in cases of violence tendons not infrequently tear away portions of the cancellous tissue as well as the compact outer layers of the bone into which they are inserted. It follows, therefore, that the trabeculæ contained in the extremities of these bones have to take their share in the frequent wrenches and strains to which the joints of children are subjected, and it is within the meshes formed by the interlacing of these trabeculæ that the red marrow of the bone is contained—red because it is full of blood, and among the other functions which it has to perform is that of manufacturing the red blood corpuscles. Beyond this the trabeculæ are lined with cells from which in childhood the growth of the epiphysis takes place, necessitating active and extremely complicated physiological changes in the organic matter through means of which growth is effected. We may form some idea of the activity of the work going on within the bones entering into the formation of the knee-joint from its abundant supply of bloodvessels; the four articular arteries, the azygos, and branches of the tibial and femoral vessels all send numerous offsets into the bones; in fact, the condyles of the femur and head of the tibia are riddled with openings through which vessels pass into and leave the cancellous tissue. Within the bone the arteries break up into narrow vessels which open into a plexus of peculiarly wide venous capillaries, and these into veins which have to pass out of the bone through the unyielding channels perforating the dense external layers of the bone. The circulation of blood, therefore, through the thin-walled venous capillaries in the marrow of bone is much delayed, and it is in this sluggish stream of blood that the nucleated cells are converted into red blood corpuscles.

Within the cancellous tissue of the long bones we have, therefore, highly vascular and delicate, soft structures through which the circulation of the blood is naturally much impeded, and these tissues during childhood, as already explained, are peculiarly liable to contusion by external force. Beyond this the marrow contains numerous cells through means of which the growth and repair of the bone are effected. We are apt to overlook the important and extremely complex nature of the process of growth; it means a vast expenditure of physiological action, and of an almost inconceivably complicated arrangement of the constituent elements of the organic matter engaged in the process. But the more complicated the machine the less its stability, and consequently the greater the danger of its component parts being disarranged. And it is in organic matter which has been contused, or in which the constituent parts have otherwise been much disturbed and its vitality thus lowered, that micro-organisms take root; and so we can comprehend why it is that the marrow of the cancellous tissue in the ends of the long bones during childhood is not infrequently the breeding ground of various forms of microbes. The vulnerability of the tissues of young persons to microbes is exemplified by the eruptive fevers from which they suffer, in the susceptibility of European recruits to tropical disease or to typhoid fever on their arrival in India. As we advance in life the ends of the long bones become surrounded by layers of dense, unyielding osseous tissue, which to a large extent preserves the soft structures contained within the cancellous tissue from injury; the process of growth has also been completed, and, the tissues having become more stable, acute infective or tubercular osteitis seldom commences in the joints of persons who have passed the age of childhood.

It is hardly necessary to observe that the bones increase in length by the growth of osseous tissue at the juxta-epiphysial line, and that at this line in the growing bone the trabecular network is composed of temporary—that is, of brittle—bone, in which the venous radicles pass up to the epiphysial cartilage, and there form loops more like sinuses than ordinary veins. One or two arteries from the diaphysis pass through the cartilage into the epiphysis, but by far the greatest part of the blood-supply of the epiphysis is independent of that of the diaphysis; in fact, the shaft of one of the long bones may become necrosed and be removed, and yet the epiphysis may continue to live and grow. Muscular force is capable of causing the complete detachment of an epiphysis, and fractures not infrequently occur through this line; short of such extensive injuries, ecchymosis and laceration of the fragile and rapidly growing structures at the juxta-epiphysial line must be of common occurrence in childhood. The circumference of the epiphysial cartilage is prolonged into the deep layer of the periosteum of the diaphysis, and its cells produce the osteoblasts of that layer; the extremities, therefore, of the diaphysis in the growing bones of children are enclosed in a cup-like cavity of cartilage, and if acute inflammation should occur in the tissues at the juxta-epiphysial line, the products of the inflammatory action must find an exit through the trabecular network of the extremity of the diaphysis into the medullary canal, and between the deep layer of the periosteum and the outer surface of the bone; in either case the blood supply of the diaphysis is cut off, the periosteum being stripped from the bone, and the pressure of the inflammatory products against the unyielding trabeculæ and Haversian system prevents the circulation of blood through the shaft of the bone, and it consequently becomes necrosed. But the deep layer of the periosteum, having been forced outwards with the surrounding vascular structures, may continue to live and form a case of new bone around the necrosed diaphysis. Professor Ollier in the year 1881 published the results of some experiments he had made on the dead bodies of children which illustrate the point above referred to; he found that only slight force applied in certain directions was sufficient to injure, and often to lacerate, the soft tissues at the juxta-epiphysial line. If the force was increased the injured structures could without difficulty be squeezed outwards beneath the deep layer of the periosteum, but not into the external soft tissues or round the epiphysis. Professor Ollier also states that in the case of children who had died from tuberculosis or from septic poisoning the structures at the juxta-epiphysial line were peculiarly friable. Without doubt a young and healthy bone, like a branch of a living tree, is a very different thing from the same part after death; but among our poor neglected, anæmic, London-born children the tissues are often, as regards their vitality, not far removed from dead structures. We can readily conceive that the organic matter which forms the bodies of these children is less capable of resisting the attacks of micro-organisms than

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that of more robust and well-cared-for beings. One seems to realise this difference when before the days of Listerian surgery one saw the swarms of ants and flies which attacked, in a climate like that of Calcutta, the wounds of persons whose vital powers were at a low ebb. And so with micro-organisms, their opportunity is in structures which have been contused or their vitality depressed by some other cause, it is in organic matter of this kind that microbes take root.

Bacteriologists teach us that micro-organisms of a dangerous character may remain quiescent in our bodies, at any rate they can live there without exciting any active disturbance, for they seem to be under the control of constituted authorities which they evidently respect; but if these salutary forces are incapable of performing their functions, or if the microbes alight on a soil composed of weak or injured tissues, they fix themselves on such matter and grow with amazing rapidity, and by means of the irritating chemical compounds they produce set up inflammation in the neighbouring tissues. To illustrate this point we may again refer to the East; there at the end of the hot season we pass over a large expanse of land with no vestige of animal or vegetable life on its surface, the earth is bare, scorched, and fissured in all directions, having for weeks been exposed to the uninterrupted heat of a tropical sun. Suddenly a storm bursts over the country and a deluge of rain falls; with its first drops the whole plain is alive with a multitude of insects and frogs whose loud croaking fills the air; a mere shower of rain has been sufficient to bring a vast amount of dormant life, including cholera and other bacilli, into active being. And so with the human body. I must have swallowed large quantities of water infected with cholera bacilli during my service in Lower Bengal, but on one occasion only, and that from my own fault, they found my intestinal canal unprepared to resist their attack, and then they nearly killed me; the shower of rain had come for them, and they took advantage of it. In like manner we can account for the action of unripe fruit or unwholesome food, saline purgatives, and so on, as predisposing causes of cholera: they prepare the surface of the intestines as a fit breeding ground for the cholera bacillus.

Clinical experience had convinced me some twenty years ago that cases of acute inflammation at the juxta-epiphysial line depended on causes such as those described—that is, to injured tissues which had fallen a prey to a specific microbe. These ideas have since been confirmed by experimental research, for Mr. A. H. Tubby has shown that among animals acute inflammation of the structures forming the juxta-epiphysial line may with certainty be produced if this part be mechanically injured, and then the staphylococci pyogenes aurei are introduced into the circulation of the animal. The result of this treatment is an intense inflammation of the injured osseous tissues, which rapidly swarm with these microbes, leading to dangerous septic poisoning. In animals where similar injuries had been inflicted at the juxta-epiphysial line, but in which staphylococci had not been introduced into the blood, no acute inflammation occurred in the damaged tissues or in any other part of the body. And so if one of our weak city-bred children suffers from traumatism at the juxta-epiphysial line, say at the upper extremity of one of his tibiæ, and if at the same time the part becomes infected by the staphylococci pyogenes aurei, introduced into the circulation probably through some open sore, acute inflammation is produced in the injured bone, so acute and so dangerous that more than half these patients die within the course of a few days. Should the child outlive the onset of the disease pus forms in the inflamed bone, and, for reasons already given, it burrows into the diaphysis and between the deep layers of the periosteum and the bone, leading to necrosis of the shaft of the tibia. In the less severe cases the inflammatory action may be limited and produce a circumscribed and chronic abscess in the extremities of the bone. It is quite possible when the juxta-epiphysial line of the upper end of the tibia is involved that pus may pass into the knee-joint—a condition described and figured by Mr. Thomas Smith in his paper on this subject, published in the St. Bartholomew's Hospital Reports for 1877. In these cases it is probable that the infective micro-organism from the juxta-epiphysial line finds its way along the walls of one of the vessels, which pass from the diaphysis through the epiphysial cartilage and so reaches the joint. However this may be, the knee may become acutely inflamed, but is by no means necessarily involved in cases of acute infective osteitis.

If we rightly comprehend the nature of this form of disease, its treatment would seem to be clearly indicated, for it is evident that we must endeavour to destroy the living organism which is at the root of the mischief. Incision into the periosteum, however important they may be, do not reach the source of the disease; to do this we must open the bone at the juxta-epiphysial line and wash out the infected tissues with a germicide, subsequently maintaining free drainage from the interior of the inflamed bone outwards in antiseptic dressings. We do wrong to wait for pus to form in cases of this description, or to delay opening the bone for an hour after we have diagnosed the nature of the disease; for the micro-organisms which are at the root of the mischief, as a rule, live and multiply with great rapidity in the part, until within a short period they destroy the life of the individual they inhabit, or cause their own death by the suppuration they give rise to in the tissues. The question therefore, as to when we should operate in cases of this description is answered by directing the bone to be opened immediately we have determined the nature of the disease, remembering that the operation is attended with no danger, but if delayed for a few hours it may be too late. In cases of strangulated hernia, and in acute glaucoma, we have come to recognise the fact that so soon as the nature of the disease has been diagnosed we are bound to relieve the constriction in the one case and the tension in the other; so in acute inflammation of the bone, having determined the nature of the disease, not mistaking it for acute rheumatism of the joint, a free opening should be made into the part, the bone must be opened and the focus of the inflammatory action reached, if possible before suppuration has taken place in the osseous tissue. An Esmarch's band having been applied to the thigh in a case such as that we are considering, a free incision is made through the soft tissues down to the epiphysis and along the shaft of the bone so as to expose the juxta-epiphysial line. A trephine about an inch in circumference is then, with a light hand so as not to splinter the bone, to be passed through the whole thickness of the tibia; another incision is to be made through the soft tissues down to the point at which the trephine has perforated the bone, so that a passage is formed through the limb, including the small tunnel in the bone, from either end of which free drainage can take place outwards beyond the surface of the skin. The opening in the bone should be thoroughly and repeatedly washed out with mercurial solution and then filled with iodoform, after which the limb having been packed in antiseptic dressings, the elastic band may be removed from the thigh. As a rule neither drainage-tube nor sutures are required in these cases. The limb should be secured by an interrupted splint so that the dressings may be changed without disturbing the part operated on—in fact, the subsequent treatment of the case is very much that of a compound fracture. If pus has passed into the knee-joint it will be necessary to follow the treatment as regards the inflamed bone already described, and in addition to opening the joint to wash it out with mercurial solution, treating it as we should do an acute abscess in any other part of the body.

The following case is an example of the results of the early treatment of acute juxta-epiphysial osteitis. An infant aged seven months was admitted into the Westminster Hospital under my care on May 9th. She was a delicate little being and suffering from whooping-cough. Thirty-six hours before admission into hospital, there being no history of an injury to the part, the child's right leg became excessively painful and greatly swollen, the infant screaming violently the instant the limb was moved. The child was at once taken to the hospital, and Mr. De Santi, who first saw the case in the out-patient department, ordered her into the wards and that I should be sent for. Some four hours after admission the child's temperature was 104° F. Her right leg from the knee to the ankle was of brawny hardness and exceedingly painful. An incision was at once made down to the bone at the juxta-epiphysial line of the upper end of the right tibia, and a tunnel made through the bone with a trephine—in fact, the patient was treated in precisely the manner already described. The child's temperature on the day following the operation had fallen to 100°, and the next day it was under that point. After three weeks the child was removed into the country, and two months subsequently, when I again saw her, all trace of the osteitis from which she had suffered had entirely disappeared, a result attributable to the fact of the diseased bone having been freely opened and washed out with mercurial solution, and the cavity filled

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with iodoform, within forty-eight hours after the commencement of the disease.

TUBERCULAR OSTEITIS.

Having described the conditions which render the marrow contained within the extremities of the long bones peculiarly liable to become the breeding ground of micro-organisms, it is unnecessary to enter further into this subject. The question we have to determine is whether the chronic joint disease of childhood depends on tuberculosis of the marrow contained in the extremities of the bones entering into the formation of the affected joint; unless we can satisfy our minds on this point it seems almost impossible to arrive at any rational conclusions as to how we should best treat the early symptoms of such cases. The difficulty surrounding this question arises from the fact that pathological specimens of these joint affections in their early stages are seldom met with, and the osseous tissue is by no means an easy one in which to detect the presence of a few tubercle bacilli, and in the early stages of these diseases of joints only a limited area of bone is involved, and within this area probably only a few bacilli exist. During the past fifteen years in the surgical wards of the Westminster Hospital three children while under treatment for the early stages of scrofulous joint disease developed tubercular meningitis and died. In these three cases (one a knee and the other two hip-joint disease) we had an opportunity of examining the condition of the affected joints at quite the commencement of the disease. In the knee-joint case a spot of inflamed osseous tissue was found at the insertion of the tendon of the extensor muscles to the tubercle of the tibia; in this congested portion of bone tubercles were discovered. In the two cases of hip-joint disease, in inflamed spots of bone near the circumference of the neck of the femur on the distal side of the epiphysial cartilage, distinct tubercles were found, and in these tubercles a few bacilli were detected. The ligaments, synovial membrane, and other joint structures were very carefully examined, but no trace of tubercles was found in them. A somewhat extensive examination of specimens of chronic joint disease enables me to state that, where the synovial or other joint structures are affected with tubercles, tuberculosis of the bones also exists. This remark applies to the more advanced stages of the disease, a subject upon which we cannot enter in this lecture.

My fellow student, Charles Price, as far back as the year 1865, from his experience in excisions of the knee-joint, arrived at the conclusion that disease met with in this articulation as a rule commenced in the ends of the bones. Volkman was of opinion that strumous disease of joints commenced in the osseous tissue, and his opinion was to a great extent founded on his own observations of the early stages of joint disease. Ollier, and Gibney of New York, are of much the same opinion. Sayers has decided views as to the origin of these chronic joint cases in tuberculosis of the bones entering into the formation of the affected articulation. But we require further pathological evidence on the subject of tuberculosis of bone in the early stages of the joint disease of childhood. Such evidence as we have points to the presence of tubercular osteitis as being the starting-point of what is commonly called scrofulous joint disease. Pathologists, as a rule, further agree in considering that the outer layers of the cancellous tissue of the bone are the most frequently affected in the early stages of tuberculous osteitis. This fact, as already mentioned, is due in all probability to the marrow in this part of the bone being injured from the action of the tendons or ligaments on the osseous structure into which they are inserted. In the acetabulum the disease not infrequently begins in the attachment of the ligamentum teres to the innominate bone. In other cases, from the pressure to which the soft structures in the deep layers of the articular cartilages are exposed, they are crushed against the plate of bone upon which they rest, and so form a favourable soil for the growth of tubercles. Bearing on the pathological evidence in favour of tubercular osteitis being at the root of the chronic joint disease of childhood, we cannot overlook the fact that of all the joints of the body the spine is most frequently affected, the diseased action commencing in the cancellous structure of the bone in these cases; the same remark applies to the head of the first metatarsal bone, to the os calcis, and the astragalus. Lastly, in all advanced cases of the chronic joint disease of childhood there is ample evidence of tubercles in the affected tissues. When tubercle bacilli have found a favourable resting-place in one or other of the tissues of the medulla of bone, they speedily become surrounded with layers of cells which protect them from leucocytes or other blood scavengers. Within this nest of cells the microbe multiplies, and its offspring produce—either isolated, or, it may be, disseminated—tuberculosis of the surrounding medulla, and in the course of time the synovial and other joint structures are invaded by tubercle bacilli. Before the disease has advanced to this stage—and when it is certainly in many cases confined to the bone—is the time when the surgeon may with great advantage attack it, in the hope of destroying the microbe which has started the mischief.

We may, however, approach this subject from another point of view. Without doubt a large majority of the cases of chronic joint disease we meet with can be traced back to an injury of some kind, nevertheless in children injuries to the joints are incapable of causing chronic joint disease such as that which is seen so frequently in general hospitals throughout Europe. This is an important point, because, if it can be shown that injuries in themselves are not sufficient to cause the disease we are considering, it follows that in such cases there must be something beyond the traumatism to account for this slow but most destructive form of inflammation. Surgeons practising in all parts of India tell us they seldom if ever meet with cases of scrofulous joint disease among native children in that country. These children, however, are subject to the same kind of accidents and injuries as Europeans; they are no better fed or housed than the corresponding classes in Europe, and yet practically they are free from those chronic joint affections which are so frequently seen in our hospitals, and which from a pathological point of view we have come to think depend on tuberculosis. In this way we are led to believe that the tubercle bacillus is the something in addition to a traumatism which is necessary to produce chronic joint disease in childhood. But, it may be argued, the tubercle bacillus exists in India; why should native children, therefore, escape tuberculosis of the joints? It is true this bacillus can live and thrive in India, but tuberculosis is certainly much less common in that country than it is in Europe, and we cannot overlook the fact that hereditary tendencies form an important element in a question of this kind. Beyond this, native children in India live day and night for the greater part of the year in the open air and in bright sunshine, conditions which, as we well know, exercise a vast influence on living organic matter. Beyond this, the native child has a cold bath every day. That sunlight, fresh air, and cleanliness have an important share in preserving living tissues from the inroads of certain forms of micro-organisms is apparent for the following, among other reasons. The lower animals, such as monkeys if left in their natural condition in tropical forests, we have no reason to suppose suffer from tuberculosis; but but if these same animals are confined in close sunless cages in our zoological gardens they die off in numbers from phthisis: or take another case, the children of our upper classes suffer little from chronic joint affections in comparison with their poorer brethren living in the dark, dirty slums of our large cities. Physicians seem to recognise the importance of fresh air and sunlight in the treatment of the early stages of phthisis and other tuberculous affections. With unquestionable advantage they order such persons an open-air life on board ship during the summer and a residence in the pure atmosphere of the higher Alps in the winter. The early stages of tubercular testicle and other glands seem to be amenable to similar treatment.

From a study, therefore, of the biological relation of the marrow contained in the ends of the long bones, from its physiological functions, and from the teaching of pathology we are led to believe that chronic or scrofulous diseases of joints are due to tuberculosis commencing within the cancellous tissue of the bones. Without question such disease may and does begin at times in the deep layers of the articular cartilages; it may commence in the synovial or other soft structures surrounding a joint, but in the case of children we have no evidence to prove that such is the case, but rather the reverse. Then comes the question, Can we fix upon the site occupied by the tubercle bacillus in the early stages of joint disease? In cases of this kind there is always some tenderness over the whole of the joint, but if pressure is made with the tips of the fingers and thumb over the bones entering into the formation of the articulation we come on spots which are not only tender, but which on pressure cause the child to cry out with pain. These painful spots are permanent—if we examine them to-morrow or a

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week hence there they are; and they indicate definite areas of tubercular osteitis, the commencement of the disease which at any moment may extend to the synovial or other tissues of the joint. Doubtless, in instances of hip-joint disease in its early stages, there is difficulty in ascertaining the precise position of tender areas of bone such as those referred to; the disease may commence in the acetebulum or beneath the articular cartilage of the head of the femur, but it most frequently begins in the neck of the bone, as in the two specimens already referred to, and it is because it begins in this locality, and on the distal side of the epiphysial cartilage, that bacilli often extend down the shaft of the femur, and so, after excision of the head of the bone, the disease continues in the trochanteric position and upper end of the femur. In the early stages of tubercular osteitis as before stated the symptoms are frequently referred to an accident or injury of some kind, and the patient suffers from pain and stiffness of the articulation and has difficulty in fully extending or flexing the joint without increasing the pain. On pressure over fixed points in the bones which enter into the formation of the articulation the pain is much augmented. These symptoms vary in intensity, but they persist for some weeks and are increased if an effort is made to use the limb. Within a short period the patient's sleep is disturbed at night by the spasmodic and painful movements of the limb. There may be little if any increase of the synovial fluid in the joint, but its temperature will be found higher than that of the sound limb.

The question then arises as to how we may best treat such a case, and this must depend upon the belief we hold as to the nature of the disease. If we believe, with many surgeons, that these chronic joint affections of childhood are in the majority of cases due to tubercular osteitis, then it is certain we must direct our best efforts to destroying the tubercle bacillus which has found a breeding ground in the bones entering into the formation of the diseased joint. We had in India at one time a famous general who, with reference to a more substantial but hardly less dangerous form of being than we have to deal with, was wont to say: When your enemies are in the open go straight at them, keep them moving; if entrenched, go at them until you have turned them out of their position—advice which we may with advantage apply to the case of the micro-organisms we are considering. We are, however, bound to examine the opinion of surgeons who prefer less active measures in dealing with the early stages of tubercular joint disease, and who hold that the best thing we can do in such cases is to lay the patient on his back in bed with proper extension applied to the limb until the diseased joint can be flexed and extended without pain, and, on pressure over the bones, the patient no longer suffers from pain. Treatment of this kind always takes months, and may require two or three years before complete relief from pain is secured; and even after so lengthened a period of treatment there can be no certainty that the tubercle bacillus has ceased to exist in the previously diseased bone, it may only await a favourable opportunity to recommence its most destructive influence on the tissues. Beyond this we should hardly rest content with having nothing more in the way of treatment to recommend these patients than rest in bed for twelve months—it may be two years and upwards—and that at the joyous period of childhood, a time when these little beings are overflowing with restless energy, and when constant motion seems almost necessary to a healthy development of body and mind. Nor can one help feeling, as in the case of the lower animals, that life under such unnatural conditions may predispose the individual to the attacks of various forms of micro-organisms. Further than this, surgeons in charge of our London, and of other hospitals throughout this country and the Continent, have reason to believe that in many instances rest and extension are by no means all that could be desired in the class of cases that come under their care. For instance, Mr. Howse, in his valuable paper published in the Guy's Hospital Reports for 1892, has brought together the details of 130 cases of excision of the knee-joint in children, treated by himself in Guy's and the Evelina Hospitals from 1873 to 1884. The cases are not brought down to a later date because, as Mr. Howse remarks, in a question of this kind it is all important to ascertain the result of treatment some years after the patient has been "cured," according to our most misleading hospital nomenclature. One-half of the cases of excision of the knee-joint operated upon by Mr. Howse are stated to have been treated by rest, and many of them by extensions, for upwards of two years before excision of the joint was deemed necessary to save the limb or life of the patient. The other half of Mr. Howse's patients had been under similar treatment for less than two years, and yet their condition was such that this kind of treatment had to be given up and excision of the knee-joint performed. Do what we will in cases of chronic joint disease among the poorer classes of our large cities, our efforts are in too many cases unsatisfactory, for many of these children suffer from the stain of hereditary disease which the hand of the surgeon cannot wipe away.

One of my former colleagues was at one time rather fond of excising the bones entering into the formation of the knee-joint both in the early and later stages of tubercular disease. He was not at the time in the habit of employing antiseptics and he adopted the open system of dressing wounds, no special care being taken to remove infected bone or other tissues. Nevertheless most of these patients made admirable recoveries so far as the union of the diseased bones was concerned, and the cessation of the unhealthy action in the previously affected structures. There are, however, serious objections to excision of the knee-joint in children unless necessary to save the limb or life of a patient, and under any circumstances this operation cannot be entertained as applicable to the early stages of the disease, with which we are alone concerned at present. But one could not help feeling that the favourable results noticed in the cases referred to must have been largely due to the copious flow of blood which took place at the time and subsequently to the excision of the joint; the ends of the bones and surrounding tissues were thus flushed out and their embarrassed circulation relieved, so that the natural enemies of the tubercle bacilli had an opportunity of going straight at their enemy. The subsequent drainage through the open wound doubtless materially aided the salutary action going on within the tissues. By means of the trephine, however, we may not only secure free hæmorrhage from the interior of the bone, but also make a tunnel through it which will ensure continued and efficient drainage, and further allow the introduction of an efficient germicide into the infected tissues. All this may be done at an early stage of the disease without running the slightest risk of inflicting any serious injury on the bone or soft tissues, provided that strict antiseptic precautions are followed. Having given the reasons for, and method of, operating on bones affected with acute infective osteitis, it is unnecessary to make any further observations on the subject, except that a precisely similar proceeding should be carried out in cases of tubercular osteitis in its early stages, before we have reason to think that caseation or caries of the bone has occurred. Spots in the tender bones should be exposed, and a trephine of about an inch in circumference employed so as to remove one or more small columns of inflamed bone from the affected joint. After such an operation the limb should be securely fixed to a splint, so that the dressings can be removed without disturbing the part. At the same time extension must be employed and kept up for six weeks or so, after which we may omit the extension during the day and employ massage. In another ten days the patient should be placed under an anæsthetic and complete flexion and extension of the joint carefully made; from that time gentle passive motion of the joint and massage should be employed daily, and the child, if possible, removed to the country and allowed to walk about, taking at first only gentle exercise, its amount and kind being guided by the freedom or otherwise of the patient from pain.

From considerable experience in the use of the trephine in the early stages of tubercular osteitis, I am able to state with confidence that it is possible in not a few cases to cut short disease of the knee or other joints, and so prevent it speading to accessory structures entering into the formation of the affected articulation. Treatment of this kind may without question be carried through without running any risk which may not be safely undertaken, if the alternative is either caries of the affected bones or rest for long months in bed. It seems that—as in life, so in operative surgery—we too frequently begin at the wrong end; if the experience we gain as we grow in years had been at our command at the commencement of our career it would have been better for some of us and for many of our patients. And so with surgery, all our knowledge and skill should be applied to preventing

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and cutting short disease in its early stages; it is then that operative surgery may achieve its greatest triumphs. In this belief I have endeavoured to explain what seem to be the correct principles, and to deduce therefrom the line of practice to be followed in cases of acute infective osteitis in its early stages, and in the far more common and hardly less mischievous tuberculous disease of the extremities of the long bones in children.

GLEANINGS FROM SURGICAL PRACTICE.

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III.[1]—RUPTURE OF THE SMALL INTESTINES.

RUPTURE of the small intestines is comparatively the most common form of injury of the bowels; that of the large intestine is more rare; while rupture of the mesentery with its vessels is not rarely met with. In the earlier part of this series I have recorded some examples of rupture of the small intestine which were in the first instance unassociated with any symptoms which could reasonably have suggested the probability of the presence of serious intra-abdominal mischief, and if the house surgeons who were responsible for the admission of cases into Guy's Hospital had not fully recognised the value, for diagnostic purposes, of a history of the accident, and particularly of the nature and mode of application of the force which brought it about, and from the suggestions thus acquired appreciated the possibilities, not to say probabilities, of grave intra-abdominal injury having taken place, there can be no question that serious derelictions of duty would have been reported and unhappy causes of public scandal would have arisen; for the same speedy deaths which have been reported in the cases quoted would have taken place, although they would have occurred outside, instead of inside, the walls of the hospital. All house surgeons and hospital officials should therefore be impressed with the necessity of retaining for a few hours every case of abdominal, as of cranial, injury brought to a hospital, with the sole object of watching for symptoms as a guide to treatment, particularly when the nature of the accident suggests the probability of internal mischief having taken place. I will now pass on to consider and point out what lessons are to be learned from a careful study of the nineteen cases of ruptured small intestine which are before me, for I believe some practical hints which may prove of use are to be deduced from their examination.

CASE 13. *Laceration of the jejunum from the duodenum.*—This took place in a man aged thirty-seven years who was run over, the wheel of a cart having passed over his abdomen. When admitted into Guy's Hospital there was no collapse, but the patient complained of severe pain in his abdomen and severe vomiting. These symptoms persisted for twenty-four hours, when he died. After death the two ends of the divided intestine were found to be four inches apart. The stomach was empty,[2] but the peritoneal cavity contained about three or four pints of a pink-coloured fluid, which was clearly composed of the iced water he had taken stained with blood. This case occurred some years ago. Had it happened within recent times it would, I trust, have had the benefit of some surgical help. It is to be noticed that in this case the force which produced the injury was of a dragging nature and that as a consequence the loose jejunum was torn from the fixed duodenum. Indeed, the character of the force and the mode of its application always appear to be of much value as a help to diagnosis in most cases of intestinal injury, for it would seem that where the force is of a diffused rather than of a localised character the injury is more likely to be extensive or even double. Thus, when a human being is run over, the wheel of a vehicle passing either over the abdomen or the back with the abdomen downwards; when he falls from a height upon a plank or beam; is trodden on by a horse; or is crushed between two obtuse bodies, it is most probable that either a solid viscus has been lacerated or that some portion of the small intestine has been torn in one or more places. At least this is the inference which a study and analysis of my nineteen cases yield.

In two cases the duodenum was torn—in one from a localised force, in the other from a force the exact nature of which is not recorded. In seven cases the jejunum was the seat of injury, and in ten cases the ileum. In eleven of these seventeen cases the injury was of the diffused character; in six it was more localised. In one of the eleven in which the force was of a diffused character the jejunum was torn from the duodenum, in three the upper end of the jejunum was lacerated in two distinct places, and in the fifth case the lower end of the jejunum was lacerated in one place. In four of the six cases in which laceration of the ileum was present the injury was single and situated not far from the cæcum; in one other case there were two, and in the fifth case four, separate lacerations. Thus, in four out of eleven cases produced by diffused force there were two or more seats of laceration, and this point has a practical bearing of no small importance.

In the five cases of rupture of the small intestine brought about by local forces, such as a kick from a man or horse, or a fall upon a fixed object, the bowel was ruptured in only one spot. In two of these six cases the jejunum was involved, and in four the ileum. If we take the whole number of cases together, the jejunum was lacerated in seven and the ileum in ten. In a rough sense, consequently, it may be said that the surgeon may from the history of any case and an appreciation of the probable consequences of a given injury take a sufficiently decided view as to the probabilities of the nature of the injury he has to treat as to form a provisional diagnosis, and with this in his mind wait and watch for the development of symptoms in order that he may act boldly when decision has been reached.

The following are the brief notes of the nineteen cases. Cases 6 and 7 already reported are examples of rupture of the duodenum, Case 4 of rupture of the jejunum from a kick, and Case 5 of rupture of the ileum.

CASE 14.—This is also one of rupture of the jejunum from the kick of a horse, and in reviewing these cases I feel sure that most surgeons would now admit that these cases were such as should have had the benefit of surgical treatment, and that such treatment if applied in time might in all reason have been expected to have been followed by a good result.

CASE 15. *Partial separation of the jejunum from the duodenum, with a second laceration four feet lower down from a diffused injury.*—This occurred in a man aged twenty-one years who had fallen a distance of eighteen feet across a plank upon his epigastrium. He was taken up insensible, when he vomited matter streaked with blood. When admitted into the hospital he was conscious and complained of severe pain in the region of his injury. Vomiting recurred and continued, but no more blood appeared in the vomit. He died about thirty-six hours after the accident, having experienced during the whole period severe abdominal pain and great thirst. At the necropsy there was no external evidence of injury. There was evidence of early peritonitis and in the peritoneal cavity the contents of the bowel, but no blood were found. The jejunum was partially separated from the duodenum, and four feet lower down there was a second rupture one inch long. The great omentum was slightly torn and some blood was effused into the mesentery. It is reasonable to think that surgery in this case might have saved life.

CASE 16. *Rupture of the jejunum in two places from a diffused injury.*—A boy aged thirteen years had been run over by the wheel of a van. When admitted he was partly collapsed, and marks of the wheel were seen below his right sixth rib, with bruises about the left side of the upper lumbar vertebræ. There was, however, no swelling, or direct evidence of fractured ribs, although this was suspected from the boy's jerking respiration. He complained of great thirst and brought up at once what he took. Vomiting, indeed, continued up to death. He died collapsed in about thirty-six hours. After death fæcal extravasation was found to have been present, and at the origin of the jejunum there was a rupture involving two-thirds of the circumference of the bowel, and eighteen inches lower down there was a second rupture through which the mucous membrane of the bowel bulged. It is to be noticed that in this case, as in the last, extreme thirst was a prominent symptom, and it may be added that in this case likewise surgery might have proved of value.

CASE 17. *Laceration of the jejunum in two places from a*

[1] Nos. I. and II. were published in THE LANCET of Nov. 2nd and 9th, 1895, respectively.

[2] Preparations, Guy's Hospital Museum, 1851, No. 91.

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diffused injury.—A boy aged twelve years, having fallen from a horse, was trodden upon by the animal's hind leg on his abdomen. He was but little collapsed after the injury, and vomited, but not blood. He complained of great pain in his abdomen. He also passed bloodless urine. The pain and vomiting continued for two days, and by some error a dose of castor oil was given. Three hours later the abdomen began to enlarge, and in six hours the bowels acted, the motion being natural in colour and free from blood. On the fourth day abdominal pain was severe, great thirst also appeared, and vomiting returned. The abdomen also became tympanitic. In fact, acute peritonitis appeared, which ended life on the sixth day. At the necropsy no trace of bruising was to be seen. The abdomen was distended, and on opening it universal peritonitis had evidently existed, and air bubbled up upon separating the coils of intestine. *At two spots* in the jejunum, one about fourteen inches below the pylorus and the second a foot lower down, were two apertures. One appeared as a circular hole a quarter of an inch across; the other was more oval, with its long axis placed transversely and nearly an inch in length. The right pleura where in contact with the diaphragm had a layer of lymph upon it. There was little or no evidence of fæcal extravasation beyond the presence of bubbles of wind when the abdomen was opened. This is somewhat remarkable, as it might have been presumed that the dose of castor oil which was given on the third day would have of necessity caused fæcal extravasation instead of a good action of the bowels unassociated with the passage of blood. It may fairly be added that in this case surgical interference could have been useful, and in these days would have been applied.

CASE 18. *Rupture of the ileum in two places from a diffused injury.*—A girl aged thirteen years, having been thrown out of a cart on to her face, was run over the back obliquely by the two side wheels of a passing dray. She was admitted with a graze on the right loin and great local swelling from effused blood, and much collapsed. She vomited as the collapse became less marked, but only the contents of the stomach (no blood). The next day the lumbar swelling had lessened, but the abdomen had swollen and become painful on pressure. She sank thirty-six hours after the accident. After death fæcal extravasation was found in the peritoneal cavity from two separate lacerations into the ileum. In this case an operation would probably have saved life. Indeed, in all the four cases which have just been recorded the same observation is applicable, although in each of them there were two distinct seats of laceration. In all the four cases it should likewise be noted that the force which produced the injuries was a diffused one. The same observation as to the nature of the force applies to the case I am about to relate, but not as to the question of surgical interference, for in it—although the four ruptures might have been remediable under surgical guidance—death took place too rapidly from hæmorrhage to allow of such a hope to be entertained. Had this complication not existed surgical help might have proved applicable and successful.

CASE 19. *Abdominal injury from the passage of a cart wheel; four lacerations of the small intestine found after death, with fracture of the pelvis.*—These injuries occurred in a man who was admitted into Guy's Hospital in a dying condition. At the necropsy the external signs of injury were small. Blood in large quantities was found in the peritoneal cavity which came from a torn mesenteric vein. The small intestine at about its centre was divided, the two ends lying loose in the cavity;[3] near the upper one there was a partial severance of the bowel, and below the lower end were two smaller lacerations, making four in all. The pelvic bones were broken, but the bladder was intact.

I will now pass on to consider cases of ruptured intestine in which one seat of rupture alone was found, and it will be of interest to note that whereas in four of these cases the injury was of a diffused nature, in five it was more of a local character—in four from a kick by a horse and in one by a man.

CASE 20. *Ruptured jejunum from a diffused force.*—A woman aged fifty-two years was admitted after she had been run over by a cart wheel which passed over her abdomen. When seen there were no external indications of injury and no very serious signs of collapse. There was, however, pain in the region of the umbilicus, which increased, and she vomited twice. Prostration, however, followed, and death occurred on the second day. After death the only injury was a rupture about half through the [illegible] a half from the duodenum. There was a little local [illegible] vasation, with evidence of early peritonitis.

CASE 21. *Rupture of the jejunum from a* [illegible] occurred in the case of a man aged twenty-five years [illegible] having been kicked below the left lower ribs by a horse, [illegible] brought to the hospital in a cab, he having vomited [illegible] road. He, however, walked into the hospital. When [illegible] in bed he vomited and was somewhat collapsed. He [illegible] plained also of severe abdominal pain. Nothing [illegible] could be made out. He subsequently had suppression [illegible] urine, and died thirty-six hours after the accident. At the post-mortem examination some slight abrasion was [illegible] over the left crest of the ilium. There was evidence of [illegible] peritonitis, and in the free edge of the jejunum, about [illegible] feet from the duodenum, there was a rupture through [illegible] its circumference, through which the mucous mem[illegible] protruded, showing everted edges.

CASE 22. *Rupture of the ileum from a local* [illegible] female child aged four years was admitted after having received a kick in the abdomen which was quickly followed by vomiting, severe abdominal pain, collapse, and death in fourteen hours. After death a lacerated wound of the integuments of the abdomen was seen to be present below the umbilicus, more towards the left side, and on opening the abdomen fæcal extravasation was found to have existed. Immediately behind the abdominal wound a coil of ileum six feet from the cæcum was found ruptured transversely nearly throughout its circumference, and the wound was gaping widely. No surgeon could have looked at the specimen without a regret that his art had not been applied to the case for its relief.

CASE 23. *Rupture of the ileum from the kick of a horse.*—A man aged forty years was admitted after the receipt of injury to his left groin, with slight collapse, but much swelling above Poupart's ligament from effused blood and intense local abdominal pain. He could not bear to have his legs extended. He had been sick after the accident. His urine was clear when drawn off, and he subsequently passed it naturally. He also passed flatus downwards. He died within forty-eight hours of the accident, vomiting and pain having persisted. After death a perforation of about the middle of the ileum was found, with but little fæcal extravasation and peritonitis as a result. This case occurred in 1877, and I then added to my notes of the case my regret that I had not operated upon the patient.

CASE 24. *Rupture of the ileum from the kick of a horse.*—This case is that of a man aged forty-one years who was admitted collapsed and in great pain one hour after the accident. There were no external signs of injury. He had vomited several times before admission and had passed urine. The same day he vomited again, and his bowels acted naturally. Vomiting at intervals took place during the second and third days, and his abdomen became more distended. On the third day he passed flatus downwards with relief, and he had a large action of the bowels. His powers were, however, clearly failing, and he died on the fourth day. After death much pus and fæcal matter were found mixed together in the abdominal cavity, and the small intestine was completely ruptured about three feet from the cæcum with its mesentery. This case was clearly one which should have been operated upon. The local injury was the only cause of death and could have been repaired.

CASE 25. *Rupture of the ileum from a local injury; death on the sixteenth day.*—This occurred in a boy aged [illegible] years who was brought to Guy's Hospital about [illegible] hours after having received an abdominal injury through falling upon a curbstone with other boys upon him. The accident was followed by neither sickness nor collapse, but by intense abdominal pain, and it was because the pain continued and the boy's abdomen began to enlarge that he was brought to the hospital. When admitted he clearly had peritonitis, from which he died on the sixteenth day. After death a large fæcal abscess was found in the right side of the abdominal cavity, which extended from the right iliac fossa to the liver. Near the cæcum a coil of small intestine was found to be perforated by a hole [illegible] which was round and had [illegible] membrane. The case was [illegible] ference, which should [illegible]

CASE [illegible]

[illegible] Museum, Guy's Hospital Museum, 1877, No. [illegible] admitted into Guy's [illegible]

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complaining of great pain and abdominal tenderness. He had vomited before his admission, but no blood. On the second day his bowels acted naturally, and his general condition was so satisfactory that it was hoped that no internal mischief had taken place. His abdomen, however, gradually became more distended and his powers failed, so that he died on the eighteenth day. At the necropsy fæcal matter escaped from the abdominal cavity as soon as it was opened, and a coil of small intestine which proved to be ileum near the cæcum was extensively lacerated and adherent to the parietes. It is to be noticed that in this case the symptoms were very insidious. The action of the bowels on two occasions during its progress is a point to remember, for such an action is quite consistent, as already demonstrated, with intestinal ruptures. In this case, as in so many of the former, it is to be regretted that more active surgical treatment had not been carried out.

CASE 27. *Ruptured ileum near cæcum from a diffused force; death in seventy-two hours.*—A railway porter aged twenty-eight years was admitted under my care in March, 1877, having been knocked down by a train. As a result of this accident he received a severe wound at the back of his head, exposing bone, and contusions about his thorax and abdomen. When admitted he was in a state of severe collapse, and he remained in this condition for about twelve hours. During this time he had his bladder emptied by means of a catheter, and his urine was normal. As he rallied from his collapse he became somewhat delirious. Twelve hours after the accident he vomited, and the vomit contained much blood; later also blood came up in small quantities. The day after the accident there were some distension and tenderness of the abdomen, especially in the left iliac fossa and lumbar region, and the vomiting became fæcal. The man sank seventy-two hours after his admission. At the necropsy there was evidence that peritonitis had been present, and a rupture of the small intestine was found to the extent of an inch about ten feet above the cæcum. There was very little fæcal extravasation into the peritoneal cavity, and what was present was localised by firm adhesions of the surrounding parts. In this case surgery could have done much, and an exploratory operation should have been made when the abdomen became distended.

CASE 28. *Rupture of the ileum from a railway injury.*—A man aged twenty-eight years was admitted, collapsed and vomiting, with a scalp wound and some injury to his head as well as to his abdomen. He died sixty-five hours after the accident, and the case was never clearly diagnosed. At the necropsy general peritonitis was found, and the effused lymph was bile-stained. On separating the matted coils of intestine a rupture half an inch long was found in the upper part of the ileum on its convex side, the opening being sealed by recent adhesions. Extravasation only took place when the coils were separated.

Remarks.—It is to be hoped that a careful study of the cases, which have just been briefly reported, will not only prove of interest but of some practical value; for it may be stated that these notes have been collected during a period of a quarter of a century ending with the year 1888, when I was working at Guy's Hospital. When writing my notes year by year in the past it was my general custom to append some remarks to each important case as to the treatment which might have proved successful, and particularly with reference to laparotomy, and it has to me been a curious fact that to almost all of the seventeen cases I have recorded a note was appended to each as it was taken that the case was one for which surgical interference might have been expected to have been successful. I regard this incident as one worthy of record; for it forms a very strong argument in favour of a surgical exploration in cases in which clinical evidence is scanty as well as in cases in which it is fairly definite. I can only add that had I had before me in past years the evidence I have now the pleasure of presenting to my surgical brethren, I should have performed laparotomy in many cases of abdominal injury which I then passed over much to my present sorrow, and, I fear, to the loss of lives which I might have saved. Before considering the treatment of these cases of abdominal injury as a whole I should like to place on record some exceptional examples. Case 29 was one of rupture of the mesentery in which there was not only hæmorrhage from venous laceration which led to death, but symptoms of obstruction to the venous circulation of certain coils of small intestine brought about by their passage through the rents in the mesentery. Case 30 was one of rupture of the lung caused by the wheel of a cart, when in contact with a child's abdomen and lower ribs, pushing the body along a road. Case 31 was an example of rupture of the septum ventriculorum of the heart from external injury, in which the patient survived twenty-one days. I would also like to illustrate the fact that secondary changes may take place in injured abdominal tissues which may not only in some cases lead to death, but in others give rise to subsequent affections which may call for help.

CASE 29. *Rupture of the mesentery with its veins, complicated with partial strangulation of the bowel, hæmorrhage, and fracture of the pelvis.*—This case was that of a man aged thirty-three years who was admitted into Guy's Hospital after having had the two side wheels of a loaded van pass over his abdomen. Collapse and vomiting immediately followed the accident and persisted till death occurred forty-eight hours later. At the necropsy the abdominal cavity was found to contain several pints of liquid blood; the surface of the small intestine was in patches ecchymosed, and some of its coils were of a dark, congested colour. In the mesentery near its attachment to the intestine there were three separate rents through which coils of intestine had passed, and these coils were much congested, although not strangulated, but the venous circulation through the coils had been clearly much interfered with. There was no rupture of the intestine, but there was a fracture of the crest of the ilium. The patient died probably from hæmorrhage due to rupture of the mesentery with its veins, although the fatal result was probably helped by the persistent vomiting which continued to the end of the patient's life, and which was caused and kept up by the herniation of the coils of small intestine through the rents in the mesentery. It is very probable that in this case life might have been saved by an operation.

CASE 30. *Rupture of the lung without fracture of the ribs.*—A boy aged seven years was knocked down by the shaft of a cart and then pushed along by one of its wheels pressing against the left side of his abdomen. The wheel did not pass over his body. The child was admitted into Guy's Hospital in October, 1858, in great pain, and when placed in bed at once rolled over on to his abdomen on the right side, with his left leg drawn up. He also coughed up blood. He soon became unconscious and died. At the necropsy there were no external visible signs of injury except a small bruise on the left side of his back. There was no fracture of any rib, but the right side of the chest was full of air and contained several ounces of blood which came from a laceration of the lower edge of the middle lobe of the right lung. There was also a laceration of the anterior border of the liver and of the left suprarenal capsule.

CASE 31. *Rupture of the ventricular septum of the heart, with contusion of the abdomen from the passage of the two side wheels of a heavy van over the lower part of the chest and upper part of the abdomen; death on the twenty-first day.*—This happened to a boy aged eight years who was admitted into Guy's Hospital under my care on July 15th, 1885. He was brought direct to the hospital after the injury and was admitted in a very collapsed condition. At that time his pulse was 136 and there was a marked thrill over the cardiac region, with a roaring to-and-fro bruit. He vomited several times after admission. His urine was passed naturally. Dr. F. Taylor saw the child with me and diagnosed a communication between the two ventricles of the heart. On the fifth day the child had decidedly improved. His bowels had acted naturally and he took liquid food well. On the fifteenth day the report says that the abdomen was natural, but the bruit was louder than it was when the boy was admitted. Pulse 130, irregular, intermittent, and occasionally imperceptible. Temperature in axilla was 95°F., and in the rectum 98°. On the nineteenth day symptoms of pneumonia appeared, from which he died on the twenty-first day. After death the rupture of the septum ventriculorum was found, with evidence of pneumonia of the left lung and base of the right. No ribs were broken, and there was no evidence of any other lesion.

CASES ILLUSTRATING THE SECONDARY EFFECTS OF ABDOMINAL INJURY.

CASE 32. *Contusion of the stomach and duodenum following a diffused abdominal injury, followed as a secondary consequence by perforation of the duodenum by ulceration, leading to peritonitis, and death on the nineteenth day.*—A boy aged eight years was admitted into Guy's Hospital on June 16th, 1884, under my care, after the passage of the two side wheels

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of a loaded van over his abdomen. He was collapsed at the time, but was conscious. He also vomited, bringing up some blood mixed with the vomit; a few hours later he vomited again, about an ounce of red blood. He passed his urine, which was healthy. He was ordered to be fed by nutrient enemata, and given a teaspoonful of milk occasionally. For some days the patient was restless and complained of abdominal pain, which was always increased after taking the small quantity of milk which was allowed. On the eighth day the bowels acted; on the tenth day the abdomen became distended; on the fifteenth day he vomited again, a little brown fluid which gave the reaction of blood, and this vomiting continued daily until he sank on the nineteenth day. At the necropsy an ulcer was found in the posterior wall of the stomach, as also in the duodenum, where apparently these parts had been pressed against the bodies of the vertebræ by the passage of the cart wheels. The ulcer in the duodenum had perforated, and as a consequence an abscess existed in the lower cavity of the omentum, in which some milk lately taken was found. Local peritonitis existed about the injured parts. This case was clearly one of bruising of the stomach and duodenum, followed in the latter part by ulceration, which led to death. It would have been better if, in this case, life had been maintained by nutrient enemata and that the stomach had been simply washed with medicated water such as water and boric acid in small doses. To have given milk was a mistake, as such a food called upon the stomach for work for which it was incompetent. It is a question whether any operation to repair the duodenal ulcer would have been of value; as a primary line of treatment it would have been uncalled for and useless.

CASE 33. *Injury of the intestine from a local force, followed by sloughing of the injured tissue and death on the fifth day.*—A trooper in the 1st Life Guards aged twenty years, when taking his horse to drink at 5 P.M. on May 8th, 1888, received a kick from a horse on his abdomen, and felt the full force of the kick in his right iliac region. He was at once taken to the military hospital near Regent's-park and seen by the surgeon in charge, Mr. F. Hume-Spry. His face was then pale and his pulse feeble, and he complained of great pain in the seat of the injury, where there was a bruise three and a half inches by three-quarters of an inch. Hot fomentations were ordered and from these he felt relief, so that next morning he was better, although the abdominal muscles were probably more tense. Opium was also given and a tablespoonful of milk every two hours; vomiting, however, continued during the day and the abdomen enlarged. The second day the local symptoms were unchanged, vomiting had lessened, and he asked for food. On the third morning tympanites was less, but vomiting returned, so that all food by the mouth was stopped and he was ordered to be fed entirely by the rectum. On the fourth day he was decidedly better in all ways and looked better. Vomiting had ceased and pain had lessened. On the fifth morning a sudden and great change had taken place, for he was found clammy and collapsed, and he died at 2.30 P.M. At the necropsy fluid somewhat resembling pea-soup escaped in abundance on opening the abdomen, and the intestines were glued together by lymph. In the ileum, about four inches above the cæcum, some four feet of bowel were congested and bruised. At two places there were sloughs, and from one of these the fæcal extravasation had taken place. In this case it is fair to assume that the bowel as a direct result of the injury was only bruised and not ruptured, although it is quite possible that one or more of the inner coats of the intestine might have been torn. At any rate, it seems probable that it was from the injured parts not undergoing repair, but sloughing and ulcerating, that the secondary effects of the injury took place, and that death occurred.

CASE 34. *Abdominal injury followed for two weeks by the passage of blood with the motions, and subsequent attacks of abdominal pain and diarrhœa after exertion for the subsequent three years.*—A man aged twenty-seven years had, three years before I saw him, received a severe abdominal blow from a fall from a tall bicycle. The accident was followed by collapse and the passage of blood with his motions for a period of two weeks, the motions at times being very loose. He subsequently convalesced, but he had ever since the accident been the subject of severe abdominal pains associated with more or less sickness and diarrhœa after anything like severe exertion. I saw the patient in 1893, and was disposed to think that at the time of the accident some injury was caused to the lining membrane of the colon—probably some laceration—and that as a result of this when exhausted by exertion his attacks of pain &c. were due. At any rate, by acting on this view and limiting exertion and regulating diet, these attacks soon gradually ceased, and a year later he seemed to be well.

A CASE OF MICROCEPHALUS FOR WHICH LINEAR CRANIECTOMY WAS DONE BY TWO STAGES.

DEATH AFTER THE SECOND OPERATION, AT WHICH A LARGE SUBDURAL HÆMATOMA WAS FOUND EXCAVATING THE LEFT HEMISPHERE.

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AND
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THE following case of microcephalus for which linear craniectomy (so-called) was done, without, however, achieving its object, may be thought worthy of being added to the already large volume of literature on the subject, partly because the matter is still under discussion, and partly because every operation of this kind ought to be honestly submitted to criticism, especially when death follows soon afterwards. Only by the most rigorous straightforwardness in recording failures can the successful cases be of the least use to those who make the final judgment on such questions; and we therefore feel bound at least to offer the narrative of this example, leaving it to others to decide whether or not the importance of the matter warrants the publication of these notes. An introductory essay on craniectomy and microcephalic idiocy would involve a discussion of conflicting views of the pathology of microcephalus, an analysis of recorded cases, and a historical retrospect, all of these subjects being extremely interesting; but the space which would be necessary for so much detail is quite beyond the needs of a communication which aims only at the narration of a case and the affording of material for each to make his own comments upon. But those who undertake these operations must at least leave no effort unattempted to justify the acceptance of a grave responsibility, and therefore it may be pardonable if a few prefatory remarks are made on certain practical points which are helpful in dealing with some of the risks and dangers incidental to the operation now under consideration. The recorded cases show that the causes of death after craniectomy are shock, hyperpyrexia, and possibly meningitis; but the latter would appear to be only a possibility, there being seldom time for the development of inflammatory sequelæ, death when it does occur being very rapid in its onset. The two causes, therefore, of strictly practical importance are, in the order of frequency, shock and hyperpyrexia. Shock seems almost invariably attributable to hæmorrhage, and therefore it is necessary to bear in mind the sources of bleeding in these cases and thus to be prepared to deal with it promptly, by prevention if possible, and if unavoidable to check it effectually. Hæmorrhage may occur from (1) the scalp; (2) the diploe; and (3) the meningeal vessels, chiefly, of course, the middle meningeal artery. Hæmorrhage from the scalp may be almost entirely avoided by one of two methods—(*a*) by encircling the head with Esmarch's tube moderately tightly applied; and (*b*) by inserting a cordon, so to speak, of sutures round the periphery of the flap by means of strong silk stitches about three-quarters of an inch long. This method is described and adopted by Dr. Lanphear of Kansas City.[1] In the present case the first plan was used and entirely succeeded, no ligatures being needed at all. Bleeding from the diploe does not appear to have given trouble in the recorded cases, and probably this is due to the fact that the bones are often very thin and contain little diploic tissue, as was the case in the present example. The same may be said of the meningeal vessels. No trouble occurred from this source in our case, and apparently with great care it may almost always be avoided; but a branch of the middle meningeal may be injured accidentally, as occurred in Dr. Lanphear's case.[2] He dealt with this by means of a

[1] See International Clinics, Third Series, vol. ii., p. 227.
[2] Loc. cit. supra.

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"needle armed with fine juniper oil catgut inserted through the dura, carried under the vessels, brought out a line or more away from the artery and the gut tied, thus ligating *en masse*."[3] Additional measures for avoidance of shock consist in administering before operation an enema containing a drachm or two of whisky or brandy, resting the head on a hot-water rubber cushion, and bandaging the lower limbs and body in cotton wool. In the event of subdural collections of fluid, blood or otherwise, a small opening is necessary to allow slow escape, lest too sudden and rapid a lowering of pressure should induce fatal collapse.

Hyperpyrexia following craniectomy has been the cause of death in several recorded cases, notably one of Mr. Horsley's, which was, in fact, one of the first two cases operated on by him, and reported in his address at the meeting of the British Medical Association in 1891. He considered the hyperpyrexia to be the consequence of injury to the thermotaxic or heat-regulating centres in the cortex, and this conclusion is corroborated, not only by the phenomenon of increased heat of a paralysed limb in injury to the motor area, but also by an interesting case operated on by Dr. Lanphear and reported in the volume of the International Clinics above quoted. In this instance the temperature rose suddenly after operation, and this was found to be the result of the accidental slipping in of a rubber drainage-tube which lay under the bone and pressed on the motor area. On the removal of this the temperature at once fell to normal. The risk from this quarter, therefore, will be reduced by avoidance of interference with the cortex, and care should be taken to preserve the dura mater from injury unless puncture or incision be rendered necessary by the presence of subdural fluid acting as a compressing agent on the subjacent brain. Recent expressions of opinion appear to be in favour of a continued trial of the operative measures, which are essentially one and the same in object, however much the details may vary—that is to say, which aim at the relief of pressure on the brain and at affording a substitute for the natural means of progressive expansion, which are normally supplied by the sutures and fontanelles, whose abnormal closure in such cases as are suitable for this treatment has made such substitution desirable. Whether linear craniectomy, or, more strictly, craniotomy, will give place to simple trephining, consisting in the removal at intervals of a series of discs, or whether the two methods may be combined by chipping out with forceps the strip of bone joining two trephine apertures, it seems to be clear that the last word has not yet been said on the subject, and that although some authorities have decidedly expressed a condemnation of the operative treatment of idiocy, yet a balance of opinion leans to the view that there exists a class of cases where the indications seem to require some procedure which will remove an injurious degree of intra-cranial pressure, whatever the exact causal relation may be between the cranial and cerebral defect in development. And we felt justified, even in the absence of any definite localised signs of brain lesion such as convulsions or paralysis, in giving the patient a chance of relief, because there existed a very obvious condition of microcephalic deformity, a marked stunting of the frontal region, and decided ridging along the lines of the coronal and sagittal sutures, with synostosis of the latter and obliteration of the fontanelles. The history of the pregnancy preceding the birth of the patient contains two very severe attacks of abdominal pain, severe enough to cause the mother to fear that she was about to miscarry. These threatened abortions (as she believed) occurred on Jan. 2nd, 1894, and in the following month (Feb. 12th), and from the first date up to the labour she said she was never long free from more or less abdominal pain. Assuming the accuracy of this history, there is evidence of intra-uterine disturbance, which might have been an important factor in bringing about meningeal hæmorrhage, and thus accounting for the large subdural blood collection which existed on the left side of the head, as will be seen in the following narrative.

The patient was a boy aged between eleven and twelve months, and was born on April 9th, 1894. The complaint of the parents on seeking advice was on account of the following:—(1) the deformity of the head; (2) the indifference of the child to its surroundings, the usual response made by ordinary children (called popularly "taking notice") being absent; (3) inability to sit up; (4) frequent fits of crying, sometimes lasting all night long; (5) coldness and blueness of the hands; and (6) tight clenching of the hands—the thumbs being drawn in across the palms, so that his hands could only be opened with difficulty. The child's parents agree that this was more marked on one side than on the other, but they differ as to which side. The child's health in other respects had been good, and his nutrition generally unimpaired. The child was born after natural labour at term. The mother was walking in an orchard on April 8th, 1894, and at 6 P.M. was suddenly aware of a gush of "water" from the vagina. From this point her labour progressed until the birth of the patient shortly after midnight (April 9th, 1894). No instrumental aid was needed. She says the "pains" were not felt for some time, but when they did come on they were "bad." She felt the head descend at each "pain," "going in" again between them. Dr. Shaw conducted the labour, and the following facts as to the child's head were observed by him. There was a marked "caput succedaneum," and the distortion of the head was very obvious at first sight. Viewed from before the forehead presented a triangular outline rising above to a sharp peak. All along the lines of the sutures the edges of the bones overlapped, giving rise to a prominent ridge, which gave a feeling like that of the edge of a book when the finger was run along the sutures. The ridge corresponding to the mid-frontal suture was most prominent. The triangular frontal bone could be moved very easily over the front borders of the parietals, and was also movable from side to side. The occipital bone overlapped in a similar manner at the lambdoid suture. The right parietal at the sagittal suture rode over the left, this being increased by lateral compression of the head. The two fontanelles at the vertex were inconspicuous at birth. When the child was seen six months later no trace of the fontanelles existed, and the sutures were firmly ossified and still marked by prominent ridges. The face was very large relatively to the cranium. No teeth have as yet appeared. On Feb. 23rd, 1895, the parents were anxious that the chance afforded by operation should be given, and were willing to take the risks, which were fully explained to them, that the child might not survive operation, and if it did that no benefit might result. The patient was well grown and in good general health. The head was a conspicuous example of microcephalus, the measurements being as follows: circumference at the level of the eyebrows, 15½ in.; transverse diameter at situation of pterion (at the middle of the latter), 2⅞ in.; transverse diameter through a point just in front of each meatus, 4 in. The forehead was peaked, the whole frontal region of the skull was narrow, and the face excessive in development relatively to the cranium, the normal ratio being reversed. The whole upper part of the skull was stunted, giving the idea of an average base fitted with a vault much too small for it. The occiput was small, but less disproportionate than the frontal end. When viewed from above the general features and the relative size of the frontal half of the skull above described were well seen. The sides converged sharply, allowing much more of the various parts of the face to be seen than can be done in ordinary heads of children of the same age. On each side at the region of the pterion there was a depression as if the temples had been compressed at this point, which gave the minimum transverse measurement (2⅞ in.). With regard to the nervous system, except the spastic contraction of the fingers and adduction of the thumbs across the palms, there were no abnormal signs definitely localised. Paralysis, convulsions, twitchings, and strabismus were absent; no monoplegia existed. The knee reflexes were present, but there was no ankle-clonus. The child seemed to manifest a general muscular-weakness in respect of not being able to sit up, but in resistance to interference he showed considerable power. Lethargy was very noticeable, and there were no signs of the perpetual movements which healthy children when awake and not feeding usually delight in. No trophic changes in the muscles were observed. The patient did not start when sudden loud sounds were made or when a bright flash of light was thrown on his face. All signs of pain or cranial tenderness were absent. Neither signs of pleasure nor of distress were evinced, except the latter when he was actually inconvenienced by attempts to measure or examine. With regard to sight, the absence of response to a bright light flashed on his eyes indicated impaired vision, if not blindness. The optic discs were very white, and the vessels of the fundus appeared small. There was no orbicularis spasm during ophthalmoscopic examination. The expression of the

[3] Loc. cit.

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face was vacant. As to hearing, there was little evidence either way. His mother said he took the breast eagerly and knew when his meals were due.

First operation, on the right side, on Feb. 23rd, 1895.—The usual preparation of the head by shaving and thorough cleaning was done, the former over-night and the latter some time before operation. Chloroform was administered by Dr. Shaw. Esmarch's tube was applied moderately tight around the head, and effectually prevented any hæmorrhage. A flap of scalp was raised and turned outwards by an incision on the right of and parallel with the median sagittal line, joined at each end by curved ones, all taken down to the bone, so that the whole of the soft structures were reflected from the bone. The length of the median incision was about three inches, extending from the anterior hair line to a point near the parietal eminence. A disc of bone was cut out with a ½-in. conical trephine of modern aseptic construction. This aperture was made at the hinder end of the exposed area, and the dura mater was seen to have no pulsation; it bulged very little and gave no distinct sense of elastic resistance. No puncture was therefore made. A strip of bone about half an inch wide was quickly removed by means of Keen's forceps, the gap so made extending a little further forward than the skin incision. A further area of bone was similarly chipped away downwards and outwards from the front end of the first cleft to give additional room for expansion at the part where the greatest narrowing existed. The flap was replaced after irrigating the whole wound with sterilised water and drying carefully. Silk sutures were inserted all round except behind, where the edges were maintained in accurate contact by the fixation of the rest, and this opportunity was taken to allow for any tension which might be caused by sero-sanguineous exudation. Antiseptic dressings were applied as usual. The operation lasted thirty-five minutes, not counting the dressings, and no shock was caused. After about a week of apyrexia the wound was soundly healed, no pus having been produced.

Second operation, on the left side.—On the 29th of the following month (March, 1895) the left side was similarly operated on. No fresh description is needed of the steps of the operation; however, on exposing the dura mater no pulsation was visible, but the membrane bulged into the trephine aperture in a very marked degree. In spite of care, the trephine pin dinted the dura mater, but did not actually wound it. The elastic resistance to the finger was so pronounced that there seemed to be no doubt of fluid beneath. A small puncture was therefore made with the scalpel, which was immediately followed by a jet of blood, which shot out as if under considerable pressure; this continued for some moments, to the amount of two or three ounces, according to guess, gradually subsiding till only a trickling stream remained. The small slit was next cautiously enlarged to enable the forefinger to be inserted, which resulted in finding a large cavity, into which the whole length of the finger could enter. This cavity seemed to have excavated so large a part of the hemisphere that the back and front regions could only be partly felt and seen, the greater part of the left side of the cranial cavity being taken up by the huge blood cyst, the lining of which was deep red in colour with adherent clot. The fluid blood which escaped was neither so bright as arterial nor so dark as venous blood, and was less clear and bright than freshly shed blood. It was quite odourless. The condition of the child became so bad from collapse, in spite of care taken to allow the cavity to be very slowly emptied, that the cyst was quickly packed with gauze and the flap of scalp replaced and kept in position by two or three silk sutures, ordinary gauze and wool dressings being applied as usual. Meanwhile, the child had had a rectal stimulant injection and copious warmth to the surface, as well as having his lower limbs wrapped in wool. The shock was partly rallied from, but in five hours' time from being removed from the table the child died, no convulsions having occurred, but more or less shock persisting. Most unfortunately no persuasion succeeded in obtaining permission to make a necropsy, and the condition of the opposite hemisphere can therefore be only inferred.

Remarks.—The absence of a necropsy unfortunately makes it difficult to say whether this case can strictly be regarded as one of porencephalon, and no proof was obtained of any similar condition on the right side of the head. One suggestion arising from this case is perhaps that in all cases the left side should be first dealt with, on the ground that the speech centre is situated on this side; this rule had been followed an unnecessary operation the other side would most probably have been avoided. appearances found at the second operation, together the history of the pregnancy and the probable period of intra-uterine compression of the head, suggest probability of meningeal hæmorrhage, leading to development as a primary condition resulting in synostosis and closure of the fontanelles. Whatever the precise pathology may have been, it is certain that during life there nothing to reveal the exact lesion, although it would appear that the fact of marked ridging along the lines of suture may be taken, in absence of localised evidence, as indication for operating. (It may be added that after first operation the mother believed that the patient brighter and less restless, with fewer attacks of cyanosis unfortunately we failed to see the evidence of this desired change.)

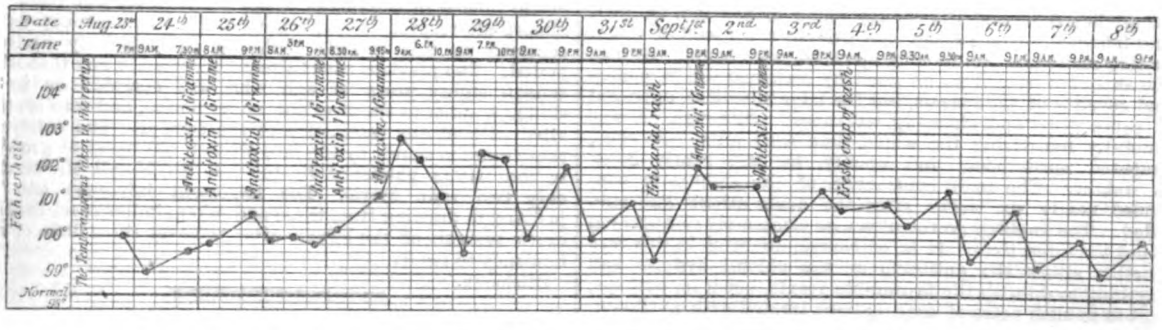
A CASE OF TRAUMATIC TETANUS TREATED WITH TETANUS ANTITOXIN AND CHLORAL HYDRATE.

BY REGINALD HARTLEY, M.D. DURH.,
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A MAN aged forty-four years, 5 ft. 11 in. in height, 12 st. 6 lb. in weight, married, whose wife and children were living, was shoeing a horse in a forge on the morning of Aug. 9th, 1895, when the animal kicked and knocked him down. He fell on his right side, bruising his right elbow and wounding the forearm near the elbow with a nail which was projecting from a horseshoe lying on the floor of his shop. When he got up the horseshoe was hanging to his arm, and a smart tug had to be given to get it out. The pain was considerable, but disappeared in an hour or two. In the afternoon the elbow swelled and got stiff, so he came down to the surgery, where at 4 P.M. he saw Dr. A. C. Ferguson. The wound was carefully washed with sublimate lotion and dressed with iodoform ointment. On Aug. 12th and 13th he again came down for attention; on the latter day the wound was found to be completely healed, but there was a small lump on the ulna, where the nail had penetrated. On Friday, Aug. 23rd, at 7 P.M., he came again, as he did not feel well. He said that on the previous morning he had found that he could not swallow well, especially solids. On taking a long breath he felt acute pain darting from the right forearm into the neck. He had had very little sleep during the night because of the pain. He had had three separate attacks of spasm in the right arm. On the morning of Aug. 23rd he still had difficulty in swallowing, but no spasm of the arm until 2 P.M. A third spasm occurred at 4 P.M. and a third at 6.30 P.M. At 7 P.M., when he was seen in the surgery, he had a severe attack of spasm, involving the whole of the right arm and fingers. The mouth could not be opened widely, as the jaws were stiff. There was a tender swelling on the ulna, about the size of a sixpenny-piece, where the nail had penetrated. The seriousness of his case having been explained to him, he consented to go into the hospital, where he went straight to bed after a hot bath. He had a cup of cocoa and milk and drank it well. At 8.55 P.M. he had a short spasm of the right arm. At 9 P.M. 40 gr. of chloral hydrate were given, and he fell asleep an hour later. He slept until 1.30 A.M., when he awoke with spasm in the left arm. He then slept on uneasily from 3.30 to 7.30 A.M. Since his admission he had taken, as ordered, 4 oz. of milk and one tablespoonful of prepared meat juice every four hours. At 8 A.M. he had a raw egg beaten up with half an ounce of brandy. He was visited at 9 A.M., when he expressed himself as comfortable. He was again visited at 1 P.M., when he had had a short sleep. On visiting him again at 7.30 P.M. he had had three spasms, each more severe than the last. One gramme of tetanus antitoxin, procured from the British Institute of Preventive Medicine, was injected. At 10 P.M. he was half asleep. The pulse was steady. He had restless, troubled sleep, with moaning at intervals until 1 A.M., when he was awakened with great pain and spasms in the right arm, left hip, and across the back

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Forty grains of chloral hydrate were given. He slept until 6 A.M., when he was awakened by spasms over the hips and loins and felt a constant tendency to grin. There were also painful spasms in the left arm. On being visited at 9 A.M. the grin was at once noticed. He was unable to open his mouth more than a quarter of an inch. One gramme of antitoxin was injected. On visiting him at 1 P.M. the patient was found to have had a quiet morning. By 5.30 P.M. he had had many short sleeps. The muscles were less forcibly contracted and the pain was less severe. At 9 P.M. he was comfortable on the whole and drowsy. The right arm was more frequently affected by spasm, but in a milder form. One gramme of antitoxin was injected. The patient thought he could swallow with less difficulty. He fell asleep at 9.30 P.M. and rested quietly until 12.30 A.M., when painful spasms came on, with great restlessness. Forty grains of chloral hydrate were given by the nurse, after which he tossed about and had intervals of troubled sleep until 7.30 A.M. On the 26th he was quite clear in his head. The right arm was in a state of strong tonic rigidity. The lips felt less "tight and tied up." At 3 P.M. he had had a comfortable day. As the bowels had not acted an enema was ordered, with a satisfactory result. At 7 P.M. he had had no sleep. The lips felt more stiff, and he did not swallow so well. The jaws were more contracted. Pain was severe when he breathed. At 9.15 P.M. one gramme of antitoxin was injected. He complained of intense soreness afterwards. At midnight the nurse had to give him 40 gr. of chloral hydrate, according to orders, as he was so restless. He tossed about, moaning, all night, and complained especially of pain in his right elbow. At 9 A.M. on



the 27th he expressed himself as better. The spasms were not so painful. There was no pain on breathing. One gramme of antitoxin was injected. He had a fair day, and slept on and off from 6 to 9 P.M. At 9.45 P.M. he had intense pain all over the back; the muscles were hard and rigid. One gramme of antitoxin was injected. On the 28th he had little or no sleep during the night. At 1.45 A.M. he had 40 gr. of chloral hydrate without any calming effect. He said that the antitoxin the preceding night had made him feel very ill, drawing up his abdominal muscles and making his "chest and belly fasten together." The nurse said that his breathing was irregular. At 2 P.M. he had slept four hours during the morning; he had very little muscular spasm, although the right arm was still very rigid. He said that he felt better. At 6.30 P.M. he was comfortable and had slept for an hour. On the 29th, at 9 A.M., he was stated to have slept well during the night, with no attacks of spasm. He had a slight tendency to convulsive spasm now in the right arm. The tongue was very dirty and the breath most offensive. The whole skin seemed to exhale a most disagreeable odour; 5 gr. of calomel were ordered, which soon acted. At 9.30 P.M. he had had a good day. There was a clonic spasm of the right arm, lasting about two minutes, caused by touching him. He could swallow fairly well. At 11 P.M. he had one teaspoonful of the compound syrup of bromide of potash, chloral hydrate, cannabis indica, and hyoscyamus. He fell asleep at once and had a fair night. On the 30th, at 9 A.M., a very slight movement of the bedclothes brought on clonic contractions in the right arm. He could swallow liquids pretty well. At 9.30 P.M. he had had a fair day. A friend, on visiting him, gave him some butter-scotch, which he was unable to chew. On the 31st he had had a good night, although awakened by painful spasms three times. They were of shorter duration. "Comes like a gunshot now from fingers to elbow, and off like a shot again." At 9.30 A.M. he had certainly greater tonic contraction in the right arm, and the neck muscles felt board-like. At 9.30 P.M. a fair day had been passed, though the pain had rather increased. He complained of his skin tickling. On Sept. 1st, at 9 A.M., he had had a restless night, being awakened several times by spasms in the right arm. The urine was of sp. gr. 1026, scanty, and loaded with lithates. There was still a disagreeable odour of the skin and breath, and he was covered with an urticarial rash, both body and scalp. He felt his jaws less stiff, but could not put out his tongue, which was still dirty. He had frequent profuse sweats during the day. At 9 P.M. the nurse told me that he had clonic spasms when she went near the bed. When feeling his pulse at the left wrist he had severe spasms of both arms and legs. One gramme of antitoxin was injected. He now confessed that all day he had felt his mouth very stiff, but was afraid to say anything, as he dreaded the injection of the antitoxin. On the 2nd he had several hours' sleep during the night. He got out of bed, but could not stand, and fell down. His tongue was very dirty. Five grains of calomel were ordered, with good result. The rash was fading. At 5 P.M. he had had a better day, but was very feeble. At 9 P.M. he had a painful spasm, which was very severe in the arms and neck. One gramme of antitoxin was injected. The skin over the injection of the day before was very red and tender, almost erysipelatous-looking. The man was very depressed, cried constantly, and had severe sweats. On Sept. 3rd, at 9 A.M., he had had a very bad night, frequent clonic spasms awakening him. He cried out loudly. The nurse gave him 40 gr. of chloral hydrate in the night without any good result. The patient had a very anxious look and heavy sweats. At 10.15 A.M. 40 gr. of chloral hydrate were given, after which he slept until 3 P.M., when the painful contractions of the right arm again awakened him, although they were not so severe. At 5 P.M. he was sleeping quietly. When seen again at 9 P.M. he was sitting up in bed and complained of currents of air in the ward, which caused spasms and queer sensations up his spine. At 9.45 P.M. he had 40 gr. of chloral hydrate and slept until 7 A.M., the contractions, which were much less severe, not awakening him. At 9 A.M. he looked better and more like himself. His old wrinkles reappeared in his face. The right arm was still hard and rigid, yet softer than two days ago. A fresh crop of urticaria was out. Six grains of calomel were ordered, which acted at 6 P.M. During the afternoon he felt the "jaws to be tight, as if the teeth did not fit." He "swallows without the jaws working." At 9.15 P.M. he was lying quiet. He had had fewer chronic spasms of the right arm, but complained of his jaws and left arm. Forty grains of chloral hydrate were given. He slept all night. On the 5th, at 9 A.M., he complained of acute pain in the left hand, which looked as if affected by gout. The hand was ordered to be wrapped in cotton-wool and oiled silk. The fingers were stiffish, but there was no spasmodic contraction. He still swallowed with some difficulty. He felt his jaws stiff "agen t'ears." At 9.30 P.M. he had had a fair day. There had been no spasms of the right arm. Forty grains of chloral hydrate were given. On the 6th he slept well most of the night, without spasms. Mistura alba was administered early, with satisfactory results. The patient looked decidedly better. I opened out his left hand, which still looked gouty. The same kind of dressing and the mistura alba were ordered to be repeated. At 9 P.M. he had had a good day. There had been no clonic spasms. He had had a little milk

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pudding. On the 7th, at 9 A.M., he had had a good night, although he had taken no chloral, sleeping on and off from 10 P.M. to 8 A.M. He had a cup of tea, with bread in it, for breakfast. The edges of the tongue and gums were sore and tender. The rash had quite gone. The right arm was less firmly contracted, and he could move the fingers a little. At 9 P.M. he had had a good day. On the 8th he slept fairly well without chloral. The right arm and hand were rather more rigid than on the day preceding. He was ordered bread and milk. He said that washing the arm caused slight spasm. He could now put out the tongue a little. On the 9th he had had a good night. The bowels acted, and he had a satisfactory day. On the 10th he had slept well. He could put out the tongue further, although the jaws could not be opened much more than before. He sat up for three hours and had minced beef and vegetable marrow. On the 11th he had had a good night. The tongue was cleaning. He sat up for three hours. On the 12th he had again had a good night. He was out on the verandah in the sunlight for an hour. On the 13th he weighed 10 st. 3 lb., and was sent home, as his wife was anxious for his return. During the next two months he was seen at intervals. The tonic contraction of the right arm, though gradually decreasing, persisted until Oct. 20th. On Nov. 15th he came to report himself. He still complained of general muscular weakness. His weight was 12 st. 3 lb.

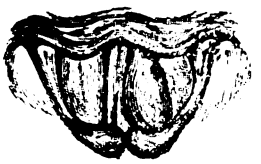
Remarks.—In this case the origin of the infection is pretty apparent. The antitoxin was administered in the following way. It was powdered finely in a mortar and dissolved in 90 minims of boiled distilled water. It was then injected, by means of a sterilised syringe, deeply into the muscles of the back. After the first injection great pain followed each succeeding dose, and the tissues round looked red, swollen, and inflamed. The patient had evidently a dread of them, as they made him feel terribly upset for some hours. At first the antitoxin seemed to do good by lessening the frequency and severity of the spasms, but the later injections appeared to cause great and alarming weakness. Although he was carefully fed during the whole time with milk, raw eggs, prepared meat juice, and brandy, he lost nearly 2½ st. in weight. The tonic contraction of the right arm continued nearly six weeks after the acute attack had subsided. The swelling on the ulna also completely disappeared about the same time. It is, of course, doubtful in this case whether either the antitoxin or the chloral hydrate had anything to do with the favourable result, but it is, perhaps, best to publish notes of each patient treated with antitoxin, and it is certainly interesting to compare this case with the one published by Dr. Tirard.[1] Yandell says, in summing up Cowling's report on Tetanus:[2] "Recoveries from traumatic tetanus have been usually in cases in which the disease occurs subsequent to nine days after the injury. When the symptoms last fourteen days recovery is the rule, apparently independent of treatment. The true test of a remedy is its influence on the history of the disease. Does it cure cases in which the disease has set in previous to the ninth day? Does it fail in cases whose duration exceeds fourteen days? No agent tried by these tests has yet established its claim as a true remedy for tetanus." In how many cases has tetanus antitoxin been tried when the symptoms have come on at an early date after the injury, and what have been the results?

Thirsk, Yorks.

A CASE OF CYSTIC TUMOUR OF THE LARYNX.

BY G. HUNTER MACKENZIE, M.D., C.M. EDIN.,
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A MAN aged sixty-seven years applied at the Edinburgh Eye, Ear, and Throat Infirmary on June 4th, 1895, on account of "difficulty in breathing," which had existed in a marked degree for above a year and had become more pronounced during the last three months. For several nights preceding admission he had had scarcely any sleep on account of a sensation of impending suffocation which sometimes caused him to spring suddenly out of bed for relief. He had always enjoyed good health until the onset of his present trouble. His voice was husky, and there was well-marked laryngeal stridor, but no pain. On laryngoscopic examination the cause of his respiratory embarrassment was at once detected. A pear-shaped body with a smooth surface lay upon and obscured the left vocal cord and part of the left ventricular band. It was attached by a short pedicle at or near the anterior commissure of the cords and extended as far as the left arytænoid cartilage. It moved slightly with ordinary



respiration, but during deep inspiration it was drawn below the level of the glottis. The obstructing body was at once removed by the aid of rectangular laryngeal forceps, and a portion of the pedicle which remained was removed by a second similar operation. Immediate and complete relief followed the operation. No recurrence had occurred four months afterwards. After removal of the tumour a somewhat rare condition of the larynx was observed. The left vocal cord, which at first seemed to underlie the tumour, was now found to have completely disappeared, apparently from long-continued pressure and erosion by the growth. A portion of the left ventricular band had been similarly affected.

Remarks.—It is worthy of special notice that two cases of cystic tumour of the larynx in old persons—the one being in almost all respects a duplicate of the other—should have occurred at this *clinique* within a comparatively limited period. The previous case (already reported[1]) was that of a woman eighty years of age who was operated on in a similar manner to the case now under notice, and who is still alive without any recurrence of the tumour. The rarity of these cases is shown by the fact that of 100 cases of growth in the larynx published by the late Sir Morell Mackenzie only two were cystic. The important inference one is justified in drawing from these and other similar cases is that cystic tumours of the larynx after removal show little or no tendency to recur.

Edinburgh.

A CASE OF PELVIC HÆMATOCELE.

BY ERNEST WILLIAM BLISS, M.R.C.S. ENG.,
L.R.C.P. LOND.,
ASSISTANT MEDICAL SUPERINTENDENT, ST. MARYLEBONE INFIRMARY.

THE following case is one of sufficient interest to warrant its being recorded.

A married woman was admitted to the St. Marylebone Infirmary on Aug. 21st, 1895. The history given by herself was that she had always been healthy up to the date of her marriage three years previously. She had one child eleven months after marriage; the labour was normal. Two months after the birth of this child she states that she suffered from "inflammation of the bowels" and was laid up for one month. No history of any other illness was elicited. Her present illness developed one month before admission, when she was attacked by pains about the rectum and all round the lower part of the abdomen. These pains increased in severity for a fortnight, when she passed from the vagina two small clots each about the size of the "end of her forefinger." She had not been unwell for two months before her illness and thought that she was pregnant. On Aug. 9th—that is, twelve days before admission to the infirmary—she became unwell and lost a good deal of blood for about a week, when the flow ceased altogether. On the 17th, four days previously to her admission, she was suddenly attacked by very severe pain in the lower part of her abdomen and felt very faint. She saw her medical attendant, who immediately sent her home to bed, and from that time till her admission to the infirmary she remained in great pain. When first seen there she had an anxious, pinched expression; the temperature was 101·6° F.; the

[1] THE LANCET, Nov. 2nd, 1895.
[2] American Practitioner, September, 1870.

[1] Brit. Med. Jour., Dec. 3rd, 1892.

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face was pale and rather sallow, but the body was well nourished. On examining the abdomen there was found occupying the hypogastric region a globular swelling, which was hard to the touch and consistent with the feel of a gravid uterus. The swelling extended about two inches and a half above the symphysis pubis. The breasts were flaccid, and no milk could be squeezed from them. Examination per vaginam disclosed no discolouration of the vaginal mucous membrane. The os was fairly hard and round and was not dilated. Bimanually a large globular mass could be felt occupying the pelvis in the middle line, but extending more to the right than to the left side. The patient's condition remained much the same for the next few days. The temperature ranged from 99° to 103°, generally being raised most at night. She complained of very severe pelvic and abdominal pain, which was much exaggerated when the bowels were moved. During this time the pelvic swelling increased slightly in size, especially laterally. On Sept. 3rd chloroform was administered and a thorough examination made. The uterus was made out to be quite distinct from the swelling, and to be pushed high up behind the pubes; it was reached with difficulty. In Douglas's pouch there was a large swelling bulging the posterior vaginal wall forwards and extending laterally on both sides of the pelvis, but more so on the left side. This was the reverse of her condition on admission. Bimanually fluctuation could be distinctly made out in the swelling. From this time (Sept. 3rd) to Sept. 13th the patient's condition remained about the same. The temperature was raised, and pain continued. The pelvic swelling, if anything, increased laterally, but not much change was observed. On the morning of Sept. 13th she began to pass blood per vaginam, and during that day she passed a number of clots of blood. From the moment she commenced to lose blood she experienced relief from the pain, and during the whole period of her convalescence she had no return of it. The bowels were moved without pain, and the temperature became normal. For the next two days she continued to pass blood (fluid and clotted), and on an examination being made per vaginam it was found that the whole of the mass occupying Douglas's pouch had disappeared. There was no pain on examination. The os could be made out easily and was in its normal position. The uterus was freely movable. Some roughness could be felt high up in the posterior vaginal wall, and on passing a speculum this was seen to correspond with what appeared to be a rough granulating surface round the opening from which the blood had been discharged. The discharge of blood ceased, and from this time till she left on Oct. 5th she made an uninterrupted recovery.

Remarks.—This case I take to be one of pelvic hæmatocele, and, considering the history of cessation of menstruation for two months, the passage of what she describes as two clots about a fortnight before admission, and the sudden attack of severe pain and faintness four days before admission, I think it was most probably caused by the rupture of an extra-uterine gestation. Unfortunately, the clots first passed were not preserved, and I was therefore unable to examine them. The method of cure in this case is, I think, not its least interesting feature. No operative procedure was considered to be advisable or was attempted. I am indebted to Mr. J. R. Lunn, medical superintendent of the infirmary, for permission to publish this case.

Ladbroke-grove-road, W.

A CASE OF DIPHTHERIA TREATED BY ANTI-DIPHTHERITIC SERUM.

BY W. A. HOLMES, M.D. EDIN., D.P.H. CAMB.

THE patient, a girl aged five years and eleven months, of a plethoric temperament and subject to hypertrophied tonsils, was attacked on April 5th by diphtheria. The parents were told by a neighbour that she thought it was a severe case of mumps. The objective signs were considerable enlargement of the parotid glands in front of and behind each ear, as also of the submaxillary and sublingual glands to such an extent as to hide the real line of the neck. Outwardly it had all the appearances of a severe case of mumps, the glandular swellings being very hard. The temperature was normal; the pulse was full, good, and quite regular. On the soft palate, on the right side, there was a small abscess which broke during the afternoon; the tongue was dry, with a white fur on it; the tonsils were hypertrophied and the uvula was much swollen; the tonsils and pharynx were both covered with an ash-grey looking membrane which did not extend into the pharynx, although it was covered with a glairy-looking mucus, as was also the uvula. In the evening there was neither aggravation nor amelioration of the symptoms, thus indicating that ordinary treatment for diphtheria was holding the disease in check. The following morning at 5.20 A.M. the diphtheria had assumed an alarming state of affairs. The patient was pulseless, the face being livid, the lips cyanosed, and the eyes fixed and covered with a glairy mucus. The fingers up to the hands were cyanosed, the tongue was dry and rolled up like a ball in the mouth, the entire soft palate, uvula, pharynx, larynx, and nose as far as the external meatûs were covered by the diphtheritic membrane, and the breathing was stertorous. She was lying powerless, with an occasional movement of the head to ease the stertorous respiration. The arms when lifted fell like pieces of lead. The skin was very hot, but the temperature was not taken. There was no perspiration. With the patient in such an utterly hopeless state I decided to use anti-diphtheritic serum. I injected 20 c.c. of the serum—i.e., 10 c.c. subcutaneously between the spinal column and scapula on each side. Two minutes after the injection the respiration was easier; in five minutes the stertor was less marked, and on the whole she was much relieved from the embarrassed respiration, giving great relief to both parents and nurse. Two and a half hours after the injection the lividity of the face and the cyanosis of the fingers and lips had been replaced by the hue of health. The temperature was normal; the pulse was good, full, and otherwise normal. Her countenance was now expressive of anxiety, the sclerotics and cornea were free from scum, and the eyes were movable. She was able to lift the hands and arms; the tongue could be protruded half an inch beyond the lips, and was not so dry as previously. With such a decided improvement 10 c.c. of anti-diphtheritic serum were again injected subcutaneously, slightly higher on the back than the previous one on the right. Two hours after this second injection of serum a marvellous change took place in the state of the patient. She now sat up of her own accord and began to speak, but with a difficult phonation, yet every word spoken could be heard and understood; her speech was nasal. Two hours and fifteen minutes after the second injection she recognised and admired a hyacinth which had been brought in and placed in a corner of the room; she also recognised everyone and everything about her. The nurse, who had been in the Monsall Fever Hospital and had had considerable experience in nursing diphtheria patients, said she could scarcely realise the change which had been brought about, remarking that she had never seen so bad a case of diphtheria. The urine voided during the day was scanty, but contained neither albumin nor sugar, and was of specific gravity 1018. To remedy the scantily voided urine, steam from hot water in a basin, and afterwards from a bronchitis kettle, was resorted to. Two drachms of perfumed carbolic acid were added to two pints of water, and the steam produced was allowed to diffuse about the patient for two hours, thrice in the twenty-four hours, at a distance of three feet from the patient. The throat was mopped occasionally with weak Condy's fluid, and flower of sulphur was occasionally blown into the throat until the diphtheritic membrane disappeared. This was done for two days subsequently. On the first day after the injection the quantity of urine voided was much more than on the previous day, and less difficulty was experienced, this being probably due to the carbolic acid reducing the irritation of the renal epithelium. The carbolic acid in no way reduced the good effects of the anti-diphtheritic serum circulating in the blood stream. The temperature was normal and the pulse as satisfactory as before. By the evening the diphtheritic membrane had disappeared from the roof of the mouth, the uvula, and the nose, the pharynx and larynx alone being covered with it. There was a copious, irritating, watery discharge from both nostrils, excoriating the skin below the nasal meatûs down to the margin of the upper lip. On the second day after the injection the general state of the patient was good. There was still the irritating watery discharge from the nostrils, but the parotid and sublingual glands on each side were much softer, the pharynx and larynx were free from the diphtheritic membrane, and urine was voided

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freely. The temperature and pulse were normal. Any food, either solid or liquid, could now be taken by the patient. On the third, fourth, and fifth days after the injection the general state of the patient was satisfactory. The appetite was good; both temperature and pulse were normal; the tonsils were hypertrophied and the site of the abscess in the roof of the mouth was healed. She appeared as though she ailed nothing, and was able to play with her toys. Anyone who saw her would scarcely believe that she had been so near death, she was now looking so well. On the fifth day the parotid and sublingual glands were normal. On the sixth, seventh, and eighth days after the injection the general state was still satisfactory. The appetite was good, but the tonsils were still hypertrophied. A fresh feature appeared during these days; phonation was difficult, sounds produced could scarcely be made out, and the vocal cords on both sides were in a state of paresis. On the ninth day after the injection the vocal cords had recovered from the paresis, and phonation was normal and easily distinguished. Beyond this nothing out of the ordinary was noticed or complained of until the fourteenth day after the injection, when the patient felt sick and vomited, and was relieved by a saline stomachic. On the fifteenth day after the injection food was not taken so well in the morning; during the afternoon she had several cold sweats and asked to be taken to bed. In the evening she felt well and took some pancreatised fresh milk. On the sixteenth day after the injection, at 4 A.M., the patient awoke the nurse, asking for more milk. Ten minutes later she said, "I am dying, you know I am dying, nurse"—on which the nurse called the patient's parents, who asked her whether the child's pulse was good, when the nurse felt it and replied that it was very good. At 4.15 A.M. the patient drew three deep breaths and passed away.

Barrow-in-Furness.

TWO CASES ILLUSTRATING THE THERAPEUTIC VALUE OF OXYGEN.[1]

BY CHARLES J. MACALISTER, M.D. EDIN., M.R.C.P. LOND.,

PHYSICIAN TO THE LIVERPOOL STANLEY HOSPITAL AND TO THE HOME FOR INCURABLES; LECTURER ON PRACTICAL MEDICINE TO THE ROYAL SOUTHERN HOSPITAL.

CASE 1. *Uræmic coma treated with inhalations of oxygen.*—A man aged thirty-nine years was admitted into the Stanley Hospital, Liverpool, on Nov. 15th, 1894, complaining of pains in his limbs, severe headache, and frequent vomiting. He was a very stout, short-necked man, and he attributed his illness to a series of severe wettings with exposure to cold. His habits had been somewhat intemperate. The presence of slight œdema of the eyelids and of the lower extremities suggested the renal origin of his trouble, and this was confirmed by an examination of the urine, which he informed me had been diminishing in amount for some days. Examined in the out-patient room, it contained rather more than one-fourth albumin. There was no blood and the specific gravity was 1015. The position of the heart beat was masked by the adipose thickness of the parietes, but with the stethoscope the sounds were most audible just below the nipple. They were all closed. The pulse (84) was regular and of good volume, but not very tense. During the ensuing twenty-four hours he passed twenty-five ounces of urine. The temperature was normal. On the morning of Nov. 17th (after sleeping well all night) he seemed drowsy and complained of dark spots floating before his eyes. The respirations were noted as being rather hurried (25 per minute) and the pulse was 82. He had severe frontal headache. The urine contained one-fourth albumin and the specific gravity was 1015. The urea, unfortunately, was not estimated. The bowels had been freely moved three times since the previous day. During the forenoon he vomited several times and in the afternoon became delirious, talking nonsense, but there was no excitement. At 5.30 P.M. it was discovered that he was absolutely blind. His temperature was 100·8° F. The pupils were very contracted and exhibited no reaction to light. There were no muscular twitchings. At 6.30 P.M. he was in a semi-[illegible] condition, from which, however, he could be roused; [illegible] breathing was loud and stertorous; the lips, nose, and [illegible] tremities were somewhat cyanosed. His temperature was [illegible] After this he became more and more deeply comatose, and [illegible] the time of my arrival at the hospital (8.30 P.M.), having been summoned by the house surgeon, the patient was in a [illegible] dition of profound coma, lying on his back, the eyes [illegible] open, with pin-point pupils, all the muscles being relaxed and the face, lips, and extremities being cyanosed. The mouth was closed and he was breathing with loud stertor through the nostrils. The heart was beating tumultuously. The pulse was about 118, poor in tension, and irregular in in strength and rhythm. He was absolutely insensible to pain. The œdema noted at the time of his admission was diminished, there being only slight pitting over the tibiæ. If the man had not been under observation a post-[illegible] hæmorrhage might have been suspected or narcotic poisoning. It was evident that he was suffering from some poison—[illegible] generated—which interfered with oxidation, and it was on this account that I at once inserted into one of his nostrils the rubber tube connected with a cylinder of oxygen and allowed him to inhale the gas very freely—pure oxygen through one nostril, and air through the other. The results were very striking, for the face and lips quickly became less cyanosed, and in about ten minutes he began to try to push the tube from his nose. The pulse was reduced from 118 to 84 beats per minute. The respirations became slower and ceased from stertor, and the pupils were less contracted. He resented the touching of his corneæ. A little later he spoke voluntarily on to his side, but I could elicit no replies to questions. The opportunity was taken of his being on his side to apply a cupping glass over the loin, and the pain which this occasioned effectually aroused him. He sat up in bed and became so violent that assistance had to be obtained to restrain him. He, however, took no notice of questions and made no attempt to speak. He presently relapsed into a drowsy condition, and the oxygen was repeated. An enema of sulphate of magnesia being given in the meantime. Ten minutes later he sat up and asked for a drink. He was now quite conscious, but continued totally blind, and complained of severe headache. There was no return of the unconsciousness, although two days later there was a threatening of it which was again averted by oxygen. The urine in the twenty-four hours measured 108 oz., specific gravity [illegible] and contained one-eighth albumin, with hyaline and granular casts. On Nov. 19th he was able to see light. The ophthalmoscope showed small hæmorrhages, especially in the right fundus. The right disc was blurred, and the left disc and [illegible] were normal. I need hardly enter into all the subsequent details of this case, and it will perhaps be sufficient if I state that he was able to read newspaper print on Nov. 21st. On Nov. 23rd all headache had disappeared, and from [illegible] date until Dec. 6th the albumin rapidly subsided in quantity, at length there was no trace of it, and the man left the hospital perfectly well shortly before Christmas. He was treated, so far as medicines are concerned, with intestinal antiseptics, and no food except milk was given so long as any albumin remained in the urine.

CASE 2. *Morphia poisoning.*—At 11.30 on the night of Oct. 23rd I was hastily summoned to see a young woman who had taken in somewhat rapid succession eight pills, each containing half a grain of morphia. The last pill had been swallowed at 10.15 P.M.—i.e., more than an hour before my arrival. Several medical men had (as is usual in such cases) been called upon, and I found Dr. Murray Mann in attendance. The patient had been able to speak and was aroused when he arrived about an hour previously, and he had with great promptitude applied mustard to the [illegible] chest, &c., and he had also administered one-tenth of a grain of atropine hypodermically. Hence the pupils, which were at first contracted to pin points, I found rather [illegible] medium, but absolutely insensitive to light. Dr. Mann had observed some general bronchitis, and the temperature had been 101·4° F. I found the girl propped up in bed, breathing very slowly (about 8 per minute), and it quickly became evident that the respirations were becoming slower and slower, until they ultimately became reduced to 3 or 4 per minute, and would soon have ceased altogether but for the employment of artificial respiration. It is needless to say that she was absolutely unconscious. The conjunctivæ were quite [illegible] painful stimulation that I could [illegible] of sensation. The face, lips, [illegible]

[1] Abstract of a paper read before the Liverpool Medical Institution on Nov. 28th, 1895.

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the latter were very cold. The pulse was very frequent and feeble, but perceptible at the wrist. An interesting point was the presence of occasional slight convulsive twitchings of the facial muscles and divergent strabismus, possibly the result of some thebaine in the morphia. To wash out the stomach with permanganate of potash or with anything else was out of the question, because I do not believe she could have lived had the artificial respiration been abandoned, and the operation itself would have been risky, and furthermore, the morphia had in all probability been entirely absorbed by the time I saw the case. Dr. Moore, on my taking charge of the respirations, went for a battery, and at the same time a cab was despatched for a cylinder of oxygen, which reached us at about 12.30 A.M. The vulcanite tube was then pushed back to the pharynx, and the gas was allowed to escape very freely while the artificial respirations were continued. The result was that the face almost immediately became less livid, and the pulse slightly better; but what was of more importance the respirations became voluntary, and the continuance of the artificial respiration became unnecessary. She was allowed to breathe the oxygen for about ten minutes, and the tube was then removed, when the lividity gradually recurred; and it was observed that so often as the oxygen was repeated the cyanosis and respiratory condition improved, and when it was omitted a relapse occurred, so that it was determined to administer the gas at very frequent intervals. After much vigorous stimulation of the buttocks, soles of the feet, and cheeks, there appeared at 3 A.M. some conjunctival reflex, which raised our hopes, but half an hour later she again lapsed into a condition of deep coma. The respirations were 7 per minute and the circulation was manifestly failing. Dr. Carter was at this time called in, and at his suggestion some digitalin was injected subcutaneously. Strong coffee was also injected into the rectum. The oxygen was now given continuously. The respirations improved after this, but the extremities, although surrounded with hot bottles, were very cold, and they were enveloped in hot fomentations. At 5 A.M. our efforts were rewarded by a return of the conjunctival reflex, by some attempt being made to move the arms and legs, and by frowning, &c., when the cheeks were slapped. At 6 A.M. she was quite rousable, and half an hour later we were able to leave her under the charge of Dr. O'Flaherty, who at that time arrived upon the scene. Strange to say, no ulceration or bruising of the buttocks, &c., followed the very powerful flagellation which they had received—a result, perhaps, due to their being at once dressed with lint saturated with hazeline. I mention this because another case of opium poisoning which I attended with Dr. Armstrong some years ago, which was treated with about the same amount of vigour, developed very considerable gluteal ulceration after recovery from the narcosis.

Liverpool.

THE INFLUENCE OF INHERITANCE ON THE TENDENCY TO HAVE TWINS.

By DONALD MACPHAIL, M.D. GLASG.

THE cases published by Dr. Cory in THE LANCET of Nov. 2nd and by Mr. Thomas Wakley, jun., in THE LANCET of Nov. 23rd prompt me to send notes of a noteworthy family history which I jotted down several years ago.

I attended a woman in her confinement when twin girls were born. It was her fifth confinement, but she had not had twins before, though she said "twins were very rife in her family." Her insistence upon the "rifeness" of twins aroused my interest in the matter, and she kindly arranged for me an interview with an old aunt, who gave me the notes I send and said she thought she could get notes of other cases in the family and fuller notes of the cases she mentioned to me. My patient died from phthisis not long afterwards, and her husband married again and left the district, so that the history remains as I first noted it down, probably incomplete. I could get no genealogical facts on the husband's side, though he had won honourable mention by the fact that his first wife's only two children were a pair of twins. His third wife had one child to my knowledge, but of her subsequent history I know nothing. The facts of the case are that my patient's husband's first wife had twins, her maternal grandmother had twins twice, her grandmother's brother's wife had twins, her grandmother's mother had twins, her grandmother's uncle's wife had twins, her grandmother's father was a twin, and his sister had twins twice and triplets once. Arranged according to generations the history seems to be as follows:—

First generation.—		A woman had twins, &c.
Second	,,	One of her daughters had twins twice and triplets once, and one of her twin sons married a woman whose brother's wife had twins, and who herself presented *him* with a pair.
Third	,,	One of *his* daughters had twins twice, and his son's wife had twins once.
Fourth	,,	Blank.
Fifth	,,	A granddaughter of the woman noted in the third generation married a widower whose first wife had had twins and she herself bore him twins.

Whifflet, Lanarkshire.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON A DIET CURE.

By W. A. HATTON, M.D. DURH.

HAVING lately had occasion to make use of one of the so-called "diet cures" for the relief of those symptoms due to an excessive development of fat in some half-dozen cases, I venture to think, as the results were so satisfactory, that a few notes may be of general interest. The plan of treatment followed is that advocated by the late Mr. Towers-Smith, which has the merit of having been tested in his own case. There being an absence of the complicated rules of the various Continental authorities—the treatment being easily followed out with very little hardship by anyone—I chose it for trial. The first case was that of a woman aged fifty years, who weighed 238 lb. on April 5th, and suffered a great deal from dyspnœa and palpitation and was unable to walk any distance. There was no organic disease—which it is always advisable in these cases to look for, and which, if present, precludes most forms of diet treatment. Her measurements were: Round the neck, 14 in.; chest, 40 in.; waist, 38 in.; and abdomen, 51 in. The diet chart would be in accordance with each individual case, but the following may be taken as an average one. At 8 A.M. a tumblerful of hot water flavoured with lemon-juice, tea or coffee plain, no milk or sugar, a little white fish, such as cod or sole; steak or chop, or cold meat, free from fat; at 12 noon, beef or mutton, hot or cold, with or without a pint or so of beef-tea or water; at 4 P.M. a cup of tea or coffee; at 9 P.M. fish or cold meat, one pint of beef-tea or hot water. All food should be plainly cooked; no fat, skin, or gravy to be taken, and no vegetables to be allowed. Drink to be taken preferably after meals. If desired, in suitable cases, a little Scotch whisky, claret, or Burgundy may be allowed, and some exercise should be indulged in daily. There is no starving in this plan of treatment, as from 1 to 3 lb. of meat may be taken daily. The only hardship to many is the absence of bread and butter and vegetables, but that always passes off after the first few days. In lieu of bread Mr. Towers-Smith has devised a biscuit, made of bran and soya, one to be taken at each meal. The above should be adhered to for fourteen days, and as improvement results a little indulgence should be allowed fortnightly. Owing to a misunderstanding this patient ate nothing for fourteen days but beef or cod-fish, and drank tea or hot water, with the result that she lost 14 lb. and felt much improved in her condition; the waist lost ½ in. and the abdominal measurement 1 in. During the next fortnight, in which she followed the above diet chart, she lost 7 lb., the abdomen 2 in. and the chest 1 in. In the succeeding fortnight she lost 3 lb. (the waist ½ in.). A little vegetable food was then allowed every other day. The patient took exercise daily, and could even then walk comfortably a couple of miles. During the next fortnight she

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lost 4 lb. (the abdomen 3 in.). She was kept to the same diet for a month, when her improvement allowed a little more latitude in her diet, and in two months she could take almost anything. The general result was that she lost 31 lb. in weight, 1 in. in measurement round the chest, 1 in. round the waist, and 6 in. round the abdomen. Nearly all her discomforts have disappeared, and she can now walk from six to eight miles with little fatigue. The other cases gave as satisfactory results. The method of treatment will compare favourably, I think, with those of Ebstein, Oertel, or any other of the many Continental methods.

Westhoughton, Bolton.

ON THE EXTRAVASATION OF BLOOD IN TUBAL PREGNANCY.

BY JAMES OLIVER, M.D., F.R.S. EDIN.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE, LONDON.

DURING the evolution of a natural pregnancy there results not only an augmentation in the size of the bloodvessels of the uterus, but a hypertrophy of the tissues of this organ generally. When, however, the fecundated ovum develops in the Fallopian tube it seldom happens that any vigorous local growth is excited by its presence, although the bloodvessels in the involved tube become greatly enlarged. Apart from any intrinsic disease the integrity of a bloodvessel depends greatly upon the manner in which it is supported by the surrounding tissues. When, therefore, the pressure exerted by the Fallopian tube against a growing ovum is insufficient to support the correlatively enlarged bloodvessels they rapidly become thinned, and rupture with extravasation of blood takes place on the slightest provocation. When the developing ovum is located in the cavity of the uterus we are accustomed to believe that accidental hæmorrhage from the maternal vessels never takes place until after the fourth week of pregnancy. Whether this belief be correct or not it is evident that in tubal pregnancy accidental hæmorrhage from the vessels in the mucous lining of the Fallopian tube may occur as early as the seventh or tenth day after impregnation. In ectopic pregnancy, therefore, blood may be extravasated from the maternal vessels before the chorionic villi become vascular—a phenomenon which happens during the third week of pregnancy when the chorion becomes incorporated with the allantois. The paroxysmal attacks of severe pain which are sometimes experienced in cases of tubal pregnancy are due to these effusions of blood, and, although the primary hæmorrhage occurs always whilst the ovum is living, subsequent hæmorrhages may nevertheless happen after this body has died. Rupture of the Fallopian tube itself, which has gradually become more and more thinned, may be induced by the first or any succeeding extravasation of blood; and as this accident may occur as early as the fourth week of pregnancy before the chorionic villi have begun to participate in the formation of a true placenta—for the ovum is everywhere placental at this period—the breach in the continuity of the tube is not in all cases at least attributable to a thinning at the placental site, or to a penetration of the tube by the villous processes. A portion of the external hæmorrhagic discharge — vaginal — which is observed in the early days of some tubal pregnancies comes directly from the ruptured vessels in the tube.

Gordon-square, W.C.

BILATERAL VARIATION OF TEMPERATURE.

BY BINGLEY G. PULLIN, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

A CASE of typhoid fever, contracted in the South of Europe, was lately under my care during its course, which ended fatally from peritoneal abscess. The subject of temperature revealed itself in an altogether new light. Accidentally, I found that the temperatures on the opposite sides of the mouth varied at the same time and with the same clinical thermometer. I became interested to ascertain whether or not this difference existed from day to day, and requested the trained nurse to take the temperature on both sides of the mouth (between the cheek and teeth) every four hours. Strange to say, on nearly every occasion the highest reading was on the left side (the abscess ultimately showed itself on the left side). During the time these records were taken exactly 100 temperatures were notified; on twelve occasions only did the temperature of the right side exceed that of the left, and only three times were the temperatures equal. It would be impossible to notify in an article each record, so I merely take the averages of the day's temperature for the last fifteen days of the illness.

First	day	0·9°	higher	on	the	left side.
Second	,, ...	0·6	,,	,,	,,	,,
Third	,, ...	1·0	,,	,,	,,	,,
Fourth	,, ...	0·9	,,	,,	,,	,,
Fifth	,, ...	0·5	,,	,,	,,	,,
Sixth	,, ...	0·9	,,	,,	,,	,,
Seventh	,, ...	0·9	,,	,,	,,	,,
Eighth	,, ...	0·7	,,	,,	,,	,,
Ninth	,, ...	0·6	,,	,,	,,	,,
Tenth	,, ...	0·4	,,	,,	,,	right ,,
Eleventh	,, ...	0·5	,,	,,	,,	left ,,
Twelfth	,, ...	1·2	,,	,,	,,	,,
Thirteenth	,, ...	1·2	,,	,,	,,	,,
Fourteenth	,, ...	1·0	,,	,,	,,	,,
Fifteenth	,, ...	0·5	,,	,,	,,	,,

The greatest difference recorded was 3·2° in favour of the left side; many times a difference of 2·0° was noted. Now, looking at this case, supposing that each time the temperature was taken it had been taken on the right side, what would have been seen? Nothing certainly alarming in the temperature of the case, as the highest record on that side was 102°—very rarely did it exceed 100°; whereas on the left side it rarely fell below 102°, and did on one occasion reach 104·8°. If we are to be guided by temperature charts, is it not of the highest importance that both sides of the body should be tested? It would certainly, to my mind, aid one very much in deciding on which side in most cases we have to meet disease, for it is evident that under the influence of some irritating cause the vascular system of the opposite side of the body is contracted, consequently there is less blood and the temperature is lower; *vice versâ* on the offending side. Many cases of a minor degree have since this been noticed by me.

Sidmouth, Devon.

NOTES OF A CASE OF THREATENED FATAL RESULT FROM CHLOROFORM ANÆSTHESIA.

BY J. C. MAXWELL, M.A., M.B., C.M.,
SENIOR HOUSE SURGEON, HALIFAX INFIRMARY.

THE patient, a strong healthy man aged thirty-nine years, was being anæsthetised on Jan. 3rd previously to operation for a small omental hernia in the neighbourhood of the umbilicus; chloroform was the anæsthetic selected, and was administered on a folded towel, the patient's head being kept low and the jaw pulled well forwards. The patient took the anæsthetic well, did not struggle, breathed regularly and quietly, and had been receiving the anæsthetic for about seven minutes without being fully anæsthetised; the abdominal muscles contracted when touched, and there was a well-marked conjunctival reflex in both eyes. The pupils were about 2·5 to 3 millimetres in diameter and reacted to light. The right carotid pulse was of good volume. Administration was continued, but no fresh chloroform was poured on the towel. In less than thirty seconds after the above observations the pupils suddenly dilated and became immobile, and the conjunctival reflex disappeared. The towel was removed, but after two or three breaths respiration entirely stopped and the carotid pulse became much feebler. The head was pulled over the end of the table, the tongue pulled out, and artificial respiration (Sylvester's method) at once resorted to. During its performance two hypodermic injections, each $\frac{1}{100}$ grain of sulphate of strychnia, were given and a current of oxygen gas was played about the nostrils. At the end of twenty minutes the patient vomited and showed signs of recovery, his pulse became stronger, and respiration took place normally. He was still much collapsed and the operation was abandoned. About two and a half drachms of chloroform had been used.

The case seemed to be one of paralysis of the respiratory centre in the medulla, coming on practically coincidently with the abolition of the abdominal and corneal reflexes. A week later the patient was again anæsthetised, this time with ether from a Clover's inhaler. The patient took the anæsthetic quietly and did not struggle or hold his breath till five minutes after the commencement of the administration. He

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then passed into a condition of complete muscular rigidity, the chest-walls being rigid, the teeth clenched, and the arms and legs stiff. The pupils were dilated. The pulse-beat was much feebler. The mask was removed and in a little the spasm relaxed and the patient began to breathe. On re-application of the mask he passed off, without causing further trouble, into normal anæsthesia maintained for thirty-five minutes. It may be of interest to mention that he had retention of urine for three days after the operation.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

A CASE OF TRAUMATIC TETANUS TREATED BY ANTITOXIC SERUM; RECOVERY.

(Under the care of Dr. ALDREN TURNER and Mr. G. LENTHAL CHEATLE.)

THE cases of acute traumatic tetanus treated by the antitoxic serum are sufficiently rare to warrant the publication of this one, which was under observation for a considerable time in the wards of the West London Hospital. It is an illustration of the effect of a comparatively new remedy, which, according to Dr. Turner, was of undoubted value in lessening the frequency of the general spasms. Cases of tetanus have recovered under nearly every form of treatment, and there are many remedies, but no specific cure. Chloral hydrate has probably given the best results, but is uncertain. It is important that the antitoxin should have a fair trial, but few surgeons would be inclined to practise preventive inoculation with it. Tetanus is now a very rare disease, even in our large hospitals, and the cases are usually admitted from without, whilst the thorough antiseptic cleansing of contused and lacerated wounds when they present themselves for treatment is most effectual in preventing its development. For the notes of the case we are indebted to Mr. E. Bromet, house surgeon.

The patient, a boy aged six years, was brought to the hospital on Aug. 1st, 1895, his mother making the statement that he was suffering from stiffness of the legs and neck. On further inquiry it was found that about a fortnight previously he had fallen on a piece of barbed wire and sustained a wound on the ball of the left thumb. Rather more than one week after this injury the patient is stated to have had a fit, in which, according to his mother's account, he became stiff all over and bit his tongue; and after the fit he was unable to open his mouth properly. At the time that the stiffness commenced the wound, which had not been treated surgically, showed an unhealthy appearance. The patient had never previously to this attack had anything of the nature of a fit. The mother was not absolutely sure of the dates, but as far as cross-examination could elicit the length of time between the injury and the onset of tetanic symptoms was eight days. On admission there was found a small suppurating wound on the ball of the left thumb. The limbs were stiff and painful when moved. There was also slight opisthotonos. The mouth could not be opened further than to admit the tip of the index-finger. The fingers were rigid and contracted. The child was quite sensible and complained of the stiff feeling of the limbs and soreness about the lower jaw. The slightest movement or attempt to administer food set up a typical tetanic convulsion. The jaws were tightly closed, the face muscles were rigid, with a well-marked risus sardonicus, extreme opisthotonos, clenching of the hands, rigidity of the muscles of the abdomen, expansion of the chest, and a peculiar sobbing noise during inspiration. About 6 P.M. on the day of admission the house surgeon, acting on the advice of Dr. Turner, freely excised the wound under chloroform. The piece of tissue, which consisted of one or two small granulations, some cicatricial tissue, and healthy skin, was submitted to a careful bacteriological examination by Dr. W. Bulloch of the British Institute of Preventive Medicine, but no tetanus bacilli were detected after staining by the usual methods. On recovery from the effects of the anæsthetic, the spasms again set in with renewed vigour and frequency, so as to necessitate the constant administration of chloroform. The slightest reduction of the anæsthesia was immediately followed by recurrence of the tetanic spasms already described. The chloroform anæsthesia was maintained from 8 P.M. on the day of admission (Aug. 1st) until midday on Aug. 2nd. During the afternoon of this day the spasms, which still remained very frequent, appeared to be less severe. At 5.30 P.M. a supply of antitoxic serum arrived from the British Institute of Preventive Medicine. One gramme of this was injected, under strict antiseptic precautions, subcutaneously into the abdominal wall.[1] For the purposes of injection the serum, which had been sent in the dry crystallised form, was dissolved in distilled water previously boiled. During the six hours which elapsed between the first and second injections only one convulsion occurred, and during this period the boy sat up in bed and asked for milk. Previously he had been fed by enemata, and the urine was drawn off by the catheter. At 11.30 P.M. on Aug. 2nd the second injection of one gramme was given. During Aug. 3rd there was only one slight spasm recorded. A good deal of muscular rigidity still remained, more especially of the abdomen. During this day the general condition had improved, he took milk freely by the mouth, and passed urine and fæces naturally. At night 0·5 gramme was injected. From Aug. 4th to 7th no further spasms occurred, although rigidity remained. Under the belief that this abdominal rigidity was of a tetanic nature another gramme was injected on Aug. 7th. The total amount injected was therefore 3·5 grammes (equivalent to 35 c.c. fluid form). On Aug. 11th several localised abscesses were detected in the abdominal wall at the seat of the injections. An erythematous rash in blotches was observed for the first time on the abdomen and face. On Aug. 13th the rash was more profuse and the abdomen tender and rigid. The abscesses were opened and dressed in the usual way. On Aug. 18th the abdominal rigidity had almost entirely disappeared. The general health was excellent. The patient was allowed out of bed. On Aug. 24th an abscess which had formed in the left lumbar region at the seat of the last injection was opened. On Sept. 4th the patient left the hospital in good health. On Nov. 13th the mother stated that slight "jerking attacks" had been at times observed after leaving the hospital, but they were infrequent and mild. The boy was in the best of health. No attacks had been observed for the past ten days.

Remarks by Dr. ALDREN TURNER.—The points to which attention is especially called are, firstly, the nature of the case, and, secondly, the method of treatment. It is difficult to say in how far recovery was entirely due to the treatment by the antitoxic serum; but the case is of value for statistical purposes, and for the same reason it is hoped that the unsuccessful as well as the successful cases may be recorded. From the point of view of incubation the case may be regarded as acute, this period being of eight days' duration. But the more or less gradual onset of the symptoms places it amongst the milder forms, which, according to the statistical tables drawn up by Kanthack,[2] as a rule present a favourable prognosis. Setting aside the question whether the case would have recovered without the aid of the antitoxic serum, I submit that no drug, or other method of treatment at present at our disposal, could have brought about the extraordinary arrest of the tetanic symptoms mentioned in the report. For the twenty hours preceding the first injection the spasms were so severe and so frequent that it was necessary to maintain a chloroform anæsthesia. During the six hours succeeding the first injection one spasm occurred, and during the twenty-four hours following the second only one slight spasm was recorded, since which there has been no recurrence with the exception of the slight "jerking attacks," to which further reference is made later. Not only was the arrest of the spasms remarkable, but the improved state of the general health was most noteworthy. As regards the method of treatment, I desire to point out that the serum was obtained in its dried form, being sent direct to the

[1] According to Dr. Hewlett one gramme of the dried serum is equivalent to ten c.c. of the fluid form.
[2] Medical Chronicle, 1895, p. 92 et seq.

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hospital from the British Institute of Preventive Medicine. The crystals were dissolved in distilled water previously boiled, the hypodermic syringe and needles had also been boiled, and the skin was carefully washed with carbolic acid solution (1 in 20). Yet, notwithstanding these precautions, an abscess formed at the seat of each injection. It appears clear that the serum crystals must have conveyed the septic agent; and this I take to be the chief objection to the dried method of preparation. As is not uncommon, the injections gave rise to an erythematous rash, which was not troublesome and did not last long. But a point of some importance, and one to which I wish to direct attention, is the continuance of so-called "jerking fits," with a certain amount of rigidity associated with them, for some time after all other tetanic symptoms have disappeared. It may be suggested, and with some reason, that as long as these attacks persist the case ought not to be regarded as a cure. It is yet a matter for conjecture what the cause of those late jerking fits may be. Should they be regarded as resulting from the treatment adopted, or are they to be looked upon as evidence of retention in the system of some of the products of the tetanic poisoning? It is to be noted that in this case the serum treatment was not applied until the eighth day after the onset of the tetanic symptoms, by which time certain products of a strychnine-like nature have been formed between the tetanus ferment and some of the organic products of the body, which the antitoxic serum was unable to neutralise; and this is the view suggested by Courmont as a likely explanation of the late phenomena. In relation to this matter Dr. Bulloch tells me that he has noted similar late "jerking attacks" in a horse in which he had artificially produced tetanus and then cured by the injection of antitoxic serum. In this instance only two days elapsed between the onset of the symptoms and the commencement of treatment. The point, therefore, appears to be of considerable scientific importance, and it is desirable that the presence or absence of these late jerking attacks should be noted, as well as the date of the first injection after the onset of the tetanic symptoms. Whatever the products may be, they are gradually eliminated by the usual channels. Lastly, it should be pointed out that although we have in this method of treatment a most potent therapeutic agent for the prevention as well as the cure of tetanus, early excision of the wound should never be neglected. Although in this case, as in many other cases, examination of the wound by an experienced bacteriologist failed to show the presence of Nicolaier's bacillus, yet there is reason to believe that it is a fountain for the constant supply of the toxic ferment.

TAUNTON AND SOMERSET HOSPITAL.

A CASE OF TETANUS TREATED WITH TETANUS ANTITOXIN; DEATH ON THE FIFTEENTH DAY AFTER ONSET OF SYMPTOMS.

(Under the care of Mr. SAMUEL FARRANT.)

ALTHOUGH the treatment of tetanus by antitoxic inoculation is older than the analogous treatment of diphtheria, yet the disease is so much rarer and the cases of recovery under the treatment so much more *sub judice* that all records of cases so treated, however negatively, become most important. Therefore we are glad to present our readers with a third account of a case this week. The injury in the case related in our columns this week by Dr. Hartley of Thirsk should have had its origin, as has the case which follows, in a kick from a horse; for of course it is only a coincidence and not a point of any pathological meaning. For the notes of this case we are indebted to Dr. Maidlow, house surgeon.

A man forty-six years of age was admitted to the Taunton and Somerset Hospital on Oct. 29th in an alcoholic state, with a history that he had been kicked on the face by a horse two hours previously. The patient had the appearance of a chronic alcoholic. After removing as much mud as possible it was found that there was a lacerated wound one inch long running downwards and to the right from the right nostril; another, starting from the anterior part of the septum nasi, passed through the lower right lateral nasal cartilage upwards and outwards, so as to almost separate it. The nasal mucous membrane of each side was also lacerated. The wounds were thoroughly cleansed, and were finally syringed with a carbolic acid solution (1 in 20); the nose after having been sewn up was dressed with blue gauze soaked in styptic colloid, the other wound having a similar dressing. Except for some difficulty in keeping the interior of the nose clean both wounds healed well, and in fact presented at no time indications for special treatment. The patient's previous health had been good, although he admitted alcoholism. Ten days previously he had had a molar tooth removed. On the 30th he felt quite well, the temperature being 97·3° F. No albumin was found in the urine. He got up and walked about. There was no evidence of visceral disease. On Nov. 3rd he said "his jaws felt stiff," but nothing was noticed. He took food well. The face was rather swollen and hot, and the patient appeared to be on the eve of an attack of facial erysipelas. The temperature was normal. On the 5th there was marked trismus. Both masseters were firmly but not painfully contracted; they remained in this state persistently without exacerbations. No other spasms occurred. There seemed to be tenderness over the right lower molar, and as he could give no account of the tooth previously removed it was thought this might be the source of a reflex trismus. The treatment consisted in applying boracic fomentations. On the evening of the 6th he had a severe respiratory spasm for nearly four minutes; the nurse thought that he was dead. The patient's body was thrown in all directions, and his distress seemed to be great. On the 8th an attempt to open the mouth with a gag failed, but two lower teeth were removed, having been loosened in this attempt. Soon afterwards another respiratory spasm occurred, which seemed to be due to a difficulty in removing collected blood. There was no dysphagia, the patient taking milk, beef-tea, &c., by the mouth. On the 9th there was no change in the condition of the jaws; otherwise he seemed to be comfortable. He was given a purgative and chloral hydrate (twenty grains every four hours). On the 10th painful swallowing supervened. On the next day (the 11th) a severe spasm occurred during an attempt to pass a nasal tube. After chloroform had been administered an examination of the teeth revealed that they were all apparently sound; in fact, there was now no doubt about the diagnosis. The only rigid muscles were the masseters. From the 11th to the 12th no fresh symptoms developed. The patient was fed every four hours with nutritive enemata containing fifteen grains of chloral hydrate, twenty grains of bromide, and ten minims of tincture of opium. The temperature was normal and he seemed cheerful. On the 13th it was noted that during the night his arms had twitched during sleep and that severe attacks of dyspnœa occurred at 11.15 P.M., 1.15 A.M., and again at 8 A.M. and 11.45 A.M.; there was no exciting cause. He complained chiefly of backache. The sterno-mastoids and masseters were extremely but not painfully rigid. No risus sardonicus was present. The pulse was 139 and regular, the respiration 38, and the temperature 100°. There was a trace of albumen in the urine. Chloroform was given on an inhaler during each attack, and seemed to cut them short. At 1.15 A.M. tetanus antitoxin obtained from Messrs. Allen and Hanbury's, fifteen grains (British Institute of Preventive Medicine), was injected into the lumbar cellular tissue. At 2.35 P.M. a sudden severe spasm occurred during sleep. No special opisthotonos was observed; the body was thrown about in all directions during this attack. There was complete retention universally afterwards. Another slight attack occurred at 4.30 P.M. From this time he never had an attack so severe as to necessitate the use of chloroform. At 11.10 P.M. fifteen grains of antitoxin were injected. On the 14th, at 5.30 in the morning, there were two mild attacks. During the day the muscles of the abdomen were rigid, and the sterno-mastoids and masseters occasionally so. The temperature during the day ranged from 97° to 101°. Another injection of fifteen grains was made at 4 P.M. The patient was still fed per rectum, but the chloral and opium were discontinued. In the evening muscular twitchings and delirium developed, the mouth being always full of a viscid blood-stained secretion very difficult to remove. On the 15th he was very depressed, but he had experienced no marked attacks since the morning of the 14th. The pulse was feeble and irregular. An injection of nineteen grains of antitoxin was given. In the evening he was delirious. Three minims of morphia were injected hypodermically. His muscles were now rigid. On the 16th he was [illegible] and delirious. A severe, but compared with the [illegible] spasms a mild, attack occurred at [illegible] tinued to improve all day and [illegible]

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but seemed to be afraid. Ten grains of antitoxin were injected. He was in a moribund state during the night, but occasionally fought vigorously and seemed to be conscious. At 8.30 A.M. on the 17th he died suddenly during the passage of food through the nasal tube.

Necropsy (partial).—No evidence of disease was found in any viscus excepting some fatty changes in the liver and pulmonary emphysema. The brain and spinal cord were not examined. Thirty hours afterwards the arms were discovered to be lax, the jaws and lower extremities being still very rigid. Decomposition was not marked.

Remarks.—The most salient points of this short history seem to be as follows. 1. The onset of the attack (the fourth day from probable inoculation) was acute; yet from the onset to the first definite dyspnœic spasm (the seventh day) till the first antitoxin injection, when he seemed to be well "in" the disease (the fifteenth day), the course of things was slow, in opposition to the usual rule that the course of the disease varies directly in acuteness according to the rapidity of the onset. 2. The only obvious rigidity, except for the various contortions of the patient's respiratory spasms, was in connexion with the masseters, sterno-mastoids, and abdominal muscles, whilst towards the end he could open his mouth and drink. 3. The spasms quite as often as not occurred while he was asleep, but the region of the fifth nerve seems to have been especially irritable. A severe attack occurred during the first passage of the nasal tube, when he seemed in need of stimulant at all hazards and the spasms seemed to have stopped. His death seemed to be due to the shock of passing the tube and feeding thereby (post mortem all the milk was found in the gullet and stomach, although air passed out of the tube as it was being passed). 4. The relief by inhalation of chloroform appeared to be great, but it seemed inadvisable to give chloroform in order to feed by nasal tube whilst enemata were retained. 5. Although the man seemed to be a typical and confirmed drunkard, yet he took chloroform (deeply) quite well, and no great visceral changes were found. Still, with a more favourable subject the necessarily depressing treatment would have been better stood. As to the chloroform, the exhaustion by long-continued spasms would have been greater, I think, than the temporary depression caused by the anæsthetic. 6. As regards diagnosis, the history, the tenderness over the right lower wisdom tooth, the possibility of such a cause, and the persistent tonicity of the masseters gave a hope of reflex spasm at the onset, whilst the history of the wound and its position made the possibility of tetanus great (I may say experimental inoculations were not made, but no specific bacilli were to be found in the wound when examined on the fourth day after the onset). 7. The great difficulty in getting at the nose and the septic condition there make it only too probable that he absorbed fresh doses of poison from this quarter, a fact which reminds one of the malignancy of "nasal" diphtheria. 8. As regards the important question of the antitoxin injections, I will refer to the following points. (1) Concerning the preparation directions are given to dissolve about fifteen grains in one drachm of sterilised distilled water. This hardly dissolves it without immersion in warm water outside; a sticky mass is liable to form. Directions are also given to weigh and pound; absolute sterility is hard to obtain in these manœuvres. (2) As to the cost, we wrote expecting to pay 45*s.* per four and a half grammes (about seventy grains), but found the British Institute of Preventive Medicine makes it at 6*s.*, which is a great advantage. (3) In connexion with the result, although spasms did not cease they become markedly less numerous and less severe, but at the same time the patient grew weaker. The temperature taken half an hour before and after the injections showed no change to speak of, but the pulse became stronger for an hour or two afterwards. Was the patient's release from severe spasms due to the prostration from the disease, from the antitoxin, or from insufficient feeding? If spasms are the signs of the disease, and I do not know of a case described without spasms (compare rheumatism without arthritis), it seems unlikely that the disease itself, as it were, "spent its fury"; in ten days a fat man with well-prepared nutrient enemata would not become so exhausted from want of food. Consequently the antitoxin must be turned to. He had five injections of fifteen grains (nearly). If immunity from spasms was due to the antitoxin, and leading writers on the subject have recorded no bad effects from tetanus antitoxin on even a healthy subject, as I believe to be the case, would it have been justifiable to suspend the treatment? The severer spasm on the day before death seems to indicate that the poison was still circulating, that the antitoxin had been efficacious, and that the weakness and prostration were signs of toxæmia, but not of toxæmia due to the tetanus antitoxin. Whence I conclude that had the patient been a more favourable subject, had the nose been better able to be disinfected, he might have lived; that he was better for the treatment he had; and that it is advisable to know more of the effects of the tetanus antitoxin itself, so that we may exclude from a patient's condition any dangerous effects of the treatment; then also we may be justified in prophylactic inoculations in all suspicious wounds.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c.[1]

THE following is the continuation of the discussion on the above subject at the ordinary meeting of the society held on Nov. 26th, the President, Mr. HUTCHINSON, being in the chair.

Dr. KINGSTON FOWLER said that he had been asked to state as concisely as possible the pathological and clinical evidence for the belief that it was possible for the specific poison of tuberculosis to remain latent in animal tissues. The general argument put forward was as follows: (1) that the disease, having been arrested, might after a period of quiescence again become active, and that reinfection took place from within; (2) that tuberculosis might be produced by the inoculation of an animal with material taken post mortem from an old tuberculous lesion; and (3) that the virus of the disease might pass directly from the parent to the offspring, and that it might reproduce the disease in the tissues of the child. The facts stated were chiefly drawn from cases of pulmonary tuberculosis. Reference was made to the frequent discovery of obsolete tuberculous lesions at the apices of the lungs and to his published work on Arrested Pulmonary Tuberculosis. If recrudescence of the disease coincided with changes in the old lesions, and recent miliary granulations were first formed around them and spread thence through the lungs, the inference was that reinfection had started from within. This would be confirmed if it should appear that the individual was in apparently perfect health until the occurrence of some symptom pointing to the presence of an old lesion—e.g., hæmoptysis. A case fulfilling these conditions was described. A man aged fifty-three had, when a boy aged thirteen, an illness said to have been "consumption"; with the exception of an attack of pleurisy, he had subsequently enjoyed good health. He was of good muscular development, of healthy appearance, and generally regarded as a strong man. In February, 1888, whilst in his usual health, he had an attack of hæmoptysis. A few days later some fine crackling râles were audible at the left apex. Death occurred in twenty-eight days from acute tuberculosis of the lungs. On post-mortem examination a sharply defined yellow caseous mass the size of a large olive was found at the left apex. Its capsule, elsewhere firm and fibrous, had broken down at one spot and had established a communication with a bronchus. Half the mass had disappeared, leaving a small rugged cavity. Recent miliary tubercle was present throughout the left upper and lower lobe and also in the right lower lobe. A precisely similar caseous mass, intact and firmly encapsuled, was found at the right apex. The inference from the facts was that the virus of the disease had lain dormant in the caseous mass for forty years. A case of acute tuberculous pericarditis was described in which the pericardium alone showed recent tubercle, but at the apices of the lungs old obsolete tubercle was found post mortem, as also a calcareous bronchial gland. Tubercle bacilli were found in the pericardial lesion. The period of latency was believed to have been four years. Attention

[1] Continued from p. 1362.

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was called to the extreme rarity of acute tuberculous pericarditis apart from general acute tuberculosis, and to the great improbability of primary infection of the pericardium from without. A case was cited to prove that obsolete lesions are capable of causing reinfection. Dr. Sidney Martin's researches on Tuberculosis were referred to, and a case was described in which inoculation of a guinea-pig with caseo-calcareous material, probably about 200 days old, had resulted in acute tuberculosis. Also some experiments by the same observer were mentioned in which inoculation with matter from old pulmonary lesions found in the bodies of two patients dying from cancer had not been followed by tuberculosis. Attention was directed to the importance of the dose in experimental inoculation and in infection of the human subject. The researches of Landouzy and Martin were referred to as proving that general tuberculosis might be produced by the inoculation of material from a fœtus, the mother being tuberculous, when no obvious signs of tubercle were present in the body of the child. Straus had repeated these experiments, but without success. The theory of Baumgarten was described. Baumgarten believed that direct transmission of the virus from parent to offspring was followed by latency of the virus in the child, and that this was the common mode of infection; that the influence of inhalation had been much exaggerated; that lesions in the fœtus were absent because the number of bacilli was small; that the virus might remain dormant for long periods in the lymphatic glands and in the medulla of bones; and that the tissues of the fœtus possessed a special resisting power owing to the activity of cell growth. The evidence in favour of the possibility of the transmission from mother to offspring through the placenta was stated, and four cases, described by Birch, Hirschfeld, Schmorl, and Kockel, were narrated. In all the cases tubercle bacilli were found in the fœtal placental villi, and in one in the liver of the fœtus and in a lymphatic gland near to it. Three cases of mixed infection of tubercle and syphilis in infants reported by Hochsinger[2] were referred to, and the evidence was given at length. The parents were both syphilitic and tuberculous. In all the cases there were well-marked signs of constitutional syphilis, including an eruption on the nates and snuffles. In all of them the diagnosis was visceral syphilis, and the patients were shown as suffering from it before the Vienna Dermatological Society. In all the internal lesions were found post mortem to be tuberculous and not syphilitic, and to contain tubercle bacilli. The reasons were stated for the view that infection in these cases was from the placenta and not from without. The opinion was expressed that the evidence in favour of the possibility of a tuberculous mother infecting her child was convincing, but no support was given to Baumgarten's view that this was a common mode of infection, and certainly not the most common. The evidence in favour of the possibility of a prolonged period of latency in the child after infection from the mother was considered to be at present defective, but the opinion was expressed that in the future direct infection from the mother would be shown to be of more frequent occurrence than was at present believed. Reference was made to the further development of Baumgarten's theory—viz., that the virus might lie latent for several successive generations, and that a child might have been infected by a tuberculous grandmother, the mother having been free from the disease. Mention was made of the Pébrine disease in silkworms, and the inoculation experiments of Maffucci on impregnated hen's eggs, which were considered to give support to this view. The opinion was expressed that it need not be seriously considered until it had first been proved that the direct transmission of the disease from mother to offspring was an event of common occurrence, and that in such a case it was possible for the virus to lie latent for a long period in the body of the child. The shortest period of latency of the virus could hardly be determined by clinical and pathological evidence. In the inoculation experiments of Dr. Sidney Martin with milk from tuberculous cows the shortest time in which a lesion was produced in which tubercle bacilli could be recognised was nine days, and the shortest period in which general acute tuberculosis occurred was fourteen days. The conditions of the tissues and blood serum which might determine latency were referred to, but it was pointed out that at present no definite statements could be made. Arrest and latency were not the same, the latter implied the dormant condition of a living virus with arrest the virus might be dead. Arrest in a case of fibrosis was the most favourable. Caseous lesions might break down if the capsule was destroyed. The resisting power of the individual depended upon the degree of virulence of the blood. The original infection might have been an accident due to exposure to the virus whilst the virulence of the blood was low. The importance of maintaining the general health after arrest of the disease was referred to. In some cases reinfection might be due to some local change of the nature of an accident. Regret was expressed that in connection with the latter part of the subject it had been necessary to use terms which were lacking in precision, and the hope was entertained that the discussion might bring out facts which would increase our knowledge of the conditions which determined arrest and latency.

At this stage the debate was adjourned until the next meeting.

[2] Wiener Medicinische Blätter, Nos. 20, 21, 1894.

PATHOLOGICAL SOCIETY OF LONDON.

A New Form of Steriliser and Incubator.—Adenoma of Sebaceous Glands.—Dilatation of Œsophagus.—Gall-stone impacted in Small Intestine.—Formation of Intra-abdominal Bands.—Traumatic Separation of Epiphysis of Great Trochanter.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Dec. 3rd, Mr. BUTLIN, President, being in the chair.

Mr. P. T. ADAMS, introduced by Mr. TARGETT, showed a New Form of Combined Steriliser and Incubator, and described a method of direct culture upon cover-glasses by modified bacteriological methods. Some advantages of the apparatus were: 1. The facility with which it could be adapted to the several operations of the bacteriological laboratory, both as an incubator and steriliser, without change of apparatus. 2. The sterile atmosphere of the incubator presented, as nearly as possible, conditions similar to those which obtained in a living animal—namely, an atmosphere saturated with moisture and at any temperature desired or suitable to the particular micro-organism under investigation. 3. Portability and compactness, enabling accurate bacteriological work to be carried out for diagnostic or other purposes with ease and rapidity. 4. The applicability of the apparatus when dealing with small quantities of nutrient media, owing to the saturated condition of the atmosphere within the incubator. 5. The same apparatus could be used for (*a*) experiments with gaseous agents such as gases, liquids, or light, without any interference with the cultures; (*b*) bacteriological examination of air; and (*c*) anaerobic cultivation.

Dr. H. D. ROLLESTON showed a specimen of a [illegible] from the Skin of the Left Temple removed by Mr. [illegible] Dent from a man aged sixty-seven. The tumour had been there for years. Five years ago it got irritated and increased in size; a year and a half ago it had been scraped with caustic, and since then had grown more rapidly. It projected upwards above the level of the dermis, which was depressed and did not infiltrate. The epidermis covering the growth was atrophied and in one place ulcerated. The growth itself was derived from the sebaceous glands, and was of an acinous type; it was divided into lobules by well-formed fibrous tissue, and in places the interstitial substance between the masses of epithelial cells showed myxomatous change. The acini were sometimes very large and filled with epithelial débris, which by pressure had flattened the lining cells. In other parts there were masses of cells of various shapes, probably acini filled with epithelial débris. The irregular acinous arrangement might pass for the structure of rodent ulcer, which itself varied very considerably in its appearances. Dr. Rolleston discussed the relations of the growth to adenoma and carcinoma of the sebaceous glands, and on the ground that it did not infiltrate the dermis was of opinion that it should be classed as an adenoma and not as a rodent ulcer. The histological arrangement of the cells, however, was somewhat irregular and suggested a transition from an adenoma to a carcinoma, and raised the question as to the relative importance of histological structure and of anatomical relation to neighbouring tissues in determining the innocent or malignant nature of a tumour. Dr. KANTHACK regarded the specimen as one of rodent ulcer, basing his opinion upon the grounds that the [illegible]

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structure was atypical, that there was some slight infiltration of neighbouring tissues, and that the appearance of the cells and arrangement of the alveoli were suggestive of malignancy.—Mr. TARGETT showed a section of a small tumour removed from the skin over the root of the left zygoma, superficial to the deep fascia; it occupied the site of a cystic growth which had been previously removed. There had been no recurrence a year after removal. Under the microscope were seen large alveoli filled with cells and well surrounded with fibrous tissue. It was covered with healthy skin which it did not infiltrate.—Mr. BOWLBY remarked that many rodent tumours did not ulcerate. The tumour shown, he agreed, had been an adenoma for many years and it had now developed a new kind of growth. Rodent ulcers probably in many cases originated in a diseased condition of the sebaceous glands.—The PRESIDENT said that both clinically and microscopically he regarded the growth as a rodent ulcer, and the long time it had existed did not militate against this. Rodent ulcer showed its malignancy chiefly by invasion and infiltration of neighbouring structures.

Dr. ROLLESTON showed a specimen of Simple Dilatation of the Œsophagus, removed from a patient under the care of Mr. Edgcombe Venning, a boy aged eight years who came of a family in which vomiting seemed to be easily set up and with difficulty controlled. The patient had had a somewhat similar attack, but recovered. The fatal illness succeeded pertussis and began with choking fits; these were succeeded by vomiting which resisted all treatment and led to a fatal termination in six weeks. The œsophagus, of normal size at its two ends, showed a marked fusiform dilatation of the intervening part. The muscular coat was hypertrophied, the mucosa was normal, and there was no sign of any organic stricture at the cardiac end. The etiology of primary dilatation of the œsophagus was briefly discussed, and it was suggested that where there was hypertrophy associated with dilatation the longitudinal coat and not both coats were enfeebled. Paralysis or inhibition of the longitudinal coat by keeping the cardiac orifice closed would explain hypertrophy of the circular coat. In this case the vomiting was apparently a neurosis connected with pertussis, and the dilatation might have been secondary and a late event in the disease.—The PRESIDENT remarked that Sir Morell Mackenzie mentioned in his work many cases of primary dilatation of the œsophagus, though he did not attempt to explain their pathology.—Dr. GOODALL saw no evidence to connect the condition described with whooping-cough.—Dr. ROLLESTON, in reply, said that whooping-cough affected especially the pneumogastric nerve, and vomiting in that disease often occurred apart from spasm of the glottis. This led him to suggest that the dilatation might result from a pneumogastric lesion.

Mr. J. HUTCHINSON, jun., related the case of a patient from whom the Calculus which he handed round had been removed. She was a woman seventy years of age, and the clinical symptoms were so clear that a positive diagnosis was made before operating. There was a previous history of biliary colic, and the obstruction had lasted three days. At the operation the intestine above the stone was greatly distended and inflamed, while the part below was firmly contracted so that the stone could not possibly move in a downward direction. Many feet intervened between the point of impaction and the cæcum. After the stone had been removed by incision through the intestinal wall the latter was sutured, and the patient made a good recovery. The calculus weighed only 120 grains, its long diameter being a little over an inch. He compared this dimension with that of Murphy's button, used in resection of the small intestine, the transverse diameter being exactly the same.—Dr. SEPTIMUS GIBBON said that he had a fatal case of this kind many years ago in his own practice. The patient was a female, and the malady was diagnosed during life, but surgery then not being so advanced as now, laparotomy was not performed. The stomach was persistently kneaded, but death resulted in nine days, and at the necropsy a gall-stone was found impacted in the duodenum.

Mr. HUTCHINSON, jun., also showed a specimen of what he believed to be a hitherto undescribed method of Formation of an Intra-abdominal Band capable of causing intestinal obstruction. In examining a dissecting-room subject a tough cord six inches in length was found to pass from the right broad ligament upwards, adhering to the great omentum at its other end. The latter was made out to be a small cyst, the hydatid of Morgagni. The remarkable elongation of its pedicle was evidently due to the excursions of the great omentum, which had dragged on the hydatid. To illustrate the varying position of the omentum, he mentioned another case in which the liver was wholly concealed by this membrane, which was attached above to the diaphragm. A somewhat similar form of intra-abdominal band originating in an insignificant anatomical structure had been recorded by Dr. Perry in the Transactions of the Pathological Society—viz., by the elongation of the appendices epiploicæ. He believed that some cases of single band causing intestinal obstruction were due to persistence of the omphalo-mesenteric vessels. It was certain that no proof of previous peritonitis could be found in many cases of obstruction by bands.—Mr. BOWLBY thought that, next to morbid adhesion of Meckel's diverticulum and of the vermiform appendix to other structures, the most common cause of bands was inflammation of the mesenteric glands of a tuberculous nature, a coil of intestine becoming adherent to the peritoneum over the site of the inflamed gland.—Dr. NEWTON PITT had seen three or four cases in which bands were traced to calcareous glands. The extreme degree of stretching which these bands would undergo was remarkable. The omentum, when adherent at its periphery, would sometimes become rolled into two or three long cords. The cord sometimes was attached to the pelvic brim over the sacrum, and some of these might be the results of inflammation started by traumatism in childhood and long since forgotten.—Dr. SEPTIMUS GIBBON commented on the absence of evidence of inflammation in many of these cases, and remarked that bands were not common causes of trouble in childhood.—Mr. TARGETT said that he had dissected the bodies of two fœtuses, and in both there were well-marked bands the remains of omphalo-meseraic vessels. They formed long thin cords extending from the attachment of the mesentery to the umbilicus. He had recently examined a specimen in which the gut had become doubled over and was adherent to its own mesentery, and so had produced obstruction by longitudinal torsion.

Mr. HUTCHINSON, jun., showed a specimen of Traumatic Separation of the Epiphysis of the Great Trochanter, given to him by Dr. Daniels of British Guiana, and obtained from a native of the latter place aged sixteen. The lad had fallen from a tree to the ground, a distance of nearly twenty feet. He survived for some eight weeks, dying from the effects of various internal injuries, including rupture of the liver. After the accident he had been able to stand and to raise the affected limb from the bed, so that a positive diagnosis was not made. In fact, this particular injury must sometimes be extremely difficult to detect, a fact illustrated by more than one of the previously recorded cases. The present made the twelfth case of which Mr. Hutchinson had found record, a striking specimen of it having been placed by him in the museum of the Royal College of Surgeons of England from a lad aged thirteen who had fallen between a train and the platform. In Dr. Daniels' case the post-mortem examination showed that the trochanter had been separated exactly at the epiphysial line, except at the lower and posterior corner, where a small portion of the diaphysis was also detached. There was a decided interval between the epiphysis and the femur, but they were connected by the periosteum, which had been stripped off the shaft for some inches whilst still retaining its attachment below. No suppuration had occurred, and evidence of commencing repair was shown in the production of new bone in the neighbourhood of the injury. The extraordinary mortality of separation of the great trochanter epiphysis was illustrated by the fact that out of the twelve cases collected by the reporter, only three appeared to have recovered, death usually occurring from shock or suppuration and pyæmia. But an obvious fallacy existed in the fact that the cases which did not suppurate or die from other injuries were rarely either diagnosed correctly or published.

The following card specimens were shown:—

Dr. H. W. MACKENZIE: Traumatic Rupture of a Bronchus leading to Pneumo-thorax.

Dr. HUGH WALSHAM: Caseating Tuberculous Tumour attached to the Cæcum.

Dr. CLAREMONT: Extensive Malignant Ulceration of Œsophagus.

Mr. TARGETT: Sebaceous Adenoma from Parotid Region.

Dr. GOODALL: Diphtheria of Œsophagus.

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HUNTERIAN SOCIETY.

Vaginismus and Allied Affections.—Physiological Rest for the Lung in Phthisis.

AN ordinary meeting of this society was held on Nov. 27th at the London Institution, Mr. CHARTERS SYMONDS, the President, being in the chair.

Mr. B. Byrne, Mr. J. McClymont, Mr. R. Jones, and Mr. H. Blandford were elected Fellows of the society.

Dr. HERMAN read a paper on Vaginismus and Allied Affections. He said that the subject of his paper was those diseases which had as their chief symptom "dyspareunia"—that is, pain and difficulty in sexual intercourse. He divided these into three classes — viz.: 1. Simple smallness of the vaginal orifice. In this there was no visible sign of disease; gentle examination did not cause pain; the patient was quite well till marriage, and the trouble dated from then. The treatment was to enlarge the vaginal orifice. This might be done (*a*) by gradual dilatation, (*b*) by rapid dilatation, and (*c*) by incision. The last method was the best. 2. Diseases of the vulva such as to make it tender. Most of these caused the patient to complain of something else besides dyspareunia. The one of which dyspareunia was the first and chief symptom was that to which the late Professor Breisky of Vienna had given the name of "Kraurosis Vulvæ." Kraurosis meant shrinking. It was characterised by progressive contraction and tenderness of the vaginal orifice. Mr. Lawson Tait had described a condition having similar features, but in addition patches of purple to brown discolouration. Mr. Tait held that this was an early stage of the condition described by Breisky; but German writers denied this. In some of the cases of kraurosis described by German writers red or purple discolouration was present. He (Dr. Herman) had seen purple tender spots on the vulva get well without leaving any shrinking or tenderness behind; he had also seen purple spots, like those in the condition described by Mr Tait, but which were not at all tender. He therefore thought Mr. Tait was right in thinking that his cases were examples of the disease described by Breisky, but that the colouration was not an essential part of the disease. Kraurosis came on towards the climacteric age. Sometimes it followed oöphorectomy. It was often associated with vaginitis, and with itching and burning of the vulva without contact. The best treatment was the use of sedative vaginal injections (such as lead or boric acid) and dusting the vulva with sedative powder (such as boric acid or dermatol). By such treatment the patient could usually be placed in comfort if not married. If such treatment failed, or if the patient were a married woman, the only treatment was to excise the tender and shrunken mucous surface. He had done this in one case with success. 3. Vaginismus. This was a nervous disease, attended with hyperæsthesia of the vulva and spasmodic contraction of the levator ani and other muscles, and often associated with dysmenorrhœa and hyperæsthesia of the rectum. This disease was generally discovered at marriage, but might suddenly appear after years of healthy married life. Sometimes it was cured by curing dysmenorrhœa. Otherwise genuine vaginismus was incurable, even by childbirth, though in the course of years it got somewhat less. It was sometimes difficult to distinguish genuine vaginismus from mere smallness of the vaginal orifice in a sensitive patient. In a doubtful case the best treatment was to give the patient the benefit of the doubt and enlarge the vaginal orifice by operation. Dr. Herman exhibited a drawing of a case of kraurosis vulvæ.—Mr. STEVENS remarked on the rarity of the two affections, and asked if herpes vulvæ might not be the actual lesion in some cases.—Dr. F. J. SMITH thought that kraurosis vulvæ was a trophoneurosis allied to morphœa.—Mr. COTMAN thought the male organ was usually at fault.—The PRESIDENT mentioned leucoplakia of the tongue and a fibrous condition of the male prepuce as probably pathologically identical with kraurosis vulvæ.—Dr. SHADWELL also discussed the condition, and Dr. HERMAN replied.

Dr. ARNOLD CHAPLIN then read a paper on Physiological Rest for the Lung in Phthisis. The paper was really a plea for non-intervention by mechanical means in cases of pleural effusion, whether of serum or pus, where the underlying lung was the seat of tuberculous processes, and was based on clinical experience of some two or three cases in which, after aspiration, the patient had rapidly gone downhill. He also advocated artificial restraint of the movements of a tuberculous lung.—The PRESIDENT said he had actually been asked by the late Dr. Mahomed to produce an artificial pneumothorax in a case of phthisis.—Mr. OPENSHAW remarked that the late Dr. Sutton agreed with Dr. Chaplin in objecting to aspiration in such cases.—Mr. HUMPHREYS thought that there were two opposite schools of opinion, the one advocating free movement in affected lungs, the other forbidding movement.—Sir H. BEEVOR thought the question a very important one, but it involved considerations of very opposite nature, and he was inclined to the belief that movement was only one factor, and possibly a small one, in the advance of phthisis.—Mr. COTMAN, Mr. STEVENS, Dr. J. H. SEQUEIRA, and Dr. F. J. SMITH also discussed the paper, and Dr. CHAPLIN replied.

HARVEIAN SOCIETY OF LONDON.

Some Forms of Iritis.

A MEETING of this society took place on Nov. 21st, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Mr. HENRY JULER read a paper on Some Forms of Iritis. The recognition of iritis, the pathological processes which ensue at the time and subsequently, and the indications for treatment depend, Mr. Juler pointed out, upon an exact knowledge of the anatomy and physiology of the eyeball. He emphasised the value of knowing the arrangement of the bloodvessels, the circulatory course of the lymph, and the muscular apparatus. Excluding the traumatic and sympathetic forms, he divided iritis into two main groups—the plastic and serous varieties. Dismissing the latter with a few remarks, Mr. Juler entered more fully into the causes of plastic iritis. He considered all kinds arising spontaneously to be due to some dyscrasia, whether it be gout, rheumatism, syphilis, tuberculosis, or any other constitutional disease. The uric acid diathesis could exist, in his opinion, and give rise to this affection without any other evidence of gout, and it was very necessary to examine the urine and make a quantitative estimation of the nitrogenous excreta. He then briefly pointed out certain local signs by which the different varieties could be differentiated, but emphasised, nevertheless, the importance of examining the patient as to his general health, so that the actual cause might be discovered and properly treated. In speaking of treatment Mr. Juler was of opinion that medical practitioners were hardly aware of the severity of the affection and paid insufficient heed to the fundamental treatment of all inflammations—rest. He could not lay enough stress upon the vital importance of adopting both general and local rest. The latter was best secured by the instillation of sulphate of atropine drops, which paralysed the sphincter pupillæ and ciliary muscles. It was a drug of the greatest value; besides giving rest to the intrinsic muscles of the eye, it prevented, or, if they were present, broke down, iritic adhesions, and was also a local sedative. To relieve pain by the use of several leeches and to give sleep by administering opium or bromidia were useful adjuncts. In gouty subjects the exhibition of hot-air baths, attention to diet and habits, and depletion were essentials. Mercury in syphilitic iritis, salicylate of soda in rheumatic iritis, and such like constitutional treatment were not to be forgotten.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Latah.

A GENERAL meeting of this association was held at the society's rooms, 11, Chandos-street, Cavendish-square, on Nov. 21st, under the presidency of Dr. NICOLSON.

This was the first statutory meeting since the incorporation of the association. Before beginning the ordinary business the PRESIDENT referred to the death of Dr. Jamieson of Aberdeen, the oldest superintendent of an asylum in Scotland, who had during the previous week died at the ripe age of seventy-seven. Although but little known to the junior members of the specialty, yet in his day he carried on a great work at Aberdeen when the methods of dealing with insanity were very backward compared with those at present in vogue, while his writings on insanity were very well worth

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perusal now in the light of the best work that had been done in recent years.

Dr. GILMORE ELLIS then read a paper on Latah, a disease which affects the natives of the Malay Peninsula. It seemed closely allied to the hysterical or hypnotic condition, but was yet essentially different from them. Many of the cases seemed to be markedly of an imitative character. The onset of the disease was due to the person being startled by some object of terror or by being suddenly excited; the condition varied in degree, and, in his experience, it did not incapacitate the person affected from ordinary work. The Malays, no doubt, displayed some simplicity of mind which rendered them susceptible to external influences and apt to be thrown by them into a state of profound agitation, yet education had no effect on the progress of the disease, for latah was just as frequent at the present day, when there are British-taught schools throughout the peninsula, as it was forty or sixty years ago. The disease was not of the nature of insanity in any way, for persons suffering from latah carried on their work like other people and were very able, as far as Malays go. The histories of some cases were given, in which the imitative character of latah was fully shown.—A discussion followed, in which the PRESIDENT, Dr. COOKE, Dr. MERCIER, Dr. MICKLE, Dr. SEYMOUR TUKE, Mr. RICHARDS, and Dr. FLETCHER BEACH took part.

Six candidates, including one lady, were elected ordinary members of the association.

LIVERPOOL MEDICAL INSTITUTION.

Vyrnwy Drinking-water.—Pityriasis Rubra.—Some Therapeutic Actions of Oxygen.—A Life Table for Liverpool.

AN ordinary meeting of this society was held on Nov. 28th, the President, Mr. CHAUNCY PUZEY, being in the chair.

Dr. HOPE asked a question of which he had given notice, as to whether any member of the institution had had experience of the alleged deleterious effects from the use of Vyrnwy drinking-water. He stated that so far as his investigations enabled him to judge, the one or two allegations concerning illnesses due to the use of the water were absolutely destitute of any foundation; and in one of them the Vyrnwy water was not supplied to the house in question at the time the alleged mischief from its use arose. A short discussion ensued, but no one had any adverse comment to make in reply to the question.

Dr. STOPFORD TAYLOR showed a case of Pityriasis Rubra. It was the patient's second attack. The skin remained quite free from any eruption during the interval. The first attack occurred in 1892 and was secondary to a psoriasis of many years' duration. The patient was admitted into the Skin Hospital in March this year. The treatment adopted was prolonged daily warm baths of several hours' duration, followed by smearing with an ointment of glycerine of lead and vaseline. Five months later, the scaling having ceased and the redness still remaining, an ointment of chrysophanic acid was rubbed in night and morning, and the patient was allowed to get up. The effect of this was to cause the rapid disappearance of the redness, except in a few isolated patches; these were painted with pure liquid tar and finally cleared. Quinine was given internally almost the whole time. The patient is now perfectly well, the skin being pale, smooth, and soft.—Mr. RICHMOND LEIGH asked Dr. Taylor if he had found pityriasis rubra especially fatal. In a table of some twenty-two cases published in the *Journal of Dermatology* by Dr. Stephen Mackenzie there were three deaths. Half of the cases were primary, and one of the deaths was in a case secondary to pemphigus foliaceus, a most fatal disease.—Dr. CARTER and Dr. ALEXANDER made remarks on this case.

Dr. C. J. MACALISTER related two cases in which Oxygen had proved very serviceable. One of them was a case of Uræmic Coma associated with lividity, in which almost at once consciousness was gained when the oxygen was administered. The other was a case of Morphia Poisoning where artificial respiration was necessary until the gas was given, when the respiratory function was restored and the cyanosis of the face, lips, and extremities was greatly relieved. In both cases—an account of which we print in this week's issue—recovery, it will be seen, was complete.

A paper was brought forward by Dr. HUGH JONES and Dr. S. G. MOORE entitled "A Life Table for Liverpool." After describing the method adopted in the construction of the table, it was shown that a considerable saving of life had been effected since the first life table was prepared by Dr. Farr in 1843. A reduction had taken place in the death-rate at all age groups, with a consequent higher expectation of life at all ages. The life table based upon the figures for 1881–90 showed that the expectation of life at birth was 34·2 years, compared with 41·3 years for England, 34·7 for Manchester, and 35·2 for Glasgow. The diminished mortality had resulted in a considerable addition to the useful years of life—i.e., between twenty and sixty-five years—amounting to 2500 years of life per 1000 births. It was further shown that the chief incidence of the excessive mortality in Liverpool was at the earlier ages, though, compared with England and Wales, the mortality was high at each age period. It was pointed out that the enlargement of the city boundaries, by which a large suburban area is being absorbed by the city, would result in an apparent diminution in the death-rate, but that this diminution would not of necessity imply any improvement in the sanitary condition of the city or in the vitality of the inhabitants.—Dr. HOPE, medical officer of health, complimented Dr. Hugh Jones and Dr. Moore on the pains taken in constructing the life table, and in criticising it indicated directions in which elaboration was necessary before the table would add materially to knowledge upon the subject. Notwithstanding that the duration of life was shorter amongst dwellers in cities than amongst dwellers in rural districts, insurance companies drew no distinction, a circumstance which suggested that it was not among the insuring and thrifty class that the mortality was excessive, but amongst the vast labouring population. The inclusion or exclusion of rural areas in urban registration districts was a most important factor in modifying death-rates of cities.

KIDDERMINSTER MEDICAL SOCIETY

Appendicitis.—Injury to Shoulder.—Congenital Contraction of Fingers.—Piece of granite in Eye.—Poisoning by Carbonic Oxide.—Exhibition of Specimens.

A MEETING of the above society was held on Nov. 22nd, Mr. W. MOORE, President, being in the chair.

Mr. J. L. STRETTON read notes of four cases. Case 1 was one of Appendicitis. The patient was a youth aged nineteen years who had suffered from occasional attacks of colic which were never severe. He had severe pain in the abdomen when he got up one morning, but he was able to go to work; the pain subsided and he ate a very large dinner of pork and bread. Towards evening the pain returned in greater intensity. Dr. Oldham was called in on the following morning and found him complaining of intense pain all over the abdomen, which was distended and tympanitic. Six grains of calomel were given and fomentations applied. The next morning he was still in pain and had not slept. The calomel had not acted. An enema was administered without result. The temperature was 103° F. and the pulse was 112. He passed flatus during the day and vomited a large quantity of bile in the evening. Dr. Oldham took him to hospital about 10 P.M. On admission he complained of abdominal pain and lay on his back; the abdomen was swollen and tense and did not move on respiration. There was a distinct fulness in the right iliac region. Under ether an incision was made in the middle line. Some stained fluid escaped from the abdomen and the coils of small intestine were covered with lymph. The appendix was found to be perforated near the base; it was ligatured and removed and the stump sutured. The abdomen was flushed with hot boracic lotion and a drainage-tube inserted. One-drachm doses of hot water were administered, but as this caused vomiting it was stopped. The patient died thirty-six hours after the operation, immediately following a copious vomit. A limited necropsy disclosed a quantity of pus in the right iliac region. The appendix removed contained a fæcal concretion. Case 2 was that of a woman aged forty years who was admitted to hospital suffering from an Injury to the Left Shoulder, which took place five weeks previously from falling down fourteen steps. She was under the impression that her shoulder was dislocated and was unable to move the limb. Examination revealed a sharp prominence beneath the outer end of the

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clavicle and that the shoulder-joint was fixed. Under an anæsthetic the arm was forcibly manipulated, several adhesions were broken down, allowing free movement at the joint, and the bone was refractured but could not be brought into position. An incision was made over the prominence and the fracture exposed; it ran obliquely downwards and outwards through the lesser tuberosity, the lower portion of which formed the sharp projection above noted. There was so much thickening that it was necessary to remove this projection with bone forceps before the bones could be brought into position. The wound was brought together with catgut sutures and dressed with cyanide gauze. A pad was placed in the axilla and the arm bandaged to the chest, a shoulder cap being applied outside. The dressings were removed in a week, showing primary union. Passive movements were commenced the following week, with daily increasing massage, and the patient was discharged five weeks after admission with a useful arm. Case 3 was that of a child aged six weeks with congenital Contraction affecting the index-finger of the right and the middle finger of the left hand, and resembling in appearance Dupuytren's disease. Case 4 was that of a man aged twenty-four years with a Piece of Granite in the Anterior Chamber of the Eye. He had had an accident four years ago; a stone flew up into the eye, which affected his sight; the present injury was sustained about a month ago. A piece of granite about the size of a split pea was distinctly visible in the anterior chamber which moved with the position of the head. The scar on the cornea was in the line of vision, and the pupil was contracted and irregular owing to complete posterior synechiæ probably due to the former accident, and it was this condition which had prevented the sharp piece of granite from slipping into the deeper structures. The patient could barely distinguish light, and the eye had an unhealthy appearance.

Mr. W. HODGSON MOORE described two cases. Case 1 was one of Carbonic Oxide Poisoning. The victim was a young, healthy bricklayer who was at work pointing the defects in a retort which had not been used for some time. His mate left him for a few minutes and found him unconscious on his return. When seen by Mr. Moore he was quite dead, and all efforts to restore animation were unavailing. The only peculiarity noticeable about the body was the salmon-pink colour of the cheeks, which extended to the chest and arms; on raising the legs a suffused appearance of the face was produced. A necropsy was made two days later; the pink colour was still quite distinct, and the muscles when cut into exhibited a bright colour. The blood was fluid and very bright; with a 30 per cent. solution of caustic soda, red stringy clots were produced. The organs of the body were healthy, but all exhibited the peculiar colour. The gas authorities denied the possibility of carbonic oxide poisoning, but Mr. J. L. Stretton, who attended the necropsy on their behalf, strongly supported Mr. Moore's view. It is probable that in scraping some of the decayed places, or in moving some of the rubbish admitted to be on the floor of the retort, the man liberated some of the gas, a very small quantity of which produces a fatal result. Case 2 was that of a man aged twenty-four years whose Brain at the necropsy showed Multiple Tumours generally distributed, probably malignant, and who had been admitted about ten days previously with severe headache. He was too ill to give an exact history, but it was ascertained that the illness commenced five weeks previously with fits (Jacksonian epilepsy on the left side) and had got worse. He had been ill at times all his life, and his right side had been weak. He had had "lumps" in the neck for four years. He had double optic neuritis and considerable incoördination. No remedies had any effect, and he died comatose.

Mr. DAVIES showed the Spleen and Internal Organs from a case of Leucocythæmia in a female aged ten years admitted under the care of Mr. J. L. Stretton in a moribund state though she had only been ill for seven days.

Mr. DAVIES read a paper entitled "Rough Notes on Clinical Treatment."

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Three Cases of Hernia with Unusual Complications.—The Diagnosis of Hystero-Epilepsy.

A MEETING of this society was held on Nov. 26th, DR. ADOLPH BRONNER, President, being in the chair.

DR. HOLTBURNE gave a demonstration of microscopical specimens illustrating—(1) Typhoid Fever Bacilli [illegible] Spleen and in Ulcer of the Intestine; (2) the deposit of iron salts in the kidney and in the liver in cases of Pernicious Anæmia and in Lead Poisoning; and (3) [illegible] droma of the Cervix Uteri.

Dr. S. LODGE, jun., showed two patients suffering from Hemianopia.

Dr. CAMPBELL showed a case of Progressive Muscular Atrophy in a man. There was wasting of the muscles of the arms and hands; the leg muscles were wasted; the knee-jerks were brisk. The differential diagnosis of the case was discussed. — Dr. GOYDER, Dr. EVANS, and Dr. RAMSDEN made remarks, and Dr. CAMPBELL replied.

Dr. A. BRONNER showed two patients on whom he had operated for Mastoid Disease, and advocated operation in cases of chronic otorrhœa with mastoid symptoms.

Mr. HORROCKS read a paper on three cases of Hernia with Unusual Complications. In the first case the cause of the trouble was found at the operation to be a tumour in the mesentery, which blocked the inguinal canal and prevented the reduction of the hernia; in the second case a half twist of the mesentery was found; and in the third case the cæcum formed part of the sac wall.

Dr. MAJOR read a paper on the Diagnosis of Hystero-Epilepsy, and the treatment of the Paroxysms. The essential diagnosis between epilepsy and hysteroid attacks was considered, the involuntary passage of urine, biting of the tongue, and the formation of petechiæ pointing to true epilepsy. The treatment recommended for the hysteroepileptic attacks was—(1) to compress the nose and mouth for thirty seconds; (2) strong faradaism; and (3) apomorphine hypodermically (one-twelfth of a grain).—Dr. CARTER laid stress on insensibility as pointing to true epilepsy.—Dr. MANTLE would look upon fever as indicative of epilepsy.—Mr. HORROCKS and Dr. FARRAR made remarks, and Dr. MAJOR replied.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on Nov. 14th, Dr. DRUMMOND, President, being in the chair.

Mr. A. E. MORISON showed a patient aged thirty-one years who had been successfully trephined for Jacksonian Epilepsy. The symptoms commenced in September, 1894, with loss of power in one arm up to the shoulder and some weakness in one leg. He was first seen in January, 1895, and he then complained of headache over the face of Rolando, coming on before the fits and lasting six or seven days after. His vision was impaired and he had well-marked double optic neuritis. His arm and leg were feeble. The reflexes were exaggerated. He had been previously trephined on the right side without benefit. Another operation being deemed advisable, the trephine was first applied between the arm and leg centres and there the brain pulsated. Another disc of bone was removed over the arm and face centres. Here the bone was firmly adherent to the dura mater, and there was no pulsation round this spot; the bone was chiselled away till a pulsating ring surrounded the non-pulsatile portion. An escape of subarachnoid collection of fluid was emptied, and the wound was entirely closed without drainage. The patient's recovery was uneventful, the fits and optic neuritis disappearing and his vision being so little impaired that he could read ordinary print. In connexion with this case Mr. Morison showed on the skull a simple and satisfactory method of mapping out the fissure of Rolando.

Dr. GOWANS showed: 1. A patient suffering from myxœdema whose patella had been wired for recent fracture, and who had been exhibited at this society many years ago as a rare, though a well-marked, case of myxœdema occurring in a man. He had undergone at intervals irregular treatment by thyroid feeding with improvement, though the evidences of myxœdema were still distinct. The result of wiring the fractured patella was quite perfect. 2. A patient twenty-eight years of age who had recovered after Removal of a Haemorrhagic Ovarian Cyst. 3. A patient recovered from an Operation for Ectopic Gestation. She was a married woman, aged seven years of age and the mother of [illegible] last born three years before her illness. [illegible] in March, 1895. Early in May, [illegible] she had vaginal hæmorrhage [illegible] more or less hæmorrhagic [illegible]

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fainted and became collapsed. On May 28th Dr. Gowans saw her and found a tumour in the middle line in front of the lower abdomen. She was so ill that no operation could be undertaken then; but in the first week of June the abdomen was opened and emptied of blood and clot in which floated a three months' fœtus. The sac was drawn out and cut off, and the cavity left plugged with gauze and drained by a tube. The tube was removed in forty-eight and the gauze in seventy-two hours. The patient, though very ill for a few days, is now in perfect health.

Mr. PAGE showed: 1. A man who had been brought before the society a month previously with Epithelioma of the Penis, Scrotum, and Inguinal Glands. The whole of these organs were now removed, and the wound was almost healed, but it was doubtful if all disease had been eradicated. 2. A patient aged six years successfully operated upon for an Ovarian Tumour (fibro-sarcoma) weighing nine and three-quarter pounds. So far as he could ascertain, this was the youngest child who had recovered after removal of a sarcomatous ovary.

Dr. HUME showed several patients on whom the operation for Radical Cure of Inguinal Hernia had been performed. Eight cases were operated on by Halstead's method; there were four recurrences. Two were treated by Macewen's method; one recurred. Nine were treated by the ordinary operation (removal of sac and stitching canal and pillars of ring); all recovered, but two wore a truss.

Reviews and Notices of Books.

Twentieth Century Practice. Vol. II.: *Nutritive Disorders.* Edited by THOMAS L. STEDMAN, M.D., New York City. London: Sampson Low, Marston, and Co. 1895.

THE second volume of the above work deals with Nutritive Disorders. Sir Dyce Duckworth writes the first article on Addison's Disease and other Diseases of the Adrenal Bodies. In some thirty pages a succinct summary of our present knowledge of the subject is given by one who seems from an early period of his medical career to have devoted special attention to it. Sir Dyce Duckworth supports the generally accepted view of the tuberculous nature of the disease, which usually attacks the adrenals when they are associated with the striking constitutional and local evidences of the disorder to which Addison of Guy's Hospital was the first to call attention. The various theories promulgated to account for the disease are critically considered, and the subject is brought up to date by some reference to the researches of Oliver and Schäfer on the influence upon the blood-pressure of dogs of the intravenous injection of an adrenal extract.

The article on Diabetes Mellitus is by Dr Carl von Noorden of Frankfort-on-the-Maine. The rapid progress in our knowledge of the disease since the date of Claude Bernard's experiments is sketched and particular attention drawn to the glycosuria of phloridzin poisoning and the diabetes induced by removal of the pancreas. The lesson he draws from phloridzin glycosuria is that the old notion that diabetes may be a disease of the kidneys in some instances, while as yet unproved, may have some truth in it. His general study of the subject inclines him to define diabetes as "a disease in which the capacity of the organism for burning up grape sugar is morbidly depressed," but he hesitates to adopt this definition without reservation, as there is not yet certain evidence that it exhaustively explains the condition actually present. The whole subject is treated in a thoroughly satisfactory manner, both from a theoretical and practical point of view. He regards the excretion of oxybutyric acid of the gravest prognostic import as rendering the speedy onset of coma very probable. In the treatment of the coma when it actually supervenes he confesses our practical helplessness, but recommends a further trial of the intravenous injection of a 0·6 per cent. salt solution, followed by injections of camphor and ether to combat the cardiac weakness which is always present.

Dr. T. J. Maclagan of London writes the article on Rheumatism, and has produced a practical essay of much value. He contrasts the former and present duration of acute attacks of the disease, and tells the story of his happy surmise that the bane and antidote might be found side by side, the healing salix near the swampy rheum. While pointing out important arguments in favour of the lactic acid theory of the disease, and rejecting after discussion the neurotic he adopts, as is well known, the miasmatic theory, and writes at some length of the analogies between ague and rheumatism and between quinine and salicin. He endeavours to establish, and argues strongly in favour of the thesis, that the local inflammation is limited in the joints almost entirely to such fibrous and serous textures as are associated with active movement and in the heart to the left side. He believes that the comparative immunity of the right side of the heart from destructive rheumatic lesions is due, like the immunity of the smaller joints, to the comparatively small amount of labour which is thrown upon the right as compared with the left heart. We naturally turn with interest to learn Dr. Maclagan's views on the salicylic treatment of rheumatism, and learn that the points he especially emphasises are that the drug should be given in full and frequent doses till the temperature is normal and the pain gone, and that it should be continued in smaller doses for ten days after acute symptoms have ceased. The comparative failure of the salicyl compounds to prevent heart complications he attributes to the activity of that organ as compared with the quiescence of the joints under treatment at the same time, but cogently argues that the other advantages gained by curtailing the duration of the disease and reducing temperature cannot be without favourable influence on cardiac complications. The article concludes with remarks upon the relation of rheumatism to chorea, in which the author is led to the general conclusion that rheumatism is essentially a disease of the motor apparatus, while chorea is essentially a disease of the motor centres. and considers this to be the clue to the explanation of the relation of the two diseases.

Dr. Henry M. Lyman of Chicago contributes the article on Gout, and in 180 pages treats this extensive subject historically, critically, scientifically, and practically. The therapeutic section of his essay is especially full, and due emphasis is given to the debilitated conditions acquired and inherited which foster the defective metabolism which lies at the foundation of gout. Few subjects are of such all-embracing interest to the physician as this protean malady. Dr. Lyman does full justice to his collaborateurs in unravelling the mystery of the disease, and speaks more appreciatively than many of the labours of Dr. Haig in this sphere. It is, perhaps, unavoidable in the close consideration of the uric acid dyscrasia that great emphasis should be laid upon the predominant *rôle* played by the imperfect metamorphosis of the nitrogenous compounds, but it is better that such emphasis should be too great than too little. The visceral complications of the disorder are adequately considered, and their treatment is indicated in a way to be of practical guidance to the practitioner.

Dr. Archibald E. Garrod of London contributes a discriminating article on Arthritis Deformans, evidently the result of much thought and observation. He prefers Virchow's term as implying no theory of the disease. According to Landré Beauvais precedence in the description of the disease, he does justice to the long overlooked services of Dr. Haygarth of Bath as a pioneer in the delineation of this ailment. The morbid anatomy adopted is chiefly that of Cornil and Ranvier. In the clinical section of the essay most space is naturally given to the multiple variety chiefly seen among middle-aged and elderly women, although not confined to these. The author inclines to the adoption of the neurotic

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dystrophic theory of the disease, while he admits the very considerable prevalence of a gouty and rheumatic history in many cases, either in the patients or in their families. Heberden's nodes receive separate treatment, as does the arthritis deformans of children. There is also a section devoted to joint lesions resembling those of arthritis deformans, such as the joint affections found in association with locomotor ataxia, syringo-myelia, and hæmophilia. In the treatment of this condition the importance of a nutritious dietary, tonics, hygienic surroundings, and patience are wisely dwelt upon. The only point in the entire article which we should feel disposed to disagree with is the consideration, together with this well-defined clinical entity, of such conditions as the articular disorganisation met with as a result of gonorrhœal infection, and we question very much the correctness of the supposition that the only difference between the dystrophic joint diseases of central nervous origin and those of arthritis deformans, or rheumatoid arthritis, is one of degree and not of kind. Rheumatoid arthritis is a term which commends itself to us, not because of an implied rheumatic origin, but because the joint lesions resemble more in their duration and degree those of chronic rheumatism than of the more destructive and more distorting lesions due to central nervous lesions and gonorrhœal pyæmia.

Diseases of the Muscles are considered by Dr. Dujardin-Beaumetz of Paris. Muscular disease as secondary to changes in the nervous system are alluded to with necessary brevity, as belonging to another section of this work, and the article deals mainly with acute and chronic myositides properly so called. Infectious (suppurative) myositis is well described, and in the sustaining and antiseptic treatment of muscular inflammation the author speaks very highly of the tonic and stimulating properties of kola nut and of the antiseptic virtues of a soluble naphthol (asaprol) introduced by himself and Stackler. An interesting clinical description of syphilitic contracture is included in the article, and its amenability to the usual specific treatment is mentioned.

The last article in this volume is concerned with the Nature and Treatment of Obesity, and its excellence is vouched for by its authorship. Professor Oertel of Munich, so well known by his works on the dietetic and mechanical treatment of diseases of the heart and circulation, has, in the essay before us, condensed results of much thought and observation. The plethoric, anæmic, and hydræmic forms of obesity are dealt with, and the interesting question of plethora discussed with rational precision. As was to be expected from the importance of the subject in relation to accumulation of fat, and from the deservedly high authority of the writer, the anatomical and clinical effects of obesity upon the organs of circulation and its relation to arterio-sclerosis are treated somewhat in detail. Judicious advice as to the prophylaxis and treatment of the condition are also to be found in this valuable essay, which Professor Oertel concludes with these weighty words: "The great number of deaths arising from fatty heart, heart paralysis, arterio-sclerosis, and dropsy are not ordinarily to be regarded as unavoidable consequences of disease; but, for the most part, are the result of conditions which the patient has brought upon himself, and which he can avert by the use of sure means and methods, even in the advanced stages, if he has the will-power to do so. In this regard he is the master of his own health."

Clinical Lectures on Diseases of the Nervous System. By W. R. GOWERS, M.D., F.R.S. London: J. & A. Churchill. 1895.

WHEN a few years ago Dr. Gowers resigned his appointment at a teaching hospital it was felt that so long as he continued his weekly afternoon of out-patient teaching at the National Hospital for the Paraly and Epileptic, Queen-square, there would still be opportunity for hearing at his best one of those who h taken perhaps the largest share in systematising a extending our knowledge of nervous diseases. But rolled on and even the weekly out-patient afternoon ha yield to the exigencies of other claims. This volume, ho ever, is evidence of the fact that something has arise take its place, for we read on the title page that th lectures were delivered at Queen-square, and we are gl learn that one whose teaching in nervous diseases has alr been characterised by vigour and originality can st listened to at that hospital, which is more particular associated with his neurological work.

In this volume there are twenty lectures in all, arran apparently without system. The first deals with the pr ciples of diagnosis of nervous diseases, and the second m mistaken diagnosis. The other subjects are more sp comprising bulbar and facial palsies, acute ataxic myelitis, locomotor ataxy, &c. All the lectures are of m interesting, but they differ in their degree of interest. have read them all with pleasure, but those which seem to be almost models of what such lectures should be are lectures on bulbar and facial paralysis. The book will ap we believe, to those whose knowledge of nervous dise profound, and it will interest those whose knowledge slight. But it is also such a book as will stimulate perhaps inspire those who are only on the threshold vast storehouse of neurological knowledge.

An Atlas of Ophthalmoscopy, with an Introduction to the Use of the Ophthalmoscope. By Dr. O. HAAB, Profes Ophthalmology, University of Zurich. Translated edited by ERNEST CLARKE, M.D., B.S. Lond. Lo Baillière, Tindall, and COX. 1895.

THE use of the ophthalmoscope is so uniformly tau all our schools that it may be presumed that those who to possess this volume have already made themselves fam with the use of the instrument, which, indeed, can on taught practically; but those who have overcome initial difficulties will find the volume before us very use

The introduction, occupying fifty-five pages, supplie description and explanation of the several errors of refra and of the modes in which the eye may be examined is written, although very briefly, in an easily intelli manner. The expense of the larger works illustra the diseases of the fundus of the eye is almost prohibi to the student, but the chief affections can be studied in the sixty-three plates—some of which contain two, or four, subjects—at the cost of a few shillings. The dis of disease selected to be illustrated and the special va depicted are those that are most common and are likely most serviceable to the practitioner as types. One of the the drawings seem to us to be rather exaggerated, as in case of Fig. A of Plate 3, representing the normal retina a deeply pigmented eye, but the great majority ha evidently been drawn from life and are sufficiently ac recognisable. Dr. Ernest Clarke may be congratulated having translated a very useful work.

Functional and Organic Diseases of the Stomach. By Sidn MARTIN, M.D., F.R.S., F.R.C.P., Assistant Physician University College Hospital, &c. 500 pp., 57 Illustrations Young J. Pentland, Edinburgh and London. 1895.

IN no branch of clinical medicine has more rapid develo ment taken place during the last few years than in t application of methods of chemical research to the examin tion of the various secretions of the body, and to the bloo and Dr. Sidney Martin's book fully justifies its existence fulness and clearness with which it treats of approved

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chemical methods and indicates how they may be carried out in investigating cases of gastric disturbance with comparatively little trouble by the busy practitioner.

Commencing with a careful account of the anatomy of the stomach and a full description of the processes of normal digestion, so far as those take place in the stomach, he passes on to the digestibility of various articles of food and the influence of condiments, stimulants, and other accessories. Dr. Martin inserts, chiefly as quotations from other authors, very serious indictments against wine, beer, tea, coffee, and tobacco, which are hardly supported by experience. The chapter on Indigestion of Food so far as it deals with gastric digestion is very full, but it is to be regretted that Dr. Martin did not in this chapter enlarge his scope and take a wider view of the digestive process. As it is, by omitting the part played by the liver, pancreas, and intestines, he has presented us with a part only of the picture. The latter half of the book deals with the organic and functional diseases of the stomach and is characterised by careful study and lucid description. The chapters on Ulcer of the Stomach and Cancer of the Stomach are particularly to be commended. They are full and accurate without being diffuse or tedious, and embody the latest knowledge on the subject. The book is well printed and illustrated, and will take a high place among those monographs on the subject—such as Habershon's and Ewald's—which are standard books of study and reference respecting a group of diseases from which few persons altogether escape.

Möller's Operative Veterinary Surgery. Translated and edited from the second enlarged and improved edition of 1894 by J. A. W. DOLLAR, M.R.C.V.S. Edinburgh: David Douglas. 1895. Price 21*s.*

THE title of this translation is incorrect, as the work is not on *operative* but on *special* veterinary surgery, as indicated in the German book, which is designated "Lehrbuch der Speciellen Chirurgie für Thieraerzte," and which really forms the second volume of a work on veterinary surgery, the first being devoted to general surgery. There is also an error with regard to the date of publication of the German edition, which is given on the title-page of the translation as 1894, whereas it was issued at Stuttgart in 1893. The volume really deals with a description of certain surgical diseases and accidents to which some of the domestic animals are liable, together with their treatment and any operative procedure that may be necessary for their cure; it is not in any respect a treatise on operative surgery, as not a tithe of the operations performed on animals are alluded to, while in many of the diseases described operative interference is either not demanded or is quite impossible. The woodcuts are generally good, as illustrating some of the diseases, accidents, or deformities treated of, but the bibliography is lamentably deficient, as happens so frequently in Continental veterinary works.

Veterinary surgeons in this country evidently have little to learn from their German *confrères* if this work is to be taken as an example of their surgery, and it is somewhat difficult to understand why it was considered necessary to attempt this translation.

CHRISTMAS BOOKS.

IT is nowadays the fashion to sneer at Christmas, to say its observance was invented by Dickens and is no longer the thing for modern days; still children, and even some elders, welcome it, and the publishing trade make a special feature of books of adventure, ghost stories, &c., in honour of the "joyfullest feast."

The Christmas ghost has rather gone out of late years, so we are glad to see it revived in the Christmas number of *Chapman's Magazine*. Mr. Arthur Machen contributes a creepy tale wherein the Red Hand, the "mano in fico" (not used as Mr. Hardy's Arabella used the fragment of pig), the evil eye, prehistoric gold-workers, and a murder are all worked into a harmonious whole. In "The Story of a Ghost" Miss Hunt has hit upon a really original kind of spectre. There have been bodiless ghosts of all kinds. There is the warm-blooded vampire of Eastern Europe—i.e., a body animated by a fiend—there is the still worse ghost with a decomposing body, of Iceland, and the Homeric ghost who, though his body had been burned, managed to drink blood, but none of these has the indefinite horror of Miss Hunt's creation. Her portrait of a medical man is good, a thing rare in fiction.

Messrs. Blackie and Son have sent us a large quantity of books for boys. *Hallowe'en Ahoy*, by Hugh St. Leger, is a story of the sea with all the requisite setting of a derelict ship, a storm, a wreck, and castaway life on the Crozet Islands. There is a ghost too.

Two Gallant Rebels, by Edgar Pickering, is a tale of the times of the great French Revolution. Claude Oglander and Rupert Ogilvie are shipwrecked upon the coast of France, join the Vendean army, take part in the celebrated attack upon Thouars, and are finally condemned to the guillotine in Nantes. The account of their escape is thrilling, but does not bear the same air of probability with which that master story-teller Dr. Neale treated a similar incident occurring in Paris in his tale "Duchenier."

His First Kangaroo, by Arthur Ferres, is a good book of Australian life for boys. There is a thrilling fight with bushrangers and plenty of healthy incident in the book.

Cassell's Family Magazine (London: Cassell and Co., Limited) still maintains its high position in the class of books to which it belongs, and the volume for 1895 may well be described as a handsome volume of healthy reading. The short stories and sketches are well written, and there is an excellent serial, "The Voice of the Charmer," by Mrs. L. T. Meade. There are also some brightly written papers dealing with the work of such popular writers as Sir Walter Besant, the Rev. S. Baring-Gould, the late R. L. Stevenson, Mr. S. R. Crockett, Mrs. Hodgson Burnett, Mrs. Humphry Ward, and Edna Lyall. Chit-chat on dress, together with the articles on artistic work for the home, will be appreciated by the gentle sex, and the monthly record of novelties of invention, science, and discovery will be found an interesting feature of the magazine by the male members of the family. "Boating on the Cam" and "Front Rank Cricketers of To-day" will also appeal to the latter class of readers. Needless to say "The Cabinet and its Secrets," by Sir Wemyss Reid, does not reveal to us any secrets of State, but the sketch is well worth reading nevertheless. Those who look for humour will find it in "Carter's Incandescent Cats," wherein an amateur electrician attempts to use the latent electricity in *felis domesticus* for supplying glow lamps. His experiments lead to some ludicrous consequences.

Katawampus: its Treatment and Cure. By his Honour Judge EDWARD ABBOTT PARRY. London: D. Nutt.—This is a book which will delight not only children but grown-up people as well. The account of the Parliament of Toys is delightful. As in our experience Katawampus is very rife after Christmas dinners, we would counsel uncles and fathers to provide themselves with copies of this book to give away.

DECEMBER JOURNALS AND MAGAZINES.

The *Edinburgh Medical Journal* leads off with Dr. Clouston's very interesting valedictory address to the Edinburgh Medico-Chirurgical Society, Dr. J. A. Macdougall concludes his series of Surgical Cases of Interest, and Dr. W. G. Aitchison Robertson contributes a delightful paper upon Sixteenth Century Therapeutics. The application of a

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live hen with an incision in the breast is practised still in some parts of the East for snake-bite. There are other papers and articles of interest, and altogether the number is a very good one.

National Review.—The two most important articles are a really admirable paper by the Roman Catholic Bishop of Salford upon the Crisis in Religious Education (the recommendations of the writer at the end of his paper are particularly good), and an account of an Air-car raised by Planes acting like a Kite, by Lieutenant B. Baden Powell.

In the *Humanitarian* Mr. Archibald Little argues that the true cause of China's decay is the practice of bandaging the feet of their women. Miss Rosa M. Bassett has an earnest plea for the better protection of children.

The *Westminster Review* has a good paper, which is really a review of a work by Mr. J. F. Hewitt, entitled "The Ruling Races of Prehistoric Times." The cradle of the human race, it is argued, was in the Southern Hemisphere.

Analytical Records
FROM
THE LANCET LABORATORY.

EXTRACT OF RED MARROW.

(F. B. BENGER AND CO., LIMITED, OTTER WORKS, MANCHESTER.)

THIS preparation is another and useful addition to the remedial extracts of animal origin. It is simply a clear, reddish-yellow glycerine solution of red marrow without objectionable taste or odour. It yields barely any ash on ignition, but sufficient, however, to give a distinct response to the molybdate test for phosphates. The red marrow of bone has, as is known by our readers, been suggested as the chief agent in promoting the development of red blood-corpuscles, and the extract, it might be anticipated, if introduced into the organism whilst in an anæmic condition, might act as a stimulant in the formative process and increase the rate of production of the red blood-corpuscles.[1] That this extract contains these peculiar principles unimpaired is evident from the results of its administration to patients in the Salford Royal Hospital, where in each case there was a marked increase, in some of more than a million red corpuscles per cubic millimetre, in from four to nine weeks. Its use may obviously be extended with probable advantage in other conditions of blood impoverishment. It may conveniently be given spread between thin pieces of bread.

CRADLE BRAND HUMANISED MILK.

(H. AND T. C. EDWARDS, LIMITED, 29, CALEDONIAN-ROAD, KING'S-CROSS.)

It is stated in regard to this preparation that on adding two parts of warm water to one part of milk a fluid is obtained very nearly approximating to the composition of human milk. Carrying this direction out we found the following to be the composition of the diluted milk obtained: total solids, 11·46 per cent.; fat, 3·70 per cent.; non-fats, 7·16 per cent.; mineral matter, 0·60 per cent. This is a very satisfactory result, especially in regard to its richness in cream. The concentrated preparation is successfully preserved without the use of antiseptics and possesses a good creamy taste. With these facts before us we are justified in placing this brand of milk in the list of really valuable and useful foods admirably adapted for infant use.

DISINFECTANT (VITOS) PREPARATIONS.

(FORBES, ABBOTT, AND LENNARD, EAST GREENWICH, S.E.)

These preparations include Vitos liquid dentifrice, Vitos disinfectant (a highly concentrated alkaline fluid), and "phenylated fibre" (which is impregnated to the extent of 25 per cent. with pure tar acid). All three on analytical examination gave unmistakable evidence of the purity of the phenol employed, there being an entire absence of crude tar oils. The "fibre" preparation, the amount of the phenol in which we estimated as 24·90 per cent., which confirms sufficiently the statement that it contains 25 per cent. is a particularly useful and effective one. It offers distinct advantages over mineral powders, is much more absorbent, is flushed as easily as paper through drains, and even when wetted and exhausted can, unlike a finely divided powder, be readily swept up. Vitos fluid disinfectant contains, according to our valuation, at least 85 per cent. of crude tar acid combined with alkali. It is of a port-wine colour and perfectly miscible with water. The dentifrice, which is alkaline, is agreeably scented, and its disinfectant basis is of a purity which is demanded of a preparation intended for the teeth. The phenylated fibre and fluid answer all the requirements of a disinfectant of real value. They are satisfactory because they contain a maximum quantity of the active disinfectant agent employed and because the agent itself, as we have shown, is pure. For the various useful purposes to which they may be put these preparations, therefore, may be trusted. Dr. Klein has reported excellent results in a series of severe bacteriological tests.

TROMMER—(1) MALT EXTRACT, (2) WITH COD-LIVER OIL, (3) WITH CASCARA SAGRADA.

(AGENTS: F. NEWBERY AND SONS, 1 AND 3, KING EDWARD-ST., NEWGATE-STREET, E.C.)

These preparations bear the name of the author of "Trommer's Test for Sugar," whose researches on food and nutrition are now well known. The plain malt extract possesses a fine barley flavour and manifests a high degree of diastasic activity, as shown in our experiments by its rapid digestive effect upon starch emulsion. The same digestive property is possessed, but in a modified degree—owing, doubtless, to the presence of oil—by the cod-liver oil and malt preparation, which contains 60 per cent. of Trommer extract of malt and 40 per cent. of fine Norwegian cod-liver oil. It presents the appearance of a perfectly uniform emulsion under the microscope. Lastly, the preparation of malt extract with cascara sagrada offers obvious advantages. It is a powerful digestive of farinaceous substances and, in addition, acts as a tonic and mild laxative. Each preparation bears evidence of careful manufacture and of the selection of ingredients of good quality.

New Inventions.

"THE LEICESTER" PERFECT PLASTER OF PARIS BANDAGES.

ON the original introduction of plaster of Paris bandages, now a good many years ago, the extemporaneous preparation of these most useful articles with the ordinary plaster used by figure-makers was a decidedly troublesome and unclean process. Even in hospitals this was recognised, while in private practice the necessity for providing a stock of efficient plaster, and for securing the aid of competent assistants during the application of the bandage or splint, constituted a serious drawback. These difficulties have, however, been completely solved by Messrs. A. de St. Dalmas and Co., Leicester, who introduced some time ago a bandage in which the plaster of Paris in very fine dry powder is thoroughly incorporated with the woven fabric. They claim for this material the special advantage that it is not affected by age or exposure, and a recent trial made with samples delivered by them more than eleven months previously has shown that a very satisfactory splint may be made with ten spirally-wound layers of the "medium" bandage, separated by one thickness of straight [illegible]. The stock sizes are either five yards [illegible] a half wide (two qualities) for rolled bandages, or one yard long and eight inches wide for cutting [illegible]

[1] Vide THE LANCET, Feb. 24th and March 10th, 1894.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 7, 1895.

THE medical profession will have learned with the deepest pleasure of the election of Sir JOSEPH LISTER to the position of President of the Royal Society. Several physicians have occupied this presidential chair, but only one surgeon has hitherto had the honour—which we may venture to call the supreme honour that can fall to the lot of the scientific man—conferred upon him. We exclude Professor HUXLEY in this connexion, and find that Sir JOSEPH LISTER'S single companion is Sir BENJAMIN COLLINS BRODIE, who was elected a Fellow of the Royal Society in 1810, at the early age of twenty-seven, and was Copley medalist in 1811, and became President nearly fifty years later. Sir JOSEPH LISTER, living in a more competitive age, when scientific knowledge is not so rare or so difficult of acquisition, did not obtain the coveted Fellowship so early in his career; but although his name is and will ever be connected with antiseptic surgery, and all that is meant by that term, it must not be forgotten that he won his spurs many years earlier in general, anatomical, and physiological work. It is now fifteen years since Sir JOSEPH LISTER was a medalist of the Royal Society, and as he has been foreign secretary for a considerable period it was all in the nature of things that the highest office should fall to him, unless by any chance the profession of surgery should have been deemed by his scientific brethren too limited or, rather, too specialised a pursuit to fit a man for the post.

On this point we wish to dwell. It is exceedingly gratifying to the medical profession that a surgeon of Sir JOSEPH LISTER'S particular quality should have been chosen to occupy the position of President of the Royal Society, for he is the pioneer of his science in our country, and the leader in a world-wide movement about which it is so trite a thing, but so true a thing, to say that it revolutionised modern surgery. It is a matter of common notoriety that no surgeon has so affected the whole practice of surgery of his day as Sir JOSEPH LISTER has affected our present practice by his teachings in reference to asepticity, and his position as the titular head of the science of the nation is a compliment to the surgery of the nation of the highest and most unmistakable sort. It is a proof that the Royal Society does not look upon the pursuit of surgery, as so many worthy people do, as a sort of upper grade of cabinet-making, but recognises that in its proper developments it is a science, not a craft, and that whoever would be a leader in surgery must have more than manual skill and exact anatomical knowledge, must have also a large scientific range over which his mind can roam at will. The antiseptic system of surgery was not a happy thought proved by an experiment or two and developed in a few telling papers, backed by a few successful cases. No; it required for its discovery and proof an amount of faithful, hopeful, and charitable work which it is impossible to estimate—faithful, for every step forward upset some time-honoured prop of surgery; hopeful, for the end must have seemed far and the dissemination of the doctrine slow; and charitable, for many were found in opposition to the innovation whose antagonism had to be recognised as honest and intelligent, and could not be classed contemptuously as ignorant. Therefore it is that the profession, with a laudable and solid selfishness, will rejoice in the call of Sir JOSEPH LISTER to the seat of NEWTON, DAVY, and HUXLEY. It is not the skilled workman that is being honoured by the Royal Society—though had they desired to be presided over by such their choice need not have fallen in another place than it has—but the science of surgery in its most modern development and in its broadest meaning, a surgery to which physiology, chemistry, botany, and physics have contributed of their best.

There can be no doubt whatever, as the late President of the Board of Trade said at the annual dinner of the Royal Society, held last Saturday evening, that in the early days of the society it was very closely connected with medicine and surgery, while of late years elections from the roll of our profession have been less frequent. This is true. We have many Fellows of the Royal Society in our body, but not the proportion of ancient times. The falling off has been inevitable and due to that great physiological process, the process of specialisation of function. In days gone by the physicists, botanists, entomologists, and many of the archæologists and antiquarians who were elected to the Royal Society were medical men, for the scientific training necessary even at that day to obtain the knowledge upon which to practise medicine stimulated in the physician and surgeon a desire for learning. When the medical profession had almost a monopoly of the scientific knowledge of the land they had, and very rightly, a great claim upon the Royal Society, and were elected Fellows in large numbers. This is now, of course, all altered, and the physicists and botanists stand by themselves as the surgeon stands by himself. Each draws on the knowledge of the other, but the more pure the pursuit the more divergent the path. All that is hoped is that representative men of each science, without impartiality, may find their way into the Society and reach its highest office. And of the impartiality we may feel assured, for now, at any rate, the virtue reigns supreme in Burlington House. And this is why there is not a savant in the world, from old France to new Japan, from northern Norway to southern Australia, who does not consider that to have been elected a Fellow of this body is an honour, in that it hall-marks his work, stamping it with a stamp that is never placed upon any metal save such as appears genuine to all possible human assaying. There is no body more free from all taint of nepotism, all suspicion of favouritism, all desire to suit its elections to the purse or personal prestige of the candidate. There are dukes and princes in the Royal Society, and there are men who have risen from the ranks, but impartiality has dictated their elections. They have advanced the cause of learning. To preside over such a body the acknowledged leader of modern surgery has been called,

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and in congratulating Sir JOSEPH LISTER upon the fact we congratulate the whole of the profession.

WE feel that in the case of Dr. WIGHT there are some points of interest on which it will not be out of place to say a few additional words. In another column will be found a letter dealing with the more especially obstetric aspect of the case, in which the possibility that the injury found on post-mortem examination might have happened spontaneously, is suggested. That this might have been so was, it will be remembered, admitted by Dr. GRIFFITH in his evidence at the inquest, reported in THE LANCET of Sept. 28th last. At the same time he expressed his opinion that the laceration had not occurred spontaneously in the case in question. It appears by the evidence of MARY ANNE HAWKEN, the nurse, that after trying to deliver with the forceps for some time Dr. WIGHT attempted to turn the child. When he failed to deliver by version "he again applied the instruments." The nurse went on to say "they did not lodge on that occasion," the inference being that on the previous occasion the forceps had appeared "to lodge" in the usual way. Supposing that the tear through the posterior vaginal wall into Douglas's pouch did not occur spontaneously, although this is admitted to have been possible, it seems, in view of the fact that turning was attempted, quite probable that the laceration may have occurred when Dr. WIGHT endeavoured to perform version. It is well known that in some cases rupture of the uterus or vagina, or of both, may occur without any blame necessarily attaching to the operator. To our thinking, it is a much more probable thing that the rupture of the parts in the present instance may have occurred either spontaneously, or during the attempt at version, rather than by a blade of the forceps being thrust through the posterior vaginal wall into Douglas's pouch. We should say that it would not be an easy thing to do this even intentionally, using any ordinary degree of force. And in connexion with this point, granting for the sake of argument that Dr. WIGHT's state of mind was such as to render him rightly responsible for his actions, it should be remembered that he is a general practitioner with thirty years' experience, during which time he has attended some 5000 cases of labour. It is only fair to suppose that he must, therefore, have had a great deal of practical experience in the use of the forceps, and it is assuming a good deal to take it for granted that he used so much force in introducing one of the blades as to push it through the posterior vaginal wall into the peritoneal cavity. On the facts it is, as we have said, more probable that the laceration that occurred took place when version was being attempted, and when the parts, already greatly stretched, were still further stretched by the introduction of the hand. It is a mistake to suppose that the rent must have been caused by great violence on the part of Dr. WIGHT. If a powerful uterine contraction occurred after the hand was introduced, the parts being already greatly stretched, the laceration might have occurred though the hand was kept quite passive. The fact that, according to the nurse's evidence, the forceps "did not lodge" after the attempt at version would seem [illegible] corroborate this view, as probably the laceration had [illegible] occurred, and one blade on this occasion had passed [illegible] the peritoneal cavity. In this respect there is some [illegible] between this case and some cases of so-called perforation [illegible] the uterus by the curette. AUVARD has clearly establish[ed] that in some such cases, when the operator has thought [illegible] perforation to be caused by the curette, it is not really [illegible] but that the perforation had been really caused by [illegible] preliminary measures used to rapidly dilate the cervix—[illegible] the curette then merely discovers the rent so produced. [illegible] the present case it would seem similarly very probable that [illegible] laceration occurred during the attempted version, and [illegible] the forceps then merely discovered the rent so made. [illegible] are not in the least degree desirous of finding excuses [illegible] Dr. WIGHT, but we feel it right to say, quite apart [illegible] any question of his state of mind, that on the facts [illegible] reported at the inquest, and simply as a matter of scientific [illegible] opinion, the lamentable accident that occurred may [illegible] been, as our correspondent "M.D." suggests, in the category [illegible] of those unavoidable accidents that will occur from time [illegible] time, and for which at all events medical men should [illegible] be held criminally responsible.

So much for this aspect of the matter. If, as [illegible] HANNAH said, there are sufficient grounds for [illegible] that Dr. WIGHT was not in his right mind at the [illegible] this would, of course, *ipso facto* absolve him [illegible] being held criminally responsible for what occurred. [illegible] the result of the inquiry which we suppose the [illegible] Secretary will order into this question will be [illegible] with interest. Moreover, if there were at the time of [illegible] accident indications clearly perceptible to those around [illegible] that Dr. WIGHT was not, for whatever reason, in a [illegible] state to undertake the attendance upon the case, [illegible] think those who observed these indications took upon [illegible] themselves a great responsibility in standing by and [illegible] allowing him to do what he did, especially when it was [illegible] clear that an operation was needed to effect delivery. [illegible] The patient's husband and the nurse both swore that they [illegible] noticed Dr. WIGHT to be in a dazed and stupid condition, [illegible] and the sister of the deceased gave similar evidence. [illegible] We are certainly surprised that the husband did not [illegible] interfere if he noticed something peculiar about Dr. [illegible] WIGHT'S mental state. There is no doubt whatever [illegible] that Dr. WIGHT had been ill for several months [illegible] the after-effects of influenza, and that he suffered from [illegible] sleeplessness and loss of appetite, also that he had taken [illegible] a full dose of chloral on the day on which the accident [illegible] happened. The case seems to us, in this respect, to afford [illegible] a lesson to those who are unwilling to recognise that failure [illegible] of health is an indication to stop work. There is no doubt [illegible] that a man in Dr. WIGHT'S state of health should give up [illegible] practice for a time, and seek to recuperate his powers by rest [illegible] and other treatment. Persistent sleeplessness more particularly [illegible] larly may be taken as indicating the need for complete [illegible] abstention from all mental effort. The use of chloral or [illegible] similar hypnotics by medical men is especially to be [illegible] deprecated, since they can always obtain such drugs on [illegible] their own advice alone, and because they may be tempted [illegible] too readily to resort to what is generally ready to hand [illegible] hand in the house. Dr. WIGHT would have been well [illegible]

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advised if in the first instance, when his health began to fail after his attack of influenza, he had taken a holiday such as would have been afforded by a long sea voyage. The probability is that in such a way he might have soon begun to recover his mental and bodily strength, and that the power of obtaining natural sleep—"the innocent sleep," and not that hurtful variety obtained by the use of chloral—would have soon returned. Had this been the course adopted we should not have had any observations on his dazed and stupid condition when attending Mrs. FLETCHER.

It cannot be too clearly impressed on every practitioner that if he attends a serious case when, for any reason, he is more or less, through illness or otherwise, unfit for active duty, his unfitness will be no excuse in the event of anything going wrong, and there is the possibility that he may be held responsible for what might have been an unavoidable occurrence, even if he had been mentally and physically at his best. We do not say that this has been so in the present instance, but it would be unfair not to admit the possibility that such might have been the case.

ON Thursday, Nov. 28th, at 12 noon, his Grace the Duke of DEVONSHIRE received a deputation of delegates from the various bodies interested in the establishing of a Teaching University for London. The deputation, introduced by Lord KELVIN, consisted of delegates from University, King's, and Bedford Colleges, the medical schools, the Royal Colleges of Physicians of London and Surgeons of England and the Society of Apothecaries, the theological colleges, the University of London, and some other bodies interested in the higher education of London. The following resolution was the important one that the deputation brought before the notice of the Lord President of the Privy Council, and many speeches, urging its necessity from various standpoints, were made by members of the deputation:

"That the Government be requested to introduce, at an early date, a Bill, similar to Lord Playfair's London University Commission Bill, 1895, appointing a Statutory Commission to carry out the recommendations of Lord Cowper's Commission, but with an added clause giving [in accordance with precedent Acts of similar tenor] to all institutions or persons directly affected by any statute or ordinance proposed by the Statutory Commission, a right of appeal to the Privy Council for the disallowance or alteration thereof, previous to such ordinance being laid before Parliament for confirmation."

The Duke of DEVONSHIRE showed but little sympathy towards the object of the deputation, for he immediately began to administer not merely the traditional cold douche, but even to put the recommendations of Lord COWPER'S Commission into a freezing mixture. He pointed out that there was a large number of candidates, non-collegiate students, who might be injuriously affected by the appointment of a Statutory Commission on the lines of Lord COWPER'S Commission. But surely this is a question of safeguards which a Statutory Commission is the proper body to settle. We believe it to be a difficult but by no means an insoluble problem to place collegiate and non-collegiate students on similar platforms for obtaining degrees. But his Grace next came to a more puzzling question—viz., the veto of Convocation on the granting of a new Charter. The deputation wished to urge that the two last votes in Convocation had decided its agreement to a new Charter, but he maintained, and quite rightly, that Convocation, unless its statutory right was taken away, had the power to approve of or veto any scheme proposed by the Statutory Commission. If the Lord President went further and was inclined to allow proxy voting, as in the case of the election of a member of Parliament, then he with Sir JOHN LUBBOCK is wrong and is departing from the regulations of the University. Voting for or against a new Charter, as for the admission of women to degrees, has always been a personal vote, and no proxies have been admitted. A further statement will be laid before the Duke of DEVONSHIRE to show that the rights of the existing graduates of the University of London and the just privileges of "external" students will not be interfered with; but we question whether this will materially alter his Grace's attitude with regard to the question. At present it seems to us that the movement has arrived at an *impasse*, but it must not be allowed to rest where it is. A university, capable of granting degrees to London students on similar terms to those on which they are conferred on Scotch and provincial students, must be established in London in the interests of general education and especially of the large number of medical students in the metropolis.

Annotations.

"Ne quid nimis."

PRESENTATION TO SIR HENRY ACLAND.

A REPRESENTATIVE company, including the Warden of All Souls, the Rector of Exeter, the Warden of Keble, the Provost of Queen's, the Principal of Hertford, Sir Joseph Lister (the new President of the Royal Society), and Professors Max Müller and Dicey assembled in the hall of All Souls' College on Wednesday last to present to Sir Henry Acland an address and an accompanying testimonial. The testimonial took the form of a bust, which will be placed in the museum of the University, and a cheque for a large sum of money, over £3000, which will be employed in carrying on the work of the Sarah Acland Home for Nurses. The address justified the testimonial, stating that it had been subscribed for in commemoration of the long and faithful service that Sir Henry Acland had rendered to the University, city, and county of Oxford, and the part which he had borne in the advancement of medical science in England, more particularly in the direction of sanitary reform and preventive medicine, during the forty years of his occupation of the chair in the University of Regius Professor of Medicine. The Provost of Queen's (Vice-Chancellor of the University) in making the presentation took these words as his text and spoke in eloquent expatiation of them, and all the profession will feel that it would not be easy to exaggerate the terms that could be employed about Sir Henry Acland in the above connexions. As scientific physician, practical sanitarian, faithful administrator, and kindly man he stands so high in the estimation of us all that no eulogy would seem extravagant.

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OBLIGATIONS AND POWERS OF SANITARY AUTHORITIES UNDER THE FACTORY AND WORKSHOPS ACTS.

THE sanitary provisions contained in the Factory and Workshops Acts of 1878, 1883, 1891, and 1895, together with the provisions relating thereto contained in the Public Health Act, 1875, and the Public Health Acts Amendment Act, 1890, form an intricate mass of legal enactments which it is hardly to be expected the members of sanitary authorities will themselves take the trouble to master in detail. The obligations and powers of the sanitary authority under the above Acts are, however, so numerous and of such vast importance to the health of the working classes of this country that it is incumbent upon all those having to do with their administration to possess at least a general idea of the provisions of the Acts in question; and it is also desirable that there should be a clear understanding in the several departments of the sanitary authority as to what provisions shall primarily concern each department. In connexion with these aspects of the question we have just received a very concise summary of what may be regarded as the direct or indirect sanitary provisions of the Factory and Workshops Acts and the Acts allied to them, which has been compiled by the medical officer of health and the engineer of Bristol for the use and information of the sanitary committee of the town council. This summary should be of the greatest value to the members of the sanitary committee, and it has, too, an interest as evidence of the enormous range of knowledge which the medical officer of health of the present day is expected to possess. Not only must he have had a scientific and medical education of no mean order, an education which should comprise a knowledge of geology, bacteriology, and kindred subjects, but it is also a distinct advantage to him, if indeed it is not expected of him, to be able to arrange for the instruction of the sanitary authority an accurate summary of intricate legal enactments. We are afraid however, that in their turn the sanitary authorities do not always recognise that in matters appertaining to public health the labourer is worthy of his hire. The Acts relating to factories and workshops are becoming numerous and involved, and it appears to us that we are reaching a state of affairs not unlike that which obtained prior to 1878, and which led to the passing of the Factory and Workshops Act of that year, an Act that is often spoken of by the appropriate name of the Factory Consolidation Act.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

MR. SHARP, in a letter which appeared in the *Times* of Friday, Nov. 29th, says: "This will be my last word upon the question." Very likely; Mr. Sharp is evidently realising the truth of that admirable saying, "Qui s'excuse s'accuse." Let us put down plainly what has happened. 1. The Board, on the motion of Mr. Sharp, appoint medical men to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful.[1] 2. Mr. Sharp says: "The majority of the cases which have been submitted to these gentlemen have been cases in which no medical certificate has been produced."[2] 3. "The great body of medical men approve of the action of the Board with regard to medical certificates."[3] 4. Letter from Dr. Glover, one of the direct representatives of the profession on the General Medical Council, repudiating this.[4] 5. Mr. Sharp replies.[5] 6. More letters from medical men pointing out that "the action of the Board is unjust and disrespectful."[6] 7. Mr. Sharp says his last word, again pointing out that most of the cases examined by the [illegible] appointed medical men are those in which there [illegible] no medical certificate obtainable.[7] 8. On the Tuesday before the last word Mr. Athelstan Riley rose for precedence to bring in a motion to refer the whole matter to the medical officer of the [illegible] Board. Mr. Sharp, curiously enough, considering that "the great body of medical men approve" &c., opposed this motion. Well, he has ignored the Board's medical officer all along, so, perhaps, it was only natural. We remind Mr. Sharp that so long as the resolution of May 30th stands he will find it increasingly difficult to get medical certificates. 9. Another letter from Dr. Glover pointing out the profound dissatisfaction of the profession.[8] We want a plain answer from Mr. Sharp to the following questions. 1. Has he, or has he not, appointed through his Board a set of medical men to sit in judgment upon the decisions of other medical men? 2. If the use of the Board-appointed medical men is only to examine when no certificate can be got, why not accept the amendment about qualified practitioners men moved at the Board meeting of June 27th? 3. If the profession is with him, why does not he ask the opinion of the medical officer of the Board?

"BACTERIA IN THE DAIRY."

THAT we may count upon microbes sometimes as our friends and sometimes as our enemies is well illustrated in the bacteriology of milk and milk products. Though milk may leave the udder perfectly sterile, yet a few moments' contact with the air, and especially the air of insanitary surroundings, are sufficiently long to be the starting-point of the development of a whole microbial menagerie. By fission alone—that is, by splitting in two, and by the resulting two dividing again in the same way—one bacterium may become the parent of over sixteen million bacteria in twenty-four hours. The composition of milk is such as to be most favourable to the growth and development of organisms, pathogenic and non-pathogenic. Some are detrimental to the healthy condition of the milk itself, or, in other words, milk has its own diseases to contend with. Experience is ever teaching how imperative it is that the strictest care should be taken to protect milk against the possibility of microbial invasion. The risks of pollution are great, and may arise from an unhealthy or dirty condition of the cow, or of the stall, or of the milker's hands and clothes. The air of the cow-house is frequently made insanitary by cleaning it out and dislodging dirt just previously to milking, and another source of contamination is the diluting of the milk with unwholesome water which may be infected with typhoid fever or cholera poison, or by placing the milk in dirty vessels, or by exposing it to the atmosphere of warm and unhealthy places, as cupboards. With these possibilities of pollution in mind the advantages gained by sterilising or Pasteurising milk by boiling are evident. Particularly is this so in the case of bottle-fed infants, the lives of many of whom would be saved from fatal diarrhœa, so frequent in artificial rearing, were these precautions taken. The same lesson is taught by the fact that mother's milk is sterile. Although boiling will destroy the disease-producing germs in milk, it may still leave spore-bearing bacteria, which in course of time would produce undesirable changes in the milk itself and render it unwholesome. On the other hand, there are friendly germs to be found in milk whose functions can be cultivated and turned to account in the production of an acceptable flavour in cream and in butter. After clearing the milk or the cream of competing organisms by Pasteurism it is sown with

[1] Meeting of School Board, May 30th, 1895.
[2] Ibid., June 27th.
[3] Ibid., Nov. 21st.
[4] Times, Nov. 25th.
[5] Ibid., Nov. 26th.
[6] Ibid., Nov. 28th.
[7] Ibid., Nov. 29th.
[8] Meeting of Board, Nov. 28th.
[9] Times, Dec. 6th.

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a pure culture of lactic acid producing organisms. The flavour of the butter and, moreover, its keeping qualities being dependent upon the character of the souring process undergone by the cream preparatory to churning, a uniform product acceptable in both these respects may be obtained by proceeding carefully on these lines. The inculcation of these methods amongst dairy farmers would add an impetus to the milk products industry, and probably bring it into a greater state of prosperity. It is satisfactory to record that efforts are already being made to do this by lectures and the publication of lectures in pamphlet form and in the agricultural papers.[1]

SLUMS IN CARDIFF.

AT the meeting of the Cardiff town council held last week a member stated that some of the houses in the poorer districts reflected great discredit upon their health department, and that in one house people were found lying without any covering upon a mattress swarming with vermin. If that were true, he added, their by-laws were either insufficient or not enforced, and the people of Cardiff were stirred by the pictures which had been drawn of life in these localities. He proposed that a sub-committee should be appointed to visit these poor districts, with their medical officer of health, and report to the council, which proposal was carried.

INFANTRY SWORD EXERCISE AND THE RECENT HANDBOOK FROM THE WAR OFFICE.

WE do not often meddle in matters *ultra crepidam*. There occur, however, now and again, special occasions when an expression of our opinion on subjects apparently outside the medical frontier is imperatively called for. Such an occasion is the present. Two letters have appeared in our columns respecting the new infantry sword exercise, and we claim the right and assert our competence to deal with the question in its medical aspect. In the first of these communications—that from Dr. Chepmell and Dr. Savage—attention was drawn to the hitherto unnoticed defects of the new Masiello system; the objections were stated tersely (and in our opinion correctly) by these gentlemen, the letter was copied by journals all over the kingdom and gave rise to much comment and correspondence, chiefly in the military press. The second critique—that in our issue of last week—is from the pen of no less an authority than Mr. Clinton Dent, an expert not only in anatomy but also in swordsmanship. This last is an exhaustive analysis of the new method, and lays bare one by one the grave defects which lie at its root. We entirely agree in the conclusions drawn by our medical critics as to the objections to this system, and would refer our readers more particularly to three of the weakest points: (1) the "on guard" position, of which the wide separation of the feet, the forced extension of the arm, and full pronation of the hand must speedily induce fatigue; (2) the exaggeration of the lunge and consequent loss of balance; and (3) the projection of the centre of gravity and difficulty of recovery. Some military men there are nowadays who maintain that as a weapon the sword, if not entirely useless, is at all events very inferior to the revolver. This may be so, but it is quite possible that in war time circumstances might arise to render the revolver unavailable, and the soldier might have the sword alone to depend upon. The same theorists declare that it is impossible ever to make a good swordsman of the British soldier, and yet these allow that the same man is as good as, if not better than, most foreigners in games such as cricket and football and general athletics. Now we venture to predict that if the same amount of time and encouragement as is given to these games was accorded to practice with foil and sabre, this stigma of incompetence, if merited at all, would speedily be effaced, and we should take our proper place as swordsmen in the front rank of nations. The question of swordplay we hold to be one of national importance, and a neglect on our part to comment on the materials before us would almost involve a lack of patriotic feeling. We trust that our military authorities may be induced to look a little more closely into the principles contained in the new manual and prevent our fighting executive from making a false start in this important educational course.

[1] We have recently received a copy of an excellent lecture of this type entitled "Bacteria in the Dairy," delivered before the Irish Dairy Association by Dr. E. J. McWeeney, the copyright of which has been secured by the proprietors of the Farmers' Gazette for the Belgravia Dairy Company.

THE UTILITY OF FIRST AID.

AT a meeting of the South-Eastern Railway Ambulance Class held recently attention was drawn by Sir Myles Fenton to the public usefulness of these classes. Among the employés of the South-Eastern Railway Company there are 305 servants qualified to render first aid, and no less than seventy cases are reported where useful practical work has been done. Among them the general manager of the company referred particularly to the case of a fireman, Alfred Newman, whose presence of mind and knowledge of first aid had been the means of saving the life of an engine-cleaner, the victim of a practical joke. The cleaner had entered the smoke-box of an engine when his colleagues, by way of what they called a joke, shut the door of the box and covered it over with sacking. The fireman, who soon after passed, seeing the lads watching the door and laughing, inquired as to the cause, and on learning it forced open the door and dragged the cleaner out in an asphyxiated condition. He was, however, eventually resuscitated by Fireman Newman. A case was also mentioned in which another fireman named Ockenden gallantly saved the life of a man from drowning. The first case is worthy of note by reason of the fact that the man who saved the life of the cleaner had not at the time taken his first certificate, and the illustration it affords of the practical utility of even a little knowledge in such cases. Great praise is due to the man's presence of mind and the prompt application of his knowledge.

"TUBERCULOUS" *vel* "TUBERCULAR"?

FOR some years past we have, so far as we are able to control the terminology employed in these pages, been particularly mindful of the different senses attaching to the word "tubercle." Originally a purely anatomical and coarsely morphological expression, it has come to signify a special infective disease the ultimate cause of which is admittedly a specific microbe. The anatomical term of course remains, it is etymologically accurate, but the confusion that has arisen from its transference from this, its legitimate and general application, to denote a special kind of nodule evoked by a specific agent is rendered worse confounded when the phrase is used in the attributive sense. Although custom has hallowed and made inviolate the noun "tubercle" in its particular as well as in its general application there is no need for a similar commingling of terms when we employ its derivative adjective. The word "tubercular" is the anatomical equivalent of tubercle and has always been so employed in anatomical text-books. It has also, with a perversity that perpetuates the initial blunder, been equally applied to denote the various pathological changes induced by the presence of the bacillus tuberculosis. Our readers will perceive that the distinguished surgeon who has just delivered the Bradshaw Lecture has adopted this same phraseology. In this respect he is by no means singular, for the like use of the term is made by many other writers and teachers of medicine and surgery. On

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the other hand, not a few—and amongst them may be reckoned THE LANCET—have attempted to dispense with "tubercular" as indicative of the specific infection, preferring to it the term "tuberculous," which, it may be remarked, is also commonly employed in the pathological writings of our French and German neighbours. We would fain see this latter practice universally adopted, not from any sense of pedantry, but as a matter of lucidity and accuracy in description. As for those who employ both terms indiscriminately in describing the same things, we fear that they are past praying for. Scientific nomenclature is certainly not free from etymological blemishes, but, at least, when there is a choice of terms let us be consistent in the way in which we apply them.

THE WIDOWS OF MEDICAL MEN.

WE have received the following pathetic and, truth to say, somewhat illogical letter, in which the writer confuses the Holloway College for Women with the Hospital for the Insane at St. Ann's Heath, but which we have decided to print because it may do good. The fortunes of many poverty-stricken widows of members of our profession are not likely to be ameliorated by the publication of the letter; but if work that she can do properly should find its way to but one woman through its means we shall be glad that we gave it space in our columns:—

To the Editors of THE LANCET.

SIRS,—Will you grant us a small space in THE LANCET? I have been asked by a great number of my sisters in sorrow to bring their case before the public with the hope that it may meet the eyes of the trustees of Holloway's College, Virginia Water. For sure am I that such a philanthropic old man as Holloway was never intended his money to be spent on a large institution that would rob the widow and fatherless of the medical profession. Let me explain. The doctor—the bread-winner—is often taken off in early life before he has had time to make a provision for his children. Hard work or devotion to his work in holding out a helping hand to others in his profession cuts his life all too short for all he meant to do; and the poor wife must hear the sad words at last—keep the home together if you can for the sake of the little ones! Will your readers tell me how, brought up in a gentle home herself. Where is the Englishman that would make the struggle with the world more hard and bitter than it is for her? And yet how many do this for want of a little unselfish thought, and send their patients to a public institution, knowing all the time that the only means open to a doctor's widow is to take into her home such patients to nurse and care for as she may feel qualified to undertake, and this means bread for her children and self, hard and honestly earned. Yet this Holloway's College is now not only open to take in certified cases of insanity, but also those who are suffering from minor mental diseases may place themselves there, so robbing the widow of the only chance of a livelihood. Has the cry of the widow no place in England? We ask not for charity; we would scorn it as gentlewomen. But we do ask you to be pitiful and courteous, and forget not your colleague's less favoured little ones and take not from us the children's bread we would gladly earn by sending your patients to public institutions, and let those who read my letter with contempt remember the eye of the great Master is over all.—I am, Sirs, yours faithfully,

G. B. R.

It does no cause good to be irrationally sentimental about it. We are personally concerned with the widows of medical men, but it must be admitted that the clergyman and the solicitor are every whit as much family bread-winners as the members of our profession, and that the early death of either is apt to leave the widow and children in a position as sad as that portrayed by our correspondent. But if any of our readers have work of the kind vaguely indicated in the foregoing letter at their disposal, we would suggest that, if they think the duties can be quite fitly undertaken by the widow of a medical man, they should give her a trial. The course would be in conformity with the best spirit of our profession, and be an expression of *esprit de corps*.

THE DENTAL HOSPITAL OF LONDON.

THE annual dinner of the staff and past and present students of this hospital took place on the 30th ult. at the Café Royal, under the presidency of Mr. Frederick Canton. Although, as might be expected, the occasion was one on which the needs of the hospital in regard to its extension in the shape of a new building were urged, still an equal share of the speaking was devoted to the necessity of united action on the part of dental surgeons to raise and establish their profession on a level of dignity comparable with that of the medical profession. It is doubtless largely this spirit animating the staff and students of the Dental Hospital of London which leads to—what must have been apparent to a visitor—such an excellent unanimity of feeling between them and to an *esprit de corps* which must prove also a powerful aid to the furtherance of the scheme for the projected new hospital. Striking and gratifying evidence of the practical interest in this movement—which it should be remembered, has important educational as well as philanthropic ends in view—is afforded in the list of the large amount of money contributed by the members of the staff and the students themselves. Dr. John Walker, the treasurer of the hospital, announced that subject to raising £3000 in order to settle the interest on loans, they were within measurable distance of laying the foundation stone, an announcement which was, of course, received with vigorous applause. He attributed this satisfactory position to the activity and zeal of the dean and the energetic secretary. They still appealed for funds to go on with the work. Dr. Sidney Coupland, in proposing the toast of "Hospital and School," expressed sympathy with the scheme, and trusted it would not be long before the new building would be completed, that would be worthy of an institution which in the past, in spite of its limited accommodation, had afforded relief in a distressing manner to thousands of the poor and had provided an efficient course of training for dental students. There was a very representative company present, which included most of the deans of the London medical schools.

TREATMENT OF ADDISON'S DISEASE.

THE treatment of Addison's disease by causing the patient to eat the adrenal bodies of a sheep has been suggested by more than one observer, and some successful cases have been reported. Another case is published by Dr. C. G. Stockton in the *Medical News* of Philadelphia for Nov. 16th. The case was that of a married woman aged forty. It was said that her mother suffered from some affection resembling that for which the daughter now sought relief. The history of her illness was that for three years she had complained of the symptoms of Addison's disease—weakness, vomiting, loss of flesh, great muscular debility and intense bronzing of the skin, which over the regions naturally pigmented presented the colour of dark mahogany. There was also unnatural pigmentation of the mucous membrane of the lips, cheeks, and pharynx. The gastric contents on examination showed an absence of odour and mucus; the acidity was very faint; hydrochloric acid was absent and lactic acid appeared as a mere trace. There was some diarrhœa. Both kidneys were movable. Above the left kidney, closely connected with it, moving with the kidney yet movable while the kidney was held still, was an irregularly shaped body, about the size of a hen's egg, which was slightly tender upon pressure. It was presumed to be a diseased adrenal. The pulse was somewhat slow and feeble, and at times very infrequent. Examination of the blood showed 1,800,000 red corpuscles to the cubic millimetre. The hæmoglobin was 30 per cent. There was marked leucocytosis, and also poikilocytosis. The patient had for some months been taking iron and arsenic. These remedies were continued, and in addition she was advised to inhale five gallons of oxygen gas three times daily and to eat daily two uncooked adrenals from a sheep. The treatment was commenced on June 23rd, and on July 6th the patient returned and showed great improvement in colour and general appearance. Her appetite had returned with her appetite. She was hungry for the first

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time in five years, she said. There was a diminution of the pigmentation, as well as a decided increase in strength; the red blood cells had risen to 3,000,000 to the cubic millimetre; the abnormal forms had much decreased in number. The improvement steadily progressed, and on Sept. 14th there were 4,000,000 red blood cells to the cubic millimetre and 80 per cent. of hæmoglobin. On Sept. 27th the contents of the stomach were again examined, but no change for the better could be discovered in her digestion although she had gained six pounds in weight. The pigmentation had almost disappeared from the hands, face, and breasts. The areolæ of the nipples were no darker than is common with women who have borne children. The most striking improvement was seen in the pulse, which was large, strong, and frequent. The blood pressure was considerably above that of health, but it did not show that high tension mentioned by Professor Schäfer and Dr. Oliver. The glands were prepared as a sandwich, and three were occasionally taken without causing discomfort to the patient. On Oct. 1st she was in better health than she had been for five years, and all medication had been withdrawn, save hydrochloric acid and pepsin. Dr. Stockton remarks that an adrenal that is palpable in a woman forty years of age is very suggestive of malignancy; but the results of the examinations of the blood afford the hope that the adrenal disease is not carcinomatous in nature.

THE RESPONSIBILITY OF "PECULIAR PEOPLE."

STRANGE as are the views on medical treatment maintained by the sect of "Peculiar People," they are not more astonishing than is the laxity with which legal processes have been employed in regulating their application. It matters little apparently that the efficacy of recognised methods of treatment has been abundantly proved and universally admitted. A few persons, misled by their own too literal and irrational reading of a Scripture text, refuse to be convinced. The hazard they thus invite, moreover, is not theirs only. The responsibility they assume is not for themselves alone. Those dependent upon them suffer also and have no option. The parent prays, anoints, and does no more; the child dies. This proceeding, it appears, constitutes merely an error of judgment, a well-meant omission, fatal indeed, but requiring no severer punishment than a reprimand. The question of prevention is here strangely overlooked. Not long since four children in one family thus died at Southend, studiously, religiously, neglected by their peculiar parents. A jury at the November assizes listened to the story of their sufferings and their mismanagement and refused to convict, considering, no doubt, that the evident sincerity of motive should constitute an excuse. If their decision be compatible with our present rendering of law on this subject we have clearly need of a new definition of neglect such as will limit parental responsibility, however well-meaning, as regards this important matter, and even allow its transference, if needful, to parochial or other competent authorities.

THE ROYAL SOCIETY.

THE anniversary meeting of the Royal Society was held at Burlington House on Saturday last, St. Andrew's Day. Lord Kelvin, who delivered the presidential address, referring to the losses which the society had received during the past year by the hand of death, paid a well-deserved tribute to the memories of Huxley and Pasteur. In his financial review of the society the President said that in answer to an application to the Treasury £1000 a year had been granted for the purpose of aiding in the adequate publication of scientific matter. After the address the medals were presented as follows:—The Copley Medal to Professor Karl Weierstrass for his investigations in pure mathematics: a Royal Medal to Professor James Alfred Ewing, F.R.S., for his investigations on magnetic induction in iron and other metals; a Royal Medal to Dr. John Murray for his services to biological science and oceanography in connexion with the *Challenger* reports and for his original contributions to the same; and the Davy Medal to Professor William Ramsay, F.R.S., for his share in the discovery of argon and for his discoveries regarding gaseous constituents of terrestrial minerals. The officers and Council for the year were elected as follows: President, Sir Joseph Lister, Bart., F.R.C.S., D.C.L.; treasurer, Sir John Evans, K.C.B., D.C.L., LL.D.; secretaries, Professor Michael Foster, M.A., M.D., and Lord Rayleigh, M.A., D.C.L.; foreign secretary, Mr. Edward Frankland, D.C.L., LL.D.; council, Mr. William Crookes, Sir Joseph Fayrer, K.C.S.I., Mr. Lazarus Fletcher, Mr. Walter Holbrook Gaskell, M.D., Mr. William Huggins, D.C.L., Lord Kelvin, Professor Alexander B. W. Kennedy, LL.D., Professor Horace Lamb, Professor Edwin Ray Lankester, Professor Charles Lapworth, LL.D., Major Percy Alexander MacMahon, R.A., Professor John Henry Poynting, D.Sc., Professor Arthur William Rücker, Mr. Osbert Salvin, Professor Harry Marshall Ward, D.Sc., and Admiral William James Lloyd Wharton, C.B. The annual dinner of the Royal Society was held at the Hôtel Métropole on the same evening, Sir Joseph Lister, the new President, occupying the chair.

SENSORY NERVES AND MOTOR POWER.

IN a recent communication to the Royal Society Dr. Mott and Dr. Sherrington brought forward facts of the greatest interest and importance with reference to the influence of sensory nerves on movement and nutrition. Claude Bernard had already directed attention to the impairment in the movements of the limbs in frogs and puppies which took place when a limb had been rendered insensitive by section of the sensory roots of the spinal nerves. Dr. Mott and Dr. Sherrington examined the effect of similar lesions in the case of monkeys. If the whole series of sensory roots belonging to a limb is divided—i.e., in the brachial region from the fourth cervical to the fourth thoracic inclusive, and in the lumbar from the second to the tenth post-thoracic inclusive—then from the time of performance of the section onwards as long as the animal may be kept alive the movements of the hand and foot are practically abolished. On the other hand, the movements of the elbow and knee, but especially the movements of the shoulder and hip, are much less impaired. This impairment in motility ensues immediately on section, and in animals kept alive as long as three months after the operation no obvious change took place. The peculiar topographical distribution of the loss of motility already alluded to was constant—that is, the defect increased from the attached base to the free apex of the limb, so that, for instance, while comparatively slight at the hip it was successively greater at the knee and ankle, and greatest in the digits. In this respect it simulated in a curiously close manner the impairment of motility ensuing upon ablation of the limb region in the cortex. In the monkey it is somewhat more severe than the impairment following cortical ablation. But, in spite of this great impairment in motility, forcible and rapid movements could be induced in the animals by causing them to struggle—e.g., as in recovering from ether inhalation. Dr. Mott and Dr. Sherrington infer, from these and other considerations, that associated movements in the limb are comparatively little impaired by loss of the sensation from the limb in which they occur, while the finer movements—those which are represented most liberally in the limb area of the cortex—are extremely severely impaired and in some instances abolished. Yet on electrically exciting the cortex corresponding to the limb deprived of sensation, even when this had persisted for months, no diminution, but rather the reverse, was found in the readiness with which the movement could be evoked. And when

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epilepsy was produced by the intravenous injection of absinthe the limb deprived of sensation was affected in a manner and to a degree not to be distinguished from its fellow. So that the experiments confirm the view, so firmly held and so strongly emphasised by Dr. Bastian, of the fundamental dependence of the finer movements of the limbs upon the integrity of sensation. The effect of the section of single sensory roots was found to be practically *nil*; some impairment of movement, especially clumsiness, resulted if several roots in relation to a limb were cut. But a degree of impairment, very nearly as great as that produced by section of the sensory roots of the whole series of nerves of the limb, was produced by section of just those sensory roots which supply the apex of the limb—i.e., the hand and foot. If the whole hand or foot be completely deprived of sensation, then the peculiar degree of inability to move the limb already referred to as a result of section of the whole series of roots results. On the other hand, if all the roots are cut except the eighth cervical, which is distributed to the whole extent of the hand, and in the lower limb region all except the sixth post-thoracic, distributed to the whole extent of the foot, a certain degree of impairment in movement results, but it is very slight. No nutritive impairment of the limb could be ascribed to the section of these roots, and certain peculiarities were observed in the resulting degeneration of the cord, of which particulars will be furnished at some future time.

LUXATIO PENIS.

WE have received from Dr. S. Baumgarten of Buda-pest a reprint of a paper he contributed to the *Deutsche Medicinische Wochenschrift*[1] upon a subject to which attention has been recently called in these columns. He alludes to the fact that luxation of the penis is one of the rarest but most important injuries of that organ, and records a case in which the accident happened at the ritual of circumcision in infancy, whilst the reduction of the luxation was not effected until eleven years later. The child was taken to Dr. Baumgarten by the father, who said that his boy had no penis, which had disappeared, as stated, when he was undergoing circumcision at the hands of the constituted official. The primary difficulty in micturition seems to have been at once overcome, but when the child was six months old he was taken to a medical man who succeeded in bringing the glans penis into view. It disappeared again, however, within the course of the day, and the father was counselled to wait until his son was older and the parts more fully developed. From time to time a swelling would appear on the right side of the scrotum, evidently marking the site of the luxated organ. When seen by Dr. Baumgarten the penis was not visible, but the scrotum was well developed. Between the mons pubis and the upper margin of the scrotum were a circular scar and rudimentary penal sheath, with a punctiform opening only admitting the smallest-sized sound which could not be introduced into the bladder. On palpation a cylindrical body could be felt beneath the skin between the scrotum and right thigh, the lower end of which was mobile and shaped like the glans penis. During urination a small swelling appeared in the same region, evidently a kind of accessory pouch between the urethra and the external orifice above mentioned. In the operation which Dr. Baumgarten performed to liberate the penis, he first laid open this pouch and was able to draw out the glans and neighbouring part of the organ, the rest requiring to be detached by the knife owing to adhesions. The formation of a cutaneous covering to the exposed posterior part of the penis required a plastic operation, which was successfully accomplished. Dr. Baumgarten describes the method pursued in the ritual of circumcision, and enumerates the accidents that have been known to follow it, but this is the first case known to him in which luxation of the penis has occurred. He also recounts the facts of five other cases of luxatio penis that have been put on record, in each case due to severe injury and in each an operation was performed to restore the organ to its normal site.

[1] 1895, No. 45.

HEALTH MISSIONERS.

THE Bucks County Council have made a new departure which is, we think, an eminently sensible one. They have established a health mission, and the health missioners are two ladies who go about giving simple lectures on hygienic subjects, and in addition—this is the important part—visit the cottages at the invitation of those who live in them and show them how to apply the rules laid down in the lectures. There is all the difference in the world between an ordinary lecture on cottage hygiene and the practical application of the same such as these two ladies carry on. To bring one's attention to the dangers of dirt; to point out that water, especially at night, is not a poison, or that to allow a child with a high temperature to drink water is not only harmless but beneficial—all this is a work which requires a great deal of tact and sympathy to carry out. An extract from the diary of one of the missioners will show how her work is appreciated:—

Extracts from Health Missioner's Diary (Miss Barker) May and June, 1894.

Date.	Place.	Subject of lecture.	Approximate number present.	Invitations to visit.	[illegible]
May 2	Stoke Goldington.	Accidents.	17	20	[illegible]
May 9	" "	Infection.	17	20	[illegible]
May 23	" "	Vaccination.	14	20	[illegible]
May 30	" "	Children.	20	20	[illegible]
May 4	Filgrave.	Sick-room.	8	19	[illegible]
May 11	"	Accidents.	8	19	[illegible]
May 25	"	Infection.	13	19	[illegible]
June 1	"	Vaccination.	12	19	[illegible]
June 8	"	Children.	13	19	[illegible]
May 7	Milton Keynes.	Sick-room.	27	21	[illegible]
May 21	" "	Accidents.	20	21	[illegible]
May 28	" "	Infection.	27	21	[illegible]
June 4	" "	Vaccination.	27	21	[illegible]
June 11	" "	Children.	18	17	[illegible]
May 1	Newport Pagnell.	Drains.	14	4	[illegible]
May 8	" "	Sick-room.	27	5	[illegible]
May 22	" "	Accidents.	30	5	[illegible]
May 29	" "	Infection.	34	5	[illegible]
June 5	" "	Vaccination.	27	5	[illegible]
June 12	" "	Children.	20	4	[illegible]

The Bucks County Council and their workers deserve every credit for the suggestion and the way in which the work has been done, and we hope soon to hear of other councils emulating their example.

THE PORTSMOUTH WATER-SUPPLY.

ONE million and thirty thousand pounds is the price asked by the Portsmouth Water Company, it is understood, for their undertaking, the purchase of which by the town council is being considered by a special committee. One item in the purchase-money that is evoking much criticism is a sum of no less than £14,000 as compensation to the directors and officials, and it is said that of this sum the consulting engineer is to receive £3800, the secretary £3000, the chairman of the directors £1600, and the others £956, £946, £946, and £682 13*s.* 4*d.* respectively.

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directors receive £126 yearly for their services and the irman £210 on a triennial appointment this is a pretty valuation, if it is accurate. Meanwhile the share-lders of the company, on Thursday, Nov. 28th, held their -yearly meeting. The water rental receipts are £1113 xcess of those of last year, and as compared with four rs ago the increase is £4014, an average at the rate of 00 a year. The full statutory dividend was recommended, 8 4s. were carried to the back dividend account, and a ance of £3490 is taken forward. The directors have tainly followed a course of wisdom all too rare in similar porations with vast interests and responsibilities. For rs they have been buying up the springs and land adjacent the works, in order to control them and place them beyond picion. One stream has been filled up. Now additional wers are being applied for which will include adjacent llages in the supply and the purchase of still more land. e position with regard to the purchase is briefly this. The airman says the company mean to adhere to their former sition—that any terms must be on such lines as are usual the compulsory purchase of water companies. The com-ittee of the council is asking for a reduction in the enormous mpensation demands. At the same time the latter body as laid it down that unless a loan for eighty years can be tained, with five years' suspension of the sinking fund, the egotiations will not be proceeded with.

A LADY EXPLORER IN THE CAMEROONS.

WE do not know whether our readers have perused the escription of Miss Kingsley's travels in the Cameroons gion that recently appeared in the daily journals, but, if , they must have been struck with the courage and re-arkable powers of endurance exhibited on the part of his lady explorer. Miss Kingsley, after reaching Old alabar, proceeded to the French settlement of the aboon, and subsequently explored the gorilla country the interior and went up the Ogowe River to 'Djole. The great difficulties and narrow escapes hat were encountered on that river and its rapids, with he adventures in the Fangwe country, at Lake N'Covi, nd the range of mountains called the Sierra del Crystal, the scent of the Cameroons Peak and the little-known Rumbi ange of mountains, altogether make up, as regards hardship nd peril, one of the most remarkable journeys on record—ertainly as far as any female explorer is concerned. Not-withstanding the great hardships and physical fatigue which Miss Kingsley went through, she appears to have escaped any attack of fever and to have enjoyed good health and to have regularly kept a diary. Miss Kingsley not only seems to possess unique physical powers, but to be endowed with an undaunted spirit and love of adventure, for she intends to return to West Africa in a few months in order to explore other parts. We hope that this lady will publish a detailed account of her travels, and narrate how she managed to maintain health and strength under such exceptional conditions as she has experienced.

THE METROPOLITAN ASYLUMS BOARD AND THE VESTRIES.

A CONFERENCE representative of the metropolitan vestries and district boards was held on Dec. 3rd, the meeting being convened by the Marylebone Vestry, who took the initiative on account of that parish having recently suffered greatly from an outbreak of scarlet fever. The Asylums Board had been invited to send members to the conference, but did not do so. Eventually the following resolution—"That a communication should be addressed to the Asylums Board strongly urging them to take steps to immediately open the vacant beds at the Gore Farm Hospital at Darenth for the purpose of providing the temporary accommodation required by the local authorities for scarlet fever patients"—was unanimously passed; and by a majority of 24 votes a second resolution: "That in the opinion of this conference the authorities making the rate to raise the funds for the requirements of the Metropolitan Asylums Board should be entitled to be directly and adequately represented upon that Board." The checking of infectious disease among a dense population is perhaps the most important problem which the exigencies of civilisation have set us to solve, and we have no hesitation in saying that a very marked cause of the increase in infectious disease and in the mortality from the same has been the Elementary Education Act of 1870. Let any unbiased reader study the report of the medical officer of health of the London County Council dealing with the year 1893, where it is conclusively shown that in respect of both scarlet fever and diphtheria there was a sudden and noteworthy diminution in the prevalence of these diseases during the four weeks of August—i.e., when the London Board schools were shut—and shortly after their opening in September an equally serious increase in both diseases. This being so, the Asylums Board has an ever-vigilant enemy to cope with, and from a letter recently addressed by the clerk to the chairman of the Board it would appear that the Board is doing its best; the difficulty of procuring sites is enormous and the expenses proportionately so. We certainly agree that the authorities who raise the Asylums Board rate should be represented on the Board, but, as far as we can see, that body is fully cognisant of the difficulties it has to meet and the importance of doing so.

WARMING OF PUBLIC VEHICLES.

IT is strange that on our railways, where passengers are confined for hours in draughty carriages, no serious attempts have been made at utilising the waste heat from the engine by a system of steam-pipes or of channels for conveying warmed air, although enough has been attained in the way of experiment to prove the feasibility of the idea, and as yet the companies have contented themselves, but certainly not the public, by serving out a limited number of "foot-warmers," which, if a man have an ordinarily stout pair of boots, and still more, if these be wet, do not even succeed in warming the feet. In tramcars and omnibuses there is, indeed, less necessity for artificial heat, the external cold being rarely so intense as it is on the continent and in America. Still it would be desirable were it only for drying the sloppy floors in wet wintry weather. But in Germany, after trying every imaginable apparatus and source of heat from coal and oil to electricity, the Deutsche Wagenheizungs- und Glühstoff-Gesellschaft in Bremen has achieved a practical success, and their system is already in operation on the Bonn, Mülhausen, Thorn, and Zwickau tramways, and is being tried on those of Hanover, Copenhagen, Mannheim, Munich, and Beuthen as well as on the electric railway at Erfurt. The stove is a cast-iron box, rather less than 1 ft. high, 2 ft. wide, and 8 in. deep, fixed under the seat between the wheel boxes through which the flue is carried with bend to the open. The door of the stove is made to close practically air tight, but fresh air is admitted through the bottom of the stove from beneath the floor of the car. The mouth of this inlet being always directed forward, the draught is increased with the motion of the vehicle, as in the engine-rooms of steamboats. The fuel consists of one to three briquettes, according to the weather, introduced on movable gratings after having been brought to a white heat externally in an ordinary stove. Once ignited, they burn for seven to nine hours and without smoke, at a cost of one penny per briquette, or, including incidental expenses, at an average of

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7½*d.* per car per day. The entire cost of one such stove, including fixing, &c., is about £2 15*s.* to £3, and with this the temperature can be kept well above the freezing point when that outside is from 15° to 20° C.—i.e., from 27° to 36° F. below freezing—and at a pleasant warmth under fewer degrees of cold.

UNREGISTERED DENTISTS.

AT West Ham Police-court on Dec. 4th Arthur Warren was summoned by Mr. G. R. Matland, a dentist, for unlawfully taking and using the title "Dentist," thereby implying that he was registered under the Dentists Act of 1878. The defendant worked for the American Dentists' Association, and, evidence having been given in support of the charge, he was fined £10 and costs, Mr. Baggallay remarking that in his opinion the whole association was "bunkum." Be this as it may, we congratulate Mr. Matland upon the results of his action. With the question as to whether the defendant knew his work or not we have no concern, but he represented himself as being what he was not—an offence all too common—and is therefore properly punished.

"CLOSED" STOVES AND DIPHTHERIA.

AN outbreak of diphtheria having occurred amongst the children attending the Dunkirk board schools in the Faversham rural district, the medical officer of health has reported that upon inspecting the schools he found that "the closets were common privies and evil-smelling, that a cess-pool was unventilated, and that the schools were very stuffy and unventilated, being warmed by 'tortoise' stoves." The school board decided at once to remedy the defects in the closet arrangements, but, failing to see how the schools being warmed by "tortoise" stoves could be held responsible for their being "stuffy and unventilated," the members naturally object to being ordered to remove the present heating arrangement. The "tortoise" was the first of the firebrick-lined stoves, which, on account of their great heating power and economy in the use of fuel, have become very popular. Like all other closed stoves, requiring very little air they are not so efficient as ventilators as open fireplaces, and where they are used some other means of supplying fresh air to the rooms is absolutely necessary. It does not follow, however, that the best remedy for lack of ventilation is to remove the stoves and substitute the extravagant firegrate. In the Dunkirk schools the children are stated to be "crowded together," and it would seem that more adequate air space and freer ventilation are the real requirements, and Dr. Newsholme in his "School Hygiene" has pointed out a simple method by which closed stoves of the "tortoise" class can be made not only to assist ventilation but also to warm the incoming air. Given an unrecognised case of diphtheria, the conditions existing in and around the schools are adequate to explain the spread of the disease whatever the mode of heating adopted, and it seems rather harsh that the simple and economical "tortoise" stove should bear such a large proportion of the blame as a cause of the epidemic.

THE LANCASHIRE ASYLUMS BOARD AND THE PENSION SCHEME.

THE Lancashire Asylums Board met last week at Preston and adopted a pension scheme, combined with a scale of salaries. A committee had been appointed for the purpose which had carefully considered the reports from the various asylums throughout the kingdom, and the scheme recommended was based on the best lines of those reports. The committee adopted the age of fifty-five years at which pensions should begin. The scale of pensions was elastic, tarting as low as one-third of the salary alone, and extending to the legal limit of two-thirds of the salary and emoluments combined. The committee thought also that the actual pension in each case should be left within the limits named for the committee of each asylum to recommend. Pensions at an earlier age than fifty-five might be given in cases of incapacity arising, and when the committee thought there was sufficient reason for an exception compulsory resignation at sixty might be broken through. We are pleased to note the adoption of these recommendations to a class of public servants who are not overpaid, and whose monotonous duties are not of the most pleasant description, and we trust they will be faithfully carried out by succeeding asylum boards. In these anti-pension days we are cognisant of one medical superintendent of a Lancashire county asylum who had difficulty in obtaining a pension at all, although he was promised it by the old authority under whom he took office—namely, the visiting justices; but the change to the county council nearly lost him a pension, and what he did get was £200 per annum less than that to which he was entitled according to scale.

THE important discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c., which commenced on Nov. 26th at the Royal Medical and Chirurgical Society, 20, Hanover-square, will be continued on Tuesday next, Dec. 10th.

MR. SYDNEY HOLLAND, the Chairman of the Poplar Hospital for Accidents, makes an earnest appeal in the daily press for £3000 to build an isolation block. Scarlet fever has broken out in the wards. The Asylums Board hospitals are full, and the patients have to be sent back to their homes to spread infection there.

AT the Sanitary Institute, Margaret-street, W., on Wednesday next, a discussion will be opened by Sir Douglas Galton on the Lessons to be Learned from the Experimental Investigations by the State Board of Health of Massachusetts upon the Purification of Sewage. The chair will be taken at 8 P.M.

SPECIAL REPORT ON THE BLACKFRIARS SALVATION ARMY SHELTER PROSECUTION.

WE present to our readers Dr. Waldo's report upon the important police-court proceedings taken by the Vestry of St. George-the-Martyr against the Salvation Army in the matter of a shelter in the Blackfriars-road.

To the Chairman and Members of the Vestry of St. George-the-Martyr, Southwark.

MR. CHAIRMAN, LADIES, AND GENTLEMEN,—You will naturally expect a few words from me, as your medical officer of health, upon the important police-court prosecution lately undertaken by your vestry against the superintendent of the Salvation Army shelter in the Blackfriars-road.

First of all the vestry may be congratulated upon the fact that a danger to the common safety, although not altogether abolished, has, nevertheless, been brought nearer a proper sanitary control. In this way the vestry of St. George-the-Martyr has carried out a public-spirited policy which deserves the thanks of every local authority in London. The history of the facts which led up to the Blackfriars prosecution is simple. For three years past I have called attention in my annual reports to the dangers arising from the presence of these overcrowded and ill-regulated pseudo-charities in your midst. The dangers in question may be divided under two heads, according to their injurious effect: (1) directly on the inmates of the shelter; and (2) indirectly on the outside public.

Copies of the reports dealing with these points have been

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duly laid before the Local Government Board and the London County Council. In 1893 the Government sent Dr. Airey to inspect the metropolitan night shelters, but his report has not been made public, neither has the Local Government Board, so far as I know in my official capacity, taken any further steps in the matter, nor has the London County Council interfered. This was the position of affairs in the summer of the present year, when an outbreak of small-pox occurred in your parish, and out of forty-four cases no less than nine were traced directly to the shelter. I thereupon applied one night at the shelter for admission, which was refused, and I then drew the attention of your Public Health Committee to the occurrence. I was next instructed by your committee to apply to the local magistrate for a warrant to enter the shelter on the night of July 8th. As a result of that visit your vestry obtained a summons asking for prohibition against future overcrowding. After a protracted hearing, extending over four months, the magistrate, Mr. Slade, granted the order asked for, and stated that personally he would not regard the presence of anything under 550 inmates as overcrowding. It is worthy of note that, despite the strong assertions of defendants' counsel in the course of the trial, no appeal has been made against the decision of the magistrate.

It may be well to add a few remarks upon the scientific evidence furnished in court. The chemist who acted for your vestry found 75 parts of carbonic acid gas per 10,000 of air in what was known as the "twopenny overflow bunk-room," whereas the usual limit regarded by sanitary officers as permissible is 6 parts of carbonic acid gas per 10,000. The chemist for the defence, Mr. Wanklyn, stated that the figure, 75 per 10,000, was impossible. Without entering at length into the matter I may say that Mr. Wanklyn's view runs counter to all standard scientific teaching and experience. Pettenkofer, for instance, one of the greatest living authorities on the subject, found 73·2 parts per 10,000 in a girls' school. Mr. Wanklyn tested the air in the "twopenny overflow bunk-room," and found 8·6 parts of carbonic acid gas per 10,000. His figure of 8·6 offers a startling contrast to our figure of 75. It is easily explained, however, by the fact that Mr. Wanklyn took his sample at an earlier hour of the night, and that between our visit of July 8th and the date of his experiment extensive alterations had been carried out in the ventilation of the particular room in question. This dispute between the chemists is unfortunate, because it tends to draw attention away from the main issue. It is entirely unnecessary, moreover, for I am prepared to state from the evidence of my own senses, apart from any chemical examination, that the air of the "twopenny overflow bunk-room" on the night of July 8th was not only dangerous to health, but also to life itself. In this view I am supported by Dr. Walsh, who was with me on the night of the visit. Besides, a foul condition of the air followed as a necessary result from the gross overcrowding and the defective ventilation of the place.

I may add that not a single medical officer of health could be found to give evidence for Mr. Booth in favour of the sanitary condition of the shelter. On the other hand, my contentions as to unwholesomeness were supported by no less than five metropolitan medical officers of health, to say nothing of independent medical and scientific testimony. According to my estimate the Blackfriars shelter was able to accommodate 401 persons. On the night of entry I found 1031. On two other occasions, on the admission of the shelter officials, the numbers varied from 743 to 1045. When the magistrate, therefore, placed the limit at 550 he convicted the Blackfriars shelter authorities of gross overcrowding. As regards the decision of Mr. Slade, I may say that in my opinion the vestry is not bound to accept the figure of 550, in the absence of any knowledge upon what basis that number has been fixed. At the same time, it would, of course, be unwise to adopt any other standard in any possible future proceedings. For my own part, I see no reason why the vestry should lessen the reasonable demand for 30 square feet floor-space and 300 cubic feet air-space for each inmate. This is the minimum I regard as necessary in the presence, I need hardly add, of free ventilation.

The weak point in the present position appears to lie in the fact that your officers have no right of entry at night for purposes of inspection. As a matter of fact, I myself was refused admission in June last, and even when armed with a justice's warrant I obtained an entrance only in the face of forcible resistance and under the threat of bringing up a strong force of police.

In conclusion, it may be confidently expected that the action of your vestry will sooner or later bring these shelters and other night refuges of a similar nature within the control of the Common Lodging-house Acts.

Your obedient servant,

F. J. WALDO.

The Vestry of St. George-the-Martyr is to be heartily congratulated upon the success of its spi rited action. That such shelters, while irresponsible in their management to proper sanitary authority, must be sources of danger to the community is self-evident, and the sooner "General" Booth's disciples see this the better for us all—and probably the better for them now that a precedent has been established for opening their eyes in a police-court. We note with pleasure that Dr. Waldo's report was received in a very proper spirit by his vestry, who passed a vote of thankful appreciation of his efforts.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of the Royal College of Surgeons of England was held, at 5.30 P.M., on Dec. 4th, at 25, Grosvenor-street. Mr. George Pollock, the President, occupied the chair. There was a large attendance. The minutes of the preceding meeting were read and confirmed.

The Honorary Secretary (Mr. Percy Dunn) reported that he had received a reply from the Council of the Royal College of Surgeons of England in respect to the resolutions which the Committee had passed at the last meeting and which had been laid before the Council. The reply was to the effect that the resolutions had been received. After some discussion it was unanimously resolved:

"That the Committee of the Association of Fellows of the Royal College of Surgeons of England regrets that the Council of the Royal College of Surgeons of England has not discussed the important suggestions made by the Committee for the more satisfactory conduct of the half-yearly meetings of the Fellows of the College, but considers it desirable, owing to several important questions being set down for discussion at the half-yearly meeting of Fellows, to postpone further action for the present."

The Committee then received a deputation from the Civil Rights Defence Committee, headed by Lord Stamford, in reference to the case of Mr. R. B. Anderson.

The agenda for the annual general meeting of the Association, which had been fixed for Dec. 11th, were then determined. These consisted of the President's address, the auditor's report, the election of officers for 1895–96, the case of Mr. R. B. Anderson and the appointment of representatives of the Association on the Civil Rights Defence Committee, and other business.

At the instance of Mr. T. Holmes, the question of the attitude of the Association in regard to the claims of the Members of the College, as expressed in the resolutions passed at the last annual meeting of Fellows and Members of the College, was again brought under the notice of the committee as these resolutions would probably be brought before the Fellows for discussion at the half-yearly meeting in January next. It was, however, decided that the advocacy of the Members' claims could not be undertaken by the Association, a policy which had been for some considerable time pursued in accordance with the wishes of the members of the Association, but it was pointed out that the adoption of this policy was not intended to fetter individual action or expression of opinion.

This concluded the business of the meeting, and the committee adjourned.

FOOTBALL CASUALTIES.—On Saturday last a member of the Lancaster Rugby Football Team, while playing in a match between the Royal Grammar School team, Lancaster, and the Christ Church Hornets, fractured his fibula.—During a game at Pontypool on Tuesday last a player sustained a fracture of three of his ribs.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5620 births and 3639 deaths were registered during the week ending Nov. 30th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 22·1 to 19·0 per 1000, further fell last week to 17·9. In London the rate was 17·3 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Croydon, 12·2 in Brighton, 12·5 in Portsmouth, and 13·1 in Bradford; the highest rates were 20·1 in Manchester, 22·7 in Preston, 23·3 in Liverpool, in Salford, and in Oldham, and 29·0 in Blackburn. The 3639 deaths included 529 which were referred to the principal zymotic diseases, against 522 and 548 in the two preceding weeks; of these, 211 resulted from measles, 93 from diphtheria, 65 from "fever" (principally enteric), 63 from whooping-cough, 48 from diarrhœa, 46 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases was recorded in Brighton; in the other towns they caused the lowest rates in Croydon, Derby, Hull, and Gateshead, and the highest rates in Birmingham, Salford, Wolverhampton, and Blackburn. The greatest mortality from measles occurred in Birmingham, Manchester, Swansea, Wolverhampton, and Salford; from whooping-cough in Wolverhampton and Leeds; and from "fever" in Norwich, Burnley, Sunderland, and Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 93 deaths from diphtheria included 63 in London, 6 in Birmingham, 3 in West Ham, and 3 in Sheffield. Two fatal cases of small-pox were registered in West Ham, and one in London, but not one in any other of the thirty-three large towns. There were 79 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Nov. 30th, against 78, 86, and 89 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 14, 23, and 20 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2799, against 2847, 2845, and 2807 on the three preceding Saturdays; 320 new cases were admitted during the week, against 349, 298, and 296 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 447 to 327 in the three preceding weeks, further fell to 285 last week, and were 146 below the corrected average. The causes of 51, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Oldham, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Norwich, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 21·4 to 18·1 per 1000, further fell to 17·4 during the week ending Nov. 30th, and was 0·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·4 in Leith and 16·7 in Paisley to 21·1 in Dundee and 24·0 in Perth. The 503 deaths in these towns included 18 which were referred to diarrhœa, 11 to whooping-cough, 8 to scarlet fever, 6 to diphtheria, 5 to "fever," 1 to measles, and not one to small-pox. In all, 49 deaths resulted from these principal zymotic diseases, against 52 and 48 in the two preceding weeks. These 49 deaths were equal to an annual rate of 1·7 per 1000, which was 0·9 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The 18 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, and included 7 in Aberdeen, 5 in Glasgow, and 4 in Dundee. The deaths referred to whooping-cough, which had declined from 21 to 10 in the three preceding weeks, were 11 last week, of which 9 occurred in Glasgow. The fatal cases of scarlet fever, which had been 9 and 12 in the two preceding weeks, declined to 8 last week, and included 4 in Edinburgh and 3 in Glasgow. The deaths from diphtheria, which had declined from 8 to 3 in the three preceding weeks, rose again to 6 last week, of which 2 occurred in Dundee. The 5 fatal cases of "fever" showed a decline of 3 from the number in the preceding week, and included 2 in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 134 and 125 in the two preceding weeks, further declined to 107 last week, and were 57 below the number in the corresponding week of last year. The causes of 35, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·1 and 23·5 per 1000 in the two preceding weeks, further rose to 27·1 during the week ending Nov. 30th. During the past nine weeks of the current quarter the death-rate in the city has averaged 24·5 per 1000, the rate during the same period being 18·2 in London and 17·5 in Edinburgh. The 168 deaths registered in Dublin during the week under notice showed an increase of 8 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 6 and 10 in the two preceding weeks; of these, 4 resulted from "fever," from whooping-cough, 1 from measles, 1 from scarlet fever, 1 from diphtheria, and 1 from diarrhœa. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 2·5 in London and 1·3 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 3 in the two preceding weeks, further rose to 4 last week. The 2 fatal cases of whooping-cough exceeded the number recorded in any recent weeks, while the mortality from scarlet fever and from diarrhœa showed a decline. The death from measles was the first during the current quarter. The 168 deaths in Dublin last week included 30 of infants under one year of age, and 41 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers recorded in the preceding week. Five inquest cases and 7 deaths from violence were registered; and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 11, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

THE following officers have arrived from India:—Surgeon-Majors Leader, Carleton, and Barrington. Surgeon-Major Nealon has been invalided from Ceylon. The following officers have embarked for India:—Surgeon-Majors Nicholson and Kerin, and Surgeon-Lieutenants Taylor and Morgan. Surgeon-Major Fox has embarked for a tour of service in Jamaica.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel James Macartney, M.D., from half-pay, to be Brigade-Surgeon-Lieutenant-Colonel, Supernumerary to the establishment, with precedence next below Brigade-Surgeon-Lieutenant-Colonel J. Barry, M.D. Surgeon-Captain Alfred Wright, from the Seconded List, to be Surgeon-Captain, vice P. B. Skerrett, retired.

INDIA AND THE INDIAN MEDICAL SERVICE.

Surgeon-Captain R. Bird is appointed to act as Civil Surgeon of Bankura. Surgeon-Captain W. Vost, Civil Surgeon, on return from temporary military duty, is posted to the Bahraich District. Surgeon-Major F. P. Nichols is appointed to hold collateral charge of the Civil Surgeoncy at Shwebo. Surgeon-Lieutenant Hugh Bennett is appointed to the Officiating Medical Charge of the 7th Bombay Infantry; Surgeon-Lieutenant Vivian Bennett to the Officiating Medical Charge of the 3rd Bombay Infantry; and Surgeon-Lieutenant Evans to the Officiating Medical Charge of the 20th Bombay Infantry. The services of Surgeon-Captain B. C. Oldham and of Surgeon-Captain F. P. Maynard, Officiating Resident Physician, Medical College Hospital, and Professor of Pathology, Medical College, Calcutta, are placed at the disposal of the Inspector-General of Gaols.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeons:

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HEALTH OF [illegible]

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ARMY MEDICAL [illegible]

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NAVAL MEDICAL [illegible]

The following appointments are [illegible]

A. M'Adam to the *St. Vincent*; A. Patterson to *Blake*; J. L. Sweetman to the *Pembroke* (additional) Chatham Yard; A. Gorham to the *Majestic*; J. Lyon he *Magnificent*; H. A. W. Richardson to the *Impregable*; A. W. Russell to the *Royal Sovereign*. Staff-Surgeons: J. Dudly to the *Empress of India*; H. E. Marsh to *Rupert* (additional) for Gibraltar Hospital; A. Kidd to *Ganges*. Surgeons: J. E. Coad to the *Majestic*; C. ckland to the *Magnificent*; E. D. Minter to the *Rupert*; E. Rock to the *Blake*; F. J. Barter to the *Empress of ia*; E. P. Mourilyan to the *Rupert* (additional) for raltar Hospital.

ARMY MEDICAL RESERVE OF OFFICERS.

urgeon-Captain William Vernon, having resigned his unteer appointment, ceases to be an Officer of the y Medical Reserve of Officers.

VOLUNTEER CORPS.

rtillery: 1st Worcestershire and Warwickshire: Sur-n-Captain R. W. Edginton, M.D., to be Surgeon-jor. *Rifle*: 1st (Pembrokeshire) Volunteer Battalion the lsh Regiment: Alexander James Anderson, M.B., to be geon-Lieutenant. 1st Volunteer Battalion the Essex iment; Adam Robert Hamilton Oakley, Gent., late geon-Captain 2nd London Volunteer Rifle Corps, to be geon-Lieutenant. 13th Middlesex (Queen's Westminster): geon-Lieutenant A. T. Collum resigns his commission. l Volunteer Battalion the Manchester Regiment: Surgeon-otain T. Carr, M.B., resigns his commission.

THE LATE EXPEDITION IN MADAGASCAR.

THE recent debate in the French Chamber on the expedition Madagascar and the new treaty consequent on the capture the capital by the French force, with the establishnt of a French protectorate, naturally gave rise to a good l of political excitement and public interest. There is no ubt that the army had to encounter very great and expected difficulties of a climatic and topographical kind their campaign in Madagascar, and that the expeditionary ce and its commander deserve great credit for their roism, endurance, and discipline in the field, and for their y orderly and humane conduct when they had attained eir object by the capture of Antananarivo and the bmission of the Queen. The admirable qualities of e French soldiers have been conspicuous on this casion, and they have been heartily recognised in is country. The sacrifices of life and health have, wever, been very large. M. Vigne said that the ganisers of the expedition to Madagascar had certainly no ght to the gratitude of the nation—on the contrary, the tion should demand of them an account of so many lives ving been sacrificed. He then entered into particulars illusative of the shortcomings, defective hygienic and medical rangements, and bad management of the expedition. . Pier Alype also dwelt upon the faults committed at e commencement, for which he held the Marine Department more especially responsible. M. Cavaignac, the French inister of War, stated that 17,500 men had been sent to ajunga to form the expeditionary corps. Three thousand d died in Madagascar, 6000 had already returned to rance, and 3900 more were to be brought back to France ithout delay. To the list of deaths in Madagascar it was ecessary to add that 300 had died on the voyage home, and bout 100 in the French hospitals after their arrival. The otal number of deaths was therefore about 3500. The reatest mortality had been caused, M. Cavaignac said, by he employment of European troops in unloading barges and onstructing roads. He warned the Chamber against seeking capegoats or making the Madagascar question a subject of ecrimination. The difficulties had been of an exceptional ind, but he admitted that faults had been discovered in rench organisation which it was necessary to reform, and lescribed or explained many of the exceptional and adverse conditions under which the expedition had laboured. The Chamber eventually passed a resolution by a large majority pproving the declarations of the Government, and sending ts congratulations to the soldiers and their chiefs. Notwithstanding this, it is evidently the intention of the Government to organise in future a colonial army and to introduce a great many improvements in military administration in connexion with any future expeditions of this nature.

THE NEW COMMANDER-IN-CHIEF.

It will not have escaped our readers' attention that Lord Wolseley, in his speech at the Royal United Service Institution on the 28th ult., in connexion with Colonel Balfour's address on the Tactical Training of Officers of Volunteers, made some observations which were quite at one with those which he had previously made, and are sufficiently indicative of what may be expected during his *régime*. Although we have not come to that period when we can, on the one hand, lay down dictatorially to a Volunteer officer that if he does not pass certain examinations in tactics his services will be dispensed with, Lord Wolseley remarked, on the other hand, that whenever we get a bad commanding officer "we should do with the Volunteers what I hope will always be done with the line, that we should get rid of him." And he went on to add, with regard to incompetent commanding officers, that we should say, "You have done your best, sir, but your best is not good enough for us, and you must go." It is clear that the new Commander-in-Chief intends, as far as possible, by selection of the best and removal of the worst officers, to try, at any rate, to make the army of the future a more perfect fighting machine. His lordship clearly has no belief in one man being as good as another, or "the much of a muchness" principle. It may be assumed, we think, from the foregoing that what applies to regimental corps will also apply to departments, and that for the future there will be, as far as Lord Wolseley is concerned, a greater application of the principle of selection in the Army Medical Service than has been the case with his predecessor in the office of Commander-in-Chief.

ARMY MEDICAL STAFF EXAMINATION.

An examination of candidates for seventeen commissions in the Army Medical Staff will be held at the Examination Hall, Victoria Embankment, W.C., on Feb. 7th, 1896, and following days. Applications for admission to the competition should be made in writing, without delay, to the Director-General, Army Medical Department, 18, Victoria-street, London, S.W.

The *Army and Navy Gazette* states that Surgeon-Colonel T. Maunsell, now Officiating Principal Medical Officer of the Bengal Army Corps, will, pending promotion to surgeon-major-general's rank, vice Inkson, succeed the latter officer, on his retirement by age, at Malta. Surgeon-Colonel J. Maturin, on promotion, has taken up the duties of Principal Medical Officer, Colchester. Brigade-Surgeon-Lieutenant-Colonel T. O'Farrell will, when gazetted to higher rank, succeed Surgeon-Colonel Churchill in the Home District on the latter's probable transfer to India, vice Maunsel. This will bring about no less than four principal medical officers in the Home District in three years.

On Nov. 29th 184 invalids arrived at Netley from India by H.M.S. *Malabar*. A further large number of invalids is expected to arrive at the Royal Victoria Hospital, Netley, ex s.s. *Dilwara*, shortly.

TORQUAY MEDICAL SOCIETY.—At a meeting of this society, held on Nov. 20th at the Torbay Hospital, the president, Mr. R. Pollard, M.B., brought the case of Mr. Anderson of Tobago before the notice of the members present, and the following resolutions were carried unanimously: First, "That on the grounds set forth in the interim reports of the Civil Rights Defence Committee the members of the Torquay Medical Society present desire to express their entire concurrence with the Civil Rights Defence Committee in earnestly inviting members of Her Majesty's Government, Members of Parliament, public men, and public bodies, both medical and lay, to coöperate with the committee in defence of the chartered and statutory rights of medical men, and of the ancient rights and liberties of British subjects." Secondly, "That this society, having considered the case of Dr. Anderson, desires to express its sympathy with him under the wrongs he has sustained, and recommends for approval by the council that a sum of five guineas be contributed in the name of the society to the fund being raised in support of Dr. Anderson's appeal." The sum of five guineas was subsequently forwarded to the Civil Rights Defence Committee, with a further sum of ten guineas subscribed by medical men in Torquay; and a memorial signed by most of the medical men in Torquay has been forwarded to their Member of Parliament, Captain Philpotts, R.N., asking him to afford the Civil Rights Defence Committee his coöperation and support.

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Correspondence.

"Audi alteram partem."

"'RETURN' CASES OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—The interesting and carefully considered paper by Mr. T. W. Thompson in THE LANCET of Nov. 23rd appears opportunely at a time when the profession generally is interested in the subject of the isolation of infectious diseases, and especially so to those who are in any way connected with the management of infectious hospitals. At the present time the subject is particularly interesting to me, on account of a case which has occurred in my own household, and which I think may be of some general interest to the profession as an illustration of a "return" case where careful precautions were adopted with the view of preventing the occurrence of such an unfortunate circumstance. To make matters clear I had better explain that my house consists of the ground floor, first floor, and second floor; the nurseries, day and night, adjoining one another on the second floor. I have two children; C., the elder, aged six and a half years, and E., the younger, aged five. I will put the case more fully immediately, in a tabular form, but will summarise it briefly as follows. C. contracts scarlet fever, and within thirty-six hours of the onset is taken to an infectious hospital in order to avoid any risk to E., who is a delicate child and has had middle-ear mischief on two occasions, and who could not be sent away from home. The nurseries are stripped, disinfected, and repapered, and the furniture all carefully washed with a strong disinfectant. E. (the younger child) then returns to the nurseries and remains well until eleven days after joining her sister on the return of the latter from the hospital. C. (the elder child) remains at the Fever Hospital between seven and eight weeks, and is then discharged. All clothes used at the hospital are left there, and my wife took a fresh set of clothes, which were put on the child immediately after a bath, and she was at once brought home, the weather being too cold to send her away. E. (the younger) is sent for a short holiday, and does not join her sister until three days later. Eleven days after the sisters have come together E. contracts scarlet fever, from which she is at the present time suffering.

Probably the following tabular statement will make the case clear:—

1st week, beginning Tuesday, Sept. 3rd	C—— and E—— go for a holiday to some friends.
2nd week, beginning Monday, Sept. 10th	C—— and E—— return home. The same evening C—— contracts scarlet fever. On Sept. 11th C—— is taken to the infectious hospital.
3rd week	The nurseries are closed, and E—— is kept on the ground and first floors.
4th week	The nurseries are stripped and fumigated with chlorine; all paint and furniture are washed with a strong disinfectant, and the nurseries are re-papered.
5th week	E—— again occupies the nurseries.
6th "	
7th week	E—— goes away for a holiday at the seaside.
8th "	
9th week: Tuesday, Oct. 29th	E—— returns home and occupies the nurseries.
" Friday, Nov. 1st	E—— is sent from home to some friends, and C—— returns from the Fever Hospital.
10th week: Monday, Nov. 4th	E—— returns home and joins her sister C——.
11th week: Saturday, Nov. 16th	E—— contracts scarlet fever.

I cite these cases as not in any way reflecting upon the management of the Fever Hospital, where my child was most carefully and kindly attended to, and where the officers, knowing the reason for which I had sent the child to the hospital rather than nurse her at home, had been particularly careful to keep the child for what was considered a sufficiently long period and up to a time when they thought there was no risk. In fact, as an extra precaution I know she was kept a few days after the time when she was considered safe and fit to be discharged.

I have sent you a note of this because I think there can be little doubt that it was a "return" case, and that in the case of the younger child the scarlet fever was not contracted from another source of infection. I am aware of the difficulty, in fact the impossibility, of being certain upon the latter point, but I am not aware that child ever came into contact with another case of fever; and between the time the elder child left the h and the day the second one took on the fever I had a case of the disease in question.

I think medical officers of infectious hospitals are fully aware of the risks attending the discharge scarlet fever patients and that they do not deserve the that is frequently attached to them. I also quite agr Mr. Thompson when, in his concluding paragraph, "that although a certain proportion of 'return' cas of course at divers times and places be due to circ in the discharge of patients, or to some other culpable maladministration, whether on the part hospital officials or of those responsible for the disi of the patients' dwellings and effects, there are, never in all probability some more obscure factors at work— perhaps closely bound up with the natural history of fever."

I am, Sirs, yours faithfully,

Mosley-street, Manchester, Nov. 27th, 1895. THOMAS H

THE INFECTION OF MILK.

To the Editors of THE LANCET.

SIRS,—A recent theft of milk[1] leads me to write If this man had not been detected in the act of ste milk, no one would have been one whit the wis probably the whole neighbourhood would have been— I write may yet be?—infected. For here is a man with his wife and having three children ill with scarl all of them occupying one small room, who goes out jug, probably a dirty one or otherwise infected, and into a neighbouring dairyman's churn. It would be ing to know what became of the rest of the milk in the Scarlet fever in this case might, or may, have been through the entire district, and in this particular in the origin in all probability would never have been tr the thief had not been caught white-handed. Thi shows one of the many great difficulties of detecti cause of infectious diseases. I would now like to po that until we have a proper sanitary inspection and re tion of all places where milk is sold as well as whe produced our present system of sanitation is almost I have for some time past been watching some probable causes of milk infection in London. The stations in the country and elsewhere may possi thoroughly inspected—such, for instance, as the reg inspection of the cows, the chemical and bacteri examination of the milk, water, and various utensils the health of the servants and the surrounding inha But what is the use of all this, if the milk cans and utensils are left at any time open and exposed to the accessible to anyone either in course of transit or a retail establishment in London or elsewhere.

The causes of infection are numerous. The can utensils are left uncovered, and exposed to the dirt not only of the houses and small retail but also to the clouds of dust blowing from the without. You may often enter the dairies only the milk uncovered upon the counter or, often, upo floor when the dairy is being swept out. The feet of cu ous customers, and the dresses of women in parti convey unheard of abominations from the public stre the floor of the dairy, and in dry weather this filth is w up and thus wafted all over the place only to settle in the milk. I have occasion repeatedly to visit one largest railway stations for the reception of milk in metropolis, and I have seen the porters sweeping refuse from the station platform and putting it in empty milk cans standing on the platform. I have them with hot water in these cans during the winter dipping a dirty broom into them and washing grease filthy parts of the platform and then again transferring dirty broom to the milk cans. I could of course mul these examples almost indefinitely, but the foregoing are patent that it must be clear to everyone that until the milk properly stored, not only in the country, but in towns, at dairies and retail establishments the present condition is more than useless—it is mischievous.

I am, Sirs, yours truly,

London, Dec. 3rd, 1895.

[1] Evening News, Dec. 2nd.

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"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—It is gratifying to know that the profession has gained a great victory at Portsmouth, and the effect, I hope, will be to encourage holders of club appointments in other towns to combine together and insist on fair and adequate remuneration for services rendered. There is one reform which is most urgently needed with respect to the tenure of club appointments. In the vast majority of club rules it is definitely stated that the medical officer shall hold office "during the pleasure of the 'court.'" This unfair rule enables a club to dispense with the services of their medical officer without assigning any reason and at a short notice. It is within my own knowledge that this has been done. It is unjust, because in many instances the medical officer has no notice of the meeting which is called for the specific purpose of dispensing with his services. He is only made aware of what has been done when he receives the official intimation that his services will not be required after a certain date. I suggest that an association of club medical officers should be formed to deal with this and other unjust rules. Justice demands that a medical officer should have every opportunity of answering any complaints that have been made against him, and also that he should have an opportunity given him of attending any meeting called to discuss the question of his dismissal.

I am, Sirs, yours faithfully,

Cardiff, Nov. 30th, 1895. T. GARRETT HORDER.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Dr. Walter Carr's letter in your last issue is amusingly persuasive, but not convincing; its gallantry is admirable, its arguments (not quite) irresistible. Because A drives in the thin end of a wedge it is no reason that B, who has far more interest in the operation and is a better judge of its expediency, should force it further in. If the question had had to be decided in the first place by the general body of the profession, instead of by certain examining bodies, the movement would probably never have got a start. And why should not this female craze die out in course of time, just like other female crazes, which are for the most part periodic and recurrent? Take, for instance, examples to be found in the essayists of last century. Goldsmith ridiculed in his happiest way the fashion of women of the day to imitate male attire. Has not this disappeared and cropped up again. Steele also devotes one of his "Tatlers" to the fondness of ladies (!) of attending trials for rape. Is not this exactly paralleled by the attendance at the divorce court to-day? And in all probability we should find in the old essays an account of the attempt by women to enter the medical profession then if the means of doing so had been like what they are now. When the times again become less sophisticated we are not likely to hear so much of these foolish movements. To know these Aspasias of the Marylebone and Gray's Inn Roads is to—well, is, no doubt, a liberal education. By what blandishments or bribery the large array of signatures was obtained to the petitions to the two Royal Colleges no one would think of inquiring. The method by which women gained an entry into the British Medical Association, "by the practically unanimous vote of 16,000 members," as the *British Medical Journal* has it, is a curious historical incident. Let us be warned in time and follow the wise example of Ulysses in his adventure with the Sirens, remembering that the encouragement and admission of women are making our profession the laughing-stock of sensible people of both sexes. Think, Sirs, of what would come to pass in the constitution of your paper should this peculiar movement make much further headway. Instead of an occasional paragraph on the wearing of stays, &c., you would perhaps be tempted to sacrifice dignity to popularity and insert a weekly article on Fashions and perhaps also a column of Gossip, to please your numerous feminine readers.

I am, Sirs, yours truly,

F. LUCAS BENHAM, M.D. Lond.

Elizabeth-street, S.W., Dec. 2nd, 1895.

"ADENOID GROWTHS IN THE PHARYNX."

To the Editors of THE LANCET.

SIRS,—The practical points in Sir William Dalby's article on the above subject in THE LANCET of Nov. 30th must have been read with much satisfaction by most who are interested in this affection. I know no more satisfactory operation in surgery than that for the removal of adenoids when undertaken before it is too late and thoroughly carried out. In order to thoroughly carry it out two points must mainly be observed: first, the patient must be anæsthetised for a sufficient length of time, and, secondly, more than one instrument must be used. To fulfil the first point it is, in my opinion, necessary that some anæsthetic having a longer action than nitrous oxide gas should be employed. Some time back, when this gas was strongly recommended for this operation, I gave it a trial in several instances, and though I do not think I am usually considered a slow operator, and though I quite admit it gives ample time to tear out a few masses with the forceps or roughly scrape out tissue with the curette, I am convinced the interval is not long enough to complete what I would term the "toilet of the naso-pharynx"; in two of my own cases when using the gas an unseemly struggle between operator and patient on the table wound up the proceedings. Then as to the second point—that more than one instrument should be employed—I cannot understand after a considerable experience how one operator uses the forceps only, another the curette, whilst the third always professes that his own finger-nail or the steel nail suffices. I admit that every now and then one finds a little soft, succulent overgrowth of tissue which one can break down and remove with the finger-nail at the time of examination without any anæsthetic, local or general. That I may now and then do; but in an average case I always make a point of employing all three instruments. Beginning with the forceps I remove all the larger masses, then I scrape well round with the curette, and complete the "toilet of the naso-pharynx" with my finger-nail. I almost always use chloroform, under which the patient is fully put by a very experienced anæsthetist; then the lint or handkerchief is removed and no more is administered. One practical point is important, and that is that the tonsils (faucial) should not be removed at the same sitting; where their size renders it necessary that they should be dealt with surgically, they should be removed first, two or three weeks before the adenoids; for tonsillotomy no anæsthetic, local or general, is required. I never use any. Sir William Dalby's word of caution towards the end of his article was urgently needed; just as members of the Stock Exchange are commonly supposed not to be able to see beyond the next account day, and some ophthalmic surgeons appear to regard a pair of spectacles as necessary for every patient who consults them, so many who dabble in nose, throat, or ear diseases have "adenoids on the brain."

I am, Sirs, yours faithfully,

S. JOHNSON TAYLOR, M.B., C.M. Edin.

Prince of Wales-road, Norwich, Nov. 30th, 1895.

CHLOROFORM IN TEETH EXTRACTION.

To the Editors of THE LANCET.

SIRS,—As there seems to be some difference of opinion on the matter, I should be glad if I might have the benefit of your opinion on the question as to whether or not it is legitimate to give chloroform in teeth extraction *under any circumstances*. I am told by some of my medical brethren that of recent years it is generally held not to be so, and as I am sometimes asked to administer chloroform for neighbouring dentists in cases where a number of teeth have to be extracted, I am naturally anxious to know whether I am justified or not.

I am, Sirs, yours faithfully,

Nov. 28th, 1895. J. B. CROZIER.

*** It is generally held that chloroform should not be given for dental operations, as the mortality under that anæsthetic is peculiarly high in that particular procedure. When, however, it is imperative that a clearance of a number of teeth or roots should be made a medical man is justified in giving chloroform. In such cases the patient should be kept lying flat on the back, should be freed from all tight clothing, and the same precautions adopted as though a major operation was to be performed. To give

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chloroform to a casual patient sitting in a dentist's chair is not only most inexpedient but is highly dangerous.—ED. L.

"THE DIAGNOSIS OF TONSILLITIS."

To the Editors of THE LANCET.

SIRS,—Under the above heading, with reference to certain "cases in the parish of Fulham very like diphtheria in its early stage," Dr. Robert Lee states: "We have reasons for knowing that, although the Klebs-Löffler microbes may be present, this disease is not diphtheria." It would be conducive to a much clearer understanding if Dr. Lee would tell us what those reasons may be.

I am, Sirs, yours truly,

ARTHUR H. W. CLEMOW, M.D. Edin.

Earl's-court-road, Kensington, Dec. 3rd, 1895.

THE CASE OF DR. WIGHT.

To the Editors of THE LANCET.

SIRS,—The jury have found Dr. Wight guilty of the offence with which he was charged; but, after all, a jury composed of laymen must, even with the assistance of the evidence of medical experts, have great difficulty in coming to a just conclusion. They, no doubt, do their best in such cases, and no doubt they did their best in this case to master the questions submitted to them. Still, there are medical aspects of the question which they must find it almost impossible to appreciate. For example, rupture of the uterus in its most complete form may occur in the course of the operation of version, no matter how carefully performed, and no matter whether the operator merely be one of whom the ordinary degree of skill may be expected, or whether he be one of special skill and experience in the performance of obstetric operations. The same is true as regards cases in which the forceps is used. No doubt such an accident is of great rarity if care and skill be employed; nevertheless, in justice to Dr. Wight, it ought to have been clearly understood that such an accident may happen even in the presence of the highest skill and of the greatest experience. Further than that, in very rare cases rupture of the uterus may occur, not only apart from any operative interference, but apart from any known indication for operative interference. I have in mind such a case. The patient had had two children naturally before and was again in labour. There was no contraction of the pelvis, she had only been in labour some two hours, and the second stage of labour was well advanced, the os uteri being fully dilated, and everything apparently progressing easily and satisfactorily. Suddenly the patient became collapsed; she was then delivered easily with the forceps, but she died in about a quarter of an hour. The child was not unusually large. Post-mortem examination showed that a spontaneous partial rupture of the uterus had occurred under the peritoneum, with extravasation of blood rather low on the posterior wall; the peritoneal coat had then given way over the extravasated blood, and the patient had bled freely into the peritoneum, and so died of hæmorrhage. Had the forceps been used here *before* the collapse set in it might easily have been suggested that the fatal accident was due to the unskilful use of the instrument. The case was, in fact, an example of one of those unavoidable accidents that no amount of skill, so far as our present knowledge goes, can foresee or prevent. The possibility that Dr. Wight's patient may have died through the occurrence of an unfortunate accident in a category similar to that of the case briefly alluded to appears by no means improbable, and, at all events, he seems entitled to the benefit of the doubt, which it is almost impossible to satisfactorily eliminate.

I am, Sirs, yours faithfully,

M.D.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—We are asked to state that, owing to want of room, the honorary secretaries are unable to issue any more tickets for the concert and distribution of prizes of the Volunteer Ambulance School of Instruction, which will take place at Crosby Hall to-day (Saturday).

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1227.*)

UNITY AND PEACE AT YORK: A DEFENCE OF THE FRIENDLY SOCIETIES' DISPENSARIES.

YORK is the first town I have visited where I have found a grievance and heard no complaints. The medical profession is absolutely united. The club medical officers hold a honoured position in the Medical Society. There is no complaint against them; all work harmoniously together. The profession looks upon the friendly societies' dispensary with no unfriendly feeling, and the general impression is that everything is for the best, if not in the best of possible worlds, at least in York, which is evidently, so far as professional interests are concerned, the best of possible towns. Not a little of its very exceptional contentment is due to the early organisation of the profession. The record carefully kept says that on Feb. 16th, 1832, a meeting of medical men was held in the house of Dr. Goldie in York. Dr. Wake was in the chair, and it was then decided to issue a circular invite "physicians and members of the Association of Surgeons Apothecaries resident in York" to form a medical society. The first meeting was held on the following March 3rd, and then the York Medical Society was formally constituted. From the very first the society displayed great activity. It held meetings at the dispensary on every alternate Saturday evening during the session. This continued till 1859, when a special room was rented in Minster street. The meetings were held there until the year 1874, and during the following three years in the board room of the York County Hospital. After this the society removed to a more central part of the city, and finally in 1890, a permanent library and meeting room was rented and furnished at Low Ousegate. The objects of this society are "the advancement and diffusion of medical knowledge." The membership is limited to duly qualified medical practitioners. The subscription is one guinea per annum for town members residing within three miles of the General Post Office, and half that sum for county members residing beyond this distance. A single payment of £5 5*s.* constitutes a life membership. The society holds every year twelve ordinary meetings during the session, which begins in October. The reading room is open from 10 A.M. to 10 P.M., and a sum is annually voted for the purchase of books and instruments. The members may borrow and use these instruments but are fined if the instruments are detained beyond a reasonable time or are not returned clean and in good condition. All the practitioners at York have joined this association. Now in the constitution of this society there are two features which have a practical bearing on the question of the clubs. From the very first, not only have the club physicians been admitted, but a special point has been made of gaining their adhesion. More than this, Mr. Bryson, the principal medical officer of the friendly societies' dispensary, has been elected a member of the council of the York Medical Society. Secondly, it will be noted that the society holds frequent meetings; thus the medical men are kept well in touch, and are therefore more likely to act loyally towards each other. Differences which are so often due to a want of mutual understanding may thus be explained away before they have time to reach an acute stage.

Both Dr. James Ramsay, the president, and Dr. Richard Turner, the secretary of the society, assured me that the medical officers in the service of the friendly societies were most honourable men, against whom there was no sort of complaint, and with whom they had frequent consultations. Little or no difficulty had arisen with regard to infectious cases and the notification of such cases. The club medical men had, in all circumstances, supported the York Medical Society. Dr. Ramsay, on his side, always refused to attend members of the friendly societies unless in consultation, in order to show club patients that they could not do just as they liked. If people join a club, then they must adhere to the medical officer of the club and not call in a private practitioner to make up for any shortcoming that may arise in the club method of treatment. Dr. Ramsay, however, far from feeling any resentment against these clubs, thought that the medical profession had

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by overcharging, themselves favoured the formation of such institutions. He had known cases where bills for about £15 had been presented to servant girls whose annual wage barely amounted to that sum. Then a bill of perhaps £30 would be presented to the head of a family whose income might not exceed £200. Dr. Turner, when speaking on the same subject, remarked that there were very few members of the friendly societies who could afford to pay properly for medical attendance. Many families who belonged to the friendly societies could, on an occasional emergency, pay in the course of a year £2 or £3 for medical attendance. but if there was any serious illness the charge for medical attendance would amount to from £5 to £10, and this they really could not pay. The York friendly societies' dispensary is maintaining three medical men who are, taking all in all, as well off as if they had the same class of people on their books as private patients. The argument, I take it, stands thus: there are a number of families who could and would, without involving themselves in financial difficulties, pay £2 or £3; but if they are charged £5 to £10 the probabilities are that they will pay nothing at all. Is it not better that such families should pay some 8*s.* to 12*s.* per annum to a friendly society? Thus some sort of payment is ensured for medical attendance, the club medical officer is certain of his income, and the general practitioner is relieved of a large class of patients who constantly disturb him and require his services, but who never pay. Both the president and secretary of the York Medical Society do not believe that there is any strong feeling in York against the friendly societies' dispensary, and they are not troubled by commercial medical aid companies. Still they do not doubt that serious grievances exist elsewhere, and, if the profession take action in a national sense, the York Medical Society will, in all probability, not be wanting in the spirit of solidarity that should unite medical men throughout the country. It will, however, be necessary to discriminate between the abuse of contract work and the action of these friendly societies, which in their way are excellent institutions.

On calling at the friendly societies' dispensary I found Mr. Bryson, the chief medical officer, equally satisfied with things in general. His income was safe. It was sufficient for him to live in comfort, to bring up his family, and to have some enjoyment in life. He was allowed an occasional holiday, was not overworked, and had extra assistance during the influenza epidemic. He did not believe the dispensary was greatly abused by rich members. He was very strict in giving equality of treatment, and, by making rich men sit down among the poor patients and await their turn, a sort of wage limit was established. A man in a good business would lose too much time and prestige if he came to the dispensary. He thought that, of the new members admitted, there were hardly any who earned more than 25*s.* a week; but they sometimes rose to better circumstances in later years and still remained members of the society. These members who had improved their position in life sometimes preferred to keep to the medical officer of the club who had attended them in their less prosperous days.

Subsequently I had a lengthy and extremely interesting interview with Mr. John Brown, who is not only the secretary of the dispensary—the York Friendly Societies' Medical Association as it is called—but the general secretary of the Friendly Societies' Medical Alliance. Mr. Brown, as secretary of this alliance, is a sort of connecting link between all the friendly societies of Great Britain, and can, therefore, speak with great authority on the subjects at issue. Speaking in the first place of the local dispensary at York, Mr. Brown very clearly set forth why it was that this institution rested on a sound financial basis. He protested that it was a great injustice to take up a current balance-sheet of a society and forthwith pronounce judgment. The accounts of a current year could only be estimated at their real value and significance when taken in relation to the past history of the organisation. Thus, before investigating the last balance-sheet of the York dispensary it was first necessary to understand how that institution had been constituted. Eighteen years ago the members of the friendly societies at York determined to open a dispensary of their own. The first step taken was to make a levy of 1*s.* per member, which was called an entrance fee. In the course of four months they had collected £217. With this sum in hand they were able to hire a house at £40 rent and furnish it with the requisites for a dispensary. As they were able to pay cash they secured the best discount in the purchase of drugs, &c., obtainable in the market. Not content with this, they organised a grand bazaar, and the result was so good that they finally realised a total sum of £450. Having this capital in hand, the promoters of the dispensary were able to borrow at a low rate of interest some £575 more, and then to purchase a house for their dispensary. Thus at the present time, instead of paying £40 rent, they have larger and better premises and pay only £19 interest for the money they have borrowed. Then, again, one must take into consideration the shilling entrance fees, which at first were very numerous—£38 17*s.* in 1878, £33 4*s.* in 1879, and £30 2*s.* and £24 7*s.* the two following years. Since then the maximum has been £19 19*s.* in 1891, and the minimum £14 in 1892. All these sums represent the capital invested in the dispensary. Mr. Brown insisted on these figures at great length. He had heard talk of the "blood money" wrung out of the services of medical men, but he thought that if the accounts were more carefully examined it would be found that the fat profits which were supposed to have been sweated out of the labour of medical officers were in reality the fruits of patient economy or careful management, and the accumulation of small subscriptions paid by the members of the friendly societies. Thus, the present value of the premises, &c., at York was set down at £1620; and for this they had borrowed £575, which cost them £19 a year interest. Surely it was not too much to ask new members joining to pay 1*s.* as their share or contribution to this property or towards the original disbursements. This 1*s.* entrance fee could not be considered as a part of the sum paid for medical attendance. On the other hand, it was easy to see that the creation of such property was entirely to the advantage of the medical officers. The fact that at York they had ready money so as to buy their drugs in the very best and cheapest market, and that they only paid £19 interest instead of £40 rent, left more money in hand to pay the medical officers a good salary, to be more lavish in cab fares or in obtaining extra medical aid in times of epidemic. At York no committee-men were paid except the secretary and the treasurer, the former putting in a hundred nights' work in the course of the year. Mr. Brown believed that where friendly societies seemed, by their balance-sheets, to be making a profit out of the medical profession, if the details were examined it would be found that they were really creating a reserve fund, or so improving the property, the house, &c., as would, in the long run, tend to the realisation of economy. Such saving would be to the advantage of the medical man; for the society is then placed in a position to treat their medical officers better and give them greater security in the tenure of their office and for the payment of their services. At York the salaries of the medical officers were increased because there was a balance, but this year the society will probably not make ends meet. Therefore, with a fluctuating income and the prospect of an occasional epidemic it is only common prudence to carry over a balance from year to year. Thus, in 1894 a balance was brought forward of £197, and in 1895 the balance brought forward was £276. The salaries paid to the three medical officers amounted to £616 5*s.*, and the sum of £11 17*s.* 6*d.* was paid for a locum-tenent. The total receipts for the year were £1549 17*s.* 4*d.*, the expenditure £1470 6*s.* 3*d.*, leaving a balance of£ 79 11*s.* 1*d.* The £628 2*s.* 6*d.* paid to the medical men represent in round numbers 3¼*d.* per visit or consultation given during the course of the year. As this is net benefit and does not include drugs, the pay here is better than in many other places. The subscriptions also are higher. They used to be 3*s.* for men, and this has now been increased to 3*s.* 4*d.*; but the society understands—and this is not appreciated in many other places—that it is the women who require the most medical attendance; therefore, young women above eighteen years and married women have to pay 4*s.* 8*d.* Children, however, are admitted at the very low fee of 1*s.* 4*d.* per annum.

In answer to all these explanations I protested that no one disputed the great benefit of insurance against sickness, if only a wage limit could be established and if medical men were not overworked and underpaid. Mr. Brown, however, saw no practical means of establishing a wage limit, and did not believe in its necessity. He challenged the statement that medical men worked for less than the remuneration to which they were properly entitled. He was curious to know who was going to establish a wage limit for practitioners. What was the market value of a medical man's services? Was it not just whatever he was able to get? It seemed to him as if the medical

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profession was a close and closed trades-union something like the guilds, crafts, and mysteries of the Middle Ages. But was it not better for the medical profession that a man should be made to pay into a benefit society rather than that he should go to a hospital? At all the workshops of York men might be seen sitting side by side earning the same wages—say 20*s.* to 30*s.* a week. The one joins a friendly society; the other, when ill, begs for an infirmary ticket. Which of the two best helps to maintain the medical profession—the man who pays 3*s.* 4*d.* a year for medical attendance or the man who pays nothing at all? But, it is said, there are well-to-do men in the friendly societies who ought to pay more than 3*s.* 4*d.* This is true, but when they joined they were poor men, and if they have remained in the society when better off it is very frequently because they have taken a deep interest in the movement. Being men of sufficient intelligence to rise in the world they are just the sort of men who would work hard for the society. In such organisations account must be taken of past hard and unpaid work, and it would be a great mistake to imagine that the present prosperity dropped ready-made from heaven. A society naturally likes to have some members in better circumstances, particularly as they are for the most part old comrades who have risen from the ranks. The societies are particularly desirous of electing a rich man as treasurer, it being safer, as it is neither wise nor right to tempt a very poor man with large sums of money. As for the trading classes as a body joining these friendly societies, Mr. Brown thought the modern tendency was in the opposite direction. The insurance companies had made so much progress that middle-class men and tradesmen insured their lives in these companies. The middle-class tradesmen no longer insured their lives in friendly societies or joined burial clubs, and therefore they likewise did not insure for medical aid. Indeed, anyone who could insure his life for £100 or more went to one of the great insurance companies, and was thus carried away from the friendly societies and the movement they represented. Therefore Mr. Brown concluded that the friendly societies' medical associations were likely to become more and more *bonâ-fide* working-class organisations. The middle-class element was becoming weaker instead of stronger; and the necessity of establishing a wage limit was not more and more urgent, but was disappearing.

For my part, reviewing all these arguments brought forward by Mr. Brown, I cannot help thinking that he was treating a national question as if the very exceptional condition of things which distinguishes the town of York in this matter from all the other towns I have visited prevailed everywhere. He did not seem to realise how the middle-class element abused the friendly societies' dispensaries at Lincoln. There the dispensaries are managed by middle-class men who have organised special privileges for the middle classes, although these wealthy tradesmen do not pay more than their poorer colleagues, the working men. Mr. Brown, on the contrary, assured me that at York, out of eighteen committee-men, there were only two that were not workmen. This makes all the difference. I feel convinced, from the numerous conversations I have had on the subject, that the great majority of the medical profession are animated with the sincerest sympathy for *bonâ-fide* working-class institutions. Nor is this sympathy merely a vague sentiment. It is practically manifested by medical advice willingly given for little or no remuneration to those who are really unable to pay the usual fees. But a feeling of justifiable resentment is equally manifest against those tradesmen and others who join working-class institutions so as to obtain medical aid at working-class rates of payment.

York, Nov. 28th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday and Sunday Fund.

THE twenty-sixth annual meeting of the subscribers to the above Fund was held on the 21st ult. The amount received this year was £345 more than in 1894, £266 of this being on account of the Saturday Fund. The total was £8200 12*s.* 8*d.*, the Sunday collections yielding £4125 17*s.* 8*d.* and those on the Saturday amounting to £4074 15*s.*; the greater part of the latter is given by the working people themselves. An auxiliary society of working men has been formed to assist the committee with collections from workshops, warehouses and other places of business. With the greatly increased organisation which is being brought about it is expected the receipts from the Saturday collections will be considerably increased. The chairman said that Manchester was much behind Liverpool, Birmingham, and other large towns in the amount collected. The working men were, however, now bestirring themselves in the matter, and it had been decided to give them a voice on the committee of management. At a meeting of the committee since the annual meeting a recommendation from the Workmen's Auxiliary to the Red Cross Society—to change the Hospital Sunday from February to the third Saturday after Easter—was adopted. An alteration in the date of the Hospital Sunday from February to a later month was considered, but was thought inadvisable to make any change at present.

Lifeboat Saturday.

This movement, originated by a merchant of this city in aid of the National Lifeboat Institution, has in the short time of four years spread widely. Last year a total of £21,000 was received from various parts of the country, while the average amount remitted from Manchester during the four years has been £4000 a year. There is an active Ladies' Auxiliary here, and an interesting ceremony took place on the 21st ult. in the town hall, as Princess Louise had consented to receive from the Lady Presidents purses containing the collections made this year. Lord Derby, who took part in the proceedings, said it was evident that the people had awoke to the responsibility entailed by Manchester having become a seaport. Before its connection with the sea more than one lifeboat had been subscribed for by Manchester people; now he believed there were not more than ten.

Cancer Pavilion and Home.

This charity, situated in Stanley-grove, is in connexion with, will be, with the Owens College Hospital when the new institution has become an accomplished fact. It was founded in 1892, contains about twenty beds, and its honorary staff are chiefly connected with the infirmary or college. At the annual meeting the other day it was stated that there was a deficit, as is usual with hospitals, of £204 10*s.* 9*d.*, due partly to painting &c. and some additional furnishing. "It is hoped, however, that the amount may be made good by the help of friends, and that the income of the hospital may in future fairly meet the expenditure." During the year ending Sept. 30th 147 cases were under treatment. Of the 108 new cases, 71 were inhabitants of Manchester and the immediate neighbourhood. The youngest patient was eight and the oldest seventy-five, the average age being forty-nine. During the year the hospital had provided a permanent home for 21 patients who could not be properly treated at home owing to the grave character of their ailment. Pay patients are received, and if this is ever justifiable it must surely be in the case of sufferers from cancer.

Manchester and Salford Sanitary Association.

At a meeting of the committee on Wednesday last it was announced that Professor D. J. Leech had accepted the office of chairman of the committee, vacated by Dr. Simpson, recently removed from Manchester, and the latter gentleman was appointed one of the vice-presidents. With regard to the milk-supply, it was decided to request the health authorities to have inspections of certain farms made, with particular reference to certain sanitary requirements. The position of the sewage disposal question in Manchester was considered, and adjourned pending information expected to be brought forward at the next meeting. On the question of the further provision of improved dwellings it was decided to submit a scheme to the Unhealthy Dwellings Sub-committee of the City Council, which intended to provide for well-paid artisans not obliged to live in the centre of the city separate dwellings with garden plots. The houses now occupied by this class would afford greatly improved accommodation for the tenants of cottages that ought to be condemned. The draft of a memorial to the Home Secretary was adopted praying that the flashing point of illuminating oils imported to this country may be raised from 73° to 100° F. And it was [illegible] stables be instructed when lamps [illegible] to prevent as far as possible [illegible] the cause of the accidents.

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that poisoning accidents from carbolic acid were too few to make any attempt to schedule the poison likely to be successful. This scarcely tallies with the general belief, and it would be interesting to know how many more people must be poisoned before the Sanitary Association will move in the matter.

Manchester Institution for Diseases of the Ear.

The fortieth annual meeting of the above institution was held on the 22nd ult. The report said that during the year the number of attendances had been 7857, or an average of 30 per working day, and the number of new patients had been 1638. It was decided a short time ago to provide a few beds for in-patients. Sixty cases had been treated during the year, and a large number of operations successfully performed that could not have been undertaken without this provision. The extent to which the in-patient department had been utilised confirmed what had long been felt—namely, the desirability of removing the institution "to premises where the inmates, when convalescent, might have the benefit of purer air and more cheerful surroundings." This, however, cannot be till the means are forthcoming, and without special effort there must be a long period of waiting. The balance-sheet showed that the deficit of £6 with which the year began had now increased to £38. The difficulty of obtaining the funds necessary for the efficient maintenance of our hospitals has been felt for so long that it is scarcely surprising to see that the "question of income had long weighed heavily on the governing body." It appears that the fee of 4*d.* has been "experimentally" charged to out-patients, but was discontinued at the end of August, "each patient now being asked to contribute according to his or her means," with, so far, a financial advantage. "It was with great regret that the committee recorded the loss sustained by the death of Professor Williamson, one of the founders and a highly valued friend of the institution." Sir William Houldsworth, the chairman, in moving the adoption of the report, mentioned as a pleasing fact that the patients had contributed £198 17*s.* out of a total income of £529. The honorary secretary said "the patients hailed from all the surrounding counties and from North Wales," that the total number of subscribers from this large area was 147, "and sixteen of these were coöperative societies representing numbers of working men, who showed through their governing bodies their appreciation of the institution," so that the subscribers were about 1 in 10,000 in the district. This is unfortunately only typical of what happens with most of our charities—they are supported by the few, while the many are quite willing to make use of them.

Hospital for Incurables.

The twenty-fourth annual meeting was held on Thursday last. The report stated that the institution had just closed another year of usefulness and prosperity. The annual subscriptions had not fallen off, which in these days was satisfactory, and amounted to £2032, as against £2025 last year. Donations and legacies had brought the receipts to £8975 11*s.* 4*d.*, but there was an adverse balance of £1436 8*s.* 11*d.*, due chiefly to the cost of repairs at Mauldeth, and to the damage at Walmersley from the great storm last winter. On Oct. 31st there were 106 patients in the homes—22 males and 46 females at Mauldeth, and at Walmersley 38 females. In addition to these homes there is a dispensary at Ardwick Green where "those suffering from chronic diseases, and suffering from periodical, and oftentimes lengthened, attacks were able to obtain skilled medical advice and medicine without the trouble and annoyance of recommends." It must not be supposed from this that "recommends" are required everywhere else. It is intended, when the funds will allow, to grant "out-pensions," but at present that cannot be done.

Fatal Street Accident.

A somewhat extraordinary accident happened on Saturday evening. As Dr. Crean was driving along a street in Broughton the coachman felt something "go wrong" and pulled up. Dr. Crean got out and found a boy, who had apparently been riding at the back of the carriage, with his head fast in the springs. He was immediately released and taken to the hospital, but died before reaching it. It is supposed that he had been riding on the axle and slipped, so getting his head fast in the springs.

Dec. 2nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

"Charity begins at Home."

UNDER the chairmanship of the Lord Bishop of the Diocese the annual meeting of the Newcastle Diocesan Branch of the Society for the Propagation of the Gospel was held on Nov. 26th in Newcastle. Two colonial bishops addressed the meeting. The Bishop of Riverina said: "There are 20,000 aborigines in North Queensland. We had taken their country from them; introduced all our own vices, which were killing them off." The Bishop of Zululand said: "We had taught the Zulus vices of which they knew absolutely nothing before." Both asked for men and money for the purpose of spreading among the Australians and Africans the religion professed by a people whose advent had had the disastrous results mentioned by the bishops. Our presence has exterminated the natives of Van Diemen's Land, and is exterminating the Australians and New Zealanders, notwithstanding all the efforts of the Society for the Propagation of the Gospel. On Nov. 27th the Rev. Canon Pennyfather, D.D., chairman of the Newcastle School Board, speaking at a meeting of the Fabian Society on child life in Newcastle, said: "The population of the city was about 207,000, and of this number nearly 1000 children were being brought up in industrial schools. The great cause of their being there was the low idea that men and women had of their parental responsibilities." On the eve of the opening of a bazaar in Newcastle for the National Society for the Prevention of Cruelty to Children, the Marchioness of Londonderry writes: "In eleven years no less than 130,000 children have been saved from unnecessary suffering, heartless neglect, and in not a few cases from a cruel death by the society." However much it may be incumbent upon us to do what we can to mitigate the evils arising from our presence in Africa and Australia, we certainly have a duty no less imperative at home. If the society could succeed in propagating the Gospel at home, is it not just possible that we might introduce fewer of our vices among people innocent of them? There would then be less need to send them men and money to counteract the evil of our presence.

The Only Cure for Distress.

This is, according to the *Newcastle Daily Chronicle*, the limitation of the population. The supply of labour exceeds the demand for it. What is the natural remedy? Restriction of the output. A man should live within his means, and has no right to introduce into the world more children than he can provide for. This is the argument employed by the writer of a most outspoken leading article recently published by the *Chronicle*. It is a sign of the times, and a very significant one, that such a leading article should appear in such a paper. It will undoubtedly have its effect. What view will the medical profession take of this open advocacy of Malthusian doctrine?

The Sub-Warden of the University of Durham.

Archdeacon Watkins has been appointed Sub-Dean of Durham University, but though the Dean is Warden of the University, the Sub-Dean is not necessarily the Sub-Warden. If when the office of Sub-Warden becomes vacant a layman should be appointed, a member of one of the Newcastle colleges, great satisfaction would be given. It is very generally felt that a further infusion of the lay element into the Senate would have a most salutary influence upon the future of the University, which is undoubtedly making rapid strides in the north of England.

Dec. 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Proposed Temporary Hospital required for Edinburgh.

Reference has been made previously to the fact that the Edinburgh corporation wishes to erect a temporary hospital on ground belonging to them, but lying within the boundaries of the burgh of Leith. The ground is regarded as very suitable for the purpose, but the Leith Dean of Guild Court and the Leith corporation continue to strenuously oppose it. The proposal has received the approval of the Local Government Board, but technical obstacles are found to block the

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way and to prevent the erection of the hospital. On Monday last the Dean of Guild Court, presided over by the Provost, appointed that day fortnight for the debate on the question. The action of the Leith authorities will probably give a considerable impulse to the scheme for the amalgamation of the burgh with Edinburgh, and people begin to see the necessity of this from a public health standpoint.

Edinburgh Royal Infirmary.

At the meeting of managers this week a report was submitted regarding a fatality which recently occurred in the Royal Infirmary. A patient in one of the top wards jumped out of a window and received such injuries that she died soon afterwards. No blame was attributable to any of the officials. An application was also made to the managers from the Scottish Branch of the Soldiers' and Sailors' Families' Association asking facilities for the training of wives and daughters of soldiers and sailors in hospital work. The matter was remitted to the superintendent and the lady superintendent for report.

Hall of Residence for Women Medical Students in Edinburgh.

A movement has been started by a number of ladies in Edinburgh to provide a hall of residence for women medical students. A similar scheme has been in operation for years for male students, and has proved such a success that building has been added to building to accommodate an increasing number of applicants. A similar scheme in connexion with the Free Church College in Edinburgh has also been working for some time quite satisfactorily both financially and otherwise. A furnished house has been placed at the disposal of the ladies' committee free of rent for a year with a view of giving the scheme a start. Such a hall of residence would be of great value to women medical students, and if properly managed would doubtless become popular, and it is important to know from the experience of similar places for male students that they can be made to pay.

The Oyster Scare after Stirling Ball.

Mention has already been made of a number of cases of typhoid fever, several of which have been fatal, which followed a ball held at Stirling some weeks ago, and that suspicion had been thrown upon the oysters eaten. A Government inquiry into the matter has been instituted, and the opinion gains ground that the oysters were probably not to blame. Meanwhile the scare has greatly affected the consumption of oysters.

The Glasgow Crematorium.

The new crematorium built for the Scottish Burial Reform and Cremation Society in the grounds of the Western Necropolis was formally opened on the 27th ult. A short religious service was conducted by the Rev. Donald Macleod, D.D., and addresses were delivered by the Rev. John Hunter, D.D., Sir Charles Cameron, and Sir Henry Littlejohn. Amongst those attending were a large number of medical men, including Dr. Bruce Goff (the President of the Faculty of Physicians and Surgeons) and Dr. A. K. Chalmers (medical officer of health). The cost of the crematorium and chapel has been £2700.

Glasgow Western Infirmary.

The annual meeting of the qualified contributors to the infirmary took place on the 28th ult., Sir Jas. Bell, Lord Provost, presiding. The report drew attention to the decision of the managers to erect three new operating-rooms fully equipped to meet the demands of modern surgery at an estimated expense of £10,000. Plans for these have now been prepared after a visit, on behalf of the managers, of Dr. Mackintosh, medical superintendent, and Mr. Burnet, architect, to the principal Continental operating theatres. It was intimated that Lord Overtoun had generously given a donation of £3500 to build and equip one of the three new theatres. Another handsome gift which the managers acknowledge is the sum of £10,000 presented by Sir William Hozier for the purpose of founding an endowment fund for the Lady Hozier Convalescent Home at Lanark, which is in connexion with the Western Infirmary, and the house and grounds of which were presented to the infirmary by Sir William Hozier a few years since. The financial statement shows the cost of each bed fully occupied during the year to have been £55 7*s.* 8*d.* and the average cost per patient treated £4 15*s.* 6*d.*

Glasgow Maternity Hospital.

At the annual meeting of this institution on the 26th ult. Professor Murdoch Cameron in his medical report stated that the number of cases attended during the year had risen to 2721 and that 112 students had been in attendance. In referring to the resources of the hospital Professor Cameron drew attention to the fact that the number of in-patients had more than doubled within the past twelve years, and urged that immediate steps should be taken to enlarge the hospital and to establish a gynæcological department and dispensary. It was intimated on behalf of the directors that this recommendation had been favourably considered, and an appeal was made for funds to enable the directors to carry it into action. The increase in the number of students and young graduates attending the service of the hospital rendered more especially the introduction of women students necessitated a readjustment and extension of the present accommodation arrangements absolutely necessary.

Glasgow Medical Mission.

The annual report states that during the past year the number of consultations held at the dispensaries by the medical officers had been nearly 43,000, whilst nearly 10,000 visits had been made by the district nurses. The severe weather of last winter put a great strain on the resources of the mission, and a deficit of £582 is reported.

Accident Hospital for Wishaw.

At a meeting presided over by Lord Belhaven on Nov. 1st it was decided to erect a local hospital, at a cost of £1,[illegible] for the immediate treatment of men injured by the accidents so frequently occurring in the iron-works and coal-pits. The movement has resulted from the manifest risk to which patients seriously injured are subjected by a journey of fifteen miles to reach a Glasgow hospital, even though the journey is accomplished in an ambulance van.

Death of Dr. G. R. Mather of Glasgow.

The death of Dr. G. R. Mather, which happened on the 29th ult., took place under peculiarly distressing circumstances. As a Fellow of the Faculty he attended the annual dinner of the Faculty of Physicians and Surgeons of Glasgow and had just completed an enthusiastic reply to the toast "The Navy, Army, and Reserve Forces," when he suddenly became unconscious. He was promptly removed to a neighbouring room, but the measures taken to restore him proved unavailing. The funeral on the 3rd inst. was attended by the President and other officials of the Faculty and a large number of the Fellows. Dr. Mather was in his fifty-sixth year. He was a well-known practitioner in Glasgow and an enthusiastic patron of Scottish art. A year or two ago he published a volume entitled "The Lives of Two Great Scotsmen, William and John Hunter."

Presentation to Sir Charles Cameron, M.D. Dub.

The numerous friends and admirers of Sir Charles Cameron in the west of Scotland have, as a means of expressing their kindly feelings towards him, presented him with his portrait, the presentation being made on behalf of the subscribers by the Lord Provost of Glasgow. Sir Charles Cameron has represented Glasgow in Parliament for the long period of twenty-one years, but he was amongst the unsuccessful candidates at the last general election. A memorial in his honour is to be erected in a prominent situation in the city.

Dec. 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Rotunda Hospital.

THE "Thomas Plunket Cairns Wing" of the Rotunda Hospital was formally opened last week by her Excellency the Countess Cadogan in the presence of his Grace the Archbishop of Dublin and a large assemblage. His Excellency the Lord Lieutenant occupied the chair and alluded in his interesting speech to a committee of the House of Lords of which he was a member some years ago and which had for its object an investigation into the management and circumstances of the various London hospitals. After remarking that there was some reason to doubt the need for some of the smaller and special hospitals of which there were so many in London, his Excellency said: "But there are three classes of hospitals which to my mind at least are proved by the evidence before us as being very valuable in their nature and important in their maintenance. In the first place there are hospitals for women, a

the second place hospitals for children, and in the third place hospitals for treating diseases of the eye. These are the three classes of special hospitals the necessity for which, in my humble opinion, has been amply proved before us. We have in London no hospital for women of anything like the importance and size of this one." His Excellency would, I think, have been accurate in stating that neither in London nor in Europe is there any institution for the treatment of women of greater size or importance than the present Rotunda Hospital of Dublin.

Trinity College, Dublin.

The election of a parliamentary representative for Trinity College is causing great interest and excitement among the friends of the candidates, Mr. Lecky and Mr. Wright. The students have from the first taken a most lively and active interest in the proceedings—the medical undergraduates being as usual in the van. The demonstrations have not been confined within the College precincts, but have been frequently evident in the streets in the shape of marching regiments of good-humoured but very noisy young men cheering for whichever candidate they happened to favour.

Annual Dinner of the Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in the Grand Central Hotel, Belfast, on Nov. 28th. The President, Professor Sinclair, F.R.C.S. Eng., occupied the chair, and there was a very large attendance, including the Lord Mayor of Belfast (Sir W. M'Cammond) and the President of Queen's College (Rev. Dr. Hamilton), both of whom were invited guests. The following were the toasts: "The Queen and other Members of the Royal Family," proposed by the President; "The Lord Lieutenant and Prosperity to Ireland," proposed by Dr. W. A. McKeown and responded to by Dr. Henry Bingham; "The City and Corporation of Belfast," proposed by Mr. Fagan, to which the Lord Mayor and Councillor Henry O'Neill, M.D., replied; "The Queen's College and Belfast Medical School," proposed by Brigade-Surgeon McFarland and responded to by the President of Queen's College, Belfast, Dr. Walton Browne, and Professor Whitla; "The North of Ireland Branch of the British Medical Association," proposed by Dr. Kevin and responded to by the secretary of the branch; "The President of the Ulster Medical Society," proposed by Dr. Dempsey. The President having replied to this, he concluded by proposing "The Secretary of the Society," to which that gentleman responded. During the evening a capital musical programme was contributed by Mr. Mackenzie, Dr. Lindsay, Dr. McCaw, Dr. McKisack, Dr. R. C. McCullagh, and Dr. Leslie. The evening passed off very successfully.

Belfast Medical Students' Association.

A very largely attended meeting of the members of this society was held in one of the class-rooms of Queen's College on Nov. 29th; the President of Queen's College and several of the College professors and of the medical men in Belfast were present. The business of the evening was to hear the opening address of the new president of the association, Dr. Magowan, who gave a most interesting account of the origin, objects, and present aims of the society. The meeting was subsequently addressed by the President of Queen's College (Rev. Dr. Hamilton), Professor Byers, and Professor Sinclair. This association, the object of which is to promote the interests of the Belfast medical students as regards their professional training, is at present in a most vigorous condition and is sure to be of the greatest benefit in binding together the students of the Belfast Medical School.

Belfast Royal Hospital.

At a special meeting of the governors and board of management of the Royal Hospital held on Dec. 2nd Dr. R. Strafford Smith was appointed physician in place of the late Dr. Ross, and Dr. Calwell was elected, by a large majority, assistant physician in the vacancy created by Dr. Smith's promotion.

Health of Belfast.

The report presented to the city corporation on Dec. 2nd showed the health of the city of Belfast to be in a most unsatisfactory condition. During the previous four weeks a large number of cases of zymotic diseases were reported—viz., scarlet fever, 118 cases; measles, 35 cases; and typhoid fever, 30 cases. In this period there were 689 births and 532 deaths in Belfast; 84 deaths were from zymotic diseases, 60 from phthisis, and 178 from other respiratory diseases. In the corresponding period of last year the deaths from zymotic diseases were 60, those from phthisis 57, and those from other respiratory affections 110. During the four weeks embraced in this report 145 children under one year of age died, and 84 persons at or above sixty years of age, while in the corresponding period of last year the numbers were 104 and 81 respectively. The annual death-rate from all causes was 26·3, that for children under one year old 6·8, and that for those of ten years and upwards 3·9 per 1000 of the population. It will be thus seen that the deaths from zymotic diseases are very numerous, as are also those from chest diseases, and contrast very unfavourably with those of the corresponding period of last year, especially in the matter of diseases of the chest. We have at present an epidemic of scarlet fever and measles, and there have been a great many cases of typhoid fever.

A Clever Impostor in one of the Cork Hospitals.

A series of impositions has been practised in Cork by a French Canadian, a recent inmate of one of the general hospitals. He exhibited well-marked symptoms of hystero-epilepsy. He had hysterical hemiplegia and also the hysterogenic spots. Touching the latter produced well-marked spasms, which seemed to be very distressing to the patient. He expressed his strong conviction that the end was approaching, and he asked to have a solicitor sent for to draw up his will. The legal gentleman duly prepared the document, and the invalid soon found an opportunity for darkly hinting that in return for their kindness one of the house surgeons and one of the nurses had been remembered. Even swindlers have learned that "gratitude is a lively sense of favours to come." He pointed to a package neatly tied up and sealed, which he stated contained valuable securities, and requested the American Consul to see that it was carefully locked in a safe. It was so important that his will should be properly drawn that he sent for a second solicitor, and as it was all foreign money he had he requested one of the legal gentlemen to furnish him with a temporary loan in coin of the realm. Soon afterwards he left the hospital, and the sealed packet was examined. It was found to contain, not securities, but two copies of an illustrated newspaper. The police exhibit a decided interest in his previous history, and in medical circles the question is asked whether an impostor would be likely to know all about the various phases of hystero-epilepsy.

The Battle of the Clubs at Cork.

I mentioned some time ago that the Cork medical men proposed to form a club to be managed entirely by themselves. A committee has been appointed to formulate a scheme, and they have already made an important report. Amongst other things they recommend that the club should supply, not alone medical attendance, but that it should also provide sick pay and the ordinary benefits such as are available in connexion with the older clubs. In that way it is hoped a very large number of members from the recalcitrant clubs would be induced to join. One of the rules adopted by the profession at the commencement of the fight was that no medical man should form a new club till the year 1896. That rule was made in the interest of the men who had resigned their clubs so that they could get them back intact, and a movement is now on foot with a view to extend the limit of time with regard to the rule.

Dec. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Trials of Country Medical Practitioners in France.

THE English parish medical officer is wont to deem himself—and not unreasonably so—the worst-used individual in existence. A stipend that a labourer would spurn, a mass of work that the same labourer would never consent to perform, unjust criticism on the part of guardians who have no conception of the dignity appertaining to our calling—these and a thousand and one other miseries would suffice to break the heart and sap the courage of a member of any other profession. This state of things is not, however, peculiar to the British Isles, unless the experiences of Dr. Boyron of Amagne are exceptional. This gentleman had the misfortune to be a club medical officer, and the mayor treated him accordingly much as he would treat a

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gamekeeper. Dr. Boyron was the medical officer of a village Société de Secours Mutuels, and he found that, encouraged by the peasant-mayor, his club patients acquired the habit of treating him in a very cavalier fashion. He mentioned the matter to the mayor, who seemed to enjoy the joke immensely. The medical man thereupon resigned. The combative mayor, however, maintained that a club medical officer had no right to resign, and even had the assurance to contest (unsuccessfully) the legality of the resignation at headquarters. One day a station-master sent an urgent message for Dr. Boyron, who, on his arrival, found that the railway official had sent for him, not to ask his advice, but to tell him that he was being treated by a neighbouring priest, whose prescriptions he was requested to countersign, so that the company could be charged with the furnishing of the drugs. Listen to yet another story. A young medical man settles in a commune whose paupers he attended for (*horresco referens*) 50 fr. (£2) per annum. One night, soon after his arrival at this Eldorado, he received an urgent summons to visit a patient who lived at a distance of six kilometres from the village. On reaching the cottage—it was then 11 P.M.—he found the doors closed and lights extinguished. In reply to his knocks the door was opened by a sturdy peasant, who laughingly informed him that there was no illness in the house, but that his wife had wished to see if, when anyone was ill, he would come if sent for! The unfortunate medico—since dead from overwork, and probably under-feeding—remarked, "I could have felled him to the ground." Added to these annoyances, others of political origin are quite common in rural France. Our Gallic brethren meddle a good deal in politics, and as their tendencies are generally towards radicalism they have often *maille à partir avec le curé*. Altogether I should say that the British country medical practitioner has the best of it.

Professor Lannelongue.

The *fauteuil* in the Medical and Surgical Section of the Académie des Sciences, rendered vacant by the death of Professor Verneuil, has been filled by the election of M. Lannelongue, Professor of Surgical Pathology at the Faculty of Medicine and Surgeon to the Hôpital Trousseau (Children's Hospital). Professor Lannelongue will be known to your readers as the originator of the operation of craniectomy for the relief of premature union of suture resulting in idiocy. His closest competitor for the above-named honour was M. Ollier (Lyons) of periosteal fame, who, out of 60 votes, obtained 22, as against 36 for the successful candidate.

Illegibly signed Prescriptions.

My British *confrères* will probably know that French practitioners sign their prescriptions with their full surname generally preceded by the word Dr. This is compulsory, for Clause 32 of the Law passed on the 21st Germinal, Year XI. of the Republic, forbids pharmacists to dispense prescriptions unless they are thus signed. Unfortunately, signatures, especially of French physicians, are illegible, and pharmacists run, in such a contingency, the risk of prosecution if they furnish the medicament. Sometimes, however, the layman who presents the prescription has himself signed it—and signed it badly purposely. Such a case was judged by the Tribunal Correctionnel of Paris on the 16th ult. Here the pharmacist, who had accepted this scrawly signature and duly prepared the mixture, was found guilty and condemned to pay a fine.

Dec. 3rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Question of Classification.

THIS is the day of Saint Andrew, whose intervention the Roman faithful invoke against death by apoplexy, though what connects that apostle and martyr with cerebral hæmorrhage I have never been able to make out. It cannot have been the suddenness of his exit from this life, for the Breviary tells us he lived for two days suspended on the cross. Nor can it have been the nature of his crucifixion, which was not like St. Peter's, with head towards the ground, pointing to that intra-cranial congestion which is the immediate cause of apoplexy. He was crucified on a decussating cross with head erect. Account for the connexion how one may, the fact remains, as votive offerings in the Sant' Andrea della Valle, for instance, can testify, that St. Andrew is the putative averter of apoplexy, and is invoked with special frequency and fervour in Rome, where death from that cause is traditionally common. Of late years, however, the medical statistician has refused to classify apoplexy what is popularly set down as the result of that lesion. A man suddenly loses consciousness, falls to the ground, and after a few convulsive movements is picked up dead, and "apoplessia fulminante" used to be accepted by professional authority as the cause of death. A more accurate etiology, however, excludes many such cases from the apoplectic category, and assigns them to syncope from cardiac lesion, or to embolism, or to one or other of the causes which pathology has established and confirmed by post-mortem examination. Your countryman, the late Dr. Aitken, for many years an able and esteemed practitioner among the English-speaking colony in Rome, was the first, I believe, to expose the error of classifying "apoplessia fulminante" what the physical signs clearly showed to be a form of syncope, due, for instance, to atheromatous heart or to aortic lesion. And, indeed, his work as corrective to the traditional classification might have been uncalled-for had his Italian colleagues fully mastered and followed up the great treatise of Lancisi, body-physician to Pope Clement XI., the treatise, to wit, entitled "De Subitaneis Mortibus," and even yet worthy of perusal, not only for its acute observation and sound reasoning, but for its limpid, fluent, medical Latinity. So St. Andrew, if taxed with failure to avert all cases of apoplexy, might fairly plead that many of these were outside his province and require for prevention the addition of a new protective saint in the Calendar.

Cremation.

This is indeed "a burning question" in Italy. In the Rivista Italia the return to the incineration of the dead was proposed and practised before any other European nationality more than dally with it—the Abbate Piattoli, Gorini, Coletti, Brunetti, Polli, and Clericetti being a few of the names associated with the first years of the movement. Keller of Milan led the way to its actual adoption, and after vindicating its propriety in his lifetime he bequeathed his body after death to the Società di Cremazione of Milan, to be reduced to ashes, and also left a considerable sum to establish a crematorium for the purpose. This was in 1876, and the contagion of his example spread to Switzerland, to France, to Germany, to Austria-Hungary, and to Great Britain, where a crematorium was erected at Woking. But Italy was the motherland of the movement and has maintained the lead in developing it; and (besides Milan) Lodi, Turin, Rome, Brescia, Cremona, Varese, Venice, Leghorn, Spezia, Padua, Novara, Modena, Florence, Naples, Palermo, Mantua, Como, Bologna, and other cities have either a crematorium of their own or are in process of constructing one. The latest is that of Turin, a magnificent structure, to which not only the local Società di Cremazione has contributed, but also, with an enlightenment desiderated elsewhere, the municipality. A provisional crematorium had been in use in the sub-Alpine capital since June 17th, 1888, but its insufficiency for the growing demands on it had become a public inconvenience. So this new and greatly extended one has taken its place, and will, when all the "colombaretti" are finished, accommodate no fewer than 2370 of these, not counting the two niches in the entrance hall and in the adjacent "edicole" or tabernacles. The apparatus of the crematorium is on the Gorini system, but with modifications suggested by other European crematoria which will reduce the duration of the process to one hour with a yield of white ashes weighing about three kilogrammes. The movement in which this great adjunct to sanitation has culminated is, in Turin as elsewhere, essentially a middle-class movement inspired, *inter alia*, by hygienic enlightenment and a wise recognition of the fact that where an ordinary cemetery could contain a million of dead, an ordinary crematorium can accommodate from ten to fifteen millions. As I have indicated, the aristocracy in Italy, as in other countries, discountenance cremation, and here in Rome we have in the great cemetery of the Campo Verano as many as 591 corpses yet awaiting definitive sepulture, provisionally lying, that is to say, in the quadriporticus that surrounds the cemetery as well as in the "locali di deposito" (depositing places). Allowed to remain in these *locali* after payment of certain inconsiderable fees, the unburied population of the cemetery has become so numerous as to compel the municipality to [illegible]

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penalties, on its final inhumation. The abuses thus sought to be done away with are obvious, not the least being the infraction of hygienic law. The adoption by Rome of the system now practised in Turin and throughout Upper Italy would make such action of our municipality unnecessary.

The Rector of Bologna University.

A distinguished contributor to THE LANCET, Professor Augusto Murri, whose monograph "On Experimental Craniotomy and the Diagnosis of Cerebral Abscess"[1] is one of the events of the *annus medicus* now closing, has just been elected—by 38 votes against 14 for Ciamician, Professor of Chemistry, and 9 for Brizio, Professor of Archæology—Rector of the University of Bologna, where he holds the chair of Clinical Medicine. There is, indeed, some doubt as to whether he will accept the post, but in spite of the internal difficulties now agitating that seat of learning—difficulties which make administrative responsibility undesirable—it is hoped he will accede to the wishes of the majority—senatus and graduates alike.

Nov. 30th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Public Health in Hungary in 1894.

A REPORT which has just been presented to Parliament by the Government of Hungary does not give a very gratifying view of the state of public health in that country. There are still 11,105 villages without any medical man, a thing which is not surprising, because numerous local authorities refuse to pay fixed salaries to medical practitioners, and not many men can reconcile themselves to a dull country life and an income hardly exceeding £60 a year. In the larger towns there is one medical man for an average of 988 inhabitants, but in Budapest there is one for every 545 inhabitants. In 1894 there were 166,224 cases of zymotic disease with a mortality of 2·2 per cent., against 124,562 cases with a mortality of 2·7 per cent. in 1893. Of diphtheria there were 46,706 cases with 22,205 deaths in 1894, against 49,233 cases with 34,183 deaths in 1893, and of enteric fever 7646 cases with 2231 deaths in 1894, against 4895 cases with 1780 deaths in 1893. There were also 4896 cases of measles, 2218 cases of dysentery with 500 deaths, 1402 cases of puerperal fever with 833 deaths, 416 cases of cholera with 230 deaths, and 2365 deaths from influenza. The total number of deaths amounted to 453,094. Of trachoma 24,228 cases were registered in 1894, against 25,284 in 1893. There were 4280 medical men, 7981 midwives, and 2092 pharmaceutists; in 1893 the number of medical men was 4153. There were 334 hospitals, and to these there were admitted 166,524 patients, of whom 6·7 per cent. died.

"Thyreo-antitoxin."

At the last meeting of the Vienna Medical Society Dr. Fränkl described his attempts to isolate the active substance in thyroid preparations, for which purpose he made cold or warm extracts of dried thyroid glands of the sheep, and separated the albuminous matter by adding acetic acid. In order to determine whether the curative properties were possessed by the precipitate which contained albumin, or by the filtrate, the former was given to two well-nourished men, who during ten days consumed daily the precipitate of seven glands without showing any loss of body-weight, whereas Dr. Fränkl, who himself drank the filtered fluid, sustained a daily decrease of 300 grammes (about 10·5 ounces), and found that his pulse-rate was increased. From this experiment he inferred that the filtrate contains the efficacious material. By inspissating it and by separating the lime he obtained a substance which he calls "thyreo-antitoxin," and to which the formula $C_6H_{11}N_3O_5$ may be assigned. It is inodorous and tasteless, and is therefore recommended for use.

The Pathogenesis of Tertiary Syphilis.

In a paper on Tertiary Syphilis read by Professor Neumann at a meeting of the Vienna Medical College on Dec. 2nd he said that cell infiltrations dating from the early stage, when mechanically or chemically irritated, give rise to proliferation and consequent tertiary symptoms in the skin, the mucous membranes, the bones, and internal organs. He referred also to the necessity for observing the idiosyncrasy of the patient, the general state of his health, and the existence of concurrent diseases, such as phthisis, malaria, and diabetes. Among intelligent communities, with the exception of large towns, there is but a trifling amount of tertiary forms, whereas in countries where ignorance and superstition prevail syphilis shows a malignancy resembling that displayed at the time of its first outbreak. By means of observations on 1048 cases he proved the influence of the treatment of the primary symptoms on the occurrence of tertiary forms. Syphilis, he concluded, is to be treated symptomatically and not preventively, nor by Fournier's chronic intermittent method In the primary stage local treatment is to be adopted, and extirpation may be resorted to in some cases. Preventive treatment may be applied in the form of inunction in cases of œdema of the prepuce and phimosis or when the affection is localised in the urethra. General treatment is to be commenced when the skin eruption appears, and there are cases in which it should be carried out even in the absence of any symptoms, as when marriage is contemplated, or in pregnancy, or in the case of a man whose wife has often miscarried. According to his experience tertiary symptoms are observed in only 10 per cent. of the cases of syphilis treated in this way.

Enteric Fever in Vienna.

According to the report of the Sanitary Department there were 62 cases of enteric fever in Vienna at the end of last month. This is the highest rate which has been registered during the present year, the cases of enteric fever numbering 33 in January, 14 in February, 7 in March, 12 in April, 24 in May, 17 in June, 27 in July, 32 in August, and 51 in September. But these 62 cases include only 51 inhabitants of Vienna, the other 11 cases having occurred in travellers arriving from Venice and Silesia.

The New Director of the Vienna Lunatic Asylum.

Dr. Adalbert Tilkowsky has been appointed director of the Vienna Lunatic Asylum, in succession to the late Dr. Gauster. He was born in Hungary in 1842, and in 1874 was elected assistant in this asylum, where he remained till 1884, when he was transferred to Klosterneuburg; and in 1891 he became director of the lunatic asylum at Ybbs. Dr. Tilkowsky is one of the most eminent Austrian experts in lunacy and neuropathology. It was through his endeavours and recommendations that the Government ultimately submitted the Inebriates Bill to Parliament.

A New Test for Mercury in the Urine.

Dr. Yolles has published his new method of recognising mercury in the urine. For this purpose he recommends the use of granulated gold, which possesses in a higher degree than any other metal the faculty of forming an amalgam. To 100 c.c. of urine he adds 2 grammes of gold and from 1 to 3 c.c. of hydrochloric acid. On the addition of 2 or 3 c.c. of freshly prepared chloride of tin flocculi are precipitated, after which he boils and mixes the compound with from 30 to 50 c.c. of chloride of tin and boils for five minutes. After removing the supernatant fluid and washing the gold with distilled water he adds three or four drops of nitric acid, and again the same quantity of chloride of tin. If only 0·0002 gramme of mercury be present a turbidity or cloudiness is produced.

Cholera in Galicia.

The last report announces 19 cases of cholera and 14 deaths from the districts of Czortkow, Husiatyn, Taroslaw, Buczacz, Trembowla, and Kamionka, making a total of 351 cases with 234 deaths since the commencement of the outbreak.

Dec. 1st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

THE daily cholera bulletins come now from six districts, though it must be remembered that each district includes a certain number of villages and hamlets. The past week shows a total of 46 new entries into the ambulances, with 31 deaths in hospital and 25 deaths outside. This gives a total of new cases of 71, or 10 per day. It looks now as if the disease were completely subdued on the important canal running between Mansourah and Menzaleh, but several new

[1] THE LANCET, Jan. 5th, 12th, and 26th, and Feb. 2nd, 1895.

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villages have been attacked on the Nile between Mansourah and Damietta; also there has been a case at Mansourah in the person of a native medical man's daughter. It appears that he was summoned to an infected village to perform a cholera necropsy, and in so doing he soiled his shirtsleeves. Disdaining the use of the disinfector in the town, he had his clothes washed at home, by this child among others. There have also been 2 cases in the town of Zagazig, one of which has already recovered.

Examination of Suspicious Cases.

A circular letter in three languages has been sent to all medical men informing them that the bacteriologists of the Egyptian Government are ready to examine, free of charge, all suspected material sent to them. Instructions are also given as to how discharges or soiled linen are to be despatched from a living patient, and how two portions of the ileum are to be forwarded after the necropsy of a fatal case. Extra assistants are now working in the two laboratories of Cairo and Alexandria, and to save time a considerable amount of the work is done by night.

Vaccination Statistics.

The figures for 1894 have just been published and show that there have been 336,605 births in Egypt during the year, only 1056 of which were among Europeans. The number of deaths was 194,256. No one knows the present population of this country. It is guessed at by various people as being something between seven millions and ten millions. If the lowest computation is taken it is found that there is a death-rate of 27·7 per 1000, but if there are now as many as eight millions the mortality is at once reduced to 24·2 per mille. It is a great pity that the Government does not yet see its way to arranging for a new census. The successful vaccinations of the year amount to 312,188, and the unsuccessful to 3548, some of those vaccinated having doubtless already had small-pox. The successful revaccinations were 3257. Since 1890 vaccination has been obligatory for Europeans as well as natives. The statistics of the first week of November show that there were 58 cases of small-pox with 4 deaths, and, moreover, that this disease was scattered over no less than four provinces of the Delta. Small-pox is therefore more widely spread than cholera.

British Troops in Cairo.

The Cairo garrison now consists of 3200 men, with a sick-rate as low as 5·5 per cent., and this includes only twelve cases of enteric fever. This disease is much less common this year than usual, and the general sick-rate is very low, because the army of occupation has lately consisted entirely of troops who have been a long time in Egypt. When a new regiment arrives the enteric fever rate is certain to go up. Ever since 1883, when 194 of the English soldiers were attacked by cholera and 142 died, it has been recognised that if the troops are to be moved at all they must be moved before cholera has actually appeared among them. Arrangements have been carefully made on paper for several cholera scares, but this is the first time that it has been deemed necessary to take any practical steps. Now the nucleus of a tent hospital has been made at Abbassiyeh, where the desert permits an unlimited stretch of fresh air. A health camp for 1000 men, with a field hospital, has been made beyond the Pyramids. At Helouan a similar health camp could be made, and the troops now at Abbassiyeh could be moved further afield into the desert, thus leaving in Cairo only the men actually necessary for military reasons. But none of this preparation will be made use of unless cholera should actually break out in Cairo itself. In the meantime an extra strict sanitary inspection has been made of all barracks and other buildings. It is greatly to be regretted that the Pasteur-Chamberland filter has not yet been granted for the use of English troops in Cairo. In this respect the army of occupation is several years behind the German Hospital, the Egyptian Government Hospital, the schools, hotels, and other large buildings in Cairo.

British Troops in Alexandria.

In Alexandria there are only 1100 men with a sick-rate to-day of 5·8 per cent., including three cases of enteric fever. There are only two companies now at Ras el Tin barracks, the bulk of the troops being established in new huts at Ramleh, near the old Mustapha Pasha barracks, which have been condemned and partly pulled down. The situation was good enough and the sea air was perfect, but it was found that the young soldiers of any new regiment suffered from a high rate of enteric and simple continued fevers. Many explanations for this have been proffered; it is not necessary to search for any mysterious cause; knows that in the early days of the British occupation partly from ignorance and partly from economy, the pools and conduits which honeycomb the Egyptian barracks were never filled up and, worse than were employed for several years as drains for sink laundry water. The Royal Engineers in 1882 contented themselves with closing all latrines superficially and plying a movable system of tubs for urine and fæces. army system which expects Royal Engineers to be sanitary engineers without giving them an adequate in this subject is responsible for much of the disease death among our troops in Egypt. I am glad to be able state that for the last year medical representations have ceeded in obtaining Pasteur-Chamberland filters barracks and hospital in Alexandria. In the event Alexandria ever being threatened by cholera the troops be moved out to a camp at Abukeer and tent hospitals be established.

Sanitary Officers.

The only good thing which as yet cholera has done Egypt is that the Government has consented to increase European *personnel*. Dr. Rogers Pasha has obtained leave appoint another permanent English medical inspector also to create an Institute of Public Health, which is presided over by a bacteriologist. For this latter post said that Dr. Bittar, at present sanitary inspector Alexandria municipality, will be one of the candidates. Leave has also been granted to appoint a temporary English inspector for the ensuing twelve months. the present moment there are working in the city villages four English medical men, with four police officers, and forty-four native medical all additional to the usual strength. The expenditure course, met by a special cholera grant, and no difficulty have yet been raised by the financial authorities. Mansoura for instance, is being kept clean at the rate of £2 a though the whole budget for municipal expenses in times is only £6 daily. The sanitary department intention of at once providing permanent disinfectors some of the chief towns in the Delta, for at present only Cairo and Alexandria which possess them, and buying some portable disinfecting machines for work provinces. These will, of course, be of great use, not for cholera, but also for the annual small epidemics typhus fever, relapsing fever, small-pox, and measles.

The Tourist Season.

The hotels and tourist agencies are still confident visitors will not be afraid to come to Egypt, because no places already engaged on the Nile steamers and boats have been counter-ordered. Greece is still the country which has put Egypt into quarantine. imperial archdukes from Austria are on their way it is certain that they would not be allowed to come authorities in Egypt believed that there was any risk doing so.

Cairo, Nov. 27th.

Obituary.

PROFESSOR ANDREA VERGA.

MEDICO-PSYCHOLOGY has to lament the loss of one most able and original votaries by the death of Dr. Verga, for many years associated with the Ospedale Maggiore of Milan as professor of that subject. He was born Treviglio, of comparatively humble parents, on May 3rd 1811, and received his education, literary, philosophical and medical, at the University of Pavia. He was a favourite pupil of the celebrated Bartolomeo Panizza, Professor Anatomy in that school, and under his influence became his time, one of the profoundest physiologists, particularly in the department of neurology, south of the Alps. attention was early attracted to the phenomena of mental disease, and, shortly after his brilliant graduation as Doctor of Medicine, he became director of the Manicomio di San Celso in Milan. This he soon made conspicuous by the

success of his treatment in obscure cases, and in consequence was in 1848 promoted to the direction of the still greater Manicomio della Senavra. By this time his fame as a medico-psychologist was high and his capacity for administration not less so, in recognition of which he was made Director of the Ospedale Maggiore of Milan, one of the largest and, historically, one of the most celebrated institutions of its kind in Italy. To him it owes the foundation of a professorship in the doctrine of medico-psychology and of a clinical lectureship in connexion with the same, while its general efficiency, far in advance, in many important respects, of Italian hospitals attached to even greater schools, dates from his active association with its administration and work. Dr. Verga was not less busy with his pen than in his professorial and consultant capacity. He was the author of many important memoirs and monographs scattered through the Atti or transactions of medical congresses, while his great treatise, composed in elegant Latin, on "Hallucinations" received the prize of the Académie de Médecine of Paris, and his work on Leprosy was similarly honoured at the Congresso Scientifico of Naples. These and other emanations from his pen have been translated into most of the European languages, and in many cases preceded his election to learned bodies, particularly those of medicine, in the several Continental capitals. Probably no Italian physician was "Corresponding Fellow" of so great a number of such societies and associations. In the Peninsula itself his presence at national and provincial medical congresses was always welcome, and at that of the medico-psychological specialty, which he may be said to have founded, his intervention sufficed to maintain the discussions at a high level of scientific and clinical thoroughness. Besides this professional distinction he was a loyal friend of literature and fine art, his skill in Latin epigrams being not inferior to that of Cesare Cantù, his brilliant contemporary who predeceased him last spring. As President of the Lombard Institute of Science and Literature he raised that body to rare efficiency, but always refused, though often invited, to enter Parliament. He was, however, provincial and communal councillor, taking much interest in the sanitary duties of the post, and in recognition of his public as well as professional services he was made by King Victor Emmanuel senator of the kingdom in 1876. For some time past Dr. Verga had been suffering from gouty eczema, and was attended by his colleagues Dr. Rossi and Dr. Bertarelli, Professor of Dermatology in the Milan school. Quite lately an abscess of the lip had to be opened by Dr. Ritordi, and while this seemed to be doing well grave pleuritic symptoms supervened, which on Nov. 20th developed alarmingly. On the 21st he died, at a quarter to four in the afternoon, retaining his intelligence and serenity to the last. His tall, striking figure and kindly address will long be missed at medico-psychological congresses, Italian and foreign. But the mark he left on his specialty will perpetuate his name. He anticipated a great deal of what is most sound in the teaching of Lombroso, and his relegation of incorrigible crime to the class of moral imbecility has had an important bearing on the judicial procedure of his country. His insistence on the necessity of attaching a lunatic side to prisons and penitentiaries has fructified usefully in more than one centre of population. Again, in the literature of his subject, a selection from his numerous writings will have permanent value, in connexion with which the republication is contemplated of his lectures on Lazarettos and on the Functions of the Brain, lectures which always drew crowds to his class-room, not of students only, but of past masters in the profession.

HENRY LAWRENCE, M.R.C.S. ENG., L.R.C.P. EDIN.

MR. HENRY LAWRENCE, who died recently at Clifton, was a well-known and popular practitioner in Bristol, his father having been for several years chaplain to the prison there. Born in 1848, he became a Member of the Royal College of Surgeons of England in 1871, receiving part of his medical education at the Royal Infirmary, Bristol, and at the Middlesex Hospital. He became a Licentiate of the Royal College of Physicians of Edinbugh in 1874. The deceased gentleman was public vaccinator for Bristol, and was at one time surgeon accoucheur to the Bristol Dispensary. To the Bristol Lying-in Institution he acted as honorary surgeon. By his friends Mr. Lawrence was held in high esteem, and his death, which took place after a short illness, will be deeply felt by the public among whom he practised.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

So far from the business of the recent meeting of the Council being of an easy and formal character requiring only a short time for its disposal, the Council sat six days and had to come to decisions of unusual difficulty and importance. Some of these we have already noticed as disposed of by the Council in the two first days of the session. Throughout the session the absence of the initiative of the Medical Defence Union was felt. Had the full energy of this and the sister society—the London and Counties Medical Protection Society—been put forth on one or two matters which engaged the attention of the Council it is possible that different conclusions would have been reached. It is to be hoped that an understanding will be come to with these bodies that will encourage them to undertake the presentation of cases to the Council which affect either the honour or the interests of the profession. It is to be remembered that they are voluntary societies, doing much work that should be done, if not by the General Medical Council, then by the Public Prosecutor or the Registrar-General. To expect from such societies all the force and formalities of legal procedure is unreasonable. The wonder is that the work has been done with so much approach to legal precision without the power to enforce legal methods.

The report of the Examination Committee on the various reports of the inspector and visitors of examinations, and the series of recommendations arising out of them occupied a day, or a day and a half, of the Council's time. The discussion was a little too prolonged, and, indeed, led to the Council not being able to finish its business on Saturday. It cannot be said that any new principle for the guidance of the examining authorities was enunciated. The action of the committee led by Sir Dyce Duckworth was rather to emphasise points in the old set of recommendations. Mr. Teale has given notice of resolutions—to be found in our report of the proceedings—which aim at crying a halt in the immense burden of examinations which is now laid on the student's back, and at reducing the number of them. The time was not sufficient for the discussion of such an important suggestion. But the resolutions have been put on the minutes, and Mr. Teale, who speaks with great thoughtfulness and authority on such matters, has given notice that he means to go very fully into this subject at the next session of the Council.

A very noticeable feature of the proceedings was the report of the Public Health Committee, showing that in the chairman, Dr. Thorne Thorne, the Council has got a successor to Sir John Simon who has the same determination to hold high the standard of examinations for diplomas in sanitary science. It was in no abatement of this determination that the report gave a kindly and almost a humorous hint that there were practical limits to the subjects of examination, even of the "distinctively high" diplomates, and that they could not reasonably be asked far-fetched questions in physical science, as of the mass of Jupiter, the oscillation of the pendulum, or concerning the law as to admissibility to evidence of dying declarations, or in mental physiology, and the like. It is much to be regretted, as Dr. Thorne Thorne points out, that no less than fifteen registered bodies in the United Kingdom now confer registrable diplomas in the United Kingdom. It adds much to the difficulty and the expense of inspecting examinations when they are so numerous, and it must also tend to some competition downwards. We

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cannot tell the exact number of successful candidates, but they can scarcely give more than two or three to each board. It is to be hoped that the licensing bodies which now act in conjunction only for ordinary diplomas will not continue to give separate diplomas in State Medicine.

The petition from the Apothecaries' Hall of Dublin for the appointment of surgical examiners, arising out of the fact that the Royal College of Surgeons in Ireland had terminated its conjoint arrangement with the Hall for giving a complete diploma, was reconsidered on Friday, the debate being postponed from Wednesday, Nov. 27th. It will be remembered that the Council reported this conjoint examination to the Privy Council as being insufficient. The reply of the Privy Council left the General Medical Council in a position of some embarrassment. It (the Privy Council) saw no reason to decide on the insufficiency of an examination which had practically ceased to exist. There was much division of opinion in the Council, some thinking the defects of the extinct Conjoint Board an opportunity and a justification for ending the Apothecaries' Hall, others arguing that it should have another chance under conditions prescribed by the General Medical Council. Irish opinion was much divided. In the end it was resolved to refuse to appoint surgical examiners. The hall is now in the position in which the Society of Apothecaries of London was placed by the refusal of the other bodies to form a conjoint board. Such a position in a corporate body always excites some pity and a feeling that the body has not had a fair chance. It remains to be seen whether the Hall will apply to the Privy Council and whether that body will order the General Medical Council to appoint examiners, or, failing this, will themselves appoint them. It is undeniable that the Hall has not the same claims that the sister body in London had. But according to Sir John Banks it fills a distinct place and meets a distinct want in Ireland.

The session of the Council which has just closed displayed the general desire of those representing the qualifying and educational bodies to be faithful to the recommendations of the Council and to the duty of holding high the standard of medical education. The penal and disciplinary powers of the Council are still undeveloped and undefined. It has resolved, however, to take one new step—as perhaps it might not have done if the Medical Defence Union were not holding aloof—viz., to prosecute a quack who trades on the lowest set of feelings and fears and who takes the title of "Dr." wherewith the more to impress the ignorant. This is a new function and one attaching more to the Public Prosecutor or the police. But let us hope that these authorities may be led by the Council's action to do their duty in the interest of public morality.

THURSDAY, NOV. 28th.

The winter sittings of the General Council of Medical Education and Registration were resumed at the Royal College of Physicians of London in Pall Mall East, Sir RICHARD QUAIN, the President, being in the chair.

New Recommendations for Examinations.

Sir DYCE DUCKWORTH, as chairman of the Examination Committee, submitted the following report:—

"Specific recommendations by the Examination Committee in regard to the results of visitation and inspection of the final examinations in medicine, surgery, and midwifery of all the licensing bodies:—

"1. That fixed intervals of time between the several examinations should be maintained, and that two years should intervene between the date of passing of the final examination in anatomy and physiology and that of admission to the final examination in medicine, surgery, and midwifery.

"2. That the extreme sub-division of examinations, and particularly of the final, as now permitted by some boards, should not be sanctioned.

"3. That questions in all the written examinations of the different bodies should be submitted to the whole of the examiners in each subject before they can be set at any examination.

"4. That candidates in all their examination work should be [illegible] supervised.

"5. That at least half an hour should be allowed for a candidate to answer each question in the papers on medicine, surgery, and midwifery.

"6. That no candidate should be orally examined in any subject or part of a subject, except in the presence of two examiners.

"7. That the clinical examinations in medicine and surgery should be conducted under the personal surveillance of two examiners, one of whom should always examine the candidate orally on each case although the adoption of this rule might necessitate in some instances additional clinical examiners.

"8. That there should always be an examination of secretions, as in testing urine, in clinical microscopy, and in prescription writing, and always an oral examination in both medicine and surgery, which should include the recognition of pathological specimens.

"9. That at every final examination there should be a practical examination in pathology, macroscopic and microscopic, unless this has been included in the examination immediately preceding the final examination.

"10. That the examination in midwifery, forensic medicine, and hygiene should be made as practical as possible.

"11. That whatever the system of marking may be, the percentage for a pass (50 per cent. in each division of a subject) should be uniform in all the boards, and in accordance with previous recommendations of the Council.

"(a) That the marks given on the written examination ought not, as is the case with some boards, to dominate those given at the subsequent clinical examinations.

"(b) That marks given in any part of an examination should be given on the merits of that part alone, and not be subject to future revision unless for the correction of a manifest error.

"(c) That the recommendation of the Council that knowledge of a subject should not be allowed to compensate for ignorance in another is not sufficiently regarded by some of the examining bodies.

"(12) That as the art of examining is only to be acquired by practice it is desirable that an examiner should be re-elected, where practicable, for at least five consecutive years, particularly for the final examinations."

He (Sir Dyce Duckworth) said that this series of recommendations had been drawn up with great care and consideration by the Examination Committee as the result of the large experience which had been gained by visitation and inspection of all the licensing boards in the kingdom during the last three years. It had been thought that recommendations in this form would be a great advantage to the various examining boards. He moved that the report be received and entered on the minutes.

Mr. BRYANT seconded the motion, which was adopted without further comment, and it was agreed that the Council should resolve into committee to discuss the recommendations in detail.

Sir DYCE DUCKWORTH formally moved, and Mr. [illegible] seconded, the adoption of Recommendation 1.

Mr. TEALE suggested that the Council should pause before adopting a proposal of this sort. The difficulties students had to face to get through the curriculum in five years were already very great, and he questioned whether the interval proposed in this recommendation would not increase these difficulties. Rejections at the final examinations were not decreasing but increasing. In 1861 the average percentage of rejections was 12·4; in 1876 the average had increased to 22·2 per cent., and in 1891 to 39·3 per cent. Their professional examinations were very uncertain, very unprecise, made up of a great deal of chance, and those who went up for them required no little preparation. It seemed to him that to keep them from the hospitals until they had got through their anatomy and physiology would not benefit them, and that the interval between the passing of the examination in anatomy and physiology and their admission to the final would rather keep them back.

Mr. BRYANT said that if the resolution was adopted it need not be that students should be excluded from clinical work until they had passed their anatomical examination. There were schools in which students were so excluded, but he did not believe in them. The resolution would give them with more time for preparation for the final examination, and in doing so he believed it was a wise step. He submitted that there was no tangible force in Mr. Teale's objection.

Dr. MACALISTER claimed to have had experience of the working of such a rule at Cambridge. After nearly twenty years' operation of it, it had been found to have no effect on the weak men, while it hampered the best men. Many men who went to Cambridge got much of their education elsewhere, and though they were ready to take the examination they could not avail themselves of that education until they had met the requirement of three years' study at Cambridge. This rule would therefore hamper men who were ready before the expiry of the interval it set up, and he rather doubted if it was wise on the part of the Council to put down a cast-iron rule of this kind. The matter seemed much more

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that should be left to the bodies themselves. He was afraid he should not be able to support the resolution.

Sir WILLIAM TURNER said that from Mr. Bryant's speech the Council might infer that it was the practice at present for candidates to pass their anatomical examination at the end of the second year and then leave the full period of three years between the passing of that examination and the admission to the final. That was undoubtedly the case as regards the Conjoint Board system in London, but that was not the case in Scotland. The ordinances of the Scottish universities required that a man should not be allowed to go in for his anatomical and physiological examination until the end of the third year, the rest being taken for the more clinical and practical side of his work. Therefore the argument advanced to meet Mr. Teale's objection, while good enough for London, did not apply to Scotland. Were it made a hard-and-fast rule that there should be an interval between the passing of the anatomical and physiological examination and the date of the passing of the final it would be a hardship to many candidates. The final examination in anatomy and physiology was held a month or so before the expiry of the second year. If this resolution was passed and it went to Scotland the authorities in that country would have to treat the matter with some latitude. They could not treat it rigidly, for if they did so it would be penalising their candidates, and that would be unjust to them. If it was passed they must put their own interpretation upon the meaning of the term "two years." It was because he looked at the matter from that point of view that he offered no objection in committee to the resolution as it now stood.

Dr. MCVAIL was very sorry to hear Sir William Turner's remarks. He thought this was a resolution on which the Council would have been quite unanimous. He did not know any resolution that had come before the Council that was so entirely worthy of their confidence. It was the case that careless students left over the examination in anatomy until they were engaged with the more serious subjects. He had known of students who, in the final year of clinical medicine, had not passed either in anatomy or physiology, and were, in fact, still actually working away at "Quain's Anatomy" and "Kirke's Physiology." These men had either been careless or had not been able to pass their examinations. Was a man who had not at the end of three years passed the examination in anatomy fit to go on in the three great subjects of medicine, surgery, and midwifery? He held that he was unfit. He did not think there was any hardship in this resolution at all. He could hardly imagine the Council rejecting it or having any tenderness for men who could not comply with it. Any such deserved the hardship, if it were hardship, of being kept back. The keeping of them back was a protection to the public.

Sir WALTER FOSTER felt that the recommendation embodied an idea that had for a long time been in the mind of the Council. The great defect in this country for the last thirty years had been this, that they did not get their students into anything like a disciplined curriculum. They wanted to get their students classified—divided into those who were studying the scientific basis, and those who were engaged in the practical application of the scientific basis to the arts of medicine and surgery. But the question was whether that could be done through the regulations of the General Medical Council or through those of the licensing bodies themselves. He thought it might be done by the students being logically kept in these two classes. Some such classification as this resolution aimed at would weed out the worthless students. He believed that if they had this classification they would get a great stimulus towards discipline, and it was because the resolution aimed at more discipline that he supported it.

Mr. BRUDENELL CARTER regarded the remarks made by Dr. McVail and Sir Walter Foster as very clearly expressing what was on the mind of the committee in adopting this recommendation. He thought the committee's feeling was that at the period of time a student approached his clinical work he should go forward with unfettered mind and so should be able to devote to it the whole of his faculties. They did not contemplate that he should have before him an examination that he should already have passed. When the resolution was originally drawn the words "at least" appeared before "two years." These words "at least" had been inserted to meet such cases as that to which Sir William Turner had referred. On the general principle he (Mr. Carter) thought and hoped that there could be little doubt that the scientific basis and practical application marked two periods, and that as far as possible these two periods should be kept distinct.

Dr. LEECH remarked that it seemed to him the advantages of the resolution far outweighed its disadvantages. He did not think it would result in an addition to the number of rejections to which Mr. Teale had referred. It would induce men to work, for if they knew they had to pass certain examinations before entering upon clinical work they would study harder.

Dr. BATTY TUKE asked if the resolution meant to imply that men should apply for examination at the end of two years.

Mr. BRYANT replied that that was the custom, leaving the three other years for purely clinical work. It was in marked contrast with what went on in Edinburgh, where they gave three years to preparatory work and two years for the rest.

Dr. BATTY TUKE: Exactly. Then it implied, he went on to say, that each man must study anatomy and physiology in one year, which was an utter impossibility. When a first-year's man had to study biology, chemistry, and physics he could not do more, and this resolution would throw the study of the two institutes of medicine into the second year, and one year was wholly insufficient.

Mr. BRYANT explained that a hope was entertained that the first year's subjects would soon come to be looked upon as subjects to be taken before entering upon the medical course proper, and when that came to pass there would be more time for the study of anatomy and physiology, and surely two full years should be enough for the average student.

Dr. BATTY TUKE pointed out that he had been taking into view only the existing conditions.

Mr. BRYANT suggested that the conditions were more and more becoming what it was hoped they soon would become. To meet any difficulty felt, he was willing to see the resolution altered by putting the word "academic" before "years," and leaving out "midwifery." In regard to the latter, some of the boards were considering whether a man might not be admitted in midwifery twelve months after his passing the examination in anatomy and physiology.

Dr. LOMBE ATTHILL said his belief was that the students did not devote so much time to work in the five years' scheme as they did under the old system, and he therefore thought this resolution a step in the right direction. If, however, it made it imperative that anatomy and physiology were to be passed at the end of the two years, he should oppose it. As the course was one of five years, a man might pass in these subjects at the end of the third year, and yet pass in the five years. As to midwifery, he thought that was a subject that should be taken at the end of the course.

Mr. TEALE said the point the last speaker made was this: he asked for three years for anatomy and physiology; in doing so he asked for a six years' course.

Dr. ATTHILL: The final is to be taken at the end of five years. You mean that?

Mr. BRYANT: Yes.

Mr. TEALE: Is this the real final?

Mr. BRYANT: The final that gives the diploma. We might say "last," instead of "final," examination in anatomy and physiology.

Mr. WHEELHOUSE: The resolution says nothing about the curriculum, but only that a certain time must elapse as between examinations.

Dr. FRASER said that in Aberdeen until a student had passed in anatomy and physiology he remained a third year's student. That, he thought, was very desirable. The great curse to a student was that he went on while he was unfit for the work. Unsuitable men kept hanging on. The resolution would be a good thing for the teachers as well as the students and the parents of the latter. It was practically carrying out the scheme in operation in the north of Scotland.

Sir DYCE DUCKWORTH intimated that he was willing to word the resolution as follows: "That fixed intervals of time between the several examinations should be maintained, and that two academic years should intervene between the date of the passing of the last examination in anatomy and physiology and that of admission to the final examination in medicine, surgery, and midwifery."

Dr. BRUCE: Is this the final shape in which you propose to send the resolution to the bodies?

Sir DYCE DUCKWORTH: Yes, if it is adopted.

Dr. BRUCE: Then I think it requires a little more consideration. I do not think it would be possible to carry it out.

Dr. HERON WATSON pointed out that the only thing the

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committee proposed was an alteration of the period at which the examinations should be taken up, and his firm belief was that if the rule were established it would exercise a wholesome effect upon the students. It would certainly influence them not to waste time and to endeavour to pass the requisite examinations within the prescribed time.

Dr. MACALISTER said it was clear they were agreed that students should have two clear years after physiology and anatomy were done with. If that was what they wanted they ought to say so. They should say that before any student was admitted to the final examination he should present evidence of at least two years' clinical study subsequently to the examination in physiology and anatomy. He moved to this effect.

Dr. BRUCE seconded the amendment.

On a division the recommendation as amended was carried by a majority, the amendment being supported by only 5 votes.

Sir DYCE DUCKWORTH moved the adoption of the second recommendation. He did not think any objection could be raised to this resolution. Passing examinations in instalments was exceedingly bad, and the Council had pronounced it very undesirable.

Mr. BRYANT seconded the resolution.

Dr. BATTY TUKE remarked that the only objection he had to the resolution was that it was not strong enough.

Dr. LEECH agreed to the resolution so far as regards the final examination, but not so far as intermediate subjects.

Dr. MACALISTER thought the word "extreme" weakened the resolution.

Mr. BRUDENELL CARTER was of the same opinion. He himself had suggested in committee that the word "extreme" should be left out.

Dr. CAMERON asked what "sub-division" meant.

Mr. BRYANT said that as regards the final examination in medicine, surgery, and midwifery, all the subjects at some universities were taken together. In the examinations of other bodies, however, the subjects were taken separately; this was what was meant by "sub-division." As to what was meant by "extreme sub-division," supposing a man went up for medicine and passed in the written part of the examination and not in the clinical, he must go up for the whole again. Some boards thought they got better results by allowing the pass rather than insisting on the subject being taken again.

Dr. BATTY TUKE: Then the recommendation is in favour of piecemeal examination?

Mr. BRYANT: No.

Dr. MCVAIL thought Dr. Tuke's view quite right. It seemed to him that the resolution gave powers to hold the examination in medicine at one time, in surgery at another, and in midwifery at another. He did not think the three subjects should be dissociated from each other. They should be passed at one time, and if a man did not pass in two he should be re-examined in these on going up again. He moved as an amendment: "That in the final examination the whole subject of medicine, surgery, and midwifery should be passed at the same time, and that failure in one of the subjects shall involve re-examination of the whole."

Dr. CAMERON seconded the amendment.

Dr. GAIRDNER could not go so far as the latter part of this amendment proposed. In Glasgow they had a rule under which a man who did not pass in one subject, but had a really good mark in the rest, was remitted for three months.

Dr. MCVAIL was willing to take the opinion of the Council on the first part of his proposal.

On a vote the amendment was rejected, and the committee's recommendation was adopted without amendment.

The third recommendation was adopted in this form—viz., "That in all the written examinations of the different bodies questions in each subject should be submitted to the whole of the examiners before they can be set at any examination."

Sir DYCE DUCKWORTH, moving the adoption of the fourth recommendation, explained that one or two instances came before the committee where there was laxity in the matter of supervision, and therefore he thought this recommendation desirable and necessary.

Dr. BRUCE took the view that it was not necessary, but the Council decided to adopt the recommendation.

A considerable amount of discussion took place with regard to the fifth recommendation.

Sir DYCE DUCKWORTH said that several cases came before the committee where the questions were such that they could not be answered in the allotted time.

Dr. WILLIAM MOORE expressed the view that half an hour was too short a period to allow.

Mr. BRUDENELL CARTER, speaking in defence of the recommendation, said it would have a twofold beneficial influence, because in the first place it would secure to the candidate sufficient time in which to do justice to his own knowledge of the subject, and in the second place it would tend to some extent to guide the examiner as to the character of the question that should be put.

Dr. BRUCE thought that the Council should have the courage to say that certain bodies did not set their papers properly, instead of sending down this general recommendation.

Dr. PETTIGREW said that the difficulty might be got over if they recommended that at least three hours be allotted to each candidate to answer the questions in the written examinations in medicine, surgery, and midwifery, and left the details to be worked out by the examining bodies.

Mr. BRYANT suggested that an average of half an hour might be adopted—that was to say, if there were six questions the candidate would be allowed three hours to answer them.

This suggestion was at once adopted by the Council and incorporated in the recommendation.

Recommendation 6 was adopted in the form proposed by the committee.

The seventh recommendation was put in this abbreviated form: "That the clinical examinations in medicine and surgery should be conducted under the personal surveillance of two examiners."

Dr. MCVAIL asked whether the committee had considered the question of holding clinical examinations only in hospitals. He wanted to know whether the system was to be allowed to continue by which a board brought two or three show cases—something very striking in the way of heart murmur or jaundice or skin eruption—and put these down in a row in a room and called that a clinical examination. In Scotland they would not so call it, because there were many cases that they examined on in the hospital ward which could not be brought to a waiting-room and diagnosed there. He objected to what he would describe as the "snap-shot" clinical examination, and he was glad to think there was nothing of the kind in Scotland.

Dr. ATTHILL: Nor in Ireland.

Dr. MCVAIL said he would be glad to hear something on this subject from Sir Dyce Duckworth, Mr. Bryant, and Mr. Brudenell Carter, who were all members of the Examination Committee.

The PRESIDENT ruled the discussion out of order on the present recommendation, telling Dr. McVail that if he wished he could bring up a proposal of his own when the recommendations of the committee were disposed of.

The recommendation in its abbreviated form was then agreed to.

As to the eighth recommendation,

Dr. HECTOR CAMERON asked what were the secretions that were required. He could understand that saliva could be got and possibly tears, but it would be difficult to get bile and other things. In its present form the recommendation did not give any idea of what was meant.

A Member: Sweat.

The recommendation was then put into this form: "That the final examination should include the examination of secretions, the testing of urine, chemical microscopy, and prescription writing; and there should always be an oral examination in both medicine and surgery which should include the recognition of pathological specimens."

The ninth recommendation was agreed to without discussion.

With regard to the tenth recommendation,

Dr. ATTHILL said that while he agreed with its principle he knew that the carrying of it out would be found impossible.

Sir DYCE DUCKWORTH said there was one examining body in the three kingdoms which carried out practical clinical midwifery. It was a solitary instance, and the committee quite recognised that most boards would have difficulty in carrying out an examination of that kind, but in the course of examining the report of the inspector and visitors the committee found that the examination in midwifery had been by no means practical in some instances, that no attempts had been made by the use of the phantom to get at practical questions. As to hygiene, it was possible that the Examination Committee had a little overstepped the actual

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requirements. Since this matter was brought up the whole subject of public health had been transferred to another committee under the chairmanship of Dr. Thorne Thorne, and possibly it might be desirable to expunge hygiene and make the recommendation read "midwifery and forensic medicine."

Dr. BRUCE objected to hygiene being omitted, because he held that every medical practitioner should have an intimate knowledge of that subject and that his knowledge should be tested in the ordinary way.

Dr. THORNE THORNE took the view that it might with safety be omitted from the ordinary pass examination.

Dr. BRUCE persisted in his objection, but the Council agreed to the recommendation with hygiene omitted.

The preamble of the eleventh recommendation having been adopted, sub-head (*a*) was made to read: "That the marks obtainable in the written examination ought not, as in the case of some boards, to override those given at the oral or clinical examination," and sub-head (*b*) was adopted in the form proposed by the committee. Sub-head (*c*) was moved in this form: "That the former recommendation of the Council—that knowledge of one subject should not be allowed to compensate for ignorance in others—should be more carefully regarded by some of the examining bodies."

Dr. MCVAIL called upon the Council to specify the bodies. This was a charge, and it should be made open and specific as was demanded, in the interest both of the bodies and the public at large.

Sir WALTER FOSTER agreed with Dr. McVail. He had been following these proceedings closely, and the conclusion he had come to was that they were pursuing a wrong line. The best course for them would have been to take all these reports of the examiners, cull out all the specific charges of negligence or inefficiency with regard to the examinations, and, having done so, to pass directions that each body should be called to order for its omissions or neglect. If that had been done, then they would have avoided sending down many of these truisms to the bodies generally. These documents would make the Council the laughing-stock of half the bodies in the kingdom because they did not apply to them. They would be put into a position which did not reflect any great credit on the Council, or add to the dignity of its proceedings, or gain it any respect as an authoritative body upon medical education.

Sir DYCE DUCKWORTH differed from Sir Walter Foster and Dr. McVail. He thought it would have been most invidious if the Examination Committee had gibbeted each body, and preferred that each one should be left to fit the cap to its own head.

The sub-head was then agreed to, as was also the twelfth recommendation.

Dr. MCVAIL moved as a further recommendation: "That the clinical examinations in medicine and surgery should be held in hospitals wherever that may be possible." He compared the system adopted by the Conjoint Board in England with that in Scotland, and expressed his decided preference for the latter.

Mr. BRYANT said he was afraid Dr. McVail had never been present at an examination of the Conjoint Board, because he appeared to know nothing about it. The cases were not such typical cases as he described, there was no hurry, and the examination was just as perfect as any that could be carried on in a hospital. In the London hospitals, moreover, it would not be possible to carry on the examination fairly, nor would it be to the interests of the patients.

Dr. MCVAIL said his contention was that it was impossible to have a proper clinical examination of patients sitting in a waiting-room.

Sir DYCE DUCKWORTH replied that the patients were brought into a spacious, warm, and comfortable and well-ventilated chamber, where they received every attention, and said he felt certain that the governors of hospitals in London would object to students being brought into the wards from time to time for the purpose of clinical examination.

Mr. BRUDENELL CARTER expressed the view that it would be impossible to get in a hospital a better examination than that of the Conjoint Board. The cases were carefully selected, and every facility was given to the student for approaching and examining them.

The recommendation of Dr. McVail was carried by a majority, and the Council adjourned.

FRIDAY, NOV. 29TH.

The Council met, Sir RICHARD QUAIN in the chair.

Unregistered Dentists.

The PRESIDENT intimated that he had received a letter from the British Dental Assistants' Association asking the Council to receive a deputation with reference to a petition on the subject of the admission of certain dentists to the Dental Register. The deputation, he was told, was in attendance. The Council deliberated for a time *in camerâ* on the question of receiving the deputation, and thereafter the President informed the gentlemen that the Council, having already decided the question of the admission of non-registered dentists, and not being prepared to reopen it now, was unable to receive the deputation. The deputation accordingly withdrew.

The petition in question was in the following terms, viz.:

GENTLEMEN,—We, the undersigned dental assistants, beg respectfully to bring before your honourable board a grievance under which we suffer. Through a misunderstanding on our part at the time of the passing of the Dentists Act, 1878, we did not take the opportunity to apply for registration, as some of us were not out of our apprenticeship, and others, who were assistants at the time, were quite ignorant of the Act. Some of us noticed Section 37 of the Act in the year 1882, some in 1883, and some at a later date, and applied for registration, but were refused on account of being "too late." Since that time up to Dec. 5th, 1892, your honourable board have granted registration in about 400 cases (according to Dental Register, 1895); and we consider, as we applied before that date, the same privilege ought to be extended to us. We are all qualified according to Section 37 of the Act. We have been articled as pupils, and most of us have paid a premium to a qualified dental practitioner for the dental education we received, while some of us, who paid no premium, gave time in lieu of cash. Our articles expired before the first day of January, 1880. We have now been twenty, twenty-five, or more years in "dentistry"; we are all married and have families depending upon us, so that it is quite impossible for us now to turn to other callings. We therefore pray that your honourable board will take our precarious position into kind consideration, and extend the same privilege to us as your honourable board has been kind enough to extend to others. May it therefore please your honourable board to admit us as "registered dentists," and to authorise the Registrar to enter our names on the Dentists' Register upon payment of the usual registration fee.

The Apothecaries' Hall of Dublin.

The Council then proceeded to the consideration of the application of the Apothecaries' Hall of Dublin for the appointment by the Council of two examiners in surgery. The application was made owing to the Royal College of Surgeons in Ireland having withdrawn from the combination with the Apothecaries' Hall, and in virtue of the provisions of Section 5 of the Medical Act of 1886, which says that if a medical corporation represents to the General Medical Council that it is unable to enter into a combination for the purpose of holding qualifying examinations, and the Council are satisfied that the corporation has used its best endeavours to enter into a combination, and is unable to do so on reasonable terms, it shall be lawful for the Council from time to time, if they think fit, on the application of the corporation, to appoint any number of examiners to assist at the examinations.

Dr. CHARLES F. MOORE moved that the petition be granted. He explained that he had received letters from Dr. Haughton and Dr. Kidd, who were unable to attend this session of the Council, expressing the hope that the petition might be successful. Having done this Dr. Moore gave an account of the position and work of the Apothecaries' Hall, and assured the Council that if they granted the petition no pains would be spared to make the examinations thoroughly satisfactory in every respect and well up to the requirements of the Council.

Dr. PHILIPSON seconded the motion without making a speech.

Sir JOHN BANKS, speaking in support of the application, said that the apothecaries supplied a want in Ireland. They were needed by the poorer class of people, who were not able to pay the ordinary fees of physicians and surgeons, and he could assure the Council that they were a highly respectable and accomplished body of men. He was confident that if they were afforded the opportunity of going on they would do well in the future.

Dr. ATTHILL said that all along the Apothecaries' Hall had attributed their failure to the ill-will and persistent hostility of the Royal College of Physicians of Ireland. He could assure the Council that such ill-will and hostility did not exist. He and the other Fellows of the Royal College of Physicians of Ireland respected and esteemed the great majority if not the whole of the governors of the Apothecaries' Hall, but what they objected to was that

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a body subordinated to them in certain important particulars should be made in all respects their equal and be made a qualifying body. Dr. Moore had said that there had been a systematic combination on the part of the Royal College of Physicians of Ireland to prevent their Fellows examining for the Apothecaries' Hall. That was not the case. He had a letter from one of their Fellows in which he stated that for two years he had been an examiner to the Conjoint Board without any Fellow of the College making any objection to his action and that afterwards he was appointed an examiner by the College itself. The fact was that the standard of the examination was lowered, and in course of time men refused to act as examiners. That was the true explanation of the difficulty. Dr. Atthill then went at length into the history of the Apothecaries' Hall, showing in what circumstances it was constituted and how it was subordinated in certain respects to the Royal College of Physicians of Ireland.

Sir PHILIP SMYLY said he had asked for instructions from his body (the Royal College of Surgeons in Ireland) as to this matter, and they decided to give him a free hand and no instructions. He therefore wished to speak, not as a representative of his College, but merely as a member of the Council. The question here was not the existence of this body, because it existed by Act of Parliament, but whether surgeons were to be given to it to complete the examinations, and he distinctly thought that they should be given. He asked that the Hall should be given a fair and honest trial as to what it could really do under fair conditions.

Dr. HERON WATSON intervened to say that the motion and the application on which it was founded hardly appeared to be consistent with the provisions of the Act. The section said that it should be the duty of the assistant examiners to secure at the examinations the standard of proficiency in medicine, surgery, and midwifery required by the Act, and how by appointing examiners in surgery were they to secure proficiency in medicine and midwifery? Instead of two examiners he fancied they would have to appoint an entire board of examiners.

Dr. MCVAIL thought the Hall should withdraw its present application and reapply in May, asking the Council to appoint such examiners under Section 5 of the Act as the Council might see fit in order to constitute the diploma of the Hall a qualifying diploma.

Mr. BRUDENELL CARTER pointed out that the Act only empowered the Council to appoint examiners to assist.

Dr. MACALISTER thought it a truly Hibernian method to appoint examiners in surgery for an examination which had been declared deficient in medicine. And, after all, the defects in the Hall were not confined to the examinations; they were found in the curriculum, in the advertisements, and in the programmes.

Sir WALTER FOSTER said he was sorry the corporate bodies in Dublin had not taken a somewhat more generous view of the difficulties of the Apothecaries' Hall. He thought the Hall had not been very fairly treated, and he appealed to the more generous instincts of the Council to come to its aid.

Dr. BATTY TUKE took the view that if this application were granted one of the great and important functions committed to this Council by Act of Parliament would fall into abeyance. They might remain as a council of registration, but it was very doubtful whether they could long continue as a council regulating medical education. For thirty-five years the Council had been trying all they could to raise the standard of medical education. They had done so by the application of sensible pressure—using the word sensible in both its senses. They had set up a standard of proficiency, and the standard must be protected. Why did the Royal College of Surgeons in Ireland leave this body?

Sir PHILIP SMYLY: We did so at the request of this Council.

Dr. BATTY TUKE thought the Council would put their own interpretation on the conduct of the Royal College of Surgeons in Ireland. When the Hall put the matter before the Privy Council it did not say *peccavi;* on the contrary, it said it had done right all through, and this body asked the General Medical Council to reconstitute and galvanise it again into existence. If the Council did so, they would stultify their action in the past and render themselves utterly useless in the future.

Dr. HERON WATSON, seconded by Dr. MCVAIL, moved:

"1. That the application of the Apothecaries' Hall in Ireland and the motion of Dr. Moore founded upon it are not in accordance with the provisions of the Medical Act, 1886, Section 5. 2. That the authorities of the Apothecaries' Hall be informed of this, with a view, should they think fit, to make a new application for the appointment of such examiners to assist at the examinations of that body in [illegible] surgery, and midwifery as shall secure at the said examinations maintenance of such standard of proficiency as is required under provisions of the Act, 1886, from candidates at such examinations."

The PRESIDENT said that the Apothecaries' Hall were anxious to get a distinct answer to their application, and thought they would be quite justified if this amendment passed in going to the Privy Council.

Dr. CHARLES MOORE said that the question of appointing examiners in medicine had been before the Hall and quite on the cards that they might so apply.

The PRESIDENT said he had a strong feeling that amendment was altogether wrong.

The vote was then taken, when 9 members voted for Dr. Heron Watson's amendment and 12 members against it. Seven members refrained from voting on either side.

The PRESIDENT said the original motion was lost.

Sir DYCE DUCKWORTH said that Dr. Tuke had placed question on a truly wide and impartial basis—for basis of this question. As chairman of the Examination Committee, for the last five years he had gone through all the reports relating to this qualifying body his mind was fully made up as to what he was going Left standing alone, helpless, and unable to carry work, they were asked to prop it up. If this Council to accede to that they would stultify all the work of three years, and would deserve to be, and would laughing-stock of the whole medical profession. Apothecaries' Hall of Dublin had had many chances and it had not availed itself of any of them. He believe it was able to make itself a satisfactory had had its day, and he thought it ought to die gracefully.

Dr. GLOVER reminded the Council that in the last years the Apothecaries' Hall of Dublin had not acted It should not get all the blame for inadequacy and ciency. The responsibility must rest on the Conjoint He for one thought the Apothecaries' Hall should chance, and in order that it should not be excluded list of qualifying bodies he proposed as an amendment "That the petition of the Apothecaries' Hall of Dublin granted on the condition that this Council appoint addition to examiners in surgery, examiners in cine and midwifery to act as assistant examiners under Section 5 of the Medical Act of 1886." hoped this amendment would bring the Council unanimous vote. Such a vote would have an effect. It would put this body on its mettle. examiners from this Council would practically be ("No, no," from Sir Dyce Duckworth), whose duty be to secure such proficiency as was required, and failed in securing that efficiency it would be their duty, and no doubt their action also, to report to the the unsatisfactoriness and insufficiency of the examination.

Dr. BRUCE seconded the amendment. He urged the proposal were accepted one result that would would be that the students who had a claim upon the Conjoint Board would, instead of hanging on to this go to the new body.

Dr. THORNE THORNE asked if this amendment was in order. The Council were asked officially to appoint examiners in surgery for the Apothecaries' Hall. The ment asked them to do something more. If they something more the body applying might not accept might resent it, and unless the Council had some document to show that it would be accepted, why they take the proposal into consideration at all?

Dr. CHARLES MOORE said he had a specially written authorising him to use his discretion at this Council regard to anything that might be proposed at it. the power to withdraw the proposal he himself had before the Council.

Sir WILLIAM TURNER thought the Council had a right know where it was at any particular moment. The before them a definite motion from Dr. Moore, which had been discussing all day long with amendments. the last moment they were told that that motion was the final application of the Apothecaries' Hall—they told that the representative of that Hall had plenary Why did not Dr. Moore tell them that at first?

The PRESIDENT: Mr. Muir Mackenzie advises me the amendment is quite in order.

Sir WILLIAM TURNER said that if they were to take

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osal without anything like a proper application they
l not be complying with the Act. They had no appli-
n. They should have an application from Dr. Moore
rom the body he represented.

e PRESIDENT: The amendment proposes to grant
iners on condition.

. LEECH thought it would be very dangerous to proceed
is way. They should not vote in a hurry.

. MACALISTER was of opinion that it would be perfectly
petent for the Apothecaries' Hall to accept the examiners
urgery and to decline the others in medicine and mid-
ry.

r. MCVAIL asked to be allowed to suggest to Dr. Moore
withdraw his motion and allow the Hall to make applica-
under the Act. It was perfectly certain that that motion
t stood now would meet with a disastrous fate, as many
ld have to vote in an adverse sense who might be dis-
d to assist the Hall if an application from them for
miners in all the subjects were before the Council. He
not think the Council would be wise in accepting from
Moore the mere statement that he had plenary powers;
re ought to be a definite written application under the
. The Hall would not lose anything by getting time in
ich to make application.

Ir. BRYANT hoped the Council would keep to the point
ore them. They were asked to help the Hall. How could
y do it? The position taken up by Dr. Tuke and sup-
ted by Sir Dyce Duckworth was precisely the position he
r. Bryant) held himself. He certainly was at a loss to see
v the Council could so stultify themselves in a session in
ich they had agreed to inform the Lord President of the
vy Council that the opinion of the General Medical Council
to the standard of proficiency required by the Conjoint
ard of Ireland was based on the results, not of one inspec-
n only, but of four special inspections and visitations, and
t the remarks made in the communications from the
othecaries' Hall of Dublin and the Royal College of Sur-
ons in Ireland had been considered by the Council and
ey saw no reason to alter their opinion as to the standard
question. Were they now disposed to stultify that position
together and to say that it was not so bad after all? Even if
ey were to act on the amendment they would be making the
aminers the nominees of the General Medical Council, and
l over the kingdom it would be looked upon because of that
a very good board to go to. They had heard much about
e Apothecaries' Hall being utterly ruined if they did not
et their examiners. He did not see where the ruin came in.
hey only removed a growth that had sprung up since 1858,
efore which the Apothecaries' Hall was a mere medical
oard—a board that had never held a position equal to that of
e London Apothecaries' Hall. In all times since 1858 this
ublin Hall had been a failure. The Council would look
erfectly ridiculous in the eyes of the public as well as of
he profession if, after asserting so repeatedly that the board
as inefficient, they should think of propping it up, especi-
lly with examiners appointed by the Council.

Sir PHILIP SMYLY remarked that the Royal College of
Surgeons in Ireland had maintained that they had made a
good surgery examination. The managing committee had
o voice whatever in the selection of medical examiners.
If they had had any voice in the matter, then some respon-
sibility might lie upon them. He had been asked for the
reason that the College left the combination with the
Apothecaries' Hall. It was this. They had no control over
the medical examination, and they were recommended by
the General Medical Council to separate. The College fol-
lowed the Council's advice. They did not separate from the
Apothecaries' Hall because the Hall's examinations were con-
demned. They followed the advice of the Council.

Dr. THORNE THORNE did not come to this meeting with a
decided opinion on this question. He had made up his mind
now. He was the most recently appointed member of this
Council. His first session was last summer's session, and he
must confess he was deeply impressed with the debate that
then took place in regard to the Apothecaries' Hall of Dublin.
It was a very important question, but when the decision was
come to, to report the examination of the Irish Conjoint
Board as insufficient, he had no idea that the action was so
exceptional. He found, however, that in the whole thirty-
seven years of its existence the General Medical Council
had never previously taken so grave and serious a step as to
report a qualifying body to the Privy Council for inefficiency.
After that exceptional action they were, forsooth, actually
asked to prop this body up again. Why, the Privy Council
had not even dealt with the Council's rep
decided last May that they would not com
pending the decision of the Privy Council; if t
now it would lead the General Medical Cou
disrepute, and for that reason he intended to
appointment of examiners.

The amendment was then put to the vote a
by a majority, only 6 members voting for it.

The PRESIDENT asked if the Council we
divide on the original motion.

Sir WILLIAM TURNER said that in Section
1886 it was said: "It shall be lawful for the
from time to time, if they think fit, on the
such corporations, to appoint any number o
assist at the examinations that are held by
tions." Could their counsel, Mr. Muir Ma
them as to what latitude was expressed in t
think fit"?

Mr. MUIR MACKENZIE explained that in a
the Bishop of Oxford was concerned it had
the words "for the Bishop if he think fit" g
discretion and imposed no duty. So there
discretion on the part of the Council under
appoint or not to appoint if they thought fi
Council would forgive him for saying that
scribed the procedure by which the privileg
privilege, of granting a diploma was to be tak
was by representation to the Privy Council.
think that the Act of Parliament intended t
Medical Council should by refusing to appoir
able to deprive a college of its statutor
exercising its jurisdiction to refuse to appo
was the duty of the Council to have regard t
the body possessed at this moment the statuto
diplomas and had the right to have exami
Council said there was some reason or ligator
the Council to refuse exercising their right.

Sir WALTER FOSTER wished to put th
enactment was intended to be an enabling ar
tive enactment. The intention of Section 5
body like the Apothecaries' Hall of Dublin to
a licensing body, and there was no other sec
of a destructive tendency. Was the bias n
the direction of enabling the body to go on?

The PRESIDENT thought that if the Counc
body should not go on they ought rather to
sentation to that effect to the Privy Council
indirect way of putting an end to the bod
grant examiners for it.

Dr. CHARLES MOORE said he had been to
that he had told an untruth. He thought t
have been said to him. He claimed to be
gentleman. He had been told that he had
saying that Trinity College, Dublin, had off
of use of their theatre to the Apothecaries
to say in reply that he had authority. He h
of the Professor and the Senior Fellow. H
say that the Professor of Theology had e
very friendly to the Hall. There were other
he should like to correct. It was said that t
Hall was under the control of the Royal Colle
of Ireland. That he entirely denied.

The PRESIDENT, interrupting Dr. Moore,
matters of no value in the determination
before them. Before putting the motion
President said he wished to ask the Coun
very carefully. If they wished to put an en
them have the courage of their convictions a
sentation to the Privy Council. Let ther
indirect way of refusing to appoint examiner

On a division, 8 voted for the motion and
members declined to vote and 3 (Dr. Hau
and Sir John Banks) were absent.

The application was accordingly refused.

Dr. ATTHILL wished to make a personal
said on Wednesday that a certain stateme
Moore was not true. He did not say—he
say—that Dr. Moore told an untruth. He be
meant what he said, but that Dr. Moore
information, and it was the information tha
contradict. He regretted that anything he
offended Dr. Moore.

Accumulated Examinations.

Mr. TEALE had given notice of a motion

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but when called upon to move he asked that he should be permitted to postpone it till next session, and also that it should be entered in the minutes as a notice for that session. The proposed motion was:

"1. That the present system of accumulated examinations, with the consequent enormous increase in the number of rejections, is not only unjust to the medical student, but is damaging to the best interests of medical education.

"2. That the time has arrived when the General Medical Council should consider:

"(*a*) How far examinations and the occasions of rejections can be reduced in number.

"(*b*) How far, whilst retaining effective examinations in those subjects which it is essential that every educated medical man should know and retain the knowledge of, several other subjects, which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, should be removed from the sphere of public examination, the 'bird's-eye survey' of such subjects being secured by compulsory short courses of lectures, aided by class examination by the teacher."

The Council agreed to Mr. Teale's requests.

Midwifery Diplomas.

Mr. WHEELHOUSE presented the following interim report of the Committee on Midwifery Diplomas:

"The chairman reports that the committee appointed by the Executive Committee on Nov. 25th to examine the above subject sat on Thursday, Nov. 28th, but are not yet in a position to report, in consequence of the fact that certain members of the committee had not received notice of their appointment on it, and requests that the committee be reappointed."

Procedure in Penal Cases.

Dr. MACALISTER remarked that the experience the Council had had in the present session of penal cases in which the accused was convicted and sentence deferred showed that some amendment of their procedure was necessary, and therefore he proposed:

"That the Executive Committee be instructed to prepare for the consideration of the Council a suitable form of standing order for the procedure to be followed in cases in which, under the last paragraph of Standing Orders XIV. 14, a decision has been postponed."

Sir WALTER FOSTER seconded the motion, which was at once agreed to.

Attendance on Midwifery Cases.

Dr. LEECH proposed:

"That the Education Committee be requested to consider whether the recommendation of the Council of May 26th, 1888, and reaffirmed May 28th, 1891, with regard to the attendance on cases of midwifery, under the supervision of a registered practitioner, required of candidates for medical qualifications, is carried out, and to report at the May session on this point, and on any modification of the recommendation which they may think to be desirable."

In making this proposal Dr. Leech explained that the resolution of 1888 was to the effect that every student should be required to attend three months' practice in a lying-in hospital and conduct twelve cases of delivery under the direct supervision of a registered practitioner. That resolution was affirmed as the result of a discussion which took place in 1891. Since then many complaints had been made that the recommendation was not being properly carried out. He believed that many boards required attendance on twenty cases, but no notice was taken of the recommendation that these should be conducted under the direct supervision of a practitioner. In looking into the certificates of the various boards he found that to be so. In his view, in all these cases there should be direct supervision, as only in that way could a man be taught all those details which were so important to the lives of patients. There were a good many who thought they did not sufficiently instruct students in practical midwifery, and that was one of his reasons for bringing the subject again before the Council.

Mr. WHEELHOUSE seconded the motion, which was amended by the insertion after the words "carried out" of the words "by the regulations of the different licensing bodies," and was then unanimously passed.

The British Medical Association's Petition.

Sir WALTER FOSTER asked whether the petition on the subject of the registration of midwives, which had been referred to the other day, had yet been received.

The REGISTRAR said he had not received any petition.

Sir WALTER FOSTER understood that the petition was to have been sent on the previous day.

Mr. WHEELHOUSE said he had got what pretended to be a petition, but it was not from the council of the British Medical Association. It was not signed by the President of that Association. It was a paper which had come to him with the signature of the manager of a medical association.

The subject dropped.

Dental Business.

A letter from the British Dental Association relating to a curriculum and degree of Michigan, U.S.A., was referred to the Dental Education and Examination Committee, and other dental business was postponed.

The Council adjourned.

SATURDAY, NOV. 30TH.

The Council resumed, Sir RICHARD QUAIN presiding.

Petition from the British Medical Association.

Sir WALTER FOSTER presented a petition from the council of the British Medical Association asking the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least ten confinements under the direct supervision of a registered medical practitioner.

The petition was referred to the Education Committee.

Examinations in Sanitary Science.

Dr. THORNE THORNE, chairman of the Public Health Committee, presented the report of that committee as to inspection of the examinations in sanitary science of the universities and licensing bodies of the United Kingdom.

The report is a very long document, and we can only find room for the conclusions and recommendations with which it concludes—namely:

"CONCLUSIONS.

"1. We are of opinion that it is necessary to call the attention of some of the licensing bodies to the instruction of the Council to the effect that every candidate on whom a diploma or certificate is conferred should give evidence 'of a distinctively high proficiency, scientific and practical, in each and all the branches of study which concern public health'; and we are of opinion that this instruction should admit of no exceptions, whether on account of the seniority of the candidate or by way of allowing excellence in one subject to compensate for failure in another.

"2. We are of opinion that it is a matter of primary importance that each candidate should, in addition to giving indication of competency in the written and practical examination, display such competency in the oral examination. The oral examination is especially called for in such matters as concern practical epidemiology and the duties of a medical officer of health.

"3. Whilst we are not prepared to advocate a uniform standard for the several examinations, we are of opinion that they should all be regarded as of the character of an honours examination.

"4. We are of opinion that no body conferring a registrable diploma or certificate in Public Health should adopt different standards for different classes of candidates.

"5. We are of opinion that where the examination is rendered in two parts no candidate should be allowed to present himself in Part II. until he has passed in Part I. And we are further of opinion that failure in any one subject in either part ought to entail rejection in the whole of that part.

"6. We are of opinion that practical bacteriology should form a distinct part of every examination for a diploma or certificate in Public Health.

"7. We are of opinion that practical examination in the routine work of a medical officer of health, including a test of ability properly to interpret plans, should form part of every examination for a diploma or certificate in Public Health.

"8. Whilst we attach great importance to the possession by every successful candidate of distinctive competency in relation to the clinical aspects of the infectious diseases, we are not prepared to say that practical examination in this matter should in every case necessarily form part of the examination.

"9. We are of opinion that a practical knowledge as to the wholesomeness of food-supplies, including meat in the form of carcase, should be regarded as properly coming within the scope of an examination which aims at providing expert medical officers of health.

"10. In conclusion, your committee desire to express their opinion that so many of the licensing bodies should have thought fit to institute examinations and to grant diplomas and certificates in Public Health. The multiplication of such examinations, quite irrespective of the number of candidates, is, in our opinion, not conducive to the maintenance of the standard of efficiency which should be aimed at.

"RECOMMENDATIONS.

"I. We recommend that this report should be communicated to all the bodies having the power to confer registrable diplomas or certificates in Public Health, for their information.

"II. We further recommend that on the expiration of a period sufficient to enable the bodies concerned to bring their examinations into conformity with the views of the Council, a re-inspection of the several examinations should be made."

Several members of the Council took exception to criticisms made by the inspector and the committee with regard to the examinations of their respective bodies, but in every instance they avowed an earnest desire to maintain a high standard of proficiency and observe all the recommendations of the Council.

Dr. THORNE THORNE moved the adoption of the report and the recommendations it contained.

Sir WILLIAM TURNER, in seconding this motion, said the Council might well congratulate itself on the admirable

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er of the report and the practical usefulness of its
ions and on the fact of possessing such a committee.
BRUCE endorsed what Sir William Turner had said
d a compliment to the chairman of the committee.
PRESIDENT said he regarded this as a model report.
report was then adopted by the Council.

Diplomas in State Medicine.

the motion of Dr. THORNE THORNE, seconded by
ALE, it was agreed :

t the Rule 1 (3) adopted by the Council on Dec. 1, 1893, for
s in State Medicine be amended; and that the rule be as

Every candidate shall have produced evidence that, during a
f six months after obtaining a registrable qualification, he has
ractically studied the duties of out-door sanitary work, under
lical officer of health of a county or of an urban district having
late of the last census a population of not less than 50,000 or of
ination of two or more sanitary districts having collectively at
e of the last census a population of not less than 35,000, or else
self held an appointment as medical officer of health under con-
not requiring the possession of a special sanitary diploma. The
ate of an assistant officer of health of a county or a large urban
may be accepted, provided the medical officer of health of the
or district consents to the assistant officer giving such instruc-

as explained that the existing rule was felt to be a
hip, and that the new reading would be more consistent
present-day conditions.

The New Recommendations for Examinations.

DYCE DUCKWORTH moved the adoption of the recom-
ations of the Examination Committee as amended by
ouncil in committee on Thursday.

BRYANT seconded the motion.

GLOVER proposed the deletion of the twelfth recom-
ation—"That, as the art of examining is only to be
red by practice, it is desirable that an examiner should
elected, where practicable, for at least five consecutive
, particularly for the final examinations." He held
half the rejections of candidates were owing to bad
iners rather than to inferior attainments on the part of
students, and what he feared, if this resolution was
ed, was that there would be a tendency to establish a
examiner for five years.

DYCE DUCKWORTH explained that the recommendation
simply intended to indicate that it would be within the
er of the examining bodies to re-elect examiners. That
t mean annual re-election. It would be within the
er of the examining bodies to discharge an examiner.

r. TEALE hoped the Council would allow this recom-
dation to stand. He regarded it as a pronouncement on
part of the Council that the matter of examining was a
serious one.

r. GLOVER said he would not press for its removal.

r. BATTY TUKE wished to draw attention to the fact
the second recommendation—"That the extreme sub-
sion of any subject of examination, and particularly of
final, as now permitted by some boards, should not be
ctioned"—practically repealed an existing standing
mmendation which was passed in 1888. In that old
mmendation it was laid down that candidates for the
l examination should not be allowed to present them-
es for examination in the various subjects separately. In
new recommendation they would approve of the various
jects being taken separately. They only objected in it to
ividual subjects being broken up piecemeal. This he
ught was a complete change of the system which had
n going on since he became a member of the Council.
submitted that it was a change of principle and the
eal of a standing resolution of the Council.

Mr. BRYANT pointed out that whatever might be said as to
nciple there was no change of practice, for it had been
rule in most examining bodies to allow men to go up in
dicine, surgery, and midwifery separately. Good men
ght be able to pass in the three subjects at one time, but
most men it was impossible to do so. If they were to
mpel the boards to re-examine in the three subjects men
icked in one they would have such complaints that the
e would soon be abolished altogether.

Dr. MCVAIL expressed disappointment with the attitude
at the committee had taken up on this matter. It was a
markable thing that the representative of the great
llege of Surgeons of England should tell them at this time
day, and after all that had been done to establish a
tisfactory curriculum, that the candidates who went to that
llege could not be up in medicine, surgery, and midwifery
at the end of the five years' study, and must
take each subject separately—that was, to c
examination in medicine after passing in su
midwifery after passing in medicine. He
College believed that if the candidates went u
subjects at one time they would fail. H
emphatically that the final examination, that w
to the Register, should be an examination
surgery, and midwifery, and unless a man we
three subjects at one time he should be given f
which to pass.

Mr. TEALE said that what Dr. McVail
all very fine, but Dr. McVail failed to disting
passing an examination and having knowle
might know his subjects and fail to pass his
Therefore, it was desirable that a man sh
examination over in one subject and go on to
making him take all three subjects at the
Dr. McVail would make everything worse than
present moment.

Mr. CARTER asked Dr. McVail what had bee
of his board with reference to the sub-divisio
since the Council issued its recommendation of

Dr. MCVAIL replied that that question should
to Dr. Cameron, but his recollection of the ma
that the Glasgow Faculty had been unwillingly
Board in England to examine in these subjects

Dr. HECTOR CAMERON confirmed this stat
position, at the same time mentioning that, as
and also as a member of the Faculty, he had
as he could the sub-division of the final examin
he did do that he was met by the objection tha
Faculty could not do otherwise so long as the
followed by the Conjoint Board of England. H
practice should be discontinued. It was his e
it was the weak man who went up separately fo
subjects. The really good men almost invari
for the three at one time.

Dr. MCVAIL moved as an amendment: "T
examination should include the subjects of medi
and midwifery, and that failure in more than
subjects should involve re-examination in all o
remarked that this was not so strong a pro
which he had made during the discussion in co

Dr. CAMERON was willing to second this ame

Dr. GLOVER hoped that the Council would
such proposal.

Sir DYCE DUCKWORTH said the Council r
system now in existence in a resolution they p
1893. It suggested then that the candidate
examination who obtained no less a percent
marks (supposing the pass mark to be 50) on
subjects should be exempt from re-examinatio
subjects. That was a recommendation; the
not make a resolution binding on any of the
would ask the Council to remember that it wa
to pass the final thirty years ago than it was
the students of the present day had a much ha
for entrance to the profession than any of th
this Council had to face.

Sir WILLIAM TURNER said that, in listenin
cussion, one was rather led to the conclusion th
be something more stimulating intellectually i
air than there was in that of London. The uni
of the Tweed required that all candidates
themselves in all three subjects at one and th
Formerly they had to take jurisprudence in
medicine, surgery, and midwifery. A conside
tion of them passed, and passed well, and n
were made about the examinations. He cou
fore, enter into the feelings that had been ex
entailed a hardship on the student to require
for the whole of the final examination at once
matter was previously under discussion he h
Mr. Bryant's position. What was in his mind
tion that should not encourage sub-division of
tion, but this recommendation had been interpr
sub division of a subject. He suggested that pe
way to meet the difficulty would be simply t
recommendation referred to by Sir Dyce Duckwo
been passed by the Council in 1893. He thoug
meet Dr. McVail's view.

Dr. MCVAIL: Yes. May I withdraw my ame
In the course of further discussion it was e

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extreme sub-division meant such piecemeal examination as would permit a pass in a subject after two remits, there being examination at the candidate's second appearance only in the part or parts (which might be the oral and clinical, or one of these, a pass having been secured in the written) in which there was failure at the first trial, and examination at the third appearance only in the part or parts in which there was failure at the second appearance.

Sir WALTER FOSTER thought the committee were quite right in condemning that system.

Mr. BRUDENELL CARTER said it appeared to him that the meaning of the second recommendation was that in the final examination they disapproved of the sub-division of any one of the subjects. He saw no reason why they should not say so. Personally he wished to get rid of the word "extreme," and he proposed: "That the sub-division of any one subject of examination, and particularly in the final, as now permitted by some boards, should not be sanctioned." If the Council passed that they would mean that the bodies must not break surgery into two or three examinations, medicine into two or three examinations, or midwifery into two or three examinations, and having made that statement they were in a position to follow it with the recommendation passed in 1893.

Sir DYCE DUCKWORTH accepted this suggestion.

It was thereupon agreed that the amended resolution should be the second recommendation, and that it should be followed by the resolution of 1893 as a separate recommendation. The latter is as follows:

"Seeing that the practice of different authorities varies on the question whether a student who fails to satisfy the examiners in each of the several subjects of medicine, surgery, and midwifery should be referred on all of them, or only on those in which he fails, the Council recommends that some general principle should be adopted with reference to this question; and suggests that a percentage of not less than 60 marks on each of any two subjects—supposing that the pass requirement be 50 per cent.—should exempt from re-examination in those two subjects."

Dr. PETTIGREW moved that the first recommendation be amended by the insertion of the words "at least" before the words "two academic years."

This proposal was seconded by Dr. MACALISTER, and was adopted by a majority—14 to 8.

On Section (*a*) of the eleventh recommendation—"That the marks obtainable on the written examination ought not to have greater weight than those at the oral or clinical examinations"—Dr. MCVAIL moved that when a candidate had in clinical medicine or in clinical surgery a mark awarded that was below the pass mark, the mark should not be raised because of any excess of marks in the oral or written parts of the examination.

Mr. BRYANT opposed this proposal, which was rejected by a majority.

The Council adjourned till Monday.

MONDAY, DEC. 2ND.

The Council resumed, Sir RICHARD QUAIN presiding.

The New Recommendations for Examinations.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, the following additional recommendation was agreed to—viz., "That in whatever subject or part of a subject a candidate may be rejected satisfactory evidence should be produced that he has carried on his study in that subject during the interval of his remission, and such a candidate should not otherwise be eligible for admission to re-examination." Many of the examining bodies, Mr. Bryant said, carried out this plan, and this recommendation would strengthen their hands and encourage the others to follow their example.

Dr. MACALISTER moved:

"That the resolutions on professional examinations, approved by the Council in committee, and by the Council itself, be remitted to the Examination Committee, with instructions to consider them in relation to the existing recommendations on the subject, and to draw up in a consolidated form a series of definitive recommendations suitable for transmission to the licensing bodies."

Dr. BATTY TUKE seconded the motion.

Dr. HERON WATSON said this was a matter of some urgency, and he thought the delay of six months might be avoided by the chairman of the committee drawing up such a code and sending it round among the members of the committee.

Dr. MACALISTER thought, however, that the final form should be submitted to the Council for its approval.

Dr. HERON WATSON said that he had already written to Edinburgh suggesting that the committee of manage[ment] the Scotch Triple Board should meet at once to bring regulations into conformity with these recommendations. This would certainly be a mistake if the recommendations were to be submitted again to the Council.

Dr. MACALISTER said he took it that the principle of the recommendation had been finally approved by the Council and that consequently the examining bodies could have no doubt as to what the Council desired.

Sir WALTER FOSTER moved, as an addition to the motion, "and also that reference be made to the report of the inspector on which each new recommendation is based." He thought that the bodies who were at fault should be clearly indicated.

Dr. BRUCE seconded this proposal, agreeing that there should be direct reference to the bodies at fault.

Dr. MACALISTER accepted the addition, and with it the motion was carried by the Council.

The Scottish Branch Council.

A report by this Council as to the registration of names and diplomas of two gentlemen was brought up and agreed to.

The Misuse of Medical Titles.

The Council spent some time *in camerâ*, and when the public were readmitted the PRESIDENT intimated that a statement had been conveyed to the Council with regard to a person who had no qualification at all in this country calling himself M.D., sending out indecent pamphlets, and advertising medicine, and that the Council had resolved to refer it to its Penal Committee to inquire into cases of persons alleged under Section 40 of the Medical Act of 1858, and what the committee saw fit to instruct the legal adviser to proceed against such persons.

The Apothecaries' Hall of Dublin.

Sir WILLIAM TURNER moved:

"That if the Privy Council should notify to the General Council their opinion, and issue any directions, on the points submitted to the General Council regarding the examinations of the Conjoint Board of the Royal College of Surgeons and Apothecaries' Hall in Ireland; also on the decision of the General Council to grant the petition of the Apothecaries' Hall that the Council appoint assistant examiners under the Medical Act, 1858, the Council empowers the Executive Committee to explain to the Council the grounds on which the General Council have arrived at their conclusion, and to take any further steps that may be necessary."

This motion, he explained, was framed strictly in accordance with the Act of Parliament. It had been felt by the Business Committee and by the President that if the Privy Council expressed any opinion to the Council upon any of these questions, or if the Privy Council issued any directions to them, the Council should have some means of replying to the opinion or directions, and, if necessary, making a representation thereon.

Mr. WHEELHOUSE seconded the motion.

Dr. MACALISTER pointed out that no notification had been made to the Privy Council as to what this Council had done.

Sir WILLIAM TURNER said that the point had been considered, and it was thought that the Apothecaries' Hall would notify the matter to the Privy Council because Dr. MacAlister were to look at the Act, he would find that it was the duty of the body to make the application to the examiners. This Council refused the application, and the next step, he apprehended, would be for the body who had been refused to make a representation to the Privy Council to issue directions to this Council. That was how he read the sequence of events under the Act. If the Apothecaries' Hall rested satisfied, then there was an end to the matter.

Dr. CHARLES MOORE assured the Council that the Apothecaries' Hall would take whatever steps were necessary to maintain its legal status. He hoped to see the Governors on the following day and to confer with him on the subject.

Dr. GLOVER moved as an Amendment that the Council transmit to the Privy Council the minutes of the meeting bearing on this subject. He thought this would be proper and courteous.

The PRESIDENT ruled that this was not an amendment.

Thereupon the motion as proposed by Sir William Turner was adopted.

Students' Registration.

Sir DYCE DUCKWORTH presented a report from the Students' Registration Committee, containing, among other things, the following recommendation:

"That while (according to Resolution 11, Vol. xxvii., p. 58) [persons] who, prior to 1892, passed the preliminary examination of the Pharmaceutical

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ociety are entitled to register as medical students on taking the y omitted subjects, they must show that they were engaged as students of medicine before 1892 and preparing for the com- their examination; and that on and after January 1st, 1897, on on these exceptional conditions shall cease, and evidence, case, be produced that all the subjects have been passed at the e at one of the examining bodies now recognised."

a short discussion the recommendation was adopted form: "That on and after January 1st, 1897, the tion of students under Resolution 11 of June 2nd, 1891, be discontinued, so far as concerns the preliminary ation of the Pharmaceutical Society."

anks to the Royal College of Physicians of London.

following motion, proposed by Mr. WHEELHOUSE and ed by Sir WILLIAM TURNER, was cordially adopted:

the thanks of this Council be conveyed, through its President, resident and Council of the Royal College of Physicians for their in granting the use of their library and other rooms and es for the session of this Council and for their kindly hospitality Council."

Thanks to the President.

GLOVER proposed a vote of thanks to the President able conduct in the chair. Sir Richard Quain had hrough his work in most admirable manner, and he re that all the members would wish to congratulate

PHILIP SMYLY seconded this motion, adding "long e live to reign."

PRESIDENT said that if he had done anything he had t with pleasure, and the greatest reward he could think s the approbation of those he saw around him. As s he was spared he would do his best to continue to that approbation.

session was thereupon brought to a close.

Medical News.

OREIGN UNIVERSITY INTELLIGENCE.—*Göttingen:* I. Braun of Königsberg has been appointed Professor of cal Surgery, in succession to Dr. König.—*Innsbruck:* von Hacker of Vienna has been appointed to the chair linical Surgery.—*Montpellier:* Dr. Forgue has been ed to take the chair of Clinical Surgery instead of that erative Medicine. Dr. Ducamp has been appointed Pro- r of Internal Pathology.—*Padua:* Dr. B. Zaniboni has recognised as *privat-docent* in Dermatology.

RISTOL MEDICAL MISSION.—The statement has ntly been issued of the Bristol Medical Mission for the eleven months. During that period 6372 new patients been treated and 20,005 prescriptions dispensed. Lady es also visited several cases. There is a convalescent e at Weston-super-Mare in connexion with this mission. income for 1894 was £586, and expenditure £658. This ion is carrying on a useful work in the poorer districts of tol, and it is feared that unless more funds are forth- ing the work will have to be curtailed.

HE annual dinner of the Harveian Society of don took place at the Café Monico on Nov. 28th. The sident, Sir John Williams, Bart., was in the chair, eighty-three members and guests were present. ongst the latter were Sir J. Crichton Browne (Pre- nt of the Medical Society), Mr. Hutchinson, F.R.S. esident of the Royal Medical and Chirurgical Society), Buzzard (President of the Clinical Society), Mr. Charters nonds (President of the Hunterian Society), Dr. Gee, and Kingscote. Sir J. Crichton Browne proposed the toast "Success to the Society," and in a most able speech set h the good work which the society had done and was doing, and the advantages accruing from an annual ial gathering. Mr. Edmund Owen proposed "The itors," and Mr. Charters Symonds replied. The toast of he Sister Societies" was proposed by Mr. George Eastes eloquently responded to by Mr. Hutchinson. Mr. Howard rsh proposed "The President," to which Sir John Williams lied. Dr. Gee proposed the health of the treasurer, Mr. pps Lawrence, who, in his reply, stated that the society s in a very flourishing condition. The treasurer proposed healths of the honorary secretaries, to which Mr. Peyton ale and Dr. James Cagney replied. A most enjoyable ening was spent.

LITERARY INTELLIGENCE.—Mr. H. R gard is writing an African tale, to appear Year's number of the *African Review*. It is son Mr. Haggard has written an African story; audience was gained by his romantic records Continent, and those who have followed his w book, though recognising the merits of his other must often have hoped that he would recur themes.

LIFE ASSURANCE MEDICAL OFFICERS' A At a general meeting, held on Wednesday, N 20, Hanover-square, the following officers wer Council—President: Dr. Douglas Powell. Vic Mr. Boor Crosby and Dr. Symes Thompson. Tr Theodore Williams. Dr. C. Y. Biss, Dr. Ro Dr. Hingston Fox, Dr. C. E. Hoar, Dr. G. A. H Havilland Hall, Dr. Montague Murray, Dr. J. Dr. Vivian Poore, and Dr. Samuel West. Sec Thomas Glover Lyon and Dr. Hector Macken same meeting the medical forms which it is offer for universal adoption by the offices were the discussion on them adjourned.

THE DRAINAGE OF HORFIELD (BRIS Bristol sanitary authority recently obtained a against the Horfield Urban Council forbidding t discharge of sewage into the Ashley Down b then the local authority has constructed a fre drainage, and this was completed last week. T treated by a Kierley's machine and mixed with termed "ferozene," and after going through t processes of pressing, filtration, &c., the deposi as manure. The total cost has been £13,0 includes the ten acres of land, only a small p is covered by the sewage works, and it is con use the rest for allotments.

MIDDLESEX HOSPITAL.—At the quarte court of governors, held on Nov. 28th, it that the construction of the new convales Clacton-on-Sea continues to make satisfactory contractors being engaged upon the interior ar the main building. An additional advance o been obtained from the trustees of the "Spic further mortgage, raising the total charge upon buildings in favour of that fund to £13,333 Right Hon. Sir Ralph Thompson, K.C.B., Mr. Gr Mr. Cavendish Bentinck, Mr. Henry Morris, and Clark have been appointed the joint sub-comm sider plans for the new cancer wing, which three wards to accommodate thirty female patie wards, and the requisite provision for the nursing staff. A further appeal has been issued for funds erection of this wing, the cost of which was or mated at £12,000, and the contributions alre amount to upwards of £9250, including a donat from Lady Cranshaw received during the past Arthur Townley Watson, Bart., Q.C., son of Thomas Watson, who was a distinguished me medical staff from 1827 to 1842, has been app seat on the weekly board vacated by Colonel C ham. In the medical school Dr. Arthur Fran has been appointed Lecturer on Pathologic and Dr. Frank J. Wethered to be Lecturer Medicine. Mr. B. Thompson Lowne ha his office as Lecturer on Physiology, t tion to take effect at the close of the c A further distribution of the Metropolitan Hos Fund has been made on the same basis as the g tioned earlier in the year. The share of the h last award was £806 5*s.*, thus raising the total this source during the present year to £2956 5 recent donations may be mentioned the fur £100 from Lord Lilford, who has likewis an annual subscription of £10 10*s.* in response which has recently been issued soliciting new scriptions. The board having been apprised th will of the late Mr. F. O. T. Delmar the income £100,000 has been bequeathed to trustees for among certain charitable institutions, prompt was made to the trustees representing the c cancer establishment to participate in the be bequest. The decision of the trustees has n made known.

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NEW MEDICAL DEFENCE ASSOCIATION—The annual meeting of this society was held at the offices of the company, 15, King-street, Cheapside, on Nov. 27th. Dr. Leslie Phillips, who occupied the chair, pointed out that the society constituted a well-equipped defence organisation, the powers of which were confined to the original and proper conception of medical defence against attacks from the public, unjust charges, malpraxis, &c. The society could not interfere in litigation between medical men, neither did it spend the subscriptions of the members in prosecuting unqualified practitioners, a function the onus and privilege of which was vested by the legislature in the Society of Apothecaries. As the result of the first year's operations £200 had been invested in Consols, and a considerable sum in cash was in hand. The cost of administration was very small, and the membership was steadily growing. The report and accounts were adopted unanimously.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND. — The annual general meeting of this society was held at Guy's Hospital on Nov. 22nd. Professor Thane was elected president in place of Professor Cunningham. The treasurer's account was adopted, and showed a balance of £76 2*s.* 6*d.*—Dr. G. F. Blacker read a paper on the Topographical Anatomy of the Fourchette. In it he pointed out the discrepancies which exist in the descriptions of this part in different text-books. He then gave some statistics from the observation of 397 patients attending his out-patient department. The most important of these showed that in about 15 per cent. the fourchette was formed by the united posterior extremities of the labia minora, while in the rest it was a fold of skin apparently uniting the posterior extremities of the labia majora.—Mr. F. G. Parsons read a paper and showed drawings of a rare form of Parasitic Fœtus lately added to the museum of the Royal College of Surgeons of England. The paper contained an account of the dissection of the different systems.—Mr. A. Keith read a paper upon the Frequent Occurrence of a Divided Inferior Vena Cava in the Genus Hylobates (Gibbons). In it he discussed the development of the veins of the abdomen, and criticised Hochstetter's views.—Mr. Higgins showed a series of specimens illustrating the True Capsule of the Knee-joint.

THE DIFFUSION OF SMALL-POX.—The amount of small-pox both in London and in the suburbs during the week ended Nov. 30th was less than for several weeks previously, and there were only 9 admissions in all to the hospitals of the Metropolitan Asylums Board. There was, however, one death registered, the deceased being an unvaccinated infant who died on board the hospital ship *Atlas*. In addition there were two deaths registered in West Ham, where the disease has been causing some alarm of late. The close of the week found 79 patients under treatment in hospital suffering from small-pox. Thus once again we find the metropolis with a waning prevalence of small-pox, and it will be well if the amount of the disease continue to decline during the winter months. In Bristol there is some fear on the part of the authorities lest the cases of small-pox found to have developed in the workhouse should foreshadow a winter prevalence, and the authorities of surrounding unions have been specially warned to keep a sharp look-out for symptoms of the disease in tramps. It is considered likely that infection has already been introduced to the Poor-law institution at Bristol by the agency of vagrants, as on several occasions during the recent epidemic in that city. Dr. Davies, the medical officer of health, thinks that the cases may also have some connexion with the appearance of small-pox in Gloucester. He has warned medical men of the importance of an early diagnosis of the disease, and has advised measures of vaccination and revaccination in institutions of various kinds in the city. A case which arose last month in Yeovil in a young man lodging in the town has been removed to the hospital just outside the borough boundary, and the whole of the members of the infected household also consented to accompany the patient to hospital. It is much to be hoped that no harm may accrue from this action if it be an accomplished fact. A case has been reported to the medical officer of health of the Barry district, but the officer has been unable to agree with the diagnosis. During recent weeks there have been two or three cases notified at Manchester, and the sufferers have been removed to the Clayton Hospital, but the adjacent borough of Salford has remained free from the disease. In Dublin, in the week ended Nov. 23rd, there were 3 fresh cases admitted to hospital and the same number of discharges, and consequently, there being no deaths, remained in hospital a total of 11 patients, as on the preceding Saturday.

SUNDAY LECTURE SOCIETY.—The second series of lectures given by this society will begin on Dec. 8th, at St. George's Hall, Langham-place, at 4 P.M., when Dr. Benjamin Ward Richardson will lecture on the Rise of Capital Punishment. Lectures will subsequently be given by, among others, Professor Arthur Smith on the Anatomy of Flame, and Professor Percy Frankland on Isaac and his Work.

DIPHTHERIA IN LONDON.—Diphtheria in its fatal form was, in the week ended Nov. 30th, less prevalent in London than in the week before, the 69 registered deaths of the earlier week falling to 63 last week. The decennial average for the forty-eighth week of the years 1885-94 was nevertheless exceeded by as many as 7. The deaths were again nearly all in young persons aged from one to twenty years. There were 6 respectively belonging to the sanitary areas of Lambeth, Fulham, and Islington Green, and 5 each to St. Pancras and Greenwich. Only 86 cases were admitted to hospital in the week, as compared with 112, 104, and 103 in the three preceding weeks. The cases remaining under treatment on Saturday numbered 691, a total higher than that recorded for some time. Around London, in the Outer Ring, there were 10 deaths from diphtheria registered last week, and of these 7 belonged to the West Ham district, the majority of the suburban areas being quite free from the disease.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAIRD, JOHN, L.R.C.P. L.R.C.S. Edin., has been appointed Surgeon to Lady Dickson Lodge, Dover Branch of Female Oddfellows.

BROWN, ROBERT C., M.B., B.C., B.A. Camb., has been appointed Second House Surgeon of the Blackburn and East Lancashire Infirmary.

CALWELL, WM., M.A., M.D. R.U.I., has been appointed Assistant Physician to the Belfast Royal Hospital, vice Dr. R. S. Smyly, promoted.

DICKSON, R. S., M.B., C.M. Glasg., has been appointed House Surgeon to the Whitehaven and West Cumberland Infirmary.

DOUGLAS, W. T. P., M.B. Camb., M.R.C.S., has been reappointed Honorary Medical Officer to the Children's Cottage Hospital, Cold Ash.

GODSON, J. H., M.B., B.C. Camb., has been reappointed Medical Officer of Health for Cheadle.

HAMILTON, W. CROSBIE, M.B., C.M. Ed., has been appointed Senior House Surgeon of the South Devon and East Cornwall Hospital, Plymouth.

HEWLETT, J. E., M.B., C.M. Edin., has been appointed Junior Assistant Surgeon to the Blackburn and East Lancashire Infirmary.

JARDINE, ROBT., M.D. Edin., M.R.C.S. Eng., F.F.P. and S. Glasg., has been appointed Assistant Physician to the Glasgow Royal Hospital.

KERBY, R. J., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Children's Cottage Hospital, Cold Ash.

LAKE, W. W., M.R.C.S., has been reappointed Medical Officer to the Woking Urban District Council.

LYON, F. H., L.R.C.P., L.R.C.S. Irel., has been reappointed Consulting Surgeon to the Children's Cottage Hospital, Cold Ash.

LYONS, EDWARD, B.A., M.B., B.Ch. B.A.O. T.C.D., L.M. Rotunda, has been appointed Junior Resident Surgeon at the Jervis-street Hospital, Dublin.

MCENIRY, JAS., J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Shire of Charlton, Victoria, Australia.

NIALL, W. G., M.D., M. Ch. Irel., has been appointed Medical Officer for Wanborough, Surrey.

PRINGLE, G. L. KERR, M.B., C.M. Edin., has been appointed Medical Officer for the No. 3 Sanitary District of the Bridgwater Union, vice Cooper, resigned.

RUDALL, JAS. T., F.R.C.S. Eng., has been appointed a member of the Medical Board of Victoria, Australia, vice R. W. Jones, resigned.

SAUNDERS, F. W., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Children's Cottage Hospital, Cold Ash.

SMITH, J. A., M.R.C.S., has been appointed Medical Officer for the Flockton Sanitary District of the Dewsbury Union.

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STRAFFORD, M.D. R.U.I., has been appointed Visiting ...ian to the Belfast Royal Hospital, in place of Dr. Ross, ...ed.

...N, E. F., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed ...l Officer for the County of Limerick, vice Jackman, resigned.

FRANK, M.D. Lond., M.R.C.S., L.R.C.P., D.P.H. Conj. Board ...has been appointed Senior Honorary Surgeon to the Perth ...al, Western Australia.

...LL-COOKE, CECIL, M.D. Lond., M.R.C.S., L.R.C.P., has been ...ted Honorary Medical Officer to the Kilburn, Maida Vale and ...hn's Wood Dispensary.

..., W. T., M.R.C.S., has been appointed Medical Officer for the ...d Sanitary District of the Township of Manchester.

Vacancies.

...er information regarding each vacancy reference should be made to the advertisement (see Index).

...YAL UNITED HOSPITAL.—Resident Medical Officer for three ... Salary £100 per annum, with board, lodging, and washing.

..., LONDON OPHTHALMIC HOSPITAL, 238, Gray's-inn-road, W.C.— ...se Surgeon.

...YLUM, Birmingham.—Resident Clinical Assistant. Board and ...ence provided.

... HOSPITAL OF LONDON, AND LONDON SCHOOL OF DENTAL ...ERY, Leicester-square.—Demonstrator. Honorarium £50 per ...im.

... HOSPITAL FOR LONDON, Leicester-square. — Assistant Dental ...geon.

...HIRE ROYAL INFIRMARY, Derby.—Resident House Surgeon and ...dent House Physician, for twelve months. Salary of the House ...geon £100 per annum, and of the House Physician £80 per ...um, with apartments and board in both cases.

... COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, un- ...ried. Salary £120 per annum, with board, lodgings, and wash- ... Applications to the Clerk to the Visitors, 9, Bedford-circus, ...ter.

... HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four ...lified Clinical Assistants and eight unqualified Clinical Clerks ...he Out-patient Department.

...EPOOLS HOSPITAL, Hartlepool. — House Surgeon. Salary ... per annum, with board, lodging, and washing.

...INSTER GENERAL DISPENSARY, Gerrard-street, Soho, W. — ...sident Medical Officer for one year.

... LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary ...0 a year, with board, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

...HAM.—On Nov. 29th, at Mathyns, Witham, the wife of George ...allington Grabham, M.D. Lond., of a son.

...ON—On Dec. 2nd, at Winton House, Basingstoke, the wife of ...irgeon-Captain H. P. Johnson, A.M.S., of a daughter.

...LD.—On Dec. 1st, at Thurloe-place, South Kensington, S.W., the ...ife of H. R. Oswald, M.D. Edin., barrister-at-law, of a daughter.

...—On Nov. 29th, at Longlands, Henley-on-Thames, the wife of ...eorge Smith, M.B. Edin., of a daughter.

...LAKE.—On Nov. 28th, at Archer-villas, Bayswater, the wife of ...ames Galbraith Westlake, Surgeon, of a son.

...N.—On Dec. 1st, at Mare-street, Hackney, N.E., the wife of ... Wilson, M.R.C.S.E., L.S.A., of a daughter.

MARRIAGES.

...ON—OGILVIE.—On Nov. 27th at Gordon's College, Aberdeen, by ...he Rev. Professor Cowan, D.D., assisted by the Rev. James ...tark, D.D., John Gordon, M.D., Aberdeen, to Marie M. Ogilvie, ...). Sc. Lond., elder daughter of the Rev. Alexander Ogilvie, LL.D., ...Headmaster, Gordon's College.

...ELLIGOTT—MALINS.—On Nov. 28th, at St. Joseph's Catholic Church. ...Dublin, Maurice Gerald McElligott, L.R.C.P.I., L.R.C.S.I., of The ...imes, Belper, fourth son of Gerald McElligott, J.P., Mountrivers, ...istowel, Co. Kerry, to Eleanor Marguerite, youngest daughter of ...he late David Malins, of Birmingham and Dublin, and of Mrs. ...Malins, Glasnevin Lodge, Glasnevin, Co. Dublin.

DEATHS.

...GES.—On Nov. 28th, at Camden-road, N., Richard Hodges, M.D., ...Aberd., F.R.C.S. Eng., aged 75.

...AS.—On Nov. 21st, at Burwell, Cambs., Thomas Lucas, M.R.C.S., aged 83.

...HER.—On Nov. 29th, suddenly, at the Hall of the Faculty of Physicians and Surgeons, Glasgow, George R. Mather, M.D. Glasg., F.F.P.S.G., of Annfield-place, Glasgow.

...F.—On Dec. 2nd, at Fairview, Worthing, James Self, M.D. St. And.

...PLES.—On Nov. 23rd, at Burwood-place, Joseph Henry Prosser Staples, M.D. St. And., aged 62, suddenly.

...HAM.—On Dec. 3rd., at East India-road, Robert Gordon Tatham, M.R.C.S., aged 66.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages and Deaths.

Medical Diary for the ensuing

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.) (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Cl Samaritan (Gynæcological, by Physicians, 2 P.M.), (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædi Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (London (2.30 P.M.), University College (2 P.M.), St. Ge St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University C Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cro Thomas's (2 P.M.), London (2 P.M.), King's College (2 Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (Ormond-street (9.30 A.M.), Gt. Northern Central (2.30

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thoma University College (2 P.M.), Charing-cross (3 P.M.), (1 P.M.), London (2 P.M.), King's College (2 P.M.), Midd Soho-square (2 P.M.), North-West London (2 P.M.), Che

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.) (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Ch Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middles St. Thomas's (2 P.M.), London (2 P.M.), University Coll Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2

At the Royal Eye Hospital (2 P.M.), the Royal Londo (10 A.M.), the Royal Westminster Ophthalmic (1.30 P Central London Ophthalmic Hospitals operations are perf

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Bryant: On the Diagnosis and Treatment of Early Ca of the Breast.

SOCIETY OF ARTS.—8 P.M. Mr. W. Worby Beaumon Road Carriages. (Cantor Lecture.)

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON square, W.).—5 P.M. Cases, Specimens, &c.:—Mr. Cr Sequel to case of Papilloma of Nose (with Microscopi Dr. J. B. Ball: Case of Laryngeal Tumour.—Dr. Tubercular Infiltration of Soft Palate and Tongue (wi Section).—Mr. De Santi: Specimen showing Tubercu of Trachea, Larynx, and Pharynx.—Dr. De Havillanc Tabes with Left Vocal Cord in Cadaveric position.— Spencer: Stenosis of Glottis.—Mr. Charters Symond Report of Two cases of Lesion of the Septum show (2) Other cases.—Dr. B. B. Waggett: A case for I W. A. Wills: Case of Inspiratory Spasm of Vocal Cor

SOCIETY OF ARTS.—8 P.M. Fourth Ordinary Meeting. cussion on Mr. Cunynghame's paper on "Locomotiv Common Roads."

THURSDAY.—BRITISH GYNÆCOLOGICAL SOCIETY (20, H W.).—8.30 P.M. Specimens:—Dr. Smyly (Dublin): (1) tion; (2) Pyo-salpinx Removed per Vaginam; (3) Fou Myomatous Uteri removed by Pan-hysterectomy. Wm. Armstrong (Buxton): On Utero-ovarian Irritati in the Causation of Rheumatoid Arthritis and the ment necessitated thereby.

HARVEIAN SOCIETY.—8.30 P.M. Dr. M. Handfield-Jon in its Relation to Pregnancy, Parturition, and the P (Harveian Lecture)

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Central Hospital, Holloway, N.).—9 P.M. Dr. C. E. Be Neuritis.—Dr. Thomas Hamilton: Abdominal Suppu

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDO st., Cavendish-sq., W.)—Mr. Hartridge: Case of Retini Mr. Ernest Clarke: Rare Form of Nystagmus.—M Rare Form of Nystagmus.—Dr. R. D. Batten: (1) Ur Disseminated Choroiditis; (2) Paralysis of Third N hole Pupil.—Mr. Marcus Gunn: Case of Embolism of of the Retina.—Mr. Holmes Spicer: Case of Retr Neuritis.—Dr. Ormerod and Mr. Holmes Spicer: Recu of Third Nerve, with Migraine.—Mr. Donald Gunn Choroiditis.—Messrs. Silcock and Marshall: (1) Gree Opacities; (2) Exophthalmic Goitre in a Male Patient of Iris, with Localised Bulging of the Lens.—Mr. Sp Specimen of Eyeball lost after penetrating wound Snell: Alveolar Carcinoma of Upper Eyelid.—Mr Double Ptosis and Loss of Convergence Power.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Dr. Hale Golding Bird: A case of Membranous Colitis tre Colotomy and subsequent closure of the wound.—Dr. Two cases of Spontaneous Thrombosis of the Cere Sinuses in Chlorosis.—Mr. R. Barwell: A case of Con Cervical Fistula; Operation; Recovery.—Dr. S. Ring Phear: A case of Addison's Disease treated with Supr (with an abstract of previously recorded cases).

LECTURES, ADDRESSES, DEMONSTRATI

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARAL LEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowe

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M Martin: Tubercular Disease.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (L W.C.).—5 P.M. Dr. Morgan Dockrell: Ulerythema.

WEST LONDON POST-GRADUATE COURSE (West London 5 P.M. Mr. Bidwell: Intestinal Anastomoses.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockre

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 5th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 29	29·69	S.	52	51	54	53	45	0·72	Overcast
,, 30	29·59	S.W.	52	51	54	53	51	0·20	Overcast
Dec. 1	30·01	W.	41	40	49	46	40	...	Cloudy
,, 2	30·16	W.	39	38	57	51	38	...	Foggy
,, 3	30·00	W.	50	48	53	52	39	...	Overcast
,, 4	30·06	W.	44	42	60	54	41	...	Hazy
,, 5	29·60	N.W.	54	50	59	56	44	0·05	Stormy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

IDEATION AND NOCTURNAL ENURESIS.

To the Editors of THE LANCET.

SIRS,—On Oct. 18th, 1890, you published a letter from me on the above subject. The importance of ideation in the treatment of disease is my excuse for again directing attention to it: the administrator is frequently of more importance than the drug administered.

In the first week of October, 1895, a patient lamented to me that her granddaughter was unable to do anything to earn her living, as for thirteen years she had wetted the bed every night. The granddaughter was anæmic, well grown, aged fifteen, menstruating regularly, with depressed countenance owing to her malady. I prescribed colocynth and iron. I impressed on her strongly that the misfortune need not and could not recur; that on going to bed she was to remember my statement that the accident could not recur, and that the spine would have to be severely blistered if she did not believe me and the accident did happen. The enuresis did not recur until the sixth night. I spoke very seriously to her about not *believing* me and doubting whether the accident could occur. The enuresis did not again recur till the sixteenth night. I now talked to her very gravely, but consented to give her one more chance before punishing her for her unbelief. She is now bright, cheerful, and well, having had no further recurrence, and is preparing to take up employment away from home.

I am, Sirs, yours faithfully,

Framlingham, Suffolk, Nov. 25th, 1895. GEO. H. JEAFFRESON.

UNIVERSITY CAMPS FOR PUBLIC SCHOOL BOYS.

LIEUTENANT-COLONEL AND BRIGADE-COMMANDANT SETON CHURCHILL sends us the following particulars about university camps, which will no doubt interest our readers:—

"There were about 400 boys and young men from all seats of education encamped this year, distributed throughout five camps. The following places were represented: Oxford, Cambridge, Edinburgh, Durham, London, and other Universities; Woolwich, Sandhurst, and H.M.S. *Britannia*; Eton, Harrow, Winchester, Charterhouse, Westminster, Wellington, Cheltenham, Clifton, and all the great public schools and leading private ones. The five camps were at Bamburgh (Northumberland), Abergele in North Wales, Deal, and an early and a late camp at Highcliffe (Hants). Each boy pays 4*s.* per diem. The boys have to do everything for themselves in the way of making beds, airing bedding, cleaning up knives, forks, spoons, plates, peeling potatoes, &c. We have in each camp one soldier cook, but no servants, so these upper-class boys are taught to rough it a bit, as they would have to do in a colony or on a campaign. The days are spent in bathing, boating, sailing, cricket, cycling, football (if not too hot), rambling or walking parties to places of interest in the neighbourhood, athletic sports, boxing, singlesticks, &c. The evenings are spent in concerts, reciting, debating, &c. Each evening before going to bed a church parade is held, which is an earnest, bright mission service for boys. No unhealthy excitement is encouraged, but an earnest spirit of deep religious enthusiasm is cultivated. Boys have special temptations, so special efforts are required to reach them. A manly, healthy form of Christianity is presented to these bright young lads, and they respond wonderfully. Each camp is in charge of a military officer, and each tent, containing seven, is in charge of a university undergraduate, who is selected as one who will make religion attractive to boys, and not present it in a gloomy form. Each camp has a medical officer in case of accidents, but so far his professional duties have been quite nominal. These camps were first started in 1892, with eighty boys. The following year there were about 180 boys, in 1894 there were about 300, and in 1895 they amounted to about 400, so the popularity of the movement speaks for itself. The boys bring each other. Each camp lasts about ten days. The movement was started by Cambridge undergraduates, but in 1893 it was seen that the numbers would increase and that some organising power would be required, which young men could not be expected to have, so it was decided to appoint a head, and they did me the honour to elect me Brigade Commandant, but I am not the originator. The idea was borrowed from the Boys' Brigade, which is an excellent effort to reach boys of a lower strata of society by similar means. The Camp Commandants this year were Major-General McCausland, Colonel Morton, Lieut.-Colonel Phayre, Lieut.-Colonel Seton Churchill, and Major Liebenrood — all military men. The medical officers thoroughly enjoy the ten days' holiday at the seaside, and pay their share of expenses—4*s.* per diem—and make no charge. Capital fellows."

Puzzled.—We can only indicate the broad lines of conduct; we cannot be anyone's professional conscience. In answer to our correspondent's queries we think: (1) no breach of etiquette has been committed; (2) a copy might be sent to the managers of the schools; (3) and (4) copies might be sent to our correspondent's own patients; and (5) we cannot answer. It would be certainly a form of advertising to disseminate copies widely, in lay circles, or among other practitioners' patients.

Dr. Jas. H. Nicoll.—A copy of our correspondent's letter has been sent to our reviewer.

PURPURA.

To the Editors of THE LANCET.

SIRS,—The following case may be of interest to some of your readers. On Nov. 2nd, at 9 A.M., I was called to a woman aged thirty-six, living in a village near this town, and found her suffering from colicky pains, a little diarrhœa, a temperature of 101° F., and little else of diagnostic importance. She was the subject of chronic mitral disease. I prescribed opium, and she was soon relieved of the pain. On the following morning, at 2 A.M., I was again sent for, and found her in a similar condition, the temperature being 103°, and with the addition of pains in the backs of the legs. Dr. Sunderland saw her later on in the day; a large number of purpuric spots had then developed, interspersed with a few blebs containing red and white serum, and some pustular spots. When I saw her again the next morning I discovered a huge swelling of the glands of the neck, which was more than twice its usual size, large purpuric patches and petechiæ over this region, and smaller purpuric spots and vibices over other parts of the body; the temperature was 106°. She was quite unconscious, with a rapid pulse, and died a few hours afterwards. She had lately been nursing a woman with paralysis and had dressed her bed-sores. I remember while at the Middlesex Hospital four or five fatal cases of purpura occurring in the same ward in the space of about three weeks, and which appeared to me to be of bacillary connexion. I should be glad to know if any of your readers have had similar experience, and what is the general belief as to the origin of purpura.

I am, Sirs, faithfully yours,

Thaxted, Essex, Dec. 2nd, 1895. EDGAR PITTWAY.

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THE POPULATION OF ENGLAND AND FRANCE.

THE question of the growth of France and the United Kingdom respectively in point of population has been frequently made a basis of comparison and comment, and an interesting and instructive article in the *Standard* of the 3rd inst. on the relative positions of the two countries in this respect is well calculated to arouse attention. The facts are very striking and remarkable. In 1801 France had a population of eleven and a half millions more than the British, but this French superiority in numbers had in 1891 shrunk to little more than half a million. According to calculations based on official returns it would seem that at the present date the population of this country probably exceeds that of France by one million. Although the number of marriages in France is greater than that of England, the actual and relative birth-rate, as compared with the death-rate, is much higher in the latter country. Our contemporary thinks it may be pretty safely predicted that by 1901, when the first census of the twentieth century is taken, it will be found that, in spite of four times as large a foreign immigration and a considerably larger number of marriages in France as compared with this nation, the population of the United Kingdom will have probably outstripped that of France by about two millions, notwithstanding, too, the vast emigration that has been going on from this country as compared with that from France.

L. W. H.—The specimen which our correspondent has sent to us is not a nerve at all, and the supposed arteries which he has observed springing from it are merely a felted network of the threads of fungi. The theories he bases on this incorrect observation with regard to the nature of arteries, veins, and nerve force are entirely contradicted by known facts, of which our correspondent can easily satisfy himself by observation. We should recommend him to purchase "Physiology for Beginners," by Foster and Shore published by Macmillan, and to investigate for himself, on the body of a dead cat or rabbit, the appearance and function of the different structures and organs of the body. He will be able to see that arteries, veins, and nerves are structures quite distinct one from another, and he will abandon the revolutionary doctrines on consciousness, &c., which he is anxious we should promulgate.

Enquirer.—It is not only allowable to append to the letters M.D. or M.B. the name of the University which granted the degree, but it is a most desirable practice.

"WANTED, A MILK STERILISER."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 30th a correspondent asks for information as to a milk steriliser; and as I have found the following apparatus very efficient during the past summer, I venture to recommend it to him. It has the advantage of being procurable everywhere, and all the parts can be easily replaced if broken.

A one-gallon iron saucepan, a *gourmet* boiler to fit it, a dozen round, white, long vials of 2-oz. capacity, such as are used in dispensing, and a pound of cottonwool. Another very useful adjunct is a frame (like a cruet-stand) to hold the bottles; it can be made of tin and galvanised wire by any ironmonger to fit into the *gourmet* boiler. The bottles are thoroughly washed with soda and water, and then rinsed with clean water; each has poured into it the quantity of milk the child requires for one feed, and the neck of the bottle is plugged with cottonwool. The bottles are placed in the frame, the frame is lowered into the boiler, and cold water poured into the latter until it reaches as high as the top of the milk in the bottles. The lid of the boiler is put on; about a pint of water (hot or cold) is then poured into the saucepan, and the *gourmet* boiler lowered into it. Place at the side of the fire, and gently boil the water in the saucepan for from half an hour to an hour. The milk in the bottles does not boil, but reaches a temperature of about 180° F., as shown by the thermometer. A handle on the frame enables it to be removed with the bottles, and also serves, if necessary, for carrying them about. The great disadvantage of the various milk sterilising apparatus in the market is the trouble or impossibility of replacing bottles or parts that are broken. The apparatus described can be obtained in every village; it is cheap, and is easily replaced. The description of the method of using the steriliser looks very formidable, but it is quickly learned and easily carried out in practice, and is the same for every form of apparatus.

I am, Sirs, yours truly,

East Twickenham, Dec. 2nd, 1895. H. HOWARD MURPHY.

*** We may draw attention to a notice of Waldstein's milk sterilisation apparatus, which is supplied by Messrs. Philip Harris and Co., Limited. (*Vide* THE LANCET, April 20th, 1895, p. 986.)—ED. L.

Alpha.—We should require to know more of the conditions in detail of *Alpha's* appointment before we could answer the question put to us. At a first glance we should be disposed to advise *Omega* not to join a partner handicapped with such an appointment.

H. E. C. K.—We can under no circumstances recommend individual practitioners or courses of treatment.

A WORD FOR ALCOHOL.

A CORRESPONDENT writes:—"Matthew Arnold had a poor opinion of Carlyle because the Chelsean sage preached diligence to a nation already far too zealous in the pursuit of utilitarian as opposed to ornamental things. It cannot be denied that this is the age of restlessness, of over-exertion, and worry, or, as our Gallic friends call it, *surmenage*. Competition, born of love of luxury and fostered by over-population, is so severe that even sluggards are induced to do violence to their natural inclinations by hard work, while people with an aptitude for toil are irresistibly driven to excess. These *obiter dicta* are *à propos* or not, as the case may be, of teetotalism. One favourite argument with total abstainers, based upon the experiments of Kraepelin and others, is the inhibitory action of alcohol upon the brain. A recent writer sums up the question in the following: 'I have quoted enough to prove that even in small doses alcohol does not stimulate but retards vital processes.' Now this is precisely what the too-zealous worker requires. Alcohol prevents the human machine from wearing out prematurely. The neurasthenic brain-user takes his customary dose in the shape of wine, spirits, or more humble beer, and forthwith finds himself, *nolens volens*, incapacitated from continuing his labours. He is compelled to allow his weary brain the rest which otherwise he would deny; alcohol, the fiend alcohol, becomes his guardian angel, saving him from cerebral exhaustion, if not from softening and utter demoralisation." But Mr. Smith thinks differently.

INTEMPERANCE.

MR. CHARLES SMITH, Secretary of the Kent County Temperance Federation, has sent us a paper which he suggests will be useful reading to ourselves and our readers. We have read the paper; but we do not reproduce it, because it has been of no use to us, and in our judgment could not possibly be of any use to anyone else. Mr. Smith is sure that our qualified approval of an issue of rum to the soldiers on march in the Ashanti expedition is very pernicious doctrine. He reinforces his opinion with quotations from the late Professor Parkes and the late Surgeon-General Maclean, and a reprint of an address delivered by himself and published in the *Kent and Sussex Courier* on "Temperance Principles in Science and Morals." We have said what we believe to be right, but are willing to respect other people's opinions.

NITRITE OF AMYL DURING CHLOROFORMISATION.

To the Editors of THE LANCET.

SIRS,—The value of nitrite of amyl in the treatment of threatened heart failure during chloroform anæsthesia appears to depend very largely upon the stage when it is administered. Drs. Gaskell and Shore maintain that the effect of chloroform upon the vaso-motor centre is one of stimulation, whilst simultaneously exercising a depressing influence directly on the heart. As the result of some recent observations I have been making on the pulse tension of patients under chloroform have come to the conclusion that one of the earliest effects of an overdose of the anæsthetic is arterio-capillary contraction. The vessels by thus contracting seem to exert a kind of stop-cock action in order to prevent the blood, dangerously loaded with chloroform, from reaching the tissues. At the same time the heart is directly depressed, and tends to yield to the peripheral resistance. This condition of virtual high pulse tension lasts only for a brief period, but that it does exist is proved by numerous sphygmographic tracings; it is quickly succeeded by a rapid fall of blood-pressure. The heart, itself depressed by the anæsthetic, has not sufficient power to go through its systole in the face of the resistance in front. It is at this initial stage of heart failure that nitrite of amyl is invaluable; after the inhalation of three or four minims the peripheral vessels relax, the resistance to the discharge of the left ventricle is diminished, and the threatened paralytic over-distension is averted. I am, Sirs, yours faithfully,

J. H. MARSH, M.R.C.S., L.R.C.P.,
Senior House Surgeon.

The Infirmary, Macclesfield, Nov. 21st, 1895.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Buchan Observer, Somerset County Herald, Bradford Observer, Brighouse Echo, Bolton Chronicle, Manchester Guardian, Ayrshire Post, Northern Whig, Yorkshire Herald, Sussex Daily News, St. Andrews Citizen, Liverpool Courier, Athenæum, Newcastle Chronicle, Birmingham Gazette, Brighton Gazette, Times of India, Architect, Scotsman, City Press, Pioneer Mail, Sanitary Record, Builder, Local Government Chronicle, Bristol Mercury, Leeds Hospital Magazine, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Hertfordshire Mercury, Mining Journal, Leeds Mercury, Grimsby News, Reading Mercury, Liverpool Daily Post, Yorkshire Post, Chesham Advertiser, Australian Medical Journal, Local Government Journal, Surrey Advertiser, Walton News, The People, Glasgow Daily Record, Pall Mall Gazette, Court Journal, Scarborough Post, Birmingham Argus, Public Opinion, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. T. D. Acland, Lond.

B.—Dr. F. Beach, Kingston Hill; Mr. L. Backus, Chatham, Ontario; Mr. T. B. Browne, Lond.; Mr. M. L. Barry, Lond.; Mr. J. F. Bullar, Southampton; Mr. W. A. H. Barrett, Bristol; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Birmingham City Asylum, Med. Supt. of; Blackburn and East Lancashire Infirmary, Sec. of; B., Exeter.

C.—Dr. R. J. Colenso, Lond.; Mr. H. Cotterell, Lond.; Mr. J. D. Chepmell, Lond.; Mr. E. Cuffe, Woodhall Spa; Cancer Free Hospital, Lond., Sec. of; Cortland Wagon Co., Lond.

D.—Messrs. Davies and Co., Lond.; Derbyshire Royal Infirmary, Sec. of.

E.—Mr. E. H. Hillson, Pattishall; Messrs. Evans, Lescher, and Webb, Lond.; *Exeter Daily Gazette*, Manager of; E. B., East Croydon.

F.—Prof. George Fleming, Combe Martin; Mr. F. A. Field, East Dulwich; Messrs. Fannin and Co., Dublin.

G.—Dr. W. S. Greenfield, Edinburgh; Mr. A. S. Grubb, Lond.; Globe Advertising Co., Aston Clinton; General Apothecaries' Co., Lond.; Glasgow Pathological and Clinical Society, Sec. of.

H.—Dr. W. W. Hardwicke, East Molesey; Dr. F. Holmden, Edenbridge; Dr. W. Hartland, Porthcawl, Glam.; Dr. W. S. Hedley, Brighton; Mr. J. Holdsworth, Liverpool; Mr. A. Hern, Kimberley; Mr. A. H. Hunt, Wolverhampton; Mr. W. C. Hughes, Lond.; Mr. R. Harrison, Lond.; Mr. P. J. Hayes, Dublin; High Shot House, Twickenham, Med. Supt. of; Hartlepool Hospital, Hon. Sec. of; Harveian Society, Lond., Hon. Sec. of.

I.—Infirmary, The, St. George's-in-the-East, Med. Supt. of.

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K.—Dr. Percy Kidd, Lond.; Messrs. Keen, Robinson, and Co., Lond.; Kensington, Lond.

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O.—Old Park Hall Retreat, Walsall, Sec. of; Ormskirk Rural District Council, Med. Officer of.

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T.—Dr. St. Clair Thomson, Lond.; Mr. F. Treves, Lond.; Mr. A. Thompson, Boxford; Mr. A. Tinker, Broadstairs; Torquay Medical Society, Hon. Sec. of; Terrol Co., Lond.; Tamar Indien Grillon, Lond.; Timely, Lond.; Tasma, Lond.

U.—University College, Bristol, Sec. of.

V.—Mr. A. H. Vesey, Lond.

W.—Dr. F. J. A. Waring, Cliftonville; Mr. R. Walker, Aberdeen; Mr. W. Woodward, Wilton; Mr. H. Wickham, Ormskirk; Mr. B. Wheeler, Manchester; Mr. J. H. Walsh, Roughton; Mr. T. A. Woolard, Wickham Brook; Messrs. H. K. Wampole and Co., Philadelphia; Messrs. Wyeoff, Seamans, and Co., Lond.

Y.—Mr. H. Young, Lond.; Dr. I. B. Yeo, Mayfair.

Z.—Dr. T. Zangger, Zurich.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. B. Allen, Hawes; Mr. E. Appleton, Stockton-on-Tees; Messrs. Armstrong and Co., Manchester; Ashwood House, Kingswinford, Sec. of; Adolphus, Lond.; A. H. N., Lond.; Alpha, Wimbledon; A., Lond.; Anterior, Lond.; A. B. C., Lond.; Assistant, Lond.

B.—Dr. T. Buzzard, Lond.; Dr. C. Black, Glasgow; Dr. C. Bannatyne, Southend, N.B.; Dr. D. C. Black, Glasgow; Mr. C. Birchall, Liverpool; Mr. J. T. Brickwell, Watford; Mr. J. S. Buck, Eaton Socon; Mrs. Budge, Crediton; Mrs. Bennett, Lond.; Box 5, Oldham; B. O. Z., Lond.; B. R., Lond.

C.—Mr. A. V. Clarke, Lond.; Mr. A. E. Couzens, Westbury; Miss Clifton, Burwell; Messrs. A. Cohen and Co., Lond.; Carriage Insurance Co., Lond., Sec. of; Canonbury, Lond.; C. W. L., Croydon; Cosmo, Lond.

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E.—Dr. A. S. Eccles, Lond.; E., Lond.; E. A. H., Ingatestone.

F.—Dr. J. Findlay, Penpont; Mr. Farncombe, Brighton; Mr. H. E. Fellows, Newcastle-on-Tyne; Felsted School, Rev. Headmaster of; F. O. B., Lond.

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K.—Mr. W. Key, Glasgow.

L.—Mr. W. Linney, Mansfield; Mrs. Lee, Kew Gardens; Lace Web Spring Mattress Co., Sandiacre; Locum, Leicester.

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O.—Mr. A. R. C. Orchard, Bovey Tracey.

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S.—Mr. H. V. Sandford, Hereford; Mr. W. A. Savage, Lond.; Mr. H. Sell Lond.; Mr. W. A. Sharpin, Millbrook; Messrs. F. Stearns and Co., Lond.; Syntax, Lond.; S. S., Lond.; Scrutator, Lond.

T.—Dr. F. Tratman, Perth, North Australia; Thorax, Lond.; T. S., Lond.; Thorn-Hill, Lond.; Truth, Lond.

V.—Vomer, Lond.

W.—Dr. J. Wilson, Liverpool; Mr. B. Wheeler, Manchester; Mr. R. R. Williams, Lond.; Mr. J. S. Walsh, s.s. *Pennsylvania*, English Channel; Mr. F. Wilson, Lond.; Mr. W. M. Wills, Lond.; Mr. R. Walker, Aberdeen; Messrs. Williams and Son, Lincoln; West Riding Asylum, Menston, Clerk of; W. P., Lond.

X.—X. Z., Lond.

Y.—York, Lond.

Z.—Zeta, Lond.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnieres, Paris.

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"*The maintenance of Nutrition is the KEYNOTE of the successful treatment of Phthisis.*"—
THE LANCET.

Bynol. "The Perfected" Malt & Oil.

Physiology.

This can be best considered by taking separately its two constituents:—

1. The **Malt Extract** used contains an amylolytic ferment called diastase, of the fullest activity. Its special function of converting starchy foods into a soluble sugar which can be easily absorbed renders this preparation at once invaluable for aiding assimilation.

In weakly and cachectic conditions the activity of the natural allied ferment ptyaline becomes greatly deficient, with the consequence that much ingested material is never digested.

The Malt Extract being semi-fluid, and possessing a characteristic sweet taste, is therefore physically a very convenient vehicle for emulsifying and disguising the slight taste of the other constituent—**Cod Liver Oil.**

2. The physiological properties and fate of the latter body are complex; its equivalent in heat-units as regards the animal body is at least two-and-a-half times that of Meat Extract (Liebig); that is to say, it is at least two-and-a-half times as valuable as Meat Extract in maintaining the body weight.

Long use has shown that, in atrophic conditions of the absorbing mechanism of the bowel, Cod Liver Oil is not only more easily emulsified, but more easily taken up by the villi of the small intestines and passed on to the lacteals.

In the "**Perfected**" **Cod Liver Oil,** where the formation of certain oxidation products irritating to the stomach is avoided, we have perhaps the ideal form of fat-food.

Milk, cream, etc., are liable to produce butyric and other allied fatty acids, of little use except to irritate the gastric and intestinal mucous membrane.

To more perfectly understand the part played by Cod Liver Oil, the digestion of fat-foods is roughly as follows:

In the stomach slightly, but chiefly in the duodenum, by the action of the pancreatic ferment, fats are—

1. *Emulsified*, that is, broken up into minute oil globules, each surrounded by what is known as a haptogen membrane. In this physical state absorption is possible by the villi, the oils being unaltered.

2. *Saponified*, that is, split into fatty acids and glycerine, both capable of absorption by the intestine.

Therapeutics.

The above considerations enable us to understand more clearly the immense use Malt Extract and Cod Liver Oil, especially in combination, have in wasting diseases.

In *Phthisis*, for example, the digestive ferments are of lowered activity, and the introduction of a modicum of artificial ferment not only increases the actual amount of food assimilated, but the power of the enfeebled ferments to assimilate.

The almost constant rise of temperature above the normal is maintained chiefly at the expense of the fatty constituents of the body; hence the wasting. This, experience has shown, can best (putting aside questions of hygiene) be combatted by increasing considerably the amount of fat-food and carbohydrate food.

When absorbed, the part played by fat-food is practically two-fold:—

1. It becomes the source from which the surplus fat stored up in various parts of the body may be replenished.

2. Fat-food is one of the chief sources of animal heat, as shown above.

As we have seen, the Cod Liver Oil is the best of the class of fat-foods, especially in an enfeebled condition, and, combined with Malt Extract, as in Bynol, further assists the assimilation of the extra carbohydrate ingested.

That what is physiologically is also clinically true cannot be better illustrated than in the remarks made by the late Sir ANDREW CLARK in a lecture at the London Hospital:—

"I have said that these fibroid cases are poor creatures, thin and white, and have what may be called nutritive debility, and the question is, What am I to do with them? You cannot do better than endeavour to make the patient walk in the way of physiological righteousness. But that sometimes will not do. Some people may be physiologically well behaved, and somehow they do not thrive on it. Can you do anything in those cases? There are two remedies which sometimes do succeed where the ordinary diet will not succeed in nourishing the patient—the one is Cod Liver Oil and Malt given with food—a preparation called Bynol—and the other is the remedy called Bynin Emulsion, consisting of Hypophosphites, Oil, and Malt; both are prepared by Messrs. ALLEN & HANBURYS. These are two good nutritive agents in promoting nutrition."

☞ "*A perfect combination of Malt Extract and Cod Liver Oil.*"—BRITISH MEDICAL JOURNAL.

Allen & Hanburys, Ltd. Plough Court, Lombard Street, **London.**

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An Address
ON
THE SOIL IN ITS RELATION TO DISEASE AND SANITATION.

Delivered before the Nottingham Medico-Chirurgical Society on Oct. 30th, 1895,

BY G. V. POORE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL; PROFESSOR OF CLINICAL MEDICINE AND MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE, LONDON.

GENTLEMEN,—In dealing with the relation of the earth to disease it behoves us to move with caution, and we shall do well at the outset to admit that there is very little knowledge of the subject which can be regarded as certain. We are in the land of conjectures, surmises, and plausible hypotheses, which perhaps are leading on to certain knowledge, but it will be necessary to check the dicta of the laboratories by experience gained outside of them. Such has always been the admirable custom in this country, where the labours of the pure scientist have been checked by that truly excellent staff of workers, the medical inspectors of the Local Government Board, to whom the world at large is more deeply indebted than perhaps it is aware. Before we blame the earth for causing us harm we must be sure that the facts, or alleged facts, of the bacteriologist are supported by the experience of the practical epidemiologist. Science unchecked by practice will certainly lead us astray in the future as it has done in the past, and just as a "lie which is half a truth is ever the blackest of lies," so a new scientific fact imperfectly understood has potentialities for evil which are unbounded.

If we set aside for the present the question of malaria, which is undoubtedly primarily connected with certain soils, we have very little evidence that any other disease of practical importance is primarily connected with the soil. There appear to be two microbes which are present with tolerable constancy in the upper layers of the soil, which, when applied to a raw surface or injected hypodermically, may cause tetanus and malignant œdema; but as yet we are without any evidence that either of these diseases can be caused by drinking water which has percolated through the soil or can rise as a miasm from the soil. They concern the surgeon mainly, and from the point of view of epidemiology are unimportant.

Phthisis, or rather death from phthisis, which is not quite the same thing, is said to be more prevalent on damp soils than on dry ones, and it has further been said that the death-rate from this disease has been reduced in certain towns by sewerage. This statement is not universally accepted, and even if it be true it does not necessarily inculpate the soil because damp soils are cold, and patients with phthisis or any chronic lung trouble are very intolerant of cold and damp. It is very generally recognised that phthisis is prevalent in proportion to overcrowding, and that it is conveyed by tuberculous milk or meat seems to be certain as the result of recent experimental work. Any charge against the soil itself is as yet not proven.

Diphtheria has been said to be prevalent on certain soils, but this assertion is now discredited, and we recognise that the great cause of its spread is overcrowding. Its habitat, if it have any, outside the human body is not yet known.

Anthrax, which is due to a spore-bearing organism, can certainly be conveyed to animals browsing on grass soiled by the dung or blood of infected animals. The bacilli seem to die in the carcase of a dead animal within three days after death; and as, for spore formation, the free access of air and a temperature of 70° F. are necessary it is not likely that this goes on in the earth. Pasteur's assertion that anthrax spores may be brought to the surface by earthworms is discredited by Koch and others. Man, I believe, has never been infected with anthrax except by direct inoculation or, as in the wool-sorter, by inhaling spores from infected wool or hides. Clearly, animals should not be allowed to browse in an infected field, and such fields should, where possible, be ploughed up and converted from pasture into arable land. The danger of burying animals dead of anthrax is considered unworthy of credence by those eminent veterinary authorities, Professor Brown and Professor McFadyean, and the latter has shown that the process of putrefaction is fatal to the virulence of the tissues of the dead animal when these are inoculated into other animals or administered by the mouth.

Enteric fever and cholera bear a close resemblance to each other in their mode of spread, and they are both recognised in this country as mainly, if not entirely, water-borne diseases. Whether this be absolutely the case in the tropics I will not pause to discuss, because I am ignorant of the conditions of tropical life, but it is known that at present the water-borne theory, as against the air-borne theory, is receiving more and more support in India. That these diseases are produced in most cases by the direct infection of water by the excreta of infected patients is in Europe very generally acknowledged. The cholera epidemics of 1848, 1854, and 1866, and the more recent epidemic at Hamburg, strongly support the water-borne theory of cholera, and the enteric fever epidemics which afford similar evidence in this country have been so numerous that it is unnecessary to particularise. The spread of both these diseases seems to be favoured by conditions of filth and overcrowding, and the existence of a filthy and sodden condition of the soil has been often spoken of in connexion with them. Nevertheless, there have been very few outbreaks of enteric fever in which the fact that cesspools, sewers, or underground middens have been in direct communication with the sources of water has not been detected. If, as seems highly probable, typhoid fever may be conveyed by sewer air there is nothing improbable in the suggestion that it can be conveyed by the air of privies or middens in which fæces are allowed to putrefy. That typhoid fever poison can lurk in properly tilled ground seems very unlikely, and I am not aware that such a thing has ever been suggested. Pettenkofer's statement that epidemics of typhoid fever and cholera follow depressions of the ground water may be true for Munich, but it has not been materially supported in this country; and, in Budapest, Fodor has found that these diseases are more prevalent when the ground water is high. The variations of level in the ground water depend upon such a number of meteorological and other conditions and give rise to so many and different effects that even if Pettenkofer's statement be accepted it would not necessarily point to the earth as the natural habitat of the typhoid fever poison. Professor Lane Notter, in his summing up of this ground-water question, says:[1] "It must, however, be borne in mind that it is not the ground itself which is the cause of the disease, but the impurities in the soil which the varying level of the ground water helps to set in action." Now, no organic impurity can possibly reach the soil from the subsoil, which is purely inorganic. Any organic impurity which reaches the ground water must, therefore, come from above and is due in the vast majority of cases to our mismanagement of organic refuse. Dr. Sims Woodhead[2] says that "*the deeper layers* of the earth are frequently almost entirely free from micro-organisms, *just as is the ground water.*" Of course if the soil of a city be porous, and if there be a subterranean network of sewers interspersed with cesspools, this would (in the high probability that an average proportion of these contrivances leak) constitute a very great danger, but we must not blame the earth because we mismanage it. The earth, be it remembered, is our sole permanent source of wealth, and we must not needlessly quarrel with our bread-and-butter.

This world would not be habitable were it not for the humus with which its bare rocks are clothed. The humus is the living covering of the skeleton, and its formation has taken ages. The primitive bare rock which has been "weathered" by the changing seasons gets clothed with a growth of lichen. This thin but rough covering entangles stray particles, and thus and by its own decay affords a nidus for a stronger growth. This stronger growth, by chemical action and physical force, works further into the rock, on which the soaking rains and rending frosts have an increasing effect, and thus, partly by the disruption of the inorganic rock and partly by the increase in ever-growing quantities of vegetable decay, the humus rises

[1] Parkes' Hygiene, eighth edition, p. 10.
[2] Bacteria and their Products, p. 394. Walter Scott, 1891.

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as it were, "on stepping-stones of its dead self" until it is able to afford footing and nourishment for the stately forest tree, and its fertility finally becomes sufficient to attract the attention of the husbandman. This humus, the loose, mainly organic covering of the rocks, is formed, as we have seen, by crumbling rocks from below and by the constant additions of dead organic matter which is deposited upon the surface. These additions of organic matter, be they in the form of dead animals, dead leaves, dung, or what not, become humified, and thus the stock of humus tends steadily to increase. The greater the stock of humus the greater the fertility, and the greater the fertility the greater will be the amount of dead organic matter to increase the stock of humus. The conversion of the dead organic matter into humus is a biological process and is caused by the animals which live in the humus and is perfected by the growth of fungi. On this account I ventured some years ago to speak of the humus as the "Living Earth," and I take it that no more important addition has ever been made to the stock of human knowledge than the recognition that the humus teems with life and that its fertility and healthiness depend entirely upon biological processes. If the humus be sterilised either by heat or antiseptics it becomes absolutely barren. It was at one time supposed that the fertility of the soil depended mainly upon the process of nitrification, whereby nitrogenous organic matter is converted into soluble nitrates which are absorbed by the roots of plants, and there can be no doubt that these nitrifying organisms are most important. The causes of the fertility of the soil are probably far more complex than we suppose, and I think it may be said that we are as yet only upon the threshold of our knowledge with regard to them.

The phenomenon of "symbiosis," or the living together of chlorophyll-bearing plants with those which have no chlorophyll in so-called symbiotic community where each partner works for its fellow's good as well as its own, is far more common than was supposed. Originally demonstrated in so-called lichens, which really consist of symbioses of fungi and algæ, it was next shown in the papilionaceous leguminosæ, whose nourishment appears to be largely dependent upon so-called bacterial nodules which grow upon their roots, and, according to my observations, more upon the superficial roots than those which run more deeply. In Oliver's edition of "Kerner's Natural History of Plants"[2] will be found an account of symbioses between fungi and big flowering plants in which "the division of labour consists in the fungus mycelium providing the green-leaved phanerogam with water and food-stuffs from the ground whilst receiving in return from its partner such organic compounds as have been produced in the green leaves." 'The union of two partners always takes place underground, the absorbent roots of the phanerogam being woven over by the filaments of a mycelium. ..... As the root grows onward the mycelium grows with it, accompanying it like a shadow. ..... The ultimate ramifications of roots of trees 100 years old and the suction roots of year-old seedlings are woven by the mycelial filaments in precisely the same manner." It is stated that many plants only flourish in symbiotic community, and in this fact lies the explanation of the readiness of some plants to grow and flourish from cuttings put in sand, or from seedlings grown in nutritive solutions, while others, in the absence of the necessary fungi encircling their roots, cannot be made to strike root or flourish in this way. When it is stated that to the latter class belong oaks, beeches, firs, willows, poplars, rhododendrons, and heaths the importance of symbiosis in this world will be readily understood. Now we know why it is that the gardener prizes leaf-mould in spite of its being comparatively poor in nitrogen as compared with guano. Leaf-mould is full of fungi, and in it the plant readily establishes its requisite symbiosis.

This great and astounding fact of symbiosis, of which we have only recently had cognisance, will serve to enforce the steadily growing opinion that the sphere of the chemist is in all living processes strictly limited. In estimating the value of artificial manures the chemist's dictum is of the greatest value, but his analysis when used to gauge the value of the living humus may be entirely misleading. The chemist has told us again and again that the quantity of nitrogen in humus and in earth-closet soil is, as compared with many artificial manures, comparatively small, and therefore the mistake has been made of regarding human fæces and the product of earth closets as of small manurial value. I believe that such a statement is most misleading, and on this point I claim to speak with no inconsiderable experience. It is known to many of you that for the past ten years I have cultivated a garden of about an acre and a quarter in extent, in which the only manure used has been the excremental and other refuse of some twenty cottages with about 120 inhabitants. In August last I invited a party of the British Medical Association to view that garden, and I think that none of my guests on that occasion will refuse to admit that the garden was as full of crops of one kind and another as a garden could well be. Dr. Voelcker, the chemist of the Royal Agricultural Society, whom I had the honour of numbering among my guests on that occasion, told me that he had never seen a piece of ground more fully stocked, and he very kindly went carefully round the garden with me to see if his experienced eye could detect any sign of sickness in the soil. I have never detected any such signs, and neither could he. The garden affords no evidence of being overdone with manure, and my belief is that it would take a great deal more. This ten years' experience has convinced me that human fæces constitute a manure of the greatest value, all analyses to the contrary notwithstanding. The probable explanation lies in the fact that the microbes extruded with the fæces are of great value in developing the fertility of the humus.

Many recent experiences in sanitation and in medicine force upon us the conclusion that the value of chemical analysis in biological questions is not final. Water which has been found to contain the bacillus of typhoid fever has passed the tests of the chemist, and there can be little doubt that in the past many samples of wholesome water have been condemned for containing the products, in the form of nitrates, of oxidised organic matter. Again, the action of toxines and antitoxins is quite beyond the reach of the chemist, and the marvellous results which have been obtained by administering thyroid extract teach us that in dietetics there is something which the chemist cannot gauge. Raw thyroid and cooked thyroid would give the same results on analysis, but how different is the physiological result! How different is the action of the carefully dried stomach of the calf in the form of rennet or pepsin as compared with a dish of tripe! These facts must force upon us the speculation that the same thing may produce very different effects according to the temperature to which it may have been artificially raised by drying under a vacuum or by cooking, and must drive us to the conclusion that although it may be advisable under certain circumstances to boil our milk or our water, it is possible that the act of cooking may change, we know not to what degree, the physiological action of the milk or water which has been thus treated. My experience tells me that the chemists are wrong when they say that human excreta are of small manurial value. Their analyses are doubtless right, but their conclusions are wrong and very dangerously misleading. In this statement I should be supported by the whole of the "Far Eastern" nations.

The ultimate manurial value of urine is doubtless very great, although when pure or nearly pure it is very deadly to herbage. The only satisfactory way of using urine as a manure is to imitate the farmer by mixing it with an absorbent material such as straw, sawdust, peat, earth, paper, cotton waste, wool waste, &c., placing it upon the surface of the ground and digging or ploughing it in.

The best evidence that the humus is alive is the fact that it breathes. The fungi which are destitute of chlorophyll absorb oxygen and give off carbonic acid, in this respect resembling animals and differing from the chlorophyll-bearing plants. The most easily obtained evidence of this is the fact that decaying refuse generates heat, a fact which is easily ascertained by using a thermometer. Thus I have at present in the garden of my cottage in the Thames Valley a heap of privet leaves intermixed with a quantity of fine twigs which give it great porosity and serve to admit a large quantity of air. On the morning of Oct. 21st the temperature of the air was 39° F., and the temperature of the heap of leaves was 57° (18° more than the air). On Oct. 22nd there was a heavy cold rain with a cold easterly wind. On the morning of Oct. 23rd the temperature of the air was 40° and the temperature of the heap of leaves was 56°. On the night of Oct. 23rd-24th there was (for the time of year) a very severe frost. My heap of leaves on the morning of the 24th was solidified on the surface by the frost, but the temperature of the interior

[2] Vol. i., p. 249.

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was 53°, while that of the air was 30° (an increase of 23° over the air). This heap, it should be stated, is only a small heap, and would all go into a big wheelbarrow. On the morning of Oct. 24th, after taking the temperature of this heap, I turned it over with a fork, putting the frozen top in the centre and altering the position of the constituents of the heap. A quarter of an hour later the temperature of the heap was found to be 32°, and at seven in the evening it was still at freezing point, or only just above it. The night of Oct. 24th–25th was again very frosty, as many as 12° of frost having been registered at a house close by. At eight in the morning of the 25th, however, my heap of leaves showed a temperature of 40°, having risen 8° during this very cold night and being 20° above the minimum cold recorded in the night. At 7 P.M. on the 25th the temperature of the heap was 42°, and the next morning, after a third very cold and frosty night, it had risen to 45°. The rise of temperature here was clearly due to the respiration of living things and could not have been in any degree caused by absorption of sun heat. (Since the above was written autumn has come upon us, and the fallen leaves have been collected into a big heap. On Nov. 15th the temperature of this heap was found to be 62° F. and a week later (Nov. 22nd) had risen to 104° F.!) The fact that the humification of organic matter generates heat is a fact which is of enormous practical value to the gardener and farmer. The market gardens round London, which produce astounding crops and assimilate an enormous quantity of dung, are in a sense extended and mild hotbeds. One hopes that those who are advocating the burning of organic refuse will pause to think, however necessary such a process may be under certain circumstances, how great is the dispersion of energy which such a process involves and how much heat is lost which might otherwise be used for the stimulation of germination and growth in seeds and plants. One hopes also that those who would condemn as foul the humus which contains a large amount of carbonic acid will remember that this gas may only be an evidence of perfectly healthy and vigorous action. The important fact that the tillers of the soil are the most long-lived of all the labouring classes is one which must never be lost sight of.

That the humus breathes and generates an enormous quantity of carbonic acid precisely as an animal does is a fact of which the agriculturist must ever bear in mind. Many of the operations of the farm have for their object the loosening of the soil and the admission of air to enable the respiratory processes to go on. Every farmer will tell you that the earlier he can get upon the ground to hoe his turnips the better will be the crop (other things being equal), and every farmer knows the advantage of thorough tillage. If the respiration of the humus is an important fact, it becomes very important indeed not to drown it. It stands drowning no better than a man does, but, like a man, it requires a requisite amount, but not too much, of drink. There can be no doubt that the failure which is almost general of so-called sewage farming arises through the drowning of the humus; and it must be borne in mind that sewage water consists to a very considerable extent of water which has been boiled, or is hard, deep well water, and has not the valuable quality of rain water of containing some 2·5 volumes per cent. of atmospheric air dissolved in it. There can be little doubt that the great trouble to the sewage farmer is the excess of water which drowns the humus. When three or four ounces of excrement are mixed with 1200 times their weight of water they run small chance of humification, and one must fear that the difficulties of the sewage farmer (financial or agricultural, or both) must increase with the magnificence and extravagance of the water-supply of the town the sanitary interests of which the sewage farm is intended to subserve. The evil effects of too much water have come before me lately in two very striking examples. While going over the experimental farm belonging to Mr. H. C. Stephens, M.P., at Cholderton, on Salisbury Plain, this autumn (which I did in company with a large number of practical agriculturists), there were here and there noticeable in the middle of fields having a uniform quality of soil, and which had been treated in identical fashions, certain large patches over which the growth of turnips, as compared with the rest of the fields, was very defective. The explanation offered was that on these patches the animals had been folded in wet weather, that the dung had been trodden into the ground, and the soil had been hardened and consolidated by the trampling of the beasts. Under such conditions (air not being adequately admitted to the pores of the soil) the humification of the dung had been hindered and the crops stunted in consequence. This was a fact new to me, who am only an amateur agriculturist, but I may state that it was unanimously and unreservedly accepted as an adequate explanation by all the farmers present, who seemed to be perfectly familiar with the consequences of folding cattle in the wet. On the other hand, the most fertile patch of the whole farm was where the cattle had been folded for a fortnight continuously on the same spot during the severe frost of last winter, and had been fed upon food which was necessarily brought to them on that spot. The ground being as hard as iron could not be more consolidated by trampling, and with the advent of the thaw there was a general disruption of soil and dung, and humification went on rapidly in earth of which the pores had been opened by the beneficent effects of a deep frost, and which had received an amount of dung which was exceptionally great.

Another experience was a visit to a sewage farm belonging to a town in which brewing is the staple industry. This farm was large (nearly twice as big as at one time was considered necessary) and was composed of a very porous, gravelly soil in a high situation. The manager was an able man, and one felt that if success was to be obtained it was here. But the amount of water pumped on to this ground was exceptionally great, amounting at times to as much as 150 gallons per head of population per diem. The result can be imagined. The humus was drowned, and large tracts of the farm were as wet as a marsh, bore no crops, and never could be made to bear any under such conditions. As soon as it had been saturated it was ploughed up and saturated again, there being no time (let alone other considerations) to grow crops in face of the huge volumes of water which had to be dealt with. Those parts of the farm which were under cultivation grew enormous quantities of water-grass, a noxious weed, and altogether the agricultural aspects of this estate were as gloomy as could well be. As for the effluent, it was thick and turbid, and stunk like a dirty brewery. It was impossible to believe that the effluent had been rendered safe for discharge into a river, and its cost must have approached that of the beer which was sold in the adjoining town. The amount of water seemed to be the trouble here, and clearly the first duty of the municipality would be to divert directly into the river all the storm water and all the water which was used in enormous quantities for refrigerating purposes, and which, being perfectly wholesome, might go into the stream direct. A visit to the pumping-station of this municipality was most unpleasant for the nostrils, and left upon me the impression that the Local Government Board would do well to insist that all sewage committees should have a board-room at the pumping-station and another at the farm, and should be allowed to deliberate in no other place. The humification of excrement in the presence of such an overpowering amount of water is impossible, and I believe that municipalities which are now busy diverting storm water will have to go further and deal with excreta, domestic slop water, and manufacturers' effluents on different and separate systems. I confess I should like to see water-closets dealt with on an independent system by a vacuum principle such as is advocated by Shone and Liernur. Manufacturers' refuse, which is liable to contain chemicals and antiseptics, is so likely to kill the humus by poison as well as by drowning that it seems impossible to deal with it on any one system, and it is to be hoped that with the advance of chemistry it may be increasingly possible to turn manufacturing effluents to profitable account.

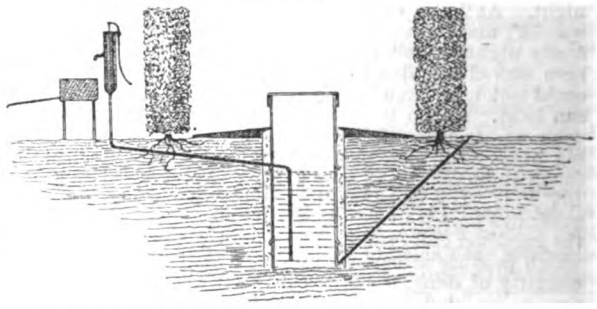
It is now more than ten years ago since I first deliberately drew attention to the shortcomings of modern sanitary methods, and pointed out that the safe disposal of organic refuse was a question which mainly concerned the biologist. It is a hopeful sign of the times that engineers are now recognising this fact, thanks mainly to the teaching of the Board of Health in Massachusetts. The purification of sewage is wrought by the presence of living organisms on the filters; and for the due filtration of drinking-water it is now admitted that the filtering material must have a coating of living slime. These are facts which are now all but universally admitted.

It is admitted that humus is one of the best filtering materials for water, and that water from a river full of living organisms is to a large extent freed from them by filtering through a few feet of the humus on its banks. In the past

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few years Professor E. Frankland has shown that water of singular microbial purity has been obtained from the gravel beds which in places flank the Thames. Such water, one must suppose, is obtained from ground water which has fallen upon the earth, has filtered through it, and is slowly flowing towards the river. The purifying agent in these cases is mainly, one must suppose, the living humus which lies upon the surface, although the subsoil cannot be without some effect. These facts must alter our attitude towards surface wells, and must teach us what to a great extent has been admitted—that the purity of surface wells must depend more upon the mode of construction and the surroundings of the well than upon its depth. Wells are polluted by foulness which has reached the subsoil without being subjected to the purifying influence of the humus, and there are many facts which go to show that if foul water gets to the under side of the humus without going through it its purification in the subsoil is far from certain. The Lausen epidemic, the Worthing epidemic, and the pollution of the deep well sunk in the sandstone at Liverpool seem to show us that percolation through a mile of underground strata entails no certain purification, and that wells 80 ft. or 400 ft. deep are not safe if fissures allow the contents of cesspools, leaking under pressure, to trickle into them. The almost universal condemnation of surface wells and their frequent pollution are mainly due to the fact that we take our filthy and dangerous liquids through the humus in pipes, and thus ensure at great expense that it cannot be subjected to purification by it. If these underground pipes leak the mischief caused by pollution of wells may be very far-reaching. It is very probable that foul water continuously thrown on the same spot of ground may in time work its way to a well and thus pollute it. Such ground which is constantly soaked, be it remembered, is never tilled, because tillage is impossible. For ground to be tillable it is essential that reasonable breathing time should be allowed. I am not altogether sure (although I hardly dare utter such a heresy) that a properly constructed surface well in a selected situation may not prove to be one of the safest sources for water, because it can be inspected with perfect ease, and the fact of accidental leakage into it would become apparent. In this connexion it may be well to describe in full detail the well which I have sunk in my garden at Andover, a garden which is rather handsomely manured with human excreta. The well is placed in the very centre of the garden at the intersection of two paths—a broad green path and a narrower asphalted path. This situation was chosen for two reasons: (1) that it was as far as possible removed from any accidental pollution from the sewer in the street; and (2) that in the centre of the garden it would theoretically run the greatest chance of fæcal contamination from the manure used. As the well was sunk solely for experimental purposes this was essential. The garden is on a river-bank and very slightly raised above the level of the water. The well is only some 5 ft. deep, and the water stands at a level (which varies very slightly) of about 3 ft. 6 in. from the bottom. The well is lined throughout from the very bottom to a point some 15 in. above the ground with large concrete sewer-pipes 2 ft. 3 in. in diameter, and these pipes have been carefully cemented at their junctions. Outside the pipes a circle of cement concrete about 4 in. thick has been run in. It will thus be evident, the sides being perfectly protected, that no water can possibly enter this well except through the bottom, all contamination by lateral soakage through the walls being rendered impossible. The well is surrounded by an asphalte path about 3 ft. wide and slightly sloping away from it, and it is encircled by a clipped privet hedge about 5 ft. high except at those points where the circle of privet is cut by the paths. There is a closely fitting cover of oak, which has an outer casing of lead, and thus all contamination from above is prevented. The water is drawn off through a 2-in. leaden pipe which passes through the outer concrete and the concrete lining pipe, the cut passage for the pipe being carefully closed with cement. The pump is behind the privet hedge, and is provided with a sink and waste pipe which takes the overflow some twenty or thirty yards to a neighbouring stream. In this way the constant dripping of water in the neighbourhood of the well is prevented, for I am very much alive to the dangers attending a constant water-drip, which might be able in time to worm its way through soil and concrete into the well itself. I regard this question of the overflow as one of great importance which is too often neglected. Figs. 1 and 2 show this well in section and plan. The nearest point to the well upon which any manurial deposit of excreta is likely to be made is on the far side of the privet hedge, and the distance of this point from the bottom of the well is 7 ft. All water which finds its way into the well must have passed through at least 6 ft. or 7 ft. of earth, and, of course, the great bulk of the water has passed through a far greater length. Three chemical analyses of this water, one by Professor Frankland and two by Dr. Kenwood, testify to its organic purity, and three bacteriological investigations have given similar indications of purity. A bacteriological examination of the water from the river Anton and the well water, made on April 11th, 1895, gave 1133

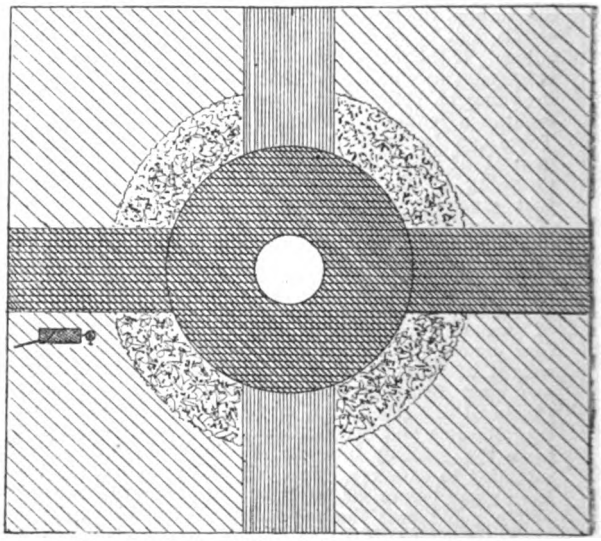
FIG. 1.



Section of well, showing concrete lining and position of pump. The diagonal line on the right of the figure is to mark the distance from the nearest garden bed to bottom of well.

growths per cubic centimetre for the river and only 7·5 for the well. Of course there may be a dangerous microbe among this small number, but, on the whole, I think the best guarantee of the purity of the water is the condition of the well, which after four years is as clean on the bottom and sides as it was the day it was made. There has been no appreciable increase of sediment on the bottom, and the pebbles are as plainly visible as they ever were. The well is for experimental purposes mainly, but water for garden use is drawn from it, and during the severe frost of last winter my gardener and some of his neighbours were entirely dependent upon it

FIG. 2.



Plan of well, showing its relation to paths and hedge.

for household purposes. I seldom go into my garden without drinking some of the water, which is clear and delicious, and my numerous guests seldom escape without drinking some also. My belief is that, as I have said, the well is a very safe one. It must be mentioned, however, that after very excessive amounts of rain, such as occurred once during the past summer, when the water came down in a perfect deluge and lay for hours in big pools upon the ground, the water in the well becomes turbid. My belief is that under these circumstances the fine sediment on the bottom

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is driven upwards by the suddenly increased pressure of the water outside, and I have no reason to think that after these storms there has been any actual increase of sediment, the stones at the bottom remaining as visible as ever. I have never been able to make a bacteriological examination after one of these floods, but hope to be able to do so.

The question whether such a very shallow well becomes dangerous after a flood is a most important one. It is clearly understood that with my well there is no possibility of flood water entering at any point except through the bottom. It must be recognised that in times of flood with a drowned humus the power of purification may be lessened. On the other hand, my experience leads me to say that it is very difficult (if it be possible at all) to wash fæces out of well-tilled humus by any rain which we get in this country. Last autumn (1894), in the south of England, we had very severe floods, and I was able to note that the humification of fæces in my garden was, as a consequence, very much delayed. Fæcal matter was visible on turning up the soil for nearly three months after it had been deposited, and the masses of fæcal matter were enclosed in crusts of humus which had been rendered airless and clay-like by the excessive amount of water. This naked-eye test seemed to show that the well had not been endangered, for there were the fæces, and most certainly they had not been washed downwards. When the pores of the soil had been opened by frost the humification of the fæcal matter went forward as usual. This experience seems to enforce what I have said before—that a drowned humus cannot deal with dung. That floods may be dangerous to surface wells we all know, but it will be recognised that the conditions and circumstances of my well at Andover are distinctly different from those of the wells mentioned in the following extract, which were filled with flood water by leakage through their tops and sides.

In the Twenty-third Annual Report of the Local Government Board (1893–1894) reference is made by Dr. Thorne Thorne to certain investigations on outbreaks of typhoid fever in certain riverside populations in Yorkshire and Lincolnshire. These investigations by Dr. Bruce Low seem to prove conclusively that the fæcally polluted water of the Rye and the Trent had infected with typhoid fever a certain proportion of the inhabitants who consumed the raw river water. Dr. Thorne Thorne goes on to say: "Incidentally it transpired during the course of this inquiry that the town of Malton had an altogether exceptional history in so far as enteric fever and diarrhœa in fatal form are concerned. Situated on the Derwent, four miles below the confluence of the Rye with that river, Malton was found to derive its water-supply from the Lady Well, sunk to a depth of 14 ft. in the middle oolite rock and occupying some low-lying land close to the river bank. Into this well river water gained access as soon as the Derwent rose above a given point, the amount of river water reaching the well varying from mere leakage through holes and crevices in the banks to complete submersion of the Lady Well by the swollen stream. Gradually it had come to be noted that the outbreaks of fever and of diarrhœa followed on seasons of flood in the Derwent, a river which was referred to locally in 1890 as containing 'the sewage of all the towns and villages situated near the Rye and its numerous tributaries.'" In country places where surface wells are the only available source of water I strongly recommend that they be made on the pattern which I have been describing.

It may be well that I should describe precisely my method of dealing with excreta in my garden at Andover. My twenty cottages are provided with pails, except one which is provided with a "dry catch," and in time I hope to substitute the dry catch for the pails. It is a much better arrangement, and it is only for financial reasons that I do not effect the change forthwith. The contents of the pails and dry catch are removed every day except Sunday, and as the distance to be travelled is very slight the time occupied is not more than an hour. This daily removal is very easy and, I believe, economical; on sanitary grounds it is most advisable. The pails are provided with covers, and they are moved two at a time by one man who is provided with a milkman's yoke. The removal is thus done in ten double journeys, which vary in length from about five yards to 200 yards; perhaps an average of 100 yards, or a little more than a mile in all. With "dry catches," a properly shaped shovel, and an iron vessel on wheels for transport, the removal of the excreta from the twenty cottages to the garden could be effected in a much shorter time. In disposing of the excreta I follow nature. Under natural conditions the increase of the humus is effected solely by organic matter deposited on the surface. I therefore have the excreta merely covered by mould for decency's sake. The scavenger digs a furrow, as is done by a gardener when cultivating his land, the excreta are placed in the furrow and then covered up, and thus at one operation the land is tilled and the excreta disposed of. All foul smell is at an end the instant the excreta are covered, and in this garden, which is a pleasaunce of considerable beauty, there is never anything to offend the eye or the nose after about 7.30 in the morning. I believe that, in the absence of any evidence to the contrary, when the excreta are thus covered with earth there is an end to any danger to health. In times of exceptional frost the excreta are mixed with ashes and stored until they can be inhumed. The great importance of this superficial burial must be insisted upon. It is the top of the soil which is most full of life. As regards microbial richness the first few inches are worth all the rest. It is the top of the soil which can destroy and assimilate organic matter; the subsoil has no such power. It is a common mistake to bury deeply any organic matter which seems to us to be particularly offensive. In this way we ensure its preservation and endanger the wells. The safety of our wells is directly proportionate to the thickness of the humus, and to place organic matter below the humus is like throwing the dog's bone beneath the kennel instead of into it. The inefficiency of deep burial hardly requires to be mentioned. Bodies buried deep in the subsoil last for years, while those which are placed in the living humus are rapidly destroyed.

I should like to mention that when my well was dug there was found beneath a turf path and about three feet below the surface a large quantity of dead leaves, which had probably been deposited in a pit at some long antecedent date. They had undergone scarcely any decomposition, although they had been in that position very many years. Again, when engaged in pulling down a cottage my man unearthed an old privy some four feet below the surface. In this privy unmistakable fæcal matter was recognisable. Neither he nor I nor any of the neighbours had any knowledge of any such privy having been in use of late years, and my belief is that these recognisable excreta had been deposited at least half a century ago. Who shall say that these excreta did not still contain spores of all the ills that flesh is heir to? Under natural conditions all dead organic matter falls upon the surface of the ground, and nature is a very sure guide.

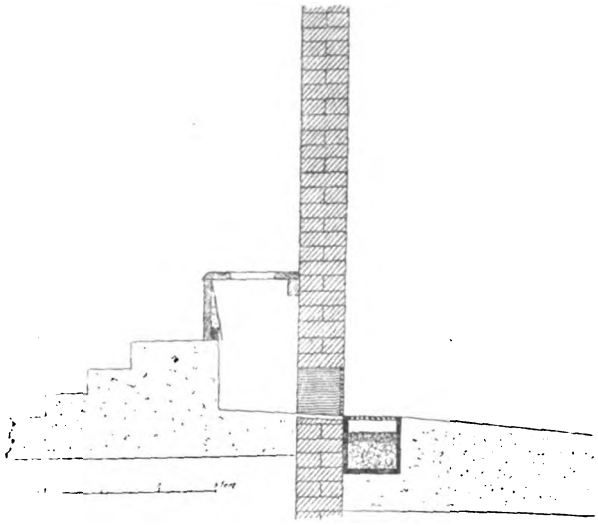
After the excreta have been superficially buried plants of the cabbage tribe are dibbled in as soon as may be. This is often done within three days, and the cabbages are sure to flourish. Seeds do not flourish with any certainty, and, although I have seen fair crops of turnips, peas, onions, &c., when the weather has been favourable, such crops are liable to fail, while cabbage as a first crop is practically sure to succeed. I could have shown you a month or so ago a spot in the Andover garden which had been sown with turnips and radishes as a first crop after manuring. The produce was Brobdignagian, but worthless except to dig into the ground. The development of green head was very great, the roots were huge and woolly. When the plan of operations which has been described (daily superficial burial followed by cabbage planting) was commenced some ten years ago many were the prophecies of failure. The practical men shook their heads and said I never should succeed that way, but that I was "bound to store the stuff in a heap to allow it to ripen before being put on the land." As a sanitarian one was naturally anxious to get the excreta below the surface of the ground as soon as possible, and I now feel confident in stating that the plan I recommend is the best from the sanitary, agricultural, and financial points of view. Sanitarily it is the best because there is no delay in the safe bestowal of the excreta; agriculturally it is best because no ammonia or other volatile body is given to the air, but all goes to enrich the land; and financially it is best because it involves moving the dung once only instead of twice, the same operation that tills the land serves to cover the dung, and while the excreta are "ripening" for other crops the farmer gets a crop of cabbage. After the cabbage crop the ground is still very rich and will grow everything or anything to which the soil and situation are suited in high perfection.

The best receptacle for excreta—far better than any form of pail—is one which imitates natural conditions and ensures that the excreta are kept above the level of the ground and are exposed to the air. Such a receptacle is the "dry catch" of which I have spoken. The privy seat is raised

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on a few steps and the receptacle below is concreted, the floor being made to slope gently towards the door, which should be made of fine wire netting in order to ensure thorough aeration. The urine in part (and my experience leads me to say in very small part, because it is voided in front of the fæces, which check its downward progress) flows towards the door, and may be absorbed either by a heap of earth or by sawdust or other available absorbent contained in a specially constructed depression or gutter. This arrangement is shown in Fig. 3. In such a receptacle

FIG. 3.



Section of "dry catch" privy, with gutter filled with sawdust to absorb excess of urine.

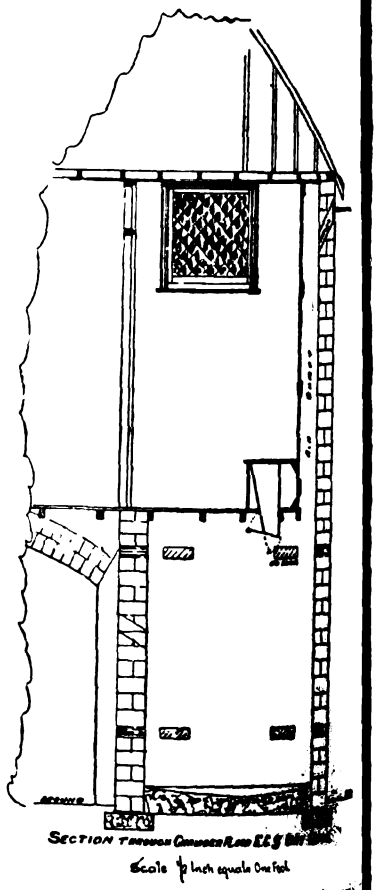
as this the humification of the fæces will go forward even though no earth be added. I had practical proof of this last summer, because the "dry catch" which I have erected was, by a mistake of the scavenger, not emptied for nearly two months, and we found that the bottom of the mass had humified and become inoffensive. No earth had been added in this case. The other figures (Figs. 4 and 5) show a specially contrived plan, the object of which is to make "dry catch" earth closets acceptable to ladies. This closet is approached from the bedroom floor of the house through a lobby having cross ventilation; the "dry catch" is on the ground floor and is provided with a door through which the soil can be removed without traffic through the house. (See Fig. 4.) The earth for this closet is also supplied from the outside through a specially contrived hopper so that the man who brings the earth cannot see, or be seen by, any chance occupant of the closet. The pan is of a shape which has carefully been considered, is screwed to the under side of the seat, and is fitted at the lower end with a flap having a somewhat heavy counterpoise. By this arrangement the excreta drop out of sight and all up-draft is prevented. The flap works in a slot and can be removed with perfect ease for purposes of occasional cleansing. (See Fig. 5.) This pan, which has worked exceedingly well for two years, was made for me by Messrs. Righton of 376, Euston-road.

To show how little annoyance may be caused under certain circumstances by excremental matters it is only necessary to appeal to the streets of London or any other large city. The amount of horse excrement and urine which are voided in the streets is prodigious, and at cab-stands the same thing goes on day after day precisely in the same spot for years together, so that the earth near there must be sodden through and through with urine; and yet how little offence there is—a certain pungency from ammonia, but no sickening, foul smell. A cab-stand is usually in very strong contrast to the urinals provided for human beings, where, in spite of a lavish supply of water, the odour is sickening and most offensive unless an attendant be provided to keep the place absolutely clean after the manner of a housemaid. Then again what is street mud? It is a collection of everything which is dropped in the street, excremental and otherwise, ground more or less by the traffic and mixed into a paste with rain water and [illegible] from the roads and vehicles. It is ugly, sticky, dirty, gives endless trouble to those who like to have their [illegible] and carriages look clean and smart; but—and this is a point to which I would call attention—it is never [illegible] offensive. It is scraped into heaps and is often left for [illegible] and practically never causes any foul smell. The [illegible] mud-heap is usually in very strong contrast to the [illegible] smell of the sewer grating alongside of it.

Simple water is by no means a perfect cleanser, [illegible] for sticky material like fæces, which we all know [illegible] its removal soap in addition to hot water and a [illegible] In a butcher's shop putrefaction is kept in check by [illegible] and fresh air, and the use of sawdust to absorb [illegible] results could not be better, and my experience has [illegible] in cow-houses, stables, piggeries, &c., the less [illegible] swilled with water the sweeter they are, provided [illegible] ample ventilation and enough absorbent material [illegible] the dung and urine to be swept up and carted away.

Our go-ahead municipalities, formed on democratic [illegible] are more ostentatious than the worst of Roman [illegible] The London County Council wished at one time [illegible] £750,000 for a *site* for its house! The central [illegible] modern municipalism are the raising of loans and the [illegible] ing of the ratepayer. It must be remembered that [illegible] is no relation between magnificence and real efficiency. [illegible] example, in a town which I sometimes visit I am [illegible] interested by a stately pageant consisting of a [illegible] veyance weighing at least half a ton and looking like [illegible] between a railway truck and a hearse. This is done [illegible]

FIG. 4.

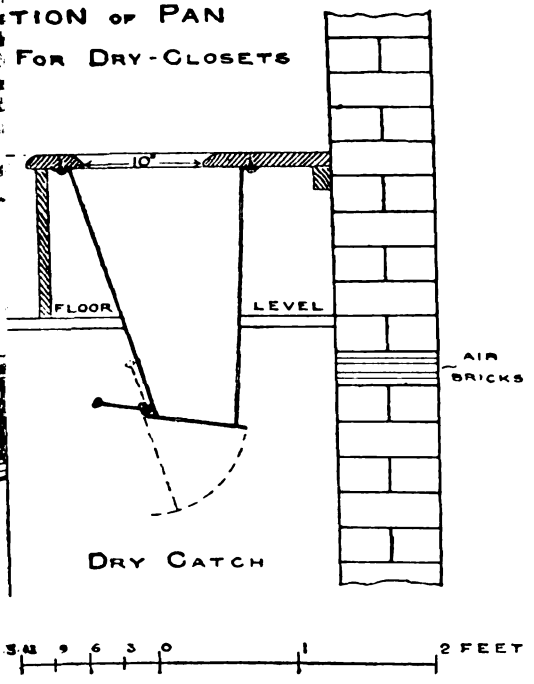


horse weighing 15 or 16 cwt., and this horse is [illegible] two men weighing, perhaps, 12 st. apiece. Inside [illegible] are eighteen huge pails weighing 40 lb. each, and [illegible] pails are the weekly excreta of ninety people, which [illegible] if properly managed, certainly not weigh more than [illegible] 300 lb. In short, there are about 30 cwt. of [illegible] removal of at most 3 cwt. of material. This [illegible] works, it need hardly be said, at a funeral pace, and there [illegible] be no doubt that a lad with a hand-truck coming [illegible] would do the work far more rapidly, efficiently, and [illegible]

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st be borne in mind that the fertility of the soil ear a certain proportion to the density of population, the ability of land to support its population ought to increase, especially if the population enjoys the s of free trade. I may perhaps best illustrate my by referring again to the visit which I paid this to the farm of Mr. H. C. Stephens, M.P. The down hich comprise this district consist of a very few f humus overlying chalk, the herbage is scanty, and lation of animals (in relation to acreage) necessarily all. One of the difficulties which the farmer has had unter in this district is the obtaining of sufficient or his stock, and perhaps the most important work Mr. Stephens has done is to sink a deep well in the This well, worked by a wind engine and provided rage reservoirs, gives a supply of water which may be d as illimitable. With good water-supply, ample nd the possibility of importing food which the neigh- railway affords, it became possible to maintain a rge number of sheep, oxen, and horses for farm and

FIG. 5.



ling purposes. The animals are all folded, and the e of their dung is returned to the soil, and the t produced by this large addition of organic matter ot fail to strike the visitor, who finds in spots e the herbage was previously so thin as to oach barrenness that he now has to wade knee- through a thick felt of grass. All over the farm the t of adding this organic matter to the soil is everywhere rent, and it is certain that the need of imported food- s for the animals must diminish in proportion to the ease of fertility of the farm. This estate on Salisbury n realises, in fact, the utopia of which I have spoken in ural Hygiene"[4]—i.e., a place where there are water- s but no sewer pipes. The indispensable water has by ful but comparatively simple engineering been brought in easy reach of the human and animal population, but organic excrements and other refuse, instead of being hed away into a neighbouring valley to poison the in- itants there, are retained upon the soil to provide extra bage, extra meat, extra work, and extra wages, with eased contentment and no loss of health. The increased ility of the soil must have the effect of counteracting erty and diminishing that charge upon the land known as Poor-rate, and, as for sanitary rates, the very essence of the gress I have been describing consists in the fact that there none to pay. When the members of the local council in this utopia have mended the roads and paid for the school they may return with a clear conscience to their own business instead of meddling with that of other people.

The fact that the potential increase of the fertility of the soil is to a certain extent proportioned to the increase of population is a political and economical fact of fundamental importance. The fertility of the soil of a country which imports millions of tons of food ought steadily to increase, and I believe that but for counteracting circumstances free trade ought to have benefited the farmer equally with all other classes of the community. If the enormous quantity of excremental and refuse matters due to free trade had been placed upon the land to increase the national stock of humus the fertility of the soil must have increased proportionately, and the fall in prices due to the competition of imported food would have been proportionately counteracted. If on the farm at Cholderton which I have been describing the well water had been used or washing all the excrement of the animals into the nearest river there could have been no increase of fertility of the soil, and the animals must have been dependent upon imported cake and other food-stuffs in a degree which would never vary, instead of, as at present, tending steadily to get less. Among the nostrums which have been suggested for the relief of agricultural distress are "light railways," but as imports and exports are apt to balance themselves one would fear that the light railway, for every truss of hay or sack of corn which it conveys to the nearest junction, will bring back a frozen carcase of meat or its equivalent. If, however, these light railways (and the existing railways) can bring the refuse of the towns on to the land to increase the agricultural capital in the form of humus, the farmers will certainly have more to sell and our need of imported food (per head of population) will tend steadily to get less. Until—if I may use the expression—we make some serious effort to leave our imported "cake" upon the land in a form in which it can be advantageously utilised, our needs for importation will never get less, and our state of scare as to the sufficiency of our navy will get steadily worse as the population increases. It is very bad policy for railways to charge exorbitant rates for the conveyance of dung, because the less dung they import the less will be the export of produce on the return journey. It is impossible to doubt that the man who increases the fertility of the soil of a country deserves well of that country and should be encouraged by the State and his fellow countrymen. Professor Otis Mason of Washington has gone so far as to say: "The form of law which does not *decrease* the amount of taxation proportionally to the yield per acre is not in the line of progress." And again: "Any law which punishes a man with taxation for preventing waste, recuperating worn acres, or developing the latent resources of nature is wicked." There can be no doubt that taxation presses very hardly upon agriculturists, especially those whose land happens to be within the boundary of a "progressive" corporation. A friend who farms 200 acres of land (of which fifteen are grass) in the Thames Valley has been good enough to show me his receipts for taxes for the year 1892, from which it appears that he and his landlord pay between them more than £300 a year in imperial and local taxes. This is due to the fact that he is under the heel of a "progressive" board, which, finding it can borrow money at 3 per cent., is making full use of its powers and is fast converting a pretty village into something scarcely distinguishable from Houndsditch.

We may now profitably turn to the consideration of malaria, a disease which is undoubtedly connected with the soil and which has its habitat in the soil of certain places. Malaria requires for its development decaying organic matter, a high or moderately high temperature, and usually an excess of moisture. Tropical marshes are the elected seats of malaria, but not the exclusive seats, for it is known that certain rocks and arid plains, as well as the sandy estuaries of rivers, are liable to be malarious. The one thing which all, or almost all, malarious districts have in common is the fact that they are barren, or nearly so, uncultivated, and in many cases uncultivable. Malaria is rare in England, but once it was common, and we must not forget that James I. and Cromwell are both of them said to have been victims of this disease, which was rife in London in their time, especially in the Essex marshes and on the south side of the Thames, in Lambeth Marsh and the adjoining districts. An undrained country is uncultivable, and it has been found that drainage followed by cultivation has in this country enormously lessened the amount of malarious disease.

[4] Essays on Rural Hygiene, second edition. Longmans, 1894.

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Cultivation of land finishes the work begun by artificial drainage. The soil is dried and aerated by tillage, and the organic matter, when the humus is no longer drowned, is oxidised and goes to nourish plants and trees which effect an upward drainage no less important than the downward drainage, while the oxygen exhaled by the green leaves cannot but benefit the air of the locality. If we wish to keep clear of malaria in this country we must till the soil and so nourish the humus that its produce may be sufficiently valuable to bear the expense of any artificial drainage which it may be necessary to maintain. If the land of this country goes out of cultivation, as in places it seems to be doing, I see no reason why we or our successors should not witness a recrudescence of malarious disease in localities which are prone to develop it.

It will not be unprofitable in this connexion to consider the history of the Roman Campagna. It is generally admitted that the Roman Campagna was not always the desolate waste which it ultimately became. It was prone to malaria, doubtless, but this was kept in check by the large farming population. It is not conceivable that in days when locomotion was slow a city could have attained the proportions and importance of Rome if it had been situated in the middle of a sterile and malarious plain. The neglect of agriculture began in the Augustan age, when Rome was at the zenith of its power, and it is worthy of note that Mæcenas is credited with having incited Virgil to write the "Georgics" in order to direct, by this fascinating method, the attention of the Roman people to the neglected joys of agriculture. With the acquisition of fertile districts in Africa and elsewhere, not only did the need for home-grown commodities decrease, but it is probable that the profits of home farming decreased also. Corn was imported in enormous quantities, while the expenses connected with the defence of the Empire led to such a merciless taxation of the landholder that in self-defence he was obliged to allow his land to go out of cultivation, and thus escape from the brutal exactions of the tax-gatherer. According to Gibbon, within sixty years of the death of Constantine 320,000 acres of the district of Campania had become barren. Further, there can be no doubt that the Cloaca Maxima and other cloacæ sent to the Tiber much, if not all, of the organic refuse which should have been returned to the land. Finally, there can be little doubt that the extravagant water-supply of ancient Rome must have had the effect of causing neglect of local wells, and as the water of the aqueducts was supplied to places in the Campagna as well as to Rome itself, the discontinuance of pumping must have helped to leave moisture in the soil at the same time that an extra supply from a distance was giving an additional quantity to it. As these great works of engineering did away with the necessity of manual labour, and as the barren land stood in no need of husbandmen, it is not to be wondered at that the problem of the unemployed grew urgent in Rome. We hear that in the later days of the Empire the masses congregated at the baths or waited whole days at the doors of the amphitheatre while they were fed with doles of bread or corn supplied from the public granaries. With a dense idle population and with barren and unwholesome surroundings the amenities of Rome as an imperial residence declined, and one is not surprised to find that Diocletian seldom visited it, and one cannot but think that the social and sanitary conditions of the capital were among the causes which led Constantine to abandon it in favour of his new city on the Bosphorus. Finally, one is not surprised to hear that when Alaric took the city in the beginning of the fifth century he did so, not by direct assault, but by seizing the huge granaries and magazines at the Port of Ostia, and then offering to the unhappy Romans the choice of surrender or starvation. We are often asked to admire the Roman aqueducts, and Rome is not infrequently held up to us as a model to be copied. I fear we are copying her only too exactly, and I fear that equally with Rome we shall find out the futility of a brutal and reckless expenditure mainly directed towards the starvation of the soil and a senseless struggle with conditions imposed on us by nature. I have heard it suggested that the cultivation of the soil of England is of no importance, that our islands are destined for residential and manufacturing purposes only, and that our sustenance is to depend entirely upon "big-bellied argosies" bearing all the treasures of more fertile climes. But the cultivation of the soil and the nurturing of the humus have important bearings upon questions other than food-supply, and if we continue to starve the humus and to encourage filth beneath it instead of upon it I fear that the ... living in this country is likely to increase, while the ... of existence will diminish.

The moral of all that I have been saying is to the ... that to nourish the humus and to till it are the ... duty of the sanitarian. This simple duty is the ... plentiful food and a good supply of wholesome ... Nature is relentless and will sooner or later destroy the ... neglect to follow her inexorable laws. We used to say ... "the weakest" (morally, physically, and mentally) ... go to the wall." Now we use the expression "survival ... fittest" to express the same idea. Nature does not ... but man, in his commendable efforts towards philanthropy ... endeavours to relent, and hence the principle ... much modern sanitary work is the attempt to bring ... survival of the unfittest. If I may judge from the criticisms ... to which at one time and another the ideas which I have put ... forward have been subjected, I may conclude that ... principles advocated are considered right, but that the ... classes of our population are not to be trusted to ... to any extent the wholesomeness of their homes. They ... we are all asked to come down to the level of the ... and most careless, and our sanitary methods (in what ... is too much of Hercules and too little of Minerva ... admit of any encouragement being given to those ... within a municipal boundary who may be so circumstanced ... that they can adopt the principles I have advocated. ... we must all be tarred with the same brush, and no ... is given to those who refuse to allow the municipality ... to be put to the trouble and expense of robbing them of ... which they find invaluable on their own land. In Hackney ... have spent a considerable sum of money in freeing ... from some pollution and saving trouble to the town. Personally, I have improved the value of a house, and, of course, ... rates of that house have been raised. Such a fact is an ... effectual check upon the vast majority of those who ... wish to imitate what they may approve of in principle. ... feel assured that no real advance in sanitation will be ... until there is an equitable adjustment of sanitary rates. ... we have the right, if we desire it, to pay for water by ... That water should be paid for according to rateable ... and that the rating authority and the water authority ... be identical seems to me to be an arrangement which ... ratepayer will possibly find irksome. The greatest of ... troubles in the present day is overcrowding, and this ... is greatly fostered by our methods of sanitation. Are we ... find responsible persons suggesting that open space ... be taxed at "site value," while at the same time we are ... willing to spend any amount of millions in bringing ... from Wales because they think that eventually a ... dangerously dense population will have a density ... as great. We shall some day recognise the ... of fighting against nature. It is the engineer's boast ... overcome natural obstacles, and we of the medical profession ... cannot but have the greatest admiration for the ... tinguished members of that sister profession who, ... skill and daring, has in countless ways assisted the ... ment of our commerce and manufactures. They have ... "expelled nature with a pitchfork," but it behoves us ... remember the rest of the quotation. We must discriminate ... also between brilliancy of achievement and the end ... We all of us admire the brilliant men who made the ... Tunnel, built the *Great Eastern* steamship, and ... the luxury of the broad-gauge railway; but it is doubtful ... the original shareholders in those enterprises would ... pate in our enthusiasm. Money will accomplish ... thing in the engineering way, and it is not the engineer's ... business to consider the financial side of the question. ... have always had a shrewd suspicion that Archimedes was ... possibly less admired by the Syracusan ratepayer than ... the rest of the world, and I have often pondered what ... had he lived in these days and had made his ... request of δὸς ποῦ στῶ, the Local Government Board ... have sanctioned the issuing of a Syracusan 3 per cent. ... stock to provide the fulcrum for which he asked.

I frequently meet friends who say, "I've been reading ... article of yours about the earth," and so forth, and ... after patting one on the back and being charmingly ... plimentary, they generally end by saying, "But, after ... you know, give me a good old watercloset with a ... flush." The fascinations of this winsome apparatus ... unconquerable, and one is bound to confess that ... the apparatus be of a good pattern and well made; ...

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the plumber who sets it has knowledge and a conscience; provided those who use it do not try its constitution with brickbats and old boots; provided there is not a frost; and provided there is not a drought—it does sweep out of the cockney's house material for which he has neither use nor market. All the difficulties and dangers of the watercloset are on the far side of the trap, and do not trouble the householder. I feel inclined to paraphrase the words which King Lear used to something equally fascinating and, as he found, equally treacherous:—

> "But to the syphon do the gods inherit,
> Beneath is all the fiends'. . . .
> Give me an ounce of civet, good apothecary,
> To sweeten my imagination."

As a champion of individual liberty, I would say that those who in country places wish for waterclosets should pay for them, and those who, for conscience' sake, do not pollute the rivers or starve the soil should not be taxed to pay for the misdeeds of those who do.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(*Continued from p. 1041.*)

SINCE my last communication I have, through the courtesy of Dr. W. McGowan of Maghera, Ireland, received particulars of the illness and death of Case 40 of the nephrectomies. The patient remained in excellent health for more than twelve months; then, in November, 1893, he had a very severe epileptic seizure. Other seizures followed, and though he continued his official work till April, 1895, his bodily and mental powers gradually failed, and he died this autumn after left hemiplegia of some weeks' duration, ending in coma, the epileptiform attacks having been much less frequent and severe for some time before his death. It is interesting to compare the after-history of this case with that of No. 36, already recorded, secondary deposit in the membranes of the brain being, I have no doubt, the cause of death in both cases. The seats of secondary deposit in cases of sarcoma of various abdominal organs are very interesting, and deserve more accurate observation and record than they have yet (so far as I am aware) received.

CASE 24.—This is a good example of the dangers of allowing cases of nephro-lithotomy to move about too soon, however smooth and quick the recovery has apparently been. The patient was a young woman, three years married, mother of one child twenty months old. When quite a small child she fell off a chair, breaking her collar-bone, and was laid up for a long time and ailing for longer, and during this illness she began to suffer from pain in the back and along the course of the right ureter. She had never noticed any swelling in the side. The pain came in fits and was worse after action of the bowels, and when bad was always accompanied by much irritability of the bowels. The urine was often dark and thick, but there was no very distinct evidence of hæmaturia. There was constant slight albuminuria, and oxalates were frequently present in the urine. The crystalline deposit was absent in specimens passed in the morning on getting up. I have noticed this in other cases, very markedly in No. 20. The physical examination did not help the diagnosis. I operated by the combined method on Feb. 23rd, 1893, and had much difficulty in extracting the stone. This led to so much handling of the kidney from the peritoneum that I thought it advisable to introduce a glass tube into the abdominal cavity beside the kidney, and it was in for forty-eight hours. The morning after the operation the temperature rose to 102° F., but quickly fell when the skin began to act, and she made a very smooth recovery. She was apparently quite well when she left the nursing home five weeks after the operation. The loin wound healed quickly and apparently soundly, and there was no sign of any trouble when she first began to turn about in bed or first got up. The urine before the operation contained pus and micro-organisms, so that it was a septic pyonephrosis, and there was unusual damage, facts of considerable importance in view of the after-history. She went home well early in April, and in July, during my absence from town, Mr. J. D. Malcolm opened a large perinephric abscess, putting in a rubber tube; pus and eventually urine flowed through this for some weeks. In September the wound healed, but she had some pain in the loin from time to time, but no swelling or tender spot could be found, and she was strong and well. After menstruation in November and December there was renal colic and much pus in the urine, with raised temperature, loin tenderness, and blush over the kidney. At Christmas Mr. Malcolm again saw her, and found the kidney itself greatly distended with pus, and put a tube into it through the old loin scar; she was then fitted with a renal urinal, and in March was wearing this, and was strong and well and content to let things go on as they were rather than submit to nephrectomy, which had been proposed. The amount of urine collected from the loin tube varied greatly in its proportion to that passed per urethram, from five ounces to twenty ounces being the range from the tube, the bladder urine varying from twenty to forty ounces. The history of the case after operation leads me to the conclusion that I allowed the renal wound to heal up too quickly, and that as a result the septic pyonephrosis continued and the ureter blocked and caused reopening of the renal wound and escape of pus and urine into the retro-peritoneal cellular tissue; probably some clot has become organised and partly blocked the ureter, though it is curious this should have occurred in face of the constant septic condition. The moral is, when there is septic suppuration along with calculus drain the kidney well.

CASE 25.—The patient was a married woman with several children. She had always been very active. The first symptoms of calculus came on after starting golf. There was bleeding and loin pain on slight exertion, but never an attack of renal colic. I operated by the combined method on Oct. 18th, 1893. and found at once a small angular stone in the lower part of the kidney, but had great difficulty in extracting it, as it was embedded in the substance of the kidney. I passed a rubber tube into the loin wound up to, but not into, the kidney. The calculus was an irregular and long-shaped oxalate, with very sharp points, and weighed ten grains. She made a smooth recovery and is now in good health.

CASE 26.—This is an unusually interesting case, and I must record it in a little more detail. The patient, a man aged fifty-six years, was brought to me by Dr. Kirkwood of Peterborough, who had attended him for many years, and believed him to be suffering from renal calculus. He had left the volunteers when only twenty-six years old because he passed blood in his urine, and he had long suffered severely, but had refused to have any special advice or to have anything done, until his sufferings became so severe, and his loss of health and strength so marked, that he at last consented to consult me. When he came into my room his appearance at once suggested advanced malignant disease, and on proceeding to examine the abdomen I found a hard and exquisitely tender swelling protruding low down over the bladder on the left side, which I believed to be a mass of intra-peritoneal carcinoma. I was the more inclined to this belief because this swelling was low down on the left side of the abdomen, whereas all his renal symptoms were connected with the right kidney. I think I should have advised against operation, but Dr. Kirkwood having watched the case for so many years, and being so confident that the tender body was a stone, I decided to make a small central incision and explore it with my finger. If it was a malignant growth I was prepared to advise against further interference. This was done on Oct. 23rd, 1894, and on introducing my finger I found that the tender prominence was a branch of an enormous calculus in the pelvis of the right kidney. I therefore proceeded to incise the loin, and with great difficulty, owing to its size and many branches, I at last extracted the main mass after breaking off most of the branches. The extraction was much aided by my being able to manipulate the stone through the distended pelvis from the peritoneum; several smaller stones were also extracted, some with facets fitting the branches. There was great loss of blood, and large masses of granulation tissue or new growth were torn away from the inside of the kidney, and a very large cystic cavity, behind and above the kidney, was opened and emptied of a quantity (two pints and a half) of brown serous fluid without any urinous odour. The kidney was greatly thickened and hardened; and when I had thoroughly cleared the pelvis I found another hard spot, which I believed

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contained some small stones, but the patient was by this time in such an exhausted condition that I thought it better not to make any further search. Drainage-tubes were passed into the cyst and also into the pelvis of the kidney. His temperature in the rectum was 95·4° F. for many hours after the operation, and his pulse 120, but he soon rallied; the left kidney acted well, and gradually a free discharge of urine was established from the loin tubes and he began to gain strength and flesh, the drawback to a more speedy convalescence being the occasional accumulations of offensive pus in the cyst cavity, which was most difficult to keep well drained. He was up on the couch on the thirty-eighth day after operation, and went home on the fiftieth day still wearing the rubber tubes in the cystic cavity, but not in the kidney. The stones removed weighed 5½ oz. Careful observations were made for a month after the operation as to the amount of urine passed from the bladder and draining away, and the latter was found to be about one-third of the whole, but there was distinct evidence all through the case that a good deal of the urine from the right kidney passed down the ureter into the bladder. On Feb. 17th, some weeks after his return home, an accumulation took place in the cyst, owing to gradual blocking of the tube opening, and Dr. Kirkwood had to enlarge the sinus, and let out a quantity of offensive pus. He was better for a time after this, and then without any very apparent reason again began to lose flesh and strength, and died at the end of June, eight months after the operation. An examination of the kidney after death revealed the presence of extensive deposits of carcinoma, which had also spread into the tissues in the wound, and some small stones in one of the calyces, doubtless those which I thought I felt at the time of the operation. I am inclined to think that I might have obtained a longer lease of life and more comfort for this patient had I performed abdominal nephrectomy instead of nephrolithotomy; but the nephrectomy, in presence of the large cystic cavity, and with such dense and possibly malignant adhesions, would have been an exceedingly dangerous and difficult operation, and local recurrence of the carcinoma would probably have been rapid and very painful. I think that though the case could not be a cure, it is entitled to a place among the recoveries, and its ending, and the knowledge of the conditions obtained after death, rather add to, than detract from, its success as a surgical procedure. It is remarkable that with such extensive cancerous deposit in an important organ the patient should have looked so well, and gained so much flesh and strength, as he did on more than one occasion after the operation—i.e., so long as the cyst cavity could be kept free from accumulation.

CASE 27.—As not infrequently happens in surgery, this case is remarkably like the preceding one in many points. The patient was a male aged sixty years who had suffered from gout and had been a great whisky drinker, taking about half a bottle daily for a long time, and had lived a very quiet, sedentary life. There was a marked history of malignant disease in the family. In 1879 the patient had had cystitis and had been under the care of Sir Henry Thompson. Since this attack he had not been conscious of any bladder or kidney trouble, excepting that he was always obliged to get up once or twice in the night to pass urine. It had always been clear till a few weeks before I saw him, when it began to be muddy and there was a good deal of mucus in it, but never any blood at any time. He had been getting deaf for some time and since his illness had become almost stone-deaf; he was also when I saw him much emaciated, with a dry, wrinkled, and somewhat yellow parchment-like skin. He was suffering a great deal of pain in the right side, and could only lie on his back. In the situation of the right kidney there was a large fixed and tender swelling which seemed to me to be probably malignant, but I deferred a definite opinion till I had examined the urine, which I found to be heavily loaded with pus, and I therefore advised an exploration of the kidney. He bore the journey up to town from his home in the country well, but in the night after arrival he had a severe rigor, his temperature rising to 105·4° and then rapidly falling to 95·0°. I operated the following day, and found on uncovering the swelling an extensive diffused blush over it with marked increase in its size. I made an incision into it just below the last rib and found a large abscess burrowing among the muscles with great ragged cavities and very offensive fæcal-smelling pus. I found in one place a hard body which I have no doubt was a small kidney, but needling only gave the impression of dense inflamed tissue, so I left it alone, proceeding to break [illegible] the septa and to thoroughly explore the cavity, I [illegible] a small calculus bedded in caseous material, and [illegible] in about the situation of the renal end of the right ure[illegible] it was firmly embedded, and when extracted was [illegible] to be deeply grooved all round, as stones partly in [illegible] pelvis and partly in the ureter so often are. There [illegible] small opening through the cavity in which the stone lay [illegible] a sound passed through this into a great pus cavity [illegible] of the kidney. This opening I dilated and passed a [illegible] tube into the cavity. Having well washed out the [illegible] cavity with injections of warm corrosive sublimate [illegible] (1 in 1000) and removed large masses of caseous [illegible] with a scoop, I put tubes into the various pockets. I [illegible] use any ligatures or sutures. He bore the operation [illegible] better than I expected, and it soon became evident [illegible] the bladder urine and from the flow from the tubes [illegible] pelvis of the kidney or ureter had been opened. Unfortunately, it also became apparent that there was a [illegible] communication with the bowel, and this, instead of [illegible] as the abscess cavity closed up and the urinary [illegible] decreased, became evidently larger with such offensive discharge that I came to the conclusion that it was a [illegible] case like the last, the calculous irritation having [illegible] cancerous growth. With free discharge and careful [illegible] he improved for a time, but the discharge became [illegible] more offensive, he suddenly developed symptoms of [illegible] absorption rather less than three weeks after the [illegible] tion, and died very quickly with acute pneumonic [illegible] ptoms. I did not obtain a post-mortem examination. [illegible] remarkable feature in this case is the very [illegible] peri-nephric suppuration with such very slight [illegible] Only very shortly before I saw him he had been staying [illegible] his brother, who thought him very bright and well. [illegible] there must have been a rapid outbreak of carcinoma [illegible] the stone, and that ulceration and breaking down occurred after the operation and rapidly enlarged the opening [illegible] bowel. Such cases as these last two and No. 2[illegible] emphasise the importance of quickly getting rid [illegible] calculus when it is diagnosed, especially in cases [illegible] there is any reason to fear the appearance of malignant disease.

CASE 28.—This case I have already more than once [illegible] to, in which I performed Abernethy's operation for [illegible] iliac artery in order to reach two small calculi which [illegible] were lying in the lower part of the urethra. I had [illegible] performed the operation before, but found it very striking [illegible] ease with which the peritoneum and its contents [illegible] safely pushed aside without fear of injury being [illegible] and the extent to which the whole pelvis is open to exploration shows that this operation may be very useful in [illegible] cases. I shall have shortly to record one fatal case [illegible] on long ago in which, I think, this operation would [illegible] saved the patient's life.

CASE 29.—A married woman aged forty-eight, the [illegible] of several children, a fine, robust-looking woman, [illegible] strong predisposition to gout, and suffering at times [illegible] gouty eczema, had been seeing me from time to time [illegible] her own medical attendant for several years complaining [illegible] deep-seated pain in the region of the left kidney. I [illegible] first leaned to the view that it was a case of calculus [illegible] the examination of the urine often repeated always [illegible] negative results and there was nothing to make a diagnosis at all positive. Visits to Contrexéville failed to relieve [illegible] at last it was decided that I should explore the kidney [illegible] and I then found—what had never been suspected or detected—a very mobile and displaced left kidney, [illegible] stone in it. On proceeding to examine the right [illegible] I was surprised to find a small angular stone [illegible] pelvis. The question now arose whether I should perform nephrorrhaphy or right nephrolithotomy. The stone [illegible] to me the more serious ailment, and I think I was [illegible] influenced by the hope that it might be a case of transference of pain, so I decided to deal with the calculus and leave [illegible] of the kidney for a future operation if the pain persisted. The patient made a good and quiet recovery from the [illegible] lithotomy, but with no relief to her old pain, and I have [illegible] just performed nephrorrhaphy with extreme difficulty, [illegible] to the low position of the last rib and the amount of [illegible] well-developed muscle which had to be traversed. In [illegible] first time in the performance of this operation I was obliged [illegible] turn the patient half over on to her face, and then [illegible] content myself with two sutures in place of the four I usually employ. When the patient was lying on her back the [illegible]

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lay right across the abdomen on its back, so that I had great difficulty in bringing it into its proper position while I introduced the sutures. It is curious that with the many examinations I made I should never have detected the mobility of this kidney. The patient was, however, of large build, stout and muscular, and the kidney a decidedly small one. I shall wait her convalescence with much anxiety to see if the pain is at last banished. It is a very nice point as to which operation it was right to perform first. I think that, on the whole, my decision at the time was the proper one, although I was inclined to doubt it just after the operation.

(To be concluded.)

SEPTIC TONSILLITIS AN ACUTE SPECIFIC DISEASE.

BY STUART A. TIDEY, M.D., M.R.C.P.LOND.

THE experience accumulated during several years of hotel practice in Switzerland has led me to the conviction that the condition under consideration—to which I have been in the habit of applying the term "septic tonsillitis" or "septic throat"—has as strong a claim to rank as an acute specific disease as have scarlet fever, measles, diphtheria, mumps, &c. I should hesitate to submit the proposition that septic tonsillitis is an acute specific disease without the support of bacteriological evidence were it not that I can call to mind no acute specific disease which has depended on bacteriology for its differentiation. Each one has been differentiated originally on clinical grounds, and bacteriology has stepped in afterwards to stamp the disease with its trade mark of essential etiology. I will define septic tonsillitis, therefore, as an acute specific disease characterised by inflammation of the tonsils and fauces due to the inoculation of a specific poison and accompanied by a general toxæmic fever the result of absorption at the seat of inoculation. With regard to etiology, individual predisposing causes are constipation and a tendency to inflammatory affections of the fauces. Children and adults seem to be equally prone to fall victims to the disease. Newcomers in an infected district are more liable to the affection than the residents are, and the disregard of sanitary arrangements exhibited by local authorities is probably due to this fact. The origin of the specific poison is, in my experience, intimately connected with defective sanitation, and more especially with inadequate flushing of sewers and the stagnation and fermentation of sewage matter. The disease occurs with the greatest frequency at and after the most crowded seasons, when the air in the vicinity of the closets is palpably offensive; moreover, the attacks arise in inverse ratio to the extent of sanitary provision in individual hotels. In this connexion I would remark that on the lake of Geneva the disease receives the euphonious name of "white throat of the lake," whilst at Pontresina I have heard it spoken of as "Pontresina throat"—terms, be it observed, which serve to transfer the onus of specific etiology from the sanitary engineer to climatic influences, and which commend themselves to the public because the initial chill, which may occur on a glacier or other expedition, is regarded by them as the exciting cause and not as the first symptom of the disease, which it naturally is. I have reason to believe, moreover, that the disease is directly transferable from person to person, and that such a mode of origin is favoured by overcrowding and defective ventilation, conditions which are frequently fulfilled in the public rooms of the less spacious hotels during the season.

The symptoms of the disease are both local and general. The local symptoms consist of pain which commences at the seat of inoculation, generally one tonsil, and rapidly involves the entire fauces, causing dysphagia. The pain is frequently accompanied by a pricking and burning sensation of the soft palate. The general symptoms consist of headache, pains in the back and limbs, prostration, and constipation—the ordinary concomitants of toxic absorption. The local signs include enlargement of one or both tonsils, with infiltration of the soft palate and uvula and extension of the inflammation into the naso-pharynx. At first the fauces are uniformly bright red in colour and gelatinous in appearance, but there is rapid ulceration at the points of maximum tension of the tonsils, and the resulting ulcers form white patches of greater or less extent, sometimes involving the pillars of the fauces and soft palate. There is a copious secretion of mucus and muco-pus from the tonsils and naso-pharynx. The febrile reaction is of sudden onset. The temperature rises on the first or second day to its maximum, falls slightly for the next few days, and reaches the normal within a week, often falling on the fifth or sixth day to sub-normal. I have never known the disease to lead to any untoward result or to be followed by paralysis. The nearest allies of septic tonsillitis are scarlet fever and diphtheria. From the former it is distinguished by absence of rash and desquamation and by its more benign and rapid course. From the latter it is differentiated by its sudden onset, by the absence of false membrane or of marked toxæmic depression in spite of the severe local inflammation, and by its more rapid and benignant course and the absence of paralytic sequelæ. It is probable, however, that the statistics of diphtheria have been greatly marred in pre-bacteriological days by the inclusion of cases of septic tonsillitis which have gone to swell the tale of recoveries from the more fatal disease.

With regard to treatment, this must be both local and general, neither ceding in importance to the other, while hygienic surroundings and a nutritious dietary are essential. The speedy recovery of the patient depends in a great measure on the frequent cleansing of the fauces and naso-pharynx with antiseptic applications. If this is omitted or the patient comes late under observation there is great enlargement of the submaxillary glands, which leads to suppuration, besides prolongation of all the painful train of symptoms. I am in the habit of ordering a thorough application to the entire fauces every two or three hours, by means of a camel-hair brush, of one of the following preparations: glycerinum acidi carbolici and glycerinum acidi tannici, of each one drachm, water to one ounce; or listerine, one drachm, water to one ounce. Each application procures a free discharge of irritating mucus and results in immediate relief to the patient. The retching produced by mechanical irritation of the back of the tongue and fauces is of service in mechanically compressing the tonsils and so aiding in the expulsion of peccant matter. The glycerine stimulates a copious flow of mucus, the tannin contracts the tonsils and so promotes the same end, while the carbolic acid is anæsthetic as well as antiseptic. Listerine is a good local anæsthetic or antiseptic, but has not the same astringent and stimulating properties as have the glycerine and tannin together. It is a far more agreeable application. With regard to general treatment, early evacuation of the bowels is all-important, and I am in the habit of following it by the exhibition of a daily morning saline aperient, which secures greatly increased comfort to the patient and enables him to take iron and tonics without inconvenience. I am not partial to antipyretics of the coal tar series, but an initial dose of phenacetin in the case of a robust patient will relieve symptoms without producing marked depression. Salicylate of soda is useful where septic tonsillitis is associated with a rheumatic diathesis. Bitters, mineral acids, bark, and iron will, I think, be difficult to improve upon in the treatment of this affection, in common with other acute specific diseases, until advancing knowledge places at the physician's disposal a complete set of specific antitoxins. Then only will the importance of differential diagnosis outweigh that of expectant attention in the treatment of febrile disease.

In conclusion, I would suggest that some forms of septic pneumonia and pleurisy are manifestations of one and the same disease as septic tonsillitis. They occur under similar conditions of defective sanitation, but although almost unknown in Alpine stations where septic tonsillitis is common, they are of frequent occurrence and often lead to a rapidly fatal issue in large towns where climatic conditions favour intra-thoracic disease. I believe that staphylococci and streptococci are the predominating micro-organic forms which are common to the affection of the tonsils and to that of the lungs and pleura. The important difference in treatment is that in septic tonsillitis the disease can be attacked at the seat of inoculation, whereas in intra-thoracic disease the organism can only be sustained while it elaborates its antitoxins and marshals its leucocytes to do battle with the invading legions of inimical micro-organisms.

Florence.

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POST-HEMIPLEGIC PARALYSIS AGITANS.

BY GEORGE F. JOHNSTON, M.D. EDIN., M.R.C.P. LOND.,

PHYSICIAN TO OUT-PATIENTS, HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

AMONG the disorders of motion following upon hemiplegia, which are generically spoken of as post-hemiplegic chorea, there is one form in which the involuntary movements in the affected limbs closely resemble the tremor of paralysis agitans and have even in some few cases been mistaken for the shaking of that disorder. Buzzard[1] has related an interesting case of this kind, alluding to the possibility of mistaking such a condition for true paralysis agitans. In most of these cases where a necropsy has been made the lesion has been found situated, in part at all events, in the posterior part of the internal capsule, involving the optic thalamus, and the hemiplegia in such cases has been, as one would expect, accompanied by hemianæsthesia of the paralysed side. But the case of which I propose to give a brief account is not of this nature. It is a true example of paralysis agitans, and the interesting point arises as to whether the onset of the tremor after the stroke was a mere coincidence, or whether the cerebral lesion and the subsequently developed shaking palsy stood to one another in the relation of cause and effect.

The patient, a man aged fifty-six years, came under my care a year ago. Nearly seven years before he had been seized with right hemiplegia. This was complete and was accompanied at first by aphasia, which passed off in a few days. The complete paralysis of the arm and leg persisted for a considerable time and was accompanied, according to the patient's account, by loss of sensation of the same side of the body. About two months after the stroke, as power began to return, the right leg commenced to shake, and a fortnight afterwards the hand and arm became affected in the same way. This shaking had continued ever since and had become gradually worse until quite recently, but the tremor had at all events not increased during the few preceding months. So far the history is suggestive of post-hemiplegic chorea rather than of paralysis agitans, but the condition of the patient when he came under observation was conclusive as to the nature of the disease. The only distinct evidence of the pre-existing hemiplegia was persisting right facial paralysis. The grasp of the right hand was so weak as not to move the index of the dynamometer, that of the left being only twenty-five. There was no more contracture in the limbs than is customary in paralysis agitans and certainly no hemianæsthesia or hemianopia. The attitude was in itself almost pathognomonic. He stood bent forward and with head somewhat depressed, both arms flexed at the elbow and carried slightly abducted from the body. The fingers were in the interosseous position, and the continuous "pill-rolling" movement of the thumb and fingers of the right hand upon one another was well marked. When sitting down the heel kept up a continuous beating upon the floor. The nature of the tremor both in the arm and leg was very characteristic. It could be controlled for a short time by strong voluntary effort. The face was typical, the upper part being quite fixed and expressionless. When told to look up he raised his eyes and elevated the brows, the head being held stiffly and scarcely thrown back at all. The voice was characteristically monotonous and somewhat high-pitched. In turning round he moved "all-of-a-piece," turning the shoulders and pelvis simultaneously instead of shoulders first and pelvis afterwards, as in health. He walked with a short, rather quick, step and had a tendency not only to propulsion and retropulsion, which were both well-marked, but also to lateropulsion, as, especially on turning, he occasionally ran off unexpectedly towards the right. Voluntary movements were performed slowly and deliberately, and he had some difficulty in rising from a chair. He was at one time extremely restless, rising up and sitting down again at short intervals and requiring a constant change of position, but of late this necessity had become less urgent. He complained of always feeling chilly—a condition not so frequently met with in these cases as that of a subjective feeling of heat. The knee-jerks could only be elicited with great difficulty by the aid of Jendrassik's method of reinforcement, and were only just noticeable when obtained, the ankle-[illegible] the right side being quite as difficult to produce as [illegible] the left. I was able to satisfy myself that this was not [illegible] to muscular rigidity. It is certainly remarkable that [illegible] should have been no evidence of degeneration of the pyramidal tracts in a case of hemiplegia severe enough to cause [illegible] loss of power in the limbs for a period of two months [illegible] the wrist-tap also produced no reflex, and there was no [illegible] tracture which could be directly ascribed to the [illegible] lesion. The amount of contracture in the arm was [illegible] such as is met with in ordinary cases of paralysis agitans. At that time, although the disease had been in existence nearly seven years, the tremor had remained almost [illegible] lateral. I say "almost," because there was very [illegible] tremor in the left hand; and on the shaking of the [illegible] side being forcibly prevented the left-sided tremor became once very apparent. In the spring of 1896 the patient had a severe attack of influenza, and since then he has [illegible] rapidly worse. The tremor is now very marked on the [illegible] side, the left leg being affected nearly as much as the right, and the movements of the left hand, though [illegible] so violent as those of the right, are nevertheless [illegible] pronounced.

This is one of the best marked cases of paralysis agitans that I have seen. The diagnosis does not depend on the tremor alone, but almost all the classical symptoms of Parkinson's disease are present, and (a very important fact from a diagnostic point of view) the tremor affects not only the originally paralysed side, but has crossed to the other. It may be objected that the hemiplegia may have been a mere coincidence in this case and that without it the paralysis agitans would have developed. In current attacks of hemiplegia do occur in this disease, as one of the original cases described by Parkinson,[2] but it is surprising that this should be the case, as paralysis agitans is a disease of long duration and chiefly occurs at the [illegible] of life when cerebral hæmorrhage is most frequent. Why, therefore, should the converse not occur and a paralysis agitans supervene accidentally in the subject of a hemiplegia? This is of course conceivable and might occur, but I do not think that in this lies the explanation in the present case. The relation between the hemiplegia and the succeeding paralysis agitans was so close, the tremor commencing as soon as slight power was regained in the limbs, and being, moreover, for seven years confined to the formerly paralysed side, that I have more difficulty in looking upon it as a coincidence than I have in accepting it as the cause of the condition. Again, it is well to remember that in those cases in which hemiplegia has occurred as an early current complication the shaking has ceased when the paralysis has been complete, and has returned with increased violence as motor power has been regained. Notwithstanding these considerations, had my case stood alone I should have been prepared to admit that we might possibly have had to deal with a coincidence. But there are several cases on record which closely correspond with that here related, and it may be well to give a short abstract of these here. In one recorded by Westphal[3] a woman aged sixty-[illegible] had a stroke, followed by left hemiplegia. There was [illegible] some loss of sensation on the paralysed side, which was [illegible] apparent when she was seen by Westphal four years afterwards, when she presented a typical picture of decided paralysis agitans, although the distribution of the tremor was somewhat unusual. The shaking had begun four years after the hemiplegia — first in the head, and spreading in a short time, first to the right arm and then to the left. The knee-jerk on the right side was much exaggerated and was absent on the left. This Westphal ascribed to a marked contracture of the quadriceps extensor. Auerbach[4] records a case which is almost the counterpart of mine. A man aged fifty years awoke one morning with left hemiplegia. There was, however, no involvement of the face and no anæsthesia, although there was a feeling of numbness in the left thigh which lasted for two years. Motor paralysis was complete for nine months, then slight ability to move the paralysed limbs gradually returned, and, coincidently with this, tremor began in the left arm. In a few months the left leg became affected. About eight years after wards the shaking extended to the right arm and shortly afterwards to the right leg. When Auerbach saw the patient ten years after the hemiplegic attack the [illegible]

[1] Lectures on Diseases of the Nervous System, p. 348.

[2] Essay on the Shaking Palsy, p. 15.

[3] Charité Annalen, vol. iv., p. 408.

[4] Berliner Klinische Wochenschrift, 1892, p. 5.

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nder lip had just become involved in the tremor. symptoms, marking the case out clearly as one of sis agitans, were present. These were, briefly, pro- erspirations, characteristic position, restlessness neces- g getting up and sitting down again every few minutes, nd expressionless aspect of the face, power of control movements for a very short time by a strong effort of ll, and stiffness of the muscles at the back of the neck narked hindrance to both passive and active bending f the head. It is needless to say that the character of emor was typical. The patellar reflex was present on ides, that on the left being more marked than that on ht. Grasset[5] also briefly records a case of what he calls iparalysis agitans post-hémiplégique," in which there emor at rest in the affected side, sensation of heat, and ering" of the head and neck. This is, however, not a l case, and no indication is given as to the period had elapsed between the onset of the hemiplegia and me of the patient's coming under Grasset's observation. ding this case as doubtful, we have here three cases, ding my own, in which true paralysis agitans super- immediately upon (presumably) cerebral hæmorrhage, this renders the acceptation of a theory of co- ence infinitely more difficult. We seem to be d to the conclusion that the cerebral lesion stood causal relation to the subsequent phenomena. ing, then, that these are true cases of paralysis agitans, hat the hemiplegia acted as the immediate cause of the opment of the malady, are we justified in concluding the tremor and other symptoms were due to the ana- al site of the lesion? Auerbach answers this question e affirmative, arguing analogically from those cases dy referred to in which post-hemiplegic tremor resem- that of paralysis agitans was found post mortem to ssociated with hæmorrhages in the optic thalamus, us caudatus, and posterior part of the internal le. But he omits to mention that in none of these was there any spread to the opposite side of ody, and in none of them were there symptoms of ysis agitans properly so called. Neither in his case nor ine, at the time when the patients came under observa- was there any hemianæsthesia, which had been present he subjects of the necropsies. He admits this to be a ulty, and suggests as the possible explanation that the n in his case may have been in the pons, and considers the close proximity of the motor tracts of both sides in situation may have accounted for the subsequent spread he tremor to the opposite side. In the absence any post-mortem anatomical evidence we can only ulate as to what is most probable, and I must ess that this explanation of Auerbach's is unsatis- ory to my mind. I think it much more likely the *rôle* played by the cerebral lesion in these cases was ly that of a determining cause in subjects already pre- osed. There are many cases on record in which the king followed immediately upon a shock of some kind, ical or emotional. Even a slight injury often seems to the part of the immediately determining cause of the or, or, at all events, it determines the part in which the iest symptoms shall manifest themselves. Thus Handfield es[6] had a case in which the right arm began to shake r the patient had been knocked down by a blow the right shoulder. Charcot[7] records several similar es. In one the tremor began in the left leg after a se to the thigh. At first occasional, this became manent, and finally extended to the other limbs, whilst er symptoms of paralysis agitans developed. In another e the tremor followed a sprain of the left ankle before the n and swelling had subsided; it began in the left foot spread to the other limbs, other symptoms being well rked. I have myself had a case in which the patient had hewhat severely strained the shoulder of the arm first cted shortly before the tremor began. But it is useless to ltiply instances of a well-known fact, and I merely mention e cases in which mental shock, such as the sudden violent th of a friend,[8] or even the loss of a five-pound note,[9] e been sufficient to start the tremor which has sub- uently proved to be that of paralysis agitans. Such comparatively slight shocks being capable of acting in this way, it is not surprising that the profound shock of a cerebral hæmorrhage, wherever its situation, should, given the necessary predisposition, bring about the same series of phenomena. And just as in an ordinary person a blow on a limb or a mental shock is not followed by these consequences, so in the ordinary cases of hemiplegia no such condition results, even in those where, from the site of the lesion, a tremor resembling that of paralysis agitans is set up. The commencement of the manifestation of the disease in the paralysed limbs also corresponds to the history of cases following external trauma, and it is not surprising that the parts controlled by the cortex of the damaged hemisphere should be first affected. I do not propose to enter here into the problem of the pathology of paralysis agitans, but merely suggest that such cases as these which follow immediately upon an internal or external trauma support the view that the essential change is a nutritional one of the higher (cortical) motor centres; for it is hard to understand why, if any of the various forms of gross organic lesion which have been described by various observers be the essential element in the production of the symptoms, they should remain inert as causes until called into play by such trifling causes as those mentioned above; whilst, on the other hand, it is quite conceivable that, given an already lowered condition of nutrition of the cortical centres, a comparatively slight cause might still further lessen their control over the lower motor centres, and thus allow of the first manifestation of the tremor. A cerebral hæmorrhage would be particularly likely to do this on the side of the brain on which it occurred, and this, I suggest, is the explanation of these cases of post-hemiplegic paralysis agitans.

Manchester-square, W.

[5] Progrès Médical, 1880, No. 46.
[6] Brit. Med. Jour., 1873, vol. i., p. 221.
[7] Leçons sur les Maladies du Système Nerveux, 4th edition, tome i., p. 185.
[8] Charcot: Loc. cit., p. 183.
[9] Atkins: Journal of Mental Science, 1881-82, p. 535.

CASE OF ORDINARY OBLIQUE FRACTURE OF TIBIA AND FIBULA,

COMPLICATED WITH COMMINUTED FRACTURE OF THE NECK OF THE FIBULA; EXCELLENT RECOVERY FOR FIVE WEEKS; THEN EVIDENCE OF HÆMORRHAGE AND PROBABLE INJURY TO ANTERIOR TIBIAL ARTERY; AMPUTATION OF THIGH; RECOVERY.

BY JOHN B. FRY, L.R.C.P. LOND., M.R.C.S. ENG.

A MAN aged sixty-seven years, while unloading hay from a cart, on March 2nd, 1894, stepped backward on to the loose tailboard, which tilted, bringing him to the ground with considerable violence. I found an oblique fracture of the tibia and fibula at the junction of the middle and lower thirds, with much displacement, the upper fragment of the tibia projecting nearly through the skin. There were considerable ecchymosis and bruising of the skin, but only over the seat of fracture. The man was at once sent to the Cottage Hospital, Thames Ditton, where I put the leg in Cline's splints. With the exception of a good deal of trouble caused by extravasation of blood and formation of bullæ, which left superficial sores, he apparently made an excellent recovery. The leg was placed in a water-glass bandage, and he left the hospital at the end of five weeks free from all pain and swelling and able to move about by the aid of crutches. Ten days later he complained of great pain in the upper part of the front of the leg, which, however, lasted only half an hour. On the following day, he having had another attack of pain of the same character before I saw him, I cut off the bandage and sent him to the hospital. A swelling was now noticed on the external aspect of the leg between the tibia and fibula, and slightly below the level of the tubercle of the tibia. It had a circumscribed glazed appearance, and was of the size of half an orange. The patient complained of no pain, and no pulsation could be detected, but as there was well-marked fluctuation it was thought to be a superficial abscess. On opening it pus escaped, followed by small clots, and copious bleeding occurred which could only be controlled by pressure of the femoral artery. With the assistance of Dr. Lyons and Dr. Senior I amputated the leg above the seat of the swelling. The whole of the parts were found ploughed up and macerated by effused blood. The destruction of tissue being so evident, it was thought prudent to amputate higher up; accordingly I adopted the

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AMONG the disorders of motion following upon hemiplegia, which are generically spoken of as post-hemiplegic chorea, there is one form in which the involuntary movements in the affected limbs closely resemble the tremor of paralysis agitans and have even in some few cases been mistaken for the shaking of that disorder. Buzzard[1] has related an interesting case of this kind, alluding to the possibility of mistaking such a condition for true paralysis agitans. In most of these cases where a necropsy has been made the lesion has been found situated, in part at all events, in the posterior part of the internal capsule, involving the optic thalamus, and the hemiplegia in such cases has been, as one would expect, accompanied by hemianæsthesia of the paralysed side. But the case of which I propose to give a brief account is not of this nature. It is a true example of paralysis agitans, and the interesting point arises as to whether the onset of the tremor after the stroke was a mere coincidence, or whether the cerebral lesion and the subsequently developed shaking palsy stood to one another in the relation of cause and effect.

The patient, a man aged fifty-six years, came under my care a year ago. Nearly seven years before he had been seized with right hemiplegia. This was complete and was accompanied at first by aphasia, which passed off in a few days. The complete paralysis of the arm and leg persisted for a considerable time and was accompanied, according to the patient's account, by loss of sensation of the same side of the body. About two months after the stroke, as power began to return, the right leg commenced to shake, and a fortnight afterwards the hand and arm became affected in the same way. This shaking had continued ever since and had become gradually worse until quite recently, but the tremor had at all events not increased during the few preceding months. So far the history is suggestive of post-hemiplegic chorea rather than of paralysis agitans, but the condition of the patient when he came under observation was conclusive as to the nature of the disease. The only distinct evidence of the pre-existing hemiplegia was persisting right facial paralysis. The grasp of the right hand was so weak as not to move the index of the dynamometer, that of the left being only twenty-five. There was no more contracture in the limbs than is customary in paralysis agitans and certainly no hemianæsthesia or hemianopia. The attitude was in itself almost pathognomonic. He stood bent forward and with head somewhat depressed, both arms flexed at the elbow and carried slightly abducted from the body. The fingers were in the interosseous position, and the continuous "pill-rolling" movement of the thumb and fingers of the right hand upon one another was well marked. When sitting down the heel kept up a continuous beating upon the floor. The nature of the tremor both in the arm and leg was very characteristic. It could be controlled for a short time by strong voluntary effort. The face was typical, the upper part being quite fixed and expressionless. When told to look up he raised his eyes and elevated the brows, the head being held stiffly and scarcely thrown back at all. The voice was characteristically monotonous and somewhat high-pitched. In turning round he moved "all-of-a-piece," turning the shoulders and pelvis simultaneously instead of shoulders first and pelvis afterwards, as in health. He walked with a short, rather quick, step and had a tendency not only to propulsion and retropulsion, which were both well-marked, but also to lateropulsion, as, especially on turning, he occasionally ran off unexpectedly towards the right. Voluntary movements were performed slowly and deliberately, and he had some difficulty in rising from a chair. He was at one time extremely restless, rising up and sitting down again at short intervals and requiring a constant change of position, but of late this necessity had become less urgent. He complained of always feeling chilly—a condition not so frequently met with in these cases as that of a subjective feeling of heat. The knee-jerks could only be elicited with great difficulty by the aid of Jendrassik's method of reinforcement, and were only just noticeable when obtained, the right side being quite as difficult to produce as the left. I was able to satisfy myself that this was due to muscular rigidity. It is certainly remarkable that should have been no evidence of degeneration of the pyr tracts in a case of hemiplegia severe enough to cau loss of power in the limbs for a period of two months the wrist-tap also produced no reflex, and there was tracture which could be directly ascribed to the lesion. The amount of contracture in the arm was such as is met with in ordinary cases of paralysis At that time, although the disease had been in existe nearly seven years, the tremor had remained alm lateral. I say "almost," because there was very tremor in the left hand; and on the shaking of the side being forcibly prevented the left-sided tremor beca once very apparent. In the spring of 1895 the patient severe attack of influenza, and since then he has rapidly worse. The tremor is now very marked on b side, the left leg being affected nearly as much right, and the movements of the left hand, though so violent as those of the right, are nevertheless pronounced.

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[1] Lectures on Diseases of the Nervous System, p. 348.

[2] Essay on the Shaking Palsy, p. 15.
[3] Charité Annalen, vol. iv., p. 668.
[4] Berliner Klinische Wochenschrift, 1888, p. 45.

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and under lip had just become involved in the tremor. Other symptoms, marking the case out clearly as one of paralysis agitans, were present. These were, briefly, profuse perspirations, characteristic position, restlessness necessitating getting up and sitting down again every few minutes, fixed and expressionless aspect of the face, power of control of the movements for a very short time by a strong effort of the will, and stiffness of the muscles at the back of the neck with marked hindrance to both passive and active bending back of the head. It is needless to say that the character of the tremor was typical. The patellar reflex was present on both sides, that on the left being more marked than that on the right. Grasset[5] also briefly records a case of what he calls "hémiparalysis agitans post-hémiplégique," in which there was tremor at rest in the affected side, sensation of heat, and "soldering" of the head and neck. This is, however, not a typical case, and no indication is given as to the period which had elapsed between the onset of the hemiplegia and the time of the patient's coming under Grasset's observation. Excluding this case as doubtful, we have here three cases, including my own, in which true paralysis agitans supervened immediately upon (presumably) cerebral hæmorrhage, and this renders the acceptation of a theory of coincidence infinitely more difficult. We seem to be forced to the conclusion that the cerebral lesion stood in a causal relation to the subsequent phenomena. Granting, then, that these are true cases of paralysis agitans, and that the hemiplegia acted as the immediate cause of the development of the malady, are we justified in concluding that the tremor and other symptoms were due to the anatomical site of the lesion? Auerbach answers this question in the affirmative, arguing analogically from those cases already referred to in which post-hemiplegic tremor resembling that of paralysis agitans was found post mortem to be associated with hæmorrhages in the optic thalamus, nucleus caudatus, and posterior part of the internal capsule. But he omits to mention that in none of these cases was there any spread to the opposite side of the body, and in none of them were there symptoms of paralysis agitans properly so called. Neither in his case nor in mine, at the time when the patients came under observation, was there any hemianæsthesia, which had been present in the subjects of the necropsies. He admits this to be a difficulty, and suggests as the possible explanation that the lesion in his case may have been in the pons, and considers that the close proximity of the motor tracts of both sides in this situation may have accounted for the subsequent spread of the tremor to the opposite side. In the absence of any post-mortem anatomical evidence we can only speculate as to what is most probable, and I must confess that this explanation of Auerbach's is unsatisfactory to my mind. I think it much more likely that the *rôle* played by the cerebral lesion in these cases was simply that of a determining cause in subjects already predisposed. There are many cases on record in which the shaking followed immediately upon a shock of some kind, physical or emotional. Even a slight injury often seems to play the part of the immediately determining cause of the tremor, or, at all events, it determines the part in which the earliest symptoms shall manifest themselves. Thus Handfield Jones[6] had a case in which the right arm began to shake after the patient had been knocked down by a blow on the right shoulder. Charcot[7] records several similar cases. In one the tremor began in the left leg after a bruise to the thigh. At first occasional, this became permanent, and finally extended to the other limbs, whilst other symptoms of paralysis agitans developed. In another case the tremor followed a sprain of the left ankle before the pain and swelling had subsided; it began in the left foot and spread to the other limbs, other symptoms being well marked. I have myself had a case in which the patient had somewhat severely strained the shoulder of the arm first affected shortly before the tremor began. But it is useless to multiply instances of a well-known fact, and I merely mention here cases in which mental shock, such as the sudden violent death of a friend,[8] or even the loss of a five-pound note,[9] have been sufficient to start the tremor which has subsequently proved to be that of paralysis agitans. Such comparatively slight shocks being capable of acting in this way, it is not surprising that the profound shock of a cerebral hæmorrhage, wherever its situation, should, given the necessary predisposition, bring about the same series of phenomena. And just as in an ordinary person a blow on a limb or a mental shock is not followed by these consequences, so in the ordinary cases of hemiplegia no such condition results, even in those where, from the site of the lesion, a tremor resembling that of paralysis agitans is set up. The commencement of the manifestation of the disease in the paralysed limbs also corresponds to the history of cases following external trauma, and it is not surprising that the parts controlled by the cortex of the damaged hemisphere should be first affected. I do not propose to enter here into the problem of the pathology of paralysis agitans, but merely suggest that such cases as these which follow immediately upon an internal or external trauma support the view that the essential change is a nutritional one of the higher (cortical) motor centres; for it is hard to understand why, if any of the various forms of gross organic lesion which have been described by various observers be the essential element in the production of the symptoms, they should remain inert as causes until called into play by such trifling causes as those mentioned above; whilst, on the other hand, it is quite conceivable that, given an already lowered condition of nutrition of the cortical centres, a comparatively slight cause might still further lessen their control over the lower motor centres, and thus allow of the first manifestation of the tremor. A cerebral hæmorrhage would be particularly likely to do this on the side of the brain on which it occurred, and this, I suggest, is the explanation of these cases of post-hemiplegic paralysis agitans.

Manchester-square, W.

[5] Progrès Médical, 1880, No. 46.
[6] Brit. Med. Jour., 1873, vol. i., p. 221.
[7] Leçons sur les Maladies du Système Nerveux, 4th edition, tome i., p. 185.
[8] Charcot: Loc. cit., p. 183.
[9] Atkins: Journal of Mental Science, 1881-82, p. 535.

CASE OF ORDINARY OBLIQUE FRACTURE OF TIBIA AND FIBULA,

COMPLICATED WITH COMMINUTED FRACTURE OF THE NECK OF THE FIBULA; EXCELLENT RECOVERY FOR FIVE WEEKS; THEN EVIDENCE OF HÆMORRHAGE AND PROBABLE INJURY TO ANTERIOR TIBIAL ARTERY; AMPUTATION OF THIGH; RECOVERY.

BY JOHN B. FRY, L.R.C.P. LOND., M.R.C.S. ENG.

A MAN aged sixty-seven years, while unloading hay from a cart, on March 2nd, 1894, stepped backward on to the loose tailboard, which tilted, bringing him to the ground with considerable violence. I found an oblique fracture of the tibia and fibula at the junction of the middle and lower thirds, with much displacement, the upper fragment of the tibia projecting nearly through the skin. There were considerable ecchymosis and bruising of the skin, but only over the seat of fracture. The man was at once sent to the Cottage Hospital, Thames Ditton, where I put the leg in Cline's splints. With the exception of a good deal of trouble caused by extravasation of blood and formation of bullæ, which left superficial sores, he apparently made an excellent recovery. The leg was placed in a water-glass bandage, and he left the hospital at the end of five weeks free from all pain and swelling and able to move about by the aid of crutches. Ten days later he complained of great pain in the upper part of the front of the leg, which, however, lasted only half an hour. On the following day, he having had another attack of pain of the same character before I saw him, I cut off the bandage and sent him to the hospital. A swelling was now noticed on the external aspect of the leg between the tibia and fibula, and slightly below the level of the tubercle of the tibia. It had a circumscribed glazed appearance, and was of the size of half an orange. The patient complained of no pain, and no pulsation could be detected, but as there was well-marked fluctuation it was thought to be a superficial abscess. On opening it pus escaped, followed by small clots, and copious bleeding occurred which could only be controlled by pressure of the femoral artery. With the assistance of Dr. Lyons and Dr. Senior I amputated the leg above the seat of the swelling. The whole of the parts were found ploughed up and macerated by effused blood. The destruction of tissue being so evident, it was thought prudent to amputate higher up; accordingly I adopted the

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circular method at the junction of the middle and lower thirds of the thigh. The greater part of the wound healed by first intention, and in a short time the whole had granulated up, and the man left the hospital on May 30th. Examination of the amputated leg revealed a severe comminuted fracture of the neck of the fibula in which there was not the slightest attempt at repair, the fragments lying loose in the macerated fibres of the surrounding muscular tissue. The posterior tibial vessels were uninjured and free from atheroma, but on following the anterior vessels it was at once seen that they were the source of the bleeding, although owing to the disorganised condition of the muscular tissue they were traced with difficulty. In close proximity to them were several small splinters from the fibula, but it was quite impossible to determine which fragment had injured the vessels. There was a large extravasation of blood in front of the interosseous membrane lying amongst the degenerated and destroyed fibres of the tibialus anticus and the extensor muscles of the toes. The hæmorrhage had also extended backwards in the muscles under the gastrocnemius and soleus, but had not destroyed the tissues to the same extent as in front. It did not extend as far as the fracture of the tibia and fibula, which was found firmly united, but had almost reached the limits of the popliteal space above.

Remarks.—The case at first appeared to be a simple one of fracture of tibia and fibula, and it was not until nearly seven weeks after the accident that any further symptoms developed. The injury at the neck of the fibula took place at the same time as the fracture below, but there may be some doubt as to whether the anterior tibial vessels were injured at the same time, or the artery perforated or ulcerated by the movements of the patient after leaving the hospital.

Esher.

THE TRANSMISSION OF DIPHTHERIA BY NON-SUFFERERS.

BY HERBERT PECK, L.R.C.P. EDIN., D.P.H. CAMB.,
MEDICAL OFFICER OF HEALTH TO THE ORMSKIRK RURAL DISTRICT COUNCIL.

THE following series of cases is of interest as showing the possibility of the conveyance of the diphtheria poison by persons who do not themselves suffer from the disease.

HOUSE A.

CASE 1.—A man aged forty-five years began to be ill on Oct 4th, 1894. The case was typical and was followed by double "drop-wrist." No other person in this house suffered from sore throat.

HOUSE B.

This is half-a-mile distant from House A. There was no communication between the houses till Dec. 26th, when the occupier began to work for the preceding patient.

CASE 2.—A child aged seven years and a half had a sore-throat on or about Jan. 2nd, 1895. The case was a typical one, followed by paralysis of both legs. The patient died from cardiac syncope.

CASE 3.—A child aged four years began to be ill on Feb. 6th. This was a typical case and resulted in death from asphyxia.

CASE 4.—A child aged twelve years had a sore-throat on Feb. 16th. The case was typical and was followed by dimness of sight and strabismus. Bacteriological examination of cultures from the throat showed the presence of large numbers of diphtheria bacilli.

HOUSE C.

This farmhouse stands on a peat-moss and is one mile and a quarter distant from Houses A and B.

CASE 5.—A youth aged eighteen years, brother of the last three patients, worked here from Jan. 15th. His mother stated that he was at home for a few minutes on the days his sisters were buried, but at no other time. He himself admitted having been home on each Sunday to change his shirt, which he did in the room occupied by the patients. He stated that he did not suffer from sore-throat at any time, but bacteriological examination showed typical diphtheria bacilli in large numbers to be present in his throat. There is no history of his ever having had diphtheria.

CASE 6.—A youth aged eighteen years began to be ill on Feb. 26th. He worked on the same farm as the last youth and slept with him. He went home to House D on the 27th, being then "full of cooth" and suffering from sore-throat, and unable to work. Typical diphtheria bacilli were present in great abundance on March 15th.

HOUSE D.

This is a mile and a half distant from House C, two miles from House B, and two miles and a half from House A.

CASE 7.—The patient was a boy aged thirteen years, who slept with the last patient, his brother. He came home from chapel on March 3rd, complaining of sore-throat. On the 8th he was seen for the first time by his medical attendant, and was then dying. No bacteriological examination was made.

CASE 8.—A child aged three years, sister of the last two patients, began to be ill on March 12th. The case was a typical one, and an abundance of typical diphtheria bacilli was found on bacteriological examination.

Remarks.—House B was probably infected by the father of the family, who himself did not suffer from the disease. His son (Case 5) did not suffer from the disease, though he was proved to have its germs in his throat, but he was the means by which it was carried to House C, whence it was taken to House D.

Ormskirk, Lancashire.

ON SO-CALLED GOUTY PSORIASIS.

BY T. FREDERICK PEARSE, M.D. BRUX., F.R.C.S. ENG.

PSORIASIS occurring for the first time in or after middle life presents distinctive characters and requires different treatment to psoriasis occurring in the young. Most writers divide psoriasis into syphilitic and non-syphilitic. Leaving aside syphilitic eruptions of a scaly nature (to which the term "psoriasis" is incorrectly applied for a scaly syphilide), I wish to draw attention to some differences in the cases of what are termed true psoriasis. There are roughly two chief varieties: (1) the psoriasis of the young, and (2) the psoriasis of the gouty, This distinction was first pointed out by Liveing. The former variety is characterised by occurring generally before puberty, by attacking the extensor surface of the limbs, by the scales being numerous and thick, by the almost entire absence of itching, by the absence of any eczematous eruption or history of it, by being symmetrical, and by the effect of treatment. The latter variety never commences in childhood and rarely before middle age; there is generally a history of gout in the patient or in his family. It does not affect the extensor more than the flexor surface; the itching is considerable, the patches are thin, not very scaly, and the scales are small and easily rubbed off. The eruption is scattered irregularly over the body and may be said to show a disregard for symmetry. Moreover, it has a great tendency to be complicated with undoubted eczema, and sometimes assumes an inflammatory aspect almost passing into eczema. It is often made worse by the ordinary applications for psoriasis. These patients bear arsenic badly, and stimulating fluids and highly seasoned articles of food, as well as sugar, affect the eruption unfavourably. This form in some cases alternates with acute attacks of gout, and in others seems to be suspended by them. At times the eruption develops very rapidly, even in a night. Under "gouty" remedies it often rapidly disappears—much more rapidly than psoriasis ever does in the young. The treatment most successful is the free use of liquor potassæ internally, with perhaps the addition of quinine. The addition of colchicum, however, is sometimes of great service. These patients require the ordinary routine and dietary for gout. They generally require to drink more water, and alkaline waters taken freely are especially to be advised. As the skin acts feebly in many gouty persons, bathing frequently is desirable, and warm baths may be recommended. The diet should be plain, and fish or white meat should be preferred to beef or mutton. Plenty of fruit and vegetables are desirable, but the more complete the avoidance of wine, beer, or spirits the better. Clinically, this variety is closely allied to dry eczema. Its appearance is similar and the itching in both cases is marked. Contrary to true psoriasis, it is not symmetrical and does not attack the same parts. What is its pathology? Is it a true psoriasis occurring in the gouty and modified in its clinical characters by the gouty state, or does gout have a psoriasis-like eruption

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as one of its manifestations? I believe the latter is the correct supposition. The facts that the eruption in these cases occurs for the first time late in life, that it has not the same clinical characters as the psoriasis of the young—the true psoriasis—and that it yields to totally different treatment, incline me to classify it as a distinct disease of the skin from psoriasis. The same anatomical changes are often brought about by different ways, and the scaly eruptions resembling psoriasis must be differentiated from it. If there is a psoriasis-like eruption in a syphilitic subject, it should not be called "psoriasis," but "syphilis," and a similar kind of eruption occurring in the gouty should not be termed "gouty psoriasis," but "gout." Psoriasis as a name for a distinct disease should be reserved for that scaly eruption of the young which constituted the first variety. The underlying cause producing its external manifestations is not known. In its clinical character it varies considerably in different cases, and it may possibly before long be capable of further sub-division.

Southsea.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

HEREDITARY CONGENITAL NYSTAGMUS.

By F. W. BURTON-FANNING, M.B. CAMB., M.R.C.P. LOND.,
PHYSICIAN TO THE NORFOLK AND NORWICH HOSPITAL AND TO THE JENNY LIND INFIRMARY FOR SICK CHILDREN, NORWICH.

THE following history was obtained from the father of a child brought to the Jenny Lind Infirmary for Sick Children, Norwich, with marked nystagmus, and I wish to record it in conjunction with the recent publications of Dr. George Dickson [1] and Dr. Angus McGillivray,[2] and that of the late Dr. Hadden.[3] The grandparents of the first generation lived to an old age and had no ocular abnormality. There were seven children as follows:—(*a*) Male, who had constant nystagmus from birth to his death, which occurred at the age of twenty-four from an accident. (*b*) Female, who was unaffected and died from poisoning aged eighteen years. (*c*) Male, in whom nystagmus remained constant all his life; on fixing his attention he also manifested head-nodding, which disappeared during repose. He died aged twenty-four years from phthisis, leaving four children. (*d*) Male, who had nystagmus at the age of forty-two years as marked as at birth. (*e*) Male, who was unaffected. (*f*) Male, who had constant nystagmus; he has had seven children. (*g*) Male, who had nystagmus in a most marked degree; head-nodding also, except during repose. He had one child. As to the third generation, C's family of three girls and one boy had no nystagmus, but one girl's head shook when excited. F's family consisted of three daughters and four sons; nystagmus was present in all the girls, though one at the age of eight years was improving. The four boys were unaffected, but all died between the ages of seventeen months and four years; two from convulsions, one from imperforate anus, and one from diarrhœa and dentition. G's boy died aged seven weeks, and I cannot ascertain if he had nystagmus. Here then we meet with oscillation of the eyes occurring in five members of a family of seven whose parents and other relatives had presented no such peculiarity. Of these five three married and had altogether twelve children, three of whom had definite nystagmus and a fourth a tendency to head-nodding. The liability of the two sexes was almost equal in this family, for, of eleven boys, five had nystagmus, and of seven girls three had it. I have had the opportunity of examining five members of this family; in all the nystagmus was horizontal only, it was slow during repose and became more rapid when the eyes were fixed on any object or when the person was excited. Their complexions were mostly dark, their vision and ophthalmoscopic appearances normal, and their general health good. My informant discovered this "jumping" of the eyes within a few hours of birth, and was convinced that the affection diminished in intensity as the child grew. To my mind this hereditary oscillation of the eyes, with or without movement of the head, seems most allied to hereditary tremor of the limbs and head.

Norwich.

[1] THE LANCET, Oct. 5th, 1895.
[2] Ophthalmic Review, August, 1895.
[3] THE LANCET, June 14th, 21st, and 28th, 1890.

A HEAVY FŒTUS.

By W. WOODWARD, L.R.C.P. LOND., M.R.C.S. ENG.

ON Nov. 29th, 1895, I was called to see a married woman of robust constitution, who, the midwife said, had been in strong labour for twelve hours, but "nothing seemed to shift. The waters," she added, "had come an hour previously." I found, per vaginam, the head to be high up in the first position and the os fully dilated. The patient was bearing the labour well; but as the head did not appear to move, though the pains were frequent and strong, I applied forceps. In an hour and a half the forceps were taken off, the head being now well down on the perineum. During its passage the mother had cramping pains in the legs, but these were neither more continuous nor more severe than is common in ordinary cases. The head was born in twenty minutes more without injury to the perineum. Then for about another twenty minutes the shoulders refused to move. Traction on the axilla effected nothing, so I pulled down the left arm and the child (a female) followed, but slipped out slowly, fully dilating the maternal outlet. The infant had vomited three times a fluid resembling liquor amnii and was becoming cyanosed before I interfered. It seemed, therefore, necessary to risk the perineum in order to save the infant. After delivery the latter lay flaccid, the cord feebly pulsating, but the escape of about one ounce of blood from the cut cord restored her, and her cries were comforting to hear. The rest of the labour gave no trouble. When the mother was comfortable the child was weighed. Two separate and distinct pairs of scales registered her weight as 11 lb. 10 oz. before she was washed. Both mother and child were doing well.

Wilton, Wilts.

CASE OF SLOW PULSE (BRADYCARDIA) EVIDENTLY DUE TO SIMPLE CONSTIPATION.

By M. M. BOWLAN, M.B. DURH., D.P.H. CAMB.,
MEDICAL SUPERINTENDENT OF THE WORKHOUSE INFIRMARY, ST. GEORGE'S-IN-THE-EAST.

THE interesting article by Dr. A. Morison on the Causes of Bradycardia which appeared in THE LANCET of Nov. 23rd is my excuse for submitting the following short note. A woman aged twenty-five, well nourished, was admitted to St. George's-in-the-East Infirmary on Jan. 13th, 1892, with a history of constipation and occasional vomiting after food. There was no history of alcoholism or dietetic error, and there was no history or sign of lead poisoning. There was no hernia or any sign of organic intestinal obstruction. She looked gloomy, complained of headache, and had a dirty tongue and foul breath, but all her organs appeared to be healthy. Her heart, however, though otherwise normal, was only beating at the rate of 48 per minute. She was given five grains of calomel on admission, but was not purged. On Jan. 14th the house mixture, sulphate of magnesia and senna, was given, but without effect upon the bowels. She was still sick occasionally after food. The pulse was still slow. On Jan. 16th the pulse-rate was 48 per minute. The patient was still constipated. On the 19th one ounce and a half of castor oil was administered. On the 20th the bowels acted well. A magnesia and sulphate of sodium mixture was ordered thrice daily. On the 21st the bowels were freely opened. The patient looked brighter and expressed herself as feeling better. The pulse was now 76 per minute, the patient being recumbent, and continued normal till her discharge on Feb. 3rd, since which time she has not come under my observation.

This case was regarded as due to the absorption of poisonous, effete, and fermentation products from the intestinal tract (whether ptomaines, leucomaines, or what not), and treated accordingly. There was no marked abdominal distension and very little vomiting, so that any local mechanical theory was out of the question.

Raine-street, E.

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COMPOUND FRACTURE OF THE NECK OF THE SCAPULA AND SIMPLE FRACTURE OF THE SHAFT OF THE HUMERUS BELOW THE INSERTION OF THE DELTOID.

BY F. A. A. HOLMDEN, M.D., M.S. EDIN.,
SURGEON-CAPTAIN, BECHUANALAND BORDER POLICE.

ON June 27th, 1895, a trooper was riding on the front of a regimental transport in N'gamiland, and when trying to step off slipped to the ground, falling on his back, the front wheel passing over the shaft of the right humerus and shoulder. I examined him a few minutes after the accident occurred, and found there was marked projection of the acromion, and a considerable interval between it and the head of the humerus. The deltoid was flattened, the limb had sunk into the axilla, and the coracoid process was movable and at a lower level than that of the opposite side. Crepitus could be produced. There was also a wound on the back opposite the shoulder-joint, which was caused by a stone in the sand. When the probe was used the injured part was found to communicate with the fractured neck of the scapula. The humerus was also fractured below the insertion of the deltoid. The following was the treatment adopted. The wound at the back of the shoulder was syringed with an antiseptic and dressed with iodoform. I applied an angular internal splint from the axilla to the wrist, fashioned so as to project a little below the elbow. The axillary end of the splint was shaped and padded so that it would principally support the anterior and posterior axillary borders, thus avoiding pressure on the vessels. Three short splints were placed on the other sides of the limb. The angular splint was now pushed well up into the axilla, and the four splints were bandaged to the limb; and then, after binding the arm to the side with a broad bandage, a sling was applied well supporting the projection of the angular splint at the elbow, as well as the forearm, which was kept midway between supination and pronation. When seen on Sept. 28th the patient had made an excellent recovery without deformity and had returned to duty.

Bechuanaland Border Police Camp, Kgontas, N'gamiland.

NOTES ON A CASE OF LYMPHADENOMA; EFFUSION INTO THE RIGHT PLEURA; PRESSURE ON THE RIGHT BRONCHUS.

BY CHARLES W. CHAPMAN, M.D. DURH., M.R.C.P. LOND.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR DISEASES OF THE HEART, SOHO-SQUARE.

THE following case may be read in connexion with a very instructive one reported by Dr. H. Sainsbury in THE LANCET of Nov. 30th, 1895.

Seventeen years ago I was suddenly sent for to see a man who had great difficulty in breathing. On my arrival I found the patient very anæmic and with an anxious expression. The history was, briefly, that he had been in the Australian bush for about four years, and that his health had been failing for two years, during which latter period his glands had gradually become enlarged. He had returned to England to put himself under the care of Sir William Jenner who had, I think, only seen the patient once or twice before I was called in, and in a consultation the same evening Sir William Jenner told me there was no evidence of fluid in the chest when he examined it a few days before. On examination there was general lymphadenoma, with urgent dyspnœa, and the right chest was airless and full of fluid. It was resolved to tap the chest, which I did with a small trocar, but only about two drachms of fluid came away. On a second consultation Sir William Jenner questioned my having entered the pleural cavity, or, even if I had, that the cannula was too small. I accordingly used an abdominal trocar, but with no better result. The patient died the following day. At the post-mortem examination, not only was there pressure on the large veins sufficient to account for the effusion, but the right bronchus was so compressed as to prevent the ingress of air into the lung. Both punctures were seen to be into the pleural cavity, so the dryness of the tapping was owing to the physical conditions within the chest, which, though different from those found in Dr. Sainsbury's case, had a similar effect in not permitting withdrawal of the fluid; there was "no vent" whereby the air could enter.

Weymouth-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

TWO CASES OF TYPHOID FEVER, BOTH COMPLICATED BY HÆMATEMESIS, AND ONE BY HÆMORRHAGE; ONE RECOVERY; ONE DEATH.

(Under the care of Dr. GREEN and Dr. J. GALLOWAY.)

INTESTINAL hæmorrhage in the course of typhoid fever is not infrequent, but it is rather difficult to estimate the percentage of cases in which it occurs. One way of estimating it is by taking the percentage of those known to have suffered from it in a certain number of fatal cases, as was done by Hölscher, who found a history of intestinal hæmorrhage in 5 per cent. This, of course, gives but an inadequate idea of its prevalence, for many patients subsequently recover. "Hæmorrhage from the bowel in enteric fever occasionally coexists with hæmorrhage elsewhere, such as epistaxis, hæmoptysis, hæmatemesis, hæmaturia, bleeding from the gums, and purpuric spots, and then the disease has been designated 'hæmorrhagic putrid fever.'"[1] In both the present cases there was vomiting of blood, which was probably dependent on a congested condition of the mucous membrane of the stomach. For the notes of these cases we are indebted to Mr. William Escombe, house physician.

CASE 1. (*Under the care of Dr. Green.*) *Typhoid fever; hæmatemesis; hæmorrhage; relapse.*—The patient, a female aged twenty-three years, was admitted to hospital on Sept. 21st, 1895. Her temperature was 101° F. Her illness commenced with headache and pains on Sept. 10th. Her condition on admission was as follows. She was lying on her back; her cheeks were rather flushed, and her expression was somewhat vacant; she was quite conscious, and her memory was good. Her pulse was 104 and dicrotic. The tongue was furred down the centre; the tip and edges were clean. Her abdomen was somewhat distended; there were a few spots typical of typhoid fever. The spleen was easily palpable. The heart and lungs were normal. The urine was highly coloured and clear, and the specific gravity was 1014; there was a large trace of albumin. On Sept. 22nd the patient complained of pain in the left thigh. On examination some œdema of the left leg was found; the upper part of the left thigh was red and tender, and a cord could be felt in the course of the femoral vein. There was slight diarrhœa and the stools were typically "typhoid in character." The fever ran a normal course after this until Sept. 27th, when some blood was passed in the stools. On the following day, at 1 P.M., the patient had an attack of hæmatemesis; the blood was dark-coloured, but was not measured as it was vomited into the bed. This was followed one hour and a half afterwards by a second attack; the blood was of the same character as before and measured two ounces. The patient was treated with a hypodermic injection of morphia; all food was ordered to be fully peptonised, and one drachm of the saccharated solution of lime was added to each five-ounce feed. She was also ordered ice to suck. The pulse was 120, and the temperature remained high. For the next twenty-four hours the motions were black and tarry in character, but there was no more hæmatemesis. Subsultus tendinum was well-marked, and there was distinct tremor in both hands. There were also dulness and numerous rales at the base of both lungs. From now onwards the temperature fell steadily, but the patient was very weak and was kept upon hypodermic injections of liquor strychniæ, two minims every eight hours, and brandy, four ounces. Ten-grain naphthaline pills, three times in the day, were employed as an intestinal antiseptic. There was no more hæmatemesis or hæmorrhage, but for two consecutive days large erythematous patches lasting about twenty-four hours appeared

[1] Murchison: Continued Fevers, p. 527.

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over the chest and abdomen. The thrombosed femoral vein cleared up with no further trouble. Unfortunately, the patient had a severe relapse lasting over twenty-four days, but during the whole of this time she had no bad symptoms and has since made an uninterrupted recovery.

CASE 2. *(Under the care of Dr. Galloway.) Typhoid fever; hæmatemesis; death.*—The patient, a man aged twenty-eight years, was admitted to hospital on Aug. 29th, 1895. His temperature was 101° F. His illness commenced with headache and shivering on Aug. 16th. The patient lay on his back; his face was flushed; the skin was hot and moist. The pupils were slightly dilated. The pulse was 104. The tongue was coated with white fur in the centre; the lips were covered with sordes. The abdomen was uniformly distended; there were spots typical of typhoid fever. The spleen could not be felt owing to muscular rigidity of the abdominal wall. There was tenderness over the right iliac fossa. The heart and lungs were normal. The specific gravity of the urine was 1012, acid, with a large trace of albumin. There was slight diarrhœa of a greenish colour, loose, and offensive; no undigested milk appeared in the stools. The illness ran a normal course until Sept. 1st, when the patient had a distinct and well-marked rigor at half-past nine in the evening; the pulse was 120 and the respiration 24. This was followed by another rigor on the following day at 4.30 P.M.; the pulse was 160 and the respiration 32. There were no physical signs of pneumonia. The diarrhœa continued and was checked by enemata of opium. The patient continued to get weaker, but took all his food well, with occasional slight retching, but no vomiting, until the 7th, when a very troublesome hiccough set in and lasted almost continuously until his death. The pulse became more frequent and running in character. On Sept. 10th vomiting commenced, and the patient brought up blood of a dark-red colour; much of the blood could not be measured, as it was in the bed, but three ounces were actually measured. He became unconscious and died on Sept. 11th.

Necropsy.—The deep ulceration was entirely in the lower end of the small intestine, none of the sloughs having separated; the upper part of the small intestine was ulcerated superficially. The mucous membrane of the stomach was much congested, and on the posterior surface at the pyloric end twenty or thirty petechial spots were visible. There was no evidence of old or recent ulceration. The œsophagus was healthy. There was no ulceration of the larynx.

ROYAL SOUTH HANTS INFIRMARY.

HISTORY OF A CASE OF A TAMARIND STONE IN THE RIGHT BRONCHUS; NECROPSY; REMARKS.

(Under the care of Dr. A. B. WADE.)

THE record of the treatment of a case of foreign body when impacted in a bronchus is always worth reading, and when there are also unusual features presented it is additionally interesting. It is unfortunate that the result in the present instance was fatal, but the case is possibly more important to the profession on account of the emphasis which is thus laid on the necessity of keeping open the tracheotomy wound until the body has been expelled. The condition of the lung, as met with at the post-mortem examination, was that usually resulting from the impaction of a foreign body in the bronchus, and it by no means follows that the child would have recovered from this even if the foreign body had been successfully expelled. Although the collection of a large number of cases gives statistics on this subject, still the prognosis must vary so much in individual cases that they can be of little practical utility. All the bodies impacted in this situation are not of the same size or shape; neither are they of the same material, varying as they have done from the steel blade of a tooth forceps to the foreign body in this case, and the size of the bronchus has varied from that of the adult downwards. Some of the substances impacted are early acted on by the secretions of the part, whilst others are affected only after a long time or not at all. For the notes of this case we are indebted to Mr. W. P. Purvis, F.R.C.S., house surgeon.

A little boy aged five, who had always been thoroughly healthy, was admitted to the Royal South Hants Infirmary, under the care of Dr. Wade, on April 23rd, 1895. A quarter of an hour before he was brought to the hospital he had been eating tamarinds, and was seized with an attack of coughing and choking, which his mother supposed to be due to a stone having stuck in his throat. On admission he had constant and spasmodic cough and a little inspiratory stridor. A large quantity of frothy mucus was secreted. Nothing could be seen or felt in the fauces or larynx. On auscultation it was found that no air was entering the right lung. On being laid down upon the bed he breathed quite easily and showed no distress. During the evening he passed a tamarind stone in a stool, but this only pointed to the fact that he had not been careful about the stones. For the benefit of those who may not recall the exact appearance of a tamarind stone, it may be remarked that, though the West Indian are not quite the same, the East Indian are of a stony hardness and a red colour. In size they vary from one-third to one-fourth of an inch in diameter. They are flat and circular, and about three-sixteenths of an inch thick. Each is enclosed in a tough fibrous husk. On April 25th no air entered the patient's right lung, and the heart was drawn over to the right side, its impulse being felt over a somewhat wide area between the sternum and the right nipple. He had very little cough. His temperature, which had been normal, suddenly ran up to 102·6° F. Under chloroform Dr. Wade performed a low tracheotomy and made search for a foreign body which was presumably impacted in the right bronchus. This might have been either the hard stone or its fibrous husk. Nothing could be felt, and the excursions of the trachea and the reflex cough when the mucous membrane was touched by instruments were very embarrassing to the operator. Inversion was also tried, but without result. A Durham's tube was inserted. On the 28th the temperature was still 100° to 102°. The wound was healthy. The heart seemed to be going back to its normal position. On the 29th the temperature was 101°. The apex-beat was in the normal situation. The patient did not seem to be quite so well. The whole of the right side of the chest was dull on percussion, and there was very loud tubular breathing all over it except at the base behind. On the 30th the silver tube was exchanged for a rubber one, and the patient was very comfortable with it. The temperature was 102·6°. On May 6th the temperature was 98° in the morning, having been 102 2° the evening before. The patient's general condition was not so good. The physical signs were unchanged except that from the front a little air seemed to enter the upper lobe of the right lung. Another attempt to remove the stone on this day was as unsuccessful as the last. No foreign body could be felt at all. Liberal brushing of the trachea with a 20 per cent. solution of cocaine failed to stop the cough reflex. On May 25th the patient seemed to be better in himself, and a little air seemed to enter the right lung. It was not quite so dull as formerly. Since the last date his temperature had been normal or subnormal in the morning, running up to 102° or 104° (105° on one occasion) every night. He had emaciated greatly, but was beginning to pick up again. On the 28th the tracheotomy tube was removed (thirty-sixth day). On the 30th the patient's weight was 2 st. 1 lb. He got up for the first time and continued to do so. On June 7th his weight was 2 st. 4½ lb. The tracheal wound was quite healed. He seemed to be much better, and his temperature did not rise so much at night. On the 13th his weight was 2 st. 4½ lb. On the evening of that day his temperature reached 104°, but he seemed to be about as well as usual, and the physical signs were unchanged. On the 14th (fifty-third day), about 2.15 A.M., he suddenly awoke from sleep, coughing and choking. Mr. Purvis was immediately summoned and lost no time in repairing to the ward. He found the patient pale and with staring eyes. The patient gave a few gasps, but no air entered his chest. By the time Mr. Purvis had reopened the old wound the patient had ceased to breathe and his heart could not be heard. Artificial respiration was performed for some little time, but without avail.

At the post-mortem examination on June 14th, at 2.30 P.M., the body was found to be somewhat wasted. The bean lay impacted just below the cricoid cartilage, filling the trachea from there down to the tracheotomy wound. The mucous membrane of the right bronchus was reddened and slightly softened, but there was no ulceration. The diameter of the tube was markedly greater than that of the left, and the stone had evidently been impacted at about the middle of its length. The right pleura was obliterated, with soft, recent adhesions. The lung was large and completely solid. On section several points of pus appeared, which were the cut ends of bronchioles, the latter being

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distinctly dilated. The stone measured in its swollen state three-quarters of an inch by half an inch across. Its shell was quite soft and chipped away in places, exposing the white cotyledons and the radicle. A portion of the lung was hardened and cut into sections. What struck the eye at once was the fact that all the alveoli were collapsed. There was absolutely no exudation into them. The capillary vessels running among the clumps of alveoli were crowded with corpuscles, and there was an enormous increase of the interstitial fibrous tissue. This last fact accounts for the affected lung (although airless) being more bulky than the healthy one.

Remarks by Mr. PURVIS.—The failure of the attempts at extraction were due to the softening of the stone, which prevented it from being distinguished from the walls of the bronchus on probing, and to the violent coughing, which absolutely prevented any delicate manipulation of instruments. There was also the doubt as to whether the foreign body was the stone itself or only the soft, tough husk, which would doubtless have been soon ejected, as it would not have swollen. It was easy to realise afterwards that it would have been impossible for the seed to have travelled up through the glottis, owing to its having swollen so much. The moral clearly is that the tracheal wound should never be allowed to heal while any chance remains of the foreign body being still in the chest, and that such a seed, though it may swell and soften, does not disintegrate even after fifty-three days.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c.

AN ordinary meeting of this society was held on Dec. 10th, Mr. HUTCHINSON, President, being in the chair.

The adjourned discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues was continued by Dr. PHINEAS ABRAHAM, who introduced the subject of the Latency of Leprosy. He said that there were many facts in connexion with leprosy which bore upon the question of latency. Numerous instances had been met with in which the symptoms of that disease had not made their appearance until long and irregular periods had elapsed since the individual could have been subjected to infection, and there were many cases on record in which the symptoms appeared to have become dormant during the course of the malady or subsequently to its full development. We might thus distinguish an initial or "primary" and a "secondary" latency. The study of the subject was beset with considerable difficulty, as might be seen from the following considerations: 1. In the present state of knowledge we could not speak of any definite period of incubation for the bacillus of leprosy, for no one had yet indubitably succeeded in cultivating it, and of its life-history we knew nothing. 2. We could not clinically determine the entry of the microbe into the human body, for, as a general rule, there was observed no initial lesion or particular symptom. In a few cases there might be a history of some previous traumatism, with localised persistent inflammation or difficulty of healing; but the vast majority of patients could not point to anything of the kind or give any precise date as to when they could have contracted the malady. In point of fact, it was not yet proved that the virus of leprosy might not gain entry by the stomach or by as many different channels as the sister disease tuberculosis. 3. It was not easy to distinguish between the true latent and the incubatory periods. We might, with M. Besnier, consider that the incubatory stage only commenced when the latent spore should have found the soil and other conditions suitable for its proper growth and development, but the subjective and objective phenomena of the incubation might be slight and overlooked, and it must often be practically impossible to draw a line of demarcation between the two stages, which, nevertheless, must be theoretically admitted to exist. A period could only be regarded as one of latency (1) if there were absolutely no concomitant [illegible] or local disturbances, and (2) if the interval between [illegible] tion and the appearance of symptoms were more or less [illegible] longed and of indefinite duration. 4. From the above [illegible] siderations, and from the fact that the inhabitants [illegible] infected country might at any time be unknowingly [illegible] under conditions for contracting the disease, we [illegible] only—to be quite free from doubt—take into [illegible] those individuals who were of a leprosy-free race [illegible] who had recently come from a leprosy-free [illegible] and (2) those, natives or others, who having [illegible] in a leprous district had subsequently [illegible] the disease after removal to a country free from [illegible] The field of accurate observation was therefore [illegible] narrowed. When facts of some definiteness were [illegible] the main thing observed was the irregularity of the [illegible] between the probable time of entry of the virus and the [illegible] appearance of the usual erythematous patches and [illegible] early pathognomonic signs. Some observers gave two [illegible] years, others much longer. Instances were known of [illegible] disease appearing a few weeks after a patient had [illegible] from an unaffected to an affected district, as [illegible] related by Arning; and, on the other hand, there [illegible] many examples of a prolonged retardation, as [illegible] mentioned by Leloir, Höegh, Thin, and others. [illegible] remarkable instances of prolonged primary latency [illegible] come under Dr. Abraham's notice. The first was the well-known Whitechapel case exhibited at the Epidemiological Society in 1889. The man had gone in his youth, upwards forty years previously, on voyages to the Baltic and Mediterranean, and afterwards had been for years selling [illegible] London, and had never mixed with sailors or others from foreign parts. He declared that he had no spots or [illegible] symptoms until six years before Dr. Abraham saw him. Although difficult to prove absolutely, it was most improbable that this man could have been exposed to any new source of infection during these forty years. It was more likely that the germ had really remained somewhere quiescent in his system for a great number of years, although, perhaps, not so long as he thought, seeing that he might have overlooked, as [illegible] lepers did, the very earliest signs of the complaint. In the following two cases the facts were tolerably [illegible] An Englishman had been taken to India as an infant, brought home when ten years old. When twenty-two he married a young English girl and shortly afterwards developed spots upon him. He died a few months after [illegible] firmed nodular leper. Since his return home he had lived in a humble way in a small inland town, and had never had communication with anyone or anything from India. The young woman, now a typical case of nodular leprosy, was born in Ceylon of English parentage, and brought to England when quite a young child. She remained perfectly well for some seven years, when she had an attack of what was thought to be rheumatic fever, accompanied with profuse erythematous swellings. The family had had no communication, directly or indirectly, with the East. It must be admitted that in her case, also, the germ must have remained dormant for many years. Instances of so-called arrested or dormant leprosy, in which the symptoms remained in abeyance for a number of years, were frequently met with in asylums and leprous countries, and might be taken to illustrate the secondary latency of the disease. [illegible] in rare cases, a recrudescence did not take place, the patient might be regarded as in a condition of permanent arrest or cure. Hansen's views were referred to, and the investigations of the Cape Commission mentioned. A case of temporary arrest of early symptoms in a boy now in England was also alluded to. In such cases the microbes had for a time ceased growing and multiplying and had assumed a resting condition. Manson's hypothesis was quoted as affording a plausible explanation of the vagaries of leprosy—the periods of quiescence, its prolonged and uncertain incubation, its difficulty of inoculation, and many other points—which shortly as follows. The bacillus was the cause of leprosy, grew only in a medium existing in the bodies of [illegible] human beings, and then perhaps only intermittently. If a bacillus fell upon such a person, it grew if the medium was present or when it was produced; it grew at the expense of the material and until the latter was exhausted; it then passed into a condition powerless to resist certain [illegible] phagocytes, which incorporated it, and in which it became encysted, until fresh cultivating medium was supplied. The bacillus then became active, passed by vessels and lymphatics and established other foci; when the cultivating [illegible]

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became exhausted the bacillus again became intra-cellular and passive.

Mr. J. ERNEST LANE continued the discussion, taking for his subject the Latency of Syphilis. He first alluded to the interval which might elapse between the appearance of the initial lesion and the first manifestation of constitutional infection. The minimum recorded period of this "second stage of incubation" was twelve days and the maximum 159. The latency of syphilis was next exemplified by cases in which, after the disease had apparently disappeared, it again manifested itself by the appearance of unmistakable symptoms after a lengthy period of complete immunity. While the possibilities in the direction of long latency were infinite, the duration of the period might continue for only two years. In hereditary syphilis the disease might be latent in the father, who, though apparently healthy, might infect his wife and children; or might be latent in the mother, who, having suffered from syphilis and having been presumably cured, might on marrying a healthy man produce a long series of syphilitic children. Further, Colles's law on the immunity of the mothers of syphilitic children was another example of the latency of the disease, for such mothers, though to all appearances perfectly healthy, had been proved by inoculation with syphilitic secretions to be protected from the disease. Lastly, cases of syphilis hereditaria tarda were instanced as proof that the disease might remain latent for a long time in the subjects of congenital syphilis.

(To be continued.)

MEDICAL SOCIETY OF LONDON.

The Diagnosis and Treatment of Early Cancer and Cysts of the Breast.

AN ordinary meeting of this society was held on Dec. 9th, the President, Sir JAMES CRICHTON BROWNE, being in the chair.

Mr. BRYANT read a paper on the Diagnosis and Treatment of Early Cancer and Cysts of the Breast. He said he had been induced to write it on account of a series of cases of cystic disease of the breast, most of which had been diagnosed as being cancerous tumours, having recently passed under his notice; and he was convinced that such errors of diagnosis might be diminished by care and thought. He admitted that typical examples of cancer as well as of adeno-sarcoma were usually readily recognised, and that difficulties of diagnosis, and consequently uncertainty of treatment, chiefly occurred when any or many deviations from the typical examples were met with. He divided his cases, in which difficulties of diagnosis were liable to occur, into the three following groups, the divisions being based on clinical symptoms alone. Group 1 included cases in which either in a young, middle-aged, or even old married or unmarried woman there was some enlargement or thickening of one lobe of a mammary gland, without any external evidence of wrong, either in the integument covering the affected lobe of the breast, the nipple, or lymphatic glands. Group 2 comprised cases in which there was a distinct and very evident lump, the size of a nut or walnut, shelled or unshelled, and inseparable from the breast gland, with some of the local conditions generally accepted as being indicative of a cancerous tumour, such as a flattened or retracted nipple, with or without an enlarged lymphatic axillary gland. Group 3 included cases in which in the middle-aged woman past child-bearing the breast gland feels to be generally, or in one or more of its lobes, harder than natural, coarse or knotty, the knots varying in size from small to large peas or nuts, and where there might be at times, with or without the application of pressure upon the gland, some discharge from the nipple of either a clear yellow or bloodstained fluid, or some cheesy pultaceous material, associated or otherwise with an enlargement of some lymphatic glands. He then took up each group separately and pointed out the questions which came before the surgeon with reference to diagnosis and treatment. In Group 1 the main question to decide was whether the local lump or induration was an early cancerous tumour or a cyst, or, if in any way connected with lactation, a chronic abscess. If probabilities pointed to its being cancerous in its nature he showed how important it was to have the diagnosis clear and the local disease removed; for such a measure, when undertaken at the very earliest stage of incipient infiltration, was far more likely to be followed by a permanent cure than when performed at any later stage. For this purpose he advocated in these cases an early exploratory incision as a preliminary measure to an excision of the growth and gland should the diagnosis of carcinoma be verified. He said he had followed this practice for many years and with the best results. In Group 2, in which there was a distinct tumour present and the question for diagnosis lay between a local cancer and a cyst, Mr. Bryant pointed out the wisdom of the question of cyst always having a first place in the surgeon's mind, for he believed it was from a neglect of this habit of thought that so many mistakes in diagnosis were met with. He drew attention to certain methods of examination which facilitated diagnosis, and to the value of different objective symptoms which might be present in the different cases. He illustrated this group, with its treatment, by giving brief notes of many interesting examples, and pointed out that these cases had mostly occurred in women after forty years of age. The disappearance of cysts by time and treatment was then discussed and illustrated by cases, but Mr. Bryant stated that such cases as these were not common, and gave no support to a practice which allowed the local trouble to continue without treatment. He believed that cases of reputed disappearance of adeno-sarcomata and of cancer were examples of mistaken diagnosis, and in reality were cysts. He had never known a tumour which was solid to disappear without surgical assistance. The reappearance of cysts which had been said to have disappeared spontaneously years before was also pointed out, and the remark made and illustrated that in one case the re-enlargement of the cyst might be genuine, and that in another the cysts might be of the proliferating kind. The third group was finally considered and the clinical features of the cases included in it carefully described. Such cases, he said, were too often regarded as being cancerous. The points for diagnosis were emphasised, and the subject illustrated by three cases worthy of study. By way of conclusion he expressed his belief that in the three groups of cases to which he had drawn attention his hearers would be able to find a place for most, if not all, the doubtful and difficult cases which would come before them, and he felt assured that if they would carry to the bedside the thoughts and methods of investigation to which he had drawn their attention their difficulties—which had been his difficulties—would be found to lessen, if not disappear, and that at any rate a working diagnosis could be arrived at in most of the cases upon which a sound treatment could be based, and that of "drifting" avoided, to the advantage of the patient and the credit of the profession.

Mr. MARMADUKE SHEILD said that the subject of the diagnosis of these cases was one of great interest and importance. Surgeons who possessed the accumulated experience of a large number of years were the only ones to speak on this subject with confidence. Mr. Bryant had used the term "adeno-sarcoma" to describe some of these cases, and to the speaker's mind no cases were more difficult to diagnose than sarcoma of the breast. Many cases classified after microscopical examination as "adenoma" recurred and were ultimately classed as sarcoma. As to the treatment of chronic indurations of the breast, were large doses of liquor potassæ to be recommended, or the internal administration of mercury and iodide of potassium with local strapping? From his own observations he was convinced that a certain number of these cases were syphilitic. He had seen cysts of the breast with such thick walls and so greatly distended with fluid that neither elasticity nor fluctuation could be recognised; such swellings had frequently been removed for cancer. The difficulty about the exploratory incision was the formation of a scar upon the breast, and he inquired if tapping with a fine trocar and injection with iodine would not suffice to cure some of the simple cysts? He had met with a case in a woman aged forty who had a hard lump in her breast. He explored it with a large trocar and cannula and found nothing. He then removed the breast, when he found a very thick-walled cyst containing putty-like material, no doubt a galactocele of ancient date. He inquired if Mr. Bryant had ever met with a dermoid cyst of the breast.

Dr. SNOW related a case in which a cyst had been evacuated and then later a malignant fungous growth protruded from the incision. He held that cysts associated with malignant disease were common—in fact, that every cyst of the breast became sooner or later associated with

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malignant disease. He had never seen cysts disappear spontaneously.

Mr. TURNER related a case in which he removed a sebaceous cyst from the breast of a medical man's wife aged thirty who had borne children and in whom the growth was of some months' standing. He brought a case some years ago before the Clinical Society which he believed illustrated the possible spontaneous disappearance of sarcomatous growths. The patient, a woman, was suffering from sarcoma of the thyroid gland. He did a low tracheotomy and the growth almost disappeared. It later grew again, and then once more shrivelled up. She died from some other affection, and at the necropsy the diagnosis of sarcoma was confirmed.

Mr. L. BIDWELL said that two cases of cyst which he had seen lately had been treated by simple aspiration and had been followed by cure. In cases of tumour of the breast with retracted nipple it was often difficult to decide whether they were carcinomatous or inflammatory, and the character of the fluid evacuated by the nipple on pressure over the breast was not always a trustworthy guide as to the nature of the affection.

Mr. LOCKWOOD said he had seen a surgeon expose himself to the humiliation of discovering after the removal of a breast that the tumour was nothing more than a thick-walled cyst. This would have been avoided if he had adhered to the rule of cutting into tumours before removing them. He had seen some time ago a case of ascites due to secondary cancerous growths in the liver and great omentum. Ten or twelve years before a cyst of the left breast had been treated by puncture and injection of iodine. On examination there was a considerable mass in the left breast, and he had no doubt that when first tapped some growth was present in addition to the cyst.

Mr. BRYANT, in reply, speaking of adeno-sarcoma, said that these growths occurred in younger women than those who were the subjects of cancer. The tumour was rapidly growing, and on examination was found to be encapsuled and movable and of a soft and succulent nature. Nearly all the cases of cyst he had been relating were brought to him by medical men as malignant growths, and for this reason he found it politic to advise an exploratory incision rather than tapping. He was quite convinced that it was false to assert that the majority of cysts of the breast in middle-aged women were associated with cancer or were likely to become so, and it was wrong to lead these patients to believe that such breasts would probably become the seat of cancer. Cases of involution cyst in women who were middle-aged, or prematurely so, should be carefully watched. The character of the fluid evacuated from a cyst was certainly of value in many cases as an aid to diagnosis. His rule was to treat simple serous cysts by plugging; other cases of cyst, especially when associated with intra-cystic growth, were dissected out; where the cysts were multiple he removed the lobe or the whole gland. He had seen but one dermoid of the breast, but had met with many sebaceous cysts. A simple cyst, if it gave rise to no trouble, might be left alone; no treatment was of use to cause absorption. He had seen no good from tapping; on the contrary, harm had followed, but this harm, as being of a septic nature, might probably be avoided nowadays. The scar which resulted from exploration was usually insignificant, and where the diagnosis was in doubt between cyst and cancer the patient would usually readily submit to incision.

OBSTETRICAL SOCIETY OF LONDON.

Tubo-Uterine Pregnancy.—Uterus Didelphys.—Exhibition of Specimen.

A MEETING of this society was held on Dec. 4th, Dr. F. H. CHAMPNEYS, President, being in the chair.

Mr. BLAND SUTTON read notes of a case of Tubo-Uterine Pregnancy with Primary Intra-peritoneal Rupture and Recovery. He detailed the possible modes of termination of a tubo-uterine (interstitial) pregnancy, and compared them with those of a purely tubal one. He also related a case which occurred in his practice of a woman aged twenty-two years who had been married two and a half years and had not been pregnant. Menstruation was fourteen days overdue when she was seized with severe pain in the abdomen and vomiting. When seen she was blanched, and the physical signs pointed to rupture of a gravid tube. On opening the abdomen a large quantity of blood was evacuated and a rent was found at the right angle of the uterus from which arterial blood was issuing at several points. The bleeding surfaces were secured by silk ligatures passed through the substance of the uterus, and the tube and ovary were cut away. The uterus was found to be somewhat large, and probably owing to the large decidua which came away the patient vomited frequently during the seventy hours after operation. After the decidua had been away the patient recovered quite satisfactorily. Mr. Sutton believed that this was the first recorded example of primary rupture of the sac of a tubo-uterine gestation treated by a surgical operation. The ovum was not found, but no other explanation of the condition of the tube suggests itself but that of tubo-uterine pregnancy. Mr. ALBAN DORAN considered that Mr. Sutton had shown that the treatment of a ruptured interstitial pregnancy was relatively simple, though the danger was usually great. Amputation of the uterus was the course which had sometimes been recommended on partly theoretical grounds. Dr. Dunning[1] recently lost a case of this kind during operation. In his report he very properly dwells on the risk of performing hysterectomy on a patient already in a profound state of shock. In regard to the decidua, Mr. Sutton had shown that, so far from it being ill developed in tubo-uterine gestation, it was particularly well formed and bulky. This fact must be remembered in association with the theory that the fœtus was relatively ill developed.—Dr. Heywood asked if the size of the uterus had been measured in any way. It was only stated in the paper that it was enlarged. He agreed that the case was probably one of tubo-uterine gestation. As a result of investigations he had found in cases of extra-uterine gestation the uterus begins to grow in size just in the same way as it does in intra-uterine gestation, and if the embryo lived it went on growing and did not stop at the end of a few months. If the fœtus died involution of the uterus commenced and was completed unless prevented by complications such as would cause involution ordinarily. Hence in a case the size of the uterus was a most important factor in the diagnosis. If the uterus were not enlarged could say that either the case was not extra-uterine pregnancy at all or, if it were, the fœtus was dead and had been so long enough to have allowed involution to be completed. Of course, it was to be remembered that the uterus was not as great absolutely as in intra-uterine pregnancy; what he meant was that at any given date of pregnancy the uterus was as great in extra- as in intra-uterine gestation when in the latter case the uterus had been emptied of its contents. He asked also whether the rupture in this case had taken place through the substance of the wall of the uterus or close to the edge where the Fallopian tube emerges.—Dr. BOXALL inquired if, apart from the absence of menstruation for six weeks, there existed any evidence—e.g., morning sickness—of pregnancy having exceeded that duration; and also if Mr. Sutton had a comparison with the character of preceding periods to disposed to regard the last flow prior to the operation as a regular period or as a hæmorrhage accompanying abnormal gestation and symptomatic of it.

Dr. ARTHUR GILES read a paper on a Case of Uterus Didelphys, with remarks on the Clinical Importance of Malformation. He recalled the three principal types of double uterus—viz., septus, bicornis, and didelphys—a description of these being given, with outline figures. He next described his case, observed at the Middlesex Hospital. The patient complained of a protrusion from the vagina; this was found to be the remains of the vaginal septum. Under ether the exact condition was ascertained; it was illustrated by a drawing. Dr. Giles discussed the clinical features of the condition as illustrated by recorded cases. Abstracts of these were given, under five headings: 1. Cases of unilateral atresia with retained menstrual products, twenty cases. 2. Pregnancy in one-half of the uterus, eight cases. 3. Simultaneous pregnancy in both halves, two cases. 4. Cases uncomplicated by atresia or pregnancy, six cases. These twenty-one cases (including Dr. Giles's) were all he could find recorded during the last twenty-five years occurring in living adults. Two recently published cases were also given. 5. Cases discovered on the post-mortem table, four cases. A table was given of the cases. one clinical cases, illustrating the following

[1] American Gynæcological and Obstetrical Journal, November
[2] Annales de Gynécologie et d'Obstétrique, October 1889.

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1. Age; most of the patients were under thirty. 2. Marriage; fifteen were married; in two there was dyspareunia. 3. Parity; pregnancy occurred in fourteen of the fifteen married cases; eleven had borne children, and three had miscarried. Among the eleven sixteen labours occurred, of which ten were natural. The six cases of dystocia were as follows: obstruction to labour by the empty retroverted half, three cases; obstruction by the vaginal septum, one case; forceps, two cases. 4. In four cases the two halves were of equal size; the right was the larger in six and the left in eleven. 5. In only one case the vagina was originally single; in six there was atresia of one half; in the remainder the two vaginæ were patent and separate. 6. Menstruation was slightly delayed; it occurred—

At 14 in 3 cases.	At 16 in 4 cases.	At 18 in 1 case.
At 15 in 4 cases.	At 17 in 1 case.	At 26 in 1 case.

It was regular in twelve out of sixteen recorded cases, and painless in twelve out of fifteen. In one case the two halves menstruated separately. In the eight cases of single pregnancy there is mention in four of a decidua in the non-gravid half. The clinical complications that may arise are: 1. Unilateral atresia, with retained menstrual products. 2. Dyspareunia. 3. Double vaginitis or endometritis, unsuccessfully treated by application to one-half only. 4. Obstruction to labour by the retroverted non-gravid half. 5. Obstruction due to the vaginal septum. 6. Retained and undiscovered products of conception in one-half in cases of double pregnancy. A bibliography was appended.—Dr. GALABIN referred first to two cases of uterus didelphys, one associated with congenital absence of the vagina, the other with fibroid tumour of one uterus only, notes of which were appended to Dr. Giles's paper. In a third case he had met with dystocia of a very unusual kind arising from a double uterus, not a complete uterus didelphys, but rather a uterus bicornis, yet not of the usual kind, for the uteri were completely separate, without any uniting band, even below the level of the internal os. The lower part of the cervix, however, was common. The woman had had several children normally; but for some unexplained reason, in her last pregnancy the poles of the two uteri became turned in opposite directions. The result was that the ovum, which began in one uterus, made its way also into the other. At full term one fundus was in the normal position; the other fundus lay in a reversed position in the pelvis and contained the head of the fœtus. The patient was admitted into Guy's Hospital in labour, and the true state of affairs was naturally not discovered till abdominal section had been performed. A large hard mass filled the pelvis, and was thought to be a fibroid tumour. The os was quite out of reach, the liquor amnii had escaped, and a hand of the fœtus could just be touched. Cæsarean section having been performed and the fœtus removed, the displaced body of the uterus at once sprang back to its normal position, and the two halves lay side by side. The incision, at first straight, was thus converted into an elongated U-shape, and the centre of the U ran through very thin overstretched cervical tissue. The edges had become so distorted that it was very difficult to sew up the incision satisfactorily. This was at length accomplished, and the patient recovered without a bad symptom, the child also being alive.—Dr. AMAND ROUTH thought these cases were not so rare as the scanty bibliography appeared to indicate. He had seen two cases. The first was described and pictured in the *Illustrated Medical News*, March, 1889. The woman was married, aged twenty-four, and had had three children. The catamenia began at thirteen and a half. There was amenorrhœa during pregnancy. The vaginal septum had been torn through, but the two uteri were quite distinct, one being anteverted, two and a half inches long; the other (right) was three and a quarter inches long and retroverted. Bimanually the uteri were felt to be quite separate, but joined loosely by a thick transverse band. She was suffering from subinvolution in the large uterus. His second case[3] was that of a single woman aged twenty-seven years who was under the care of Dr. C. H. F. Routh. She was found to have a tense vaginal ridge on the left side continuous with an elastic mass in the pelvis on the left of what appeared to be a normal uterus. The vaginal ridge was incised and its contents allowed to escape. It was then found to be a case of distinct double uterus and double vagina, with left vaginal atresia, producing left hæmatocolpus and hæmatometra. The left uterus eventually contracted down to two and a half inches, but remained retroverted.—Dr. GILES, in reply, agreed with Dr. Amand Routh as to the degree of rarity of these cases. He was interested in the cases related by Dr. Galabin, and would ask permission of the society and of Dr. Galabin to include a short account of the two cases of uterus didelphys in the paper in the form of an appendix.

The following specimen was exhibited:—Dr. CULLINGWORTH: Supposed Tubo-Ovarian Cyst.

[3] Transactions of the Obstetrical Society, vol. xxxvi.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Dec. 6th, Dr. A. SYMONS ECCLES, President, being in the chair.

Dr. SEYMOUR TAYLOR showed: 1. A man aged thirty with Symmetrical Drooping of the Pinnæ, which might, he suggested, be an instance of maternal impression, the mother having sustained a fright from a rat when she was four months pregnant. 2. A woman presenting all the classical signs of Myxœdema, but the thyroid body was enlarged, though probably dystrophic. He believed that, as in the case of disease of the adrenals, any actual disorganisation of the thyroid body would produce myxœdema. 3. A woman with the usual signs of Myxœdema, except that she was remarkably pallid and was without the usual circumscribed blush on the cheeks. He believed that there existed a distinct variety of pallid cases. In this case there was no albuminuria or evidence of cardio-vascular changes.—Dr. DOBSON remarked that in one of his cases there had been albuminuria, which disappeared under the thyroid treatment.

Mr. BIDWELL showed a case of Sclerosis of the Superior Maxilla in a woman aged fifty-two. For eight years there had been swelling of the left upper alveolus, and recently severe aching pain. A molar tooth was extracted, and since then the swelling had greatly decreased, thus showing that it was not an osteoma. There was no evidence of syphilis or acromegaly.

Mr. MCADAM ECCLES, for Mr. PAGET, showed a case of Resection of the Elbow for Compound Fracture of the Humerus.—Mr. BIDWELL said that when possible resection should not be performed in these cases, since a stronger joint thus resulted.

Mr. KEETLEY showed a boy on whom he had performed an operation for Radical Cure of Hernia with Undescended Testis by bringing the organ into the scrotum and fixing it there by suture to the adjacent tissues of the thigh.

Mr. MCADAM ECCLES showed a girl aged thirteen with at least twenty-three Exostoses. There was a history of rheumatism, but none of syphilis. The mental condition had not been noted.—Dr. SHUTTLEWORTH quoted the case of a boy thus afflicted who was imbecile and a girl who was mentally defective.

Dr. ALDERSON showed a case of Rodent or Epitheliomatous Ulcer on the Nose of a man aged ninety. There had first been a wart, which had been treated with caustics. He believed the ulcer to be epitheliomatous.—Mr. BIDWELL concurred in the diagnosis and advised operation under cocaine.—Mr. MCADAM ECCLES thought it was rodent ulcer owing to its early history, its slow growth, and the non-involvement of glands. He suggested ethyl chloride as a local anæsthetic.—Mr. KEETLEY discussed the differential diagnosis and believed this case to be probably one of rodent ulcer.—Dr. POTTER held that rodent ulcer was an early stage of epithelioma.

ISLINGTON MEDICAL SOCIETY.

Lunacy and General Practice.

THE second meeting of the session was held at the residence of Mr. G. T. KEELE, St. Paul's-road, Highbury, on Nov. 26th.

After confirmation of the minutes and election of new members, a paper was read by Dr. T. SEYMOUR TUKE on Lunacy and General Practice: some Thoughts on the Duties, Difficulties, and Responsibilities of the Private Practitioner. Dr. Tuke began by saying that it was incumbent on every man going into private practice to know more than something about lunacy. It had been much neglected, but he was glad to be able to hope that in the future, instead of the instinctive dread that was so commonly felt when a case of insanity was met with, all medical men would be

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prepared to act fearlessly, spontaneously, and self-reliantly on their own responsibility, and be better able to know when to intervene. Asylum experience is of course necessary, but careful attendance at demonstrations, reading, and observation are of importance. Dr. Tuke would go further, and say that all men, whether medical or not, would be the better for having some knowledge of the subject, and of first principles and possible results, for the most important thing in lunacy is early recognition and early treatment. The general public know nothing of lunacy. They have been allowed by those who should guide them aright to remain in a condition absolutely behind the times—namely, one some fifty years old—instead of keeping pace with the tremendous changes that have taken place. Outcry is made if anything goes wrong, but little is thought or known of the zeal and self-sacrifice of those who devote their lives to the study of insanity and the care of the insane in both public and private asylums. The private practitioner has much to think of in the early stages. There are friends and relatives (often all in opposition to each other) to advise, nurses to provide, treatment to be considered, changes, removals, and choice of places to be decided on, and much thankless work to be done. After a few words on the legal processes in private and pauper cases, and on the subject of writing certificates, the kinds of cases that were most likely to confront the private practitioner were mentioned, the puerperal, melancholic, and those cases where depression was a marked symptom from any cause, too often met with in our daily papers, and too often consigned to oblivion with the verdict of "temporary insanity," a thing that rarely, if ever, exists. Under this head come cases of imaginary impotence, disease, unworthiness, wickedness, and bankruptcy, all of which should never be treated lightly. Maniacal cases (apart from temporary febrile and alcoholic conditions) and cases of youthful, senile, hysterical, and climacteric insanity were mentioned, and special attention drawn to the early recognition of general paralysis of the insane. All these depend on the watchfulness and action of the "usual medical attendant." Dr. Tuke concluded by protesting against many of the cruel, ignorant, and idle things that had been said and written of late about insanity and those who made it their special study, and against the violent attacks levelled at individuals started by those who are either ignorant or wilfully desirous of advertising themselves and misleading the public.

Mr. KEELE, while quite concurring in the advice of Dr. Tuke as to the benefit of early recognition and treatment in cases of insanity, spoke of the many difficulties a practitioner had to encounter in dealing with such cases. He exemplified this by narrating a case that had given him much trouble and anxiety last summer. A man gradually developed insanity, imagining there was a league of men against him, and by falsely accusing his relatives and threatening them with violence. He was unable to get this man to go into the country for a change, for, like Dr. Mack's patient, he positively refused to go. One day the man jumped out of a window to escape his imaginary foes, and Mr. Keele then certified to his being of unsound mind, and the relieving officer removed him to the infirmary of the Islington Workhouse. The patient was duly seen by the magistrate and medical officer, with the result that a detention order of fourteen days was given. At the end of that period the man was discharged from the infirmary without any previous notice being given to his relatives. He was fortunately met in the street by his sister and taken home. Mr. Keele had written to the relieving officer and stated he considered such conduct on the part of the authorities as cruel and wrong. The man continued at home for about a month, his delusions more intense, and his threats of violence increasing. Mr. Keele then advised the relatives to consult a specialist in lunacy, with the result that an urgency order was obtained for his removal to St. Luke's, where he is still, after two months, a patient requiring careful observation.

After some remarks by Dr. DUCAT, Dr. REID, Mr. WORLEY, and Mr. KING, a vote of thanks was passed to Dr. TUKE, and the meeting adjourned.

LIVERPOOL MEDICAL INSTITUTION.

Lamellar Fibromata.—Exhibition of Cases and Specimens.

A MEETING of the Pathological Section of this society was held on Dec. 5th, Mr. G. G. HAMILTON being in the chair.

Dr. ABRAM read a short paper upon Lamellar Fibromata, which was illustrated by specimens and by lantern slides. The lantern slides were prepared from photographs taken by Professor Boyce.—Dr. BUCHANAN said that in a specimen he had examined the structure was identical with that of a hydatid membrane, and no cellular elements were observed.—Dr. WIGLESWORTH called attention to the similarity in microscopical structure displayed by Dr. Abram's specimens and the fibrous thickenings of cartilaginous consistence which are not infrequently met with on the splenic capsule in old people and alcoholic subjects, and he said the latter formations might be described as lamellar fibromata.—Mr. HAMILTON, Mr. PAUL, Mr. LARKIN, Professor BOYCE, and Professor SHERRINGTON took part in the discussion, and Dr. ABRAM replied.

Dr. BUCHANAN showed the Stomach from a case of Carbolic Acid Poisoning, and a beautiful drawing of the appearance of the specimen when fresh. He drew attention to the immunity of the tongue and the glosso-epiglottidean folds, and pointed out that the duodenum was not affected in the least degree. The stomach was greatly contracted, and the mucous membrane had a greyish, brilliant pearly lustre like oily putty.

Dr. WIGLESWORTH showed (1) the Brain from a case of Hydrocephalus; and (2) the Brain from a case of Cerebral Tumour.—Mr. PARKER referred to a case of Brain Tumour in which, some six years ago, he had removed a tumour from the right Rolandic area, the patient being still alive and well. In his case, however, the diagnosis had not been one of great difficulty, unlike Dr. Wiglesworth's, in which diagnosis of the condition was impossible.

Dr. A. W. CAMPBELL showed some Brain Sections from a case of Cerebral Hæmorrhage prepared by a new method. They were made in March, 1895, and had satisfactorily retained their colour. The following is the method of procedure: 1. Immersion of the brain in a 1 in 20 carbolic acid solution for a few days. 2. Sections one-eighth to a quarter of an inch in thickness are then cut. 3. The sections are placed face downwards upon a piece of glass, surrounded by a framework of wood, and covered with melted paraffin (46° C.); the paraffin is then allowed to set. 4. The glass is then lifted up, some Farrant's solution poured over the section, and the glass replaced, the edges being sealed by Canada balsam. 5. A plaster-of-Paris frame is then moulded on to the sides and back of the specimen.

Mr. MURRAY exhibited some patients suffering from Lymphangeioma and Sections of the Growths.—Mr. PARKER had lately had a similar case. He discussed the questions of angeiomata and lymphangeiomata, and asked for an opinion on the subject of "degenerated nævi," which he held to be lymphangeiomata.—Professor BOYCE, Mr. HAMILTON, and Mr. BARENDT also spoke.

Dr. ANNETT showed specimens of Meningo-encephalitis.

Mr. THELWALL THOMAS exhibited specimens of Tuberculosis of the Peritoneum snipped out during an operation. The specimens showed typical tuberculous granulations. The boy, now eighteen months after operation, is in perfect health. He also showed an Implantation Cyst from the Head of the Metatarsal Bone of the Great Toe. The epithelial graft had no doubt been made in the process of scraping for caries, which had been performed on three occasions. He likewise showed two cases of Multiple Epitheliomata: (1) epithelioma in the centre of the lower lip removed by operation, followed three years later by two separate and distinct growths in the same lip, but away from the scar; and (2) hard warts of the lip and juicy epithelioma of the tongue.

Mr. MURRAY and Mr. PAUL brought forward a case of Sacro-coccygeal Tumour in a Boy aged two years. Mr. Paul said the growth measured five inches by four inches by three inches, and was situated between the rectum and the coccyx, projecting on the surface behind the anus where the skin was ulcerated over it. The central part consisted of a soft fungating growth of malignant appearance, composed for the most part of trabeculæ of connective tissue set with one or more layers of cubical epithelium, but also containing tracts of skin, with hairs, sebaceous and sweat glands. The outer parts of the growth were dense and fibrous and contained immature bone. In another part Lieberkükn's follicles were recognised. The structure was very complex, and discussing the relation of this with other tumours Mr. Paul thought it should be grouped with the congenital renal and thyroid growths.—Mr. PARKER said Mr. Paul had not mentioned the adenoid variety of these growths, of which he had shown a specimen at the previous meeting. He considered that the growth was

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not malignant, but simulated the malignant state from the rupture of a cyst and subsequent septic inflammation.

Mr. G. G. HAMILTON showed specimens of (1) Union of Intestine by Murphy's Button; and (2) Cholecyst-colostomy.

Dr. LEIGH showed photographs of Count Orloff. He considered the "wonder" to be an example of osteo-malacia.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Nephrectomy for Hydronephrosis.—A Case of Diabetic Neuritis.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 4th, Dr. CATTLE being in the chair *pro tem.*

Mr. ANDERSON read a paper on Nephrectomy for Hydronephrosis. The details of five cases were given, all of which recovered after operation. In two cases, a boy aged ten and a woman aged thirty-seven, the usual symptoms of hydronephrosis were present, such as attacks of spasmodic pain, and formation of a tumour which disappeared coincidently with a large flow of urine and relief of the pain. In both these cases the origin of the ureter was reduced to a pin-hole, the kidney substance atrophied, especially in the case of the female, whose symptoms had lasted twenty years, and the pelvis was dilated to the capacity of a pint or more. In three other cases, one in a man, the hydronephrotic condition was associated with mobility of the organ. The case in the man was successfully treated by suturing the kidney to the lumbar muscles. The same treatment was pursued in the case of a female, but the kidney subsequently broke loose. This was due, it was thought, to the stitches cutting through the attenuated kidney substance. The patient was seized with rigors, high temperature, and swelling of the abdomen. On exploration the kidney was found swollen and livid owing to twisting of the pedicle. It was removed, and the patient recovered. In a third case of hydronephrotic and movable kidney extirpation was at once carried out. The paper concluded with a review of the various causes of hydronephrosis, Mr. Anderson remarking that he believed his cases of pin-hole ureter were almost unique.—Dr. WATSON made some remarks.

Mr. PRYCE read notes of a Case of Diabetic Neuritis in a man aged fifty years who had drunk freely of beer and spirits. He was ataxic, but Romberg's symptom was not well-marked. In the left leg no knee-jerk could be obtained, an erythematous rash was present, and there were trophic ulcers and anæsthetic patches on the foot. He had suffered from sciatic pains. The urine contained much sugar.—The CHAIRMAN and Mr. ANDERSON made remarks, to which Mr. PRYCE replied.

Mr. ANDERSON showed (1) an Ovarian Tumour weighing ten pounds; (2) a Tumour of the Right Lobe of the Thyroid Gland; and (3) two Hydronephrotic Kidneys with Pin-hole Ureters.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Vaginal Cœliotomy.

AN ordinary meeting of this society was held at the Birmingham Medical Institute on Dec. 4th, the President, Dr. T. EDGAR UNDERHILL, being in the chair.

Mr. MARRIS showed for Dr. SIMON a boy seven years of age afflicted with Leucoderma. He was one of ten children and had always been weaker, mentally and physically, than the rest of the family. Twelve months ago his hair, which had been almost black, began to fall off in patches. As the hair grew again it was found to be pure white. At present the head is well covered with a growth of very soft white hair, except for a band about two inches broad extending round the back of the head from ear to ear which retains its original dark colour. Below this band the hair is again white. Scattered without symmetry over the body and limbs are patches of white skin surrounded by a brown pigmentation, which fades gradually into the natural skin tint. The areas of white skin vary in size. The skin of the face is uniformly dark, contrasting markedly with the white hair. Under the microscope the hairs are seen to contain a few relics of the dark medulla. There is no deepening in colour of the nipples and there is no pigmentation within the mouth.

Mr. BARLING showed Photographs of an Unusual Case of Syphiloderma, with hæmorrhagic centres to the individual patches.

Mr. HAMMOND SMITH showed a Knee-joint with Fracture of the Outer Head of the Tibia extending into the joint. The cause was a fall of coal, which produced a compound fracture of the leg unconnected with that into the knee-joint. Large hæmorrhage into the joint and indistinct crepitation led to the diagnosis of the outer fracture and amputation through the lower part of the thigh.

Mr. BARLING showed a Sequestrum from a case of "Quiet Necrosis" in a male aged fifty-two, which in many ways simulated sarcoma of the femur. There was a massive swelling encircling the bone and completely fixed on it, and without any of the signs of inflammation. Incision into this revealed dense inflammatory infiltration of the muscles and a small quantity of semi-fluid material at the back of the femur in contact with a small patch of bare bone, whence the sequestrum eventually separated. The necrosis followed double pneumonia some three months before, the swelling appearing during convalescence.

Dr. PURSLOW showed a specimen illustrating Perforation of the After-coming Head. The patient was a primipara, and when Dr. Purslow saw her attempts had been made, under chloroform, to deliver the head by traction on the body and by forceps. Pulsation in the cord had ceased some hours previously. The perforator was passed through the roof of the mouth, and after evacuation of brain matter the head was delivered by traction on the body. Attention was drawn to the advantages offered by the roof of the mouth as a site for perforation of the after-coming head.

Dr. SHORT showed the Gall-bladder and Ducts from a man aged seventy-nine years who died from Senile Asthenia. A few days before death jaundice set in, with bilious urine; there was no pain and the stools were dark in colour. After death the gall-bladder was found full of gall-stones, contracted, and fibrosed. The common bile-duct was much dilated and partially obstructed by a stone. The dilatation appeared of old date, but no history of any attack resembling hepatic colic could be obtained.—Dr. SHORT also showed the Stomach of a man aged forty. Three years before death the man had extremely severe hæmatemesis, followed by pain, but unaccompanied by signs of hepatic cirrhosis. The pain, at first paroxysmal and afterwards constant, persisted, and the case ran the clinical course of a pyloric cancer, with dilated stomach, but no tumour was felt during life, and the pain at times was intense. He refused operative interference. At the necropsy a large flat ulcer of the size of a crown-piece was found on the posterior wall of the stomach, close to the pyloric aperture, which was narrowed by the hard, raised edge of the ulcer. Microscopically no evidence of cancer could be found.

Dr. RUSSELL showed a specimen of Dilated Duodenum from a case of Peripheral Neuritis.

Mr. W. EDELSTEN BRACEY showed a Portable Irrigator the main feature of which was a bucket of sufficient size which was collapsable in the manner of the well-known drinking cup. The apparatus was well made, there being absolutely no leakage, and the price was moderate.

Mr. JOHN W. TAYLOR read a paper on Cases of Vaginal Cœliotomy. A description was given of the operation, followed by a series of cases illustrating Mr. Taylor's experience of vaginal cœliotomy as applied to vaginal fixation of the uterus, removal of the appendages, igni-puncture of the ovaries, and separation of pelvic adhesions. Mr. Taylor concluded his paper with a description of the part played by this operation in the practice of Professor Martin and Dr. Dührssen of Berlin, and drew attention to the important position which the operation was rapidly assuming and to some of its more recent developments.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Cranial Hypertrophy.—Fracture of the Ethmoid Bone with Basal Meningitis.—Method of measuring the Shortening at the Neck of the Femur.—Epidemic of Hysteria.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 29th, Mr. MAYO ROBSON, President, being in the chair.

Mr. HARTLEY showed an unusual case of Cranial Hypertrophy in a boy aged twelve years. The condition was congenital and almost entirely confined to the cranium, the

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bones of the face being very slightly affected. The principal bosses were two—one at the vertex and a second on the left side of the skull involving chiefly the parietal region. In addition there were irregular thickening of the occiput and an invasion of the orbits producing marked proptosis, absolute loss of one eyeball, and complete blindness in the other. The upper jaw was much compressed laterally, the two halves forming a very acute angle in front and the teeth growing very irregularly. (Plaster casts by Mr. MARGETSON were shown.) The lower jaw was normal. There was no evidence of intracranial disease, of hydrocephalus, or congenital syphilis, and no deformity of the limbs or joints. The patient's mental development is quite up to the average; he has a good ear for music, and is being educated on the Braille system. The case seems nearest akin to leontiasis ossea.—Dr. GRIFFITH mentioned that the museum of the medical school contained a skull closely resembling that in the case just recorded, and he himself had shown a somewhat similar case at a previous meeting.—The PRESIDENT had seen a somewhat similar case improved by iodide of potassium.—Dr. EDDISON asked whether there was any evidence of syphilis in the parents; he thought the appearance suggested it. It was unlike any case of osteitis deformans that he had seen, nor was it ordinary hydrocephalus.

Mr. W. H. BROWN read notes of a case of Fracture of the Ethmoid Bone with Basal Meningitis. The patient, a boy aged sixteen years, was struck over the occipital region of the skull by a falling stone; he fell forward, his forehead coming violently into contact with the ground. He was unconscious for a short time. No special symptoms were noticed, but he was kept in bed. On the third day, when sitting up, a copious watery discharge ran from both nostrils and continued for six days, when it ceased. The temperature rose to 104·5° F. and was accompanied by intense frontal pain, photophobia, tinnitus, and a transient strabismus. Three weeks after the accident he was admitted to the Leeds Infirmary under the care of Mr. Brown. There were then no external signs of injury beyond some discolouration of the skin at the root of the nose. He complained of severe temporal pain; the movements and sensations of all the limbs were normal; the temperature was 100°; there was convergent strabismus affecting both eyes, the pupils were dilated and reacted slightly to bright light, and double optic papillitis was present. Later, vomiting occurred at irregular intervals; the boy was irritable and at times delirious, but gradually his symptoms disappeared and he is now quite well. Mr. Brown believed that only a few cases of basal fracture with nasal discharge of transparent fluid recovered, and said that a discharge from the Schneiderian membrane might be taken for cerebro-spinal fluid. He thought the fluid in this case was cerebro-spinal, on account of the quantity and absence of any affection of the sense of smell.—Mr. SECKER WALKER said he had lately examined the eyes again, and all the ocular symptoms had disappeared except some slight swelling of the right optic disc. Vision in each eye is good. He mentioned that at least four cases of persistent discharge of cerebro-spinal fluid from the nose associated with double optic neuritis had been reported, but in these cases there was no history of traumatism.—Mr. WARD and Mr. LITTLEWOOD both thought that the ice-bag was of little value in the treatment of head injuries.—Dr. TREVELYAN thought it was a typical example of traumatic cerebro-spinal meningitis both in its symptoms and temperature chart. He observed that the prognosis of these cases of non-tuberculous meningitis was a matter of exceptional interest. The longer the disease had lasted after a certain point, the better the patient's chance of recovery. The particular micro-organism setting up the disease was also a very important matter. Spinal puncture might in the future throw light on this latter question, and also show how far the pathological processes might extend in the direction of pus production and yet be consistent with recovery.

The PRESIDENT demonstrated a Method of measuring the Shortening at the Neck of the Femur which he had employed for several years, and which he believed had not been hitherto described. The method consists in drawing a transverse line from the tip of the great trochanter forward and inwards across the front of the thigh on each side, and dropping a vertical line to meet this from the tip of each anterior superior spine; the latter constitute the measuring lines in question. The advantages presented by these measurements are (*a*) the ease with which they can be made with the patient in the dorsal decubitus; (*b*) the degree of exactitude which the method renders possible; and (*c*) the manifest advantages for demonstration purposes of seeing simultaneously the limbs which have to be compared.

Mr. J. CROSSLEY WRIGHT read notes of an Epidemic of Hysteria which took place on the girls' side at the Crossley and Porter School. The patients were fourteen in number and varied in age from eleven to fourteen years. The cases occurred between Nov. 11th and 24th, and in the majority one type was distinguishable—viz., clonic rhythmical spasm of the upper limbs varying in intensity between a fine tremor and coarse violent movements involving the whole of the trunk. In some of the cases the elbow-joint was rigidly extended, the fingers being flexed firmly into the palm, while the chief motion was at the shoulder-joint, giving rise to forcible alternate abduction and adduction as well as internal rotation of the whole limb. In two cases there was a distinct hammering action of the clenched fist against the side, table, or against any surface with which it was placed in contact. In a single instance there was spasm of the eyelids, with an occasional quick opening and shutting. No definite cause for the commencement could be made out; some of the girls were working for examination. The treatment was the same in all the cases—viz., isolation, rest in bed, with milk diet, faradaism, a succession of blisters in order to cause pain to the moving parts, and for drugs valerian and bromide of potassium. That which seemed to have the greatest effect was the blistering, and a marked improvement was at once made out.—Dr. BARRS considered that tremor was a common symptom in hysteria.—Dr. EDDISON advocated a more vigorous line of treatment and asked if it was certain that, as Mr. Wright had stated, the movement continued during sleep.

The following card specimens were shown:—The PRESIDENT showed: 1. Part of the Right Lobe of a Liver weighing half a pound, removed for Carcinoma from a patient aged fifty-two. The patient has progressed satisfactorily since the operation a week before. 2. Carcinoma of Small Intestine removed by Enterectomy and Suture over Decalcified Bone Bobbin, the patient recovering eight days after operation. 3. Fractured Internal Semilunar Cartilage removed for lameness which had existed for three years. It had produced all the symptoms of loose cartilage.

Mr. LITTLEWOOD: Case illustrating a New Method of Tendon Suture.

Mr. W. H. BROWN: Case in which the Urachus remains Patent, a large quantity of Urine passing by the Umbilical Opening.

Mr. SECKER WALKER: Case of Severe Symblepharon relieved by a modified Teale's Operation.

Dr. T. WARDROP GRIFFITH showed two cases of Congenital Cardiac Disease. One was diagnosed as of the usual type of pulmonary stenosis, with consequent imperfection of the cardiac septum, and the other presented mixed characters. He also showed a case of a man suffering from Addison's Disease who was entering on a course of Treatment by Suprarenal Extract.

CARDIFF MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Increase of General Paralysis in England and Wales.

AN ordinary meeting was held on Dec. 6th at the society's new rooms in Queen-street, the President, Alderman EDGAR JONES, M.D. Durh., being in the chair.

Dr. PATERSON showed three cases of Graves's Disease, in all of which there was neither exophthalmos nor V. Graefe's sign.—Dr. C. T. VACHELL thought the slight thyroid enlargement was of a simple nature and the accelerated pulse due to a neurotic temperament.—Dr. JOHN WILLIAMS spoke, and Dr. PATERSON replied.

Mr. J. LYNN THOMAS showed: 1. Scirrhus of Male Breast, the size of an orange. 2. Vermiform Appendix recently amputated after the Seventh Attack of Typhlitis, the patient doing well. 3. Calculous débris removed from the left kidney, the chief symptoms being hæmaturia and extreme irritability of the bladder, the location of the mischief being differentiated by the cystoscope. Eighteen months after the nephrolithotomy the patient's health and urine were normal. 4. Calculus weighing six drachms suprapubically removed from a girl aged nine years. 5. Alternating Calculus weighing six ounces six drachms removed by the combined perineal and suprapubic method. The combined method greatly facilitated the removal of the large stone.—

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Dr. HERBERT VACHELL observed on the rarity of scirrhus of the male breast, he having only seen one in the practice of the late Mr. John Wood.—Dr. COOK had seen a calculus in a young girl, and Dr. RHYS GRIFFITHS made some remarks and showed two calculi removed by lateral lithotomy.

Dr. STEWART of Bridgend read a paper on the Increase of General Paralysis in England and Wales. He treated the subject chiefly from the statistical standpoint, and showed in which grades of society and sex the increase took place.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases and Specimens.—Oxaluria.—The Results of Surgical Measures in a Series of Cerebral Cases.

THE second meeting of the seventy-fifth session was held on Dec. 4th, Dr. ARGYLL ROBERTSON, President, being in the chair.

Dr. LUNDIE showed Photographs of a rare Tumour of the Upper Lip in a boy aged thirteen years. The tumour was situated in the thickness of the lip equi-distant from the skin and mucous membrane.—Mr. STILES examined the tumour after removal and reported that it was of the nature of an endothelioma undergoing myxomatous degeneration with here and there cartilaginous development. Two specimens were shown under the microscope.

Dr. ALLAN JAMIESON showed a case of Morphœa or Circumscribed Scleroderma. The disease had begun sixteen months before as a small point-spot under the right eye. Other patches appeared later. They all had a violaceous tint fading on pressure. All the lesions were restricted to the skin supplied by the second and third branches of the fifth nerve. There was no lardaceous deposit.

Dr. FELKIN showed a new form of Safety-pin with a special catch to prevent it becoming accidentally unfastened.

Mr. STILES showed a Pneumatic Rubber Truss for Hernia in Infants. It possessed many advantages over the spring truss, especially in difficult cases. It set up no irritation, and the infant did not grow out of it.

Dr. J. C. DUNLOP read a contribution on Oxaluria and the Secretion of Oxalic Acid in the Urine. The paper was an abstract of work done in the laboratory of the Royal College of Physicians of Edinburgh. He first glanced at the literature of the subject, pointing out the contradictory nature of the chemical and clinical observations. In his early observations he had used Neubauer's method, but this was found so unsatisfactory that a new method had to be devised. Observations with the microscope showed that oxalic acid was frequently present in the urine, and from chemical analysis he found that the urine of all men eating an ordinary mixed diet contained oxalic acid, and that consequently oxalic acid was a normal constituent of the urine. Oxalic acid was usually described as precipitated in the urine as a calcium salt in two forms, octahedral and dumb-bell. The latter, however, he found to be crystals of carbonate, not oxalate. What determined the precipitation of crystals of oxalate of lime had not previously been shown. The balance of evidence seemed to show that precipitation was prevented by the presence of acid phosphate of soda, and possibly by the presence of other solvents. It was not due to the presence of excess of lime. In urines depositing crystals the average percentage of oxalic acid present was found to be 0·0025, while in those not depositing crystals it was 0·0010. He therefore concluded that precipitation showed increased percentage of oxalic acid. Many theories had been advanced to show that oxalic acid could be produced in the metabolic changes of the proteids and carbohydrates, but Dr. Dunlop found that the excretions could be arrested by a restricted diet free from oxalic acid. He hence concluded that food-stuffs were the source of the oxalic acid in the urine, and not the metabolism of proteids or carbohydrates. He had carried the experiments further by adding a substance containing oxalic acid—e.g., tea—to the diet, when an excretion of oxalic acid took place. The clinical condition oxaluria described by Begbie, presented besides the condition of the urine, the well-known symptoms of pains, dyspepsia, and nervous symptoms. The deposition of crystals of oxalate of lime indicated increased excretion of oxalic acid, but to what this increased excretion was due was not indicated by examination of the urine. The pains in the lumbar region were probably due to mechanical irritation due to the passage of the crystals. The dyspeptic symptoms in oxaluria are, Dr. Dunlop considered, identical with acid dyspepsia, and the treatment in both conditions was similar. The nervous symptoms in oxaluria were identical with those in acid dyspepsia. The consideration, then, of all the symptoms of oxaluria showed that it did not differ from acid dyspepsia except that the deposition of oxalate of lime crystals in the urine occurred with more regularity. Oxaluria, he considered, was no pathological entity, and the recognition of oxalates in a urinary deposit had no diagnostic value.—Dr. NOEL PATON complimented Dr. Dunlop on the value of his contribution, and thought he had proved that oxalic acid was not formed by any metabolic process, but taken in the food. Dr. Dunlop had exploded an old and popular fallacy.—Dr. GRAHAM BROWN was not inclined to abandon his old friend oxaluria. Cases had been described where oxaluria and diabetes alternated, and then in dogs, when the respiration was interfered with and dyspnœa produced, oxalates appeared in the urine, which disappeared as the dyspnœa disappeared.—Dr. GILLESPIE suggested that oxalates might be found in the intestines by the action of organisms in starches, &c. He suggested experiments with guaiacol or some other intestinal antiseptic.—Dr. STOCKMAN thought Dr. Dunlop had proved his point that taking a healthy man oxalates in the urine could be got rid of or produced at will. He thought, however, observations should be made on an individual who had the faulty habit of transforming food into oxalates and excreting them.—Dr. JAMES expressed his belief that oxalates might be the result of altered metabolism.—Dr. W. RUSSELL thought there was some misapprehension as to the position of oxaluria. It was not treated as a special disease in all English books, and it had been long known that it was associated with gastro-hepatic derangements. While Dr. Dunlop had proved his main contention in the case of healthy persons, it would be well to make investigations in morbid digestive conditions before it could be absolutely accepted that vegetable food was the sole source of oxalates, and that they might not be derived from other substances, as a result of faulty digestion.

Dr. G. A. GIBSON read a paper on the Results of Surgical Measures in a Series of Cerebral Cases. He gave a record of seven cases of cerebral disease where surgical interference had been considered advisable. Case 1: A patient complained of persistent headache, with loss of power in the left arm and leg. The left side of the face was involved in the paresis, and the speech was indistinct. The pain in the head started from a swelling situated three inches and three-quarters behind the glabella and a little to the right of the middle line. It was evidently of a bony nature. Optic neuritis was present. Syphilis having been excluded, and there being no evidence of tubercle, the tumour was held to be sarcomatous. The patient would not consent to operation. Three months afterwards he was readmitted to the Edinburgh Royal Infirmary in a very much worse condition. Mr. Annandale operated over the middle third of the motor area on the right side and removed a large glio-sarcoma. The patient made an uninterrupted recovery and had remained in good health ever since, having recovered the use of almost all his muscles. Had the operation been performed earlier Dr. Gibson thought in all probability he would have regained more of the power of fine adjustment. Case 2: A man aged thirty years had had syphilis. On admission he was in a torpid state. The pupil reflex was sluggish. The left leg, arm, and side of face were paralysed. Coma supervened. Mr. Alexis Thomson operated in the middle zone of the right Rolandic region. The dura mater and brain bulged very markedly, but nothing abnormal could be found. After the operation the patient recovered consciousness, but there was no improvement in the paralysis. Three days afterwards he collapsed and died. Post mortem a tumour was found occupying the right corpus striatum and the knee and anterior portion of the posterior limb of the internal capsule. Case 3: A married woman complained of headache, giddiness, and difficulty in walking. The headache was deep-seated and strictly localised to the frontal region over the left eye. There was optic neuritis, with nystagmus. The left pupil was larger than the right. There was no paralysis with the exception of the soft palate. The knee-jerks were exaggerated. The gait was staggering, the patient walking with the feet wide apart. Vomiting unassociated with

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the ingestion of food was present. The lesion appeared to be cerebellar, on the right side and low down. Dr. Purves Stewart pointed out that the headache might be due to the irritation of the fronto-cerebellar fibres crossing from the left frontal region to the superior cerebellar peduncle. The suggestion seemed a valuable one, and added a symptom of diagnostic value in the study of cerebellar disease. Mr. Annandale operated and removed a tumour from low down in the lateral lobe of the cerebellum, rather closer to the foramen magnum than to the outer wall of the skull The patient made an uninterrupted recovery and had since passed through a normal labour. Case 4: Infantile hemiplegia with convulsions. The skull was trephined, but nothing abnormal was found, and little benefit followed the operation. Case 5: A woman aged forty-seven years suffered from convulsive attacks. The intelligence was weak. She was believed to be suffering from dementia with a focus of irritation on the right side of the cortex. Dr. Cotterill performed an exploratory operation, but no gross lesion could be discovered. The patient died. Post mortem the brain was found to present the histological changes of general paralysis of the insane. Case 6: A man thirty-three months before admission had been injured by a plank falling on his head from a height of thirty feet. Since then he had spent most of his life in bed, suffering from occipital headache, giddiness, inability to walk, and deafness of the left ear. No spasmodic phenomena were present. There were on the head a scar and depression. Mr. Alexis Thomson removed with the wheel-saw an elongated section of bone, including the depression. Case 7: A man was admitted in a comatose state with twitchings of the right side of the face. On the following day he had a localised convulsion, commencing with the right side of the face and spreading to the arm and leg on the same side. This was repeated every ten minutes. Mr. Alexis Thomson operated and removed an extensive blood clot. Nine hours after operation the spasms ceased, but the patient sank and died. Post mortem a fissured fracture was found passing from the left parietal eminence to the middle fossa of the bone.—Dr. PURVES STEWART indicated the anatomical considerations which had led him to think that the frontal headache might be an evidence of cerebellar lesion, and he thought it might prove to be a new, a valuable means of differentiation.—Dr. W. RUSSELL said that the record of cases was such a record as was valuable to the profession, for it gave the whole experience of one man and was not confined to a few successful cases. It was records such as this that were wanted, not only in brain surgery but in the surgery of other regions.

ROYAL INSTITUTION.—The following are certain of the lecture arrangements before Easter: Dr. John Gray McKendrick, Professor of Physiology in the University of Glasgow, six lectures (adapted to a juvenile auditory) on Sound, Hearing, and Speech; Professor Charles Stewart, Fullerian Professor of Physiology, R.I., eleven lectures on the External Covering of Plants and Animals: its Structure and Functions; Mr. H. Marshall Ward, Professor of Botany in the University of Cambridge, three lectures on Some Aspects of Modern Botany; Lord Rayleigh, Professor of Natural Philosophy, R.I., six lectures on Light. The Friday evening meetings will begin on Jan 17th, when a discourse will be given by Lord Rayleigh on More about Argon. Succeeding discourses will probably be given by Professor Burdon Sanderson, Dr. John Murray, Dr. Edward Frankland, Professor T. R. Fraser, Professor Dewar, and other gentlemen.

DISINFECTING PLANT IN ISLINGTON. — The vestry of St. Mary, Islington, have lately invested in the erection of a very complete disinfecting plant and a shelter house for a family invaded by infectious disease. The cost of the station, which is in the middle of the Seven Sisters'-road, is roughly as follows: of two disinfectors, £500; of buildings, including shaft and laundry, £1100; of destructor, £85; of laundry appliances, £125. Besides, there is the cost of the shelter house, £1150. There is now no excuse in this parish for not being thorough in the disinfection of clothes, bedding, and other articles. This is a form of cremation of which all sensible ratepayers must approve. The station is found so useful that some neighbouring parishes contract for its use. Though the outlay may seem large, the cost of work is cheap compared with the old rates of disinfecting clothing, &c.

Reviews and Notices of Books.

Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation. A Series of Drawings, with Descriptive Text and Histories of the Cases. By CHARLES J. CULLINGWORTH, M.D., Hon. D.C.L. Durh., F.R.C.P., Obstetric Physician to St. Thomas's Hospital, London; Examiner in Obstetric Medicine at the Victoria University; late Examiner at the University of London and the Royal College of Physicians, London; Hon. Fellow of the American Gynæcological Society, &c. London: Rivington, Percival, and Co., King-street, Covent-garden. 1895. Price 12*s.* 6*d.*

WE do not know that this work could have been subjected to a better test than that to which we have put it—namely, we have recently had occasion to refer to it in connexion with a case under treatment and have found it practically helpful. The author says that it has for some years been his intention to publish a series of illustrations of the diseases of the Fallopian tubes. The present work is the outcome of that intention. All the drawings are from specimens removed in the course of his own operative work; they are consequently taken from actual specimens, and are accompanied by a clinical history of each case, with the view of furnishing his readers with clearer ideas respecting tubal disease, and enabling them more fully to realise the processes actually taking place in such cases. We can only say that the drawings seem to us to be very useful and accurate delineations, some of the coloured ones being especially so, the artist having succeeded uncommonly well in producing effective pictures of morbid conditions which are true to nature. The author, alluding to the frontispiece representing the normal tubes as they are found in the living subject, takes the opportunity of making a few pertinent observations about this anatomical region. A good drawing of the parts contained in this region, as seen from behind in the healthy adult, affords information which is obviously an essential preliminary to a recognition of the anatomical changes induced by disease, and the frontispiece supplies this desideratum.

In addition to other illustrations there are altogether fourteen plates of a larger size illustrative of Hydro-salpinx, Purulent Salpingitis, Pyo-salpinx simulating Tubo-ovarian Disease, Hæmato-salpinx, Unruptured Tubal Gestation with Apoplexy of Ovum, Ruptured Tubal Gestation, and Primary Carcinoma of the Fallopian Tube. A descriptive text giving the clinical features of the cases in a very pertinent and brief way, together with a summary on Salpingitis and Tubal Gestation, complete the volume. We trust that we have said sufficient as to the nature and contents of this work and of its series of illustrations of the diseases of the Fallopian tubes to indicate its eminently useful and practical character and the opinion we entertain of its merits.

Guy's Hospital Reports. Vol. LI. 1894. Edited by C. E. PERRY, M.A., M.D., and W. H. A. JACOBSON, M.A., M.Ch. London: J. & A. Churchill. 1895.

THIS volume consists chiefly of a series of articles based on cases which have occurred in Guy's Hospital at various times. Mr. L. A. Dunn records the sequel of a case of Fractured Pelvis with Ruptured Urethra, which was reported in Vol. XLIV., and the same author gives an account of a case of Multiple Atrophying Sarcomata of the Head and Neck. An abstract of a paper by Mr. Bryant gives some interesting information concerning temperature after operations. Dr. Hale White and Dr. Chaning Pearce contribute a very interesting article on Empyema following Lobar Pneumonia. Notes and temperature charts are given of twenty-six cases which were treated in the

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hospital between 1884 and 1894, inclusive, and the authors conclude that this complication has become more common now than in former times. Dr. John Fawcett has made a series of experiments with regard to the Efficiency of Piperazin in the Treatment of Gout, and does not think the drug so useful as many have supposed. Mr. F. Newland-Pedley writes two papers; one is on the Treatment of Suppuration of the Maxillary Antrum, and the other on the Treatment of Congenital Cleft Palate. Dr. Theodore Fisher gives an account of Some Researches into the Pathology of Hypertrophy of the Heart without Gross Organic Lesion. Mr. G. B. Smith discusses the question of Amputation in Senile Gangrene. Dr. Turner writes on Scarlatinal Nephritis and Dr. Silk on the Administration of Gas and Ether. Dr. Pye-Smith reports a case of Bilateral Paralysis of Facial and Auditory Nerves. A list of specimens lately added to the museum and the names of students who have passed examinations or received appointments end the volume, which is from first to last very interesting.

The Life of Sir Henry Halford. By WILLIAM MUNK, M.D. Leyden, F.R.C.P. Lond. London: Longmans and Co. 1895.

THE scholarly and accomplished librarian of the Royal College of Physicians of London has in this book set forth, at the express desire of the above-mentioned body, the life of one of the most celebrated of its members. Henry Vaughan, afterwards Halford, was the second son of James Vaughan, M.D., of Leicester, and was born in 1766. He was educated at Rugby and Christ Church, and from 1786 to 1789 studied medicine at Edinburgh. In 1792 he commenced practice at Scarborough, but at the end of that year started in London on a capital of £1000 borrowed from Lady Apreece, a friend and patient. In 1793 he was appointed physician to the Middlesex Hospital, and probably owing to his "Oxford connexions, his classical attainments, and his pleasing manners," was sworn physician extraordinary to the King before he was twenty-seven. In 1806 he gained great reputation by correctly diagnosing the disease from which the Duchess of Devonshire—Gainsborough's Duchess—was suffering, maintaining, in opposition to the whole of his colleagues, that she had hepatic abscess, and the accuracy of his diagnosis was proved by post-mortem examination. In 1809 he assumed the name of Halford on succeeding to the estate of Wistow and was created a baronet. In 1820 he was elected President of the Royal College of Physicians of London, a post he held until his death in 1844. We cannot here enter into all the details of his long career, of his close association with Royalty—he was physician to George III., George IV., William IV., and her present Most Gracious Majesty—of his services to the Royal College of Physicians, a body in which he took a most sincere interest: for all these the reader must refer to the pages of Dr. Munk's most interesting book.

As a picture of the manners of a bygone age the book is singularly faithful. Take the letter of the Royal College of Physicians in answer to the King's (George IV.) letter stating that the President of the College for the time being should always hold the office of physician in ordinary to the sovereign (pp. 104–5). We should have much liked to hear Thackeray's opinion of it. Again, take the letter of Sir Henry Halford and Sir William Knighton to George IV. dissuading him from attending the funeral of his father (pp. 175–6).

Sire,—We your Majesty's physicians venture humbly to approach your Majesty to implore your Majesty to forego that satisfaction to your feelings which your Majesty attaches to a performance of the last act of filial piety to the late King your Majesty's father. We are scarcely yet relieved from that state of anxiety and alarm which your Majesty's dangerous illness gave rise to and from which your Majesty is only just extricated under the mercy of heaven. We cannot therefore contemplate an indulgence of your Majesty's wishes without absolute dismay, seeing the probability of a relapse in consequence of the exposure of your Majesty's person to the night air in a cathedral, under that anguish of mind which your Majesty was observed by everybody so painfully to suffer at the performance of the same sad ceremony last year.

And we humbly entreat your Majesty to yield not to our wishes only but to those of the whole nation, which would be expressed, we are persuaded, if it were generally known that your Majesty meditated this dangerous effort of respect and piety. HENRY HALFORD.
WILLIAM KNIGHTON.

It seems unkind to remind a son of the satisfaction to his feelings at burying his father, and as the son was observed to suffer "anguish of mind at the same sad ceremony last year" we cannot see why he was so anxious to bury his father again. Well, well, "Sir George Catacomb had the confidence of his sovereign, sir," as Mrs. Frank Berry remarked upon a memorable occasion. With all his faults—and Dr. Munk does not disguise them—Sir Henry Halford seems to have been a capable physician, and, above all, a master of what perhaps we are too prone to forget now—the art of giving a patient ease and comfort as well as of treating the disease itself. Perhaps this book will take the place of that inscription in the Library of the Royal College of Physicians which that body unanimously decided in 1844 to put up, but for which the Library walls still sigh.

LIBRARY TABLE.

The Art of Horse-shoeing: a Manual for Farriers. By W. HUNTING, F.R.C.V.S. London: H. and W. Brown. 1895. Price 3*s.* 6*d.*—IF horses are not properly shod it cannot be because of any lack of directions as to how this necessary act should be performed, as the literature of the subject may now be described as superabundant. In this addition to it, which is professedly written for farriers—horse-shoers, it may be presumed, are meant, for veterinary surgeons are very commonly designated farriers, particularly so in rural districts—the old ground is gone over, and we find a *réchauffé* of the descriptions and directions which have been so often served up, perhaps with the view of making them more palatable each time. They are good so far as they go, because they are founded on common-sense notions of what is necessary to keep the horse's foot healthy and render the services of the animal more efficient and durable, and also because they have the results of a great many years' experience—some of them more than a century old—as evidence of their utility, although they have only too frequently been overlooked or ignored.

Elements of Human Physiology. By ERNEST H. STARLING, M.D. Lond. Second edition. Pp. 454. London: J. & A. Churchill. 1895. Price 7*s.* 6*d.*—This edition of Dr. Starling's useful little manual for the student of physiology has been carefully revised. The author has been prudent in not materially augmenting the size of the volume. What the beginner requires is not so much the newest theories but old and well ascertained facts arranged in due sequence and clearly explained. This work is one of the best of those which aim only at giving the student such a groundwork of physiological knowledge as will fit him to understand and guide him in the practice of medicine, without compelling him to wade through much irrelevant matter which would, perhaps, be serviceable to him if he were qualifying for a professorship.

London Temperance Hospital: Report on Surgical and Ophthalmic Cases for 1894. London: J. Vincent and Son. 1895.—This report is edited by Dr. Leonard Wilde and contains tabulated lists of the various cases which were treated in the hospital. The total number of surgical cases admitted in 1894 was 572, of which 95 were ophthalmic cases. Particulars of more important operations are given as well as abstracts of the pathological conditions in fatal cases.

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There is also a full report of all the operations on the eye, with details of operations for extraction of hard cataract, from 1888 to 1894, inclusive. In the appendix it is stated that alcohol was not administered to any patient during 1894.

Cutaneous Medicine. Part I. By LOUIS A. DUHRING, M.D. Philadelphia and London: J. P. Lippincott Company. 1895.—This is a systematic work on Diseases of the Skin, which is intended to take the place of the author's "Practical Treatise on Diseases of the Skin," which is now out of print. An attempt is made in this new work to show the broad relations which the functions and diseases of the skin bear to the functions and diseases of the other systems of the body, and in so doing to give due attention to general diseases when local manifestations are the prominent symptoms. Part I. gives a good account of the general anatomy and physiology of the skin, and is made clearer by the presence of numerous excellent diagrams taken from many standard authors. The remainder of Part I. is taken up with general considerations regarding symptoms, etiology, pathology, diagnosis, treatment, and prognosis. There are numerous literary references throughout the work which add much to its value.

Hazelton: a Northumbrian Story. By Dr. WILLIAM MURRAY. Newcastle-on-Tyne: J. McCan.—It is well known that many of the busiest and most responsible members of the profession find their recreation in good novel-reading, and, indeed, that some of them are rather voracious in this respect; but few of them carry the recreation to the further point of writing novels. An instance to the contrary is before us in the shape of a very readable and commendably short novel by Dr. William Murray. "Hazelton, a Northumbrian Story," is redolent of that region, with the fine salmon-fishing rivers of the North Tyne, the Cheviot Hills, and other characteristic scenery. Dr. Murray displays a familiarity with the life of the natives in every grade of society, from the gamekeeper to the squire and the lord. He treats of young ladies and gentlemen in the perplexity of the love period of their lives and the perplexities of their suitors, together with the troubles of their seniors over other and deeper problems which make the interest of good novels. He writes on such subjects as easily as if he had written on them before, or should have done so, and out of the experience which an observing physician has of human life. We commend the story to our readers as one thoroughly sound in its tone and very readable—characteristics constituting great charms in such literature. The Northumbrian dialect may at first sight be a slight stumbling-block to some readers; but Dr. Murray renders it accurately as one to the manner born and guides us safely through the most difficult passages.

Contribution à l'Étude de l'Atrophie Musculaire Progressive, type Duchenne-Aran. Par le Dr. J. B. CHARCOT, Ancien Interne des Hôpitaux. Paris: Félix Alcan. 1895. (*Contribution to the Study of Progressive Muscular Atrophy, type of Duchenne-Aran.* By Dr. J. B. CHARCOT.)—This essay, the first literary venture of its author, is dedicated by him to the memory of his illustrious father. In the thoroughness and fidelity with which the task is executed, and the clearness with which the thesis is expounded, we recognise that the son has inherited those gifts of intellect which have made the name of Charcot world-famous. The aim of his present contribution to science is to re-establish as a distinct clinical and pathological entity that disease with which the names of Duchenne and Aran are indissolubly associated. Twenty years ago "progressive muscular atrophy" was an affection which figured prominently in the nosology, and the connexion of which with degeneration of the anterior cornua of the spinal cord was regarded as a leading example of the trophic influence of the nerve cells of that region. But the advance of neurology led to a remarkable disintegration of the affections included under the common term, and no work did more to this purpose than the demonstration by Professor Charcot himself of the fact that many a case was really due to secondary involvement of the grey matter in a sclerosis originating in the lateral columns. The study of multiple neuritis, of syringomyelia, and of primary myopathic atrophies still further reduced the domain of chronic anterior poliomyelitis, so that not a few of the most distinguished neurologists openly declared that it had no independent existence. Even Professor Charcot himself, his son informs us, was somewhat shaken in his belief in the existence of a protopathic spinal amyotrophy by finding in later years that cases which he had previously considered to be of this order were really of the nature of syringomyelia. Dr. J. B. Charcot, however, produces in this essay arguments and facts which tend in the other direction. He gives a full record of five cases personally observed in the Salpêtrière Hospital, two of which are completed by details of post-mortem examination; and he concludes that the Duchenne-Aran type of progressive muscular atrophy is a morbid entity absolutely distinct from amyotrophic lateral sclerosis. To be sure, he points out that accompanying the nerve-cell degeneration in the anterior cornua there is a zone of sclerosis in the direct pyramidal tract, but he regards this latter, quite reasonably, as being immediately dependent upon the nerve cell lesions. As we have said, the essay is lucidly written and its reasoning well sustained. It is further illustrated by some excellent pathological drawings. We trust that it will prove to be the forerunner of many important contributions to neurology from the same pen.

CHRISTMAS BOOKS.

Messrs. Blackie and Son send us, besides those we mentioned in our issue of Dec. 7th, the following books:

Through Russian Snows: a Story of Napoleon's Retreat from Moscow. By G. A. HENTY.—*A Knight of the White Cross: a Tale of the Siege of Rhodes.* By G. A. HENTY.—Mr. Henty has the faculty of really interesting boys (and many girls too), and he has told his story of Napoleon's retreat from Moscow with such spirit that it is one of the best he has written. It is the story of two boys who were left orphans, one of whom, after being taken prisoner for alleged smuggling and a suspicion of murder, volunteered for the French army on the condition that he would not be required to fight against the English; and the other, holding a commission in the English army, was offered an appointment on the staff of a Russian General on account of his knowledge of the Russian language. They both went through the Franco-Russian war of the first Napoleon and finally met at the conclusion of the campaign. The second story deals with the struggle between Christianity and Mahomedanism and the great part played by the Order of the Knights of St. John against the Turks. The story, which is well told, deals with the first siege of Rhodes, in which the author has no difficulty in finding plenty of incident and excitement to sustain the interest of his readers.

A Thane of Wessex. By C. W. WHISTLER.—This is a well told story, which, although written in a professedly archaic style, does not bore the reader as many modern archaisms do. The subject is the great Viking raid of 845, and tells how Heregar was outlawed on a false accusation of treason. He discovered the war ships of the Vikings, gave warning to his countrymen, and finally by strategy defeated the Danes at the mouth of the Parret, and was thereupon taken into favour again. The account of the battle is quite Homeric in its force and simplicity. Mr. W. H. Margetson's illustrations are good although anachronistic. We are sure

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there was not any Norman architecture at Glastonbury in 845, nor do we think that the habit of a Benedictine nun in those days was white.

At War with Pontiac. By KIRK MUNROE.—This is a capital story of Indian warfare in America. The hero passes successfully through some thrilling a ventures, being protected by a tattoo mark of the Bear Totem. He finally marries the daughter of Pontiac, the great chief, she being an eighteenth-century Pocahontas, but, luckier than her prototype, she lives happily with the man whose life she saved.

The Tiger of Mysore. By G. A. HENTY.—Any book about India ought to be interesting to English boys, and doubly so when written by such a good story-teller as Mr. Henty. "The Tiger of Mysore" is a tale of the times of Tippoo Saib; the adventures of Dick Holland in the attempt to rescue his father—an enthralling scene with the Tiger in the harem—and the escape from the hill fort being two episodes which stand out among a number of others.

Mr. T. Fisher Unwin sends us:

Dog Stories from the "Spectator." With an Introduction by J. ST. LOE STRACHEY. — This volume consists of selections from the correspondence columns of the *Spectator* descriptive of the intelligence, reasoning power, and sympathy of dogs. The selections are both good and interesting. All of us are fond of animals, boys and girls especially so, we are glad to say, for there is nothing more natural, wholesome, or beneficial than the cultivation of the humane and sympathetic sides of our natures. All who have read the letters that have appeared from time to time in our contemporary will be glad to renew their acquaintance with them in a collected form, and those who have not done so will peruse this volume with a fresh and lively interest.

Among the Gnomes. By FRANCIS HARTMANN, M.D.—The book is a far-off following of Peacock's satires, and though well done in places is, on the whole, heavy.

The Chain of Gold, by STANDISH O'GRADY, is an admirable tale of the adventures of two boys on the wild west coast of Ireland. The shifts to which the castaways are put and their ingenuity in overcoming them are vividly told, and the slight admixture of the supernatural in the story is quite in keeping with the Celtic spirit.

Stories for Ten-Year-Olds. By FRANCIS WILCE SAUNDERS. Series I. London: Swan Sonnenschein and Co. 1895. 2*s.* 6*d.*—We think these little sketches and stories are better suited to those who are over than under ten years of age. Many of them are no doubt clever and suggestive, but to be fully appreciated they seem to us to require a sense of humour and a power of reading between the lines which boys and girls often do not possess, and the style and language are not sufficiently clear, simple, and direct.

DECEMBER JOURNALS AND MAGAZINES.

The Medical Chronicle.—Dr. D. J. Leech contributes his paper on "Our Forefathers" which was read at the opening session of the Yorkshire Medical College on Oct. 1st, 1895, and an abstract of which was printed in our issue of Oct. 5th. Dr. Kelynack publishes an interesting series of cases showing the Connexion between Alcoholic Neuritis and Pulmonary Tuberculosis. Mr. E. H. Howlett contributes Notes of a Case of Tetanus following a Gunshot Wound successfully treated with Tetanus Antitoxin.

The American Journal of the Medical Sciences.—Among the many good papers in this periodical are Dr. William Osler's dealing with the Visceral Complications of Exudative Erythema, and Dr. R. T. Hall's upon Craniotomy for Epilepsy. Dr. Louis Starr gives a series of cases of Scurvy occurring in children fed upon sterilised milk.

The Practitioner.—Dr. R. T. Hewlett has an admirable paper upon Antitoxin Treatment.

New Inventions.

A BASIN ENEMA CLIP.

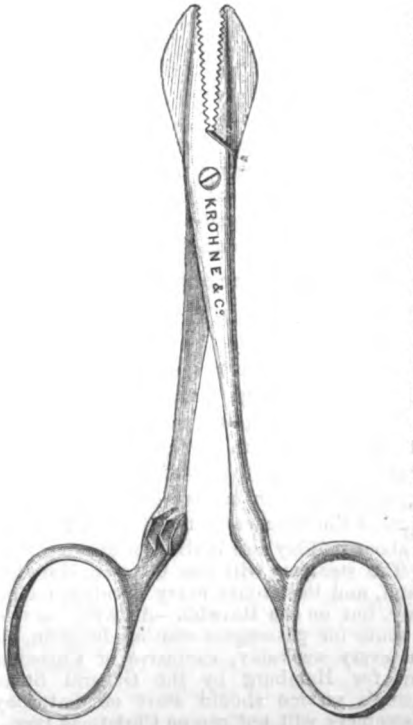
MESSRS. REYNOLDS AND BRANSON, 13, Briggate, Leeds, have sent us an ingenious and useful little appliance, one which will be a real convenience to medical men and nurses. The clip will hold the tail of any enema syringe firmly at the bottom of the basin, beneath the liquid, making the entrance of air impossible. It also has another very great



advantage in acting as a rest for the bone rectal (or vaginal) pipe after the enema has been used, and so avoiding the wetting of bed linen or making a mess on the floor or table. The illustration shows the clip at one-third its size. The price is 6*d.* (post-free 7*d.*), or 5*s.* per dozen.

IMPROVED CLIP FOR LIGATURING VESSELS.

THERE is often some difficulty in ligaturing vessels over the ordinary Spencer Wells'clip, especially in deep wounds. Either the point of the instrument is included in the ligature, or in trying to avoid this the clip is torn off the vessel. In the modification shown in the illustration I have tried to combine the convenience of a tenaculum with the advantages of forci-pressure. A thin, curved flange projects from the blades of the clip in the plane of the handles and guides the ligature over the point. In other respects the clip is unaltered. Frequent trials (for which I have to thank the surgeons of St. George's Hospital) have shown that the instrument works well. The slight widening of the blades seems to involve no practical inconvenience. I am indebted to Messrs. Krohne and Co., of Duke-street, Manchester-square, for the great trouble they have taken in working out the idea.

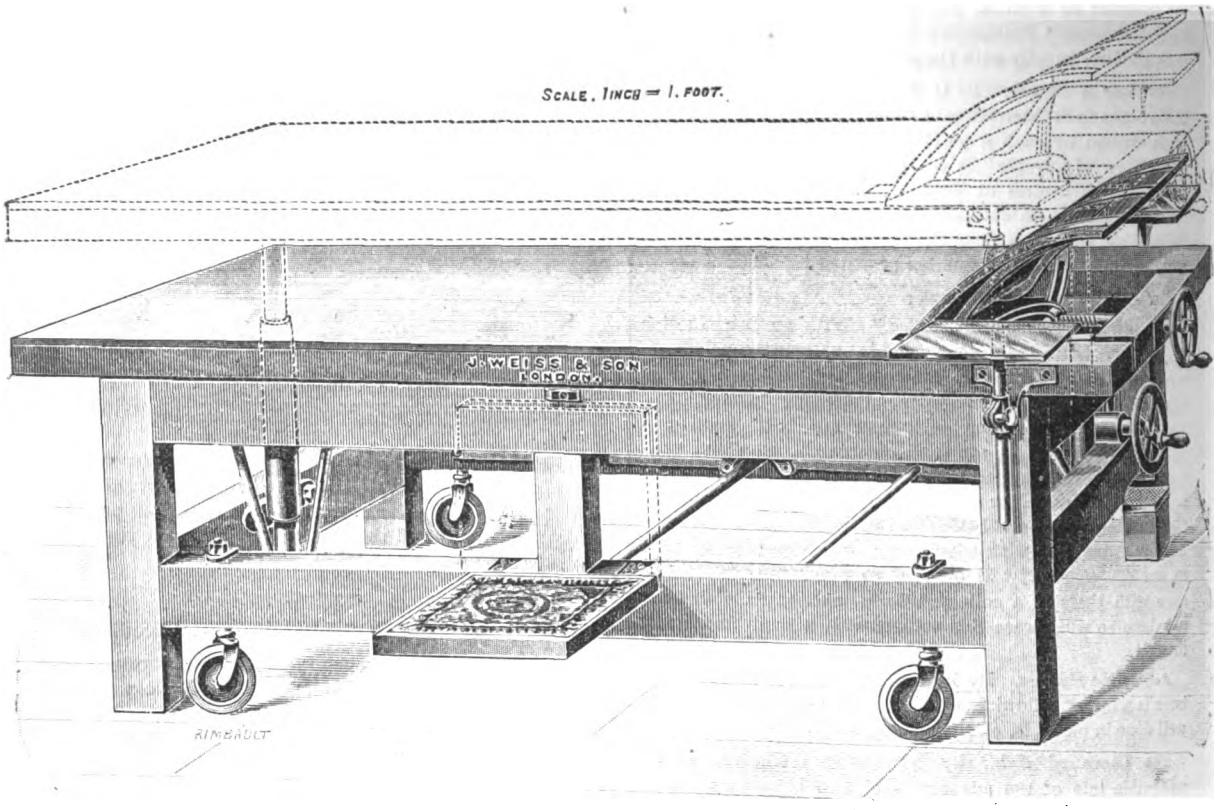


ARTHUR H. WARD, F.R.C.S.Eng.,
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Hertford-street, W.

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TABLE SPECIALLY DESIGNED FOR OPHTHALMIC OPERATIONS.

IN accordance with instructions prepared by the medical staff of the Royal London Ophthalmic Hospital, Moorfields, Messrs. John Weiss and Son, 287, Oxford-street, W., have designed and made a new table for the operating-theatre, having the following among other advantages—viz.: The top of the table is of solid mahogany, 6 ft. by 2 ft., which, together with the frame, can be raised ten inches by means of suitable gearing worked by a hand-wheel, the minimum height being 2 ft. and the maximum 2 ft. 10 in. from the ground. The table is perfectly firm whatever be the level of the top. The leverage is such that the top of the table carrying a heavy man can be easily raised by turning the wheel with one hand alone. The headpiece, on being raised by a screw action, takes the form of a pillow the height of which is adjustable. By means of a foot lever the table can be lifted off its legs on to rubber-tyred wheels to facilitate the movement of the table from place to place with or without its burden. Each side of the table has an adjustable support to carry the instrument trays, &c., also a step to allow of the patient reaching the floor without the height being altered.



CHRISTMAS HOLIDAYS.—The Hook of Holland route of the Great Eastern Railway Company offers exceptional facilities to persons who wish to spend their Christmas holidays in Holland or Germany. Passengers from the midland counties or north of England can travel direct to Parkeston Quay, Harwich, and with the passengers leaving London in the evening arrive at the chief Dutch cities the following morning, while through carriages run to Cologne and Berlin on arrival of the steamers at the Hook of Holland, reaching Cologne about midday and Berlin the evening after leaving London. The steamers will run between Harwich, the Hook of Holland, and Rotterdam every evening, including Christmas Day, but on the Harwich—Antwerp service, which is the best route for passengers visiting Belgium, the steamers will run every week-day, exclusive of Christmas Day. Passengers for Hamburg by the General Steam Navigation Company's service should start on Saturday, Dec. 21st, as the steamers will not run on Christmas Day.—The London and North-Western Company announce that the ticket offices at Euston, Broad-street, Kensington, and Willesden Junction will be open throughout the day from Monday, Dec. 16th, to Monday, Dec. 23rd, inclusive, so that passengers wishing to obtain tickets for any destination on the London and North-Western Railway can do so at any time of the day prior to the starting of the train. Tickets dated to suit the convenience of passengers can be obtained at any time (Sundays and Bank Holidays excepted) at the town receiving offices of the company. On Tuesday, Dec. 24th, a special train will leave Willesden Junction at 2.55 P.M. for Bletchley, Wolverton, Rugby, principal stations on the Trent Valley line, and Stafford in advance of the 2.45 P.M. ordinary train from London (Euston). The 4.30 P.M., Euston to Birmingham, will be divided; the first portion will run express to Coventry and Birmingham, and leave Euston at 4.25 P.M.; the second portion of the train will leave Euston at 4.30 P.M. as usual. The night Irish mail, due to leave Euston at 8.20 P.M., will not leave until 9.5 P.M. The mail steamer for Kingstown will await the arrival of the train at Holyhead. On Christmas Day a special train will leave Euston at 6.15 A.M. for Northampton, Rugby, Birmingham, Stafford, Stoke, Crewe, Manchester, Liverpool, Chester, Ireland, Lancaster, Preston, Carlisle, Edinburgh, Glasgow, &c. The company also announce cheap excursions to Coventry, Leamington, Birmingham, South Staffordshire stations, Wolverhampton, Nuneaton, Liverpool, Warrington, Lancaster, the English Lake District, Manchester, Oldham, Stoke, Chester, North and South Wales, and the Cambrian line, Shrewsbury, Carlisle, Scotland, Ireland, &c.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 14, 1895.

THE limits of a medical man's duty to the dependent classes form a subject of great interest and importance, and this has been well handled in an able article by Dr. JAMES WALK in a paper read before the American Academy of Medicine at Baltimore on May 4th of this year. It is obvious that our American *confrères* suffer as severely as we do from over-competition and crowding of professional men, and especially from unjust imposition of gratuitous work. The medical student of to-day has the greater part of his training devoted to the physical sciences. In former times the tyro engaged in professional visits with his preceptor and acquired not only remedial science but the methods of dealing with men and women in their moral, social, and business aspects. The ordinary medical charities, crowded with patients, are not the only outlets for the superabundant philanthropy of the young physician or surgeon. It is a growing notion that the medical man should treat free of charge all the dependents of his neighbourhood. Upwards of 20 per cent. of the population of Philadelphia receive free medical treatment. In the crowded out-patient departments of dispensaries and hospitals what opportunity is there for that careful and systematic investigation of cases which alone is of true clinical value? The wholesale system of gratuitous medical relief pauperises the community. The younger medical men are defrauded of their share in practice, and the whole profession is injured and degraded. The enormity of the evil may lead to a powerful revulsion of feeling, within and without the profession. The article, written in a moderate tone, certainly does not show an encouraging aspect of affairs in America. Any candid observer must assert that in our own country, especially in the large towns and centres of civilisation, matters are little better, though we have good reason to believe that in this country the "special hospitals" are perhaps the most abused.

It is a lamentable fact that the training of many a modern scientific student does little to fit him for the practical duties of his profession, especially in its business aspects. The advice not uncommonly given by senior members of the profession to juniors just emerged as fully fledged practitioners is somewhat as follows: "Now you have passed your examinations, go and learn your profession by acting as assistant." Be this as it may, many young consultants and practitioners are strangely deficient in even that rudimentary business capacity which would be essential towards the successful conduct of any other occupation or profession. The enthusiastic physician or surgeon who occupies years of his life in crowded out-patient departments will assuredly waste his time unless he turns his opportunities for the investigation of disease to account. The crowds of patients, as well as the deficient accommodation, not uncommonly quite prevent this. Of the scores of individuals who occupy his time, and who dub him by the suggestive epithet of the "free doctor," not a few, if closely questioned, would be found to be well able to pay the customary fee for consultation. We do not believe that matters are quite as bad in this country as in America; anyone, however, who perused the addresses of representative practitioners in the ethical section at the recent meeting of the British Medical Association could not fail to be struck with the serious tone which pervaded many of the sentiments uttered regarding such matters as hospital abuse and club practice. The evil is already "sufficiently enormous" in this country to call for the most serious attention on the part of all the younger members of the profession. As regards the matter of hospital abuse, this lies almost entirely in the hands of the profession itself. In this connexion we may recall to our readers the valuable paper of Messrs. GRIFFITHS and HORDER, published in our issue of Nov. 30th. The paper embodied the results of an elaborate inquiry undertaken by these gentlemen into the matter of abuse of medical charities and contains a number of most practical suggestions. We cannot commend the wisdom or *savoir faire* of any consultant who gratuitously gives away his services at a hospital to a patient who can pay him a fee. We do not altogether think well of the medical or business capacity of any family practitioner who allows his patient to drift to a hospital through his tardiness in suggesting a consultation; still less do we approve of the custom, which is alleged to be gaining ground in London, of practitioners sending their patients to hospitals to obtain gratuitous opinions. It is almost an established fact that three-fourths of the accident practice in London is done gratuitously at the hospitals. While no one can be refused first aid at a hospital, be he peer or be he pauper, we would most earnestly urge the surgeons of hospitals situated in fashionable localities of large towns to exercise very close supervision in this matter. So soon as a simple fracture has united, or is safely placed in retentive apparatus, the patient should be dismissed to his own house under the care of his own medical man, or to one of the many excellent private institutions which exist for care and nursing. There is little reason why such cases as wounds of the radial artery or fractures of the bones of the upper extremity, after receiving the immediate aid which they demand, should not at once be consigned to the care of the patient's own medical man, who in his turn may ask the consultative advice of any surgeon he chooses. To treat cases of this nature in well-to-do persons gratuitously is the worst form of hospital abuse. All the junior officers of large hospitals, especially the house surgeons, should be instructed to see into each case and report on it in writing to the secretary of the hospital or other responsible officer. Practitioners in the neighbourhood of a hospital would confer a great boon upon the profession if they reported to the secretaries any cases coming under their cognisance where their patients are abusing the purposes of charitable institutions. We hope that consultants at the hospitals will take these remarks, which are offered in no captious spirit, seriously to heart. We trust also that practitioners will coöperate with them in the duties of self-protection. The hour has arrived when members of our profession should cease to give their time and labour to those who, although they

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can find money for the theatre or a trip to the seaside, go to a hospital when they are ill. Such persons, who are numerous enough in London as well as Philadelphia, usually take a professional man at his own value and, on one pretence or another, are constantly emulating the daughters of the horse-leech and crying, "Give, give!" So far as teaching opportunities go, benefit would certainly be conferred upon the hospitals by limiting the number of out-patients, and at certain well-known institutions this has already been done. Sufficient material can readily be found among the ranks of the really poor, who alone should share the benefits of charitable funds.

We note with satisfaction that one of our large London hospitals has recently increased its teaching staff—an example which may be well followed by others. If, in addition to increasing the care and facilities in teaching, the medical officers of our hospitals would once and for all set their faces against gratuitous relief to those who have means, they would be helping a reform which could not fail to meet with all support from the rank and file of the profession, and with the approbation of the right-minded section of the public, who would recognise that their charitable bequests were not wrongly used. The growing generation of students would learn a useful and lasting lesson—viz., that, though kindness and philanthropy should ever be practised by every medical man, he should most jealously guard against abuse in these particulars and exemplify throughout his life the adage that every man has a right to expect and receive adequate pecuniary reward for his labours.

To the question what shall we drink, to discuss which at this season of the year seems a little odd, Mr. RADCLIFFE COOKE in the *Times* of the 9th inst., backed by a leading article in the same issue, would reply, cider. With the economic and industrial aspect of the question, which is a very important consideration, we have little to do beyond expressing our entire approval of any movement that is calculated to warm into life and vigour a well-nigh extinct home industry. We turn, then, to consider what are the qualities and special characteristics of cider upon which its recommendation as a popular drink could be based. In this connexion there is little doubt that cider has not been very favourably regarded, because no special care or attention has been paid by cider makers to the exact conditions which would ensure the production from the apple of a uniform and palatable drink. The use of materials that are chosen with little regard to their quality—as, for example, damaged fruit, or fruit looked upon as of no good for any other purpose than cider making—has operated largely against its taking rank on any extensive scale with other better-known beverages. The process of fermentation has hitherto been conducted in a slipshod, rule-of-thumb way, without regard being given to the minutiæ of the process. What wonder, then, that cider has not been popular except amongst a few country people in those counties where it is chiefly produced. Yet there is no reason at all why there should be any uncertainty as to the ultimate condition of cider, any more than there should be of beer or claret. The composition of good cider is not widely different from light claret, except that instead of tartrates and tartaric acid it contains malates and malic acid, the characteristic acid of most fruits, and the proportion of spirit is less.

The average composition of still cider is as follows: 4·88 per cent. alcohol, 0·33 per cent. malic acid, 1 per cent. acetic acid, 4 per cent. sugar; of champagne and effervescing cider, 3·5 per cent. alcohol, 0·35 malic acid, 0·05 acetic acid, 6 per cent. sugar; of bottled Hereford cider, 5 per cent. alcohol, 0·3 per cent. malic acid, 0·1 per cent. acetic acid, 1 per cent. sugar. The latter may be described, like some champagnes, as dry. Success in the making of cider is favoured also by carrying on the process of fermentation like that of lager beer at a moderately low temperature, when the sugar is rapidly converted into alcohol and carbonic acid. Otherwise, if the alcohol be slowly produced, organisms rapidly make their appearance, producing acetous and possibly also lactous fermentation. These are the enemies of the cider-maker, and of course fatal to the production of a palatable drink. It is worthy of remark that the alcohol of well-made cider is, owing probably to the low temperature employed, particularly pure, and on distillation yields a spirit of excellent character and from which very good brandy may be made. It is free from other alcohols and allied products, which doubtless contribute to the stupefying and heavy qualities of strong English beers brewed at comparatively high temperatures. This alone is a fact in favour of cider as a beverage. The fruit acid of cider, however, is not thrown out of solution as the alcohol increases, as is the case with certain wines. The delicate flavour and agreeable fruity aroma of unsophisticated cider are due to the extraction of the essential oils of the pips and skins of the fruit by the alcohol produced, the alcohol itself being rich in compound ethers. It is to malic acid that cider owes its pleasant acidity, and the presence as well of alkaline salts and malates (which produce alkaline salts) gives cider its diuretic and slightly aperient properties. On this account cider would seem to be a useful beverage for the gouty and those who suffer from uric acid deposits, the expulsion of which it is said to favour. But for this purpose, as, indeed, for general purposes, the cider must be sound. If sound and genuine cider be placed upon the market with a guarantee we make no doubt that the demand for it will rapidly increase, and when the public once find out for themselves the really wholesome and refreshing qualities of genuine cider the nasty preparation purporting to be cider will be banished, a home industry will be restored to the position it ought never to have lost, and an agreeable and mildly stimulating beverage will be available which, if consumed rationally, will be found free from the objectionable qualities of many beverages that unfortunately are only too highly held in popular esteem. Sound cider, on the other hand, should possess to an equal degree the refreshing and harmlessly exhilarating properties of genuine light grape wines, the consumption of which abroad, to the exclusion of ardent spirits, has had a distinctly healthy and moral effect upon the people.

WE are sorry for the managers of the Metropolitan Asylums Board. A task at once impossible and ungracious

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has been assigned to them, and they are getting that plentiful blame which awaits gentlemen in our happy country who undertake such tasks without fee or reward. All sorts of faults are attributed to them. They do not supply an amount of accommodation for infectious cases equal to the demand; they dismiss, or their medical officers dismiss, cases before they are free from infection, and thus give rise to fresh cases of the very diseases for the restriction of which they were elected. They spend money like water to the figure perhaps of half a million a year, and one of their own number has been unkind enough to suggest that some members of the Board, or of its committees, pay ridiculously large prices for sites, and that there is a suspicion of personal profit and advantage in the transactions. We may say at the outset that we have little belief in the truth of these suggestions. It is undoubtedly tempting to men dealing with such large sums of public money and with contracts of such magnitude—and knowing also the difficulty which the Board has in finding a local habitation for its unpopular hospitals—to turn to personal advantage circumstances of which they have early or exclusive knowledge. But, fortunately, in both Imperial and Local administration there has always been amongst us an abundant supply of men of ability and standing who were "above suspicion." And until the contrary is shown by very much more evidence than Mr. ELLIOTT has produced, we shall have implicit confidence in the integrity of the managers of the Metropolitan Asylums Board. Sir EDWIN GALSWORTHY dealt admirably with Mr. ELLIOTT'S suggestions and his demand for an inquiry. He refused to be content with any inquiry by a committee of the Board, and moved an amendment for investigation by the Local Government Board. This was a dignified course, and one that will be entirely satisfactory to the public.

This was by far the least interesting part of the business before the Board at its meeting on Saturday last. The great interest of the meeting was in the complaints from all quarters of the inadequacy of the accommodation provided by the Board, and the pressure put on it to open Gore Farm—now used for small-pox cases—for fever patients. The feeling of dissatisfaction on this subject will scarcely be allayed by the hopeful view of the chairman, founded chiefly on one day's experience, that the decline of the epidemic had set in. Though every application for admission that day—the day of meeting—had been met, the number of cases of fever and diphtheria treated in the hospitals in the last fortnight had been 3562, against 3551 in the previous fortnight. We have no doubt that the complaints from all quarters—from Lewisham, St. Pancras, Bethnal-green, Limehouse, and other boards—are well founded, and we see little reason to hope for any immediate relief or remedy if the present absurd facilities for entering these hospitals by the public are allowed to continue. It is one thing to provide isolation hospitals for the poor or for those who had no adequate accommodation in their homes. It is quite another to invite the public into such hospitals as Parliament has done. We have the greatest misgiving as to the justice or the wisdom of this policy. But it was passed with a light mind by Parliament in 1890, and it is the chief cause of the insuperable difficulties into which the Board has been brought. The representative of the *St. James's Gazette* satisfied himself, on statistical evidence furnished him at Norfolk House, that prior to the new legislation which admitted the public—as distinguished from the poor—to the hospitals of the Board the accommodation was ample, and that this legislation led to a sudden and overwhelming increase in the applications for admission. This is what we have always suspected. The Hon. SYDNEY HOLLAND says, in a letter to the same journal that "if the Board did what it ought to do—provide accommodation for every case of scarlet fever or other infectious disease of like moment in London—it would probably mean the expenditure of a million of money. And what would the ratepayers say to that?" We should say that it would probably mean the expenditure of many millions. That might be a superable objection, for the poor ratepayer is soon silenced. But the wisdom of the policy seems so doubtful that it should not be persisted in till a full investigation of the working of the present system of admission has taken place. Let the public realise that there are hundreds, if not thousands, of cases which can be isolated and treated at home, and which ought to be so treated. The causes of the prevalence of infectious disease need immediate and close investigation.

It is a little disappointing to see a man in Mr. HOLLAND'S position, as chairman of a charitable hospital, say, even with some qualification, "that the Board ought to provide accommodation for every scarlet fever case and other infectious diseases of like moment in London." We should have expected some clearer exposition of the enormous difficulties and cost of such a policy, and some insistence on the duty of all people who can treat their infectious cases at home to do so. We do not blame the hospitals of the Board for the spread of infectious disease. The authorities have shown that the "return" cases which arise from patients prematurely dismissed are not many, and that they keep scarlet fever cases on an average ten weeks and diphtheria cases seven weeks. All the same, it is obvious that there is no obligation on the State to provide isolation for those who can have it in their own homes, and that the loose legislation of 1890 has excluded those for whom isolation hospitals are urgently demanded on every ground of humanity and policy. This matter is urgent, but the most urgent matter of all, and the shortest way to find accommodation for the really proper cases in the hospitals of the Board, is to create safeguards against the use of the hospitals by those who do not need them.

SURGICAL AID SOCIETY.—The annual meeting of the Surgical Aid Society was held at the Cannon-street Hotel on Dec. 9th, the Lord Mayor presiding. The report which was read by the secretary, Mr. R. C. Tresidder, showed that during the year 13,345 patients had been relieved, including 4842 men, 6961 women, and 1542 children. There had been a considerable increase both in the amount of relief afforded and in the number of surgical appliances granted to poor applicants, no fewer than 20,046 such articles having been supplied. The income during the last twelve months had been £10,599 as against £10,256 in the preceding year. The Lord Mayor said that the society had been established thirty-three years, and during that period had supplied 220,600 surgical appliances to needy sufferers.

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Annotations.

"Ne quid nimis."

LONDON WATER SUPPLY.

IN conformity with a resolution of the County Council, made on Oct. 22nd, "That the Council having decided not to proceed with the suspended water Bills, and desiring that the Council should be the water authority for London, it be referred to the Parliamentary Committee to report to the Council without delay the lines on which the Government should be asked to legislate," the Parliamentary Committee presented their report at the last meeting of the Council on the 10th inst. It is a very lengthy report, and embodies every phase of the question previously before the water committee. It points out that if the water companies' undertakings were purchased on ordinary arbitration terms London might be made to pay from thirty to forty millions in purchasing the undertakings, and find itself obliged to spend in addition from ten to twenty millions in providing a new supply. In explanation of their action in recommending the Council to invite the Government to deal with the question, the committee point out that the county of London over which the Council desire to be the water authority is only one-seventh of the area the requirements of which the Royal Commission of 1893 said would have to be considered. The Government should, therefore, be asked to constitute by Act of Parliament a public authority for the whole water area, and they suggest taking as a basis the proposal made by a select committee, of which Sir William Harcourt was chairman, that a body be composed of members nominated by the London County Council, the City Corporation, and the home counties, with the addition of nominees of the Local Government Board, and of a sufficient number of coöpted members possessing special knowledge and qualifications. The Act should confer upon the water authority thus constituted full power to purchase the undertaking of all or any of the companies by agreement, and, failing agreement, to determine in what manner and on what conditions purchase shall be effected. The committee observe that no serious attempt has hitherto been made by the Council to negotiate with the companies, and they think that every consideration now points to the desirability of this course being taken without delay. In the event of a purchase not being effected an inquiry into the statutory powers and obligations of the company and the control exercised over them, with a view to make these obligations, &c., more complete, should be instituted; but pending the formation of the water authority the committee suggest that the Council could usefully take steps with a view to facilitating the acquisition of the companies' undertakings. In regard to future supply, the water committee should, they think, bring up its report with the least possible delay. This report only came formally before the Council on Tuesday last, its consideration being adjourned till next week. There will be, therefore, considerable interest attaching to the proceedings of the next meeting.

GEORGE AUGUSTUS SALA.

DURING his forty years of journalistic exertion it would be strange if, among the innumerable topics he took up and laid down the better for his handling, Mr. Sala did not have frequent occasion to touch on the healing art and its practitioners. We know, in fact, that he took special pleasure in watching the fight between medicine and disease, in recording the victories won, or, even when these were indecisive, in noting such advantages as were gained by the hygienic or therapeutic arms. In the columns of the influential and widely diffused journal with which he was connected we can recall many a brilliant article, dwelling on discoveries or incidents attesting the advance of medicine—recall it (let us add) with the more pleasure that it was THE LANCET from which such texts for the day were usually drawn. During the great battle commenced in these columns thirty years ago for Poor-law amelioration, in which the late Drs. Anstie and Netten Radcliffe bore a conspicuous part, we often recognised with gratification the effect our arguments and revelations produced on the lay journalist—on none more than on Mr. Sala, who popularised them and diffused them over an area of the reading public which THE LANCET by itself could not have reached. And as with great questions of social reform so it was with topics of individual or restricted, but striking, medical interest. Some twenty-two years ago, when a "Howard commemoration" was a subject of the day, his leading article on that mighty philanthropist was perhaps the best tribute to him the occasion evoked, recalling in some of its passages the memorable eulogy by Edmund Burke. Again, in his frequent excursions to this or that great European capital—"working-holidays" he used to call them—he rarely omitted to note the standard reached or missed in philanthropic effort or social amelioration. In Rome, for example, he presided at a meeting in aid of the Victoria Home for the rescue and rehabilitation, under British and American auspices, of the little waifs and strays of the Eternal City, and his eloquent, kindly, and touchingly humanitarian appeal was of signal service to the friends of the institution. In the same city or rather its neighbourhood he interested himself in the reclamation of the Campagna by the Trappist brothers at the Trefontane, and his picturesque account of their success won him the gratitude of the devoted men, employed in that all too inadequately supported work. We might multiply instances of his essentially humane and generous nature from our recollection of his coöperation in medical charities, especially in the organisation of the Hospital Sunday movement; but we have said enough, as medical journalists, to warrant our contribution to the mass of testimony borne in his honour by those of other interests—the literary, the dramatic, and the artistic. A conspicuous and popular figure in the public life of the Victorian era, George Augustus Sala will be remembered, long after individual attestation can make itself heard, not only as a humourist and *raconteur* and an accomplished man of letters, but, in the language of Heine, as "a brilliant swordsman in the struggle for the liberation of humanity."

MEDICAL DEFENCE AND QUACKS.

WE are very glad to see that the Medical Defence Union has succeeded in obtaining a conviction against a person named Ferdinand who, besides misrepresenting himself to the general public with regard to his degrees, is also the author of some of the most disgusting and disgraceful advertisements that we have ever seen. The advertisements are written in order to promote the sale of a patent medicine called "ferlandi," which, of course, is a panacea for all diseases under the sun "except rupture and bad cases of cancer, which require special treatment," and this, as we are told later on, consists in the latter case of "ferlandi" combined with cancer pills. Hospitals are designated by the delicate name of "carving saloons," and the public are asked whether these "carving dens are to continue" and whether those who practise in them are to be allowed to associate with respectable people. It is a pity that this contemptible individual does not give us his own definition of respectability, as we imagine it would have to be rather a sweeping and ingenious one if it

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is to include him in it. The advertisements, however, have their interest, as, in order to prove that hospitals deserve the name of "carving saloons" and other such genteel epithets, many of the same cases are quoted as those which anti-vivisectionists bring forward in support of their allegations. In both cases the method of quotation is the same; fragments of cases are given which would in most instances appear in quite a different light if their full particulars were set out. We cannot do better than conclude with one of Ferdinand's own prayers: "From all quacks and speculators, good Lord, deliver us, our children, and our pets."

ERRORS IN DIAGNOSIS.

THE difficulty which exists in making an accurate diagnosis of many injuries to the head has again been shown at the Vincennes Barracks in a case of fracture of the skull which was not recognised, and was thought to be only a slight injury until the man became rapidly worse and died. Such mistakes must, unfortunately, from time to time occur, although happily they are rare. The rarity of such accidents of diagnosis in London reflects the greatest credit on the care of the hospital house surgeons. It is practically impossible for the public to realise the many difficulties which often lie in the way in these cases. There is, perhaps, no external injury to act as a guide, and too often the patient is in a condition of complete stupor from drink when brought into the hospital; usually he has been found unconscious, and no reliable history of any injury can be obtained. It is, indeed, scarcely to be wondered at if mistakes should sometimes occur under these conditions, although great care may have been taken to avoid them; and more especially so when it is remembered what a very large number of patients are every day brought to our hospitals unconscious from the effects of alcohol alone, and an examination of each one of these has to be carefully made with a view to finding other possible injuries. In all cases in which there is any room for doubt the only safe course for the house surgeon is to detain the patient until the alcoholic intoxication has to some extent passed off, when other symptoms may be recognised.

ANTI-VIVISECTIONISTS AND HOSPITALS.

THE anti-vivisection party are again endeavouring to win the general public over to their side by means of misrepresentations and omissions in the various accounts which they give of experiments. Canon Wilberforce and Mr. Ernest Bell both wrote to the *Times* on Nov. 30th and tried to show that hospitals are the homes of many horrors. Canon Wilberforce gives a list of many cases which have appeared from time to time, and as usual sadly misrepresents them. One quotation is: "Poor woman admitted to a hospital in a dying condition made the subject of constant observation and examination with tuning-forks, &c. These examinations were continued till her death, which occurred twenty-four hours after admission.—*Brit. Med. Jour.*, Oct. 27th, 1883." Now on looking this case up we find that a woman was admitted complaining of difficulty of speech and paralysis, the symptoms of which had lasted three months. A list of her prominent symptoms is then given, such as loss of power on one side of the face, deviation of the tongue, and so on, and then it is remarked that "a watch was heard one inch and a half from the right ear and eight inches from the left, and a tuning fork was heard best on the left side." Let it be observed how differently this is represented by Canon Wilberforce. The torture with tuning forks fades away into the simple act of putting the fork into vibration and asking the woman when she hears it. The woman died from cerebral tumour, and the case was simply examined in such a way that would lead to some hope of a diagnosis being made. One more example of these disgraceful quotations: "Experiment of injecting milk into the veins of a dying patient." This sounds by itself horrible enough, but a full account of the circumstances puts a very different complexion on the case. The author begins by saying that he believes injection of milk is of great value as a substitute for the transfusion of blood, as he had found that in many cases patients' lives had been prolonged by the operation. He then goes on to say: "I have perused most of the literature on the subject and find that many of the operations have been followed by marked success, in some cases by temporary and in others by permanent benefit, but sometimes no good has occurred from the injection (when improperly performed or when performed in unsuitable cases), and the operation appears to have proved fatal in a few instances." Cases: 1. Profuse uterine hæmorrhage; pulse 150; temperature 101°. All signs of impending death; eight and a half ounces of milk injected into median basilic vein. Pulse and temperature fell next day, and patient made good recovery. 2. Two cholera patients moribund. Injection of milk followed by recovery. Several other cases are given of which some recovered and others did not, but let the truth be noted as compared with Canon Wilberforce's misleading extract. Instead of "experimenting" on the patients, the injection is used as a substitute for transfusion of blood and gives the patient a last chance of living, and from the full reports of these cases there is every reason to believe that several lives were actually saved by the operation. No one can object to the anti-vivisectionists quoting whatever cases they choose in support of their doubtless well meaning but mischievous opinions, but those quotations must be made fairly and with due regard to their context. As representatives of an honourable and humane profession we cannot permit an undeserved slur to be cast upon its members, and the merciful work of hospitals to be impaired by enthusiasts who are unable to support their wholesale allegations.

ANTHRAX GERMS AND OATS.

A CASE has been recently tried before the Lord Chief Justice and a special jury in the Queen's Bench Division, which places the position of disease germs in a new and rather serious light. A firm of corn-merchants sued a lighterman and contractor to recover the price of certain Turkish oats. The defendant denied liability on the ground that the oats contained the germs of anthrax, which had caused the disease to break out in his stables, with the result that he lost fifteen horses, some of which were insured, but he counterclaimed in respect to the others. The plaintiffs, however, denied that the oats contained the germs of anthrax, and in proof of this they brought forward evidence to show that they had bought and sold a large quantity of these oats and had received no complaint except the one in question. The oats were said to have been very dirty and should have been cleaned before being given to horses in order that they should not render the animals liable to contract disease. A veterinary professor, who had witnessed extensive outbreaks of anthrax in England, stated he had known contamination to be produced by germs in a cart, and that germs spread very easily by being blown about as impalpable dust. Ultimately the jury found that the goods were unmerchantable by reason of latent anthrax germs, and that the defendant was not negligent in not having cleaned them, though guilty of negligence in regard to not having taken an order for a second supply of these oats off the file. Judgment was entered for the defendant for £280, the value of eleven horses which died in consequence of the first delivery of oats; the value of four horses that perished after the second delivery of oats was agreed to at £100, which amount was finally divided between the parties. The interesting

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feature in this case is that no evidence was forthcoming to demonstrate that the oats incriminated were infested with anthrax germs, and their presence in this food was therefore a mere supposition, due to horses having succumbed to the disease after feeding on them, while the same kind of oats had been supplied to feed other horses, but no such fatal consequence had followed. Surely it was possible to give decisive proof of the actual presence of anthrax bacilli in the dust of the grain, and knowing that anthrax infection may occur through drinking contaminated water or consuming hay or grass containing these organisms, and in other ways, it does seem strange that the supposition was accepted as if it had been based on actual demonstration. The decision, at any rate if it is to form a precedent, will have far-reaching consequences when applied to the provision of suspected food to man and animals.

TYPHOID FEVER AT LUTON.

SOME weeks ago we drew attention to the epidemic of typhoid fever which was existing at Luton, and suggested that a full and independent inquiry into the sanitary condition of the town would be the best means of checking this epidemic and of preventing another in the future. This suggestion was also made by medical men in the neighbourhood, but the authorities have taken no steps towards such inquiry, and the result is that the fever still persists, and seems likely to do so until some more radical measures are taken to find out the source of infection. The cases have mostly occurred in one quarter of the town, and no doubt there will be found various defects to account for it. Among the deaths we regret to have to record that of a nurse named Allan, who died on Nov. 30th, having contracted the disease in the discharge of her duties. According to the Luton papers the inhabitants of the town are now taking the matter up, and will no doubt insist on a proper inspection being made. Typhoid fever is, to a very great extent, a preventable disease, and any failure to take full and adequate measures in dealing with outbreaks entails very grave responsibility on the authorities.

DISCOVERY OF UNKNOWN TRIBES IN AFRICA.

DR. DONALDSON SMITH, who has lately returned to England after exploring in Africa, has discovered no fewer than fifteen tribes. On hearing this news the question may be asked, What good end is reached by these discoveries? Are the people discovered the gainers—or might it not be better for them to be left in their primitive ignorance? With the benefits of civilisation will, doubtless, be also imported many of its vices. Probably the solution of the problem lies in the mean, and the evil and the good are fairly evenly balanced. Amongst the newly discovered people was a tribe of dwarfs, none of them exceeding 5 ft. in height. In the accounts published as yet the exact nature of the country is not stated, nor are the physical characteristics of the dwarfs described; it is therefore idle to speculate as to how near these pigmies are akin to the forest dwarfs found by Stanley, who are mentioned as having large heads and long beards. If, as is not unlikely, it was thick forest where Dr. Donaldson Smith met them there would be a strong presumption that they might be of the same origin, and to carry the speculation further it may be that in many parts of Africa amongst the dense unexplored forests there live tribes of dwarfs of like race, with like customs and habits. In fact, already there have been found by different travellers in Africa more than one tribe of dwarfs, notably the Batwas, 4 ft. 3 in. in height, and the M'Kabbas, near Lake Ngami, reported as averaging but 4 ft. It will be instructive to hear from Dr. Donaldson Smith a fuller description of the appearance of these diminutive men. How far the origin of the race of dwarfs has been affected by climatic influence is more or less an open question. Probably the comparative absence of light and air accounts for the forest men, as also for the Laplanders; but, on the other hand, this argument will not apply to the Andaman islanders or to the bushmen of Australia. When Dr. Donaldson Smith delivers his address before the Royal Geographical Society he will doubtless enter more fully into details, both with regard to the nature of the country and the appearance and habits of the people.

THE MURDER-MONGER.

AT Warwick Assizes, upon Dec. 10th, Sarah Ann Eden, a midwife, was condemned to death for the murder of a woman at Aston, upon whom she procured abortion and who died in consequence. This was no case of an unmarried ignorant girl in her first pregnancy trying to conceal her shame. For such criminals, wrong as they are, we may have pity, but in the present instance the woman was married and had six children. She first tried, with that indifference to this form of crime which so many women exhibit, to get her medical attendant to perform the operation, and when he refused she went to the prisoner. The crime of procuring abortion is far too common, and it cannot be too strongly impressed upon women that she who knowingly gets rid of her unborn child in this way is morally as much a murderess as the operator, and sins of this nature are not confined to the lower orders, but are only too frequent in the upper strata of society.

TRAUMATIC EPILEPSY AND OPERATION.

IN a recent number of the *Philadelphia Medical News* Dr. John D. Davis relates three cases of unusual interest and importance. The first is that of a man aged thirty, a farmer by occupation and without any history in his family of epilepsy, insanity, or other neuroses, who ten years before he came under observation fell a distance of fifteen feet, striking the back of his head on a piece of wood. Within an hour he was attacked by a severe convulsion, which lasted several minutes. After that he had on an average two convulsions a day, he was seldom free from headache, and had almost constant tinnitus aurium on the left side. He had suffered both in spirits and in appearance, and all the usual remedies had been unsuccessfully tried. The seat of the original injury was over the left occipital region, and it was proposed to trephine in this region in the hope that relief might be obtained. Accordingly operation was undertaken, but the membranes appeared healthy and there was no indication of a cyst or other morbid condition of the brain; but on the inner surface of the skull, about three-eighths of an inch from the trephine opening towards the parietal eminence, it was found that the bone was of almost cheesy consistence All this diseased material was removed and the wound dressed with the most rigorous antiseptic precautions. Convalescence was rapid and the result of the operation most gratifying. There was relief of headache, the tinnitus ceased, and at the time the paper was written, two and a half years after the operation, there had been no return of the convulsions. The second case related is that of a man who at the opening of the World's Fair in October, 1892, received a blow with a chair on the right parietal bone. He was unconscious for several hours and soon began to suffer from severe headaches. He became mentally deranged, suffered from epileptiform convulsions, and lost the use of the left arm and leg. When seen by Dr. Davis about a year after the accident he was suffering from intense paroxysmal headache, frequent convulsions, left hemiplegia, and mental derangement. No good effect being

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obtained from drugs, trephining was performed over the right parietal bone. The dura mater bulged distinctly, and when it was incised about a couple of drachms of thin pus escaped. The cavity was washed out, and after the operation the patient's condition was materially better. There was, however, a return of symptoms ten days later, but these were relieved by dressing the wound, allowing some accumulated pus to escape. Since then there had been no return of the pain or other symptoms, and the left-sided weakness was much less and was still diminishing. The third case was that of a girl aged twenty-two who had had a fall on the back of her head while skating about sixteen months before she was seen. She was unconscious for several hours after the accident. Headache then became incessant and was increased by pressure on the back of the head. Her mental condition became very unsatisfactory, her appetite failed, she lost flesh, and suffered from about two convulsions a day. Operation was performed, and although there was every indication of very greatly increased intracranial pressure no actual lesion was found. However, three days after the operation the patient ceased to suffer from headache, the mental disturbance disappeared, and she began to gain weight. Eight months after the operation she had remained free from fits. These three cases are certainly remarkable, not only for the success with which they have been treated, but because of the interest which attaches to the different conditions found to be present—in one a softening of the skull at one point, in another an abscess, and in the third increased intra-cranial pressure without obvious cause. Dr. Davis is to be congratulated on the result of his operative treatment.

CAMARAN: THE CAUSE OF CHOLERA TO MECCA PILGRIMS.

COMPLAINTS are gradually accumulating as to the danger of retaining the Island of Camaran as a quarantine station in the Red Sea. It was shown by Dr. Thorne Thorne during the sittings of the International Sanitary Conference of Paris last year that the detention of intending pilgrims from India on that island preliminary to their being allowed to commence the land journey to Mecca had again and again been followed by an occurrence of cholera amongst them, although no suspicion of such disease had prevailed during the long sea voyage from Bombay to the Red Sea; and the verdict of a French physician was quoted to the delegates to the effect that Camaran was an *entrepôt cholérique*. Recent experience goes to emphasise and confirm this view, and reports have shown how utterly unwholesome, and even filthy, are the conditions to which the pilgrims are exposed during their enforced detention on the island. It is quite true that both at Paris and elsewhere promises have been made on behalf of the Sultan as to prodigious sums which His Majesty was just going to have spent on removing all sources of complaint; but promises of this sort now only cause an incredulous smile, and in the meantime it is known that during the last pilgrimage Camaran remained the *entrepôt cholérique* it has always been; soil, air, and water being liable to excremental pollutions of the worst sort. The past history of cholera, in connexion with the Mecca pilgrimage comes aptly to illustrate the mischievous results which this disease-producing quarantine station has led to. Between 1817 and 1866 there was an absence of quarantine detentions on pilgrims landing on the Arabian shore, and during that period cholera only broke out during the Mecca pilgrimage on two occasions—namely, 1835 and 1865. Between 1866 and 1881 a period of observation lasting twenty-four hours was imposed on arrival in the port of Jeddah, and again cholera only appeared during the Mecca pilgrimage on two occasions—namely, in 1872 and 1877. But since 1881, when the quarantine station and lazaret of Camaran were opened, and since which date Indian pilgrims have been compulsorily detained there for a period of five to ten days, cholera has actually broken out during the Mecca pilgrimage on eight separate occasions—namely, in 1881, 1882, 1883, 1890, 1891, 1892, 1893, and 1895. Well may our Mahommedan fellow subjects in India begin to demand the abolition of the compulsory detention of hitherto healthy pilgrims at this *entrepôt cholérique*. That demand is now being raised by those who are primarily concerned; but, under present circumstances, we fear that some money consideration which shall in some form or other make up for the so-called sanitary dues now imposed on the pilgrims will have to be offered before any such result is likely to be attained. In the meantime the Turkish possession of Camaran remains the greatest hindrance to the abolition of cholera in connexion with the Mecca pilgrimage.

INFANTILE MORTALITY AT CARDIFF.

AT the last meeting of the Cardiff Sanitary Committee the medical officer of health (Dr. Walford) was present, and by request read his report upon the alleged excessive infantile mortality at Cardiff. He stated that out of a total number of 608 deaths during the three months of the third quarter of this year 308 were of children under one year of age. Eighty of these were from diarrhœa. The deaths took place principally amongst children who were artificially fed. A discussion on the same subject took place at the meeting of the Cardiff Burial Board, when a medical man who is a member of this board and also of the Sanitary Committee stated that this excessive mortality was due to three causes: first, the deplorable lack of knowledge that prevails in all classes concerning the feeding of infants; secondly, the insanitary conditions in overcrowded districts; and, lastly, infant insurance, with regard to which he was of opinion that the Legislature ought to act.

THE HABITS OF BATS.

A VERY interesting paper on the habits of these curious animals in captivity appears in the current number of *Nature Notes* from the pen of the artist Mr. J. D. Batten, who has for years kept a number of them as pets. They appear to be easily fed on meal-worms, and to be extremely docile and easily managed, although none of them live for more than a few months in captivity. The account both of the waking from natural sleep and of hibernation is of great interest. Speaking of sleep Mr. Batten says: "The bat when thoroughly asleep is dead cold to the touch. If I then took it in my hand ..... it would lie quite still. On putting it to my ear I could hear a throbbing begin, at first very slowly and not very regularly, more than a second between the beats. Gradually the throbbing became quicker and quicker until it was impossible to count the beats; at the same time the warmth of the body was increasing rapidly and the bat quivering visibly. At last the throbbing becomes a continuous whir ..... and the body feels hot to the hand. Then rather suddenly the throbbing quiets down ....., slows somewhat, and becomes almost inaudible. The bat coughs or sneezes, chatters a little with its teeth, and moves about expecting to be fed." The noises heard must be to a large extent from the voluntary muscles. Some interesting observations are given as to the hibernation of bats and their behaviour when roused during that process. In the case of two bats that died during hibernation the spleen was found by Dr. F. E. Batten to be very large, while in one that died just before that stage and in two which died at other times of the year it was quite small. Much information is wanted as to the size of the various organs and the chemical constitution of

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the tissues in hibernating animals. It is alleged that large quantities of glycogen are stored up even in the connective tissues—in such quantity that the masses of glycogen can be seen in the cells under a moderate magnifying power after staining with a weak solution of iodine. Practitioners living in parts of the country where hibernating animals, such as dormice and hedgehogs, are abundant have the opportunity of making original observations which would be of the greatest value in throwing light on very obscure physiological processes.

MEDICAL WITNESSES' FEES.

AT the Westminster Police-court on Dec. 10th Mr. J. E. Coulson, assistant medical officer of St. George's Workhouse Infirmary, gave evidence in a pauper case and applied to the magistrate for a certificate for his fee. Mr. Sheil refused, saying the petitioner had been sent by the workhouse and must ask the workhouse people for his fee. We do not believe that the "workhouse people" have any legal right to "send" their medical officers as witnesses, and next time such a case arises we should advise Mr. Coulson to refuse to attend without a subpœna and his fee.

RUBBISH.

WE had occasion, in our issue of Nov. 23rd, under the heading "The Friend of Humanity—New Version," to comment upon a letter sent out to publishers signed by Mr. Edward Curtice as managing director of the Newspaper Exchange and Advertisement Clearing House. The letter consisted, it may be remembered, of a proposal to supply the press with a popular medical article every week from the pen of "'Dr.' Allinson, the well-known Hygienic Physician," if certain advertisements of Mr. Allinson's books could be inserted in the columns of the various papers applied to. We have since received from a fellow-editor the following document, which would appear to be a circular letter to the provincial press from a "London correspondent." We have omitted certain reviews and notes on the trial of Jabez Balfour and the *Spectator* dog stories, but otherwise we print the communication exactly as it purports to have left the offices of Messrs. Romeike and Curtice:—

THE JOURNAL OF UNIVERSAL INFORMATION AND ORGAN OF THE LONDON NEWSPAPER EXCHANGE AND CLEARING HOUSE COMPANY.

No. 75. *Saturday, December 7th, 1895.*

I am sorry that my health prevented me publishing the Journal last week, and also that the weather stopped me calling on several big advertising agents to ask payment of long outstanding a/cs due to distant subscribers. I sent a clerk to a well-known advertising agent and he was most indignant and refused to speak to anyone except the principal, who lives 400 miles away, but why should any honest man delay payment, surely he could send a cheque direct. I will call on him myself on Monday.

* * * * * * * * *

I am sorry that some of my friends have taken offence because I sent out Dr. Allinson's advertisement. It should be understood that it is purely a matter of business, and I am paid to send it out. The anonymous scribbler who wishes me every evil wish and will give me a kicking when he meets me, is only wasting his time and stamps.

A few weeks ago I wrote that I had become a patient of Dr. Allinson's, and I am pleased to say that by diet only, and without physic, I am much better for his advice.

I was entrusted with the advertising for the Patti concert, and I think the order was carried out to the satisfaction of those who employed me as they sent a cheque and two stall tickets for the Albert Hall. My wife and I went, and regretted that the many millions in London cannot hear this wonderfully gifted lady. Her encore "Comin' thro' the Rye" was sung with all the witchery and coquetishness of a girl of 16, yet it must be 30 years ago since I heard her for the first time at Covent Garden at a benefit concert of Mr. Harris, the father of Augustus Drurylanius.

* * * * * * * * *

I have accidentally met with a booklet recently published by Messrs. Churchill, from which I think cancer-sufferers should derive much information of a decidedly encouraging nature. It is called "The Conditions of Radical Cure in Cancer." The author, Dr. Herbert Snow, a well-known Specialist on tumours and cancer, discusses the treatment of the latter which he regards as eminently curable by certain novel scientific methods and principles if taken in time. He considers opium, of old termed the "Divi donum," or special gift of God, as by far the best remedy for this fearful scourge we at present possess; and while confessing that it is not an absolute cure goes on to affirm: "Opium is the only drug which markedly checks the growth of carcinomata, and its early employment even when no surgical operation takes place will commonly add years of comfortable life."

Printed and Published by Romeike and Curtice, 359, Strand, London, W.C.

We do not think that the firm of Messrs. Romeike and Curtice will add much to any prestige they may rightly enjoy among those concerned in journalistic work and newspaper production by assisting in the dissemination of rubbish of this class, and we are certain that Dr. Herbert Snow will be grieved to find his name offered prominence in such a place.

THE PHYSIOLOGICAL ACTIVE PRINCIPLE OF THE THYROID GLAND.

DR. SIGMUND FRÄNKEL has made some valuable experiments in the Institute of Medical Chemistry of Vienna on the active principle of the thyroid gland. The results of feeding with animal extracts of the thyroid gland, adrenals, &c., in certain diseases have been most successful clinically, although the exact composition of the remedies has not been thoroughly understood. Several previous attempts have been made to discover the active principle of the thyroid gland, but hitherto without success. Dr. Fränkel experimented with known quantities of cold and warm extracts of the thyroid glands of sheep. The albuminous bodies were precipitated by acetic acid, and by feeding experiments he ascertained that the precipitate had no marked effect, whilst the filtrate that was obtained possessed the well-known properties of the thyroid gland, or, in other words, contained the physiological active principle. The filtrate was then chemically examined. It was first evaporated to a syrup, and on cooling solidified, showing the presence of gelatine derived from the connective tissue of the thyroid gland. By other experiments this gelatine was shown to be inactive. Fresh material was then taken and the albuminous substances and the gelatine precipitated by neutral acetate of lead, and the metal separated by filtration after precipitation by sulphuretted hydrogen. The residue obtained from the filtrate after evaporation was dissolved in alcohol and ether added, when a body was obtained which had the following peculiarities: it was intensely hygroscopic, and was soluble in water and alcohol. The watery solution had a neutral or slightly alkaline reaction, and only applying the usual tests for an alkaloid a positive result was obtained. Dr. Fränkel calculated the empirical formula as $C_6H_{11}N_3O_5$. He has provisionally named the substance "thyreo-antitoxin," as stated last week by our Vienna Correspondent. Investigations are being made clinically with this body, but sufficient time has not elapsed to establish any definite results. In experimenting on animals Dr. Fränkel failed to find the fall of blood-pressure demonstrated by Schäffer upon intravenous injection of thyroid extract, but acceleration of the pulse-rate was well marked. He also found that the hearts of frogs poisoned by muscarin, which had ceased to beat, could again be brought to act by dropping on them a few drops of a watery solution of the thyreo-antitoxin. In animals, too, after the thyroid glands had been extirpated and convulsions and other symptoms had followed, temporary recovery followed subcutaneous injections of a 1 per cent. watery solution of the remedy. These experiments agree with those made by Gley of Paris with injections of thyroid juice. Dr. Fränkel maintains, therefore, that he has demonstrated the isolation of the active principles of the thyroid gland, and that it is a pure chemical body, with well-defined chemical properties and occurring in considerable quantity in the gland. He anticipates that we shall eventually be able to administer this particular antitoxin in exact doses. As he has isolated it the body is odourless, and with a taste which "reminds one of the extract of beef rather than of the thyroid or its extracts." Another advantage he claims for the antitoxin is that we shall be able to assure ourselves of its purity, and

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that it is free from ptomaines, for a case of poisoning has recently been reported through feeding with a thyroid preparation. It must be remembered also that many of these preparations offered for sale are rendered inactive through faulty methods of preparation.

THE LATE SURGEON-MAJOR PARKE.

A MEMORIAL brass has been set up in the parish church of Kilmore, Ireland, in memory of Surgeon-Major Parke, whose premature death evolved such widely expressed sympathy at the time, both in medical and lay circles. The following is a copy of the inscription: "In Memory of Thomas Heazle Parke, Surgeon-Major A.M.S.C., second son of Wm. Parke, Esq., J.P., of Cloghes House, Kilmore. Born Nov. 27th, 1857; died Sept. 11th, 1893. Beloved and honoured by all who knew him. He entered the Army Medical Staff in 1881; served in Egypt with distinction, accompanying the Bazuda Desert column of the Nile Expedition for the relief of General Gordon, 1884-85. From January, 1887, to December, 1889, he served on the expedition for the relief of Emin Pasha as surgeon. It is as a tribute to his constant gentleness and care for the sick and suffering, and to the splendid services he rendered alike to Europeans and Africans during the three years' march across Africa, that this tablet is erected in grateful and affectionate remembrance by the two surviving officers of the expedition, Henry Morton Stanley, A. J. Mounteney Jephson (lieutenant)." The brass is mounted on a slab of polished marble.

THE FRENCH ARMY MEDICAL SERVICE.

WE recently[1] alluded to the retrogressive spirit displayed by the military authorities in their treatment of the medical staff of the French army, and we regret to observe that the topic is still the subject of unfavourable comment in several of our Parisian contemporaries. The feeling of discontent amongst members of the medical corps is described as becoming daily more and more accentuated, and unquestionably, if the facts now adduced are exact, these neglected, not to say despitefully treated, officers have every reason to be dissatisfied. A writer in *La Revue Médicale*, signing himself Georges Collet, is responsible for the following serious allegations. When, in answer to a telegram from the War Office, General Duchesne despatched from Madagascar his list of nominees for admission to the Legion of Honour he *forgot* the officers of the *Corps de Santé*. The omission having been observed, the General-in-Chief's attention was invited thereto by cable, whereupon he at once sent home a second despatch giving the names of all the medical officers taking part in the expedition! It would, of course, be possible to interpret this extraordinary procedure in a complimentary sense; the General might be supposed to mean that where all had acquitted themselves so meritoriously it was impossible for him to make selections; but, unfortunately, no such flattering explanation can be accepted by people acquainted with the real state of affairs. It was notorious that when the Madagascar expedition was being organised very little attention was paid to the demands of the Medical Director; and throughout the operations administrative medical officers were compelled to engage with the superior staff of the force in never-ending contests whereof the echoes have traversed the seas. The truth is the *Corps de Santé* is on the eve of losing the position it has so laboriously acquired. The decree which overrode the law by removing all transport material from the control of the chief medical officer must be fresh in everyone's recollection. M. Collet's next charge is made on the authority of Dr. Noël, and refers to the remarkable manner in which the military medical element has disappeared during the last few decades from the officers' roll of the Legion of Honour. In order that the discrepancy may be seen at a glance we have constructed the following table from the materials supplied in our contemporary:—

Legion of Honour.	1868.			1895.		
	Total number.	Officers of the Legion.	Knights of the Legion.	Total number.	Officers of the Legion.	Knights of the Legion.
Médecins Principaux, 1st Class	40	36	4	40	30	10
,, ,, 2nd Class	40	26	14	45	11	34
Médecins Majors, 1st Class ...	260	59	200	313	10	253
,, ,, 2nd Class ...	268	—	98	330*	—	77

* Approximate number.

The position of *médecins majors* of the second class is declared by M. Collet to be deplorable. Before an officer of this grade can hope for promotion he must have from twenty to twenty-five years' service and be about forty-three years old. No medical officer can expect advancement in the Legion of Honour until he has served for at least thirty years, and even then he cannot count on it be his career ever so blameless. There are now several retired officers with more than this amount of service, inclusive of from ten to fourteen campaigns, who are not in possession of the coveted rosette. The department had great hopes when General Zurlinden was at the head of affairs that something would be done to improve its position; but he is no longer a Minister, and serious doubts are entertained regarding the friendliness of his successor, M. Godefroy Cavaignac. As we mentioned last week, M. Vigne stated in the French Chamber that the hygienic and medical arrangements in Madagascar were defective, but if the medical officers were treated as M. Collet says, it is not right that they should be made to bear any blame in connexion with the terrible mortality by which the expeditionary ranks were doubly decimated. A mortality of 20 per cent. in a few months should be a warning to all Governments and generals not to neglect medical advice when military operations have to be conducted in a bad climate, or, for the matter of that, in a good climate.

CASTS IN NON-ALBUMINOUS URINE.

A PAPER on this subject appears in the *Berliner Klinische Wochenschrift*, No. 14, 1895, by Dr. A. Kossler. The writer has made a study of the occurrence of casts in urine which does not contain serum-albumin, with special notice of their relation to nucleo-albumin. He accordingly investigated mainly cases of infectious fevers, tuberculosis, and various forms of poisoning, nucleo-albumin being more commonly found in connexion with such conditions than with nephritis. He examined the urine of twenty-nine patients which was free from albumin, and found casts of various forms in the majority of the specimens. Chronic pulmonary tuberculosis yielded the greatest number of positive results; in eighteen cases casts were found—hyaline and granular; and in a few of the cases epithelial casts also. Solitary specimens of blood casts of both varieties, red and white, and of amyloid casts were likewise reported. Two cases of rheumatic endocarditis gave similar results, and one case each of the following diseases—viz., scarlet fever, enteric fever, croupous pneumonia, empyema following pneumonia, and a prolonged case of severe bronchitis, in which the temperature remained high; there were also two cases of phosphorus poisoning and two of a febrile disorder of an uncertain

[1] THE LANCET, Sept. 28th, 1895.

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nature. As before stated, all the specimens of urine examined did not contain serum-albumin, but the majority of them yielded nucleo-albumin in varying quantity, and the writer contrasts the occurrence of casts in connexion with nucleo-albumin with that of their occurrence with serum-albumin. Various circumstances go to show that the source of nucleo-albumin with casts is renal. Dr. Kossler had opportunities of examining twelve of the eighteen cases of pulmonary tuberculosis post mortem. In none of the cases were there any well-marked inflammatory changes, either diffuse or circumscribed, and he did not find in any of them cell-infiltration and exudation into the glomeruli. On the other hand, he was able to demonstrate changes in the epithelium of the urinary tubules: coarse granulation, well-marked cloudy swelling, and loss of nuclei, all stages of necrobiosis of the cells to the full destruction of the same. But these degenerative changes were not distributed through the whole of the kidney, but were distributed in small patches throughout the tubular structure. The occurrence, therefore, of casts with nucleo-albumin seems to stand quite apart from the ordinary exudative processes in the kidneys; the histological characteristics were entirely those of degenerative lesions of the glandular tissue.

AN ACTION FOR RECOVERY OF FEES BY A DENTIST.

AN important case was recently heard before Mr. Justice Mathew which opens up the question of fees. The action was brought by a dentist to recover fees to the amount of £105 for two small removable pieces of bridge-work, each carrying four teeth. The plaintiff, in support of his case, stated that the defendant had agreed to pay the sum sued for, but this fact hardly seemed to be supported by the subsequent evidence. Amongst other things we notice that the plaintiff stated he practised as a specialist in advanced American dentistry, and that removable bridge-work was never done by any dentist but himself. For the defence Mr. Charles Tomes gave evidence and expressed the opinion that the work was of a very ordinary character; was done by hundreds of dentists both here and in America; and that a fair fee would be about 30 guineas. The result of the case was that the plaintiff was allowed the sum of £30. In reviewing, this action we cannot help thinking that bridge-work is only too frequently used as a means of claiming large sums of money, and the patients, too nervous to face publicity, pay the sums demanded. The more quickly people begin to learn that there is no such thing as dentistry special to a country the less we shall hear of these cases. A few more decisions similar to the above would, we think, have a beneficial effect.

SYRINGOMYELIA IN A CHILD.

IN the *Revue Médicale de la Suisse Romande* Dr. Thomas relates the particulars of a case of this curious affection occurring in a child aged six. The patient went to a dispensary on account of severe and troublesome diarrhœa, but the hands were noticed to be peculiar in appearance. He was an only child, born at full term, but the labour was long and difficult. He had had digestive troubles and a severe burn in 1893. Two years before he was seen—i.e., at the age of four—the mother noticed that he did not seem to have pain when he was burnt. On examination the child was found to be of medium height and thin. There was a moderate degree of lateral curvature with the convexity directed to the left. The hands were large, stumpy, and cyanosed, and in the left hand the terminal phalanx of the index-finger had almost disappeared, while those in the other fingers and also in the thumb had been altered. Similar changes were present in the right hand. There was at least no marked degree of muscular atrophy in the hands and none in the legs, but while tactile sensibility seemed to be normal there was diminution of that for pain and for the appreciation of heat and cold. The knee-jerks were not obtained; there was no incontinence of urine, but loss of control over the sphincter ani. This case is peculiar and interesting because of the youth of the patient and the completeness of the clinical features of the case. An unusual feature certainly is the loss of control over the sphincter ani. But if, as seems likely to be the case in some instances, the condition which we designate "syringomyelia" depends upon a developmental defect in the spinal cord, such a defect of control might be due to a cause similar to, if not identical with, that which produces a similar weakness in certain cases of spina bifida occulta.

THE FORMS OF MUSCULAR ATROPHY.

IN his essay on the Duchenne-Aran type of progressive muscular atrophy (noticed on another page) Dr. J. B. Charcot does good service in presenting in tabular form the numerous conditions under which muscular atrophy arises, although, as he says, any classification in the present state of knowledge must be regarded as provisional. It may be useful to reproduce here the categories which he has formulated under the three heads of "myelopathy," "neuritis," and "myopathy."

MYELOPATHIC GROUP. — A. *Acute Amyotrophies.* 1. Infantile paralysis and adult spinal paralysis. 2. Acute central myelitis. 3. Hæmatomyelia. 4. General subacute anterior spinal paralysis. B. *Chronic Amyotrophies.* I. Protopathic Forms: 1. Progressive muscular atrophy, Duchenne-Aran type. 2. Labio-glossal laryngeal paralysis. II. Deuteropathic Forms: 1. Amyotrophic lateral sclerosis or muscular atrophy, Charcot type. 2. Hypertrophic cervical pachymeningitis. 3. Syringomyelia. 4. Tabes. 5. Various types of central myelitis. 6. Intraspinal tumour. 7. Disseminated sclerosis. III. Special form of family progressive muscular atrophy commencing in the feet and legs and involving the hands subsequently.

NEURITIC GROUP.—1. *Infectious Form: a.* Diphtheria, typhoid fever, &c. *b.* Primary infective neuritis, beri-beri. *c. Multiple* neuritis consecutive to syphilis and tuberculosis. 2. *Toxic Form.* 3. *Spontaneous Form*, neuritis *a frigore*, &c. 4. *Atrophic Form*, dyscrasic or cachectic, as from pernicious anæmia, chlorosis, cancer, diabetes. 5. *Sensory neuritis.*

MYOPATHIC GROUP.—1. Pseudo-hypertrophic paralysis. 2. Juvenile form of Erb. 3. Progressive muscular atrophy of infancy of Duchenne; facio-scapulo-humeral type of Landouzy-Dejérine. 4. Hereditary form of muscular atrophy of Leyden and Möbius. 5. Scapulo-humeral type of Zimmerlin. 6. Femoro-tibial type of Eichorst.

TREATMENT OF SMALL-POX BY EXCLUSION OF THE CHEMICAL RAYS OF DAYLIGHT.

IN September of last year Dr. J. Moir drew attention in our columns to this treatment of small-pox, and we have since received communications on the subject from Dr. Moir, Dr. Finsen, and Dr. Feilberg. Dr. Finsen has recently published an interesting historical account of the Red Light Treatment of Small-pox, the scientific basis on which it is founded, and the method of carrying it out. Dr. Feilberg states that he was at first very sceptical as to the influence of red light on small-pox patients, but, nevertheless, tried its effect on several unvaccinated children suffering from small-pox, and was surprised at the favourable course which the disease took. The vesicles did not suppurate, there was no secondary fever, and no permanent pitting resulted. The essential point for the success of this treatment, according to Dr. Feilberg, is that the patients should come under treatment during the early stages of the disease, shortly after the vesicles have appeared; if the seventh day has been reached suppuration can hardly be avoided. Another important point is that the exclusion of the chemical rays of daylight must be complete and continued until the vesicles have quite dried up. Dr. Moir, whilst admitting that Dr. Finsen bases his treatment on a scientific basis, and notwithstanding the extreme ability displayed both by him and Dr. Feilberg and the care and fairness shown by them in their papers, is still doubtful as to whether their explanations are correct. He admits that he criticises without experiment, but though he has not used

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identical treatment yet he has given trial to somewhat similar experiments. For instance, he used to employ a solution of collodion and castor oil on the exposed parts to prevent suppuration and pitting, also, for similar reasons, iodine and glycerine solution, the latter particularly apparently meeting Dr. Finsen's chief requirements; but as the result of these and similar trials he still believes that the only distinction to be depended on as to the extent of suppuration and pitting is the presence and quality of the successful vaccination.

"HONOUR TO WHOM HONOUR IS DUE."

UNDER the rubric of "Palmam qui meruit ferat" a controversy has lately closed in the *Times* as to the real authorship of the saying, "He who never makes mistakes never makes anything." The ex-American Minister, Mr. Phelps, did indeed enunciate the aphorism, in a connexion, moreover, which drove its truth effectively home; and other publicists on the platform and in the press quoted it from him as a novel contribution to proverbial philosophy till prior claims were put in for its authorship, and it was assigned (*inter alios*) to the poet Goethe, the Emperor Napoleon, the dramatist Beaumarchais, and Mr. Samuel Smiles. The gist of the aphorism residing in the fact that "humanum est errare" and that the man who most is to be commended is he who errs least often, Napoleon was thought to have anticipated Mr. Phelps when he remarked, "the best general is he who makes fewest mistakes." But by none of the participants in the controversy was it shown that the aphorism is to be attributed to the Father of the Healing Art. In the Hippocratic treatise περὶ ἀρχαιῆς ἰητρικῆς (on ancient medicine) the author reserves emphatic approval for the physician who errs indeed, but who errs only in unimportant matters (τὸν σμικρὰ ἁμαρτάνοντα), and then follows the famous comparison of the practitioner to the pilot—a comparison, as was long ago pointed out by THE LANCET, appropriately addressed to an audience familiar with the difficult navigation of the Greek archipelago. Like all teachers of consummate ability Hippocrates possessed, and improved by practice, the art of condensing the results of observation or reflection in memorable phrases, and the aphorism in question is but one out of many in which he can be shown to have anticipated the wisest of the moderns.

HOSPITAL ABUSE AT BRIGHTON.

DR. WARING, whose communications to us on the above subject have made a wide impression, has returned again to the charge in a paper read before a special general meeting of the Brighton and Sussex Medico-Chirurgical Society on Nov. 26th. He adduced illustrations, for the accuracy of which he vouches, which are very striking. He learns from the reports of the various charities in Brighton that 38,113 tickets were distributed in 1894. If these did not represent 38,113 separate persons or cases, as is alleged, then the claim on the charitable is made on an exaggerated statement. He adduces striking individual instances of abuse in the cases of persons with good incomes, and of whom better things might be expected. He protests very properly against nearly a third of the women of Brighton being attended in their confinement by the midwives of the Lying-in Institution. One of the midwives of the institution has told him that over half the cases could afford to pay. We agree with him that as a rule all first cases should be denied charitable help. As an instance of abuse of a charity he mentions that of a gentleman, living in a large house and subscribing 10*s.* to a dispensary, sending a relative, who lives with him, to the dispensary for advice, and for one or two elastic stockings. It is difficult to tell where the charity comes in here, and the only conclusion we can come to is that the gentleman's conscience must be more elastic than the stockings which he gets for his friend at less than cost price. With equal force Dr. Waring protests against working men in the receipt of large wages dropping a penny weekly into the workman's boxes at railways and other works, and purchasing tickets for the sum so raised for the use in cases of common illness of all their relatives. This is not to help a charity, but to pauperise themselves and to cheat the medical profession. We can only notice another bad case. A patient suffered from cataract. Dr. Waring asked whether he could afford £5. He said he could well, and promised to let him hear soon, Dr. Waring meaning to get a surgeon in Brighton to perform the operation. Some time elapsed and he met the patient with apparently good sight. He had had the operation done "for nothing" at the eye hospital and by the very surgeon whom Dr. Waring intended to ask to operate for the fee which the patient could well afford. There is no morality or gratitude in such action of patients. And there is not much more on the part of the hospital that helps them. If such abuses in the name of charity are not corrected the institutions will die out. Their medical officers should save them by declining to be parties to so great an abuse.

HEALTH IN THE POST-OFFICE SERVICE.

THE Departmental Committee on Post Office matters held a meeting at the House of Lords on Friday last, Dec. 6th, Lord Tweedmouth presiding, when the important evidence of Mr. Arthur H. Wilson, chief medical officer to the General Post Office, as to the health of the employés was heard. From figures which Mr. Wilson gave in illustration we learn that the average number of days' absence from work in the year among the employés in the central office is 8·6, while the average staff numbers 6000 men. As the average number of days' absence from sickness in the country generally is a fraction over 9·0, it will be seen that this figure must be considered a satisfactory one, both from the point of view of the men and of their employer—the country. The average figure representing days of absence from sickness among the sorters was rather high; while in the senior telegraphist class it reached 12·3, a figure accounted for by the chronic illness of a few and not by any generally prevailing bad conditions. With regard to the death-rate in the Post Office the average age of the men in the service is about thirty-five years, and the death-rate is smaller than the general death-rate of the country, it being for the years 1891–94: postmen, 6·3; telegraphists, 4·2; and sorters, 4·1. The employés of the Post Office are known to consider that their average rate of sickness is high and compares unfavourably with the sick-rate of the working portion of the community between the ages of fifteen and sixty-five years. It would appear from Mr. Wilson's evidence that, at any rate during the four years with which he has dealt statistically in his evidence, the Post Office employés as a whole enjoy better health than men of about the same age engaged in many other occupations and professions.

THE WESTMINSTER PLAY.

IF the classics are worth teaching at all they are worth being taught well, and, to this end, the representation of Greek and Roman scenic masterpieces has, from the revival of letters downwards, been practised with satisfactory results, both at home and abroad, in the best organised schools. Westminster has long been distinguished among ourselves for the prominence she has given to such performances, and this year will continue the time-honoured tradition by the representation of the "Andria" of Terence. Exception, not altogether groundless, has, however, been

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taken to the scantiness of the repertoire from which the plays are drawn. Three of Terence and one of Plautus recur with a frequency almost monotonous, until the scholarly outsider inquires if the school authorities are quite justified in so restricting their choice. Other plays besides the "Andria" or the "Phormio" or the "Adelphi" or the "Trinummus" are now read in good editions at not a few grammar schools, and would, if represented, be quite as effective on the stage as the best of the old favourites. Take, for instance, the "Menœchmi" of Plautus. This is an acknowledged masterpiece, and, besides, gives the reader or spectator a glimpse into the *vie intime* of antiquity not afforded by others of the same class. For one thing, it introduces the medical man as he posed and practised in the period of the Republic, before, that is to say, he was recognised by Julius Cæsar's famous edict as belonging to a liberal profession. Even then the practitioner had a house of his own specially adapted for the admission and treatment of cases, and in the "Menœchmi" he says—

"ego abibo domum
Ut parentur, quibus paratis opus est."

There the patient was under his direction and responsibility, and there also there was in attendance the *personnel* consisting of carriers and assistants at the disposal of practitioner and patient alike. The whole scene, with which the fifth act opens, is most interesting and instructive as an object-lesson in the private practice of Republican Rome, and suggests the further consideration of how far scenic representation might not be made subservient to reproducing for the modern world the characteristic life of the ancient.

"AN EPIDEMIC RELIEF SERVICE."

UNDER the above title we have received from a correspondent, engaged in nursing, a communication embodying some suggestions, in favour of which there is much to be said. She has evidently been impressed in practice with the enormous difficulty which is experienced in many country districts, owing to the lack of proper isolation accommodation, in dealing adequately with epidemics of infectious disease and by the no means infrequent supineness of rural sanitary authorities in the face of serious outbreaks, difficulties which, as she rightly observes, are enhanced in a high degree by the fatalism and ignorance of the poor. She refers to the utterly inadequate manner in which the directions of the medical attendant in matters relating to isolation and disinfection are carried out by the untrained persons into whose care the infectious sick in rural districts so frequently fall, and she is anxious, if possible, to see a better state of affairs brought about. With this praiseworthy end in view she suggests the formation of an "epidemic relief service" for use in outbreaks of infectious disease. Her proposal is that a roll of nurses skilled in the nursing of cases of infectious disease, and willing to be despatched to wherever their services are required, should be kept; a suggestion, in fact, much after the lines of that acted upon during the last cholera scare by the Royal British Nurses Association, and to which we drew attention in THE LANCET of Aug. 27th, 1892. There is little doubt, if the suggestions embodied in our correspondent's communication could be carried out in their entirety, that many lives and much suffering and inconvenience might be spared. It would be in times and places where epidemic regulations under Section 134 of the Public Health Act, 1875, were in force that the suggestions referred to would be of the greatest value; but this raises the question as to what is to become of the nurses enrolled during non-epidemic times. Obviously, if they were otherwise engaged they would not be available at a moment's notice without considerable inconvenience to their patients. The Isolation Hospitals Act, 1893, confers power upon a hospital committee to provide for the training of nurses in the nursing of cases of infectious disease, and this provision is that which approaches most nearly to the proposals made by our correspondent. The expense connected with the carrying out of her suggestions seems to be the chief objection to them; as to their value there can be no question.

OUR Russian Correspondent, as will be seen in another column, announces that the date fixed for the Twelfth International Medical Congress to be held at Moscow is the week beginning Aug. 19th and ending Aug 26th (these are the English dates), 1897. The president (acting) will most likely be Professor Klein, Dean of the Faculty of Medicine in the University of Moscow, and Professor Erisman, who holds the chair of Hygiene, has been elected general secretary. The official languages will be French and German.

THE trustees of the National Portrait Gallery have received from Mr. G. F. Watts, R.A., fifteen oil portraits and two drawings. The portraits are part of the series painted by Mr. Watts with a view of their eventually becoming the property of the nation, and among them medical men will be glad to hear is the face of Sir Andrew Clark in the good company of Matthew Arnold, Robert Browning, Thomas Carlyle, Cardinal Manning, John Stuart Mill, Dante G. Rossetti, the Earl of Shaftesbury, Lord Tennyson, and others.

PROFESSOR HAFFKINE, fresh from his practical work in connexion with the subject, will deliver a lecture on Preventive Inoculation against Cholera in India, on Wednesday, Dec. 18th, at 5 P.M., at the Examination Hall, Victoria Embankment. Members of the profession will, we understand, be welcome to attend.

DR. ARTHUR NEWSHOLME will read a paper on "A National System of Notification and Registration of Sickness" at a meeting of the Royal Statistical Society, to be held on Tuesday, Dec. 17th, at 5 P.M., at the Royal United Service Institution, Whitehall, S.W.

Pharmacology and Therapeutics.

PARACHLOROPHENOL IN LARYNGEAL PHTHISIS.

DR. SPENGLER in his dissertation (St. Petersburg, 1895) shows that parachlorophenol has considerable effect on tubercle bacilli in laryngeal phthisis when locally applied. After having observed its action by experiments on animals, twenty-six patients who were suffering from tuberculosis of the larynx and of other organs were treated, ten of whom appeared to be completely cured. The parachlorophenol was mixed with glycerin in various proportions, and when applied to the ulcerations on the mucous membrane of the larynx was found not only to cause no irritation but to have a soothing effect as well as a cicatrising action, the soothing effect being much more prolonged than that obtained by the use of cocaine. It was found applicable in all classes of cases and so is preferable to lactic acid and even to surgical manipulation. In cases of lupus of the mucous membrane, too, it acted very beneficially. Parachlorophenol was found, by experiment, to have a very energetic microbicidal action on tubercle bacilli, whether in pure cultures or as existing in the sputa of phthisical patients.

CHLORIDE OF AMMONIUM IN PHTHISIS.

Mr. A. Kebbell, M.R.C.S. (Flaxton, York), advocates the use of chloride of ammonium in even advanced cases of pulmonary phthisis. He generally gives it internally in doses of 7½ gr. taken in milk every three or four hours, and finds that it is followed by great increase of expectoration, improvement in sleep and appetite, and diminution of night sweats. He attributes its efficacy—which in his experience "surpasses any drug that I have used or seen used in the treatment of phthisis"—mainly to the

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facility of expectoration and also, perhaps, to its action on the ulcerated surfaces. He hopes that others will give the drug a trial and report their results. Hitherto the use of chloride of ammonium has been mainly confined to simple catarrhal conditions of the respiratory tract, and its application in advanced tuberculous disease is, we think, novel.

VERATRUM VIRIDE IN ECLAMPSIA.

At the Society of the Alumni of Bellevue Hospital, New York, Dr. Barrows related two cases of considerable interest. The first was that of a young German primiparous woman who had been troubled with frequency of micturition for some time. About a week before her admission her legs had become swollen. The night before her admission on her way to visit her medical man she had fallen down, become unconscious, and had gone from one convulsion into another at intervals of about twenty minutes. The convulsions subsequently became more frequent, occurring every five minutes. On admission her temperature was 105·4° F., and the pulse 126, while her pupils were pin point in size. An ounce of urine was drawn off by the catheter, and this was found to be almost solid albumin and to contain granular and hyaline casts. The uterus was next emptied, the cervix being incised and forceps applied. Two hours after this the convulsions recurred. Two drops of croton oil were administered, and five minims of tincture of veratrum viride were given hypodermically every hour until four doses had been given. In a few hours her pulse became soft and regular, and her temperature was 100°. There was no recurrence of convulsions, and in twenty-four hours 108 ounces of urine were drawn off with a specific gravity of 1015. This contained a trace of albumin with hyaline and granular casts. Uninterrupted recovery took place. The second case was that of a multiparous woman seen on the same day. In her case a similar procedure was followed and with an equally gratifying result. Dr. Barrows, in a few remarks commenting on the cases, drew special attention to the administration of veratrum viride in such conditions. It had been for a long time used in the Southern States, apparently with success, in such cases as those described, and he directed special attention to its effect in promoting urinary secretion and in this way probably controlling the convulsions.

AN ITALIAN TOWN DAIRY.

BY W. W. BALDWIN, M.D.

I AM acquainted with an honest peasant family who have milk and sour wine to sell. They live wisely outside the city limits to escape that last and heaviest burden of taxation upon the poor, "il dazio consumo." This tax, of not under 25 per cent. is levied by our Florentine city government upon every necessity of life that passes any of the gates through the iron barrier drawn about Florence. A fine antique stone portal, with great wrought-iron gate of mediæval workmanship, opens into a picturesque paved courtyard. To the left rises a grey, grim, castellated tower, all that remains of a stately old Tuscan villa. In front of this stands a beautifully sculptured stone well-curb whose decorated iron top, doubtless wrought by the same cunning hand that created the artistic gate, over-arches all like a flower. To the right, encroaching somewhat upon the courtyard, lies a group of dilapidated houses in base stucco, doubtless of modern construction. These serve as tenements to various poor families, but the peasants live safely in the tower like hawks in their nest. The vineyard, with its trailing vines festooned from tree to tree, one of the peculiar charms of Tuscan landscape, leads down through ineffable vistas to a shining stream. The farther bank, covered with silver birches, aspens, and larches, rises abruptly to vine-clad slopes. Sweeping up beyond, like a vision, is one of the transcendent, indescribable panoramas of classic Italy, whose background is the noble-crowned height of Fiesole, uplifted above silver-grey olive groves.

My friend the peasant, for whom I had been waiting while making these observations, then came and conducted me to the cows, objects of my afternoon visit to this delectable nook of Old Florence. The stable upon inspection, with its thick stone wall, appeared to be the foundation for that group of flimsy houses to the right. There was a little wooden door by the side of a fine portal which had been bricked up and plastered over in true peasant fashion. Entering from radiant sunlight into dusky gloom, one could distinguish nothing until a barricaded window had been thrown open. Then a vaulted ceiling with supporting columns and exquisitely carved capitals, remains of frescoes long since irreparably ruined by damp and mould, and, above all, a beautifully proportioned interior, revealed what must once have been a gem of mediæval chapels. In a dark corner, standing knee-deep in stable litter, were two little dun-coloured cows, placidly blinking and eating of cabbage-stalks and other garden débris, truly a not very promising source of milk-supply, even with the help of the customary "elongation" from the well, it being a Tuscan superstition that "to baptise the milk encourages the cow."

"Do you turn your cows out every day in the field?" I asked. "Heaven forbid that I should tempt Providence," answered the peasant. "Some crazy English people once persuaded me to give my cows the freedom of the vineyard, because, they said, air and sunshine are good for milk. The blessed beasts went mad directly, and one, a perfect angel, broke her neck careering about. Truly," remarked he, with fine irony, "every wise man knows that cows require peace and quiet to ruminate prosperously, and the sun was ever bad for milk." Although the little beasts in question had been certified as perfectly well by a competent veterinary surgeon, nevertheless milk elaborated in such stunted, anæmic organisms from rubbish of food, in tainted air, away from sunlight, could not be wholesome. My friend and other peasants of reputed wisdom, moreover, assured me that rude change of immemorial habit invariably induces disease in these cows, which was proof, they thought, of great superiority in the Tuscan town dairy system. As unexceptionable milk, however, was my object, I did not seek to combat invincible prejudice at this time, but proposed, as a compromise, to purchase a "seasoned" Swiss cow upon my own account, the peasant contracting to feed her according to prescribed rule, to give a daily outing, and to strictly observe sanitary laws. A spacious octagonal temple (or antique summer-house?) in the vineyard happily afforded, with certain alterations, admirable stabling.

The problem of storing and transporting this milk unpolluted was most perplexing. One had dark suspicions that the well water was not free from organic infiltration, which subsequent analyses amply confirmed. The rush-covered flasks (*fiaschi*) of thin glass, universally employed to transport milk for immediate consumption, are picturesque, but very dirty, and swarming with bacteria. They are simply given a daily "lick and promise" with water from the nearest well, but never properly cleansed from one season's end to another. A kitchen near the ecclesiastical stable was then visited. Upon rude shelves in the corner were some green glazed terra-cotta receptacles into which the milking is poured and "baptised." An untrapped sink poured its tide of slop water, mixed with organic débris, into a leaky drain which could not be traced beyond the centre of the courtyard. "Here," said the peasant, "everything consumes itself." (These blind drains are popularly called "self-consumers.") In a dark alcove without means of ventilation except through the kitchen was a "luogo comodo" (convenient place), also untrapped. This opened directly into the large, unventilated, common cess-pit under the kitchen window, which was emptied every five or six months, and its contents employed for agricultural purposes. The smells from stable, sink, and cess-pit, together with something peculiar to generations of uncleanliness besides, made a combination too rank for any civilised nose. As might have been expected, this group of houses had been visited again and again by infection, various outbreaks of diphtheria having occurred, and latterly several children sleeping together in a room adjacent to the kitchen were down with scarlet fever. In the several Italian families supplied with this milk I discovered but one recent instance of undoubted infection from its use. A girl five years of age, who had not been exposed in any other way, sickened for a very mild attack of scarlet fever about fifteen days after first drinking it. From her the father contracted the disease and nearly lost his life in consequence. To this interesting case and the epidemic in general, however, I hope to devote a future paper. Here my purpose is to give a simple sketch of the average Italian town dairy. It is true one may not always find such a picturesque environment as at our farm even in Tuscany, but the trail of the mediæval serpent of uncleanliness is in them all. (One may except several

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large dairies in the vicinity of Florence conducted upon the English system. These are unexceptionable in every respect, and at present supply the foreign colony with pure and wholesome milk.)

Perhaps the spell of antique Florence, slowly disappearing before the jerry-builder, possibly a missionary sentiment in cause of sanitation or personal friendship for the good, honest man, may have been my excuse for choosing this unpromising source of milk-supply. Be that as it may, our Swiss cow having taken possession of sanitary quarters in Diana's temple surrounded by vineyards, with food of the best and drinking-water from an unpolluted spring, our next step was to purchase an appropriate cart and English milking utensils of approved pattern, which are cleansed and sterilised daily. The cart, which stands when not *en route* under a thatched shed near our stable, serves meanwhile as dairy. Occasional unexpected visits are also made at the farm to ensure attention to detail. All this being satisfactorily accomplished, those mediæval horrors of leaky drains, foul kitchen, pestiferous stable, and unspeakable "conveniences" continually reproach one until steps shall have been taken to create there an oasis of sanitary righteousness. The question "Am I my brother's keeper?" will be easier to answer after these poor people have been delivered from the old haunting shadow of pestilence and death.

SANITARY EVOLUTION IN GLASGOW.

IT is not too often our good fortune to have to notice anything from the pen of the accomplished medical officer of health of Glasgow; but whenever Dr. J. B. Russell does appear in print we are prepared to find, not only that he has something important to communicate, but that his subject has been treated in a fashion at once able and refreshing. Unlike most other medical officers of health, on this side of the Tweed at any rate, Dr. Russell abstains from publishing an annual report, with rates of birth, sickness, and mortality, in orthodox form; and this he does from conviction that, except on the sure basis of a frequent census, even the best estimates of population for intercensal years must be so unreliable as to furnish rates which are merely worthless and misleading. In England, as in Scotland, this is well known to be the case, especially where small and rapidly changing areas have to be dealt with. Dr. Russell has, therefore, justification for the exceptional course to which he has for many years consistently and deliberately adhered. It by no means follows, however, that Dr. Russell fails to recognise the value of statistical methods, wherever these can be based on satisfactory foundations. That, on the contrary, he keenly appreciates the need of accurate numerical data as the very mainspring, as well as the test, of public health work, is proved by the excellent and comprehensive three-volume report on the vital statistics of Glasgow, which he issued after the census taking of 1881, the results of which formed the basis of the numerous and instructive tables which illustrate the volumes referred to.

We have just received another important contribution to sanitary literature from the pen of Dr. Russell, entitled "The Evolution of Public Health Administration in Glasgow," the subject being illustrated by the sanitary history of that city in the nineteenth century, with special reference to the period which has elapsed since the year 1854. From the preface we learn that an unbroken record of sanitary operations in Glasgow has been maintained throughout the last forty years. Speaking generally, the first ten of these years represent the period of awakening and groping for an instrument and a method; the remaining thirty represent the period of resolute endeavour, each successive decade exhibiting a stage in administrative progress. The anticipated revision in 1896 of the internal administration of the city, the removal and re-establishment in suitable premises of the sanitary department, and "the sense of quickening life now apparent in the city, which seems to foretell an era of new departures"—these are circumstances which, in Dr. Russell's judgment, mark the present time as especially opportune for a retrospect such as that which is now before us. In order to estimate the magnitude of the task which has been successfully grappled with in these last forty years it was necessary that some idea should be formed of the sanitary state of Glasgow in the first half of this century. Accordingly, Dr. Russell gives in Section I. of his book a review of the history of Glasgow from the commencement of the century down to 1854, Section II. being occupied with the results of public health work since the latter year and with the concomitant progress of hospital administration for the isolation of infectious disease.

Beginning with the opening years of the present century Dr. Russell gives a general survey of the several periods into which he has divided the ninety odd years which have since elapsed, keeping in prominence "a coherent reading of the moral of the narrative." In the years before 1855 the register of burials kept by the wardens of churchyards was the only available source of information as to the number of deaths or their causes. Mortality bills, made up from these sources and published from 1821 to 1832, kept vividly before the community the startling records of those times, when at frequent intervals the city was devastated by epidemics of fever and small-pox. Though typhus fever did not arrest attention specially until 1818, it had evidently been in the city from the beginning of the century. The subsequent history of this pestilence, in Glasgow as in other places, appears to have been like that of an active volcano, periods of deceptive repose alternating with violent eruptions. For short intervals infection smouldered in the "wynds," bursting out into epidemic fury as soon as the influx of immigrants had produced a susceptible population. Small-pox was scarcely ever absent, feeding chiefly on Celtic immigrants and becoming epidemic at intervals as they accumulated. There were three severe epidemics of cholera between 1832 and 1854, and in 1843 more than a quarter of the inhabitants in the poorer districts were attacked by famine fever. The present generation can with difficulty realise what such recurrent epidemics meant in the experience of their forefathers.

In 1837 the death-rate of Glasgow was 41 per 1000, one-fifth of which was caused by "fever" alone, which attacked at least 22,000 people in that one year. In 1847 the death-rate rose to 56 per 1000 living, of whom 10 per 1000 were killed by "fever," which is estimated to have attacked as many as 45,000 persons. It is proved beyond question, and the fact is attested by hosts of competent witnesses, that the sanitary state of Glasgow at the time referred to was at any rate as bad as neglect, prejudice, and ignorance could make it. Eminent medical men were then, as they have ever since been, to the fore in pointing out the dangers which threatened the health of the citizens and in suggesting appropriate remedies. At that period a large proportion of the population lived in dwellings so over-crowded on the soil as to be beyond the reach alike of sunshine and of air, and so confined as to leave no more space than was necessary for mere ingress and egress. The houses were constructed in utter defiance both of health and of decency, and their inmates were so completely deprived of the most primitive means of cleanliness as to have reached the lowest depths of physical as well as moral degradation.

We have not space for a tithe of the details by which Dr. Russsell so vividly pourtrays the wretched conditions existing in Glasgow at the period here referred to—conditions which would scarcely be believed to have been possible in the present century but for the unimpeachable character of the authority who vouches for the accuracy of the description. Still, notwithstanding the urgency of the protests which were addressed to the

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authorities of the time, it was not until after the year 1854 that even the most elementary measures were initiated to redress the evils thus prominently brought to light. Under the immediate stimulus of the cholera epidemic of 1848 Glasgow had already acquired power to demolish ruinous and dangerous dwellings; but this power was practically a dead letter, and was only enforced in case of houses that could no longer hold themselves upright. As a matter of fact, but little permanent good was done even in these cases, for, in consequence of the want of by-laws, the greed of property owners rapidly covered again the old sites with buildings scarcely superior to those which had been displaced. As Dr. Russell aptly phrases it, "All this was mere scratching of the surface," and it was not until twenty years later that anything effectual was done to improve the condition of the homes of the people. Of sanitation, in the modern sense of the term, there was none. Medical writers of the time relate that the great cholera epidemic above referred to was in full swing before any attempt was made even to disinfect houses or clothing. The late Dr. Sutherland is quoted as testifying to the disgraceful inefficiency of what passed for the sanitary service, and as explaining that the reason why human filth was allowed to accumulate in the "wynds" and "closes" was because this material was the perquisite of the householders, and, therefore, was only removed when the farmers thought fit to fetch and pay for it. In the year 1859 was effected perhaps the greatest and most permanent sanitary improvement ever adopted in Glasgow. In that year the Clyde was discontinued as a source of water-supply, and a splendid service from Loch Katrine was obtained in its stead. Thenceforward a vast improvement was noticeable in the public health, and cholera, at any rate in its epidemic form, practically ceased to be. But it was not until 1862 that a Sanitary Committee was nominated, and not until the following year that the first medical officer of health received his commission. Subsequently a lay nuisance officer, with a small staff of helpers, was appointed to look after the typhus fever epidemic which at that time was raging in Glasgow. In 1870 the first sanitary inspector was appointed, with a subordinate staff of forty-two officers, five of whom were females, at that time a novelty. In 1876 the hospital treatment of epidemic disease was taken over from the infirmary authorities by the municipality, who, five years later, resolved to open their fever wards to all citizens free of charge. In 1883 a new public washing and disinfecting establishment was added to the municipal preventive machinery, the object being, on the removal of an infectious patient, to prevent the spread of disease by purifying the house and all the surroundings of the sick.

In our rapid and necessarily imperfect review of this interesting work we have now followed the history of Glasgow sanitation down to almost the present day. Before closing the book we would notice one omission which the modesty of its author does not permit him to supply. From beginning to end of the 140 pages not a word is mentioned of the part which the medical officer of health himself has taken in the splendid sanitary achievements of the last quarter of a century. The name of J. B. Russell is, however, a household word throughout the public health service, whose members will, we believe, with one accord acknowledge the obvious fact that it is mainly to the energy, ability, and self-sacrificing care of Dr. Russell himself that the vast improvements chronicled in these pages have been effected.

IN Dr. Seaton's summary of notification returns in the administrative county of Surrey we notice that the county was quite free from small-pox during November, Influenza was present in several districts, but apparently does not prevail to a notable extent except in the Frimley district.

PUBLIC HEALTH IN THE CITY OF CHICAGO IN 1894.

CHICAGO, with its population of 1,567,727, is at the present time the second largest city of North America, New York, possessed of a population of 1,957,452, being the only one exceeding it numerically. After Chicago come Philadelphia and Brooklyn with populations of 1,139,457 and 1,055,000 respectively. Some idea of the cosmopolitan character of the people of Chicago may be gathered from the fact that there are in it but 949,092 Americans out of a total population exceeding one and a half millions, and that several of its districts are so distictly foreign as to necessitate the employment of interpreters on the sanitary staff.

In his annual report for 1894 Dr. Arthur Reynolds, the commissioner of health, states that "Chicago continues to be not only the healthiest large city on the American continent, but the healthiest among all cities of magnitude in any quarter of the globe." He considers that the figures given at the official census were too low, but taking these as the basis of calculation the year 1894 yielded a death-rate of but 15·24 per 1000 of the population, and the "phenomenal healthfulness of the city continues to be a theme of incredulous comment by less favoured localities." In a table furnished in the report under review are given the population and death-rate of all the cities of the United States having populations over 200,000, and from this it appears that the rates in the several towns vary from 15·24 in Chicago to 24·88 in New Orleans. Taking now what are called the five lake cities—i.e., Chicago, Detroit, Milwaukee, Cleveland, and Buffalo, all of which are situated in the region of the great lakes and which together contain about 30 per cent. of the aggregate population of the great towns—it is found that their death-rate is but 15·56 per 1000, as compared with a rate of 19·88 per 1000 in the remaining cities. Dr. Reynolds states that an urban rate of less than 18 per 1000 has been pronounced incredible by the highest statistical authority in his country, and he wonders what will now be said as to the aggregate death-rate of the five lake cities. Dr. Reynolds will probably, too, wonder what the same authority will say to the 1894 death-rate of 17·8 per 1000 recorded for the 4,349,166 population of London. The death-rates of the five lake cities are certainly remarkably low, and it will be interesting to know to what their exceptional rates are due; whether, for instance, to any peculiarity of the age distribution of the population, or to the salubrity of their geographical position. The death-rate among the coloured element of Chicago—which amounted last census to 24,889—was during 1894 at the rate of 26·67 per 1000, as against a rate among the white population of 15·05. Violent deaths were responsible for a considerable portion of the mortality in Chicago during last year, and this seems to have been in large part due to the fact that within the corporate limits of Chicago there are over 2000 miles of railroad tracks, with more than 3000 street crossings over which 1400 trains pass daily. In spite of this the corporation does not compel the railway companies to maintain gates at the crossings, or even to employ signalmen to warn passengers of the approach of trains; in fact, one of the leading medical journals has spoken of Chicago as the "most blood-guilty city on earth." The epidemic of small-pox which occurred in Chicago during 1894 was, Dr. Reynolds reports, "the lesson of neglected vaccination," but nevertheless it is very interesting to observe the manner in which, when the consent of the city council had been obtained, vaccination was carried out. In one month no less than 586,500 vaccinations were performed, and in the whole year 1,084,500 out of a population of about 1,600,000. This work was performed by 500 vaccinators, specially appointed. Dr. Reynolds supplies a chart in his report showing the remarkable manner in which small-pox, although obviously in the ascendant, was at once arrested owing to the wholesale vaccination. Dr. E. Garrett, the chief medical inspector of Chicago, states that in his experience the vaccination of nursing infants is a difficult matter, and that they also manifest for a short time after birth resistance to small-pox. The diagnosis of the exanthemata in the case of negroes is said

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by the same observer to be a very difficult matter, and for this reason all doubtful cases occurring among the coloured population are at once quarantined until the diagnosis is established. Dr. Benson and Dr. Chapman, two of the medical inspectors, in reporting upon the small-pox hospital, state that as a result of their experience they have arrived at the conclusion that there is no period of life at which vaccination may not be safely performed, and that there is no physiological condition in which the human animal can exist which will contra-indicate the performance of vaccination. It is to be regretted that the two gentlemen just referred to do not give more details in respect to this very interesting question. It may be added that Dr. Benson and Dr. Chapman make a practice of washing the arm to be vaccinated with soap and warm water, and, after washing, to rinse with "rather hot water." Dr. Warren, the physician in charge of the Chicago small-pox hospital, which building he considers a disgrace to "the metropolis of the West," records two cases of variola in domestic animals. In one case his own horse developed a typical variolous eruption which passed hrough the papular, vesicular, and pustular stages; and in the second case a cat brought into the hospital wards went through similar symptoms a fortnight after admission.

There are many other interesting subjects in Dr. Reynolds's elaborate report to which we wish we could devote space, but we must limit our further remarks to the water-supply of Chicago and its apparent effect upon the death-rate from enteric fever. Many of our readers have probably fresh in their memories the Report of THE LANCET Special Sanitary Commission of Inquiry concerning the Water-supply of Chicago, U.S.A., which appeared in THE LANCET of April 8th, 1893, so that it will be unnecessary to do more than state that since the date in question some of the intakes in Lake Michigan have been so lengthened as to ensure that all water supplied to Chicago shall be taken in at a distance of at least two miles from the shore. Dr. Reynolds contributes a special report upon the water-supply of the city at the end of 1894, and he states that the chemical and bacteriological analyses which have been made from time to time show that, in the "conservative" phrase of the laboratory director, Dr. Gehrmann, "the character of the water is that of a usable drinking-water." It seems, too, that, after storms followed by winds which tend to carry the shore water in the direction of the intakes, the number of bacteria in certain of the shorter intakes has been excessive, and there have, too, been indications chemically of an excess of organic matter. The water from the four-mile intake has been not merely usable, but a pure water as classified by analysts. There is obviously, Dr. Reynolds observes, need for more four-mile tunnels. Taking now the typhoid fever mortality of Chicago as an index of the purity of its water-supply, it is to be observed that between Jan. 1st, 1890, and Dec. 31st, 1892, at which latter date water was let into the four-mile tunnel, the annual death-rate from enteric fever averaged 11·5 per 10,000 of the population. In 1893, during the first year of using the new tunnel, the rate was 4·18, and in 1894 3·14 per 10,000. The reduction in the typhoid fever mortality was shown by all the wards in the city, and this fact is, Dr. Reynolds considers, in favour of the reduction being due to improved water-supply. A remarkable reduction has also been observed in diarrhœal mortality.

Up to the close of 1892 Chicago had the highest typhoid fever mortality of the several principal cities of the Union—all those having populations of 200,000 or over. In 1894 it ranked tenth amongst the seventeen. This reduction in the typhoid fever mortality is certainly a very striking one, and much of the evidence adduced tends to support a thesis of water-borne infection as an explanation of the prevalence and decline of this disease. Still we must confess we shall await with interest the rates of subsequent years. Other American cities besides Chicago have evinced within recent years some very remarkable fluctuations in their death-rates from typhoid fever. For instance, the city of Detroit in 1890 and 1891 ranked first in the list of large American cities as regards the smallness of its enteric fever mortality, while in the following year it occupied a place sixteenth in the list, rising again in 1894 to the fourth place. Dayton, too, has had its oscillations in this respect, as also has St. Louis. One of the most interesting papers in the Chicago report is by the Chief Smoke Inspector, and it will well repay perusal by those medical officers of health more especially concerned with the smoke nuisance.

A TURKISH ARMY SURGEON.

MR. WILLIAM V. HERBERT, the author of "The Defence of Plevna, by One who Took Part in It," has received a letter from Dr. Charles Ryan of Melbourne, who in 1877 was one of the surgeons in Osman Pasha's army. The following extracts may interest our readers:—

"I saw your book yesterday for the first time and read it with intense interest. I am an Australian by birth. I graduated in medicine from the University of Edinburgh; thence I went to Paris, where I spent a few months at the university; and finally spent the winter of 1875-76 in Vienna. I always had a strong desire to visit the East, and in taking up the *Times* one day I saw an advertisement to the effect that the Turkish Government required thirty surgeons to proceed to the seat of war (the Servian war had just broken out). I obtained an introduction to the Turkish ambassador, and received an appointment at the rate of £200 per year, to be paid in gold, the rank of a major and four rations. I proceeded to Constantinople, where I spent a week, and one fine morning early in June I found myself in the train with a thousand Turks, bound I knew not whither. We travelled together to Tatar Bazardjik, thence we marched to Sofia, where we spent a few days. From Sofia we went to a place five miles the other side of Pirot, where we camped, not very far from the Servian border; thence we marched to Akpalankah, where we spent three weeks, and thence to Nish. After the fall of Alexinatz I stayed in Widdin until Osman Pasha's departure to Plevna.

"I cannot imagine who the long English correspondent mentioned in your book could have been. The only English correspondents that I knew were poor Nicholas Leader, who died in the Shipka Pass a short time afterwards, and poor Frank Power, who was afterwards British Consul in Khartoum, and was killed by the Arabs with Colonel Stewart.

"On the declaration of peace with Servia, Osman Pasha gave a ball, to which none but field officers were invited. We sent to Crayova in Roumania (*fifty miles*) for our supper. I was curious to know where our partners were to come from, and was amazed to find so many pretty girls present, chiefly Grecian, Bulgarian, Roumanian, and Spanish Jewesses, and you know how pretty some of the latter were. Three days before war was declared I hired a boat and paid a visit to Calapat, and spent a most interesting day. I remember well the scene that occurred when the first shot was fired. I was lunching with Colonel Stracey, at a hotel kept by a Polish Jew on the banks of the river, when, without any warning, the guns began to fire. The excitement and the scene which followed are admirably portrayed in your book. This was at 1 P.M. on July 19th, 1877. I jumped on my horse and rode due north, tied up my horse on the left side of the range, and went up to where we had three batteries of artillery in action, and I saw one of the layers, while setting a gun, have his head taken clean off. I was so affected that I turned sick and vomited. A month later I could have seen fifty men have their heads taken off without feeling the slightest emotion. There were only seventeen surgeons in Plevna at this time, and we were working for about forty-eight hours on a stretch. It was our custom, as you are aware, after heavy engagements to dress the wounded and send two-thirds of them in carts to Sofia, leaving behind only the gravely wounded who were unable to travel. With regard to our medical staff, Hassib Bey was, as you state, our head—a very decent old fellow, who took a fancy to me. Most of the doctors were Hungarian Jews; there was one Austrian and one Hungarian called Kronberg. Kronberg was the only man in the whole crowd who had a spark of pluck, the rest were arrant cowards.

"During the second battle of Plevna I rode out continually from the headquarters camp. I was provided with bandages, lint, &c., and lent a helping hand wherever I saw any wounded. The Russians having commenced to flee Hassan Sabri Pasha gave the order for the cavalry to follow them up, and my friend Mustapha Bey waved his sword to me and shouted, 'Come along.' Eventually the order was given by Hassan to retreat, as he was afraid lest our retreat would be cut off, and we galloped towards a field of maize. Never will I forget my sensations. While facing the enemy I had no fear, but now all was changed. When you are in the open and the bullets come hissing past you, you cannot say how close they actually pass; but on this

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ride I saw the bullets striking the leaves and stems all about me, and for many years afterwards, whenever I had nightmare, it was always that ride through the maize field. On the morning following the battle I rode out to the Grivitza redoubt and saw close by an immense number of Russians dead. They were all stripped naked, and many of them were in the most extraordinary postures.

I took part in the fight at Pelishat (Aug. 31st), our ambulance being placed about three-quarters of a mile behind the fighting. When the troops retired two soldiers, one dying with a wound through his neck and the other with a shattered thigh, were being left behind. The most adventuresome of the Russians were within 200 yards of me, but I carried these two wounded on my horse for about a mile, when the man with the shot through his neck died, and I was able to bring the other man back to Plevna. I also took part in the expedition to Lovdcha (Sept. 3rd). I received no warning, simply jumped on my horse, took my great-coat and a few instruments. When we got within about four miles of Lovdcha we were told that the Russians had taken the place two days previously. I accompanied the cavalry, and we came to a large knoll, on which were thirty or forty walnut trees, and there we met with a horrible spectacle. Some 400 Turkish soldiers in their flight had been overtaken here and killed. Each man had his rifle broken beside him; their faces were slashed, and they were cut to pieces. On the march back to Plevna we passed several deserted Bulgarian villages. Those memorable days in September, can one ever forget them? I had a little desultory fighting on my own account when Skobeleff was taking the two redoubts and the troops were flying in hundreds, and the shrapnel shells were exploding on the Plevna side of the hill. Riding to the redoubt I did my level best to rally the troops. During the night we moved all the wounded who were in the hospitals in the south of the town to the north, and the next morning we had something like 3000 of them lying out in the open near the main road. My house was so close to the Kavanlik redoubt that during the night my horse, which was tied up in the yard, received a bullet wound, and all night long the bullets kept striking the shutters. The dreadful uncertainty of that night is strongly impressed on my memory. The morning broke on a terrible scene. After Tewfik Pasha's glorious success I remember the joyous cry of 'Allah!' given vent to by our troops as they rushed forward. This was taken up by the reserves in the valley below, thence travelling like *feux de joie* all over the lines of Plevna. We were now in a state of siege, and our stock of bandages, medicines, dressings, &c., had run out. We had 5000 wounded to look after. I alone had charge of between 200 and 300 of the most gravely wounded, with only two Iarrabashi, or Turkish surgeons, to assist me. Nothing could have been more terrible than the position in which I was placed: absolutely without remedies or dressings, an hospital which contained five times its proper number of inmates, and nearly all the wounds maggoty. All I could do was to scoop out these creatures with my fingers. I had no beds and no mattresses; the men were lying on the floor in the clothes in which they were shot. More brave, enduring, long-suffering, heroic patients I shall never see again. I was so disheartened at the dreadful misery and my inability to alleviate it that I felt inclined to sit on the steps of my house and cry like a child. The only correspondent we had was Ollivier Pain, a French Communist. As he had no proper firman Osman Pasha sent him back to Constantinople to obtain one, and he returned to Plevna shortly after the third battle, before the taking of Telisch. He it was who wrote that most stirring and noble reply of Osman Pasha to the Grand Duke in which he declined to surrender Plevna. I remained in Plevna until the second week in October. During this time I was worked pretty well to death. The enormous number of wounded we had on hand, and the few medical men, will easily account for that. A few days before the Russians cut off Plevna for the last time by the taking of Garna Dubnik I went to Constantinople, and before I could get back to Plevna it was closed to the outside world. I then went straight to Erzerum, where I served through the siege. There were no correspondents there, and if the horrors of that siege were written people would not credit that such things could happen in this enlightened century. I have as the result of my daily intercourse and my insight into their character the highest admiration for the Turks. I have always thought that a Turkish army commanded by British or German officers would be well-nigh invincible.

"In conclusion, allow me to offer to you my sincere thanks for the intense pleasure your book has given me. It has awakened some of the pleasantest recollections and memories of my life."

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE CASE OF MR. R. B. ANDERSON.

A DEPUTATION from the Civil Rights Defence Committee, introduced by the Earl of Stamford as President, waited on the committee of the Association of Fellows of the Royal College of Surgeons of England on Wednesday, Dec. 4th, 1895. Mr. George Pollock, President of the Association, occupied the chair. The deputation consisted, in addition to Lord Stamford, of Major-General Graham, Mr. R. B. Anderson, Mr. Henry Anderson, and Mr. Walter Rivington. Telegrams and letters regretting inability to take part in the deputation were received from Mr. William Williams, J.P., treasurer of the British and West Indian Alliance, Mr. H. T. Butlin, treasurer of the British Medical Association, Dr. E. G. Younger of the London and Counties Medical Protection Association, and the Hon. Stewart Erskine, Vice-President of the British and West Indian Alliance. Before proceeding to the business of the deputation the hon. sec., Mr. Percy Dunn, read a letter from General Graham conveying the thanks of the Civil Rights Defence Committee to the committee of the Association for having, at the last meeting, adopted a resolution expressing appreciation of the action of the Council of the College in coöperating in support of the rights of a Fellow and Member. A letter was also read from Mr. Holmes to the effect that the published reports of Mr. Anderson's case made it quite clear that he had suffered the grossest injustice as well as indignity—the former at the hands of the Trinidad judges, and the latter at those of the English—and that he ought to be fully and fairly compensated, and that the Association could not be better occupied than in supporting Mr. Anderson in obtaining compensation and the reversal of the illegal sentences and orders against him.

Lord Stamford then briefly introduced the deputation, and called upon Major-General Graham to read a statement as to the measures now being adopted by the Civil Rights Defence Committee.

After thanking the committee of the Association, Major-General Graham expressed a hope that the measures adopted would be confirmed by the general meeting of the Association on the 11th inst., and that the example would be followed by every remaining medical or surgical association or society in the kingdom. In such a hope they had already had much encouragement, several branches of the British Medical Association having organised subscriptions, and some having voted amounts from their funds. The Torquay Medical Society had lately done the same, recommending a vote of £5 from its funds, and organising a uniform subscription of 5*s*. each from members, amounting in all to £18. Besides this, that society had adopted resolutions calling upon Her Majesty's Ministers, Members of Parliament, public men, and public bodies to unite with the Civil Rights Defence Committee in defence of the common rights of all medical men and all British subjects, and had obtained the signatures of its members to a memorial to Commander Philpotts, R.N., M.P. for the Torquay Division. Mr. Cohen, M.P., had come forward in the most generous way and promised his support to the committee. The Council of the British Medical Association had been asked to use its great influence with its branches throughout the country, and the friends of Mr. Anderson in Lincolnshire, his native county, were taking up the matter warmly. By such means it was hoped to enlist the sympathy and coöperation of other public bodies, especially the guilds and corporation of the City of London, than which no public bodies in the kingdom were more interested in standing forward, and being seen to stand forward, in defence of the ancient rights and liberties of Englishmen. They had a special ground to do so in this case, since the

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rights of one of those guilds, the Worshipful Society of Apothecaries, had been violated, Mr. Anderson being a licentiate and also a silver medallist of that guild, and his licence granted by them under Charter being rendered valueless. Careful and patient methods were essential to success, and only general coöperation and voluntary aid such as had been described could win the contest of truth and justice and law against malice and unlawful oppression. Major-General Graham concluded by asking the Association to appoint a representative on the Civil Rights Defence Committee.

In response to an appeal from Lord Stamford Mr. Rivington supported the proposals of the deputation, and remarked that there had been nothing like the case of Mr. Anderson since the time of James II.

Mr. Gant, who had lately read the papers, stated that he had been filled with amazement and literally bewildered, the history of the case being more like some extraordinary fiction than bare facts ascertained and proved.

Dr. Robert Barnes remarked that it was stranger than any fiction.

In response to questions Mr. Anderson explained that he was not originally singled out for attack, but that the attack by Sir John Gorrie was against all the more respectable portion of the community in Trinidad and Tobago, and that it had been so powerful and overwhelming as to reduce its victims to complete helplessness and submission, so that he became eventually the sole individual able to maintain any resistance. Sir John Gorrie's motive was to figure as the champion of the black people and lower classes. Full particulars of the medical case were given in the first interim report, and in the letter of the three other medical men in Tobago (Dr. Tulloch, Mr. Purser, and Dr. Blance), as well as those of the two other cases amalgamated with it. Mr. Anderson further explained how the general principle involved in the wrongs done to him affected others equally.

Mr. Pollock, on behalf of the committee, undertook to bring Mr. Anderson's case before the Association at its general meeting.

The deputation then withdrew.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Staffordshire County Sanitary District.—The population of the administrative county of Stafford, estimated to the middle of 1894, was 797,101; its general death-rate for the year was 16·2 per 1000 (urban 16·5, rural 15·4), and the zymotic mortality 1·47 per 1000 (urban 1·68, rural 0·97). Dr. George Reid, as heretofore, adheres to his plan of reporting under subject headings, in the place of summarising separately the report of each medical officer of health in the county, a practice common amongst most other county medical officers of health. The sanitary committee of the county council has recently delegated some of its detailed work to three sub-committees, a step which appears to have had the effect of considerably facilitating their procedures. During the year 1894 numerous inspections of water-courses were carried out by the council in its capacity as a sanitary authority under the Rivers' Pollution Acts, and satisfactory progress has, Dr. Reid states, been made in the prevention of river pollution. In connexion with this subject it appears that an appeal on the part of the Staffordshire County Council to the Warwickshire County Council for assistance in obtaining information in regard to the pollution of the river Tame during its progress through Warwickshire did not meet with a very hearty response, and Dr. Reid has therefore been requested to ascertain the facts himself, and to report to the council as to what share the Warwickshire local authorities have in the pollution of the said river. In addition to the inspections of rivers in the county considerable attention has been paid to canals, and the pollutions discovered have been brought to the notice of the canal companies, who bid fair to become valuable allies as regards the prevention of pollution. In the matter of small-pox Dr. Reid regrets that with few exceptions the local reports do not contain such information as regards the incidence of the disease upon the vaccinated and unvaccinated as to enable a full summary to be given, but he supplies the following statement, which is of considerable interest. Of 1356 cases, 1183 occurred among vaccinated and 173 among unvaccinated persons. The deaths numbered 77, of which 23 occurred among vaccinated and 54 among unvaccinated persons, so that the case mortality in the two classes was as follows:

	Per cent.
General case mortality	5·6
Case mortality among vaccinated persons	1·9
" " unvaccinated persons	31·2

The medical officer of Handsworth, in reporting upon some cases of enteric fever which occurred in his district, states that in two cases the evidence pointed to the consumption of mussels as the cause. Unfortunately we are not told whether in the cases in point the mussels were consumed raw or cooked. Dr. Reid furnishes in his report an interesting table showing to what extent the isolation hospitals are made use of in the respective districts. There is, as was to be expected, an enormous difference in the several districts in the percentage of cases isolated as compared with those notified. For instance, in the urban districts where isolation accommodation is available the percentage of isolations to notifications varies from 1·3 per cent. to 90·3 per cent. The divergencies are accounted for in large part by the imperfect accommodation provided in some instances and by the charges for admission which are made in others. As bearing upon this question Dr. Reid hopes that a conference will shortly be held at which the provision of isolation accommodation for the county will be considered.

Bradford Urban Sanitary District.—So long a period has elapsed since we have had the pleasure of noticing one of Dr. Arnold Evans' reports that we were beginning to have doubts as to whether he had continued the practice of issuing annual reports. We have, however, just received those for the years 1893 and 1894 bound together. The most interesting part of the volume is the table relating to the incidence of small-pox in and around the Leeds-road Fever Hospital during the last epidemic of the disease in Bradford, and the history of Bradford's action as a result of the experience then obtained is instructive in a high degree. The broad facts in connexion with the occurrence are briefly these: an exceptional incidence of small-pox occurred around the Leeds-road Hospital shortly after acute cases of that disease were isolated there, an incidence which fell upon the houses in the several quarter-mile zones from the hospital outwards in the percentages of 10·4, 6·8, 2·1, and 1·0, the incidence on the houses in the whole of the borough being 1·6 per cent., on those in the special area 3·6 per cent., and on those outside the special area 0·6 per cent. These remarkable gradations in incidence were best explained, Dr. Evans stated, in a paper he read before the British Medical Association at Bristol in 1893 on a thesis "that the poison was conveyed aerially direct from the wards of the hospital." Owing to this exceptional incidence of the disease around the Leeds-road Hospital use was made of a temporary structure erected at Scholemoor, and on this being ready all subsequent cases of the disease were removed thither. From this time the incidence of the disease around the Leeds-road Hospital began to abate. Unfortunately a disastrous fire, which our readers may remember, occurred at Scholemoor, and the cases had to be returned to Leeds-road—a step which led to a considerable extension of the disease. The structure at Scholemoor was, however, rebuilt and used again for the isolation of small-pox, the outbreak shortly after coming to an end. After this experience the corporation of Bradford seriously turned their attention to the acquisition of a site for a small-pox hospital which should be remote from at least their own population, and they have now acquired a piece of land some twenty-eight acres in extent in an isolated position, where they propose to erect a hospital for the reception of patients suffering from small-pox alone. It should be mentioned to the credit of Bradford that a few years ago the authorities expended a considerable amount of money in an endeavour to provide a small-pox hospital on the lines suggested by the Royal Commission on Small-pox and Fever Hospitals—i.e., one in which all the outgoing air should be sterilised. It is, however, much to be regretted that this experiment was unsuccessful, and the special apparatus provided has now, we believe, been demolished. There were in all 935 cases of small-pox

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treated in the Leeds-road Fever Hospital, and the protection afforded by vaccination may be gathered from the following table:—

		Deaths.	Death-rate.
All cases	935	100	10·7 per cent.
Vaccinated cases ...	706	36	5·1 ,,
Doubtful cases ...	34	9	26·5 ,,
Unvaccinated cases	195	55	28·2 ,,

From these figures Dr. Evans points out that "(1) if the unvaccinated had died only at the rate of those vaccinated there would have occurred, not 55 deaths, but 10 deaths; (2) if the vaccinated had died at the rate of those unvaccinated there would have been, not 36, but 193 deaths; (3) if all the patients had been vaccinated there would have been only 48 deaths instead of the 100 deaths actually recorded; (4) if all the patients had been unvaccinated there would have occurred 264 deaths in place of the 100 deaths actually recorded."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5785 births and 3644 deaths were registered during the week ending Dec. 7th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 22·1 to 17·9 per 1000, was again 17·9 last week. In London the rate was 17·3 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 10·0 in Croydon, 10·9 in Derby, 11·3 in Brighton, and 12·6 in Huddersfield; the highest rates were 20·7 in Wolverhampton, 23·5 in Manchester, 23·7 in Blackburn, 27·3 in Salford, and 28·9 in Liverpool. The 3644 deaths included 561 which were referred to the principal zymotic diseases, against 548 and 529 in the two preceding weeks; of these, 207 resulted from measles, 109 from diphtheria, 80 from whooping-cough, 66 from "fever" (principally enteric), 54 from scarlet fever, 41 from diarrhœa, and 4 from small-pox. No fatal case of any of these diseases occurred last week in Croydon, Derby, or Huddersfield; in the other towns they caused the lowest death-rates in Swansea and Sunderland, and the highest rates in Manchester, Wolverhampton, Liverpool, Blackburn, and Salford. The greatest mortality from measles occurred in Liverpool, Manchester, Oldham, Salford, and Blackburn; from scarlet fever in Gateshead; from whooping-cough in Bradford; and from "fever" in West Ham, Norwich, Birkenhead, and Newcastle-upon-Tyne. The 109 deaths from diphtheria included 69 in London, 5 in Liverpool, 4 in Wolverhampton, 4 in Birmingham, and 4 in Manchester. Two fatal cases of small-pox were registered in West Ham, 1 in London, and 1 in Oldham, but not one in any other of the thirty-three large towns. There were 87 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 7th inst., against 86, 89, and 79 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 23, 20, and 9 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2805, against 2845, 2807, and 2799 on the three preceding Saturdays; 312 new cases were admitted during the week, against 298, 296, and 325 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 447 to 285 in the four preceding weeks, further fell to 264 last week, and were 194 below the average. The causes of 58, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Bradford, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Birmingham, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 21·4 to 17·4 per 1000, rose again to 19·5 during the week ending Dec. 7th, and was 1·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·2 in Leith and 15·4 in Perth to 24·1 in Aberdeen, and 24·4 in Dundee. The 562 deaths in these towns included 21 which were referred to diarrhœa, 19 to whooping-cough, 10 to diphtheria, 8 to scarlet fever, 6 to measles, 3 to "fever," and not one to small-pox. In all, 67 deaths resulted from these principal zymotic diseases, against 48 and 49 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2·3 per 1000, which was 0·5 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The 21 fatal cases of diarrhœa showed a further increase upon those recorded in recent weeks, and included 5 in in Glasgow, 5 in Edinburgh, and 5 in Dundee. The deaths referred to whooping-cough, which had been 10 and 11 in the two preceding weeks, further rose to 19 last week, of which 12 occurred in Glasgow and 4 in Aberdeen. The fatal cases of diphtheria, which had been 3 and 6 in the two preceding weeks, further rose to 10 last week, and included 6 in Glasgow. The 8 deaths from scarlet fever corresponded with the number in the preceding week, and included 4 in Aberdeen and 2 in Glasgow. The 6 fatal cases of measles exceeded the number recorded in any recent week, and included 3 in Greenock and 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 123 and 107 in the two preceding weeks, rose again to 132 last week, but were 37 below the number in the corresponding week of last year. The causes of 32, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 23·1 to 25·1 per 1000, declined again to 20·1 during the week ending Dec. 7th. During the past ten weeks of the current quarter the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 18·1 in London and 17·4 in Edinburgh. The 135 deaths registered in Dublin during the week under notice showed a decline of 33 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 10 in each of the two preceding weeks; of these, 2 resulted from whooping-cough, 2 from diarrhœa, 1 from small-pox, 1 from "fever," but not one either from measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·3 in Edinburgh. The 2 fatal cases of whooping-cough corresponded with the number recorded in the preceding week. The deaths referred to different forms of "fever," which had been 2, 3, and 4 in the three preceding weeks, declined again to 1 last week. The 135 deaths in Dublin last week included 29 of infants under one year of age, and 29 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons were below those recorded in any recent week. Three inquest cases and 4 deaths from violence were registered; and 55, or more than a third, of the deaths occurred in public institutions. The causes of 8, or nearly 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during November in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 13·8 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 9·9, 12·4, and 14·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Westminster, Stoke Newington, St. Olave Southwark, and Bermondsey; while they showed the largest excess in Chelsea, Hackney, Bethnal Green, Limehouse, Mile End Old Town, Poplar, and Greenwich. The prevalence of small-pox in London showed a marked decline during November, the 32 cases notified during the month including 7 in Camberwell, 5 in Greenwich, 4 in Poplar, and 3 in Limehouse sanitary areas. The Metropolitan Asylum Hospitals contained 73 small-pox patients at the end of November, against 331, 227, and 103 at the

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MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—NOVEMBER, 1895.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,392,346	32	2274	1238	—	457	12	20	616	—	4649	13·8	2	377	77	265	74	—	77	1	80	953	2·8	6131	18·2	140
West Districts.																										
Paddington	122,756	—	44	31	—	8	—	1	11	—	95	10·1	—	—	1	8	1	—	2	—	1	13	1·4	169	17·9	110
Kensington	167,671	1	65	30	—	14	—	—	28	—	138	10·7	—	9	5	17	6	—	2	—	2	41	3·2	203	15·8	178
Hammersmith	108,429	2	35	16	—	9	—	—	9	—	71	8·5	—	9	2	4	3	—	2	—	—	20	2·4	133	16·0	144
Fulham	117,745	—	33	52	—	11	—	2	10	—	108	12·0	—	9	1	11	3	—	3	1	5	33	3·7	150	16·6	169
Chelsea	99,930	—	84	43	—	17	1	—	13	—	158	20·6	—	3	3	13	3	—	3	—	—	25	3·3	154	20·1	119
St. George Hanover-square	74,037	—	29	6	—	5	—	1	7	—	48	8·5	—	5	1	3	—	—	—	—	3	12	2·1	76	13·4	111
Westminster	54,003	—	15	14	—	2	—	—	3	—	34	8·2	—	6	1	5	1	—	1	—	2	16	3·9	79	19·1	224
St. James Westminster	23,149	—	12	5	—	1	1	—	1	—	20	11·3	—	1	1	1	—	—	1	—	—	4	2·3	28	15·8	30
North Districts.																										
Marylebone	137,392	—	38	11	—	18	—	—	25	—	92	8·7	—	6	—	3	4	—	2	—	5	20	1·9	174	16·5	105
Hampstead	77,592	—	30	20	—	4	—	—	6	—	60	10·1	—	—	2	2	—	—	—	—	1	5	0·8	67	11·3	143
St. Pancras	233,543	2	135	58	—	23	—	1	42	—	261	14·6	—	63	9	24	3	—	5	—	7	111	6·2	412	23·0	165
Islington	335,929	—	186	72	—	37	1	4	28	—	328	12·7	—	9	5	17	—	—	6	—	6	43	1·7	417	16·2	122
Stoke Newington	35,234	—	12	7	—	2	—	—	2	—	23	8·5	—	—	—	—	—	—	1	—	—	1	0·4	44	16·3	117
Hackney	215,623	—	178	63	—	52	3	1	40	—	337	20·4	—	16	2	11	11	—	7	—	7	54	3·3	312	18·9	143
Central Districts.																										
St. Giles	37,654	—	16	11	—	2	—	—	9	—	38	13·2	—	2	1	—	—	—	—	—	1	4	1·4	51	17·7	172
St. Martin-in-the-Fields	13,536	—	2	6	—	3	—	—	1	—	12	11·6	—	1	—	2	1	—	—	—	1	5	4·8	20	19·3	294
Strand	22,586	—	8	4	—	5	—	—	1	—	18	10·4	—	2	—	—	—	—	—	—	1	3	1·7	35	20·2	180
Holborn	32,188	—	29	2	—	6	—	—	5	—	42	17·0	—	2	2	—	—	—	—	—	1	5	2·0	48	19·4	208
Clerkenwell	65,036	—	45	18	—	6	—	—	11	—	80	16·0	—	27	1	2	1	—	3	—	—	34	6·8	123	24·7	231
St. Luke	40,763	—	10	8	—	7	—	—	12	—	37	11·8	—	3	—	1	—	—	1	—	1	6	1·9	82	26·2	144
City of London	33,824	1	19	7	—	1	—	—	2	—	30	11·6	—	1	—	—	1	—	1	—	—	3	1·2	65	25·1	164
East Districts.																										
Shoreditch	122,932	—	71	27	—	13	2	—	23	—	136	14·4	—	3	2	3	4	—	4	—	2	18	1·9	159	16·9	147
Bethnal Green	130,061	2	98	47	—	18	—	—	31	—	196	19·6	—	16	1	12	3	—	2	—	2	36	3·6	228	22·9	139
Whitechapel	75,820	—	57	23	—	1	—	—	17	—	98	16·9	—	2	1	2	—	—	—	—	1	6	1·0	123	21·1	123
St. George-in-the-East	45,227	—	25	14	—	2	—	—	10	—	51	14·7	—	1	—	4	—	—	—	—	1	6	1·7	74	21·3	127
Limehouse	56,885	3	42	21	—	7	1	—	7	—	81	18·6	—	—	—	2	1	—	1	—	1	5	1·1	94	21·5	107
Mile End Old Town	108,443	1	64	53	—	10	—	1	18	—	147	17·7	—	3	1	8	4	—	2	—	2	20	2·4	161	19·4	131
Poplar	171,230	4	102	94	—	21	—	—	34	—	255	19·4	—	12	2	17	2	—	6	—	1	40	3·0	246	18·7	133
South Districts.																										
St. Saviour Southwark	26,570	—	11	6	—	—	—	1	2	—	20	9·8	—	—	—	1	—	—	1	—	—	2	1·0	51	25·0	200
St. George Southwark	60,168	2	16	14	—	6	—	—	13	—	51	11·0	—	15	2	—	1	—	—	—	3	21	4·5	111	24·0	205
Newington	119,358	—	54	38	—	8	—	1	15	—	116	12·7	1	51	1	9	4	—	1	—	3	70	7·6	245	26·8	189
St. Olave Southwark	13,065	—	4	2	—	—	—	—	—	—	6	6·0	—	—	—	—	1	—	—	—	1	2	2·0	21	21·0	185
Bermondsey	83,861	—	22	5	—	10	—	1	14	—	52	8·1	—	19	2	4	—	—	2	—	4	31	4·8	150	23·3	172
Rotherhithe	40,713	—	19	2	—	3	—	—	15	—	39	12·5	—	4	2	1	—	—	—	—	1	8	2·6	66	21·1	182
Lambeth	284,883	1	198	76	—	24	1	2	32	—	334	15·3	—	28	9	13	1	—	4	—	3	58	2·7	355	16·2	116
Battersea	165,130	—	114	57	—	17	1	2	22	—	213	16·8	—	4	1	11	2	—	—	—	3	21	1·7	195	15·4	131
Wandsworth	185,956	1	71	33	—	15	1	—	23	—	144	10·1	—	2	4	5	5	—	4	—	—	20	1·4	166	11·6	115
Camberwell	252,737	7	111	86	—	18	—	—	37	—	259	13·4	1	32	3	16	6	—	—	—	4	62	3·2	343	17·7	120
Greenwich	175,183	5	69	107	—	31	—	1	24	—	237	17·6	—	5	3	20	—	—	6	—	2	36	2·7	231	17·2	129
Lewisham (excluding Penge)	82,410	—	44	17	—	9	—	1	5	—	76	12·0	—	—	3	2	2	—	—	—	1	8	1·3	89	14·1	142
Woolwich	42,768	—	20	8	—	4	—	—	1	—	33	10·1	—	—	1	1	—	—	—	—	1	3	0·9	50	15·2	99
Lee	38,832	—	19	11	—	1	—	—	1	—	32	10·7	—	3	1	5	—	—	1	—	—	10	3·4	50	16·8	170
Plumstead	61,494	—	18	13	—	4	—	—	6	—	41	8·7	—	3	1	5	—	—	3	—	—	12	2·5	81	17·2	156
Port of London	—	—	—	—	—	2	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 51 cases of membranous croup.

† Including deaths from membranous croup.

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end of the three preceding months; the weekly admissions averaged 15, against 57, 27, and 15 in the three preceding months. The prevalence of scarlet fever in London showed a decline during November; this disease was proportionally most prevalent in Chelsea, Hackney, Holborn, Bethnal Green, Whitechapel, Limehouse, Lambeth, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 2690 scarlet fever patients at the end of November, against 2435, 2845, and 2727 at the end of the three preceding months; the weekly admissions averaged 304, against 292, 333, and 263 in the three preceding months. The prevalence of diphtheria in London during the month under notice almost corresponded with that in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, St. Martin-in-the-Fields, Mile End Old Town, Poplar, and Greenwich. There were 672 diphtheria cases under treatment in the Metropolitan Asylum Hospitals at the end of November, against 666, 664, and 661 at the end of the three preceding months; the weekly admissions averaged 98, against 80, 101, and 103 in the three preceding months. The prevalence of enteric fever in London showed a very slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Chelsea, Hackney, St. Martin-in-the-Fields, Strand, and Holborn sanitary areas. Erysipelas was proportionally most prevalent in St. Giles, St. Luke, Bethnal Green, Whitechapel, and Rotherhithe sanitary areas. The 20 cases of puerperal fever notified during November included 4 in Islington, 2 in Fulham, 2 in Lambeth, and 2 in Battersea sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Nov. 30th, the deaths of 6131 persons belonging to London were registered, equal to an annual rate of 18·2 per 1000, against 16·9, 16·0, and 17·5 in the three preceding months. The lowest death-rates during November in the various sanitary areas were 11·3 in Hampstead, 11·6 in Wandsworth, 13·4 in St. George Hanover-square, 14·1 in Lewisham, (excluding Penge), 15·2 in Woolwich, 15·4 in Battersea, and 15·8 in Kensington and in St. James Westminster; the highest rates were 23·0 in St. Pancras, 23·3 in Bermondsey, 24·0 in St. George Southwark, 24·7 in Clerkenwell, 25·0 in St. Saviour Southwark, 25·1 in City of London, 26·2 in St. Luke, and 26·8 in Newington. During the four weeks of November 953 deaths were referred to the principal zymotic diseases in London; of these, 377 resulted from measles, 265 from diphtheria, 80 from diarrhœa, 77 from scarlet fever, 77 from enteric fever, 74 from whooping-cough, 2 from small-pox, and 1 from an ill-defined form of fever. These 953 deaths were equal to an annual rate of 2·8 per 1000; the lowest zymotic death-rates were recorded in Hampstead, Stoke Newington, Whitechapel, Limehouse, St. Saviour Southwark, and Woolwich; and the highest rates in St. Pancras, St. Martin-in-the-Fields, Clerkenwell, St. George Southwark, Newington, and Bermondsey sanitary areas. Two fatal cases of small-pox were registered in London during the month under notice, slightly exceeding the corrected average in the corresponding periods of the ten preceding years; of these 2 deaths, 1 belonged to Newington and 1 to Camberwell sanitary areas. The 377 deaths referred to measles were 167 above the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in St. Pancras, Clerkenwell, Bethnal Green, St. George Southwark, Newington, Bermondsey, and Camberwell. The 77 fatal cases of scarlet fever were 31 below the corrected average; this disease showed the highest proportional fatality in St. Pancras, Holborn, Rotherhithe, and Lewisham sanitary areas. The 265 deaths referred to diphtheria were 105 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Kensington, Chelsea, Bethnal Green, Poplar, Greenwich, and Lee. The 74 fatal cases of whooping-cough were 64 below the corrected average; this disease showed the highest proportional fatality in Kensington and Hackney sanitary areas. The 77 deaths referred to enteric fever slightly exceeded the corrected average number; among the various sanitary areas the highest proportional fatality of "fever" was recorded in Hackney, Clerkenwell, Poplar, Greenwich, and Plumstead sanitary areas. The 80 fatal cases of diarrhœa were 12 above the corrected average; this disease was proportionally most fatal in St. George Southwark and Bermondsey sanitary areas. In conclusion, it may be stated that the mortality in London during November from these principal zymotic diseases was nearly 13 per cent. above the average.

Infant mortality in London during November, measured by the proportion of deaths under one year of age to registered births, was equal to 140 per 1000, and was slightly below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, St. James Westminster, Marylebone, Limehouse, and Woolwich; and the highest rates in Westminster, St. Martin-in-the-Fields, Holborn, Clerkenwell, St. Saviour Southwark, and St. George Southwark.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

THE following officers have embarked for a tour of service in India:—Surgeon-Lieutenant-Colonel Miller and Surgeon-Major Kerin. Surgeon-Colonel Maxham has arrived at the Cape and taken over the duties of Principal Medical Officer. Brigade-Surgeon-Lieutenant-Colonel Duke and Surgeon-Captains Manders, Hale, and Hayman have arrived in Ceylon. The following officers have arrived from India on completion of a tour of service:—Surgeon-Lieutenant-Colonel Quill and Surgeon-Majors Carleton and Barrington.

ARMY MEDICAL STAFF.

Surgeon-Major-General James Inkson, M.D., is placed on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—1st Bombay Grenadiers: Surgeon-Lieutenant Moore to officiate in Medical Charge. 2nd Bombay Lancers: Surgeon-Lieutenant Leumann to officiate in Medical Charge. Surgeon-Captain P. W. O'Gorman, Officiating Civil Surgeon of Midnapur, is appointed to act as Civil Surgeon of Singhbum. Surgeon-Captain B. H. Dean is appointed to do general duty at the Bengal Presidency. Surgeon-Captain J. G. Hojel is appointed to be Resident Surgeon, St. George's Hospital, Bombay.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeon T. E. H. Williams to the *Flora*. Surgeons: S. W. Johnson, M.B., to the *Melita*; and H. F. Iliewicz to the *Flora*, and after to the *Pelican*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Joseph W. Hodgson, M.D., to be Surgeon-Major. Surgeon-Lieutenant James Taylor, M.D., 6th Volunteer Battalion the Gordon Highlanders, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Northumberland Fusiliers: Surgeon-Captain W. B. Mackay, M.B., to be Surgeon-Captain. 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Captain R. S. Gibb, M.B., to be Surgeon-Major, and Surgeon-Lieutenant J. L. Wilson, M.B., to be Surgeon-Captain. 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry: Surgeon-Major W. Hammond resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry): William Henry Hender Bennett, M.B., to be Surgeon-Lieutenant.

THE HEALTH OF THE SOLDIER IN WESTERN EUROPE.

Dr. F. Antony, a French military surgeon, has published in the *Archives de Médecine et de Pharmacie Militaires* (tome xxvi., page 142) some very interesting statistical information regarding sickness and mortality in the various armies of Western Europe. The amelioration that has taken place in the vital condition of the soldier during the last thirty years is most remarkable and far exceeds anything of the kind observable in civil life. Everywhere the figures adduced by the compiler denote improvement; but although it is difficult, if not impossible, to institute a perfectly exact comparison between the several countries on account of the different systems in force, we nevertheless note

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with satisfaction that the advance in salubrity is in no case so well marked or so steady as with us. When considering military mortality (in time of peace) from a comparative point of view there are, according to Dr. Antony, two chief factors which the observer must bear in mind: in the first place, the numerical proportion borne by the armies to the total population; and, secondly, the amount of invaliding. France, for instance, keeps up a force equal to that of Germany, whereas the latter country is the more populous by a quarter, and German medical officers are consequently able to exercise greater discrimination in the selection of recruits. This power to pick and choose is better marked in Austria, where the troops are not half as numerous as in France, and better still in England, where scarcely 100,000 men in all are enrolled beneath the colours. The influence of free invaliding on the death-rate is, of course, obvious. Doubtless Dr. Antony's arguments are sound to a certain extent, but as regards England it should not be forgotten that we have no conscription, and that suitable recruits are not easy to find. Of late matters in this respect have somewhat improved, but, especially in the line, there is still difficulty in securing a sufficiency of eligible youths. The following hospital statistics are interesting as far as they go. To render the information complete the number of men treated *à la chambre* should be shown. 1880-90, admissions to hospital per annum per 1000 of strength at beginning and end of decade: France, 612—618; Germany, 1172—897; England, 829—810; Austria, 995—891; Italy, 833—796. Dr. Antony's statistics of death and invaliding are more elaborate and must represent a vast amount of labour on his part. His final remarks on the subject are noteworthy. "What conclusions are to be drawn from this compilation? It is an incontestable fact that the soldier has a threefold better chance of living now than he had thirty years ago, so long, that is, as he remains in the ranks. It is none the less true, however, that eliminations on account of ill-health have gone up in a corresponding ratio, save as regards the English army, where all figures are indicative of continuous regression. For the other nations the results obtained are perhaps favourable, but approbation in their case cannot be unreservedly given."

Table showing Loss by Death and Invaliding in some of the Armies of Western Europe.

Per 1000 per annum.	Died.	Invalided.
France, Home Service, 1862-69	10·10	6·8
,, ,, 1872-79	9·25	12·5
,, ,, 1880-84	8·4	13·5
,, ,, 1885-89	6·3	18·17
Germany, Prussia, 1846-63	9·69	8·4
,, 1873-77	5·7	27·7
,, 1880-89	3·0	31·0
Austria, 1840-50	28·0	—
,, 1850-60	17·5	—
,, 1871-79	11·6	—
,, 1880-91	15·5	—
Italy, 1864-69	16·3	—
,, 1871-80	10·0	13·6
,, 1882-91	7·5	18·3
England, 1860-68	9·52	33·86
,, 1871-80	7·96	22·0
,, 1880-89	6·1	19·58
,, 1890	5·1	16·72
Belgium, 1868-69	12·8	8·5
,, 1876-79	5·8	—
,, 1880-84	4·6	—
,, 1887-91	4·85	14·0 to 17·5
Spain, 1886	13·49	30·0
,, 1891	10·06	28·5

It is impossible to fill up the invaliding column in the case of Austria, because men sent on temporary sick leave are inextricably mixed with those who are permanently disabled. This observation also applies in a measure to Belgium and Italy.

THE ASHANTI EXPEDITION.

There is not very much to chronicle in regard to the forthcoming expedition to Ashanti. Some of the British troops from this country have already arrived at the Gold Coast, and the Special Service Corps, with a large draft of the Army Hospital Corps, some officers and men of the Royal Engineers, and others embarked on Saturday last for Cape Coast Castle, after having been inspected by the Commander-in-Chief. Lord Wolseley, accompanied by several officers of the headquarters staff, Sir William Mackinnon, the Director-General of the Army Medical Department, and others, visited the *Coromandel*, which is understood to be admirably fitted up with every comfort and convenience. Great activity prevails at Cape Coast Castle. Four thousand native carriers selected from various tribes have already started from Prahsu, about eighty miles distant from the base, all stores having, by Sir Francis Scott's order, to be forwarded there. It is understood that arrangements have been, or are being, made for 10,000 native carriers altogether. The 2nd West Yorkshire Regiment, stationed at Gibraltar, have embarked on board the steamer *Manila* for the West Coast of Africa, where the corps joins the Ashanti Expedition. Great care and attention have been bestowed on the details connected with the equipment of the force and upon the military and medical arrangements of the present expedition based upon the experience obtained in the previous operations which took place twenty-two years ago. The total cost of the last expedition was altogether about £900,000. Among the officers who embarked for Ashanti in the *Coromandel* were Surgeon-Lieutenant-Colonel Blennerhassett, Surgeon-Major Wolseley, Surgeons-Captain O'Callaghan, H. A. Cummins, W. C. Beevor, J. F. G. Burke, G. Wilson, and Hilliard, and Surgeon-Lieutenant C. G. Spencer. The *Coromandel* is expected to arrive at Cape Coast Castle on Christmas Day.

The *Army and Navy Gazette* says: "Some seem to regard the present Ashanti expedition as a very insignificant little affair. Now it may or may not be. Certainly there is one enemy to be fought—viz., a very trying and pestilential climate. In the Ashanti War, under Lord Wolseley, the mortality did not cease at the time of the war, for after leaving the country, within a given period of four months, it is put down to 3·14 per cent. of the strength disembarked. So likewise the present expedition will have results after leaving the country as well as during its stay there."

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The sixteenth distribution of prizes of the school took place at a concert held in the Banqueting Hall, Crosby Hall, E.C., on Saturday, Dec. 7th. The prizes were distributed by Lieutenant-General Moncrieff, and the president of the school, Major Andrew Maclure, occupied the chair. Major Maclure, in speaking of the work of the school during the past year, said that the classes generally had been well attended; a large number had obtained proficiency certificates, bringing up the number of officers who had thus qualified for promotion to close upon 200. Officers from the colonies, including Australia and the Cape of Good Hope, had also joined for courses of instruction. A new feature in the work with regard to first aid classes had been the introduction of lectures on nursing and duties in military hospitals. Lieutenant-General Moncrieff, in presenting the prizes, congratulated the team of the London Rifle Brigade on having carried off by the narrow margin of one point the handsome Challenge Bowl presented to the school by Surgeon-Major-General J. B. Hamilton, M.D., late principal medical officer, Home district. Surgeon-Major H. F. Stokes, chief instructor, also spoke and testified to the able support which he had received from the staff of the school. A capital concert terminated the proceedings. The next class for the training of regimental stretcher-bearers will be held at the headquarters of the "Artists" R.V., commencing at 7.30 P.M. on Wednesday, Feb. 5th.

THE ITALIAN FORCE IN ABYSSINIA.

If the accounts of the Italian reverse in Eastern Africa and of the threatening attitude of a very large advancing Abyssinian army be not exaggerated, General Baratieri's force will require to be at once largely reinforced by troops from Italy. The fighting at Ambalagi appears to have been very severe and to have been mainly brought about by that over-confidence which characterised some of our own movements in Egypt and the Soudan. A detached native force advancing under the command of Italian officers was surprised by a vastly superior number of the Shoan army and compelled to retreat. Later telegrams from General Baratieri, it is stated, allege that Abyssinian forces have

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invaded the Tigre country and besieged Makalle and Antalo. We have heard nothing of the field medical service now in Abyssinia at the disposal of the Italian force, but it is clear that a number of medical officers, together with hospital stores and equipment, will be required, and these, no doubt, will be sent out with the reinforcements to be despatched by the Italian War Office.

DEATHS IN THE SERVICES.

Surgeon-Colonel Daniel Charles Grose, principal medical officer, North British military district at Edinburgh, on the 7th inst., in his fifty-fifth year. He entered the Army Medical Service in 1864, and in 1865–66 served with the expedition from Aden into the interior of Arabia, was in medical charge of the force at the action of Bir Said, and was present at the subsequent operations. He became a surgeon-major in 1876 and brigade-surgeon in 1890.

THE PASTEUR INSTITUTE FOR INDIA.

Surgeon-Colonel C. Roe, I.M.S., has been appointed honorary secretary of the association for the foundation of a Pasteur Institute in India. It is understood that sufficient funds have been collected to assure the success of the scheme.

Sir William Mackinnon, the Director-General of the Army Medical Service, was recently at Windsor Castle on a visit to the Queen.

On Dec. 3rd 170 invalids arrived at the Royal Victoria Hospital, Netley, from Bombay, *ex* hired transport *Dilwarra*.

Correspondence.

"Audi alteram partem."

"THE CASE OF DR. WIGHT."

To the Editors of THE LANCET.

SIRS,—I was pleased to read your editorial article and also "M.D.'s" letter in THE LANCET of Dec. 7th. I concur entirely with both, and as there appears a possibility of a doubt, Dr. Wight should have had the benefit. Ever since I read the account of the inquest in the daily press of the unfortunate case I have been on the look out for the *post-mortem* report of the injuries, which in my opinion should certainly have been communicated to the medical press, so that the profession might have had an opportunity of forming their own conclusions from a scientific account of the case. No matter how intelligent twelve laymen may be, they are incapable of forming a true opinion from post-mortem details. In this lamentable case it is unfortunate that no evidence was produced for the defence, and if the injury was situated in the posterior vaginal fornix, as stated in your leading article, there is every reason to believe that the rupture was accidental; if the rupture had been lateral, then one could understand how the blade of a forceps would, when carelessly employed, cause the fatal mischief. I take it that very few men have seen such an unfortunate occurrence, and having seen two cases myself I may be pardoned for trespassing on your valuable space. My first case happened in 1878, when I was engaged to attend a multipara whom I had delivered with difficulty some years before. As I had not been paid I said I should require my fee before I went to her again. I heard no more about the case till one morning in September, about 2 A.M., I was called with the message that Dr. C—— required my aid at once. I went, and found my neighbour, who had just succeeded to a practice, had been in attendance some time. She had been in labour several hours, and he had had forceps on and off for two hours, the forceps slipping off each time he tried to bring down the head. I examined her and found an antero-posterior diameter of three inches. I tried the same forceps and then tried my own, but they slipped off. I examined carefully again, and found what seemed to be the head well down, and beyond could feel something like the tip of the shoulder. I went for the perforator and crotchet, and was only away a very short time. On my return I found the head had receded and the fœtus was in the peritoneal cavity. Introducing my hand carefully into the vagina I found it passed through a rent in the posterior fornix or Douglas's pouch, and the uterus was completely separated; I got the feet and succeeded in delivering her in a few minutes. She survived her delivery for thirty-six hours. When did the laceration take place in this case, and who was to blame? We did our best to deliver her, and did not use more force than I used on the previous occasion. The rupture was caused no doubt through trying to bring the head through too narrow a brim, but who would venture on craniotomy before an attempt with the forceps? I feel somewhat strongly, therefore, in Dr. Wight's case that the misfortune which has happened should be put down to criminal neglect when I could understand even the anxiety of such a case causing him to have a dazed appearance. I trust something may be done to lighten the poor man's punishment, because the stigma of being held criminally responsible for what after all may only have been an unavoidable accident must be great in the case of a man who has practised honourably for thirty years.

I am, Sirs, yours faithfully,

Wigan, Dec. 9th, 1895. W. BERRY, F.R.C.S. Irel.

To the Editors of THE LANCET.

SIRS,—Without going into the merits or demerits of this unfortunate case, there is one thing which is not mentioned either in your article or in "M.D.'s" letter—viz., the apparent unfairness of the prosecuting counsel, when opening the case, in drawing the attention of the jury to the fact that the defendant was "more than half an hour" getting the forceps into apposition, thereby implying that such delay was a sign of want of knowledge or κῦδος in the operation. Now it is a well-known fact with obstetricians that in certain cases, especially where the presenting head is a fixture and the pains well-nigh continuous, it is utterly impossible to apply the forceps *cito* and at the same time *tuto et jucunde*, and that the very length of time in applying them may be but a witness of care and of scientific knowledge in the operation.

I am, Sirs, yours fathfully,

W. L'HEUREUX BLENKARNE,
Surgeon to the Leicester Provident Dispensary.

Leicester, Dec. 10th, 1895.

SEQUEL TO A CASE OF TRAUMATIC TETANUS TREATED WITH TETANUS ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—When sending you the notes of my case of traumatic tetanus treated with tetanus antitoxin[1] I had to record that the latest news of the child still mentioned some lameness. This has been since accounted for satisfactorily, though, I confess, unexpectedly, by the removal from the foot of a small triangular piece of china three-eighths of an inch in its longest diameter. The mother of the child writes that "on Friday (Oct. 25th) she complained of the foot being very painful. I examined it and saw a small white thing in the middle of the wound. I tried to take it out with a needle but could not, so put on a poultice of linseed and a little soda, and it took out a small piece of the dish that her foot was cut with at the beginning." As Dr. Neil Fullarton and myself both sought repeatedly with a probe for any foreign body without success, and as the wound had been well poulticed for some days until it assumed a healthy appearance, I was scarcely prepared for this sequel and was, therefore, glad to receive the enclosed letter from Dr. Fullarton.

I am, Sirs, yours faithfully,

Harley-street, W., Dec. 9th, 1895. NESTOR TIRARD.

Dr. Tirard. Blairbeg House, Lamlash, Arran, N.B., Nov. 11th, 1895.

Dear Sir,—I was up Corrie way the other day and looked in to see the little girl, K. W——, who is looking extremely well. No one would ever suppose she had so recently been through such a serious illness judging by her present appearance. You know, of course, about the piece of dish which came out of the wound, and which has apparently been retained under the tendon of the flexor longus pollicis, judging from the part of the wound it came out of, and also from the fact of it only moving out when the child began to use the foot. I am sure you must have been gratified, as I was, with the result of your treatment. I send you this note as I am sure you will be glad to learn of your little patient's complete recovery to health and strength, which she undoubtedly owes to you.

With warmest regards, believe me, yours truly,

NEIL FULLARTON.

[1] THE LANCET, Nov. 2nd, 1895.

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THE CAUSE OF GOITRE.

To the Editors of THE LANCET.

SIRS,—I have read with great interest, in THE LANCET of Nov. 9th last, Dr. Gordon Holmes's remarks on the pathogenesis of sporadic goitre. It is curious that, so far as I have read on this subject in the text-books and in the various articles in the medical papers, I can find no reference to the observations of Dr. J. Saint-Leger on the cause of goitre. In his book—"Études sur les Causes de Crétinisme et du Goitre Endémique," published in Paris in 1867—there are some very interesting and carefully worked out observations on the origin of these diseases. He passes in review the various supposed causes and brings forward conclusive evidence against them. He traces the close connexion between goitre and cretinism, and maintains that the number of cretins free from goitre has been greatly exaggerated, pointing out that among cretins there is found a form of goitre which shows very little externally, the swelling of the gland developing laterally and under the muscles; he also adds that *all* cretins labour under embarrassed respiration as if from a mechanical obstruction. I may mention that we found among some of the cases of goitre operated on during my period of residence at the Cumberland Infirmary that the disease showed very little externally, but had grown under the muscles, and in two cases the growth was found embracing the trachea, and the greater part was found posteriorly. As to the cause of goitre, Dr. Saint-Leger maintains that it is found in the drinking water, and after an exhaustive research into the geological formation of the goitrous districts he came to the following conclusions. 1. That endemic goitre coincides with metalliferous soils. 2. That the chief goitre-forming element is sulphide of iron or iron pyrites. This is the most abundant and most frequent element, and the only one which is never absent. 3. That next in order of frequency comes copper pyrites (the double sulphide of copper and iron), and then, but less frequently, the sulphides of lead, arsenic, and antimony.

In support of this contention he brings forward most convincing arguments. It is the small dose of the sulphides frequently repeated that causes the disease. In three mice to which for three months he gave in their food small doses of sulphide and sulphate of iron, he produced very marked swelling of the thyroid, and in others to which were administered other supposed goitre-forming substances no such effect was produced. A very striking instance he quotes from Mr. Clelland's observations:—"In the year 1831 two companies of the 30th Regiment of Native Infantry were placed in garrison at Lohooghal, while two other companies were stationed at Petoragur, a station to the north of Lohoogha having precisely the same altitude and mean temperature as the latter. At the end of three years there was not a single case of goitre at Lohooghal, while at Petoragur there were fifty. The water for the supply of the former station came from the metamorphic clay schist, while that for the latter came from metalliferous limestone containing beds of schist with graphite and iron and copper pyrites."

Another convincing proof brought forward by Dr. Saint-Leger was as follows. Knowing the geological formation of certain districts of France he marked on the map the localities in which there ought to be goitre and then visited them. He found no goitre in the districts where he did not expect to find it, but he did not find goitre in all the places he expected, but in these cases he found that the water-supply was either got from a different formation at a distance or from wells sunk in beds of transported alluvium covering the real geological formation. In all the other districts he found the disease. These observations are very interesting and require more working out in this country. I am at present endeavouring to find out their truth as regards Cumberland and Westmorland, and hope to communicate the results of my research at some future date. Goitre is endemic here, and it is well known that n the mountains of the Pennine range—and, indeed, in other hills in these counties—iron, copper, and lead are found in large quantities, and it would be interesting to find out if these metals are found in other goitrous districts in the country. With regard to Dr. Holmes's remarks on predisposing causes of goitre, my experience here bears out the fact that the disease is most prevalent in females and that it develops generally at puberty, though in some cases in early childhood. I have seen several cases of mother and daughter being affected with the disease. It is interesting to mention, in conclusion, that Paracelsus and other physicians of the sixteenth and seventeenth centuries accused metallic waters of causing the neck to swell, and even mention iron pyrites as a cause of goitre.

I am, Sirs, yours truly,
LOUIS E. STEVENSON, M.B., B.C. Cantab.

Penrith, Nov. 12th, 1895.

"'RETURN' CASES OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—A record of the following history, which occurred in my practice some two years ago, may be of interest in showing that subsequent cases of scarlet fever occurring in a family cannot always be interpreted as "return" cases.

A boy at school here had scarlet fever, and when free from infection, as I considered, he returned to his home in Ireland. He having one sister at home who was young and very delicate, his parents resolved that he should go somewhere in the country before joining the family, for prudential reasons. Within three days of his leaving my care the sister fell ill with scarlet fever, although there had been no communication with the convalescent. Now, had the convalescent returned to his home I should doubtless have inferred that the sister's illness was a "return" case of scarlet fever, whereas I have little doubt that she contracted her scarlet fever by travelling in a tramcar within four days of falling ill. It was known that there was scarlet fever in the town in which she resided. In my opinion some of these "return" cases of scarlet fever are doubtless freshly contracted cases arising from travelling in public conveyances—railway carriages, cabs, and tramcars—which are the most infectious of all places—certainly they cause me great trouble. Within the last six months I have traced two cases to travelling in railway carriages, one while travelling to a football match, the other to a funeral.

I am, Sirs, your obedient servant,
Rugby, Dec. 6th, 1895. CLEMENT DUKES.

"'TUBERCULOUS' *vel* 'TUBERCULAR'?"

To the Editors of THE LANCET.

SIRS,—Among your annotations in THE LANCET of Dec. 7th there is one under the above heading. The difficulty and perplexity therein mentioned have long been recognised, and I have publicly and privately suggested a very simple and, to my mind, perfectly satisfactory solution—viz., the use of the word "nodule" for the representation of an object otherwise capable of being called a small lump, and the correlative "nodular" or "lumpy." As you say, custom has hallowed and made inviolate the noun "tubercle," and I would suggest that the time has now arrived when tubercle, tuberculous, tubercular, &c., should be gracefully yielded up to the power of a specific bacillus, and only used to connote its activity, past or present. The old order changeth, giving place to the new, and I maintain that what was excusable in an anatomist in years gone by, to apply the term "tubercle" to any small lump, cancerous, sarcomatous, or of unknown origin, is now no longer so since an all-powerful bacillus has seized upon it for its own. If my suggestion be accepted confusion cannot arise, for if the bacillus be not actually searched for we can still say "a nodule was found (? tubercular)." About three-fourths of the literature of consumption would never have obscured our eyesight, physically and mentally, had the simple words nodule and nodular but been used in the place of tubercle and tubercular where doubt was in the mind of the writer as to the presence or absence of the bacillus.

I remain, Sirs, yours truly,
Christopher-street, E.C. FRED. J. SMITH.

A CASE OF NYSTAGMUS ARISING FROM AN UNUSUAL CAUSE.

To the Editors of THE LANCET.

SIRS,—On reference to text-books I find the causes of nystagmus, or involuntary oscillation of the eyeballs, to be divided into two classes according to the age at which the symptom manifests itself—namely, in early or in adult life. The causes in early life are congenital cataract, corneal ulcer and atrophy of the choroid; whilst in adults, miner's nystagmus and that occurring in locomotor ataxy are the

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usual forms given. In the case in question it was whilst attending one of the children that I first saw the father, who is a gardener, and noticed that he had nystagmus. I inquired whether he had ever been bothered with his eyes and obtained the following history. Up to the age of twenty-two his eyes were perfectly normal. One evening he was stoking the greenhouse fires and some unignited gas must have accumulated, for on opening the stove doors there was a burst of flame, which scorched his hair and face, and from the effects of which he was laid up for a fortnight. On getting about again he found he could not see as well as before on account of the movement of his eyeballs, and his friends all noticed the change in them. He is now forty-three years of age and tells me he can read perfectly both by daylight and artificial light, and that his eyes do not bother him in the least except in bright sunlight, when he becomes rather "dazed." On examination I find he has horizontal nystagmus, that both eyes act together, and that their movements are perfect in all directions. The oscillation still continues, but is reduced to about 120 a minute, when the eyes are extremely turned either inwards or outwards. The corneæ are clear, and no abnormal signs can be seen about either eye. The pupils act well both to light and to accommodation. With the ophthalmoscope I find the lenses transparent and without any signs of opacity. The discs are slightly injected, but otherwise normal. By retinoscopy + 3 corrects the left eye and + 4·5 the right eye. I have not attempted any treatment, not quite seeing what course to follow, as the nystagmus is now of twenty-one years' standing, and the subject is in perfect health and according to himself has "never had a day's illness." With regard to the pathology I am also at a loss, but suggest that changes have taken place in the nerves or nerve endings in the ocular muscles, due to peripheral neuritis caused by the inflammation consequent on the burns received twenty-one years ago.

The course of reasoning I have pursued is as follows. If a child be born blind and continue so, nystagmus generally supervenes because one of the first acquired coördinate actions is that of the harmonious and accurate movements of the muscles of the eyes, whereby the child learns to look at an object, nystagmus being therefore a defect of coördination. Now the mechanism of coördination is: (1) sensory paths for perception and conduction of impressions; (2) receiving central ganglia; and (3) efferent nerves to carry impulses from centres to motor structures. Failure of coördination may arise from defect in any one of these three structures, for in locomotor ataxy we find the change in the sensory structures, in cerebellar disease it is in the central ganglia, whilst in multiple sclerosis the lesion is in the motor paths. Miner's nystagmus, being due to excessive use and straining of the ocular muscles, is an example of lesions in the motor paths. Nystagmus occurring in locomotor ataxy is due to sensory changes. May not the nystagmus in the case under consideration be due to changes in the nerve endings in the muscles, but whether sensory or motor, or both, I cannot say?—I am, Sirs, yours truly,

A. DUNLEY OWEN, M.R.C.S., L.R.C.P. Lond.

Northampton, Dec. 9th, 1895.

*** This case is one of exceptional interest. There are many other affections besides those mentioned by our correspondent with which nystagmus may be associated, as, for example, with errors of refraction, especially high degrees of hypermetropia, with retinitis pigmentosa in albinos, and with disseminated sclerosis of the brain and spinal cord, with hysteria and with lead poisoning. The pathology of the case may of course be that ingeniously suggested by Mr. Dunley Owen, but we should be inclined to give another explanation to the effect that the shock of the explosion caused a small lesion of the choroid or retina at or near the fovea centralis in one or both eyes, and that the amblyopia thus produced led to the oscillation of the globes. Mr. Dunley Owen does not give the distant vision of the patient.—ED. L.

APOTHECARIES' HALL, IRELAND.

To the Editors of THE LANCET.

SIRS,—The Court of the Apothecaries' Hall, Ireland, would call your attention to an observation made in your valuable journal at page 1468 in reference to the petition presented by them to the General Council of Medical Education for the appointment of additional examiners in surgery, in which it is stated "Irish opinion was much divided on the Council." The facts are as follows:—There are in all seven Irish representatives. Two recorded their votes for the Hall. One spoke most strongly in favour of the request, but was urgently obliged to leave before voting. Two other Irish members of the Council were absent, but wrote letters expressing their opinions that the examiners ought to be granted. The two Irish votes given against the Hall were by two Fellows of the Royal College of Physicians, Ireland.

I am, Sirs, faithfully yours,

ROBERT MONTGOMERY, M.R.C.S., Secretary.

Mary-street, Dublin, Dec. 9th, 1895.

*** Our account and Mr. Robert Montgomery's are in accord.—ED. L.

MIDWIFERY TRAINING FOR STUDENTS.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to the fact that in your report of the proceedings of the General Medical Council[1] I am represented as saying that the Council have recommended that every student should be required to attend three months' practice in a lying-in hospital and conduct twelve cases of delivery under the direct supervision of a registered practitioner. The recommendation itself which I quoted is to the effect that either attendance at a lying-in hospital *or* presence at twelve midwifery cases should be required, and it is only stipulated three of the twelve should have been conducted personally under the direct supervision of a registered practitioner.

I am, Sirs, yours truly,

Mosley-street, Manchester, Dec. 9th, 1895. D. J. LEECH.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Having to-day seen, for the first time, a letter signed "Albert Morton" in your issue of Nov. 16th, on the "Admission of Women to the Royal Colleges of Physicians of London and Surgeons of England," I beg you to allow me, though somewhat late, to comment on one passage contained in it, for an assertion that goes uncontradicted is sometimes supposed to be admitted. The paragraph is as follows:

"Dr. West justly says: 'What had women done for midwifery, which for a century and a half was entirely in their hands?' I would go a great deal further, and say that the modern medical women are doing more to degrade and lower the standard of the profession than any body of medical men have ever done, for they are at the present time seeking to attend midwifery for a fee of 5*s*., and for aught I know for even less than that. Does this show that there is any great and growing demand for the services of medical women even for members of their own sex?"

Now is Mr. Morton sure of the accuracy of his *facts?* It is always difficult to prove a negative, but I believe if anyone took the trouble to inquire he would find that no medical woman in practice in England has ever taken less than a guinea as her minimum fee for a midwifery case. Mr. Morton's mistake is probably founded on the fact that in certain maternities officered by medical women, to which a system of training for women students is attached, there exists a rule requiring the out-patients to pay 5*s. to the funds of the hospital* on registering their name for attendance, instead of receiving cards entitling them to be attended free, as is the usage of those hospitals in connexion with which men students undertake similar work. The object of the rule was partly to avoid pauperising a new district, partly to limit the number of cases undertaken, as the supply of women students is also limited. The sum of 5*s*. was fixed upon in the belief that no one could possibly mistake it for a doctor's fee. It may or may not have been judicious to adopt this change of method, but at any rate the question involved is not "Do women doctors degrade the profession by taking lower fees than men?" but do they degrade it by insisting that even students' work, when supervised by fully qualified doctors, should be to

[1] THE LANCET, Dec. 7th, 1895, p. 1474.

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some extent paid for instead of given without any payment at all? I am, Sirs, yours sincerely,

MARION RITCHIE,
Hon. Sec. of Clapham Maternity Hospital and St. John's Maternity, Battersea.

Dec. 10th, 1895.

"SHOULDER BRACES."

To the Editors of THE LANCET.

SIRS,—Some years ago[1] I protested against a well-known surgeon recommending a new form of shoulder strap for stooping, &c. In THE LANCET of Nov. 23rd I find you have given, most probably inadvertently, a paragraph describing still another form of shoulder brace under the description of ——'s "Anti-stoop." The trade in these useless straps must be enormous to judge from the profuse way in which they are being advertised, just as if they were "cure-all" pills. For many years I have taught that shoulder straps do far more harm than good; employing them tends to develop the muscles which draw the scapulæ forwards, so that when the straps are left off the sufferer is more round-shouldered than ever. Allow me to quote the opinion of the late John Shaw of the Middlesex Hospital, one of the most clear-headed writers on orthopædic surgery I have come across. He says in his book:[2] "The effect which the instrument (shoulder-brace or common back collar) produces in ordinary cases may be easily comprehended. If the shoulder-blades be brought close to the spine by the straps of the brace and kept constantly so, there can be no use for the several strong muscles which pass from the spine to the shoulder-blades. They must consequently waste and become nearly useless, while those on the forepart of the chest, being excited to resist the straps, will become increased in power, and hence, when the strain is taken off, not only will the shoulders fall forward as in a delicate person, but the muscles on the forepart of the chest will predominate over those by which the shoulder-blades should be held back and pull the shoulders forwards."

I do not think any impartial surgeon would controvert John Shaw's sensible remarks written seventy years ago.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Nov. 25th, 1895. BERNARD ROTH.

"THE WIDOWS OF MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—I have read the article on "The Widows of Medical Men" in THE LANCET of Dec. 7th, and beg to submit the subjoined statement. Like most of the licensed houses and registered hospitals—of which it is one—the Holloway Sanatorium receives voluntary boarders, but it does not lay itself out for them, only 37 of its 380 inmates residing as boarders at St. Ann's Heath or at the Brighton branch. Of these 37 boarders some are without means and one on the free list, others are unfitted for home care, and only a small proportion could be available for boarding with doctor's widows. In 1894 the average weekly cost of each inmate was £2 1*s.* 10*d.*, the average weekly payment now made by each boarder is only £1 11*s.* 5*d.*, which in some cases includes clothing, seaside trip, and other extras. The Holloway Sanatorium boarders are of no pecuniary advantage to the hospital, nor would they be so to G.B.R. and others like herself. The sanatorium can only accommodate 400 inmates: 279 patients and boarders were admitted in 1894, and 267 were discharged. Many of those discharged were placed, on my recommendation, in private care. If G.B.R. is a suitable person I may be able to help her.

I am, Sirs, yours faithfully,
S. R. PHILIPPS, Medical Superintendent.

St. Ann's Heath, Virginia Water, Dec. 11th, 1895.

"THE DEGRADATION OF MEDICAL PRACTICE."

To the Editors of THE LANCET.

SIRS,—Whilst endorsing on the whole your leading article on "The Degradation of Medical Practice by Commercial Companies,"[1] it must not be lost sight of that these insurance and medical societies (vulgarly called "death and the doctor" clubs) are by no means the only offenders against the well-being and honest independence of the medical profession. Take, for instance, the older friendly societies—e.g., Oddfellows, Foresters, &c.: these originally were, as they still are in some parts of the country, for the "brethren" only, but of late years the wives and children have been admitted as "dispensary" members of such societies, and that, too, without any medical examination as to their fitness to become members. This has been doubly hard on the medical profession, as formerly such wives and children were one's private patients, and the members themselves gave one very little trouble, for, as a general rule, it is an exception for a man to suffer from hysterical and fanciful ailments like a woman, or to be subject to "catching complaints" like a child, and of this nature is a large percentage of the cases which take up a medical man's time with his "dispensary" work, whether it be that of a (so-called) provident dispensary or of the "dispensary" members of the older friendly societies. I have used the words "hysterical" and "fanciful" in no invidious sense, it being self-evident that man, being out and about at his daily work and thus having more change of scene, has less time for introspection, a fruitful source of hysteria, &c., to which woman is more prone by reason of her more circumscribed environment and from the more monotonous duties of the home, which confine her so much indoors. "Man for the field, and woman for the hearth," as Tennyson has it.

I have the fortune (or misfortune?) to practise in one of the most club-ridden towns in England, so much so that there is scarcely a general practitioner in it who is not a "club doctor" of some sort or kind, even those living in the most aristocratic parts of the town not disdaining such medical—I should say pecuniary—aid to their practices, and quite half the number of practitioners are dispensary medical officers. This is, perhaps, scarcely to be wondered at when it is stated that the especial difficulty in this town is that, on the one hand, there is such a large preponderance of the artisan class of population, and, on the other hand, the number of fresh medical men starting in practice steadily increases out of all proportion to the monetary value of the population. This is altogether a most unsatisfactory state of things, and if the well-being and *amour propre* of the medical profession are to be in any way improved, or even retained, some *modus vivendi* must be arrived at. One way would be the extension of the dispensary system, only with a sliding scale of payment for members, to be arranged according to their income or to the rental of their houses. Then, again, all dispensary committees should consist either altogether of the medical officers themselves or they should have a preponderating voice in the management. By these means would be reduced to a minimum that most crying abuse of most dispensaries and clubs—viz., the want of care that generally characterises them in refusing to admit as members those who are in a position either to be private patients or at any rate to pay a much larger capitation fee than they do under the present *régime*. I remain, Sirs, yours faithfully,

Leicester, Dec. 4th, 1895. A LEICESTER PRACTITIONER.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—It is in accordance with the best traditions of THE LANCET that grievances in the profession should be freely discussed in its columns. No one in his day did more yeoman service to the profession than the level-headed, hard-hitting Founder of your journal, and the name of the one-time Doctor-Member for Finsbury and Doctor-Coroner for Middlesex should ever be remembered with respect, especially by the general practitioner of medicine. It may be questioned, however, whether it is altogether wise that the internecine misunderstandings of the profession should be so constantly dragged before the public to the amusement of the cynic and the indifferent, and to the pain of all who respect the interests and dignity of the profession. One of the most distinguished consultants of the day, himself for long a general practitioner, once remarked to the writer that in throwing mud at the profession one inevitably besmirched oneself. When a wrangle degenerates into the pot calling the kettle black we know that argument and reason have been

[1] New York Medical Journal, Nov. 3rd, 1888: A Note on the Uselessness and Harmfulness of Shoulder Straps, Shoulder Braces, and hoc genus omne for Round Shoulders, &c.
[2] Further Observations on the Lateral or Serpentine Curvature of the Spine. London, 1825.

[1] THE LANCET, Nov. 30th, 1895, p. 1375.

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abandoned, and temper and abuse are in the ascendant. The grievance of the general practitioner used to be that the specialist took work from him, and more recently he seems to have discovered that he robs the public. Although, no doubt, particular instances are thus indignantly and anonymously pointed at, the impression conveyed to those not fully conversant with the circumstances is that the charge is a general one, and a profession second to none in honourable distinction is thus lowered in the eyes of the public. The secret of these misunderstandings seems to be that the altered conditions of the profession by the mere force of evolution are not sufficiently taken into account. The hard-and-fast line between the consultant and the private practitioner no longer exists. Let us free our minds from cant and recognise an increasingly palpable fact. The "consultant" has in no way degenerated from his gold-headed stick prototype, but the "visiting apothecary" of the old school is as extinct as the dodo. I do not speak of that stratum in the profession which sells what brains it has for sixpence and throws in the physic, but of the physician or surgeon in private practice. A natural consequence of the improved education and status of the general practitioner is that the purely consultant opportunities of the consultant have been very materially diminished. Is there, then, still to be a class of consultants? And if so, how are they to come into being? In the pre-Napoleonic French army a man required to have at least four generations of ennobled ancestors before he could become a candidate for commissioned rank. Is it to be required of the budding consultant of the twentieth century that he should be born in the purple or set out in life with a competent income? If not, how is he to live? Only a very limited number of men can become attached to teaching hospitals, and thus trust to the future good offices of past students; while without the material which a hospital affords no one can become worth consulting in any department except one—namely, obstetrics, in which many general practitioners are quite as much specialists as those who pose as such. This does not apply to gynæcology. Those, then, who have not assured them a former-pupil *clientèle*, and also are in a position to conscientiously regard their advice as worth having in consultation, must give evidence of it by publication—that is, by appeal to a larger professional public than that of a single school. Now, a man cannot have a consulting reputation with the profession and no reputation with the public, and if the public in the exercise of their liberty of action consult such a one *unintroduced* by a fellow practitioner, what is the consultant's duty: to shut the door in the face of this public and starve, or to practise his profession and put on weight? It is not difficult to choose between these alternatives, and no one hesitates to choose the latter unless he finds it to his advantage to do so. This situation, however, necessarily leads to friction, and how is this to be avoided? In my opinion, by ceasing to emphasise a distinction between the rank and file of the profession which is being gradually but certainly obliterated; by throwing down artificial barriers to the development of the special practitioner from the general practitioner; and by impressing the meanest member in the ranks of the profession with the belief that, like the post-Napoleonic private soldier, he potentially carries a field-marshal's baton in his knapsack. Given a fair field and no favour, it will only be a very ill-conditioned person who can object to the natural consequences of the ensuing contest. I have ventured, Sirs, to express my convictions so fully as I have had some opportunity of studying by experience both sides of the question.—I am, Sirs, yours faithfully,

Dec. 10th, 1895. IN TOTO PARS.

"THE PRIMARY EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—In Professor Fawcett's letter on this subject in THE LANCET of Nov. 23rd he makes a misleading statement when he says that two hours are devoted to Practical Anatomy at the London University examination. The actual facts are these. The candidates are each given a part to dissect for two hours, but of this two hours a quarter of an hour is spent in a *viva-voce* on bones. At the end of this time the candidates are taken to another room, whence they go in turn to another *viva-voce* in soft parts. As far as a candidate can judge, the dissection is of no use, as any man with a little skill in dissecting and less anatomical knowledge could easily perform the task. Conversation is free and unchecked all the time. As you say in your annotation, the London examination is much more severe and thorough than that of the Conjoint Board, but I do not think it is fairer to the student. How can a man do himself justice after two hours' dissecting, and perhaps another two hours' waiting in a bare and dismal room, without recreation or refreshment of any kind, and most likely in a state of extreme nervousness? Then, when he is thoroughly exhausted in mind and body, he is questioned minutely on various regions of the body. This is no imaginary picture—I speak from bitter experience. As far as a candidate can judge the time *is* limited, as every quarter of an hour a bell rings and a fresh batch of candidates takes the place of the old ones. As regards the results of the Conjoint Examinations Professor Fawcett well describes them as "startling." It is a well-recognised fact in provincial schools that it is impossible to foretell who will pass. I have known very able men, who have passed examinations quite as hard at their own universities, who have been ploughed in one or more subjects at the Conjoint examination, much to the disgust of themselves and friends.

I am, Sirs, yours faithfully,

Nov. 25th, 1895. F. S. J.

THE BATTLE OF THE CLUBS.—XIII.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1460.)

THE ROYAL VICTORIA DISPENSARY AT NORTHAMPTON.

NORTHAMPTON is distinguished among all other towns by possessing one of the largest and, in a way, one of the most successful provident dispensaries of England. Here, if anywhere, the question of club practice has been fully discussed, though it must be confessed the result is far from satisfactory. To judge from printed reports and the rules laid down there is little to complain about; but to judge from the conversations of the junior practitioners in the town the complaints are numerous and a very bitter feeling exists. The actual position of affairs can, however, only be rendered intelligible by, at least, a brief historical retrospect. The Royal Victoria Dispensary was founded in 1845 to commemorate the visit of Her Majesty the Queen to Northampton. A sum of close upon £1000 was then raised by donations; thus, in its initiation the institution was distinctly a charity. At the cost of £800 a building was purchased, and another £200 were spent to convert this house into a dispensary. Some persons then urged that medical aid should be given gratuitously to those who were too poor to join the benefit societies and the sick clubs of the town. Others maintained that this class was already well provided for by the tickets which subscribers to the General Infirmary were able to give away and by the Poor-law Union. Then it was pointed out that many respectable working men felt degraded by having to beg for infirmary tickets; that the loss of time in getting these tickets sometimes entailed great aggravation of illness or even loss of life. Again, it was stated that the wives of working men were only in one or two instances able to obtain from benefit clubs the attendance, during their confinement, of competent medical men. For these various reasons it was decided to work the institution on provident principles—that is, to make the members subscribe. Mr. John Becke, solicitor, was appointed honorary secretary, and has been throughout the most active worker in the organisation of this great institution. In several pamphlets, speeches, and documents he has defended the institution; and, in answer to the objection that it might injure the interests of the medical profession, he has expressed his

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York.

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doubts that such was the case, but has added that if these interests were opposed to the well-being of a large number of the poor the interests of a higher and richer but less numerous body must give place to those of the poorer. Mr. Becke, however, and others also, contend that medical men were rarely paid by the poor they attended, and that the medical officers of the Poor-law boards received very inadequate stipends. On the other hand, by the provident system medical men would be ensured payment, and poor families would not be ruined by serious illnesses. Then diseases were aggravated and preventable deaths occasioned because many people postponed seeking medical advice till a great emergency arose. They resorted to the dispensing druggist, the advice of some friend, or to quack medicines, rather than incur the cost of proper medical attendance. Members of a provident institution could, on the contrary, and without extra cost to themselves, obtain advice early, and thus the evil might be nipped in the bud. This, also, was very advantageous to the community at large in cases of infectious disease, as there would be a better prospect of taking the necessary precautions in time to prevent the disease spreading. For these various reasons the first rule was worded as follows: "The object of this institution is to enable the working class to ensure for themselves and their families efficient medical advice and medicine during illness by their own small periodical payments, with the assistance of contributions from the more opulent. The free members shall consist of working persons and servants, their wives and children, not receiving parish relief, and being unable to pay for medical advice in the usual manner." The payment used to be 2*d*. a week for a family, 1*d*. a week for persons above and ½*d*. for those under fourteen years. Now the weekly charge is 3*d*. for families and 1½*d*. for persons above and 1*d*. for persons below fourteen years. Domestic servants pay 5*s*. a year. The fee for confinements is 10*s*.

In a pamphlet giving a history of this institution Mr. Becke relates that there was much discussion as to the number of medical men to be appointed. "The late Mr. Smith of Southam, whose opinion was certainly entitled to great respect, thought it ought to be thrown open to every medical practitioner in the town who wished to join it. I and others believed that by thus dividing responsibility we should greatly diminish the efficiency of the medical staff, that some would join simply because they did not wish to see their names omitted, but to whom the remuneration would not be an object and all labour distasteful; that if the number of officers was limited and the appointments subject to competition, only those would seek for the appointments who were anxious to obtain them and who were ready to do the work." These arguments were met by a sort of compromise, and six medical officers were elected; but in the first year one and in the second year two of them resigned. This confirmed Mr. Becke in the opinion that the number of medical men to be engaged should not be more than the institution could afford to remunerate adequately. All those who worked for the institution should make good incomes out of the work, and this end has certainly been well realised, so well, indeed, that it has caused strong dissatisfaction among the other practitioners. That the compromise described above should have proved a failure was very natural, for it could not satisfy either party. It had all the disadvantage of creating a privilege, but the privilege when obtained was not worth having. The fairest method would have been to throw the dispensary open to any fully qualified practitioner who chose to enrol himself as one of its medical officers. It would then be no special privilege or honour to be included in the list of medical officers, so that it is difficult to see why a medical man should enrol himself if he did not mean to attend the patients. But even if this had occurred in one or two instances the patients would very soon have found out those practitioners who had not their hearts in the work. A little experience would have shown who were the medical officers to whom this club practice was of consequence and who were prepared to give it the necessary time and attention. Young and energetic men would then have had a fair chance of coming to the front, and could not complain that a privileged monopoly has been created. It is true that in those days it was not foreseen that the institution would grow to its present size and importance. There are now 7751 paying members and families, and this I was assured may be taken to represent more than 20,000 persons who are entitled to receive medical aid from the Royal Victoria Dispensary. The income for the year 1894 was, for readmission fees, fines, and cards, £384 7*s*. 9*d*. The subscriptions of the free members amounted to £3184 16*s*. 4*d*., and the midwifery fees to £152 2*s*. 6*d*. Altogether the total payments made by free members amounted to £3596 10*s*. Out of this sum, £2682 14*s*. 3*d*. was paid to the five medical officers who are now attached to the dispensary. What remained was for the most part devoted to defraying the working expenses, purchasing drugs, &c. I have heard no complaint that profit is made out of the medical men.

The friends of the institution argue that it has rendered a great service to the medical profession, as otherwise the profession would never have received the £2682 which the institution has collected and paid over to its medical officers. The medical men who are opposed to the institution urge that a portion of this money is obtained from persons who can well afford to pay proper fees, and that a class of privileged medical men have been created who receive large incomes in exchange for no service, inasmuch as they pay a much smaller sum than they receive to their assistants, who do all, or nearly all, the work. Is it right that more than £1000 a year should be paid to a prominent medical man who does not do the work but devotes himself to a lucrative and extensive private practice, consigning the club patients to his two assistants? These assistants, though duly qualified, certainly do not cost their employer anything like the sum he received from the Royal Victoria Dispensary. I would haste to add that the medical officer in question enjoys the highest reputation, is excessively popular throughout the town, and that not a word has been uttered against him. But a principle of club management is at stake which it should be possible to discuss without casting the slightest reflection on the high honour and unimpeachable reputation of an individual or individuals concerned. The question is simply whether it would not be better to divide the £1000 or more paid annually to one single medical officer, who cannot, and does not, see the patients, among four or five junior practitioners, to whom it would be a Godsend, and who have all the time necessary to devote themselves personally to the patients. Then, again, could not the members of the institution protest that they pay too much? The experience of Northampton shows that it is possible for one single medical officer to derive from these subscriptions more than £1000 a year and get the work done by two assistants for less than £500 a year, thus pocketing, as middleman, at least 50 per cent. of the sum paid by the subscribers. In the face of these figures, which are available to all, why should not the members of the dispensary propose to reduce their subscriptions by one-half, and offer £250 a year to each of the two assistants who are really doing all the work? Several medical men at Northampton were strongly of opinion that it was not right for medical officers to receive large incomes from what was partly a charity and then farm out the work to assistants. The charitable donations, it is true, have singularly fallen off. They only amounted to £91 last year, but they have been much more considerable in times past, and the dispensary itself was started with the £1000 collected as charity money. It is not generally supposed that large incomes are to be made out of such benevolent institutions; and it can be urged that the benevolence of such institutions would be twofold if they not only provided medical aid to the poor, but also a better opportunity for young and rising practitioners to gain experience and the means of existence.

There next comes the wage limit question. In this respect the Royal Victoria Dispensary is head and shoulders above the friendly societies and the medical aid commercial companies, because its authorities do most emphatically recognise the necessity of a wage limit. The rule says that members shall consist of "working persons" who are "unable to pay for medical advice in the usual manner"; and that those who wish to become members "shall leave particulars as to his or her name, age, residence, and occupation at the dispensary." Mr. Charles Becke, who is now acting in his father's stead as honorary secretary, informed me that the committee of management meet every Friday evening and are open to receive any complaints, and would investigate at once any case where a person was receiving medical aid when he could afford to pay the usual fees. They were happy to receive information on such points from any source. When such persons were discovered they were made to leave the institution as recipients of medical relief,

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but were asked to subscribe as donors and patrons. The committee also visited candidates to see that they were not too well off to become members; but the best proof of their sincerity in this matter could be found in their refusal to amalgamate with the friendly societies. Some years ago, before the friendly societies and benefit clubs federated together so as to establish the dispensary of their own now located in Sheep-street, they proposed that the Royal Victoria Dispensary should take the matter in hand. This was a brilliant offer, for it would have brought in many thousand members. Nevertheless, it was refused because, on inquiry, it was proved that many of the members of the friendly societies were not artisans and working men. It is, as already shown, against the rules of the Royal Victoria Dispensary to admit middle-class persons. Yet in the early history of this institution the difficulty of drawing a hard-and-fast line was keenly felt, consequently the following by-law was adopted: "That it is the opinion of this committee that all artisans and labourers, working as journeymen, should be considered as proper persons to be admitted without reference to the rate of wages which they may be receiving; and that the circumstance of the wives of any of them keeping a shop (excepting beer-shops or public-houses) shall not operate as a disqualification, but that no person filling the situation of a foreman or earning his living solely by keeping a shop should be admitted, it being also understood that no widow or single woman keeping a shop shall be considered as included in the disqualification." Mr. Becke recognises that objections can be made to this rule. Many artisans earn quite enough to pay for medical advice, but it is difficult to minutely examine the condition of a family, and a man with high wages but a sickly wife or relatives to support may be very hard pressed. The matter must be left to the discretion of the committee and for the medical officers to report if they find anyone in good circumstances claiming medical aid. Taken altogether, these rules show that there is the desire to prevent abuses, but has the effort been successful? The medical officers of the Royal Victoria Dispensary on whom I called recognised that there might be some abuses; but, if so, they were in any case contrary to the rules. They also pleaded there were abuses in all institutions, and one of the medical officers pointed to a drawer which he declared was full of the documentary evidence he had accumulated setting forth the abuses prevalent at hospitals. These medical officers were also under the impression that, whatever fault might be found with the Royal Victoria Dispensary, there were far greater abuses at the dispensary set up by the friendly societies. One medical man thought that not only were persons possessing good incomes receiving medical aid from the friendly societies, but sometimes the medical man was cheated by patients turning up for whom he had never been paid. This occurred to him at least three times in the course of a year when he was a club officer. On taking the patient's card and comparing it with the list given him by the club or friendly society, he would find that the patient was not on his list. The patient had paid his subscription, but the medical officer had not been credited with the amount.

On visiting several practitioners who were not connected with the Royal Victoria Dispensary, I found that their view of this institution was far less favourable. After denouncing the Royal Victoria Dispensary as a monopoly worked by assistants, they pertinently inquired why, if the wage limit was so strictly applied, so few persons were refused admittance during the course of the year. When I remarked that, in any case, there were abuses with regard to the wage limit at the dispensary of the friendly societies, a practitioner with whom I was speaking replied that he more frequently came across abuse of the Royal Victoria Dispensary. The latter had an altogether higher class of patients; the friendly societies came next; and the lowest class of all were those recruited by speculating financial companies who threw in medical aid as a bait for securing life insurances. From the window of his surgery, overlooking the villadom of Northampton, he pointed out a row of pleasant houses in which he declared many members of the Royal Victoria Dispensary lived. Personally, he was acquainted with a member of this dispensary who was a greengrocer who had retired from business, and who, when not satisfied with the advice obtained from the dispensary's medical officer, very freely gave guinea fees to a consulting physician. He knew also a fishmonger and poulterer who belonged to the dispensary, and he attended an inebriate tradesman who had not been compelled to resign his membership. This man did not like to call the medical officer of the dispensary when he was suffering from the consequences of his insobriety, and then readily gave a 3*s.* 6*d.* fee, to say nothing of the money he squandered in drink. Yet, in spite of the rule that tradesmen are not eligible, and in spite of the wage limit, this man was kept on the books of the Royal Victoria Dispensary. He considered that the dispensary greatly injured the prospects of private practitioners, not merely by failing to apply their own rules and wage limit, but by their readiness to attend from beginning to end any case of illness for 6*s.* 2*d.* The rule is that, if a person is ill and wants to join the dispensary, he must pay 1*s.* for a month's subscription, 2*d.* for his card, and a 5*s.* entrance fee—total, 6*s.* 2*d.* Thus even the improvident, who have not joined the dispensary when in good health, can for this comparatively small sum avoid calling in a private practitioner. This constitutes a terrible competition. People of restricted means, who call in a medical man, invariably find some neighbour who reproaches them for needless expenditure, since, they urge, all that was necessary could have been obtained from the dispensary for 6*s.* 2*d.*

Such are the main arguments brought forward on both sides by the friends and foes of this great institution. I have only one fact to add. According to the printed report 73,811 consultations were given during the year 1894. As the payment of the five medical officers who, with their assistants, did this work amounted to £2682 14*s.* 3*d.*, this gives an average of over 8*d.* per consultation. I have not yet met with another similar institution which paid its medical officers anything like so high an average per patient seen.

Northampton, December, 1895.

(To be continued.)

ACTION OF THE NORFOLK AND NORWICH MEDICO-CHIRURGICAL ASSOCIATION.

Everywhere we note a determined intent on the part of medical men to withstand the encroachments of the clubs and to promote social and professional intercourse as much as improve pecuniary status by combining for purposes of general protection and co-operation. We welcome these manifestations, for in many cases—of which our articles under the heading of "The Battle of the Clubs" have detailed several—the remedy for existent evil is in the hands of the local profession, if they will seek it in mutual goodwill and apply it with solid firmness.

The position of medical men holding appointments under certain societies has been under the consideration of the Norfolk and Norwich Medico-Chirurgical Society, a body of 120 gentlemen, and the members present at the last monthly meeting, which was held on Dec. 3rd, were unanimous in their opinion that some step should be taken to discourage the canvassing and touting for patients by agents representing clubs, and a resolution to this effect was passed. As an outcome of this resolution the following circular letter was issued by Dr. Thomas J. Compton, the hon. sec. of the society, to the members in his official capacity:

"Heigham Hall, Norwich, Dec. 4th, 1895.

"Dear Sir,—At a fully attended meeting of the society, held at the Norfolk and Norwich Hospital on Dec. 3rd, the report of the Council in reply to Mr. Belding's question: 'Are the medical officers of the Liverpool Victoria Friendly Society included in the strictures passed by the Norfolk and Norwich Medico-Chirurgical Society on medical men holding medical aid appointments?' was received and adopted, and the members were unanimously of opinion that the Liverpool Victoria Legal Friendly Society comes within the meaning of Law VI. 'as unbecoming and unprofessional for any member of the profession to lend his name or to associate himself in any way with such a society'; and it was resolved that the decision of the members should be made known, at an early date, to each member of the society by circular. Law VI. reads as follows:—

> VI.—Any registered medical practitioner who shall be adjudged guilty of and persist in unprofessional conduct, as defined by the code of rules adopted by this society, shall be ineligible to be a member of this society.

"The rules adopted by the society are those formulated by Dr. Styrap, with clause appended with regard to Medical Aid Associations, defined as associations formed as trade speculations, carried on by lay proprietors for the purposes of deriving pecuniary profits from the earnings of members of the profession, and pushed by means of advertisement; or by the employment of paid canvassers who tout and solicit the patients of other practitioners; and that it be deemed unbecoming and unprofessional for any member of the profession to lend his name or to associate himself in any way with such societies or clubs.

"Yours faithfully,

"THOMAS J. COMPTON, Hon. Sec."

Rule VI., which is quoted in the circular letter, has been recently passed as one of the laws of the society in the hope that the medical officers of the associations therein described

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may recognise the possible ill that may accrue to the profession by lending their assistance to such institutions; and already we understand that several members have signified their intention of relinquishing all connexion with clubs which derive pecuniary profits from the earnings of the profession. The members of the Norfolk and Norwich Medico-Chirurgical Society, in taking this action, fully recognise the necessity of medical aid being essily procurable for those who are unable to pay the usual medical fees, and it is their intention to organise at once a scheme under which this object can be attained, while the medical men remain their own masters. It only remains for us to express our warm appreciation of the action of the society, and our conviction that its results must be satisfactory. Success is assured from the first if the local medical men stand by each other in their intent to help the poor.

We have also received from the Medico-Ethical Association of Fermanagh a copy of their new rules and code of ethics. Upon these we shall comment next week, space to-day only permitting us to congratulate those instrumental in welding together the practitioners of the neighbourhood in the manner indicated by the formation of the association.

THE ASHANTI EXPEDITION.

(FROM OUR SPECIAL WAR CORRESPONDENT.)

I AM sure you will be much interested to learn that we have travelled so far safely, and, what is more satisfactory, that the contingent and all on board our ship are quite well.

On leaving Liverpool we had a strong north-north-west wind, very cold at times, and experienced a nasty rough sea till we were off Ushant. The wind, however, decreased, and sea moderated considerably after leaving this point. Three days after quitting England we enjoyed the luxury of a calm day, which was seized upon as an opportunity to clear up and shake down a bit after the severe dressing we had received; but the brief respite was soon followed by a strong southerly headwind, which, by driving up a nasty, topping cross sea, caused serious discomfort to all on or below decks. Much to the relief of all, the weather toned down on Nov. 29th and proved a great comfort to the sea-sick folk, so much so as to permit even the greatest sufferers from *mal de mer* reappearing in their seats at the dining table. The colonel commanding has now decided to disembark the expedition at Cape Coast Castle instead of Accra, in consequence of the surf being very bad at the latter place. I would also say that, so far as I can ascertain by report, verified by personal inspection, the food served out to the men so far is satisfactory, ample in quantity as well as excellent in quality. The water is much discoloured by iron oxide, in consequence of the bad shakings the iron receptacles have received during the rough weather, and was looked upon by Tommy Atkins as something very bad and likely to produce fever; but after obtaining advice and being satisfied that the fluid was quite pure enough for drinking purposes the soldiers have taken kindly to their allowance ever since.

The day's runs were as follows: Nov. 24th, 244 miles; Nov. 26th, 235 miles; Nov. 27th, 175 miles; Nov. 28th, 198 miles; Nov. 29th, 248 miles; Nov. 30th, 244 miles.

SS. *Bathurst*, at sea, nearing Grand Canary,
Nov. 30th, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Recent Assizes.

MR. JUSTICE COLLINS concluded, on the 5th inst., an assize which will be memorable for the number and gravity of the cases tried. Four prisoners are now in H.M. Prison, Walton, under sentence of death, the juries having convicted each of wilful murder. In addition to these, two other prisoners were sentenced to fourteen and twelve years' penal servitude respectively for manslaughter. In the former case the grand jury ignored the bill for murder, but found a true one for manslaughter. The prisoner pleaded guilty; he was a labourer who had killed his wife under very aggravated circumstances, Mr. Justice Collins observing that it was the worst case of its kind he had ever tried. Both parties were given to intemperance, but the prisoner repeated his violence again and again after intervals, until the poor woman sank exhausted. In the other case, the prisoner O'Callaghan was an unqualified assistant to the surgeon whose son he murdered under shocking circumstances. As is too often the case, the local press made it appear that the prisoner was a fully qualified medical practitioner, which is not true. Much to the surprise of many who heard the trial the jury found a verdict of "Manslaughter," but the judge showed his sense of the enormity of the crime by the sentence he pronounced.

The Criminal Law Amendment Act and Early Pregnancy.

There were a large number of cases of felony and misdemeanour under the Criminal Law Amendment Act, 1885. In one case where the prisoner was charged with misdemeanour the girl, who was only fourteen years and five months old, was delivered of a fully matured child on Nov. 2nd last, and in another case the girl, though only fifteen, was several months pregnant. It is significant of the effect of new Acts of Parliament in creating new offences that prior to the Act of 1885 neither of these cases would have been a criminal offence; while before the year 1875 what may be termed the "felony age" was under ten, and the misdemeanour age above ten and under sixteen. As it is well known that the majority of females do not attain puberty till the age of fifteen, the provisions of the more recent Act have reasonable grounds for their enactment. There is much to be said in favour of extending the age from sixteen to eighteen.

Dec. 10th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary: Election of Pathologist.

DR. T. BEATTIE has been elected pathologist at the Royal Infirmary. He is an excellent man for the post. Formerly the members of the honorary staff were appointed by the governors and canvassing was allowed; but as this involved considerable expense, and was troublesome to both the candidates and the electors, the system was altered. Now the honorary staff are elected by the house committee, the consulting staff, and, in addition, by a selection committee consisting of thirty governors who are not otherwise connected with the management of the institution, and canvassing is forbidden. The house committee consists of thirty-two members, and there is at the present time a consulting physician and a consulting surgeon, making the constituency sixty-four. Of these sixty-four votes only thirty-eight were recorded last week. It may be taken that on every election the house committee, of which the eight members of the staff are members, will vote, so that practically the house committee has in its hands the election of the honorary staff. Many will say this is as it should be, for the house committee knows most about the requirements of the institution and takes the greatest interest in its management. There are, however, two sides to the question, and when thirty outside governors were appointed to take part in the election of the honorary staff it was certainly never contemplated that, as on this occasion, less than half of them would record their votes. If canvassing is not to be allowed it is obvious that, under the present system, candidates who have had no connexion with the infirmary, opposed by those who have, are still further severely handicapped. Other hospitals have changed their method of electing the honorary staff in the direction the Newcastle Royal Infirmary has, and it would be interesting to know whether they are satisfied with the result. The method of the election of the honorary staff is certainly a very important matter to a hospital and to the public.

Newcastle-on-Tyne, Dec. 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Lord Rector's Address at Edinburgh University.

LORD JUSTICE GENERAL ROBERTSON, Lord Rector of Edinburgh University, delivered his rectorial address in the Synod Hall on Friday of last week. The hall was crowded

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by students and others, and the chair was occupied by the principal, Sir William Muir. The Lord Rector began by thanking the students for the honour they had done him by electing him, and reminded them that he was the first Lord Rector who had been elected by the votes of female as well as male students. The traditions of the University were Scottish, and some of them even local; but while still retaining its patriotism it had become in the highest degree cosmopolitan. A moiety of the students are drawn from England, Ireland, Australasia, Canada, and India, while no local partiality has prevented the chairs being filled by the best of the distinguished men of all seats of learning who have desired them. This showed that the true ambition of Scotland was not to be satisfied with a commerce of the mind limited to their own land. The body of undergraduates constitutes a living appeal to the imperial sentiment of the community in which they live. If with sober pride they may believe that the training of the University attracts men from afar, let it not be forgotten that prestige must not be slept on. The credit of all colleges incessantly fluctuates, and is only maintained by achievement and prowess. He referred to a movement on foot for encouraging research by enabling picked men who had shown scientific insight to stay awhile in the University and prosecute investigations. Looking to the prosperity of the University, they need not merely the very best machinery for acquiring the very best skill in all the professions, but here, as everywhere, it is the forward policy, the shining feat, that captivates mankind. And he hoped that some wealthy Scotsman would link his name in imperishable honour with the scientific future of their country by endowing research. Referring to the fact that that was probably the last time an important university function would be held in a hired hall, he took for his next words the words on the roof of the McEwan Hall: "Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding." Other good gifts the University had to bestow, but this was the gift of her right hand. It was not professional skill, or scientific knowledge, or literary accomplishment, although all were instruments towards this attainment: it was the balanced mind, the candid disposition, the educated view that perceives the relations of things, that is alive to analogies and not innocent of irony, that does not expect to find all things in categories, and all black or white, that is reverent to what is great and disaffected to what is smug. Not in mental acquisition, but in mental habit is wisdom found. The University is also the nursing mother of culture, and her sons its champions. In its pristine meaning culture included appreciation of form and love of the beautiful, but the crown and flower of all education was intellectual magnanimity. Hence in the choice of studies wise men, if their leisure be small, will go to the main streams of thought and action. However interesting may be the by-ways of history, the curiosities of literature, and the eccentricities of criticism, it is not there that magnanimity will be learned. He then proceeded to speak of the public value and public duties of disciplined intellect. If he had at all sketched the qualities of the educated mind, its capacities for the comprehension and furtherance of national interests stood apparent. In proportion as the mind of a country is driven away or withdrawn from interesting itself in the State and serving the State, that country is weakened and human progress is stunted. In urging the duty of educated men, he spoke not only of active participation in politics, for more direct and subtle agencies were at least as potent. What was required was that the light of knowledge should be turned on the path of this self-governing people and the best aid given by the best minds. Every man's life had its patriotic side, and his responsibility is not lightened, but increased, by the degree of his mental equipment. There is due to the State a tribute or excise out of cultivated intellect, and at present he doubted if the State got its due. He spoke thus because he had an immense desire for the success of the system of popular government now established among them. That success must depend on the prevalence of reason in its counsels, and he did not believe that British householders were hostile to reason or disinclined to avail themselves of the best informed guides. He considered the pessimist view, which was that the many were ignorant, poor, and selfish, and would overbear the men of light. He thought all that highly fallacious, and argued against it, showing if it would ever be so it was because the men of reason and intellect had accepted the game as up. It was one of the reassuring signs of the times that plain speaking and courage were increasingly popular. He used the term pessimist to describe the desponding and disaffected tone about popular government which is not unknown in university circles, and which unquestionably tends to deprive the State of what is its due. He suggested that it was the duty of men of culture to take more part than they do in current affairs. They ought to take their proper place, but they will only get it if they realise the condition—the very natural and quite tolerable condition—of popular government, and more or less of all governments: "If thou wilt be a servant unto this people this day, and will serve them, and answer them, and speak good words to them, then they will be thy servants for ever." He next dwelt upon the necessity of a better, improved, more liberal, and more steady public opinion; and said that questions which were sure to come up in the future should be faced so that events should be moulded and developed beforehand. He referred particularly to the subject of Socialism. It would be said that the performance of what he described as the part of educated men in the State depended on a high standard of public spirit, and he assented to it. Why should there not be such a standard? And if to the attainment of it some further effort be required, where better and to whom could an appeal for such effort be made than here and to them? He had a right to address them, undergraduates of a great university, as children of the light and children of the day. As the personal possession of culture was the condition on which alone the service of which he spoke could be rendered to the State, he did not wish to divert their attention from the studies to which they were at present pledged, but rather to suggest another and a nobler reason for their strenuous prosecution. Whatever their future might be, they must not lose sight of the State or regard the ambiguous problems of political progress as outside the ambit of their influence. There was not an intellectual life well led, not a book well written, not a discovery made, that might not by some conscious regard to general enlightenment be invested with a double beneficence. The address was listened to with close attention.

Extension of the Edinburgh Royal Infirmary.

The managers of the Edinburgh Royal Infirmary have finally decided to recommend that the proposed extension of the infirmary should be at once proceeded with. The complete scheme of extension is estimated to cost £100,000, but it is proposed at present only to go on with half that amount. The new buildings will occupy the site of the old Sick Children's Hospital and the land to the north of it to the east of Lauriston-lane. The extension is much needed, for during the greater part of the year there is a much greater demand for beds than can be supplied.

The President of the Royal College of Physicians of Edinburgh.

Dr. J. Batty Tuke has been elected to the Presidential chair in succession to Professor Gairdner. Professor Simpson has been renominated Vice-President.

The Edinburgh Medico-Chirurgical Society.

This society met last week. Dr. Craufurd Dunlop read a valuable paper on investigations he had made on the presence of Oxalic Acid in Urine; and Dr. G. A. Gibson read a record of a series of interesting cerebral cases which had been operated upon with variable success.[1]

Outbreak of Typhoid Fever at Dunbar.

A considerable outbreak of typhoid fever has occurred in Dunbar, and is causing interest because of a difference of opinion as to its probable cause. This is one of the districts in which caravan hospitals are being tried, as was mentioned in THE LANCET at the time.[2] One of these was being used for cases of typhoid fever and, according to one statement, was so placed that a cesspool for its use drained into a small stream, the water of which entered directly or indirectly into the water reservoir for the town. The other statement is that the water of a loch in connexion with the water-supply was bad, evidence of this being found in the fact that many dead fish have been discovered in it. The expert opinion seems to be at variance and appears to have got mixed up with the question of the suitability of caravan hospitals. The

[1] A report of the proceedings will be found on another page.—Ed. L.
[2] THE LANCET, May 25th, 1895.

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site upon which a caravan hospital is placed is necessarily one of great importance, but an error in this particular should hardly be allowed to discredit a scheme that is at least deserving of a fair trial.

Dec. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mater Misericordiæ Hospital.

THE interesting case of intestinal stricture in which Mr. Coppinger a month ago established a lateral anastomosis between the ileum and transverse colon has progressed favourably. As will be remembered from the brief notice of this operation which appeared in THE LANCET of Nov. 23rd, a Murphy button of aluminium, imported from Chicago by Messrs. Fannin and Co. of this city, was made use of. Now, it has recently been discovered that aluminium is soluble in alkaline saline solutions, a fact which is said to have taken the French naval engineers recently by surprise, and to have caused the destruction of some of their modern torpedo-boats. The metal seems very stable, and is certainly no more prone to oxidise or tarnish under ordinary conditions than gold or silver, but it dissolves with effervescence in even a dilute solution of potash. Under these circumstances, and in the absence of any reports dealing with the matter in the medical journals, the behaviour of the button in this case was noted with considerable interest. It only appeared on the eighteenth day after operation, and seemed little the worse for its long sojourn in the intestine or for the work which it had successfully performed. Its two parts, however, were found to be adherent, as if soldered together, and although steeping in ether, boiling in oil, &c., were tried, it was found impossible to unscrew the instrument or to separate its halves. I would suggest that the next surgeon who places an aluminium anastomosis button in a patient's lower intestine should have it carefully weighed before and after use, and that he be prepared for any effect that the absorption of the alkaline salts of that metal might possibly produce.

City of Dublin Hospital.

Ligature of the second portion of the left subclavian artery was successfully performed by Mr. Henry G. Croly at this hospital on the 3rd inst. The patient suffered from a traumatic aneurysm which overlay the third part of the artery and rendered operation impossible in that situation. Some of the outer fibres of the anterior scalenus muscle were accordingly divided, and a ligature of kangaroo tendon applied round the bloodvessel in its second portion. The patient is doing well on this the eighth day after operation.

Dublin University Biological Association.

At the opening meeting of this association, which was held on the 5th inst. in the New Building, Trinity College, Dr. Alfred R. Parsons, the incoming President, read a very interesting paper on Modern Tendencies in the Treatment of Disease. It was listened to by a large and appreciative audience, which included the Presidents of the Royal Colleges of Physicians and Surgeons, and the President of the Royal Academy of Medicine, Ireland. The latter—Dr. James Little—contributed an able speech to the discussion which followed, while Professor Purser, Sir C. Nixon, and Dr. C. E. Fitzgerald proposed or seconded resolutions.

The House of Industry Government Hospitals.

Mr. James Wilson Hughes, who was well known and esteemed in medical circles in Dublin, died on the 9th inst. The deceased gentleman filled the offices of secretary for more than thirty years to the Richmond, Whitworth, and Hardwicke Hospitals, as well as to the Westmorland Lock Hospital and St. Mark's Ophthalmic Hospital.

Epileptic Patients in the Belfast Workhouse.

The Local Government Board have sent a communication to the Belfast board of guardians pointing out that, while they consider it proper that epileptics should be classified in a separate ward where they can receive the special attention necessary to their condition, they think it undesirable that such a ward should form part of the lunatic department. Simple epileptics—that is, epileptics whose mental condition in the intervals between their seizures is sound—should not be associated with the insane who happen also to suffer from epilepsy. The Local Government Board hope that the guardians will separate the epileptic ward intended for simple epileptics from the lunatic department of the workhouse. A sub-committee of the guardians have also been considering this question, and on the same day as the letter from the Local Government Board was made public this sub-committee in their report to the board of guardians recommended that a cottage hospital should be provided for the accommodation of the epileptics on a piece of ground adjacent to the lunatic department, where at any time they could have the advantage of the advice of the resident medical officer.

Sanitary Powers for Portrush.

At a meeting of the Portrush town commissioners, held on Dec. 4th, a resolution was carried to the effect that a petition be presented to the Local Government Board to have the town of Portrush constituted an urban sanitary authority. Portrush is the leading summer health resort in the North of Ireland, and at present the two main factors of a town from a health point of view—the water-supply and the sanitary arrangements—are not controlled by the town commissioners. These matters are managed by the Coleraine board of guardians, many of whom reside a long distance from Coleraine, and it is naturally felt by the town commissioners who live in Portrush that people residing there would take a much greater interest in the condition of the place, hence they are anxious that an urban sanitary authority should take charge of the town. There is all the more necessity for this being done at once, as during the past summer there was a strong feeling existing among those who resided at Portrush that both the water-supply and the sanitary arrangements of the place might be improved.

Certificates in Lunacy Cases.

At the weekly meeting of the Lisburn board of guardians, held on Dec. 3rd, the chairman read a letter from Mr. Jefferson (dispensary medical officer), in which he said that in a certain lunacy case (named) he filled in the usual form certifying that the person was a dangerous lunatic, and also a copy to be forwarded to the Lunacy Commissioners in Dublin. When the resident magistrate at Lisburn read it he ordered Mr. Jefferson to be sworn. The latter declined, as he said his certificate was sufficient, and added that he would take the oath with pleasure if the magistrate would show him the law compelling him to be sworn. This the resident magistrate declined to do, and Mr. Jefferson left the court. The chairman also read a letter from the Local Government Board stating that Section 10 of 30 and 31 Vic., cap. 118, only requires a medical officer to certify a person to be a dangerous lunatic. There is nothing in the section as to his giving sworn evidence, and the guardians would do well to consult their solicitor in the matter. Mr. Jefferson deserves the thanks of the profession for the manly and dignified stand he took in this matter.

The Rate of Speed for Ambulances.

The city coroner of Belfast and the police committee are at present at variance on the question of the speed at which the ambulance carriages should be driven. Formerly these most useful vehicles were allowed to go at a quick rate if summoned to a street accident, but of late they are only allowed to go at a trot. A jury at an inquest some time ago condemned this slow rate of progression, but, notwithstanding, at an inquest held on Dec. 6th a member of the fire brigade (who take charge of the ambulances) said that they could only trot, as the coroner put it, "to save human life," while to save property they are allowed to gallop. The coroner having expressed himself strongly on this matter at the inquest on Dec. 6th in reference to the death of a man who was rescued from the water at the quay, and who was subsequently taken by the ambulance to the Royal Hospital, the jury added a rider to their verdict in which "they strongly protested against the action of the police committee of the corporation in preventing the ambulance from proceeding at a rapid pace on its work of mercy to save human life, while it permitted the fire brigade to gallop to save property."

Charge of Infanticide: the Frenzy of Parturition.

A case tried at the Cork Assizes last Saturday is of considerable importance from a medico-legal point of view. A domestic servant, only seventeen years old was charged with the murder of her child. In a small loft over the room in which the prisoner had slept the body of the child was found The head had been cut off and the arms were tied together

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with handkerchiefs and clothes belonging to the accusedr Mr. Falvey of Tralee, probably alluding to the smallness. of the pelvis, stated in evidence that the circumstances under which the birth occurred must have caused the girl frightful suffering, and he believed that owing to her great suffering she would become unconscious of what she was doing. Mr. Denny of Tralee gave similar evidence, and the judge in summing up said that, if the jury thought that the prisoner from the condition of her mind was not guilty of the murder, he took the responsibility of directing them that they could come to the conclusion that she was guilty of the offence of concealing the birth of the child. The jury after half an hour's deliberation found the accused had committed the act charged against her, but that she was insane, so as not to be responsible, according to law, for her actions at the time that the act was done. His lordship then ordered the prisoner to be detained as a criminal lunatic until her Majesty's pleasure with regard to her should be made known.

The Proposed Amalgamation of the Mill-street and Kanturk Unions: Important Government Project.

The guardians of the Millstreet Union have been for some time desirous of amalgamating their union with the Kanturk Union and of converting the Millstreet workhouse into an auxiliary lunatic asylum. The Local Government Board sent one of their inspectors to hold an inquiry on the subject, and they have informed the Millstreet guardians that they do not at present feel at liberty to sanction the proposed amalgamation, as the Kanturk guardians are entirely opposed to it. In the course of their letter the Local Government Board made the very important statement that "the Government have under consideration the propriety of adopting a general scheme of amalgamation in connexion with a better system of the classification of the poor in workhouses." The proposals of the Government are anxiously awaited, as a rearrangement such as is suggested would be likely to result in an amelioration of the lot of many of the poor people who are obliged to seek the shelter of the workhouses, and the taxpayers would hope for a considerable retrenchment of establishment charges.

The Belfast Nurses' Home and Training School.

At the annual meeting of this medical institution, held on Nov. 29th, it was reported that the year 1895 was its most auspicious one as regards its most vital interests as a training home—viz., its connexion with the Royal Hospital. The board of management of the Royal Hospital early in the year agreed to furnish a room in the hospital for the lady superintendent of the Nurses' Home, and, subject to their existing rules, to give her the complete control of the nursing of the hospital and the general cleanliness of the wards. Further, the Royal Hospital board arranged that the ladies of the Nurses' Home committee should in turn act as orderlies in the hospital, invested with their authority to visit not only the wards but the hospital generally, and to report directly to them on any subject they should consider necessary or desirable. In a very able speech, made by Professor Cuming in moving the adoption of the report, he said the arrangement made between the Nurses' Home and the Royal Hospital had his entire concurrence. As he pointed out, the interests of the two places (the Royal Hospital and the Nurses' Home) were concurrent, and everything that tended to improve the one tended also to improve the other. Professor Cuming spoke in very feeling terms of the great loss sustained by the hospital and the Nurses' Home in the death of Dr. Ross, a man who had left an example to his colleagues that it would always be well to profit by—the example of a man who was strictly devoted to his duty and who was unfailing in his regard for every form of misery and distress.

Dec. 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Budget of the Paris Hospitals.

IT may interest the friends of such institutions as my own dear old Guy's Hospital, which, owing to depreciation in the value of agricultural property, have to struggle against bad times, to be placed *au courant* of the sum asked for annually by the Assistance Publique for the maintenance of the hospitals of Paris. For the coming year the total expense is fixed at the enormous sum of 49,275,296 fr. 50 centimes, or nearly £2,000,000. The total number of days spent in hospital in 26,307 beds by patients during 1895 was 9,068,000, these beds including those found in hospitals properly so called, infirmaries, *maisons de retraites*, and divers foundations. The hospitals strictly so denominated represent 12,750 beds, with 4,517,000 days spent therein by patients. The salaries of the administrative *personnel* (*chef* and *employés de bureaux*, *directeurs des hôpitaux*, &c.) attain, together with sundry accessory expenses, the total of 2,196,310 fr. The medical *personnel* absorb 768,400 fr., thus apportioned:

132 physicians	198,100	francs.
63 surgeons	80,400	,,
14 accoucheurs	19,100	,,
253 internes (medicine and surgery)	184,100	,,
21 pharmacists	114,000	,,
153 internes en pharmacie	107,600	,,
18 dentists	10,200	,,
38 midwives (*sages-femmes*) ...	42,300	,,

Then come, in addition, the director, demonstrators, and *chefs de laboratoire* of the Anatomical School of Clamart, who collectively receive 12,600 fr. Accessory expenses, comprising 125,000 fr. for indemnity to externs of out-of-the-way hospitals, and 99,000 fr. paid to the newly created *assistants de consultation* (young medical men who replace hospital physicians and surgeons in the out-patient room), reach 335,468 fr. The nursing department costs 1,973,550 fr., this department being made up of 71 nuns, 249 male and female superintendents (heads of wards), 624 sub-superintendents, 354 extra superintendents, 390 first-class male and female nurses (*infirmiers* and *infirmières*), and 2742 ordinary nurses (male and female). The drug department costs 1,370,000 fr., and surgical instruments, apparatuses, and dressings involve an expenditure of 1,154,035 fr. Some idea of the costliness of modern materials for the dressing of wounds may be gathered from the under-mentioned details:

Carded wool	80,000	francs.
Ungreased cotton wool ...	76,000	,,
Ordinary cotton wool and peat	700	,,
Muslin	215,000	,,
Iodoform gauze	57,000	,,
Salol gauze	14,000	,,
Carbolic gauze	3,000	,,
Oiled silk	46,000	,,

The commissariat department absorbs nearly 6,000,000 fr., 1,000,000 fr. going for bread, 3,290,000 fr. for meat, and 1,400,000 fr. for wine.

Is Gastro-intestinal Antisepsis realisable?

We know that since the researches of Bouchard and the late Dujardin-Beaumetz the disinfection by means of drugs of the gastro-intestinal canal has become quite a common therapeutical practice, especially in France. The most common method of attaining this result is to prescribe a mixture (in *cachet*) of salicylate of bismuth and benzo-naphthol or β-naphthol. But is the cleansing result as satisfactory as the authors of this method would have us believe? Dr. Bardet asked this question on the 27th ult. at the Société de Thérapeutique, and adduced some facts that appear to negative the value of the much-vaunted and seductive method. The test of the efficacy of these antiseptics is the deodorisation of the stools, the diminution of their maximum of toxicity, and a like diminution of the degree of urinary toxicity. Now, Dr. Bardet denies that deodorisation means an anti-ferment action. Besides, fœtidity of the fæces is not necessarily indicative of putrid fermentation, which rare event is almost exclusively met with in biliary retention. He maintains that the deodorisation (so called) procurable by the use of intestinal antiseptics is in reality only a masking of the odour, this being proved by their powerlessness to attenuate the fœtor of really putrid fæcal matter, and because such deodorisation cannot be obtained by the employment of even powerful (non-aromatic) antiseptics such as mercurial salts. The bacteriological experiments of Dr. Bardet lead him to believe that the diminution of micro-organisms in the fæces brought about by the administration of naphthol, &c., is not real, and that Baczkiewicz is mistaken on this point. The culture on plates of previously diluted fæcal matter passed by four individuals before and after the prolonged administration of a daily dose of four grammes of benzo-naphthol yielded invariably an equal number of colonies. The change in urine toxicity is, according to Dr. Bardet, not a fair test, that being dependent on other concomitant agencies. He concludes, then, that local or general antisepsis of the alimentary canal by

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means of salol, naphthol, or benzo-naphthol is an impossibility. He adds that their decomposition in the intestines is far from being a constant occurrence, for they frequently accumulate or are voided unchanged. Dr. Bardet does not, however, deny that favourable results are sometimes yielded by the method, but he is certain that the usual explanation of this action is not the true one.

The Sanitary Condition of the French Army in Madagascar.

The *Médecine Moderne* states that according to a letter addressed from Madagascar on Oct. 10th, to the *Tablettes des Deux Charentes*, the sanitary condition of the expeditionary force for the entire campaign was at that date as follows: deaths, 4000; in hospital, 6000; unfit for service (éclopés—lame), 3000. This left 2000 men fit for service out of a total of 15,000. But is there not some exaggeration in these figures?

Dec. 10th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Army Medical School.

THE centenary of the Army Medical School (Friedrich Wilhelms-Institut) was celebrated with great display on Dec. 2nd. A case of small-pox having occurred on the premises, it was considered inadvisable to conduct the ceremonial proceedings there, and they accordingly took place in the great hall of the University, where the leading army and naval surgeons and many old pupils assembled from every part of the empire. Prince Frederick Leopold, represented the Emperor, and delegates of the Government, the University, and the army were also present. The opening speech was delivered by General-Staff-Surgeon Dr. von Coler, the chief medical officer of the army, who pointed out that the kings of Prussia, and at a later period the emperors of Germany, always attached much importance to a well-trained army medical staff, and he then gave a short historical account of the medical service of the army. The results of recent improvements in practical surgery had been conspicuously shown during the last wars, but the development of practical hygiene was not less important. By improving the hygienic conditions of the army the amount of invaliding had been reduced by 42 per cent. since 1868, and the mortality by not less than 57 per cent. The lives of 2000 soldiers had, in fact, been saved by hygienic measures; for the deaths in 1894 were 2000 fewer than they must have been if the rate of mortality had been the same as in 1868. Following Dr. von Coler the Minister of Public Instruction congratulated the Army Medical Staff, saying that medical science in general was much indebted to them, since men like Professor Virchow, the late Professor Helmholtz, and others had been pupils of the Army Medical School and had begun life as army surgeons. The Rector of the University and the Dean of the Medical Faculty then spoke on behalf of their respective corporations. Finally, the Minister of War, General Brousart, read an imperial order, by which the Army Medical School was henceforth to be called the Emperor William Army Medical Academy. A reorganisation of it is also contemplated, details of which will, in course of time, be published by the War Office.

The Training of Military Surgeons.

The German method of training military surgeons is quite different from the British system, according to which all candidates for the medical service of the army are already duly qualified practitioners and in possession of a degree or diploma before their special military training is commenced. In Germany, on the other hand, the young men enter the Army Medical School at the beginning of their period of study; they board in the college free of charge, receive an allowance, and are trained in the University at the expense of the War Office. For every year they have been in the college they are obliged to serve two years in the Army Medical Staff. Although these students are under military jurisdiction—and, in fact, are military men—they wear no uniform whatever and possess almost the same academical freedom from restraint as the civilian students, attending together with them the lectures of the professors of the University, fulfilling the same curriculum, and passing the same examinations; they, however, may not choose their lectures or professors at their own discretion, but must attend where they are ordered. Besides the lectures at the University, additional courses are held for them in the college by the army medical officers on duty there, and during the final stage of their study instruction in military surgery and medicine is given by special military teachers. The college has the largest medical library in Germany, containing more than 50,000 volumes, good laboratories, and collections for the exclusive use of the students. After having taken their degrees and qualifications the pupils are appointed as army medical officers. But there are further advantages in store for them; the offices of clerk and dresser in the Charité Hospital are exclusively reserved for the pupils of the Army Medical School, and according to the regulations of this hospital the majority of the assistant physicians and surgeons must be army medical officers. The cause of this singular rule is twofold—namely, that the Army Medical School existed long before the University was founded, and that the Charité Hospital was originally of a purely military character. The great preponderance of the Army Medical Staff in the Charité Hospital and some other medical institutions belonging to the Government has always been regarded with some anxiety by the other members of the profession, and the military medical students are not universally liked by the civilian students, who complain that they are excluded by them from many of the better appointments.

Employment of Army Medical Officers in Civil Hospitals.

Since the above was written the medical profession has again been surprised by an announcement in the lay press relative to the employment of army medical officers. According to the plans of the Government a number of them will henceforth be appointed as assistants in several university and municipal hospitals, not only in Berlin, but also in the provincial towns. They will, as a rule, hold their appointments for six or twelve months, and will then be replaced by a new series. Arrangements have already been made by the Government with the boards and chief medical officers of some hospitals, and a large number of them are said to be very favourable to the innovation. The hospital boards will in this way save the salaries hitherto paid to their civilian assistant medical officers, as, of course, the Government will bear the expense of the new scheme. The army medical authorities, in explanation of their action, declare that the surgical training of the army medical staff is of supreme importance, especially in time of war, and that the military hospitals do not afford sufficient opportunity for surgical practice. This may be perfectly true, but the civilian population also has a just claim to the services of well-trained civilian surgeons. The number of hospital appointments in this country is very small, and only a few medical men are fortunate enough to be selected for them. If a portion of the appointments be reserved for army medical men the interests of the civilian profession will undoubtedly suffer, and it seems highly desirable that the legal advisers of the provincial medical boards (Aerztekammern) should give their views on this question.

Primary Actinomycosis of the Lungs.

Dr. Heusser, of Davos, Switzerland, has recorded in the *Berliner Klinische Wochenschrift* a case of primary actinomycosis of the lungs. In November, 1894, there was sent to him by Professor Lichtheim of Königsberg a lady who had fallen ill in April with all the symptoms of acute pleurisy. She had been in hospital under the care of Professor Lichtheim, and paracentesis was performed, by which 600 c.c. of serous fluid were drawn off, but the fever nevertheless continued. In the expectoration, which was scanty, no tubercle bacilli could be found. The patient was first sent home to the country, where she was expected to recover, and afterwards to Davos. There a slight infiltration of the right upper lobe and a cavity in the right lower lobe were diagnosed. In the expectoration, however, to the surprise of the physician in charge, instead of Koch's bacilli, typical actinomycetes were discovered. Although at first the case seemed to be hopeless the general state of the patient eventually improved. The fever very soon disappeared, the patient's weight increased 7·7 kilos. (= 17 lb.), and the infiltration of the lungs became apparently less. Nevertheless, actinomyces fungi, together with numerous streptococci, were still found at the time of her departure from Davos. It has for a long time been said that the climate of Davos is favourable to the arrest of tuberculosis, and according to Dr. Heusser this case seems to prove that it also tends to check the development of actinomycosis. He hopes that a residence on the mountain may be beneficial in cases of actinomycosis in other parts of the body.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

Quinine in Italy.

I HAVE before me the Bill drawn up by Signor Boselli (Finance Minister) for the better regulation of the sale of quinine—a Bill which, if it become law, will prove of no small advantage to the profession, and, through the profession, to the public. In Italy about 16,000 persons annually die of malarial fever; about 3000 communes are unprovided with pharmacies at which prescriptions can be made up; and the average price at which quinine can be obtained by the public is 500 lire (£20) the kilogramme, while the State procures it for the army and navy at only 60 lire (£2 8*s.* 4*d.*) the kilogramme. It is worth remarking, moreover, that where malaria is most prevalent commerce is non-existent and the population is of the poorest—in other words, precisely where the bane falls heaviest the antidote is not to be had. His Excellency Signor Boselli proposes to remedy this condition of things, disclaiming in advance all intention of creating a State monopoly. He would concede to the firm or firms which purvey the drug the simple right to avail themselves of the shops in which are sold and retailed articles of a privileged character (*generi di privativa*)—like salt or tobacco, for instance. These shops are disseminated throughout the kingdom to the number of 27,000, are found in the humblest communes, and, being in direct contact with the public, can make quinine accessible to all. They are subject, moreover, to Government surveillance, which can repress every possible abuse. On payment of a small sum they can acquire the right to sell the privileged article, and Signor Boselli makes it obligatory on them to have on sale either the sulphate or the hydrochlorate of quinine or both—the hydrochlorate being the more energetic, and the sulphate the more commonly in use. The quality will be of the utmost purity, any adulteration being visited with rigorous penalties. The drug, whether sulphate or hydrochlorate, is to be sold in circular tablets, which can be easily swallowed, each tablet to be enclosed in a capsule to ensure perfect preservation. The price will be fixed at a sum which even the very poor can command—a price uniform throughout the kingdom for the sulphate and hydrochlorate respectively, so that three grammes of the sulphate will cost 50 centimes (5*d.*), and two grammes of the hydrochlorate also 50 centimes. There is little doubt that the Bill will become law, and as little doubt that it will prove a mighty boon to the Italian lower orders. Nothing can exceed the confusion and irregularity under which quinine is now sold. At Milan, for instance, it may be had for 25 centimes the gramme; at Florence, on the other hand, the same quantity costs double, sometimes treble, that sum. But even more important than the question of cheapness is that of purity. Every English physician practising in Italy knows to his cost the difficulty of procuring genuine quinine. For years it was sold, even in pharmacies of repute, adulterated with 60 per cent. of cinchonidine. Now there is a prospect of getting a pure and effective article, and the sooner Signor Boselli's Bill passes through committee and is entered on the statute-book the better for the practitioner in Italy and the public under his charge.

The Health of the Pope.

His Holiness is so far re-established in health that on several of the bright, dry, exhilarating days we have been enjoying lately he has been able to take carriage exercise in the Vatican gardens. These outings are timed for midday, when the warmth is greatest, and have included a visit to the Tower of Leo IV. and to that stretch of the gardens which is cultivated under His Holiness's direction.

Dec. 10th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Sanitation in Moscow.

THE following notes relating to the sanitary condition of Moscow, gathered during a brief stay in that beautiful city, may be of interest. The population of Moscow when the last census was taken in 1889 was about three-quarters of a million; it is at present reckoned at something just under a million. The city is rapidly growing, and it is calculated that in a few decades the population will be double what it was at the last census. The exact death-rate of Moscow is not easy to ascertain in the absence of more exact knowledge as to the present population, and it is not stated even approximately in the annual health reports of the city. It appears, however, that the mortality is really something like 35 or 37 per 1000 living. This high death-rate is partly, but not wholly, explained by the large number of deaths among children in the Foundling Hospital. In the last annual report for 1893, of the 27,067 deaths which occurred in the city, 3034 were of infants in the Foundling Hospital. These deaths are generally excluded from the mortality statistics, and with justice, as the large majority of children brought to the hospital are born outside Moscow. They are only kept in the hospital for one month, and are then put out to nurse in various villages; the number of children who annually pass through the hospital varies from 16,000 to 20,000. But even after these deaths are excluded from the general mortality, the death-rate remains at something just under 30 per 1000.

The water-supply of Moscow is at present in a stage of transition. Two years ago a new system of supply was opened; pipes were laid down, and a constant supply to each house afforded in something like one-third of the city. The remaining houses still obtain their water by means of barrels brought round on small hand-carts. The water they receive is, however, the same as that supplied directly to the other houses, the barrels being filled from large underground cisterns, of which there are several in different parts of the town. The water distributed is therefore ultimately from the same source for the whole of Moscow. This source is at a distance of some ten versts (seven miles) from the city boundaries. It consists of Artesian wells, forty in number, covering a considerable area of ground near the village of Muititsch. The soil there is for the most part clay. The water is brought in cast-iron pipes, two feet in diameter, to the Alexéiefski pumping works, about one mile from the city barriers. There is here a small underground reservoir capable of holding 300,000 vedros (a vedro is 2·7 gallons; this is therefore some 810,000 gallons). Thence the water passes to the Krestofski water towers within the city barriers. There are two towers, each 128 feet high. At the top of each is a reservoir of cast iron holding 150,000 vedros. As the daily supply to the city is between one and one and a half million vedros, the water in all these reservoirs is changed several times in the day. The water is distributed to the city from the towers by a pipe twenty-eight inches in diameter. This, as all the other cast-iron pipes, is "processed" inside by one of the tar processes for protecting iron. If the present population of Moscow be a million, the daily water-supply is only about three or four gallons daily per head. To increase this extremely small water-supply is a problem now occupying the municipal authorities. The present source at Muititsch is capable of supplying considerably more than it does at present, and to still further supplement this it is proposed to take water from the Moskva river some distance above the point where it enters the city. It is hoped that in this way it will be possible to supply seven vedros (nineteen gallons) daily to each person. The water from the river is said to prove, on examination, to be of remarkable purity. Like all rivers, however, it has the disadvantage that there are a number of villages along its banks, from which much objectionable matter must inevitably reach the water. The present water-supply is entirely unfiltered; the water, from the chemical and bacteriological points of view, is, nevertheless, of a high degree of purity. Before leaving the subject of the water-supply, it is worth noting that the distributing pipes have to be laid at least ten to twelve feet below the surface on account of the intense cold in winter. In the great frosts of the winter of 1892–93, even at this depth, a large number of pipes were split by the cold. Ninety degrees of frost (−58° F.) occurred on more than one occasion.

Up to the present time there has been no system of drainage in Moscow, the old and objectionable cesspool taking its place. The authorities have, however, already begun to execute a scheme for the sewerage, first of the central third of the city, and ultimately of the other two-thirds. A network of underground pipes already exists for the carrying away of rain water. There are strong grounds for suspecting that a great many houses have connected their drain pipes with these; it is certain that sewage in some way gains access to them. From the frequent and unusually large openings at the edge of the kerb-stone into these pipes a constant, excessively foul-smelling, visible

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steam is seen to arise during frosty weather—that is to say, during half the year. It undoubtedly arises invisibly during the other half. It is this that has gained for Moscow the reputation among visitors of being a "smelly" city. At present it is impossible to deny that the charge is well founded, but the new system, if thoroughly carried out, should do much to remove the reproach.

The system adopted is the "separate system," in which one set of pipes will carry the rain water and another the sewage. The latter vary from six inches to seven feet in diameter, the smaller pipes being of earthenware and the larger of brickwork. The best method of ventilating and flushing sewers and drains has been the subject of prolonged consideration. Over three years ago three engineers to the city authorities were commissioned to visit Germany, Switzerland, and England to obtain the latest information on this question. In England they visited London, Wimbledon, Croydon, Oxford, Reading, and Dover. A full report of their labours was issued in Moscow after their return. I am indebted to M. Semenof, who was a member of this Commission, for most of the details here given of the new drainage system in Moscow. The same question was dealt with by another Commission under the presidency of M. Erisman, Professor of Hygiene in the Moscow University, and their very full and instructive report has been issued during the past few weeks. It contains, amongst other things, an account of exhaustive experiments upon the effect of extreme cold, such as occurs in the winter here, upon the usual arrangements for ventilating drains and sewers. The sewage matter will be conducted, under the new system, to a large area of land obtained for the purpose by the municipality, about twelve miles from the city. This area measures 1000 desiatins, or 2700 acres. The sewage will be disposed of on the principle of broad irrigation.

It will be seen from the above notes that, while the present sanitary condition of Moscow leaves much to be desired, extensive schemes of reform are already initiated. The coronation of the Emperor, which is fixed for May 6th (18th) next, and the International Medical Congress, which is, I learn, to be held here in August, 1897, will probably prove powerful stimuli to the rapid execution of these schemes.

The Twelfth International Medical Congress.

I have just learnt from Professor Erisman, the general secretary to the Congress, that the date fixed for the next International Medical Congress is the week beginning Aug. 19th and ending Aug. 26th (New Style), 1897. The official announcement will very shortly be sent to the English press. The Emperor has given his Imperial sanction to the Congress, and the Grand Duke Sergi Alexandrovitch, the governor of Moscow (and grandson-in-law to Queen Victoria), has granted it his patronage. The nominal president will probably be the Minister of Public Education; the acting president will almost certainly be Professor Klein, the Dean of the Faculty of Medicine in the University of Moscow. Professor Erisman, who holds the chair of Hygiene, has, as already stated, been elected general secretary. The meetings of the Congress will be held in the theatres and laboratories of the University Clinique, the so-called *klinitcheski gorodok*, or clinical townlet. Papers and discussions must be in either the French or German language; Russian has been excluded lest the Congress should become national rather than international, and English on the grounds that it is a language little used or understood by other than Englishmen.

Moscow, Nov. 24th (Dec. 6th).

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Dean Case.

IT cannot be said that the *dénouement* of the Dean case will add to the prestige of the medical profession, but rather will enforce the old proverb about "the cobbler and his last." It will be remembered that Dean was found guilty by a judge and jury of poisoning his wife, but that popular clamour induced Parliament to appoint a Royal Commission to reinvestigate the case, the Commission consisting of two medical men and one lawyer. The medical portion found that there were doubts as to Dean's guilt, and he was pardoned in consequence. The legal member dissented from the report of the Commission. Then the prosecutor for the Crown made a sensational statement to the effect that the solicitor for the defence had admitted that Dean had confessed his guilt, and Dean and his solicitor were arrested on a charge of conspiracy, and Dean was also charged with perjury. The druggist who sold him the poisons was discovered, the solicitor admitted that Dean had confessed, and Dean then himself admitted his crime, was found guilty of perjury, and is now undergoing trial, with his solicitor, for conspiracy. The medical problem still remains that Dean gave his wife both arsenic and strychnine, but she only exhibited symptoms of arsenical poisoning.

The Diagnosis of Leprosy.

In October, 1894, a supposed case of leprosy was sent from Rockhampton to Brisbane, with a certificate from two medical men that the patient was suffering from leprosy. He was there examined by four practitioners, and from serum expressed from a tubercle on the thigh the bacilli of leprosy were obtained, and the patient was sent to the leper lazaret at Dunwich. In July, 1895, as some improvement had occurred in the patient's condition, the Colonial Secretary instructed Mr. Pound, the Government bacteriologist, who is not a medical man, to examine the patient. He reported that he could find no bacilli, and the Colonial Secretary transferred the patient to another lazaret at Peel Island. At the August meeting of the Queensland Branch of the British Medical Association the action of the Colonial Secretary was discussed and criticised adversely. It was pointed out that as Mr. Pound was not a medical man and had no clinical knowledge of leprosy to enable him to select serum from proper situations for bacteriological examinations, his negative results were of no value, and the following motion was passed unanimously: "That, whereas a bacteriological examination forms an important part of the medical examination of a suspected leper, it is necessary that such bacteriological examination should be conducted by, or carried out under the immediate supervision of, a qualified medical practitioner."

Conference of Medical Staffs of the Hospitals for the Insane, Victoria.

In October was inaugurated the first of a series of conferences, which it is proposed to hold annually in Melbourne, of the medical staffs of the various hospitals for the insane in the colony. The subjects discussed were: 1. The training and examination of attendants and nurses, and their registering. It was decided that, in conjunction with the scheme of teaching of attendants now adopted, examinations should be held, and the results should largely influence promotions. 2. The equipment of the metropolitan asylums with apparatus for the prosecution of pathological work, and the appointment of a pathologist was approved. 3. It was decided to make a series of collective investigations on the subject of general paralysis of the insane, which was becoming increasingly prevalent.

Quacks and Indecent Advertisements.

Reference has been made in previous communications to the extent to which quackery flourishes in the colonies. Every newspaper is crowded with quack advertisements, which grow bolder and more indecent every year. The Medical Defence Association of Victoria recently waited on the Chief Secretary and urged upon him the necessity of introducing a Bill into Parliament to suppress such advertisements, and the various medical societies have passed resolutions in favour of such a Bill being passed. The quacks do not get it all their own way, however, in Victoria. One of them was recently charged with offences against the Medical Act, in that he pretended to be an apothecary and prescribed outside his open shop. It appeared that he was called in to see a woman who was suffering from an ovarian tumour. He, however, denied that she had a tumour and prescribed for her. She grew worse, however, and was subsequently operated on at a hospital with a fatal result. The first charge was held to be proved, and the quack was fined £5. He subsequently sued the husband of the woman for the value of the drugs supplied, but lost his case.

Nov. 6th.

ACCIDENT TO A MEDICAL MAN.—Last week whilst returning from seeing patients, Dr. T. Evans, the medical officer of health of Newquay (Cardiganshire), and his groom were thrown out of a dog-cart; both had a miraculous escape, but the horse had to be killed owing to the injuries it had received.

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Medical News.

UNIVERSITY OF LONDON.—M.B. EXAMINATION.—The following have passed the under-mentioned examinations for honours (October, 1895):

MEDICINE.

FIRST CLASS.

Crookshank, Francis Graham (scholarship and gold medal) University College.
Salter, Alfred, (gold medal), Guy's Hospital.
Abrahams, Bertram L., B.Sc., University College.
Gillies, Sinclair, St. Bartholomew's Hospital.
Cook, John Howard, University College.

SECOND CLASS.

Shaw, Harold Batty, University College.
Cook, Albert Ruskin, B.Sc., Cambridge University and St. Bartholomew's Hospital.
Handley, William Sampson, Guy's Hospital.
Dimsey, Alfred, University College.
Harnett, Charles John, Guy's Hospital.
Sowry, George Herbert, St. Bartholomew's Hospital.
Pugh, William Thomas Gordon, Middlesex Hospital.
Walton, Herbert James, St. Bartholomew's Hospital.

THIRD CLASS.

Eastes, George Leslie, B.Sc., Guy's Hospital.
Every-Clayton, Leopold E. V., Guy's and London Fever Hospitals.
Rodocanachi, A. J., B.Sc., University College.
Thomas, Thomas Morrell, Guy's Hospital.
Sinigar, Harry, Mason College.
Despard, Rosina Clara, London School of Medicine for Women.
Hull, Charlotte Elizabeth, London School of Medicine and Royal Free Hospital.
Brook, Sydney Wilkinson, Owens College and Manchester Royal Infirmary.
Bodman, John Hervey, University College, Bristol, and St. Bartholomew's Hospital.
Traill-Christie, Margaret Marion, London School of Medicine and Royal Free Hospital.

OBSTETRIC MEDICINE.

FIRST CLASS.

Gillies, Sinclair (Scholarship and Gold Medal), St. Bartholomew's Hospital.
Handley, William Sampson (Gold Medal), Guy's Hospital.
Hopton, Ralph, Yorkshire College.
Cook, Albert Ruskin, Cambridge University and St. Bartholomew's Hospital.
Every-Clayton, Leopold E. V., Guy's and London Fever Hospitals.
Salter, Alfred, Guy's Hospital.

SECOND CLASS.

Cook, John Howard, University College.
Pugh, William Thomas Gordon, Middlesex Hospital.
Rodocanachi, Ambrose John, University College.
Bodman, John Hervey, University College, Bristol, and St. Bartholomew's Hospital.
Jewell, William Henry, Guy's Hospital.
Sowry, George Herbert, St. Bartholomew's Hospital.

THIRD CLASS.

Coleman, James Jordan, Guy's Hospital.
Dimsey, Alfred, University College.
Shaw, Harold Batty, University College.
Vellacott, Philip Northcott, Guy's Hospital.
Despard, Rosina Clara, London School of Medicine for Women.

FORENSIC MEDICINE.

FIRST CLASS.

Harnett, Chas. John (Scholarship and Gold Medal), Guy's Hospital.
Gillies, Sinclair (Gold Medal), St. Bartholomew's Hospital.
Abrahams, Bertram Louis, University College.
Salter, Alfred, Guy's Hospital.
Sinigar, Harry, Mason College.
Nicholson, T. Goddard, B.Sc., St. Thomas's Hospital.
Shaw, Harold Batty, University College.
Kirton, Reginald Gower, London Hospital.

SECOND CLASS.

Handley, William Sampson, Guy's Hospital.
Eastes, George Leslie, Guy's Hospital.
Hardenberg, Edward Fras. H., Guy's Hospital.
Hunt, Tom Harold, Owens and Yorkshire Colleges.
Pearson, Maurice Grey, B.Sc., St. Bartholomew's Hospital.
Vellacott, Phillip Northcott, Guy's Hospital.

THIRD CLASS.

Despard, Rosina Clara, London School of Medicine for Women.
Crookshank, Francis Graham, University College.
Cook, Albert Ruskin, Cambridge University and St. Bartholomew's Hospital.
Brook, Sydney Wilkinson, Owens College and Manchester Royal Infirmary.
Edmunds, Percy, James, B.Sc., University College.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Dührssen, *privat-docent* in Midwifery, has been granted the title of Professor.—*Budapest:* Dr. Janny, *privat-docent* in Surgery, has been granted the title of Professor.—*Innsbruck:* Dr. J. Nevinny has been promoted to the Ordinary Professorship of Pharmacology.—*Kiel:* Dr. K. A. Bier has been appointed Extraordinary Professor of Surgery.—*Palermo:* Dr. G. Rummo of Naples has been appointed Professor of Clinical Medicine; Dr. A. Monti of Pavia has been appointed Professor of General Pathology.—*Cracow:* Dr. B. Wicherkiewicz of Posen has been appointed to the chair of Ophthalmology.—*Munich:* Dr. Ludwig von Stubenrauch has been recognised as *privat-docent* in Surgery.

FOOTBALL CASUALTIES.—On Saturday last, during a match between two local clubs on the Bishop's Wood estate, Highgate, a player fractured his left leg.—In a match between the Cheltenham College and Clifton teams, a member of the latter team sustained severe contusions, and was admitted to the Cheltenham Hospital.—On Monday last, in the progress of a match at Tralee, a player, aged twenty-three years, after a scrimmage fell and died immediately.

TESTIMONIAL TO A MEDICAL MAN.—On Dec. 7th a meeting of about 300 friends and patients was held at the Lordship-lane Hall, Dulwich, S.E., to present Mr. John Rand, F.R.C.S. Eng., with his portrait on the occasion of his retirement from practice. The chairman, Mr. Matthew Wallace, J.P., said "this meeting and presentation were the result of a spontaneous expression of feeling showing the great regard, affection, and respect which were felt for Mr. and Mrs. Rand, not only in his professional but in their social and public life during the twenty-six busy years of their residence and work in Dulwich." The excellent portrait was the work of Mr. W. H. Margetson of Coventry Park.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Almeida Couto, Professor of Clinical Medicine in the University of Bahia.—Dr. Jas. E. Garretson, Emeritus Professor of Surgery in the Medico-Chirurgical College of Philadelphia.—Dr. Popoff, Extraordinary Professor of Physiology in the University of Dorpat.—Dr. Chas. F. Hersman, Professor of Clinical Medicine in the Missouri Medical College, St. Louis.—Dr. A. de Cerqueira Pinto, formerly Professor of Organic Chemistry in Bahia.—Dr. Bourienne, Professor of Clinical Midwifery in Caen.—Dr. Teichmann, formerly Professor of Anatomy in Cracow.—Dr. Ludwig Rütimeyer, formerly Professor of Comparative Anatomy in Basle.—Dr. H. Schmid, *privat-docent* in Odontology in Prague.

DIPHTHERIA IN LONDON.—The week ended Dec. 7th saw fatal diphtheria in London once again greatly in excess of the decennial average for the forty-ninth week. Last week the registered deaths in London numbered 69, as compared with 61, 69, and 63 in the preceding three weeks. The decennial average for the week in the years 1885–94 was exceeded by 25. The weekly average of deaths from the diseases in London during the period, Oct. 5th to Dec. 7th, was 65, as against 19 for the same period ten years ago. In the forty-ninth week of 1892 the registered deaths reached a total of 58, this being as many as 27 in excess of the decennial average 1882–91, and also the highest total on record. It will thus be seen how great have been the strides made by the disease of late. The deaths last week were all in young persons aged under twenty years. The sanitary areas credited with the largest share of the deaths were Greenwich with 8, Lambeth with 6, Hackney and Islington each with 5, and Camberwell and Clerkenwell each with 4 deaths. The malady seems to have shown some little disposition to diminish in amount, but not in intensity. Last week 114 cases were admitted to hospitals of the Metropolitan Asylums Board, against 104, 103, and 86 in the three preceding weeks; and the patients remaining under treatment on Saturday last numbered 694, as against 678, 688, and 691 on preceding Saturdays. The northern union of Edmonton and the West Ham Union had each of them experience of fatal diphtheria last week.

BOOKS, ETC., RECEIVED.

ALLENSON, H. R., Paternoster-row, London, E.C.
Demon Possession. By the Rev. J. L. Nevins. 1895. Price 7s. 6d.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Adherent Pericardium. By J. F. H. Broadbent, M.D., M.R.C.P. 1895. pp. 126. Price 3s. 6d.
Modern Microscopy. By M. J. Cross and M. J. Cole. Second Edition. 1895. pp. 182. Price 3s. 6d.

BENTLEY, R. AND SON, London.
At the Court of the Amir; a Narrative. By John A. Gray, M.B. Lond. 1895. pp. 523.

BLACK, ADAM AND CHAS., Soho-square, London.
Introduction to the Study of Fungi: Their Organography, Classification and Distribution. By M. C. Cooke, M.A., LL.D., A.L.S. 1895. pp. 360. Price 14s.

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BRAUMÜLLER, W., Wien und Leipzig.
Archiv für Dermatologie und Syphilis. 33. Band, 1. u. 2. Heft. 1895.

CHURCHILL, J. & A., New Burlington-street, London.
Transactions of the Ophthalmological Society of the United Kingdom. Vol. xv. Session 1894-5. With List of Officers, Members, &c. 1895. Price 12s. 6d.

GOVERNMENT PRINTING OFFICE, Washington.
Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. XVI. W—Zythus. 1895.
Alphabetical List of Abbreviations of Titles of Medical Periodicals employed in the Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. From Vol. I. to Vol. XVI., inclusive. 1895.

KIMPTON, H., High Holborn, London; and HIRSCHFELD BROS., Fetter-lane, London.
Diseases of the Chest, Throat, and Nasal Cavities. By E. F. Ingals, A.M., M.D. Third Edition. Illustrated. pp. 686. Price 21s. net.

LEDGER, SMITH, AND CO., St. Mary Axe, London.
The Medical Digest, or Busy Practitioner's Vade-mecum. Appendix, including the years 1891-2-3-4, and to August, 1895. By R. Neale, M.D. London. 1895.

LEWIS, H. K., Gower-street, London, W.C.
The Treatment of Pulmonary Consumption. A Practical Manual. By V. D. Harris, M.D. Lond., F.R.C.P., and E. C. Beale, M.A., M.B. Cantab., F.R.C.P. 1895. pp. 483. Price 10s. 6d.

LONGMANS, GREEN AND CO., London.
Transactions of the Clinical Society of London. Vol. xxviii. 1895. pp. 326.
Hygiene. By J. L. Notter, M.A., M.D. Dubl., and R. H. Firth, F.R.C.S. 1895. Second Edition. 1895. pp. 433. Price 3s. 6d.

LYON, J. B., State Printer, Albany.
State of New York. State Commission in Lunacy. Sixth Annual Report. Oct. 1st, 1893 to Sept. 30th, 1894.

METHUEN AND CO., Essex-street, London, W.C.
The Vaccination Question. By A. W. Hutton, M.A. 1895. pp. 195. Price 1s. 6d.
The Housing of the Working Classes. By E. Bowmaker, M.D. 1895. pp. 186. Price 2s. 6d.

NUTT, DAVID, Strand, London.
Katawampus: its Treatment and Cure. By His Honour Judge E. A. Parry. Illustrated by A. Macgregor. 1895. pp. 95.

PHILIP GEO. AND SON, Fleet-street, London, E.C.
The Anatomy of the Human Head and Neck. Illustrated by means of Superimposed Plates. By Dr. Schmidt. English Edition by William S. Furneaux. Price 2s. 6d. net.

PENTLAND, Y. J., Edinburgh.
Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus 13.

REBMAN PUBLISHING COMPY., Adam-street, Strand, London, W.C.
Annual of the Universal Medical Sciences. Edited by Chas. E. Sajous, M.D., and others. Illustrated. Vols. i. to v. 1895.

SAUNDERS, W. B., Walnut-street, Philadelphia.
A Manual of Syphilis and the Venereal Diseases. By J. N. Hyde and F. H. Montgomery, M.D. Illustrated. 1895. pp. 618.

SCIENTIFIC PRESS, Strand, London.
Nursing, its Theory and Practice. By P. G. Lewis, M.D., M.R.C.S. Eighth Edition. 1895. pp. 371. Price 3s. 6d.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.
L'Hypnotisme Scientifique. Par Dr. Crocq fils. Introduction, Professeur Pitres. 1896.
Précis de la Vaccine et de la Vaccination Moderne. Par Dr. M. Hublé. Tomes I et II. 1896.
Les Variations de la Mortalité à Paris: leur Cause Météorologique. Par Dr. F. Chiais.

SMITH, ELDER AND CO., Waterloo-place, London.
Medical Diagnosis with special reference to Practical Medicine. By J. M. Da Costa, M.D., LL.D. Illustrated. Eighth Edition. 1896. pp. 1104. Price 24s.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London, E.C.
Parasitism, Organic and Social. By J. Massart and E. Vandervelde. Translated by W. MacDonald. Revised by J. A. Thomson. 1895. pp. 122. Price 2s. 6d.

UNWIN, T. F., Paternoster-square, London, E.C.
Among the Gnomes. By Franz Hartmann, M.D. Illustrated. 1895. pp. 272. Price 5s
The Chain of Gold. By S. O'Grady. Illustrated. 1895. pp. 304. Price 5s.
Inmates of my House and Garden. By Mrs. Brightwen. Illustrated. 1895. pp. 277. Price 3s. 6d.
Pax and Carlino: a Story. By E. Beckman. Illustrated. 1894. pp. 196. Price 2s. 6d.
Criminal Sociology. By Enrico Ferri. 1895. pp. 284. Price 6s.
Toxin: A Sketch. By Ouida. 1895. Price 1s. 6d.

WHITTAKER AND CO., White Hart-street, Paternoster-square, London.
The Chemists' Compendium. Compiled by C. J. S. Thompson. 1896. Price 2s. 6d. net.

WHITAKER, J., AND SONS, Warwick-lane, London, E.C.
An Almanack for 1896. By Joseph Whitaker, F.S.A.

WILSON, J. & SON., Cambridge, U.S.A.
Medical and Surgical Report of The Children's Hospital, Boston. 1869-1894. Edited by F. M. Rotch, M.D., and H. L. Burrell, M.D. 1895. pp. 367.

The Royal London Ophthalmic Hospital Reports; vol. xiv., Part I.; Oct. 1895 (J. & A. Churchill, New Burlington-street, London).—Anatomischer Atlas; von Professor Dr. A. D. Ross, Dr. C. Toldt, and others; zweite Lieferung; Bogen 11-20; (Urban und Schwarzenberg, Wien und Leipzig, 1896).—Report upon the Condition of Irish Union Hospitals; by T. H. Moorhead, M.D.; reprint (Irish Medical Association, Dublin; 1895).—Annales Suisses des Sciences Médicales; livraisons 2-8 (Carl Sallmann, Basel, 1895).—Die Behandlung der Gaumenspalten, mit besonderer Berücksichtigung der Prothesen mit Korkkern; von H. Brugger (Carl Sallmann, Basel, 1895).—Ueber die Therapie des Tetanus; von Professor Sahli (Carl Sallmann, Basel, 1895).—Undersogelser og Forslag angaaende Arbeiderstandens Boliger i Christiania; ved Axel Holst (I. Chr. Gundersens Bogtrykkeri, H. Auth. E. Gundersen, Christiania, 1895).—From Hazel, Watson, and Viney, Medical Stationers, Long Acre, London, W.C.: Smith's Physicians' and Surgeons' Visiting List Diary, Almanack, and Book of Engagements for 1896, fiftieth year, No. 3 edition and No. 5 edition.—From Cassell and Co., London: Lett's Office Diaries and Almanacs, Nos. 1 and 8, for 1896; also Lett's Medical Diaries for 1896 (three copies).—Dermatologie: Dermatoses Inflammatoires; par L. Brocq et L. Jacquet (G. Masson, Paris).—Annales de Dermatologie et de Syphiligraphie; troisième série, tome vi., No. 11; Novembre, 1895 (G. Masson, Paris).—Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin; von R. Virchow; Band cxlii., Heft 3 (G. Reimer, Berlin, 1895).—Catechism Series; Midwifery; Parts I. and II. (E. & S. Livingstone, Edinburgh; price 1s. each net).—The British and Colonial Druggist's Diary, 1896. (T. and H. Smith and Co., Edinburgh, and Worship-street, London, E.C.).—Magazines for December: The Picture Magazine, Illustrated English Magazine, The Strand Magazine, Boys' Own Paper, Girls' Own Paper, Leisure Hour, Sunday at Home, Pall Mall Magazine, Friendly Greetings, Knowledge, Woman's Life, The Gymnast and Athletic Review.—Christmas numbers, 1895: Cassell's Yule Tide, and Christmas Annual, Chapman's Magazine, Pears' Annual, The World, Christmas Annual, The Queen, Black and White, The Happy Home, The Strand Christmas Double Number.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BROWN, JOHN, M.D., Ch.B. Vict., D.S.Sc., L.R.C.P. Lond., has been re-appointed Medical Officer of Health for the Borough of Bacup.

BEATTIE, THOMAS, M.B., B.S. Durh., has been appointed Pathologist to the Royal Infirmary, Newcastle, vice Drummond, resigned.

BYERS, HENRY STAGG, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Stockton and Thornsby Hospital, vice H. B. Hoffmeister, resigned.

CHAMBERLAIN, E. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Banstead Sanitary District of the Epsom Union.

CLARIDGE, H. A. H., M.B., B.S. Durh., has been appointed Medical Officer for the North Canes Sanitary District of the Cannock Union.

DAUBER, J. H., M.A., M.B., B.Ch. Oxon., M.R.C.P., M.R.C.S., L.S.A., has been appointed Honorary Assistant Physician to the Hospital for Women, Soho.

DOIDGE, M. J., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Wells Union.

FRASER, PETER, M.D., C.M. Edin., has been appointed Medical Officer of Health by the Carnarvon Joint Sanitary Authority.

FULTON, WM., M.B., C.M. Glasg., has been appointed Medical Officer of Health for Stevenston, Ayrshire.

GARSTANG, T. W. H., M.R.C.S., has been appointed Medical Officer of Health by the Knutsford Urban District Council.

GORDON, J. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Sithney Sanitary District of the Helston Union.

HARKER, W. E., M.B., B.S. Durh., has been appointed Medical Officer of Health to the Newcastle-upon-Tyne Port Sanitary Authority.

HEATH, H. T., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Mansfield Woodhouse Urban Sanitary District.

HERMON, J. M., M.B., C.M. Edin., has been appointed Medical Officer for the Sharlston Sanitary District of the Wakefield Union.

KEMP, BENJN., M.R.C.S., has been re-appointed Medical Officer of Health by the Horbury Urban District Council.

LISTER, THOS. D., M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Westminster General Dispensary.

MACKENZIE, W. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health by the Altofts Urban District Council.

MACKISACK, H. L., M.D., M.Ch. Irel., has been appointed Registrar to the Royal Hospital, Belfast, vice Calwell.

MIDDLEBROOKE, E., L.S.A., L.M. Dubl., has been appointed Medical Officer for the St. Ives Union.

MORGAN, J., M.R.C.S., has been appointed Medical Officer for the Rheidol Sanitary District of the Aberystwith Union.

MUNN, PATRICK I., M.B., C.M. Edin., has been appointed Junior Resident House Surgeon to the Dumfries and Galloway Royal Infirmary.

NORRIS, O., L.R.C.P., L.M. Irel., has been appointed Medical Officer of Health for the Sherburn Rural Sanitary District, vice R. Cuff.

O'BRIEN, C. M., M.B., L.R.C.S. Irel., has been appointed Medical Attendant to the Staff of the London and North-Western Railway Company's Depôt, Dublin.

PATRICK, J., M.B., B.Ch. Irel., has been appointed Assistant Medical Officer for the Purdystown Asylum.

PHILLIPS, E. V., L.R.C.P. Lond., M.R.C.S., D.P.H.R.C.S. Irel., has been appointed Medical Officer of Health to the Oxenden Rural Sanitary District.

POTTS, L., M.R.C.S., has been appointed Medical Officer of Health for Headley Sanitary District of the Epsom Union.

SENIOR, ARTHUR, M.B., B.C. Camb., has been appointed Medical Officer of Health by the Esher and the Dittons Urban District Council.

STEVENS, F. J., M.R.C.S., D.P.H.R.C.P.S. Eng., has been appointed Medical Officer of Health for the Camberwell Sanitary District.

STEELE, W. C., M.B., C.M. Glasg., has been appointed Medical Officer for the Seventh Sanitary District of the Tendring Union.

VICKERY, WILLIAM HENRY, F.R.C.S. Eng., has been appointed Surgical Registrar to the Newcastle Infirmary.

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LLINGTON, W. T., L.S.A., has been appointed Medical Officer for the Bushberry Sanitary District of the Cannock Union.

BB, C. CAREW, M.B., B.C. Cantab., has been appointed Dispensary Surgeon to the Bradford Infirmary, vice A. Rutherford, resigned.

LD, R. B., M.D. Lond., M.Sc. Vict., has been appointed Honorary Assistant Physician and Medical Superintendent of the Cancer Pavilion and Home, Manchester.

Vacancies.

r further information regarding each vacancy reference should be made to the advertisement (see Index).

TH ROYAL UNITED HOSPITAL.—Resident Medical Officer for three years. Salary £100 per annum, with board, lodging, and washing.

RISTOL INCORPORATION.—Medical Officer for the Workhouse at Stapleton. Salary, which is to cover the cost of any substitute in case of temporary absence from duties, £250 per annum, with unfurnished residence. Fees for vaccination cases allowed. Applications to the Clerk to the Guardians, St. Peter's Hospital, Bristol.

ERBYSHIRE ROYAL INFIRMARY, Derby.—Resident House Surgeon and Resident House Physician, for twelve months. Salary of the House Surgeon £100 per annum, and of the House Physician £80 per annum, with apartments and board in both cases.

EVON COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £120 per annum, with board, lodgings, and washing. Applications to the Clerk to the Visitors, 9, Bedford-circus, Exeter.

EVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board and washing.

VELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

ULME DISPENSARY, Manchester.—Honorary Physician.

IVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

OPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer. Salary £80 per annum, to be increased by yearly increments of £10 to a maximum of £100, with rations, furnished apartments, and washing. Applications to the clerk to the Managers, Bromley, Middlesex, E.

AUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging provided in the institution.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BONAR.—At his residence, 114, Via del Babuino, Piazza di Spagna, Rome, on Dec. 8th, the wife of Dr. Thomson Bonar, of a son.

CHAWNER.—On Dec. 6th, at Hill House, Clay-cross, the wife of Alfred Chawner, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

RENDLE.—On Dec. 4th, at 7, Buckland-terrace, Plymouth, the wife of C. E. Russel Rendle, M.R.C.S., L.R.C.P., of a son.

SCOTT.—On Nov. 29th, at Finstall-park, Bromsgrove, Worcestershire, the wife of Sidney Jebb Scott, M.A., M.B., F.R.G.S., of a daughter.

MARRIAGES.

NEWINGTON—SOUNDY.—On Dec. 4th, at St. Nicholas Church, Sutton, Surrey, C. W. H. Newington, M.R.C.S., L.R.C.P., son of the late S. W. Newington, surgeon, of Goodhurst, Kent, to Maud, daughter of the late W. B. Soundy, formerly of Redhill.

PETRIE—DE WOLF.—On Dec. 5th, at Christ Church, Lancaster-gate, W., Reginald Ogilvy Petrie, M.A., M.B., C.M. Edin., of St. Andrews, N.B., to Ellen Lydia (Nellie), youngest daughter of the late James R. De Wolf, of the Salacres, Upton, Cheshire.

ROBERTS—PETLEY.—On Dec. 4th, at the Church of the Holy Trinity, Tulse-hill, Frank Ernest Roberts, M.R.C.S. Eng., of Tulse Dale, West Norwood, to Louisa, daughter of Joseph Petley, of Simla Lodge, Norwood-road, Herne-hill.

WHITEFORD—THORNE.—On Dec. 5th, at St. John's Episcopal Church, Greenock, James Harris Garcia Whiteford, B.A. Cantab., M.B., C.M. Ed., of Greenock, to Edith May, twin daughter of Thomas May Thorne, Wardwood, Greenock.

WINGATE—SOPER.—On Dec. 7th, at St. Andrew's Church, Ashley-place, Westminster, William Warburton Wingate, M.B., B.C. Camb., eldest son of the late William Wingate of Ludford Magna, Lincs., to Isabel Mary, daughter of William Soper, M.R.C.S.E., of Clapham-road.

DEATHS.

HAKE.—On Dec. 7th, at Southend, Essex, James Hake, M.R.C.S. Eng., L.R.C.P. Lond., aged 33.

PICKTHORN.—On Dec. 3rd, at Durban, Natal, T. Russel Pickthorn, Staff Surgeon R.N., aged 37.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 12th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 6	29·41	N.W.	50	49	73	51	49	0·05	Raining
,, 7	29·58	N.W.	39	36	60	47	36	0·04	Fine
,, 8	30·07	N.W.	36	34	47	43	34	...	Fine
,, 9	29·95	S.W.	43	43	53	51	35	0·01	Raining
,, 10	29·89	N.W.	45	43	56	48	42	0·06	Foggy
,, 11	30·04	S.E.	34	34	46	46	33	...	Foggy
,, 12	29·84	N.W.	41	40	55	44	34	0·11	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—SOCIETY OF ARTS.—8 P.M. Mr. W. Worby Beaumont: Mechanical Road Carriages. (Cantor Lecture.)

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—Papers:—Dr. Peters: On the Varieties of Diphtheria Bacilli.—Mr. Eyre: On the Xerosis Bacillus.—Messrs. Kanthack and Stephens: The Escape of Diphtheria Bacilli into the Blood and Tissues. Card Specimens:—Dr. Weber: Heart from case of Angina Pectoris.—Dr. Snow: Colloid Carcinoma of Breast.—Dr. Lennox Browne: Malignant Growths of Tonsil.—Dr. Rolleston: Crateriform Ulcer.—Dr. Hugh Walsham: Tuberculous Liver with Lardaceous Disease.

SOCIETY OF ARTS.—4.30 P.M. Mr. Frank Cundall: Jamaica in the Past and Present.

WEDNESDAY.—SOCIETY OF ARTS.—8 P.M. Mr. John Southward: Machines for Composing Letter-press Printing Surfaces.

THURSDAY.—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Dr. R. W. Carter (Weymouth): A Precise and Scientific Method of Administering Chloroform and Ether, with demonstration of the inhalers by which these results are obtained.

HARVEIAN SOCIETY.—8.30 P.M. Dr. M. Handfield Jones: The Heart in its Relation to Pregnancy, Parturition, and the Puerperal State. (Harveian Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Percy Kidd: Demonstration of Laryngeal Tuberculosis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Ichthyosis.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Pemphigus and Dermatitis Herpetiformis.

During the week marked copies of the following newspapers have been received:—*Eastern Morning News, South Australian Register, Cork Daily Herald, Halstead Times, Sydney Evening News, Enquire Within, South Wales Daily News, Birmingham Gazette, National Observer, North Star, City Press, Sheffield Independent, Builder, Times of India, Pioneer Mail, Citizen, Architect, Courrier de la Presse, Land and Water, Provincial Medical Journal, Indian Mirror, Nottingham Daily Express, Sanitary Record, Leeds Mercury, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Mining Journal, Bristol Mercury, Liverpool Daily Post, Reading Mercury, Local Government Chronicle, Hertfordshire Mercury, Yorkshire Post, Wigan Observer, Public Health, Solicitors' Journal, Daily Chronicle, Surrey Advertiser, Local Government Journal, Kentish Independent, Lancashire Daily Express, Health, Echo, Coventry Mercury, English Mechanic, Graphic, North British Daily Mail, Manchester Courier, West Middlesex Advertiser, Jackson's Oxford Journal, Folkestone Express, Public Opinion, Coventry Herald, Journalist, Dover Express, Liverpool Echo, Irish News, &c., &c.*

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE EMPLOYMENT OF UNQUALIFIED ASSISTANTS, ETC., AND THE RESOLUTIONS OF THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—In the advertising pages of THE LANCET (Nov. 16th, 1895) a notice, printed under the heading "Important Notices," a series of resolutions which have been from time to time passed by the General Medical Council in regard to "covering" unqualified persons and the employment of unqualified assistants, and which with your kind permission I would like to ask those of your readers who are more intimately acquainted with the matter to make clear to me.

In making this inquiry I may mention that my attention has been more fully drawn to the subject by the comments which, on various occasions, you have made in your esteemed paper about this custom, &c. When reading these I always ask myself what the objects of the resolutions of the General Medical Council are if these are not applicable to the very abuses which they are intended to defeat, with the result that I invariably find myself divided between two opinions—viz., either that the Council purposed the resolutions to be good jokes, or else to be laws enforceable and binding on all qualified members of the profession, but impracticable for want of definition; in fact, laws in name, but not in reality. To find out whether or not one, or other, or any, of these views is right, or if the resolutions are of any value whatsoever, considering the way in which very many qualified practitioners utilise without let or hindrance their unqualified assistants in the working of their practices and in opposition to the apparent intention of the resolutions, is what I wish to draw attention to.

In the first of the resolutions which were passed by the Council on Feb. 27th, 1888, the opinion is expressed that "A registered medical practitioner would render himself liable to the censure of the Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner." This law, as you may observe, was not accompanied by any attempt to make a formal definition of the "misconduct in question," nor were the remaining laws, enacted at the same time, construed in any sense so as to enlighten anyone as to their real meaning, or for the guidance of such persons as might feel disposed to lay cases of reasonably suspected infringements of them before their compilers for inquiry and judgment. If the resolutions are real, what wonder is it that unoffending practitioners, anxious for their own preservation and of others, seem so apathetic and indifferent in trying to bring this evil to an end, when they are handicapped by the Council's indefinite resolutions. For example, does the resolution sanction, or will the Council infallibly censure, a registered practitioner who, when going away on his holidays, say for a month, leaves his unqualified assistant to absolutely carry on and conduct his practice in his absence, or who allows his unqualified assistant, without any kind of personal supervision whatsoever, to treat patients all through their illnesses, and to "do surgery" both at home and at branches, and to sign "club" and other certificates (not death certificates), &c.? Also, is it justifiable for a public vaccinator to depute his unqualified helper to perform all or any of the public vaccinations and then return the certificates of such vaccinations as having been done "successfully by me"; or for a medical officer of health to send his unqualified assistant to inquire into the causes of and to inspect cases of, infectious diseases notified by colleagues in his district; or for a principal to notify infectious diseases seen only by his unqualified assistant and then pocket the fee for doing so?

As to "covering," which is vaguely stated to be doing, or assisting in doing, or participating in doing, "any act which enables any unqualified person to practise as if he were duly qualified," what guarantee is there that a practitioner is liable to censure, or will be censured, who signs death certificates for patients seen only by his unqualified assistant, or for the latter to "fill in" in case of death occurring during his principal's absence from home on holidays, the principal, of course, having never visited the patient during his lifetime, or who merely "looked in" just before death, so as to be in a position to sign the death certificate if necessary, or who, when called into consultation by a "quack," meets him? Further, what of the unwritten prescribing, compounding, and booking of medicines by unqualified assistants?

In enumerating these acts I do not pretend to exhaust all the cases which might be brought forward in support of my charge of obscurity with which some of the principles on which our profession is based are enveloped. Sufficient, however, for my purpose have I quoted to show practically what a dead letter the resolutions of the Council are. I think the time has come for the sufferers to assert themselves and to try to compel by every fair means possible the Council to specify the misconduct in question.

Some persons will doubtless say, Why not forward reports of cases of suspected misdoings to be dealt with by the Council? Well, that course, I understand, has been pursued over and over again with a negative result, until now the mere mention of doing such a thing elicits the stock phrase, "Oh, what is the use of doing it, the Council won't do anything in the matter." If such an assertion be true, and is due, as stated, to a dislike to open the ball in any quarter lest by doing so persons in "high places," influential brethren and others holding important positions, &c., might in the general melée have to be assaulted, the sooner such a hugger-mugger policy is ended the better. Such a line of reasoning is suicidal. If every man cannot have his full pound of flesh by the present Council upholding consistently its own enactments—our rights and privileges—let us who are desirous of sustaining the character of our calling at least make an effort to rouse the Council from its slumbering, or else try if its members cannot be replaced by more practical men, and by men who will have the courage of their convictions.

I am, Sirs, yours faithfully,

Liverpool, Nov. 18th, 1895. R. HILL SHAW, M.B.

FLAGRANT ADVERTISEMENT.

To the Editors of THE LANCET.

SIRS,—For at least two years the enclosed advertisement has appeared weekly in the *People* newspaper. The label (also enclosed) is taken from a bottle of medicine supplied by the physician. The dispensary has painted upon the wooden portion of the front: "Dr. Fisher, M.R.C.S. L.R.C.P." The wire window-blinds are inscribed: "Ear, Liver, and Nervous Disorders." On looking through the window, may be seen two framed diplomas, and a notice—"This is not a free dispensary." No one resides upon the premises. In the neighbourhood a qualified gentleman named Fisher, holding the diplomas M.R.C.S. Eng., L.R.C.P. Ed., and L.S.A., does reside, as will be seen by referring to the Medical Directory.

I should be glad of an opinion from you as to whether it is justifiable for any medical man to issue such labels as the one I enclose, stating his fees. As to the advertisement in the newspaper I have named, I need say nothing.

I am, Sirs, yours faithfully,

Dec. 10th, 1895. OBSERVER.

*** We subjoin the advertisement, which, it will be seen, does not mention the name of the medical man, but gives the address, while the medicine label gives the same address and the name. We consider the whole to constitute what our correspondent has called it—a case of "flagrant advertisement," but we find no Dr. D. Fisher in the current Medical Directory or Register.—ED. L.

[*Advertisement.*]

NERVOUS DEBILITY DISPENSARY,
268, CITY-ROAD, E.C. (on the Canal Bridge).

NERVOUS DEAFNESS, Dyspepsia, Noises in Head, Loss of Vigour, and Genito-Urinary Diseases, &c., especially treated. THE PHYSICIAN attends 11.0 to 12.0 and 7.0 to 9.0; Sundays, 11.0 to 12.0 only. Weekly Subscription, 1s. to 2s. 6d. ADVICE AND MEDICINE BY POST.—"A genuine and successful institution."—MEDICAL REVIEW.

[*Label.*]

PROVIDENT DISPENSARY, 268, CITY ROAD, E.C.,
Adjoining the Macclesfield Arms, Canal Bridge.
PHYSICIAN—DR. D. FISHER.

Two Table Spoonfuls to be taken every four hours.

Attendance from 11 till 12 a.m., and 7 till 9 p.m.
Sundays from 10.30 till 12 a.m. only.
ADVICE AND MEDICINE SIXPENCE.
HOME VISITATION AND MEDICINE 1/6.
N.B.—Notice of cases requiring visiting must be given before 12 a.m.

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INFANT MORTALITY.

C.O.H.—The only possible method for the calculation of infant mortality, that is, of deaths under the age of one year, in any locality during any given period is to ascertain the proportion which such deaths bear to the births registered in the same locality during the same period. Any excess in this calculated proportion over the rate of 100 per 1000, or 10 per cent., represents excessive infant mortality in a small town. It should, however, be remembered that in a small population a month is far too short a period for the calculation of a trustworthy birth- or death-rate. The Registrar-General does not calculate or publish rates of infant mortality for any small towns; but in his quarterly return is invariably published the rate of infant mortality in each of a hundred English and Welsh towns, not one of which, however, has a population less than 30,0000 persons. This return also gives the mean rate of infant mortality in each quarter in England and Wales, and in England and Wales exclusive of the 100 large towns separately dealt with.

CORRESPONDENT sends us the following advertisement from the *Scotsman* of Dec. 10th:—

DOCTOR wanted at once for a country district where a large practice is obtainable. Applications, with testimonials, to be sent to A., 9, Scotsman Office, Aberdeen.

He considers, as we do, that for a medical man to post testimonials of his fitness to undertake a practice to an anonymous individual at the office of a newspaper would be a most ill-advised proceeding.

Dr. G. H. Broadbent's communication has been received and shall have our attention.

A. R. H.—The subject of this letter is not worth powder and shot.

THE CLIMATE OF THE EAST COAST OF AFRICA.

To the Editors of THE LANCET.

SIRS,—Can any of your readers let me know quickly if it would be an unhealthy voyage from Port Natal along the East Coast of Africa to the island of Zanzibar? Myself and some friends, one a delicate person, propose to make the trip, and we would probably be there in March next. We would coast it in a large steamer, calling at Delagoa Bay and Beira, these two places at least. If there would be any considerable danger to health from fever or any such causes, we would give up the idea. If you could kindly let me know I would be exceedingly obliged, as we find a difficulty in obtaining reliable information on this point.

I am, Sirs, yours respectfully,

Dec. 10th, 1896. VOYAGER.

"ADVERTISING."

To the Editors of THE LANCET.

SIRS,—Referring to the accusation brought against me by an inquiring gentleman of Canonbury, I shall be glad if you will publish the following: The cards copied in your journal were sent by me to the members of a society (club) to which I am the medical officer, and to no one else. It is therefore quite untrue to suggest that they were 'circulated freely," as they were addressed to the members of this society only (the Hebrew Tontine Benefit Society)—i.e., to my own patients, and enclosed in envelopes.

I am, Sirs, yours obediently,

Houndsditch, E.C., Dec. 13th, 1895. M. BERNSTEIN, M.D.

A. B.—It is doubtful if our correspondent could recover his fee in a county court, though he has undoubtedly been treated badly. How far he would have a good case legally would depend upon the exact way in which the arrangement was made and the amount of clear proof that he could bring in support of its existence. While sympathising we are strongly of opinion that whatever the circumstances no such action should be brought.

"THE BRITISH MEDICAL BENEVOLENT FUND."

To the Editors of THE LANCET.

SIRS,—May I ask you kindly to allow me to acknowledge through your columns the following additional donations to the British Medical Benevolent Fund?

Mr. Raland...	£1	1	0	"A Friend," per Dr. Barnes of Carlisle ...	£100	0	0
Mr. Herbert Allingham	2	2	0				
Dr. Gervis...	10	10	0				

I am, Sirs, yours faithfully,

W. H. BROADBENT.

84, Brook-street, Grosvenor-square, W., Dec. 11th, 1895.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Will any of your readers tell me which is the best form in which to administer strychnine hypodermically for snake-bite? It is very insoluble, and the necessary dose would mean a large quantity of fluid. What has been found the best dose?

I am, Sirs, yours truly,

Dec. 9th, 1895. ZAMBAAN.

MEDICAL ADVERTISEMENTS IN AUSTRALIA.

CANCER and TUMOURS.—A wonderful and natural remedy for cancers and tumours. Pamphlet on the subject post-free on receipt of 4*d.* in stamps. References.—Apply, A. M'Kee and Co., City Medical Hall, Adelaide-street, Brisbane.

DISTRICT MEDICAL CLUB, 515, Elizabeth-street, N., Market-buildings, daily 2 to 3 and 7 to 9 P.M. All diseases treated. Advice and medicine, 2*s.* 6*d.*—Dr. Maloney, surgeon.

ELECTRIC PILLS.—For Nervous Debility, Weakness, Incapacity, Loss of Vital Power, &c. (Dr. Laseurs, M.D., Paris, one of the Greatest Specialists in the world). Electric Pills are the most speedy and the most powerful remedy in the world. One box will be sufficient, and in even the weakest, the oldest, the most shattered, works a miracle, while perfectly harmless, leaving no bad after effects. Guaranteed never to fail. Worth their weight in gold. Price, 10*s.* 6*d.*, post free, from the sole agent, W. PARSONS, Chemist, 68, Bourke-street, E. Melbourne.

NERVOUS DISEASES! SYPHILIS!! VIRILITY!!!—Dr. L. L. SMITH, L.S.A. Lond., the only legally qualified medical man advertising! To those suffering from early practices. To those about to marry. To those married yet childless. To the Nervous. To the Prostrated. To those who have lost all energy. To those suffering from loco motor ataxis and paralysis. To those suffering from cerebro spinal irritation. To the Impotent!!! To those whose blood contains impurities. CONSULT DR. L. L. SMITH, 41, Collins-street.—Fee by letter, £1. Personal Consultation, Mornings and Evenings. Fee, £1 1*s.*, including two days' medicine.

NERVOUS SUFFERERS.—A new discovery; the very worst of cases; all nervous secret disease.—Jason, Box 124, G.P.O., Melb.

SURGEON LANGSTON, M.R.C.S. Eng., 121, Collins-street East. Every man who is weak, nervous and debilitated should consult this reliable old surgeon, over forty years' experience. Nervous and Physical Debility, Exhausted Vitality, Premature Decline, and all diseases and weaknesses of men. Consultation free, expert treatment, inviolable secrecy, and certain cure. Hours, 10 to 4 daily. Monday, Wednesday, and Saturday evenings, 7 to 9. SURGEON LANGSTON, M.R.C.S., 121, Collins-street, Melbourne.

THE POOREST MAN in the country can write to us and receive by return mail (free of charge) in a plain, sealed envelope, full directions for a speedy, permanent, and private home cure for all nervous and debilitating diseases.—Address to Foreign Novelty and Agency, P.O. Box 347, Sydney.

The above extraordinary advertisements speak for themselves. We are told when commenting on this kind of thing that it occurs away from home, and that under different conditions a different code of ethics must prevail; but that this is not so is proved by the fact that most of our colonial brethren shrink from advertising and hold fast by the honourable tenets of the profession. What most can do all can do, and the conduct of practitioners who indulge in this grossly unprofessional method of bringing themselves before the public is most reprehensible. The M.R.C.S. Eng. and the L.S.A. Lond. have got into company which should make them blush.

Medicus has not given us sufficient particulars to warrant our giving him a definite answer. Who said what? And when? We presume that whatever the occasion the medical officer had the right of reply, and that his defence would receive the same publicity as the reflections upon him.

Inter Cornua has placed before us two alternatives. He appears to consider that either way he must be wrong. We should say that either way he would be right, and that style which he uses is a matter for his private taste.

"THE PHONENDOSCOPE."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "W.," in THE LANCET of Nov. 30th, we shall be pleased to send him a phonendoscope on trial for a few days; or it can be seen and tried at any time at either of our addresses. We are, Sirs, yours faithfully,

55, Grosvenor-street, W., Dec. 6th, 1895. HOOPER AND CO.

THE BEST ANGLO-FRENCH MEDICAL DICTIONARY?

To the Editors of THE LANCET.

SIRS,—Can any of your readers let me know through the columns of THE LANCET which is the best English and French dictionary of medical terms? I am, Sirs, yours faithfully,

Dec. 4th, 1895. C. S. J.

THE TROPICAL DISEASES OF WEST AFRICA.

To the Editors of THE LANCET.

SIRS,—Would you let me appeal to your readers to furnish me with the title of a good text-book of tropical diseases as met with in West Africa. I am, Sirs, yours truly,

Dec. 11th. A. A. S.

ERRATUM.—In our review of Dr. Jackson's book, "Skiascopy and its Practical Application to the Study of Refraction," which appeared in our columns on Nov. 30th, we omitted to mention that Messrs. Kegan Paul, Trench, Trübner, & Co., Limited, are the London agents for the publication.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

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Communications, Letters, &c., have been received from—

A.—Dr. A. G. Auld, Glasgow; Dr. J. H. Abram, Liverpool; Dr. W. W. Baldwin, Florence; Mr. Jas. Aitken, Aberdeen; Mons. J. Astier, Paris; Apothecaries' Society, Lond., Sec. of.

B.—Dr. C. Bodon, Berlin; Dr. I. Banks, Aberdare; Dr. L. H. Bennett, East Ilsley; Mr. W. Bernard, Londonderry; Mr. G. H. Broadbent, Manchester; Mr. C. Birchall, Liverpool; Messrs. Burgoyne, Burbidges, & Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Bury Dispensary Hospital, Sec. of; Bristol Incorporation, Clerk to the Guardians of.

C.—Dr. W. G. Curgenven, Derby; Mr. A. C. Champati, Patna City; Mr. E. Cordery, Lond.; Mr. J. P. Cassidy, Holloway; Messrs. T. Clark and Co., Lond.; Messrs. Clarke, Son, and Platt, Lond.; Messrs. A. H. Cox and Co, Brighton; Messrs. T. Cook and Son, Lond.; Clapham Maternity Hospital, Hon. Sec. of.

D.—Dr. T. Duka, Kensington; Mr. A. Denman, Beaconsfield; Mr. W. E. Dawson, Walton-on-the-Naze; Messrs. J. Davey and Co., Lond.; Messrs. Downie, Aiton, and Aiton, Glasgow; Messrs. Down Bros., Lond.; Messrs. Dawson and Sons, Lond.; Derbyshire Royal Infirmary, Sec. of; Devonshire Hospital, Buxton, Sec. of.

E.—Dr. H. M. Earle, Jullundur, Punjab; Mr. J. R. Essex, Pontypool; Messrs. Evans, Son, and Co., Lond.; Messrs. Edwards, Son, and Co., Birmingham.

F.—Dr. T. Fisher, Greenwich; Mr. J. B. Fry, Esher; Mr. N. A. Hay Forbes, Tunbridge Wells.

G.—Dr. W. H. Gilbert, Baden Baden; Messrs. Gerrard and Son., Lond.; Gas Light and Coke Co., Lond, Senior Inspector of; Great Eastern Railway, Lond., Manager of; Genuine, Lond.

H.—Dr. J. L. G. Haskett, Lond.; Dr. J. Holmes, Whitefield; Dr. O. N. Hewitt, St. Paul, Minn.; Mr. E. S. Hartland, Highgarth; Mr. J. Heywood, Manchester; Mr. G. F. Helm, Truro; Mr. G. Hermanni, jun., Lond.; Mr. J. R. Hill, Chapeltown; Mr. A. B. Hicks, Lond.; Messrs. Hayes and Son, Stamford; Messrs. W. Hatchman and Co., Lond.; Hulme Dispensary, Manchester, Hon. Sec. of.

I.—Miss Inman, North Scarle; Islington Medical Society, Hon. Sec. of; Inter Cornua, Carlisle.

J.—Dr. M. Jackson, Barnstaple; Jeyes' Sanitary Compounds Co., Lond.

K.—Dr. H. R. Kenwood, Lond.; Dr. W. Kidd, Blackheath; Dr. W. D. Kingdon, Colyton; Dr. C. J. Kauffmann, Manchester; Közgazdasági Napli, Administration des.

L.—Dr. A. B. Lazarus, Melbourne; Mr. W. W. Lake, Guildford; Leeds and West Riding Medico-Chirurgical Society, Sec. of; *Land and Water*, Lond.; Liquor Carnis Co., Aston Clinton.

M.—Dr. L. W. Marshall, Nottingham; Dr. W. Murrell, Lond.; Dr. P. W. Marriott, Mentone; Dr. W. McDonald, Waterloo, Liverpool; Mr. C. Mansell Moullin, Lond.; Mr. O. G. R. McWilliams, Teignmouth; Messrs. J. Murdoch and Co, Lond.; Mason College, Birmingham, Librarian of; Medical Magazine Co., Lond.; Middlesex Hospital Medical School, Hon. Sec. of; Maltine Manufacturing Co., Lond.; Medicus, Weymouth; M.B., C.M., Melbourne.

N.—Dr. E. Norton, Folkestone.

O.—Od Chemical Co., New York; Ops, Lond.

P.—Dr. D. Paterson, Cardiff; Dr. Palmer, Lond.; Messrs. Partridge and Co., Eastbourne.

R.—Dr. J. W. Rolph, Pahang; Dr. R. D. Rudolf, Bengal; Mr. E. Ringrose, Newmarket-on-Trent; Mr. A. W. M. Robson, Leeds; Mr. E. G. Rivers, Lond.; Mr. H. B. Robertson, Corwen; Messrs. Ridges and Sons, Wolverhampton; Roy. United Hosp., Bath, Sec. of; Roy. Med. and Chirurgical Soc., Lond., Sec. of; Royal Institute of Painters, Lond., Sec. of; Royal Meteorological Society, Lond., Assistant Sec. of.

S.—Dr. J. G. Smith, Clifton; Dr. C. E. Stanger, Tonbridge; Dr. S. Suzuki, Tokio; Professor Sherrington, Liverpool; Mr. H. Sell, Lond.; Mr. H. W. Scriven, Lond.; Mr. J. H. Spreat, jun., Burrington; Mr. F. T. Smith, Lond.; Mr. J. M. Schley, New York; Mr. Brajenda Nath Sen, Bengal; Mr. H. Silverlock, Lond.; Mr. F. A. Southam, Manchester; Mr. Y. Saneyoski, Tokio; Mr. B. W. Swendon, Great Smeaton; Messrs. Street Bros., London; Messrs. Street and Co., Lond.; Messrs. J. P. Segg and Co., Lond.; Messrs. Stubbs, Lond.; Sanitas Co., Lond., Managing Director of; Surgical Aid Society, Lond., Sec. of.; Seamen's Hospital Soc., Lond., Sec. of.

T.—Dr. A. J. H. Thornton, Robben Island; Dr. H. Tibbits, Lond.; Dr. A. Duxford, Boston Limes; Dr. J. C. Thresh, Chelmsford; Mrs. Turner, Lond.; Mrs. B. Thomson, Ilkley; Taunton and Somerset Hospital, House Surgeon of; Thorax, Lond.

U.—University of London, Registrar of.

V.—Mr. W. Van Praagh, Lond.; Victorian, Lond.; Voyager, West Brighton.

W.—Dr. J. K. Warry, Hampstead; Dr. W. W. Webb, Netley Abbey; Mr. A. B. Watson, Torquay; Mr. T. M. Watt, Hovingham; Mr. G. Williams, Liverpool; Mr. T. R. Woolard, Wickham Brook; Miss Wilkinson, Lond.; Messrs. J. Wright and Co., Bristol; Watford Public Library, Sec. of; Wolverhampton Hospital, Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. J. H. Abram, Liverpool; Dr. J. Adams, West Malling; Dr. A. E. Ash, Stoke Ville; Mr. E. Appleton, Stockton-on-Tees; Messrs. Armour and Co., Lond.; A. H. N., Lond.; Anthimus, Lond.

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The Action and Use of Some New Synthetic Remedies.

DERMATOL.

SINCE the first communication on Dermatol, appearing in No. 24 of the *Berlin. Klin. Wochenschrift*, 1891, many reports on the new remedy have been published both at home and abroad. Further investigations in various directions seem not only to have established many of the early claims made for Dermatol, but also to have indicated fresh fields of usefulness for it.

The physical characteristics of Dermatol are now well known. It is a fine yellow powder, unaltered by exposure to light and air, insoluble in ordinary re-agents, free from taste, and entirely without odour. The latter property is especially esteemed by patients on whom the employment of strong-smelling antiseptic powders like Iodoform would entail serious inconvenience. The insolubility of Dermatol prevents its absorption, and therefore it never produces any toxic effects, even when employed in large quantities under conditions most favourable for absorption.

A further characteristic of Dermatol is the absence of irritating properties. The unpleasant symptoms that sometimes follow the use of dressings such as Iodoform, Corrosive Sublimate, &c., are never observed with Dermatol. It has been shown that by the intimate admixture of Dermatol with septic nutrient material, the development of bacterial growths is arrested. Dr. Bluhm (*Therap. Monatshefte*) has tested its bactericidal power upon twelve different kinds of bacteria, comparing the results with those obtained from Iodoform, and finding the polyseptic action of Dermatol far superior to that of its repugnant predecessor.

It is more especially indicated as an absorbent, antiseptic powder for the treatment of fresh surgical wounds, slight accidental cuts, or old non-purulent wounds. When applied as a dusting powder it rapidly absorbs the secretions from wounds of these types, and forms a very hard, dense, and closely adherent crust, hence it proves extremely useful in all cases in which astringent and drying effects are desired. It has been reported valuable in crushed and lacerated non-septic wounds, burns, and scalds, and in large crural ulcers. Before the introduction of Dermatol it was impossible to close a sewn rectal or fistular wound with any degree of security. Now, this valuable chemical forms a protective crust in a short time, under which primary healing progresses. The result is not less satisfactory in operations for prolapsus, and in rectal plastic surgery.

In gynæcological practice it is attracting a great deal of attention, in view of the reports presented to the Bonn Gynæcological Congress. Remarkably satisfactory results were reported to have been obtained by its use in the treatment of laparotomy wounds, prevalent carcinomata, myomata, deep-seated tuberculous peritoneal abscess, and in infectious catarrhs of vagina, cervix, or endometrium. This report referred to, after calling attention to the superiority of Dermatol over Iodoform, concludes: "Dermatol is absolutely unirritating, powerfully antiseptic, astringent, odourless, stable, and non-hydroscopic."

In dermatological practice it is highly recommended in the form of a 10 per cent. ointment with Lanoline for eczema in children, intertrigo mammæ, and intertrigo ani. It has been tried with excellent results as a dusting powder in dysidrosis of the hands and feet, in balanitis, in operations for phimosis, and, in alternation with antiseptic and stimulating remedies, in the treatment of bubo. For burns the 10 per cent. Lanoline ointment above mentioned is highly recommended.

Dermatol has been used with excellent results in otitis media suppurativa, otitis externa, and in a large number of cases of chronic middle-ear suppuration. The secretion was quickly reduced in quantity, and "most of the cases ceased suppuration after a few insufflations." In otitis externa it was employed (*Therap. Monatshefte*, 1892, No. 12) with excellent results. After two to five applications of the powder the aural cavity was dried, the swelling reduced, and the eczema healed. When used to check a purulent aural discharge insufflations should be alternated with irrigations with an antiseptic solution, such as that made by dissolving a "Soloid" of Iodic-Hydrarg. in a pint of water.

In ophthalmic work it has been used in the after-treatment of operations, and Dr. Werther reports successful results with Dermatol in phlyctanular inflammation of the conjunctiva in scrofulous children. It is an advantage that Dermatol can be employed for scrofulous patients simultaneously with potassium iodide, which is contra-indicated in conjunction with calomel.

Dermatol supplied to the Medical Profession in 1 oz. tins at 1s. 2d. each. For the internal administration of Dermatol, "Tabloids" containing 4 gr. each are recommended as the most convenient form for administration, and are supplied to the medical profession in bottles of 24 and 100 at 8d. and 2s. each.

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This is a clear, syrupy liquid, consisting of a mixture of Benzoic, Salicylic, and Carbolic Acids, melted together and dissolved in Lactic Acid. The results of all bacteriological trials with the mixture have shown that it possesses an antiseptic power considerably superior to that of carbolic acid; these trials dealt with the respective micro-organisms peculiar to the following diseases:—Cholera, Anthrax, Pneumonia (Fraenkel), Bacillus Pyocyaneus, Typhus (Eberth), Diphtheria, Tuberculosis, and with Staphylococcus Pyogenes Aureus. The results of these trials were completely satisfactory; even the last-named bacterium (which is the most resistant known) is immediately killed by a 1 per cent. solution, whilst to attain the same result with carbolic acid it is necessary to expose it to the action of a 2½ per cent. solution for at least one minute. Phenosalyl has been used by Duloroy in the sterilisation of instruments, of gauze, and of different organic substances like blood, as well as of decomposing urine and the saliva of consumptives, with most encouraging results. The numerous tests to which Phenosalyl has been subjected show that, while it kills the bacteria of pus after one minute's contact, it does not irritate the skin, nor has it any corrosive action on instruments. A communication by Professor Fraenkel summarises the advantages of Phenosalyl over other antiseptics as follows: Easy solubility in water; no danger of toxic symptoms; a pleasant and non-persistent odour which does not cling about the hands or clothes. Solutions of Phenosalyl have no corrosive action on the skin, the mucous surfaces remain smooth and slippery, and do not become dried up, as is the case after washing with carbolic acid or corrosive sublimate. Supplied to the Medical Profession in 2-oz. bottles at 10d. per bottle.

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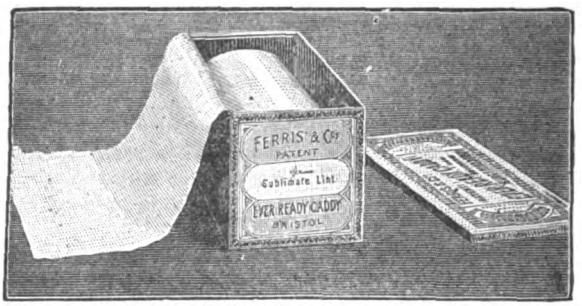
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"Ever-Ready" Plasters and Dressings.



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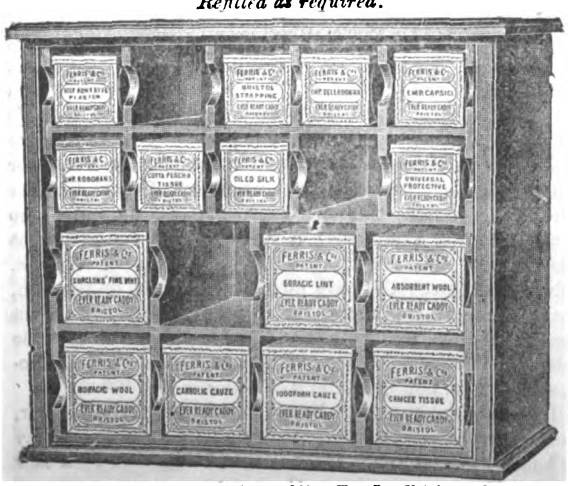
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The PATENT CADDY is made in Two Sizes, to suit different kinds of Dressings.

Each Dressing is Fitted in a separate Caddy, which can be Refilled as required.



MAHOGANY CABINET, holding Ten Small (A) and Eight Large (B) Caddies.

From the MEDICAL ANNUAL, 1895, p. 558.

"We thank Messrs. FERRIS & Co. of Bristol, for having solved a question which concerns us much more deeply than most of the great political questions with which the general public trouble themselves. How is the practitioner to keep his stock of lint, cotton wool, adhesive plaster, strapping, oil-silk, waterproof sheeting, antiseptic dressings, &c., &c., in anything like order, so as to be able to find whichever is required when he wants it, and so that the several articles do not spoil as a result of the haste and waste of every-day practice? Messrs. FERRIS & Co. deal with this question by putting each dressing on a cylinder and enclosing this cylinder in a tin box which they call a "Caddy." At the end of the Caddy the name of the dressing is distinctly printed. They next produce a wooden cabinet, having pigeon-holes which fit the Caddies, and these when placed in position, with the name distinctly marked at the end, enable us at once to pick out the desired dressing. The box is opened, the required quantity pulled from its reel and cut off, and the remainder is untouched and cannot soil however long it may remain.

"There is no place for the "Caddy" but its vacant pigeon-hole, so that if a dozen of the most untidy assistants or nurses were using from the same cabinet, it would be impossible for any dressing to be out of its place or spoiled by careless usage. Busy practitioners will agree with us about the practical importance of this. Some of us who are fairly tidy in our habits, so far as the limits of time allow, know too well the feeling of doubt and uncertainty with which the drawer in which the dressings are kept is turned over, and sometimes we find it, but often—*'mais nous avons changé tout cela.*"

"We can only express our sympathy for those who do not know of these useful and inexpensive Caddies, which are supplied separately, and adapt themselves to the practitioner's own shelves or cupboards, although for the reason we have mentioned we would recommend a cabinet where each Caddy has its place."

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A Lecture
ON
PREVENTIVE INOCULATION AGAINST CHOLERA IN INDIA.

Delivered at the Examination Hall, Victoria Embankment, on Dec. 18th, 1895.

BY W. M. HAFFKINE, D.Sc.

[ON Wednesday afternoon last Professor Haffkine, who is staying temporarily in England, acceded to a request from the Royal College of Physicians of London and the Royal College of Surgeons of England that he should deliver in the Examination Hall of the Conjoint Board an account of his well-known work in India in the matter of the prevention of cholera by inoculation. The chair was taken by Sir J. Russell Reynolds, Bart., President of the Royal College of Physicians of London, and Professor Haffkine entered with the President. Both gentlemen were received with cheers by an expectant audience, far below numerically, however, what might have been expected. Professor Haffkine said:]

The virulence of pathogenic bacilli varies greatly, and in this fact is to be seen the explanation of mild and severe epidemics; and from this, no doubt, arose the practice of preventive inoculation; when a mild epidemic occurred everyone tried to take the disease, seeking close contact with infected persons, and, later, the virus itself was applied to give a mild attack; but, unfortunately, very often what looked like a mild form of the disease was really a severe form occurring in a very resistant subject, hence very severe epidemics arose, so that it has come to pass that legal proceedings are now taken against those who practise this method.

In small-pox, rabies, and syphilis, where the microbe is transferred directly from case to case, and leads no existence outside the human body, great variations in the virulence may be observed, but this is still more the case in those bacteria which lead a saprophytic life; and there appears to be no limit to the variations in virulence that may occur, and not merely variations in virulence, but in shape and size. Thus the cholera bacillus, as the field of investigation grew larger, was found to vary from a comma to a straight bacillus, and from what was little more than a micrococcus to a long, thin bacillus; usually it was harmless to birds, but at times birds were affected by it. The position and number of cilia also varied. Metchnikoff has found that its initial strength may be seventy-five times greater than when the virus has become weakened. The terms used are employed as in small-pox. The infectious material from a patient affected with the disease is a virus, and the process is called variolisation; this was the Eastern practice. On the other hand, the substance cultivated under conditions which will keep the microbe in a fixed state of virulence is a vaccine, and the process is vaccination. It is the difference between vaccination and variolisation which distinguished the method I have employed in India from that used in Spain by Dr. Ferran in 1885. Dr. Ferran injected bacteria from cases of cholera, and the results were so unfortunate that the method was forbidden by the Spanish authorities, and similar disasters have led to the use of any form of cholera inoculation being forbidden in Russia. The method which I have employed in India is on the same lines on which Jenner and Pasteur worked—that is to say, the use of a modified virus. A great difference between the two methods is to be seen in the fact that Jenner's method has survived a hundred years of trial. When Toussaint began to inoculate against anthrax he used the unmodified virus from cases suffering from the disease and the results were exceedingly disastrous, but Pasteur's inoculation against the same disease were with the modified virus, and were eminently successful. In the case of rabies also, preventive inoculation by an attenuated virus had now been used for ten years, and had been applied to many thousand people in France alone. I have abstained from using sterilised cultures in all my inoculations in India, because the effect is very much more evanescent and less trustworthy. The method which I have worked out is to give two injections:[1] the first injection is of a mild form, and the second is one whose virulence has been strengthened. This is given after an interval of five days. The full effect of each is not attained until five days have elapsed, so that the individual is not fully protected till ten days after the first inoculation. The microbe is cultivated under fixed and suitable conditions and its virulence is known, so that it can be used with certainty and safety. One-twentieth of a culture tube has been adopted as the standard dose. The amount of reaction is in direct proportion to the dose, and the amount of protection is in direct proportion to the intensity of the symptoms produced. A slight swelling and pain in the side are the usual local signs, and there is a slight rise of temperature. The amount of pain and fever are in direct proportion to the intensity of the symptoms produced. It is a matter of vital importance that the operator should be master of the strength of the virus used and know exactly the amount of power contained in a given dose.

And now we come to the record: 70,000 injections were made on 42,179 individuals without a single instance of mishap or accident of any description produced by our vaccination. My work in India lasted twenty-nine months—from April, 1893, till the end of July, 1895. The Indian cholera vaccination was applied in ninety-eight localities in the North-West Provinces and Oudh, in the Punjab, in Lower Bengal and Behar, in the Brahmaputra Valley and in Lower Assam, and during this time there were inoculated 294 British officers, 3206 British soldiers, 6629 native officers, non-commissioned officers, and soldiers, 869 civil Europeans, 125 Eurasians, and 31,056 natives of India. No official pressure has been brought to bear upon the population, and persuasion only has been used. In some localities efforts have been made to apply the inoculation to large parties of people living under similar conditions in order that comparison might be made between the inoculated and the uninoculated belonging to the same unit of population. The inoculated people belonged to sixty-four British and native regiments, to nine civil gaols, to forty-five tea estates, to the fixed agricultural population parallel to the Hurdwar pilgrim road, to the bustees of Calcutta, and to a certain number of boarding schools, orphanages, &c., and in the vast majority of cases the inoculated people lived under the direct observation of the military and sanitary authorities of India. Cholera has occurred in the inoculated localities from one to 459 days after the operation, and careful statistics have been immediately collected by the civil and military medical authorities in regard to both inoculated and uninoculated. The results can be grouped into three categories: (1) unsuccessful results, or those where any definite conclusion is impossible; (2) results slightly favourable to the method: and (3) satisfactory results. To the first-class belong observations made in a certain number of tea estates in Assam. The coolie workers live in very isolated bodies and remain unmixed with the general population. The whole of the cases underwent the first part of the treatment only—that is, inoculation with the maximal dose of the first vaccine. Cholera occurred in from one to six months after vaccination. The second inoculation was not made till after the cholera season. At Adam Tila, of 657 non-vaccinated no cases of cholera occurred, and of 318 vaccinated there were 2 cases (0·63 per cent.) with 1 death (0·31 per cent.). At Kalacherra, of 520 non-vaccinated there were 4 cases (0·77 per cent.) with 3 deaths (0·58 per cent.), and of 211 vaccinated there was 1 case (0·47 per cent.) with 1 death (0·47 per cent.). At Chargola, of 1007 non-vaccinated, there were 3 cases (0·30 per cent.) with 1 death (0·10 per cent.); and of 291 vaccinated there were no cases. At Pallarbund, of 1170 non-vaccinated there were 2 cases (0·17 per cent.), with 2 deaths (0·17 per cent.); of 451 vaccinated there were no cases. At Lungla, of 2050 non-vaccinated, there were 3 cases (0·15 per cent.) with 3 deaths (0·15 per cent.); of 421 vaccinated there were no cases. At Burnie Braes, Loobacherra, Kalaincherra, and Sandhura the number of vaccinated is not stated, but 11 cases occurred with 5 deaths. No cases are reported among the 677 vaccinated. To the second class belong observations made on cases where the results are slightly favourable. The results are divided into two groups. In the first maximal doses of the first vaccine only were used and cholera occurred in from

[1] Professor Haffkine explained the method of preparing anti-choleraic vaccine in a former lecture delivered on Wednesday, Feb. 8th, 1893, and reported in THE LANCET of Feb. 11th, 1893.

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two to six days after vaccination in the Manchester Regiment and three months and a half after in the case of the Degubber tea estates. The statistics are as follows: In the 2nd Battalion Manchester Regiment, at Dinapore, of 729 non-vaccinated there were 6 cases (0·82 per cent.) with 3 deaths (0·41 per cent.); 193 were vaccinated and there were no cases. At Degubber tea estate in Assam, among the 228 non-vaccinated 2 cases occurred (0·88 per cent.) and 1 death (0·44 per cent.), and no cases were reported among the 387 vaccinated. The second group of observations were made on cases inoculated with weak doses of both vaccines, cholera occurring from 13 to 15 months after operation. Among the British troops in Cawnpore, of 797 non-inoculated there were 19 cases (2·38 per cent.) with 13 deaths (1·63 per cent.), and no cases occurred among the 75 inoculated. In the East Lancashire Regiment at Lucknow, of 640 non-vaccinated there were 120 cases (18·75 per cent.) with 79 deaths (12·34 per cent.), and of 133 vaccinated 18 cases (13·53 per cent.) with 13 deaths (9·77 per cent.). The last class contains observations with satisfactory results. These have been grouped into four parts. In the first group maximal doses of the first vaccine only were given, cholera occurring in from one to three months after vaccination. At the Karkurie tea estate, of 203 non-vaccinated there were 5 cases (2·46 per cent.) with 2 deaths (0·98 per cent.), and of the 709 vaccinated 1 doubtful case (0·24 per cent.) with 1 death (0·24 per cent.). At Kalain tea estate there were 1375 non-vaccinated with 23 cases (1·67 per cent.) and 11 deaths (0·8 per cent.) and of 681 vaccinated 2 cases (0·29 per cent.) with 1 death (0·15 per cent.).

The second group contains cases where small doses of both vaccines were given, cholera being prevalent during vaccination. At Gaya gaol during the first period of five days necessary for the full effect of the first vaccine, of 210 non-vaccinated there were 7 cases (3·35 per cent.) with 5 deaths (2·38 per cent.), and of 212 vaccinated 5 cases (2·36 per cent.) with 4 deaths (1·89 per cent.). During the second period of five days necessary for the full effect of the second vaccine, of 197 non-vaccinated there were 9 cases (4·57 per cent.) with 4 deaths (2·03 per cent.), and of 206 vaccinated 3 cases (1·46 per cent.) with 1 death (0·48 per cent.). During the last four days of the epidemic, of 192 non-vaccinated there were 3 cases (1·56 per cent.) with 1 death (0·52 per cent.), but no cases amongst 201 vaccinated. The total shows 2·56 times fewer cases and 2·05 times fewer deaths amongst vaccinated than amongst non-vaccinated. The difference in the results in the Gaya gaol during the first five days is very slight, and points out the absolute similarity of conditions under which the inoculated and the uninoculated lived.

The third group includes cases with medium doses of both vaccines. The observations extended over 459 dates after vaccination. In Calcutta the comparison between the uninoculated and inoculated has been made exclusively among members of the same families living under the same conditions of life. Observations during 459 days after vaccination were made in the bustees of Calcutta, and middle doses of one and of both vaccines were given. Of eight houses with inoculated people affected during the first period of five days after the first injection there were 5 cases among 75 non-vaccinated (6·66 per cent.) with 3 deaths (4 per cent.) and 3 cases among 52 vaccinated (5·77 per cent.), with 3 deaths (5·77 per cent.). Of two houses with inoculated people affected during the second period of five days necessary for second vaccination there were 2 cases among 8 non-vaccinated (25 per cent.) with 2 deaths (25 per cent.), and no cases among 17 vaccinated. Of twenty-six houses with inoculated people affected between the 11th and 459th day after vaccination there were 38 cases among 263 non-vaccinated (14·45 per cent.) with 34 deaths (12·93 per cent.), and 1 case (in a child which had not been brought up for the second inoculation) among 134 vaccinated (0·75 per cent.) with 1 death (0·75 per cent.).

The last observation (the fourth group) came from Assam, and was received only a few days ago. The full account has not yet reached me, but the preliminary note runs as follows. In Assam, Surgeon-Captain Hare, my co-worker, is continuing these inoculations for the Assam Government, under whose direction all coolies for the Assam-Burma Railway Survey have been collected and sent under an escort. Cholera had broken out amongst the coolies, and Surgeon-Captain Hare immediately applied the inoculation. The result is as follows: Amongst the uninoculated there were 34 cases with 30 deaths, while amongst the inoculated, which formed the larger part, there were only 4 fatal cases.

It appears that in instances where cholera has made the largest number of victims, and where it has sufficiently spread so as to make it probable that the whole population were equally exposed, the result has been invariably favourable to inoculation. Applied during the existence of the epidemic it tends to reduce the mortality even during the first ten days. In Lucknow there was a difference in the number of cases attacked of between 18 and 13 per cent., and in the deaths of between 12 and 9 per cent. The best method is probably to use doses of both vaccines, the second one being kept at the highest strength attainable. The evidence collected up to now is decidedly in favour of inoculation, and my own conviction is strengthened more and more. My responsibility, however, forces me to point out that the number of observations is not yet very large, and that it is desirable to have the results confirmed by more and more information. I hope you will pardon me if I quote the opinion of Koch, whose discovery was the starting point of our inoculation for cholera. He says "the demonstration is complete; the protective power of the method is established finally by the observations collected in India up to now; further perfections and simplifications may be possible, but the main question at issue, the chief part of the problem, is solved by the facts recorded in your report to the Government of India." I quote this by his permission. Many very interesting curative methods by serum injection have been introduced during my absence from England. Treatment by antitoxins must be considered a decided success, but it cannot be used as a preventive treatment, as its effects on the system are very rapidly worn out. Neither the anti-diphtheritic serum nor the anti-cholera serum lasts more than a few days. The treatment stands otherwise in regard to people affected already. On my return to India I intend to make an extensive trial in connexion with the physicians of the country and with the help of Professor Pfeiffer of Berlin, who has put at my disposal his experience on the subject and a supply of antitoxic serum. In case it proves a failure—and there is danger of the patient succumbing before the antitoxin can have its effect—I intend to combine it with transfusion of saline fluids. It is possible that the administration of antitoxic serum will mitigate the symptoms and it is possible that its administration will diminish the active protection afforded by the vaccines. A series of experiments have been undertaken in the Netley Bacteriological Laboratory.

On the day I came back from India I found Pasteur lying on his death-bed. Whatever might have been his appreciation of the work, I have only one desire—that the whole of the honour that may come from my efforts should be referred to his sacred memory. To the Government of India, the officers of the India and Army Medical Staff in India, to Professor Hankin in Agra, to Dr. Powell of Cuchar, and to Dr. Simpson, the well-known health officer of Calcutta, I address my hearty expressions of gratitude for the assistance they have given me in carrying out my work. I beg them to accept this public acknowledgment that without their help I should never have been able to accomplish in India the smallest part of what I have done. I also beg to thank the chairman and the organisers of this meeting for having given me this opportunity of making this communication.

[At the conclusion of the lecture Sir J. Russell Reynolds said he could not let that lecture come to an end without saying on behalf of his colleagues how deeply they were indebted to Professor Haffkine for having done such good work, and for having come there and given them such a lucid exposition of the way in which the work had been done. They congratulated him most heartily for the success which had attended his labours, and hoped that in the future a still greater amount of success would follow. He congratulated the lecturer on another point. Before Professor Haffkine entered the lecture theatre he had told him (Sir J. Russell Reynolds) that he could not speak English. After hearing Professor Haffkine deliver the lecture, however, he thought he had spoken it remarkably well.]

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Professor Alexander Fraser, having passed the necessary examinations, has been admitted a Fellow of the College. Mr. Richard Keatinge, L.R.C.P.I. and L.S.A. Lond., having passed the necessary examination, has been admitted a Licentiate to the College.

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An Introductory Address
ON
THE SENSES: THEIR USE AND CULTIVATION.

Delivered at St. Mungo's College, Glasgow,

BY FRANCIS H. NAPIER, F.R.C.S. ENG., M.B., B.S. LOND., F.F.P.S. GLASG.,
OPHTHALMIC SURGEON TO THE ROYAL INFIRMARY, GLASGOW.

GENTLEMEN,—We are met to-day to inaugurate the commencement of the winter session, and it is my first duty, and a very pleasant duty too, to give to the students, one and all, a very hearty welcome; and in this welcome I speak not only for myself, but I have also the honour to be the mouthpiece of the governing body of the College and of my colleagues of the teaching staff. We are glad to meet again the older students, invigorated, it is to be hoped, by the vacation just drawn to a close, and returning to their studies with renewed ardour. We are glad also to see amongst us for the first time the faces of those who are on the threshold of their medical studies. We congratulate them on their choice of a profession, not because that profession leads to any considerable pecuniary emolument, but because, with good and honest work, it opens up a prospect of a sufficiency to live upon, and gives a boundless opportunity of alleviating the sufferings of those less fortunate than ourselves. Now, gentlemen, when I was asked to deliver the inaugural address this year, I must own that I felt at a loss; for though deeply sensible of the honour of being invited to undertake it, I was at the same time fully conscious of the difficulty of the task before me. I recognised how limited was the choice of a subject. I take it that the inaugural address should be delivered to the student, and primarily to the first-year student. It should not, therefore, be too technical in character, for that would confine its interest to the few; and, on the other hand, it is difficult to find a subject of general interest which has not become hackneyed by constant repetition. The subject of medical education is, of course, one that will exercise a never-ending fascination on all of us, and is of peculiar interest on such an occasion as the present, but on that topic you were addressed not long since in an exhaustive and able manner by one of my colleagues, so I definitely determined to abandon it. After much consideration I decided to collect a few of the well-known and recognised facts and theories relating to the senses, with the object of seeing what bearing they have upon our profession. I do not hope to present to you anything new or original, for, after all, there is little that is new in the world either of thought or reality. The great philosophers of the Greeks—Socrates, Plato, and Aristotle—had dipped into the realms of speculation as deeply as any of our modern thinkers; but I do trust to be able to put before you, briefly and compactly, some of these thoughts of all times, clothed in such a fashion as to draw out more pointedly the special lessons that they hold for us in our professional requirements.

What do we mean when we speak of our senses? What are their use and what their capacities? It is difficult to define what we imply by the term sensation. Sensation appears to be a peculiar modification of consciousness developed by the action of external stimuli on certain special organs called sense organs, by which the nature of sensible objects is made known to us. The senses, as commonly enumerated, are five in number—those of sight, hearing, smell, taste, and touch. For the proper use of these senses we require a special terminal sense organ and a connecting link between the two. The terminal sense organ is that which directly receives the impressions, and varies in character according to the sense to be supplied, and the connecting link plays the purely mechanical part of conducting the impressions so received to the central sense organ or special part of the brain, to be there translated to the consciousness as sensations. There must also exist some stimulus external to ourselves to produce the impression on the terminal organ, and an unknown quantity, which we call the mind, which makes us conscious of the impressions on the brain. It is quite evident that all these factors are essential. Thus, if the eye be absent or the retina insensitive, there can be no consciousness of light; and if that part of the brain which responds to impressions on the ear be absent or imperfect, the sense of hearing is lost or modified. These factors are present in all animals which are possessed of senses; and just as man has the most highly-developed brain, so, for the requirements of his life, are his sensory organs correspondingly developed. It would be useless to him to be endowed with a brain capable of receiving and translating the most complex impressions, unless he possessed terminal organs equally capable of receiving such impressions, and however perfect and sensitive his sensory organs they would be of little use to a brain imperfectly developed.

It is impossible to classify the senses in any way that is strictly scientific; but the usual method is to class them under headings descriptive of the impressions produced on the mind through the medium of the different sense-organs. Thus we speak of the senses of sight, hearing, smell, taste, and touch; but it will be readily seen that the sense of touch is completely different and much more complex in character than the other senses; it is for this reason that the sense of touch is sometimes spoken of as a "common sense," and the other four as "special senses." Sensations depend on the nervous action excited, which, again, on its part depends largely on the manner in which the external impulse is applied. This holds good for all the senses; thus tone and colour depend on the rapidity of the impulses made on the auditory and ocular apparatus, and it is self-evident that the sense of touch varies considerably according to the stimulus applied. But there is this great distinction that, whereas stimuli applied to the nerves of a special sense give rise to a very limited range of sensations, those applied to the tactile organs excite a class of sensations which vary almost endlessly, according to the manner in which the impulses are applied. We know that, whatever the character of the stimulus applied to the ocular apparatus, the result is always the same—a sensation of light. The victim of a blow on the eye "sees stars." Again, rapid movements of the eyes and pressure on the eyeballs in a dark room produce the same sensation of light. Whether the stimulus be mechanical or spectral the result is identical. The same holds good for the auditory apparatus; whatever the stimulus the result is sound; the kind of sound may vary—it may be musical or discordant, it may be of high or of low pitch—but it is sound. We know that tinnitus aurium, or persistent subjective sound in the ears, is produced by stimulation of the auditory nerve or pressure on the labyrinthine nerve fibres in diseased conditions of the ear. With general sensibility, however, the case is different. We seem to have many senses bound up under the same term, some being modifications of each other, but others partaking more of a special nature; thus we have the sense of simple touch, the sense of locality, the temperature sense, the sense of pain, and the muscular sense. Some of these, I have said, are merely varieties or degrees of the same sense, and are produced by varying stimuli applied to the sensory nerves. As a familiar illustration of this fact I may point out that the schoolboy in handling the cane as a matter of curiosity is conscious of the sense of simple touch; but when the same cane is applied smartly to the fingers as a means of correction his sensations are fully represented by his cries.

There is another important distinction between the sense of touch and the other senses, and it is this—that while each of the latter is excited through a single organ, that of touch is excited by impressions applied to the whole surface of the body. It would manifestly be very inconvenient to us if the general surface of the body possessed the sense of sight—all that is necessary is that the special sense organ of vision should have a commanding but protected position. The same holds good for the other special senses, but not so with the sense of touch. That sense is given to us principally for our protection, and, this being so, it is necessary, in order that it should fulfil that purpose, that the general surface of the body should respond to the stimuli. Consequently we find that the skin is much more sensitive than the deeper structures of the body. A muscle when cut is almost insensitive unless a sensory nerve is injured. Every surgeon knows that the most painful part of an operation is in the initial stage, when the skin is being divided, and that when he gets to the deeper structures of the body, unless diseased, they are almost insensitive. Again, the water which scalds the lips and mouth when it reaches the stomach is only

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able to give us a slight sensation of pain. Thus we see that though all the senses are alike in their physiological requirements, the nature and distribution of the sense of touch is widely different from that of the other senses. Now, in ordinary language we speak of our different sensations as though perceived by the organ which receives the impressions; we say that the eye sees, the ear hears, and the tongue tastes; this is a convenient and even necessary method of expressing ourselves, but scientifically it is inaccurate. It is the brain which alone has the power of perception; the eye does not see, nor the ear hear, neither does the tongue taste, but the impressions received by these organs are conveyed to the brain and translated by the mind into sensations of colour, sound, &c.; the sensations are solely in the mind. So that as sensation is a quality of the mind, and not of the body, it is a mistake to speak of the different sensations, as we habitually do, as bodily sensations. Again, when we fix our attention on objects around us we commonly and most inaccurately speak of our perception of those objects through certain qualities. Thus we speak of the colour of flowers, the song of birds, and the taste of food, inferring that the object has that particular quality which it has not, for these qualities are our own mental sensations. More than 400 years B.C. Plato recognised this fact, and in his "Dialogue on the Republic" illustrates the nature of our sensuous knowledge through a parable. He supposes a number of captives confined in a cave and bound down in such a manner that they can only see the further end of their prison, and that across the mouth of the cave pass figures which cast their shadows within. The prisoners, only able to see the shadows, would speak of them as realities and invest them with names and qualities; so with us: the world is a mere world of sensations and shadows, quite as unlike the realities as Plato declared them to be.

It is difficult for us to conceive that we do not see things as they appear to us projected into space, but it is no longer capable of dispute that our ideas of size, space, and distance are the results of acquired knowledge founded on mental efforts and experiments principally made during the year of infancy. The man, who, blind from birth, is suddenly, by surgical operation, put in possession of the faculty of sight cannot distinguish distance by sight alone. All objects appear equally near to the eye, and objects known to the touch are not recognised by the eye until the person becomes accustomed to compare his sensations of touch with those of vision; he cannot even distinguish a body in action from a body at rest—that is, he does not conceive that successive impressions of the object over the field of the retina imply that it is moving. Though this is so, though we are perfectly aware that nothing outside ourselves possesses the qualities that we invest it with, still we find it convenient to ignore the fact and to speak of the brilliant sunshine, the green grass, the disagreeable smell, and so on—it is our only method of expressing ourselves. If it be true, then, as I have just stated, that all sensations take place in the brain, how comes it that we refer these sensations to objects outside ourselves? The answer is, By experience. The newly born child has no knowledge of the external world, and his range of sensations is very limited; he recognises the sensation of light and moves his eyes towards the source of the impression, and, as he grows older, he learns to associate involuntarily the movements of the eye necessary for the fixation of the object. At the same time, the sense of touch being very early developed, he touches the object, recognises its presence, and learns the requisite muscular effort required to bring the hand into contact with it. Not only this, but he sees his hand, he sees its movements, and he sees it touch the object. By comparing these impressions of sight, touch, and muscular movement he elaborates, by slow degrees, the ideas of substance, of resistance, and of extension, and attaches physical qualities to certain objects. These different sensations combine to teach him that the object which is giving rise to varying sensations of the mind is external to himself, he begins to be conscious of something outside the *ego*—conscious of the world around him. If he were only to recognise the mental impressions, he would have to particularise each separate impression producing sensations of light, feeling, muscular sense and movement, but he only recognises one impression—namely, the object that he is seeing and touching: therefore it must be outside himself. As he increases in physical and mental development the child learns to refer all his sensations to external objects, and to think of them as directly giving rise to those sensations.

In fact, all our knowledge of the world around us, our knowledge of everything that exists, our whole power of reasoning, is dependent on the exercise of our senses; without his senses man would be merely a potential being. Kant puts the same thing tersely and epigrammatically. "Concepts without intuitions," he says, "are empty; intuitions without concepts are blind"; that is to say, "Without our senses our mind would be empty, without our mind our senses would be blind." In these few words is bound up the whole philosophy of the subject. It does not seem, however, that all, or nearly all, the senses are necessary for the full development of the brain. We are aware of many cases which prove the contrary—men and women who, deprived of one or more senses from birth or early childhood, have been found capable of fulfilling important duties in every walk of life; their conception of the world around them must be very different to ours, but what they lose from defect of one sense is made up to them by hypersensitiveness of others. John Stanley, the eminent musician, born in 1713, lost his sight at the age of two years. For fifty years of his life he held the appointment of organist both of the Temple Church and of St. Andrew's, Holborn; he was an expert performer on the flute and the violin, and for ten years superintended the performance of the oratorios at Covent Garden Theatre. Stanley's skill as a musician was such that, when at a performance of one of Handel's *Te Deums* he found the organ a semitone higher than the other instruments, he without any premeditation transposed the whole piece from D into the key of seven sharps major. To take another striking instance of what the capacities of a blind man are, I may mention the case of John Metcalf, the greatest blind mechanic who ever lived, who, born in the year 1717, at the age of six became totally blind from small-pox. In the words of Mr. Hanks Levy, himself a blind man, speaking of Metcalf, he says: "He walked and rode, he swam, fished, played at cards and skittles, rode and betted on races, was an excellent performer on the hautboy and other instruments, was a very successful recruiting agent, and as a soldier was the life of the corps to which he belonged. He was a dealer in horses, fish, hay, and wood, and succeeded in evading the law in various contraband transactions. He was successful in building houses and in making a great number of roads and bridges which to this day are a lasting memorial to the genius, perseverance, and indomitable courage of this blind man." In our own days we have had John Fawcett, Postmaster-General and Cabinet Minister, one who through his great mental qualities and sound common sense was a mainstay to his party. All these are instances of what can be done in spite of the loss of a single sense. But let us go further. We have all heard of that wonderful American woman, Laura Bridgman, born in 1829. At two years of age, when she had only mastered the difference between A and B, she became seriously ill, and when she recovered, five months later, she was blind, deaf, and had nearly lost the power of smell and taste. Her sense of touch, however, was perfect, and through this one sense she was taught to read by several systems; she was taught to write, and, most wonderful of all, communicate with her fellow-creatures. Laura Bridgman possessed a master-mind; no difficulties were too great for her, and she died at an early age, justly celebrated as a teacher and an author. The case of Helen Keller is, perhaps, the most wonderful of all. Born in 1880, she became deaf, dumb, and blind at the age of eighteen months. When seven years of age she was placed under the instruction of an expert, who taught her entirely through the sense of touch. In a few days she had mastered the manual alphabet and was learning the names of objects around her, and within four months of the beginning of her education she was able to write a perfectly legible and correctly spelled letter. At the age of ten she learned to speak, being taught to imitate the movements of the lips, tongue, and throat in her instructor by touching them with her fingers. In twenty-four days she had the free use of speech. In her case, as in that of Laura Bridgman, her education was effected through the sense of touch; if she had been without that sense, her brain would have remained dormant—capable, it is true, of great things, but undeveloped because incapable of receiving intelligence of anything outside itself.

Before leaving this part of my subject let me say a few words on the subject of the unrecognised sense.

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Just as mathematicians are fond of speculating about a fourth dimension, so do physiologists try to prove the existence of a sixth sense. I have personally no doubt—and no one who has much to do with them can fail to recognise it—that the blind possess a sense which is either absent or lying dormant in the sighted. A blind man who has been properly educated will walk along a crowded street, cross roads, and run up and down staircases with the greatest facility. I have seen dozens of blind men skating together and never coming into collision, which is more than can be said for their sighted brethren. A blind man when opposite an object can perceive whether it be tall or short, slender or bulky; he can detect a solitary object or a continuous fence. Mr. Hanks Levy says that he can do all this and more; when walking along a street he can distinguish shops from private houses, and even point out the doors and windows. He says that darkness makes no difference to him, but that a fog dulls his powers; that he seems to perceive objects through the skin of the face and to have the impressions immediately transmitted to the brain. Covering his face with a thick veil destroys the sense altogether. He calls this unrecognised sense by the name of "facial perception."

Now it is quite evident that just as our mental powers can be developed by education so also can our senses. The newly-born child is conscious of the stimulus produced by light, but he has no impression of objects, he has no peripheral vision. His sense of touch is strongly developed from birth, but he is without the sense of hearing till the second or third day, and possibly later. As the child grows up his senses become more developed and his intelligence increases; so it is with all of us: our senses and our intelligence go hand in hand and increase in powers of perception and conception until with advancing age they again become blunted. Some are, no doubt, endowed by nature with greater quickness of observation than others, but all can cultivate the powers they possess. About the middle of this century there appeared in London a Frenchman named Houdin, who had cultivated his powers of quick and accurate observation to a degree of perception that was hardly short of miraculous. His father had been in the habit of training his perceptive faculties from early youth by making his son walk down a street and then describe all that he had seen in the windows of the shops he had passed. Taking advantage of his exceptional quickness, the father professed that his son was gifted with second sight and made a handsome income by exhibiting his powers. One of his favourite tricks was to hold a *séance* in the drawing-room of a strange house and to make his son give a description of one of the rooms on the ground floor, which room he had previously allowed him to glance into on his way through the hall. Houdin would accurately describe not only the furniture and ornaments of the room, but also the subjects of the pictures and the names of the books in the bookcase—all his information being obtained by one quick glance. The painter in the study of his art learns to distinguish gradations of colour too subtle for the uneducated eye to perceive. He can resolve colours into their component parts, and when he wishes to reproduce the beauties of nature on his canvas he uses a number of pigments which to the uninitiated bear no relation to the general scheme of colour. The musician, by long practice, can recognise the fundamental and overtones of every note; he can pick out the individual part in a complicated piece of orchestral work, and a false note made by a single instrument is immediately detected. The wine-taster is, by long experience, able to value the different kinds of wine, either through the sense of taste or smell. So it is with the medical man, who is enabled to detect the slightest departure from the standard of health with a precision only born of constant practice and observation. The whole art of diagnosis, all success in treatment, depends on an intelligent use of our senses. Everything we know in medicine and surgery has been learned through the senses, and the greatest discoveries have been made by means of discriminate observation. The medical and scientific world is at the present moment mourning the loss of one of the greatest savants and experimenters of modern times; one who, by his genius, became pre-eminent as a chemist; one who saved for his fellow-countrymen untold wealth, and who paved the way for the successful application of preventive treatment in medicine. I speak, of course, of Monsieur Pasteur, who, living to an advanced age, never seemed to tire of the *rôle* of benefactor to his fellow creatures. How was it done? By the constant and untiring use of the senses, by trained observation, and by well-ordered experiments. We cannot begin too soon in our medical education to cultivate those senses which are to assist us so much in our profession. Anatomy was never learned by reading books; the only true way to study anatomy is by dissecting and seeing for oneself the complex arrangement of the human frame. Learnt in this way it is never, it can never, be forgotten. It was while dissecting as a student that Sir James Paget discovered the presence of the trichina spiralis in the diseased condition called trichiasis. And whilst I am on the subject of anatomy let me impress on you one thing, and that is to feel everything with your fingers as well as seeing it. Holden says that every surgeon should have eyes at the end of his fingers, so as to form a mental picture of what he feels, and every surgeon knows that when operating he has often to be guided by his fingers where, owing to bleeding or position, he cannot see. But unless he has learned by experience to recognise what he feels his fingers will be of no use to him. So I cannot impress on you too strongly the importance of accustoming your fingers to the feeling of the normal parts and their relation to each other, and this experience you can gain in the dissecting room with very little trouble. Just as anatomy and physiology, chemistry and materia medica, and all those subjects which will take up your attention during the first two years of your studies—I say, just as these subjects lead you onward to the study of the greater sciences of medicine and surgery, so the habits of observation that you have acquired while mastering them become of infinite value to you when face to face with disease in the wards or the dispensary. Here, again, your efforts to acquire a habit of quick observation should be unceasing—eye, ear, touch, all the senses should be brought into play, first consciously, but with practice almost unconsciously. You may think that I am laying an unnecessary amount of stress on this point, but I assure you it is not so. From my own experience I find that a very large proportion of students notice nothing about their patients until they begin to interrogate them and to find out the history of their complaint. The patient possibly is lame, or his fingers are disfigured with rheumatic gout, or one of his eyes may be injured, but the unobservant student has seen nothing; not so with the practised observer, who takes immediate note of any peculiarity of gait, posture, or figure, who hears the cough and notes its character, and takes in, almost insensibly, the nature and characteristics of his patient before asking him a single question. In diagnosis there are two methods of procedure usually followed; on is to take note of all the physical signs and symptoms of the patient, and afterwards to elucidate the history of the case, and the other method is to reverse the process and begin with the history. The latter is the more generally adopted as it is the easier, for the more salient features of the disease may often be discovered through the history without the trouble of any further examination; but whichever method is carried out it is wise to begin by taking a rapid and comprehensive survey of your patient before doing anything else, for it is in the first few seconds that you will notice most. But let me warn you, on the other hand, against the evils of "snap-shot diagnosis" which we are all of us so prone to in the earlier part of our career. These rapid observations of the outstanding features of a case should not be made the basis of an immediate diagnosis, but should rather act as guides to our subsequent examination, both physical and historical, of the condition of the sufferer.

Let me give you a few instances of what I mean. The man whose jaw is broken supports his chin on his hand; when the clavicle is fractured the shoulder on that side is flattened and drawn forwards and inwards, and the elbow is supported by the opposite hand to take off the weight. The peculiar swaying gait, the body being poised over each limb in turn at every step, betrays the condition called congenital dislocation of the hip, and the position of the limb makes us suspect the presence of hip disease in its early stage, the joint being flexed, abducted, and rotated outwards into the position of greatest ease. A person suffering from inability to face the light, with watering of the eyes, compels us to think of disease of the cornea; but if these symptoms are confined to one eye we suspect the presence of a foreign body or some local cause of irritation. The ataxic patient walks into the room with exaggerated movement of the legs, but he who is suffering from lateral sclerosis drags his stiffened limbs behind him. The complexion and appearance of the face may help us in many

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ways—it may be anæmic, chlorotic, flushed, cyanotic, or jaundiced; it may be emaciated, puffed, or œdematous. These are only a few illustrations amongst a host that crowd into one's mind. Numberless instances might be quoted to illustrate the value of the cultivation of the senses in the practice of our profession. Take the case of tumours. The uneducated eye sees a swelling of a certain size and shape and nothing more; but the surgeon has to learn the nature of the swelling—he looks at the skin over it and at the vessels transversing its surface; he notes its colour and the presence of inflammation or ulceration; his fingers detect whether the skin over the tumours is loose or bound down, whether there is fluid inside it, or, if solid, what its consistence; the hand applied to the surface detects increase of temperature or presence of pulsation, and the ear or stethoscope hears the bruit or sound within. All these points and more must be gone into before a satisfactory diagnosis can be made.

Even the most highly trained senses may be mistaken, and it should not be forgotten that a single sense may be wrong in its deduction, but that where several senses point to the same conclusion the evidence is much strengthened. We have all heard, and some of us may have had experience, of illusions of the senses, but we know that it is always a single sense that has been led astray; the ghost is seen gliding through the corridor, but there is no sound or footfall; the carriage is heard to drive up to the door, but no horses can be seen. An illusion never affects more than one sense at the same moment. Again, to take other instances, the educated fingers can detect the slightest deviation from the normal standard in the tension of the eyeball. The operator, by his cultivated sense of touch and exact balance of muscular action, is enabled to perform difficult and dangerous operations with comparative ease and safety. To such a pitch of perfection can this "tactus eruditus," or educated sense of touch, be brought that the surgeon, in passing the catheter or the lacrymal probe, can tell immediately if the point of his instrument is following a wrong direction, and is informed of the character of the mucous surface his instrument is traversing. I was told lately of a well-known surgeon who was exploring an incised kidney through a lumbar incision in order to discover the presence of a stone. With the point of his finger he was able to find it; and not only so, but he gave an elaborate description of the stone, its size, shape, and character, so graphic and so precise that his auditor could have drawn an exact representation of the calculus before he saw it.

Again, what should we know of the condition of the internal organs if it were not for our educated senses? Take the case of the chest—with the ear and the stethoscope we listen to the sound of the heart and discover the presence, character, and position of murmurs or periodical sounds; we listen to the lungs and notice the respiratory and pleural sounds and the vocal resonance. Inspection, auscultation, palpitation, and percussion all give their quotum of information. And so on through the whole range of medicine and surgery. It is quite evident then that you cannot bring yourself too much in contact with patients and their diseases, and it is for this reason that you are much to be congratulated on the wealth of material ready to your hand. Here you will have no excuse for not cultivating those senses which in some other schools might become blunted for want of use. And let me strongly advise you not to depend on what your teachers tell you, but to depend on your own observation; during the next few years you will be under the guidance of many instructors, but all they can do for you is to teach you how to learn for yourselves; your teachers as well as yourselves are merely students, only a few rungs higher up the long ladder of knowledge; they are all liable to error, and it should be your constant care to correct such error by the constant use of your own observation. I do not ask any one of you to become a Sherlock Holmes; that most interesting person, who died in this country in the early spring, but seems to have come to life again in America, had a comparatively simple task before him; from an accomplished fact he had to trace back the sequence of events until by discovering the why and the wherefore he was able to put his finger on the perpetrator of the deed. We have a much harder task, for we must look forwards as well as backwards; not only must we find the first causes and trace the origin and course of a disease, but we must also discover the indications which point to its future progress either for good or bad. But it is not sufficient to haunt the wards and dispensaries. We have seen already that sensation is a mental quality; consequently the brain must be educated. It is not sufficient for the brain to be a simple storehouse of impulses received through the senses; it must also be educated in order to give these sensations their proper proportion and significance. Reading, and wide reading, must be resorted to, to develop the mind and give it a broad grasp of the facts and realities of life. It is not by the exclusive use of the senses or by reading only that the highest development of reason is obtained, but by a proper combination of the two.

And now, gentlemen, a few words to those who are just beginning their professional career. You have probably studied your college calendar and have mystified yourselves to some extent with numberless details of what is about to be required of you. You have grasped the one outstanding and appalling fact that many examinations have to be passed before you can enter the portals of the medical profession. The terrors of these examinations have probably been enhanced by your friends—by those who have failed, because they wish to impress on you an explanation for their failure, and equally by those who have passed, who are anxious that you should realise the value of their achievements. You have very likely been told that for the next five years your life will be made a burden to you by their constant ordeals, and if that were in reality all you had to look forward to your existence would indeed be insupportable. But it is not so; and I implore you to remember from the first, from the very commencement of your professional studies, that the aim and object of those studies is not primarily or to any important degree to enable you to pass certain examinations, but that their object is to teach you your work, and to train you in the duties of your profession. A man who knows his work will certainly pass his examinations; but, on the other hand, many men have passed successfully only to find out afterwards that they did not know their work, and that their best opportunities for real study had passed away. The best advice I can give you is to put all thought of examinations out of your minds, to do the work that your teachers direct you to do, and to do it thoroughly, and when the time comes for the final effort, when each man strains every nerve to collect all his knowledge in a concrete form, you will find what a comparatively easy task you have before you, and examinations will lose their terrors. Work for the sake of the work itself, and it will well repay you. Some men work to make a living, some for ambition's sake, and some for the pure love of doing good to their fellow-creatures. Now I presume that most of us take up the medical profession with the object of making a living, and a very good object it is, too. I am not going to pretend to you that our one and only stimulus is the opportunity presented to us through our profession of doing good: you all know that it is not so; you have decided to join the ranks of the medical profession in order to make your way in the world. This is your primary object, but to it is added the great pleasure of knowing that inseparably bound up in the practice of that profession is the fact that we are benefiting mankind. What a stimulus should this be to us to make our work as perfect as we can, not only during our student days, but through the whole of our career.

A NATIONAL SYSTEM OF NOTIFICATION AND REGISTRATION OF SICKNESS.[1]

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THE subject of this paper is not novel. Most of the proposals and suggestions which I shall make have been already made, more ably than I can hope to repeat them; and what is novel in my remarks is but the natural outcome of the pioneer advocacy by B. W. Richardson, Farr, Rumsey, Ransome, and many others. The present time, however, seems opportune to reopen the question, review the progress already made, compare our experience and present condition as regards the notification of sickness with that of other countries, and indicate the directions in which reform and advance are urgently required and may be most

[1] Abstract of a paper read before the Royal Statistical Society on Dec. 17th, 1895, Mr. C. S. Loch, B.A., Vice-President, being in the chair.

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advantageously pursued. I shall in the first place briefly sketch the history of the question and the progress already made; this progress will in the next place be contrasted with that made in some other European countries; and, finally, proposals for further progress will be made.

The office of Registrar-General of Births, Deaths, and Marriages in England was created in 1836. The first report of the Registrar-General was published in 1839. Although the comparison of death-rates of great towns with each other, particularly for short periods, is fraught with fallacies, the general result of the publicity secured and of the consequent efforts on the part of local authorities has been an immense improvement in the public health of the community. The reduction in the general death-rate from 24·7 in town districts in 1851–60 to 20·2 in 1884–93, and from 19·9 in country districts in 1851–60 to 17·5 in 1884–93, and the reduction of the death-rate from "fever" from 792 per million in 1858–60 to 202 per million in 1886–90, are sufficient evidence of this. It soon, however, became evident that registration of deaths gave a very imperfect view of the prevalence of disease. It is very fallacious to assume any fixed ratio between sickness and mortality. The fatality of infectious diseases, for instance, varies greatly in different outbreaks under varying circumstances and in different localities. Thus, if it be required to compare the amount of scarlet fever in Brighton with that in London, in 1894 the death-rate from this disease in London was 0·22 and the number of cases was 4·24 per 1000 of the population. In Brighton in the same year the corresponding death-rate was 0·03 and the case-rate 1·85 per 1000 of the population. It can easily be calculated from these data that the ratio of the scarlet fever death-rate in Brighton and London was as 1 : 7·3, while the ratio of the corresponding case-rate was as 1 : 2·2. Thus the fatality of scarlet fever in Brighton was 1 in 62 cases, while that in London was 1 in 19 cases. Hence, while the deaths from scarlet fever in London were over seven times as numerous (in proportion to population) as those in Brighton, the cases were only about twice as numerous. This illustration serves to show that *mortality* is not necessarily a correct index of the *morbidity* of a community. The highest ratio of sickness is occasionally found associated with a favourable rate of mortality. Mortality statistics necessarily ignore everything that precedes the close of life. They are silent about the large mass of common sickness, which, although it may disable a man, is not "unto death." From the standpoint of the commonwealth and the common health, sickness is more important than death; for "it is the amount and duration of sickness rather than the mortality that tell on the prosperity of a community." (Dr. Dickson.) Or, as Charles Dickens has stated it: "It concerns a man more to know the risk of the fifty illnesses that may throw him on his back than the possible date of the one death that must come. We must have a list of killed *and of the wounded too*."[2]

[Dr. Newsholme then proceeded to give the history of attempts to establish registration of sickness. He said:]

Dr. Rumsey[3] in 1875 mentioned that it was one of "twelve proposals by which the lives of many thousands of the rich as well as the poor may be saved yearly," made to Parliament by Mr. John Bellers at the beginning of the eighteenth century, before the first of our modern hospitals was planned. It was again urged by Dr. Clifton, physician to the Prince of Wales in 1732, with special references to hospitals. Dr. Rumsey in 1844, in his evidence before the Medical Poor Relief Committee of the House of Commons, suggested a comprehensive plan for the uniform registration of the sickness which affects the poorer classes. In 1848 Dr. Liddle, subsequently medical officer of health of Whitechapel, proposed amended forms for the weekly medical returns made by their medical officers to boards of guardians, and the utilisation of these returns in general sanitary inquiries. About the same time it was suggested in the *Sanitary Review*[4] that there should be appointed a Registrar-General of *Diseases* in London as the central authority, to whom the district returns, after local use, should be forwarded for digest and publication. Dr. B. W. Richardson was, I believe, the first to carry any scheme for notification and registration of sickness into actual practice. The cases notified were tabulated in the *Journal of Public Health and Sanitary Review* of 1855; but he had written on the subject as far back as 1852. The registration was continued by Dr. Richardson for several years, "and in the end had observers, from Dr. Moyle of the Scilly Islands to Dr. Spence of Lerwick, in the Shetlands. At one time he had forty-four observers from latitude 40° 50′ N. to 60° 9′ N., and from longitude 6° 24′ W. to 1° 8′ W. These observers were all admirable men, and many of their local reports were most valuable, although now forgotten. They entered their remarks on printed forms, which were regularly posted to them each quarter." In the end, attempts to secure official support for the work having failed, the notification ceased. Dr. Richardson's personal pioneer effort to secure information as to sickness from different sources was soon followed by the Metropolitan Association of Health Officers, which in 1857 organised a combined effort to give authentic information concerning sickness of all kinds attended at the public expense. The returns included sickness of all kinds attended at the public expense, in hospitals and dispensaries, and by Poor-law medical officers, whether outdoor cases or in workhouses and infirmaries. The returns were contributed voluntarily and gratuitously by the respective medical officers of these institutions and the Poor-law medical officers. The General Board of Health undertook to print and circulate the weekly and quarterly tables; and meteorological tables were appended to each publication. This magnificent voluntary effort for some time appeared likely to prosper. At the most successful period, however, rarely more than 50 of the 109 metropolitan hospitals and dispensaries contributed to the returns. The returns of Poor-law cases were, at the best, from only 80 of the 180 Poor-law medical officers in the metropolis; and the official publication collapsed in November, 1858, before the end of its second year of publication. A much more successful attempt was organised in 1860 by the Sanitary Association of Manchester and Salford, Dr. Arthur Ransome being the moving central spirit in it. The tables compiled by this association had one special merit not shared by those of the Metropolitan Association: the number of deaths among the cases reported was stated, so that a complete comparison between the sickness and mortality in the groups and classes of population included in the reports could be made. The returns seem to have been conscientiously and completely made, thus giving them, as claimed by the honorary secretaries in 1862, "a value which no similar return has ever attained before." From this point the history of the attempt to establish registration of sickness is chiefly comprised in the proceedings of special committees of the Social Science and the British Medical Associations. At the Bradford meeting of the Social Science Association, in 1859, Dr. Rumsey read two papers bearing on the registration of sickness, and on the general working of the system of registration of deaths,[5] and, as the result of the discussion which followed, a committee was formed. This committee, in March, 1860, passed a resolution recommending, among other things, that the superintendence of the registration of births and deaths should be combined with that of sickness attended at the public expense, and, as far as possible, that of sickness attended at public institutions. This resolution was subsequently endorsed by the association and brought under the notice of the Home Office. At a meeting of the Lancashire and Cheshire Branch of the British Medical Association, held on Oct. 24th, 1862, it was resolved that a sub-committee be appointed "to consider and report on the best means of carrying out the registration of disease in large towns." A committee of the whole British Medical Association was appointed in 1865, at the instance of Dr. Ransome, and for ten subsequent years he prepared valuable reports, from which the following information is extracted. At a meeting of the British Medical Association held in Dublin on Aug. 9th, 1867, the form of return proposed by the above committee for the uniform registration of disease was adopted; and in January, 1868, the registration of disease occurring in public practice was commenced upon the same plan and with the same list of diseases at Manchester and Salford, St. Marylebone, Birmingham, Newcastle-upon-Tyne, and Gateshead. The returns were made monthly at St. Marylebone, weekly at the other places.

In 1869 a deputation headed by Dr. B. W. Richardson waited upon the President of the Local Government Board, who expressed himself "heartily with the deputation in spirit." In 1870 a deputation of the British Medical Association waited on Mr. Goschen, who thought it desirable to

[2] All the Year Round, vol. iv., pp. 227 and 228.
[3] Essays and Papers on Some Fallacies of Vital Statistics, 1875, p. 47.
[4] Vol. iii., p. 317.
[5] Rumsey, op. cit., pp. 1 and 17.

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wait for the report of the Royal Sanitary Commission. He agreed that the registration of disease would be an excellent thing. The report of the Sanitary Commission appeared in 1871, but nothing came of it.

One by one the towns contributing to the voluntary notification of sickness ceased their work, the efforts of Manchester and Salford being the most protracted and successful. It need cause no surprise that the voluntary coöperative principle has failed in this instance, notwithstanding the pertinacity and enthusiasm of its earlier advocates. "The voluntary principle, so powerful in the diffusion of Christianity, in works of mercy, in struggles for liberty, and in scientific discovery, has invariably proved quite unequal to the regular, constant, and universal performance of laborious official duties without any hope of profit or of praise." (Rumsey.)

The subject of a national system of registration of disease, the attempts to establish which I have sketched, appears to have gradually dropped into abeyance. It was blessed by medical men and sanitarians and Secretaries of State, and yet the inertia of officialdom appears to have prevented any practical steps being taken. The measure was not one which it was profitable to pursue in the stress of political party strife, and it was pushed aside for more urgent and politically more attractive schemes.

[Dr. Newsholme then passed on to consider the compulsory notification of disease:]

In September, 1877, the first local Act for enforcing the compulsory notification of the chief infectious diseases came into operation in Bolton, Lancashire. This example was followed by other towns, and the adoptive enactment of the Infectious Disease (Notification) Act in 1889 was followed by a rapid adoption of the Act by urban and rural sanitary authorities throughout England. At the present time the Act applies to five-sixths of the English population, and there is little doubt that it will shortly be made compulsory through the whole of Great Britain. Notification is but a means to an end. If the early and authentic information imparted to health officers by notification is simply filed in the office, the course of an epidemic will obviously be undisturbed; but when such notifications are followed by conscientious investigation, when the water-supply, the milk-supply, the school attendance, and a number of other factors in connexion with a series of cases of infectious diseases are examined, it is evident that the resulting chain of evidence may be, as in many instances it has been, so strong as to lead to immediate preventive measures of a most successful character, and in other instances to force the most radical reforms upon even unwilling sanitary authorities. This does not exhaust the benefit derived from compulsory notification of infectious diseases: the notifications have forced upon sanitary authorities the knowledge that there are infectious diseases in their midst, and the constant reiteration of the lesson has gradually and increasingly braced them up to the discharge of their duties. Hence it is not surprising to find that at no previous period of the sanitary history of England has there been such great activity as since 1889 in the provision of isolation hospitals. Even if these isolation hospitals have not, by the removal of first cases of infectious diseases in houses, diminished the prevalence of infectious diseases, they have as humanitarian institutions justified their existence by the better and more successful treatment that the majority of patients thus removed have secured; but they have also diminished the actual amount of some of these diseases. Small-pox epidemics are more easily manageable and have been kept within narrower bounds in communities in which all cases are notified and isolation enforced. Scarlet fever has declined enormously in mortality in recent years. Some of this decline is doubtless due to the milder type of disease now prevalent, the case mortality having become greatly reduced. It may be fairly argued, however, that the diminishing malignancy of this disease is partially due to the fact that cases of it, instead of being treated in crowded houses with imperfect nursing, are now treated in large airy wards, the virus of the disease not being concentrated by an unfavourable environment. This hospital treatment of infectious patients can only be secured in the majority of instances through the machinery of compulsory notification of the cases. Notification of infectious diseases, by forcing attention to them, has led to the provision of more efficient means of disinfection, to the removal of insanitary conditions to which in some instances they owe their existence, and to the steadily improving education of the public in hygienic matters.

[Dr. Newsholme then pointed out the various advantages gained from the mass of information accumulated through notification, and strongly urged the compulsory notification of *all* infectious diseases. He also suggested an interchange of information bearing upon infectious disease: (1) between different districts of this country, and (2) between this country and other countries. He continued:]

We may conveniently consider here foreign methods of notification and registration of sickness. A recent investigation into the etiology and relative prevalence of rheumatic fever in various parts of the world[6] has made me familiar with the available sources of information in many countries, and by personal inquiries in German and Scandinavian towns I have been able to acquire additional information from the responsible medical officers.

[Dr. Newsholme hereupon gave an account of the means adopted for the notification and registration of sickness in Belgium, Germany, Denmark, Sweden, and Norway, and after claiming that the scope of preventive medicine was co-extensive with all diseases, except the consequences of old age, concluded his paper with the following proposals:]

Accurate knowledge of sickness, of its degree of incidence in relation to sex, age, occupation, housing, locality—in fact, of all the conditions under which it is originated—must, however, precede rational preventive measures. Hence it is necessary that the following measures should be adopted:—

1. All cases of sickness occurring among the parochial poor in each district should be periodically reported to the medical officer of health, and tabulated statements concerning them forwarded to a central office in London, in which such statistics, along with those from other sources, should be analysed, summarised, and published. Schedules might easily be arranged similar to those in force in Christiania or Berlin, in which a weekly return of the new cases of sickness among the poor could be made by the Poor-law medical officer with a minimum of trouble. The cases in the workhouse infirmaries and in industrial schools should be similarly scheduled. Care would be required to prevent the same cases from being entered more than once. It may be mentioned that it has since 1879 been incumbent on all district and workhouse medical officers, and upon medical officers of district schools appointed since that date, to furnish the medical officers of health with returns of pauper sickness and deaths; but as the chief object of these returns appears to have been the notification of infectious diseases, the returns have been in most places allowed to lapse, and have not, I believe, been used for general statistical purposes.

2. All cases of sickness, whether out-patients or in-patients, at hospitals (general and special) and at public dispensaries should be reported weekly or monthly to the medical officer of health, and by him forwarded to the central office in London, to be there treated like the pauper statistics. The hospitals and dispensaries of this country are supported by subscriptions or bequests, and they owe it to the State to furnish the fullest particulars which the latter may require. Every public institution for the treatment of the sick should, I maintain, be required to give to the medical officer of health a weekly statement of the number of new in-patients and out-patients treated during the week, specifying the age and sex and nature of the illness of patients; also a quarterly or annual statement of the total cases, and the number of days spent by each patient in the hospital. The statistics of large general hospitals, especially those to which medical schools are attached, are of great value, the diagnosis and certification being exceptionally accurate. I have recently shown that the statistics of the chief metropolitan hospitals give a faithful index of the yearly incidence of rheumatic fever in London, and the same must be true for many other diseases. It will hardly be credited that several of the large metropolitan hospitals, as University College, London, and Guy's Hospitals, publish either very imperfect or no tabulated statistics of annual cases of sickness. At the Edinburgh Infirmary such records were only commenced in 1889, while in other hospitals in various parts of the country accurate statistics have been kept for a long series of years, as at Aberdeen, Glasgow, York, Bradford, Brighton, and many other places. It should be made obligatory on the managing bodies of all general and special hospitals and all public dispensaries to keep accurate entries of all cases treated at these institutions, and to report on special schedules these cases to the medical officer of health at stated intervals. What has been done in Germany can be done here, and as they followed our lead in respect of

[6] Milroy Lectures on the Natural History of Rheumatic Fever, 1895.

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registration of deaths it is for us now to follow them in registration of hospital and other forms of sickness. The question of hospitals would not be complete without reference to the special hospitals now established in most towns and districts of England for the isolation and treatment of infectious diseases. Many important problems as to the intensity of different epidemics, the relative fatality of cases occurring in different districts, the influence of "hospitalism" on the character of each disease, &c., might be solved by accurate comparative statistics for the great fever hospitals throughout the country. At present there are statistical reports for such hospitals in the annual reports of some medical officers of health of very varying comprehensiveness and value. What is required is that these should be formed on a uniform basis, and that the statistics from different hospitals should be analysed and published at a central office in London. It is but fair to mention here the extremely valuable reports of the statistical committee of the Metropolitan Asylums Board. The year 1894 was the ninth year of issue of this report, which is in some respects a model for others. I may also mention here the statistics in the same report as to lunacy and imbecility in the asylums and schools of the Board, which it ought to be practicable to compare with those of other similar establishments throughout the country. The lunatic asylums for each county form another field for collective investigation, which can only be fully utilised by analysis and tabulation of statistics at a central office.

3. All friendly societies and all sickness insurance societies of every description should be required to furnish weekly or monthly returns of the number of new cases of sickness in their experience, classified according to a specified schedule, and a yearly statement of the total subscribing number of members, classified according to age.

4. An attempt should be made to obtain accurate returns of sickness in the great industries. This can only be gradually secured. Two factors are necessary in order that industrial sickness may be estimated for comparative purposes: (*a*) an accurate return of the number of men employed in each industry; and (*b*) a similarly accurate return of the cases and causes of sickness, each classified according to age. Some important steps have been taken in this direction in the Factory and Workshop Act, 1895, which will come into operation on Jan. 1st of next year. By Section 34 it is required that:

> The occupier of every factory and workshop shall, on or before the 1st day of March in every year, send to the inspector of the district on behalf of the Secretary of State a correct return specifying, with respect to the year ending on the preceding 31st day of December, the number of persons employed in the factory or workshop, with such particulars as to the age and sex of the persons employed as the Secretary of State may direct, and in default of complying with this section shall be liable to a fine not exceeding £10.

There is, however, no provision requiring a general notification of sickness among the employés, although this would be quite practicable. The only approach to it are the enactments contained in Sections 20 and 29. Section 20 states that:

> 1. Every occupier of a factory or workshop shall keep a register of accidents, and shall enter therein every accident occurring in the factory or workshop of which notice is required by the Factory Acts, within one week after the occurrence of the accident, and this register shall be at all times open to inspection by the inspector and the certifying surgeon for the district.
> 2. If any occupier of a factory or workshop makes default in complying with the requirements of this section, he shall be liable on summary conviction to a penalty not exceeding £10.

This enactment will doubtless be of great value in determining the relative liability to accidents of different industries, and the directions in which additional regulations and restrictions are required. Section 29 requires that:

> 1. Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or anthrax, contracted in any factory or workshop, shall (unless the notice required by this section has been previously sent) send to the Chief Inspector of Factories at the Home Office, London, a notice stating the name and full postal address of the patient, and the disease from which, in the opinion of the medical practitioner, the patient is suffering; and shall be entitled in respect of every notice sent in pursuance of this section to a fee of 2*s.* 6*d.*, to be paid as part of the expenses incurred by the Secretary of State in the execution of the principal Act.
> 2. If any medical practitioner, when required by this section to send a notice, fails forthwith to send the same, he shall be liable to a fine not exceeding 40*s.*
> 3. Written notice of every case of lead, phosphorus, or arsenical poisoning, or anthrax, occurring in a factory or workshop, shall forthwith be sent to the inspector and to the certifying surgeon for the district; and the provisions of the Factory Acts with respect to accidents shall apply to any such case in like manner as to any such accident as in those sections mentioned.
> 4. The Secretary of State may by order made in accordance with Section 65 of the principal Act apply the provisions of this section to any other disease occurring in a factory or a workshop, and thereupon this section and the provisions referred to therein shall apply accordingly.

While in full sympathy with the object in view in Section 29 of the Factory and Workshop Act, 1895, an earnest and emphatic protest must be urged against the machinery and the destination of the notifications proposed in this section. As I have elsewhere stated,[7] it constitutes a new departure, that of compulsory notification of disease by a medical practitioner to a layman. It involves a most pernicious procedure, one not only fraught with serious direct and indirect detriment to the medical profession, but also detrimental to the object in view, as it involves, in some degree at least, the investigation of the causation of special diseases—a medical problem—by lay inspectors. The medical officer of health is in virtue of his special training and profession the person to whom these diseases should be primarily notified, and who should guide the remedial measures to be taken. In a letter[8] Dr. Russell, the distinguished medical officer of health of Glasgow, after referring to and endorsing the above-quoted remarks, states: "Apart from the principle, the method of this Act is absurd." He then quotes the following paragraph from a statement submitted (unsuccessfully) to Mr. Asquith by the Police Commissioners of Glasgow during the committee stage of the Factory and Workshop Bill, 1895: "The medical practitioner will form an opinion that his patient suffers from poisoning or anthrax before he arrives at any conclusion as to its cause. This presumes an inquiry into circumstances, and the conclusion may possibly not be one which will make the practitioner any more popular in the locality if he promulgates it. Let every such case be notifiable to the medical officer of health of the district as if it was an infectious disease. Let the medical officer of health make the inquiry, and if he believes the disease was 'contracted in any factory or workshop,' let him at once inform the local factory inspector."

I will now sum up. What is advocated is that:

1. All cases of sickness treated at the expense of public funds, whether in connexion with the administration of the Poor-law (out-door infirmaries, industrial schools, &c.) or in isolation hospitals, or in idiot and lunatic asylums, should be periodically notified to the medical officer of health.

2. All cases of sickness treated by means of public charity, whether in general or special hospitals, or dispensaries, should be similarly notified.

3. All cases of sickness treated in friendly societies or other sickness assurance societies should be similarly notified.

4. Returns of accidents and of certain diseases, as lead poisoning, woolsorters' disease, &c., or other industrial diseases, should be made part of a wider system of notification of diseases by private medical practitioners to the medical officer of health of each district.

5. The schedule of notifiable diseases under the Infectious Diseases (Notification) Act should be widely extended. Diseases should be classified into those compulsorily notifiable (1) within twenty-four hours, and (2) weekly, and the list of the latter should be greatly increased; they should include pneumonia, rheumatic fever, phthisis, and other diseases, as lead poisoning &c.

6. In connexion with this extension of notification the whole question of payment of fees for notifying will require complete reorganisation.

7. All notifications of sickness should be sent in the first instance to the medical officer of health of each district, and by him transmitted to a central office in London.

8. The central office in London should probably be in connexion with the General Register Office, Somerset House, and weekly returns of sickness should be published alongside of the weekly returns of mortality. The most urgent of these reforms is the collection and tabulation of the cases of sickness attended at the expense of the public funds or treated in public charitable institutions. This might be begun almost immediately. The only obstacles are the *vis inertiæ* of the responsible heads of Government departments and the expense that would be incurred. Successive Secretaries of State have committed themselves to the principle of the proposal, and there is reason to hope that strenuous action and agitation on behalf of this proposal by the Royal Statistical and other allied societies would secure the desired end. I can conceive of no work more important in conducing to the

[7] Brit. Med. Jour., Aug. 31st, 1895. [8] Ibid., Sept. 10th, 1895.

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progress of both curative and preventive medicine than that which I have briefly described; it is a work of national importance, and the obtaining of this additional information for every district and town, with the present staff of medical officers of health eager to avail themselves of it, would undoubtedly be followed by marvellous improvements in the public health.

INTESTINAL OBSTRUCTION DUE TO FÆCAL ACCUMULATION ASSOCIATED WITH DISPLACED KIDNEY.

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IN THE LANCET of July 21st, 1894, I described four cases in which the above connexion of events occurred, and since then I have met with three more cases in nearly all respects similar.

CASE 1.—The patient was a woman aged sixty years, multipara, thin, active, healthy, neurotic, and subject to constipation, but not in the habit of taking aperients. I was called to see her as she was suffering from acute abdominal pain, which came on after an indigestible meal. The pain was referred to the region of the transverse colon and the back. Vomiting occurred, but did not relieve the pain. An aperient medicine which she had taken failed to evacuate the bowels. I found a large oval swelling with smooth outline occupying the right hypogastric and iliac region, decidedly tender on pressure. Under the influence of opiates and fomentations and starvation the pain subsided in two days, and the bowels acted copiously by the help of enemata. As the patient recovered the swelling diminished considerably, and she was found to have a displaced, slightly movable, but not enlarged, right kidney. After a few months orders to attend to the evacuation of the bowels were neglected, and a similar but slighter attack occurred. On this occasion the accumulation in the colon was smaller, and, as the patient recovered, the kidney was found to be in the same condition and position as after the former attack. Constipation continues in this case and has to be treated by regular aperients.

CASE 2.—The patient was an unmarried woman aged forty-seven years, well-nourished, of neurotic type. When first seen by my partner, Dr. Mackern, in my absence, she was found to be suffering from general abdominal pain, which was largely pelvic. The abdomen was large and generally tender, a large mass being clearly felt in the right iliac region. A ring-pessary in a foul state and rough from wear, which she had worn on account of some uterine displacement, was removed, but no relief was given. It was ascertained that she had suffered from displacement of the right kidney before this illness. The pain now centred in the mass on the right side, and the temperature was raised from 100° to 101° F. and night perspirations occurred. By the action of opiates and laxatives the pain was reduced and the bowels evacuated, and after an illness of about ten days the patient was convalescent, and the right kidney was found to be displaced, somewhat enlarged, lying in the right iliac region, and the greater mass which had existed in that region had disappeared.

CASE 3.—The patient was a woman aged sixty-five years, multipara and very thin, with weak muscular system and highly neurotic. She had been subject for many years to irregularity of the action of the bowels, slightly to constipation, but more especially to recurrences of "diarrhœa" with lumpy stools. She had known of the existence for a long time of a painless lump in her right side about two inches from the umbilicus; this lump used to slip away from her hand as she felt it. Dr. Mackern saw this patient also in my absence, and found that for a few days prior to his visit the lump had become larger and more tender, and there had been a tendency to diarrhœa alternating with constipation and lumpy stools. There was little or no pain in this case. Aperients and olive oil brought away copious evacuations, with diminution in the size of the mass and relief of all discomfort. Abdominal massage and the regular use of cascara sagrada kept the bowels free, and it became clear that the fæcal accumulation had disappeared, and a movable right kidney, not tender, was left.

There are thus in these two series of cases—seven in all—with very similar symptoms, progress, and, I think, causation. Six had somewhat acute symptoms of obstruction, and the seventh a nearly painless attack of obstruction, with looseness of the bowels due to fæcal accumulation. All of the seven were in women, whose ages ranged from forty-two to seventy-two years. Four were multiparæ and three were spinsters. Out of the seven, four were decidedly subject to constipation, and the other three were not liable to any intestinal disorder other than attacks of abdominal pain or recurrences of so-called "diarrhœa." If, in these seven cases, the connexion between displacement of the right kidney and fæcal accumulation in the right half of the colon be one of cause and effect, there seems to be no reason why one should look for any influence other than a mechanical one. A very slight degree of pressure, especially of a kind which was not uniform, on the lumen of the large intestine would suffice to arrest partially the upward passage of its contents. No doubt in most cases of disturbance of the functions of the abdominal viscera the aid of the sympathetic nervous system may be called in for the purpose of explaining such disturbances, often wrongly. Here, as in many others, a simple anatomical explanation is forthcoming, and mechanical pressure may be set down as the efficient cause. But, seeing that the nerve-supply of the right half of the colon and that of the supra-renal body and kidney is derived from the outer side of the solar plexus, and that the nerves to the supra-renal body are large and directed horizontally outwards, it is not unreasonable to suppose that the alteration of the position of a displaced kidney may interfere with the nerves of the organ in a way which will communicate itself to an organ whose nerves arise from a neighbouring part of the great plexus, which presides over so many viscera. Whatever form the interference with the nervous apparatus of the colon should take, whether inhibition of its normal peristaltic action over several inches of its length, or over-stimulation of that peristaltic action, the ultimate result would probably be the same—viz., stasis of the contents of the ascending colon, or hepatic flexure of the colon. The fact that many displaced kidneys give rise to no symptoms does not disprove this suggestion as to a connexion through the renal and supra-renal plexuses and the superior mesenteric plexus, for many displaced kidneys are tender and somewhat enlarged for a short time only, and this tenderness is little recognised or attributed to its real cause, the influence through the nerve-relation only taking place during those periods of tenderness and enlargement. In this suggestion of a nervous disturbance, radiating from one viscus to another through the somewhat abused sympathetic nervous system, one may be following out a wrong as well as an unnecessary track, when mechanical pressure alone is to blame for the obstruction of the intestine. But whatever theory we may form as to the nature of the causation, the practical rule to be applied to such cases is clear—viz., that the patient be instructed to attend systematically to the action of the bowels as long as she or he lives.

Blackheath.

WORD-BLINDNESS AND VISUAL MEMORY.[1]

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THE subject of this paper is one to which there is but scanty reference in English medical literature. My attention was specially drawn to it on meeting with the very interesting case which forms the basis of this communication. After spending considerable time and labour in searching out similar cases scattered throughout French and German medical literature, it occurred to me that it might prove useful to others to focus the results of my studies and personal observations in a paper, especially since the subject, though one of intense interest both from a medical and a psychological point of view, has received but little attention in this country. The following is the history of my case of word-blindness.

A man aged fifty-eight years has always enjoyed good health with the exception of occasional attacks of bronchitis

[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society on Oct. 4th, 1895.

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in winter. He is a teacher of French and German, and is a man of intelligence and education. Of recent years he has had a large amount of mental work, and before his present visual difficulties appeared he had considerable mental worry. He first came under my notice on Aug. 29th, 1894, and gave the following history. About one month previously he was greatly startled to find that one morning in his own house he could not read the French exercise which a pupil gave him to correct. On the previous day he had read and corrected the exercises just as usual. Greatly puzzled he went into an adjoining room, and having summoned his wife, he asked her if she could read the exercise. She read it without the slightest difficulty. He then took up a printed book to see if he could read it, and found that he could not read a single word. He remained in that condition until I saw him. On examining his visual acuity with the test types I found that he was unable to read even the largest letters of the test types. He informed me that he could see all the letters plainly and distinctly, but could not say what they were. He made the most absurd mistakes, and only very rarely, after guessing several times, did he hit upon the proper name of the letter. What attracted my special attention was the fact that he read at once the number standing at the top of each paragraph of the test types. I found on examining him further with figures that he did not experience the slightest difficulty in reading any number of figures quite fluently and without making any mistakes whatever. He could read figures printed on the same scale as Jaeger No. 1, the smallest of the test types, and from other tests it was evident that there was no lowering of his visual acuity. His inability to read was thus manifestly not due to any failure of visual power, but to a loss of the visual memory for letters. The page of a printed book appeared to him exactly as it appears to a person who has never learned to read. He sees each individual character distinctly enough, but the character is no longer a visual symbol, as he no longer remembers the special significance attached to it. His difficulty with written characters was equally well marked, and it was the same for Latin and Gothic characters. He is ignorant of music, and I therefore could not test his power of reading musical notes. To put it briefly, he had lost the visual memory of all the printed and written characters with which he was previously familiar. He could, however, write with perfect fluency and ease to dictation, although afterwards he could not read what he himself had written. No other mental defect could be ascertained on the most careful examination. He spoke as fluently as ever, nor had he since the beginning of his attack ever experienced the slightest difficulty as regards speech. His mental powers were as vigorous as ever, nor was there any defect of memory apart from the loss of memory for the visual symbols of language. I was struck with the fact that in trying to read he always carried the book well to the left hand, and could not see it at all when carried to the right. On examining his visual fields with the perimeter there was found loss of the right half of each visual field—i.e., he had right lateral homonymous hemianopsia. No other defect could be found, and the fundus of each eye was perfectly normal on ophthalmoscopic examination. His general health was good, and with the exception of atheromatous vessels there was no evidence of disease present on the most careful examination of all his organs. I have had this patient under constant observation during the last thirteen months and saw him last on Sept. 27th. His general health has remained good during that period. No new mental symptoms have arisen. He informs me, however, that his memory is not quite as good as it used to be, and that this is particularly noticeable in the case of proper names. The right homonymous hemianopsia remains practically the same. With regard to his power of reading there has been a slow but steady improvement during the last six months. During the first six months his condition in this respect was stationary, but during this period I had advised mental rest, and he had made no attempts at reading unless when I examined him now and again. About six months ago, however, I advised him to begin to learn to read. He began by learning the alphabet and spelling through a child's primer. He practised daily, and at the present time he can read, but only slowly and laboriously, spelling out the words letter by letter like a child. In the alphabet at the beginning of his primer he has underlined the letters which gave him difficulty, putting a double line below those which gave him most difficulty. On asking him to read he does so slowly, spelling out each word letter by letter. He makes many mistakes, particularly with the letters which he has underlined in the alphabet. His behaviour is exactly that of a child learning to read. Meeting with the letter F, for example, he hesitates, begins to run over the alphabet from A to F, and then he recognises the letter as F. Meeting with Y, he hesitates for some time, although he says almost at once this is the last letter but one of the alphabet. However, giving him plenty of time and with occasional mistakes, he is now able slowly and laboriously to spell out printed matter. One point very observable in his reading is that he has no difficulty with some short, familiar words. *The*, for example, he always recognises at once without requiring to spell it out letter by letter. This point was also noticeable in a case recorded by Badal which I shall mention later. Badal's explanation seems a very reasonable one—viz., that such familiar words form, as a whole, a picture or graphic unity which is instantly recognised without it being necessary to analyse it into its constituent letters. With regard to written symbols, my patient has not made such marked progress. I tested him on Sept. 2nd last with very clear and distinct handwriting. He could only read a word here and there, and had great difficulty in recognising the letters. The explanation, I think, is very simple. During the last six months he has been reading printed characters every day, while he has not practised constantly the reading of written characters, but only tried it occasionally. This is a point of great interest—the comparative fluency with which he now reads printed as compared with his difficulty with written characters, and the fact that he has been practising constantly the reading of printed but not of written characters. His power of reading figures fluently remains as before. With regard to his power of writing to dictation, he writes as fluently and rapidly as he ever did. He does not spell quite so correctly as he did previously, and his handwriting, though quite legible, is not so good as it was previously to the onset of his word-blindness. The patient himself seeks to explain this by lack of practice in reading and writing during the last thirteen months, and no doubt this is an important factor; but another factor is to be found in the word-blindness, the patient being unable to read what he himself has written, and, therefore, gaining no help from vision in the spelling of the words and the formation of the letters. He is much in the same position as a man writing with his eyes shut.

It was Kussmaul[2] who first clearly pointed out that blindness for words is capable of being met with clinically as an isolated condition, and that it represents the pathological condition of a special faculty. He invented the term "word-blindness" for the condition in which the patient, though not blind, is unable to read visible words. Since Kussmaul's treatise our knowledge of the condition has been greatly increased by the numerous cases which have been reported. It is now evident that the terms "word-blindness," "cécité verbale," and "Wortblindheit" are not sufficiently precise without further definition. There are different forms of word-blindness which must be carefully distinguished from one another. The case just reported is really one of letter-blindness—i.e., the inability to recognise individual letters. In my case the inability embraced all the different forms of letters known to the patient—Gothic and Latin, written and printed. This is not always so. A few cases have been recorded where the visual memory lost for one alphabet was preserved for another. Michel[3] quotes a case where the patient could read the Gothic but not the Latin characters. Charcot[4] had a case where a patient knowing French, German, Spanish, Latin, and Greek lost the memory of a few of the Greek and German characters only. Mierzejewski[3] has recently described a new form of word-blindness which he has proposed to call "cæcitas syllabaris et verbalis, sed non litteralis." The patient could recognise the individual letters and name them, but he could not unite them into syllables and words. Badal[5] has reported a somewhat similar case which merits more detailed description. The patient could see and name each individual letter, but could not combine these even into the simplest syllables or words. A few words she was able to recognise and pronounce, but these were such as were familiar to her from frequent

[2] Disturbances of Speech, Ziemssen's Cyclopædia, 1877, vol. xiv.
[3] Berger: Les Maladies des Yeux dans leurs Rapports avec la Pathologie Générale. Paris, 1892.
[4] Clinical Lectures on Diseases of the Nervous System, vol. iii., New Sydenham Society's Series.
[5] Archives d'Ophthalmologie, March-April, 1888.

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repetition—for example, her own name. Badal's explanation is that such familiar words form a graphic unity, a form picture, which can be recognised at once without resolving it into the individual letters. Badal traced her inability to read to a loss of the sense of space. Although in a given word she saw and could name the individual letters, she did not appreciate their relationship to one another. She could repeat the letters in each word, but not in their proper sequence. She could thus name any individual isolated letter, but when several letters were combined into a word she could not read it, because she could not perceive the relative order in which the letters were placed.

It is thus evident that the terms "word-blindness" and "alexia" are not sufficiently precise. The inability to read may be due to the inability to recognise the individual letters, cæcitas litteralis, or to an inability to combine these into syllables and words, cæcitas syllabaris et verbalis. My case affords a remarkably pure example of cæcitas litteralis, or inability to recognise the individual letters.

One feature of this case to which I wish to direct particular attention is the fact that this patient could read figures as fluently as ever; indeed, it was this feature which first made me suspect that it was a case of word-blindness. On trying him with the test types I was at once struck with the fact that although he could not read a single letter, he read without hesitation the number standing at the top of each paragraph of the test types. I then tested him further with large combinations of figures, and all these were read with the greatest fluency and without any hesitation whatever. This is a point in these cases which has not met with the attention it merits. In the vast majority of the recorded cases of word-blindness no mention whatever is made as to the ability to recognise figures. In the thesis of Mdlle. Nadine Skwortzoff[6] amongst fourteen cases of word-blindness collected by her only one occurs where it is stated that the power of recognising figures was preserved. On quoting this case she remarks that generally we find no difference in word-blindness as to the reading of figures and letters. Cases, however, do occur where the ability to recognise figures remains intact, and that more frequently than was previously supposed. I have met with five recorded cases in addition to my own. In the case of Mierzejewski, already quoted, the patient could recognise and read figures even when these were combined in the most complicated manner. In a case very similar to my own, reported by Brandenburg,[7] the patient suffering from word-blindness and right lateral hemianopsia could recognise and read figures. Brandenburg in his paper quotes a case reported by Joly where the patient suffering from agraphia and word-blindness could recognise figures and also write them. In a case reported by Dejérine[8] the patient was totally word- and letter-blind with right homonymous hemianopsia, but he retained the power of reading figures and could do mental calculations as well as formerly. Alfred Binet[9] has presented us with a very interesting aspect of this same question from another point of view. In his interesting psychological study of MM. Inaudi and Diamandi, who have recently startled the scientific world by their great feats in mental arithmetic, Binet points out that whilst their memory for figures had acquired an abnormal extension, which excited astonishment and admiration, the other forms of memory—e.g., that for words—presented nothing special, and, in fact, in some respects they were below normal. In the case of Diamandi, his extraordinary memory for figures was a purely visual memory. When he learned a series of figures by looking at them for a moment he could repeat them in any order. He explained the mental process by saying that he actually had a precise mental picture of the figures with all their peculiarities of printing and even of colour. His visual memory for figures was so exact as to resemble a mental photograph, which he could read off at leisure, as he would from the page of a book. Yet his visual memory for words was by no means above normal. Experience thus clearly proves the complete independence of the visual memories of letters and figures, for, as we have seen, the one form of visual memory may be lost whilst the other remains intact, and the one form may be developed in excess whilst the other is even below the average.

Another very interesting form of loss of visual memory is that of loss of the visual memory for musical notes—note-blindness. This is a subject which until quite recently had scarcely met with any attention. Professor Edgren of Stockholm has very recently published a striking paper,[10] in which he gives fifty-two cases collected from various sources in which the power of musical expression was partially lost, and which he has designated by the term "amusia." Professor Edgren regards the following conclusions as admissible from the study of the fifty-two cases: (1) that a pathological process can cause partial or total loss of the power of musical expression—amusia; (2) that the various forms of amusia possess a certain degree of clinical independence in their relation to each other and to aphasia; (3) that the clinical forms of amusia appear to be analogous to the clinical forms of aphasia and are often, but not necessarily, accompanied by the analogous form of aphasia; (4) that amusia can exist without aphasia and aphasia without amusia; and (5) it is probable that certain forms of amusia possess an anatomical independence, the region affected being near to but not identical with, that affected in the analogous form of aphasia. Of the different forms of amusia described in this paper one of the most interesting is note-blindness—i.e., loss of the visual memory for musical notes. The patient can see the notes as usual, but has no longer the faintest idea of their significance. This is very frequently associated with another form of amusia, tone-deafness, where the notes are heard, but simply as sounds, without the patient being able to assign them to their position in the musical scale. From the proximity of the visual and auditory centres it is easily understood how these forms are frequently associated together, just as the analogous conditions word-blindness and word-deafness. But note-blindness also occurs as an isolated symptom, there being no other impairment of the patient's powers of interpretation or expression of musical sounds, and the patient being able to read all other printed and written symbols. The patient can read the words of a song, but can no longer read the accompanying music. Word-blindness is very frequently accompanied by note-blindness, but not always, the patient sometimes retaining the power of reading musical notes. It is evident, then, that the visual memory for musical notes is quite distinct from the visual memory for words and letters, since the one form of visual memory may be entirely lost whilst the other is not changed or modified in any way. For illustrative cases I would refer to Professor Edgren's paper.

The following case, which has come under my observation, affords another excellent example of partial loss of visual memory. The loss of visual memory was also associated with right lateral homonymous hemianopsia, just as in my case of word-blindness.

The patient, a married woman aged thirty-eight years, consulted me on Nov. 23rd, 1888, at the out-patient department of the North Riding Infirmary, Middlesbrough, when I was acting there as resident surgeon. She gave me the following history. Twelve months previously she had fallen down in a fit, and for some time afterwards had some loss of power in her right side, and some slight difficulties in speech. During the last three months she had suffered greatly from headaches, which were always worse at night. But it was her visual troubles about which she had come specially to consult me. She was constantly running up against people in the street and against objects such as chairs in her own house. What distressed her even more was that she could no longer find her way about the town. When she went out she could see the houses and streets quite plainly, but she no longer recognised them. She could no longer recognise her own street by sight. She only lived a short distance from the infirmary, but could not come to it alone. She was in the same position as a complete stranger, although she had lived in the town for many years. What was still more distressing to her was that she was quite helpless in her own house and could not do her own household work. She had completely forgotten where things were placed, and most of her time was occupied in looking for the various household articles. The history of running up against people and objects at once suggested an examination of her visual fields. It was found that there was a right lateral homonymous hemianopsia, loss of the right half of each visual field. Unfortunately she was illiterate, so that I could not test her visual acuity by reading the test types. By employing other tests, such as her power of picking up exceedingly minute objects and of recognising dots, &c., it was evident that the visual acuity

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[6] De la Cécité et de la Surdité des Mots. Paris, 1881.
[7] Graefe's Archiv für Ophthalmologie, 1887, Abtheilung iii.
[8] Comptes-Rendus des Séances de la Société de Biologie, Paris, March, 1892.
[9] Psychologie des Grands Calculateurs. Paris, 1894.
[10] Deutsche Zeitschrift für Nervenheilkunde, Dec. 14th, 1894.

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in the left half of each field was exceedingly good. The hemianopsia, then, was quite insufficient to account for her visual difficulties. It was evidently a form of mind-blindness, a loss of the visual memory for places. There being a history of syphilis, she was put upon specific treatment. Her general condition greatly improved, her headaches and speech troubles disappeared, but when I last saw her, after three months' treatment, the hemianopsia persisted, and she had still the same difficulties as regards the visual memory for places.

Charcot[11] relates a case in some respects similar to the preceding, but in which the loss of visual memory was much more extensive. Charcot's patient was a highly educated and accomplished man in whom the visual memory had been very highly developed. After a time of great mental worry and anxiety, with loss of appetite and sleep, he was astonished to find that a sudden and profound change had come over him. At first everything was confusion, and the patient feared that he was threatened with some form of mental derangement. In every instance the memory of form and colour had completely disappeared, yet he could perceive them when present without difficulty. Like my patient, the monuments, houses, and streets of the town he dwelt in seemed all strange and new to him. Every time he returned to it, after an absence, it seemed as though he had arrived there for the first time. He could not draw the simplest object from memory, although he used to draw fairly well. When he now tried to draw objects from memory he produced only a shapeless scrawl. He had also lost the visual memory of colours. He found the visual recollections of his wife and children impossible, and even when they were before him their faces seemed strange to him. There was only very partial mind-blindness, he having a difficulty in recognising a few letters of the Greek and German alphabets. His eyes were examined by Parinand and found to be normal.

A very interesting case of object-blindness associated with word-blindness, followed by post-mortem examination, has been recorded by Sérieux.[12]

A female aged sixty-two years had a stroke in 1888, followed by paralysis, and had another attack in June, 1890, with epileptiform convulsions and hallucinations of hearing. When examined on Dec. 16th, 1890, word-blindness and agraphia, and also word-deafness and paraphasia, were found to be present. She was also found to be suffering from marked object-blindness, which was exhibited by the inability of the patient to recognise her relatives and friends when they called upon her. Their faces and figures seemed to her to be quite changed, and, as she expressed it, all the people about her seemed to be wearing masks. This object-blindness, although best marked in relation to faces, was also manifested in relation to the familiar objects about her, although to a less extent. A few months afterwards she died from pneumonia. On examination of the brain a bilateral cortical lesion was found. On the left side there was a softening in the supra-marginal convolution, and also a limited patch of softening in the posterior extremity of the first temporal. On the right side there was a large patch of softening involving the angular and supra-marginal convolution and also the posterior extremities of the first and second temporal convolutions.

I have quoted these additional cases in order to make the conception of the visual memory more complete. But what is meant by the terms "memory" and "visual memory"?

It is customary and correct to employ the term "memory" in a general sense to express the power, which all rational beings possess, of preserving and of reproducing impressions previously received. In psychology up till recent times memory was regarded as a special faculty and as an indivisible unity. But the new psychology, expounded with lucidity by Ribot[13] and by Binet,[14] teaches that the word "memory" is simply a general term reducible to particular cases, that such a unity as memory does not exist, but that individual memories do exist—e.g., memories of vision, of hearing, of taste, of smell, of movements, and so forth. The facts of mental physiology and pathology have clearly shown that we must not regard the memory as a single faculty having a definite location in the brain. The memory is really the sum total and result of a number of distinct mental processes. There exist partial, special, or local memories, each of which has its own special domain—all of which have intimate connexions with one another, yet possess an independence of each other such that one of these special memories can be enfeebled, lost, or developed to an abnormal degree without any of the other forms necessarily presenting any corresponding modifications. These special or local memories are both motor and sensory. Of these the sensory memories form a most important group. Each organ of sense has its cortical centre in the brain, where not only fresh sensory impressions are received, but also previous sensory impressions are stored up and linked with associated sense impressions stored in other centres. Our primary and most simple ideas of objects are formed by the revival in our minds of these sensory memories.

The member of this group which concerns us is the visual memory. There is in the cortical centre of vision situated in the angular and supra-marginal convolutions a storehouse of past visual impressions. These can be called into the sphere of consciousness at will when we form what we call a mental picture, or, according to the French nomenclature, a visual image. To put it concisely, the visual memory means the power of preserving and of recalling to consciousness past visual impressions. It is only through the help of this visual memory, of this storehouse of past visual impressions, that we can interpret the fresh visual impressions that are constantly passing to the brain. Sweep away the visual memories or images from the brain, and you have the condition commonly known by the term "mind-blindness." In this condition the object is seen, but there is no intelligent perception of it. There are no past visual impressions to compare it with, and through the medium of the visual memory to arouse the other sensory and motor memories regarding it. Hence the object, though seen, has no significance whatever for the mentally blind. Mind-blindness, then, is simply loss of visual memory. We must carefully distinguish between simple perception of an object and an intelligent knowledge of it. If retina, optic tract, and percipient centre in the occipital lobe are intact, then we shall be conscious of the image of any object which falls upon the retina, and may assign it to its proper position in the external world. But we may have no intelligent knowledge of it. The visual memory centre must be communicated with, the present visual impressions must be compared with similar past visual impressions, and through the medium of the visual memory we arouse the other sensory memories regarding it, all of which are closely associated. The visual memory, then, plays a most important part in every conscious exercise of the vision. But it is evident from the study of the facts of mental pathology that this visual memory is not a unity. We have seen that the visual memories for words and letters, for numbers, and for musical notes have a functional independence of each other. Each group of visual memories may be entirely lost, whilst the others remain intact and unaffected in the slightest degree. Hence we are led to infer that they must possess an anatomical independence. We can as yet only localise the visual memory of words and letters, but from the frequency with which these three groups of visual images are simultaneously lost we can infer that the regions affected, though not identical, are probably very close together. Further, these three groups have this in common, that they are highly specialised visual memories, requiring for their retention in the brain a considerable amount of mental concentration and education.

There are other groups of visual memories which are not so highly specialised, and for the acquirement of which comparatively little mental concentration or special training is necessary. The visual memory of form and colour, of objects and places, furnishes us with a mental picture gallery which enables us to find our way with unerring accuracy through the intricate streets of a great city, which enables us to recognise a friend after the lapse of years, and which puts us in an intelligent relationship with the objects around us in our daily life. That this form of visual memory is distinct from the highly specialised visual memories of words, numbers, and musical notes is clearly shown by the clinical evidence. Word-blindness and note-blindness are but seldom accompanied by any impairment of this larger group of visual memories. We have seen, as in Charcot's case, that a great impairment of this group of memories may exist and yet the patient be able to read and write. Further, this form of mental blindness for form and colour, for objects and places, is of great rarity, whereas the loss of the highly specialised visual memories is comparatively common. I would thus divide the forms of visual memory into two main groups:

[11] Loc. cit.
[12] Comptes-Rendus des Séances de la Société de Biologie, Paris, Décembre, 1891.
[13] Les Maladies de la Mémoire. Paris, 1895.
[14] La Psychologie du Raisonnement. Paris, 1886.

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first, a group of highly specialised visual memories for the acquirement of which great mental concentration is necessary, and which are possessed only by those specially trained; and, secondly, a group of visual memories for form and colour, for objects and places, for the acquirement of which no great mental effort is required, and which are possessed by all men who have the sense of vision. We are led to infer from the complete functional independence of these two groups of visual memories an anatomical independence, and a plausible suggestion has been offered as to why the loss of the first group should be comparatively common as compared with the loss of the second.

The organs of sense that are concerned in the reception and interpretation of speech are represented bilaterally in the cerebral cortex. Since each eye and each ear are connected with both hemispheres destruction of the cortical centre in one hemisphere will not make the patient deaf in one ear or blind in one eye. Destruction of one occipital lobe causes, as we shall see, a homonymous hemianopsia only. But with regard to language the education of these sensory centres is unilateral. In the auditory and visual centres of one hemisphere only are the sensory impressions of language, visual and auditory, retained and stored up. The hemisphere selected is always that in which are situated the motor centres for speech and writing. It is thus the left hemisphere in right-handed people and the right in left-handed people. A lesion on one side of the brain, in the vast majority of cases on the left side, may completely obliterate the visual word memories and make the individual word-blind. The visual memories of numbers and musical notes are also probably unilateral and in the immediate neighbourhood of the word centre, for, as already pointed out, all three groups of visual memories are frequently lost together. It has been suggested that the second group of visual memories—those of objects, of places, of form, and of colour, which do not require such an effort of attention and concentration—are efficiently imprinted and stored up in the higher visual centres of both hemispheres. Hence it would require a bilateral lesion to produce object-blindness, and hence, as can be readily understood, its much greater rarity. The case of Sérieux, already quoted, supports this view, where the patient suffered from word- and object-blindness, and where, after death, was found a bilateral lesion in the brain involving the left supra-marginal convolution and the right angular and supra-marginal convolutions. This, however, is a subject which is by no means settled and which awaits further investigation.

A notable feature in both my cases of loss of visual memory was their association with right lateral homonymous hemianopsia. This condition also existed in Charcot's case of word-blindness, already referred to. According to Charcot, a similar hemianopsia associated with word-blindness was to be found only in one other observation, that of Westphal.[15] Since then, however, many cases have been recorded, and I am able to quote nine additional cases. Two cases have been recorded by Samelsohn,[16] two by Wyllie of Edinburgh,[17] and two by Henschen of Upsala.[18] One case has been recorded by Brandenburg,[19] one by Dejérine,[20] and one by Bruns and Stoelting.[21] In all these cases word-blindness was associated with right homonymous hemianopsia. As we have cases of word-blindness without right hemianopsia, and as we have right hemianopsia without word-blindness, it is evident that the cerebral centres for the right halves of both visual fields and for the visual memory of words must be distinct from one another. Yet these symptoms are associated with such frequency as to lead to the inference that the cerebral centres or the paths to them must lie in close proximity to one another. We shall see that pathological evidence confirms the inference drawn from clinical experience.

The question of the exact localisation of the visual centres in the brain has given rise to considerable controversy in the past. For a considerable time Ferrier and Munk carried on a discussion on this subject. Ferrier originally held that the cerebral centre of vision was situated in the angular convolution, and Munk that it was in the convolutions in the posterior part of the occipital lobe. Recent clinical and pathological observations[22] are reconciling these apparently antagonistic opinions by showing that both Ferrier's centre and Munk's centre have important parts to play in the function of vision. It has already been pointed out in this paper that in the act of vision we must distinguish between the mere perception of an object, as occupying a certain position in our visual field, and an intelligent knowledge of it, as to its exact nature and qualities. Although the boundaries of the visual centres cannot as yet be laid down with precision, yet the mass of pathological evidence tends to show that the occipital lobe, especially in the neighbourhood of the cuneus and the calcarine fissure, is the centre for primary visual impressions, the perceptive centre, and that in the angular convolution and its neighbourhood there is a centre of a higher nature, one of whose functions seems to be the storage of the visual memories of things and words, the visual memory centre. It is evident from what has already been said that the functional activity of both these centres must be called into play in every conscious and intelligent exercise of vision. It is now a matter of general agreement that the primary visual centre in the occipital lobe is connected with the half of the retina in each eye, the left occipital lobe with the two left halves and the right occipital lobe with the two right halves. But since the left half of each retina corresponds to the right half of each visual field a lesion in the left occipital lobe would produce blindness in the right halves of both visual fields, or, in other words, a right hemianopsia. The hemianopsia is termed homonymous because it is on the same side in relation to both eyes. A lesion of the right occipital lobe would produce left homonymous hemianopsia. To put it concisely, destruction of the primary visual centre in the occipital lobe produces homonymous hemianopsia in the opposite half of the field of vision. It is also known that a lesion in any part of the optic tract from the cerebral cortex to the optic chiasm will produce homonymous hemianopsia.

In my case of word-blindness, however, there are two points which lead us to infer that the lesion causing the hemianopsia is in or near the cortex. 1. When a beam of light fell upon the blind half of each retina the pupil contracted actively, just as when it fell upon the seeing half. Wernicke first pointed out that if there be loss of the reflex movement of the pupil, when light is thrown upon the blinded portion of the retina, the break in the conduction must lie below the spot at which the fibres to the oculo-motor nucleus are given off—i.e., it must lie in the optic tract itself. This valuable diagnostic symptom has been called Wernicke's hemiopic pupillary reaction. But when, as in my case, the pupillary light-reflex is intact, the lesion is to be located higher up, in the internal capsule, the optic radiations, or in the cortex of the brain. 2. The association of the hemianopsia with word-blindness, which is known to be always dependent on a cortical or sub-cortical lesion, leads us to infer that the right homonymous hemianopsia is due to a lesion in the cortex of the occipital lobe or of the optic radiations passing to it. The frequent association of right homonymous hemianopsia with word-blindness, already referred to, thus confirms the results of pathological experience, that the centre for the visual memory of words is in the neighbourhood of the left occipital lobe.

Although its boundaries have not yet been finally laid down, still a constantly increasing pathological experience[23] tends to prove that the centre in which are stored the visual memories of letters and words includes the supra-marginal and angular convolutions, both of which belong to the inferior part of the parietal lobe. Pathological experience also shows that the more important part of the centre is situated in the angular convolution, which is bounded posteriorly by the occipital lobe. It has already been pointed out that the visual centre forms no exception to the law that with regard to language the education of the motor and sensory centres is unilateral. The hemisphere selected is always that in which are situated the motor centres for speech and writing, hence in right-handed people, forming the vast majority of cases, the visual memory centre for letters and words is situated on the left side of the brain in the region already described. This centre in the left angular gyrus and neighbourhood is

[15] Zeitschrift für Ethnologie, 1874.
[16] Berliner Klinische Wochenschrift, No. 21, 1882.
[17] Disorders of Speech, 1894.
[18] Klinische und Anatomische Beitrage zur Pathologie des Gehirns. Upsala, 1893-94.
[19] Loc. cit.
[20] Loc. cit.
[21] Neurologisches Centralblatt, Nos. 17 and 18, 1888. Leipzig.
[22] Henschen: loc. cit.; and M. J. Déjérine and P. Sérieux: Comptes-Rendus des Séances de la Société de Biologie, Paris—a series of papers during the years 1891 and 1892.
[23] Skwortzoff, loc. cit.; Henschen, loc. cit.; and Déjérine and Sérieux, loc. cit.

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connected with both occipital lobes, hence destruction of the left occipital lobe causes right homonymous hemianopsia, but not word-blindness, since the right occipital lobe is still connected with the visual word centre in the left angular gyrus. To have complete word-blindness the centre itself must be destroyed or its connexions with both right and left occipital lobes must be cut off. The visual word centre is supplied with blood by the sylvian artery, and it is a significant fact that all the cerebral centres concerned either in the expression or in the interpretation of language are situated within an area supplied by the same vessel. The speech-motor centre, the graphic centre, the auditory word centre, and the visual word centre are all supplied by branches of this sylvian artery, hence it is easily understood how disturbances of all the centres or some combination of them are so frequently associated; further, in consideration of the immediate proximity of the visual and auditory word centres, the auditory being in the posterior part of the first convolution of the temporo-sphenoidal lobe, it is manifest how the symptoms of word-blindness and word-deafness are associated with such great frequency. My case of word-blindness is a pure example of the rarer condition of isolated lesion of a single centre, all the other centres concerned in language being intact. The patient could speak, write, and understand spoken language as well as ever he did.

I have dwelt particularly on the fact that my word-blind patient could write fluently to dictation, although he could not read what he himself had written. The old explanation put forward to account for such cases was that by constant and prolonged practice the motor images of writing had become so deeply imprinted upon the graphic motor centre (in the second frontal) that without any aid from the visual centre the revival of these motor images was quite sufficient to guide the hand to form the letters correctly. It has been shown, however, by the recent observations of Déjérine and Sérieux[24] that when the visual word centre is destroyed the patient can neither read nor write. He is agraphic because he can no longer call up in his mind the visual memories of letters which are necessary to stimulate the graphic motor centre. How, then, are such cases as mine to be explained where there is complete word blindness without agraphia, and where the patient can write fluently, although he may not be able to read a single word of what he has written? It is now maintained that in such cases the visual word centre is intact, and also its connecting path with the graphic motor centre, but that the pathways connecting the primary visual or preceptive centres in both the occipital lobes with the visual word centre in the left angular convolution are cut across. Hence the visual memories of words and letters can still be revived from within, and serve as a guide to the graphic motor centre; but impressions from without from the preceptive centres can no longer reach the visual word centre because of the interrupted pathways. Such an explanation is in perfect harmony with the facts observed in my case. I found that the patient, even when unable to read a single letter, still possessed the power of calling up at will the visual images of all the letters. He informed me that when I mentioned any letter he could mentally see it just as well as ever he could. Hence the patient could write because he had still the power of reviving the visual images of letters, and to accomplish this the centre itself must have been intact. How, then, could he no longer recognise these same letters which he had written? Because the visual word centre was cut off from the primary visual centres in the occipital lobes, and hence could not be reached by any visual stimulus from the external world. I would refer particularly to a case recorded by Déjérine[25] in which the post-mortem examination supported in a very striking manner the view expressed above. This case is particularly interesting, as it presents almost the identical group of symptoms which were met with in my case of word-blindness.

Déjérine's patient was a man sixty-eight years of age who, after a number of attacks of tingling in the right arm and right leg, suddenly perceived that he was unable to read a single word. Although word-blind he could write as fluently as ever. He could copy correctly pages of manuscript, although he could not read a word he had written. He had also lost the power of reading musical notes (note-blindness), but he could still sing well. He could read figures and do mental calculations just as well as ever. On examination with the perimeter he was found to be suffering from right homonymous hemianopsia. Ten days before his death he was suddenly seized with paraphasia and total agraphia. There was no muscular paralysis, and his intelligence remained clear until his death, which occurred suddenly. On examination of the brain there was found (1) an old lesion, a softening which had destroyed the cuneus and some of the neighbouring convolutions of the left occipital lobe and had extended deeply into the white matter so as also to cut across the fibres passing from the right occipital lobe to the left angular convolution—this old lesion thus accounted satisfactorily for the hemianopsia and for the word-blindness without agraphia which had persisted for four years; and (2) a recent lesion—viz., a softening of the left angular and supra-marginal convolutions, which explained the recent appearance of the total agraphia. The paraphasia was probably caused by disturbance of the auditory word centre, which is in the immediate neighbourhood. For other illustrative cases I would refer to the papers published by Déjérine and Sérieux, to which I have already called attention.

It is thus evident that in my case the word-blindness and the right lateral homonymous hemianopsia may be accounted for by a single lesion. We have seen that interruption of the optic radiations as they pass to the occipital cortex produces a lateral hemianopsia, just as when the occipital cortex is destroyed. A subcortical lesion in the white matter of the left occipital lobe, so situated as to cut across the fibres passing from both occipital lobes to the left angular gyrus, would render the patient word-blind but not agraphic. As such a lesion must involve the optic radiations passing to the left occipital cortex, the patient would have at the same time right homonymous hemianopsia. As to the probable nature of the lesion, the absence of all signs of disease, with the exception of atheromatous vessels, and the non-progressive course after the lapse of thirteen months would suggest as the most probable condition a spot of softening due to hæmorrhage or thrombosis. One of the most interesting features in this case was the slow but gradual improvement of the patient, which I have already described in detail. In most of the recorded cases of word-blindness, unfortunately, there is no account of their after history. In the after histories which are given the patients seem only very rarely to have recovered the power of reading. We know that in aphasia, particularly in youthful patients, the power of speech is sometimes recovered even after complete destruction of the speech centre in the left side of the brain. That the recovery in these cases is due to education of the corresponding centre in the opposite side is, I think, demonstrated by Barlow's[26] case of cerebral lesion, first in the left third frontal convolution and then in the corresponding convolution of the right side.

The patient, a boy suffering from heart disease, had first an attack of aphasia due to embolism in the artery supplying the left third frontal convolution. He speedily regained the power of speech by training the corresponding right third frontal convolution. A second embolism plugged the artery supplying this convolution also. The patient had a second attack of aphasia, which, however, was permanent. Have we in the patient who forms the subject of this paper a case of education of the corresponding centre in the opposite side of the brain, or is it that the interrupted paths have been repaired, or that new communicating paths have been found leading to the word centre in the left angular gyrus, which we regarded as still intact? I offer no definite opinion, and our knowledge is as yet too imperfect to dogmatise. I content myself with enumerating three striking facts: (1) the permanence of the hemianopsia, which is practically the same as at the outset of the attack; (2) the slow and gradual acquisition of the knowledge of printed letters, but only after persistent education and practice; and (3) the comparatively slight improvement in the knowledge of written letters, the study of which has not been carried out with the same steady perseverance.

In conclusion I would ask, Why have we such scanty records of cases of mind-blindness, or, as I prefer to designate them, cases of loss of visual memory? I venture to affirm that through lack of knowledge the true nature of such cases, when they do occur, is very frequently not

[24] Déjérine and Sérieux, loc. cit.

[25] Comptes-Rendus des Séances de la Société de Biologie, March, 1892.

[26] Brit. Med. Jour., vol. i. 1877.

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recognised. I would urge the most careful examination of all patients suffering from visual derangements where there are no ocular changes to account for them. It is only by the painstaking analysis of symptoms and the careful recording of such cases, followed, where possible, by pathological examination, that we can hope to gain any further knowledge of the complex cerebral processes involved in vision, of which at present we can only form a very faint and imperfect conception.

ON THE TREATMENT OF IMPACTED FRACTURE OF THE NECK OF THE FEMUR BY BREAKING DOWN THE IMPACTION UNDER ANÆSTHESIA.

BY F. A. SOUTHAM, F.R.C.S. ENG.,
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IN THE LANCET of Nov. 17th, 1894. I called attention to the unsatisfactory result which attends the usual method of treating impacted extra-capsular fracture of the neck of the femur. This consists in simply keeping the limb at rest, no attempt being made to correct the characteristic deformity—the shortening and eversion (rarely inversion) of the limb, always present in a greater or less degree—for fear that if the impaction is broken down the fracture will not unite. The result is that the patient remains with the limb shortened and everted, and consequently more or less crippled for the remainder of life. A case of this injury occurring in a male aged twenty-seven years was described, where the fragments were loosened by forcibly breaking down the impaction under anæsthesia, and, the shortening and eversion having been corrected, perfect union took place without any deformity resulting. Three cases have since been treated according to the same method in the Manchester Royal Infirmary (two under my own care and one under my colleague, Mr. Whitehead) with satisfactory results, especially as regards the correction of the eversion, and as the patients were aged respectively fifty, sixty-five, and seventy-five years, a brief record of each may, perhaps, be interesting, for they illustrate the fact that advanced age is in itself apparently no bar to this procedure, the fracture in each instance readily uniting with an abundant formation of callus after the impaction had been broken down.

CASE 1.—A woman aged seventy-five years was admitted to the infirmary under my care on Dec. 20th, 1894. She was examined on admission by Mr. J. H. Ray, house surgeon, who found that the right lower extremity was shortened to the extent of an inch and a quarter and well everted; the trochanter was thickened; crepitus was absent, and the limb could not be inverted. The patient having been anæsthetised the fragments were loosened by Mr. Ray, who felt the bone give way with a "crunching" sound; the limb could then be inverted and moved freely about a point just internal to the great trochanter. A straight splint reaching from the hip to the ankle was bandaged to the outside of the limb, and extension was applied in the usual way by means of a weight (8 lb). As some slight chest symptoms developed the patient was allowed to sit up in bed after a few days, and at the end of three weeks she was placed on a couch during the daytime with the limb between sand-bags, the extension being only applied at night. On Feb. 5th she went home. The limb was shortened to the extent of about half an inch and was very slightly everted. As she lay in bed she could flex the thigh to an angle of 45°, and the movements at the hip-joint were quite free. With support she was beginning to bear her weight on the limb and walk about the ward.

CASE 2.—A woman aged fifty years was admitted to the infirmary under my care on July 2nd, 1895. On examining her the following morning I found that she presented all the usual signs of an impacted extra-capsular fracture of the left femur—viz., shortening to the extent of about half an inch with slight flattening over and thickening of the trochanter in an antero-posterior direction, also marked eversion, the toes pointing directly outwards. There was an absence of crepitus. Attempts to correct the deformity by rotating the limb inwards caused great pain and produced no effect. Under anæsthesia the impaction, which was very firm, was broken down with a grating sound, though it was not until the thigh had been flexed to an angle of 45° and the knee bent to a right angle that enough force could be brought to bear upon the limb to loosen the fragments sufficiently to completely correct the eversion. On making traction upon the leg after the fragments had been loosened it could be restored to the same length as the other. A Liston's long splint was bandaged to the outside of the limb and extension (9 lb.) applied. On July 29th the splint and extension were removed and the limb was fixed in a plaster-of-Paris bandage. When this was taken off at the end of a month the fracture was firmly united without any perceptible shortening or eversion of the limb. The movements of the hip-joint were quite free, and in the course of a few days she was able to walk without assistance.

CASE 3.—A man aged sixty-five years was admitted to the Infirmary on Sept. 8th, 1894, under the care of Mr. Whitehead (who has kindly allowed me to include the case with the preceding). On examination the left lower extremity was found to be shortened to the extent of two inches; there was well-marked eversion, which could not be overcome by ordinary passive movement; crepitus was absent; and the trochanter was thickened. The patient having been anæsthetised, the impaction was broken down by Mr. J. W. Smith, resident surgical officer, assisted by Mr. Ray, and, the deformity having been corrected, the limb was fixed on a Liston's long splint, with 5 lb. extending weight. The patient was kept in the recumbent position, which was well borne, until Oct. 1st, when the splint and extension were removed; it was then found that firm union had taken place, the limb being very slightly everted and shortened to the extent of three-quarters of an inch. It was put up in a plaster-of-Paris bandage, and the patient left the hospital on Oct. 4th. He has since resumed his former occupation, that of a waiter, and though he walks with a limp and the limb slightly everted, wearing a thick sole to the boot, he is able to rotate the foot inwards and has good movement in the hip-joint.

I am indebted to Mr. Ray for notes of Cases 1 and 3.

Manchester.

MORTALITY FROM EMPYEMA IN CHILDHOOD.

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THE publication of the interesting statistics by Mr. Wightman in THE LANCET of Nov. 30th, 1895, has induced me to collect the cases of empyema which have been under my own care since May, 1879. The statistics alone, when read in connexion with the paper referred to, must be of value, because the percentage of recoveries at all ages is more favourable than in the lists supplied by Mr. Wightman. All my cases have been treated by free incision with the exception of two, where, owing to the grave condition of the child and the extent of the effusion, it was deemed to be wiser to relieve the chest by a limited aspiration some hours before proceeding to free incision. This I believe to be a very useful precaution, it being impressed very much on my mind in the case of an adult female who had an enormous left-sided collection after parturition. The total number of my cases was forty-five, the deaths being seven. In the foregoing list I find that only seven cases were under three years of age, and of these two died, one child being a year old and the second a year and nine months. The method of treatment in every case may be briefly summarised as follows: (1) free incision; (2) a single tube in infants, but a double-barrelled tube in all above the third year; (3) the complete emptying of the chest of fluid for the first week twice daily by turning the child on to his side as one would empty a barrel, this being assisted by an effort of coughing when the child is old enough to understand what is needed; (4) the early removal of the tube—i.e., at the end of the first week; and (5) allowing the patient to sit up and move about as soon after the first week as possible, thus helping the expansion of the lung. I may here add that I have never found it necessary to remove a portion of a rib in an acute case.

In connexion with the deaths the following facts are distinctly noteworthy: (1) that with one exception all the

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fatal cases were those of effusion on the *left* side—this is very interesting, and confirms the belief held by some that left-sided pleuro-pneumonia is always more dangerous to life than when it occurs on the right; (2) in all there was a long history of illness before admission, varying from six weeks to three months; (3) in one gangrene of the lung was believed to exist, but this could not be proved post mortem: (4) of the two deaths occurring in children under two years of age, one was the direct sequence of chicken-pox, and in both the children were rachitic to a degree; and (5) one case suffered from thrombosis of the left iliac vein six days after operation, and he died on the eighth day.

The deductions I would draw from these facts are as follows: (1) that free incision when done early is very successful; (2) that the removal of a portion of a rib is never necessary in acute cases; and (3) that a fatal issue at any age is rather the result of the neglect to recognise the true nature of the case than from the operation itself.

Nottingham.

CURRENT FROM THE MAIN.

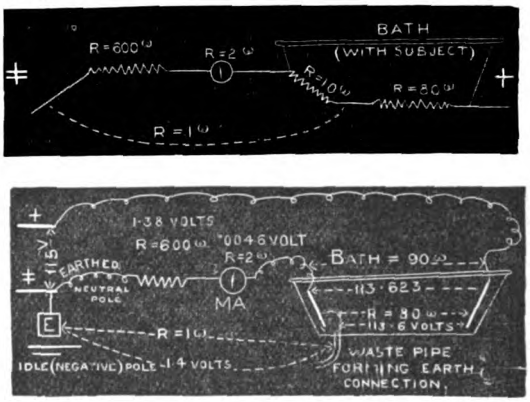
BY W. S. HEDLEY, M.D. EDIN.,

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SINCE the publication under the above heading of two articles on the utilisation of public supply currents for electro-therapeutic purposes[1] great progress has been made in the supply of electricity from central stations. The same interval has brought forth a variety of apparatus as well as a somewhat extensive literature bearing upon the points in question; but it cannot be said that by any writer has there yet been shown a complete grasp of the subject, nor by any instrument have the many serious difficulties of the case ever been adequately met. In view, however, of the great and increasing employment of these currents, and with an experience of their usefulness in medicine, the time seems to have arrived for a complete survey of the whole problem; and the following remarks offer themselves as an attempt at its solution.

Considering the improvement that has taken place in public supply currents, I am of opinion that for medical employment their chief danger now lies, not in the possible influx of strong currents or in the chances of a failure of supply, but in leakage currents and in the breakdown of transformers, and of these risks the greater is leakage.

1. *Leakage currents.*—This source of danger has hitherto been either under-estimated or completely ignored, but it is nevertheless a very serious one, and in the absence of suitable precautions may lead to accidents of a grave kind. Those stations which supply by direct distribution, or distribution from transforming centres, are undoubtedly, and for obvious reasons, more subject to earth leakage than are those in which transformers are used at or near the house. Again, stations supplying electricity on the three or five wire systems, even if they do not actually connect to an earth plate or water pipe, are likely to have the middle wire (the "neutral") at practically earth potential. It is true that any connexion to earth of a main supplying current direct to houses is forbidden by the Board of Trade, but when, for purposes of its own, it suits a company to earth its middle wire this regulation does not seem to bar the practice. Now, if under these circumstances the patient be placed in contact with one of the outer mains (positive or negative) what may be expected to happen? If the connexion to earth be good, even a damp floor, such a patient would be subjected to the full pressure of supply, usually 100 volts or more. It is obvious that if the contact be of low resistance (for instance, if the patient be in an uninsulated bath) the resultant current through the patient's body might be one of considerable and even dangerous magnitude, perhaps approaching 400 milliampères. It would be useless to interpose resistance between the patient and the uninsulated (neutral) pole, as this portion of the circuit would be shunted by the leakage current, and if the milli-ampère meter was also placed in this portion of the circuit it would fail to register any of this leakage. The following diagrams[2] will serve to illustrate the electrical conditions that exist—for example, in a bath—when an earth connexion is made.



There is one "series" R = 80 and there are two parallel branches (R = 600 + 2 + 10 and R = 1). Then the total resistance $= \frac{612 \times 1}{612 + 1} + 80 = 80{\cdot}998$, and the total current $\left(\frac{115}{80{\cdot}998}\right) = 1420$ m.a. Of this total the body will take an average of 25 per cent.[3]—that is, it will receive 355 m.a. The current in the respective parallel branches will be as 612 : 1—in other words, the milliampère meter will register 2·3 m.a. Had the patient been placed in contact with the uninsulated (neutral) wire and the resistance been interposed between him and the insulated pole (positive or negative) he would not, even if placed in an uninsulated bath, have been in the circuit of any earth current. This would hold good only so long as the condition of the mains was good. Should a fault break out on one of the outer wires (positive or negative) the state of affairs would be in no way different from the case just considered. What, then, is the remedy for this risk? Clearly insulation. It should be taken as an axiom that the current from public supply mains should *never* be applied either as a shunt or direct to the patient without interposing between him and the earth an insulating substance of such a nature as would undoubtedly stand the full main pressure across it without passing a current of 1 m.a. In the case of three wire systems the "full main pressure" would be double that of supply, and in five wire systems four times that of supply. This necessity for insulation would apply equally to all systems, whether continuous or alternating, direct or transformed. In the usual electrical applications security would be attained by standing on a very dry floor or, more certainly, on a varnished kamptulicon mat. But in the case of the water bath, connecting as it does with a good earthing device in the shape of waste pipes and water pipes, the case is altogether different, and certain additional precautions then become necessary. With these duly carried out effective insulation can certainly be secured. In the first place it is obvious that the bath should not be made of metal. Hard wood or porcelain are suitable materials, the latter by preference. The bath should stand upon glass mushroom insulators filled with a heavy resinous oil (similar to those used for insulating storage batteries) or it might be placed upon hard vulcanised rubber blocks. The inlet stopcocks for both hot and cold water should be placed some distance from the bath, and in such a position that it would be impossible for the patient, when in the bath, to accidentally make contact with them. An insulating piece of porcelain or vulcanised rubber should be inserted in both inlet pipes between the stop-cocks and the bath. If the waste pipe be attached to the bath an insulating piece should be inserted as close to the bath as possible. But danger may be even more easily and effectually averted by fixing directly below the waste outlet of the bath

[1] Current from the Main. By W. S. Hedley, M.D., THE LANCET, Dec. 19th, 1891, and April 9th, 1892.

[2] These diagrams are only intended to show by an example the possible danger to a patient from leakage currents. 115 volts is the full pressure of the mains. The total current under the above conditions is 1420 m.a., and the resistance in the respective branches is 612 ohms and 1 ohm, and, as current is inversely proportional to resistance, the current in the circuit of high resistance (the galvanometer circuit) will be 2·3 m.a., and in the earth circuit 1417·7 m.a. But both circuits are common to the bath.

[3] My most recent experiments, shortly to be published, prove this—a conclusion in startling contrast with former surmises.

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a shallow tank or sink to receive waste water from the bath, the waste pipe being attached to this sink. Neither the tank nor the waste pipe should make contact with the bath.

I have just read, and not without misgiving, the report of a discussion at the recent conference of the Board of Trade upon the question of raising the limit of low-pressure supply. It cannot be said that on this occasion the calculations of the commercial electrical engineer were hampered by any undue regard for the safety of human life. It was claimed by several of those present that they had received harmless shocks from what are now considered to be high-pressure circuits. One gentleman asserted that he had felt no ill effects from a 600 volt shock. In view of the fact that so much depends upon contact and the manner of taking a shock, and that little or no information was given on this point, it is difficult to form an opinion from such a statement. Did the gentleman in question touch one pole only of a 600 volt circuit? If so, what was the earth insulation of the other pole? Was his body in contact with the earth? Or, presuming that he simultaneously placed one hand on each pole of the 600 volt circuit, what was the surface area of skin contact, and what the condition of the skin? In the absence of information on these points the statement referred to cannot be considered to have any real value. Had the surface area and condition of the skin been favourable for a low resistance contact, it is more than possible that the gentleman in question might ere this have been "put to earth" in a sense other than an electrical one.

2. *Breakdown of transformers.*—The second source of danger (one which, of course, can occur only with transformed systems) is that due to the breakdown of the insulation between the primary and secondary windings of a transformer. This risk does not belong exclusively to alternating current systems. Continuous current transformers are now used in several public installations, notably at Oxford (1000 volts primary) and at Chelsea (500 volts primary). In the event of a breakdown of the insulation the secondary mains would have their potential above earth very considerably raised, and should it happen that there are weak places in the network of secondary (distributing) mains (of which the patient's body, unless well insulated from earth, would form one) an excessive current would pass, with probably fatal results to the patient. The Board of Trade regulations provide that every secondary circuit of a high-pressure main shall be fitted with an approved form of apparatus for automatically connecting the secondary mains to earth in the event of their potential above earth rising to a dangerous degree; but in this case there is the not improbable contingency that when the occasion for its action arises such an apparatus will be out of order, and, even if it be working well, it cannot act until the potential above earth of the mains has risen to this dangerous degree. And after that there is still an interval, short but quite appreciable, required for the action of the device in question. It must be borne in mind that during this time the excessive potential is acting upon the patient unless he be very well insulated, and, further, that it does not take long, with good contacts, to kill a man with 1000 or 2000 volts. What, then, are the precautionary measures here? Never to rely solely upon the insulation of the patient from earth when the supply is a transformed one, but always to place a substantially made transformer in the circuit. With alternating currents a "Woakes"[4] or "Miller and Woods"[5] transformer may be used; but it should be tested with at least the pressure of the primary mains between its primary and secondary windings before being installed for work. With continuous currents from a transformed system it will be well to interpose a motor, and make this drive by belt a small dynamo which should *not* be fixed on the same metal bed-plate. The dangers due to leakage and the breakdown of the transformer represent practically the whole of the difficulties that have to be contended with so far as the company's mains are concerned. The risks of failure of supply and serious rise of supply pressure need not, in the case of English companies at least, now be seriously considered. The companies for their own sakes take every possible precaution to guard against these accidents, and usually with complete success. Under any circumstances it is desirable to fix upon each pole of the electro-therapeutic circuit a reliable magnetic cut-out. The best apparatus of this kind is that known as the "Cunyngbame," of which the following is a description. Two planished ends of a copper solenoid dip into two mercury cups forming the terminals of the instrument, and on the current reaching a predetermined amount the solenoid is "sucked over" (drawn back upon) a curved, soft, iron core-piece, the position of which is fixed but adjustable. The solenoid is fastened to one end of a radial arm which is pivoted at its lower end in such a way that a slight movement of the solenoid brings it vertically over the turning centre and into a position of unstable equilibrium; any further increase of current will cause the solenoid to drop by force of gravity and at the same time withdraw the contact points from the mercury cup, thus breaking the circuit. If desired, the mercury cup could be short-circuited by a resistance of such an amount as would reduce the current in the circuit to half or quarter of the breaking current. For example, let it be supposed that the magnetic cut-out has been set to break circuit at 200 m.a., and that the electromotive force of supply is 100 volts, then the resistance to the circuit must be $\frac{100}{\cdot200} = 500$ ohms. Now, if the magnetic cut-out be short-circuited with a resistance of 500 ohms, the current, instead of ceasing altogether, would be diminished to $\frac{100}{500 + 500} = 100$ m.a.; or, if 1500 ohms be used as a short-circuiting resistance, the current would have been diminished to $\frac{100}{500 + 1500} = 50$ m.a.

Where two magnetic cut-outs (one on each pole) are used it would be well to short-circuit both instruments with resistances, and to set one to act a little in advance of the other. Fusible cut-outs and lamps in the circuit have been recommended as safeguards, but it has been more than once pointed out by me in THE LANCET that at best such devices are unreliable for the purpose in question and may lead to the serious discomfiture of those who put their trust in them. It is well known that fuses cannot be guaranteed to act within 5 per cent. of their nominal current; it is necessary also to remember that even then they take quite an appreciable time to heat and melt. Again, the difficulty of obtaining small fuses of reliable gauge is greater than with fuses of larger capacity. With lamps the result is even more uncertain. The resistance of carbon diminishes as the filament grows hot until the state of incandescence is reached, after which resistance remains practically constant. Again, the temperature to which it is raised under normal lighting conditions depends entirely upon the efficiency (watts per candle) at which the lamp is intended to burn: therefore it is evident that as a fuse a lamp's breaking point must vary considerably. With high-efficiency lamps—i.e., with lamps which absorb small voltage for candle-power—the ratio between the nominal current and the fusing current will be less than with low-efficiency lamps. Used as a "backing" resistance—i.e., as a choking or current-reducing resistance of steady value—a lamp to ensure anything like reliability should have a considerable current passed through it—certainly full incandescence should be attained. As safeguards, therefore, for electro-therapeutic purposes fusible cut-outs and lamps are entirely out of the question.

Having cleared the ground of the only serious difficulties that lie in the way of utilising lighting currents, I hope to go on to consider their physical characters, their therapeutic qualities, and the control apparatus by which such currents may be best adapted to the varied requirements of practice.

[4] This instrument has on one bobbin three separate secondary coils; one supplies cautery, the second light, and the third gives current for application to the patient.

[5] This device is provided with a number of terminals on the secondary winding, such that any voltage from 2 upwards and any current up to 20 amperes can be obtained.

A CONTRIBUTION TO THE SURGICAL TREATMENT OF MALIGNANT DISEASE OF THE BREAST.

BY ROBERT SANDERSON, M.B. OXON., M.R.C.S. ENG.,
LATE DEMONSTRATOR OF ANATOMY, WESTMINSTER HOSPITAL MEDICAL SCHOOL; SURGEON TO THE WOMEN'S HOSPITAL, BRIGHTON.

THE published statistics of the results of the surgical treatment of malignant disease of the breast so plainly show disappointing results that little apology seems to be demanded for an attempt either to criticise the past or make suggestions for the future. It has become an acknowledged principle of the treatment that not only should the whole affected mamma

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be freely and thoroughly excised, but that in addition a clean sweep should be made of its lymphatic connexions. It is unnecessary in this article to enumerate the pathological considerations which have led to the adoption of this principle, but it is very necessary to examine the question as to how far the principle has been applied to the practice now employed.

First, as regards anatomy. It is a matter of fact that efferent lymphatic vessels run from the axillary glands through the apex of the axilla into the posterior triangle, and after forming connexions with the glands therein finally enter the thoracic duct on the left side and the right thoracic duct on the right side. Moreover, superficial lymphatics from the skin covering the mamma track up over the clavicle to these same glands in the posterior triangle.

Now, to examine the practice. It is laid down that in primary malignant disease of the breast the axilla should be cleared out (after removal of the breast), whether the glands be visibly infected or not. Why? Because the fact that they are not affected macroscopically is no proof that they are not affected microscopically. And yet, in the face of the anatomical facts quoted above, it is not the usual custom or practice to go further. If it is wrong to assume that the axilla is free from disease because it shows no sign to the naked eye or finger, it is equally wrong to assume that the posterior triangle has escaped. If it is right and peremptory to clear the axilla, it is also right and peremptory to clear the posterior triangle. Still more is it inconceivable how the triangle can be left untouched if the axillary glands are found to be clearly affected at the time of operation.

It may possibly be objected that it is not feasible or is difficult to clear the posterior triangle. To this it can be replied that by a flap operation done a week or ten days after the primary operation a clean dissection can be made of the whole posterior triangle, that it is not difficult, and that it is quite feasible. A flap formed by a long incision down the sterno-mastoid muscle meeting an incision along the clavicle is detached as far back as the anterior border of the trapezius; this exposes the triangle, and the contents can be systematically removed with a little care and patience. By such means the acknowleged principle would be carried out as far as is possible, and if the principle is right it seems incumbent upon the surgeon to strive to apply it thoroughly in practice and not to be content with stopping half-way. It is not suggested that this is the best method of operating, and inasmuch as two cases only have been so treated, and those comparatively recently, no results of value can be produced. It is hoped, however, that this article will serve to ventilate the question as well as to point out that at present the practice appears to directly clash with the acknowledged principle.

Brighton.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of the British Medical Temperance Association was held on Wednesday, Dec. 11th, at the London Temperance Hospital, when a paper was read by Dr. C. R. Drysdale on Therapeutics without Alcohol, in which he contended that alcohol was of little, if any, use in the treatment of disease. Sir B. W. Richardson, who presided, said that, in conjunction with the late Dr. Farr, he had found that more people were killed by alcohol than by phthisis. The discussion was continued by Dr. Norman Kerr, Mr. Hazel, Dr. Paramore, and Dr. Ridge, and a vote of thanks was accorded to Dr. Drysdale.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY. The December meeting was held at the infirmary of St. George's-in-the-East on the 14th inst., Mr. J. R. Lunn being in the chair. Dr. M. M. Bowlan (medical superintendent of St. George's-in-the-East) exhibited cases of Extensive Ulceration of both Feet; Suppuration of Knee-joint cured and perfect movement regained by draining and free irrigation; Congenital Heart Disease; Pityriasis Rubra; and Jaundice associated with Rupial Eruption. The question of a uniform diet for all workhouses within the metropolitan area was discussed and approved of, Mr. Walter Burney (Greenwich) pointing out that those houses which adopted a more liberal diet were favoured with the company of the professional workhouse loafer, who was a pest to society and made these institutions unendurable to the respectable poor. Various other administrative matters were discussed, and a vote of thanks to Dr. Bowlan for his interesting series of cases terminated the proceedings.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

ACUTE PERFORATION OF AN ULCER OF THE STOMACH; LAPAROTOMY; RECOVERY.

(Under the care of Dr. W. PASTEUR and Mr. HENRY MORRIS.)

THIS case makes the eighth record of operation for perforation of simple ulcer of the stomach that we have published in the Mirror of Hospital Practice during the course of the present year. It was, however, the first of the series to be subjected to operation, and has probably been already referred to, although not previously published. It is a very important case, because it shows distinctly the local symptoms which may be present soon after perforation has taken place, at the stage, in fact, when morphia is so often given and much valuable time lost in consequence of the masking of symptoms which that drug produces. The absence of rigidity of the abdominal muscles when the girl was first seen, although there was already a loss of the liver dulness, should be especially noted; it was not long before this rigidity or "guard action" was found, but that it may be absent at first is an important observation. In the seven other cases referred to life was saved by operation in four cases, and in a fifth it was prolonged until the eleventh day. In all but one the perforation was of an ulcer on the anterior surface of the stomach. The fact which comes out most prominently in these records is the importance of early operation. The successful results were gained when there had been intervals of six, nine, nine, and thirteen and a half hours between the first symptoms and the operation, and death ensued when the intervals had been fourteen, nineteen, and niceteen and a half hours. This is a most striking fact, more strongly emphasised as the patient who only lived for ten days was the one operated on fourteen hours after the commencement of the symptoms. In the larger number it was possible to suture the opening in the stomach, but in one the tissues around the opening gave way, and it was necessary to excise the edges in order to reach healthy parts for the sutures. In one case a tube was passed into the stomach through the opening. For the notes of this case we are indebted to Mr. W. E. Hudleston, house surgeon, and Mr. John Murray, surgical registrar.

A young woman aged twenty-four years, single, presented herself at the out-patient department of the Middlesex Hospital on March 10th, 1894, at 3.30 P.M. She had enjoyed good health until two years ago, when she became subject to indigestion, which, however, had only given trouble during the preceding six months. The chief symptom was epigastric pain very soon after taking food and lasting for some two hours. During the previous three months there had also been sickness after food, sometimes on several successive days, and for the last six or eight weeks the patient had not touched meat or potatoes on account of the pain which followed. On one occasion, some four months previously, she vomited a small quantity of dark blood. The bowels had never given her any trouble. She had been under treatment for dyspepsia during the last few weeks. The patient was in her usual health on the morning of the 10th, and took boiled haddock at her midday meal (12.30). At 2.30 p.m., as she was hurrying upstairs, she was suddenly seized by a strong "drawing" pain in the lower abdomen. This rapidly increased in area and intensity, and by the time she reached the hospital, an hour later, had spread over the whole abdomen. She managed to walk to the hospital, about a quarter of a mile, but was doubled up with pain and felt faint. There was no vomiting. Her appearance when first seen did not in any way suggest the nature of her illness. As she lay on a couch in the out-patient room, with slightly flushed cheeks, without pinching of features or anxiety of expression, answering

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questions readily in a clear voice, there was little to suggest acute perforation of the stomach. Physical examination of the abdomen, however, left little room for doubt as to the true state of things. There was slight uniform distension of the abdomen; the abdominal wall was quite flaccid, and gentle palpation could be borne without much pain The percussion note was everywhere tympanitic and the liver dulness was completely obliterated. The patient was at once removed to the wards, and when seen again an hour later her condition had already changed considerably for the worse. The face was now anxious and somewhat pinched, the abdominal wall had become rigid and acutely tender, the girth at the umbilicus was greater since admission by more than one inch, and pain was rapidly becoming more acute. At 6.30 P.M.—just four hours after the first onset of symptoms—Mr. Henry Morris operated. A median incision four inches long was carried from the costal angle towards the umbilicus. After dividing the superficial structures the peritoneum bulged up into the wound, and on being nicked allowed a quantity of offensive gas to escape. When the peritoneum was divided the distended colon presented in the wound. This was returned into the cavity, flat sponges were introduced, and the wound enlarged downwards to the umbilicus. On drawing the stomach up into the wound a perforation the size of a No. 12 catheter was brought into view. It was situated close to the pylorus on the anterior surface near the greater curvature. The ulcerated portion of the stomach was invaginated by means of eight Lembert sutures of No 2 silk, a second row of sutures being placed more superficially to strengthen them. The peritoneum was thoroughly irrigated with a 1 in 400 carbolic solution at 105° F., and the pelvis sponged out as dry as possible. The various peritoneal pouches were similarly dealt with. Much lymph was removed from the surface of the liver. The abdominal wound was closed with nine thick silk sutures, and the ordinary dressing applied. During the irrigation of the peritoneum the pupils became widely dilated, and there was a tendency to failure of respiration. Much difficulty was experienced in maintaining respiration for an hour or two after the operation. At 9.30 P.M. breathing was of the Cheyne-Stokes type, the pulse had improved considerably, and the temperature was 93°. On March 11th the patient had slept five hours and a half during the night. She complained of pain on respiration. There was no sickness. The temperature was 99·8°. She was ordered to take nothing whatever by the mouth; a morphia suppository was to be repeated if necessary, and a rectal tube to be passed frequently. On the night of March 11th the patient was sick twice and again four times on March 12th. The vomit was watery and bile-stained, but contained no blood. At 4 P.M. she was ordered one teaspoonful of hot water every hour. The pulse was 116, the temperature 99·6°, and the respiration 26. On March 13th there had been no more sickness. She was ordered two teaspoonfuls of hot tea and milk every hour. On March 14th a simple enema was administered. Her diet consisted of six ounces of tea and twelve ounces of hot water in the twenty-four hours. Nutrient enemata were ordered to be given every four hours. On March 15th urine was passed naturally for the first time. One teaspoonful of prepared meat juice every two hours was ordered. On March 18th the patient was improving steadily. The stitches were removed on this day. Two ounces of arrowroot every five hours were ordered. On March 22nd progress was uninterrupted. There was some distension, which was relieved by a rectal tube. On March 24th the wound was nearly healed. The patient left the hospital cured on April 7th. She came again to the out-patient department more than twelve months after the operation complaining of pain after food, which rapidly yielded to simple remedies. She stated that she had been perfectly well and strong ever since leaving the hospital.

Remarks by Dr. PASTEUR.—This case illustrates many points which have been emphasised by subsequent experience. The early recognition of the nature of the case and the prompt resort to operative procedure doubtless contributed in no small measure to the recovery of the patient. The diagnosis was made within one hour of the onset of symptoms, and before five hours had elapsed the perforation had been closed and the peritoneum thoroughly cleansed. The importance of an early diagnosis is self-evident, and with increasing knowledge of these cases this should become more and more easy of attainment. The value of "obliteration of the liver dulness" in this instance was manifest. Had this not been recognised when the patient was first seen the difficulty in making a diagnosis would have been much greater. The history and the mode of onset were, it is true, suggestive of the true cause; but in view of the complete absence of the pinched look of the face, of the tense, tender abdomen wall, and of all signs of general collapse, one might well have hesitated to give an opinion on the spot and felt disposed to watch the case awhile before making a definite diagnosis. I am doubtful, however, whether delay, even in such circumstances, could be justified. Personally, if in doubt at the outset of a case of this kind I would rather urge a patient to run the comparatively trifling risk of an exploratory incision than allow the time to pass by when an operation might have cured an otherwise necessarily fatal accident. Two other factors also doubtless contributed to the favourable result—the one, the good general condition of the patient, and the other the almost complete absence of the initial collapse which is so often met with in these cases. This last is probably a point of considerable importance in estimating the chances of success in any given case.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

INTERESTING SURGICAL CASES IN THE WARDS.

(Under the care of Dr. COURTNEY NEDWILL.)

WE are pleased to be able to bring before the readers of THE LANCET the notes of the following cases of successful surgery in the hospital of Christchurch. Hydatid disease is very common in the colony of New Zealand, and cysts have been met with in all the various internal organs. We can only suppose that the thyroid has escaped implication to the extent shown by Dr. Nedwill because of its comparatively small size. With regard to the size of stones which have been removed from the bladder by the suprapubic route during the life of the patient, we published in THE LANCET the account of a case under the care of Mr. Milton,[1] who extracted a stone, now in the museum of the Royal College of Surgeons of England, which weighed thirty-four and a half ounces by suprapubic cystotomy from the bladder of a fellah aged sixty. The man lived two months and a half and then died from kidney disease. Even this is exceeded by the case referred to in Ashhurst's "International Encyclopædia of Surgery," of which we have been recently reminded by Sir G. M. Humphry,[2] where a surgeon removed a stone weighing forty ounces and a half. The man did not survive more than eight days. It is to be expected that extraction of the larger stones should be more frequently followed by a fatal result, as their long sojourn in the bladder will have caused more extensive changes in the kidneys. When small ovarian tumours are attached by long pedicles they are difficult to diagnose from movable kidney, wandering spleen, and tumours of the omentum or intestine, or uterus. When larger, and there is likewise a considerable amount of free fluid in the peritoneal cavity, difficulty arises in another way, as it is often quite impossible to determine the exact nature of the growth, whether it is cystic or solid, &c., and the only way to make certain is to perform abdominal section. Those experienced in abdominal examinations can frequently make a shrewd guess, but short of operation there is little to help in the diagnosis between a moderate-sized sarcoma of the ovary, with multiple growths in the peritoneum, and a multilocular ovarian tumour of similar size one of the cysts of which has been slowly filling the peritoneal cavity with fluid after its unnoticed rupture.

CASE 1. *Hydatid cyst of the thyroid gland.*—A girl eight years old was admitted on July 1st, 1895, on account of a tumour occupying the central part of the thyroid gland. Her mother said she first noticed a lump in her child's throat about three years previously. During the last three months the child had had great difficulty in breathing, especially at night, frequently starting up in bed, throwing her hands about, and appearing as if she would be suffocated. After her admission she had several severe attacks of dyspnœa. On July 3rd she was placed on the operating table and an attempt made to anæsthetise her which had to be abandoned

[1] THE LANCET, Sept. 16th, 1893.
[2] THE LANCET Nov. 30th, 1895, p. 1342.

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on account of impending suffocation. A hypodermic injection of cocaine was then made over the tumour, which was easily exposed by a short vertical incision. The pearly-white appearance of the cyst and the clear fluid drained off when it was incised suggested its nature. The lining membrane was removed by forceps and the edges of the opening in the cyst were stitched to the skin wound. On introducing the finger into the cyst it was found that it had insinuated itself all round the trachea. On July 29th she was discharged with only a very small sinus remaining unhealed.

Remarks by Dr. NEDWILL.—I can find only one other similar case reported—namely, by Wilks and Moxon—and as there was no mention of hydatids either by Mr. Butlin or the other members of the British Medical Association who recently discussed the subject of tumours and cysts of the thyroid gland, I take it that this case is of sufficient rarity to justify its publication.

CASE 2. *Large vesical calculus weighing only ten grains short of eleven ounces removed by supra-pubic operation.*—A man aged thirty-two was admitted to the hospital on June 3rd, 1895. Ever since he was fifteen he had suffered great pain and had had difficulty in passing urine. For the previous three years he had been quite unfit for work. On examination a very large stone was detected. The urine was very offensive and highly albuminous. The bladder was frequently washed out for a few days, and on the 9th, six ounces of boracic solution having been injected and a rectum bag introduced, the abdomen was opened above the pubes. The greatest difficulty was experienced in extracting the stone; the wound had to be enlarged, not only close up to the pubes, but upwards in the direction of the peritoneum. To prevent extravasation Dr. Nedwill had to insert fourteen or fifteen catgut sutures between the cut edges of the bladder and the abdominal wound. A drainage-tube was passed into the bladder, and irrigation was carried out sometimes twice, thrice, or four times during the twenty-four hours. On July 1st urine was passed for the first time from the urethra. During this month the patient had several rigors with high temperature—on one occasion a temperature of 106° F. was recorded. After July 1st urine ceased to come from the urethra till the 27th. These rises of temperature were apparently due to some small pocketing of pus between the bladder and the abdominal wall, as from first to last there was no extravasation of urine. On Aug. 1st the temperature was normal. On the 23rd a dry dressing was applied. On Sept. 7th it was reported that the patient sat up every day and the wound was healed. He was discharged on the 15th in excellent health.

Remarks by Dr. NEDWILL.—I am much indebted to Dr. Graham Campbell, who was acting for Mr. Murray-Aynsley, our house surgeon at this time, for the great care he gave this case during the after-treatment. Quite twenty grains extra were chipped off the stone during extraction. I have not the advantage of consulting a reference library, and cannot, therefore, say whether other stones larger than this one have been successfully operated for. A short time ago I read a report of a lecture by Mr. Christopher Heath, where it was mentioned that he had removed a stone of a similar size. Mr. Heath stated in his lecture that he had never had a more sultry Sunday afternoon's work than in removing it. In my case I can also say I never had a more sultry Sunday morning's work.

CASE 3. *Fibrous tumour of the ovary with a very long and narrow pedicle.*—A married woman aged forty-nine was admitted to the hospital on June 5th, 1895. She had been confined of her last child in 1877 and had, she said, inflammation of the bowels at that time as well as ten years previously to admission. The abdomen had been gradually enlarging since her confinement, but more especially during the previous twelve months. On her admission the abdomen was found to be very much distended with fluid, which was evidently in the peritoneal cavity. A tumour could be felt floating in this fluid and easily tilted far away from the finger in any direction. On the 9th the abdomen was opened; about two gallons of peritoneal fluid were removed, and a solid tumour weighing 1 lb. 8 oz., with a very long and narrow pedicle, was easily extracted. Only a few omental adhesions were present, and a single ligature was found sufficient for the small pedicle. The temperature remained normal throughout the after-treatment, and she was discharged on July 13th.

Remarks by Dr. NEDWILL.—Mr. Murray-Aynsley examined the tumour for me and reported it to be an almost pure fibroma with a minute cyst in its substance. I report the case as I understand it to be not very common.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c.

(Concluded from p. 1501)

Mr. SPENCER WATSON said that in syphilis the persistence of glandular enlargement would lead to a suspicion that the disease was latent, and that therefore treatment should be prolonged. The virus of both pathogenic and non-pathogenic bacteria could be attenuated by sunlight, and something like this might happen in the case of patients who were sent to a sunny climate, though in the latter case the benefit resulted rather from increasing the resistance of the tissues of the patient.

Dr. LAZARUS-BARLOW said that he proposed to deal with the bacteriological aspect of the question, and with only one section of it. In pébrine the silkworm's egg after being laid was seen to contain germs of microbes. These would remain latent in the egg during the winter, although the temperature might be favourable to their development. When the egg began to germinate then the microbes increased in number until the caterpillar was fully developed. This fact illustrated that there was a certain something essential to the development of the microbe and which depended upon its environment. He, some time ago, came across a paper[1] in which was discussed a question whether plants could absorb nitrogen from the atmosphere when nitrogen was not presented to them in the soil. Two seeds were sown under these conditions; they put forth leaves which were green and turgid, but a total arrest of growth ensued for over two months. The arrest or growth of a plant or organism depended chiefly upon the conditions under which it found itself. The influence of environment was especially well seen in the case of the diphtheria bacillus, which was so fastidious as to require a certain particular amount of alkali in the culture medium. If the diphtheria bacillus were grown upon Lorrain Smith's serum, which consisted of sterilised blood serum plus alkali, the question whether growth started depended upon the length of time the serum had been sterilised and upon its non-exposure to atmospheric air. It was upon the culture medium that latency depended. In London all were probably almost equally exposed to infection with the tubercle bacillus. A would become infected and B not; this depended rather upon peculiarities of A and B than on the organism.

Dr. THEODORE WILLIAMS said that he found difficulty in distinguishing between latency and arrest in tuberculosis. By latency appeared to be meant the condition in which the virus was dormant, in arrest the virus might be dead. When could a case of tuberculosis be said to be arrested? He quoted the case of a man aged twenty-two years who was the subject of pulmonary tuberculosis, there being cavities in both lungs. Under favourable treatment the patient gradually recovered and became a short-breathed, stout man. Thirty-six years from the onset of the first symptom of phthisis, and sixteen from the last phthisical symptom, the patient died from non-tuberculous albuminuria, and at the necropsy the remains of a cavity were found in one lung surrounded by fibrosis, and in the other were the remains of a cavity together with a considerable mass of caseous material encapsuled by fibrous tissue. If this capsule had given way the patient might have died from miliary tuberculosis or from acute meningitis. One might truly say, call no man a case of arrested tuberculosis until he was dead. He referred to the following instances of tuberculous outbreaks after a period of latency: (1) a case of old pulmonary lesion which was quiescent was followed by acute head symptoms and death from tuberculous meningitis; (2) a patient with a cavity in the lung surrounded

[1] Annales de Chimie, 1855.

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by fibrosis was placed under unfavourable hygienic circumstances and then tuberculosis developed at the opposite pulmonary apex; (3) tuberculous meningitis suddenly developed after old tuberculous osteitis of the vertebræ; and (4) tuberculous lymphadenitis of the neck, axilla, or elsewhere, remained quiescent, then a gland suppurating started acute miliary tubercle of the lung or tuberculous meningitis. The mediastinal and bronchial glands were especially apt to be invaded with tubercle after scarlet fever. There was danger following sometimes upon operation on chronic tuberculous lesions, and he referred to a case in which scraping of an axillary lymphadenitis was followed within forty-eight hours by the development of tuberculous meningitis elsewhere. He had met with a case of tuberculous pericarditis which followed upon an old lesion.

Sir WILLIAM BROADBENT said that in his opinion the papers had almost exhausted the subject, and very little room was left for the addition of new facts. The point of main interest to the society was to see that clinical cases could be explained by experimental investigation. He quoted a case in which a fall from a horse was followed by the development of acute tuberculosis. Latency might result from the encapsulation of the bacilli or their spores, or it might depend upon other circumstances in the environment. He had met with many cases in which the cause of typhoid fever could not be traced to any known cause during the usually observed period of latency or incubation. Cold or influenza frequently opened the door to typhoid fever by diminishing the tissue resistance of the individual; this was paralleled by experiments in animals. Injection of micro-organisms up to a certain dose might be followed by no infection, but if a non-infective dose were injected on one side and a dose of chloral were injected at the same time on the opposite side the animal would succumb. A somewhat similar state of affairs probably existed in the cases of scarlet fever following operation.

Dr. MANSON said that the causes of latency of disease and the conditions under which organisms became latent were various. In malaria the action of quinine did not kill the organism, but reduced its malignancy; warmth and good food acted in a similar way. The latency of the organism might be, so to speak, broken up by the action of adverse influences. A patient treated successfully for malaria in India when coming home might encounter bad weather in the English Channel; this would induce a fresh attack of malaria. The fungus which induced a particular form of itch in the tropics remained latent in the cold weather. Purely mechanical conditions of the parasite might induce symptoms, as when the filaria became rolled up and thus blocked the thoracic duct.

Mr. J. HUTCHINSON, jun., said that undoubtedly a few cases of syphilis, a very few, occurred in which the poison of the primary chancre remained latent for much over the usual period of time. Of this, one of the strongest examples was a patient at the Lock Hospital who was exposed to risk on Aug. 17th, a fortnight after which he came for an indolent inguinal bubo. The most careful search failed to discover any initial sore. He was again thoroughly examined on Aug. 31st, Sept. 17th, and Sept. 22nd, with the same result, no mercurial treatment being given. It was not till Oct. 5th—i.e., seven weeks after the solitary exposure to contagion—that an indurated ulcer developed close to the frænum, the bubo meanwhile having become still more characteristic. Secondary symptoms followed in due course. Such a case would make one less sceptical as to the tales of syphilitic "bubon d'emblée" in the male subject. It was possibly from prison surgeons and hospital physicians that the least doubtful evidence as to latency of primary syphilitic germs would be obtained. Aimé Martin observed the development of a hard chancre on the labium of a girl who had been for ten weeks isolated in the prison of St. Lazare. And as regarded the onset of secondary syphilis he could most positively confirm M. Diday's observation that an intercurrent illness might postpone it very considerably. M. Diday mentions two cases (one of typhoid fever and the other of pneumonia) in which the primary chancre had been contracted previously to the illness, whilst secondary symptoms did not appear for 120 and 160 days respectively. In two similar cases in which the patient had contracted an indurated chancre before or whilst sickening with typhoid fever Mr. Hutchinson had observed the syphilis "hang fire" until complete recovery had taken place from the typhoid fever—i.e., a period of from three to four months. As to the latency of tertiary symptoms the facts were too well known to require emphasis. For example, in a case he had published a man contracted syphilis at the age of twenty-one years, and after going through the ordinary secondary symptoms remained wholly free until the age of fifty-three years, when exposure to much privation was followed by the outbreak of multiple nodes of the skull, ischium, and humerus. Similar instances of long apparent latency were common both in acquired and inherited syphilis, and pointed to fresh activity of organisms which had remained in the tissues, though unfortunately the bacteriologist could not at present furnish any proof. Allusion was made in Mr. Lane's paper to the immunity from fresh infection or auto-inoculation during the primary stage. A remarkable exception occurred last year. A man under treatment with a hard chancre of the penis and inguinal bubo after six weeks inoculated one finger by accident, developed a chancre at this site, followed by swollen, hard, lymphatics up the arm, and large axillary glandular swelling. The patient had particularly severe secondary symptoms.

Dr. GEORGE OGILVIE said that Colles's law if valid established only the immunity of the mother, and did not justify the inference of latency. That a person was immune against syphilis no more proved that syphilis was latent in him than would a similar immunity against typhoid fever or tetanus. The term immunity had been used in two senses—as "refractory" and as "free from symptoms"; the latter was latency. He failed to grasp the distinction between "real" and "apparent" latency which the President had drawn. The term "latency" he took to mean a symptomless interval between two manifestations of disease, the second manifestation being either a clinical one or a discovery at the post-mortem table. Diseases which were non-specific, and which occurred in people who had had syphilis, were commonly called syphilitic, and this extended artificially the period of latency. Very little had been said as to the part which irritation, traumatism, or puberty played as disturbers of latency, and he quoted a case in which interstitial keratitis was evoked by traumatism. Paralysis of the limbs in late hereditary syphilis had frequently a blow for an exciting cause. In late hereditary syphilis two, five, ten, or twenty years might elapse before external manifestations were recognised, though internally the malady had existed in foci from the time of birth.

Dr. J. EDWARD SQUIRE said that the disease tuberculosis might lie latent for long, but the question was whether the germs remained latent also. Perhaps the bacilli were really active within an encapsuled focus, and doing as much damage as they could do in the confined space.

Dr. W. K. SIBLEY thought that the latency of a germ resembled the hibernation of an animal, and he referred to his published experiments upon the induction of tuberculosis in snakes, the disease progressing rapidly when the snakes were incubated, and becoming arrested when the reptiles were kept at an ordinary temperature. He suggested that experiments might be made with such an animal as the dormouse to see if tuberculosis would remain latent during the hibernation of the animal.

Dr. J. A. HAYWARD referred to a case which he had already published. A child was suffering from diphtheria and recovering, he was then attacked with measles, and at the invasion of measles there was a renewed activity of the diphtheria bacillus with a re-formation of membrane.

Mr. HUTCHINSON, in reply, explained that by "real" latency was meant absolute quiescence of the infective agent, whereas if the germ were doing something in the body he regarded this as "apparent" latency.

Dr. WASHBOURN and Dr. KINGSTON FOWLER also briefly replied.

PATHOLOGICAL SOCIETY OF LONDON.

The Varieties of Diphtheria Bacilli.—The Xerosis Bacillus.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Dec. 17th, Mr. ALBAN DORAN, Vice-President, being in the chair.

Mr. E. A. PETERS read a paper on the Varieties of Diphtheria Bacilli, in which he described four kinds of bacilli. The following is a summary of points of difference seen in early cultivations. 1. Long Klebs-Löffler bacillus. A twenty-four-hour cultivation on blood serum showed short bacilli, long segmented forms 0·003 mm. in length, long clubbed bacilli, and short clubs. This bacillus was pathogenic to guinea-pigs, and did not readily lose this property. 2. Short diphtheria bacillus (described in detail for the first time). This bacillus when compared under the same conditions

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with the long Klebs-Löffler bacillus differed from it in that at twenty-four hours' culture it consisted of a large number of conical bacilli 0·0015 mm. in length, with a few slightly segmented forms, which were characterised, as were also the short forms, by a pointed sheath. This bacillus was pathogenic to guinea-pigs, but soon lost this character. 3. The short pseudo-diphtheria bacillus under the same conditions showed numerous forms 0·001 mm. in length. Segmented forms were short and rare with this bacillus. The bacillus was never pathogenic to guinea-pigs. 4. Bacilli resembling the long Klebs-Löffler bacillus, except for slight clubbing and more definite segmentation. These were non-pathogenic to guinea-pigs. The clinical aspects of the cases in which these bacilli were found were: 1. The long Klebs-Löffler bacillus was found in cases of severe diphtheria. 2. The short diphtheria bacillus, which was less common, was associated with mild cases of diphtheria. 3. The short pseudo-diphtheria bacillus was widespread and was found in many cases of follicular tonsillitis, in cases of scarlet fever, rötheln, simple angina, and other catarrhal conditions. The affection with this bacillus *per se* was never fatal. Accordingly the importance of the differentiation of these bacilli, which was possible with cultivations on blood serum after twenty-four hours' exposure to a temperature of 37° C., was urged. 4. These bacilli caused no apparent hurt and were possibly non-pathogenic forms of the long Klebs-Löffler bacillus. Experiments principally by cultivation methods had been made by Mr. Peters for over a year with a view to the possible change of one variety into another, with the result that no such change was recognised. No. 2, however, readily lost its virulence to guinea-pigs. (Dr. Washbourn carried out the inoculation experiments.) It seemed probable that these bacilli were allied forms, while their morphological characters and clinical significance warranted the separation of these four varieties. The paper was illustrated by lantern slides prepared by Mr. Bousfield and also by cultures and microscopical specimens.

Mr. J. EYRE read a paper on Neisser's Xerosis Bacillus, commenting upon its close resemblance to the bacillus diphtheriæ. He had isolated it from the conjunctival secretion of a series of cases which presented slightly different appearances from the ordinary form of follicular conjunctivitis, and which appeared to be somewhat infectious; also from one case of trachoma, but he had been unable to detect it in the secretion from normal conjunctivæ. The cultural and morphological appearances upon various media were described and the differences between it and the Klebs-Löffler bacillus pointed out. The chief points to be relied upon in differentiating the xerosis bacillus from the bacillus diphtheriæ were summed up as follows: (1) first cultures from the conjunctival secretion, &c., did not make their appearance under thirty-six to forty-eight hours; (2) the production of an alkaline (never an acid) reaction in broth and milk; (3) retarded and scanty growth on gelatin—poor growth and rapid death upon potato; (4) the invariably innocuous character of the broth cultures when inoculated into animals susceptible to the bacillus diphtheriæ; and (5) the transition to a short, straight bacillus staining evenly after cultivation on blood serum for ten to fifteen generations, and the restoration of those characters which render it liable to be mistaken for the diphtheria bacillus when transplanted on to glycerine blood serum.

Mr. LENNOX BROWNE said that the photographs shown by Mr. Eyre disturbed his faith in the specificity of the diphtheria bacillus, for the organisms he had shown would certainly have been diagnosed microscopically as diphtheria bacilli. The diagrams which Mr. Peters had shown bore no resemblance to the photographs. He thought it important that bacteriologists should agree on a culture medium upon which the bacilli to be diagnosed should be grown, as very different results were obtained by growing the same organism on different media, and this tended to introduce confusion. He had seen an exceptionally mild case of diphtheria associated with the long bacillus, and an exceptionally severe case associated with the short bacillus, and he had found the pseudo-bacillus associated with ordinary tonsillitis. He had found streptococci, staphylococci, and diplococci (but not pseudo-bacilli) associated with cases which had taken the clinical course of diphtheria. In the last photograph Mr. Peters had shown he saw several staphylococci associated with the diphtheria bacillus.

Dr. WASHBOURN traced the history of diphtheria bacilli. What Löffler first described was a long bacillus which was pathogenic. Then Hoffmann described a short bacillus which he called the pseudo-diphtheria bacillus, which was non-pathogenic and was found under a number of conditions other than diphtheria. Roux and Yersin later contributed a paper[1] dealing with the biology of diphtheria bacilli and their relation to the pseudo-diphtheria bacillus. They found that the non-virulent forms were morphologically identical with the virulent forms. Mr. Peters had demonstrated a bacillus which differed morphologically from the diphtheria bacillus and which was found in diphtheria and other conditions. It always retained its cultural and morphological characters for those particular media respectively on which it was grown. It had been found in the throat in German measles, also in scarlet fever with a mild throat affection which was non-diphtheritic, and in another case of scarlet fever associated with nasal discharge, also not diphtheritic. Mr. Peters had described two varieties of diphtheria bacillus; a long bacillus which was either pathogenic or non-pathogenic and a short bacillus which differed in morphological particulars from the long bacillus which was pathogenic, but the virulence of which disappeared after long culture. Roux and Yersin had described both the long and the short bacilli as non-pathogenic. Those acquainted with the bacteriology of the microbe they were working with were quite familiar with the appearance of the organism on each of the respective media. The short bacillus grown in broth would become shorter, and the pseudo-diphtheria bacillus when grown on blood-serum would become longer; this showed how important it was to know exactly the nature of the culture medium from which the specimen had been obtained. He was satisfied that all Mr. Peters's preparations were from pure cultures and that there was no contamination of them with staphylococci.

Dr. KANTHACK thought that the confusion already existing had been rendered worse by Mr. Peters and Dr. Washbourn. Two forms of bacillus had been described as pseudo-diphtheria bacillus, one of which was morphologically like the true diphtheria bacillus, while the other was quite different. He thought that the term pseudo-diphtheria bacillus ought to be given up altogether. There was at present only one test which could be applied to decide whether a particular organism was pathogenic or not, and that was to discover its virulence when inoculated into animals. In cases which were not those of diphtheria bacilli had been found by him, and these when inoculated into a guinea-pig killed it in twelve or even ten hours. At St. Bartholomew's Hospital he had made 195 examinations, mostly on very virulent cases, and he found that he could not argue from the length of the bacilli or from their clubbing whether they were virulent or not. It was easy by cultivation to change the long form into the short form, and both long and short bacilli were to be found in nearly all colonies on the surface of agar; he had never found unmixed colonies of the long variety. He had occasionally seen the short variety change into the long variety. He concluded by asserting that any morbid lesion in a throat which was associated with the Klebs-Löffler bacillus was a case of diphtheria; that culturally, tinctorially, and morphologically these might resemble other non-pathogenic bacteria, and that they could not be identified without experiments on animals. With regard to the xerosis bacillus he had made examinations of a series of cases of conjunctivitis. From two cases, which were those of ordinary muco-purulent ophthalmia, he cultivated a bacillus on serum and agar-agar, which was morphologically identical with the diphtheria bacillus. In two cases of membrane upon the conjunctiva following traumatism, one from a burn with lime and one from a burn with nitrate of silver, similar bacilli were present. But the gelatin culture of this organism was different from that of the diphtheria bacillus; it grew in small colonies which were not dead-white like those of the diphtheria bacillus; the agar culture was also different. Non-pathogenic long bacilli resembling the long form of diphtheria bacillus had been found in bad meat and in cow's milk by Klein. There were, indeed, a large number of bacilli which conformed to this type, and this emphasised the small reliance to be placed on morphological identity.

Dr. H. DURHAM disputed the value of experiments on animals to determine the virulence of the organism under examination, and quoted Koch's experiments in this direction with cholera bacilli, which were absolutely worthless in identifying the microbe of cholera. What was required was to prove absolutely, by means as yet unknown, that the

[1] Annales de l'Institut Pasteur.

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so-called pseudo-diphtheria bacillus could be raised in virulence.

Dr. GOODALL asked how many times the cases were examined before the organism was pronounced to be a pseudo-bacillus. Some of his patients had been examined twice and the bacillus of diphtheria had not been found, and yet the patients had afterwards developed paralysis. The long variety he had found to be always present in the severe cases, while the short variety he had not found by itself in cases which were really bad or in which paralysis had afterwards developed. He hoped the term pseudo-diphtheria bacillus would be discarded.

Mr. PETERS, in reply, pointed out that a bacteriological examination was often valueless unless material were taken directly from the larynx. His pseudo-diphtheria bacillus he had seen cause membrane in but one instance. The pointed bacillus, which was rare, was the one which, being pathogenic, most resembled the short, non-pathogenic bacillus.

Mr. EYRE also briefly replied.

The following card specimens were shown:—

Dr. WEBER: Heart from case of Angina Pectoris.

Dr. SNOW: Colloid Carcinoma of Breast.

Mr. LENNOX BROWNE: Malignant Growths of Tonsil.

Dr. ROLLESTON: Crateriform Ulcer.

Dr. HUGH WALSHAM: Tuberculous Liver with Lardaceous Disease.

CLINICAL SOCIETY OF LONDON.

Membranous Colitis treated by Right Colotomy and subsequent Closure of the Wound.—Congenital Median Cervical Fistula.

AN ordinary meeting of this society was held on Dec. 13th, Dr. WHIPHAM, Vice-President, being in the chair.

Dr. HALE WHITE and Mr. GOLDING-BIRD communicated the particulars of a case of Membranous Colitis treated by Right Colotomy and subsequent Closure of the Wound. The patient, a neurotic woman aged thirty, first began to pass mucus from the rectum and to suffer from constipation in 1885. From that time both these symptoms had become more marked, and by 1891 she was suffering from severe abdominal pain. In the next year the motions often consisted of nothing but mucus and blood, and the pain was agonising. This state of things continued till 1894, when she began to pass tubular casts; the pain kept her in bed most of the day, very strong purgatives were necessary to move the bowels, and she was a complete invalid. When seen by Dr. Hale White and Mr. Golding-Bird in 1895 she was in the same condition and had much tenderness over the descending colon and sigmoid flexure. A motion was examined; it consisted of a little fæces, much mucus, long tubular casts, and a considerable amount of blood. As during the previous ten years all sorts of drugs, various diets, prolonged rest in bed, and many health resorts had been tried, it was decided, with the consent of Dr. Walter Smith of Dublin, to perform a right colotomy. The bowel was fixed to the surface on May 10th, and opened on May 17th. Three days later the colon was washed out from the artificial to the natural anus with hot water, but already the membranes had ceased to be formed. For five weeks all the motions were passed through the artificial anus without the aid of purgatives. The fæces always appeared normal. As at the end of this time all the original symptoms had disappeared, the colotomy wound was closed and the bowels were subsequently kept confined for a week with opium. Some compound liquorice powder was then given, and a motion which was passed contained neither mucus nor blood. The general health and strength improved, and she went into the country on July 24th, feeling better than she had done for many years, having passed no blood or mucus since the operation on May 10th. Dr. Hale White and Mr. Golding-Bird submitted that in a severe case of membranous colitis this treatment was justifiable and was the most rational, for by it the colon could have complete rest. Their patient, it was true, had since died, but as far as could be made out her death had nothing to do with her operation or the colitis. Her subsequent history was imperfect, but it could not be made out that she suffered from membranous colitis after she left London.—Mr. ADNEY (Tunbridge Wells) said that he witnessed the last forty hours of the life of this patient. When called to her he found that she had already acute general peritonitis which was equally marked on both sides of the abdomen. She was moribund, and the inflammation appeared to be of the suppurative form. The swelling felt per rectum was probably an enlarged lymphatic gland which had suppurated and the resulting abscess burst into the peritoneum. The patient stated that there had been no return of the symptoms pointing to colitis.—Mr. GODLEE said that the treatment of dysentery by colotomy had been suggested to him many years ago by Dr. Manson, but he had only had an opportunity of putting it in practice during the present year. The patient, a female, had suffered from dysentery in India, but the symptoms had passed off. Since her return home she had suffered from hepatic abscess which had burst into the bowel, and she had nearly lost her life from thrombosis after child-birth. The dysentery set in again and he did a left colotomy, his object being to apply nitrate of silver or other suitable local applications to the diseased bowel. The whole mucous membrane in the neighbourhood of the colotomy opening was studded with long polypoid growths an inch and a half or two inches in length. The patient somewhat improved after operation, but she died later from causes apart from the dysentery.—Dr. TURNEY said that between three and four years ago Mr. Ballance operated on a case which he had diagnosed as dysentery, but which turned out not to be so. The patient was a man aged thirty-five who had been in India but had not suffered from dysentery there. He complained of a discharge of blood and mucus from the bowel, and he was much emaciated. Mr. Ballance opened the abdomen in the right inguinal region, cut across the ileum near the ileo-cæcal valve, bringing the upper end of the gut to the surface and fixing it there to form an artificial anus, the lower end being also brought out for irrigation purposes. The gut was irrigated several times daily, the fluid traversing the whole length of the colon and escaping at the anus. The patient improved at first, but died from hypostatic pneumonia within a week. The ulcerated bowel readily absorbed the toxic products passing along it, although the mucous membrane was too diseased to perform any physiological function; hence it was no loss to the patient to be deprived of the use of the large intestine. He hoped this method of treatment would be extended to cases of ulcerative colitis. In the light of the case which had been narrated he was disposed to believe that in another case division of the intestine would be unnecessary.—Dr. F. HAWKINS (Reading) said that as membranous casts frequently came from parts of the bowel other than the colon he objected to the term "membranous colitis." He had seen cases in which casts had come from the jejunum and ileum. He thought a better name would be "mucous disease of the bowel." He believed that this affection was more common than was supposed, for he himself had met with several examples. In one case the patient, a woman aged forty-four, ceased to pass casts under purely medical treatment, and she had not passed any now for three years. She had been in the habit of taking large doses of sulphate of magnesia daily for a year before the trouble commenced, and another case had been reported in which the disease was preceded by the taking of large doses of this salt.—Mr. BARKER asked what was the microscopical structure of the casts and what was the mode of their production. In one case in which he made a microscopical examination of the casts they appeared quite structureless, containing only some scattered epithelial cells, the remainder of the casts appearing to consist merely of coagulated mucus.—Dr. HERRINGHAM said he was interested in the causation of this affection, among other reasons, because he himself had been a sufferer from it. The passage of casts usually followed a long period of constipation. He had examined many such casts under the microscope, and they were always structureless. If under treatment the constipation disappeared the membranes ceased to be formed. He knew of three cases which came to a sudden fatal termination, in all of which death was preceded by great pain and tenderness in the left side of the abdomen. In one of these cases which died after operation, and in another case which recovered after operation, an abscess was found in the region of the descending colon. With regard to the causation of these abscesses in the region of the sigmoid flexure, he thought they were due to retained fæces leading to ulceration. In one of the two cases of abscess he had referred to a small communication with the bowel was found, but in the other the pus was perfectly sweet, and as far as could be made out no communication existed with the gut. He added that a German physician who had described these cases under the name of "pericolitis

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sinistra" believed them to be as common as suppurative lesions of the vermiform appendix.—Dr. SIDNEY PHILLIPS said that the subject under discussion was the treatment of colitis, and not that of dysentery; moreover, the mucous casts which were passed in cases of colitis were very different from those which were consequent on prolonged constipation. In colitis sloughs of mucous membrane were frequently passed, and the symptoms were different from those met with in association with dysentery. In colitis the ulceration often involved the small intestine as well, and this was a reason why, perhaps, the intestine should be opened in the lower ileum in preference to the colon.—Dr. WHIPHAM said that he had seen a case in consultation with Mr. Edgcombe Venning which was on all fours with the one related by Mr. Golding-Bird. The patient was a neurotic young woman who had passed mucous casts for some months before he saw her, and the passage of the casts was always preceded by attacks of severe pain in the region of the descending colon. Small doses of calomel secured free evacuation of the bowels, and the motions contained shreds and casts of mucous membrane. She was kept altogether in bed on a milk diet, and under this *régime* she became extremely emaciated, and it was feared that she would succumb, but although no change was made in the treatment she suddenly took a turn for the better, and for six months she had been quite well. A point of interest in connexion with this case was the fact that her sister had since manifested symptoms of the same affection.—Dr. HALE WHITE, in reply, said that he dissented altogether from what Dr. Hawkins had said in respect of the nomenclature, for the term "mucous disease" of the bowel was already applied to a different affection in children. He admitted that the disease might not be as rare as had been supposed, but it was certainly rare in a severe form. The mild form commonly followed constipation, and the patients usually got well when the constipation was relieved. This form was commoner in hysterical women. The severe form did not appear to be commoner in women than in men, nor was it commoner in neurotic subjects. With regard to the cases of abscesses in the left side of the abdomen, he had recently seen a case in which an elongated vermiform appendix led to an abscess which opened on the left side. With regard to the action of sulphate of magnesia as a causative agent, the patient did not go to Kissingen to take the waters until many years after the disease had been established. The microscopical appearances of these casts had been accurately and exhaustively described by Dr. Wilks and Dr. Goodhart in the Transactions of the Pathological Society.—Mr. GOLDING-BIRD, in reply, said that the local tenderness over the ascending colon led him to select that part of the gut for opening. It was remarkable that Mr. Godlee's patient was relieved by the operation although he did nothing to the papilliform excrescences on the mucous membrane. It should be borne in mind in respect of these cases that the mechanism of defecation when set in action in association with an ulcerated bowel excited profound nervous depression, and the opening of the gut in the region of the descending colon, by obviating this in a great measure, probably explained the relief experienced by Mr. Godlee's patient.

Mr. R. BARWELL related a case of Congenital Median Cervical Fistula in which operation was followed by recovery. The patient, a young woman, was sent to him in April last by Dr. Bezly Thorne with well-marked lateral curvature of the spine. On June 11th, her back being nearly straight, she showed an opening in the mid-line of the neck, situated on the most prominent point of the thyroid cartilage, which occasionally, at least once a day, discharged a thin fluid, and of which she was very anxious to be cured. The small orifice was surrounded by depressed and reddened skin for about a quarter of an inch from side to side; nearly half an inch from above downwards it was partially overhung by a transverse narrow fold of healthy skin. While the deeper parts of the throat were at rest the coloured depression was very shallow, but in swallowing it deepened, being drawn upward and inward, gliding under the transverse fold, which thus became more overhanging, widening also so as to stretch almost from one sterno-mastoid to the other. On palpation a line of cylindrical, somewhat hard tissue could be felt running up from the opening to the hyoid bone; it seemed about the size of a cedar pencil. The foramen cæcum was not abnormally large. She would not allow the use of a probe. He diagnosed a tubular remnant of a supra-hyoid accessory thyroid gland, and on June 19th he dissected it out through a small oval incision. The wound healed rapidly, though a re-collection of fluid had to be evacuated about a fortnight later. Unfortunately, no microscopical examination was made of the tube removed.

OPHTHALMOLOGICAL SOCIETY.

Retinitis Circinata.—A rare Form of Nystagmus.—Superficial Peripheral Choroiditis.—Embolism of the Central Retinal Artery.—Retro-bulbar Optic Neuritis.—Recurrent Paralysis of the Third Nerve with Migraine.—Double Ptosis.—Paralysis of both Internal Recti.—Exhibition of Cases and Card Specimens.

AN ordinary meeting of the above society was held on Dec. 12th, Mr. EDWARD NETTLESHIP being in the chair.

Mr. HARTRIDGE showed a case of Retinitis Circinata. It presented the appearance of a grey degeneration at the yellow spot, with a mass of white deposit in the nerve fibre layer of the retina radiating from the yellow spot region. There were no retinal hæmorrhages. It did not agree in every detail with the recognised appearances, but he thought it was possibly an early stage of retinitis circinata.—Mr. HOLMES SPICER thought that the characters of the white exudation in this case were more like those of albuminuric retinitis than of retinitis circinata. In all the undoubted cases that had been observed there had been a remarkable constancy in the character of the exudation, a grouping quite different from that shown in this case.—Mr. HARTRIDGE, in reply to Dr. HABERSHON, said that there was no renal disease; the heart had not been examined.

Dr. ERNEST CLARKE showed one case and Dr. GRIMSDALE three cases of Nystagmus in the fixing eye during occlusion of its fellow. In Dr. Clarke's case the vision in the two eyes together was $\frac{2}{3}$; when either eye was occluded by placing a card in front of it, the uncovered eye immediately began to oscillate violently. In Dr. Grimsdale's cases the nystagmus was of the same kind, but less marked.—Dr. HABERSHON said he had examined Dr. Clarke's case and found that, though there was no sign of actual nerve disease, the patient was of a neurotic type, and all the reflexes were more pronounced than usual.—Dr. ORMEROD pointed out that the patient was a jeweller and that the nystagmus had come on since he commenced that trade, in which he used a single watchmaker's glass to one eye.

A case of Peripheral Choroiditis of Obscure Origin was shown by Dr. RAYNER BATTEN. The patient was a woman aged forty. The choroiditis was limited to the periphery; the outline of the patches was irregular and map-like; the deeper layers were not affected, but the surface layers had a bleached appearance. Vision was almost unaffected except for slight contraction of the fields. No evidence of acquired syphilis could be found; the condition was probably a late manifestation of inherited syphilis. It was still progressing.—Mr. HOLMES SPICER thought the fundus changes in Dr. Batten's case were due to congenital syphilis, the white lines seen along the smaller veins being a common feature of that affection, and were also an indication of recent progress.

Mr. MARCUS GUNN related the case of a young adult anæmic girl in whom Embolism of the Central Retinal Artery occurred without evidence of cardiac disease. About three weeks ago there was sudden failure of the left eye, with the appearance of a thick film before it. The vision had somewhat recovered in part of the field since. She was suffering from amenorrhœa at the time. Although there was not much change in the size of the arteries there was the typical cherry-red spot at the macula. Although at first he regarded it as a case of embolism, he had since thought that it might have been a hæmorrhage into the optic nerve sheath which had affected the vascular supply of the nerve.—Mr. HARTRIDGE spoke of a recent case of embolism of the central artery in a healthy man. When the patient was seen two hours and a half after the occurrence there was already œdema of the retina.—Mr. BICKERTON mentioned a case he had seen lately in which there was very little apparent change in the vessels, and the pupil acted to light.—Dr. BATTEN cited a case of sudden failure of sight in an anæmic girl, with very slight changes in the vessels.—Mr. DRAKE-BROCKMAN said that some time ago he had seen a woman who, with a sudden attack of giddiness, had completely lost the sight of one eye. The patient was anæmic, but was free from cardiac disease or albuminuria.

Mr. HOLMES SPICER showed a case of Retro-bulbar Optic Neuritis occurring in a healthy man sixty-eight years old

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whose sight had been failing for seven months. He had been a great smoker, but had given up smoking. There was no history of rheumatism, gout, or syphilis, no locomotor ataxy or disseminated sclerosis, and no renal disease or diabetes. The optic discs were very pale and slightly swollen. The fields were quite full, but he had a large colour scotoma at the fixation point. The case presented all the features of a severe tobacco amblyopia, but recovery had not followed abstention from the poison; he had got steadily worse.—Mr. GRIFFITH thought that the pallor of the discs in the case exhibited was too intense for uncomplicated tobacco amblyopia.—Mr. JOHNSON TAYLOR considered the case was an aggravated one of tobacco neuritis complicated with alcoholism.—Dr. HABERSHON suggested that the case occupied an intermediate place between tobacco amblyopia and the family cases of optic atrophy described by Leber.—The PRESIDENT said that cases were sometimes met with in which tobacco produced much graver changes in the nerve than were usually met with, and these were generally those of old men. The present case he considered might be of that class.

Dr. ORMEROD and Mr. HOLMES SPICER showed a case of Recurrent Paralysis of the Third Nerve with Migraine. A boy aged fifteen had had complete paralysis of the left third nerve when a year old; recovery took place. When he was about seven years old he had a second attack; since then he had had an attack every nine or ten months. He was subject to "bilious" attacks, with intense headache on the left side, and the paralysis always came on during a bad attack. There was some atrophy of the left optic nerve, and some of the paralysed muscles had never recovered. The present attack was passing off, but there were still slight ptosis, a dilated pupil, and complete paralysis of the external muscles of the eye supplied by the third nerve.

Mr. WAREN TAY showed a case of Recent Double Ptosis with Loss of Convergence and Weakness of the Internal Recti. There was no apparent cause for the attack; at first the movements of the eye were good, but complaint was made of diplopia; later the failure of convergence was marked. Recovery quickly followed the use of iron and nux vomica.

Mr. TREACHER COLLINS showed a case of Paralysis of both Internal Recti. A man aged twenty-two had suddenly had paralysis of both internal recti five days ago, accompanied by headache. He was unable to move either eye towards the nose either in looking to one side or in convergence. The pupils acted normally and vision was good; his gait was unsteady, his knee-jerks were exaggerated, and he became unsteady on standing with his eyes closed.—Dr. TURNER made some remarks on the probable seat of the lesion in the last two cases.

The following case and card specimens were shown:

Mr. DONALD GUNN: Peripapillary Atrophy of the Choroid of Unusual Character.

Mr. SPENCER WATSON: Specimen of an Eye lost after Removal of a Foreign Body by the Electro-magnet.

Mr. JESSOP: Specimen of Papilloma of the Conjunctiva.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held on Dec. 11th, the President, Mr. C. J. SYMONDS, being in the chair.

Dr. F. J. SMITH showed two specimens of Tubercle of the Choroid taken from a case of tuberculous meningitis.

Mr. COTMAN showed a specimen of Perforating Ulcer of the Stomach taken from a man forty-eight years of age.—The PRESIDENT spoke on some points in the diagnosis of the occurrence of perforation, and quoted some cases of correct and incorrect diagnosis within his own experience.—Dr. F. J. SMITH also spoke of the difficulties of diagnosis and advised operation (even exploratory) when perforation was diagnosed.—Mr. OPENSHAW said there was no difficulty in posterior perforations.—Mr. COTMAN replied.

Dr. J. H. SEQUEIRA showed a specimen of Rheumatoid Arthritis taken from a dissecting-room subject. The left shoulder-joint was affected, and there was atrophy of the biceps muscle.—Mr. CAMPBELL MCDONNELL discussed the relationship of rheumatism and rheumatoid arthritis, as did also Dr. GLOVER LYON, and Dr. SEQUEIRA replied.

Mr. OPENSHAW showed: (1) a Solid and Sarcomatous Growth of the Ovary weighing 7 lb. 7 oz.; (2) a Sarcoma of the Kidney removed by operation from a man twenty-four years of age, which had only been growing five months and weighed several pounds; and (3) a Myeloid Sarcoma of the Middle of the Shaft of the Femur, for which he had performed amputation at the hip-joint by a method of his own.—In connexion with Mr. Openshaw's second case, the PRESIDENT mentioned a large abdominal tumour which had existed for more than six years without apparent increase or much serious discomfort to the patient; he thought it was an adenoma of the suprarenal capsule, but had not been able to obtain a necropsy when the patient died from an intercurrent disease.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Hydro-nephrosis.—Lightning Stroke.—Septic Pneumonia.—The Treatment of Incised Wounds.—Exhibition of Cases.

A CLINICAL meeting of this society was held on Dec 11th, Dr. GILBERT RICHARDSON in the chair.

Mr. THOS. S. HOWELL read notes of an interesting case of Hydro-nephrosis in which the obstruction in the ureter was believed to have originated in a strain at the age of thirteen years; the patient died suddenly from hæmorrhage into the sac at the age of forty-four years.

Mr. PERCY POPE read notes of the following cases: (1) Five Cases of Lightning Stroke occurring Simultaneously; and (2) a Large Quantity of Morphia taken Subcutaneously with Suicidal Intent.

Mr. M. G. BIGGS read notes of a case of Septic Pneumonia.

Mr. A. E. DODSON made some remarks on the Treatment of Incised Wounds, advocating the avoidance of the use of water in surgical incisions.

Mr. JOHN GAY showed a patient who had received a Gunshot Wound above the Right Elbow, causing extensive Laceration of the Tissues and Severance of the Musculo-spiral Nerve. The healing of the wound was followed by complete loss of power in the forearm, which was entirely restored by a ten months' course of massage.

Dr. A. D. ROE showed a case of Mitral Disease in a boy.

Dr. M. MACKINTOSH showed a case of Empyema in a boy which had been entirely cured by one aspiration.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Case and Specimen.—Diphtheria successfully treated with Antitoxin.—Intestinal Obstruction.

A MEETING of this society was held on Dec. 6th, Dr. E. F. WILLOUGHBY, President, being in the chair.

Mr. W. C. WORLEY showed a case of Extensive Molluscum Fibrosum in a man of poor mental and bodily development aged fifty-two. The growths, which varied from the size of a pea to that of a small grape, had appeared gradually during the past six years, were numerous, and were distributed over the body above the knee, but especially on the face and neck.

Mr. W. C. M'DONNELL read notes of a case of Diphtheria successfully treated with Antitoxin. The usual clinical signs of diphtheria were present, breathing became stertorous on the third day of treatment, and the urine, examined on the fourth day, contained a trace of albumin. Antitoxin was injected (15 c.c.) on the third day, and again (10 c.c.) on the fourth. Within two days of its use all the symptoms had greatly improved, and recovery was uninterrupted. Löffler's bacillus was not isolated in a specimen of mucus first examined, but it was found in a second.

Mr. A. QUARRY SILCOCK read notes of two cases of Intestinal Obstruction. In Case 1 the patient was seen in consultation with Mr. Beaman Hicks. The obstruction was evidently low down in the large intestine. An exploratory median incision showed the colon to be much distended. It was, therefore, punctured and the puncture closed with Lembert's sutures. A malignant tumour could then be felt in the sigmoid flexure. The colon was stitched to the abdominal wound and opened thirty-six hours later. Recovery was rapid. The patient in Case 2 was seen in consultation with Mr. Hoskins. The same symptoms were present and the same operative procedure was adopted as in Case 1. The colon could not, however, be brought up to the mesial incision, and a left inguinal colotomy was therefore performed. Recovery was rapid, but the patient died some

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months later. Mr. Silcock emphasised the utility of the exploratory method pursued in these cases as being efficient and as obviating injury by bruising, &c., to the distended structures.

Mr. G. STEVENS showed a specimen of Rupture of the Heart. The patient, a man aged seventy-six, became collapsed after the passage of a stool and died within three-quarters of an hour. It was found that the left ventricle was ruptured by a small aperture posteriorly, near the interventricular septum. The loss of blood had evidently been gradual. The heart tissue was fatty, and showed also the microscopic signs of pigmentary infiltration.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.
(METROPOLITAN BRANCH.)

Outbreak of Enteric Fever.

A MEETING of this society was held on Dec. 10th, Dr. YARROW being in the chair.

Dr. SIDNEY DAVIES read a report on an Outbreak of Enteric Fever distinctly traceable to a particular milk-supply, though the actual cause could not be discovered. Plumstead had been comparatively free from the disease, the number of cases notified in the past three years having been 22, 29, and 26, and up to the beginning of May of the present year there had been 6 scattered cases as regards time and place. Between the 9th and 11th of that month 6 cases, all getting their milk from this dairy, had been reported, but he did not apply for a closing order until the number had risen to 25 by the 15th. The milk was nevertheless sold surreptitiously, and on the 29th there had been 92 cases. In the following weeks 47, 21, 7, and 6 and between June 26th and 30th 4 fresh cases were reported, besides 13 in July. Of the 177 cases occurring in the district up to the nd of June 159, or about 90 per cent., were proved to have had their milk directly or indirectly from this dairy—33 of them from a shop in Woolwich which was supplied from the Plumstead dairy. How many cases may have occurred in Woolwich from the same milk could not be ascertained, and the epidemic must have continued to rage there had the dairyman been content to obey the letter of Section 71 of the Public Health (London) Act, selling his milk exclusively in Woolwich, but the notoriety he obtained by defying and evading the magistrate's order, for which he was again summoned and fined, led to the breaking up of his establishment and the sale of his stock on May 28th. The occurrence within a few weeks, at a time of year at which enteric fever does not usually prevail, of six or seven times as many cases as had previously been known to arise in a whole year, pointed to some extraordinary cause; and the fact that 90 per cent. of these were proved to have had milk from a single dairy left no room for doubt as to its influence, which was confirmed by the decline of the epidemic following the cessation of the sale of milk after the interval required for incubation; but had the business not been conducted so irregularly as it was, without books, &c., an even larger percentage of the cases might have been traced to the same source. In 44 of 141 houses regularly supplied by the dairyman's carts there were 65 cases. Of 49 houses in certain streets supplied by him 29 were invaded, but only 2 of the remaining 150. The 177 cases included 74 males and 103 females; 23 were under five years of age, 41 from five to ten, 57 from ten to twenty, 45 from twenty to forty, and 6 over forty, one of these, a mild case, being seventy-one years of age. Besides these there were several suspicious cases of diarrhœa among infants. The cases sent to hospital numbered 113, with 13 deaths, and those treated at home 64, with 10 deaths, or 11 and 15 per cent., in marked contrast to the usual mortality of scarlet fever &c., and probably due to the more careful dieting of patients in hospitals. The case mortality in Plumstead had previously been 22 per cent.; possibly the lower rate on the present occasion might have been owing to the larger proportion of children attacked in a milk epidemic. An inspection of the dairy showed the drains to be everywhere unsound, the yard gulleys defective, the rain water pipes connected with the drains, and the cowsheds extremely dirty. The water-supply was that of the Kent Company, and as drawn from the taps was of its well-known purity, but there was a brick tank, lined with cement, from which the water was baled for the cows, and possibly for washing the cans. The tank was green and the water turbid, the former evidently not having been cleaned for months or years; and the milk was kept in a cellar under the house, where it was possibly exposed to sewer air. The cows were apparently in good health, and an examination of the milk and of the water in the tank failed to show the presence of the typhoid fever bacillus, though the bacteria in each were identical. Little value, however, could be attached to such purely negative results in the face of the overwhelming evidence of the connexion of the epidemic with the supply of milk.

LIVERPOOL MEDICAL INSTITUTION.

Endo-laryngeal Removal of "Singer's" Nodule.—A Responsibility to the Lying-in Patient from a Sanitary Point of View.—Spinal Localisation.

A MEETING of this society was held on Dec. 12th, the President, Mr. CHAUNCY PUZEY, being in the chair.

Mr. BARK showed two patients after Endo-laryngeal Removal of "Singer's" Nodule. They were both professional voice users. The first patient had completely lost his singing voice; the growth had been removed in 1892 by another surgeon, but recurred in about a year. In July, 1893, the growth was completely removed by Grant's guarded laryngeal forceps. Two weeks later he fulfilled a professional engagement and said that his voice had never been better; there had been no recurrence since. The second patient had suffered from hoarseness and loss of singing voice for over two years; the growth in this case also was removed by Grant's forceps; this was in June, 1894, and the voice had been good ever since.—Mr. BARK also showed a Papilloma removed from the Anterior Commissure of the Larynx by Gibb's snare and a patient suffering from Trachoma of the Larynx.

Dr. STEEVES read a note entitled "A Responsibility to the Lying-in Patient from a Sanitary Point of View." He thought that a variety of puerperal fever existed the result of defective sanitation, and instanced cases where he believed puerperal septicæmia was caused by atmospheric infection by sewer air. He referred to the great benefit that a puerperal fever patient derived from removal to healthy surroundings. In the city of Liverpool one-third of the puerperal fever cases reported were from houses described as insanitary. The prevalence of this disease was no necessary index of the amount of zymotic disease existing. The medical attendant when engaged for a confinement rarely inquired into the sanitary condition of the house, but Dr. Steeves thought that if the physician was not experienced in sanitary details he should not hesitate to obtain a skilled opinion. If the owner of the property refused to abate a nuisance the aid of the sanitary authority should be invoked. A protracted period of ill-health frequently followed confinement, the victim really suffering from chronic sewer air poisoning; this could only be put an end to by change of residence or an alteration in the sanitary arrangements of the house. Dr. Steeves then moved the following resolution, which was seconded by Dr. Imlach: "That, in the opinion of the members of the Liverpool Medical Institution, it is the duty of every medical practitioner, when engaged to attend a confinement, to forthwith inspect, or cause to be inspected, the premises of the patient, with a view of having any sanitary defects which may exist corrected, and so further the stamping out of puerperal septicæmia by the methods of preventive medicine." Several members spoke on the resolution, some stating that, in their opinion, insanitary conditions had nothing whatever to do with puerperal septicæmia; others thought that the resolution to be effectual should apply to every kind of illness, and not specially to the puerperal woman. It seemed to be generally agreed that it would be very unwise that any such resolution should go forth to the public from the institution, and on being put to the vote it was rejected by an overwhelming majority.

Professor SHERRINGTON drew attention to the Localisation of Function in the Spinal Cord as illustrated by the distribution to the skin of the sensory spinal nerve pairs arising from the cord. He pointed out that experiments show the field of skin supplied by each sensory spinal nerve root to be a large area of somewhat simple configuration. Where simplest—that is, in the trunk and neck—the segmental skin field is band-like, wrapping transversely round one lateral

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half of the body. In the limbs the spinal skin fields are distorted and are disconnected from attachment to the median line of the body, whereas in the trunk and neck each of the spinal skin fields extends from the mid-dorsal line to the mid-ventral line. In the region of the limbs the mid-dorsal line of the body may be said to extend laterally in a side branch, forming a secondary axis almost at right angles to the main axis; upon this secondary axis, which may be called the limb axis, the spinal skin fields are ranged as though upon folded portions of the axial lines of the trunk itself. Each spinal skin field spreads out to a marked extent into neighbouring spinal skin fields, and in this way has an overlap into the field in front and the field behind. There is, therefore, no area of skin which is supplied by one spinal nerve alone; the supply is from two roots in some places, as in the palm, and in others from three roots. Although in a plexus each sensory spinal root gives separate contributions to many nerve trunks, the cutaneous distribution of the root composes a field, not of discrete or disjoined patches, but of patches so joined that the distribution of the entire root forms one continuous field. Numerous slides were shown in the lantern of the various skin fields as met with in the monkey.

Professor PATERSON described the Distribution of Spinal Nerves to the Skin and Muscles of the Trunk and Limbs of Man. By means of a large parti-coloured model he showed how closely the skin fields in man correspond with those found experimentally by Professor Sherrington in the monkey. He pointed out that, while superficially segmental in origin, the spinal nerves are truly segmental in distribution only to the muscles of the thoracic wall—where the segmental elements forming muscles have combined, the segmental nerves combine also, forming plexuses. With regard to cutaneous innervation it was certain that overlapping takes place in the distribution of the simplest type of nerve, so that it was possible to affirm that no spot of skin and no muscle (except the inter-costal muscles) are supplied by a single spinal nerve. With this qualification the cutaneous innervation of the trunk between the limbs is zonular—continuous belts of skin are supplied from back to front by the branches of the third to the twelfth thoracic nerves. The growth of the head and limbs causes the adjacent nerves to be drawn out of their primitive position. In the limbs, lines (dorsal and ventral axial lines of Sherrington) could be drawn from the middle line of the body down the limbs and indicated the meeting-place of widely separated nerves; it is only at the ends of these lines that a continuity of distribution appears. It is seen in the limbs that, in spite of the apparent complexity due to the combination of the spinal nerves in the plexuses and in the nerves of distribution, a definite arrangement exists by which the skin and muscles are supplied by a gradually descending series of spinal nerves, proceeding from the pre-axial to the post-axial borders of the limbs.

MANCHESTER MEDICAL SOCIETY.

Chorditis Tuberosa.—Pathogenesis of Cancer.—Malignant Endocarditis.—Tuberculous Disease of the Mucous Membrane of the Middle Ear.

A MEETING of this society was held on Dec. 4th, the President, Mr. F. A. SOUTHAM, being in the chair.

Dr. YONGE showed a case of "Singer's" Nodes of the Vocal Cords in a boy aged fourteen, without history, and without symptoms except partial loss of the upper register in singing. The unusual features of the case were the absence of hoarseness or symptoms of laryngeal fatigue (which are met with in the majority of such cases), the peculiar position of the nodes, which were situated about the centre of the cords instead of anterior to that point, and the absence of any history of laryngeal overstrain. The cords, in spite of being "weighted," as it were, by the nodes, vibrated in a similar manner to healthy cords. This was proved by blowing indigo on to the cords, when the particles moved outwards in a curved line towards the ventricles during phonation, behaving in precisely the same manner in which, as Dr. Hodgkinson has shown, they do in the normal vibrating cord; the efficient vibration explained the absence of vocal impairment in the case.

Mr. ROGER WILLIAMS, in his remarks on the Pathogenesis of Cancer, said that for many years the microbic theory of cancer had been so much the order of the day that no other had been able to obtain a hearing. Inasmuch, however, as the cancer microbe had not yet been discovered, and as collateral indications of its existence were conspicuous only by their absence, he thought the time had now come for setting forth a rival theory, and that was the task to which he proposed to address himself. It was evident that out of the confusion of a transition period but two conceptions as to the origin of neoplasms had emerged, the one based on the cell theory and the other on the microbe theory, and henceforth the struggle must be between these two. The question now was, Did cancers and other neoplasms arise, as J. Müller maintained, through a modification of the formative process, or were they the outcome of the inflammatory process owing to the presence of microbes or other sources of irritation *ab extra?* In other words, Were neoplasms essentially of *intrinsic* or *extrinsic* origin? He inclined to the former alternative and thought that the future would see a decided reaction in this direction. Having entered at some length into the various considerations favourable to this view, the conclusion was reached that in the great majority of cases the outbreak of cancer was entirely spontaneous and could not be attributed to the immediate action of any appreciable extrinsic cause whatever. In the genesis of neoplasms, as in the genesis of other organic structures, two factors must be taken into consideration—the *cells* whence they originate and the *force* that regulates the cellular activities. Lowly organised cells abounded in all parts growing and capable of growth, and these were the only real cancer and tumour germs. The essence of the neoplastic process was that certain cells of the affected part grew and multiplied more rapidly than their congeners, regardless of the requirements of the adjacent tissues and of the organism as a whole. The essential feature of malignancy was the persistency of this undue proliferative activity. The process by which cancers and other neoplasms arose might be regarded as a kind of abnormal generation, the tumour being the result of this modified super-induced repetition of the developmental process, and its qualities the result of the degree of emancipation of its constituent cells. Hence the genesis of cancer and other neoplasms was a phenomenon of the same order as discontinuous growth in general.

Dr. DRESCHFELD gave a communication on the etiology of Malignant Endocarditis. Of the organisms found some did not occur in other affections; others were well-known microbes, such as the staphylococci, streptococci, and pneumonococci. In some rare cases the typhoid bacillus, the bacillus of tuberculosis, the bacillus of diphtheria, and the gonococcus had been found. Of the predisposing causes besides pyæmic and septicæmic diseases, the acute zymotic diseases, pneumonia, and chronic endocarditis, Dr. Dreschfeld mentioned chorea, which in one case, without any previous endocarditis, was associated with malignant endocarditis, and related a case where rupture of one of the aortic valves from overstrain was soon followed by malignant endocarditis. The season had also some influence on the occurrence of malignant endocarditis; several of the cases observed commenced during the months of September and October. Of the various clinical forms, one was specially referred to where the chief symptom, besides the physical signs of endocarditis, was an intermittent pyrexia, the temperature rising only a few degrees for several hours, and being soon succeeded by a normal temperature. The rise of temperature was ushered in by a sensation of cold or distinct chill and general malaise; during the afebrile period the patient feels comparatively well. These cases often go on for months. They usually terminate fatally; occasionally, however, they recover. The examination of the blood during life, withdrawn by means of a syringe from a vein, gave often negative results on microscopic examination and on cultivation; occasionally, however, an organism (usually a streptococcus with virulent properties) was obtained. Large doses of quinine and the administration of arsenic appeared to give the best results. Several cases with typical signs of malignant endocarditis (intermittent or remittent pyrexia, symptoms of embolism, &c.) recovered under this treatment.

Dr. MILLIGAN read a paper upon Tuberculous Disease of the Mucous Membrane of the Middle Ear. In the first place he pointed out the insidious onset of the affection. The occurrence of a discharge from the mucous membrane of the middle ear, unaccompanied by pain or any of the usual symptoms of an acute sthenic inflammation, and the presence of a perforation in the centre of a pale, œdematous, and uninflamed membrana tympani, should always excite suspicion. The presence of enlarged cervical glands and the early appearance of facial paralysis are also important symptoms.

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Special reference was made to the occurrence of facial paralysis in these cases, and its comparative rarity in non-tuberculous middle-ear affections. In order to definitely establish the tuberculous nature of such cases scrapings of portions of diseased bone, removed from the interior of the mastoid process, were taken and inoculated subcutaneously into guinea-pigs. In the course of from two to five weeks the animals were killed, and scrapings from enlarged glands taken and examined for bacilli. Microscopic sections of the liver and spleen were also made and examined. Of ten cases thus experimentally examined eight proved to be tuberculous and two non-tuberculous. Great stress was laid upon ascertaining the essential character of the morbid affection, not only from the point of view of treatment, but also from that of prognosis. In tuberculous middle-ear affections the prognosis is grave, and the younger the patient the graver the prognosis, thus differing very materially from simple inflammatory non-tuberculous cases, where the prognosis is good. Free removal of all diseased foci of bone should be undertaken, and, in general, to effect this it will be found necessary to open the mastoid cells. Good food, tonics, and fresh air are all essentials in the treatment of such cases. The paper was illustrated by lantern slides, microscopic sections, and dissections of guinea-pigs.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens. — The Symptoms and Diagnosis of Malignant Diseases of the Larynx. — The Retinacula of Weitbrecht or Cervical Ligaments of Stanley.

A MEETING of this society was held on Dec. 11th, Mr. A. W. PRICHARD being in the chair.

Dr. EDGEWORTH showed a patient with Unilateral Neuritis of the External Popliteal Nerve.

Dr. PROWSE showed specimens from a case of Acute Nephritis in which the inferior vena cava was plugged with clot, leaving a small central channel; both pulmonary arteries were plugged with similar clots.

Dr. SKERRITT showed a specimen of Diffuse Cancer of the Stomach.

Dr. MICHELL CLARKE showed a specimen of Aneurysm of the Ascending Aorta communicating with the Superior Vena Cava, and Dr. SHINGLETON SMITH and Professor FAWCETT spoke on the subject.

Dr. WATSON WILLIAMS read a paper on the Symptoms and Diagnosis of Malignant Diseases of the Larynx, illustrated by patients and drawings.

Professor FAWCETT read a paper, illustrated with numerous specimens and diagrams, on the Retinacula of Weitbrecht or Cervical Ligaments of Stanley.—Mr. HARSANT and Dr. EDGEWORTH commented on the paper.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Radical Cure of Hernia.

A MEETING of this society was held on Dec. 5th, the President, Dr. PORTER, being in the chair.

Mr. SNELL showed: (1) A large number of Stereoscopes with Photographs illustrating Eye Operations and methods of examining eye patients; (2) an Electrolysis Needle, and introduced a woman with embolism of the central artery of the retina.

Mr. RICHARD FAVELL showed Gynæcological Specimens and gave particulars of a successful case of Nephrectomy.

Dr. SINCLAIR WHITE exhibited and made remarks on: 1. A Successful Case of Laminectomy for Complete Paraplegia due to spinal caries. The paralysis had been present for upwards of a year and had resisted seven months' treatment by continuous extension and other recognised expectant plans. The patient, a boy eight years of age, was operated on five months ago and could now walk well. The arches of the fourth, fifth, and sixth dorsal vertebræ were removed and a large cavity corresponding in extent to the body of the fifth dorsal vertebra cleared out. 2. Upwards of 300 Gall-stones removed from a woman. Dr. White, instead of stitching the cut edges of the gall-bladder to the wound in the parietes, tied them over a glass tube with a constriction at the point of ligature. This plan had answered well by saving time at the operation and by keeping the wound free from bile during its healing. 3. A Child with Supernumerary and Webbed Fingers and Toes.

Mr. CLYDE L. HAYES showed a case of Malignant Disease of the Tongue.

Dr. CUFF showed: (1) A woman with a large Venous Nævus of the Tongue; and (2) a boy aged ten with Enchondromata on the Left Hand.

Dr. ARTHUR HALL showed cases of Melanoderma and Syphiloderma.

Dr. GWYNNE read a paper on the Radical Cure of Hernia. He maintained that it was one of the most successful operations of modern surgery, relieving the patient not alone from grave inconvenience but also from the ever-present danger of strangulation. He advocated Macewen's method of stitching up the inguinal opening, but thought that ligature and excision of the sac simplified the operation and produced as good results, especially in children, as Macewen's mode of dealing with it. In Dr. Gwynne's opinion this applied with still greater force to congenital herniæ. In cases of the latter he preferred closing the ring with stout ligatures so as to restore the valvular condition of the canal, and subsequently ligaturing the sac as high up as possible without excising any portion, due care being taken not to include or otherwise injure the spermatic cord. A number of cases were exhibited dating from one to five years after operation.—The PRESIDENT, Dr. SINCLAIR WHITE, Dr. WILKINSON, Dr. GWYNNE, Dr. BURGESS, Dr. SWEETEN, and Dr. ADDISON discussed the cases and paper.

PLYMOUTH MEDICAL SOCIETY.

General Paralysis of the Insane.

AT a meeting of this society on Nov. 30th, Mr. SQUARE in the chair, a paper was read by Mr. A. N. DAVIS, the medical superintendent of the Borough Asylum, on General Paralysis of the Insane. After dealing with the symptoms, causation, and course of the disease, Mr. Davis pointed out the frequency with which this disease occurs amongst the annual admissions to the asylum, overcrowding, heredity, alcohol, and syphilis being the principal causes. No case had been reported as recovered, but remissions were relatively frequent, and these principally amongst the maniacal types. The melancholic cases were chiefly females, amongst whom no remission occurred, but on the contrary their disease rapidly progressed to a fatal termination within twelve months from admission. The cases of longest duration were not marked by any continuous mental excitement or severe convulsive seizures, but gradually drifted into steadily progressive dementia. Expansive delusions and pupillary anomalies characterised all the male cases, but beyond a feeling of passive contentment no such delusions were the rule amongst the female paralytics.—In the discussion which followed Dr. ALDRIDGE (Plympton House Asylum) remarked on the large amount of trouble which cases of general paralysis caused to asylum superintendents owing to the fragility of the bones in the second and third stages and alluded to the large proportion of general paralytics coming under Dr. Davis's care. He himself had only had seventeen cases in twenty-four years, or 8 per cent. of the admissions, male and female. The cases usually became rapidly fatal after admission into an asylum—in the third stage in about six months. He mentioned syncope as an occasional cause of death; he had never seen a female general paralytic, though such cases were not uncommon in the upper classes at the present day. He had seen no case absolutely cured. The prognosis was not difficult; when asylum treatment commenced a man's affairs should be put in order.—Mr. BULTEEL asked as to the part played by injury as a cause of general paralysis.—Mr. RIDER cited two fatal cases due to worry in temperate men of the Royal Navy.—Dr. PEARSE had only seen one genuine case. — Dr. MARIETTE also inquired as to injury in its causal relationship.—Mr. WHITEFORD asked whether influenza was a common cause.—Mr. SQUARE objected to the name as a misnomer for a collection of symptoms which indicated brain disease.—In reply Mr. DAVIS said two female cases—both in prostitutes—were rapidly fatal; he also cited a case where a second remission of symptoms had taken place. He said several cases now in the borough asylum were put down to influenza.

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ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—"Brief Sketches from my Breviary" &c.

A MEETING of this section was held on Nov. 22nd, Dr. LOMBE ATTHILL, President, in the chair.

Dr. W. J. SMYLY showed three specimens of Ectopic Gestation, all of which had been removed by operation, the patients making good recoveries. Double Pyosalpinx (two specimens): both recovered. Uterus removed in a similar case: abdominal section; attempt to remove tubes failed after rupture of one with extravasation of pus; vaginal hysterectomy; abdominal cavity shut off with Mikulicz's bag; recovery. Pedunculated Myoma larger than adult fist: the soft tumour was diagnosed as dermoid of left ovary, but was found to be a myoma; recovery. Myomatous Uteri (four specimens): hysterectomy in all cases; one death. Cancerous Tumour of Left Ovary: operation simple; sudden and severe internal hæmorrhage the same evening; abdomen reopened, bleeding controlled, and abdomen cleared of clots; convalescence uneventful until ninth day; complete paraplegia with anæsthesia, loss of reflexes in lower limbs, and paralysis of bladder; some fever for a week, then normal temperature, but paralysis persists.

Dr. E. WINIFRED DICKSON exhibited a Fibro-myoma removed from the Cervix Uteri. The patient was aged thirty years and had borne four children. The last pregnancy had ended a few weeks previously, at six and a half months; there had been severe hæmorrhage on this occasion, and the tumour had been then diagnosed. The symptoms had been slight, consisting only of a dragging sensation in the pelvis, dating for a year back, and some glairy discharge. The tumour was attached by a short broad pedicle to the front and left side of the cervical canal from the os externum nearly to the os internum. The posterior lip was hypertrophied, and the glands much enlarged. The tumour was removed with scissors, and the edges of the wound united with sutures. There was not much hæmorrhage. The patient made an uninterrupted recovery.—Dr. SMYLY remembered only two specimens of myoma of the cervix which had been shown to the Academy. One of these was shown by himself.—Dr. ALFRED SMITH remembered one which Dr. Macan had exhibited, and in which there were adhesions between it and the vagina.

Dr. ALFRED SMITH showed a Uterus with large Fibro-cystic Tumour which was removed by complete hysterectomy. The tumour extended one finger's breadth above the umbilicus, was very elastic, and growing rapidly. Palpation showed that the tumour had a long pedicle, and several small daughter cysts were growing from the fundus of the tumour. Vaginal examination: The uterus was separated from the tumour by a broad pedicle; its fundus was well studded with small fibromata, and was greatly enlarged. The diagnosis of ovarian tumour was made. Abdominal section revealed a fibro-cystic pedunculated tumour growing from the left side of the uterus, and the fundus of the uterus invested with small fibroids. The entire removal of the tumour and uterus was determined upon.

Mr. R. A. FLYNN exhibited a Uterus removed by Vaginal Hysterectomy for Cancer. He said:—"A woman aged forty-six had ten children, and at the birth of the last, four and a half years ago, I attended the patient. She consulted me in January last for backache and pain in the left side. On vaginal examination I found the os uteri turned towards the anterior vaginal wall, the cervix lacerated, and through the posterior vaginal wall I found the corpus uteri lying backwards on bimanual examination. There was retroversion of the uterus, which was quite movable; the adnexæ were normal; the sound passed two and a half inches, causing neither hæmorrhage nor pain; the point passed backwards. The speculum showed nothing abnormal. The uterus was easily replaced bimanually, and a No. 8 Smith's pessary was introduced. I saw the patient a week afterwards and found the uterus in good position and her symptoms relieved. I did not see the patient again until Nov. 3rd, when she consulted me for menorrhagia which had lasted two months. On vaginal examination I found the cervix enlarged, with its tissues so friable that it could easily be broken down with the finger, causing considerable hæmorrhage. On bimanual examination I found the uterus normal in size and position, and the adnexæ normal; the speculum showed a large ulcerated cervix. I removed the pessary and the uterus went very quickly into the position of retroversion. I now removed a piece of the cervix with a knife for microscopic examination, and sent the tissue removed to the Clinical Research Association, London, and received the following report on Nov. 9th:—'The specimen removed from the cervix uteri shows an early infiltration of the tissues with a squamous-celled epithelioma.' Dr. Smyly kindly saw the patient with me on Nov. 11th, and agreed with me that it was a favourable case for vaginal hysterectomy. The operation was performed on Nov. 14th, the broad ligament being secured with Landon's clamp forceps; the clamps were removed in forty-eight hours. The patient has up to the present (Nov. 22nd)—nine days after the operation—made an uninterrupted recovery. The case I regard with hopefulness, as I was fortunate in getting her at an early stage, and consider that there is a good chance of the non-recurrence of the growth."

Mr. WALTER BERNARD read a paper entitled "Brief Sketches copied from my Breviary, of the priceless sayings of other men, with some remarks showing what valuable outposts they were in helping me to extend the boundaries of my knowledge, and to avert death while practising the obstetric art." He said:—"While engaged in general practice many as well as myself cannot but feel how essential it is for the common good, as well as for an example to those who follow, that some proof at certain stages of our careers ought to be given that we are keeping our lamps well oiled and trimmed during the well-timed changes in preventive medicine. From my breviary I shall awaken some of the lore of the past and present. From the time of Hippocrates down to our own times puerperal fever, its lore and complications, were mystified and vague, and not until 1860 was the disease clearly defined. Strother, in 1718, was the first to give it the name of puerperal fever. Smellie, a great compiler of the thoughts of other men, then came to the front, making known his mistakes and failures, and being no "secret monger" he did not fossilise his experience. Since Smellie's time much has been written on puerperal fever, but it was not until the great discussion on it, held in London in 1875, that its accurate relations to infective diseases were made apparent. Eclampsia, taken by itself, is rare. A few cases follow one another, not often seen by a medical man until soon after a seizure. During utero-gestations there are occasionally marked signs of a coming storm which will be found in books, and which by proper treatment can be frequently averted. The headache, giddiness, failure of sight, and œdema of limbs sound a warning note. As to treatment, one of the old rules holds good: if plethoric, bleed; if anæmic, do not. Administer chloroform, hydrate of chloral, enemas, purgation, and the hot-air bath. For the induction of premature labour no absolute rules can be enforced, but in this state of things a level-headed consultation is absolutely necessary. Some of the prodromata of the so-called functional and organic hemiplegia are curiously alike, such as the numbness, giddiness, tingling, dragging, and cardiac and vascular changes. Some of these had a gouty or syphilitic history, and early arterial degenerative changes appeared in some before middle life. A few had a history of chorea in childhood. My records show that too much dependence was placed on the local treatment of dysmenorrhœa and too little on the general management of patients as regards condition and family history. In placenta prævia the well-known and carefully thought-out rules ought to be followed. Ancient forceps, like crania, are of much interest, as they exhibit the intelligence of men coequal with their cranial formations. Laceration from the driving power of ergot and the untimely and unskilled use of the forceps is almost a thing of the past. Their skilful management, together with that of the perineum, need not be gone into. So far back was external pressure used in retained placenta that it was unknown in remote antiquity when it commenced. Patience in the vanished past, as well as in Guillemans's time in 1609, was recommended. It was not even known when the 'Dublin method' commenced, which Credé of Leipzig brought under the notice of the German School in 1860, modifying it according to his views. At one time pressing off the placenta had its advocates. The practice did not last long when it again came into fashion some years ago. Post-partum hæmorrhage is not common now, as medical men and nurses are better trained, and the causes are more fully investigated. But yet occasional

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cases are met with, and consequently every medical man's ether and uterine syringes ought to be always antiseptically ready and in good working order. And send at once for the nearest help, throwing reputation, money, and mutual distrust aside while life is swinging in the balance. Let us do our duty at any cost, even at the risk of our own lives; but to save lives outside we ourselves must work, and if we work honestly we can be independent and rise above the level of all that is acrid, trivial, and temporary."—Dr. MACAN said they had listened with great pleasure to Mr. Bernard's paper, which had touched on almost every subject of midwifery. They felt very much indebted to him for coming from Londonderry to read it.

SECTION OF PATHOLOGY.

Tumours of the Kidney composed of Suprarenal Tissue.

A meeting of this section was held on Nov. 29th, Dr. CONOLLY NORMAN, President, being in the chair.

Dr. MCWEENEY described two new cases of Tumours of the Kidney composed of Suprarenal Tissue and discussed the subject, which has hitherto escaped notice from English-speaking pathologists. His first case was that of a left kidney successfully removed by Mr. Coppinger at the Mater Misericordiæ Hospital in March, 1892, from a woman aged fifty-three, who is still alive and well. The lower part of the kidney is converted into a large cyst, from which a bowlful of brain-like hæmorrhagic material was evacuated during the operation. The walls of the cyst are ragged and covered with adherent masses of tumour tissue. The second case was that of a woman aged thirty-eight from whom a huge mass of confluent tumour nodules occupying the position of the left kidney was removed by Mr. Lentaigne at the Mater Misericordiæ Hospital last September. The only recognisable part of the kidney left was its upper extremity. The nodules were not unlike liver in appearance and consistency; many were as large as the closed fist; all were distinctly encapsuled, and none showed signs of advanced degenerative change. Microscopically these two tumours agreed in their close resemblance to the suprarenal cortex. They consisted of large polygonal or cubical epithelial cells, with a small, round, centrally placed nucleus, arranged without intercellular substance in elongated rows or circular groups separated by blood capillaries. The tumour cells were placed directly on the capillary wall, which simply consisted of a line of endothelial nuclei. In the first tumour the deposition of fat and glycogen was a marked feature. There was but little fat and no glycogen in the second. This would appear to show that the deposition of glycogen is not, as Lubarsch supposes, an essential feature of tumours of this kind, but is merely associated with retrogressive change. The origin of certain tumours of the kidney from suprarenal "rests" was first pointed out by Grawitz in 1883. His results were extended and generalised by Horn. Dr. McWeeney came to the same conclusion as Lubarsch—viz., that they must really be considered as derived from dislocated suprarenal elements. Thirty-two such cases are now on record, many of which took a malignant course and formed metastatic deposits in various organs. Nephrectomy had proved a very fatal procedure even in the absence of peritonitis and uræmia. In one of the cases now brought forward two pounds of morphologically perfect suprarenal cortex, free from degenerative change, were present in the body, a fact not without significance in view of the high physiological activity now known to be possessed by this tissue.—Dr. O'SULLIVAN said that when in Vienna last summer he had seen two of these growths. The first was like Dr. McWeeney's first case. It was an encapsuled mass confined to the upper part of the kidney, and consisted of pultaceous material infiltrated with blood. There was no metastasis. No microscopic examination was made. The other was of more pathological importance, since in the kidney itself there were several masses of the same character, but also a considerable amount of metastasis in the bones.—The PRESIDENT said the Academy should be congratulated on having received such a learned paper from Dr. McWeeney. There was a case published in the *Journal of Pathology*, about three years ago, by Dr. Kanthack and Dr. Rolleston resembling in many ways that of Dr. McWeeney. Another case, not mentioned by Dr. McWeeney, was published in France in 1882 of adenomata of the kidney.—Dr. MCWEENEY, replying, said that he had not as yet been able to look up thoroughly the English literature on the subject. He had, however, consulted Dr. Rolleston's Lectures on the Suprarenal Capsule, which were most exhaustive. In the class of cases Dr. McWeeney was referring to, the tumour originated in the kidney, altogether apart from the suprarenal. In both of his cases the tumour originated in the lower end of the kidney. The fully formed tissue of these tumours is not like urinary tubules. In the cortex of the human suprarenal, but more especially in that of the higher mammals, pseudo-tubular structures of the same kind were found by Creighton, Marchand, Pfaundler, and others.

Reviews and Notices of Books.

Archæological Survey of India: The Bower Manuscript. Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation, with Notes. Edited by A. F. RUDOLPH HOERNLE, Ph.D., Principal, Calcutta Madrasah. Part II., Fasciculus II. Published by Order of the Government of India and under the Patronage of the Bengal Government. Calcutta. 1895.

[SECOND NOTICE.]

WE took the opportunity of giving some account of this very interesting archæological publication in October last year,[1] after the appearance of the first portions of the work, and referred more especially to the main portion of the manuscript containing a treatise on Medicine. The second fasciculus of the second part of the publication is now before us, completing the medical portion, or rather as much of it as was saved from destruction. There are fourteen chapters on thirty-one leaves; that portion which contained the fifteenth and sixteenth chapters is lost. The size of separate leaves is about 11½ in. by 2½ in. The writing, in Nagari character, is in black ink, mostly on both sides of the leaves.

"The whole manuscript when discovered consisted of fifty-six leaves[2] of birch bark, some in single thickness and others from two to four thicknesses. Some of the leaves appear perfectly fresh and clear, others are much discoloured. All are very brittle and tender. The leaves are enclosed between two boards, and a string runs through them." The *whole* MS. consists of five distinct parts, and is written almost entirely in *slokas* or verses: firstly, the medical portion now consists of thirty-one leaves; the second part contains a collection of proverbial sayings, on five leaves; the third part has a story of how a charm of snakebite was given by Buddha to his disciple Ananda whilst staying in the Garden of Anathapinda, on four leaves; fourthly, another collection of proverbial sayings, on six leaves; and, fifthly, a fragment of another medical work, on five leaves. Besides these there are a few detached leaves unconnected with one another and with those of the larger portions.[3]

Professor Hoernle, with rare erudition and perseverance, was able to interpret the meaning of the whole MS., which he transcribed in the original Nagari with a transliteration into Romanised characters, and translated the medical portion of it into English, which is now completed. Professor Hoernle adds very copious notes and references, comparing them with other Hindu medical treatises, from which it appears that the prescriptions of the author occur almost word for word in the works of Charaka, Susruta, and Vangasena, the old Hindu medical and surgical authors.

Our interest very naturally centres around the now completed medical portion of the MS., the "Navanîtaka," or "The Cream," as its author calls it. In our first notice we have mentioned the division of this treatise into sixteen chapters, and have culled from it a curious prescription, containing thirty-six ingredients, for a powder which is to

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[1] THE LANCET, Oct. 20th, 1894, p. 918.
[2] Proceedings of the Asiatic Society of Bengal, 1890, p. 223.
[3] Journal of the Asiatic Society of Bengal, 1891, p. 80.

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cure almost every conceivable disease the flesh is heir to, and if taken for two months without interruption it will secure the patient's life for one hundred autumns. The author, whoever he may have been, was a Buddhist by religion and wrote in Sanskrit, although not in the most classical style of that language; the copying of the MS. was done by several scribes, portions of it being written in a careless and slovenly manner.

Beyond its antiquity, as the most ancient medical manuscript known to exist in the Sanskrit language, dating from about the fifth century of our era, this work possesses no special value for medicine of the present day. Verses 43, 45, and 50, however, contain the following sensible doctrine:[4] "The normal condition of elements, health, energy, and long life are all dependent on the digestive faculty ..... through all these, life of living beings is prolonged. Hence one should first of all examine the state of the digestive faculty ..... a wise physician will at all times, in all diseases, first direct his treatment to the proper regulation of the digestive faculty." This very much coincides with the advice given by an eminent physician recently deceased to a well-known patient. There are prescriptions for treating cases of cholera, diphtheria, stone in the bladder, &c.

We feel we ought not to conclude our notice of this manuscript without giving an account of its discovery by that indefatigable traveller, Captain Bower, and the romantic circumstances connected with it. Captain Bower says: "While at Kuchar, in Kashgar, Eastern Turkestan, a man offered to show me a subterranean town, provided I would go there in the middle of the night, as he was frightened of getting into trouble with the Chinese if it was known that he had taken a European there. I readily agreed, and we started off about midnight. ..... The subterranean ruins of Mingai, to which my guide had promised to take me, are situated about sixteen miles from Kuchar, on the banks of the Shahyar river, and are said to be the remains of Afrasiab's capital. ..... The same man procured me the packet of old manuscripts. They had been dug out of the foot of one of the curious old erections (Buddhist *stupas*) about fifty to sixty feet high, broad in proportion, and resembling somewhat a huge cottage loaf, of which several are to be found in the Kuchar district."[5] This is the find to which Professor Hoernle gave the appellation of "Bower Manuscript" in honour of its discoverer.

On Brain and Nerve Exhaustion (Neurasthenia) and on the Nervous Sequelæ of Influenza. By THOMAS STRETCH DOWSE, M.D., F.R.C.P. Edin., &c. London: Baillière, Tindall, and Cox. 1894. Price 2*s.* 6*d.*

AT the last meeting of the British Medical Association but one the discussion on Neurasthenia and its Treatment was introduced by Dr. Savage in the following words: "What is neurasthenia? There was once a professor who, being asked what he knew upon a certain subject, replied, 'Nothing; I have not even lectured on it.' This is rather how I feel in relationship to the subject on which I am to open a discussion. We have a disorder whose very name is not without difficulty, for the classical scholar only recognises it as neurasthĕnīa, while we medical men are content to call it neurasthēnīa."

In face of so frank a confession by an acknowledged expert it was with no great expectation of enlightenment that we took up Dr. Dowse's *brochure*, albeit a carefully revised fourth edition. Before embarking upon a systematic perusal of the work we commenced our task by glancing rapidly through the pages, which are admirably printed. Almost at once our attention was arrested by the subjoined passage: "Occasionally a spark of science scintillates in the ever-increasing and heterogeneous detritus which man is vain and pleased and conceited enough to call knowledge. This scintillation is wisdom. The cosmology of nature, the evolution, devolution, and involution of conceptual properties, based upon analytical and synthetical deduction, constitutes an appreciative something which we call 'facts in nature.' The revelation through the agency of perception and reflection by coördination and correlation develops faculty; and when such is the outcome of an initial and intuitive potentiality the giant genius springs into existence and illumines by intensity and expansive radiation."

After this we felt that if it were a fair sample of the remainder we had, indeed, embarked upon an arduous voyage. On the very next page we found it stated that, "in dealing with human life and thought, we have in the plainest possible language to deal with human individualities." There seemed to be promise of better things here, and we consequently felt emboldened to persevere. Soon another paragraph stood out, as it were, from the luxuriant context: "Conceit and ignorance are usually twins by birth; and even by culture they are both propagated by the same soil and nourished by the same elements; they are both intolerant, selfish, cruel, and utterly devoid of reciprocity, sympathy, or charity." Then came: "As a physician I should indeed be a dreaming dotard if I failed to comprehend, to realise, to estimate, and to value the significance and the importance to mankind of our constant and progressive accumulation of knowledge. ..... No one doubts the enormous power and self-sufficiency of knowledge"—*id est*, of the "heterogeneous detritus," &c., of a page or two before! The following passage is even still more remarkable: "Does the cultivation of science, upon its purest scientific lines, ennoble the nobility of human nature, or has it not a tendency to elaborate certain faculties at the expense of others, and thus lead to prejudice, bigotry, jealousy, and conceit? Power, and especially self-acquired power—for power born is vastly different to power bred—has through all ages been attended with vainglory and a supreme admiration for self. Has science altered this? No. It cometh like the wind and goeth like the wind. It seems as though it were the final links in the great and continuous chain of evolutionary conditions." In the face of such high-strung eloquence it may perhaps appear a trivial interruption to inquire where the final links in a continuous chain are situated?

Having managed to read the eight introductory pages of the book, we became aware of some alarming symptoms not unconnected with exhaustion, and had it not been for Dr. Savage's encouraging opinion that neurasthenia is seldom caused by brain fatigue we should incontinently have given in. Fortified by this authoritative dictum, we ventured once more on our course. Soon we reached a paragraph which, although inordinately long, it is really quite impossible to leave unquoted. Here it is: "The greatest learning, sagacity, and knowledge have been expended to unravel, evolve, interpret, and arrange the connexions which link and bind together the physiological, anatomical, and pathological signs and symptoms which are developed, extracted, and produced by some unknown factor directed in the evolution and dissolution of that strange, wonderful, related, but to us exceptional, region which forms an oasis between the physical, the material, the moral, the intellectual, the mental, the ideational, the metaphysical, and the psychical, and which, when viewed from the hopeless belief of the physicist, the materialist, and the scientist, forms a realm entirely subordinate to the great evolutionary doctrine, which at one time was looked upon as the revolutionary, transmitting, and metagenetic power which should bring light out of darkness

[4] Ibid., p. 181.
[5] Proceedings of the Asiatic Society of Bengal, p. 221, 1890.

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and convert an unknown problem of infinite omniscience to the level of the sagacity, the intelligence, and the understanding of the mind of man. When we look around and note the feeble, weak, illogical, impotent stuff ....." The passage does not really end here, but space is too important to be recklessly filled.

Proceeding on our weary quest we next arrived at eight "propositions ..... of interest." The first two are appended: 'That in neurasthenia there exists a want of correlative integrity between the cerebro-spinal and sympathetic centres, and, in my opinion, this is the fundamental cause, and is often but not necessarily hereditary. That there is defective antagonism between the centres at the various levels, cerebral and bulbo-spinal, by which a process or processes of inhibition are started and maintained. Governing and controlling centres are subjugated by restraint, so that controlling power is greatly diminished."

Peradventure the reader will understand what is meant by "correlative integrity" and "defective antagonism" in this connexion? A little further on the symptoms of neurasthenia are stated in great detail under a dozen heads. No one with the smallest tendency towards hypochondriasis should read this portion of the book unless he wants to be frightened out of his wits. The succeeding thirty pages or so, treating as they do *de omnibus rebus et quibusdam aliis*, must be left unsurveyed.

Concerning treatment we find "each case must be studied closely and carefully by itself. I must say that this has been my own experience." Dr. Dowse does not believe in iron and quinine or in electricity for neurasthenia. Opium "continued for some weeks, and it may be months," is his dangerous sheet anchor, in spite of the admission that "it may be necessary to increase the dose." He also recommends full doses of hydrate of chloral, and this notwithstanding his own warning with reference to alcohol: "It must be remembered that we are dealing with a class of people whose resisting power is of the lowest order—who are liable at any moment to give way to any idea which is uppermost in their vacillating minds and to gratify every passion."

Some very elementary matter is next inserted with regard to heat-producing and flesh-forming compounds; and interspersed there are many remarks about foods, children, dyspepsia, gout, koumiss, Board schools, and dipsomania, which for want of space and other reasons cannot be further alluded to. The neurasthenic dietary formulated by the author must not, however, be dismissed in any such summary manner. His "general advice" to his patients on the subject is as follows: "Don't rise until eight o'clock in the morning. ... ... Take breakfast with fish or a well-cooked chop or rump-steak. ... ... At eleven o'clock take a glass of dry sherry and a biscuit, or a new-laid egg beaten up with port wine. ... For luncheon, at half-past one, take oysters.....(or) a basin of really good soup, which should be followed by a cut of mutton or beef from the joint.....You may drink a wine-glass of whisky, with a bottle of Apollinaris. At 4 o'clock a small cup of immediate tea may be taken with some dry biscuits—avoid the sweet, tempting cakes which are now so freely supplied with this meal.....The dinner should never consist of more than four courses—namely, soup, fish, joint, and game. Never mix your wines, but vary them every three or four days, sometimes taking a dry champagne, at other times a good well-seasoned, sound burgundy." That's all. There is absolutely nothing ordered for supper.

Transactions of the West London Medico-Chirurgical Society. Vol. VI. London: Baillière, Tindall, and Cox. 1895. Price 5*s*.

THIS volume is edited by Mr. J. H. Menzies and Dr. Clemow, and shows unmistakable signs of the flourishing condition of the society. Abstracts of very many interesting papers are given as well as a full report of the two Cavendish Lectures, one by Mr. Henry Morris on Some Changes in Surgical Opinion regarding the Diseases of the Urinary Organs, and the other, by Sir William Broadbent, on Some Points in the Treatment of Typhoid Fever. The reports of the clinical evenings are highly instructive and give the accounts of a large number of very good cases which were shown, and altogether this volume is well got up and presented in a readable form.

The Practice of Massage: its Physiological Effects and Therapeutic Uses. By A. SYMONS ECCLES, M.B. London: Macmillan and Co. 1895. pp. 375. Price 7*s*. 6*d*.

IN spite of writings neither obscure nor few, it may be safely asserted that a really scientific exposition of the much-abused subject of massage has hitherto not been available in English medical literature. To a great extent this gap has been filled by the monograph before us, which deserves to be widely read and studied, for its chief merit lies in the exposition it gives of the physiological basis of this therapeutic measure and the appropriate application of it to the relief of many a chronic malady. Nor is it possible to peruse its pages without being convinced that the art of the masseur is one not easily acquired, and demanding of its practitioner a more than superficial knowledge of bodily structure and function. It is, moreover, clear that it is not possible, even with such detailed descriptions as are here given of the methods of "effleurage," "pétrissage," "tapotement," "vibration," and "massage à friction" to convey to the learner the more or less delicate differences of manipulation that can only be imparted by practical demonstration, whilst it is also obvious that the practice, to be thorough and effective, demands no little dexterity and endurance. From all which it follows that there must be much so-called "massage" which is far from attaining the height of excellence to which the author points, whilst from the therapeutical standpoint the method is likely to suffer from mal-application in some cases and unsuitable employment in others. Dr. Symons Eccles writes with a confidence born of experience, and on p. 263 he deplores the "apathy which still pervades the medical world in this country" as to the proper supervision of massage; and doubtless he has reason for this remark, for any therapeutic measure is liable to fall into discredit if it be wrongly applied or ignorantly perverted from its main object. In the same connexion he goes on to say that "it is unfortunate, both for practitioners and the public, that no measures have yet been taken to provide for the efficient teaching and practice of massage and medical gymnastics in the great schools of medicine attached to our hospitals, in which thousand of cases must exist in want of such treatment by more careful and thorough massage than can be obtained under present conditions." These remarks are made in regard to the treatment of chorea, a malady in which regulated muscular exercise is *primâ facie* a rational course to encourage.

The bulk of the work is naturally occupied with the therapeutical application of the method. That massage, from its effects on the circulation, promotes metabolism, and thereby improves nutrition, explains in general terms the good resulting from its use in many chronic affections of skin, joints, blood, muscle, and nerve; but that it is also of direct service as a means of mechanical stimulation of nerve and muscle is also manifest. Some of the most interesting records contained in this book are of cases of chronic gastric disorder and habitual constipation—conditions which prolonged drug treatment often tends to aggravate rather than to relieve—where no doubt can remain of the efficacy of massage treatment. Equally instructive are the descriptions of various forms

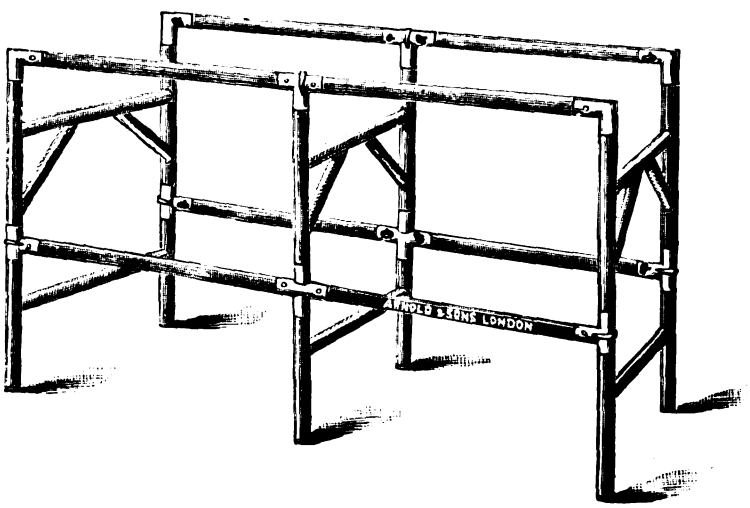
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of nervous disease, organic as well as functional, which are amenable to the same therapeutic measure. Indeed, it is in the neuroses especially that massage has had some of its most striking successes, but Dr. Eccles is emphatic in the opinion that for its proper guidance and conduct it is essential that the medical man himself should be fully cognisant of its powers and their limitations. If by this work he succeeds in gaining for the practice more serious attention in this country at the hands of those who prescribe it, he will have done not a little to redeem the practice from the subsidiary position that it mostly occupies. Whilst making every allowance for mistaken conclusions, there remains a sufficient body of evidence to prove that the method of massage, properly and scientifically applied, is physiologically correct, and therefore rational and appropriate in the treatment of diseases.

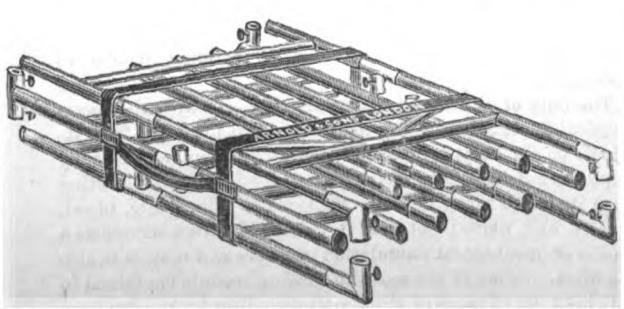
New Inventions.

A PORTABLE BAMBOO OPERATING-TABLE.

THE surgeon upon arriving at a private house where preparations have been made for an operation usually finds a kitchen table or perhaps even a dining-room table of, say, three flaps, enough to seat sixteen guests comfortably, got



ready to support a patient weighing perhaps 8 st. If the assistant had merely to look at the proceedings with a spy-glass across the vast superfluous expanse of table there would still be grave inconvenience caused by the little space left for instrument tables, &c. I generally ask permission to



obtain from the upper storeys two plain deal dressing tables. These, though often rickety, serve, when divested of their pink calico hangings, to support the weight of the heaviest man, fairly distributed as it is over the eight legs of the two tables; and I am certain that, at least for private use, a far lighter operating-table would suffice than any hitherto described.

Messrs. Arnold and Sons, London, have made for me one with a frame of stout bamboo with aluminium furling rod-joints fixed by thumb-screws. The top is of stout waterproofed canvas, descending eight inches down the sides and ends and removable. The whole table can be washed with soap, soda, and warm water just as easily as the waterproof sheeting between the carbolised towels and the patient, and is just as aseptic. The table can be tilted to an angle and kept so by placing the legs of one end on a box. The weight without the cover is 25½ lb.

C. B. KEETLEY, F.R.C.S. ENG.,
Surgeon to the West London Hospital.

THE "EXCELSIOR" BED SUPPORT.

THIS bed support was first brought into use at the Birmingham General Hospital during the present year, it being designed to prevent patients from slipping down in bed. It consists of a strip of woven wire mattress webbing two feet long and five inches wide, covered with a cushion and fixed in a sloping position on vertical brackets attached to a horizontal board. Straps or bands of stout ordinary webbing fastened to the ends of this board and buckled to the head of the bedstead keep the support in any desired position on the mattress. When the patient is in the recumbent attitude with his knees flexed and the back of his thighs resting against the cushion of the support, he is securely maintained in a comfortable position free from any tendency to slip towards the foot of the bed, for the pressure of his weight is resisted by the straps buckled to the head of the bed. The appliance, in fact, imparts to an ordinary mattress some of the convenience of a reclining chair in which there is a hollow to receive the lower part of the back. The manufacturers are The Bed Support Company, The Butts, Coventry.

ICKRINGILL'S PATENT HYGIENIC AND ELASTIC CLOTH.

THE special characteristic of this cloth depends on the circumstance that its thickness and softness—equal to those of stout flannel—are produced by a peculiar arrangement of the fibre, which is brought out endways on one of the sides of the fabric, giving a surface somewhat like thick short fur. The longitudinal threads of the cloth, being of caoutchouc render it very elastic, while it is pleasantly smooth, soft, and velvety to the touch and thoroughly pervious to air and moisture. A notable advantage of this material is that it may be washed with soap and hot water without its elastic properties being impaired and without the troublesome tendency, as in flannel, to become felted. Abdominal belts are manufactured of the cloth, a purpose for which it seems to be very well suited, as it not only affords the necessary mechanical support, but fits smoothly in consequence of its elasticity, secures protection and warmth, and does not confine the moisture of the skin. The cloth is made of varied strength, and one of the thinner qualities is made up into roller bandages of the ordinary form. The manufacturers are Ickringill's Patent Hygienic and Elastic Cloth Syndicate, Limited, 35, Devonshire-street, Keighley, Yorkshire. Messrs. Maw, Son, and Thompson, Aldersgate-street, are the London agents.

WEST-END HOSPITAL FOR NERVOUS DISEASES, WELBECK-STREET, W.—Sir W. H. Broadbent has accepted the post of consulting physician on the staff of this hospital, rendered vacant by the death of Dr. Bristowe. Owing to the resignation of Dr. Hughes Bennett on account of ill-health Dr. T. Outterson Wood becomes the senior physician, Dr. W. Wallis Ord is promoted to second, and, by arrangement with Dr. de Watteville, the beds allotted to the third physician to in-patients have been taken over by Dr. Fletcher Beach.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 21, 1895.

THE paper of Dr. NEWSHOLME on a National System of Notification and Registration of Sickness communicated to a meeting of the Royal Statistical Society, and reported in abstract in another part of our present issue, will be read by all who feel interested in the national health. The audience to which Dr. NEWSHOLME mainly addressed himself was the Statistical Society, and through it the public. His views met with more criticism than concurrence, but all admitted the interest of the paper as a whole, and all would be ready to admit that the system of registration which he advocates is the logical completion of the system of death registration. This system originated in this country, and has been copied by our neighbours of the Continent. Dr. NEWSHOLME would persuade us to follow their example in the registration of sickness. It is impossible to deny that the registration of mere mortality affords very inadequate information. Many grave diseases causing extensive suffering and temporary disability for the duties of life do not cause death. It is very gratifying to know that, however backward we are in this country in the registration of sickness, we have long had men amongst us who were alive to its importance and who have more or less carried it out on a limited scale and in a voluntary way, either alone or in combination with those whom they were able to entice into coöperation. Amongst them Dr. NEWSHOLME made honourable mention of Dr. (now Sir) B. W. RICHARDSON, Dr. RUMSEY, Dr. ARTHUR RANSOME, and others.

In 1869 Mr. GOSCHEN was approached as President of the Poor-law Board by a deputation headed by Dr. RICHARDSON, urging legislation to procure the registration of sickness. Mr. GOSCHEN expressed hearty approval of the suggestion, but pointed out—and for this the profession cannot be too grateful to him—that care should be taken not to impose additional labour on the Poor-law officers. It would even seem that in the beginning and middle of last century there were men who advocated the registration of disease. But with all this historical advantage and impetus we are behind other nations—Belgium, Germany, Denmark, Sweden, and Norway. It is true that lately in the Factory and Workshops Acts sections are found requiring notification of cases of poisoning from lead, arsenic, phosphorus, or anthrax to the Chief Inspector of Factories at the Home Office, also to the inspector and to the certifying surgeon for the district. But there is no attempt in these Acts to require a return of general sickness, or even of any of the more common diseases which in some of the countries specified by Dr. NEWSHOLME are reported. In some of the countries named by Dr. NEWSHOLME a large number of constitutional diseases are required to be reported; also a large number of local diseases. The hospital statistics of the German towns include every individual infectious disease, and others also, to the number of 144. Syphilis and gonorrhœa, phthisis, pneumonia and pleurisy, chronic alcoholism, acute rheumatism, and other rheumatic affections are among the diseases included in the hospital statistics. Dr. NEWSHOLME seems to think it would be possible and proper for the State to require similar returns from its own hospitals and from hospitals supported by charity. Lord THRING and others failed to see by what right the State could demand returns from private hospitals sustained by charitable voluntary subscriptions. The fact is that in this country the people have two marked characteristics which ardent sanitarians are prone to forget—they are jealous of any unnecessary encroachment on their personal liberty and privacy, and they do not like too much refinement in legislation. They would not tolerate the method described in an interesting speech by Dr. WEEKS of Portland, Maine, U.S.A., as the legal one in his State—the placarding in scarlet of the dwelling in which there is a case of scarlet fever or diphtheria or small-pox. This would seem a cruelly excessive publication of the domestic affairs of a British citizen. And if they submit to registration or notification of disease it is not that they like it, or for its own sake. As Lord THRING said, they only submit to it for the ulterior purpose of isolation. If notification is to have no consequence or efficiency, it will be sure to be resented and removed. This brings us to the real test of such measures as the registration of sickness proposed by Dr. NEWSHOLME, and to a perception of the force of the strong current of criticism with which they were received. He was careful to say in his reply that it was far from his intention to recommend a general registration of sickness. In the paper he argued that everything but "age" itself came within the care and the concern of preventive medicine; and so it does—but such excessive care is apt to be resented by ordinary people, and by the ordinary member of Parliament, who is bound to respect their views. If there were any strong case made out for returns of any given disease this reluctance would give way, especially if it were shown that such returns would lead to any practical remedies that legislation could promote. And this is practically all that Dr. NEWSHOLME wants. At any rate, it is all that he is likely at present to get. He would do well to define a few—a very few—diseases of the constitutional class on which information is most wanted, and to begin any system of registration of sickness with them. Public opinion would sanction some extension of the notification principle in regard to other infectious diseases than those now notifiable. They are clearly a class by themselves. They endow the patients suffering from them with a power of affecting and injuring others, which gives these others an interest in, and even a right to interfere with, their personal liberty. But the case of incommunicable diseases is very different. It may be so extensive and so injurious, and withal so amenable to legislative measures, as to justify State notice. But all this has yet to be made clearer before it can be embodied in practical legislation.

Dr. NEWSHOLME realises that when a wider notification is called for it will necessitate a revision of the notification fees. It should be clearly understood that medical men

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are to be recompensed for the imposition of such additional work, either by direct payment or, as he suggests, by additional legal guarantees for the protection of the profession from vexatious prosecutions.

THE subject that has been under discussion at the last two meetings of the Royal Medical and Chirurgical Society is one which has often exercised the minds of thoughtful clinical observers, and one, too, in which renewed interest has been taken since the tacit assumption that infective diseases are due to the invasion of the body by specific parasitic organisms. The phenomena of the diseases in question are in the main explicable on the theory of the implantation of germs which undergo continuous development in the blood and tissues, inducing the morbid changes peculiar to the special disease of which they are the cause. The stages of incubation, of active manifestation, local and general, and of decline and recovery concord precisely with the development, activity, and ultimate fate of the micro-parasites in their struggle with the cell forces of their host. It is also quite in agreement with what is known concerning the life-history of allied non-pathogenic organisms, that under appropriate environment and in suitable soil the development of the pathogenic parasite is favoured and encouraged. Similarly the facts of immunity are capable of satisfactory explanation from analogies derived from our knowledge of the conditions of life in the vegetable world, as in the exhaustion of the soil, although it may well be that other conditions are operative in the case of the animal organism for which no counterpart can be found in the macrocosm. At any rate, the present position of pathological interpretation in this matter is this general admission of the fact of pathogenic germs as the essential factor in diseases belonging to the so-called infective groups. The discovery of the actual microbes in certain of these diseases, and the exhaustive studies that have been made of their morphology and development in artificial media, have not only added to the clearer comprehension of their *rôle* in disease, but have amply sanctioned the inference of the existence of like agencies in allied affections.

If, then, what is known of the ordinary clinical history of infective disease harmonises with observed facts of the life-history of specific bacterial organisms, it becomes a matter of importance to determine whether variations in the course of the former are concomitant with, or, rather, consistent with, variations in the conditions of the latter. Perhaps the most remarkable of such departures from the ordinary evolution of a disease is the reappearance, after a long interval, of the manifestations peculiar to it, a recrudescence of symptoms which can only admit of one of two explanations—either that it is due to fresh infection or that it means a reawakening to vitality of germs long since implanted in the body, which for some reason or other have fallen into a state of quiescence or dormancy. This is the question which has been so ably debated at the Royal Medical and Chirurgical Society, the general outcome of which debate has undoubtedly been to strengthen the belief in the latency of disease germs, and this from direct bacteriological evidence as well as from clinical and pathological observations in the human subject. As Mr. HUTCHINSON, in his admirably suggestive remarks at the opening of the debate, observed, a distinction must be made between true latency and a latency which is only simulated. In the first the assumption is that the disease germs are actually in a state of quiescence, as dormant in the tissues of the body as the grains of wheat in the Egyptian sarcophagus, awaiting only some special condition to restore them to vitality; in the other instance, they may be supposed to be silently exerting their influence, but without any overt manifestations of their presence. The adoption of a belief in true latency, which, as Dr. WASHBOURN showed, is consistent with bacteriological knowledge, would certainly afford an explanation of facts in the history of syphilis, tuberculosis, and leprosy which were so well advanced by Mr. ERNEST LANE, Dr. KINGSTON FOWLER, and Dr. ABRAHAM. The view, however, is capable of very wide application, as Mr. HUTCHINSON indicated in reference to vaccinal erysipelas, and Sir W. BROADBENT in respect to typhoid fever. It may also be applied to the explanation of direct inheritance, not only in syphilis, but in regard to tuberculosis, thus reinstating a doctrine somewhat shaken of late years by a too rigid belief in the contagiousness of tubercle.

One aspect of this doctrine as an alternative to that of reinfection from without is deserving of careful analysis. It was referred to by several speakers, and has been often discussed elsewhere. This is the determination of the conditions that are requisite for calling into activity the dormant microbes. More than one speaker alluded to the influence of traumatism as an apparent exciter of latent infectivity. In some cases this is fairly obvious, but in others it is very mysterious and inexplicable. Why should injury of a joint evoke tuberculosis in it? or why should a slight blow be followed by tuberculous meningitis? Inexplicable as this agency is, it is not more so than the admitted agency of chill, which is the direct antecedent of many diseases that are admittedly microbic in origin. We explain this by stating that chill lowers the vital resistance of the organism; but why should it equally stimulate the latent germs to activity? There is, indeed, ample scope, not only for speculation, but for arduous research in the endeavour to harmonise the facts of specific infection with those of apparent spontaneous outbreak of disease. As regards the fact of latency of germs we think there can be no dispute. It is impossible, for instance, to explain the sudden outburst of tuberculous meningitis in a subject who has caseous foci in glands or elsewhere on the theory of reinfection. Long before the bacillus tuberculosis was discovered such outbursts of acute tuberculous infection in those who had such foci in the body were recognised, and were regarded as the chief danger from which it was almost impossible to protect the subject. The cases cited by Dr. FOWLER in respect to pulmonary tuberculosis hardly admit of any other explanation. As to syphilis, the doctrine of latency has long been held, and is, indeed, often the only explanation available to explain the life-long liability to further infection that is associated with

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this disease. If, then, the teachings derived from analogy, the experiences of the bacteriological laboratory, and the observed facts of clinical experience, all point to the fact of latency of the germs of disease, the concordance of testimony is too great to be disregarded.

A SPECIAL meeting of the governors of the Chelsea Hospital for Women was held on Wednesday afternoon, Lord GLENESK presiding. The purpose of the meeting was to consider the propriety of the governors dispensing with the services of a member of the honorary medical staff. Under all ordinary circumstances such a proceeding should have been possible to the governors in a manner that would call for no controversy. But the Chelsea Hospital for Women is a luckless institution; for, although the result of the meeting of the governors was to cordially endorse the action of their executive body in the expulsion of the medical officer in question—in which action they were supported, it should be added, by the whole of the medical staff, the impeached officer excepted—yet the outcome of the meeting cannot be considered satisfactory. There are many points remaining which suggest debate of an acrimonious character, and which may possibly receive that unfortunate attention. Therefore we say that the Chelsea Hospital for Women is a luckless institution, for its executive are unable to take a strong and decided action. A trail of ills follows their various departures, and the name of the hospital becomes associated in the public mind with what, for lack of a more dignified word, we must term "rows."

Briefly, the case is as follows, but an account of the meeting is given in another column. Mr. O'CALLAGHAN made changes in the organisation of the hospital. Whether these changes were or were not reforms is no question before us now, but it is our most strongly held opinion that to place any nurse, however capable, in a position of superiority to the resident medical officer of the hospital, will always be in direct contradistinction to the manner in which hospitals should be conducted, and such a course, if uniformly adopted, would end in the ruin of all proper medical administration. Having instituted this "reform" (for Mr. O'CALLAGHAN'S action certainly did place the resident medical officer in a subordinate position to a nurse), a dispute arose between Mr. O'CALLAGHAN and the resident medical officer as to the after-treatment of one of his operation cases. Out of this dispute there arose a dispute between Mr. O'CALLAGHAN and certain members of the staff as to the said operation. The propriety of the operation was unquestioned, and the manner of its execution was not impeached. The dispute was simply whetner what had been done was of the nature that had been suggested in consultation. Mr. O'CALLAGHAN says that it was and Mr. BLAND SUTTON says that it was not. The dispute has obviously arisen out of a sad error, but either side may be right without affecting the merits of the case, for though Mr. O'CALLAGHAN'S colleagues, holding him as the mistaken person, find him impossible to work with, the lay executive of the hospital have clearly stated that they were not acting in response to the wishes of their honorary medical staff in desiring from Mr. O'CALLAGHAN his resignation, but entirely upon their own responsibility. Following on these unfortunate occurrences the board, as we have indicated, called upon Mr. O'CALLAGHAN to resign. He refused. They offered a form of arbitration. For this reason and that reason the proposal came to naught. Finally, on Wednesday afternoon, the board made a motion for Mr. O'CALLAGHAN'S expulsion, which, being endorsed by a general meeting of governors, was carried by 106 to 17.

What was the real point at issue? Not Mr. O'CALLAGHAN'S opinions of the duties of a house-surgeon. Not Mr. O'CALLAGHAN'S accuracy, which has been gravely impugned. The question before the meeting was, Is such a "row" a domestic one, or is it one upon which arbitration from outside should be invited, the executive of the hospital being unable to manage the affairs of the hospital properly? Mr. O'CALLAGHAN was making no categorical defence; he was simply asking for arbitration. We have no hesitation in saying that under ordinary circumstances arbitration would have been unnecessary. Under ordinary circumstances a board of governors would have been the proper people to deal with the situation. But the management of the Chelsea Hospital for Women is not governed by a properly constituted lay board. They are under a stigma. They should never have undertaken the business of the election of their present medical staff. At the time they did so they lay under the censure of an independent tribunal. We refer to the committee of investigation appointed by the hospital authorities to inquire into Dr. PARKES'S statements that he considered that the lay management of the hospital was unsatisfactory. As a result of that report the medical staff of the hospital resigned, and the lay management should have done the same. They were equally to blame then, and they still rest under the shadow of that blame. Now Mr. O'CALLAGHAN has been dismissed by this discredited lay board. A strong board above criticism, backed by its medical officers, should be able to discharge not one, but fifty honorary medical officers. But the lay management of the Chelsea Hospital for Women is not strong, and in undertaking the dismissal of Mr. O'CALLAGHAN without formulating the charges against him, and giving proper reasons for refusing the conditional arbitration for which he prayed, they have made a mistake. On the merits of the case we express no opinion, but as to the value that arbitration would have had as a method of dealing with the case we have no doubt.

ROYAL BRITISH NURSES' ASSOCIATION.—The eighth annual conversazione of the Royal British Nurses' Association was held on Monday, Dec. 7th, in the galleries of the Royal Institute of Painters in Oil Colours, London. Princess Christian, the president of the association, was unavoidably absent, but many distinguished guests attended, among them being Lord and Lady Halsbury, Lady Dimsdale, Lady Dorothy Nevill, Sir T. and Lady Lawrence, the Rev. Sir Borradaile Savory and Lady Savory, Sir J. Crichton Browne, F.R.S., Sir J. Eric Erichsen, Sir Richard Quain, and Sir Dyce and Lady Duckworth. The guests, who numbered some 2000, were received by the vice-chairman of the executive committee, Sir J. Crichton Browne, Mr. T. Pickering Pick, and Miss Thorold, supported by the honorary officers of the association, Mr. Langton, Mr. Fardon, and Mrs. Dacre Craven.

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Annotations.

"Ne quid nimis."

THE CASE OF MR. LIONEL SMITH.

WE are sure that all our readers will be glad to see from a letter which appears in another column that some slight redress has been made to Mr. Smith for all the injuries which he has suffered during the past eight years. For a full account of the case we must refer our readers to our issues of Feb. 9th and Aug. 24th; but to recapitulate shortly the facts are these. In 1887 Mr. Smith was acting medical officer at Albany. In the following year a patient in the Albany Colonial Hospital died, and a coroner's jury of three persons attaching blame to Mr. Smith on this account, the Government dismissed him, allowing an appeal to the Secretary of State, who upheld the Governor's decision. Mr. Smith then, having been refused a hearing before the Medical Department in West Australia, entered a petition of right with the Colonial Secretary as defendant. The jury, after one trial in which they disagreed, eventually found for the plaintiff with £200 damages for wrongful dismissal, but on the question of whether he had or had not been wrongfully dismissed they could not agree. In the end the Privy Council ordered judgment to be entered for the Government of Australia. This is a very short and bald statement of a grievous and cruel wrong inflicted by the Government upon an absolutely innocent man. Government took away his livelihood and his character, so that he is left, a middle-aged man with a wife and children, to begin the world over again. It will be seen from the letter in our correspondence columns that Mr. Chamberlain, true to his Bechuana name of "the one who rights things," has offered Mr. Smith the appointment of district surgeon in Zululand, a post he has determined to accept. The salary is very small, but it is something, and in order to be able to take it Mr. Smith requires funds to complete the education of his children and to provide for the passage and outfit of himself, his wife, and his family. He has been fighting his battle nobly and resolutely for eight weary years, and has now come to the end of his resources. We confidently appeal to our readers and through them to their well-to-do patients to send us such a sum as will enable Mr. Smith to face, at any rate, the immediate future without fear. Let everyone consider the woeful position of this man. Judged guilty of a crime which he never committed, maligned, deprived of all opportunities of making a living, looked upon as that much-to-be-pitied but tiresome person "a man with a grievance," with those dearer to him than his life dependent upon him, he is absolutely without means. A chance, thanks to Mr. Chamberlain, offers itself of, at all events, keeping a roof over his head and of getting food, but immediate help is wanted. Christmas is the season of all others for works of charity and mercy, and we are confident that those who have this world's goods will answer our appeal to share them with their brother who is in such sore need. Let them remember that "alms do deliver from death," rather than be placed in the category of those of whom it was said, "When they will not give a doit to relieve a lame beggar they will lay out ten to see a dead Indian." Subscriptions sent to THE LANCET office should be enclosed in an envelope marked, "Lionel Smith Fund."

LONDON WATER-SUPPLY.

THERE was no protracted debate on the question of London's water-supply at the meeting of the County Council last Tuesday. The proposal to ask Parliament to create a water trust for the control of the London water-supply was rejected, and in its stead a motion was carried by a majority of thirteen to ask the Government to place the control of the water-supply in the hands of the London consumers, who are to be directly represented by the Council in conjunction with the City Corporation. A clause is provided for consumers in the metropolitan area outside the county who "shall not be denied or deprived of similar rights in their respective areas." Further, "the purchase price of the existing water undertakings shall not be assessed under the provisions of the Lands Clauses Consolidation Act, but shall be based upon the fair and reasonable value of these undertakings, due regard being had to the rights, special circumstances, and obligations of the companies." Finally, "the Parliamentary Committee shall be instructed to report as to the reply of Her Majesty's Government immediately after the recess." The adoption of this motion will probably wrest a definite pronouncement from the Government as to the precise direction which they propose legislation should take, and their reply will therefore be one of great moment.

PLUMBER'S WORK.

IN view of the great importance in a sanitary respect of the work of plumbing we have been for a considerable time engaged in an inquiry as to the relative efficiency and cost of plumber's work. We have been much struck by the absence of any definite information as to the latter point, and have as far as possible endeavoured to supply the deficiency. Our inquiry is now practically completed, and we propose to publish in the course of a few weeks the results of our Commissioners' investigations. These investigations have been undertaken independently by us, and we are solely responsible for the result. We have thought, however, that their value would be enhanced if the report were submitted to the criticism of experts. The Worshipful Company of Plumbers very courteously and readily fell in with our views, and appointed a committee to consider our report and make suggestions or criticisms thereon. The committee have devoted much time to this work, and we shall have great pleasure in printing their report as an addendum to our own. Their criticisms, whether destructive or the reverse, will be equally welcome.

HORSELESS CARRIAGES AND SANITATION.

So novel as yet is the mere idea of street traffic without the aid of horse power that the minds of most persons can hardly have touched the practical questions involved in such an arrangement. We are not, however, wholly without evidence bearing upon this subject. The ordinary cycle, though but a toy in comparison with many larger and more complicated members of its class, and a variety of automatic wheeled machines which have appeared at times on public view, have added something to our education. The steam and electric tramcar, and even the time-honoured road engine, afford other examples of mechanical energy thus employed. We may therefore claim to know enough of the outlines of the new system of movement to sketch with an approach to accuracy some of the advantages and drawbacks which its adoption must entail. It is needless here to discuss the many economic, æsthetic, and social effects which would follow even the partial disuse of the horse as a draught animal. Another question, that of sanitation, calls for more attention from us. There can be no doubt that, as regards this important matter, the equine mechanism is somewhat lacking. Our stables without the horse would be as pure as our homes if we were ourselves visible only as figures of still life, waxen, or ivory models. The stable-pit filled with the defiled bedding of our obedient and faithful four-legged

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servant would be known no more to our senses. The contagia bred in its midst and scattered in the dry dust of summer air, to find their way within our sleeping and sitting rooms, would be only the remembered signs of a past and primitive civilisation. The germs of glanders would not harbour and be hatched, as they still occasionally are, in the stalls of overcrowded mews. Thus far the margin of profit is on the side of him who charges his vehicle with steam or electric energy. Possibly he may still have grounds for anxiety, for accidents will happen, even with machinery. It is hardly to be expected, however, that this generation will witness a triumph of hygiene so marked as is suggested by the above description. The stable and the coach- or cart-house will not soon be dissociated, and the need of stringent sanitary measures on the part of their owners will remain as a pressing and continual obligation. Much remains to be done, and much can be done, in this direction in order to ensure not only the health of stabled animals, but of the human population in or near mews. The frequent and regular removal of refuse is one important means to this end, and by means of the methods, at once effectual and simple, employed for this purpose in well-kept stables the work of cleansing can be carried out with ease and completeness.

THE HOSPITAL ACCOMMODATION OF THE METROPOLITAN ASYLUMS BOARD.

WE have received, through the courtesy of Mr. T. Duncombe Mann, clerk to the Board, a copy of a letter he has addressed to the chairman, Sir E. H. Galsworthy, showing what the Board has done to meet the enormously increased demand on its space since the notification system and the wholesale admission of the public, as distinguished from paupers, to the hospitals. It makes much of what the Board has done in providing in four years five sites, on two of which hospitals have been already built. On three others the buildings have not been completed, and, indeed, on one—the Tooting permanent site—building is not yet begun. The weakest part of Mr. Mann's defence is in not showing why the Board should keep 1000 beds for a handful of small-pox cases while there is such a pressure for the admission of fever patients. We adhere to our view that the whole working of this system of huge hospitals for the admission of great numbers that presumably could be accommodated at home requires immediate and close investigation as to its efficiency and expediency. Unfortunately it is one of those questions which have no party interest, and it is too probable that we shall go on spending millions of money without curtailing the proportions of epidemics.

VITAL STATISTICS IN EGYPT.

THE Egyptians are unquestionably a very prolific people. From an official paper just published we learn that the number of native births registered during the year 1894 was 335,549, while the deaths from all causes came to 192,103 only; the excess of births over deaths amounted consequently to no fewer than 143,446, which, with an estimated population of 8,000,000, represents the enormous increment rate of 1·79 per cent. Under the existing *régime* there is no reason to doubt the accuracy of the vital returns, whatever may have been the case formerly when the military service was so unpopular that parents used every effort to prevent the inscription of their sons' names on the hated lists. Registration, thanks chiefly to the untiring labours of Dr. Engel Bey, is now very fairly carried out all over the country; and, moreover, even though a little of the old leaven should still remain, the effect of uninscribed infants would be to cause a fictitious diminution of the birth-rate. The census of 1882 is generally regarded as incorrect and misleading, because it was hurriedly taken during the height of the Arabi disturbances, but the statistics now supplied tend in some measure towards the rehabilitation of the discredited enumeration. Its details may be, and probably are, often unreliable, but the totals arrived at seem to be approximatively correct. The native population of Egypt up to the Second Cataract, and including the Oases, was put down as 6,469,716, and if we adopt that number as a basis and allow for increase from superiority of births at the 1894 rate, the calculation will be found to work out at about 8,000,000. According to this hypothesis the birth-rate last year was equal to 42 (nearly) per 1000, and the death-rate to 24 per 1000. Before leaving this portion of the subject there is one point to which we desire to draw attention as affording food for thought. In the two principal towns the difference between the birth- and death-rates is startlingly less prominent than it is in the rural districts, which are nevertheless often said to be extremely insanitary. For every 100 births in Cairo and Alexandria there were 86 deaths during the twelvemonth, whereas in the provinces the proportion was as 100 to 54. Turning to the foreign side of the tableau we find that while 2513 "strangers" died in Egypt during the year 1894, the number of births among them was only 1056. It is probable, however, that the latter total does not represent the whole of the exotic progeny, for in a note it is stated that although registration of deaths is now obligatory for all, the declaration of births is still optional for foreigners. Some years ago the idea prevailed in certain quarters that European women were nearly always barren in Egypt. There are, of course, no real grounds for the notion, but should it still be entertained we are here furnished with upwards of a thousand unmistakable proofs of its fallacy. On the other hand, it has been affirmed that the procreative powers are, if anything, enhanced by residence on the banks of the Nile, and all native Egyptians are thoroughly convinced that the muddy water of their river is in this respect infallible. In their own case there would seem to be very little doubt that, at all events, it does not act as a preventive. With regard to vaccination, it is very satisfactory to find that the operation is now efficiently performed throughout the length and breadth of the land. No fewer than 312,188 "vaccinations with success" are recorded, the number of failures being only 3548, or a little over 1 per cent. In 4045 instances revaccination was essayed, for the most part with good results, only 788 cases proving refractory at the second attempt. Since December, 1890, infants of all nationalities have been liable to compulsory vaccination.

ROYAL ACADEMY OF MEDICINE, IRELAND: THE PROPOSED NEW HOSPITAL SCHEME.

A SPECIAL meeting of the Academy was held on Tuesday last to consider the above scheme, Dr. James Little, President, being in the chair. Dr. Duffey, physician to the City of Dublin Hospital, moved a resolution to the effect that, whilst approving of the proposal to provide better accommodation for cases of small-pox and a home for patients recovering from infectious diseases, the proposed scheme for establishing new isolation hospitals for infectious cases was unnecessary and uncalled for. The proposal was seconded by Sir Christopher Nixon, who argued that the treatment of fevers in departments of general hospitals had not been attended with ill results, and he considered the proposal to establish new hospitals unnecessary and calculated to cause great expenditure of the ratepayers' money. Dr. Grimshaw, President of the Royal College of Physicians of Ireland and Registrar-General for Ireland, moved the previous question. In a very long address he pointed out the dangers resulting from treating cases of fever in other than special hospitals, and mentioned cases which had come

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under his own observation in which fever had been spread in hospitals from one person to another. He considered that every case of fever was a centre of disease from which it could spread, and urged, therefore, the necessity of isolating patients completely, which could not be done in general hospitals. He had always condemned the treatment of fevers in such hospitals, and his opinion on that subject remained unchanged. Sir Charles Cameron, chief medical officer of health of Dublin, in seconding the amendment, said that if the Academy passed the resolution proposed it would be an indelible stain upon them. Everywhere except in Dublin fever was treated in special hospitals; and was Dublin right and the rest of the world wrong on that subject? The amendment was then submitted and carried by 21 to 12 votes, and as the original resolution could not then be put, the long debate anticipated did not take place. Many members left before the division was taken.

WEATHER AT MENTONE DURING TWENTY-ONE SEASONS.

WE have received from Dr. William Marriott of Mentone an analysis of the weather at that place during twenty-one years, concerning which he writes as follows:—In the choice of a winter and spring climate for an invalid, the number of fine days on which he can go out at these seasons of the year should be taken into serious account. In the following table of the weather at Mentone during twenty-one seasons, it will be seen how great is the preponderance of fine days over cloudy and rainy ones. The latter are counted rainy even if only a slight amount falls, the rest of the day being fine and allowing of walking or driving out, a continuously rainy day throughout, preventing an invalid getting out, being of rare occurrence, probably half a dozen in the season. The observations in 1886–87 were only taken up to Feb. 22nd owing to the earthquake on the following day:—

November to April.

	Fine.	Cloudy.	Rainy.
1874–75	86	59	36
1875–76	102	40	40
1876–77	104	34	43
1877–78	117	14	33
1878–79	93	19	68
1879–80	117	32	33
1880–81	104	30	46
1881–82	138	18	25
1882–83	98	30	53
1883–84	113	27	42
1884–85	119	15	47
1885–86	104	23	54
1886–87	82	4	28
1887–88	113	3	62
1888–89	120	13	48
1889–90	123	12	46
1890–91	117	21	43
1891–92	118	11	53
1892–93	122	14	44
1893–94	127	15	39
1894–95	117	15	49

Thus out of 181 days in the six months there are only from forty to fifty rainy days. Invalids can therefore look forward to 135 fine days, mostly bright and sunny, while in London during the same period they would not amount to twenty.

TREATMENT OF MALIGNANT DISEASE OF THE BREAST.

IN a paper which appears in another column, by Dr. Robert Sanderson, the question is raised as to whether it is right to stop the "clearing out" process at the axilla. Dr. Sanderson very rightly pleads that we must also consider the posterior triangle. It is important to remember that lymphatic glands may be affected by carcinoma either directly or indirectly. The glands which receive lymph directly from the infected area enlarge first, but it is only at a later period that other glands, through which the lymph has afterwards to pass, become involved. In carcinoma of the breast the lymphatic glands which are most frequently affected are those in the axilla, especially the pectoral set lying under the border of the pectoralis minor. Later in the case glands higher up, situated in the posterior triangle, become also involved. It is extremely rare for the glands above the clavicle to be affected directly. In every case of carcinoma of the breast, in order to reduce the chance of recurrence to a minimum, the axilla should be cleared, even if no enlarged glands can be felt. But if there be no evident involvement of the axillary glands, there is practically no chance that the glands in the posterior triangle are affected; so that it is undesirable to subject the patient to the increased risk of this extension of the operation. But if the axillary glands are markedly involved there is very great probability that the glands above the clavicle are also affected; in such a case there is no reasonable chance of cure unless these glands also are removed. The superficial glands lying on the cervical fascia can be readily taken away, but it is no easy matter to remove the deeper glands which lie around the subclavian vessels and under cover of the clavicle, and these deeper glands are those most likely to be affected. Yet it is undoubtedly advisable to attempt their removal in many cases where they are now left untouched. But the axillary and the supra-clavicular glands are not the only lymphatic glands connected with the breast; the lymphatics of the inner segment of the breast run to the sternal glands in the anterior mediastinum, and it is greatly owing to the fact that carcinoma of the breast usually affects the upper and outer segment of the breast that these intra-thoracic glands are so rarely involved.

LETTER-BLINDNESS.

THE case of word-blindness recorded by Dr. Hinshelwood, which will be found on another page, with the appended comments on visual memory, is of very considerable interest, and an additional form of visual defect must be accepted in which, as in a few other recorded cases, there is not only word-blindness, or loss of memory of the signification of the words of a sentence, but a failure to recognise the individual letters of which words are composed. In this instance the precision of the limits of the cerebral lesion was so exact that Arabic figures were read with perfect ease though the patient was unable to name a single English or Gothic letter. The defect proving persistent the patient, a man aged fifty-eight years, was recommended by Dr. Hinshelwood to begin to learn his letters like a child, and after some months of painful application he recovered the power of naming them. A somewhat similar condition has been observed in patients possessing a knowledge of music, the defect consisting in a loss of the power of musical expression, which has been named "amusia," in one form of which analogous to the above-mentioned case there is a loss of the power of comprehending the significance of musical notes though they can be perfectly seen. In Dr. Hinshelwood's case there was complete loss of vision in the inner part of the right and the outer part of the left retina, or right lateral homonymous hemianopsia. The chief interest of such cases as this, and of others that Dr. Hinshelwood has collected, consists in their bearing on the recondite subject of memory. It has been generally regarded as a special and distinct faculty holding good for all sorts and kinds of knowledge. Sir William Hamilton and Dugald Stewart were at one in regarding it, in the words of Stewart, as that faculty which enables us to treasure up and preserve for future use the knowledge we acquire. That a person has a good memory is in common parlance equivalent to saying he can recall any past impression on his senses; but it is obvious that this is incorrect, and that whilst there is no such single faculty as memory, memories of different kinds of impressions—as of vision, hearing, and movements—do exist, each

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of which, as pathology teaches, has its own special cortical area in the brain. An intimate connexion exists between the several centres, but any one may be lost from some local lesion, whilst the others remain intact and in full functional activity. Moreover, some of these centres, as those for speech and writing, as well as the seats of the visual memory of numbers and musical notes, are probably unilateral whilst such visual memories as those of objects, places, form and colour are, as Dr. Hinshelwood observes, efficiently imprinted and stored up in the higher visual centres of both hemispheres. Therefore it would require a bilateral lesion to produce object blindness, hence its much less frequent occurrence. We must refer our readers to Dr. Hinshelwood's instructive paper for the reasons that led him in this case to believe the lesion to have been unilateral.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

WE must offer our thanks to our contemporary the *Times* for the excellent leading article of Dec. 13th concerning the School Board and medical certificates. It is all very well for Mr. Sharp to say no slight is intended to be put upon the medical profession, but the fact remains that he has put a slight upon it in general, and in particular by refusing to consult the medical officer of the Board. If the remarks in the whole of the medical press, the leading article and correspondence in the *Times*, the caustic little dialogue in this week's *Punch*, and the refusal of sundry hospitals to give any more certificates do not overcome the pigheaded obstinacy of Mr. Sharp's committee and the Board as a whole, and lead to a rescinding of the resolution of May 30th, further steps will have to be taken. The Board makes a great point of Bible instruction. We would remind it of a notable question, "Who made thee a judge and a ruler over us?"

THE METROPOLITAN POLICE SURGEONS' ASSOCIATION.

THE eighth annual dinner of this association was held on Wednesday evening, the 18th inst., at the Criterion Restaurant. In consequence of the inability of the chief surgeon of the metropolitan police to preside, the late chief surgeon, Mr. Timothy Holmes, acted as chairman. On the conclusion of the dinner the Chairman proposed the usual loyal toasts, and then the "Navy, Army, and Auxiliary Forces," coupled with the name of Lord St. Vincent, who, in the course of his speech, referred to the successes of the Medical Staff in Burmah and at Chitral. The Chairman then proposed "The Metropolitan Police Surgeons' Association." After he had commenced, the unexpected arrival of the chief surgeon, Mr. Mackellar, was announced, and his appearance was the sequel for much cheering and hearty congratulations on recovery from his recent illness. Mr. Mackellar was requested to reply, and did so in his usual eloquent manner, his name being received with musical honours. Mr. Farr also replied, giving a history of the formation of the Association. In the absence of the Commissioners of Police, to whose kind assistance in the interests of the Association reference was made by the Chairman, the "Health of the Chief Surgeon" was proposed, and acknowledged by Mr. Mackellar. Dr. Phillips, in proposing the "Guests," made allusion to the happy relations existing between the divisional surgeons of police and the metropolitan magistrates. Mr. Newton, the magistrate of Marylebone Police-court, replied. Mr. Spurgin proposed the health of the Chairman, who, in reply, reviewed some of the events which affected police surgeons during his tenure of the office of chief surgeon. "The Medical Press" was proposed by Dr. Yarrow, and Mr. W. H. Battle, who replied, alluded to the interest which was taken by the medical press in all matters of public importance brought forward by the Association. He also expressed the especial interest which the Editors of THE LANCET took in supporting the views of such an important Association. "The Dinner Committee," proposed by the Chairman, was replied to by Mr. Spurgin, one of the secretaries of the Association, who may be congratulated on the success of a very pleasant gathering. During the evening a programme of music was provided under the direction of Mr. Herbert Schartau, assisted by Mr. John Bartlett, Mr. Wingrove Ives, and Mr. F. Russel, a ventriloquist who is well known for his clever sketches.

CONDITION OF THE BLOOD IN PURPURA.

IN the *Presse Médicale*[1] is an essay on Purpura Hæmorrhagica by Professor Hayem in which the condition of the blood in this disease is recorded, and describing investigations made by him. Professor Hayem states that in this variety of purpura the blood possesses the following characteristics. 1. There are no appreciable anatomical modifications in the red corpuscles, except, perhaps, a diminution or absence of those corpuscles of exudation which are produced by the disintegration of the red cells when preparations of blood are submitted to the action of solvents. 2. There is a considerable diminution in the number of hæmatoblasts; those that remain are often considerably increased in size. 3. There is no constant alteration in the number of leucocytes. In one case only was the number of white cells increased. 4. The coaguability of the blood was normal. The fibrous reticulum remained invisible, although, on the other hand, it was formed of fibres of an unusually large size. 5. Transudation of serum was absent from the clot, which latter possessed only a feeble power of contraction. Thus, the two characteristic and constant pathogenic properties of the blood appeared to be the scarcity of hæmatoblasts and the absence of transudation of serum after coagulation. The diminution of the hæmatoblasts in purpura would partially explain the production of hæmorrhages (epistaxis, menorrhagia, &c.), as these bodies play an important *rôle* in the arrest of bleeding and the clotting of the blood. It is probable that in certain diseases attended with purpura the diminution in the number of hæmatoblasts is in consequence of a destruction of these elements. It is possible that the state of the blood may be dependent upon a faulty elaboration of nutrient material, or upon the introduction into the blood, under the influence of digestive disorders, of toxic substances having the property of producing changes in the hæmatoblasts.

PROSECUTIONS FOR SELLING DRUGS OVER THE PRESCRIBED STRENGTH.

THE law is clear in regard to the sale of drugs, but not so easily interpreted is it in regard to food, although both, of course, come under the provisions of one Act. In the former case the requirements of the Pharmacopœia are to be complied with, but in the latter no rules are laid down as to what should be the standard quality of the various articles of food. Drugs are required to be sold containing neither a deficiency nor an excess of the active ingredient, but the precise quantity; foods are not to be attenuated, or, in other words, the seller is not to practise a fraud upon the purchaser, nor is he to offer for sale any article for consumption containing ingredients that are injurious to health. The pharmacist, therefore, commits just as serious a breach of the law if he supplies drugs which are of greater strength than is asked for, or in excess of the strength prescribed by the Pharmacopœia. (Parenthetically, imagine a London milkman found guilty of

[1] 1895, p. 233.

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selling milk containing an unusual proportion—say 20 per cent.—of cream!) Four cases of this kind occurred recently at Birmingham. In two of the cases tincture of iodine was sold containing 150 per cent. of iodine and 50 per cent. of potassic iodide in excess of the quantities set forth by the British Pharmacopœia; in the other two cases samples purporting to be tincture of aloes contained 40 per cent. of solid ingredients and 50 per cent. spirit in excess of the formula. With the exception of one case—viz., that of aloes, in which it appeared the inspector purchasing the samples had entered it as "compound tincture"—fines were inflicted and costs imposed. It is not probable in these particular instances that any harm would have resulted despite the great excess of ingredients found on analysis by Dr. Alfred Hill, the medical officer of health; but if the same laxity had been extended to other drugs the results might obviously have been very serious indeed. The majority of these offences are probably committed when a purchaser buys drugs on his own responsibility, and not when he is under the direction of a medical adviser. On the whole the record of offences of this sort, on the part at any rate of respectable chemists and druggists, is a very satisfactory one; theirs is a business which requires constant care, and no one better than themselves know it and realise it. Still, the cases which do occur from time to time should not escape the notice of the medical profession, who should, therefore, keep a constant watch and some sort of check on the medicines which druggists make up for them.

A CASE OF TRICHINOSIS.

A CASE of trichinosis is reported by Dr. Edgar Garceau of Boston in the *Boston Medical and Surgical Journal* of Nov. 21st of this year. Apart from the rarity of the disease the case presents several points of interest. The patient was a German thirty years of age. About the end of March he ate some smoked ham. Many of his friends who also ate some of the same ham were taken violently ill the day after with severe vomiting and purging, but they all eventually recovered. He himself was not taken ill at once, which fact he thought was accounted for because he ate only a very small piece. For two weeks, however, he felt ill, complaining chiefly of backache and pain in the limbs. When seen on April 12th the muscles of the calves of his legs and of the arms and back were sore. The bowels had been regular, and there had been no symptoms of intestinal irritation. On examination a few red spots were seen on the abdomen, which disappeared on pressure. The spleen was of normal size. The temperature was 103·5° F. The face was red, the eyes bulging in the sockets, and the conjunctivæ red and swollen and raised above the level of the corneæ. The next day he was worse, and he passed three very loose stools, watery, and of pea-soup consistency. The following day there was vomiting, the temperature was 104°, and the voice husky. He gradually grew weaker and died on April 17th. Only a partial necropsy was allowed, but no difficulty was experienced in demonstrating the characteristic trichinæ. At the early stage of the case the diagnosis and the resemblance to enteric fever was remarkable. The prodromata of malaise, backache, and pain in the limbs, the gradually rising temperature, the characteristic typhoid stools, and the rose-coloured spots all suggested enteric fever as the probable diagnosis. The pains in the limbs, however, became so severe that morphia had to be administered for their relief, and then the diagnosis of trichinosis was more assured. We have, therefore, the history of the case and the period of incubation (two weeks) during which time the trichinæ were migrating from the intestines to the muscles. If the patient had eaten a good deal of the ham it is probable that he would have escaped, as the others did, by the violent vomiting and purging. Dr. Garceau suggests that a cathartic should be given in future doubtful cases to clear out the parasites. In this patient's case all the trichinæ swallowed had a chance to propagate, and the number so propagated may be inferred when it is said that a single female trichina may produce more than a thousand embryos. The ocular symptoms were suggestive; the œdema of the conjunctivæ was very marked, and was the first symptom which aroused suspicion as to the nature of the case. The implication of the laryngeal muscles, as evidenced by the husky voice, was also characteristic.

THE "SUN" AND CHARGES AGAINST A MEDICAL MAN.

ON Thursday, Dec. 12th, the case of Ady *v.* Cadett came before Mr. Vaughan. Mr. Cadett is a journalist, who, it was alleged, had published a defamatory libel in the columns of the *Sun* upon one J. C. Ady, a medical man. Mr. Ady having been cross-examined, Mr. Vaughan stopped the case and dismissed the summons. As we believe further proceedings are pending we refrain from any comment.

MUSCULAR ATROPHY AND GENERAL PARALYSIS.

IN a recent number of the *Münchener Medicinische Wochenschrift* Dr. Riebeth publishes a case of which an abstract appears in the *Neurologisches Centralblatt*. The patient had gonorrhœa in 1884, but had not apparently had syphilis. His nervous symptoms began in 1893, and consisted of weakness, giddiness, noises in the ears, and inability to work. There were also considerable excitability occasionally verging on violence, an indifferent manner and emotional tendency. He was found to have unequal pupils, loss of reaction to light, absent knee-jerk, articulatory disturbance, and impairment of intelligence. After his discharge there were increase in his psychical symptoms, diminution in his appreciation of pain, and other disturbances of sensibility. In March, 1894, the triceps and trapezius on each side were found to be wasted, and this wasting gradually increased, so that at the end of May, 1894, there was much atrophy of the right trapezius and latissimus dorsi, and of the pectorals and triceps on both sides. There was slighter atrophy of the left trapezius and of the serratus, rhomboid, deltoid, and infra-spinatus on the right side; while in the left latissimus, the flexors of both forearms, the rotators of the upper arm on the right side, the right supra-spinatus, and the abdominal muscles the atrophy was very slight, but distinct. In these muscles there was diminished response both to faradaism and voltaism. It is evident that in this case there was first affection of the posterior columns with a disturbed cerebral state, while the condition underlying the muscular atrophy developed later. The condition somewhat resembled that in the juvenile form of muscular dystrophy, but here the muscular atrophy probably depended upon changes in the spinal cord.

HUNTINGTON'S AND CONGENITAL CHOREA.

AT the recent meeting of the Vienna *Verein für Psychiatrie und Neurologie*[1] Dr. von Sölder showed a case of Huntington's chorea. The patient was a woman fifty-two years of age who became affected with chorea seven years previously, but her intelligence was still good. The eye muscles, contrary to the usual rule, took part in the contractions. Speech was much interfered with, and there was but little voluntary control of the choreic movements. These, however, ceased during sleep. There was considerable muscular weakness, and the reflexes were distinctly increased. The patient was the granddaughter of a woman who became choreic at the age of fifty and died in her fifty-third year. Of her seven sons, all (including the father of

[1] Neurologisches Centralblatt, 1895, p. 1149.

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the patient shown), except the eldest, suffered from chorea about the fiftieth year. The patient had four sisters, and of these one suffered from chorea at the age of forty-nine, while two others were mentally affected. A son of the patient was healthy. Another case was also shown, one of so-called "chronic congenital chorea" in a girl aged sixteen. The contractions were noticed immediately after birth, and the patient did not begin to walk until she was four years old, and it was only at the age of eight that she could walk alone. She was also late in speaking. She used her hands with difficulty, but her condition showed a slow but gradual improvement. Voluntary movement increased the contractions. The knee-jerk was slightly increased, but with the exception of a small degree of weak-mindedness the general condition was fairly good. The case, according to Dr. von Sölder, is really one of cerebral diplegia, and, as was recently pointed out in our columns, this is almost invariably the actual condition in cases of so-called congenital chorea; so that the term is probably a misnomer, and the movements would be more correctly described as those of athetosis.

DR. RENTOUL explains in a circular that his opposition to five successive Bills since 1890 has cost him, "out of his own private means," £321 15*s.* 9*d.* Dr. Hugh Woods established a fund to repay Dr. Rentoul, and succeeded to the amount of £50. Mr. Colin Campbell succeeded in the same way to the amount of £30. In 1894 the branch committee of the Lancashire and Cheshire Branch refunded him £37 17*s.* 2½*d.* These sums amount in all to £117 13*s.* 2½*d.*, leaving him still £204 2*s.* 6*d.* out of pocket.

THE death, on the 17th inst., is announced of Mr. Daniel Ambrose, M.D., Q.U.I., L.R.C.S.I., &c. Dr. Ambrose was member of Parliament for South Louth. He belonged to the anti-Parnellite party, and at the last General Election defeated another medical man, Mr. J. G. Fitzgerald.

WE regret to hear of the death of Dr. Fauvel, of Paris, whose reputation as a laryngologist is of world-wide fame. His work on Tumours of the Larynx is one of the standard works on the subject.

THE ASHANTI EXPEDITION.

VERY great activity has been displayed on the Gold Coast in disembarking stores and in preparing for the advance of the troops on Kumasi. One of the main difficulties in the present expedition, as on the last occasion, has been the transport. There is no animal or vehicular transport in the country, and everything has to be carried by native bearers. Great care has been taken in providing and organising a sufficient force of these, and the transport work went on very satisfactorily as far as Mansu, but owing to the difficulty in procuring food in the country beyond, and the desertion of a number of the native carriers, a block occurred from the accumulation of stores at that station. This will, however, soon be overcome. As in our Indian warfare, and following the course adopted in the last Ashanti campaign, rest camps have been provided along the line of route. Eight of these have been constructed, and a field telegraph will be completed between Cape Coast Castle, which is the base, and Prahsu. The postal service which has been organised between these stations is working well. The distance, it may be mentioned, of Prahsu from the base is about eighty miles. A pontoon bridge is being constructed over the Prah, but the work is temporarily delayed pending the arrival of requisite materials, and cannot be completed for many days. Three canoes, each capable of carrying thirty men, have been constructed for the passage of the river.

Meanwhile a hospital for the troops is being provided at Connor's Hill, which will afford accommodation for five officers and seventy-five men, and a bearer company of 600 men has been organised for the transport of the sick. We are not told, by the way, what the means of transport of the sick and wounded will be, whether stretchers or canvas cots or hammocks from the naval ships, or all of these. Surgeon-Captain Eckersley has started to provide for the establishment of a hospital, at Prahsu for the troops on the march. In addition to the land hospitals at the base there will, of course, be the large amount of accommodation afforded by the floating hospital, the *Coromandel*, which has been specially fitted up for the purpose; and with the steam transports and other communications between the Gold Coast and this country there should be no difficulty in arranging for the transit of invalids.

Whilst preparations are being made for the advance of the force along the line of route from Cape Coast Castle across the Prah to Kumasi, a movement is also to be made contemporaneously with that of the expeditionary force from the coast, from the north, by a large force of constabulary and a detachment of Houssas and two Maxim guns. This latter force will, it is understood, proceed to the Nkoranza country, and thence threaten, and advance if necessary, on the Ashanti capital.

The subordinate chiefs in the interior of the colony are understood to be very favourable to the expedition, and have proffered their services and large detachments of bearers. Samory, the Mahommedan chief of a large warlike tribe in the vicinity of Ashanti, who has a powerful army, is understood to be also favourable to the British enterprise.

The belief entertained on the Gold Coast is that the chiefs of the Ashantis are determined on fighting. It is rumoured that Prempeh will be deposed and replaced by his mother, a woman of fortitude and masculine character, who is strongly inimical to the whites. Be this as it may, the expedition may have to encounter some unforeseen difficulties and hard fighting before the troops succeed in capturing the Ashanti capital. The topographical difficulties and dense bush for obvious reasons offer very favourable conditions for Ashanti warfare. The country is well adapted for raids and surprises and sudden attacks from numerous small and concealed bodies of men.

The health of the troops on the Gold Coast is reported to be excellent. The present season is favourable in this respect for the expedition, which cannot, however, it is believed, start for Kumasi for some time. We hope that when it does start the march to the Prah may not be protracted by any defective arrangements or other obstacles, for the country and bush are very malarious, and that when the expedition has accomplished its work by penetrating to the capital and securing its political objects the force may effect its return march before the rains set in. In that case there is no reason to suppose that the risks to health and life should prove greater than on the occasion of our last war with Ashanti. Everything depends upon the exercise of forethought in providing for the requirements of the force and in safeguarding their health, as far as practicable, by good sanitary arrangements. The previous experience of those who have to conduct the arrangements in these respects affords the best guarantee that we can have of their being properly carried out.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 12th inst., the President, Mr. Christopher Heath, being in the chair.

A further report dated Nov. 15th was presented from the Board of Examiners in Dental Surgery. The chief recommendation was that an examination in mechanical dentistry, chemistry, physics, and metallurgy should form the first examination for the licence. The report was referred to a committee of the Council.

Dr. Arthur P. Luff was appointed an Examiner for Part I. of the Examination in Public Health.

Two cases of alleged misconduct on the part of Members were considered.

The President stated that the Deputation Committee, at a meeting held on the 2nd inst., had determined to further postpone their report to the Council, as one of the subjects referred to their consideration had been selected by the

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Council for reference to the meeting of Fellows to be held on Jan. 2nd, 1896.

The President, on behalf of himself and the Vice-Presidents, reported the delivery of the Bradshaw Lecture, on the 5th inst., by Mr. N. C. Macnamara, the subject of the lecture being, "Infective and Tubercular Osteitis as Causes of Arthritis in Childhood and the Importance of Early Treatment." The best thanks of the Council were accorded to Mr. Macnamara for his lecture, and he was requested to publish it.

A letter of the 22nd ult. from Mr. Frank Marshall, honorary secretary of the Newcastle-on-Tyne Dental Hospital, applying for the recognition of that institution by the College for the purposes of teaching, was referred to the Board of Examiners in Dental Surgery.

A letter was read, dated the 20th ult., from Mrs. E. Garrett Anderson acknowledging the receipt of the letter informing her of the reply of the Council to the memorial from the London School of Medicine for Women, and expressing the belief that the memorialists, while much regretting the decision, will greatly value the assurance contained in the resolution of the Council that, had the matter rested solely with them, the prayer of the memorialists would have been granted.

A letter was read, dated the 27th ult., from Dr. Liveing reporting the adoption by the Royal College of Physicians of London, on the 22nd ult., of the report, dated Nov. 11th, 1895, of the delegates on the arrangements of the examinations under the five years' curriculum, with the following rider—viz: "That the College of Surgeons be informed that this College would consider it an improvement if pharmacology were placed with therapeutics under the head of medicine, instead of being accorded a distinct position as a subject separate from medicine, surgery, and midwifery." The Council thereupon expressed their approval of the suggested alteration.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at their late session. The letter was received, and the best thanks of the Council were given to Mr. Bryant for his services as representative of the College.

THE BATTLE OF THE CLUBS.—XIV.

WE have received a copy of the "Rules, Code of Etiquette, &c., of the Fermanagh Medico-Ethical Association." The objects of the Association are as follow:—

The promotion of social and professional intercourse, of mutual protection and coöperation, of opportunities to enable members to obtain the advice and united support of the local profession.

To obtain increased and more efficient representation for general practitioners on the General Medical Council, and of medical men in Parliament.

To arbitrate in disputes between members of the Association.

To support and protect the honour and dignity of the profession, and to promote honourable practice, to suppress advertising, or other unfair methods of competition, unqualified and irregular practitioners.

To watch Parliamentary proceedings affecting the profession and give the members the opportunity of expressing their views thereon.

To consider and take action upon the relations of medical officers with all forms of club practice, and with regard to Poor-law and other official appointments.

To circulate a Code of Ethics and information as to various scales of medical tariff amongst the members.

To promote the improvement of medical fees, and the adoption of some "wage" or "valuation" limit for those entitled to free attendance from Poor-law medical officers.

To establish, maintain, and circulate amongst the members a patients' black list.

WITH REGARD TO CLUB PRACTICE.

To enforce a wage limit.

To insist on a medical examination for all new members and an examining fee.

To raise the usual rate of subscription for females and juveniles.

To safeguard the tenure of office by a three months' notice on either side.

The code of medical etiquette set out by the Association is, with some additions, that adopted by the Manchester Medico-Ethical Association. It contains directions for nearly every conceivable point that can possibly arise in the relation of practitioners to patients or to one another. A very full and carefully drawn-up table of fees is given. With regard to the question of club practice the Fermanagh Medico-Ethical Association does not seem to have made up its mind. Appended to the rules and code are the rules adopted for club practice in Cork, and those drawn up by the Eastbourne Provident Medical Society, of which latter a full account appeared in THE LANCET of Oct. 5th, 1895. In the matter of Cork, the Fermanagh Medico-Ethical Association consider that the wage limit—£200 a year—is too high, and that the practice of charging for a family irrespectively of numbers is not nearly so desirable a practice as charging for each member of a family. In these two opinions we cordially agree. For a man with an income of £200 a year to belong to a club is absurd, or would be in England; but the question of medical attendance in Ireland stands upon a somewhat different footing. In our opinion, the club difficulty is best solved by the formation of provident medical associations like those at Eastbourne and Bexhill, and the Portsmouth Medical Union.

CHELSEA HOSPITAL FOR WOMEN.

THE CASE OF MR. O'CALLAGHAN.

ON Wednesday afternoon a special meeting of the governors of the Chelsea Hospital for Women was held in the board-room at the hospital, under the chairmanship of Lord Glenesk. The purpose of the meeting was "to consider the propriety of the governors dispensing with the services of a member of the honorary medical staff, and to pass a resolution thereon." There was a fair attendance.

At the opening of the proceedings, Mr. O'CALLAGHAN asked if Mr. Charles Russell, his solicitor, who was helping him in the case, might be allowed to speak for him. This was not granted at first, but Mr. BURDETT-COUTTS, M.P., appealed to the council in the interests of fair play. He said that the case of Mr. O'Callaghan should be fully and fairly stated before the governors proceeded to a decision on the subject.

The CHAIRMAN said that this need not be made a formal matter of motion. Mr. Russell had no real *locus standi*, but as there was a disposition on the part of some of the governors it would be advisable to admit him, and he would take it upon himself to do so.

Mr. RUSSELL was then admitted into the room.

The CHAIRMAN said that the council had considered themselves obliged to summon this meeting to decide upon the council's conduct in a matter affecting the hospital. Rumours had got abroad about the hospital, as if some scandal had occurred in it connected with the patients and with matters of that kind. That was not the case. He had only to repeat the strong terms of praise he used when they last met regarding all responsible for the carrying on of the hospital, including of course Mr. O'Callaghan, of whose skill no one had ever had the slightest doubt. Mr. O'Callaghan had circulated a pamphlet in which he represented himself quite unfairly as a victim, not because of professional jealousy but because he was a reformer, and that he was meeting the usual fate of reformers—martyrdom. His reform consisted of interfering with the general law of the hospital by forbidding the resident medical officer to interfere with his (Mr. O'Callaghan's) patient. It was a question of hospital discipline, not of Mr. O'Callaghan's efficiency at all. Mr. O'Callaghan had found fault with the resident medical officer for touching the dressings of a patient. That was a medical question upon which only medical authorities could determine; but immediately after this the council found that the case had not been entered up in the books; that the woman had died on June 18th; and that on the 26th, when the weekly board meeting was held, there was no notice of the death, and the case was not written up. There again they thought Mr. O'Callaghan had been in default. Mr. O'Callaghan virtually attributed the death to the resident medical officer—to a secondary shock received from his treatment. That was a serious allegation; and the council found, upon further inquiry, that Mr. O'Callaghan had invited Mr. Bland Sutton and Dr. Duncan to state their opinion in a way that both gentlemen considered a violation of medical etiquette. It had been his (Lord Glenesk's) painful duty to inform Mr. O'Callaghan that he had lost the confidence of the board, and it had been thought he would at once resign. Mr. O'Callaghan did not take that course, but called for further investigation, and Mr. Burdett-Coutts made his appearance on the field of battle and suggested a *modus vivendi*, to which they were all most ready to listen. But the whole medical staff then intimated that they

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could not possibly work with Mr. O'Callaghan. In all this matter he would point out that the council had been pretty nearly unanimous throughout; and they were certainly unanimous now, and the medical staff were also unanimous. Before the medical staff made that intimation the council had already asked Mr. O'Callaghan to resign; and therefore the council were not, as some people had said, dictated to by the medical staff at all. The death of the patient Sarah Welman was in no way regarded as accountable to the action of the resident medical officer. On the other hand, the staff considered that he would have been neglectful of his duty if he had acted otherwise than as he did. Mr. Burdett-Coutts and Mr. Dyer Edwards interviewed the medical staff, hoping to find some way out of the matter without calling for the resignation; but the staff replied that they were unable to assent to the suggestion of withdrawal and apology. Upon that the council resolved—Mr. Burdett-Coutts withdrawing and two other gentlemen not quite agreeing—not to rescind the motion calling for Mr. O'Callaghan's resignation. Messrs. Day, Russell, and Co. wrote on behalf of Mr. O'Callaghan that he would not resign, and the council replied that they would have to refer the matter to the governors, and that word "refer" had been twisted into meaning an arbitration. That was never intended. The council were the executive, doing the work for the hospital as well as they could, but they were never going to submit to an arbitration before lawyers. They were willing to refer the matter to two gentlemen as consultants, one to be nominated by the President of the Royal College of Physicians and the other by the President of the Royal College of Surgeons. He then narrated the circumstances which led to his (Lord Glenesk) having seen at the hospital two gentlemen nominated by the Royal Colleges of Physicians of London and Surgeons of England to assist as consultants in the matter, and read correspondence from Messrs. Day, Russell, and Co. showing how and why the help of these gentlemen had not been used. The council had never intended to offer an arbitration before which Mr. O'Callaghan could appear with distinguished leaders of the Bar, and they ultimately took the advice of Mr. Cozens Hardy, Q.C., as to their legal rights. Lord Glenesk concluded his speech by saying that the council, after eighteen meetings, and after carefully weighing everything, had come to the conclusion, very reluctantly but entirely based upon the internal regulation of the hospital, that whether Mr. O'Callaghan lost his head or whatever else was the matter with him, he could not get on with his colleagues, and so they wished him to depart from Chelsea Hospital. If this meeting decided that the executive and the honorary staff were in the wrong they would be asked to appoint another board and another staff, though both would willingly continue their services until their successors were appointed; but this meeting would either endorse their conduct towards Mr. O'Callaghan or prefer to dispense with their service.

Mr. RUSSELL, Mr. O'Callaghan's solicitor, was then heard. He said that Mr. O'Callaghan was there that day charged with some terrible things. He (Mr. Russell) had nothing to complain of in the way the chairman had put the case according to the chairman's view of it. They no doubt desired to be fair; but he thought the council had acted in the most unfair way in threatening resignation should this meeting not support them. The meeting had been told that Mr. O'Callaghan had made false charges against colleagues, that he had tried to suborn them to falsify the books. Yet the chairman said that there was nothing to arbitrate upon. After taking upon himself the responsibility for Mr. O'Callaghan not appearing before Dr. Black and Mr. Bryant, Mr. Russell said he thought the history of the dispute had been given correctly, fairly, good-temperedly, and politely in the pamphlet which had been circulated. Mr. O'Callaghan had desired to introduce a particular reform into the hospital, and the chairman said he should have gone to the board to ask authority to do it. But that missed the whole point of the case, because there were rules by which the doctor in charge of each ward was given power, as he contended, to introduce such changes. He knew there was a difference of opinion about it, but when Mr. O'Callaghan issued the order that the resident medical surgeon was not to interfere with his patient he did it in the belief that he was well within his rights. The patient was admitted on May 30th. Shortly afterwards there was a consultation about which there was now a dispute. On the one side, Mr. Bland Sutton stated that a particular operation was advised. On the other side, Mr. O'Callaghan said that a totally different operation was advised. The operation book was not written up until the woman was dead and buried. It was then brought to Mr. O'Callaghan to sign, and immediately, when it was called to his attention, Mr. O'Callaghan said he did not notice that Mr. Sutton had signed for a different operation, and he did what a man of honour would do, and the next time he met Mr. Sutton he told him that he had made a mistake and signed for the wrong thing. Mr. Sutton said, "Do you mean to say that I am a liar?" and to that rather "tread on the tail of my coat" remark Mr. O'Callaghan said, "Well, if you put it that way, you are." But did that mean that Mr. O'Callaghan tried to suborn a colleague to falsify a book? Mr. O'Callaghan now apologised heartily and sincerely for the language he used. But the charges were serious, and some impartial outsider should be asked to hear and decide upon them, which he thought was the original intention, and which would have been carried out but for the unhappy incident of the arbitrators named going and seeing a member of the board without a representative on the other side. A first impression upon an arbitrator was most important.

The CHAIRMAN said the reference had nothing to do with the council. It was simply a reference of the charges made by Mr. O'Callaghan against the resident medical officer.

Mr. RUSSELL said that the question had been raised whether Mr. O'Callaghan had the right to establish a particular rule, and so the conncil would also have been concerned. Lord Glenesk was incapable of doing an unfair action consciously; but surely where the honour and the future of a medical man of good repute were concerned, it was the commonest justice that they should put definitely in black and white the charges made against him. That was what he asked them to do, and to refer the charges to fair arbitration.

Dr. DUNCAN, senior medical officer at the hospital, asked if Mr. O'Callaghan had written or endorsed the contents of the pamphlet which had been circulated.

Mr. O'CALLAGHAN: Certainly.

Dr. DUNCAN said that the pamphlet was teeming with inaccuracies, and he went on to give extracts and to contradict them. It mentioned that the Samaritan Hospital had not a resident medical officer. He (Dr. Duncan) had it on the authority of one of the staff of that hospital that, although it did not keep a resident medical officer now, it used to do so, and the officer was dispensed with owing to circumstances totally unconnected with the treatment of patients. Moreover, all the staff lived in the vicinity of the hospital; but Mr. O'Callaghan and himself lived three miles away from the Chelsea Hospital for Women, and a patient might easily bleed to death before they could arrive. The medical staff came to the unanimous conclusion that the death of the patient in this case was in no way contributed to by the action of the resident medical officer. It was entirely false to say that the action of the medical staff forced the council to call for Mr. O'Callaghan's resignation.

Mr. BLAND SUTTON then gave his version of the incident of the signing of the operation book. He had signed it, leaving the line above his for Mr. O'Callaghan to enter his statement about it. Ten minutes before going before the committee, he met Mr. O'Callaghan, who, without discussing the case, said, "Look here, my boy, there is a way out of this difficulty for you." He replied that there was no difficulty for him. Mr. O'Callaghan said, "Tell the council you made a mistake, that your entry referred to a case in another ward," and he replied that he had had no other case, and asked, "Do you mean to say I deliberately wrote a lie in the book," and Mr. O'Callaghan said, "Yes, and I will tell the board so." He then said he would never speak to Mr. O'Callaghan again.

Mr. BURDETT-COUTTS read his letter of resignation as a member and Vice-chairman of the Council, stating that his reasons were that the Council first called upon Mr. O'Callaghan to resign upon the strength of an *ex-parte* statement, and that although it was afterwards much shaken by evidence adduced by Mr. O'Callaghan, the Council refused to rescind the resolution. In taking this latter decision the Council appeared to have accepted a second *ex parte* statement from the medical staff, which was not only injurious to Mr. O'Callaghan, but an attempt to dictate to the Council whether they should or should not retain a particular officer in the hospital. He considered that the whole matter should be referred to arbitration.

The CHAIRMAN said that Mr. Burdett-Coutts had only

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been present at two out of the eighteen meetings at which this matter had been considered. His late colleagues were now unanimous.

Mr. FERGUSON said that there was nothing to arbitrate upon.

Mr. J. L. LANGMAN said that Mr. O'Callaghan had been blamed for not attending before the arbitrators; but Mr. O'Callaghan had been told that no action would be taken for two months, and so had made his arrangements to go away. He moved: "That the whole of the questions that have arisen in this matter be referred to arbitration."

Mr. O'CALLAGHAN said he wished to say a few words in reply to some of the remarks which had been made. Mr. Sutton, during the week in question, saw two cases with him of the same nature, and he (Mr. O'Callaghan) said that Mr. Sutton had mixed up the two, and when asked to sign the book on the second case he forgot. He (Mr. O'Callaghan) knew it was a mistake only—but it was Mr. Sutton's mistake. He was prepared to prove this before the arbitrators; but all these things wanted clearing up, and he was prepared to go to arbitration, for all he wanted was justice and fair play for the sake of his reputation.

Dr. TRAVERS seconded Mr. Langman's motion.

At this stage,

Mr. RUSSELL said that, to keep himself in order, he would now formally lodge a protest against the staff or their nominees voting upon this occasion, that he would ask for a scrutiny of the votes, and that he protested against the power of the governors to dismiss Mr. O'Callaghan.

Upon Mr. Russell attempting to say these words an interruption took place, booing, tapping, and sounds of disapproval proceeding from one end of the room—the end where the audience was largely composed of ladies.

The CHAIRMAN then moved: "The council, after full investigation and consideration, being of opinion that the continuance of Mr. O'Callaghan as a member of the medical staff would be incompatible with the maintenance of proper discipline of the hospital and injurious to its interests: and all the other members of the honorary medical staff having in a formal manner definitively refused to coöperate with him in the discharge of their professional duties in the hospital: it is resolved that Mr. O'Callaghan be, and he is hereby, relieved of his duties as an honorary medical officer of the hospital."

Mr. DYER EDWARDS seconded this motion.

Canon FLEMING said there was a lady present who was not credited with the number of votes to which she was entitled. That, no doubt, would strengthen Mr. Russell in his intention to have a scrutiny. He (Canon Fleming) was in favour of the motion for arbitration.

A vote was then taken, with the following result:

For Mr. Langman's motion	17
Against	106
Majority against	89

The Chairman's motion was then put to the meeting and agreed to without a further division.

The proceedings, which lasted three hours, terminated with a vote of thanks to Lord Glenesk for presiding.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual general meeting of the Association of Fellows of the Royal College of Surgeons of England was held on Dec. 11th. Mr. George Pollock, the President, occupied the chair. The minutes of the last annual general meeting were read and confirmed. The President stated that as his address practically embodied a report of the work done by the Association during the past year he would ask Mr. Percy Dunn, honorary secretary, to read it. The following is a summary of the address:—

The first business of importance which took place after the annual general meeting last year was the appointment of a sub-committee to meet and confer with a sub-committee of the Society of Fellows with respect to the election of the President of the College and other matters. Practically, the only result which ensued from this conference, which took place on Nov. 7th, 1894, was the decision, at the instance of the Association of Fellows, of the Society of Fellows to undertake a canvass of the Fellows upon the subject of the mode of election of the President. But out of this meeting of the two sub-committees the Association were led to adopt a resolution asking the Council of the Royal College of Surgeons of England to agree to a conjoint committee of the Council and the Fellows for the purpose of considering what alterations should be made in the existing charters of the College. This resolution was brought before the Fellows' meeting in January last.

Upon several occasions, both officially and unofficially, communications bearing upon College politics have been received from the Society of Members, but the committee of the Association has in all cases declined to pledge itself to any definite policy in this regard, leaving it to the members of the Association to act in their individual capacity as they may deem fit.

The Association has recorded in its minutes the loss sustained by the profession by the death of Mr. Hulke.

The next important matter was the appointment of a deputation to meet a committee of the Council of the Royal College of Surgeons of England on June 10th. At that meeting the deputation laid before the committee of the Council several proposals for the amendment of the charters and by-laws which had already received the sanction of the Association, and subsequently, at the request of the committee, placed these propositions in writing, together with the reasons that might be adduced in favour of them. These propositions have been under the consideration of the committee of the Council, but as that committee has not yet reported to the Council of the College no answer has yet been received by the committee of the Association.

The mode of conducting the proceedings at the half-yearly meetings of the Fellows, which appeared to the committee not to fulfil the objects for which the meetings were established through their initiative, has claimed some attention from the committee, as the result of which certain resolutions were forwarded to the Council of the College by the committee with a view to remedy the defects. The Council of the College has replied to the resolutions to the effect that the proceedings had been conducted in accordance with the regulations, but in answer to some further resolutions for the amendment of these regulations has contented itself with formally acknowledging the communication of the committee. It is still hoped that the action of the committee will bear fruit, but if not it may be advisable for further action to be taken.

The remainder of the report was occupied with an account of the proceedings of the committee in respect to the case of Mr. R. B. Anderson, already reported in THE LANCET, and recommending the members of the Association to coöperate with the Civil Rights Defence Committee and appoint representatives on that committee.

Mr. A. T. Norton read the auditor's report for the past year, and added that he would have great pleasure in rendering all the assistance in his power in keeping the books of the Association. The report was unanimously adopted, and a vote of thanks was accorded to Mr. Norton.

The following is the list of officers elected for the year 1895-6: President, Mr. George Pollock; Vice-Presidents, Mr. T. Holmes and Mr. W. Rivington; Treasurer, Mr. Tweedy; Auditor, Mr. A. T. Norton; Hon. Sec., Mr. H. Percy Dunn; Committee, Mr. W. Allingham, Mr. Herbert Allingham, Dr. Robert Barnes, Mr. Wickham Barnes, Mr. Bruce Clarke, Mr. John Couper, Dr. Ward Cousins, Mr. Gant, Mr. Victor Horsley, Mr. Jordan Lloyd, Mr. Mayo Robson, Mr. Manley Sims, Dr. C. Steele, Mr. George Jackson, Mr. C. B Keetley, Mr. George Helm, Mr. Mansell Moullin, Mr. Vincent Bell, and Mr. J. J. Purnell.

The case of Mr. R. B. Anderson was then brought forward for discussion, and the meeting unanimously approved of the action of the committee in this regard. Mr. Pollock Mr. Holmes, and Mr. Dunn were appointed the representatives of the Association on the Civil Rights Defence Committee. The following resolution was then passed unanimously: "That this Association adopts the reports of its committee and of the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, and desires to express its thanks to the Right Hon. the Earl of Stamford as President and the public men and bodies constituting the Defence Committee who have stood forward in resistance to illegality, oppression, and persecution, and its appreciation of the action of the Council

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of the College in uniting in defence of the rights of its Fellows and Members." Further, Mr. Holmes undertook to give notice of the following resolution for the half-yearly meeting of Fellows at the College in January next—viz.: "That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, and pledges itself to take every possible step to promote the objects of that committee."

Unanimous votes of thanks were severally passed to the officers of the Association for their services during the past year. This concluded the business of the annual general meeting.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE have received from the Society of Members of the Royal College of Surgeons of England certain "propositions for amendment of the Charters," and a statement in support of these propositions. The statement, we are informed, is published with the sanction of the President of the College.

Proposition 1 lays down "that no alterations in the constitution and external relations of the College shall be effected without the consent of the corporation."

Proposition 2 submits "that there should be an annual meeting of the corporation, to which the Council shall present a report of its proceedings, together with a duly audited balance-sheet, such report to be submitted to and approved by the meeting."

3. That the number of the Council be increased to thirty-two, and that eight of these may be Members and shall be elected by Members only.

4. No Member who has not been such for twenty years shall be eligible for a seat on the Council.

5. Members to be elected to the Council in the same way as Fellows.

6. Concerns the retirement of members on the Council.

The arguments used in the "statement" of the committee of the Society of Members are in brief as follows:—

As to the right of the Society to speak on behalf of the general body of Members, a similar body of propositions was signed by 5000 Members in 1888.

The Society of Members further suggest that the Council of the College ought to make inquiries themselves of the Members. The expense of such an inquiry is estimated at £45—i.e., £30 for postage and £15 for printing, &c.

With regard to Proposal 2, the committee think that as most of the income of the College comes from Members they ought to see how the money is spent.

"Proposal 3 contains the kernel of the whole matter." The committee consider that the College ought to show more activity in dealing with "infamous conduct," and also in suppressing unqualified practice in surgery.

As to Proposal 5, Members, as forming by far the greater part of the corporation, ought to have some share in its government. Under the new proposal the Fellows will still form three-fourths of the Council.

In conclusion, the committee earnestly ask the Council whether it would not be for the advantage of the College to allay the smouldering discontent now existing among Members.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5561 births and 3609 deaths were registered during the week ending Dec. 14th. The annual rate of mortality in these towns, which had been 17·9 per 1000 in each of the two preceding weeks, declined again last week to 17·8. In London the rate was 17·5 per 1000, while it averaged 17·9 in the thirty-two provincial towns. The lowest rates in these towns were 10·9 in Croydon, 11·3 in Brighton, 12·2 in Portsmouth and in Halifax, and 12·6 in Huddersfield; the highest rates were 20·4 in Manchester and in Norwich, 21·0 in Bolton, 21·7 in Blackburn, 22·8 in Liverpool, and 25·5 in Salford. The 3609 deaths included 524 which were referred to the principal zymotic diseases, against 529 and 561 in the two preceding weeks; of these, 198 resulted from measles, 92 from diphtheria, 79 from whooping-cough, 56 from scarlet fever, 53 from "fever" (principally enteric), 43 from diarrhœa, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Brighton; in the other towns they caused the lowest death-rates in Croydon, Derby, Birkenhead, Burnley, and Preston, and the highest rates in Norwich, Liverpool, Blackburn, and Salford. The greatest mortality from measles occurred in Manchester, Birmingham, Norwich, Salford, and Blackburn; from scarlet fever in Hull and Birmingham; from whooping-cough in Salford, Liverpool, and Cardiff; and from "fever" in Norwich, and Sunderland. The 92 deaths from diphtheria included 63 in London, 4 in West Ham, 4 in Birmingham, 3 in Leicester, and 3 in Newcastle-upon-Tyne. Two fatal cases of small-pox were registered in Hull, and 1 in London, but not one in any other of the thirty-three large towns. There were 89 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 14th inst., against 89, 79, and 87 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 20, 9, and 18 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2800, against 2807, 2799, and 2805 on the three preceding Saturdays; 329 new cases were admitted during the week, against 296, 325, and 312 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 447 to 264 in the five preceding weeks, were again 264 last week, and were 208 below the corrected average. The causes of 50, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Salford, Bradford, Leeds, Newcastle-upon-Tyne, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Burnley, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·4 and 19·5 per 1000 in the two preceding weeks, declined again to 18·9 during the week ending Dec. 14th, but exceeded by 1·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Paisley and 15·4 in Edinburgh to 26·0 in Greenock and 29·2 in Perth. The 546 deaths in these towns included 24 which were referred to whooping-cough, 17 to diarrhœa, 10 to measles, 8 to scarlet fever, 5 to diphtheria, 4 to "fever," and not one to small-pox. In all, 68 deaths resulted from these principal zymotic diseases, against 49 and 67 in the two preceding weeks. These 68 deaths were equal to an annual rate of 2·4 per 1000, which was 0·2 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 10 to 19 in the three preceding weeks, further rose to 24 last week, of which 15 occurred in Glasgow, 4 in Dundee, and 3 in Aberdeen. The 17 deaths from diarrhœa showed a decline from the numbers recorded in recent weeks, and included 7 in Glasgow and 4 in Dundee. The fatal cases of measles, which had been 1 and 6 in the two preceding weeks, further rose to 10 last week, of which 5 occurred in Glasgow and 5 in Greenock. The 8 deaths from scarlet fever corresponded with the number in each of the two preceding weeks, and included 5 in Glasgow and 2 in Aberdeen. The fatal cases of diphtheria, which had increased from 3 to 10 in the three preceding weeks, declined again to 5 last week, of which 2 occurred in Aberdeen and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 107 and 132 in the two preceding weeks, declined to 97 last week, and were 54 below the number in the corresponding week of last year. The causes of 37, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·1 and 20·1 per 1000 in the two preceding weeks, rose again to 22·8 during the week ending Dec. 14th. During the past eleven

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weeks of the current quarter the death-rate in the city has averaged 24·0 per 1000, the rate during the same period being 18·0 in London and 17·2 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 10 and 6 in the two preceding weeks; of these, 3 resulted from "fever," 3 from diarrhœa, 1 from diphtheria, 1 from whooping-cough, but not one either from small-pox, measles, or scarlet fever. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 2·7 in London and 0·8 in Edinburgh. The deaths referred to different forms of "fever," which had been 3, 4, and 1 in the three preceding weeks, rose again to 3 last week. The 3 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, while the mortality from whooping-cough showed a decline. The 153 deaths in Dublin last week included 28 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths of infants showed a slight further decline from those recorded in recent weeks, while those of elderly persons showed an increase. Five inquest cases and 3 deaths from violence were registered; and 54, or rather more than a third, of the deaths occurred in public institutions. The causes of 13, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL KNOX has been appointed to the Charge of the Cambridge Hospital, Aldershot, in succession to Surgeon-Lieutenant-Colonel Smith, under orders for India. Surgeon-Captain Cockerill has been posted to Dover. The following officers have embarked for a tour of service in India since our last issue:—Surgeon-Majors Hubbard, Wight, Dundon, Beamish Powell, and Sandiford, and Surgeon-Lieutenant Williams.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain J. G. Hojel is appointed to be Professor of Materia Medica and Pharmacy at the Grant Medical College, Bombay. Surgeon-Captain G. B. French, Personal Assistant to the Principal Medical Officer of the Bengal Command, is to hold Civil Medical Charge of Naini Tal, in addition to his military duties, during the absence on leave of Surgeon-Major W. H. Cadge. Surgeon-Major F. S. Peck is reappointed to be Civil Surgeon of Muzaffarpur. Surgeon-Captain A. G. Hendley, Civil Surgeon, on return from the leave on medical certificate granted him by the Government of India, is posted to the Balaghat District. Surgeon-Lieutenant-Colonel J. Moran, Civil Surgeon, on return from furlough, to the Gorakhpur District, and Surgeon-Major G. M. Nixon, Civil Surgeon, on return from furlough, to the Jhansi District; Surgeon-Major D. F. Barry, Civil Surgeon, is transferred from Gorakhpur to Moradabad; Surgeon-Captain L. G. Fischer, Civil Surgeon, from Moradabad to Budaun; Surgeon-Major G. A. Emerson, Civil Surgeon, from Jhansi to Dehra Dun; and Surgeon-Captain J. M. Cadell, Supernumary Civil Surgeon, from Dehra Dun to Kheri.

NAVAL MEDICAL SERVICE.

Surgeon W. Bett has been appointed to the *Halcyon*.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Surgeon-Lieutenant T. E. Stuart to be Surgeon-Captain. 9th Lancashire: Surgeon-Lieutenant A. Jones resigns his commission. *Rifle:* 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Berkeley George Andrew Moynihan, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Lancashire Fusiliers: Surgeon-Lieutenant R. Mitchell, M.D., to be Surgeon-Captain. 3rd (Morayshire) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Surgeon-Captain G. H. Mackay, M.B., resigns his commission.

THE HOSPITAL SHIP FOR ASHANTI.

The *Coromandel*, which was fitted out in this country as a hospital ship, and recently sailed with the Special Service Corps and other troops and a draft of the Medical Staff Corps for the Ashanti expedition, has ere this reached her destination on the Gold Coast. The vessel, which is of 4358 tonnage and belongs to the P. and O. Company, should prove a very efficient floating hospital, according to the description that has been given of her—in the *Army and Navy Gazette* for example. The accommodation on the mess decks is for 350 men, with saloon cabin accommodation for forty officers. The hospital wards, which are spacious, well lighted, and ventilated, are painted a very pale green and fitted with ninety swinging iron cots, room being left for 100 canvas cots to be also slung if required. The ship is furnished with electric lighting throughout. The hospital wards are supplied with punkahs, and twelve lascars embarked as punkah pullers. Captain Wheler, who commands the *Coromandel*, was in charge of one of the transports employed in the Suakin expedition. The accommodation is excellent and the lighting and ventilation good. In addition to numerous port-holes, hatches, and skylights, the ship is fitted with Edmund's extraction system with specially constructed shafts for the removal of vitiated air from between decks and compartments. Arrangements for hospital cooking, over and above the usual cooking galleys, a condensing apparatus capable of supplying upwards of 3000 gallons of water per diem, a well-fitted laundry, bath-rooms, ice-making machine and ice-room, and soda-water manufacturing apparatus have been supplied, and the hospital sanitary arrangements have been carefully carried out. There is also an operating-room, furnished, of course, with the latest instruments and appliances, and a large dispensary. Quarters are also provided for the medical staff and for three lady nurses, a portion of the saloon being screened off and set apart for their use.

AN ELEMENTARY VETERINARY MANUAL.

We have received a copy of a small work entitled "An Elementary Veterinary Manual,"[1] for the use of officers attending veterinary classes. The author is Surgeon-Captain Bruce Seton of the Indian Medical Service, and the book forms one of Messrs. Gale and Polden's Military Series. We are always glad to welcome works by medical men which range beyond our own professional limits, and we are not surprised at an officer of the Indian Medical Service, who has been in charge of a Lancer regiment, devoting his spare time to a subject of such importance to cavalry officers. The book is simply and carefully written; its basis consists of notes taken at lectures in the Army Veterinary School, Aldershot, and these have been supplemented by notes and extracts from well-known handbooks. The book will no doubt be well received by officers in India, and will be very useful to those going through the army veterinary courses.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*North-Eastern District: Artillery:* 1st North Riding of Yorkshire Volunteer Artillery (Western Division, Royal Artillery): Surgeon-Lieutenant-Colonel Thomas R. Pearson, M.D. *North-Western District: Rifle:* 5th Volunteer Battalion the Cheshire Regiment: Surgeon-Major Seymour H. Munro, M.D., retired. 2nd Westmoreland Volunteer Battalion the Border Regiment: Surgeon-Major George William Brumwell.

Herr Dowe, whose invention of a bullet-proof coat gave rise to a good deal of interest and attention, recently died at Wiesbaden from pulmonary phthisis.

[1] An Elementary Veterinary Manual, by Surgeon-Captain Bruce Seton, I.M.S. London: Gale and Polden. 1895. Price 2s. 6d.

FOOTBALL CASUALTY.—On the 16th inst., at Chelmsford, during a match, Chelmsford against Colchester Garrison, a player fractured his right leg, and was taken to the Chelmsford Infirmary.

METROPOLITAN ASYLUMS BOARD.—An extraordinary meeting of the Board will be held to-day (Saturday) at 12 noon to consider the question of reopening the Gore Farm Hospital for the reception of convalescent fever patients. Mr. Brass will move:—"That the Small-pox Hospitals Committee be instructed to forthwith make arrangements for opening so much of the Gore Farm Hospital for the reception of scarlet fever convalescing cases as may be found necessary and practicable."

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Correspondence.

"Audi alteram partem."

THE HARD CASE OF MR. LIONEL SMITH.

To the Editors of THE LANCET.

SIRS,—The case of Mr. H. Lionel Smith, whose unjust treatment by the Government of Western Australia you commented on in your issue of Feb. 9th, has, we are glad to say, assumed a more hopeful aspect. After an eight years' struggle with what *Truth* designated as "bitter persecution," Mr. Smith found himself practically ruined and unable to obtain redress in Australia. Fortunately, however, we have in Mr. Chamberlain a Minister who acts promptly. On Aug. 8th he sent a courteous reply to an official letter on Mr. Smith's case from the Royal College of Physicians of Ireland, and this week Mr. Smith has received the offer of the appointment of district surgeon in Zululand from the Colonial Office. The salary is small, but it will enable Mr. Smith to start once again on his professional career. To do this, however, he is urgently in need of funds to meet expenses which have been incurred for the education of his children, now all but completed, and to provide for the passage and outfit of his wife and two youngest children. If prompt and substantial relief is not forthcoming we see no alternative but the workhouse for Mr. Smith and his family; but, on the other hand, if he is enabled to accept the post which has been offered him, he will have the opportunity of making a provision for them. In the eight years which have elapsed since his dismissal Mr. Smith has exhausted all his own resources, hence he is reluctantly compelled to allow this appeal to be made, and we cannot but think that there must be those within and outside the profession both able and willing to help under circumstances so urgent and yet so temporary.—We are, Sirs, yours faithfully,

JAMES F. GOODHART,
Dec. 17th, 1895. F. DE HAVILLAND HALL.

*** We have undertaken to receive and acknowledge subscriptions (vide p. 1592).—ED. L.

A PLEA FOR THE PASTEUR TREATMENT OF HYDROPHOBIA.

To the Editors of THE LANCET.

SIRS,—Having recently had a child bitten by a rabid dog brought to me I advised the parents to send it to the Pasteur Institute. Unfortunately, the poor little thing died. The anti-vivisectionists have commenced one of their usual energetic campaigns, and in the local papers endeavour to damage my professional reputation and prospects. I am asked by some neighbours why I recommend patients to resort to the Pasteur treatment for rabies. My answer is as follows, and I should be glad if you would comment on it and correct it if wrong. Hydrophobia has been recognised for centuries as one of the most fatal and intractable diseases. Up to the year 1880 every conceivable plan of treatment had been tried, and none proved in the least effectual. Of every 100 persons bitten by (presumably) mad dogs, from 20 to 70 developed hydrophobia; of these (20 to 70) rabid people everyone died and suffered horrible agony. In 1886 the Pasteur Institute was opened in Paris. Up to the present over 17,000 persons have been treated there for rabies. The total deaths have been 283, according to the anti-vivisectionists—that is, 1·66 per cent. Every one of the 283 who developed hydrophobia died in spite of every effort to save them. If these 17,000 persons had not been treated by the Pasteur method at least 30 per cent.—that is, 3200—would have developed hydrophobia and would have died. At the lowest calculation, then, some 3000 lives have been saved by the Pasteur treatment in ten years, or 300 a year, from a most terrible death. The anti-vivisectionists say that the Pasteur treatment causes hydrophobia. If this were true the deaths in 17,000 cases so treated should be 3200—the natural death-rate—plus the number of cases caused by the treatment, ever so many more than 3200. But the total deaths have been only 283. Contrasted with the fatality of the other diseases, diphtheria, typhoid fever, &c., the death-rate is very low. With these facts before him, every medical man is bound in duty and in conscience to recommend or, at least, offer the Pasteur treatment to every patient bitten by a dog presumably rabid. The medical profession are not biased in favour of anti-rabic inoculations, but would, I believe, prefer a treatment by other means, if any could be discovered nearly as successful as the Pasteur inoculations. While hydrophobia is such a dreadful death, while so many of those bitten contract the disease if untreated, while Pasteurism diminishes the cases and the deaths at least 18 per cent., and while there is no other efficient treatment before them, so long will the public demand the application of the anti-rabic inoculation to the bitten, and so long must the medical profession advise their patients to resort to it.

I am, Sirs, yours faithfully,
Twickenham, Dec. 18th, 1895. H. HOWARD MURPHY.

*** We have compared Dr. Murphy's figures with those given in the "Annales de l'Institut Pasteur" and find them calculated correctly. The 283 deaths are those given by the anti-vivisectionists. M. Pasteur used not to count deaths occurring within fifteen days of the first inoculation, so that the deaths for 1886–94 work out at 81. We would refer the opponents of the practice to consult the report of the Royal Commission appointed in 1886, an abstract of which appears in our columns of July 2nd, 1887, signed by such weighty names as those of Sir James Paget, Sir Richard Quain, Dr. Lauder Brunton, and others.—ED. L.

"TREATMENT OF SMALL-POX BY EXCLUSION OF THE CHEMICAL RAYS OF DAYLIGHT."

To the Editors of THE LANCET.

SIRS,—In your annotation under the above heading in the current issue of THE LANCET you mention the communications you have received from Dr. Moir, Dr. Finsen, and Dr. Feilberg; allow me to remind you that in 1871 (Feb. 4th and April 22nd) you published two articles on this subject by me, in which my experiments on plants and animals were described, and the reasons given on which I based my treatment of small-pox. Not to recapitulate, I may say I found, first, disease modifies the sensibility in the skin—i.e., sensation may be altered and perverted by it, due to some change produced in the nervous system not well understood; secondly, diseases that are partially eliminated by the skin increase its susceptibility to stimulation, so that what in health would be beneficial to it is by disease rendered hurtful; thirdly, light under ordinary circumstances—i.e., in health—is a desirable stimulant, but has detrimental effects in small-pox, scarlet fever, measles, &c.; fourthly, by excluding the white rays of light from patients suffering from these diseases, I find that in practice most beneficial results follow. These were the conclusions I came to twenty-four years ago, and I can say they have been confirmed in most, if not all of, the cases that have been under my care since then.

I am, Sirs, yours faithfully,
Jermyn-street, S.W. J. H. WATERS, M.D. Glasg.

"'TUBERCULOUS' *VEL* 'TUBERCULAR?'"

To the Editors of THE LANCET.

SIRS,—Kindly allow me to question the correctness of the judgment concerning "tuberculous" and "tubercular" in THE LANCET of Dec. 7th. What is the proper use of each of these words? The termination "ous" means "full of" or "abounding in"; the termination "ar" means pertaining to. In some words with both terminations the distinction is well preserved, as, for example, in "populous" and "popular." In others the distinction is nearly obliterated; but in so far as retained is to the same effect, as, for example, in "granulous" and "granular," "tubulous" and "tubular," "nodulous" and "nodular." Reference to a good dictionary, like Webster's, will settle this point. The tendency, however, is for the termination "ar" to supplant its rival. If indiscriminately used, the termination "ous," with its definite meaning, would often be wrong, while the less definite "ar" would nearly always be right. A concrete noun with the termination "ar" becomes an abstract adjective, meaning "having the qualities" belonging to the things signified by the noun; but with the termination "ous" the concrete force is retained, the meaning being "full of the

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things" indicated. We may quite properly speak of "tuberculous meninges"; but to speak of "tuberculous meningitis or osteitis" is almost as bad as to speak of a "populous fallacy." A writer unable to discriminate between the two terms will therefore do wisely to adopt "tubercular" to the exclusion of "tuberculous." As to usage, on looking through the books at my disposal I find a great preponderance of authority in favour of "tubercular meningitis." The appeal to French and German usage can hardly be allowed much weight. We must surely be guided by the genius of our own language. I am, Sirs, your obedient servant,

WILLIAM R. HUGGARD.

Davos Platz, Switzerland, Dec. 10th, 1895.

THE METROPOLITAN ASYLUMS BOARD AND THE CHAIRMAN OF THE POPLAR HOSPITAL.

To the Editors of THE LANCET.

SIRS,—You write in a leading article in THE LANCET of Dec. 14th that "it is a little disappointing to see a man of Mr. Holland's position as chairman of a hospital say in a letter to the *St. James's Gazette* that the Metropolitan Asylums Board ought to provide for every scarlet fever case in London." If my opinion is of the slightest interest, will you kindly allow me to say that my mode of communication with the *St. James's Gazette* was a hurried interview, at their request, and not by letter, and that though my words certainly bear the construction you put on them I never meant to imply that the Metropolitan Asylums Board should do more than *take cases from homes where proper isolation is impossible*, and not all cases occurring in London? This limited duty, however, would cost them the million I mentioned. My special complaint against the Metropolitan Asylums Board is that I believe they had room for our Poplar Hospital patients, though not perhaps at Homerton, and considering how very serious it was for these patients, who were injured by accidents as well as infected with fever, to be sent to homes where neither injuries nor fever could be attended to, I do think that the officials of the Board might have done much more than they did for us. Further, after the officials had refused to take the patients we applied at Norfolk House for an ambulance to remove them to their homes. There we met with a blank refusal unless our medical officer would guarantee that they could be properly isolated at those homes. This he of course refused to do. He could, of course, guarantee nothing of the sort, nor do I believe that the officials were within their legal rights in refusing the ambulance to us on such grounds. You defend the Board; but surely it is to be regretted, to put it as mildly as possible, that they should have taken this moment for giving notice to all the staff at and closing Gore Farm with its 700 beds. This does strike a layman as curious conduct, when just now is the worst fever time, and when an epidemic of scarlet fever was in existence which admittedly the Board was unable to cope with. I know that the hospital there is an exposed one, and I know that the medical authorities condemn it for that reason, which, by-the-bye, says very little for the judgment of the Board in erecting a hospital there at all. But surely any hospital, in however exposed and cold a site, gives a better chance of recovery to children than a crowded home in a crowded district, and their removal there is certainly better for the community at large.

I am, Sirs, yours faithfully,

SYDNEY HOLLAND,
Chairman of the Poplar Hospital.

Dec. 14th, 1895.

THE SLAUGHTER OF CATTLE AND MEAT INSPECTION AND DISTRIBUTION.

To the Editors of THE LANCET.

SIRS,—If, as was laid down by the deputation to the President of the Board of Agriculture, it is desirable to formulate fresh regulations for the slaughter of foreign cattle at the ports of debarkation for the protection from disease of our flocks and herds, it is even more desirable to introduce amended legislation for the protection of human beings from the perils to which they are exposed by the consumption of meat which has not been certified by competent authority to be fit for food. At present, animals brought to the market or auction sales are transported, sometimes with the infliction of much pain and hardship, to the great centres of population, and are then driven, for the most part, to private slaughter-houses, often situated in the poorest and most populous districts, where the due inspection of the animals before killing, and of the meat afterwards, is surrounded with considerable difficulty. Is it not possible for the killing to be done in public slaughter-houses near main railway stations, contiguous also to the farms where the animals have been reared, the meat being then carried, if the railway authorities coöperate, by special meat trains fitted with the necessary refrigerating chambers? The general adoption of such a method throughout the land would be for the benefit of all concerned; the pain accruing to the animals would be reduced to a minimum, the long journeys in trucks and along narrow streets would be things of the past, and the slaughtering would be performed in the humanest possible manner by licensed slaughterers. Cattle markets, auction sales, and slaughter-houses might, by such coöperation as that suggested by the Duke of Devonshire in his letter to the Agricultural Union, be under the control of the breeders of cattle themselves, to the pecuniary gain of the farmer, and thus to the substantial advantage of the agricultural interest generally: not only would the animals be inspected before killing by properly qualified veterinary surgeons, but the meat would undergo a rigid scrutiny before being despatched to the market; butchers and their assistants, who deserve well of their countrymen for their valuable services, would be relieved in a measure of grave responsibilities; a continuous supply of good, sound, wholesale meat would be the boon secured for our teeming populations; and the standard of public health would be materially raised.

To further such a reform as is here proposed the Church Society for the Promotion of Kindness to Animals and the Church Sanitary Association are engaged in promoting a memorial, already influentially and numerously signed, and the President of the Board of Agriculture has consented to receive this memorial at the hands of a strong and representative deputation headed by the Duke of Westminster. The Lord Mayor of York and the Mayors of Leeds and Durham have shown their sympathy by granting the use of their parlours for conferences to be held in those cities. The names of those who desire to take part in the deputation or to sign the memorial will be gladly received.

I am, Sirs, your obedient servant,

F. LAWRENCE, Hon. Sec.

Westow Vicarage, York, Dec. 16th, 1895.

STATISTICS OF HOSPITAL TREATMENT.

To the Editors of THE LANCET.

SIRS,—All hospital physicians and surgeons are aware of the difficulties of keeping in touch with patients when they have been discharged from the wards after surgical or other treatment. It often occurs that a patient presents himself at the out-patient department for some affection which is the sequel of some operation performed at another hospital, perhaps some years previously. The patient does not remember the date of the operation or of his admission, and although the surgeon communicates with the registrar of that hospital he is in many cases unable to find particulars of the cases. In order to cope with this difficulty to some extent I would suggest that when a patient is discharged he should be given a card—blue for medical, red for surgical cases—with his name, number in hospital register, dates of admission and discharge, and name or number of ward, with a request printed thereon to the effect that he should present the card if he again applies for relief at the same or at any other hospital. Such a card (if it were kept by the patient) would at any rate give the surgeon particulars and enable him to communicate with the registrar of the hospital where the patient had been and so to obtain particulars. Such a card might well be given out by the ward sister, who might also tell the patient that it would be to his own advantage to keep it. If only some such plan could be generally adopted I think the notes of cases in some hospitals would be kept better than at present, and so be of value in making out statistics of certain modes of treatment. I need only to mention the radical cure of hernia as an example. It is, I am well aware, only occasionally that we meet with a case of exceptional interest from another hospital,

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and generally only when the patient has changed his abode and has gone to live in another district; but in my own experience it is just in those cases that we are unable to obtain satisfactory details of the past history of the case.

I should be very glad to hear if any such plan as the one proposed exists in any hospital, and to receive any suggestions with regard to it.—I am, Sirs, yours faithfully,

Grosvenor-street, W. PEYTON J. B. BEALE, F.R.C.S.

*** Mr. Peyton Beale's letter deals with a subject of considerable importance to those engaged in hospital work and so, secondarily, to the whole profession. We hope that his letter may be fruitful in bringing forth suggestions.—ED. L.

A REMARKABLE SERIES OF INFANTILE MALFORMATIONS.

To the Editors of THE LANCET.

SIRS,—The following series of congenital and accidental malformations is probably unique and seems worthy of a corner in the pages of THE LANCET. My wife's ayah tells me that her sister, a Malay, perfect in form, has given birth to seven children within the last ten years, and that all have died. Upon interrogating her, I got a report as follows. The first child, born with a deformed left pinna, lived six months. From the description this would seem to be a case of absence of the cartilage of the external ear. The second child presented a double harelip and cleft palate, and lived two months. The third child was found to be minus the left forefinger and only lived three months. The fourth child lived three days and wanted the left great toe. The fifth child showed no external deformity, but lived three months only. The sixth child presented what seems to have been a dermoid cyst of the neck. The seventh child had just died, three days after birth, and presented a large tumour on the occiput, apparently a hydrencephalocele. I regret that I have not seen the woman or any of her children, but from inquiries of her sister it seems that both the woman and her husband present no congenital deformities, and none of the infants bore any traces such as might be attributed to congenital syphilis. I am, Sirs, yours faithfully,

Singapore. H. CAMPBELL HIGHET, M.D. Glasg.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—I have perused with much interest the article in your issue of the 14th inst. on the working of the Royal Victoria Dispensary, Northampton. On the whole I cannot complain of its tone; it puts both sides of the question fairly enough, but your correspondent has, inadvertently I am sure, done a great injustice to one of our medical staff. He refers to a prominent medical man who has received as much as £1000 a year from the dispensary, and suggests that he does no part of the work. I can vouch from my own personal knowledge that the gentleman in question did for a number of years a very large share of the work, and still takes an active part both in seeing patients and supervising the work of his assistants, and that the lively personal interest he has taken in the institution has conduced very greatly to its success during the years he has been connected with it. I might say more about the reasons that have made him so popular, but as he will probably read this I refrain from doing so. I am, Sirs, faithfully yours,

L. L. BECKE,
Honorary Secretary, Royal Victoria Dispensary, Northampton.

Northampton, Dec. 17th, 1895.

A PROMPT REPUDIATION.

To the Editors of THE LANCET.

SIRS,—I deeply regret that the zeal of an indiscreet friend should have placed me in the unsavoury position indicated by a paragraph in your current issue, and will take care that no such incident shall again occur so far as I can prevent it. Until I read your remarks I had never even heard of the publication you criticise. While admitting the justice of your animadversion you will, perhaps, however, permit me to express a hope that the heading of the paragraph in question is intended to apply to the manner and not to the matter of the part concerning myself. The words quoted denote a position in reference to treatment which I have openly taken up for years past, and from which I see no reason for receding.—I am, Sirs, yours faithfully,

HERBERT SNOW.

Gloucester-place, W., Dec. 15th, 1895.

*** We had no intention of suggesting that Dr. Snow's particular views were "rubbish" when we placed that word over our annotation in last week's issue (*vide* p. 1520). The word expressed our mental estimation of the whole of the letter as gravely intended for the general press.—ED. L.

NYSTAGMUS OF UNKNOWN CAUSATION.

To the Editors of THE LANCET.

SIRS,—The pathology of nystagmus is sometimes most obscure. I have under my observation a case which appears to me to be even more difficult to account for, if that is possible, than the case recorded by Mr. Dunlop Owen. A domestic servant aged twenty-eight consulted me first on Jan. 16th, 1893, and has been seen by me, off and on, up to the present time. In December, 1892, the movements of the eyes were first noticed. When I saw her in January, 1893, vision was ⅔ with each eye, not improved by glasses. Both fundi were normal. In each eye there was combined lateral and rotatory nystagmus. She complained that when anyone was coming near her she took some time before she properly recognised who it was. She also said that she occasionally felt a little "giddy." These two symptoms came on when she first noticed the oscillation of the eyeball. The knee-jerks were normal. She has two sisters and one brother, all without nystagmus. On Dec. 16th, 1893, I noted that "the giddiness is not now present, the general health is good. She cannot say that objects move when she looks at them, but she takes time before she sees well." On Nov. 7th, 1895, with the exception of the nystagmus and slight anæmia, I found nothing wrong with her. Since this visit the anæmia has improved. In this case we can, I think, eliminate albinism, errors of refraction, diseases of the media and fundi of the eyes, insular sclerosis, lead poisoning, hysteria, locomotor ataxy, and intracranial tumour. I am, Sirs, yours faithfully,

Londonderry, Dec. 16th, 1895. E. DONALDSON.

"SHOULDER BRACES."

To the Editors of THE LANCET.

SIRS,—I agree with Mr. Bernard Roth's letter on this subject to the extent that a rigid brace simply splinting back the shoulders might have the effect he deprecates, but I doubt if such braces are ever now used. On the other hand, it is my experience as a principle that spring force, whether exerted by metal or elastic, helps atonic muscles (be they spinal, scapular, or others) to act within the range of effort that they can undertake without fatigue, and leads to their development and not to their deterioration. But Mr. Roth is so entirely imbued with the gymnastic treatment to the exclusion of all others that he pronounces what "for many years I have taught" as being quite *ex cathedrâ*, and asperses the carefulness of your editorship by believing that "you have given, most probably inadvertently, a paragraph" to treatment of another kind than his own. Nay, more, to substantiate his tenets he quotes an extract from the work of the late Mr. John Shaw. If Mr. Roth looks at p. 141 of the very work to which he appeals he will find the following enunciation: "But although the most beneficial effects are produced by exercises, we shall be disappointed if we trust entirely to them in cases where the spine is actually distorted, or even when the curvature is slight. I am often told of extraordinary cures effected merely by exercises, but I have not been able to see any such instances." This being so, it would be ungracious to disagree from the deserved encomiums Mr. Roth passes on Mr. John Shaw when he says that he was "one of the most clear-headed writers on orthopædic surgery that I have come across," and when he concludes his letter with this satisfied termination: "I do not think any impartial surgeon would controvert John Shaw's sensible remarks written seventy years ago."

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 13th, 1895. HEATHER BIGG.

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"DANGERS AT SCHOOL."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to a reference in an evening newspaper alluding to a paragraph entitled "Dangers at School," indicating a probable means of transmission of diphtheria and tuberculosis among school children by means of infected slates. I beg to say that I made this conjecture and reported to this effect to our sanitary authority while investigating an outbreak of diphtheria, having arrived at this conclusion by reason of certain facts which came under my observation during these inquiries, and after watching children frequently moisten their slates with saliva and then pass them on to their companions or place them among other slates to be used by their fellow-pupils at some future time. Thus, given an unrecognised case of diphtheria, recrudescent, or an infected throat, herein appears to lay the explanation of a frequent means of transmission of these diseases. I stated this publicly and superintended and advised boiling the slates in a solution of sodium carbonate.

I am, Sirs, yours faithfully,

Maidstone, Dec. 11th, 1895. PERCY T. ADAMS.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—I hope you will find space in the columns of THE LANCET for a few remarks I have to offer on the above subject. Having read carefully the letter in one of your former issues sent to the dispensary committees, and signed by some of the oldest practitioners in Brighton, there are a few facts that I would like to draw their attention to, of which, perhaps, they are not aware. Why are dispensary letters given to tradespeople and those in comfortable circumstances? Simply this: because the young medical men holding appointments in those institutions, who are in a better position than the dispensary committees to judge of the circumstances of patients applying for letters, hope at some future date to set up in private practice in the district. This, of course, they consider as a good introduction, and will raise no objection to visit well-to-do patients. I would be inclined to doubt this statement if it did not come from a reliable source. But what are you to do when one of those gentlemen themselves volunteers the information? If such an unprofessional spirit prevails amongst the gentlemen holding these appointments, I see no way out of the evil, except that they should not be allowed to practise in the district afterwards.

I am, Sirs, yours faithfully,

Brighton, Dec. 16th, 1895. ONE INTERESTED.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—In reply to the letter of the secretary of the Clapham Maternity, regarding the lowering of fees by female medical practitioners and consequent degradation, I wish to point out that when this institution was started as a private speculation by Dr. Annie McCall the whole of the neighbouring district was flooded with touting circulars placed in the letter-boxes of other practitioners' patients, where, amongst other items of charges, confinements were undertaken at 5*s.* a head. This circularising of the whole district was repeated at regular intervals. The institution has since developed into one "supported by voluntary contributions." What was once a private speculation has become a maternity hospital, kept up for the benefit of two or three female practitioners and the students who have to get their cases. Many also state that the present secretary—the lady who signed the letter in your last issue—is well aware of the above facts. Will she deny that the above is a true statement?

I am, Sirs, yours truly,

Dec. 16th, 1895. VIGILANS.

THE council of the Medical Guild, having discussed, clause by clause, the Draft Midwifery Nurses Bill as proposed by the Lancashire and Cheshire Branch of the British Medical Association, unanimously passed the following resolution: "That this council express their dissatisfaction with the Draft Bill as it stands and their determination to oppose it."

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Death Sentence: a Warning.

THE recent trial of the woman Eden at the Warwick Assizes revealed some painful facts. It seems that she brought on an abortion which terminated fatally, for which she was convicted of murder and sentenced to death. Another death is also attributable to her treatment—that of a barmaid from Leeds. The judge remarked that it was quite clear that this woman had been practising a wicked trade which had become far too common in this country. He spoke in laudatory terms of the medical profession in connexion with the case. The public are hardly aware of the risks run by the ignorance and recklessness of such a woman, and are wont to somewhat condone such nefarious practices when carried out at the request of the sufferer herself. The law is decisive upon the matter; it is well for society that it is so. It cannot be too well known that the practice of procuring abortion is morally wrong, personally dangerous, and legally criminal. In this instance relief is experienced by the reprieve of the condemned woman by the Home Secretary. Repugnant as such a vice is, and hideous the picture of a woman being hanged, protection must be afforded to society in the aggregate; the warning is therefore salutary and well timed.

Children and Firearms.

A shocking accident ending in the death of a child aged eleven by her brother's act lately occurred here. The brother, aged nine years, opened a drawer in his father's bedroom and found a five-chambered revolver fully loaded. Taking this out he pointed it at his sister and pulled the trigger; the little girl received the bullet in her head and fell dead instantly. The distress of the parents was great. The father stated that he bought the revolver owing to a scare of burglars; placing it in a secret drawer, he considered it safe. The fear of burglars is a lesser one than the danger of a loaded firearm in a house where it is possible for children to get access to it. This is a melancholy illustration of the fact. To place such weapons under lock and key is an obvious deduction from the risk of such terrible accidents.

Prosecutions for Drug Adulterations.

Some important and interesting prosecutions took place at the police-court recently. Four retail chemists and druggists were summoned for selling articles which were not of the nature, quality, and substance demanded. In two of the cases tincture of iodine, and in the other two tincture of aloes, had been sold which were in excess of the strength prescribed in the British Pharmacopœia. The medical officer of health and public analyst stated that one sample contained 40 per cent. more ingredients in solution than the Pharmacopœia ordered, while, at the same time, the spirit was much stronger than it should have been. The principle is of great importance, for in buying a drug it is necessary that it should be of known quality. Fines of £1 and costs were imposed notwithstanding the ingenious defences set up.

Queen's College.

After two unsuccessful attempts to hold an annual meeting of the governors of this college a quorum was made up on the 12th inst. The severance of the medical faculty has evidently left the college in straitened circumstances. Sir Walter Foster stated that the supply of theological students from the universities was not enough, and that it was necessary to fall back upon such colleges as these. He hoped always to be connected with it, and expressed his regret at anything approaching the decline of such organisations. He advocated amalgamation with similar colleges as a relief to the present difficulties. Dr. Wade resigned his position as governor, writing that he was interested in medicine and not in theological teaching. Altogether the college is in a very poor way, and threatens to die from inanition if some vigorous efforts are not made for its recovery.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Unqualified Practitioners.

TWO cases were heard at the county-court on the 9th inst., when local quacks received a slight check. In the first the plaintiff sought to obtain the return of 21 guineas and

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damages from "a hernia specialist" named Sherman, for alleged negligence and fraud. He went to Sherman and signed a paper specifying what he required, and what he was suffering from, then submitted to a "preliminary examination," and paid a guinea. He was told he had a rupture on the right side, and could be cured for £20. He paid the money after the defendant assured him he could cure him, and received a receipt and agreement, which, however, gave no guarantee as to the cure; but Sherman gave his word "as a gentleman" that he could and would cure the rupture. "The plaintiff accepted the statement, and thereupon the defendant fastened an appliance upon him and gave him a bottle of his curative compound." After enduring much pain, and being several times assured that he was "getting cured," he saw Mr. Whitestone of Middleton Junction, who told him he had a slight rupture on the right side only and advised him to wear a truss, and said the pain was due to "the appliance." After all this he saw Sherman again, who then said he had a rupture on the left side and promised to cure him for ten guineas, but this time he gave up the "appliance" and Mr. Sherman as well. Mr. Whitestone, Mr. Walter Whitehead, senior surgeon to the Manchester Infirmary, and Mr. Robert Collier stated in evidence that the appliance—as it was always called—was an improper one. The defendant stated that "he had been carrying on his present business nearly four years, and before that was with his father, who had a similar business in London, and that "prior to engaging in his present business he was connected with horse-trotting in the United States." According to the newspaper report, "Dr. John Tanner of London, who held a number of high qualifications, said he had examined the appliance referred to, and thought very highly of it. In his opinion he had never seen anything better." His Honour Judge Parry said the case was important to the public, "because one could not but know, looking at the newspapers daily, of the large number of unqualified medical practitioners who were paid large fees. ..... The question was, Did the defendant tell lies to induce the plaintiff to pay £21 for an article which might perhaps be worth 10*s.* 6*d.*?" He held that there had been fraudulent representation, and gave judgment against the defendant for £22 and costs; so that the issue turned, not on irregular or unqualified practice, but on fraudulent trading. The second case was an action against Robert Whitehead, a "cancer specialist" of Manchester, for £15 damages. The plaintiff, a cook, saw the defendant early in the year and was told she was suffering from weakness. Two months later she noticed a growth on the chest, which he said was a tumour, adding that it would turn into a cancer. He gave her some plaster and medicine and "painted the place with something which gave great pain." Her mistress sent her to Mr. Walter Whitehead, who removed the growth. In his evidence he said the growth was not a cancer and the treatment had been barbarous and cruel. Mr. Alexander Wilson of Manchester gave similar evidence. The defendant said he had applied his treatment with "profound success." "In all other cases he had treated for a similar purpose he had never known inflammation to follow." These cases always prove the rule by being the exceptions. The judge said "the defendant held himself up as being able to cure cancer." He appeared to have told the plaintiff that her complaint might become a cancer, and applied his specific with harmful results. "As long as people would pay for unqualified assistance they must be allowed to do so. In this case definite harm had been done, and the woman had to go to a hospital to undergo an operation by a man of real and high qualification." She was awarded £10 and costs. Here, again, the unqualified practice goes for nothing, and the verdict is for the injury done to the plaintiff. Quacks have many advantages in this happy land.

A "Miracle" at Stockport.

There has been some excitement at Stockport over the following case. The wife of a mill hand, now forty-eight years of age, is said to have taken to her bed sixteen years ago, and to have been unable to walk till about a month since, in spite of medical assistance of all kinds. She is stated to have been an in-patient of the Stockport Infirmary seven times. On the day the "miracle" occurred she seems, according to the account given, to have had a strong mental impression, as she says she distinctly heard a voice say: "Arise, my child, thou shalt walk again"—a somewhat comical way of addressing this woman of forty-eight. Thereupon "she got out of bed and walked across the floor, saying 'Lord help me!' Since that time she has had no difficulty in walking." It seems hard on the husband that she waited so long before hearing the voice, and a pity that it cannot be claimed as a cure by a hypnotic "suggestor." Perhaps, however, one "suggested" at a distance.

Habitual Drunkenness.

A woman only twenty-five years of age was brought the other day before the Burnley magistrates for the fifty-eight time for drunkenness, having been found drunk two hours after leaving the court on the previous Wednesday, where she had been fined for the third time within a week. "She had been in a girls' home and given up as hopeless, and the police, it was stated, frequently overlooked offences, as they were tired of locking her up." She must be well known to the local publicans, who, to their disgrace, supply her with drink, and who deserve punishment quite as much as she does. She has probably no wish to restrain her craving for drink, and no power if she had the wish. Surely this is a case where she should be protected from herself and detained in a suitable asylum, both for her own sake and for the safeguarding of society against the risk of her presenting it with a family of hereditary drunkards.

Life-Saving Round Manchester.

The Humane Society for the Hundred of Salford makes a presentation of medals at its annual meeting, which was held the other week in the Town Hall, the Lord Mayor being in the chair. The saving of thirty lives during the year, the greater number from drowning, was acknowledged by various rewards. Eighteen silver medals, one silver bar, and eleven money rewards were given. A man named Unwin, employed on the Rochdale Canal, has saved many lives from drowning, and has already received the gold medal of the Society, with two gold bars, a silver medal with two silver bars, and on this occasion another silver bar was added to the ribbon of the medal to commemorate his saving a boy this year from drowning. Besides these medals, twenty-one silver badges were given to boys and girls from some of the schools of the city, who in competitions had shown themselves sufficiently "proficient in swimming exercises to be enabled to save life." A "dummy figure," on which life-saving can be practised, has been provided at each of the public baths and found very useful in teaching. The public swimming-baths are popular, and the teaching of the best modes of seizing a drowning person in the safest and most efficient manner is worthy of every encouragement.

National Society for the Prevention of Cruelty to Children.

A grand bazaar, extending over several days, in aid of this society, has been held here, and closed on Saturday last. It has been supported by Lancashire chiefly, but parts of North Staffordshire, Westmorland, and Cheshire have joined in the work. The receipts have amounted to £10,300, and a subscription has been organised to defray the expenses, so that the total received may go to the society. The receipts will be increased somewhat, as the unsold goods were yesterday disposed of by auction. The special object of the bazaar was to aid in the establishment of a reserve fund of £40,000, towards which about £25,000 have now been obtained by similar efforts in various parts of the country. When one thinks of the almost daily records of gross and often fiendish cruelty to children, it seems as if the society should be approved by all humane people; but, from a letter in this morning's *Courier* from a "victim," who, however, has the courage to sign his name, it does not appear to be so, and he quotes from Mr. Justice Grantham's charge to the grand jury at the York assizes. As reported in the *Manchester Weekly Times*, he referred to this society and said "it was very dangerous that the society should interfere with prosecutions," and that it was desirable that these prosecutions should be in the hands of the police, who represented the Crown, and whose duty it was not to get convictions, but to further the administration of justice, whereas this society appealed for support on the ground of what they did, and quoted the number of convictions. He adds that "it would be a sad day indeed if the police should become so negligent of their duty that their duties should be taken up by a society, and the police relieved of their responsibility." The existence of such a society in no sense can be taken as doing away with police responsibility. Many causes may interfere with the efficiency of police supervision, and it may be asked, How many of these convictions (which we may safely assume to be just, as the law is administered by Mr. Justice Grantham and his colleagues) would have occurred if it had

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not been for this society? Its formation was due to this very inefficiency of the police to prevent cruelty to children, and the law as administered may be trusted to check any prejudiced or malicious prosecutions, if we may suppose them to be attempted.

Dec. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Annandale's Health.

SOME weeks ago Professor Annandale had so far recovered that he was able to resume the duties of his chair in so far as to deliver the regulation lectures. This he has continued to do, but it has been thought advisable that he should go for a trip to the Cape. He will sail early next year and will be absent for about four months. Many of his old students in South Africa will be pleased to meet their old teacher.

Leith and Edinburgh.

The question of the proposed temporary hospital which Edinburgh desires to erect within the Leith boundary has been adversely pronounced upon by the Leith Dean of Guild Court. The question will probably go to a higher court.

The Royal Infirmary Kitchen Concert.

The time-honoured Kitchen Concert was held last night in the Edinburgh Royal Infirmary, and passed off with the customary *éclat*.

The Christmas Vacation.

The Christmas vacation will begin in Edinburgh on Monday next and last for a fortnight.

The Edinburgh Medico-Chirurgical Society.

This society will hold a special meeting to-morrow (Wednesday) afternoon for the exhibition of patients and specimens. The society only occasionally has these clinical meetings, but many members think they are very useful and could with advantage be held more frequently. The time of meeting is also of the nature of an experiment.

Benefactions to Glasgow Infirmaries.

The trustees of the Bellahouston fund have made the following additional bequests: 1. To the Royal Infirmary (1) a grant of £2500 in supplement of an equal sum already paid by the trustees for the better equipment of the medical school; and (2) a grant of £7500 towards the erection of a pathological museum and laboratory and another operating theatre to be called the "Bellahouston theatre." 2. To the Western Infirmary (1) a grant of £3500 for the erection of another operating theatre, to be called the "Bellahouston theatre"; and (2) a grant of £5000 towards the erection of pathological buildings. 3. To the Victoria Infirmary a grant of £6000 for the erection and equipment of a dispensary for out-patients, to be called the "Bellahouston dispensary."

Glasgow Maternity Hospital.

The following appointments have been made to the hospital staff:—Physician-accoucheur, Malcolm Black, M.D.; Assistant Physician-accoucheur, R. Jardine, M.D.; House-surgeon (in-door), A. A. Warden, M.B.; House-surgeon (out-door), A. Kay, M.B. Professor Murdoch Cameron has retired from the acting staff, his term of office having expired.

Scottish Poor-law Medical Officers' Association.

An association having for its main object the promotion of the interests of medical officers appointed under the various local authorities has recently been formed. The first meeting was held in Glasgow on the 9th inst., when office-bearers for the current year were appointed.

The Victoria Infirmary, Glasgow.

The eighth annual report of this infirmary shows that the accommodation provided by the new wing recently erected has been fully utilised, every bed during the past year being nearly continuously occupied. The average cost of each fully-occupied bed has been £62 3*s*. 5*d*., and the average cost per patient £5 16*s*. The directors thankfully acknowledge a donation of 1000 gs. from Mr. Cameron Corbett, M.P., towards the expenses of the out-door dispensary, as also the sum of £6000 from the Bellahouston Trustees.

Aberdeen Medico-Chirurgical Society.

The annual dinner of the Medico-Chirurgical Society of Aberdeen was held on Saturday evening in the Medico-Chirurgical Hall, King-street. Professor Stephenson occupied the chair. Dr. Ogilvie Will acted as "croupier." The chairman submitted the loyal and patriotic toasts, which were duly honoured. A very large number of members and guests were present, and the speeches were bright and good.

Dec. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. William Dudley White.

ALTHOUGH not connected with any of our clinical hospitals, Mr. Dudley White was very widely known and esteemed by the medical profession in Dublin. He held for many years one of the dispensaries of the North Dublin Union and was visiting physician to St. Mary's Industrial Schools and to the Hospice for the Dying at Harold's Cross. His father was a prominent citizen of Dublin, where he filled the position of coroner; while his son, Mr. J. Dudley White, is at present a distinguished undergraduate and scholar of Trinity College. The deceased gentleman's funeral was very largely attended. At the general meeting of the Dublin University Philosophical Society on Thursday last the following resolution was carried unanimously: "That the Society expresses its deep sympathy with Mrs. White and with Mr. Dudley J. White (Sch.), honorary registrar of the Society, in their great bereavement, and that the Society do now adjourn as a mark of respect and sympathy." The motion was proposed by Mr. R. J. Rowlett (Sen. Mod.), honorary secretary, and seconded by Mr. R. T. Harris, M.A. The society then adjourned without transacting any business.

Dublin Orthopædic Hospital.

The annual meeting of the friends and subscribers to this hospital was held on the 12th inst. in the board-room of the institution. Mr. Swan read the report, which was of a highly satisfactory character.

Infectious Diseases in Dairy Premises.

The guardians in Belfast, having written to the Local Government Board requesting them to name the infectious diseases the existence of which in dairy premises would justify the guardians in having the dairy closed, have received a reply that the medical officers of the Belfast union of guardians, from their professional attainments and experience, are well qualified to advise the guardians on the question, but that it appears to the Local Government Board that the existence on dairy premises of any of the following diseases would justify the guardians in taking action—viz., cholera, small-pox, typhus fever, enteric (typhoid) fever, puerperal fever, scarlet fever, and diphtheria. The question of measles being included is left to the guardians' medical officers. The value of this communication lies in the circumstance that it specifies the names of the diseases for the existence of which a dairy may be closed, because, as a guardian present (Dr. Gibson) at the last meeting stated, some time ago there was a difficulty in securing a conviction in a case where typhoid fever existed in a dairy owing to the medical officer hesitating to say whether typhoid fever was infectious, as distinguished from contagious, the regulations formerly only applying to such cases as, in the opinion of the medical officer, were contagious.

Belfast District Asylum.

Dr. O'Farrell, inspector of lunatics, in his memorandum of inspection of the above asylum on Nov. 1st, which has just been published, states that he believes no public institution in the United Kingdom is at present more overcrowded than this asylum; yet he found every department orderly and clean, while its bill of health is favourable and its mortality-rate very low. With such perilous surroundings, with dormitories so full that there is scarcely space for beds, he thinks the resident medical superintendent deserves the greatest credit for his good and careful management of the institution. It is a curious thing that with so much zymotic disease prevailing in Belfast, there have been no cases in the asylum.

"The Rate of Speed for Ambulances."

I understand that the Police Committee of the Belfast City Corporation have, in deference to the verdicts of the

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coroner's juries,[1] decided to allow the ambulance carriages, when summoned to an accident, to go at a rapid pace, and not, as complained of, merely at a trot as formerly.

Typhus Fever in Ireland.

I regret to say that the hopes of modern sanitary authorities, that this disease—which in Ireland has so often claimed as its victims members of the medical profession—would soon become eradicated, are being so very slowly realised. I have reported in this column accounts of outbreaks at Ardboe (in the vicinity of Lough Neagh), from which the patients were removed mainly to Cookstown Workhouse, and also at Ballyclare, where there has been a very serious epidemic. I am sorry to say the disease has broken out in Killybearn, in the Magherafelt Union. So far in Belfast at present typhus fever is not prevalent, but if introduced its spread would not be diminished owing to the want and poverty which are following in the wake of the present most unfortunate strike of the ship-building engineers. A rather serious outbreak has also been reported from a town called Shillelagh in the county of Wicklow. Twenty-four cases of epidemic typhus fever are now being treated in the workhouse hospital there.

Belfast Naturalists' Field Club.

Dr. Lorrain Smith, Lecturer on Pathology at Queen's College, Belfast, gave, on Dec. 13th, a very interesting lecture on the Study of Bacteriology before the microscopic section of the Belfast Naturalists' Field Club.

Pollution of the Water-supply of Cork.

Mr. Donovan, superintendent medical officer of health of Cork, has made a most important report relative to the water-supply of the city. He stated it had come to his knowledge that the sweepings of the streets and the filth from the back-yards of Macroom were actually carted into the Lee as it passed that town. As the river so contaminated furnishes practically the sole water-supply to Cork, Mr. Donovan urged the extreme importance of impressing on the guardians of the Macroom Union the grave responsibility they incur, and he pointed out that as typhoid fever is somewhat more than usually prevalent in Cork at present, it is all the more requisite that possible sources of contagion should be avoided. The urban sanitary authority accordingly addressed a very strong remonstrance to the Macroom guardians, and should that prove unavailing I have reason to believe that the law will be invoked.

Who ought to Pay the Substitutes of Dispensary Medical Officers who have been Subpœnaed by the Crown?

This is a question which was proposed for the immediate solution of the Dispensary Committee of the city of Limerick. Two of the dispensary medical officers were ordered, under the usual pains and penalties, "all business whatsoever being put aside," to give evidence before the representative of Her Majesty at the winter assizes recently held in Cork. Accordingly, before proceeding to Cork the two medical gentlemen named for their committee two substitutes, and the latter took steps to convey to the committee that they could not put their services at the disposal of the guardians without a remuneration at the rate of three guineas a week. The secretary hastily convened a meeting, and the committee came to the conclusion that under the circumstances there was no course open to them but to agree to the proposed terms. Some of the newspapers grumble, and say it is very exacting on the part of the dispensary medical officers to expect to be paid salaries for the performance of duties which they cannot possibly discharge, owing to their absence in an adjoining county, whilst at the same time they are in receipt of handsome remuneration from the Crown. But the newspapers forget that the dispensary officers are allowed no option. They must give evidence which is beneficial to the ratepayers. For the "handsome remuneration" of three guineas a week they are obliged to neglect their private practice, which in many instances is their principal source of income, and a certain section of the public think they ought to be still further punished by the reduction of their salaries.

Lunatic Asylums in England, Ireland, and Scotland.

Mr. Kenny has procured a return relating to the number and treatment of pauper lunatics, which contains some interesting figures. From it I learn there is accommodation for 67,842 in England, 11,418 in Ireland, and 10,444 in Scotland. In England and Scotland the number of inmates did not nearly equal the number for which there was accommodation, but in Ireland it exceeded it by more than 1000. The annual cost of maintenance per head is £41 in England, £21 in Ireland, and £20 in Scotland. An interesting question for alienists to solve is why, as is shown by the return, female lunatics are in a majority in England and Scotland and male lunatics are in an enormous majority in Ireland.

Dec. 17th.

[1] THE LANCET, Dec. 14th, 1895, p. 1544.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Overcrowding at the Faculty of Medicine.

I HAD occasion to communicate to your readers in a recent letter the new rule which shuts the doors of the Paris Faculty on would-be students who, being foreigners, are not *bacheliers*. It is very evident that the authorities are alarmed at the ever-increasing number of entries, and, if I am correctly informed, at least one aspirant of British nationality has been refused a student's ticket, even though he had duly passed his *bachot*. In this case he was referred to the British Ambassador, the only consolation vouchsafed him being that the intervention of Lord Dufferin might possibly procure him the coveted admission. That matters are really serious at the Faculty from overcrowding is incontestable. The current number of the *Gazette des Hôpitaux* ("La Lancette Française") gives a prominent place to an alarmist article on the subject. The writer, who prints a graphic chart in support of his statements, very aptly asks what is to become of all the young men after graduation, seeing that even now most practitioners have much difficulty in making both ends meet. He accordingly calls upon the Faculty authorities to protect the aspirant against himself, and to stem a tide that can only end in disaster. It is, moreover, certain that such a glut of students must bring about a deficient standard of education, and that, therefore, both diligent and idle students must suffer from this plethora. For instance, last year 1348 names were on the dissecting list; now, to meet this demand, only 934 entire bodies and 589 bodies which had undergone post-mortem examination were received, and these had to serve in addition for competitions, examinations, laboratory, lecture, and research purposes, and for the classes of operative surgery. These left only 496 subjects for dissection distributed amongst 1348 students. The dissecting-rooms, large as they are, can only accommodate 720 workers; 200 more have, by a recent arrangement, been distributed amongst the various hospital amphitheatres. What become of the remaining 428? Clinical work is also, as may be imagined, heavily handicapped. Last year the number of *stagiaires* (ward work is compulsory on every student, who, if not an extern or intern, is called a *stagiaire*) was 1000; this year it will reach 1400. To meet this difficulty an auxiliary corps of clinical teachers has been organised, and, in addition, the Faculty has had recourse to the *bonne volonté* of volunteer professors, who cannot be paid owing to deficiency of funds. New regulations fix the duration of each student's *stage* in the wards at three years. This will give 2000 *stagiaires* who will have to be provided with instruction. The remedy suggested by the writer is to discourage entries and encourage the development of medical education at the provincial faculties and especially at the provincial preparatory medical schools. It is suggested, also, that the examination for the M.D. Paris should be rendered still more stiff, and if one may judge from the figures below there certainly would seem to be some scope in this direction. At the First Examination for the degree there is an average of 2·9 per cent. of candidates adjourned; at the Second Examination, first part 24·54 per cent. and second part 9·24 per cent.; at the Third Examination, first part 15·59 per cent. and second part, 17·39 per cent.; at the Fourth Examination, 16·03 per cent.; at the Fifth Examination, first part 10 per cent. and second part 8·56 per cent.; and for the Thesis, 0·55 per cent. As regards the admission of foreigners into the Faculty, it is suggested in the *Journal de Médecine de Paris* that, while the non-indigenous student be received with open arms, he should, after graduation, be denied the right to practise on French territory, his degree becoming thus a purely honorary title.

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Recurrent Gonorrhœal Rheumatism.

Dr. Emery presented to the Société Française de Dermatologie et de Syphiligraphie (Dec. 12th) a man who had for the nineteenth time had gonorrhœal rheumatism and ten attacks of gonorrhœa. The first attack of gonorrhœa occurred in 1876; it was after the fourth (in 1878) that he had seven successive attacks of rheumatism, which left considerable deformity of the feet resembling that of chronic polyarthritis deformans, and a deformity of the middle finger which assumed the shape of a radish. M. Mauriac recalled in this connexion the history of a man who had during twenty-one years an annual attack of gonorrhœa accompanied with rheumatism. M. Fournier once had under his care a young man in whom each sexual act, even though means were taken to prevent infection, infallibly provoked an attack of rheumatism. So sure was he of this result that on these occasions he ordered his lunch to be served in bed on the morrow. Here there was no question of a fresh attack of gonorrhœa, the sexual orgasm sufficing to relight the joint pains. This would seem to support the medullary theory of the affection, and M. Gastou cited a case of blennorrhagic rheumatism where there was present disseminated muscular atrophy outside the articular area, which atrophy was considered by M. Oudin as being of medullary origin. M. Fournier remarked that directly he saw Dr. Emery's patient he diagnosed gonorrhœa from the radish-shape of the deformed fingers. A similar deformity exists in arthritis deformans, but in the latter disease all the digits are deformed, whereas in the gonorrhœal type, only one or two are involved.

Persistence of the Diphtheria Bacillus.

MM. Le Gendre and Pochon[1] have had under observation for the last fifteen months a child who, in less than three years, has had three attacks of diphtheria (once faucial, once buccal and nasal combined, and once nasal and faucial combined). Since the methodical bacteriological examination of the nasal and pharyngeal mucus has been undertaken (thirteen times since September, 1894), Löffler's bacillus has been invariably discovered, either retaining its virulent properties or deprived of them (not killing the guinea-pig), and either appearing in the form of average bacilli or being dwarfed, or again assuming the shape of the "coccus Brisou." Sometimes the bacillus was present alone and sometimes associated with the staphylococcus. Copious nasal and pharyngeal douches with a 5 per cent. solution of Labarraque's liquor caused the temporary disappearance, total or partial, of the bacillus. But a suspension of the treatment for some time is followed by a change in the child, who loses his gaiety, appetite, and colour; an examination then reveals the presence of the micro-organism. It is evident that it continued to lurk in the recesses of the nasal mucous glands. This example of latent microbism is worthy of record.

Dec. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Battle of Amba-Alagi: the Red Cross.

THE reverse that has befallen the Italian arms in Abyssinia is but the prelude to the extension of hostilities, and already large reinforcements are on their way to the seat of war. As to the battle in which Major Toselli and his column of native troops were cut to pieces, it was so completely a surprise that much of what is interesting in such engagements is necessarily wanting. So far as advices to hand indicate, there was no medico-military service on any considerable scale, and beyond the fact that Dr. Jacopetti ("tenente medico") is among the slain, we know nothing as yet as to how far the medico-military arm was engaged. As to the Red Cross, there is no doubt that its resources and *personnel* will share in the general reinforcement now called for.

The Sale of Quinine.

Signor Boselli's Bill, by which the right to sell quinine of guaranteed purity will be conceded to those shops in town and country already privileged to sell salt, tobacco, and postage-stamps, has, not unexpectedly, evoked much criticism, favourable and unfavourable. I have already given what has been advanced in the former sense, and which may be summed up in the fact that the Bill is framed to meet exceptional circumstances and to make quinine obtainable in malaria-stricken localities where the chemist and druggist is unknown. On the other side, it is urged that this concession is an invasion of the pharmaceutical province; that the Government which exacts high qualifications from the dispenser of drugs has no right to "poach on his preserves" and compete with him in the sale of one of the most largely employed preparations in the pharmacopœia. The dignity of the apothecary's art, moreover, is compromised by raising the tobacconist to the rank of a vendor of quinine. Another objection which I have not seen urged is this: that quinine, unless medically prescribed and protected as to its sale by the recognised consensus between practitioner and apothecary, is a source of danger—"a veritable poison to the vaso-motor system," as Dr. Tommasi Crudeli has described its abuse; and that to place it in the power of the ignorant countryman to dose himself with it *ad libitum* is to make a valuable remedy a source of positive disease. In all this there is undeniable force, add to which that the action of the Government in intervening between the public and the apothecary is but another example of its perennial blunder in beginning at the wrong end. Why not drain the marshes and reclaim the derelict lands that breed malaria? Why, in its neglect of this duty, go out of its way to innovate mischievously in the dispensing of a powerful drug which ought never to reach the public except through the combined medium of practitioner and apothecary? To this the Government apologists reply that the apothecary cannot be hurt or compromised where he does not exist; that the Bill contemplates facilitating the sale of the drug in those two-thirds of Italy where malaria is prevalent, but where no druggists' shops are to be found; that while the reclamation of the malarious tracts is not being overlooked, the fever-stricken labourers must in the meantime be protected by a drug which is to them what the Davy lamp is to the miner; and that the Bill is only provisional, remaining in force not a day longer than the rapidly diminishing prevalence of malaria makes it necessary. The controversy is a grave one, and before the Bill passes through committee it will undoubtedly be modified in a sense more favourable to the pharmaceutical interest.

Dec. 16th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

SINCE cholera was first officially discovered it is now exactly two months, and there have been 1010 cases reported, of which 840 have died. This ratio is greatly in excess of the real mortality rate, for it must be remembered that, whereas the deaths cannot be concealed, many slight cases of the disease are never recognised as being anything more important than diarrhœa. Even in England in 1892 and 1893 it was found necessary to make the notification of diarrhœa in cholera districts compulsory, and, moreover, to pay the notifying medical men, before the disease was stamped out. Such notification will be impossible in Egypt for many a long day, because so long as the capitulations exist it is impossible to compel natives protected by foreign Powers to do anything sanitary. The daily bulletins for all Egypt give the following figures for the past week: 34 admissions into hospitals with 33 deaths, and to these, 21 deaths must be added as having occurred outside the hospitals. Cholera seems to have been successfully stamped out of the canal which furnished so many infected villages last month, and at Mansourah the schools have been reopened. Two cases have occurred in one of the native quarters of Cairo, both being children of a man who evidently imported the disease here from Zagazig. He was an itinerant beggar who lived on the precarious bounty of those who were willing to have the Koran read to them. It appears that he went to Zagazig on Nov. 28th, returned to Cairo on the 30th, and died in his miserable lodging here on Dec. 1st. As there was a history of his having suffered from dysenteric diarrhœa for three months, the native medical man who attended him before death certified that he died from chronic dysentery. However, on

[1] Société Médicale des Hôpitaux, Dec. 13th, 1895.

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Dec. 6th at 10 P.M. his daughter aged eighteen was taken ill, and she died twelve hours later. The case clinically was one of cholera, and bacteriological examination of the ileum confirmed the diagnosis. In the night of Dec. 9th a son of the dead beggar aged seven years was taken ill, and he died at 3 A.M. on Dec. 11th. His case, both clinically and bacteriologically, was also cholera. Immediately the first case was found the house was isolated and the various inmates of it kept under medical observation. As the house consists of several poor tenements, some denizens of which were intending to start for Upper Egypt, Dr. Rogers Pasha has taken the wise precaution of temporarily conveying all the family and the dwellers in this infected house out to the desert at Abbassiyeh, where they will undergo a quarantine of seven days. It is needless to say that all necessary disinfection of the house and its contents, and of the cesspool which was within one yard of the well (not used for drinking water, but often used for various other purposes), has been ably carried out. The heads of the Sanitary Department are personally superintending this work. As the disease is confined to this one house in Cairo there is no reason why it should not be successfully isolated here as it has been in the big towns of Mansourah and Zagazig.

Precautions in Cairo.

Since the beginning of October the Special Sanitary Commission for Cairo has been diligently at work. A great improvement has been made in all surface cleanliness such as the sweeping and scavenging of streets, markets, stables, dairies, &c. This is not an unimportant labour if one remembers that many of the natives have no latrines in their houses and that there are as yet no public closets except those attached to the mosques. The English Commandant of Police tells me he has never seen Cairo look so clean before. The insides of huts and stables have been limewashed, many faulty wells have been closed, and several places in which water is supplied gratis have been erected in Boulak and Old Cairo by arrangement with the water company. The mosque cesspools have been compulsorily emptied by a pneumatic odourless system, and have then been disinfected. The public baths, which have the economical habit of storing up dustbin refuse for fuel, have been restricted to keeping only a supply for twenty-four hours on their premises. If Dr. Rogers succeeds in organising this reform it will be a cheap and salutary way of utilising each bath in the town as a public destructor.

Precautions in Zagazig.

Though Zagazig is now free from cholera, the work of prevention is not being allowed to abate. Wells are being bored in six different parts of the town, and water from them, taken from a depth of thirty feet, is now being analaysed by the Government chemists in Cairo. The transport of milk and cream from all infected districts has now been forbidden.

Cairo, Dec. 11th.

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the M.S. Examination recently:—

Aldrich-Blake, Louisa B., M.D., London School of Medicine and Royal Free Hospital.
Hamilton, E. T. B., M.D., B.Sc., Guy's Hospital.
Sheen, Alfred William, M.D., Guy's Hospital.

The following candidates passed the B.S. Examination:—

FIRST DIVISION.

Barnard Harold Leslie, London Hospital.
Berry, Frances May D., M.D., London School of Medicine and Royal Free Hospital.
Chaning-Pearce, David Arnold, Guy's Hospital.
Hull, Charlotte Elizabeth, Royal Free Hospital.
Hunt, George Bertram, University College.
Pugh, William Thomas Gordon, Middlesex Hospital.
Russell, Alfred Ernest, St. Thomas's Hospital.
Shaw, Harold Batty, University College.
Sloane, John Stretton, B.Sc., St. Bartholomew's Hospital.
Thomas, Thomas Morrell, Guy's Hospital.
Turner, William, King's College.

SECOND DIVISION.

Appel, Elizabeth Louise C., B.Sc., London School of Medicine and Royal Free Hospital.
Armitage, Frances, London School of Medicine for Women.
Blake, Victor John, University College.
Bodman, John Hervey, University College, Bristol, and St. Bartholomew's Hospital.
Brown, Joseph Norwood, University College.
Byrne, Peter Kevin, B.A., University College.
Corthorn, Alice Mary, London School of Medicine and Royal Free Hospital.
Coutts, Francis James, University College.
De Segundo, Charles Sempill, St. Bartholomew's Hospital.
Dimsey, Alfred, University College.
Evans, Daniel Edward, St. Mary's Hospital.
Every-Clayton, Leopold E. V., Guy's Hospital.
Haines, John William, St. Bartholomew's Hospital.
Handley, William Sampson, Guy's Hospital.
Hopton, Ralph, Yorkshire College.
Hora, Julian, Guy's Hospital.
Horner, William Ernest Leethem, University College.
Hunnard, Arthur, University College.
Jewell, William Henry, Guy's Hospital.
Levick, Harry Driffield, St. Thomas's Hospital.
Martin, Antony Alexander, St. Mary's Hospital.
Miskin, Leonard John, St. Thomas's Hospital.
Paling, Albert, Middlesex Hospital.
Parry, Leonard Arthur, Guy's Hospital.
Richmond, Benjamin Arthur, B.Sc., Guy's Hospital.
Rodocanachi, Ambrose John, B. Sc., University College.
Salter, Alfred, Guy's Hospital.
Smith, Frank Addinsell, St. Bartholomew's Hospital.
Sowry, George Herbert, St. Bartholomew's Hospital.
Steinhæuser, John Robert, Guy's Hospital.

The following candidates passed the M.D. Examination:—

MEDICINE.

Adkins, Albert James, St. Thomas's Hospital.
Bathurst, Lullum Wood, St. Bartholomew's Hospital.
Bennett, Lizzie, London School of Medicine and Royal Free Hospital.
Berry, Albert Edward, Owens College and Manchester Royal Infirmary.
Blomfield, Edward Eldridge, B.S., London and Guy's Hospitals.
Bolton, Joseph Shaw, B.S., B.Sc., University College.
Bunch, John Le Mare, B.S., B.Sc., University College.
Castellote, Ramon Horace, University College.
Cole, Robert Henry, St. Mary's Hospital.
Collyer, Brice, St. Bartholomew's Hospital.
Crowley, Ralph Henry, St. Bartholomew's Hospital.
Eves, Percy Stanhope, B.S., University College.
Gully, Robert Cullum, St. Bartholomew's Hospital.
Hamilton, Richard, Owens College, Manchester Royal Infirmary, and Guy's Hospital.
Jones, Lillie Mabel Agnes, London School of Medicine for Women.
Joseph, Arthur Hill, University College and Royal Infirmary, Bristol, and King's College.
Lane, Clayton Arbuthnot, St. Mary's Hospital.
Lankester, Arthur Colborne, St. Thomas's Hospital.
†Leete, Arthur Henry, B.Sc., Guy's Hospital.
Low, Vincent Warren, B.S., St. Mary's Hospital.
Manning, Guy Eugene, Guy's Hospital.
Meakin, Harold Budgett, St. Bartholomew's Hospital.
Pace, Elizabeth Margaret, London School of Medicine and Royal Free Hospital.
Parsons, Christopher Thackray, St. Mary's Hospital.
Perram, Edward Arthur, St. Bartholomew's Hospital.
†Potts, William James, Owens College and Manchester Royal Infirmary.
*Roberts, Charles Hubert, St. Bartholomew's Hospital.
Rogerson, Clement Michael, Yorkshire College.
Shaw-Mackenzie, John Alexander, University College.
Smith, Edwin, St. Thomas's Hospital.
Smith, William Robert, B.S., King's College.
Smyth, Reginald Mander, St. Mary's Hospital.
Soden, Wilfred Newell, St. Bartholomew's Hospital.
Stanley, Arthur, St. Mary's Hospital.
Stedman, Thomas Bernard, University College.
Sturge, Mary Darby, London School of Medicine and Royal Free Hospital.
Ta' Bois, Alfred Charles, St. Bartholomew's Hospital.
Taylor, Edwin Claude, B.S., Guy's Hospital.
Taylor, Frederick Ryott P., B.S., Westminster Hospital.
Warner, Thomas, King's College.
Wells, Sydney Russell, B. Sc., St. George's Hospital.
Williams, Ethel Mary Nucella, London School of Medicine and Royal Free Hospital.
Williams, Samuel, University College.
Woollett, Charles Jerome, Charing-cross Hospital.
Wright, Sydney Faulconer, St. Thomas's Hospital.
Young, Robert Arthur, B.Sc., Middlesex Hospital.

STATE MEDICINE.

Symes, John Odery, St. Mary's Hospital.
Williamson, John, St. Bartholomew's Hospital.

* Gold medal.

† Obtained the number of marks qualifying for the gold medal.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen (whose names are arranged in order of seniority as Members), having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Fellows of the College:—

Ferrand, Edward (Surg.-Lieut.-Colonel, I.M.S.), M.D. Durh., L.R.C.P. Edin., St. Bartholomew's Hospital and Durham University; Member, May 19th, 1875.
Foulerton, Alexander Grant Russell, L.R.C.P. Lond., St. Bartholomew's Hospital; July 30th, 1884.
Tanner, Herbert, L.R.C.P. Lond., St. Mary's and St. Thomas's Hospitals; April 28th, 1885.
Pisani, Lionel John (Surg.-Capt., I.M.S.), L.S.A. Lond., Charing-cross Hospital; Jan. 21st, 1886.

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Ridley, Nicholas Charles, M.B., L.R.C.P. Lond., St. Mary's Hospital; May 10th, 1888.
Lace, Frederick, L.R.C.P. Lond., University College and Royal Infirmary, Bristol; May 9th, 1889.
Leaf, Cecil Huntington, M.B., B.C. Camb., L.R.C.P. Lond., Cambridge University and London Hospital; July 28th, 1890.
Curtis, Henry Jones, L.R.C.P. Lond., University College and Hospital; Feb. 12th, 1891.
Addison, Christopher, L.R.C.P. Lond., St. Bartholomew's Hospital; Nov. 12th, 1891.
Ballance, Hamilton Ashley, M.D., L.R.C.P. Lond., University College and Hospital; Aug. 1st, 1892.
Hainworth, Edward Marrack, M.B., B.S., L.R.C.P. Lond., St. Thomas's Hospital; Aug. 1st, 1892.
Randall, Martin, M.D., L.R.C.P. Lond., University College and Hospital; Aug. 1st, 1892.
Sutcliffe, William Greenwood, L.R.C.P. Lond., St. Thomas's Hospital; Aug. 1st, 1892.
Barnard, Harold Leslie, L.R.C.P. Lond., London Hospital; Nov. 10th, 1892.
Smith, Thomas Rudolph Hampden, M.B. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Nov. 10th, 1892.
Turner, William, M.B., L.R.C.P., L.S.A. Lond., King's College and Hospital; May 11th, 1893.
Elworthy, Henry Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital; July 27th, 1893.
Arnold, Gilbert James, L.R.C.P. Lond., St. Thomas's Hospital; Nov. 9th, 1893.
Dickson, Henry Arthur David, L.R.C.P. Lond., St. Thomas's Hospital; Nov. 9th, 1893.
Colby, Francis Edward Albert, M.B. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Feb. 8th, 1894.
Brown, Ralph Charles, M.B., Ch B. Melb., L.R.C.P. Lond., Melbourne University and Westminster Hospital; Nov. 14th, 1895.
Brodie, William Haig, M.D. Edin., Edinburgh University, St. Mary's and St. Bartholomew's Hospitals; not previously a Member.

The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:—

Baker, William Herbert, Charing-cross Hospital and Dental Hospital of London.
Bascombe, Edwin Cecil Dare, Middlesex Hospital and National Dental Hospital.
Beaumont, Frederick Charles, Guy's Hospital.
Breakell, John James, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Chambers, Thomas Rubens, Guy's Hospital.
Colyer, Stanley William Randolph, Charing-cross Hospital and Dental Hospital of London.
Dawson, William James Oliver, Guy's Hospital.
Denham, Norman, Guy's Hospital.
Dimock, Edward Claude, Guy's Hospital.
Goddard, John Wood, Guy's Hospital.
Händel, Franz Edward, Guy's Hospital.
Hankey, Stanley James, Charing-cross Hospital and Dental Hospital of London.
Harrison, Edward, Charing-cross Hospital and Dental Hospital of London.
Humby, William John, Middlesex Hospital and National Dental Hospital.
James, Benjamin Edgar, Guy's Hospital.
Jepson, Harold Ernest, Charing-cross Hospital and Dental Hospital of London.
Jones, Frederick Warner, Charing cross Hospital and Dental Hospital of London.
King, Herbert, Guy's Hospital.
Lees, Tom, Charing-cross Hospital and Dental Hospital of London.
Lewis, James William, Guy's Hospital.
Ludbrook, Stephen Percy, Charing-cross Hospital and Dental Hospital of London.
Macdonald, George Ernest, University College, Liverpool, Charing-cross Hospital and Dental Hospital of London.
McKay, Robert, Middlesex Hospital and Dental Hospital of London.
Marston, Walter, Middlesex Hospital and Dental Hospital of London.
Mathews, Harold Dewe, Guy's Hospital.
Payne, Joseph Lewin, Guy's Hospital.
Pidgeon, Walter Herbert, Charing-cross Hospital and Dental Hospital of London.
Relph, Herbert John, Middlesex Hospital and National Dental Hospital.
Robertson, Harry Lennox, Mason College, Queen's and General Hospitals, and Birmingham Dental Hospital.
Rose, Samuel Frank, Middlesex Hospital and Dental Hospital of London.
Ryle, Arthur Buxton, Guy's Hospital.
Seccombe, Clovis Leopold, Middlesex Hospital and Dental Hospital of London.
Spencer, George Ross, Charing-cross Hospital and Dental Hospital of London.
Turton, Arthur William, Charing-cross Hospital and Dental Hospital of London.
Veitch, William MacGregor, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Wood, James, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.

Seventeen gentlemen were referred for six months

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Wicherkiewicz of Posen has been appointed Professor of Ophthalmology.—*Genoa:* Dr. Mostiari of Siena has been appointed Professor of Surgical Pathology.—*Naples:* Dr. Aniello has been appointed Extraordinary Professor of Orthopædi Surgery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Tepliasin of Kazan, a well-known ophthalmologist.—Dr. G. H. Van der Mey, Professor of Midwifery and Gynæcology in the University of Amsterdam, from septicæmia following an operation.—Dr. Fauvel, a distinguished Parisian laryngologist whose opinion it was intended to have obtained in the case of the late Emperor Frederick, at the age of sixty-five.

PRESENTATIONS.—Mr. T. M. Wills, L.R.C.P., L.M., F.R.C.S. Irel., on the annual distribution, at Bootle, on the 13th inst., of certificates and medallions to the Bootle Fire Brigade and the police force in connexion with the St. John Ambulance Association, the mayor of the borough presiding, was the recipient of a portrait of himself, as a mark of appreciation of his services to the ambulance classes.—Dr. D. Mitchell, who has for the past fifteen years been in practice in Renton (Dumbartonshire) and has taken a prominent part in the public and political life of the district, has been presented with a purse of sovereigns on the occasion of his leaving Renton.

DIPHTHERIA IN LONDON.—Last week the registered deaths from diphtheria in London numbered 63, whereas the numbers in the three weeks preceding had been respectively 69, 63, and 69. The total last week was 20 in excess of the average for the fiftieth week of the years 1885-94. The deaths, as has now for some long time been the case, were nearly all in young persons of under twenty years. The week saw also deaths registered in Greater London, the larger share being credited to West Ham and to the Edmonton Union. In these two localities the disease seems to be especially fatal. The figures concerning notification of diphtheria in London are now before us for the four weeks ended with the last day of November. They show that every one of the sanitary areas of the county of London, excluding the port district, was invaded by diphtheria. The notifications in gross amount show a slight decline over the previous four weeks ended Nov. 2nd. The total notifications in the earlier period, 1305, have given place to 1269, and the weekly average of 326 to 317. On the other hand, whilst in the earlier period eight districts with over fifty notifications respectively had an aggregate of 655, in the later period ten districts had respectively over 50 notifications and a total of 734. Thus we have to face a weekly list of upwards of 300 notified attacks.

THE SANITARY INSTITUTE, PARKES MUSEUM, MARGARET STREET, W.—At a sessional meeting of the Sanitary Institute held at the Parkes Museum, Margaret-street, W., on Wednesday, Dec. 11th, Sir Benjamin Baker, K.C.M.G., LL.D., F.R.S., in the chair, Sir Douglas Galton, K.C.B., LL.D., F.R.S., read a paper on the Lessons to be learned from the Experimental Investigations by the State Board of Health of Massachusetts upon the Purification of Sewage. After dealing with the various systems of sewage filtration, he described the systems devised for the aeration of the filters, dealing more particularly with experiments made by Colonel Waring at Newport, New York. He summed up the conclusions to which the various experiments lead as follows: 1. The suspended matters of sewers (sludge) can be mechanically withheld by straining slowly through suitable material. 2. The filth accumulated by this straining material can be destroyed, and the straining medium restored to a clean condition by mere aeration. 3. The successive alternate operations of fouling and cleansing can be carried on indefinitely without renewal of the straining material. 4. The purification obtained by this straining process practically equals that accomplished by chemical precipitation, and is sufficient to admit of discharge into any considerable body of water not used as a source of domestic supply or for manufacturing purposes requiring great purity. 5. Such filters can be maintained in *constant* and *efficient* operation by suitable aeration. 6. The erection of a plant capable of purifying large volumes of sewage upon a relatively small area calls for no costly construction. Repairs and renewals are merely nominal. The attendance required is but slight. There is no outlay for chemicals, &c. The only expense of mechanical operation is the driving of the blower or air-compressor. 7. The process admits of wide variation in the selection of filtering material, and nearly every community can find in its local resources something suitable for the purpose.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOWES, WM., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the East Ashford Union.

BRIMACOMBE, R. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Kingswood, vice H. Grace.

BURMAN, W. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Wath and North Rotherham Joint Hospital.

DOWLING, G. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Alderley Edge Urban District Council.

EDDOWES, ALFRED, M.D. Edin., has been appointed a Physician to the St. George's and St. James's Dispensary, King street, Regent-street, W.

FRIEL, R., M.B., B.Ch., L.M. Irel., has been reappointed House Physician to the Richmond, Whitworth and Hardwicke Hospitals, Dublin.

HOGG, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Shardlow Sanitary District of the Shardlow Union.

LEWIS, FREDERICK W., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

MORTON, A. C., M.R.C.S., has been reappointed Medical Officer of Health for the North Walshem Urban Sanitary District.

O'CONNELL, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Senior Assistant Medical Officer for the Workhouse of the Township of Toxteth Park.

SHEKA, J. B. P., L.R.C.S., L.R.C.P., L.M. Irel., has been appointed House Physician to the Richmond, Whitworth and Hardwicke Hospitals, Dublin.

STANLEY, H., M.B., B.C. Camb., has been appointed Medical Officer for the Fifth Sanitary District of the East Ashford Union.

STEPHENSON, SYDNEY, M.B., F.R.C.S.E., has been appointed Ophthalmic Surgeon to the North-Eastern Hospital for Children, Hackney-road, Shoreditch.

SWORDER, H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Luton.

TAYLOR, H. H., F.R.C.S., M., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Royal Alexandra Hospital for Sick Children, Brighton, vice Morgan.

THOMPSON, H. E., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

TIBBETTS, T. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health by the Quarry Bank Urban District Council.

WAGSTAFF, J. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pelham Sanitary District of the Bishop Stortford Union.

WALSH, LESLIE H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Royal Mineral Water Hospital, Bath, vice Wohlmann, resigned.

WALTER, E. W., L.R.C.P. Edin., L.M., M.R.C.S., has been appointed Medical Officer of Health by the Shoeburyness Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon for one year. Salary £80, with board and lodging in the infirmary, and a certain fee for attending the in- and out-patients under the direction of the Honorary Surgeons. Applications to the Hon. Secretary, Oldbury Rectory, Bridgnorth.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished quarters and board, gas, coals, and attendance.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road, W.C.—Three Assistant Registrars.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistantships.

CHORLTON-UPON-MEDLOCK DISPENSARY, Manchester.—Resident House Surgeon, unmarried. Salary £100 a year, with furnished rooms and attendance.

CITY OF LONDON UNION INFIRMARY.—Dispenser at the Infirmary, Bow-road, E. Salary £100 per annum and dinner daily. Applications to the Clerk to the Guardians, 61, Bartholomew Close, E.C.

COUNTY BOROUGH OF CARDIFF.—Resident Medical Officer, unmarried, for the Borough Hospital for Infectious Diseases, for one year. Salary £50 per annum, with board (without stimulants) and residence in the hospital. Applications to Dr. Walford, Medical Officer of Health, Town Hall, Cardiff.

COUNTY BOROUGH OF WIGAN.—Medical Officer of Health and Medical Superintendent of the Sanatorium. Salary £225 per annum, payable monthly. Applications to the Town Clerk, Municipal Buildings, Wigan.

EDMONTON UNION.—Medical Officer at the Chase Farm Schools, Enfield. Salary £80 per annum. Applications to the Solicitor and Clerk, The Grange, White Hart-lane, Tottenham.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Junior Assistant Medical Officer (lady) for the ladies' side. Salary £100. Applications to Dr. Phillips, Virginia Water.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants in the out-patient department, and four Clinical Clerks to the in-patient physicians.

KING'S COLLEGE, London.—A Demonstrator in the Bacteriological Laboratory.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Annual salary £100.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer. Salary £80 per annum, to be increased by yearly increments of £10 to a maximum of £100, with rations, furnished apartments, and washing. Applications to the Clerk to the Managers, Bromley, Middlesex, E.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone-road, N.W.—Surgeon to the out-department.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon, for twelve months. An honorarium of £50 per annum, with board and lodging in the hospital. Also House Physician to the in-patients, for eight months. An honorarium at the rate of £50 per annum, with board and lodging in the hospital.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

YORK COUNTY HOSPITAL, York.—Assistant House Surgeon. Salary £60 per annum, with board, rooms, washing, &c.

Births, Marriages, and Deaths.

BIRTHS.

BLATCHLEY.—On Dec. 10th, at Evelyn-street, Deptford, S.E., the wife of J. B. Challands Blatchley, L.R.C.P., L.R.C.S. and L.M. Irel., of a daughter.

MCCAUSLAND.—On Dec. 17th, at Swanage, Dorset, the wife of A. McCausland, M.D. Brussels, of a son.

SKELDING.—On Dec. 8th, at Bedford, the wife of Henry Skelding, M.B. Camb., of a daughter.

TAIT.—On Dec. 11th, at Highbury-park, the wife of Edward Sabine Tait, M.D., of a son.

MARRIAGES.

HUDSON—BIRD.—On Oct. 21st, 1895, at St. Peter's Church, Mossel Bay, Cape Colony, by the Venerable Archdeacon Fogg, Francis Joseph Hudson, M.B. Aberd., District Surgeon, George, third son of the late John F. Hudson, Mossel Bay, to Bessie Bird, eldest daughter of the late Captain George B. Bird, R.N.R.

SCOTT—CLEVELAND.—On Dec. 17th, at St. James's, Kidbrook, Patrick Cumin Scott, M.B. Cantab., M.R.C.S. Eng., youngest son of James Nairne Scott, Esq., Blackheath, to Alice Adelaide, younger daughter of the late Henry Cleveland, Esq., Solicitor to Government, Bombay.

SENIOR—WESTALL.—On Dec. 17th, at St. Cyprian's, Lewisham, Robert W. Senior, M.R.C.S., L.R.C.P., late Surgeon R.N., son of the late Joseph Senior, of Streatham, to Helen Maud, daughter of William Mawley Westall, of St. John's Lodge, Brockley.

SWANTON—DOE.—On Dec. 18th, at St. Michael's Church, Cornhill, James Hutchinson Swanton, M.D. Irel., M.A., to Sophia Doe, niece of the late Joseph B. Doe, J.P., D.L., of Edmonton.

DEATHS.

AMYOT.—On Dec. 15th, at Diss, Norfolk, Thomas Edward Amyot, F.R.C.S., aged 78.

BROOKES.—On Dec. 10th, at Much Wenlock, Shropshire, William Penny Brookes, F.R.C.S. Eng., J.P., in his 87th year.

CHANDRA.—On Dec. 14th, in London, Brigade Surgeon-Lieutenant-Colonel Rajendra Chandra Chandra, late Professor, Medical College, Calcutta.

HANBURY.—On Dec. 11th, at The Oaks, Sidcup, Kent, Richard Savill Hanbury, M.D. St. And., formerly Surgeon 2nd West York L.I. Militia, and of Peterborough.

MARTINE.—On Dec. 11th, at Weston, Haddington, N.B., William Martine, M.D. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

MEDICAL OFFICERS OF HEALTH AND THEIR TENURE OF OFFICE.

Mr. W. J. F. Churchouse, L.R.C.P. Edin., &c., medical officer of health to the Rural District of Daventry, sends us a lengthy communication from which it is quite evident that, owing to proper and honourable performance of his duty under the orders of the Local Government Board, he has fallen under the displeasure of people who prefer no sewers and a dirty water-supply to decent sanitation which will involve some cost; and now another officer has been elected in his place. Mr. Churchouse also sends us a correspondence with the Local Government Board on the subject, in which he expresses his astonishment that the central authority, whose "approval" is necessary to every appointment, as regards which they certify for repayment of half the salary by the County Council, should not uphold him as health officer. Our correspondent's case, unfortunately, is only one of many others, and as the law now stands we do not see how matters can be mended. He was only appointed up to a certain date. When that date arrived the post was legally vacant, and it rested absolutely with the district council to appoint him again or to appoint someone else. It is true that the Public Health Act gives power of "approval" to the Local Government Board; but this approval has not to do with the individual appointed, unless, indeed, it can be shown that he is morally or physically unfit to perform the duties. It is mainly concerned with the possession of proper medical qualifications and with the assignment of a reasonable salary. No statute gives the Local Government Board power to impose an individual medical officer of health on any authority having the statutory power of making a fresh appointment. Indeed, we do not see how it could be otherwise; the responsible authority must have the responsibility of selecting its own officer. But, once appointed, he should be upheld; and it is for this reason that we gladly see that the Local Government Board now urge authorities to make most of these appointments either for a long term of years or for life, during which period of appointment the holders cannot be removed, except with the Board's sanction. We deeply regret the circumstances attaching to our correspondent's case. It affords an additional reason for demanding of Parliament that, as regards tenure of office during good behaviour, provincial medical officers of health should be placed in the same position as that attaching to metropolitan officers of health.

WILLIAM III. AND HIS PHYSICIANS IN 1700.

THE following is the account of the post-mortem examination performed upon William III. after the illness referred to in our issue of Nov. 23rd:—

Report of the Physitians and Surgeons, comanded to assist at the dissection of the Body of the late King.

Upon the first view of the Body, before dissection, the following appearances were remarkable.

The Body in generall was much emaciated; Both the Legs up to the Knees and a little higher, as also the right hand and arm as far as the Elbow, were considerably sweld.

There appeared likewise on the left thigh near the Hipp, a bladder full of water, of the bignesse of a small Pullet's Egg, ressembling a Blane.

Upon opening the Belly, the Guts appeared of a Livid colour, and the bloud contained in the vessels there of blackish: The gutt called Jlion had in some places, the markes of a slight Jnflammation.

The Pancreas, Mesentery, Liver, Gall Bladder, Spleen, Kidneys and Stomack, were all sound and without fault.

Jn the Thorax or Chest wee observed, that the right side of the Lobes of the Lungs adhered to the Pleura, and the Left, much more, from which upon separation, there Jssued forth a quantitie of Liquor judged to be purulent or frothy serum: The upper Lobe of the left side of the Lungs and the part of the Pleura annext to it, were inflamed to a degree of mortification: And this wee looke upon as the immediate cause of the King's death.

ffrom the ventricles of the Heart and the great bloud vessels issuing out of them were taken severall large tough ffleshlike substances of the Kind called Polliposer.

The Heart was of the smaller size, but firm and strong.

Upon laying bare the right Collar bone, wee found that it had bin broken neare the shoulder and well sett, some Extravasated bloud was lodged above and below the ffracture.

The Brain was perfectly sound and without any signe of distemper.

Jt is very rare to find a Body, with so little bloud, as was seen in this, there being more in the Lungs, than in all the parts besides putt together,

Signed

HUTTON BLONDMORE
MILLINGTON BIDLOO
[and others]

Delivered to ye Queen and Councell, March ijth, 170½

Endorced—"Dissection of the Late King's Body." In writing of a later date and in different coloured ink, similar to the signatures—"To His Grace the Duck off Queensburry, &c., &c."

Mr. Thos. Jackson is thanked for his communication. If he will take counsel with his medical man, and present the facts to us properly attested by that gentleman, we shall be happy to give them consideration.

"A QUERY."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent, "Zambaan," *re* strychnine in snake poisoning, may I be allowed to say that the treatment, according to Dr. Muller, is to inject, in urgent cases, ½ gr., in milder ones ¼ gr. every half-hour until the effects of the snake poison are completely removed, and is perfectly safe practice which none who follow it will have cause to regret. A very small dose will then suffice to produce slight muscular spasms, and, to make doubly sure, a glass or two of whisky-and-water will show by their exhilarating effect that all danger is past. In a very bad case I had the patient was in a state of coma when I saw him; so I commenced by injecting fifteen minims of liqour strychniæ B.P., and twenty minutes afterwards injected a similar amount, both in the neighbourhood of the bite. Altogether I was obliged to inject sixty-five minims of the liquor—the largest quantity ever used up to that date (April, 1890). Messrs. Burroughs, Wellcome, and Co. of Snow-hill make the requisite tabloids, which are very convenient to carry; but I used the liquor strychniæ B.P. with good results for some years, and generally combined it with a little cocaine.

I am, Sirs, faithfully yours,

E. ST. GEORGE QUEELY,
formerly Government Medical Officer, Maytown District, North Queensland.

Dec. 16th, 1895.

VANISHING CUSTOMS.

To the Editors of THE LANCET.

SIRS,—I am endeavouring to obtain for scientific purposes trustworthy evidence concerning customs and superstitions connected with death and burial; and it has been suggested to me that there are many medical men in villages and country places all over the United Kingdom who often come across odd, old-world customs, sayings, and superstitions, especially among the peasantry and labouring classes, and who, if they knew that these were of value, would be glad to forward a note of them. You will be conferring a favour on me if you will allow me to make known through your columns that I shall be most grateful for any such information, and that I shall be happy to acknowledge the kindness of my correspondents in any use I may make of their communications. I am, Sirs, yours obediently,

Highgarth, Gloucester, Dec. 4th, 1895. E. SIDNEY HARTLAND.

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"THE CLIMATE OF THE EAST COAST OF AFRICA."

To the Editors of THE LANCET.

SIRS,—In reply to the inquiry of "Voyager" regarding the climate of the east coast of Africa permit me to say that it depends on how long he proposes to be on the coast, and how much time he proposes to stay on shore at the places he mentions, and whether it includes little shooting excursions up the rivers. Speaking generally, he may voyage along the coast from Natal to Zanzibar, calling at every port, and even spending a few hours on shore at each place, provided he sleeps on board at night, and suffer no ill consequence whatever. I speak with an experience of over three years on the east coast, the Zambesi river, and Lake Nyassa. I have not put in at all the coast ports, or, indeed, at most of them; but I have sailed from the Cape to Aden, calling at the principal ports, and I have no hesitation in prophesying a very pleasant, safe, and interesting trip for "Voyager" and his friends, and my only regret is that I am not to be one of the party.

I am, Sirs, yours faithfully,

T. THORNTON MACKLIN, M.D.

St. Mary's, Isles of Scilly, Cornwall, Dec. 16th, 1895.

P.S.—If your correspondent would like to make further inquiries, I shall be happy to respond.—T. T. M.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "Voyager," I can reassure him that a trip by sea from Natal to Zanzibar is free from danger of fever, although the temperature will be pretty hot at this time of year. Travelling along the edge of the coast itself, or at sea within a couple of miles, would not have been so safe at the commencement of the wet season now past. I am, Sirs, yours faithfully,

Cromwell-road, S.W., Dec. 13th, 1895. ROBERT J. COLENSO.

To the Editors of THE LANCET.

SIRS,—In reply to "Voyager's" letter I may mention that while acting as surgeon in the Union Steam Ship Co.'s service, in 1893 and 1894, I went twice along the east coast from Cape Town to Zanzibar. The voyage is by no means unhealthy for those coasting. I never had fever myself, nor did I know of any cases of fever acquired by officers or crew while coasting. Delagoa Bay and Beira are not particularly healthy places for permanent abode; but there is no fear of getting malarial fever while living on board a vessel during her stay at these places, nor is one precluded from landing for a short time by the climate. The people who get malaria are those who are compelled to live on shore for some time. If your correspondent cares to communicate with me, I shall be happy to give him any further information I can. I am, Sirs, yours faithfully,

Dec. 17th, 1895. SETH.

To the Editors of THE LANCET.

SIRS,—In reply to "Voyager" allow me to say that part of the littoral of East Africa—namely, Natal to Zanzibar—is particularly unhealthy, for it includes the worst governed part of Africa—the Portuguese territory. The sandy soil is permeated with miasmata, and the sanitary arrangements are most primitive. Delagoa Bay is very deadly to Europeans, and also another large place, Quilimane, higher up. I have visited every town on the east littoral of Africa from Cape Town to Aden. At Delagoa Bay I found the medical man and the Consul laid up with fever. The former told me it was a hell upon earth, and was much surprised that I had come ashore with my patient, with whom I was travelling round the world *vid* the east coast of Africa. I have an exhaustive account of my trip along this coast, and shall be pleased to give your correspondent any information about this littoral. The steamship service is very good, the officers of the companies—the Donald Currie line and the British Indian line—being particularly civil and obliging. Mosquitoes (particularly at Quilimane) are very troublesome. By "delicate" health I conclude "Voyager" uses the word in every sense. I am, Sirs, yours truly,

J. F. BRISCOE,
Medical Superintendent, Westbrooke House Asylum,
Dec. 14th, 1895. Alton.

To the Editors of THE LANCET.

SIRS,—I saw on Saturday night "Voyager's" letter in THE LANCET and in reply thereto I beg to offer the following observations. I returned from Zanzibar a few months ago, having been in charge of the English hospital there connected with the Universities Mission to Central Africa. I do not think one can advise anyone to go to Zanzibar simply for pleasure, more especially a delicate person. There is a great deal of malaria there, and in March, just at the end of the hot season, I expect, as was the case last year, dysentery will be rife. The rainy season usually begins about the end of March, and at the end of it the most unhealthy time of the year sets in. Some people, of course, have fever mildly, but a serious attack very often leaves lasting effects. Further, there is really nothing in Zanzibar to make it worth while to go there. The island is pretty; but there is nothing of interest beyond the beautiful church built by Bishop Steere. To one who lives and has work in the place it is, of course, different, but to a casual visitor there are no attractions. The hotels also are very bad. The English community there is fairly large and very hospitable; so that in this way visitors to the island generally have a pleasant time. The Delagoa Bay fever is, I believe, even worse than that of Zanzibar, and the place, from all I have heard about it from those who have been there, is very dreary. The climate of Zanzibar is very hot and very damp, somewhat resembling that of a fern-house at home. Mosquitoes abound. Prickly heat and boils also are often the lot of new-comers. Altogether, it is scarcely the place to go to for a pleasure trip, although people who live there like it and manage to be very happy there, in spite of its drawbacks. I am, Sirs, yours faithfully,

Norfolk street, Strand, W., Dec. 16th, 1895. MARGARET BREAY.

"TESTICLE *v.* SWEETBREAD."

To the Editors of THE LANCET.

SIRS,—The letter on the above subject in your issue of Nov. 30th has just been brought to my notice. I should like to mention, for the information of Mr. J. Miller, that in this part of the country testicles, especially those of lambs, are a very common dish indeed. I have myself seen farm labourers, when they have been castrating the male lambs, frequently eat them as they draw out the testicles. The lamb is held up by one man, whilst another takes up the skin of the scrotum and snips off a bit of the wool; he then makes a vertical nick in the skin and through the tunica vaginalis, and, pushing the testicle through the opening, draws it out with his teeth. He then either eats it, puts it carefully on one side, or else throws it on the ground, when, if any dogs are about, it is quickly eaten up by them. I am informed by those who have partaken of this dish (cooked in milk) that it is simply delicious; but I, for one, should not care to partake of it.

I am, Sirs, yours faithfully,

J. T. ROGER MILLER,
Malton, Yorks, Dec. 17th, 1895. Fellow, Obstetrical Society, London.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 19th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 13	29·29	N.W.	39	37	66	46	37	0·28	Cloudy
" 14	29·76	N.W.	39	36	54	53	36	...	Foggy
" 15	29·32	S.W.	51	50	55	51	39	0·35	Cloudy
" 16	29·12	S.W.	42	40	50	45	38	0·07	Cloudy
" 17	29·52	S.	43	42	52	46	42	0·30	Cloudy
" 18	29·71	E.	41	40	48	44	40	0·02	Raining
" 19	29·83	E.	38	37	42	40	37	0·01	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Professor John Gray McKendrick: Sound, Hearing, and Speech (experimentally illustrated).

During the week marked copies of the following newspapers have been received:—*Sussex Daily News, Louth Times, Oban Times, Northern Whig, Sheffield Telegraph, Liverpool Courier, Birmingham Gazette, Hackney Mercury, Suffolk Times, Manchester Guardian, Levant Herald, Freeman's Journal, Wigan Examiner, Wolverhampton Chronicle, Brighton Gazette, Bristol Mercury, Yorkshire Post, Ashbourne News, Derbyshire Courier, Leeds Mercury, Hampshire Telegraph, Liverpool Daily Post, Crewe Guardian, North Herald Reporter, Cork Constitution, Hereford Weekly Marvel, Sanitary Record, Times of India, Leeds Daily News, Notes and Queries, Leeds Evening Express, Parish Councillor, Times, Citizen, Nottingham Guardian, Temperance Record, Westminster Gazette, Blackburn Daily Telegraph, New Age, The Lady's Pictorial, East Anglian Times, Echo, Lancashire Daily Express, Jersey Times, West Kent Advertiser, Scotsman, Kidderminster Shuttle, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. J. Allen, Portland, Oregon, U. S. A.; Messrs. H. Austin and Son, Clifton; Messrs. R. Anderson and Co., Lond.; Association for the Suppression of Street Noises, Sec. of; Anderson's College Medical School, Glasgow, Treasurer of; *Annales d'Oculistique, Les*, Brussels; Alpha, Lond.

B.—Dr. T. Lauder Brunton, Lond.; Dr. Buchanan, Lond.; Dr. H. C. Bastian, Lond.; Mr. G. H. Broadbent, Manchester; Mr. H. Bigg, Lond; Mr. G. F. Burchill, Wallington; Mr. R. A. Bayliss, Spondon, Derbyshire; Mr. J. P. Bush, Clifton; Mr. A. De W. Baker, Dawlish; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs J. Beal and Son, Brighton; Messrs. J. Bell and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Burroughs, Wellcome, and Co., London; Bancroft's School, Woodford Wells, Manager of; B. B., Lond.

C.—Dr. J. M. Clarke, Clifton; Dr. W. Coates, Lahore; Dr. L. Cane, Peterboro'; Mr. W. N. Clemmey, Bootle; Mr. W. C. G. Collins, Aylesford; Mr. S. Constable, Lond.; Miss Candy, Lond.; Messrs. A. H. Cox and Co., Brighton; Chelsea Hospital for Women, Sec. of; Central London Throat, &c., Hospital, Sec. of; Cheyne Hospital for Sick, Chelsea, Sec. of; Castle Hotel, near Ringwood; Coöperative Purchasing Agency, Bath; Cortex, Lond.

D.—Mr. J. A. W. Dallard, Lond.; Devon, Lond.; Derbyshire Royal Infirmary, Sec. of.

E.—East London Hospital for Children, Sec. of; Emeritus, Lond.

F.—French Hospital, London, Secretary of.

G.—Dr. H. L. Gordon, Lond.; *Gazette* Co., Birmingham.

H.—Dr. J. Hinshelwood, Glasgow; Mr. P. H. Beale, Lond.; Mr. J. L. Hamilton, Brighton; Mr. J. Heywood, Manchester; Mr. W. Heffer, Cambridge; Messrs. Hertz and Collingwood, Lond.; Hamilton Association, Lond., Supt. of.

I.—Inquirens, Northampton.

J.—Mr. C. E. Jennings, Lond.; Mr. R. G. Jack, South Kensington; Mr. T. Jones, Mansfield.

K.—Dr. T. N. Kelynack, Manchester; Mr. H. Knevitt, Lond.; Messrs. Keen, Robinson, and Co., Lond.

L.—Dr. F. Levison, Copenhagen; Mr. H. Littlewood, Leeds; Mr. R. S. Lipscomb, Starcross; Mr. T. S. Lacey, Royton; Mr. J. D. Lewis, Llandyssul; Mr. K. K. Lewis, London; Messrs. Lever Bros., Lond.; Messrs. Loescher and Co., Rome; Liquor Carnis Co., Aston Clinton; Lewisham Union Infirmary, Sec. of.

M.—Dr. W. McCallin, Castledawson; Dr. H. McDonnell, Dundalk; Dr. O. Macartney, Partick; Mr. R. Mosse, Lond.; Mr. C. Mansell Moullin, Lond.; Mr. P. Möller, Lond.; Messrs. Manlove, Alliott, and Co., Nottingham; Messrs. C. Mitchell and Co., Lond.; Moss, Litter, and Peat Industries, Lond.; Mason College, Birmingham, Librarian of; Medical Society of Victoria, Melbourne, Sec. of; M. S. R., North Kensington, S.W.; M.D., Lond.

N.—Northumberland and Durham Medical Society, Hon. Sec. of; National Provident Institution, Lond., Sec. of.

O.—O. Q. R., Lond.

P.—Dr. S. R. Philipps, Virginia Water; Mr. F. Passmore, Lond.; Mr. H. W. Page, Lond.; Mr. H. L. Pearson, Birkenhead; Mr. V. V. Podwyssotzky, Moscow; Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis, and Co., Lond.; Practitioner, Lond.

R.—Mr. J. Rand, Lond.; Mr. J. Romano, Newbattle; Mr. W. A. Richardson, Lond.; Mr. W. Rae, Northampton; Messrs. Ridges and Sons, Wolverhampton; Messrs. J. Richardson and Co., Leicester; Royal College of Surgeons, Lond., Assistant Sec. of; Royal Statistical Society, Lond., Sec. of; *Roxburghe Press*, Lond., Editor of; *Revue Internationale*, Paris.

S.—Dr. H. Simpson, Frodsham; Surgeon-Major H. F. Stokes, Lond.; Mr. H. L. Smith, Balham; Mr. F. W. Strong, Stroud; Messrs. Spies, Bros., and Co., Lond.; Messrs. W. H. Smith and Son, Liverpool; Messrs. G. Street and Co., Lond.; Messrs. F. Stearns and Co., Lond.; St. Thomas's Hospital, Lond., Steward of; Sheffield City, Clerk of; St. Luke's Hospital, Lond., Steward of; *South Wales Daily News*, Cardiff, Proprietors of; Scottish Preserves Co., Greenock; S. T., Lond.

T.—Dr. E. F. Trevelyan, Lond.; Mr J. K. Thornton, Lond.; Mrs. W. B. Thomson, Ilkley; Thresh's Disinfector Co, Chelmsford, Managing Director of.

U.—University of London, Sec. of; Upsilon, Lond.

V.—Varilat Elastic Stocking Co., Lond.; Victoria Hospital for Children, Chelsea, Sec. of; Victoria Hospital for Children, Lond., Sec. of; Verax, Barnsbury.

W.—Dr. E. Walford, Cardiff; Mr C. Wilkes, Lond.; Mr. W. M. Wills, Lond.; Mr. W. Whitehead, Manchester; Mr. J. L. Williams, Lond.; Messrs. J. Wright and Co., Bristol; Messrs. Wall and Sells, Lond.

X.—X. Y. Z., Lond.

Y.—York County Hospital, Sec. of; Yerep, Bampton.

Z.—Messrs. A. and M. Zimmermann, Lond.; Zenana Medical College, Lond., Hon. Sec. of.

Letters, each with enclosure, are also acknowledged from—

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An Address
ON
"DOCTORS AND SHORTHAND WRITING."

Delivered at the Conference of the National Federation of Shorthand Writers' Associations held at Liverpool on Aug. 3rd, 1895,

BY NORMAN PORRITT, M.R.C.S. ENG., L.R.C.P. LOND.,
HON. SURGEON TO THE HUDDERSFIELD INFIRMARY.

MR. CHAIRMAN AND GENTLEMEN,—Is shorthand of any value to members of the medical profession? Such is the question I am here at your invitation to answer, and I begin my task by making an observation which is applicable to any of the learned professions—not the least of the advantages possessed by shorthand is the mental training required to learn it.

I see from time to time wonderful examples of pupils who have learnt shorthand in the phenomenally short space of a few weeks. But I submit that this estimate cannot apply to the majority of learners, to those who, with average intellects, have to make up for the want of transcendent ability by laborious plodding. For a number of years I taught shorthand at the Huddersfield Technical School, and whilst the learners' class numbered more than 100, with an average attendance of 80, the advanced class never exceeded 30 members, with an average attendance of about 20. Although the elementary class, should have been the feeder of the advanced I assume that it failed to be so because a large number of pupils had not the mental grit to battle through the certain amount of drudgery which is as necessary in the case of shorthand as in the acquirement of most other things of any value in this world. I look upon a youth who has mastered phonography as having gone through a course of self-discipline which is the best possible preliminary to the severer curriculum of any learned profession. I am not contending that phonography is difficult to learn, because that is not the case, but I do maintain that its acquirement calls for self-denial and dogged perseverance, qualities which cannot be displayed or acquired too early, whilst the ample reward which phonography returns to those who woo it steadily and surely is a self-learnt object lesson of the value of perseverance far more precious than any to be gained from pounds of precept or tons of example.

Observing in passing that the scientific basis, the philosophical character, and the geometrical beauties of phonography cannot fail to quicken the intelligence and widen the mental outlook, we shall find that our subject divides itself into the use of shorthand by the student and its use by the practitioner. The medical student prepares for his examinations and the practice of his profession by attending the lectures and demonstrations of his professors and teachers, by his own private study and reading, and by making observations and gaining knowledge in the dissecting-room, in different laboratories, in the wards and the out-patient rooms of the hospital, in the operation room and the post-mortem theatre, and possibly in the homes of the sick. In these different departments of his work and training he sees and hears many things of the utmost value to him in preparing for his examinations and for his life's work as a practitioner. His teachers have been students like himself, and for his benefit they present their offerings of knowledge and give him the results of their experience in well-arranged masses capable of ready assimilation. To preserve these precious lessons the student probably begins to take notes, and it is not necessary before this gathering of shorthand writers to emphasise the advantages which the shorthand writer has over his lumbering longhand brother. Fortunately for the student, to obtain the benefits of shorthand it is not necessary to be a swift writer, as verbatim notes, at any rate, of the lectures the student attends during the first two years of his career, are not necessary. One who starts his student career with a sound knowledge of, and the ability to use without hesitation, the easy reporting style of phonography at a speed of not less than sixty words per minute will find in the lectures he attends abundant opportunity for reporting practice. And the daily practice, added to the evening revision of his notes, will imperceptibly lead to an improved style of writing and a higher rate of speed, until advancing in his career the student reaches the lectures dealing with the proper subjects of his life's work, when he will be able to take down as much or as little as he desires of the words of men whose utterances are received by the whole profession with a respect due to the knowledge which has inspired them. And when in the quiet of his room the student goes over his notes, putting in vowels here and there, giving clearness to doubtful outlines and precision to ambiguous statements, the tone and style, the peculiarities, and mannerisms of the lecturer come back to him, and the impression made by the spoken words is deepened and intensified in a manner to which the longhand writer, with his laboured inconsequent jottings, is altogether a stranger. Many of the lectures are illustrated by diagrams or experiments, and a great advantage of shorthand is that it enables the student, whilst he is securing in his notebook the gist of the lecturer's explanations, to watch the experiment or examine the diagram. In such a case the longhand writer must either cease note-taking or miss some part of the practical lesson the professor is enforcing by his diagram, specimen, instrument, or experiment. And, as Dr. Gowers has pointed out, shorthand enables a student to subsequently make a rough copy of anything he sees into a finished picture by the ease with which shorthand descriptions are added to the imperfect drawing made during the demonstration or lecture. In other work, whether it be at the bedside taking notes of the condition of patients, in the out-patient room noting the features of the ailments to be seen there, in the ward listening to the comments of the physician or surgeon as he makes his round, in the operation room noting the surgeon's cunning in the details of an operation, in the post-mortem room with its grim, useful lessons, in the reading-room making notes from journals and works of reference, or in the quiet of his own room pouring over his books, the advantages of shorthand become more and more manifest.

If money is an object—and there are few to whom it is not—shorthand may obviate for the student the necessity of some text-books. In the "Use of Shorthand by the Student" issued by the Society of Medical Phonographers, Dr. Gowers tells us that, relying only on the shorthand notes of the lectures he attended—to the exclusion of text-books—he won the gold medal on taking his degree. Granting that Dr. Gowers embodies in himself that combination of ability and industry which is said by some to be the same thing as genius, it is tolerably sure that he could not have achieved this triumph without the aid of some form of quick writing, of which none is better than phonography. And this brings us to what is perhaps the most important feature of shorthand in medical work—its educational influence. Shorthand not only enables a student or medical man to work better, but to do better work. The act of writing becomes a pleasure instead of a tedious drag, and the mental processes evolved by the record of facts induce, to quote the words of Dr. Gowers, "a habit of quicker discernment," whilst the revision of the notes compels "a habit of looking out for the significance of the facts and of their relation to knowledge previously obtained. The power of seeing with the mind as well as with the eye becomes developed more and more, and its cultivation lays the foundation for an increased capacity, and even for an ability that would not otherwise exist, which will go on increasing through life, and cannot but make a great difference to the manner in which life's work is done." If time allowed I would pursue this point further, and I will content myself by quoting other words of Dr. Gowers, and say with him: "Of two students with equal ability, character, and knowledge, of whom one knows shorthand and the other does not, it is certain that the one who knows shorthand will far exceed the other who does not. Whatever a student would do without it, he will certainly do much more, achieve a higher position, gain greater capacity, be more fitted for the work of after-life, and do that work better, if he uses shorthand."[1]

But for the student to secure these advantages it is essential that shorthand be learnt before medical studies begin. The attempt to learn it after study commences is more likely to be a hindrance than a help, although a student of ability and determination may succeed in acquiring it. When he is qualified, however, a man may

[1] The Use of Shorthand by the Student. Price 2d. London: Sir I. Pitman and Sons, 1, Amen-corner, E.C.

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take it up with advantage, and the sooner the better. Many times have I wondered why some encouragement is not given by the ruling medical authorities to the preliminary study of shorthand. Twelve years ago, in the preface of a little book I published, I put in a plea for its inclusion in the optional subjects of the student's preliminary examination, and if the General Medical Council could see their way to adopt such a proposal they would, by bringing shorthand before the notice of the intending student, be conferring a lasting benefit upon him by placing in his hand a weapon with which he could more easily, more surely, and more thoroughly hew his path through the forest of subjects he has to traverse before he can receive his diploma or degree. And the advantages of a knowledge of shorthand will recur again and again in increasing ratio throughout the life of the now qualified practitioner. The chief, but by no means the only, use of shorthand to the medical practitioner is found in making notes of the cases he sees, and I would refer particularly to the advantages I have found from it in cases which have become the subject of subsequent legal investigation. At any moment a medical man may be called to the victim of some murderous attack, when the ability to at once take down what he hears and details of what he sees will not only be invaluable to himself and his reputation, but may guide the course of justice as to the guilt or innocence of accused prisoners. At post-mortem examinations, where he may be present on behalf of some individual or as the servant of the country, his shorthand writing will find scope for time-saving usefulness; whilst in the civil courts to which he may be summoned to testify by reason of professional relations with interested parties, his shorthand notes will ensure clearness and certainty to evidence which, if memory alone were trusted, would have a vagueness, soon to be converted by a clever cross-examiner into contradiction and unreliability. But the shorthand jottings—insignificant and unworthy as they seemed—will further the cause of justice and help the practitioner to preserve his credit and his reputation throughout his disagreeable ordeal in the witness-box. To the practitioner himself to take notes of his cases is one of the best guarantees of thoroughness of work, and, other things being equal, he who takes notes will do more justice both to himself and his patients than he who does not. Yet few general practitioners of medicine take notes, the high pressure at which his work has to be done, the scanty time at his disposal, and the cumbrous method of writing in general use being sufficient to deter all but the most energetic. Then volumes of often illegible and incomplete longhand notes soon accumulate and occupy much room, and if a system of abbreviation be adopted it is difficult for anyone but the writer himself to decipher the notes. Whilst the neat, compact phonography, lending itself so readily to the use of longhand headings, which point the reader to the spot he is seeking without having to traverse line after line of meandering scrawl, gives a pleasure and ease for after reference almost as remarkable as the time saved in the writing. In "The Use of Shorthand by the Practitioner"[2] the best methods of obtaining the fullest help from shorthand are described, and how the accumulating notes may be indexed so that any case may be at once referred to is set out with the clearest fulness.

The success of the Society of Medical Phonographers has been most gratifying from the medical as well as the phonographic point of view. Students of medicine are eligible for membership for the moderate subscription of 3*s.* 6*d.*, and both students and practitioners, learners and expert writers, will find in the lithographed publications and circulating magazines the society has already established agencies which cannot fail to be most helpful in their work. Dr. Neil, of Warneford Asylum, Oxford, is the secretary, and to him applications for information and membership should be addressed.

As a time-saver and sparer of tedious clerical work, then, shorthand comes to the busy practitioner as an invaluable boon. And it is to be remembered that the treatment of the bulk of the illnesses of the country is in the hands of the general practitioners, a minority—and I suspect a small one—of cases being seen by hospital physicians and surgeons and specialists. If the latter represent the head of the profession the general practitioners are the backbone. If the experience of only a half or even a quarter of this army of general practitioners could be placed on record who can estimate the benefits to medical science? There are grey-haired general practitioners whose judgments have been matured by self-derived lessons of which they alone have the secret; and when they die their memories are treasured and their loss deplored by patients grateful for benefits received. But too often all the documents relating to their life's work they leave behind are well-thumbed visiting lists, well-kept day books, and fat ledgers. Their perhaps unique knowledge and experience die with them. I take no credit for pressing these facts upon you. This yearly waste of priceless knowledge has been deplored before, and an attempt made to check it. In 1880 Sir George Humphry, from the presidential chair at the annual meeting of the British Medical Association, held at Cambridge, proposed his scheme for collective investigation. "One work," he said, "a work that especially appertains to the Association, the work of collective action, of the 'pull all together' of eight thousand members of the profession, I mean the work of cumulative observation or accumulated data, has been too little attempted, or if attempted has been productive of too little result. I am aware that anything on a large scale of this kind is a serious undertaking, a gigantic enterprise; and I feel it, therefore, to be worthy of this gigantic Association. It is, perhaps, the only work in which all or a large part of the members can really and fully participate, and to which each can contribute his mite. It is almost the only way in which questions relating to temperamental, climacteric, and topographical agencies upon disease and many others can be fully investigated and solved. To engage the members of the Association as participators in any division of such work would prove one of the most powerful inducements to the cultivation of observation and thought respecting the mass of facts which are passing, now too often unnoticed or unheeded, before their eyes, and would tend more than any other thing to deepen their interest in the science of medicine, and to impart the charm of wider usefulness to the daily routine of life."

These are weighty words and might have come from the lips of some advocate of the use of shorthand in medicine. Yet collective investigation is now never heard of. Stamped with the approval of Sir George Humphry and other eminent men, taken up by one of the most powerful and wealthy associations in the world, rejoicing in a title which was more than attractive, and received with acclamation by the profession, it has failed to realise expectations. For notwithstanding the all-powerful agencies which called it into existence and supported it, this attempt to collate, classify, and utilise the experience of the general practitioners of the country failed because when practitioners came to make their returns they had to rely not on facts, but impressions of facts, not upon accurately recorded data, but upon the shadows which flickered in their memories after the lapse of weeks, months, or years, aided by the daily business entries in their day books and ledgers. Laudable and ambitious as the collective investigation movement was, it failed because the foundation upon which alone it could rest did not exist.

But the words of Sir George Humphry have lost none of their wisdom or cogency by the lapse of years. The need is just as great to-day as when the weighty words came from the presidential chair of the British Medical Association at Cambridge. And I submit, with all humility, that the missing link in the grand chain of collective investigation can be supplied by shorthand. A few jottings at the bedside of the patient or in the surgery or consulting-room make an undying record of what actually was, and can be made in an incredibly short space of time with ease at the moment and confidence for reference in the future. With the aid of such record collective investigation would be a living actuality—a noble edifice, resting on its only possible basis, the immediate record of accurate observation. And valuable as would be the results of a general use of shorthand to each individual practitioner and his patients, they are not the most important or significant of those which the future may have in store for medical phonography; and in giving to the subject the first place on the agenda paper of your conference you are not merely encouraging the spread of shorthand on the one hand and forwarding the interests of doctors on the other, but you are promoting what are above all the objects of the profession to which I have the honour to belong—you are assisting in the diffusion of what cannot but tend to the advancement of medical knowledge and the health and well-being of the community at large.

[2] Published for the Society of Medical Phonographers by Sir I. Pitman and Sons, 1, Amen-corner, E.C. Price 8*d.*

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MEANS FOR EFFECTING INTESTINAL ANASTOMOSIS.

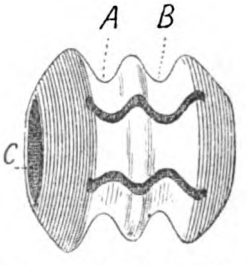
BY P. J. HAYES, F.R.C.S. EDIN., M.D., M.Ch. (Hon. Causâ) R.U.I.

SENIOR SURGEON TO THE MATER MISERICORDIÆ HOSPITAL, DUBLIN; PROFESSOR OF SURGERY, CATH. UNIVERSITY, DUBLIN.

THE interesting article on the employment of partially decalcified bone bobbins for facilitating intestinal anastomosis, published in THE LANCET of Aug. 31st last, by Mr. Allingham, led me to design a special form of bobbin, which, I venture to hope, will be found effective in cases of intestinal trouble necessitating either excision of a portion of the intestine and end-to-end junction, or the establishment of lateral communication between proximal and distal parts of the digestive tract. It is not at all my desire to criticise the several ingenious and valuable devices by which many well-known surgeons have overcome risks inseparable from operations of the kind just named. My sole object is to render the advantages belonging to each method easy of combination. It may be taken as granted that for the vast majority of intestinal operations a minimum expenditure of time ought to be linked with a maximum degree of assurance against danger of either leakage from or obstruction in the bowel. Probably most surgeons will also accept the view that the simpler the mode of suturing the less the operator will be hampered.

The bone or ivory bobbin which I have devised is of the form depicted in Fig. 1. It will be seen that the central

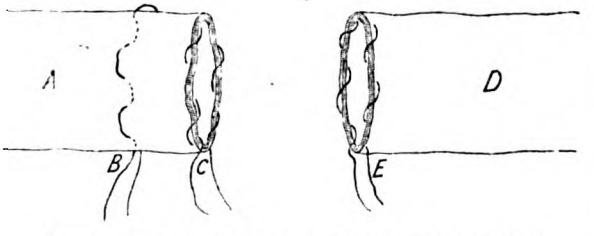
FIG. 1.



Double bobbin, shaded ends decalcified. A, Unshaded central ridge and grooves, not decalcified. B, Saw lines are seen segmenting the undecalcified bone and extending a little way into the decalcified parts. C, Lumen of bobbin.

part has been longitudinally segmented by means of a fine saw, the number of sections being proportionate to the size of the bobbin. The ends of the bobbin up to, and a little beyond, the extremities of the section lines are decalcified. End-to-end union—say, after an enterectomy—is to be accomplished in the following manner. At the orifice of each

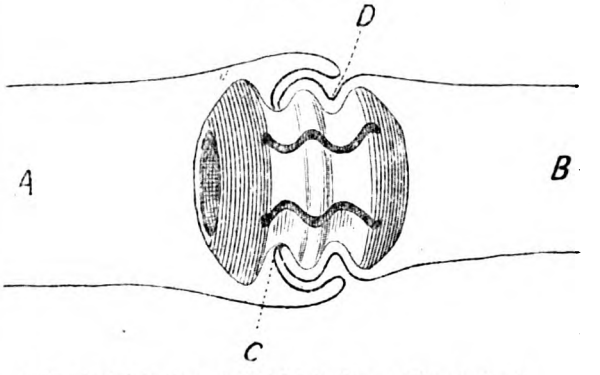
FIG. 2.



Intestine drawn on too large a scale. Shows proximal and distal portions of intestine prepared for end-to-end union. Marginal sutures traverse all layers of wall. Subserous purse-string only dips beneath peritoneal layer. A, Proximal intestine. B, Subserous purse-string suture. C, Marginal suture. D, Distal intestine. E, Marginal suture.

portion of intestine a marginal suture traversing all layers of the gut wall is to be inserted. On the proximal part of the intestine, about three-quarters of an inch above the marginal suture, a purse-string suture, implicating the serous coat only, is to be introduced (see Fig. 2). The ends of intestine, proximal and distal, are now to be drawn over the bobbin, until they correspond to the upper, or proximal, groove marked A in Fig. 1. Their marginal sutures are then to be drawn tight so as to make them fit well into it and securely tied. The final step consists in gently pushing up the bobbin and distal intestine, whilst careful downward traction is being made on the proximal intestine, until invagination from below upwards will have proved sufficient to bring the sub-serous purse string on the proximal intestine over the site of the bobbin-groove B (Fig. 1). This

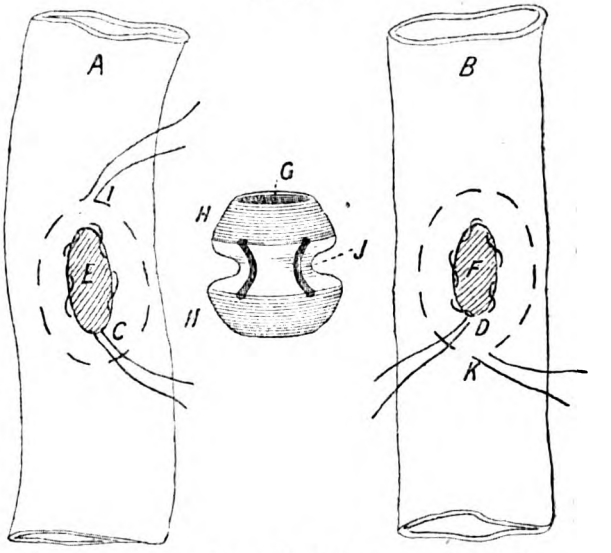
FIG. 3.



A, Proximal intestine. B, Distal intestine. C, The proximal groove where both marginal sutures secure the orifices of proximal and distal parts of intestine. D, Distal groove where subserous purse-string presses proximal intestine over invaginated distal.

purse-string, on being tied, will press the serous surfaces of the proximal and distal ends of intestine together, and by lightly compressing the distal portion over the corresponding groove of the bobbin afford absolute security against risk of slipping (see Fig. 3). Special features of the bobbin are—(1) its undecalcified condition where strength is required to bear pressure of ligature-like sutures; (2) its decalcified condition at the extremities, where solution takes place within a

FIG. 4.



A, Intestine. B, Intestine. C, Marginal sutures. D, Marginal sutures. E, Aperture to receive bobbin. F, Aperture to receive bobbin. G, Lumen of bobbin. H, Decalcified ends of bobbin. I, Subserous purse-string. J, Segmented undecalcified bone to be covered with a layer of "protective." K, Subserous purse-string.

moderate period; and (3) the undecalcified segmented centre, which must fall as small fragments into the lumen of the intestine. Lateral anastomosis can be accomplished with the aid of the bobbin just described, but in some instances it will be found preferable to effect it in the following fashion. The surfaces to be united are marked off by two sutures (see Fig. 4), the inner suture being a marginal one for the border of the

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operation wound—which may be made either before or after insertion of the sutures—the outer is to be a purse-string dipping beneath the serous tissue only. When proximal and distal parts of the intestine will have been thus provided with openings and sutures, a bobbin, which may be termed "single," to distinguish it from the form previously described, and to which the prefix "double" can be attached, is to be externally covered with thin "protective," and either end is to be inserted into one of the previously prepared intestinal apertures. Each marginal suture is then to be securely tied, and finally each purse-string is to be drawn tight and knotted. The marginal sutures will cause the edges of the openings to closely embrace the deep groove of the bobbin. The purse-strings will press the serous surfaces also well into the sulcus, rendering them corrugated and maintaining them in extremely close contact. The object to be effected by investing the outer surface of the bobbin with a layer of protective or other suitable membrane is to safeguard the groove against any escape of intestinal contents through the slots segmenting the undecalcified centre of the bobbin.

It will be seen that the sutures to be employed are of the simplest character and most easy of insertion. There is no need for any prolonged operation. In the employment of the double bobbin there is absolute security against any contamination of the peritoneum, and as the undecalcified parts, designed to withstand the pressure of ligature sutures, will be set free as small pieces when the bobbin ends become dissolved, there is freedom from all risk of impaction. In London Messrs. Krohne and Sesemann, of 8, Duke-street, Manchester-square, W., have prepared bobbins according to my instructions. In Dublin Messrs. Smith and Sheppard, of 124, Stephen's-green, are able to supply samples.

Dublin.

CLINICAL REMARKS ON CASES OF CHRONIC BRONCHITIS.[1]

By A. G. AULD, M.D.,

ASSISTANT PHYSICIAN AT THE GLASGOW ROYAL INFIRMARY.

THERE have been recently in these wards a goodly number of cases of chronic bronchitis, to several of which we may appropriately apply the more homely designation of "winter cough." They begin to appear in great numbers in the autumn of the year, more especially at the out-patient department, where, I should say, roughly speaking, they number at least one-third of all the cases. It is, therefore, the change of weather which brings this about. A vast number of bronchitic patients cannot afford to winter abroad and avail themselves of the "special" cures, and in the case of out-patients at the hospital a great many cannot even obtain that equable temperature indoors which is so essential under many conditions of the disease. Consequently, in our treatment of the latter class we are limited very much to the employment of drugs. Now, in any given case of chronic bronchitis which we are called upon to treat—and I am referring more particularly to treatment by drugs—various problems requiring solution present themselves. Few chronic diseases, indeed, exhibit such diversities in different subjects. Antecedent constitutional conditions are in great part responsible for this, though I do not go so far as to say that bronchitis is invariably grafted on some constitutional weakness or diathesis. The question of the origin of the affection is, however, far too wide for our consideration here. What I specially desire to bring before you is that each individual case demands its own special investigation and a line of treatment in accordance with the results of this investigation. We may be, some of us, unfortunately, too often in the habit of prescribing certain remedies somewhat indiscriminately, on the assumption that cases of chronic bronchitis are all very much alike. The method of "pinning our faith," as the saying is, to any particular drug or combination of drugs is conspicuously inept in this affection, for which, indeed, there are no specifics. It is a proceeding which is untrue to our art, and is sure to end in disappointment.

In illustration of these remarks let us look in the first place at two cases which are in many respects alike, though by no means entirely so. The first is a man thirty-nine years of age who has had winter cough for twelve years. This is unusual in so young a man and leads us to suspect that the subject of it must be of a scrofulous diathesis. In such, as is well known, the various mucous membranes of the body are unduly vulnerable, being especially liable to the catarrhal process. He is fairly well nourished, somewhat pale yet slightly cyanotic, and we find by a process of elimination that the lungs are the only organs in which we can definitely locate disease. His temperature is normal. On examining his chest we find from the hyper-resonance to percussion and otherwise considerable generalised emphysema, and auscultation reveals the presence of numerous crackling râles throughout both lungs. We do not detect many sibili or rhonchi, but from the extreme apices to the extreme bases these medium-sized, seemingly viscid râles are exceedingly abundant, so that this is a very severe case of the disease indeed, for the affection is deeply rooted. Also, it will be noticed that the râles are heard almost exclusively, if not exclusively, during inspiration, and chiefly towards the end of this act. Again, on listening, for instance, underneath the clavicles we find that the expiratory murmur is rough and somewhat bronchial in character. This, it may be remarked, is also, in conjunction with certain other phenomena, one of the earliest signs of phthisis. In either case it is due to the altered condition of the bronchial tubes. Normally, the bronchial tube which ramifies within the lung is a thin delicate cylinder whose elastic walls in their gentle recoil noiselessly propel forwards the air in expiration. Not so here; instead, the tube has become converted from congestion, &c., into what may be regarded as a rigid body on whose roughened and unyielding walls the air of expiration harshly plays.

I may, perhaps, in a manner digress here just to mention a peculiar, and, I believe, undescribed condition of the inflamed mucous membrane of the trachea and largest bronchi in certain severe cases. It is well known that post mortem longitudinal bands or ridges are often found, giving the hypertrophied membrane, more especially over its posterior tracheal surface, a ribbed appearance. These ledges are formed chiefly of a granulation-like tissue, but very frequently quite a large amount of elastic tissue is likewise present. But in one or two cases I have detected quite large nerves traversing this tissue. In the normal membrane it is extremely difficult, even with the highest powers of the microscope, to trace the nerve twigs. That comparatively large nerves, therefore, should be found in these ledge-like bands is a curious problem in pathology. Suffice it to say here that they would very well serve to explain the excessive irritation which the cough betrays in these cases.

The second case is that of a man thirty-five years of age who has had winter cough for five years. He says that he has frequently to inhale a sulphurous atmosphere. He is thin and pale, but presents no evidences of deficient aeration of blood. His temperature is sometimes in a slight degree above the normal. Physical examination reveals that his right lung is free from bronchitis, but the left lung throughout presents a condition exactly similar to what we found in the lungs of the first patient—that is to say, it is throughout the seat of numerous râles; but little emphysema, however, can be detected. The unilateral character of the disease in this case, and its extent, viewed in connexion with numerous other cases which I can recall, are by no means of good augury as to the ultimate issue. It is rather to be suspected that there is a special weakness in this particular lung which, if neglected, will show itself in other forms at no very distant date. At present, however, we only find the bronchitis. In both these patients expectoration is scanty and the cough is very troublesome, especially at night and in the early morning.

In treating these cases we have two indications clearly set before us. One is to relieve the symptoms—the distressing cough, the laboured breathing, and the uneasiness and tightness in the chest; and the other, to raise the quality of the patients' tissues so as to enable them to overcome the disease and resist its further invasion. To fulfil the first of these indications the patients have been taught to inhale the spray of ipecacuanha wine diluted with twice its bulk of water. This mixture is sprayed into the throat by the ordinary hand-ball apparatus morning and evening for about ten minutes, the patient being directed to spit out the liquid which accumulates in the mouth. The result of this treatment has been that the second patient has been greatly relieved. His expectoration is easy, he coughs but little, and he gets a good night's sleep. The first patient has also received benefit, but not so marked. Other drugs may be given in this manner to soften the mucus, but it is an interesting question how far improvement is due to the drug and how

[1] Delivered in the Glasgow Royal Infirmary on Nov. 29th, 1895.

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far it may be due to the moisture. Dr. Wolfe, at my suggestion, gave the second patient the spray of hot water the last day or two, and the patient expressed himself just as much relieved as he did with the ipecacuanha. However, this may have been due to the previous good effect of the latter. Another process which may be advantageously combined with this is massage of the chest and back, with the use of a rubifacient such as the compound liniment of camphor. It will not suffice merely to rub with the liniment for a few moments over the surfaces. It must be a systematic and thorough massage, and so helpful and refreshing is this to the patient that many will on no account do without it. I do not see that we should be eternally vexing our souls as to the "how" and the "wherefore" of everything, and so I will not stop to discuss the possible manner in which this process does good. It is a grand thing to lighten the burden of a sufferer and enable him to proceed more cheerfully on his way, which is often weary enough. In regard to the second indication of which mention has been made—viz., the improvement of the patient's general condition—these cases would indicate the employment of cod-liver oil in large doses, which, in addition to its nutritive qualities, is also a valuable expectorant. By these various means, and with other circumstances favourable, many such cases can not only be relieved but permanently cured. With regard to the use of ipecacuanha there is a caution to be given, and that is that it is not a safe agent to use in cases wherein there is disease of the heart.

In the next place let us look at another case which presents very different features from those just considered. The patient is a man fifty years of age and has had winter cough for three years. His skin is of a somewhat dusky hue, but on examining his mucous membranes it is evident that he is somewhat anæmic. He has considerable emphysema, but his circulation is wonderfully good considering the state of his blood and the weakness of which he complains. Excepting his lungs, the organs generally appear to be in a healthy condition. Auscultation reveals numerous rhonchi and bubbling râles over both lungs. But the feature of the case is this, that without much difficulty he expectorates unusually large quantities of mucus. This, in an elderly man, has a very weakening effect and shows a low condition of vitality. It is not exactly what is known as pituitous catarrh or bronchorrhœa, but it is a condition approaching it. Herein we find the indications for treatment different from those we formerly considered, inasmuch as it is rather repression than encouragement which the expectoration demands. Encouragement, no doubt, to get rid of what accumulates, but repression of that abnormal secreting action of the mucous membrane of the air tubes. In order to effect this we may give by inhalation a spray of hot water lightly medicated with oil of turpentine or fir wood oil. In addition to this we give a mixture of perchloride of iron with some strychnine, which will act both as an astringent tonic and hæmatinic. This patient has for some days been subjected to this treatment, and already expresses himself as feeling much better. There are one or two other remedies which may be mentioned in connexion with this case. One is iodide of potassium, which in many cases of bronchitis acts in a rapid and marvellous manner, even when other means have failed. It is believed by some, however, that it should be withheld if there is a condition approaching to bronchorrhœa, although I have not fully tested this. The employment of a hydragogue cathartic is often attended with much relief in virtue of a vicarious or revulsive action. This may be more particularly indicated in plethoric subjects. Again, acute exacerbations are not infrequent, and in the case especially of obese persons such acute attacks may suddenly supervene on slight previous symptoms and may carry off the patient in forty-eight or even thirty-six hours. A smart purge at the outset of such attacks should not be omitted. It remains to be said that in cases such as these opium in all its forms should be avoided.

Now in these three patients we have found a bronchitis which is uncomplicated with evidences of disturbance in other organs. There has been, in two of them, the local complication of emphysema, but this is generally to be expected. But the most important, and certainly the gravest, result or complication of this disease is derangement of the circulation; and in order to study its effect on the heart and circulation generally we will in the last place briefly turn our attention to another case. This patient is a man fifty-three years of age, and we find that he was treated in the Glasgow Royal Infirmary over two years ago for bronchitis. The report of his case at the time referred to states that over both lungs, before and behind, numerous râles were heard, coarser in front and finer behind. The heart sounds were "booming" in character, but no murmur was present. The apex beat could not be definitely localised. Respiration was 40 per minute; the cough was bad, with yellow sputum; the pulse was 84. There was no indigestion; the bowels acted regularly; the urine was normal; and he left the hospital improved. At the present time there is not much new to note with regard to the râles, which remain pretty much as they were; but there is very marked general emphysema, so that his chest is somewhat barrel-shaped. As we looked at him, propped up in bed a few days since, you would have observed his anxious straining for breath, his labouring chest, the prominent veins in his neck and face imparting in their ramifications a dusky patchiness to the latter, and his earnest yet restless gaze. Although still propped up in bed, his breathing is now fairly calm; venous congestion about his face is still, however, apparent, while a more reposeful expression exists in his eyes. The reason for this change will shortly be mentioned. With regard to defective aeration of the blood it is necessary to remember that it produces two symptoms which are apt to lead the unwary astray. One is a reduction of the temperature, the other an enfeeblement of the pulse. This patient's temperature has for some time been frequently sub-normal, and his pulse until recently under 60. Therefore, in many cases of bronchitis the state of the pulse and temperature is not a safe guide as to the severity of the inflammation. Turning to the physical examination we find in the first place that there is much œdema of the skin of the trunk and legs. There is also some ascites. Then on listening over the bases of his lungs we make out fine moist crepitations, but these are not so marked as might have been expected. It shows that there is some œdema of the lungs as well. Examination of the liver shows some increase of dulness, which means that it is congested, while his urine contains a small quantity of albumin, which unmistakably points to some congestion in his kidneys. That congestion is present also in his stomach is shown by his distaste for food. In point of fact, we find that the venous circulation is impeded throughout all this man's body. With regard to the stomach, a year or two ago I happened to make some microscopical examinations of congested stomachs such as we find here and in certain conditions of Bright's disease, in the latter case due to poisons seeking elimination. It was really surprising to find the degree to which the capillaries which ramify between and amongst the gastric glands had become developed. In well-preserved stomachs they formed a plexus which ramified over the free extremities of the villi, and the extreme tenuity of their distended walls made one wonder how in an organ subject to so much disturbance hæmorrhages were not more frequent in such cases. The probability is that capillary hæmorrhages are really more common than is supposed, the only indication of which might be a temporary darkening of the fæces.

In order to find the explanation of the general venous congestion we turn to the heart and readily make out enlargement of the right ventricle. The apex beat is diffuse and displaced downwards and to the right, but the presence of emphysema prevents the mapping out of the ventricular border. No murmur can be detected, but the first sound has an impure or muffled character. On listening over the base reduplication of the second sound is heard, due, as is usually supposed, to the difference in the tension between the two sides of the heart. Before the patient was put under treatment the heart beats were irregular, weak, and slow, numbering under 60 in the minute. The failure of the heart in such cases as this is generally put down to the difficulty experienced by the right ventricle in driving the blood through the lungs, while the defective aeration of the blood likewise interferes with its nutrition. We note further, however, that age has a good deal to do with it. In the case of the second patient mentioned, aged thirty-nine, who has had bronchitis for twelve years, we found the heart to be acting well. But senility of the tissues causes rapid failure, which goes on to fatty degeneration, and this condition of the heart, together with the extensive emphysema leads us to consider whether there is not a more or less universal tendency in this case to a degenerative process.[2] So that the bronchitis may not, after all, have

[2] Emphysema, by A. G. Auld, THE LANCET, Dec. 2nd, 1893

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to bear the brunt of being the sole cause of the mischief. Under all the manifestations of disease there are hidden agencies at work whose presence eludes the most vigilant. It is a fine thing, no doubt, to go around the wards and "spot" the cases, to use the expression one so frequently hears. In this connexion, perhaps, I may be allowed to mention an anecdote of the late Sir Andrew Clark. A year or two before his lamented death a lady went up from Glasgow to consult him. When the examination was over the patient said: "And what do you consider to be my disease, Sir Andrew?" The reply was: "Well, if I were a young man, I should certainly give your disease a name, but being an old man I prefer not to apply any name to it." There is a good deal of food for reflection in this. In reference to the treatment in this case it is incumbent on us to give as prompt relief as we can to the condition of the circulation. To this end we gave medium doses of digitalis, and for the condition of his lungs a stimulating expectorant is clearly indicated. Carbonate of ammonium in fairly large doses, together with the compound spirits of ether, was therefore used in conjunction with the digitalis, and we are pleased to find a marked improvement since this was begun. We endeavoured in this way to obtain diuresis, and the result has been that his urine has risen in quantity from 31 ounces on admission to 118 ounces to-day. With regard to carbonate of ammonium I may mention that it is sometimes very serviceable when given in large doses, even as much as ten grains, and glycerine is an excellent medium wherewith to administer it. Should, however, the time come when these remedies fail us, we may resort to the inhalation of oxygen, and should cyanosis become an urgent symptom venesection is often followed by much relief.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF GASTRO-INTESTINAL HÆMORRHAGE IN AN INFANT.

BY LOUIS E. STEVENSON, M.B. CAMB.

IN the columns of THE LANCET of April 22nd, 1893, I placed on record a case of this extremely fatal disease. A second case has recently come under my notice. The labour history of the mother is rather unusual and is briefly as follows. Liquor amnii drained away on Nov. 16th, 1894. The woman was assured by a neighbour that this was only the "womb slipping down," and I was not sent for. I happened to call on the Wednesday following, when I found the patient looking much smaller than one would expect at the end of gestation, and she complained to me that the waters had come away, but she had had no pain whatever. I wished to examine, fearing a mal-position, but the patient did not appreciate my anxiety. On the evening of Nov. 25th I was summoned, but found on my arrival that the child had been born one hour. I removed the placenta, which was extremely small, by expression. The child (female) was puny and emaciated-looking, there being apparently an almost entire absence of adipose tissue in her body and limbs; she had the appearance of being starved. The function of respiration was established with difficulty. The child was ordered to be wrapped in cotton wool and kept warm. Next day she breathed rather heavily, but on the following day took the breast eagerly and seemed to have improved. On the morning of the next day I found the child very ill, having passed a treacly motion of blood mixed with meconium. The skin was of a deep icteric tinge, more like the hue of true jaundice than that of the so-called icterus neonatorum. There was no bleeding from the umbilical cord. Later in the day a considerable amount of bright-red blood was vomited and several more dark-coloured motions were evacuated, the child dying at 2 A.M. the following morning.

Remarks.—There was no history of hæmophilia, though the child herself may have been a hæmophiliac. More probably, I think, this was one of those cases where visceral congestion follows difficulty in the establishment of respiration. Hæmorrhage would also be favoured by debility of the child and possibly by uterine compression before birth. The nutrition of a fœtus must depend, I suppose, on the relative size of the placenta, as it is hardly likely that partial compression of the cord for nine days could account for the extreme emaciation of the child when born. The mother, I may add, is a strong, stout, healthy woman. I could not elicit any history of syphilis in the family.

Temple Sowerby, Penrith.

SARCOMA OF THE OVARY IN A CHILD.

BY FREDERICK PAGE, M.D. EDIN., M.R.C.S. ENG.,
SURGEON AND JOINT LECTURER ON CLINICAL SURGERY, NEWCASTLE-ON-TYNE ROYAL INFIRMARY.

A GIRL aged six years with a large abdominal tumour was sent to me by Dr. Bishop of Wylam-on-Tyne for operation. The abdomen had been noticed to be gradually increasing in size for about four months, but, the child's general health continuing to be good, no anxiety was felt. On Nov. 2nd the abdomen was opened, and a solid tumour of the left ovary weighing three pounds and three-quarters removed. There were no adhesions, and only some two ounces of blood-stained fluid in the pelvis. On Nov. 25th the child returned to the country, having made an uninterrupted recovery. The tumour proved to be a fibro-sarcoma. Mr. Bland Sutton, in his work on Tumours, alludes to twelve cases of sarcoma of the ovary in children under fifteen years of age which have been operated upon since the year 1874. Seven of the children died from the operation. The youngest patient was three years and a half old; Dr. Cameron of Glasgow operated, and the case terminated fatally. The youngest patient who recovered was seven years old, and Dr. H. Croom was the operator. The case now reported would seem, therefore, to be that of the youngest child who has, so far, been successfully operated upon for sarcoma of the ovary.

Newcastle-on-Tyne.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

SEACOMBE COTTAGE HOSPITAL.

A CASE OF OVARIOTOMY; RECOVERY.

(Under the care of Dr. BOUVERIE MCDONALD.)

THE patient was a woman aged forty-two years who had been operated on for ovarian tumour of the left side five years previously at the Hospital for Women, Liverpool. She complained of an abdominal swelling, free from pain, and in no way affecting the general health. Menstruation was irregular. The tumour was central and extended three inches above the umbilicus; it was smooth and fluctuating below, but somewhat lobulated and more solid above. A multilocular ovarian tumour was diagnosed and its removal decided upon. On June 4th, 1895, Dr. Bristow administered an anæsthetic, and with Dr. Craigmile's assistance Dr. McDonald proceeded to operate. The only difficulty met with was in the abdominal wall, the old cicatrix having made the respective layers dense and adherent. The lower portion of the tumour readily collapsed after puncturing with a Spencer Wells trocar, and the upper and more solid portion was easily drawn through the abdominal wound. A Staffordshire knot of Chinese silk was used for the pedicle, and the abdominal cavity was freely irrigated with boric acid solution. A Keith's glass tube was used in the lower part of the wound, which was closed by interrupted silk sutures.

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The progress of the case was highly satisfactory. The temperature once reached 100° F. The tube was removed on the second day. All the stitches were taken out on the eighth day, and the patient was out of bed on the fourteenth day. By the twentieth day she was looking after some of the children in the hospital, and went out daily afterwards.

Remarks by Dr. MCDONALD.—"Should ovariotomy be undertaken by the ordinary general practitioner?" is a question that may meet with as many "ayes" as "nays." It is, however, generally accepted that the operation—not only on account of the recognised experience of the operator, but also for the safety of the patient—is best performed by a specialist. My own private views have endorsed those of many of my medical friends that ovariotomy may present so many difficulties unforeseen that it is undoubtedly wise to leave the operation in the hands of one who is almost daily brought face to face with every contingency which may arise. I am fully aware that many cases have been undertaken by general practitioners, and also that a fair proportion have ended satisfactorily. Nevertheless, I consider that the operation should not be undertaken lightly—merely for the sake of having done an ovariotomy—but every consideration should be well weighed before proceeding to operate. It may, therefore, be of some interest to any who, like myself, are associated with a small hospital—where an occasional ovarian tumour presents itself—to give a few rules which might guide one—as they guided me—in deciding upon the operation. Firstly, the patient's absolute consent should be obtained. No general practitioner has any right to force his own services, or in my opinion even persuade a patient to submit to his limited experience in this direction. In the case described above I only consented to operate at the urgent request of the patient. Next in importance is the preparation of the patient by attending to rest, daily evacuation of the bowels, and giving plain wholesome food for three or four days before the operation. Thirdly, the preparation of the room. In this case I had the room fumigated with sulphur on three occasions. The walls and floor were carefully washed. The operating-table and chairs were also thoroughly disinfected, and nothing else but the bed occupied the room. All the instruments were, through the kindness of Messrs. White and Wright of Liverpool, new, and lay in carbolic solution (1 in 20) for eighteen hours before the operation. Skilful nursing is a necessity; as regards day work I was well off with the ordinary staff, but a nurse accustomed to such cases was procured for night work. Need I add to these primary rules the necessary confidence in one's own power to complete the operation? Granted that all the above conditions are present, then I consider that a general practitioner is entitled to undertake the case. The correct diagnosis of ovarian tumour is not to be passed over lightly, and here again the great advantage of a specialist is all-important. Even the differential diagnosis is not always easy, and, having satisfied oneself of an ovarian origin, the questions arise: Are there adhesions? Is the tumour solid or fluid? Is it unilocular? &c. One word of warning may not be out of place. I know of some young practitioners who, having successfully undertaken *one* case of a special kind, immediately allude to details of the case as "their invariable custom," but after one successful ovariotomy let no man be puffed up with his own prowess—rather let him, should he be called upon to undertake a second case, study every detail with the same anxiety which he showed in his first attempt. My thanks are due to Miss Collins and Nurse Hughes for their constant care and attention, also to Dr. Craigmile for his assistance at the operation.

Medical Societies.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Abdominal Aneurysm.—Abdominal Suppuration.

A MEETING of this society was held on Dec. 12th, the President, Mr. CHARLES KING, being in the chair.

Dr. BEEVOR read an account of a case of Abdominal Aneurysm showing peculiar symptoms. The patient was admitted into the Great Northern Central Hospital under his care suffering from symptoms of pressure on the roots of the upper lumbar nerves on the left side. Thus on carefully comparing the sensation of each thigh it was noted that there were areas of comparative anæsthesia on the left; the left knee-jerk was also diminished on comparison. A certain amount of reflected pain was complained of over the left great trochanter, and on percussion over the spines of the first and second lumbar vertebræ tenderness was found. It was then observed that there was a small abdominal tumour on the left side of the spine, but from the other symptoms it was thought to be malignant character. In a short time this tumour increased in size, occupied a large area on the left side of the abdomen, and showed expansile pulsation. Soon after this increase began to be observed, one morning, while moving in bed, the patient was seen to fall back, his face became blanched, and he expired almost immediately. On post-mortem examination there was found to be an aneurysm of the abdominal aorta which had caused erosion of the bodies of the first and second lumbar vertebræ and which had penetrated the left psoas muscle, dissecting through the soft muscular structure, and turning it into a secondary aneurysmal cavity. The blood had then passed upwards, and, passing below the diaphragm, had escaped suddenly into the left pleural cavity; death had resulted as the consequence of this accident. Dr. Beevor remarked on the importance of observing with care apparently insignificant physical signs as a means to accurate diagnosis, and especially the comparison of one side of the body with the other in the case of any symptoms involving sensation or any other interference with the nervous system.—In the course of the subsequent discussion Dr. GALLOWAY remarked on the absence of signs of referred pain along the course of the lumbar nerves, which must have been pressed on during the progress of the aneurysm.—Mr. MOWER WHITE pointed out the fact that from the anatomical relations the aneurysm must have perforated the strong iliac fascia on gaining access to the psoas muscle, and inquired whether it was not possible that the aneurysm might have originated in either the first or second lumbar artery instead of in the aorta itself.—After remarks by Dr. GLOVER and Dr. MORISON, Dr. BEEVOR replied, and said that there was no evidence that the aneurysm had originated in either of the two positions mentioned as possible by Mr. Mower White.

Dr. THOMAS HAMILTON then described a case of Abdominal Suppuration. The patient, a man in late middle life, had long suffered from symptoms of chronic dyspepsia, with gradual loss of strength. After a long period of illness he developed a tumour in the left side of the abdomen, about the iliac region. This increased in size, with rise of temperature, and presented much difficulty in diagnosis. The patient was seen in consultation by several physicians and the opinions formed differed, some being in favour of the diagnosis of abdominal suppuration and others of malignant disease. At length, on being seen in consultation with Mr. Langton, it was decided to incise the mass with the idea of exploration. On incision the tumour proved to be an abscess in connexion with the descending colon, and on microscopic examination of the wall of the cavity there was found to be no evidence of malignant origin. While the abscess was being drained there appeared in the discharge a coil of sausage skin and a bristle about ¼ in. in length. Dr. Hamilton was of opinion that the abscess was associated with the presence of these foreign bodies as irritants. In spite of all efforts to prevent the spreading of the suppuration the abdominal wall became extensively involved and death resulted.—Dr. GLOVER, who had seen the case with Dr. Hamilton, remarked on the extraordinary manner in which the abscess had simulated a malignant growth, and stated that in the first instance he felt quite assured of the malignant origin of the obstruction that was produced.—Mr. CHARLES KING spoke of the case, and criticised Dr. Hamilton's supposition that the foreign bodies mentioned had been the immediate cause of the abscess. Mr. King was of opinion that it was more probable that there had been a fæcal accumulation, possibly around the foreign bodies, which had caused ulceration of the mucous membrane, with a resulting pericolic abscess.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE third meeting of this society was held on Dec. 12th, Dr. J. DRUMMOND, President, in the chair.

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Dr. GOWANS exhibited a boy whose Elbow he had excised a year ago for Tuberculous Bone Disease following an injury. The joint and humerus were extensively involved, so that more bone than usual required removal. On recovery it was found that a flail-like arm was the result, and an attempt was made to remedy this by prolonged rest in plaster bandages, but without success. Four months ago the ends of the bones were cut down upon, and the radius and ulna were wired to the humerus, and the arm was put up in splints for six weeks. The wire was left in, for ankylosis was expected, but it could now be seen that every normal movement of the arm was easily performed, and the boy had so much power in it that he could lift heavy weights.

Dr. LIMONT showed a man thirty-six years of age who had a chancre in 1894. Two months after a secondary rash appeared. He was admitted to the infirmary on Nov. 22nd, 1895, when there were still evidences of recent syphilis in the stains of eruptions and adhesions of iritis. He had to be held up, for he could not stand. He could move his legs in bed, but had little power in them. Sensation was unaltered, his leg muscles wasted, and reflexes increased. After he was admitted he developed incontinence of fæces, in addition to his urinary difficulty. He had now been in the infirmary for three weeks, and taking iodide of potassium in 20-gr. doses. A marked improvement was evident, for he could stand alone and walk a little; his bladder trouble was abating, and the anal weakness was gone.—Dr. LIMONT showed a man thirty-six years of age whose early history was complicated, for a dual infection (glanders and syphilis) was possible. On Feb. 2nd, 1895, he had a chancre. This was followed by a secondary eruption which had left traces of a strongly suggestive character. That he had syphilis at this time was proved also by the fact that he infected his wife, who had an ordinary attack of syphilis. About the same time as he noticed the chancre he was bitten by a horse. The horse was suspected to be suffering from glanders and was injected by mallein. The injection was followed by glanders reaction, and on post-mortem examination evidences were found of glanders in the horse. The proofs of glanders in the patient were not so convincing. Towards the end of February he had large white and yellow patches in the throat, with fœtid breath. At the end of March a skin eruption appeared, described as resembling measles at first, and then like small-pox, for the spots had matter in them. He was sent to the Infectious Hospital as a case of suspected glanders, where he stayed thirteen weeks. About a month ago he began to complain of headache and became listless and apathetic. Two weeks ago he noticed some difficulty in walking; his left leg and left arm, and speech became affected. He was admitted to the infirmary on Dec. 7th, 1895. He was listless, and took little notice of anything, and wandered in his mind at night. His left face, arm, and leg were weak, and the knee-jerk increased. The only other discoverable sign was that his left pupil was dilated. He had improved since admission. Dr. Limont said that in his opinion the condition was due to syphilitic disease with thrombosis of the cerebral vessels.—Dr. G. MURRAY said he had seen this case in March. The patient then had a sore-throat with white patches, an offensive discharge from his nose, and a pustular skin eruption. The history of possible glanders infection was complete. Discharges from the throat and skin and penile sore were treated for glanders bacilli, but they were not found. Inoculation of guinea-pigs also proved negative.

Dr. DRUMMOND showed a man forty-five years of age who had Syphilis ten years ago. Fifteen months ago he had headaches and similar symptoms, from which he recovered three months later under large doses of iodide of potassium. He had now complete paralysis of his right seventh and sixth nerves and partial paralysis of the right hypoglossal. His left arm and leg were paralysed. There was no optic neuritis, which was commonly absent in pons tumours. Vomiting was infrequent, as is also usually the case. Though gummatous tumours in the pons were rare there could be little doubt that a gumma of the lower part of the pons was present in this case.—Dr. DRUMMOND showed a child aged six who when a baby had been treated for bronchitis with brandy and honey. When a year old she had half an ounce of port wine daily, and at the age of three was allowed to have beer to dinner in addition to the port wine. At odd times, too, she was supplied with gin. A year ago she began to suffer from morning sickness, with loss of appetite, wasting, and weakness. Soon after an attack of measles last Christmas her abdomen began to swell, and for the last three months has been very large. She has been twice tapped, but rapidly refilled. The liver dulness is considerably increased, and the liver can be felt to be large and hard. The spleen is enlarged and hard also.

Mr. PAGE showed a man thirty-seven years of age who was admitted to the infirmary with a large Aneurysm of the Right Popliteal Artery of four months' duration. There was a history of syphilis, and the patient had extensive aortic disease. His femoral artery was ligatured at the apex of Scarpa's triangle on Nov. 21st, 1895. The wound healed by first intention and the aneurysm was cured.

Mr. WILLIAMSON showed a woman forty-eight years of age from whom the Uterus with Multiple Fibroids had been removed (with specimen).—Mr. WILLIAMSON also showed a young woman from whom a large Tumour of the Clitoris had been removed (with specimen).

Dr. HUME showed a man with a Malignant Stricture of the Œsophagus on whom Gastrostomy by Franks' Method had been performed. There was no redness of the skin round the fistula, and the contents of the stomach very rarely escaped. He considered this the best operation for establishing a permanent gastric fistula.

Dr. HUME showed a man about fifty years of age who had had three attacks of Intestinal Obstruction. The first occurred eight years ago, the second two years ago, and the third during last autumn. After the last attack he did not recover his strength, slight abdominal distension remained, and a firm, tender nodule could be felt above the umbilicus in the right linea semilunaris. On opening his abdomen the cæcum was seen to be distended, and the transverse colon contracted. The ascending colon and hepatic flexure were buried in adhesions, but sufficient could be felt to give assurance that something was wrong there. The cæcum was opened, and a finger introduced discovered a tight stricture near the hepatic flexure of the colon. An opening was next made in a convenient part of the transverse colon, and an anastomosis made between this and the cæcum. The two openings were united by simple sutures without the aid of plates, or buttons, or bobbins, and the man's recovery had been uneventful. The operation was done three weeks ago, and already a marked improvement in his condition was apparent.

Dr. GOWANS showed a specimen of Cystic Adherent Ovaries and Enlarged, Thickened Tubes removed successfully by operation. The chief symptom complained of was intolerable pain.

Dr. DRUMMOND exhibited the Thoracic Contents removed from a man who died a month after the October meeting. The right lung contained a growth the size of an orange which had apparently commenced in a gland and invaded the right bronchus, which it completely occluded. The thoracic duct was also blocked by the growth, which accounted for the great and rapid emaciation. There was pronounced bronchiectasis; the bronchiectatic cavities were filled with pus. (There was no rise of temperature during life, a fact Dr. Drummond had never noted before in any similar case.) Microscopic specimens (exhibited) showed the growth to be a lympho-sarcoma.

Mr. PAGE showed a Gall-stone as large as a green walnut removed from a woman fifty-two years of age. There were four smaller stones in the gall-bladder; the large one he thought was impacted in the end of the cystic duct, though the patient had no jaundice.—Mr. PAGE exhibited a portion of the Pelvis and Intestines of a woman sixty-two years of age who died in the infirmary after an operation for the relief of intestinal obstruction. The patient was a chronic invalid, and five days before her admission was suddenly seized with acute symptoms of obstruction. During the operation a portion of intestine was drawn out of the sac and the obstruction relieved, but death followed in a few hours from shock. The specimen showed from the front part a projection like a walnut of the upper and inner part of the obturator membrane, and from the back a pouch of like size with a somewhat smaller neck, formed by the membrane below and bone above. The specimen was an excellent one of this rare variety of hernia.—Mr. PAGE showed a Hydronephrotic Kidney which he had removed from a man twenty-one years of age. For fifteen years the patient had suffered from symptoms attributed to renal calculus.

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EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—So-called Mittelschmerz.—Viburnum Prunifolium.—A Rare Form of Abortion.

A MEETING of this society was held on Dec. 11th, Dr. A. BALLANTYNE, President, being in the chair.

Professor SIMPSON showed specimens of: 1. An Exomphalic Fœtus, sent from Shanghai. It was the child of a white person, and presented by the herniated mass. The delivery was difficult and was assisted by pulling down a limb. 2. Anencephalic Fœtus which had been accompanied by excess of liquor amnii. The mother's first child was also anencephalic, and the pregnancy ended prematurely at six months. There are two children alive, one is an idiot and the other is deficient intellectually. 3. Malformed Fœtus, where the left forearm had only one bone and the hand was articulated at an angle to it with four fingers present, but with absence of the thumb; the right forearm was also imperfect, but better developed, and on the hand there was a thumb, but only attached by a skin connexion.

Dr. FELKIN showed a new Safety Pin where, after the end of the pin was fixed in the head, it could only be released by pressure on a small and easily worked spring catch.

Dr. F. W. N. HAULTAIN showed a specimen of Hæmatoma of the Ovary removed from a patient aged twenty-two years who had suffered from a sudden onset of pain in the right side two years previously, and six weeks before the operation from severe pain in the left side. The appendages were removed to relieve the urgency of the symptoms. The right ovary was found to contain a granular cyst with a deposit, evidently the remains of a blood clot; the left showed a well-formed blood clot in a cavity, found microscopically to have the walls of a follicle.

Dr. HAULTAIN also showed a specimen of Hæmatosalpinx obtained from a patient who had died from mitral disease; she had suffered from severe pelvic pain three weeks before death.

Dr. J. W. BALLANTYNE showed: 1. Photographs of a Dicephalic Fœtus born in South Spain. There were two heads and necks, two incomplete thoraces, and a single heart and abdomen. He referred to the fact that James IV. had a double-headed boy at his court who lived to the age of thirty years and could sing in different parts with the two heads and in different languages. 2. Photograph of a case of Congenital Elephantiasis occurring at Rio, Brazil. The mother had suffered from five distinct traumatisms, and one was attended with lymphangitis. The infant was born with a hypertrophic right leg, and in the blood of this boy streptococci were easily demonstrated. The child improved greatly under the use of iodide of potassium and elastic pressure. The medical attendant explained the case by the passage of the streptococci through the placenta to the fœtus. He had seen nine other similar cases. 3. A photograph of a Spurious Hermaphrodite.

Dr. J. HALLIDAY CROOM read a paper on So-called Mittelschmerz, sometimes called a form of dysmenorrhœa. The pain occurred at mid-term in the intermenstrual period with exact regularity. The attack simulated all the symptoms of dysmenorrhœa, more or less severe, but without a discharge of a menstrual character. There were three manifestations of this ailment: (1) pain occurring at a regular intermenstrual period and with no external flow; (2) pain accompanied with severe flow of blood; and (3) pain with a clear discharge. There were three possible explanations: (1) that ovulation and menstruation might not occur together, if the ovary were thickened and ovulation occurred at mid-term pain would be experienced; (2) due to an endometritic condition; and (3) due to a swollen Fallopian tube, a hydrops tubæ, which reached its height at mid-term and expelled its contents through the vagina, this being accompanied by pain. In one case Dr. Croom had removed the appendages for this condition and found a hydrosalpinx; the pain disappeared after the operation, but menstruation continued.—Professor SIMPSON mentioned that this symptom occurred in many patients, and was rarely the prominent one present. It usually disappeared with the treatment necessary for the main disease.—Dr. MILNE MURRAY had seen many cases. One was compelled to go to bed for two days with the "middle pain." The pain was agonising in this patient, and examination showed some endometritis, but no tubal distension. She was best relieved by two-drachm doses of bromide of potassium. Another case occurred in a patient who had borne four children; each pregnancy had terminated a fortnight before term. There was good ground stated for the assumption that conception occurred in this patient after the violent pain had passed off

Dr. THEODORE SPENNAN read a paper on Viburnum Prunifolium and its value in the treatment of dysmenorrhœa, giving the results of a research to discover what was the real action of the drug, its active principle, and if this active principle had an action corresponding to that of the whole drug. Viburnum was first brought into use by a Dr. Thares, U.S.A., in 1866 his attention having been drawn to it by its use among the negro population and the great benefits ascribed to it. It has now been extolled by different authorities in dysmenorrhœa, menorrhagias of the menopause, habitual abortion, threatening abortion, after-pains, false pains, and in diarrhœa and dysentery. Botanically, it is a shrub which sometimes becomes tree-like, and in spring produces white clustering flowers; it grows most luxuriantly in the southern states of North America. The root bark is officinal in the United States pharmacopœia and is the only part from which preparations are made; it is rather brittle, has a weakly astringent, slightly bitter taste, and a musty valerian odour. In the chemical investigation he found it very difficult to separate an active principle, but had succeeded in obtaining a body in solution after processes calculated to remove all other substances except alkaloids. It was obtained in very small quantity, only about ½ per cent. of the drug; this has an action on the frog very similar to that of the whole drug. It also contains an organic acid similar to valerianic acid and a resin. The physiological experiments gave very marked results. On the rabbit, large hypodermic doses produced drowsiness and some motor weakness. When introduced into the jugular vein, a neutral or slightly alkaline extract free from alcohol or resin, a tracing showed considerable lowering of pressure, which soon tends to return towards normal as the drug is eliminated. In frogs a concentrated decoction produced in half an hour sluggishness of reflex, muscular weakness, drowsiness, and death. An alkaloidal solution by injection caused incoördination of movement and muscular weakness almost amounting to paralysis. The most marked effect is obtained by passing defibrinated blood containing the extract through a frog's heart. The ventricle stops in diastole and is greatly distended; the auricle may go on beating for a few seconds and also stops. If the blood is removed by gentle pressure and pure blood passed through it, it begins to contract once more; if the poisoned blood is again passed paralysis again results. The effect on man was obtained by experiments on himself. He took six capsules, each containing the equivalent of one drachm of the ordinary fluid extract, within thirty minutes. Pulse tracings were taken before and during the experiment. After the doses the pulse became slower and softer, and the tracing showed a slightly more marked dicrotic wave; there was slight frontal fulness, not amounting to headache. Even with these large doses there was absence of great discomfort, and this proves the absence of toxicity Others, however, have noticed in their patients headaches, disturbances of vision, and dryness of the mouth. The conclusions he drew from his research are, that there is probably some diminution of reflex irritability, a quieting effect on involuntary muscle, and possibly some lowering of blood pressure, which, even though small, might afford relief in congested conditions. Then there is the important effect of the viburnic (or valerianic) acid in neurotic and hysterical conditions. As compared with the use of opium in similar conditions it does not cause such marked constipation and has practically no toxic effect, while in many cases its effects quite equal those of opium. The preparations are: (1) an aqueous decoction, not pleasant; (2) tincture, 1 in 5, or, as in France, 1 in 1; (3) fluid extract made with alcohol and water, dose one half to one drachm, which can be given every hour and a half; (4) inspissated extract made from the last and given in pill form, but is not dependable unless made fresh; and (5) capsules. These are made by evaporating one drachm of a 1 in 1 fluid extract to ten minims at a low temperature or *in vacuo*, and enclosing in a capsule. These are easily taken, as the taste and unpleasant smell are easily masked and are the best form for administration. Dysmenorrhœa could be classified under three heads: (1) obstructive, with a spasmodic element; (2) nervous or spasmodic pure and simple; and (3) inflammatory or congestive. He was inclined to confine the use of viburnum to cases where there is a nervous, hysterical, or spasmodic element. It is possible that by slightly reducing the blood pressure it may relieve congestive conditions, but

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these are better treated by other means.—Dr. CRAIG had used the liquid extract of viburnum extensively for threatened abortions, and knew of no drug that was more effective.—Professor SIMPSON had given it in threatened abortion, and with sufficient results to encourage its use.—Dr. HAULTAIN administered it in dysmenorrhœa and as a uterine sedative. On the cutting pains of the first stage of labour he had not seen any effect; for after-pains no drug gave such good results except opium.

Dr. HAULTAIN read a paper on a Rare Form of Abortion, and showed two specimens illustrating it. He described cases where the amnion with the ovum or its remains had been expelled as an entire sac, leaving the decidua behind. In one case under his notice the decidua was removed six weeks afterwards; it required to be torn off, the operation being attended with very free hæmorrhage. There had evidently been pre-existing disease and death of the embryo, causing the attachment of the amnion to be less secure and its expulsion from the resulting uterine irritation. These specimens showed death a considerable time before expulsion. The decidua might go on growing, and would form a carneous mole.—Dr. J. W. BALLANTYNE questioned the absorption of the fœtus in these cases, believing it was rather due to its non-development.—Professor SIMPSON said that sometimes a little portion of cord would be found and yet no fœtus; the cord showed that there had been a fœtus, but it had been absorbed. He attributed these cases to the special toughness of the amnion, which had permitted of its bursting its way through the other membranes and being expelled entire. The amnion was three times as tough as the chorion. The caul was almost always formed of amnion alone.

Reviews and Notices of Books.

Die specielle Tuberculose der Knochen und Gelenke auf Grund von Beobachtungen der Göttingen Klinik. I. Das Kniegelenk. Bearbeitet von Dr. F. KOENIG, Professor der Chirurgie, Director der Chirurgischen Klinik. Mit 42 Holzschnitten. Verlag von August Hirschwald. Berlin, 1896. (*On Tuberculosis of Bones and Joints; from Observations at the Göttingen Clinic. I. The Knee-joint.* By Dr. F. KOENIG, Professor of Surgery, Director of the Surgical Clinic. With 42 Wood-cuts. Berlin: A. Hirschwald. 1896.)

PROFESSOR KOENIG has for twenty years filled the important post of Director of the Surgical Clinic at Göttingen. Having during that time accumulated a very large experience in tuberculous disease of bones and joints, he has resolved to publish a series of monographs based on this experience. The first is just published and treats of tuberculous disease of the knee. It is prefaced by a very careful and elaborate statistical summary of 720 cases by Dr. Mertens and Dr. W. Koenig. Then follow chapters devoted to the consideration of the pathological anatomy, the clinical history, the prognosis, and the treatment of this form of disease. The volume is a most valuable treatise and a rich storehouse of material. It would be impossible in the space at our disposal to go over in detail the ground so ably traversed by Professor Koenig; but we may say that he is at variance with the late Bradshaw lecturer as to the constancy with which the bones of the knee are involved in cases of tuberculous disease of the joint, and he has found that in about half the cases the disease is a tuberculous synovitis, and in a nearly equal number a tuberculous osteitis. No one routine method of treatment is advocated, but wide views are taken. Rest and extension are recommended in the early stages, and particularly in children; to these are sometimes added injections of carbolic acid and iodoform. Where these measures fail to produce speedy improvement arthrectomy is practised in children and excision in adults. Stress is laid upon the importance of resorting to operation more promptly in adults than in children, where the so-called conservative measures do not avail. The next volume of the series will deal with tuberculous disease of the hip.

Atlas des gesunden und kranken Nervensystems, nebst Grundriss der Anatomie, Pathologie, und Therapie desselben. Von Dr. CHRISTFRIED JAKOB. Mit einem Vorwort von Professor Dr. AD. v. STRÜMPELL. München: Verlag von J. F. Lehmann. 1895. Preis M.16. (*Atlas of the Nervous System in Health and Disease, with Outline of its Anatomy, Pathology, and Treatment.* By Dr. C. JAKOB. With a Preface by Professor AD. v. STRÜMPELL. Munich: J. F. Lehmann. 1895. Price 10*s.*)

THIS forms one of a series of hand-atlases which are in course of publication by the firm of J. F. Lehmann in Munich. Several volumes have already appeared, including two on Obstetrics by Dr. Schaeffer, who also edits one on Gynæcology; one on Skin Diseases, by Dr. Kopp; one on Ophthalmoscopy, by Dr. Haab; and one on Fractures and Dislocations, by Professor Helferich. The Atlas before us contains no fewer than seventy-eight plates, several of which include more than one figure. In the first place, a series is devoted to the morphology of the central nervous system, in which are found anatomical drawings and reproductions of photographs of the brain and spinal cord. Next comes a series (mainly diagrammatic) to illustrate the development and structure of the nervous system. An original feature in this part is a collection of twenty-one plates to illustrate the appearances seen on section of the brain from the frontal lobe in series backwards to the medulla. By a lavish use of colour the distinctive structures are made apparent. In a fourth section are illustrations of the general pathological anatomy of the nervous system, and, in a fifth, of the special pathology of the spinal cord and nerves. Appended to the Atlas is a concise account of the subjects occupying about 200 pages. Altogether the Atlas is well planned and executed, and its use should prove of distinct advantage to the neurological student, who will find in it a safe guide through the anatomical mazes of the nervous system.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D. F.R.C.P. Edin. Third Edition. Edinburgh: W. F. Clay. 1895.

FEW words are needed to direct attention to the appearance of a new edition of Dr. Byrom Bramwell's interesting volume. Its author has the gift of lucidity in teaching, is fully aware of the advantages of illustrations in explaining textual descriptions and ding in their right interpretation, whilst he has, moreover, in such a subject as diseases of the spinal cord one which to an unusual degree demands such systematic and illustrative treatment. The subject is dealt with in the form of lectures, which has enabled the author to emphasise important facts and to speak with greater freedom than is customary in a purely formal treatise. After some general remarks on the anatomical, physiological, and pathological bearings of the subject, he opens his description of diseases of the cord with acute anterior poliomyelitis, departing from the usual order in considering its morbid anatomy before dealing with its clinical features. This topic leads naturally to progressive muscular atrophy, although he is careful to point out that the latter condition is one which is often associated with, and dependent on, primary sclerosis in the adjacent pyramidal tract. The distinctions between this amyotrophic lateral sclerosis and the form of chronic anterior poliomyelitis to which the clinical term "progressive muscular atrophy" is alone applicable are clearly set forth. From these topics he diverges to speak of the muscular dystrophies, of which pseudo-hypertrophic paralysis is the most striking example. The changes described in the spinal cord in this affection are hardly adequate to account for the muscular defect, and, as is pointed out, the disease is now generally regarded as a primarily myopathic affection. This chapter is illustrated by a number of well-executed

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portraits. Locomotor ataxia occupies several lectures, and its remarkably varied clinical and pathological history is well narrated. The rarer conditions of Friedreich's ataxia, ataxic paraplegia, and syringomyelia receive considerable attention, and are deserving of careful study. In particular we would draw attention to the very careful and detailed analysis of the symptoms of syringomyelia, especially as regards its differential diagnosis from the numerous conditions that simulate it. Acute myelitis, chronic myelitis, and acute ascending paralysis are next discussed, and are followed by the subject of multiple cerebro-spinal sclerosis. Here again, in regard to differential diagnosis, Dr. Bramwell is full and explicit. His remarks on this head should prove of much service, especially those made in respect to the differentiation of disseminated sclerosis from general paralysis of the insane and from hysteria. Meningeal affections, tumours of the cord and membranes, concussion of the spine and traumatic lesions, with especial reference to "railway spine," complete a volume which has the merit of being readable and instructive, accurate without being too recondite, and above all practically helpful as a guide in the differentiation and treatment of spinal cord affections. Opportunity has evidently been taken to subject the work to careful revision, and its indefatigable author may be assured that his book is one which will be of service to many a practitioner who is unable to devote the time necessary to master more voluminous treatises of neurological science.

DIARIES.

MESSRS. BURROUGHS, WELLCOME, AND CO., Snow-hill-buildings, London, E.C., have earned the thanks of many busy practitioners by the publication of their *A B C Medical Diary and Visiting List*, which is so well and so favourably known as hardly to require detailed recommendation. The volume for 1896 is of a size very convenient for the pocket, and is strongly bound in blue cloth, gilt-lettered, with red edges, and a pencil holder at the back. The diary portion, which occupies about half the book, gives two pages (one opening) to each week of the year and is conveniently ruled for the insertion of patients' names, cash entries, and other memoranda. The special feature of the work, which distinguishes it from other publications of the same class and renders it of utility to prescribers, is a copious list of all the most recent additions to materia medica, together with a description of their actions and uses. Messrs. Burroughs, Wellcome, and Co. announce that they send a copy of this diary free of charge to every medical man in Great Britain, India, and Australia, and they invite hints and suggestions for incorporation in the issue for 1897.

MESSRS. CASSELL AND CO., La Belle Sauvage Yard, Ludgate-hill, send us *Letts's Medical Diary* for 1896 in various bindings, either red or maroon morocco, with a flap, inside pockets, and gilt edges, or in cloth with marbled edges. Each four pages (two openings) are ruled and headed to suit each week of the year. This diary is a long-established favourite.

MESSRS. HAZELL, WATSON, AND VINEY, 52, Long-acre, W.C., and 1, Creed-lane, E.C., are the publishers of *Smith's Physicians' and Surgeons' Visiting List* for 1896, which is now in its fiftieth year of issue and is well known to medical men. It may be had either strongly bound in morocco with pockets inside the cover, or of less thickness bound in cloth. The same firm are now bringing out *Hazell's Physicians' and Surgeons' Visiting List* for 1896, which is about the same size as the thinner form of Smith's List, but has the distinguishing feature that each alternate page, ruled with the days of the week and month, is less than half the full width. This arrangement has the advantage that it enables the visits of one month to be seen in one opening at a glance, and obviates the necessity for writing the names each week.

MESSRS. WILLIAM COLLINS, SONS, AND CO. (London and Glasgow) have a large variety of diaries for 1896, the largest being the *Scribblin; Diary*, interleaved with blotting paper, of large foolscap size, ruled for three days on each page, and the smallest being the *Bijou*, also ruled for three days on each page, and of dimensions suitable for the waistcoat pocket. The smaller sizes are handsomely bound in morocco.

The British and Colonial Druggists' Diary, 42, Bishopsgate Without, E.C., is now in its eleventh year of issue, and is a substantial volume of quarto size, interleaved with blotting paper, and ruled to show one week on each page. The introductory and concluding portions contain a large amount of miscellaneous information useful to pharmaceutists and prescribers, lists of the London hospitals, with the hours of attendance, and (which we hope will be omitted next year) lists of "general and specialist" physicians and surgeons in London and the provincial towns.

New Inventions.

A VACCINATION SHIELD.

IN order to avoid the irritating and injurious friction and pressure of the clothing at the site of vaccination, I have devised a shield which consists of a well-padded wire ring, bent to suit the contour of an infant's arm, and having its aperture filled by an open net-work of fine wire. There are no constricting tapes, and the plan of fixing the shield by means of adhesive plaster (preferably the American rubber plaster) renders any shifting of position impossible. In applying the shield, if care be taken that the strips of plaster do not overlap at their ends, there can be no constriction of the arm such as occurs when tapes are employed. The Chemists' Association, Limited, Curtain-road, E.C., manufactures the shield and has the wholesale agency for it.

Upper Tooting, S.W. EDWIN SMITH, M.B. Lond.

THE "BLUE BUOY" SWIMMING BELT.

MOST persons who have travelled by sea are familiar with the ordinary life-belt, consisting of slabs of cork connected by cords or fine canvas. Under the name of the "Blue Buoy" swimming belt Mr. J. E. Holdsworth, of 19, Golden-square, London, W., has brought out a similar article for the use of those who are learning to swim, the slabs of cork being replaced by japanned metallic cylinders about two inches in diameter. As each belt contains nine of these, conveniently fastened together by tapes, six of them being seven inches long and three of them ten inches long, its supporting effect in the water is sufficient to give confidence to the most timid novice, and when a certain amount of proficiency is attained the buoyancy of the belt may be reduced at will by the removal of some of the cylinders. The wearing of such a belt would probably enable bathing to be indulged in by anybody with safety, either in the sea or in fresh water.

FOREIGN UNIVERSITY INTELLIGENCE.—The list of successful candidates for the M.D. Degree of the University of Brussels was published on Tuesday, Dec. 10th. It contains the names of the following British practitioners:—Francis Howard Humphris, M.R.C.S. Eng. and L.R.C.P. Lond.; Charles Baring Langton, M.R.C.S. Eng. and L.R.C.P. Lond.; William Egmont Kirby, L.S A. Lond.; and Miss Harrison, L.R.C.P. and S. Edin. Mr. Humphris and Mr. Langton have both won their diplomas "with distinction."

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THE LANCET.

LONDON: SATURDAY, DECEMBER 28, 1895.

THE ANNUS MEDICUS 1895.

Medicine.

THE study of the nature and causes of the specific infective disorders continues to occupy the chief place in medical research. The general acceptance of the fact that such diseases are due to the invasion of the body by microbic organisms is accountable for this, whilst the dependent subject of immunity, natural and acquired, is being profoundly investigated. The value of vaccination as a prophylactic for small-pox has been widely confirmed by the experiences of many parts of this country during the past few years, as recorded in the health officers' reports; and the long-expected Report of the Royal Commission on Vaccination, which has, moreover, to deal with many other aspects of the question, will, it may be hoped, shortly re-affirm this cardinal point. Meanwhile, science has advanced the subject of protective inoculations beyond the limits of providing immunity from possible attack, and in the discovery of antitoxins has opened up a line of treatment of the actual disease which may prove to constitute the greatest advance of the century. Throughout the year the results of the application of serum therapeutics to diphtheria have been steadily accumulating in all quarters of the globe, as the discussion on the subject at the annual meeting of the British Medical Association showed. In London the trials have been made on a large scale in the fever hospitals, and in due course we may hope to be furnished with a body of facts which will go far to determine the future position of this new therapeutic resource. The basis of the antitoxin treatment being the correct recognition of the true cause of the infective disease itself, there has necessarily been applied on a large scale what may be termed the bacteriological test for diphtheria; and the results of this method of study of the disease are tending to show that in a certain proportion of cases recognised clinically as diphtheria the Klebs-Löffler bacillus does not occur, whilst in a still larger number this organism co-exists with other pathogenic forms. It has also been proved that the bacillus in question may persist for a long period in the throat after all manifestations of its presence have passed, and that it may even occur without giving rise to any such manifestations at all. It is clear that in this disease alone there still remains much to be explained before its precise pathological history can be written. This is especially true in regard to the relationship it bears to other forms of epidemic sore throat and to the conditions amidst which the disease arises. Another infective disease in which an antitoxin has been discovered and practically applied is tetanus, but its comparative rarity perhaps accounts for the work upon it in this direction having awakened less widespread interest than the question of diphtheria. Nor can it be affirmed that the even older attempt to introduce a like method in the common affection, acute pneumonia, has been at all widely taken up, although the study of pneumococcus infections has been more and more extended and formed the subject of an important communication by Dr. WASHBOURN to the Pathological Society. The subject of pneumonia was also very fully discussed at the meeting of the British Medical Association, the debate being opened by Dr. DOUGLAS POWELL.

The etiology of enteric fever has continued to be the subject of inquiry by sanitarians, but no new facts as to the nature of the disease have been gained. The possibility, amounting almost to probability, of the transmission of the typhoid fever germ through shell-fish used as food has led to the undertaking of an inquiry on the question by the medical department of the Local Government Board.

The interesting discovery by LAVERAN of the malarial parasite continues to receive confirmatory evidence in various quarters. In this country Dr. PATRICK MANSON and Dr. THIN have made important and practical communications on the subject. It is true that another interpretation has been put upon the appearances presented by the blood in malaria by a worker in India, although the evidence must be strong to shake the conclusions which have been gradually built up by competent experts.

The discovery by PFEIFFER of protozoal organisms in variolous and vaccinal vesicles seems not unlikely to share the fate of the cancer-organisms, which, after a brief but not inglorious existence, have been almost wholly explained away. The fact, no doubt is that unless a disease organism can be cultivated outside the body it is rash to conclude in its specific properties from microscopical characters alone; and, unfortunately, no method has yet been discovered whereby the amœba-like masses regarded as parasitic in blood or cells can be so cultivated and observed apart from the tissues in which they are detected by high microscopical powers. Indeed, as regards vaccinia and variola, the evidence of other observers, as COPEMAN and KLEIN, points rather to a bacterial than a protozoal agent.

The evidence taken by the Tuberculosis Commission, and the general tenour of its report as to the transmissibility of the disease by the consumption of the flesh or milk of infected animals, confirm the opinions arrived at by similar inquiries on the Continent; but whilst the knowledge of tuberculous diseases is widening, the proofs of the direct transmission of the virus by contagion are not yet firmly established. The foundation of a prize by Dr. HERMANN WEBER, to be awarded triennially for work on this subject, is therefore an earnest of continued research upon it.

That rheumatic fever may rank among infective disorders has long been a matter of speculation; so far as it is capable of support from epidemiological considerations the admirable Milroy Lectures of Dr. NEWSHOLME supplied the required data.

The Congress of Medicine held in India at the close of last year was the means of bringing to notice many important questions in epidemiology, whilst the literature of this branch of medicine has been enriched by the completion of Dr. CREIGHTON'S History of Epidemics in Britain, and the reproduction by the Epidemiological Society of

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London of BOGHURST'S "Loimographia," a description of the Great Plague of London by a medical eye-witness.

In respect to other diseases than the specific infectious class, contributions, both clinical and pathological, have been numerous and important. In this country alone may be mentioned the writings of FRASER, BALFOUR, CATON, EWART, and OLIVER on heart disease; of MARCET, FOXWELL, S. WEST, and POWELL on respiratory affections; and of GOWERS, BEEVOR, and TAYLOR on nervous diseases, the last named opening up new ground in his description of change in the spinal cord in pernicious anæmia. Dr. W. HUNTER, by the publication of his experimental researches in Toluylenediamin, affords fresh evidence in favour of his views on the pathology of pernicious anæmia, a disease in which the prescription of bone-marrow has apparently met with some success. Indeed, the gradual introduction of organic extracts in the treatment of affections of glandular organs has become a feature of modern therapeutics, since the striking efficacy of thyroid extract in myxœdema has been established. In his Gulstonian Lectures Dr. ROLLESTON gave a full description of the pathology of the suprarenal bodies, whilst the address of Professor SCHÄFER at the British Medical Association threw fresh light on their physiology, a subject further worked out by Dr. G. OLIVER. The influence of massage on the circulation has been experimentally studied by LAUDER BRUNTON and TUNNICLIFFE, and the application of this knowledge to the treatment of so apparently a hopeless condition as atheroma was happily set forth in an address by the former, published in these columns. Amongst purely pathological works. it must suffice to mention that the present year has seen the publication of new editions of such standard books as those of ZIEGLER and COATS, the appearance of an English edition of WEICHSELBAUM'S "Manual," and the completion of Professor HAMILTON'S work on Pathology. Of works on Medicine several new editions of familiar text-books have appeared, and such new and extensive treatises as the "Handbook" of PENZOLDT and STINTZING, the "Traité de Médecine" of BROUARDEL, GILBERT, and GIRODE, and the first volumes of the singularly styled cyclopædia, "The Twentieth Century Practice of Medicine."

Surgery.

During the year which is closing distinct progress has been made in many branches of surgery, though no discovery of striking importance has occurred. In the surgery of the abdomen the method to be employed in intestinal anastomosis and kindred operations has been a subject much discussed. Murphy's button is undoubtedly the easiest and the simplest in application, and it is claimed for it that no subsequent contraction occurs at the point of union. Numerous cases have been recorded where the result has been everything that could be desired, but, as might be expected, the button has its opponents, and two main objections are brought against it, the one that perforation is likely to occur where the two halves of the button touch, and the other that the button is very liable to be retained for a lengthy period, or even permanently. These objections, in part at least, seem founded on theoretical considerations, for the cases quoted in Professor MURPHY'S paper, which includes all known cases operated on with the button, are sufficient to show that the button is capable of giving very good results. Many other devices are employed for the same purposes, and perhaps the latest is Mr. ALLINGHAM'S bone bobbin for end-to-end intestinal anastomosis.

We have recorded a successful use of the button in what may be called cholecystenterotomy, though the cavity which was opened into the bowel proved to be a dilated common bile-duct, and not the gall-bladder. The Czerny-Lembert suture is still much employed, and Mr. HERBERT PAGE has recorded two successful cases in which fæcal fistulæ were treated by resection of the bowel and this form of suture was used. Pyloroplasty, as the Heinke-Mikulicz operation is usually termed, is being more frequently performed. A very satisfactory instance of its employment by Mr. MORISON of Newcastle is recorded in THE LANCET. The operation may be briefly described as longitudinal section and transverse suture of fibrous stenosis of the pylorus. It has also recently been employed for simple stricture of the intestine, and Mr. MAYO ROBSON advocates the use of his bone-bobbin as an adjunct to the operation; he has recorded a case where he successfully employed it for a fæcal fistula of the small intestine with narrowing of the bowel beyond. Appendicitis still claims much surgical attention, though the general tendency is now towards less frequent operations. We were able at the beginning of the year to give a report of an address on this subject by Professor WHITE of Philadelphia, whose careful account of the anatomy and pathology of the appendix helps greatly to elucidate many of the important problems connected with this structure. Professor OGSTON of Aberdeen has endeavoured to devise a method of dilating a fibrous stricture of the pylorus without operation. He considered that if a solid body could be made to pass at intervals through the narrowed opening the stricture might be dilated, or at least its contraction might be delayed. With this intent he administered by the mouth small spheres of gutta-percha, hoping that the muscular contraction of the stomach would suffice to force them through the pylorus. The spheres were given immediately after breakfast and were of such a size as just to pass through the pylorus. They were given at intervals of five days and were gradually increased in size. Though they were employed in four cases, yet only one of these can be said to have given the method a fair trial. No opinion can be expressed as to the value of this method until more extended observations have been made. Mr. CARTHEW DAVEY of Liverpool records the death of a patient on whom pylorectomy for carcinoma was performed by Mr. RAWDON five years previously; for three years and a half of this time he remained in perfect health. Such a lengthy period of freedom from recurrence is unique. Perforations of the hollow abdominal viscera with extravasation of their contents into the peritoneal cavity are now readily treated by laparotomy and suture, instead of being left to the very faint hope afforded by the administration of opium. We have recorded a case of perforation of the gall-bladder after ulceration in a case of typhoid fever. In another case, where an ulcer of the stomach had perforated and had been closed by suture, a second ulcer gave way two days later and rapidly proved fatal.

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Mr. MARMADUKE SHEILD in a paper on duodenal ulcer has pointed out how very obscure the symptoms of this lesion are, and he has shown by two cases that it may be missed, if not especially looked for, even after laparotomy. A case of dilatation of the common bile-duct, very similar to the one to which we have referred above, and simulating a distended gall-bladder, was described by Mr. EDGEWORTH of Bristol; the condition is so rare that it is well worthy of description. Intestinal obstruction caused by the impaction of a large gall-stone is recorded by Mr. EVERLEY TAYLOR of Scarborough; laparotomy and enterotomy were performed and the stone removed; the patient recovered; the stone measured four and a half inches in circumference, and was two inches long Mr. BLAND SUTTON recorded a series of three successful splenectomies all occurring within six weeks. Splenectomy is now much more frequently performed than formerly, and the results are very satisfactory except when the operation is done for leucocythæmia, and then recovery is, we believe, unknown. Deputy-Inspector-General REID has described an interesting case of double popliteal aneurysm; the larger aneurysm, that of the left leg, was treated by Surgeon TOWNSEND by intermittent pressure with a Carte's tourniquet, and by the end of five weeks the cure was complete, a large, hard, non-pulsating mass remaining in the popliteal space. The aneurysm on the right side was treated by "Reid's method." Potassium iodide was given in order to increase the coagulability of the blood, and Carte's tourniquet was occasionally applied to the femoral artery to open up the collateral circulation. Then the elastic bandage was applied in the usual manner, except that a protecting gutta-percha pad was placed over the aneurysm to ward off any direct pressure. At the end of an hour Carte's tourniquet was put on and the constrictor removed. The tourniquet was slackened after five hours, and a faint pulsation was felt, which, however, ceased at the end of five days. On a comparison of the two results, it was seen that the aneurysm on the left limb, treated by slow pressure, though cured, still formed a hard, unyielding lump in the popliteal space, causing a good deal of discomfort to the patient and interference with the use of the limb. In the aneurysm in the right leg, treated by Reid's method, only a small mass was left on the floor of the popliteal space; it could hardly be felt and caused no inconvenience. Moreover, in the limb treated by the slow method no pulsation could be felt in the femoral below the origin of the profunda; while in the other limb the femoral pulsation was obvious in the lower part of Hunter's canal, but this difference in the length of artery occluded must not be taken as a usual difference in the results of the two methods Another case of aneurysm possessing considerable interest was under the care of Brigade-Surgeon-Lieutenant-Colonel STEVENSON. It was an abdominal aneurysm, and on laparotomy being performed it was found that the artery affected was the superior mesenteric, and that it was not possible to apply a ligature on the proximal side of the sac. It was determined to treat it by the introduction of a length of coiled steel wire; two yards were introduced through a fine cannula. Free hæmorrhage occurred at the time, and further severe hæmorrhage came on the same evening. The patient died the next afternoon from syncope. In this case the laparotomy was undoubtedly indicated, but the introduction of coiled wire into the sac of an aneurysm has been tried so often that it may now be put aside as a useless method of treatment. Even had a cure resulted, it is very doubtful whether the small intestine could have survived such an interference with its blood-supply. The transperitoneal operation for ligature of the iliac arteries for aneurysm has been performed twice on the same patient by Mr. MAKINS with an excellent result. This method obviates any interference with the sac wall, a point of much importance when the peritoneum is firmly attached to the wall of the aneurysm. There is a growing tendency to open the abdomen elsewhere than through the linea alba, for it has been shown that better union and less likelihood of a hernia result when the incisions are not made through ligamentous structures.

We were able to give in the columns of THE LANCET a translation of an eloquent address by Professor MUSSI of Bologna on the Surgery of Intracranial Abscess, in which he pointed out that, though our powers of diagnosis of cerebral abscess were not great, yet that exploratory trephining in doubtful cases gave most excellent results. The treatment of microcephalic idiocy by removal of portions of the cranial wall has hardly met with the success which was at first anticipated and which has been attained in a few cases. The explanation of this is to be found in the fact that two entirely distinct classes of cases have been included under the one name; the more numerous class contains the cases in which the skull is small because the brain has ceased to grow, and Sir GEORGE HUMPHRY has shown that of nineteen cases of which he gives details all belong to this class. There are, however, a few cases to be met with in which the early obliteration of the sutures has prevented the growth of what is really a normal brain; in these benefit may reasonably be expected from removal of bone, but such cases are very rare indeed. It is, therefore, obvious that indiscriminate operation in cases of microcephalic idiocy can only be productive of many unfortunate results.

It is now generally recognised that death in most cases of tuberculous meningitis is the result of dilatation of the ventricles, which is caused by blocking of the foramen of Magendie by the exuded lymph on the base of the brain. The former surgical procedure of tapping the ventricles did no permanent good, as the fluid rapidly re-collected. Better results are now obtained by *draining* the ventricles after puncture, for by this method a permanent outlet is provided from the cavity of the ventricles to the subdural space. A good example of this method in which Dr. KERR of Bradford operated was reported in the columns of THE LANCET It is not long since it was usual to allow a bone to remain dislocated if it could not be returned by manipulation or traction, but now many surgeons cut down on the joint, divide any structure which prevents reduction, and return the bone. We have recorded an interesting example of this: a dislocation of the shoulder occurred in a young man aged twenty-two; it proved irreducible, so the joint was laid open and the head of the humerus was found to be grasped by two firm bands which formed part of the capsule. When these were divided the dislocation was easily reduced. The importance of energetic

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treatment of acute inflammation in the ends of long bones in children is dwelt on in a paper by Mr. W. H. BATTLE. In many cases the only chance of preventing involvement of the neighbouring joint, or even of saving the child's life, is afforded by early incision down to the bone, with, if necessary, trephining. Unfortunately, these cases are often not recognised until it is too late to save the joint. Phelps's open operation for severe cases of talipes is being more frequently performed; an interesting modification of it has been suggested and carried out by Mr. T. H. KELLOCK; in this a flap of the redundant skin on the outer side of the foot is used to fill up in part the large open wound on the inner side; the result was excellent.

In the treatment of fractures the results usually obtained appear good, but Mr. BEDDOE has pointed out that if the cases are followed up the results do not appear nearly so satisfactory, for out of sixteen cases of fracture of the femur only four patients could do their work as well as they could before. To remedy this Mr. BEDDOE suggests, as Mr. ARBUTHNOT LANE has suggested before, that fractures should always be wired. The treatment of enlargement of the prostate by castration is on the whole growing in favour, but it is by no means rare for deaths to follow the operation; this is probably to be explained by the very diseased condition of the kidneys usually present in long-continued prostatic enlargement. In a series of 111 cases, collected by Professor WHITE of Philadelphia, twenty patients died, but in 87 per cent. of all the cases rapid atrophy of the prostate occurred. Mr. MANSELL MOULLIN considers that the early rapid diminution in size which the prostate undergoes after castration is the result of the shrinking of its bloodvessels, and that it is not till later that true atrophy occurs. Mr. C. B. LOCKWOOD has advocated the radical cure of hydrocele by excision of the sac, and the results obtained by this method compare favourably with those of injection, but most surgeons will hesitate to adopt the proposed method in all cases. Cases of extensive malignant disease of the breast are sometimes not operated on because of the difficulty of providing sufficient covering for the large wound which must result. For these cases Mr. ARBUTHNOT LANE suggests removal of the upper limb at the shoulder in order to provide the covering required from the skin of the arm; the subclavian vessels are tied in the third part. The result of a case in which this was done was very satisfactory, but the operation was performed so recently that at present no certain opinion can be expressed as to its practical value.

Obstetrics and Gynæcology.

During the past year considerable activity has prevailed in both the departments indicated by the above heading. It would be impossible within the limits at our disposal to do more than refer briefly to some portions of the work that appear especially deserving of attention. Professor C. B. PENROSE in May last communicated to the American Gynæcological Society an instructive paper on Bacteriology in Pelvic Surgery. The pathogenic organisms present in inflammation of the uterine appendages are the gonococcus, the streptococcus and staphylococcus, the bacillus coli communis, the tubercle bacillus, and the pneumococcus. He divides the great number of cases of pyosalpinx into two groups—those due primarily to the gonococcus and due to venereal infection, and those due to the staphylococcus and streptococcus and connected with septic infection after labour, abortion, or operation. The bacillus coli communis enters the abscess cavity secondarily through the wall of adherent intestine. A micro-organism is to be found at some stage in all cases of suppuration in connexion with the uterine appendages, but all pelvic abscesses do not contain organisms; after a time they die, and the pus is then sterile. Apparently, also, the danger of septic peritonitis depends greatly on the kind of micro-organism in the pus; it would seem that pus in which gonococci alone are present is less dangerous than when some of the other micro-organisms are present also. Generally, septic peritonitis is due to the staphylococcus, streptococcus, and bacillus coli communis. Besides the kind of micro-organism present, much also depends on the kind of fluid in the peritoneum and the condition of the peritoneum itself—whether it be healthy or in some way damaged. Professor PENROSE examines the pus microscopically during the operation in cases where it is impossible to remove the pus sac unruptured; if the pus is sterile he does not wash out or drain, but if organisms are found he washes out and drains. The operation of vaginal hysterectomy for disease of the uterine appendages is not one with which most of us here are very familiar. An essential condition in undertaking vaginal hysterectomy used to be that the uterus should be freely movable, so that it could be easily drawn down to the outlet of the vulva. Fixation of the uterus is no longer regarded as a contra-indication.

There is, no doubt, a good deal to be said in favour of the operation in the cases under consideration as opposed to removal of the uterine appendages. The fact that in the latter operation the uterus is left is not in itself of any great advantage, for without its appendages the uterus is practically useless. The removal of the uterus by the vaginal method certainly has advantages in regard to affording free drainage; and it is claimed that the mortality is very low. The technical details of the operation as given by Dr. GILLIAM of Columbus, Ohio, do not appear to present any great difficulty. After freeing the cervix and securing the vessels at the sides it is split laterally and each half amputated, a fresh hold being taken of the part of the uterus above before the whole cervix is cut away. When the bladder has been dissected off, the anterior wall of the uterus is split longitudinally and removed piecemeal; forceps to secure the vessels are applied according as this appears necessary, and the remainder of the uterus is removed. The appendages are removed if this seems practicable; if otherwise they are left. Collections of pus in the neighbourhood of the uterus are opened up, washed out, and drained. Dr. GILLIAM admits, however, that under favourable conditions many of the ailments connected with the tubes cease, and he thinks only a very few reach a stage at which removal of the appendages, or removal of the whole uterus, becomes necessary; but he says: "When the destructive changes of pelvic inflammation have gone on to such an extent as to be practically beyond the reach of the cœliotomist PÉAN steps in, and by removing the uterus per vaginam makes possible a perfect recovery." Dr. BALDY records six cases of removal of the uterus subsequently to

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removal of the appendages, the latter operation having failed to relieve the symptoms. The result of the hysterectomy was completely satisfactory in this respect. As Dr. BALDY truly says: "There is no one who has practised gynæcological surgery to even a limited extent but knows that patients suffering from chronic pelvic inflammatory disease are not always cured of their symptoms by the removal of the tubes and the ovaries alone." It remains to be seen whether the same will be true of hysterectomy in such cases. We believe the operation has only been tried to a very small extent as yet in this country. Dr. BALDY has collected a list of 223 cases with only six deaths. In connexion with hysterectomy, it may here be mentioned that several abdominal hysterectomies have now been performed in cases of puerperal septicæmia, where milder measures appeared to be unavailing. The operation in such circumstances cannot yet be said to have passed beyond the purely experimental stage. Dr. MORDECAI PRICE read a paper before the Philadelphia Medical Society on Hysterectomy for Puerperal Infection, in which he expressed the opinion that the operation in such circumstances is nothing less than a criminal procedure. He instances a typical case three days after labour with a high temperature (103° to 106° F. or more), with all symptoms at the very worst. Granting that the cause of the trouble is in the uterus, he objects to the use of the sharp curette for dealing with the interior of the uterus, and insists that with the finger alone every particle of membrane and placenta remaining after labour can be removed, if not without ether, then with it. In his opinion the finger will remove all that should be removed, and that without wounding the parts in the least. He follows this treatment by washing out the uterus through a double-channelled tube—first with an antiseptic, and then with pure water only at a temperature of 110°. Without going so far as to deprecate the use of the curette entirely in such cases, we think that undoubtedly in the large majority what needs to be done can be done with the finger alone better and more safely than with any instrument. Obstetricians of large experience will agree with Dr. M. PRICE that among septic puerperal cases it is at times utterly impossible to say what cases will recover, and that some of those apparently in a desperate state get well. When this has been admitted to be so, the difficulty of selecting for surgical treatment—that is to say, for abdominal hysterectomy—those cases that will die if left alone must be obvious; and, again, a similar difficulty arises in the other direction, for how, if we cannot often say what the result will be in these cases, are we to avoid subjecting women, who left alone will recover, to the danger of a formidable operation, and more especially formidable in the circumstances as to strength in which it is to be undertaken? It is true that Dr. BALDY has reported a series of nineteen abdominal hysterectomies for puerperal sepsis with seven successes, or, in other words, with twelve deaths. Granting the extreme difficulty of the prognosis, it is by no means certain that in the twelve fatal cases all the patients would have died if left alone; the probability, indeed, seems to us rather the other way.

The treatment of puerperal sepsis by injections of anti-streptococcic serum has come into some degree of prominence during the year; two cases so treated by Professor GAULARD of Lille, for instance, are recorded in the December number of the *Revue Obstétricale Internationale*. One case terminated favourably, the other died. In the fatal case he is inclined to attribute the result to the injections, and considers that we need information and experience as to the dose and the indications for repeating it. He does not consider that the use of injections should cause us to be less ready to use the curette, and to make sure that the uterine cavity has been thoroughly cleared out. This should be done before having recourse to the injections. Here, again, the same difficulty arises, many very bad cases recover perfectly without the use of injections of the serum, and it will be very difficult to conclude that recovery is to be attributed to the injections. On the other hand, the use of them carries with it a danger of its own.

Therapeutic Progress.

The impetus imparted to the study of serum therapeutics during 1894 by the sanguine reports of its success in diphtheria has been fully maintained during 1895; for the present this subject appears to have eclipsed the interest of the older remedies, vegetable, mineral, or synthetic, and literature teems with records of trials, successes, and failures, from which it may well be hoped that some permanent benefits may be obtained. Attention has been so far riveted to this subject that a learned professor of therapeutics lately announced that sero-therapy and its therapeutical applications would form the subject of his winter course of lectures, to the exclusion of current medication by means of drugs. Doubtless there will be a return swing of the pendulum, but meanwhile we must note with approval the eagerness with which this logical outcome of bacteriology is being tested and discussed. The debate on the antitoxin treatment of diphtheria at Munich indicated a general belief in the great reduction of mortality, which was by many attributed to an arrest of the disease at an early stage before the larynx was involved. Opinions differed as to the relative frequency of post-diphtheritic paralysis, but even those who thought it was increased held that this was to be explained by the greater number who recovered. The chorus of praise was marred by a few discordant notes from those who were unconvinced and attributed the undoubted alteration in mortality to the mildness of the epidemic; but in the end the majority agreed that the antitoxin treatment had done no harm, that there was evidence that it had done much good, and that, for the present, the production of immunity must be considered not proven. It is interesting to compare this debate with the later discussion on serum therapeutics at the meeting of the British Medical Association, where diphtheritic antitoxin claimed the greater share of attention, but was considered from various standpoints, many references being made to the methods of preparation and preservation. Valuable papers have appeared upon the preparation of antirabic serum and upon the method of determining its strength. An antitoxin has been described for carcinoma, and there is some evidence that under its use the general condition is improved and the size of tumours diminished. Streptococcus antitoxin, or anti-streptococcic serum, has been used for puerperal septicæmia

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and erysipelas. Tetanus antitoxin was described at the British Medical Association meeting, and careful notes of several cases of traumatic tetanus—many successful—have since appeared in our columns; the prophylactic action for veterinary purposes has also received notice. Tetanus has also been treated with hypodermic injections of carbolic acid, as well as with morphia, opium, and chloral. Antivenene, whose antidotal powers are attributed to chemical rather than physiological action, has been recommended for the production of immunity from snake-bites, for the treatment of which strychnine and local injections of chloride of lime have also been employed, but not with very encouraging results. In view of the high rate of mortality hitherto the rule with most of the diseases for which the aid of sero-therapy has been invoked, the importance of the subject cannot be overrated, even though the present wave of enthusiasm almost challenges scepticism.

The interest inseparable from the active preparation of a new edition of the British Pharmacopœia has diverted a large share of energy from matters of clinical importance. Numerous suggestions for improvement have been made, and the requirements of the medical profession were considered at the meeting of the British Medical Association.

Cardiac therapeutics were discussed at some length at the Medico-Chirurgical Society of Edinburgh, and included consideration of the SCHOTT or Nauheim treatment, of OERTEL'S treatment, and of the relative value of diet, of arsenic, nitrites, morphine, strychnine, strophanthus, digitalis, and other remedies calculated to remove fluids or to increase elimination. A paper in these columns on the mechanico-gymnastic and balneo-therapeutic treatment of chronic cardiac disorders indicates that the Nauheim treatment was fully described in 1878, and that its employment is not advisable in cases which fail to react with medicaments such as digitalis. Rules guiding the selection of cardiac tonics have been formulated, strophanthus being preferred to digitalis. Acute rheumatic endocarditis has been stated to be most successfully treated by counter-irritation in conjunction with iodide of potassium or iodide of sodium. The value of mercury, and the *rôle* of alcohol in the treatment of heart disease, have also been considered, while attention has once more been directed to the influence of opium on disturbance of cardiac rhythm due to irritation of the alimentary tract. A research concerning some new vaso-dilators has indicated that erythrol tetranitrate and mannitol hexanitrate can produce a prolonged fall of blood-pressure due to dilatation of arterioles. Antipyrin has been recommended as a hæmostatic in aneurysm, while in leukæmia arsenic, administered hypodermically, is stated to be the most satisfactory of all remedies hitherto proposed.

At the Congress of Medicine at Munich an extremely important discussion was held upon the therapeutic action of ferruginous compounds; BUNGE urged the dietetic use of ferruginous vegetable products, and stated that ferruginous drugs act only by suggestion; while QUINCKE was convinced of the use of ferruginous preparations, especially of the suboxides and albuminates. He maintained that organic compounds were not preferable to inorganic, the inorganic iron being changed in the intestine to an organic combination; he concluded by saying that drugs cannot be dispensed with in the treatment of chlorosis, a conclusion with which most practitioners will cordially agree. The course of the recent discussion on the treatment of acute lobar or croupous pneumonia elicited very few new facts; oxygen inhalations and the use of perchloride of iron, of morphine and strophine, strychnine, caffeine, and digitalis were referred to, but the consensus of opinion appeared to indicate that the claims of antitoxic treatment were premature, that ice applications had not gained in favour except for the relief of pain, and that there might be some risks in the reduction of fever by drugs that are not distinctly inimical to micro-organisms. On the other hand, it is worth noting that the cold bath has been employed in the pneumonia of children in France, and that it is stated to be more efficacious than when used for adults. The pharmacology of the ipecacuanha alkaloids has been lately studied, and it is held that cephæline is the more powerful emetic, while emetine, although emetic in large doses, is the more powerful expectorant. On these grounds it has been urged that the alkaloids might give more constant and more satisfactory results than preparations derived from the plant, in which their relative proportions are subject to variations. Amongst recent suggestions for the treatment of phthisis may be mentioned chloride of ammonium, para-chlorophenol, and fluoride of calcium, the last named being especially indicated in tuberculosis in infants. Acute catarrh has been treated with sulphanilic acid, douches of carbonic acid are said to have cured anosmia and also ordinary common colds, and cocaine has been employed, apparently with good results, in whooping-cough.

Several monographs indicate that papain is gaining favour in the treatment of various forms of dyspepsia, from simple atonic dyspepsia to that associated with gastric ulcer, when it is said to promote cicatrisation. It is stated, however, that it is most efficacious when given with other drugs. Bichromate of potassium has also been recommended for chronic dyspepsia and other affections of the stomach. In the diarrhœa of tubercle and in typhoid fever compounds of bismuth and naphthol have been employed as intestinal antiseptics, while the "radical cure" of chronic dysentery, by daily washing the large intestine with dilute solution of nitrate of silver, has been described. From experiments with aniline colours the rapid absorbent power of the rectum has been confirmed, and it is suggested that large doses of quinine and other drugs might be thus administered. A new drug, uranium nitrate, has been advocated for the treatment of diabetes mellitus, and its power of controlling the secretion of sugar is said to be greater than that possessed by any other drug. For the same disease yeast has been suggested, while uricedin (citrate of potassium, sulphate of sodium, chloride of sodium, and citrate of lithium) has proved of service in the uric acid diathesis. Bromide of lithium has been used in acute and chronic Bright's disease, while, in the acute form more particularly, the external application of pilocarpine or of guaiacol has been commended. Uræmic coma, attended with great cyanosis and loud stertor, has been successfully treated with inhalations

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of oxygen. Attention has been directed to the dangers of morphia in gynæcological practice, and to the use of salipyrin in menorrhagia and metrorrhagia, and of veratrum viride in eclampsia. Very little has been reported of new antipyretics, but early in the year an interesting paper upon the administration of salicylates in acute rheumatism was published in our columns; for the same disease salophen has been recommended, as well as for chorea and neuralgia. The value of eucalyptus oil as a disinfectant in scarlet fever has been investigated, with somewhat disappointing results. Much has been said in favour of the treatment of diphtheria by sulphur, and by insufflations of sulphur together with tabloids of pure sulphite of magnesium, but these researches are not so numerous or so convincing as those with antitoxin. The recurrence of influenza has led to renewed attention to the prophylactic value of quinine, and, in some quarters, there is general agreement that the hydrochlorate and the hydrobromate possess greater efficacy than the sulphate. As revivals rather than novelties may be mentioned the recommendations of nitrate of silver and of biborate of soda in epilepsy, and perhaps the use of chlorobrom for seasickness should fall in the same category. Trional has been employed as a hypnotic in cases where chloral and sulphonal fail, and it has been of especial service in cases of sleeplessness in children. Chloralose and somnal, two other hypnotics, have also received a certain amount of support, but the latter is contraindicated by any gastro-intestinal disturbance. Comparatively little has been heard of the animal extracts during the year, but thyroid extract has given good results in the treatment of obesity in patients free from indications of myxœdema; it has also been used in goitre, and with marked success in psoriasis. Salicin and salicylates have been highly recommended for psoriasis and other skin affections; they are said to be of great value in the stage of active development, and in hyperæmic cases which are unsuitable for arsenic or thyroid extract; it is further claimed that they are less likely to upset general health than either of the last two. The antisudorific properties of picrotoxine have been made the subject of clinical study, and a peculiar bullous eruption on the hands has been figured and ascribed to the application of iodine liniment to the chest. Serious coma has been accidentally produced by carbolic acid in three recorded cases, in two it resulted from the application of carbolic compresses to the skin, and in the third, an infant, it ensued after the head had been accidentally washed with pure carbolic acid. Serious symptoms have followed the use of cocaine, and in a fatal case of acute poisoning the quantity taken was two drachms of a 10 per cent. solution of the hydrochlorate. A case of poisoning by hypodermic injection of strychnine has been successfully treated, after the development of opisthotonos, by the continuous administration of chloroform for over six hours, and a similar happy result has followed the use of oxygen in morphine poisoning, in which artificial respiration had been necessary. A remarkable case of quinine poisoning, by five or six drachms of the sulphate, was reported at the Indian Medical Congress, the prominent symptoms being paralysis, inertia, and blindness; the patient gradually recovered, but vision remained bad for some months. A dose of five grains of exalgine, in a case of asthma and insomnia, produced symptoms sufficiently serious for it to be classed as a respiratory poison. The relative safety of sulphonal in large doses has been once more demonstrated by a female dipsomaniac who recovered from a dose sufficient to produce sleep for sixty hours. An accident with phenyl-hydroxylamine led to most severe symptoms with marked separation of hæmoglobin; phenacetin rashes have been noted, and the toxic list may be closed by reference to the delirium and unconsciousness caused by *scopolia lurida*, described at the Indian Medical Congress. It will be noted that, with the exception of the last-mentioned, these toxic symptoms have resulted from the accidental or injudicious use of relatively common drugs, and they are included in this account of therapeutic progress of the year either for the success of the treatment employed or for the warnings they convey.

The meeting of the British Medical Association enabled the therapeutic claims of many English hydropathic centres to be dealt with by those having local experience of their value, and the therapeutics of saline laxative mineral waters have also received attention.

In conclusion, it may be noted that earnest protests have been raised against the dogmatism of laboratory teaching and its supposed claim to be the proper foundation of rational therapeutics. We have been reminded of the respect due to the empiricism of antiquity, which has furnished so many of the drugs still employed and trusted by the majority of the profession. Amidst much that is new, the claims of empiricism cannot be ignored; explanatory theories, however satisfactory, do not deprive an empirical discovery of its value, nor do they, strictly speaking, place the discovery within the realm of rational therapeutics. These protests, though timely, indicate a spirit of conservatism; but it must be admitted that, when the work of the laboratory is supported by undoubted clinical experience, like that adduced in favour of some forms of serum therapy, no protests can be effective in checking the march of progress.

Dental Surgery.

During the past year dental surgery may be said to have made sound and steady progress. The British Dental Association, under whose guidance the dental profession has made so much headway in recent times, has again a good year's work to chronicle. The strength of this body has always been in the unity with which it has worked, and as long as this continues its influence will be felt. Such steps, therefore, as that quite recently taken by the Midland Branch of the Association, in sending a vote of thanks to the General Medical Council when the same had not been considered necessary by the representative board, is not a healthy sign. As an outcome, no doubt, of the annual meeting of the Association at Newcastle last year, a dental hospital has been started in that city, and another gratifying point to chronicle is the large number of new dental appointments which have been made to public institutions, in a great measure due to the work of the committee on the teeth of children. During the past year a large number of prosecutions of much interest to dentists have taken place, and included in these have been two cases of evasion of the Act of 1878. The most valuable contributions

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to dental science have been the articles dealing with the constitution of teeth by Dr. BLACK and Mr. C. S. TOMES. The articles by the former appeared in the *Dental Cosmos*, and the investigations which he carried out must have entailed a large amount of time and labour. The result has been a valuable addition to the knowledge of the teeth and also of the various materials used for filling. Mr. TOMES'S articles appeared in the journal of the British Dental Association, and were in some respects surveys of Dr. BLACK'S, criticised by the light of investigations he had himself undertaken. The results obtained by Mr. TOMES seem to point to the fact that something outside the amount of lime salts is the cause of caries of the teeth, and he throws out a hint that the trouble may be in the amount of water contained in dentine, or, perhaps, not in the dentine at all, but in the enamel. An interesting discussion has taken place on the nature of the translucent zone in carious dentine. In this connexion Mr. F. J. BENNETT has described in dead teeth an appearance similar to the translucent zone, and Dr. MILLER of Berlin towards the close of the year has contributed an article in which, although he inclines to the view that the appearance is only seen in living teeth, still admits that the question is far from being settled. Fresh light has been thrown on the origin of Nasmyth's membrane by Mr. PAUL, and a large amount has been written on coagulents and non-coagulents in the treatment of pulpless teeth. Hardly any books of importance have been published, and the one most worthy of mention is one on "Dental Microscopy" by Mr. A. HOPEWELL SMITH. This book has satisfied a long-felt want. A very valuable paper by Dr. HEWITT has appeared in which he sums up the result of inquiries into the number and causes of deaths which have occurred from the administration of chloroform for dental operations, and his statistics show that the large majority have taken place in Scotland, where chloroform is so frequently administered. Dr. HEWITT'S contribution is a very valuable one, and should go far to settle a much vexed but very important question. By death the dental profession have lost their veteran leader, Sir JOHN TOMES. Although for the last few years he had not been in active practice, his opinion on all matters was always sought, and up to the last he was the guiding spirit of a profession which he truly may be said to have made. The death of Mr. JAMES PARKINSON has also severed one of the few remaining links of the present with the past.

Ophthalmology.

In this department we have to record that the Bowman Lecture was delivered before the Ophthalmological Society of the United Kingdom by Dr. W. R. GOWERS, who took for his theme Subjective Visual Sensations, dealing, in the course of his remarks, with those that occur in connexion with hysteria and epilepsy, the details of the cases being drawn from his own experience. The fourth Boyle Lecture was delivered by Dr. CRUM BROWN on Movements of the Head and Eyes. The meetings of the Ophthalmological Section of the British Medical Association were well attended, and several important papers were read. Three instances of the rare parasitic affection, constituted by the presence of the nematoid worm, named Filaria Oculi, have been placed on record. Two of these were in the same patient, and were under the care of Dr. ARGYLL ROBERTSON. They were both extracted in the living state, and proved to be a male and female specimen of the worm. The third specimen was observed by MM. LACOMTE and COPPEZ, and moved briskly in the anterior chamber without producing iritis. The parasite was critically examined by M. VAN DUYSE. Both patients had resided on the West Coast of Africa. Troubles of the conjunctiva and their treatment occupy, as usual, a considerable space in ophthalmic literature. Dr. MALGAT claims to have been highly successful in the treatment of granular lids by means of electrolysis, a needle forming one pole of a small Gaiffe's battery being applied for a few seconds to each granulation, whilst the other pole is placed on the arm or between the hands. The strength of the current should be about six or seven milliampères. Cocaine renders the little operation painless, and the cicatrices left are slight and produce no inconvenience. It is interesting to find that antitoxin treatment has proved successful in cases of diphtheritic conjunctivitis. From a perusal of the reports of the various cases in which this remedy has been employed with great advantage by Mr. WALTER JESSOP, Dr. MORAX, Dr. TERSON, Dr. H. COPPEZ, M. GAYET, and others, the conclusion may be drawn that, if the treatment is commenced sufficiently early, the symptoms threatening invasion of the cornea by the specific bacilli of diphtheria and consequent serious impairment of vision soon disappear, and complete recovery takes place, adding another to the now numerous evidences of the value of this means of treatment. The pain and inflammation of the conjunctiva that not infrequently follow the employment of the yellow oxide of mercury ointment in cases of phlyctenular ophthalmia when applied in doses sufficiently strong to be really serviceable have led to the trial of other and blander remedies. Amongst others the phenate of mercury and the phenate of gold have been tried by M. GALEZOWSKI. The former when subcutaneously injected has also been found useful, not only in inflammatory troubles of the lids, but in cases of syphilitic affections of the choroid and retina. The phenate of gold it is said may be employed hypodermically with advantage in cases of atrophy and in ataxic conditions of the optic nerve. A substance named sodium sozo-iodolate has been proposed by M. GOLDZIEHER as a remedy in cases of ulcer of the cornea in the proportion of 3 per cent. of vaseline and a small quantity of atropine sulphate. Formol in the proportion of one per thousand of distilled water has been used with success in the same class of cases by M. OLIVIER and by M. FROMAGET when other remedies had failed, and Dr. ROLLAND has vaunted the merits of antipyonin, which he believes possesses the advantages of being soluble, antiseptic, and innocuous, whilst it is very effective in cases of abscesses and ulcers of the cornea, in pannus, and in the various forms of conjunctival inflammation. Signor LAVAGNA recommends the use of formaldehyd as an antiseptic remedy, and one that is especially useful in cases of inflamed lacrymal sac in solutions containing one part in two thousand. Two cases of very serious hæmorrhage from the conjunctiva have been recorded, not apparently associated with hæmophilia. In one of these, a child seven months old, under the care of Dr. STOEVEN, death took place from the

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hæmorrhage proceeding from a small growth of granular tissue on the inner surface of the lid, whilst the other was seen by Mr. JESSOP, and the source of the hæmorrhage was a depressed jagged ulcer on the palpebral conjunctiva.

The mode of dealing with the cortical substance of the lens left after the extraction of a cataract is one of the most difficult points to determine in ophthalmic surgery. To remove it by operation or to leave it alone is a proceeding equally beset with difficulties, and in many cases the surgeon wishes he had adopted the opposite plan to that he has pursued. M. SERRILLO advises with confidence the introduction of a Beers' knife on the fourth or fifth day after the operation, when the lens substance is softened by absorption of the aqueous. It will be interesting to know his plan of procedure ten years hence, as experience of many cases is requisite before a sound conclusion can be drawn.

The treatment of detached retina has been under discussion on several occasions during the past year, and various methods have been suggested. Dr. C. S. BULL of New York, in addition to rest in the recumbent posture, atropine, and a bandage, has employed pilocarpin hydrochlorate, which, however, as most practitioners have found who have used it, produced such alarming prostration that he ceased to prescribe it; iodide of potassium, puncture of the sclera, division of fixed membranous opacities, and division of the detached retina have all been tried, but in few instances were any of these remedial means satisfactory in their results. An original method of treating this affection has been suggested by Dr. R. DEUTSCHMANN, which has proved of service in some cases, and at least deserves a trial. It consists in injecting into the eye some of the fresh vitreous from the eye of the rabbit by means of which the retraction of the films and filaments in the vitreous, which have been thought to cause the detachment, is prevented. The injection of the vitreous under, of course, aseptic conditions does not appear to be followed by any marked irritation. Mr. NETTLESHIP read a paper at the Ophthalmological Section of the British Medical Association meeting, in which he advocated iridectomy in chronic glaucoma as a general rule, for although in many instances no improvement results, in others the progress of the malady is arrested, whilst in others, again, the restoration of vision is considerable.

The almost uniform occurrence of injury to the exciting eye in cases of sympathetic ophthalmia as well as the results of microscopical investigation have led to the generally accepted view that this disease is due to the introduction of germs into the injured eye, which by one of several routes make their way to the opposite eye, and by exciting inflammation in it destroy or materially deteriorate its power of vision. Various observers have ventured to doubt the truth of this general statement, and other modes in which the troubles characteristic of sympathetic ophthalmia may be produced have been suggested. A very carefully examined case by a competent observer, Mr. W. COLLINS, has been reported in which the microscopical examination of the eyes supplied no evidence whatever of the presence of micro-organisms, and in such case one or other of the explanations given by those who do not admit septic contamination must be admitted.

In an article on the Albuminuric Retinitis of Pregnancy Dr. SILEX of Berlin finds that it occurs in the proportion of 1 case to every 3000 pregnancies, and is fully of opinion, with most authorities in this country, that premature labour should be induced. VAN FLEET, in a paper published in an American journal, is opposed to this proceeding, and doubts whether the physician is justified in sacrificing the life of the fœtus to preserve the vision of the mother. The action of the practitioner would probably be guided by the circumstances of the case. A short but interesting communication to his own *Recueil d'Ophtalmologie* has been made by M. GALEZOWSKI, giving an account of the diseases of the eye he met with in travelling through Persia. He shows incidentally that there are openings in the great countries of the East for some of the younger ophthalmologists, for in requital of the attention to, and interest in, the many cases of diseases of the eye amongst His Majesty's subjects who had come under M. GALEZOWSKI's care the SHAH decided to establish a chair of Ophthalmology and endow it with an annual revenue of about £400, and Dr. RATULD now occupies it with distinction.

The injection of an antiseptic fluid into the anterior chamber of the eye after the operation for the extraction of cataract has again been proposed by M. CHIBRET, who recommends a freshly made solution of mercury cyanide of the strength of 1 in 20,000 of water, and he has devised a special and rather complicated syringe, but the members of the Ophthalmological Society of Paris do not appear to have been greatly taken with the proposal, which is indeed opposed to the disposition of most surgeons to simplify the operation as far as possible. An isolated but very interesting case has been put on record by M. ABADIE in which electrolysis proved of great service. The patient had given way to his temper, and shortly after his vision became dim and in the course of three hours was lost, probably from intra-ocular hæmorrhage. After undergoing some medical treatment without success, he placed himself under the care of M. ABADIE, who inserted an iridised platinum needle into the eye, the opposite (negative) pole being placed on the arm. On the following day the patient was able to count fingers, and in the course of a month could guide himself and read the names of streets.

Observation of the distressing effects of high degrees of myopia has of late years led to the suggestion by FUKALA, SCHWEIGGER and others that the lens should be removed though still perfectly transparent and the excessive refraction diminished. In the event of the operation being successful there can be little doubt that the vision of the patient undergoes considerable improvement, the myopia being reduced about fifteen dioptres, but the risk and uncertainty of the operation, which are thought by many to be greater than in ordinary senile cataract, deter most people from submitting to it. VON HIPPEL, however, brought the subject before the Ophthalmological Congress which met this year at Heidelberg, and stated that he had operated on sixty cases with good results, and his statements were supported by Professor SATTLER, who has also had considerable experience. It should not be resorted to when the myopia is below what is corrected by a 10 D concave glass. VON HIPPEL'S results were good, the patient preferring in all instances the eye that had been operated on to the other; but in Professor SATTLER'S cases the effects were less satisfactory, in some instances being disastrous

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and in others being unattended with improvement in vision. A totally different method of assisting myopic patients has been reintroduced by Dr. MASSELON and Dr. DE WECKER. It consists in the employment of convex instead of, as usually practised, concave glasses. The principal objection to this plan is that the position of objects as seen by the patients through such glasses is reversed, though it is said that the necessary mental correction is soon learned. The cause of myopia has been referred by Dr. O. BITZOS, after an elaborate inquiry into the subject, to abnormal elasticity of the sclerotic with increase of intra-ocular tension, which last is again due to excessive accommodation or prolonged strain of the eye in working at near objects. The injurious effects of protracted attention to near objects is indubitable, but the increased elasticity of so dense a tissue as the sclerotic seems to be doubtful. The physio-physical conditions by which accommodation is effected, it may be remarked in passing, have been fully considered by Dr. WILHELM SCHOEN.

Apropos of a method of treatment practised by M. WECKER in cases of wounds of the cornea, which consists in freeing the conjunctiva from the sclerotic and bringing it forward by a continuous circular suture and thus rendering the wound subconjunctival, priority in the proposal for performing the operation has been claimed by M. TROUSSEAU. Whoever may have devised it, the proceeding is in some instances very useful if performed under carefully conducted aseptic precautions. In regard to strabismus and the operation for its cure there seems to be a growing disinclination, especially in America, to divide the stronger muscle, but instead to effect by operation the advancement of the weaker muscle, and thus to improve its leverage in bringing about the rotation of the eye. EWALD HERING contests the supposed colour-blindness for blue at the fovea centralis, which was admitted by A. KÖNIG, who thought that the blue-blind area corresponded to a visual area of from 55 to 70 minutes in diameter. He has dealt also with Purkinje's phenomenon—that in the different colours the sensation of brightness is a different function from the absolute degree of light, blue, for example, being brighter than red or green when the light is lowered. W. A. NAGEL has experimented on the sensibility of the bulbar conjunctiva, and has found that of the three sensations of pressure or contact, pain and temperature this membrane possesses chiefly two—pain and cold. The subject of colour vision has been considered in an important treatise by Captain DE W. ABNEY, in which the theories of colour and the chief facts that have been ascertained in regard to the perception of colour are discussed in masterly fashion. Dr. EDRIDGE-GREEN and Mr. BICKERTON have published papers on colour-blindness in which it is pointed out that too great reliance must not be placed on the Holmgren wool test, that examinations for the public services and for railway and other signal-men should be conducted by medical men specially trained in colour-blindness, and that the arrangements for the examination of such an extremely important defect are not even now conducted in a satisfactory manner.

Forensic Medicine.

With the exception of a remarkable case at Sydney, N.S.W., the closing year has not been fertile in furnishing instances of poisoning beyond the usual record. In this case a man was indicted for the murder of his wife by administering *arsenic*. From the facts that both arsenic and strychnia in large quantity were detected in a drink intended for the deceased, and that arsenic was found in the excreta, there can be no doubt that the deceased came to an untimely end. The accused was tried, convicted, and condemned to death. The sentence was afterwards commuted to imprisonment for life, and later the Government on being memorialised ordered a commission, consisting of a lawyer and two medical men, to examine and report. The lawyer was of opinion that the decision of the jury should be endorsed, whilst his *confrères* were not satisfied that it had been proved that the condemned man had caused the poison to be taken by his wife. We need not here detail the subsequent history of the case. But the events above recorded are somewhat analogous to what happened in the Penge case. It will be remembered that four persons were condemned to death for the murder of a woman named STAUNTON by starvation. The expert medical evidence given at the trial left grave doubts whether she had not succumbed to tuberculous meningitis. A weighty representation made by the medical profession in favour of this hypothesis led to the death sentence being commuted in the case of three of the convicts—the fourth was granted a free pardon, as a committee of judges held that the indictment was bad in law. Abroad two cases of poisoning—not fatal—by *creolin* have occurred. In one a woman took with suicidal intent 75 grammes of the substance. She recovered in five days. The symptoms were those of narcosis and severe gastro-intestinal irritation. The poison was excreted mainly by the kidneys. In the other the creolin was used as a 2 per cent. vaginal irrigation. Dr. HERZEN relates a case in the *Révue Medicale de la Suisse Romande* of severe toxic effects from the ingestion of twenty centigrammes of *chloralose*. Convulsions of the muscles of the extremities and those of mastication ensued. These were subdued by hypodermic injections of ether. The patient recovered. A lamentable accident occurred through a druggist's apprentice dispensing one ounce of tincture of opium for black draught. The bottles containing the drugs were carelessly allowed to be in juxtaposition in the shop. Death ensued in three hours. In Yorkshire a woman, on her own confession, took the greater part of a mouse powder, which contained two and a half grains of *strychnia*. The symptoms peculiar to the drug gradually subsided under treatment, but she died from syncope after twenty-four hours. The jury found a verdict of "*Felo de se*." We had occasion to comment strongly on the merits of the case, inasmuch as there was scientific doubt—(1) as to whether she had taken strychnine; (2) as to the cause of death; and (3) as regards the verdict, contending on the latter point that the act, if committed, was in itself *primâ-facie* evidence of insanity, and especially in a person the subject of chronic alcoholism.

Chloroform has been responsible for a number of deaths, the majority of which resulted from inhalation prior to intended surgical operations. Two cases have been reported of the fatal effects of chloroform inhaled to allay pain and procure sleep. In one instance it was shown that a man had delivered at his house two ounces of chloroform daily for eighteen months. In the other a member of our profession fell forwards whilst self-anæsthetised, and so

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inhaled a lethal dose of the poison. A sad mishap befel the wife of a medical practitioner, who inadvertently swallowed a quantity of chloroform and died within half an hour. The A.C.E. mixture—recommended many years ago by a committee of the Royal Medical and Chirurgical Society—has caused death during its inhalation in one case. Cardiac failure preceded the cessation of respiration. Concerning the analysis of *blood stains*, recent investigation has shown that with improved instruments approximate information may be obtained as to the source of the blood, whether human or not, but considering—(1) that in two animals at least—the guinea-pig and the opossum—the size of the corpuscles is practically the same as in man, and (2) that the shape and dimensions of the cells are subject to marked variation owing to external influences, the information at our service must be regarded rather of scientific interest than as a reliable aid to medico-legal inquiries. As regards the detection of blood an American professor has succeeded in demonstrating by the aid of SORBY'S apparatus its presence when existing in so minute a quantity as $\frac{1}{3000}$th of a grain.

The Society for the Prevention of Cruelty to Children has good reason to be proud of its increasing usefulness. Their last yearly report showed that in only 4 per cent. of the prosecutions instituted by them had the charges been dismissed. We are entirely of opinion that their officers should have a free hand in their attempts at detection of criminal usage of children, whether by actual cruelty or by neglect, and we regret that recently a metropolitan magistrate should have described their action as over-officious. If these officers are not allowed to enter houses without notice of the object of their visits the ends of justice must be thwarted.

On more than one occasion we have had to urge an alteration of the law in its relation to medico-legal procedure. Instances of such desirability are not far to seek. At present medical officers at public institutions are not entitled to fees for making post-mortem examinations and giving evidence at inquests in cases of deaths which have occurred in such institutions. This is clearly an injustice, which was submitted to at the time of the passing of the Coroners Bill to save the measure from being wrecked. Again, it appears from a case heard at the Farnham Petty Sessions that unless the accused is committed for trial the magistrates have no power to order a fee or even travelling expenses for a medical witness.

The recommendations of the London County Council relative to proposed alterations of the law regulating coroners' inquests have been fully dealt with in these columns. We trust that ere long they will receive the sanction of the Legislature. At the beginning of the year no less than three separate cases of fatal accidents at laundries occurred in the metropolis. In Marylebone eight persons lost their lives by fire. To remedy the evil of want of efficient inspection the late HOME SECRETARY dafted a Bill to include laundries in the Factory Act. To render this thoroughly effective it must cover all buildings where work is taken in for profit. We acquiesce in the suggestion that it should be ordered that the fines on conviction under the Margarine Act should go to the prosecuting body, as in the Food and Drugs Act. At the recent Hertford Assizes Mr. Justice HAWKINS when trying a case of rape took occasion to say that since he had not the power in such cases to order "the cat" he refrained from using it where he had—namely, in cases of robbery with violence. No doubt the learned judge is right in wishing he could sentence persons convicted of the former offence to corporal punishment, but we doubt if this is a valid reason for withholding the lash where the Legislature intended it should be used. At the same assizes an interesting point arose as to the jurisdiction of a coroner in committing for trial at a particular court. At the inquest held at Folkestone on the body of Mrs. FLETCHER, who died from the effects of rupture of the uterus, the jury found a verdict of manslaughter against Dr. WIGHT (who was subsequently tried and convicted at the Old Bailey). The coroner committed the accused to be tried at the Maidstone Assizes. The alleged offence and the death occurred in the county of London, and consequently the prisoner had to be tried at the Central Criminal Court. His lordship ordered the recognisances of the witnesses to be binding only for the trial in London. Mr. T. R. ALLINSON, whose name had been removed from the Medical Register for advertising, has been convicted and fined the full amount for practising as a qualified man. If prosecutions were not instituted in such cases the disrolling of a person for unprofessional conduct would be of little avail. We cordially endorse the action of the General Medical Council.

The course taken by Mr. OLIVER PEMBERTON, the Birmingham borough coroner, in requiring the presence at an inquest of a person under arrest for an alleged criminal act in connexion with the death, the cause of which was under investigation, deserves approbation. It is just that an accused person should have the right of hearing the evidence, and if he chooses of testifying on oath or making a statement even in a court of first instance. He cannot be compelled to speak, but by an order of the Lord Chancellor he can be present at the inquiry if he so desires.

This medico-legal review must end with a brief recital of two cases of singular interest. We refer to the Plaistow matricide and the death of a young woman named ROSE ENGLISH, who was found shot in the chest and neck in the same room with her male companion. At the Central Criminal Court ROBERT ALLEN COOMBES was put on his trial for the murder of his mother in cold blood and by premeditation. The facts were unchallenged, for the boy avowed his crime. After a long argument and severe cross examination of the prison medical officer the accused was found to be not in a fit state to plead on the ground of insanity. According to the strict letter of the law he was criminally responsible, as his alienism was not of an intellectual nature—i.e., he probably knew the quality and nature of the act and the difference between right and wrong—the legal definition of insanity as regards criminal responsibility—but his antecedent and then present condition too clearly showed that his moral depravity was great and his inhibitive will-power practically *nil*. We trust the circumstances of this crime and the subsequent legal procedure will stimulate Parliament to bring the criminal law into accord with common sense and medical belief. At present it is an anomaly, and, what is more, unjust.

In reference to the death of ROSE ENGLISH, the expert

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medical testimony given at the inquest was to the effect that the fatal wounds might possibly have been self-inflicted, but that this was in the highest degree improbable. The jury returned a verdict of "Suicide." We are of opinion that the Public Prosecutor acted wisely in not taking further action.

Biology and Physiology.

No better evidence of the activity and interest with which physiological science is pursued at the present day both in this country and abroad can be given than the fact that PFLÜGER'S *Archiv*, the parts of which for many years only formed one modest volume per annum, is now represented by three and contains an astonishing number of articles of which it is very difficult to notice even those that are especially important. A less, but still considerable, increase has taken place in MICHAEL FOSTER'S *Journal of Physiology* and in the *Quarterly Journal of Microscopical Science*. Great attention continues to be directed by microscopists and histologists to the characters and structure of the cell both in plants and in animals. Mr. A. SEDGWICK has indeed given a note of warning that too much stress may be laid upon the cell in development as a unit of the organism, and that in reality the several tissues proceed from a multiplication of nuclei and run into one another by almost imperceptible gradations, but the subject has great attractions, and a large number of observations upon cells have been made and recorded by VERWORN, SCHLATER, REINKE, STRASSBURGER, WAGER, KANTHACK, HARDY, and others, but especially by HEIDENHAIN, who in an elaborate article contained in the *Archiv für Mikroskopische Anatomie* describes the central corpuscles and nuclei of cells, and introduces or uses many new terms which almost require an education to understand, such, for example, as centrosome, astrosphere, archoplasm, mesocentrum, and megacaryocyte. Professor ERNEST HAECKEL has published two parts of his valuable work on systematic phylogeny, one of which is occupied with the Protesta and Plants and the other with the Vertebrata. The phylogeny of the invertebrata remains to complete the work. An endeavour is here made to follow the gradual development of both plants and animals from the very earliest and simplest to the latest and most complex forms. Perhaps no other biologist is so competent to fulfil this task as the author who has set himself to accomplish it. It will be interesting to know whether the facts at his command afford satisfactory evidence of the development of the vertebrate series from the great stem of the mollusca through the tunicata or from the arthropod division of the animal kingdom, plausible reasons for each of which have been lately advanced.

Some interesting work in physiological chemistry has been done by Dr. W. HALLIBURTON on certain tissue extracts which contain nuclein and have been named nucleoproteids, and by the same experimenter in conjunction with Dr. S. W. PICKERING and with Dr. T. GRIGOR BRODIE on intravascular clotting resulting from intravenous injection of certain artificially made colloid substances. These compounds in their chief reactions closely resemble proteids, some containing, whilst others are destitute of, phosphorus. This line of research may prove to have an important bearing on intravenous clotting from disease, as well as on that produced by the venom of snakes. Dr. E. SALKOWSKI and Dr. HAHN have shown that the splitting of the casein molecule which takes place in digestion is due to the specific action of pepsin, and that whilst one part is dissolved and absorbed the other remains insoluble as paranuclein. Dr. A. GARROD has continued his researches upon the unstable pigments of the urine. The analyses of Dr. RALPH STOCKMAN show that the iron metabolism of the body is small, and that the quantity of iron in the dietary of healthy persons with good appetite only amounts to about eight or ten milligrammes per diem, which is a strong argument against the large doses of iron that were, and still perhaps are, sometimes given. The necessity for obtaining precise details in regard to the anatomy of the nervous system such as will satisfy the requirements of the clinical observer, whose horizon has been so greatly extended by the experimentalist, has led to many careful histological researches and to the publication of numerous treatises and memoirs on this subject. Some of these, like the works of DÉJÉRINE and DEBIERRE, are exclusively devoted to the anatomy and histology of the brain and spinal cord, whilst others, like those of TESTUT and POIRIER, only deal with the centres as a part of general anatomy, but in both cases the comprehension of the structure of these organs as given in the text is greatly facilitated by numerous woodcuts, many of which are original, and in nearly all cases beautifully executed. Nor have workers been wanting to investigate the physiology of the nervous system. Some remarkable experiments have been made by Dr. MOTT and Professor SHERRINGTON, which show that section of all the sensory roots of the nerves distributed to a limb is followed by permanent motor paralysis in addition to the anæsthesia which might naturally be expected to occur, from which they conclude that the whole sensory path, from periphery to cortex cerebri, is in action during voluntary movement. The assumption that such motor centres exist in the cortex cerebri has been combated by Dr. BASTIAN, who maintains that there are no motor, but only sensory centres in this region; sensory impressions and the activity of sensory centres being the real guides for volitional action, and the true motor centres only existing in the spinal cord. In connexion with this it is interesting to observe that Dr. E. STEINACH has quite recently shown that the posterior roots of the spinal nerves are not exclusively sensory, but that they also contain motor fibres which are distributed to the visceral muscles originally developed from the lateral plates in the embryo. Dr. FRASER HARRIS has studied the rapidity with which the impulses producing voluntary tetanus succeed each other, and after trying many different methods of experimentation finds that the contraction of the muscle is not a complete but an incomplete tetanus, and that the rhythm of the volitional impulses proceeding from cerebral motor areas has an average rate of from ten to twelve per second, or that it has some higher rate transmuted into one of ten or twelve per second by the activity of the motor cells of the anterior cornua of the spinal cord. The experiments of GRIGORESCU show that the rapidity of transmission of sensory impressions and of motor impulses is the same in the sciatic nerve and spinal cord. The absolute rapidity of sensory impressions in the sciatic nerve and cord together is from about twenty-five to about thirty-one metres per second. In the cord alone it is upwards of

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fifty-one metres per second, so that time is lost in the transference of the sensory impression from the terminals of the sciatic nerve in the cord to the cells of the cord. In locomotor ataxy the speed is slower in both, but especially in the cord. OEHL demonstrates that the speed is slower, the difference being as thirty-five is to forty-one. Amongst the minor communications on the nervous system may be mentioned that by Dr. M. GROSSMAN, who has demonstrated that the inhibitory fibres of the heart are formed by the three or four lower fasciculi of the vagus and the uppermost fasciculus of the spinal accessory nerve; that by FRANZ HOFMANN, who has satisfied himself that in the frog's heart the vagal fibres which cause variations in the frequency of the beats do not run in the septal nerves, whilst those that modify the strength of the ventricular contraction and the tone of the ventricle run in the septal nerves; that of Dr. H. BORUTTAU on the functions of the vagal branches distributed to the lungs; that of Mr. LANGLEY on the regeneration after section of the sympathetic nerve; that of Dr. K. PANDI on the cortical mechanism of reflex acts, a mechanism which he believes to be uniformly present in the animal kingdom; and lastly, that of Dr. A. G. LEVY on the elasticity of brain, a point of some importance in regard to the growth of tumours and the penetration of foreign bodies into it.

In regard to the blood and circulatory system the origin of the blood corpuscles is referred by M. WERNICKI to the eosinophile layer of the cancellous tissue of bone, the granules of which receive a coating of hæmoglobin at the spleen and then constitute the hæmatoblasts of HAYEM, and this appears to be the view of Dr. SACHAROFF; but a difficulty arises from the fact pointed out by SIAROCILEO, that the rays, the blood of which contains abundance of eosinophile cells, have no bones, and therefore no cancellous tissue. WERNICKI thinks all the white corpuscles have the same origin, that they are short lived, and after escaping from the vessels by a diapedesis nourish the tissues. The glycolytic ferment contained in the blood has been carefully examined by HAMBURGER, who names it glycase, a ferment hitherto only found in plants. It converts starch into sugar much more slowly, but as effectively as the ferment of the salivary, pancreatic, or intestinal ferments. The activity of the ferment, according to J. ABELOUS and G. BIARMÈS, differs in different animals and at different ages. D. B. DANILWOSKY has shown that the intravenous injection of infusion of spleen causes great increase in the quantity of hæmoglobin and of blood corpuscles. The effects on the white corpuscles of defibrinating blood and of the act of coagulation have been carefully studied by Dr. W. HARMSEN, who finds that many are destroyed in these processes, the proportion of the uninucleated differing from that of the multinucleated. Dr. O. LANGENDORFF has applied the methods of the LUDWIG school for preserving the vitality of the excited heart in frogs by artificially feeding it with defibrinated, filtered, and warmed blood to the mammalian heart, and has restored it to activity even after the lapse of ten minutes after total cessation of contraction. VON ZIEMSSEN has employed a sphygmomanometer devised by VON BASCH, which appears to be constructed on the principle of an aneroid barometer, and from its delicacy may prove of service in clinical research. He finds the normal tension in the temporal artery to be from 80 to 110 mm. of mercury. In a case of arterio-sclerosis with cardiac hypertrophy it rose to 180 to 210 mm. mercury, and in a case of valvular insufficience fell to 50 mm. mercury. Messrs. BAYLISS and HILL have endeavoured to determine the relation between the pressure in the cranial cavity and the blood supply to the brain, and incidentally support the views of KELLIE, enunciated long ago, in regard to the constancy of the absolute quantity of blood in the cranial cavity, though its distribution in arteries, capillaries, and sinuses respectively may vary. The experiments of LAUDER BRUNTON and TUNNICLIFFE afford an explanation of the beneficial effects of massage by showing that it causes increased flow of blood through the muscles during and after the massage, whilst the blood pressure at first rose, then fell, and diminished considerably after the massage had ceased. This they attribute to a primary contraction of the blood-vessels followed by relaxation. Observations throwing some light on the obscure functions of the suprarenal capsules have been made by Dr. OLIVER and Professor SCHÄFER. From their experiments it appears that whilst extracts of the cortical portion of these bodies are comparatively inert, extracts of the medullary portion have an extraordinary power, when injected into the vessels, of increasing arterial blood pressure, raising it from two to five times the normal tension, apparently by causing contraction of the systemic arterioles. The somewhat paradoxical difference in the effects of the medullary, as compared with the cortical extract of the same organ, is perhaps associated with the totally different developmental origin of the two parts, the medullary portion being derived from the epiblast (or rather the sympathetic nerve mass) and the cortical part from the mesoblast—the two parts being, as BALFOUR showed, quite distinct in the cartilaginous fishes.

Anæsthetics.

No very definite pronouncement dealing with the death-rate under anæsthetics has been made during the past year. At the same time much useful work has been done and serviceable information collected. GURLT, continuing the statistics from Germany, gives the mortality under chloroform as 23 deaths in 31,803 cases, and under ether 5 deaths in 15,712 cases. In 1894 the deaths were 17 in 32,725 under chloroform, showing an enhanced death-rate for the present year. GURLT refers to complications due to ether, which, although not showing themselves at the time of the operation, should, he thinks, be reckoned in comparing the two anæsthetics. Ether has been found unfavourable in laparotomy. The unsatisfactory results probably arise from the faulty methods employed in Germany for the exhibition of ether. Chloroform in parturition has been studied by Dr. BEDFORD BROWN. He has collected 40 deaths. The comparative immunity from danger enjoyed by parturients is due, he opines, to changes occurring in the vaso-motor system in pregnancy. He uses chloroform lightly in all stages of labour, and to its full degree to relax muscular spasm and rigidity of the os. There is no reason, he thinks, to regard chloroform as lessening uterine contractions or promoting hæmorrhage. Various observers have advocated measures to be adopted

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anticipatory of, or corrective to, danger arising from chloroform. The pupils during narcosis have been carefully studied by JOSEPH WHITE, WARD, GILL, and others. In the second stage the eyes wander and the pupils dilate; in the third the eyes are fixed, the pupils contract, and GILL regards a pin-point pupil as a criterion of safety. In the fourth stage the eye is fixed and the pupil widely dilated, the sympathetic being paralysed. The effect of electrical stimulation by faradaic currents is shown by ROCKWELL and VON ZIEMSSEN to be really respiratory and not cardiac. The accelerator fibres are more active than the inhibitory. Laborde's method of stimulation by rhythmic traction upon the tongue has been well spoken of by LABBÉ, VERNEUIL, and WARNOTS. BOBROFF, experimenting on lower animals, has used artificially prepared serum for subcutaneous injection in cardiac syncope. He uses five drachms to six drachms and a half. PONCET records some cases in which he performed tracheotomy for respiratory difficulty under anæsthetics. The patients were apparently dead from non-entrance of air into the lungs, and the operation was performed with the view of effecting a rapid ventilation of the pulmonary area. The results induced PONCET to believe that many lives would be saved if early tracheotomy were done, even when no physical impediment existed preventing the entrance of air. BAIXER has drawn attention to the increased perils diabetes causes when chloroform is used. Discussing the causation of death under chloroform, LAUDER BRUNTON has in our columns produced weighty reasons in favour of the view that in poisoning by chloroform the nerve centres are primarily affected, a neuroparesis being brought about.

HAIG has observed that when uric acid exists in undue quantity in the organism there is an abnormal blood pressure. Under chloroform the pressure of the blood is in the initial stage lowered, but as the patient passes out of chloroform this depression gives place to a great increment in blood pressure. This HAIG believes is a source of marked danger to a diseased heart, and if it be present coincidently with the uric acid tension may lead to syncope and death. The association of uric acid toxæmia with death from chloroform has, however, yet to be substantiated. The dangers remotely due to ether have been noticed above; they have during the year been carefully studied by NAUWERCK. BRUN'S view was that ether becomes contaminated by oxidation products and other impurities, and his opinion was corroborated to a certain extent by the experiments of LOWIT, but NAUWERCK advances cogent arguments to show that so-called ether pneumonia is, at all events in his experience, not the result of ether at all, but the effect of auto-infection of the patient's lungs by the septic contents of his mouth and nasal passages. POPPERT records 8 cases in which he believes that pulmonary œdema has resulted from ether. MIKULICZ has also had unfortunate experience with this anæsthetic, and sums it up as (α) 3 cases in which asphyxia occurred during etherisation; (β) 2 deaths from collapse; and (γ) pulmonary difficulties—viz., œdema of the lungs 2 cases, and acute bronchitis 4 cases. MIKULICZ, however, has overlooked two sources of grave fallacy—viz., the excessive quantities of ether given to his patients and the imperfect precautions taken to avoid loss of bodily heat during the operation, due largely to irrigation, wet towels, and other accessories of the antiseptic method. That lowering of bodily temperature takes place under ether has been demonstrated by ANGELESCO, who places it at about 3°F. The loss is proportional to the length of the inhalation, or more probably to the quantity of ether taken in, and is the index of the evaporation heat taken from the lungs. PORTER'S paper opportunely points out that the genesis of much of the so-called ether bronchitis is to be sought in the fact that patients are taken after a prolonged operation under ether in a hot and ill-ventilated theatre into cold and draughty wards. In this connexion the study of the blood during ether narcosis possesses particular importance, and Dr. DA COSTA'S research has advanced our knowledge to a material extent. Although the number of cases studied were too few for us to accept his conclusions as absolutely proven, yet they are of the greatest interest. He found that the hæmoglobin was lessened, thus accounting for the lessened oxidation, and that this was more especially the case when the patients were anæmic at the time of the operation, whether the anæmia was primary or secondary to hæmorrhage. He believes that the blood stream is chilled by prolonged anæsthesia, and suggests that this may cause nephritis and pulmonary complications. He did not find that age exercised any effect. The important results arrived at by MICHELI of Bologna, WUNDERLICH, ALBER, and RINDSKOPFF must not be omitted. They deny *in toto* that the "late effects" such as bronchitis, nephritis, and pneumonia are to be attributed to ether. They investigated a large number of cases, and found that albuminuria never or very rarely occurred *de novo* after ether, and was when present quite transitory. LEPINE asserted before the Lyons Congress that, provided ether was pure, it did not give rise to bronchial irritation even when antecedent bronchial catarrh existed CHALOT goes further. Quoting LINDH, NICOLAYSEN, LASSEN, ASK, and others, he asserts that the "late effects" of chloroform are more numerous than those of ether.

Mr. NEVE published in our columns an important paper on anæsthetics, read before the Indian Medical Congress. From an experience of 6000 cases in the Kashmir Hospital without a death he had seen dangerous symptoms — e.g., primary syncope from fear in early narcosis, laryngeal spasm, &c. During the year further experiments have been made with Schleich's injections of weak cocaine solutions, and many observers have spoken highly of this method of achieving a local anæsthesia. FERRAUD and LUCAS CHAMPIONNIÈRE have used gaïcol as a local anæsthetic. Several fresh inhalers have been introduced, notably improvements in Krohne's chloroform inhaler and the Birch-Rumboll nitrous oxide gas and ether inhaler; while Dr. CARTER has introduced an apparatus on the principle of Junker's inhaler, but intended for ether, which he regards as an advance in so far as its obviates any cyanosis during the use of ether. The special Clinical Report which we have published in the columns of THE LANCET and the reports of the Hyderabad Chloroform Commissions have been collected together for issue in one volume, and will, we venture to think, constitute the most important collection of clinical facts dealing with anæsthetics since the publication of the report of the Royal Medical and Chirurgical Society in 1864.

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Mirror of Hospital Practice.

A review of the cases which we have published in the Mirror of Hospital Practice during the past year shows how very important are the clinical facts brought before the profession in this department of THE LANCET. Our contributors are world-wide and their contributions so varied in character that it is difficult at this time of the year, when we give our annual review, to know which to choose for special mention. It is from the surgical wards this year that the largest number of our records are drawn, and, therefore, in our Annus Medicus it follows that we must direct attention more particularly to the successes of surgery. It will, however, be seen that in a large number the assistance of the physician was given, and without his early appreciation of the gravity of the disease success could not have been attained. As time goes on the usefulness of the diphtheria antitoxin is becoming better known and its scope more defined, but early in the year it was not understood to the same extent as it is now, and the series of cases which we published helped to direct the careful attention of the profession to this remedy. The curative effect of tetanus antitoxin has been less certainly established, and we have brought forward cases in which it has proved unsuccessful. We cannot, however, say that it is of no use—further observations are required; but as the disease is rare in this country opportunities of investigation are not numerous, whilst the remedy is sometimes difficult to procure.

The value of syphonage and other methods of treatment of simple dilatation of the stomach, as met with in some of the large vegetable eaters of some of our rural districts, was shown in a series of cases.

A very limited field for the successful employment of the surgeon's art is that afforded by meningitis and hydrocephalus. Quite recently surgeons were content to perform paracentesis of the lateral ventricle and draw off a small amount of fluid, perhaps repeating the operation later if a child developed coma as a result of excess of fluid in the ventricles of the brain. As these cases always terminated fatally it was suggested that the subarachnoid space should be drained through a trephine opening in the occipital bone; of this method of treatment we have published the following examples during the past year: 1. A youth aged eighteen years suffered for eighteen months from attacks of giddiness with severe headache. Other symptoms followed, and at the time of the operation there were all the symptoms of intracranial pressure. After the trephining of the right cerebellar fossa the finger passed towards the fourth ventricle and encountered a soft, bulging membrane (the posterior medullary velum), which gave way and allowed the exit of much cerebro-spinal fluid. The symptoms were at once relieved, and the patient made an uninterrupted recovery. 2. This was the case of a male child aged three and a half years, the subject of chronic hydrocephalus. An opening was made to one side of the middle line with a gouge, the dura mater was incised, and a probe passed to the fourth ventricle. Drainage was kept up for twenty-eight days, and the patient recovered in a very satisfactory manner. 3. This was a male child aged five months, who suffered from chronic hydrocephalus and fits. Basal drainage was effected, but a too rapid flow of fluid occurred, and the child died from hyperpyrexia. We have mentioned during the year five other cases of operation for meningitis. Of these the following was the only successful one of the number. The patient was a girl aged thirteen, who had been ailing for a few weeks, and had been ill in bed for seven days. There were symptoms of meningitis with advancing coma. Trephining on the right side above the level of the lateral sinus was effected, the dura mater was incised, and a large quantity of clear fluid drained away. The lateral sinus was wounded and the opening was plugged. There was much oozing of clear fluid from the wound. She had attacks of headache and fever which were relieved by passing dressing forceps to open up the wound again. Perfect recovery ensued. All these cases illustrate the necessity for early operation if anything like success is to be expected; there is little prospect of success if the patient has been comatose for some days.

We have published several cases of thrombosis of the lateral sinus secondary to disease of the middle ear, and the method of operating for this septic condition has been fully shown, as also the symptoms which make the diagnosis probable. Case 1 was a boy aged nine years. He was admitted very ill with symptoms of thrombosis, and, in addition, internal strabismus was seen. An operation was performed, and a small quantity of pus was found behind the mastoid, and the mastoid was cleared out; offensive pus was found behind the lateral sinus, and a purulent clot was removed from the interior of the sinus. The internal jugular vein was tied on the following day. Rigors occurred after operation, and abscesses in the neck required to be opened. Recovery ensued. In Case 2 an operation was required on a boy aged six years within a month of the commencement of otorrhœa (the complication of an attack of scarlet fever); the symptoms of sinus thrombosis were very few, the chief localising sign being pain behind the ear. Fetid pus and clot were found in the lateral sinus, but not in the mastoid process. Pus could be pressed up from the neck into the wound. The internal jugular vein was tied on the following day. Suppuration in the right elbow and left hip, with spontaneous dislocation of the latter, caused much anxiety, but he ultimately recovered. In Case 3, that of a male aged nineteen years, pyæmia, manifested by the usual symptoms, with swelling of a shoulder, had been present for about three weeks. A septic clot was removed from the sinus and the internal jugular vein ligatured. The patient recovered, although several rigors occurred during the after-treatment. The shoulder-joint did not suppurate. In another case the operation was unsuccessful, the pyæmia proving fatal; the clot was above the point where the sinus was exposed: the jugular vein was not ligatured.

The cases of injury and disease of the abdomen which we have placed before our readers have been more numerous than usual, and show a continued advance in our methods of surgical treatment. Three of the most interesting resulted from direct injury. The first was caused at football by the head of an opponent which struck the patient in the region of the spleen. A large collection of fluid formed in the left side of the abdomen, which subsided after repeated aspiration; an effusion in the left pleura did not recur after the same method of treatment, and the man ultimately got well. In

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the second case an abscess formed more than three weeks after a crush of the abdomen, and when this was incised fæcal matter was found in it. A fæcal fistula followed. The situation of the abscess, its contents, and the history of the case make it probable that there had been a rupture of the ascending colon. In the third case a man was shot in the abdomen, and the missile, a revolver bullet, entered an inch below and to the left of the umbilicus, and it was found at the operation that four coils of small intestine had been perforated. The eight resulting openings were sutured and the bullet found and removed. Recovery was perfect. Amongst the diseases of this region submitted to operation we may note acute diffuse suppurative peritonitis, caused by perforation of the appendix cæci, was successfully treated by abdominal section and free flushing of the intestines; also a case of rupture of hydatid cyst of the liver.

We have published no less than eight cases of operation for perforation of gastric ulcer, of which five recovered and three died. Of those which recovered the ages varied from nineteen years to thirty-one, and the duration of symptoms was from four to thirteen and a half hours. In four cases the median incision was employed, and in all these the ulcer was on the anterior aspect of the stomach; in one, where an oblique incision was made, the ulcer which had given way was on the posterior aspect and difficult to reach, and a second operation was undertaken later on account of similar symptoms, but the cause was not disclosed at the operation. In two of the cases thrombosis of a vein of the lower extremity appeared during convalescence. Of the three fatal cases the ages were twenty-one, thirty, and thirty-three years respectively, and the symptoms of perforation had existed for nineteen, nineteen and a half, and fourteen hours; the ulcers were in all of these cases on the anterior aspect. In most instances the openings were closed by Lembert's interrupted sutures, but in two the edges of the perforation were excised before the sutures were inserted; in one the peritoneum was drained and in another a glass tube was placed in the stomach. The series shows very strongly the dangers of giving morphia before the diagnosis is established, the great importance of early operation, and the necessity for thoroughly washing out the peritoneum. The causes of a fatal result were shock of operation, local suppurative peritonitis, and general suppurative peritonitis. The case of a girl aged twenty years is now historic, as a mass of hair weighing no less than 5 lb. 3 oz. was successfully removed through an incision in the anterior wall of the stomach. She had had attacks of vomiting for five years, and the tumour caused by the distended stomach was a large one at the time of operation. The largest similar masses previously removed during life were 2 lb. in one case and 30 oz. in another. We have for many years taken advantage of opportunities to publish cases of successful operation for intussusception, especially in infants below two years of age, as the disease is then very fatal, and the results of operation under the most favourable surroundings doubtful. In one case the child, a girl aged four months, was subjected to operation within twenty-four hours of the commencement of symptoms, but without any previous attempt at reduction by inflation or injection. The intussusception was easily reduced, and rapid recovery followed. In a second child aged twelve months symptoms had been present for nearly two days; attempts at reduction by manipulation, inflation, and injection failed, so the abdomen was opened in the middle line, and the intussusception reduced. The child was considerably collapsed afterwards, but recovered. We remarked on the importance of trying the simple and more successful methods before resorting to operation in intussusception when it can be treated within forty-eight hours of its commencement.

There have also appeared in the Mirror several important renal cases showing the similarity in symptoms sometimes produced by a tumour of the kidney and by a malignant growth in the colon over the kidney. Also the history of a case of congenital dilatation of both ureters in which right ureterotomy and left nephrotomy were performed in a newborn child. The child died ninety-four days after the operations from diarrhœa. The removal of a very large ovarian cyst from a girl aged sixteen years is an example of a tumour of most unusual size. The tumour weighed from eighty to ninety pounds, at least eleven pounds more than the emaciated body of the patient. The result was in every way most satisfactory. Cæsarean section was performed in the case of a woman aged twenty-six years, and resulted in saving the life of the child and the recovery of the mother. The latter was suffering from severe cancerous stricture of the rectum, for the relief of which inguinal colotomy had been performed some months before. The difficulties caused by the presence of an artificial anus close to the wound were serious, but skilfully overcome. We must here refer to a somewhat novel method of treatment (the first instance, we believe, in this country)—the formation of a permanent suprapubic opening in the case of a woman suffering from carcinoma of the urethra and bladder. The malignant growth was freely excised and the suprapubic wound then closed, urine being afterwards passed through the suprapubic opening into a portable urinal. The comfort of the patient was greatly increased. Tuberculous disease of the bladder has not been subjected to direct treatment through a suprapubic incision on many occasions in this country, and when it is disseminated throughout the mucous membrane, as in the majority of the six cases which we have placed before our readers, and is in an inaccessible position, it is difficult to understand how success can be obtained by less radical measures. When, however, the tuberculous process is localised, as in an ulcer which occupies a small portion of the mucous membrane, and the patient is a female, it may be possible to attack it through the urethra. Case 1. The patient was a female, aged twenty-two years with symptoms of three years' duration. No improvement followed local treatment during a period of months. A number of ulcers were found just within the orifice of the bladder; the ulcers which were accessible were scraped and then cauterised, some were only scraped and iodoform was rubbed in. The wound healed in three weeks. Case 2. This patient was a male aged thirty-three years, with symptoms of a few weeks' duration; in the trigone were four or five deeply congested patches about the size of peas, with slight ulceration on their surfaces, and in the surrounding mucous membrane a number of minute grey tubercles could be readily seen. These were scraped and iodoform applied; the bladder was drained for six

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weeks. Case 3. This was a male aged twenty-three years who had symptoms for nearly three years. An irregular ulcer with jagged edges was found in the trigone; this was scraped and iodoform applied; the bladder was drained for six months. Case 4. A male aged fourteen years who had had symptoms for four months. A much thickened, congested, and warty patch was found on the right side of the trigone; the bladder was drained for three months, but the wound was open for seven months. The left kidney was removed for tuberculous disease. Case 5. A male aged forty-nine years, who had had symptoms for about six years. A thickened mass in the anterior wall with caseous material about the size of a florin was found and scraped; the bladder was drained for ten weeks. Case 6. A male aged thirty-one years, who had had symptoms for five months. The mucous membrane was vascular; there were numerous yellowish, raised patches, with granulation-like projections; the wall was sponged and the projections scraped with the finger-nail; the bladder was drained for a month. Very great benefit was received in all the cases, whilst in some sufficient time has elapsed to say that the patients have now recovered.

The Public Medical Services.

As regards the naval and military medical services there is not much to be chronicled as far as any changes in organisation or constitution are concerned. During the year that is past this country has had its military expeditions on a small scale, and other Powers have had theirs on a larger scale. At the moment of writing a British force is on the eve of advancing from Cape Coast Castle to the capital of Ashanti, and we are living amid the rumours of war, the mere possibility of one of which, notwithstanding that no one really believes in the occurrence of such an appalling calamity, has been sufficient to shake the world's money markets. One of the morals to be drawn from this excited state of the public mind—this condition of unstable equilibrium in which nations are living—is that the present is no time for neglecting the public medical services of this country. The COMMANDER-IN-CHIEF has emphatically dwelt upon the paramount importance of having a large and powerful navy, and he has told us that the great object he has in view is the perfecting of the British Army as a fighting machine. If we look back to the pages of THE LANCET for the past year or two it cannot be said, however, that in the opinion of many army medical officers their own particular branch of the service is perfect, or that sufficient pains are taken for its practical training, and for rehearsing in times of peace the duties which must fall upon it in times of war. Still, greater efforts are being made from year to year towards attaining this end. This empire may be said to have tentacles spread out everywhere, and no political storms and currents taking place in the world's history can fail to affect us in some measure. It cannot be alleged that our small campaigns and expeditions since the time of the Crimean War have been invariably designed, provided for, and carried out with the sanitary and medical success that was attainable, but the progress which has been made during the interval has nevertheless been enormous. We have always contended that what is best for the public is best for the services themselves. There is no finality to progress in efficiency. Unhappily, we live in times when all civilised and many semi-civilised nations are equipped with arms of precision and all the latest inventions, and the advances made in these respects render modern war a very different thing to what it was. Our pages during the past year have contained many observations on the effects of the Lee-Metford rifle and other arms, and the address of Sir WILLIAM MACCORMAC, the President of the Surgical Section of the British Medical Association, at its late meeting gave an excellent epitome of our knowledge of these modern weapons in relation to the surgery of war. The size of belligerent armies nowadays and the greatly increased number of wounded are factors which tax the organisation and powers of the largest and best medical services in the world, and it is quite conceivable that these may prove in the future more than any medical force can adequately cope with. It is obviously important, therefore, that the military and naval medical services should be the best that selection and training can make them. The first Ashanti war, under Sir GARNET WOLSELEY, in 1873 was called an "engineers' and doctors' war," and was well managed, and there is no reason why the present campaign should be less successfully conducted in a medico-sanitary respect, with which we as medical journalists are only concerned. During the past year the Indian Government has had its Chitral campaign, with the heroic energy and brilliant marches of the relief expedition over the Shandar Pass, some 12,000 ft. high and only ten miles distant from a mountain peak with an altitude of 21,000 ft., and other dramatic situations and military achievements. In this expedition, where all did excellently well, the Indian and British Medical Services rendered most valuable aid. Several members of the Indian medical department—notably Surgeon-Major ROBERTSON and Surgeon-Captain WHITCHURCH—rendered distinguished services in the siege and relief of Chitral. The latter officer exhibited conspicuous bravery during a sortie from Chitral in March last, for which he received the Victoria Cross, and the former the titular distinction of a Knight Commander of the Star of India, in recognition of the services he rendered prior to and during the siege of the hardly-pressed garrison of Chitral. As we have said, other countries have had their wars and expeditions also during the past year. The French expedition to Madagascar, which was really a remarkable military achievement, was unhappily attended with large mortality-, sick-, and invaliding-rates attributable to climatic causes and, we fear, largely also to want of proper provision and hygienic arrangements. In no campaign, probably, has the French soldier exhibited higher or more soldier-like qualities than he did in Madagascar—brave, patient, and enduring under difficulties, hardship, and disease, and, according to all English correspondents, humane in his conduct towards the natives. The Chino-Japanese war brought to light the remarkable qualities of the Japanese, their aptitude for organisation, and the singular knowledge they displayed of modern scientific methods of warfare and of surgical art and appliances and field hospital work. Their weak point was sanitation, of which they did not seem to have an elementary knowledge—at any rate, in the earlier part of the war. It would be very interesting to have a medical and surgical history of this war, with the

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statistical results of the methods adopted by the Japanese. As regards the Italians in Abyssinia, beyond the fact that they have recently had a bad reverse, and that the Italian officers behaved with uncommon gallantry and devoted courage, we know but little. A very large reinforcement had been sent by the Italian War Office to Abyssinia, and we shall probably soon learn the results of Italian surgery in the field and the work of its medical service in that country.

Death has been very busy of late in the senior retired ranks of the Army Medical Staff. Amongst those who have passed away were Sir THOMAS CRAWFORD, K.C.B., the late Director-General, Sir THOMAS LONGMORE, C.B., the late well-known professor of military surgery at Netley, and other officers respectively noticed in our obituary columns at the time of their decease. The year that is to follow will probably see many changes in medico-sanitary matters in India. The term of service of the present Director-General of the Army Medical Staff is drawing to a close, and army medical officers will soon be inquiring as to his probable successor and as to the changes that will be brought about in 1896 under the newly-appointed Commander-in-Chief at the head of the Army and a forthcoming Director-General of their own service.

Chemistry.

The year 1895 will be ever held memorable in the annals of chemistry. It has seen the recognition of another constituent of the air and the discovery of an element existing upon the earth which had formerly been supposed to exist only in the sun. If argon had not been a constituent of the air, and helion not an element the existence of which had been indicated in the sun, the discoveries would have been on no higher level than those which, occurring now and again, consist in the mere addition of bodies to the list of presumably new elements. No discovery of rare earths or of new metals in rare earths is comparable in importance to the discovery of argon and helion. We have yet to learn the properties and functions of argon, but its existence had not been discovered long before it was the means of leading to a discovery which startled the astronomic world. We refer to the extraction from certain minerals by Professor RAMSAY of a gas which proved to be identical with the helion of the sun, giving lines in the spectrum corresponding exactly with those of the sun's chromosphere. Since this announcement was made the subject has been attacked with extraordinary energy; more minerals have been examined and more fresh results have been obtained, and *inter alia* Professor NORMAN LOCKYER has shown that the gas from the mineral cléveite is one of complex origin, and spectroscopic analysis indicates distinctly that several lines are closely related to the solar and stellar phenomena. "We appear to be in the presence," he observes, "of the *vera causa* not of two or of three but of many lines which so far have been classed as unknown by students both of solar and stellar chemistry, and if this be confirmed we are evidently in the presence of a new order of gases of the highest importance to celestial chemistry, though perhaps they may be of small practical value to chemists, because their compounds and associated elements are for the most part hidden deep in the earth's interior." There seems to be little doubt that neither argon nor helion is an element, and each day we may expect new announcements of the isolation and separation of single constituents from them both. Such has been the brilliance of the results of Lord RAYLEIGH and Professor RAMSAY'S researches that the steady and, nevertheless, laborious work of investigations in other fields has been to some extent lost sight of. Their results have been dimmed by the strong radiance of the premier discovery. We referred, for instance, last year to the isolation of a new element from bauxite by Dr. R. S. BAYER, who has since obtained more precise information in regard to it. This new element appears to be related to the tellurium and vanadium group of metals, and its salts yield a series of perfectly distinct and beautiful colour reactions with the usual reagents. Dr. FRANK CLOWES has drawn some important conclusions in regard to the respirability of air in which a candle flame has been burnt up to its point of extinction. He finds that such air is safely respirable, but an atmosphere which extinguishes a coal-gas flame appears to approach closely to the limit of respirability as far as the proportion of oxygen which it contains is concerned. Hence the coal-gas flame appears to be a more trustworthy indicator of respirability than the flame of a candle or oil lamp, which should be discarded as absolute tests of the respirability of air, for by adopting these tests a person may be deterred from entering an atmosphere which is safe and respirable, and from rendering services of a humane or urgent character. Calicum carbide, since its discovery, has been made in commercial quantities by fusing lime and carbon together in the electric furnace. This substance yields pure acetylene gas on moistening with water, which has an illuminating power of 240 candles—that is, fifteen times greater than the Parliamentary standard. It has been proposed to use calcium carbide as a means of portable light, and to employ it as a gas for illuminating purposes, or for the enrichment of gas of low illuminating value. An interesting note on the active constituent of the pellitory of medicine by Professor DUNSTAN showed that the activity of the plant (Anacyclus pyrethrum), usually ascribed to a resin, is due to a crystalline, intensely active substance present in the resin which has been named "pellitorine." Progress in "vital chemistry" has been slow. We are yet far from understanding how it is that nature produces molecules of a highly complex character without, as Professor MELDOLA put it at this year's meeting of the British Association, the use of strong reagents and at ordinary temperatures. Syntheses of complex organic compounds with long sounding names have been constantly accomplished by the chemist as before, but the process of the natural building up of molecular structure is still surrounded with obscurity. Professor MELDOLA asks, Is there any evidence that the 180 substances successfully synthesised in the laboratory are produced in the organism by a direct process of building up? Is not the opposite view possible, and may not these substances, from the simplest to the most complex, be products of the degradation of still more highly complex molecules? What is more complex in structure than protoplasm, which is present in, and forms part of, the organism from the very beginning of its existence—from the germ to the adult—and onwards to the end of the vital process? On the other hand, the chemists' equivalent for protoplasm, the primordial matter out of which the various elements have been fashioned, the protyle, is

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necessarily assumed to be the simplest form of unorganised matter. In spite of the great and striking discoveries of the year we still see through the glass darkly as to the origin of life, and not even the brilliant discoveries of Lord RAYLEIGH and Professor RAMSAY have thrown so far any light on the question as to what the atom is: whether, as Lord SALISBURY has said, it is a movement or a thing, or a vortex, or a point having inertia; whether there is a limit to its divisibility, and, if so, how that limit is imposed; and whether the long list of elements is final or whether any of them have any common origin. Still must the truth ever be sought: though every fresh discovery appears to bring us not only no nearer to it, but sometimes further off than before, each one must surely be a piece which will some day be found to fit in when the problematic whole is made up.

Epidemiology and Public Health.

Taking 1895 as a whole it cannot be described as an unhealthy year. It is true that, with the intense cold of January, there was a distinct increase in the amount of death amongst people over sixty years of age, and that epidemic influenza once again added to the mortality at advanced ages. So also, following on the comparative drought of August and September, and in connexion with the unusual heat of the latter month, there was an excess of death amongst infants. This latter was mainly due to epidemic or autumnal diarrhœa, the deaths from which were more numerous during the third quarter of the year than they had been for over ten years. But when all this is said the general death-rate has not been in any way excessive. One disease, however—namely, diphtheria—has maintained an unusually high death-rate throughout all phases of temperature, rainfall, &c., ever since the beginning of the year; and the ordinary increase which annually sets in about the middle of September has been almost altogether exceptional in so far as the amount of death is concerned. Indeed, during the eight weeks ending Dec. 7th, 1895, the weekly number of deaths from diphtheria in London ranged from 61 to 76, the mean being no less than 68. This disease seems to be passing beyond control, and this being the case we cannot but regret that more use is not made of the antitoxin serum. We are not here concerned with its use as a remedial agent, but we wish that its power to confer immunity against attacks in households already infected had been put more frequently to the test. The process of injection, if properly carried out, is trivial and harmless, and even if the protection afforded turned out, as some suppose, to be very evanescent and of comparatively short duration, it would be well to know if, by its use, protection, however limited, against this fatal disease is to be obtained.

Small-pox at one time appeared to be threatening the metropolis and certain other towns in England. In London the number of inmates of the small-pox hospital ships became exceptional, but before the advent of the late autumn, when increase in this disease is most to be dreaded, the epidemic had largely subsided. Indeed, the whole history of small-pox in the metropolis, since the sick have been removed down the river instead of being aggregated in hospitals placed in populous centres, has been very remarkable. The latter system was associated with constantly recurring epidemics in London; the system now in vogue seems to lend itself to a fairly rapid extinction of each individual threatening of an outbreak. The relation that exists between vaccination and small-pox compels us once more to express our profound regret that the Royal Commission on Vaccination, appointed as far back as May, 1889, has never yet given the slightest indication as to the nature of the conclusions at which its members have arrived with regard to the value of that operation as a means of controlling and preventing small-pox. But, on the other hand, the inexplicable delay, during which three members of the Commission have died, has brought about a general condition of neglect in the matter of vaccination which no recommendations or advice of the Commission can remedy under many years, if, indeed, at all.

Happily, we have had no prevalence of cholera in England this year. It is true that certain fatal attacks of a disease which was clinically deemed to be cholera occurred at Great Grimsby during one period of the summer, but bacteriologically the cases were held to differ from Asiatic or true cholera, and that test is, for the moment, looked upon by local authorities and others as settling the question. But the disease still prevails in Europe and in other parts of the world under circumstances that involve risk of danger to this country. Russia, which still exports her aliens largely through our ports, has had this year some 27,000 cases and some 10,000 deaths from cholera. The principal provinces affected have been Volhynia, Podolia, and Kieff; but more recently the disease has appeared in the north, including St. Petersburg. In Galicia there was a fresh autumnal outbreak, and some 250 deaths have already resulted from it. Turkey in Asia has again been a seat of the disease, and the number of deaths there can hardly be less than 3000. A fresh importation has also come from the East. Quarantine restrictions have once more failed, and cholera reached Mecca and Jeddah. In connexion with the returning pilgrims the disease got access to Egypt, especially in the neighbourhood of Damietta, where cholera has lingered for some time; it also reached Tangier and Morocco, and it is in these newly affected places that a fresh introduction of infection from the East is likely to be a cause of distinct anxiety when the warm weather of 1896 sets in. Indeed, we must again, for another year, urge upon sanitary authorities and sanitary officers to be vigilant, and to endeavour to maintain in their districts such a standard of public health and sanitary conditions as will enable them to extinguish at the onset any beginnings of cholera or of any disease having etiological and clinical relations with that disease.

There was no noteworthy sanitary legislation during 1895. It had been intended that last year should have seen the end of our old quarantine laws, but under the special Parliamentary conditions the Bill for repealing those laws had to stand over until next session. We shall welcome such repeal, for it will fortify our position in claiming abatement of quarantine restrictions imposed by other countries and by our own colonies. Whilst referring to this subject we would recall the fact that the Paris Convention, which was signed by the British delegates early in 1894, subject to certain definite reservations,

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has never been ratified. The original date, however, for ratification has now passed, and we can only attribute the failure to the unwillingness of other nations to forego the proposals made in such matters as the definite establishment of new quarantine stations in the Persian Gulf. The result may also, in part, be due to the disinclination of certain nations interested in the pilgrim traffic to accept the limited offer as to increase in deck space to be allotted on pilgrim ships which was made on behalf of this country. Indian views prevented our acceptance of the French proposal, which could not be objected to on purely sanitary grounds, and our offer to meet France and other nations half-way is still resented by some of the native population. In the meantime everything relating to the Mecca pilgrimage and to the sanitary circumstances associated with it is at a standstill. It is to be hoped that at the close of next year we may have been able, with the coöperation of other Governments concerned, to make some substantial advance towards securing conditions which shall prevent this annual religious feast from becoming so fertile a source of disease and death to a vast number of our fellow-subjects in India.

"*The Battle of the Clubs.*"

One of the most satisfactory facts in the history of the profession in the course of the year has been the indication in various localities of a development of *esprit de corps* leading to the formation of strong local organisations and the assertion of the most obvious professional rights. This movement—for it is nothing less—began seriously in Cork in the year 1894, and even earlier, and it may now be said to be felt more or less generally. We have long thought that there was something grossly wrong in the position of the profession in the great centres of industry—that its services were too lightly recompensed and often too easily obtained for nothing. We thought that the time had come to institute some systematic inquiry into the question as it presents itself in different towns. We appointed for this end a gentleman of much experience in such pursuits, of fair judgment, without prejudice, and of good literary and descriptive ability. The result is a series of papers in the course of the year headed "The Battle of the Clubs," which give a better account of the system on which clubs are conducted, the opinion held by the profession, and its efforts to raise the whole standard of club service and of payment and respect for medical officers than, as far as we know, can be found elsewhere.

There is one other feature of these descriptions of the club system which should command for them the attention of the members as well as of the medical officers—we mean their obvious impartiality. The writer has not hesitated to record the opinions of medical men or of laymen interested in this subject, which seemed to throw the blame for medical aid and similar sweating institutions on the medical profession. His obvious business was to record such facts or opinions as were entitled to consideration. For example, at Hull several medical men told our Special Commissioner that "some club officers, by their neglect of club patients, had brought the creation of friendly societies' dispensaries on themselves." At York the President of the medical society expressed the opinion that the profession by its overcharges had driven people into clubs, instancing a servant girl who had received a bill for £15 and a gentleman with an income of £200 a year who had received a bill for £30. We are not accepting these statements as a fair account of the origin of clubs or of the entrance into them of those who can afford to pay, but we give them as illustrations of the impartiality with which our Commissioner has reported different views of this difficult question. The result of his labours is to be found in his account of the Battle of the Clubs in Brussels, Portsmouth, Eastbourne, Lincoln, Great Grimsby, Bexhill, Hull, York, and Northampton. He has not yet completed his labours, but the above reports are a striking proof of the fact that the profession has at length awoke to a sense of the importance of united local action in vindication not of its rights merely, but of the reform that is necessary in the conditions of medical attendance on the working classes.

The time has not come for dogmatising on details, such as the expediency of a wage limit, or the exact figure at which it should be placed, the wisdom of including all the willing medical men of a given place on the staff of a dispensary or of limiting the numbers, the advantage of a dispensary system created and managed solely by medical men, or by the representatives of friendly societies, or by some joint committee. The interest of the reports is in supplying information of the actual condition of things in the different towns. A few facts may be noted at once, which to those who have not pondered on the subject will appear incredible. The low terms on which medical men have been remunerated is the first. At Hull, in the dispensary started by six lodges of Oddfellows, where an experienced medical man estimated that 20 per cent. of the members could pay the ordinary fees which a medical man would charge a working man, a whole family is attended for 12*s.* 6*d.* Taking the figures supplied by the Friendly Societies' Medical Alliance, this dispensary gives for each consultation with its medical officer the sum of a very small fraction above seven farthings. At Portsmouth, where the wages of working men have advanced 10*s.* a week, the whole standard of club remuneration has been demoralised by the example of the Portsmouth Medical Benefit Society, which takes in all the members of the family at the handsome sum of ½*d.* per head per week. We will not multiply instances of such twopenny-halfpenny treatment of the medical profession, which almost tempts us to fear that as the British workman has grown in wealth he has receded in generosity and the sense of justice.

We hasten to notice a more satisfactory fact brought out in these reports—the realisation by the profession that things have come to such a pass that they must be amended, and that there is only one way of procuring this amendment—viz., the union of the profession in different localities to enforce reasonable terms and to make it impossible for strangers to come in and interfere in what is essentially a domestic matter. One of the most striking illustrations of this union, and one of the first, reported in a very interesting communication by our Commissioner, was in the case of Brussels, where the same evils are found and are being met with admirable resistance. The medical men.

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formed themselves into a syndicate, not so much to obtain more money, as to exclude comparatively rich men from the benefit societies. Cases were cited of men in such societies earning £1000 a year. The union of the profession was so effective that the medical chief of those who supplanted the men who resigned their ill-paid posts on the Mutualist Federation of Clubs had at length to apologise and to resign. At Eastbourne, perhaps, the union of the profession has been carried to the highest point, the whole resident medical men combining to form the Eastbourne Medical Provident Association, which every medical man is free to join. The association has practically gained its point, which was to overthrow the National Medical Aid Company, Limited—one of those commercial companies which seek to commercialise medical attendance, and which in doing so degrades medical service and those who render it. At Portsmouth the union of the profession has had a great triumph. All the men in practice signed an agreement not to oppose any gentleman who acted in accordance with the general consent of the profession concerning any public appointment. The holder of certain clubs declined to attend juveniles and infants for less than 4*s*. a head. Four strangers tendered at a lower figure. All the local men supported the medical officer, and the tactics of unanimity prevailed. He was reappointed. At Bexhill the Eastbourne example has been followed. Mr. JACKSON of Plymouth, President of the Incorporated Society of General Practitioners, informs us that the men of Devon and Cornwall also are following the example of Eastbourne.

We do not advocate any inhumane action towards the really poor, but we expect all practitioners to join in the "Battle of the Clubs" and secure a proper recognition of the value of medical services. So, more or less, in some other places. We must not write as if the "Battle of the Clubs" had been everywhere fought and won. The fight is only beginning and in some places is very much needed indeed. In Lincoln the Medical Aid Association includes a large number of men of independent means—ex-mayors, &c.—who are quite willing to take their medical attendance for 3*s*. 6*d*. a year—a sum for which they would not get a good errand boy for a week. At Hull, too, the movement is very weak-kneed. At York, though there is a good understanding between the medical society and the medical officers of the friendly societies, it is not denied that many members of the Friendly Societies' Dispensary could pay easily two or three pounds a year to the profession, though they now pay only 12*s*. 6*d*. It is vain for medical men to delude themselves with hopes of help from outside for the settlement of such questions. They have the means of helping themselves, as the cases of Brussels, Eastbourne, and Portsmouth show. They would be much more respected by the public if they asserted these rights. Central or metropolitan associations can do something, and ought to do more than they do in this "battle." But it is essentially a local one. One word must be said as to the duty of consultants in this matter. They must clearly recognise that they have their obligations to the profession. It is complained that in some cases a consultant is true to his brethren, but becomes discouraged on finding that others have adopted quite a different course of action.

The Royal College of Physicians of London.

The proceedings of the Royal College of Physicians of London during the past year have only been marked by one event of importance, and that was the decision arrived at at a special meeting on Oct. 24th to decline the petition of those interested in the medical education of women to admit women to the examinations for the licence. The decision on this occasion was closer than anticipated, showing 59 votes in favour of rejecting the petition against 50 in support of it. Otherwise the College has pursued the even tenour of its way, with no very noteworthy incidents. The munificence of Dr. HERMANN WEBER has enabled the College to institute a triennial prize of 150 guineas for essays on the subject of tuberculosis, the prize being termed the Weber-Parkes Prize, for it has been founded by Dr. WEBER in memory of his friend the late Dr. E. A. PARKES. The first award is to be made in 1897, and the subject chosen for competition is "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis, especial Regard being had to their Application to Human Tuberculosis." The regulations for the examinations for the Diploma of Public Health have been subjected to revision; and the decision of both Royal Colleges to dispense with the proposed Third Examination in the new five years' curriculum has met with general approval. At the meeting at which this subject was discussed it was recommended that pharmacology should form part of the examination in medicine, instead of standing alone as a separate subject. The Pharmacopœia Committee presented a report of suggested alterations in the Pharmacopœia which was adopted by the College. The College was represented at deputations to the late Prime Minister and to the Duke of DEVONSHIRE upon the London University question by the President, the Registrar, and Dr. ALLCHIN, to whom the duty of speaking on behalf of the College was assigned. During the meeting of the British Medical Association a conversazione was given by the College and was numerously attended. Sir J. RUSSELL REYNOLDS has been re-elected President, and the various lectures were delivered as follows: the Goulstonian, on the Suprarenal Bodies, by Dr. H. D. ROLLESTON; the Milroy, on the Natural History and Affinities of Rheumatic Fever, by Dr. NEWSHOLME; the Lumleian, on the Diagnosis, Prognosis, and Prophylaxis of Insanity, by Dr. G. F. BLANDFORD; the Croonian, on the History of the Respiration of Man, by Dr. MARCET; the Bradshawe Lecture, on Some New Vaso-dilators, was delivered by Dr. BRADBURY, and the Harveian Oration by Dr. CHURCH. The Baly Medal was awarded to Dr. W. H. GASKELL, F.R.S., and the Murchison Scholarship was gained by Mr. MACVICAR of Edinburgh University.

The Royal College of Surgeons of England.

Reform at the Royal College of Surgeons of England advances slowly; meetings of Fellows, of Members, and of Fellows and Members have been instituted, but they have not always been utilised to their full extent. At the annual general meeting of Fellows and Members in November resolutions were passed, practically unanimously, in favour of

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obtaining an amended charter, which should contain provisions—(*a*) that no alterations in the constitution and external relations of the College should be effected without the consent of the body corporate; (*b*) that the present annual general meeting be made statutory, and that the report of the Council be submitted for formal adoption; and (*c*) that the Members of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council. At the January meeting of the Fellows there was some difficulty in obtaining a quorum, and the Council having declined to test the opinion of the general body of Fellows as to the advisability of any change in the mode of election of the President, Mr. HERBERT PAGE, on behalf of the Society of Fellows, communicated the result of a canvass amongst the Fellows, which showed a large majority in favour of some change. The July meeting consisted merely of a statement by the President that certain changes in the by-laws had been approved by the HOME SECRETARY, and that the Council had appointed a committee to receive deputations from the Fellows. As no notice had been given of any resolutions nothing more was done. In February the President, Mr. J. WHITAKER HULKE, F.R.S., died, and Mr. CHRISTOPHER HEATH was elected in his stead, and re-elected in July. Mr. REGINALD HARRISON and Mr. PICKERING PICK were appointed Vice-Presidents. At the election to the Council in July there were five vacancies and nine candidates. Mr. WILLETT was re-elected, and Mr. F. TREVES, Mr. H. T. BUTLIN, Mr. ALFRED COOPER, and Dr. WARD COUSINS were elected. For this election voting papers were sent for the first time to all Fellows, and they were receivable at the College up to the time of the commencement of the election; altogether 621 Fellows voted. A memorial was received by the Council from the London School of Medicine for Women, asking for the admission of the students of the school to the examinations of the College. The matter was referred to the annual meeting of Fellows and Members, and the majority voted against the admission of women, though the numbers were nearly equal. When the matter again came before the Council they expressed their approval of the admission of women, but regretted that at present it was not possible for them to accede to the requests of the memorialists. The pecuniary position of the College is not satisfactory, as its income is falling steadily year by year, and there is no indication of any likelihood of improvement. The committee appointed to consider the advisability of having a practical physiology examination for the first examination for the Fellowship have reported against any change.

Meetings of the General Medical Council.

The General Medical Council held two meetings as usual, one in May, the other in November. The later meeting took place in the Royal College of Physicians of London, as the premises of the Council, now owned by them, were undergoing reconstruction. At the May meeting the presence of Sir JOHN SIMON was much missed. But his place as Crown nominee was well filled by Dr. THORNE THORNE, who soon took a useful share in the work of the Council. A lively discussion took place in May on the best way of giving due importance to the views of medical practitioners, as distinguished from pharmacists, in the preparation of the new edition of the Pharmacopœia. The President, Sir RICHARD QUAIN, was very happy in his efforts to retain much of the machinery that worked well in the case of the present Pharmacopœia while accepting suggestions for securing the full assistance of medical experts. It is understood that all parties are working well and harmoniously. A still more lively subject of discussion at the May meeting was that of the Midwives Bill, then before Parliament, and sent down by the Privy Council for the consideration of the General Medical Council. The Council referred the Bill to a committee which had been previously appointed, and on its report a full discussion took place. The Council also received a deputation from the Lancashire and Cheshire Branch of the British Medical Association of those opposed to such legislation. The result was that the Council made various alterations in the Bill, chiefly one in its title—viz., "That the title of the Bill be amended so as to read 'A Bill to promote the better training of women as midwives and midwifery nurses, and for the compulsory registration of them as such.'" In other words, the Council did not depart from its traditional views on this subject, but emphasised its opinion that the women to be registered must be registered under a title that would make clear their non-medical character—in fact, that they were nurses and in no sense medical practitioners. A very important act of the Council at its May meeting was to affirm the insufficiency of the conjoint examination of the Apothecaries' Hall of Dublin and the Royal College of Surgeons in Ireland, and to resolve on a representation to this effect to the Privy Council. The November meeting is too fresh in the recollection of the profession to need much notice here. The subject of the constitution of the Council and the increase of the number of direct representatives was raised by Sir WALTER FOSTER, and seconded by Mr. WHEELHOUSE. The Council rejected the proposal to refer the matter to a committee by a majority of 20 to 7. It has never had any sympathy with the principle of direct representation, though highly civil to the direct representatives. It is satisfactory to note that, on the motion of Dr. GLOVER, seconded by Dr. THORNE THORNE, the Executive Committee was instructed "to revert to the question of the disciplinary functions of the qualifying medical authorities and of the General Medical Council, and to report to the Council at its next meeting on the best means of further defining and confirming these functions and bringing them into harmonious and efficient coöperation." On the thoroughness with which this duty is discharged by the Executive Committee much of the discipline of the profession in future will depend. The Council was occupied chiefly in the discussion of the specific recommendations by the Examination Committee arising out of the consideration of the reports of the inspector and visitors of the final examinations, and in the discussion of the report of the Public Health Committee and of the recommendations therein contained. The chief drift of these recommendations was to emphasise and confirm the

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determination of the Council to maintain a high standard of examination for any diplomas or degrees in Public Health. Dr. THORNE THORNE'S able management of the report made it clear that there will be no abatement in the demands of the Council on this subject. The subject of practical instruction in midwifery was referred to the Education Committee, which, let us hope, will effectually condemn the absurd regulation of the Council on this matter. The Apothecaries' Society of England, through its representative, Mr. BRUDENELL CARTER, intimated to the Council its wise determination to discontinue its examination in Arts from the end of the current year. The Council by resolution instructed the Penal Committee to inquire into the cases of persons offending under Section 40 of the Medical Act, and *where it sees fit* to instruct the legal advisers to proceed against such persons. The subject of examinations by the Apothecaries' Hall of Dublin again occupied the serious attention of the Council in two ways. A communication from the Privy Council sought information as to the length of the continuance of the examinations of the Hall conjointly with the Royal College of Surgeons in Ireland. The Council replied that all existing claims of candidates who have already passed a part of these examinations should be exhausted within six years from the present time, the bodies in question being prepared to meet their claims. The Council reaffirmed its opinion of the inefficiency of the examinations, and it declined to comply with the request of the Apothecaries' Hall to appoint surgical examiners. It will be curious to see whether the Hall will now apply to the Privy Council to procure the appointment of such examiners, which the Council refuses to appoint of its own motion. Sir JOHN BANKS maintained that the Hall supplied a want in Ireland; but the numbers of those who seek this qualification seem to show that there is not a great demand for Irish apothecaries. As an alternative Irish students must obtain the costly diploma of the Irish Colleges or go elsewhere for examination. The November session was the fifty-ninth session of the Council.

British Medical Association.

Under the distinguished presidency of Sir JOHN RUSSELL REYNOLDS, President of the Royal College of Physicians of London, the sixty-third annual meeting of the British Medical Association was this year held in the metropolis. The Presidential Address took the form of a masterly review of the state of medicine at the present day compared with that of the time of the ever-to-be-lamented Dr. PARKES, who, twenty-two years ago, when the Association last held its meeting in London, under the able presidency of the late Sir WILLIAM FERGUSSON, delivered the address in Medicine. The able addresses in Medicine and Surgery at the present meeting were delivered respectively by Sir WILLIAM BROADBENT and Mr. HUTCHINSON, and the excellent address in Physiology was given by Professor EDWARD A. SCHÄFER. The introductory addresses in nearly all the sections showed evidence of careful thought and an intense desire to improve and help forward a profession which, founded as it is on an altruistic basis, must ever command the respect and support of all who have at heart the good of humanity. Dr. WILKS'S important opening address in the Section of Pathology will go far to increase the attention which is being paid to the study of morbid anatomy, and Sir WILLIAM PRIESTLEY'S presidential address in the Section devoted to Obstetrics and Gynæcology was the subject of much attention and some criticism. Looked at as a whole the sixty-third annual meeting of the British Medical Association may be said to be one of the most, probably the most, successful meeting the Association has ever held. All who took part in its organisation are to be congratulated, and the votes of thanks accorded to Mr. ANDREW CLARK, Dr. ISAMBARD OWEN, and Mr. H. T. BUTLIN at the concluding general meeting were well deserved. Those, too, who organised the various excursions and ministered to the enjoyment of the visitors deserve nothing but praise.

The University of London.

In January, 1894, the report of the Gresham Commissioners, under the chairmanship of Lord COWPER, was issued; but it led to but little practical action during that year, except to prove the existence of a marked difference of opinion in the University of London. In January, 1895, the movement for reconstitution was revived, and Lord ROSEBERY received two deputations on the subject. The first deputation of teachers and others who were in favour of the scheme received his favourable support; whilst the second, which consisted of graduates who were opposed to it as depriving Convocation of the most important of its rights—viz., that of a veto on any new charter—received but faint encouragement. Lord ROSEBERY, however, said that the Government would be bound "to consult very largely the vote of Convocation, whenever it is taken," on the question of appointing a Statutory Commission to carry out the scheme of the Gresham Commissioners. On the 22nd of that month a meeting of Convocation took place, and 421 members were present. Dr. SILVANUS THOMPSON moved, and Dr. ALLCHIN seconded: "That Convocation is of opinion that there should be one university in London, and not two; and that the interests of higher education will be best served by such an enlargement and reconstruction of the existing university as will (while retaining its existing powers and privileges, and without interfering with the efficient discharge of its present duties as an examining body for students from all parts of the British Empire) enable it to promote learning, scholarship, and research as a teaching university for London." It was moved, as an amendment, by Mr. BOMPAS, and seconded by Dr. NAPIER: "That all the words in the motion after the word 'That' be omitted, and the following words be added: 'In the opinion of Convocation it is essential that in any enlargement or reconstruction of the University of London, its existing powers and privileges should be retained unimpaired, the efficient discharge of its present duties should not be interfered with, and the high standard of its degrees should be maintained.'" Two hundred and six members voted for the original motion, and 174 against. On a second motion as to the powers of the Statutory Commission an amendment was moved that the scheme did not contain adequate securities for external students and for keeping up the high standards of the degrees. One hundred and thirty-three voted for the amendment, and 157 for the original motion.

On May 14th the next meeting of Convocation was held, and

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a most curious difference as to the opinion of the University on the question was displayed. Mr. BOMPAS endeavoured to get the resolutions rescinded which had been passed in January, but he was defeated by 238 votes against 116. At the same time an election for a vacancy on the Senate was proceeding. Mr. COZENS-HARDY, as the chairman of the committee in favour of the scheme of the Commissioners, was brought forward by one section, and he was opposed by Dr. NAPIER, who was nominated by those who objected to the scheme as over-riding the privileges of Convocation. One thousand two hundred and thirty-one graduates supported Dr. NAPIER, who was elected, whilst 738 voted for Mr. COZENS-HARDY. It was therefore apparent that whilst those graduates who attended the meetings of Convocation desired a reconstitution of the University, those who resided in the provinces when permitted a proxy vote showed that they were quite opposed to the schemes. The next step was the introduction in the House of Lords on May 9th, 1895, of Lord PLAYFAIR'S Bill to carry out the recommendations of the Gresham Commissioners. The operative clause in the Bill, which was a very short one, was as follows:—

1. The Commissioners shall make statutes and ordinances for the University of London in general accordance with the scheme of the report hereinbefore referred to, but subject to any modifications which may appear to them expedient after considering any representations made to them by the Senate or Convocation of the University of London or by any other body or persons affected.
2. In framing such statutes and ordinances the Commissioners shall see that provision is made for securing adequately the interests of non-collegiate students.
3. All such statutes and ordinances shall be laid forthwith before both Houses of Parliament, and shall come into operation on the expiration of forty days after they have been so laid, and shall have effect as if enacted by this Act, but shall be subject to alteration in manner provided by such statutes and ordinances.

The resignation of the late Government settled the fate of that Bill, and it never passed beyond the first reading stage in the Upper House, but the Duke of DEVONSHIRE has recently plainly intimated what would have been the result if it had been pushed forward. "I am quite sure that if Lord PLAYFAIR'S Bill had in the last Parliament reached the House of Commons it would have encountered a considerable amount of opposition." When the addresses of the candidates at the general election were issued most of the graduates were astonished at the position adopted by Sir JOHN LUBBOCK. He not only supported the existing rights of Convocation as to a veto, but stated that it would be his utmost endeavour that the decisions of a Statutory Commission should be submitted, not merely to graduates in Convocation assembled, but that absent graduates should have a proxy vote, as in elections for a Fellow on the Senate or a Member of Parliament. This has materially altered the position of the question. On the one hand, Lord PLAYFAIR'S Bill would have deprived Convocation of its power of veto; on the other hand, Sir JOHN LUBBOCK insists that every graduate should be able to exercise his right, even by a proxy vote, and not by a personal attendance as is the constitutional method under the existing charter.

On Nov. 29th a large deputation of representatives interested in the Gresham scheme, who were introduced by Lord KELVIN, a member of the first Commission, waited upon the Duke of DEVONSHIRE as Lord President of the Privy Council. They submitted to his Grace a resolution which had been passed at a meeting of those interested at the University of London on the 21st: "That the Government be requested to introduce, at an early date, a Bill, similar to Lord PLAYFAIR'S London University Commission Bill, 1895, appointing a Statutory Commission to carry out the recommendations of Lord COWPER'S Commission, but with an added clause giving [in accordance with precedent Acts of similar tenour] to all institutions or persons directly affected by any statute or ordinance proposed by the Statutory Commission a right of appeal to the Privy Council for the disallowance or alteration thereof, previous to such ordinance being laid before Parliament for confirmation." The right of appeal to the Privy Council was not contained in Lord PLAYFAIR'S Bill. The reply of the Duke must have greatly surprised the delegates, and was far from encouraging to their hopes. He expressed his anxiety for the external students, whom, he stated, were not represented on the deputation, and thought "that it was a somewhat strong proceeding that a change in the constitution of the University should be imposed upon it without allowing Convocation to exercise their right" of veto. Obviously, the Lord President of the Council supports Sir JOHN LUBBOCK in his opposition to Lord COWPER'S scheme so far as the rights of Convocation are concerned, and would favour an extended system of taking the vote. His Grace's suggestion for a unanimity in the University of London itself is futile, for the amendments recommended by the dissentients to the scheme go to the root of the question, and are fatal to the main principles laid down by the Commissioners. As we said on the 7th inst., "the movement has arrived at an *impasse*, but it must not be allowed to rest where it is. A university, capable of granting degrees to London students on similar terms to those on which they are conferred on Scotch and provincial students, must be established in London in the interests of general education, and especially of the large number of medical students in the metropolis."

The Medical Societies.

In the following review of the work of the Medical Societies of Great Britain and Ireland, the endeavour has been made rather to indicate the salient points of some of the more prominent communications than to catalogue them all. Speaking generally, the greatest advance of the year appears to have been in the direction of abdominal surgery, while in medicine the treatment of diphtheria and other maladies by serum extracts has engrossed much of the attention of investigators. The clinical meetings of the various societies continue to be much the best attended, and those papers proved most attractive which dealt with series of cases accurately observed and compared rather than the disquisitions upon single rare instances of disease.

In the department of Medicine we notice first the valuable Lettsomian Lectures by Dr. FREDERICK ROBERTS on the Combinations of Morbid Conditions of the Chest. These were full of practical information and have been widely read. Dr. COLMAN, in a thoughtful paper on the Treatment of Epilepsy, advocated large doses of bromides to control the fits and the use of specially constructed pillows to prevent suffocation at night. Sir BENJAMIN WARD RICHARDSON spoke on the subject of Cycling and Heart Disease from the

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standpoint of a sixteen years' practical cyclist, and concluded in favour of the exercise in persons of healthy heart, and that even in cases of heart disease cycling was not to be always of necessity excluded. Dr. P. W. LATHAM, in a paper on the Administration of Salicylates in Acute Rheumatism, advocated the use of salicylic acid itself in the form of pills, with calomel purges and milk diet. A case in which an Aortic Aneurysm perforated into the superior vena cava was related by Dr. ALEXANDER BRUCE. The Treatment of Empyema in Children formed the subject of a paper by Dr. CAUTLEY, and he compared incision with resection, to the disadvantage of the latter, especially in children under two years of age. Dr. PASTEUR read a paper on the Association of Respiratory Paralysis with Cardio-pulmonary Symptoms in Diphtheritic Paralysis, based on an analysis of thirty-two cases treated at the North-Eastern Hospital for Children, Hackney. He concluded that the mortality from this affection was higher than had been supposed. Dr. CATON described a case of Acromegaly in a female aged twenty-seven years which was much benefited by the alternate administration of thyroid and pituitary tablets. Dr. FREDERICK TAYLOR read a paper on the Causation of Ægophony, in which he regarded it as discord or dissonance, but his views were ably disputed on musical grounds by Dr. MAGUIRE. Dr. PATRICK MANSON delivered the Hunterian Oration on a Microbe of Malaria. He emphasised the extreme value of microscopic examination of the blood as an aid to the diagnosis of paludism. Professor FRASER opened a discussion on Cardiac Therapeutics with a paper on the remedies employed in cardiac affections and their indications. In the course of it strophanthus was lauded as the most generally applicable of all the specific cardiac agents. Dr. HECTOR MACKENZIE, in a paper on Hysterical Deafness, quoted a case in which it affected both ears and remarked on the paucity of literature on the subject. Dr. H. C. TWEEDY gave details of a case of Symmetrical Gangrene of the Ears which was not due to Raynaud's Disease. Dr. JAMES TAYLOR read a paper on Nervous Symptoms and Morbid Changes in the Spinal Cord in certain cases of Profound Anæmia. The sclerosis present was due to a double cause, to small hæmorrhages and as a resultant of a blood state. The Treatment of Empyema in Children was dealt with in a paper by Dr. COUTTS. He inclined to the opinion that simple incision was preferable in infants. Dr. S. WEST related a case of Serous Pleuritic Effusion of eighteen months' duration for which the chest was tapped thirty-seven times and the side then incised, the result being complete recovery with full expansion of the lung. The routine treatment of Acute Pleural Effusion by Incision was subsequently advocated by Dr. A. WILSON. A case of Sclerema Neonatorum was described by Dr. A. GARROD. Dr. ALEXANDER MORISON read a paper on Syncopal Bradycardia, which he divided into five classes. Dr. WILLIAM HUNTER read a paper on the Use and Abuse of Antipyretics. Dr. WILLIAM RUSSELL read a paper on the Palliative Treatment of Jaundice from Malignant Obstruction, the gall-bladder being opened and drained to relieve cholæmia. Dr. S. WEST described a case of Recovery from Tuberculous Meningitis. The Influence of Cobra Venom on Rabbits was discussed by Professor FRASER. A paper was read by Dr. CHURTON on the Utility of Testing for Indican in the Urine. The subject of Spasmodic Asthma was discussed by Dr. GOODHART. Mr. R. W. LLOYD recorded a case of Strychnia Poisoning in which chloroform was administered for upwards of six hours. A paper was contributed by Dr. J. C. DUNLOP on Oxaluria and the Secretion of Oxalic Acid in the Urine; he found this to be a normal constituent of the urine of all men eating an ordinary mixed diet.

Papers on surgical cases have been more than usually abundant during the year, and in many instances it is satisfactory to note that the writers have supplemented the purely surgical details by reference to the results of bacteriological examination. Mr. ARBUTHNOT LANE described his operation for certain cases of Congenital Dislocation of the Hip-joint by placing the head of the femur in a cavity cut in, and beneath, the anterior inferior spinous process of the ilium. Mr. HUTCHINSON opened a discussion at the Royal Medical and Chirurgical Society on the Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis. It was held that in most cases the nervous disease was secondary to disease of the bloodvessels, and that the affections were usually acute and destructive unless prompt treatment was adopted. Dr. JAMES TAYLOR later read a paper dealing with three groups of Syphilitic Diseases of the Brain. Dr. WALLIS ORD and Mr. EDWARD COTTERELL brought forward a case in which Linear Craniectomy was performed for Microcephalus with a beneficial result. Mr. J. L. STRETTON related a case of Castration for Enlarged Prostate, in which after operation the prostate had shrunk to half its original size, and the patient passed urine naturally. The after-history of this patient, together with the necropsy, was detailed later. Mr. MANSELL MOULLIN related two cases in which Orchotomy was performed for Enlarged Prostate. Mr. BRUCE CLARKE read a paper on Thirty Cases of Nephrorrhaphy with their results. In the greater number he had operated because pain was the prominent symptom, and he detailed the after-history of the whole of them. Mr. HERBERT ALLINGHAM gave in a paper the results of operation on a series of cases with Lesions of the Stomach; and Mr. DUNN, Mr. SILCOCK, and Dr. LEES related cases of Laparotomy for Gastric Ulcer. Dr. MCBRIDE discussed some questions with regard to the Diagnosis, Prognosis, and Treatment of Suppuration in the Middle Ear and the Nasal Accessory Cavities. Mr. BALLANCE brought forward a case of Fracture Dislocation of the Spine, in which improvement followed laminectomy. Mr. CHARLES BALL read a paper on the Arrest of Bleeding by Sutures, with special reference to the operations for Varicocele, Nævus, and Varicose Veins of the Leg. Mr. REGINALD HARRISON described a case of Large Pelvic Hydatid successfully treated by Perineal Incision and Drainage. Mr. HOWARD MARSH read a paper on the Clinical Study of some of the more important Forms of Abscess. Mr. GOLDING-BIRD advocated early Erasion in Inflammation of the Sacro-iliac Joint. The Diagnosis of Retroperitoneal Sarcoma was discussed by Mr. C. B. LOCKWOOD. Mr. BERNARD PITTS contributed some practical remarks on the Surgery of the Rectum. Mr. HEUSTON read a paper on Excision of the Rectum in Malignant Disease implicating

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the Middle Third of the Bowel, advocating a modification of the old perineal operation in such cases. Dr. ST. CLAIR THOMSON and Dr. R. T. HEWLETT contributed a paper on the Micro-organisms found in the Healthy Nose. They found pathogenic organisms only infrequently in the Schneiderian membrane. Mr. W. H. BATTLE described a case of Calculus of the Kidney associated with Simple Growth in the Renal Pelvis. Mr. WALSHAM related an instance of Intra-peritoneal Rupture of the Bladder in which suture was followed by recovery. A specimen illustrating the treatment of Imperforate Anus was shown by Dr. KIDD. Mr. A. G. MILLER read a paper on the Treatment of Fractures near a Joint, in which he advocated massage and movement. Mr. LOCKWOOD contributed a paper on the Operation for the Radical Cure of Hydrocele by Excision of the Sac. Mr. ARBUTHNOT LANE read notes of five cases of Bony Ankylosis of the Temporo-maxillary Articulation in Children. Dr. ADOLPH BRONNER took as the subject of his Presidential Address before the Bradford Medico-Chirurgical Society the Complications and Treatment of Otorrhœa. Mr. MANSELL MOULLIN read a paper on Suprapubic Cystotomy and Prostatectomy in cases of Multiple Calculi. A curious case of Fragilitas Ossium was related by Mr. LANGTON. Dr. DAVIES, in opening a discussion on the Curability of Cancer by Surgical Operation, said that evidence went to prove that cancer was something far other than a mere local disease. Mr. JOSEPH COLLIER related a case of Abscess of the Spleen in a woman aged forty-five years who had never been abroad. In a discussion on Colotomy Mr. WHEELER recommended the anterior or inguinal method, while Mr. CROLY preferred the lumbar operation. Mr. EDMUND OWEN, in a paper on the Operative Treatment of Cleft Palate, argued that this operation should be performed at the earliest available moment. Two cases of Injury to the Roots of the Brachial Plexus were described by Dr. BEEVOR. Mr. BRYANT read a paper on the Diagnosis and Treatment of Early Cancer and Cysts of the Breast, and he emphasised the importance of incision as a preliminary to excision in all doubtful cases. Five successful cases of Nephrectomy for Hydronephrosis were recorded by Mr. ANDERSON. An interesting case of Fracture of the Ethmoid Bone with Basal Meningitis was related by Mr. W. H. BROWN.

In the department of Abdominal Surgery Mr. J. D. MALCOLM read a paper on the Modes of Death from Ovariotomy. He emphasised the importance of making a selection of cases for operation, which was one of the most difficult duties, and perhaps the most important one, of the surgeon in this branch of his art. He showed that septicæmia was the most common danger of abdominal surgery, but that in uncomplicated cases of ovariotomy it was preventable by the use of antiseptics and by care, and that functional and mechanical disturbances of the bowel were special dangers after operation. There were numerous contributions during the year of great interest from the operator's point of view. Mr. MAYO ROBSON read accounts of cases of Tuberculous Disease of the Liver, of Complete Volvulus and Strangulation of the Great Omentum, and of Traumatic Hæmorrhage without External Wound. Mr. FREDERIC EVE described a case of Acute Intestinal Obstruction from Gall-stone; he advocated early laparotomy and forcing the stone if possible through the ileo-cæcal valve. Mr. MAYO ROBSON later dealt with the varieties of Intestinal Obstruction dependent on Gall-stones. Mr. WILLIAMSON showed a case in which he had performed Laparotomy for Partial Rupture of Intestine. The methods to be adopted in cases requiring Resection of Intestine were described by Mr. CAIRD, and Mr. KEETLEY drew conclusions from twenty cases on which he had operated. Dr. TAYLOR read a paper on Retro-peritoneal Rupture of the Duodenum. Mr. HERBERT ALLINGHAM contributed a series of cases of Intestinal Resection. The subject of Perityphlitis was discussed by Mr. SYMONDS, his paper being founded on twenty-three cases which had come under his care for surgical treatment. The cases were, of course, divided into the two groups of relapsing typhlitis operated upon in the quiescent stage and acute suppurating lesions. Of the cases of relapsing typhlitis one was operated upon after a first attack and four after two attacks. In the acute cases he considered the danger was much increased by the removal of the appendix when an abscess existed. Mr. TREVES later gave an additional series of eighteen cases of Relapsing Typhlitis which had been operated upon in the quiescent period, and in discussing the diet advisable to ward off attacks recommended the avoidance of milk. Mr. PRIDGIN TEALE read a paper on the Disruption of Impacted Biliary Calculi; in three cases a gall-stone in the common duct was broken up by the needle. Mr. MALCOLM related in detail all the cases of Liver and Gall-duct Surgery that had come under his care. Mr. ARBUTHNOT LANE read notes of a case of Rupture of the Gall-Bladder and Liver produced by violent straining in a patient suffering from Obstructive Jaundice. Mr. J. HUTCHINSON, jun., described a case of Intestinal Obstruction produced by a Gall-stone the small diameter of which was less than that of the Murphy's button designed for the small intestine. Mr. GILBERT BARLING related a case of Gangrenous Umbilical Hernia in which a successful result followed resection with use of Murphy's button. Mr. JACOBSON contributed a paper on Some Points connected with the Question of Operation in Acute Intestinal Obstruction. Dr. LUCAS BENHAM and Mr. SILCOCK gave details of a case of Acute Intestinal Obstruction due to Volvulus of the Sigmoid Flexure in a female aged fifty-six. A new method of performing Abdominal Hysterectomy was described by Mr. F. B. JESSETT, the peritoneal flaps being everted and drawn down through the vagina. A curious case of Intussusception through a Patent Meckel's Diverticulum was placed on record by Mr. GOLDING-BIRD. Dr. HALE WHITE and Mr. GOLDING-BIRD communicated the particulars of a case of Membranous Colitis treated by Right Colotomy, repeated Irrigation of the Large Intestine, and subsequent Closure of the Wound.

In the branch of Obstetrics and Gynæcology some points in the treatment of Peritonitis were brought forward by Dr. JOHN SHAW. A paper by Dr. J. W. BALLANTYNE gave an account of the references to Antenatal Diseases and Injuries found in the Hippocratic Writings. Dr. MALINS opened a discussion on the Treatment of Post-partum Hæmorrhage, laying considerable stress upon prophylactic treatment and the treatment of those called

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"flooders." The clinical report of the Rotunda Lying-in Hospital for the year 1892-3 by Dr. SMYLY, Dr. GLENN and Dr. TWEEDY, showed that as a result of the precautions taken against infection there had been a great reduction in the morbidity of the patients during the last few years. They defined "morbidity" as meaning the number of cases in which the temperature even once exceeded 101·4° F. Dr. R. J. PROBYN-WILLIAM and Mr. LENNARD CUTLER gave a paper on Some Observations on the Temperature, Pulse, and Respiration during Labour and the Lying-in. They considered that the low rate of the pulse after delivery, as given in the text-books, was exaggerated. Dr. CLEMENT GODSON delivered the inaugural address at the British Gynæcological Society on the Evolution of Obstetrics and Gynæcology, in which he advocated that those who taught midwifery and gynæcology should be ranked on the surgical side of hospital staffs. Dr. FREELAND BARBOUR contributed a Study of the more recent Frozen Sections in their Bearing on the Mechanism of Labour and the Third Stage. Cases of Tubal Gestation were related by Mr. W. A. STOTT, the rupture occurring in the middle portion of the left Fallopian tube, and by Mr. BLAND SUTTON, showing the advantages following immediate laparotomy. Dr. MORE MADDEN gave full attention to the subject of leucorrhœa. Mr. BOWREMAN JESSETT showed a specimen consisting of the entire Uterus, which had been the seat of Epithelioma of the Cervix. The growth was first scraped away as much as possible, and then the cavity packed with chloride of zinc paste. "The Dangers of Morphia in Gynæcological Practice" was the title of a paper from the pen of Dr. MACNAUGHTON JONES. Dr. LEONARD REMFRY read a paper on Ovariotomy in Women over the age of eighty years. Ten cases were referred to, all of which recovered. A paper was contributed by Dr. GLENN on the Methods of using Normal Saline Solution in Severe Hæmorrhage and he recorded the results he had obtained in seven cases. Dr. C. HUBERT ROBERTS read a paper on the Pathology of "White Leg" after Childbirth. A paper on the Influence of the Removal of the Ovaries on Metabolism by Professor E. CURATULO and Dr. LUIGI FARRULI of Rome tended to elucidate the cause of the benefit received in osteomalacia by removal of the ovaries. Dr. H. MITCHIE read a paper on Pregnancy complicated by Suppuration within the Pelvis, illustrated by six cases divided into three groups. Dr. CHAMPNEYS and Mr. BOWLBY contributed a paper on the Development of Mammary Functions by the Skin of Lying-in Women, and they found that the axillary lumps consisted of modified skin glands. A paper on Chorea Gravidarum was contributed by Dr. R. C. BUIST, and contained a careful digest of 255 cases where this complication of pregnancy existed. Dr. FANCOURT BARNES read a paper on Some Difficulties in the Use of the Curette, the two principal conditions calling for the use of the curette being chronic endometritis and retained products of conception. The question of the Advisability of registering Midwives in Scotland was discussed by Dr. D. BERRY HART. Dr. W. S. A. GRIFFITH and Dr. T. G. STEVENS contributed a paper entitled, "Notes on the Variation in Height of the Fundus Uteri above the Symphysis Pubis during the Puerperium, the Conditions which influence this, and the Practical Conclusions which may be drawn from such Observations." Certain Micro-organisms of Obstetrical and Gynæcological Interest were studied by Dr. G. D. ROBINSON. Dr. HERMAN discussed the subject of Vaginismus and Allied Affections.

In the department of Pathology it may be said that bacteriology and pathological chemistry have been more in evidence than mere exhibitions of morbid anatomy. Dr. WASHBOURN read a paper on the Pneumococcus, with especial reference to Immunity; and he was followed by Dr. A. E. WRIGHT with a paper on the Bacteriology and Pathological Chemistry of Pneumonia. The Pathology of Diphtheria was also dealt with from the bacteriological side by Mr. BERTRAM HUNT and others, and Mr. W. ROBERTSON described the Method of producing Immunisation of Horses. The question of the Classification of Epithelial Morbid Growths on Morphological Attributes *per se* was discussed by Dr. HERBERT SNOW and others. Dr. VOELCKER described a case of Carcinoma of the Ureter involving its lower two inches and not projecting into the bladder. Dr. FRANCIS HAWKINS exhibited a specimen showing Congenital Obliteration of the Ductus Communis Choledochus. The paper read by Dr. FELIX SEMON on the probable Pathological Identity of the various forms of Acute Septic Inflammation of the Throat excited a discussion which exhibited the difficulty of establishing a satisfactory criterion of identity in its pathological sense. Dr. ORD and Mr. SHATTOCK made a communication on the Microscopic Structure of Calculi of Oxalate of Lime. Dr. PLOWRIGHT read a paper on the Spontaneous Fracture of Uric Acid Calculi. Dr. J. R. BRADFORD gave an account of the Results following the Removal of Portions of the Kidney. The Pathology of Graves's Disease was elucidated by observation and experiment by Mr. W. EDMUNDS. Dr. VAUGHAN HARLEY read a paper on Absorption and Metabolism in Obstruction to the Pancreatic Duct. Mr. D'ARCY POWER showed a case of Primary Sarcoma of the Vagina in a young Child. Mr. JACKSON CLARKE discussed the subject of Tertiary Syphilitic Lesions in Lymphatic Glands. Sir DYCE DUCKWORTH related a case of Sudden Death due to Cardiac Syphiloma. Dr. T. HARRIS read a paper on the Clinical Value of Inoculation Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis. The Pathology of Certain Forms of Vesical Tumour was illustrated by Mr. J. H. TARGETT. Dr. ARCHIBALD GARROD and Mr. HOPKINS contributed notes on the Occurrence of Large Quantities of Hæmatoporphyrin in the Urine of Patients taking Sulphonal. The Relation of Biliary Calculi to Malignant Disease of the Liver was discussed by Mr. C. BEADLES. Mr. BATTLE read a paper on Acute Inflammation of Bone as it is met with in children over five years of age, dividing these cases into three classes. Mr. LEOPOLD HUDSON instituted a comparison between the Lesions found in the Large Intestine of Pigs in Swine Fever and those seen in Human Ulcerative Colitis. Dr. J. W. BALLANTYNE commenced a series of papers on Teratogenesis, or an Enquiry into the causes of Monstrosities. One of the most interesting discussions of the year was that instituted by Mr. HUTCHINSON on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, and in the course of it many new facts were brought forward. Mr. E. A. PETERS produced the result of his study of the

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Varieties of Diphtheria Bacilli, and Mr. J. EYRE did the same with Neisser's Xerosis Bacillus. Mr. ROGER WILLIAMS, in discussing the Pathogenesis of Cancer, came to the conclusion that in the great majority of cases the outbreak of the disease was spontaneous, and could not be attributed to the immediate action of any appreciable extrinsic cause. Dr. DRESCHFELD, in a communication on the Etiology of Malignant Endocarditis, enumerated the various micro-organisms which had been found to act as causative agents. Dr. MCWEENEY described two cases of Tumour of the Kidney composed of Suprarenal Tissue.

Turning to Ophthalmology, we note that a paper upon 100 operations for Senile Cataract was read by Mr. J. B. STORY, who dwelt upon the importance of thorough asepsis as the principal factor in determining the result of a cataract extraction. Mr. W. H. JESSOP described two cases of Diphtheritic Conjunctivitis treated by Klein's Antitoxin. Mr. WRAY read a paper on Removal of the Lens in High Myopia with a view chiefly to arrest morbid changes in the retina and choroid, but also to enable patients with the highest grades of myopia to work at reading distance if unable to do so. Mr. WRAY later read a paper on the Treatment of Detached Retina. Mr. MACKAY contributed a paper on Eyesight and the Public Services, which pointed out the unsatisfactory manner of conducting the visual examinations at present adopted. Mr. W. A. BRAILEY described a peculiar form of Iritis not usually recognised. Dr. MULES brought forward a new operation for Ptosis, the principle of the operation being to substitute the frontalis muscle for the levator palpebræ. Mr. TREACHER COLLINS read a paper on Blood-staining of the Cornea, the pigment being precipitated hæmatoidin. Mr. J. B. LAWFORD described some cases of Ophthalmia Nodosa due to the penetration into the eye of the hairs of certain varieties of caterpillars. Mr. SIMEON SNELL collected notes of nine cases of Chancre of the Conjunctiva, and remarked that though these cases were not uncommon, yet very few had been reported.

Some good papers were contributed on the Administration of Anæsthetics. Mr. BERNARD STEDMAN related the extremely satisfactory results he had obtained by Rectal Etherisation as a method of induction and maintenance of general anæsthesia. Dr. FREDERIC HEWITT and Mr. MARMADUKE SHIELD brought forward a paper on Posture in its relation to Surgical Operations under Anæsthetics. The posture of the head in its relation to that of the trunk was discussed, the postures of surgery were individually considered, the posture of the patient after operation was described, and the influence of the force of gravity upon the circulation and respiration was dealt with.

In the Department of Public Health Dr. T. M. LEGGE contributed a paper on some Points of Difference between English and Continental Methods of Municipal Sanitary Administration. The other countries visited for purposes of investigation and comparison were Sweden and Norway, Denmark, Belgium, France, and Germany. An interesting historical communication on Epidemic Diseases in the Royal Navy came from the pen of Fleet-Surgeon THEODORE PRESTON. A debate took place at the Society of Medical Officers of Health on the Connexion between Female Labour in Factories and the High Infant Mortality in certain Manufacturing Towns. Mr. H. C. JONES read a paper on the Legal Definition of Sewers and Drains, and it was shown that the law required amendment. A paper on the Relations between the Conditions of the Soil and the Prevalence of Epidemic and Endemic Diseases was read by Brigade-Surgeon-Lieutenant-Colonel LANE NOTTER. Dr. NEWSHOLME advocated a National System of Registration of Sickness. Dr. SIDNEY DAVIES read a report on an Outbreak of Enteric Fever distinctly traceable to a particular Milk-supply, though the actual cause could not be discovered.

Amongst the papers on Miscellaneous Subjects was one by Dr. FELIX SEMON on a novel form of Malingering—namely, Chronic Self-inflicted Ulceration of the Throat—the point of diagnostic value being the abrupt cessation of the lesion above and below, at parts inaccessible to the patient. Dr. INGLIS PARSONS read a paper on the Disintegration of Organic Tissues by High Tension Currents, the experiments being undertaken to ascertain the capabilities of electricity as a destructive agent in the treatment of malignant disease. Mr. G. STOKER showed how hair could be made to grow by the local imprisonment of oxygen gas over the area to be cultivated. Dr. IMLACH read a paper on Modern Miracles of Healing. Mr. F. R. HUMPHREYS read a paper on the Necessity for a Central Organisation in the Medical Profession. Dr. E. SYMES THOMPSON read a paper on the Climate of Egypt, comparing it with that of the Alps, the Canaries, and the Cape. A thoughtful paper by Dr. T. SEYMOUR TUKE on Lunacy and General Practice referred to some of the duties, difficulties, and responsibilities of the private practitioner with regard to mental cases.

In concluding this notice of the work of the Medical Societies for the year we are happy to record progress all along the line. Especially successful have been the discussions which have taken place on selected subjects, though here it would be a great improvement if the learned monographs compiled by the introducers of the subjects to be debated upon were printed and "taken as read" by the societies, as more time would thus be allowed for spontaneous interchange of opinion.

Special Sanitary and Analytical Commissions.

The activity of the Analytical Department of THE LANCET has been fully maintained. No less than 150 samples coming under the heading of Food and Drugs were examined during the year. The total number of analytical results published was 500, of which 265 were included under the heading of Analytical Records, while 235 were made in connexion with special inquiries. The number of new inventions examined in the laboratory was twelve.

Of the special inquiries the work of our Commissioners on the incandescent gas light from a hygienic point of view was, perhaps, the most exhaustive. The whole of the work, except the determination of illumination values, was done in THE LANCET Laboratory. The inquiry was undertaken in the interests of the public in consequence of certain statements appearing in print and elsewhere that this burner gave off (*inter alia*) carbon monoxide. The results were such as to free it entirely from any reproach on this head, and, on the contrary, showed that this system of lighting possessed distinct economic and

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hygienic advantages, while its superior lighting powers were quite evident. The report, which appeared in the first issue of THE LANCET of the present year (Jan. 5th), contains an interesting account of the history of the progress and development of incandescent gas lighting, and a description of the processes of manufacture of the incandescing filaments.

Munich beer was the next subject of analytical inquiry. Analyses of the materials used in its manufacture, the water, yeast, malt, and the finished product itself, were made. It was shown that, in spite of the fact that Munich beer contains a greater proportion of nutritious malt extractives than the strongest beer, yet the proportion of alcohol is only one-half as much. Moreover, the quantity of hops used is considerably less. These were facts which it was considered accounted sufficiently for the less stupefying effects of Munich beer.

In the spring our Commissioners were invited to inspect the system of ventilation combined with a method of treating infected air, which it was proposed to introduce into the New General Hospital at Birmingham. The system, which was fully described in THE LANCET of Feb. 16th, consisted in propelling air after being warmed and screened through moist fibre screens, and, in the event of infectious disease, in placing similar screens—moist, if desired—with an antiseptic at the points of exit. Our Commissioners expressed a favourable view of the propulsion system, and in their opinion the addition of an arrangement for disinfecting the outgoing air was one of the best suggestions that had been made in connexion with avoiding the probability of infection being spread by infectious diseases hospitals. Favourable results of bacteriological analyses of the outgoing air in a series of experiments were quoted in support of this view.

The production of both an enzyme and ferment from a certain class of fungi was the next subject investigated. The report appeared in THE LANCET of May 25th. Interesting features in this process were the rapid production of diastase, which was shown to possess very high digestive powers on starch, and the growth of a pure and active yeast, which quickly excited alcoholic fermentation.

Recent important improvements in the preparation of cod-liver oil and castor oil were the subject of our Commissioners' attention in an article in THE LANCET of June 8th. The improvements were directed in each case to palatability, digestibility, and increased efficiency, each of which had been secured—in the former case by carefully excluding decomposed albumins by extracting the oil from the livers by means of steam and the prevention of the formation of hydroxy-acids, and in the latter by extracting the oil from the seeds in the cold and carefully excluding the drawn product from the action of the air.

The department is at present engaged upon some important inquiries which have already occupied a good deal of time and attention, but the results are not yet complete. It is hoped, however, that they will be ready for publication in the first number of THE LANCET in 1896.

The Benevolent Agencies of the Profession.

Christmas week is a time for remembering the claims of these agencies. It is sad to have to report that they are still inadequate to meet the demand for their help. The letter of Sir WILLIAM BROADBENT as treasurer of the British Medical Benevolent Fund in THE LANCET of Nov. 9th is eloquent in the simplicity of its pitifulness. During the year 174 cases had come before the committee and 119 grants had been made amounting to £1083, giving an average of only £9 instead of £12 or £18, and latterly even that had to be reduced to £5 or £6. At the last preceding meeting (in October) twenty cases had to be considered, besides those postponed from September, and there was only the sum of £34 to meet the claims to be made for the rest of the year. Next week we shall publish the seventh annual report of THE LANCET Relief Fund, which, as our readers are aware, is intended to give prompt, and, it is hoped, permanent, help to those who have fallen into pressing need of immediate pecuniary assistance. The Royal Medical Benevolent College has happily been able to make an advance in its capacity for helping the profession, both in the way of assisting the education of boys the sons of medical men, and of increasing grants made to non-resident pensioners. On Monday, July 8th, His Royal Highness the Prince of WALES laid the foundation of the new lower school buildings, in which 100 of the younger boys, separated from the main buildings, will be accommodated. No less than fifty boys, sons of medical men, are educated on the foundation free of all cost, and many more receive assistance. This is a very gratifying report. The Widows' and Orphans' Fund continues its admirable work in relieving the widows and fatherless children of those members of the profession within the metropolitan area who had the means and the forethought to provide for their families. The pity here is that so easy and benevolent a form of life insurance is not more appreciated and that many practitioners who could by a little self-denial provide against "the rainy day" do not do so. But the lot of the widow and the fatherless is not the less sad because of want of thought or want of means on the part of the deceased breadwinner. The Christmas help of medical men cannot be better bestowed than in assisting such excellent funds. Their good work is undoubted and deserves constant encouragement.

Honours to Medical Men.

The time when the services which medical men render to the community shall be fully recognised by a grateful State is not yet; but if the list of Medical Honours during the past year is not so large as might reasonably have been expected it contains names of which not only the profession but all English-speaking peoples, and, in fact, the whole world, may be proud. Among the list of names which HER MAJESTY selected for the bestowal of New Year Honours were those of Dr. RUSSELL REYNOLDS, the President of the Royal College of Physicians of London, and Mr. ERICHSEN, a past-President of the Royal College of Surgeons of England. Both these gentlemen received Baronetcies, and the honour done to Sir J. RUSSELL REYNOLDS and Sir J. ERIC ERICHSEN was hailed with keen satisfaction by the whole of their medical brethren. Only three gentlemen whose names appear on the Register of the General Medical Council were selected to receive honours on the occasion of HER MAJESTY'S seventy-sixth birthday—Dr. JOSEPH EWART of Brighton, Director-General JAMES NICHOLAS DICK, C.B.,

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and Dr. SALVATORE PISANI. Sir JOSEPH EWART received a Knighthood, Sir JAMES NICHOLAS DICK a Knight Commandership of the Bath, and Dr. SALVATORE PISANI was made Companion of the Order of St. Michael and St. George. Sir WILLIAM HALES HINGSTON and Sir JOHN CHRISTIAN SCHULTZ received the honour of Knighthood and Knight Commandership of the Order of St. Michael and St. George respectively on the same occasion. The promulgation of the long-delayed rewards and honours for Chitral disclosed the fact that Surgeon-Major GEORGE SCOTT ROBERTSON, C.S.I., had been gazetted as a Knight Commander of the most exalted Order of the Star of India, and that Surgeon-Captain HARRY FREDERICK WHITCHURCH had received that coveted decoration, the Victoria Cross. It is unnecessary to recapitulate here the story of his bravery, for it is known, we believe, by every member of a profession which must feel a thrill of justifiable pride whenever the name of Surgeon-Captain WHITCHURCH, V.C., is mentioned. The Waziristan honours list included the names of Surgeon-Colonel LIONEL DIXON SPENCER, who was made a Companion of the Most Honourable Order of the Bath, and Brigade-Surgeon-Lieutenant-Colonel GEORGE MCBRIDE DAVIS, who was made a Companion of the Distinguished Service Order. Sir CHRISTOPHER NIXON, Physician in Ordinary to the Lord-Lieutenant of Ireland, and Sir W. THORNLEY STOKER, President of the Royal College of Surgeons in Ireland, on the retirement of Lord HOUGHTON from the post of Lord-Lieutenant of Ireland, received their Knighthoods. Sir H. D. LITTLEJOHN of Edinburgh also received his Knighthood during the past year. The latest honour announced is the bestowal of a Knight Commandership of the Order of St. Michael and St. George upon Dr. L. A. A. DE VERTEUIL, President of the Trinidad and Tobago Branch of the British Medical Association.

The Metropolitan Hospital Sunday Fund.

The present year will be a memorable one in the annals of the Metropolitan Hospital Sunday Fund, for the sum collected on behalf of the sick poor of the metropolis has far exceeded the amount obtained in any previous year. Twenty-three years ago, when the Fund was started, the total receipts amounted to £27,700 8*s*. 1*d*., and the collections and donations steadily rose till last year, when they reached a total of £43,679 11*s*. 8*d*. This year they have reached the unprecedented total of £60,361 4*s*. 2*d*., which, after allowing for liabilities and the usual expenses, a little over 2 per cent. of the whole, was distributed among 121 hospitals and 53 dispensaries, 5 per cent. being set apart for the purchase of surgical appliances. The large increase is due, in a great measure, to special donations and legacies. Three donations each of £1000 were received from Lord IVEAGH, Sir SAVILE CROSSLEY, and Mr. J. B. ROBINSON. Mr. B. I. BARNATO, Mr. DANIEL MARKS, and their friends contributed £10,000, and the members of the Stock Exchange, through Messrs. BURDETT and HARRIS, and Messrs. PIM, VAUGHAN and Co., gave £3400. The Rev. CANON FLEMING, Vicar of St. Michael's, Chester-square, headed the list of congregational contributions with £1180 10*s*.; the Rev. C. J. RIDGEWAY, Vicar of Christ Church, Lancaster Gate, followed with £1170 18*s*. 11*d*.; and the Rev. Prebendary EARDLEY-WILMOT, Vicar of St. Jude's, South Kensington, came next with £804 5*s*. As we have said, the unprecedented sum reached this year is greatly owing to special gifts, but it is encouraging to note that year by year the sums received from the various churches show a steady rise. Another noticeable point is the confidence placed in the distribution committee and in their methods of administration. This confidence in the distribution committee assures us that the success which has attended the strenuous efforts of the friends of the Fund during the past year, under the presidency of Sir JOSEPH RENALS, will be maintained under the presidency of his successor in the Mayoral chair, Sir WALTER WILKIN.

Obituary.

We have always to count upon deaths in our ranks which seem premature, those of men cut off in the very prime and promise of their lives. This year some very sad instances had to be recorded in our pages, such as that of ALFRED W. STURDEE, of H.M.S. *Hood*, who was drowned while bathing at Gozo. In one number of THE LANCET—that of March 30th—we had to report the death of three young practitioners from various causes, and throughout the year such incidents of death have been too frequent. Some died as veritable martyrs to heroic ideas of self-sacrifice. SYDNEY WEBB, M.D. Edin., had had an appointment on the Congo as missionary without salary, and had worked for two years, sometimes seeing 120 cases a day. His time for rest and holiday had come, but on the voyage home he died. Similar in its devotion and sense of duty was the fate of GEORGE STEELE, M.B. Glasg., who died from fever after most effective missionary work in Nyassaland, Central Africa. Not less heroic and noble was the death of JOHN THOMAS REESE, who persisted in crossing a mountain in a thunderstorm to see a poor patient, and who was struck dead by lightning. Three thousand people attended his funeral. Some striking instances of the old tendency of medicine to run in families came to light—that of JOHN ABERNETHY WICKS of Emsworth, Hants, whose family had practised thereabouts for 150 years, and that of JOHN WHITAKER HULKE, whose family for 200 years had practised medicine. Some fine instances of long life and service will be found in our biographies. LOUIS FLORENTIN CALMEIL, M.D., who first discerned the nature of general paralysis, died at the ripe age of ninety-seven after "a life of devotion to his poor patients and to researches into their diseases," which gained him the Cross of the Legion of Honour. EVAN PIERCE, M.D. St. And., of Denbigh, died at eighty-seven, having during his own and other generations supported a hospital of fifteen beds, and given his town public pleasure grounds and a public hall. EDMUND CHARLES JOHNSON, F.R.C.S. Eng., J.P., D.L., in early life abandoned very good prospects to advance the cause and comforts of the blind, having contracted the ardour in this cause by attending Lord CRANBORNE, brother of our distinguished Premier, who suffered the misfortune of blindness. THOMAS GROOM of Whitchurch died at eighty-six, having spent over sixty years in the relief of suffering, with occasional recreation, for he used to tell of one forenoon in

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the "forties," before the days of breechloaders, when he brought down thirty brace of partridges in the neighbourhood of Whitchurch.

If the death of members of the profession in the first rank of authority and eminence is a disaster, then few years have been more disastrous than 1895, as a few names from our obituary will show: JOHN WHITAKER HULKE, F.R.S. and President (at his death) of the Royal College of Surgeons of England; Sir WILLIAM SCOVELL SAVORY, Bart., F.R.S.; DANIEL HACK TUKE, M.D. Heidelberg, F.R.C.P. Lond.; LOUIS FLORENTIN CALMEIL, M.D.; CARL THIERSCH, of Leipzig; CARL LUDWIG, of Leipzig; ARTHUR EDWARD DURHAM, F.R.C.S. Eng.; Sir GEORGE BUCHANAN, M.D. Lond., F.R.S.; CARL VOGT; Sir GEORGE HORNIDGE PORTER, M.D. T.C.D., F.R.C.S. Irel., LL.D. Glasg.; HANS WILLIAM MEYER, M.D., of Copenhagen; the Right Hon. THOMAS HENRY HUXLEY, P.C., F.R.C.S. Eng., F.R.S.; Sir JOHN TOMES, F.R.C.S. Eng., F.R.S.; STEPHEN JENNINGS GOODFELLOW, M.D., F.R.C.P. Lond.; JOHN SYER BRISTOWE, M.D. Lond., F.R.C.P., F.R.S.; LOUIS PASTEUR (for we must claim him), who, though without technical qualification, opened new regions of "healing" and enlarged almost beyond precedent the powers and possibilities of medicine; Sir THOMAS LONGMORE, C.B., F.R.C.S. Eng.; Sir THOMAS CRAWFORD, K.C.B., LL.D.; THOMAS KEITH, F.R.C.S. Edin.; and ROBERT JAMIESON, M.D., L.R.C.S. Edin. All we can say when we think with regret of the vacancy created in science and in medicine by the loss of such men is that if they have accomplished their decease, they had likewise in a high degree fulfilled their mission and their fame, and earned

> "The crown that virtue gives,
> After this mortal change, to her true servants
> Amongst the enthroned gods on sancted seats."

Annotations.

"Ne quid nimis."

A MEDICAL OFFICER DEFENDED BY GUARDIANS FROM UNJUST BLAME BY A JURY.

WHEN will coroners as a matter of bare justice refuse to allow juries to criticise, if not to censure, the conduct of public officers, without giving the said officers the opportunity of defending themselves? The last case in point, at Wakefield, is one which should teach them to always observe this obvious rule. A pauper widow aged seventy years, in receipt of 2*s.* 6*d.* a week from the guardians, procured last year an order for medical relief, and was attended regularly up to last September by Mr. Clayton. He always found her drunk, and on the last occasion near the pillow was a breakfast-cup nearly half full of whiskey. The neighbours said it was perfectly useless doing anything for her, as she was always cursing and swearing and drunk. There was nothing else the matter with her, and he left instructions that if anything else occurred he was to be sent for. He heard no more till December, when a man came for a death certificate, saying that the widow had died suddenly. An inquest was held. No proper notice was given to Mr. Clayton, and he was not present. But the jury spoke as if Mr. Clayton had neglected the patient, and asked the coroner to aquaint the guardians. The guardians went fully into the case and entirely acquitted their medical officer, and properly so. The fact is that the law is at fault in such cases as this in not permitting the authorities to place patients under conditions in which alcohol can be withheld from them. This is one lesson of the case. The other is to coroners not to allow juries to censure without having the facts before them and the persons blamed.

THE RECENSION OF HIPPOCRATES.

THE year must not close without some reference to the light it has thrown on the language and thought of the father of medicine. Under the title of the "Hippocratic Revival"[1] we commented on the contributions just made by Germany and France to the interpretation of Hippocrates, the chief of which is Dr. R. Fuchs's masterly rendering of the "Sämmtliche Werke," now approaching completion. Yet more important, however, is the reconstitution of the text by Hugo Kühlewein, of which the first volume is now before us. It forms the latest addition to the "Bibliotheca Scriptorum Graecorum et Romanorum," published by Teubner of Leipsic, and is a favourable specimen of the beautiful typography, careful editing, and convenient size for which that collection has long been famous. Hitherto, with the exception of Reinhold's two octavos (Athens, 1865, 1866), editions of Hippocrates were too voluminous, like Littre's, or too bulky, like Ermerins', for comfortable use. Such an edition as could really be called "handy" was not to be obtained. Now we have just what was desiderated, along with an *apparatus criticus* that puts the reader in possession of the actual words of the original, as nearly as these can be ascertained by a collation of the best manuscripts. We shall take another opportunity of indicating in detail the superiority of the present to all previous texts; meanwhile we may refer to the three chapters of the Prolegomena as setting forth the broad features in which the present edition is an improvement on its predecessors. The first two are from the pen of that fine medical scholar, Herr I. Ilberg, and treat "De Codicibus Manu Scriptis" and "De Memoria Secundaria"; the third—a very important dissertation—"De Dialecto Hippocratico," is by the responsible editor, Hugo Kühlewein. The motto of the edition is the characteristically Hippocratic rule laid down in the "Epidemics" (I. 5), ὠφελεῖν ἢ μὴ βλάπτειν (to be useful or at least not to injure), and, so far as we have yet been able to judge, Herr Kühlewein may be congratulated on his loyalty to it, not only in the letter, but in the spirit.

SANITATION IN GLAMORGANSHIRE.

DR. W. WILLIAMS, medical officer of health for Glamorganshire, in his report to the County Council for the quarter ended Sept. 28th, gives interesting particulars of much active sanitary work. Scarlet fever and enteric fever have been the prevailing diseases notified in his district, no fewer than 662 of the former and 218 of the latter, as well as 83 cases of diphtheria and 14 of puerperal fever having come under observation; only one case of small-pox was observed. Of the 83 cases of diphtheria 45 occurred in the newly built village of Bedlinog, situated on the uplands in the north-east corner of the county. The inhabitants are principally colliers and their families; there are 297 occupied houses, and the population probably amounts to 1500 persons. The water-supply is good and no illness could be discovered among those who supplied milk to the village. Mr. Dyke of Merthyr, who investigated the circumstances, attributes the origin of the diphtheria to some unhealthy and decayed wooden dwellings where the closets were very foul, and also to the careless manner of emptying cesspit contents in pits in the gardens surrounded by occupied houses. There was

[1] THE LANCET, March 30th, 1895.

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a considerable outbreak of enteric fever at Pontardawe, where 42 cases, with 8 deaths, occurred between Sept. 27th and Nov. 27th. Several hypotheses have been put forward to explain this epidemic, one of them being that the first person attacked—a tramp from Tredegar—had defæcated in the neighbour hood of the tank from which the public water-supply was derived.

THE FORTHCOMING FRENCH CONGRESS OF SURGERY.

THE Administrative Council of the French Association of Surgery has submitted the following subjects to be laid before the Congress of Surgery which will be held in Paris in October, 1896: 1. Surgical Treatment of Talipes; introduced by M. Forgue, Montpellier. 2. Treatment of Prolapsus of the Genital Organs; introduced by M. Bouilly, Paris. These subjects will be submitted to the general assembly and to every member of the Congress individually.

THE Alvarenga Prize of the College of Physicians of Philadelphia has this year been awarded to Dr. Guy Hensdale for an essay on Syringomyelia. The prize is worth 180 dollars, and the next award will be made on July 14th, 1896, for the best essay on any subject in medicine.

THE deaths are announced of Mr. James Rouse, F.R.C.S., consulting and late senior surgeon to St. George's Hospital, and Mr. John Chippendale, F.R.C.S., a venerable and well-known member of the profession. We hope to give later a somewhat extended obituary of these gentlemen.

DR. DAVID NICOLSON, the Medical Superintendent at Broadmoor Asylum, and President of the Medico-Psychological Association, has been appointed a Lord Chancellor's Visitor in Lunacy in the place of Dr. Lockhart Robertson, who has resigned.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of constituents of the Metropolitan Hospital Sunday Fund was held at the Mansion House on Wednesday, Dec. 18th, when the Right Honourable Sir WALTER WILKIN, Lord Mayor, President and Treasurer of the Fund, occupied the chair. Among those present were the Greek Archimandrite, Archdeacon Sinclair, the Chief Rabbi, Sir George Bruce, the Rev. Dr. Rigg, the Rev. Dr. Kennedy, the Rev. Dr. Jenkins, Mr. Richard B. Martin, M.P., Dr. J. G. Glover, Dr. Hare, and Mr. J. A. Bloxam.

At the commencement of the proceedings Mr. CUSTANCE, the secretary, announced the receipt of a legacy of £500, free of duty, from the late Mr. John Smith.

The LORD MAYOR having expressed the interest he and all citizens felt in the success of the Fund, which he hoped in the coming year would be productive of still larger sums than in the past,

Archdeacon SINCLAIR moved the adoption of the council's report. The Fund's twenty-third year, he said, had become memorable by the large increase in the funds raised from various sources, bringing in the unprecedented total of £60,361. This was owing very considerably to a great increase in legacies and special donations, including £3000 from the Stock Exchange by Messrs. Pym, Vaughan, and Co. and Messrs. Burdett and Harris, £10,000 from Mr. Barnato and friends, and £1000 each from Lord Iveagh, Mr. J. B. Robinson, and Sir Savile Crossley. Apart from these, it was gratifying to notice that the amount collected in the places of worship had been the largest on record—£38,370—each congregation showing a steady rise. All that was largely due to the efforts and advocacy of the medical journals, particularly THE LANCET and the *Hospital*, who published interesting reports in connexion with the needs of hospitals. If ministers' sermons were dull and ineffective after reading these reports it was certainly their own fault. He himself made a large use every year of the facts given in these journals, which were far more telling than the most verdant rhetoric of their own. He would like to remind the clergy that at the time of the year when the hospital collection was made a very large number of people were out of London, and he advocated the use of a printed form to be sent round to such persons to remind them that although they were not present at church, it would be fitting that they should send in their subscriptions. The numbers of people who attended church on Sunday formed a very small part of the population, and even those who did not attend church might be reached in this way.

The Rev. Dr. RIGG seconded the motion, and said it was a difficult matter to arouse and move the whole of London, the conditions of life being different from those prevailing in large cities such as Birmingham and Liverpool, where the collections on Hospital Sunday showed a better comparison with the numbers and wealth of the population. Still, the success of this year showed what could be done by sustained endeavour. The journals to which the Archdeacon of London had referred had rendered good service, but all must use their endeavours to bring the enormous forces which there are in London to a focus. The motion was carried.

Mr. R. B. MARTIN, M.P., moved that the laws of the constitution which had been in force during the past year should be continued. He said he could remember the history of the Fund from its beginning. He referred to the interest taken in the Fund by Sir Sidney Waterlow at its commencement, who was then Lord Mayor, and the great interest taken in, and impetus given to, the Fund by the late Dr. James Wakley of THE LANCET. The laws of the constitution had worked well for twenty-three years, and he did not believe that any hospital, from the greatest and most important to the smallest and least important, well and carefully managed could fail to receive a grant. He hoped the clergy, taking the course adopted by Dean Forrest, Canon Fleming, and others, would begin collection for the Fund some time before the actual day, and he especially begged that the collections made on Hospital Sunday should be entirely devoted to the Fund and not divided between it and other charities. Referring to the economical way in which the Fund was administered, he said that last year the working expenses sank to 2·69 per cent. of the amount collected, and they might say that practically the whole amount collected was distributed.

The Rev. MAIN S. A. WALROND seconded the resolution, which was carried.

Sir GEORGE BRUCE moved, and the Rev. Dr. KENNEDY seconded, "That the council for the year 1895 be re-elected for the year 1896, with the Rev. Canon Graham, D.D.; the Rev. David Anderson, M.A.; the Rev. M. R. Neligan, M.A.; the Rev. H. Russell Wakefield, M.A.; the Right Hon. the Earl of Stamford; Sir Joseph Renals, Bart.; Mr. Alderman G. Faudel Phillips, and John Astley Bloxam, Esq., F.R.C.S., &c., to fill vacancies." This was agreed to unanimously.

On the motion of the Rev. W. H. BARLOW it was agreed "That June 14th be fixed for Hospital Sunday of 1896, and that the cordial coöperation of all ministers of religion within the metropolitan area be again invited in the usual way."

A vote of thanks to the Lord Mayor, moved and seconded by the Rev. Dr. KITTO and Mr. BLOXAM respectively, terminated the proceedings.

THE ROYAL METEOROLOGICAL SOCIETY.—The monthly meeting of this society was held on Wednesday, the 18th inst., at the Institution of Civil Engineers, Great George-street, Westminster, Mr. R. Inwards, F.R.A.S., President, in the chair. Mr. R. H. Scott, F.R.S., read a paper on Some of the Differences between Fogs, as related to the Weather Systems which accompany them. In this it was shown that there are at least two distinct classes of phenomena described under the generic name of "fog." In the case of anticyclonic fogs no rainfall takes place, the temperature is low in the morning, and there is a considerable rise of temperature during the day, while in the case of cyclonic fogs rainfall does take place, and the temperature is high in the morning, frequently approaching or even equalling the maximum for the day.

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THE CENTENARY
OF
THOMAS WAKLEY.

AN INTRODUCTION TO A BIOGRAPHY OF THE FOUNDER OF "THE LANCET."

THE year which is now closing is the centenary of the birth of the founder of THE LANCET, and, after consideration, we have decided that it is not only a natural inclination, but a clear and unmistakable duty that is prompting the writing of a biography of the late Thomas Wakley. The causes for hesitation are obvious. Firstly, as the father of one and the grandfather of the other of the present editors he may be held to occupy a position in our eyes necessarily removing him from criticism. So that any biography appearing in these pages would, it might be believed, have to be received with particular caution by our readers, the personality reviewed being presented rather as seen with the blurred glasses of family affection than with the candid and independent gaze of the disinterested chronicler. Secondly, the life of Thomas Wakley, the medical reformer, is so intimately bound up with the fortunes of this paper that to tell it in detail is to tell in detail of the origin and progress of THE LANCET, a proceeding which might savour somewhat of editorial egotism. Thirdly, so many years have now passed since his death that an account of his life might be reasonably expected to have lost its chances of a strong hold upon the public, medical or lay.

As against these, and as our reasons for holding that to write this life is our public duty to the profession every whit as much as it is our pleasure, the following may be advanced. Firstly, Thomas Wakley lived so openly before the world, the things that he said and the things that he did were so entirely the public property of his day, that it is impossible for us to place incorrect facts before our readers without being immediately detected, and it is with facts that we shall mainly deal. With regard to the meaning of those facts and the proper deductions to be drawn from them, the lapse of time makes it difficult for us or our readers to go wrong. The lapse of time is all-important. It is impossible correctly to interpret the work of a reformer from day to day, and from hour to hour. When a man lives a life of battle against wrongs and abuses, it is, and must ever be, his fate to be compelled to wait for years without recognition of the value of his work—if value there be—by the persons whose good opinion is alone worth having. The irresponsible and unbalanced agitator, the crank, and the self-advertiser all bear the unfurled banner of the reformer, and whirl it ever lest haply it may catch the breezes of popular applause; and their shrieking cries somewhat drown the steady tones of the true prophet. But the shrillness of the charlatan passes soon into hoarseness, and the hoarseness into a husky whisper, and the whisper into discredited silence, whilst the tones of the true prophet grow louder and clearer as time goes on; and the more men find his warnings to have been wanted and his actions to have worked for practical good, the more do his tones become reinforced by the commending and endorsing expressions of his fellows. Without allowing a not inconsiderable space of time to expire before giving an account of so full and energetic a career as that of Thomas Wakley, no adequate and impartial view of the man could be taken. A mountain cannot be seen from its side or even from its base, some little peak, some unimportant excrescence of the outline obscures the whole view. We must get to a distance. Just so with these big and busy careers, they cannot be judged during their course, and they cannot be summed up at their immediate close; distance—a long distance—of time must be allowed to elapse before the manner of life that has been led, and the amount of good, or it may be ill, that the world has reaped therefrom can be estimated. But then the task becomes easy, and in some ways the longer the delay the easier, for time will have sifted the wheat from the chaff, and the harvest can be accurately gauged. This is eminently the case with such a man as Thomas Wakley, the medical reformer. Time tells his story. We have only to say how things were when he arose and how he treated them, all of which is a matter of public history, and then to refer to things as they are now, one-third of a century after his death, to be in a position to judge of his life-work.

This brief and bald sketch of the life of Thomas Wakley must be looked upon as a skeleton of the biography that is to appear in ensuing numbers of THE LANCET—it is the bones over which the various tissues of a complex organisation will be laid, and it is hoped that to those who know nothing of the man or his history it will prove a stimulant to curiosity. We are certain that many must feel as they read the following schedule of his work, with an indication of the conditions under which he did it, that the medical profession must owe him an immense debt. We who live in peaceful times, and for whom the medical career is ordered by a properly authoritative and in a way representative Council upon a sound and sensible basis, have a difficulty in understanding the evil plight of the medical man some seventy years ago, but it is particularly necessary that the reader should have some appreciation of the reality and gravity of the abuses that were rife in the profession at the time of the foundation of THE LANCET that he may judge rightly of the course taken by Thomas Wakley in his successful efforts towards reform. Without such appreciation the vigour of his actions and language might be misinterpreted, and the stupendous nature of his task be underrated.

The following passage out of a letter from Sir John Erichsen will show that we are not alone in our views; and, roughly speaking, the object of the biography is so to place its subject before our readers that they may regard Thomas Wakley in the same light that he does. Sir John Erichsen's words are the thesis which the ensuing chapters will prove:—

"6, Cavendish-place, W.,
"Nov. 23rd, 1895.

"DEAR SIRS,— * * * * * * * * I am glad to hear that you are about to publish a biographical sketch of Mr. Wakley on the occasion of the centenary of his birth. The present generation of medical men know little of him, and are for the most part ignorant of how much they owe to him for exposing and fearlessly attacking the manifold abuses that existed in every department of the profession, in the colleges, hospitals, and medical schools, in the first third of this century. Corruption, jobbery, nepotism, promotion by purchase were rife in the colleges and hospitals, and medical education was at a low ebb when Wakley entered on his career as a journalist. By his outspoken and fearless denunciations of these abuses he brought about their reform, and so cleared the road to fame and fortune for those members of the profession who had to rely solely on their own ability and power of work. It was, in fact, Mr. Wakley who made a William Jenner or an Andrew Clark possible. I know no better or more interesting reading than is to be found in the earlier columns of THE LANCET. To any young physician or surgeon who wishes to know something of the past history of his profession I would recommend them as giving him an insight into the condition of his profession sixty or seventy years ago. For force of argument, vigour, and vivacity of style, and keenness of satire, its leaders and articles communicated by Wardrop and others are unsurpassed. And the reader, if not the possessor of a long purse or the nephew of an all-powerful uncle, will rise from their perusal with a feeling of deep gratitude to Mr. Wakley as the man who had cleared away those obstacles that would otherwise have

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barred the way to success in life, and by no one is that feeling more cordially entertained than by,

"Dear Sirs, yours most truly,

"JOHN ERIC ERICHSEN.

"To the Messrs. Thomas Wakley, Sen. and Jun."

Thomas Wakley was born on Nov. 27th, 1795, at Membury, in Devonshire, being the eleventh and youngest child of his father, a considerable land-owner in the county, and a well-known authority in agricultural matters not only locally but outside his immediate neighbourhood. His home did not see much of him. After being for some little time—a very little time—at the Grammar School at Chard, he made a sea-voyage to Calcutta upon an East Indiaman as a kind of supercargo. The captain under whom he sailed was a friend of the family, and the journey seems to have been rather a pleasure trip undertaken with the permission of his friends in response to his ardent wish than a serious beginning to a professional career as a sailor. The captain died on the voyage and Thomas Wakley returned home, and was sent to another school in his native county, the Wiveliscombe Grammar School, and thence after two years of study entered upon his articles to an apothecary at Taunton—one of the old school in practice before the Act of 1815, and content to style himself an "apothecary and man-midwife." This was in those days the usual method of entering upon the profession of medicine, and the articles were a regular form of indenture—the binding over of an apprentice. He did not complete his time with his original master, but spent his seventeenth and the two following years as pupil, partly to a Mr. Coulson, of Henley-on-Thames, and partly as assistant to his brother-in-law, a Mr. Phelps, who was in general practice at Beaminster, in Dorsetshire. And in 1815 he came to London to "walk the hospitals." And what a chaotic condition the profession was in at the time will appear in the course of this biography—for at the risk of repeating ourselves it must again be said that this preliminary sketch is intended only to be a bare record of facts—but no doubt young Wakley's friends chose wisely for him in sending him to study at the school of the United Hospitals of Guy's and St. Thomas's, a school over which Sir Astley Cooper reigned supreme.

Almost immediately his critical faculty, always, as we shall see, developed to an enormous extent and exercised with a vigour amounting to pugnacity, began to manifest itself. Although nominally a student at the united schools, he began wandering about London, attending the classes of the various lecturers at various schools to see who was the person most fitted to impart instruction—who had th gift of teaching, of illuminating the subject upon which he was speaking; and who were the teachers to be avoided—the wordy, the diffuse, and the unpractical, of whom at that time and under the corrupt conditions prevalent there were many. And he was right in his judgment to an astonishing extent, to such an extent that in the year of the battle of Waterloo he had formed much the same opinion as to the value of lectures and lecturers that we are in the habit of accepting as universal opinion now. He decided that harangues, however eloquent and honest in endeavour, upon such subjects as anatomy, chemistry, and materia medica, unless accompanied or supplemented by a practical course of demonstration, must be useless to him, and he would have none of them. Surgery and medicine with hospital practice, materia medica with dispensing, anatomy with dissecting, he saw would constitute a practical education, but separate the theory from the practice and the one became a useless source of tedium and the other an opportunity for idle horse-play. Yet so bad was hospital administration in those days that the education of the student had to be conducted in a scrappy manner. How could Sir Somebody Something's lectures be made clear to the student by observation of his practice when no student knew on what day or at what hour the eminent baronet might appear at the hospital, when the diagnosis at which he had arrived was not communicated to anyone, when the treatment—not only its *rationale* and its results—but the bare treatment was known only to his clinical assistants? These were the things that were so terribly obvious to the shrewd country lad's eye, and these were the questions that while still in a state of pupilage he was wont to ask angrily, and to say that some day they would have to be answered. And the attitude is a remarkable example of precocity. For consider! Here is a country lad, brought up on a western farm, educated at a local grammar school, apprenticed in a small provincial town, who comes to London to begin his professional career amidst new and imposing surroundings, where his eyes are filled with strange sights, while his ears are made to ring with stories of the surgical prowess of this great man, the medical finesse of that, the wealth of another, and the importance of all the professional figureheads. For there is no such hero-worshipper as your medical student, and the great men of those days lost nothing in the estimation of their following by the fact that they had now and again attained to their positions under corrupt systems. But this lad is not carried away. He calmly walks from one great man to another, appraises them to find more than one wanting, and even where he does not withhold approbation of an individual finds the system under which the work is done or the lectures delivered a rotten one, and does not scruple to say so. It is not often that a beginner in a profession, one whose foot is barely upon the threshold, starts with an indictment of the whole framework of that profession. And if he does, his fault-finding is generally the outcome of meaningless spleen, proved from the beginning to be groundless. But Thomas Wakley's first boyish impressions of the medical curriculum were in the main correct, and even in detail remarkably free from error; and he proved their correctness later and lived to see the abuses which were so clear to his boyish gaze reformed in large measure by his own act and pen.

In 1817, having taken the diploma of the Royal College of Surgeons of England, Mr. Wakley turned his thoughts to practice. The conditions under which the profession lay, every whit as much as his declared proclivities, precluded him from thinking of a career as a hospital surgeon, with its emoluments of lecturer's and examiner's fees. He had not the necessary introductions, he was without the necessary spirit of surgical research, and he had in him not one whit of the pliability which allows a man to adopt a career not particularly to his taste for the sake of possible worldly success. Men and women, their lives and natures, appealed to him, and he started in practice among the poor with a desire to alleviate their sorrows that was quite independent of any desire to extend his own scientific knowledge. At the beginning of the year 1820 his future father-in-law bought for him an old-established practice in the neighbourhood of Oxford-circus on the occasion of his approaching marriage. The house stood in Argyll-street, Regent-street, as nearly as may be upon the present site of Hengler's circus. Here he brought his wife, to whom he was married on Feb. 6th, 1820. Miss Goodchild was the daughter of a wealthy man, and in after years Mr. Wakley made no secret of the fact that in many of the stormy crises of his life—and he was not long before he began courting the storms—the long purse and strong ready assistance of his father-in-law kept him from foundering.

Within six months of their marriage a terrible misfortune overtook the young couple—the house in Argyll-street was destroyed entirely by fire. Mr. Wakley and two of his servants barely escaped with their lives, and all their furniture and Mrs. Wakley's jewelry—she had recently been

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the recipient of some handsome wedding presents—perished in the conflagration or was stolen. Mrs. Wakley, by good fortune, was away from home at the time staying with her father. This does not, however, tell the tale of their troubles. The remarkable circumstances under which the fire occurred were alleged by the insurance company to be such as to entitle the company to withhold compensation, while the wildest stories derogatory to the probity of the luckless owner of the house were rife. Mr. Wakley brought an action against the company, and recovered the whole sum that was owing as well as mulcting them in costs, but until the case was decided all along the line in his favour he was placed by cruel slanders under a heavy cloud of suspicion. The true story we shall tell at length in an early chapter of the biography. It is sufficient here to state that no one who knew him ever listened to the evil reports, while he himself was so absolutely careless of the opinion of any who were not personally known to and respected by him that he made no vigorous protests. He vindicated himself in the law courts and laughed at the libels.

During the next two years he practised his profession, but his heart was not in his occupation. He was a big man, and he felt that there had grown up within him the capability to do a big work. He was a born reformer and an eloquent propagandist, and the routine of practice stifled him. It was not his profession that he disliked—he was absolutely devoted to the science of medicine—it was that, burning with righteous indignation at the many abuses existent in that profession, he felt that he could serve it better as a reformer than as a general practitioner. Such impulses counted for almost everything in deciding him to take the extreme step of leaving the profession to enter upon a systematic attempt to set aright the abuses; but we have it on personal record from himself that it was the wish of his young wife that actually precipitated him upon the course with which his name will ever be associated. Mrs. Wakley had taken an objection to his remaining in practice and found his resolve to leave it most welcome, so that, no sooner was his scheme formulated so far that he could speak of it to his friends of a like way of thinking, than he found himself encouraged to persevere in it in the very quarter where he might have expected opposition. It was almost as much due to the future editor's respect for his wife's wishes as it was to his own burning desire for reform that THE LANCET owed its origin.

On Oct. 5th, 1823, a Sunday, the first number of THE LANCET was issued, prefaced with a declaration of war and teeming with contentious matter. The preface said that as it had long been a subject of surprise and regret that there existed no channel for conveying to the public, to practitioners, and to medical students reports of the lectures at the hospitals of London, and that as Sir Astley Cooper's lectures on surgery were probably the best in Europe, the new journal would publish them as they were spoken. A report of clinical cases all over the world was also promised. The resistance to publicity that followed in so many directions was foreseen in the following words, and the treatment that it received was also prophesied: "We are well aware that we shall be assailed by much *interested* opposition; but we will fearlessly discharge our duty." As to the literature of the first volume, we need here only refer to one item of the contents, a lecture delivered by Sir Astley Cooper in the theatre of St. Thomas's Hospital, for its publication may be taken as the purest type of the sort of work that the editor had before him as the ideal of his duties. Sir Astley Cooper was the leading light of surgery in England. He was also a magnificent supporter of the then prevailing methods of nepotism by which the valuable and honourable appointments of the metropolitan hospitals were too frequently held by unworthy representatives of the profession. The combined staff of St. Thomas's and Guy's, at that time known as the United Hospitals, contained several close relatives of Sir Astley Cooper, and it is not exaggerating to say that he had had a voice in the election of all his juniors. The young journalist's shrewd idea of a first step towards reform would have been voiced by himself as follows: I will publish the lectures of the hospital surgeons and physicians to their classes; if they are good, so much the better for the profession at large and those hoping to join the roll; if they are bad the profession at large will see that they are being taught by men who are unfit to hold the posts for which they are paid, and will as a consequence recognise that the existent systems of election are corrupt. It was characteristic of his methods of thought that he never seems to have considered whether he had a legal right to publish the lectures in that way at all, a question that was eventually settled in his favour after prolonged litigation with the celebrated Abernethy. It was also a good example of his fairness in the midst of his enthusiasm that he should have selected Sir Astley Cooper as his first "victim," for that is how the authors of the reported lectures were wont to describe themselves. Sir Astley Cooper was a splendid lecturer, with enormous experience to draw upon, and a happy, lucid manner of expressing himself, so that the issue of his lectures was a real boon to the profession. Had Mr. Wakley been the pure iconoclast that he was represented to be—and iconoclast, we may add, is far too mild a word, for a section of the profession at that time, in their fright, spoke of him in terms that could have fitly been applied to a Malay running amok—he would not have selected as a specimen lecturer belonging to the privileged classes his old and brilliant teacher. He would have selected a bungler—there were such—and would have reported him and criticised him simultaneously. But he desired to *in*form as much as to *re*form, and whatever his legal position might have been in the matter, the great value that the publication of such lectures was to the medical world is beyond all doubt.

From this time forward for ten years the pages of THE LANCET were the duelling ground for a series of fierce encounters between the editor and the members of the privileged classes in medicine. Lectures and debates at the medical societies were reported, to the exasperation of the lecturers and the speakers, and the delight of the profession at large and the students. As a natural pendant to the editorial assertion that the elections to the staffs of the various metropolitan hospitals were made at the instigation of gross nepotism, accounts were given in the pages of THE LANCET of maladministration in the various schools and malpraxis in the various wards. And upon these came actions and cross-actions. These will be narrated at length in subsequent chapters. It is sufficient to state here that six actions were brought against him, the aggregate sum of £8000 being claimed for damages. Of these actions he lost four—£50 being awarded to Mr. Tyrell, £5 to Dr. Macleod, one farthing to Dr. Ramadge, and £100 to Mr. Bransby Cooper. This last sum, together with £400 costs, was collected by public subscription, so that his fearlessness being justifiable cost him but little. The criminal action brought against him by the Royal College of Surgeons of England, and the action brought against him by Mr. Guthrie were both abandoned by the plaintiffs in his favour. On the other hand Mr. Wakley, who never dropped his methods of outspoken speech, brought six actions for libel as plaintiff, and won them all. On most of these occasions he conducted his own case, often against the most powerful advocates of the day, engaged at enormous fees, and in one, the most sensational case of all, that of Cooper *v.* Wakley, he actually began by upsetting Sir James Scarlett, afterwards Lord Chancellor Abinger, on a point of law. His wonderful success had this effect—

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it gave him a right to free speech which he exercised to the wholesome dread of all pretenders, while it made his enemies, and they were many, cautious.

His attitude towards the Royal College of Surgeons of England is another subject which will require so much description later that it is unnecessary to do more than allude to it here. In the year 1826, at a large meeting promoted by Mr. Wakley, and presided over by Mr. (afterwards Sir William) Lawrence, a resolution was passed condemning the examinations of the College as perfectly ridiculous as a test of qualification; and both before and after that date the columns of this paper teemed with uncomplimentary allusions to the constitution and government of the corporation. Things have greatly changed now, though our readers well know that, in our opinion, they might still change with advantage, but the place that Mr. Wakley assumed in the fiercer struggles of olden times was the place he always chose when once he had made up his resolute mind upon the rights and wrongs of a matter. He fought in the van, and was responsible for the discontinuation of many of the humiliations to which the Members of that day were subjected at the hands of their governing body.

In 1830 Mr. Wakley, who had always been impressed with the necessity of a coroner having had a medical education, and had repeatedly insisted upon this in these columns, became a candidate for the coronership of Middlesex. There were many circumstances that combined to make this election particularly exciting and ruinously expensive, and Mr. Wakley's candidature proved unsuccessful. In those days all the Parliamentary free-voters had a vote for the county, and as the poll was kept open for a week the attendant expenses were enormous. This unsuccessful attempt cost Mr. Wakley no less than £8000, but it paved the way doubly for his future success. On the one hand, the arguments in favour of the tenure of coronerships by medical men were brought before the public in a forcible manner, were discussed and rediscussed, and, as time has shown, were found to be sound. On the other hand, the severity of the contest—Mr. Wakley registered 3534 votes and his successful opponent but 3670—made calls upon Mr. Wakley's powers of oratory, to which he responded in a manner that astounded his friends and is even said to have surprised himself. That he was a clear-headed man, able to say what he thought and write what he knew in a way that conveyed no doubt of his meaning or his sincerity were matters by this time of common notoriety, but that he possessed the magic power of holding a large audience, of carrying it with him in his sentiments, of playing with its finer feelings while dominating its coarser, that, in short, he was a true orator and not a mere enthusiastic speech-maker, was unknown to the public and unknown to himself until he began to address the freeholders of Middlesex in search of their suffrages for the coronership. As a result of his remarkable displays of eloquence, when he presented himself again to the freeholders of Middlesex in 1839 he was elected coroner by an enormous majority; while the eyes of the Radicals were turned with attention upon the possessor of qualities that would be so useful to their party. Mr. Wakley held the post of coroner until the close of his life—indeed, the last communication received from him to our pages was a message from Madeira saying, with the hopefulness so often associated with the condition of health that he was then experiencing, that in a few weeks he expected to be back to continue his duties. Of his conception of those duties and of the way that he discharged them we shall frequently have occasion to give examples. The memorable Hounslow case, where an unfortunate private soldier died from the results of flogging, called forth a verdict under his direction which set England ablaze; his professional brethren have never ceased to thank him for his untiring efforts to place medical evidence upon a proper basis; while such heterogeneous testimony as that of Dickens, Douglas Jerrold, the matter-of-fact electors of Middlesex, the serious columns of the *Examiner* and the *Spectator*, and the comic columns of *Punch* could be adduced to show that his courage, zeal, and industry as a coroner were widely recognised.

On the passing of the Reform Bill in 1832, and as a direct result of the eloquent electoral campaign that he had conducted in first seeking the office of coroner, he received a requisition from a large body of the electors of Finsbury that he would offer himself as a candidate to represent them in Parliament. He accepted, but was unsuccessful, as he was also at a second election that immediately followed. But in 1835 he obtained a majority of upwards of 1000 votes, and from that day represented the borough until his retirement in 1852. During all this long period he infused into his Parliamentary duties the same impetuous enthusiasm that marked his early crusades in the cause of medical reform. He was a frequent and powerful speaker, shrewd, sensible, and humorous, sarcastic sometimes, pathetic sometimes, but always direct and convincing. He entered the House a declared and uncompromising Radical, with a platform manner, a contempt for forms, and an Ishmael's reputation; he was re-elected to the House as a recognised voice in the more Liberal counsels of his country, as an orator, an accomplished parliamentarian, and the personal friend of the leaders of his school of thought. While in the House he used every opportunity that offered itself of upholding the rights of his medical brethren. He framed and carried the Medical Witnesses Act, the effect of which was to put in the pocket of the profession many thousands annually of properly earned remuneration. He obtained a Select Committee of the House of Commons to inquire into the state of medical education and practice, whose report had great influence upon the cause of reform in the profession; and many of his speeches upon the status of the medical corporations, and the desirability of medical coronerships show that in the larger sphere of constitutional duty he ever remembered the cause of his profession. His finest oratorical effort was also one of his earliest—a speech calling upon Lord Grey to commute the sentences of certain Dorchester labourers condemned to penal servitude for illegal combination. The speech was received with unbounded applause on both sides of the House, and will be seen, when we reproduce it in full, to be a remarkably eloquent exposition of liberal humanitarianism. If this speech was not convincing to the House, it was to the country at large, and that was the audience to which he was really addressing himself.

The rest of his public life is written in the columns of this, his paper. He instituted or supported the following Bills among many, or spoke and wrote ceaselessly concerning them:—The Medical Stamp Act (1829), A Bill for the Publication of Lectures (1835), and a Bill for the Remuneration of Medical Witnesses (1836),[1] while he resisted with effect many propositions for legislation that he considered detrimental to the public health of the nation or the well-being of the profession. He inaugurated and largely carried out remarkable reforms in the Poor-law, effecting the dismissal of incompetent officers, espousing the cause of the pauper lunatic, and sitting upon a Select Committee of the House of Commons appointed, as a result of his own motion, to inquire into the efficiency of the treatment provided for the sick poor in the parochial unions. He inaugurated an inquiry into the food of the country, the result of which he published in THE LANCET,

[1] These dates refer to Mr. Wakley's articles in our columns, and do not signify the passage of the Acts in question.

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the articles being the forerunners of the series which we still continue to issue under the generic title of THE LANCET Special Analytical Sanitary Commissions. "We have undertaken," he said, "a task large enough to engage the attention of the Government of this country. With the exception of officers to observe and report upon diseased meat or fish the public authorities take no cognisance of the adulteration and poisoning by the slower but equally sure mode of adulteration of foods and drinks. We will bring the microscope and the test-tube to bear with unerring truth upon things hidden and secret to the unaided senses." This programme was exhaustively and fearlessly entered upon, and there is no doubt that the Act of 1875, under whose working the use of adulterants injurious to health has practically ceased and the practice of fraudulent adulteration been greatly reduced, was the outcome of the ruthless exposures commenced in these columns twenty years previously.

The foregoing must suffice for a sketch of the life-work of Thomas Wakley. In 1860, towards the close of the year, he began to suffer severely from a cough, with much expectoration and occasional hæmoptysis. In January, 1861, he had to own himself an invalid, and repaired to Brighton to place himself under Dr. Alfred Hall, who had previously had the care of his wife in her last illness. He returned to London in the spring in a much better state of health, but hæmoptysis recurring he left under medical advice in the autumn of the same year for Madeira. He there rallied considerably, the emaciation was arrested, and he seemed to be gaining strength. Early in May, however, the hæmoptysis recurred, and on the 16th of that month he died.

It is the task of developing the foregoing sketch into an adequate biography that lies immediately before us. We hope that our readers will recognise from this outline that it is a fitting and proper task to be undertaken in these columns, inasmuch as we shall prove beyond all cavil that to the efforts of Thomas Wakley much of the material prosperity of the medical profession of the present day is due and much of the importance that the medical man occupies in the opinion of his fellow-citizens; for the healing sciences have been as much advanced by the man who made adequate medical education and proper chances of advancement possible for the poorest aspirant as ever they have been advanced by the test-tube of the *savant*, the beneficence of the plutocrat, or the golden eloquence of the gifted lecturer.

We shall be exceedingly grateful to anyone who can give us information that will be of service to us in the preparation of the forthcoming biography. Letters should be addressed to the Messrs. Wakley, and all documents will be carefully filed and returned when used. We take this opportunity of cordially thanking the numerous gentlemen who have already written to us, it having been impossible to reply to all.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE half-yearly meeting of Fellows will be held on Jan. 2nd, 1896, at 4 P.M. The following are the agenda on the notice paper:

To read the minutes of the half-yearly meeting of Fellows on July 4th last (an abstract of this meeting was published in our issue of July 13th).

Motion that the President do sign the minutes as being correct.

The President to report that the committee appointed by the Council to receive deputations from the Fellows in reference to the desirability, or otherwise, of applying for a new Charter had received one deputation of Fellows; that the committee had also, by direction of the Council, received a deputation of Members in reference to the same matter; that the committee had further been instructed by the Council to report upon certain resolutions carried at the annual meeting of Fellows and Members on the 7th ult., but that, as one of those resolutions was submitted to the meeting of Fellows to-day for consideration, the committee had thought it desirable to postpone their report to the Council.

To read the following resolution carried at the annual meeting of Fellows and Members on the 7th ult., and referred by the Council to the consideration of this meeting of Fellows, viz.: "That the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council." Proceedings thereon.

Mr. Herbert W. Page to move: "That it is desirable to give to the Members of the College direct representation upon the Council, and that for this purpose the number of seats on the Council shall be raised to twenty-eight, of which four shall be filled by eligible Fellows, who shall be elected by the votes of Members only, in such a manner and at such time as the Council may determine."

Mr. R. Clement Lucas to move: "That, in the opinion of the Fellows of this College, women should be admitted to the diplomas of the College."

Mr. Timothy Holmes to move: "That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee in the case of Mr. R. B. Anderson."

Mr. C. H. Golding-Bird to move: "That the Council be requested to consider the advisability of changing the date of the winter meeting of the Fellows to the first Thursday either in December or February from the first Thursday in January."

There can be no doubt that the first Thursday in January is a very inconvenient date for the half-yearly meeting, coming as it does in the midst of the holidays and festive season when few are inclined to make sacrifices for such a purpose as this. It requires at any time a strong inducement for medical practitioners to concern themselves with medico-political questions, and the facilities afforded for discussion at the College are not such as to tempt anyone to put himself out of the way to attend the meetings either of Fellows or of Fellows and Members. On Jan. 2nd we trust that the unusually interesting and important programme will attract many who would otherwise have stayed away, and that the representation of the Members of the College, the claims of women to admission to the diplomas, and the wrongs of Mr. R. B. Anderson will receive the consideration which they all deserve. We would therefore urge upon all Fellows who can possibly attend that they should sacrifice their social enjoyments for the good of the College and make a point of helping to fill the benches of the theatre on Jan. 2nd, 1896.

THE PUBLICATION OF PAPERS READ BEFORE THE ROYAL SOCIETY.

WE have received the following letter from Professor Michael Foster, senior secretary to the Royal Society, with a request for its publication:—

"Shelford, Cambridge, Dec. 21st, 1895.

"DEAR DR. PAVY,—I have to acknowledge the receipt of your book entitled 'The Physiology of the Carbohydrates, an Epicriticism,' which you have done me the honour to send me. I have carefully read the preface, the appearance of which has set me free to say in regard to myself what could not be said in official correspondence. I have the leave of the President of the Royal Society to state that since your first letter to them the President and Council have received legal advice confirming your contention that in taking steps with regard to the publication of Dr. Paton's paper before it was read they acted in contravention of the statutes. In their anxiety to shorten the delay, always in part unavoidable, attending the publication of papers they have been led, not only in the case of Dr. Paton's paper, but also in many other cases during recent years, to adopt a mode of procedure which they now learn contravenes the statutes; but they have decided on taking steps so to amend the statutes as to remove a limitation which, in the interests of the Fellows and of science, is clearly undesirable. This point conceded,

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the whole of the rest of the action taken in regard to Dr. Paton's paper was conformable to the statutes. The President and Council, sitting as Committee of Papers, authorised the officers to 'refer' papers during the recess, and under this authority Dr. Paton's paper was referred to certain Fellows of the Society, who, since they were 'knowing and well skilled in the particular branch of science to which the said paper' related, seemed likely to have been chosen referees by the Committee of Papers had it been sitting. The reports being favourable, the paper was, under a like authority, ordered for publication in accordance with the reports. This action of the officers, being reported to the Committee of Papers at its first meeting after the recess, was approved and confirmed. By that decision the President and Council sitting as Committee of Papers took from my brother officers and myself all responsibility. Had the President and Council thought that the referees had been unwisely chosen it was in their power—and was, indeed, their duty—to undo what had been done and to reconsider the question of publication. They did not do so.

I at once and freely accept your explanation that by the words 'contrary to what is considered ethically becoming' contained in your first letter you meant 'biassed.' Will you allow me to say that I fully recognise the grave responsibilities attaching to my office of senior secretary to the Royal Society and the injury to science attending on a 'biassed' action on my part. No man is free from 'bias,' and my action has at times, probably often, been other than it should have been. But, so far as I know, I have not consciously allowed myself to be unduly influenced by personal considerations save, perhaps, when I have urged against the hostile criticism directed towards some communications made to the Royal Society that these should be judged not only in respect to their absolute value, but also with regard to the position and reputation of the authors. The last paragraph in your preface embodies a suggestion as to the nomination of the referees on Dr. Paton's paper, which I venture to hope you would not have published had you fully realised that, refereeship being strictly confidential, I am prevented from making any answer whatever to it. Your preface being a public matter, I shall send a copy of this letter to the medical papers, and in conclusion let me ask you not to think me discourteous in desiring not to continue the correspondence.

"Yours faithfully,

"Dr. Pavy, F.R.S., &c." "M. FOSTER.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5925 births and 3774 deaths were registered during the week ending Dec. 21st. The annual rate of mortality in these towns, which had been 17·9 and 17·8 per 1000 in the two preceding weeks, rose again last week to 18·6. In London the rate was 18·1 per 1000, while it averaged 18·9 in the thirty-two provincial towns. The lowest rates in these towns were 11·8 in Brighton, 12·8 in Portsmouth, 13·0 in Derby, 13·6 in Croydon, and 13·9 in Bristol; the highest rates were 21·8 in Oldham, 23·0 in Birmingham, 23·1 in Wolverhampton, 24·3 in Salford, and 27·5 in Liverpool. The 3774 deaths included 593 which were referred to the principal zymotic diseases, against 561 and 524 in the two preceding weeks; of these, 250 resulted from measles, 101 from whooping-cough, 97 from diphtheria, 57 from "fever" (principally enteric), 51 from scarlet fever, 47 from diarrhœa, and not one from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Swansea, Derby, Preston, and Halifax; the highest rates in Birkenhead, Birmingham, Liverpool, Norwich, and Salford. The greatest mortality from measles occurred in London, Leicester, Birmingham, Norwich, Blackburn and Salford; from scarlet fever in Salford; from whooping-cough in Plymouth, Bradford, Leicester, Birkenhead, and Leeds; and from "fever" in Salford, Norwich, Sunderland and Birkenhead. The 97 deaths from diphtheria included 62 in London, 6 in Birmingham, 5 in Liverpool, 4 in Manchester, 4 in Newcastle-upon-Tyne, and 3 in Sheffield. No fatal case of small-pox was registered during the week under notice, either in London, or in any other of the thirty-three large towns. There were 82 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 21st inst., against 79, 87 and 89, at the end of the three preceding weeks; 5 new cases were admitted during the week, against 9, 18, and 18 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2725, against 2799, 2805, and 2800 on the three preceding Saturdays; 210 new cases were admitted during the week, against 325, 312, and 329 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 264 in each of the two preceding weeks, rose again to 291 last week, but were 214 below the corrected average. The causes of 46, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·5 and 18·9 per 1000 in the two preceding weeks, rose again to 19·2 during the week ending Dec. 21st, and exceeded by 0·6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth, and 15·7 in Paisley to 19·8 in Aberdeen and 33·5 in Greenock. The 553 deaths in these towns included 23 which were referred to whooping-cough, 17 to measles, 13 to scarlet fever, 11 to diphtheria, 11 to diarrhœa, 8 to "fever," and not one to small-pox. In all, 83 deaths resulted from these principal zymotic diseases, against 67 and 68 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·9 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 10 to 24 in the four preceding weeks, were 23 last week, of which 15 occurred in Glasgow and 4 in Aberdeen. The 17 deaths referred to measles showed a further increase upon the numbers recorded in recent weeks, and included 10 in Greenock and 7 in Glasgow The fatal cases of scarlet fever, which had been 8 in each of the three preceding weeks, rose to 18 last week, of which 5 occurred in Glasgow, 3 in Edinburgh, and 2 each in Aberdeen and Leith. The fatal cases of diphtheria, which had been 10 and 5 in the two preceding weeks, rose again to 11 last week, and included 5 in Edinburgh, 2 in Leith, and 2 in Glasgow. The 8 deaths referred to different forms of "fever" exceeded the number recorded in any recent week, and included 6 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 132 and 97 in the two preceding weeks, rose again to 103 last week, but were 39 below the number in the corresponding week of last year. The causes of 39, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·1 and 22·8 per 1000 in the two preceding weeks, further increased to 25·1 during the week ending Dec. 21st. During the past twelve weeks of the current quarter the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 18·1 in London and 17·2 in Edinburgh. The 168 deaths registered in Dublin during the week under notice showed an increase of 15 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 6 and 8 in the two preceding weeks; of these, 3 resulted from "fever," 2 from diarrhœa, 1 from scarlet fever, 1 from diphtheria, 1 from whooping-cough, but not one either from measles or small-pox. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 3·3 in London and 2·7 in Edinburgh. The deaths referred to different forms of "fever," which had been 4, 1, and 3 in the three preceding weeks, were again 3 last week. The mortality from diarrhœa showed a slight decline, while that from diphtheria and from whooping-cough corresponded with that recorded in the preceding week. The 168 deaths in Dublin last week included 29 of infants under one year of age, and 41 of persons aged upwards of sixty years; the

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deaths both of infants and of elderly persons slightly exceeded the numbers recorded in the preceding week. Three inquest cases and 1 death from violence were registered; and 65, or more than a third, of the deaths occurred in public institutions. The causes of 18 or nearly 11 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

THE following officers will retire in 1896:—Surgeon-Major-General Sir W. A. Mackinnon, K.C.B., Director-General, Surgeon-Major-General J. Colahan, Surgeon-Major-General H. F. Paterson, Brigade-Surgeon-Lieutenant-Colonel H. J. O'Brien, Brigade-Surgeon-Lieutenant-Colonel J. Barry, and Surgeon-Lieutenant-Colonel A. Kirwan.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Services:—*Bengal Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels (dated Sept. 30th, 1895): Patrick Alexander Weir, Peter Johnston Freyer, M.D., Percy de Haga Haig, John Lewtas, M.D., and John O'Neill, M.D. Surgeon-Captains to be Surgeon-Majors (dated Sept. 29th, 1895): James John Pratt and Robert Shore, M.D. *Madras Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels (dated Sept. 30th, 1895); Edward Ferrand and Francis Hoskins Pedroza. Surgeon-Captains to be Surgeon-Majors (dated Sept. 29th, 1895): William Burney Bannerman, M.D., and Henry Thomson. *Bombay Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels (dated Sept. 30th, 1895): John Wilkins Clarkson and Joseph Parker, M.D. Surgeon-Captain to be Surgeon-Major (dated Sept. 29th, 1895): Carrapiet John Sarkies. The Queen has also approved of the retirement from the Service of the undermentioned officers:—*Bengal Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel Henry Black Purves (dated Dec. 4th, 1895), and Surgeon-Lieutenant-Colonel William Michael Courtney (dated Dec. 7th, 1895).

NAVAL MEDICAL SERVICE.

Fleet-Surgeon James William Hambly Hawton has been placed on the Retired List of his rank at his own request (dated Dec. 9th, 1895).

VOLUNTEER CORPS.

The following members of the Volunteer Ambulance School of Instruction have recently passed the proficiency examination for Volunteer Medical Officers conducted by the Army Medical Staff at the headquarters of regimental and other districts thus earning the higher grant for their corps and becoming entitled to promotion after completing the necessary period of service:—Surgeon-Lieutenant-Colonels: F. W. Humphreys, V.D., F.R.C.S., 15th Middlesex (The Customs and Docks) Rifle Volunteers; T. R. Pearson, V.D., M.D., 1st North Riding of Yorkshire Volunteer Artillery; A. Wilson, V.D., 2nd Volunteer Battalion Northumberland Fusiliers. Surgeon-Majors: T. F. Fleetwood, M.B., F.R.C.S.I., Victorian Military Forces, South Australia; F. Orton, M.D., 3rd Middlesex Rifle Volunteers. Surgeon-Captains: D. Stewart, 1st Volunteer Battalion Northumberland Fusiliers; H. G. Ashwell, Robin Hood Rifle Volunteers; W. R. Wood, M.A., M.D., 1st Volunteer Battalion Cheshire Regiment; H. Marriott, M.B., 4th Volunteer Battalion Cheshire Regiment; R. Batterbury, M.D., 2nd Volunteer Battalion Bedfordshire Regiment; H. J. Mackay, M.D., 2nd Volunteer Battalion Wiltshire Regiment; J. W. Hodgson, 1st Devonshire Volunteer Artillery; J. S. Forrest, 2nd Northumberland (Percy) Volunteer Artillery. Surgeon-Lieutenants: P. M. Yearsley, F.R.C.S., 16th Middlesex (London Irish) Rifle Volunteers; G. Herschell, M.D., M.R.C.P., 22nd Middlesex (Central London Rangers) Rifle Volunteers; F. J. Warwick, M.A., and A. C. Tunstall, M.D., F.R.C.S., Bearer Company East London Volunteer Brigade; T. Brushfield, M.D., and F. Hird, Bearer Company Surrey Volunteer Brigade; R. E. South, 2nd Volunteer Battalion Lincolnshire Regiment; S. A. Mugford, 2nd Volunteer Battalion Essex Regiment; G. McIntyre, M.B., 4th Volunteer Battalion Scottish Rifles; G. H. Ward-Humphreys, 1st Gloucestershire Volunteer Royal Engineers; H. W. Laing, M.D., 1st Fifeshire Volunteer Artillery; T. Forrest, M.B., 3rd Lanarkshire Rifle Volunteers; W. J. Sprott, M.D., Robin Hood Rifle Volunteers; J. J. O'Hagan, M.B., 5th (Irish) Volunteer Battalion the King's Liverpool Regiment; K. W. I. Mackenzie, 5th (Isle of Wight Princess Beatrice's) Volunteer Battalion the Hampshire Regiment); R. Jackson, M.B., 2nd Lancashire Volunteer Royal Engineers; J. H. Stacey, 1st Volunteer Battalion Norfolk Regiment; J. B. Stevens, 2nd Volunteer Battalion (Princess Louise's) Argyll and Sutherland Highlanders; R. P. Mackenzie, M.B., 1st Shropshire and Staffordshire Volunteer Artillery; W. A. Pond, M.A., M.D., M.R.C.P., 2nd London Rifle Volunteers; A. Thorne, 1st Cinque Ports Rifle Volunteers; C. Vise, M.D., 1st Volunteer Battalion the Queen's Own Royal West Kent Regiment; R. Odell, 1st Volunteer Battalion Bedfordshire Regiment; W. G. Mitchell, M.A., M.D., 5th Volunteer Battalion the Gordon Highlanders; H. H. du Boulay, 1st Dorsetshire Volunteer Artillery: R. Beveridge, M.B., 3rd Volunteer Battalion Durham Light Infantry; S. Lodge, M.D., 3rd Volunteer Battalion the Prince of Wales's Own West Yorkshire Regiment; W. Murdoch, M.D., 3rd Volunteer Battalion the King's Own Scottish Borderers: James Taylor, M.D., 6th Volunteer Battalion the Gordon Highlanders; E. W. St. V. Ryan, 16th Middlesex (London Irish) Rifle Volunteers; L. E. Shore, M.A., M.D., Cambridge University Rifles.

At the distribution of prizes to the 1st Middlesex Volunteers, R.E., on Dec. 13th, a presentation of a handsome silver bowl and illuminated address was made by Field Marshal Sir John Lintorn Simmons, K.C.B., K.C.M.G., &c., the Honorary Colonel, on behalf of the officers, past and present, to Surgeon-Lieutenant-Colonel Baines, V.D., M.D., on his retirement after thirty-six years' service in the Corps.

THE ASHANTI EXPEDITION.

As far as the health of the troops and the medico-sanitary aspects of the expedition are concerned the prospects remain as satisfactory as they were. The attitude of Samory, the chief of the Mahommedan tribe, seems doubtful however, and this introduces a factor of military importance, as they are a warlike people and well armed. It is rumoured, too, that King Prempeh has arrested the only two white men in Kumasi as spies. Large quantities of stores have been landed at Cape Coast Castle and are being rapidly pushed to the front. Several British officers have made rapid marches to Prahsu to complete all the necessary arrangements and to construct the bridge over the river Prah. There is no lack of native bearers to act as transport; the chief difficulty that is to be feared in regard to them is that no dependence can be placed upon their courage, as they will probably fly in the event of any attack. No change appears to have been made in the plan of the expedition. Satisfactory assurances have been received as to the attitude of the Koranza tribe, through whose country it is proposed to make a diversion to Kumasi on the advance of the force over the Prah to the capital. The tribes inhabiting the country generally have suffered too much from their Ashanti neighbours in the past to have any love for them. Surgeon-Colonel Taylor, the principal medical officer of the force, has issued a leaflet containing a number of simple and practical suggestions for the information and guidance of the soldiers. Great progress has been made in the hospital arrangements for the force and in the formation of rest camps along the line of march, and a great deal has been effected in the way of clearing a road for the troops. The health of the expedition is reported to be satisfactory. A certain amount of sickness and fever was in any case to be expected, but it has been so far very small, and not at all of a severe character.

THE ABYSSINIAN CAMPAIGN.

The Italian War Office is sending out large reinforcements to strengthen their garrison in Abyssinia after the unfortunate reverse they lately sustained in that country. It is everywhere recognised that the officers at the late fight at Ambalagi, by their extreme bravery and devotion under most trying circumstances, reflected great credit on the Italian army. The *Italia Militare* states that after the departure for East Africa of the first nine battalions, five other battalions also sail during this month with two additional battalions of mountain artillery. A large contingent of the Medical Service, with hospital stores and equipments, will be required with this force, especially as the arrival of the Italian troops in Abyssinia will probably soon be followed by

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active operations against the Shoans, who are, by the way, said to be suffering from lack of provisions.

THE COMMANDER-IN-CHIEF.

The speeches made by Viscount Wolseley at Woolwich and Sandhurst have, we think, created a very favourable impression. They are quite in keeping with the views he has always expressed in regard to the army being made to offer in the future a professional career for officers, and his desire to see the bond between them and the men under their command not one of mere discipline, but of comradeship also. We are glad to notice, too, that the Commander-in-Chief has, by his example, recently practically discouraged unnecessary extravagance at mess. This is a step in the right direction now that a larger proportion of young men of relatively small means are entering the army than was formerly the case.

THE MADAGASCAR EXPEDITION.

The health of the French force in Madagascar is said to have much improved of late. It will, of course, take some time before those who have contracted malarious fever of even a mild type can have their health fully restored, but most of those who have been seriously attacked or who have suffered from dysentery and were fit to travel have been already invalided from the country. The climate of the uplands is comparatively healthy, and now that the French troops occupy quarters in the capital, and are, we trust, fairly fed and provided for in every way, their health and strength should become far more satisfactory. The late expedition was of a most arduous kind according to all accounts.

THE INDIAN CHOLERA REGULATIONS.

A committee has been appointed by the Government of India—consisting of the Quartermaster-General, the Principal Medical Officer of Her Majesty's Forces, the Sanitary Commissioner with the Government of India, and Professor Hankin—to consider and revise the cholera regulations for India.

Correspondence.

"Audi alteram partem."

"CHELSEA HOSPITAL FOR WOMEN."

To the Editors of THE LANCET.

SIRS,—I beg to be allowed to correct an error of fact which has crept into your editorial article of Dec. 21st on the action taken by the council and governors of the Chelsea Hospital for Women in relieving a member of the honorary staff of his duties. You say "as a result of that report [of the Committee of Inquiry in 1894] the medical staff of the hospital resigned, and the lay management should have done the same." As a matter of fact, the board of the Chelsea Hospital for Women did resign at the same time as the medical staff, and the present council (the great bulk of whom are new members) was elected by the governors at a meeting held on Nov. 28th, 1894.

I am, Sirs, your obedient servant,

Dec. 23rd, 1895. GLENESK.

*** We are sorry to be compelled to correct Lord Glenesk in matters of fact in the recent history of the hospital over whose fortunes he presides. The lay management of the Chelsea Hospital for Women did not resign upon the presentation of Lord Balfour of Burleigh's condemnatory report. This report was presented in July of last year, and the medical staff immediately resigned. The lay management stuck to office and set about electing a new medical staff. A resignation of the lay management took place in the following November, but that is not "the same time," nor did this resignation depend upon the fact that severe censure had been passed upon them; at least, if it did, Lord Glenesk, who tendered it, gave a different reason.—ED. L.

To the Editors of THE LANCET.

SIRS,—From your report of the meeting it would convey to the profession that 123 governors had voted and that only 17 were for me and arbitration, whereas only 57 persons voted—40 against and 17 for me; but the majority of 40 included 22 persons who were members of the board and staff and their families, and therefore personally interested in the question they voted upon. Of the remaining 18 I am advised one was not qualified to vote, so that of the independent voters 17 were for arbitration and 17 against. Neither my wife nor I voted, although entitled to do so. The result was therefore brought about by the iniquitous system of cumulative voting in vogue at this hospital. Furthermore, many influential governors who were unable to attend either wrote or wired to the chairman demanding inquiry. These facts speak for themselves.

The question which naturally arises in the professional mind after reading the many inaccurate statements (which were after careful pruning sent to the daily papers, while the powerful common-sense speech of Mr. Burdett-Coutts, the late vice-chairman, was suppressed) is, Why did the board want me to resign? The following letter written by me to them will explain:—

June 23rd, 1895.

GENTLEMEN,—I beg to acknowledge your letter of the 20th inst., and to say that it is quite true that I have expressly forbidden your resident medical officer to interfere in any way with my operation cases. It is quite *untrue* that my staff nurse treats my patients beyond carrying out my instructions. With regard to your remarks as to rules, I know of no rule that can interfere with my responsibility in the care and treatment of my patients, and I will not share with an inexperienced resident medical officer this grave responsibility in any serious operations which I may have from time to time to undertake. Both he and my staff nurse and matron are instructed that, in case of any condition arising in which my presence is required, they should wire for me, or, if at night, send a hansom. My time is my patients', and in less than an hour I can always be at their bed-side. This is the system to which I always have been accustomed, and to which I mean to adhere. That it is no experiment is evident from the fact that in the Samaritan Hospital, which may be called the parent institution for abdominal surgery, under Sir Spencer Wells and his successors the medical staff have persistently refused to commit their cases to a house surgeon, and to this system they attribute their great success, which is a matter of common notoriety. The necessity for this arrangement has been forcibly brought before me by the treatment of my last hysterectomy by the resident medical officer.

The treatment referred to is this: Within eight hours after a hysterectomy the house surgeon tightened up the serre-nœud which was on healthy uterine tissue, removed all the dressings superficial and deep, which meant lifting up the pin and taking out the pressure pads, and interfered a second time the next morning early, all this being done without sending for me, *which he had strict orders to do.* These are facts which are undeniable; I saw all these dressings next day. For this disobedience to my wishes I reprimanded the house surgeon, and he took the very unusual course of reporting me to the board—hence my letter. I leave my action towards him and my views on this subject gladly to the criticism of any abdominal surgeon in Europe. All that I insisted upon in my so-called "reform" was that the after-treatment of these grave cases should be left to me alone. I never placed the house surgeon in an inferior position to a nurse; he had complete charge of all my other cases. This was only one of many red herrings drawn across the track while evading the main point. The board asked me to withdraw this letter, which I refused to do, as I felt conscientiously that those were the only conditions under which such terrible operations were justifiable, hence their antagonism to me. It is some satisfaction to feel that such men as Sir Spencer Wells, Mr. Jonathan Hutchinson, and Dr. Robert Barnes found coöperation with this board impossible, and that since their resignation no man of position in London could be found willing to accept the post of consultant, although many men of mature wisdom and experience have been approached to this effect. Why does this state of affairs exist? Public inquiry is the only means of solving this question. I am ready to place my case in the hands of any such tribunal, and to prove the veracity of all my statements.

Here I can only simply deny the insinuations made against me by the chairman and some of the staff. For the present I leave my reputation, and their treatment of me, cheerfully to the judgment of my professional brethren, feeling certain that as "Right is might" I will yet get an opportunity of meeting my enemies in the gate.

I have the honour to be, Sirs, your obedient servant,

Harley-street, W. ROBERT O'CALLAGHAN.

To the Editors of THE LANCET.

SIRS,—The scrutiny of the votes given at yesterday's meeting resulted as follows: for the resolution put from

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the chair, 107; against, 17. (The numbers as counted yesterday were 106—17.)

I am, Sirs, yours faithfully,
HERBERT H. JENNINGS, Secretary.

Chelsea Hospital for Women, Fulham-road, London, S.W., Dec. 19th, 1895.

THE CASE OF MRS. GUTHRIE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 16th of this year an appeal appeared on behalf of Mrs. Julia Guthrie, widow of the late Professor Guthrie, formerly surgeon to the Westminster and Royal Westminster Ophthalmic Hospitals. This appeal was signed by Mr. Upton of Brighton, who stated that Mr. Brandreth, LL.D., a solicitor, would act as treasurer of any fund which might be raised. In the issue of the following week I wrote pointing out that all surgeons were deeply indebted to the author of the "Commentaries on the Surgery of the Peninsular War," especially for his work on the subject of hæmorrhage and its treatment. I expressed the hope that Mrs. Guthrie, then seventy-five, would not be allowed to die of want, and suggested that if each of a few surgeons would guarantee her a guinea or two a year the difficulty would be met. Very little resulted directly from the appeal, but I spoke and wrote to various friends, and was enabled by their kindness to transmit to Mr. Brandreth £25 12*s*. Some six months later, on sending Mr. Brandreth my second subscription, it was returned by an official receiver. Mr. Brandreth had become bankrupt, and there appears to be no hope of recovering the money which he received on behalf of Mrs. Guthrie. I have been informed that at his further examination Mr. Brandreth admitted having thus received a considerable sum, one gentleman alone having given fifty guineas. I have been further assured that Mrs. Guthrie had on Oct. 26th received only £23 from Mr. Brandreth — not even so much as had passed through my own hands. I need hardly say that this result has been a cruel disappointment to Mrs. Guthrie. Had it not been for a little timely help she would now have been not only penniless and without necessary clothes, but in debt. I believe that she is now again without money. Under these circumstances, I venture again to ask for help on Mrs. Guthrie's behalf, and to offer to acknowledge and administer any sums which may be sent to me for her. I am, Sirs, yours faithfully,

134, Harley-street, W. STANLEY BOYD.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—The letter of Mrs., Miss, or Mr. Marion Ritchie—I beg his or her pardon, for I have not the honour of his or her acquaintance—certainly does not disprove my statement of "facts," but to my mind clearly confirms their accuracy. I am not in the habit of making statements unless they are facts. How your correspondent is in a position to prove that, as stated, "no medical woman in practice in England has ever taken less than a guinea" I cannot say; still, I will not go into the question whether this is a fact or not. This fact, however, remains, that "women students," "officered by medical women," attend the poor women of Battersea and Clapham for a fee of 5*s*., and these poor women believe not only that they are paying "a doctor's fee," but the majority of them believe that they are going to have a doctor to attend them for this fee. Instead of this they find out, often to their regret afterwards, that they are being practised upon and that they are paying for the privilege into the bargain.

It would be interesting if your correspondent would inform the treasurer of the Hospital Saturday Fund whether they are receiving any of that Fund, and also that they are charging the extreme poor of such a poor parish as Battersea a fee of 5*s*., or as much as they could, to secure the services of a skilled midwife to replace the unskilled attendance of beginners. It is immaterial to the poor woman whether the fee of 5*s*. is paid "to the funds of the hospital" or goes into the pocket of anyone else. The fact remains that medical women, no matter whether qualified or not, are attending cases of midwifery for a fee of 5s., at least in Battersea, and I am informed that some of our poorer brethren, in order to deal with this disgraceful competition of women, are accepting fees which are almost as low in order to keep the wolf from the door. I sincerely trust that some of them will enlighten us upon the subject. I know of at least one case where an unmarried woman who was pregnant and had engaged a medical man to attend her for a fee of £1 1*s*., but was attended at one of these so-called hospitals conducted by women. It is this disgraceful competition of so-called hospitals, and their congeners that is helping so largely, not only to pauperise the people, but also to impoverish that noble profession to which we have the honour to belong. I am, Sirs, yours truly,

Weymouth-street, W., Dec. 13th, 1895. A. MORTON.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me space to give a point-blank contradiction to the assertion made in a letter signed "Vigilans" in your issue of Dec. 21st, that the Clapham Maternity was originally started as a "private speculation" by a medical woman? It originated in the work of a medical mission opened in Clapham in 1885 by the Church of England Women's Missionary Association, with the coöperation of several well-known London and Clapham medical men. The post of medical officer for this work was advertised in THE LANCET, and by that means obtained by the lady named by your correspondent, but she was a total stranger to the originators and had no pecuniary interest (beyond her fixed salary) in their arrangements.

I am, Sirs, yours truly,
MARION RITCHIE,
Hon. Sec., Clapham Maternity.

*** This correspondence must now cease.—ED. L.

"THE CASE OF DR. WIGHT."

To the Editors of THE LANCET.

SIRS,—I am glad that your correspondent "M.D." has called attention to the omission by the defence in the above case to call evidence to show that rupture of the uterus may occur in labour irrespectively of all operative interference or during the most careful and skilful manipulations. I can instance a case in point. About three years ago I was called in to attend a primipara forty years of age. The messenger stated that she was in severe continuous pain, and her mother was afraid she was dying. On arrival I found I had to do with a dying woman, apparently suffering from internal hæmorrhage. I injected ether hypodermically and made an examination per vaginam, but could not detect any dilatation of the os. She died in a few minutes. I offered to do Cæsarean section to try to save the child, but the husband would not consent. At the necropsy I found an extensive rupture of the uterus, the walls of which were so thin that they did not appear much thicker than the membranes; in fact, the whole of the nutrition of the uterus seemed to have been expended upon a very large fibroid which involved a large portion of the lower part of the uterus. Had this rupture taken place during a later stage of the case or when forceps were being applied I am afraid it would have been, to say the least of it, unpleasant for me.

I am, Sirs, yours faithfully,

Dec. 11th, 1895. ANOTHER M.D.

THE SOIL IN RELATION TO DISEASE.

To the Editors of THE LANCET.

SIRS,—In your issue of Dec. 14th I have read with the greatest interest Dr. Poore's lecture on the Soil in its Relation to Disease and Sanitation. In common with most officers of the Indian Medical Service I can bear witness to the value of human excrement as manure. In the Bengal gaols, and I believe in most others in India, the whole of the fæcal excrement is trenched in the gaol garden; and these gardens generally yield excellent crops. There is never any unpleasant smell except for a brief period during the "rainy season." Even then the smell is not very noticeable and can be overcome if the trenches are made a little deeper than is necessary at other times of the year. As in the case of Dr. Poore's garden the fæces, covered with earth, are generally merely buried and the "humification" left to nature. This process, however, may be hastened by an excellent scheme which is

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in use in the Presidency Gaol, Calcutta. The superintendent, Mr. P. Donaldson, by an ingenious use of the Archimedean screw, devised a machine in which the fæces and earth are most intimately mixed. This mixture is ground out through a hole in the gaol wall and is received into pans. It is carried at once to the garden. I was for some time medical officer to the Presidency Gaol, and I can say without hesitation that I never noticed the least smell in or around the garden. Dr. Poore's well is also very interesting to me, since it carries out and improves upon a principle on which, in my sanitary reports as a civil surgeon, I have always insisted with regard to shallow wells.

I am, Sirs, yours faithfully,

J. H. TULL WALSH,
Surgeon-Captain I.M.S.

Roughton, Dec. 18th, 1895.

THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—On reading in your columns the remarks of Sir Richard Quain as to the disabilities of the legal profession, I could not see that there was any reason for our being content with the present constitution of our Council. Some of us from Lancashire and Cheshire, who were present at its session in May last, certainly were not favourably impressed with what we witnessed. Had we been shareholders in an undertaking having in its employment or government 32,000 hands, we should not have felt satisfied in leaving it in the hands and under the control of such a body of men, neither should we have felt content that even the affairs of a city would be effectually managed with a similar body of men in its Council. We certainly do hope that those members of our profession who can visit the council chamber during the session will avail themselves of the opportunity, for the public have free access, as they will then see how and by whom the business of the government of the profession in these realms is conducted. Surely there ought to be some limit as to the age when elected. At our Manchester Royal Infirmary the limit for holding appointments is sixty. Is there any reason why some such restriction should not be adopted in our governing body? Surely hundreds of capable and reliable men can be found in the country under that age who have the necessary energy and ability which would command the respect and confidence of every man. As to Sir Richard Quain's remarks about the direct representatives, many of us in this part of the country are of opinion that, if we had had more, we should have had a far more practical outcome of the investigations in reference to medical aid associations than we can find in their report on that question.

One effectual means of bringing the medical officers of such trading institutions into line would be to have an annual registration, as in the legal profession that the president referred to. If the amount of the fee were 5*s.*, the Council would have an additional income of about £8000. This would provide us with ten additional direct representatives, and leave a large balance to be applied to some other useful purpose for the benefit of the profession at large.

It is not necessary to dwell at length on the advantages that would be derived from an annual registration; but this one might be stated, that such men as I have mentioned would at once begin seriously to reflect that it would be absolutely necessary to put their houses in order. For the first year or two there might have to be a prolonged session of the Council or its executive to inquire into the reasons why certain men should not be again licensed to practise, or whether their licences should be endorsed, both as a record and a warning, as is done by the magistrates in certain other licences. But as time went on and better discipline resulted, the extra sessions would become small matters, for members would always feel that they were under the direct control and supervision of the General Medical Council.

I am, Sirs, yours faithfully,

G. H. BROADBENT.

Manchester, Dec. 7th, 1895.

PRESENTATION.—Mr. J. Griffiths Whittindale, L.R.C.P., L.R.C.S., district medical officer, Old Calabar, Niger Coast Protectorate, has been presented by the European, residents as a token of the high esteem in which he is held by them, with a handsome silver-mounted dressing-bag for his wife and a canteen of plate and silver-mounted cigar-box for himself.

THE BATTLE OF THE CLUBS.—XV.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1541.)

NORTHAMPTON: THE FRIENDLY SOCIETIES AND THE NATIONAL MEDICAL AID COMPANY, LIMITED.

AT Northampton, next in importance after the Royal Victoria Dispensary, is the Friendly Societies' Medical Institute. The total membership of this important organisation amounted, in 1894, to 13,154. The income for that year was £1737 2*s.* 6*d.*, and the expenditure £1667 4*s.* 6*d.*, leaving a surplus of £69 18*s.* Out of this expenditure £660 16*s.* 8*d.* were paid to the medical officers of the institute, and as, during the course of the year, they gave 44,192 consultations the medical officers were paid at the average rate of a little over 3½*d.* per consultation. One of the former medical officers of this institution states that no medical man could manage the work for this and similar institutions unless he is prepared to see from thirty to forty patients per hour at the surgery and to visit from ten to fourteen patients at their own homes also in the course of a single hour. The committee, however, have now resolved to establish some sort of limit to the number of patients to be seen by the officers. They have determined under no circumstance to pay their head medical officer more than £300 a year. If the number of members increase they will not augment this salary, but will appoint another assistant medical officer. Actually, there are two assistant medical officers. Some time ago the chief medical officer of this institution resigned because, among other reasons, he objected to the interference in medical affairs of an absolutely incompetent lay committee. At that time the committee consisted of three paper-hangers, three compositors, two barbers, two shoemakers, two porters, one baker, one miller, two clerks, one grocer's assistant, and one ex-policeman. This committee holds in its hands the very conscience of its medical servants. The committee meet and pass resolutions governing the medical service without so much as consulting the medical officers. When the chief medical officer on one occasion protested, the president of the managing committee replied: "You must do what we say while you *was* in our service." It stands to reason that these medical servants of uneducated lay committees cannot afford to give due consideration to the welfare of the patients. They are not allowed the time necessary to properly examine the patients, neither have they the leisure to read current medical literature and keep themselves posted in the progress of medical science. They must go on prescribing at express speed and by rule of thumb, and the committees of management are too ignorant to understand how this degrades the profession and endangers the health of their members. As for a wage limit, there is none. One of the mayors of Northampton and all his family belonged to, and obtained medical aid from, the Friendly Societies' Medical Institute. A member of this institute did not scruple to seek its medical aid, though he was able to pay £21 to a surgeon for a special operation performed upon his wife. A retired publican used to pay guinea fees to a consulting physician, though for ordinary complaints he obtained his medicine from the institute. A Poor-law guardian was also a member of this institute; and men who are too highly placed to join this friendly society for its general benefits send some of their sons to be enrolled as juvenile members. According to the rules, the family of a member can join the friendly society, not necessarily for all benefits, but for the medical aid only. Thus a comparatively rich man, who does not want to subscribe for a sick allowance or a funeral fund, enters his son as a member for these benefits; and then, on the strength of this relationship, brings in all the family for the medical aid of the Friendly Societies' Medical Institute. Thus the middle-class element that no longer cares for the ordinary financial benefits given by these friendly societies manages to come in all the same for the medical aid. Yet these are the very people who

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association.

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could well afford to pay medical men proper fees. Then, to further swell their incomes, the friendly societies take in women and children, and these require so much attendance that they overwork the medical officers, who are therefore not able to give proper attention to adult male members. Yet, in their origin, such institutions were specially intended to help the breadwinners. This is a serious commercial injury to the community, as it tends to reduce not only the income of the families but the output of goods manufactured. It must also act injuriously to such friendly societies as allow a higher sick pay to their adult male members.

Northampton has a population of about 64,000 inhabitants, and more than half this population are medically treated at the two great dispensaries—the Royal Victoria Dispensary and the Friendly Societies' Medical Institute. But this is not all. There are many small clubs which have no dispensaries of their own and contract with some local practitioner for medical attendance; and then we have in full force the National Medical Aid Company, Limited, acting on behalf of the Liverpool Victoria Legal Friendly Society and offering to anyone and everyone medical aid if they will only insure their lives. This medical aid company employs five practitioners in the town, and one of these practitioners assured me that he had had as many as from 3000 to 4000 subscribers to this company on his books. Thus, if we add the probable number of members of the small clubs and of the National Medical Aid Company to the members of the two great dispensaries already described, and further take into consideration those who are treated at the hospital or infirmary and those who come under the Poor-law, we shall be puzzled to find what population remains for the private practitioner. It may safely be said that three-quarters of the population receive medical aid and are withdrawn from the reach of the private practitioner. In the event of an epidemic there is a little more hope; for the club and dispensary medical officers cannot do all their work, and some of the members, finding that they are kept waiting too long or are treated too hurriedly, call in a private practitioner. Strange to say, these casual patients usually have no difficulty in paying proper fees, and this again tends to show that there is no efficacious wage limit. Indeed, can it be maintained for a moment that three-quarters of the population of Northampton are incapable of paying medical fees? Yet this is what those who would urge there is no abuse must prove. As a matter of fact, of course, everybody recognises that there are numerous abuses, but the tendency is to blame other societies than the one to which they each individually belong. So far as the medical profession is concerned, the action of the National Medical Aid Company constitutes the worst grievance. Nowhere have I heard such a chorus of complaints as at Northampton, and in these complaints there was a new feature. It seems that this company not only employs its medical officers to compete against all other medical men, but actually sets its own paid officials to fight against each other. As soon as one of its medical officers becomes a little popular, or when there is some fear lest he should be able to create for himself a private practice, or if perchance he should offend the company's local superintendent, another medical man is brought down from some distant town and a number of the patients transferred to the new-comer. I was able to talk this matter over with two practitioners who had been introduced into the town in this manner. The first explained that he had only recently obtained his diploma when he was approached by the National Medical Aid Company. He had no experience and no knowledge of the workings of this society, but was very pleased at the prospect offered him of an assured, if small, income. He therefore consented to be their medical officer. The very next day a number of patients came to his surgery, and he was not a little concerned to find that many of them suffered from chronic diseases. On asking them some questions he discovered that they were all patients of another practitioner who lived in the neighbourhood and whom he knew to be also in the employ of the National Medical Aid Company. These patients had been told by the collectors or canvassers in the employ of the company not to go any more to the medical man they had been accustomed to consult, but to go to the new officer whose services the company had just secured. This was very disconcerting intelligence, for he did not care to take another practitioner's patients, and thus actively side with a lay, speculating, financial company in its quarrel with one of his colleagues and fellow medical men. Then, on making further inquiries, he ascertained that the company was employing twelve or thirteen canvassers, who went to almost every house in Northampton seeking to persuade the inmates that the medical men of the National Medical Aid Company were far and away the best, adding to these assertions wonderful descriptions of cures supposed to have been effected by the company's medical officers. These canvassers, who were thus trampling underfoot all principles of medical etiquette, made good incomes out of the life insurances with the Liverpool Victoria Legal Friendly Society which each subscriber to the National Medical Aid Company is compelled to effect. As a commission the canvassers obtain the whole of the premium paid for a life insurance during the first sixteen weeks. After that, as they continue to collect the money, they receive 25 per cent. of what they collect. When once a connexion is established the collector can sell his book to another collector who wishes to come into the business. For instance, a £5 book means an income of £1 5s. weekly, and the goodwill is worth something. Now these canvassers have the making or destroying of a medical man's reputation. They bring the patients, and they can take them away again. For the most part the people enrolled by these canvassers are of a very low and troublesome class. Many do not join of their own free will, but are worried into consenting by the reiterated calls and the irrepressible volubility of the canvasser. On the other hand, when once they have been induced, in spite of themselves, to pay a few weekly subscriptions, they begin to think it is time they should get something for their money. Consequently they march off to the medical officer, make up some sort of story, waste his time, but get a bottle of physic, and go away satisfied because they have obtained something for their money. In view of all these circumstances, the practitioner on whom I had called explained that he very soon severed his connexion with the National Medical Aid Company, and expressed his utter disgust with its methods and proceedings.

The company next employed a medical man who became very popular, and who died when his practice was worth a good £400 per annum. The company, however, refused to transfer its members to the possible purchaser of this practice and brought in a medical man of its own, a stranger to the town. Thus, when a medical man has, after years of arduous and poorly paid labour, built up a practice, this in case of death may not be sold; his family cannot inherit the proceeds of such a sale, because a lay company chooses to withdraw its members, though the skill and devotion the medical man had shown in a great measure enabled the company to obtain these members. The importance of this practice, which the National Medical Aid Company would not allow to be sold, is shown by the fact that the practitioner it introduced to take the place of the defunct medical officer soon had upwards of 3000 members on his books. Now, however, he has scarcely 1000, and the reason of this falling off is most edifying. The new medical officer elected to live in a fashionable part of the town. This district was healthier, more pleasant, and there was some chance of creating a private practice. The company, on the contrary, wanted to take him to the popular and overcrowded side of the town. There he would have had such a crowd of the company's patients that he would not have found either time or opportunity to cultivate a private practice, and would, therefore, have been absolutely dependent on the company, and obliged to obey its every beck and call. Indeed, this is so thoroughly its object, that by a combination of persuasion and menaces it often succeeds in inveigling medical men to sign agreements by which they became practically the slaves of the company. But the new medical officer would not sign any such agreement, and he could not be persuaded to live in one of the slums of the town. Further, he began to make various discoveries which did not please the canvassers. For instance, the subscription for medical aid is 2½*d.* per week per family, but the canvassers accepted 10*d.* a month, and the year consists not of forty-eight but of fifty-two weeks. The new medical officer complained. The company did not like all this, and, therefore, yet another medical officer has been brought by the company into Northampton, and this accounts for the sudden and considerable falling off of members on the books of the medical officer who ventured to complain. The fact is that the canvassers do not care how little is paid for medical aid;

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their interest is in the premium for life insurance. The medical officer counts on receiving 10*s.* 10*d.* per annum per family, but he only receives 10*s.* when the payment is effected per month. Then during the great strike in the boot and shoe trade very few families paid any subscriptions whatever. After the strike was over, instead of claiming the arrears, some among them were simply put on to the books of another medical officer as if they were new members—indeed, this is a common method of transferring members from one officer to another. The canvasser, instead of urging the member to pay up the arrears of subscriptions into which he has, perhaps, been purposely allowed to fall, urges him to join as a new member on some other medical officer's list. Thus are the members transferred from the medical man who is too independent to please the company to some new medical officer it has imported on purpose to compete against the more recalcitrant officer. This has the further advantage of engendering a certain amount of bitterness and rivalry between the medical officers. By dividing the company is better able to govern, and it also renders it less probable that the medical officers will be able to meet on friendly terms and trust each other sufficiently to agree on some concerted action. Then, also, by changing the collectors the accounts can be thrown into confusion, and the medical officer who has fallen into disfavour with the company finds that this confusion results in his losing a great many of the members on whose annual subscriptions he relied for his income. The medical officers in the employ of the company are for the most part in a very dependent position, and everything is done to keep them in this condition. As one of them exclaimed to me in angry protestation, "How can you call on a poor young practitioner like myself to resign? I have a wife and growing family to maintain. I have no wealthy patients and hardly any private practice. Why should I resign when medical men in this town who have large and lucrative private practices gladly work for the Royal Victoria Dispensary. Besides, if I did resign, someone else would quickly come and take my place." Of course, I protested that no good could be done by the resignation of a practitioner here or there; it was only by concerted action that some result could be obtained. The medical officer who considered it unfair to expect him to resign said, on the other hand, that he would be delighted if a decree could be issued declaring that all medical men who continued in such service would lose their diplomas. Then every medical officer would have to resign; the company and all the abuses it had introduced would disappear, but the patients would remain, and he would have his chance, equally with the other practitioners, of securing some of them.

Northampton, December, 1895.

ARE HOSPITALS TO BECOME MEDICAL CLUBS?

The medical staff of the Swansea Hospital have forced this question on the attention of the committee of the hospital. They have presented a report to the committee showing that the medical profession gives its services gratuitously to hospitals on the understanding that they are charitable institutions for the sick poor, but that little by little the readiness of medical men to coöperate with the general public in a grand scheme of kindly charity is being misused, to the detriment alike of the general body of supporters of the hospital and of the welfare of the medical profession itself. They especially show that workmen, to their great credit, make important contributions to the hospital, but that there is a growing disposition on the part of workmen and their masters to regard such contributions as giving them a right to attendance, not as a charity, but as a privilege purchased by their contributions. This is an admirably plain statement of a new theory and view of hospitals which cannot for a moment be permitted, and which is at the root of the enormous abuse of these institutions. The theory of voluntary hospitals is that they are institutions for the working classes when overtaken with serious accident or exceptional illness. Everybody is delighted to support hospitals on such a theory, and the working man should cheerfully join in supporting them in this theory. But whoever till now thought of regarding his subscription as meant to cover attendance for ordinary illness? Such a view is absurd, and if pressed will stop subscriptions and kill the hospitals. Such views are an outcome of the abuse of the out-patient department, which is now more like a market than a consulting-room, and which entices by its facilities all classes. But it is not the out-patient department alone which is abused. We gave an instance in THE LANCET of Dec. 14th of a case of cataract dealt with in a hospital where the patient was quite able to pay a fee. Here is another at Swansea Hospital. A well-to-do lady patient came in for an operation, but took fright on the death of a patient in a neighbouring bed, and left it. Outside the hospital, and as a private patient, she had the operation done and paid £20 for it, "with best thanks," paying besides for nurse and maintenance. Colonel Morgan talked on this subject with less reason, let us hope, than he would talk on military matters. He said "in his opinion working men had a right to their admission, and the benefits need not necessarily be a charity." Where can right come in when, as everybody knows, the hospital was for serious cases that cannot be accommodated at home or paid for without strain by a working man? As the chairman said, "There are the rules; we cannot alter them. The hospital is not A CLUB, it is A CHARITY." An amendment was passed particularly requesting subscribers to investigate the circumstances of the cases they recommend. Working men are not by nature shabby or incapable of subscribing for the benefit of others. They will do well not to be led by Colonel Morgan save in military matters. Of one thing they may be sure, that if they try to convert hospitals into clubs the medical staffs will refuse to act and the public will refuse to subscribe. The staff of the Swansea Hospital have distinguished themselves by an honest and firm protest which is much needed everywhere.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Glasgow Medico-Chirurgical Society.

AT a meeting of this society on the 6th inst. the following communications were submitted. Dr. Finlayson reported a case of Rupture of the Descending Aorta the result of violence, the patient having for some time after the injury continued at heavy manual labour and made little or no complaint. Dr. Finlayson also narrated a case of Aneurysm of the Arch of the Aorta, in which there had been a diastolic murmur, though the aortic valves when tested on post-mortem examination appeared competent. Dr. Dalziel showed a specimen of a Perforating Ulcer of the Duodenum which he had removed by operation after rupture into the peritoneum had occurred. The patient, who was a young woman, had made a good and uninterrupted recovery. Dr. Dalziel also showed a patient on whom he had performed a Partial Amputation of the Foot for a Perforating Ulcer of the Sole the result of injury to nerve trunks. Microscopic specimens illustrating the Histological Changes in the Nerves in Diabetic and Traumatic Peripheral Neuritis were exhibited by Dr. John Love.

Dec. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Ulster Eye, Ear, and Throat Hospital.

I FIND from the report presented at the annual meeting of this hospital held on Dec. 12th that there were 1549 patients during the year, and of these 178 were intern. The plans for the extension of the hospital have been prepared. New closets and bath-rooms, day-rooms, a laundry, better accommodation for nurses and servants, several small wards, and a new operating-room will be provided. The special feature of the addition will be the new operating-room. The floors and walls will be all tiled and cemented, so that no dust, dirt, or germs can have a hiding place, and everything will be managed in accordance with the most recent requirements of aseptic surgery. The committee have in hand available for this extension between £1400 and £1500. There have been received £71 14*s.* 6*d.* from subscriptions, £109 6*s.* 3*d.* interest on endowments, and £473 7*s.* from patients during the year. The results in operations for cataract have been very good, for in the year to which the report relates, and the part of the present year which has elapsed, there have been sixty cataract operations (exclusive of those caused by injury), with a result of more than 98 per cent. restored to vision. The year commenced with a balance against the

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institution of £253 11*s.* 3*d.*, and closed with a balance against it of £151 10*s.* 2*d.* It is hoped that during the present year the financial condition will show an improvement.

Dec. 23rd.

Obituary.

THOMAS EDWARD AMYOT, F.R.C.S. ENG.

THE announcement of the death of Mr. Amyot, of Diss, Norfolk, has been received with deep regret by a large circle of patients and friends, hardly any medical man being more widely known and esteemed throughout the county than he was. His connexion with Norfolk was long established; his mother was a daughter of Mr. Colman, a surgeon in Norwich, and he has practised his profession in Diss since 1846—a period of nearly fifty years. His father was Thomas Amyot, F.R.S., a distinguished man of letters and a prominent member of the Society of Antiquaries and the Shakespeare, Percy, and Camden Societies. Mr. T. E. Amyot was born in London in 1817, studied medicine at St. Bartholomew's Hospital, gained the diploma of Membership of the Royal College of Surgeons of England and the Licence of the Society of Apothecaries in 1839, and in 1866 he became a Fellow of the Royal College of Surgeons. Mr. Amyot was a man of great mental activity, which displayed itself in many and diversified ways. A careful and judicious practitioner, and one who zealously kept up with the great advances in medical knowledge which have been made during his long career, he delighted in literature and music and devoted much of his leisure to the microscope and to the study of astronomy, geology, and botany. Among his contributions to periodical medical literature was an account of an occurrence of foot-and-mouth disease in the human subject. He was a member of the Norfolk and Norwich Medico-Chirurgical Society and had filled the office of president both of that society and of the East Anglian Branch of the British Medical Association. For some time Mr. Amyot had shown symptoms of infirmity incidental to his advanced age, and the end came with the utmost peacefulness on Dec. 15th. The funeral took place in Diss cemetery on Dec. 19th in the presence of a large assemblage of sorrowing friends. Mr. Amyot has been a widower for some years, but has left a son and a daughter.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BUNCOMBE, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent to the Infirmary, City of London Union.

CAMERON, R. D., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Wallingfen Sanitary District of the Howden Union.

CARRÉ, GERARD, M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon (non-resident) to the Royal Ear Hospital, Soho-square.

CHRICTON, H., M.B., B.S. Durh., has been appointed Resident House Surgeon to the Ingham Infirmary, South Shields.

CHETWOOD-AIKIN, K. C., M.B. Aberd., has been appointed House Surgeon to the Central London Ophthalmic Hospital.

COOKE, W. H., M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed Resident Medical Officer to the Royal United Hospital, Bath.

CROSS, E. J., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer for the Second Sanitary District of the St. Neots Union.

DEWAR, T. F., M.D. Aberd., C.M., B.Sc. (Pub. Health) Edin., has been appointed Medical Officer for the Burgh of Monifieth, N.B., vice Templeman, resigned.

ELLIOTT, THOS., M.D. Dubl., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the No. 1 Sanitary District of the Tonbridge Union, vice E. J. Penney, resigned.

HAWORTH, J. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Filey Sanitary District of the Scarborough Union.

HUNTON, FRED., M.D., B.S. Durh., has been appointed Medical Officer for the Stockton Sanitary District and the Workhouse of the Stockton Union.

JONES, JAS. H., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Newport (Mon.) Port Sanitary Authority.

MARTINE, W. R., M.B., M.S. Edin., has been appointed Medical Officer to the Haddington Oddfellows' Society.

MILLER, WALTER F., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Alwinton Sanitary District of the Rothbury Union, vice J. H. Hart.

OLIVER, WILLIAM, M.B., M.S. Edin., has been appointed District Medical Officer for the Saddleworth Union.

PEPPER, H. M., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Assistant Medical Officer to the Royal Berkshire Hospital, Reading.

SMITH, REGINALD, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the West Norfolk and Lynn Hospital, King's Lynn, vice C. E. M. Lewis.

SOMERVILLE, T. A., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Medical Officer of Health by the Winslow Urban District Council.

SPRENT, W. S., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Surgeon to the Royal Hovingham Lodge of Oddfellows, vice T. M. Watt, resigned.

STURGES-JONES, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Peruvian Corporation in the Colony of the Perené in the Republic of Peru.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished quarters and board, gas, coals, and attendance.

CITY OF LONDON UNION INFIRMARY.—Dispenser at the Infirmary, Bow-road, E. Salary £100 per annum and dinner daily. Applications to the Clerk to the Guardians, 61, Bartholomew Close, E.C.

COUNTY ASYLUM, Prestwich, near Manchester.—Assistant Medical Officer, unmarried. Salary commences at £100 a year, increasing to £200, with apartments, board, attendance, and washing.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 a year, with prospect of an annual rise of £25 up to £200, together with furnished apartments, board, attendance, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants in the out-patient department, and four Clinical Clerks to the in-patient physicians.

HOSPITAL FOR WOMEN, Soho-square, London, W.—Registrar, for twelve months. Honorarium 25 guineas.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

KING'S COLLEGE, London.—A Demonstrator in the Bacteriological Laboratory.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Woman as Clinical Assistant for the Out-patient Department.

NORTH-LONDON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Resident Medical Officer for one year. Honorarium £40 per annum, with board, lodging, &c. in the Hospital. Applications to the Secretary, Offices, 41, Fitzroy-square, W.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Annual salary £100.

PARISH OF ROUSAY AND EGILSHAY.—Resident Medical Officer. Salary £51 sterling per annum. Applications to Inspector of Poor, Rousay, Orkney.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall.—Resident Assistant House Surgeon. Salary £80 per annum, with board and lodging.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, residence, and washing provided.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon, for twelve months. An honorarium of £50 per annum, with board and lodging in the hospital. Also House Physician to the in-patients, for eight months. An honorarium at the rate of £50 per annum, with board and lodging in the hospital.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck-street, London, W.—Physician.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

YORK COUNTY HOSPITAL, York.—Assistant House Surgeon. Salary £60 per annum, with board, rooms, washing, &c.

Births, Marriages, and Deaths.

BIRTHS.

BURNETT.—On Dec. 19th, at First-avenue, Brighton, the wife of James Compton Burnett, M.D. Glasg., of a daughter.

COOKSEY.—On Dec. 17th, at Marine-parade, Worthing, the wife of E. T. Cooksey, L.D.S.R.C.S. Eng., of a daughter.

MARRIAGE.

BORRETT—STEWART.—On Dec. 19th, at All Saints', Bayswater, George G. Borrett, Surgeon, Royal Navy, eldest son of the late Rev. George Kimble Borrett, of St. Clement's Rectory, Hastings, to Grace Gwendoline Haldane, only child of the late James Stewart, of Powis-square, Bayswater.

DEATHS.

COBBOLD.—On Dec. 19th, at Dedham Lodge, Essex, Rowland Townshend Cobbold, M.R.C.S. Eng., aged 74 years.

CHIPPENDALE.—On Dec. 23rd, John Chippendale, F.R.C.S., of Upper Phillimore-place, Kensington, aged 91 years.

GROVE.—On Christmas Eve, at St. Ives, Huntingdonshire, William Richard Grove, M.D., aged 57 years. Funeral at St. Ives, Saturday, the 28th, at 2.30.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the current half-year is given in this week's issue, which completes the second volume of the year 1895. The practice of supplying loose copies of the Index was discontinued at the end of last year. The Index is now placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 will be ready shortly. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers will also be ready in a few days. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

TO CORRESPONDENTS.

THE pressure of matter in the present number of THE LANCET has been such as to necessitate our deferring the answers to several interesting questions by correspondents till next week.

THE LIONEL SMITH FUND.

WE have pleasure in announcing the receipt of the following subscriptions in answer to our appeal, and beg to earnestly recommend the case to the attention of our readers for reasons which we have set out in our last issue (p. 1592):

The Proprietors of THE LANCET	£10	10	0	Per Dr. S. S. Sprigge	£4	4	0
Dr. Schorstein	1	1	0	Mr. J. G. Macoskie	0	5	0
A. R.	1	1	0	R. D. B.	0	10	6
Dr. Fredk. W. Saunders	0	10	0	Dr. Wm. R. Huggard	2	2	0
Dr. T. Kilner Clarke	2	2	0	Dr. A. G. Miller	0	10	0
H. M.	5	0	0	Dr. Claude Wilson	1	0	0
Dr. Clement Dukes	1	1	0	K. W. M.	0	10	6
Dr. J. Connel	1	0	0	A Brother Medical Freemason	3	3	0
Mr. B. B. Broadbent	2	2	0	Dr. H. P. Cholmeley	1	1	0
Dr. S. S. Sprigge	1	1	0				

Subscriptions will be received at THE LANCET Offices and acknowledged in our columns. Communications on the subject should be marked "Lionel Smith Fund."

Secundus.—The L.S.A. being, if obtained since 1886, a qualification in medicine, surgery, and midwifery, is admitted as a complete qualification for Poor-law purposes, and thus stands on an equal footing with the qualifications conferred by the Conjoint Board of Physicians and Surgeons in London.

Anxious.—Yes.

SMOKING FOR STAMMERERS.

To the Editors of THE LANCET.

SIRS,—Might I ask what the effect of smoking is on the stammerer? I read in one of Lytton's works that stammering lips should put a pipe between them by way of improving respiratory power, and possibly for the effect of the sedative on the coördination of the vocal apparatus. I have tried the weed in these cases, but the result is far from satisfactory, and in those in whom the nicotine dries the mouth very much I should think the result must be very bad. Can anyone throw any light upon this point?

I am, Sirs, yours faithfully,

Aston-on-Clun, Salop, Dec. 20th, 1895. H. CUTHBERT.

A HARD CASE.

C. J. wishes to know if there is any home where a patient aged eleven, partially crippled from infantile paralysis, can be received without payment. Patient is a hermaphrodite, but decidedly on the male side. Patient has been hitherto treated as a female, but a change in this respect is desirable.

M.O.H.—The data given hardly suffice for a definite opinion; but we may inform our correspondent that there is a good deal of roseola about, some of which is deemed to be of a rather hybrid type.

"THE EMPLOYMENT OF UNQUALIFIED ASSISTANTS, ETC., AND THE RESOLUTIONS OF THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—I read to-day with much interest the able letter of your correspondent, Dr. R. Hill Shaw, in THE LANCET of Dec. 14th on the above subject, and I beg to express my full endorsement of it. The matter is one which I too have often considered, and wondered why the General Medical Council permits, or does not more fully look into it. The amount of abuses which the employment of unqualified assistants in the conducting of practices entails is, I believe, an acknowledged fact on all sides, and is worthy the serious attention of the Council. The latter no doubt have passed resolutions bearing on the point which are practically useless, since the "misconduct in question" is not defined, and, besides, the punishment attached to most of them is not of a very deterring character. These omissions I understand from the tenour of your correspondent's communication to be the grievances he wishes the attention of your readers drawn to. I consider his complaint quite justifiable, in which also I take it you coincide, as expressed on page 1468 in THE LANCET of Dec. 7th last, and where you say "that the penal and disciplinary powers of the Council are still undeveloped and undecided." Such a condition of affairs ought not to exist, and I would therefore appeal to you to support the exposure of this evil, which has no benefiting effect upon the profession. The necessity for the Council to declare itself may be inferred from the numerous instances of questionable doings which the writer gives and which I could augment if I would. To do so is needless, as the mischief is too well known to everybody connected with the profession to require confirmation.

I am, Sirs, yours faithfully,

Brighton, Dec. 14th, 1895. PRO BONO PUBLICO.

"THE CLIMATE OF THE EAST COAST OF AFRICA."

To the Editors of THE LANCET.

SIRS,—As I have visited all the places mentioned by "Voyager" in his letter, perhaps the following few remarks may be of use to him. One month in which he proposes travelling—viz., March—is one of the worst on the east coast of Africa. The weather is extremely hot, the humidity great, and malarial fevers are rife. Delagoa Bay and Beira are exceptionally unhealthy places, intermittent fever or "shakes" being very prevalent at the former. Zanzibar is less so, but the fevers acquired there are, as a rule, more serious, being of the remittent type. Still, although the voyage is unpleasant on account of the damp heat, it may be undertaken with safety by healthy persons, provided moderate care be exercised and attention paid to the ordinary rules of hygiene. Sleeping on shore and on deck in harbour should be especially avoided. But for anyone in a delicate state, if the voyage be intended for health purposes, I would recommend that another direction be taken—for instance, round the Cape to St. Helena.

I am, Sirs, yours truly,

GEORGE T. BROATCH, Surgeon R.N.

Royal Naval Hospital, Great Yarmouth, Dec. 18th, 1895.

TREATMENT OF GONORRHŒA.

To the Editors of THE LANCET.

SIRS,—As I have been greatly puzzled over a case of acute gonorrhœa presenting the usual symptoms, but not at all giving way to the ordinary treatment, I trust some of your readers will give me the benefit of their more mature experience, and through your columns let me know what treatment to follow. The patient has had warm hip-baths, copaiba, cubebs, santal midy, saline, antimonial mixtures, injections of cocaine, and 2-per-cent. solution of ichthyol, but to no avail. The discharge still continues; and now to the train of symptoms are added rheumatism with occasional attacks of hæmaturia. No albumin.

I remain, Sirs, yours faithfully,

Port of Spain, Trinidad, B.W.I., Dec. 12th, 1895. ANXIOUS ONE.

"STRYCHNIA IN SNAKE-BITE."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent "Zambaan" (THE LANCET Dec. 14th, p. 1614), I can say that arseniate of strychnine is soluble to the extent of at least 4 parts in 1000 of solution, and probably to an even greater degree. I very frequently use the solution of the strength 4 parts in 1000, and find that it is absorbed at once. I do not know what amount of strychnine is given in cases of snake-bite; a patient of mine suffering from the effects of alcoholism had 12 mgm. (= ¼ grain) in one day without experiencing any bad symptom.

I am, Sirs, yours respectfully,

A. E. CORDES, M.R.C.P. Lond.

Rue Bellot, Geneva, Dec. 19th, 1895.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

FRIDAY.—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Dr. McCann: The Diagnosis of Gonorrhœal Inflammations (with limelight demonstration).—Dr. Clemow: The Treatment of Entero-Colitis in Infants.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Professor John Gray McKendrick: Sound, Hearing, and Speech (experimentally illustrated). And on Thursday and Saturday at the same hour.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Association Française de Chirurgie, Secretaire Général de.

B.—Dr. F. L. Benham, Lond.; Dr. A. W. Bigelow, Chicago; Mr. R. Baker, Lond.; Mr. H. C. Burdett, Lond.; Mr. W. H. Brown, Leeds; Birmingham and Midland Counties Sanatorium, Sec. of; British-American Ball Nozzle Co., Lond.; Beach House, Middleton; B. A., Lond.

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N.—Dr. A. Newsholme, Brighton; Dr. J. S. M. Nurse, Anguilla; Mr. J. W. Norman, Paignton.

P.—Dr. C. Porter, Stockport; Mr. G. Pernet, Lond.; Mr. H. W. Page, Lond.; Messrs. Potter and Sacker, Lond.; Messrs S. de Pinto and Son, Leith; Poplar Public Library, Librarian of; Prestwich County Asylum, Superintendent of; Plymouth Medical Society, Hon. Sec. of.

Q.—Sir Richard Quain, Lond.

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Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. J. Adkins, Banbury; Dr. E. Allen, Hawes; Dr. A. E. Ash, Stoke Ville.

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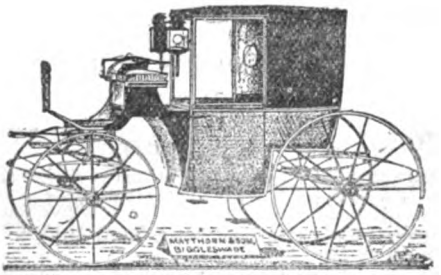
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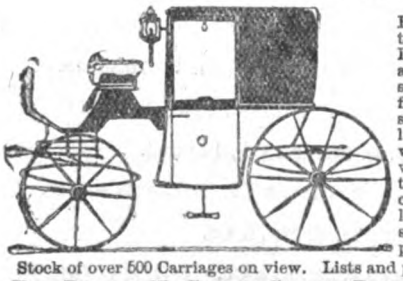
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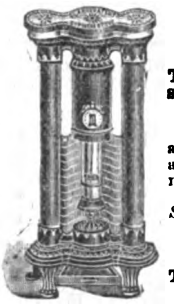
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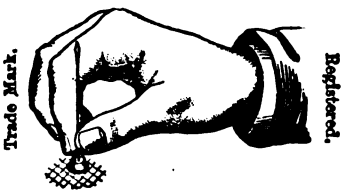
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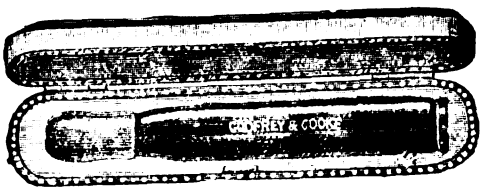
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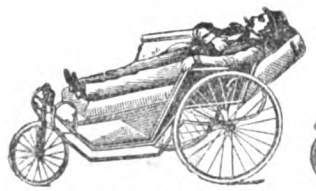


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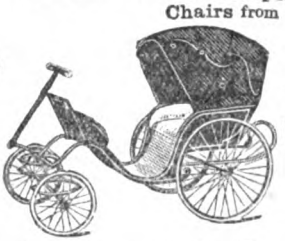
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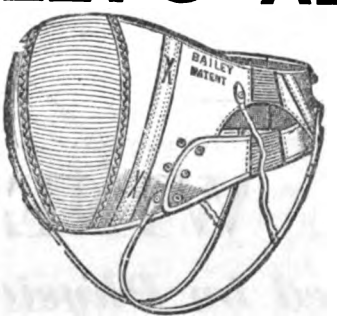
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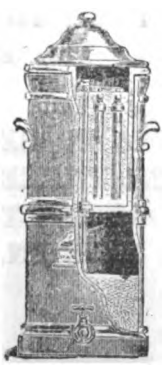
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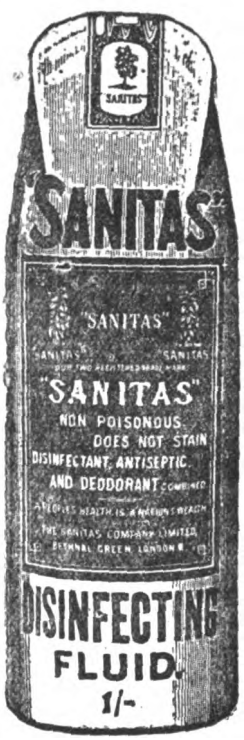
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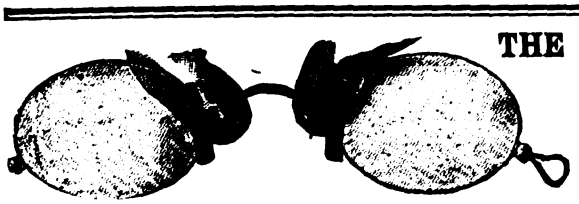
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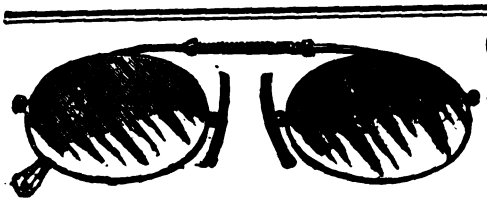
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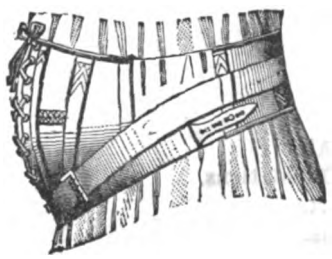
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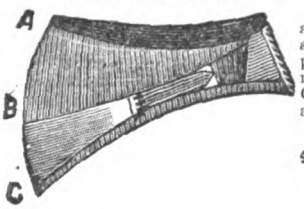
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Applications for admission to the Competition should be made in writing, without delay, to the Director-General, Army Medical Department, 18, Victoria-street, London, S.W.

The List will be closed on the 31st January.

W. A. MACKINNON, Director-General.

War Office, London, Nov. 25th, 1895.

INDIAN MEDICAL SERVICE.

INDIA OFFICE, 6th December, 1895.

An Examination for 17 Appoint-

MENTS to Her Majesty's Indian Medical Service will be held in London on 7th February, 1896, and following days.

Copies of the Regulations for the Examination, with Information regarding the Pay and Retiring Allowances, &c. of Indian Medical Officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom the necessary certificates must be sent so as to reach him not later than 24th January, 1896.

It is notified for information that candidates competing for admission to the Indian Medical Service in and after February, 1897, will be required to produce a certificate of having attended a course of instruction for not less than three months at an Ophthalmic Hospital or the Ophthalmic Department of a General Hospital, which course shall include instruction in the errors of refraction.

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" 15th.—Diseases of Sebaceous Glands.
" 22nd.—Diseases of Sweat Glands.
" 29th.—Syphilis.
February 5th.—Syphilis.
" 12th.—Parasitic Diseases (Vegetable).
" 19th.—Parasitic Diseases (Animal).
" 26th.—Diseases of Nails.
March 4th.—Adenoma Sebaceum.
" 11th.—Erythemata.
" 18th.—Pemphigus, and Dermatitis Herpetiformis.

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" 18th.—Eczema.
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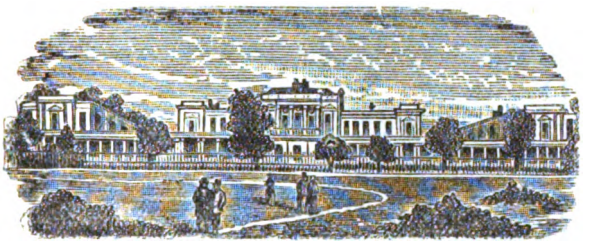
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FOR LADIES ONLY.

Patients taken in both Homes privately or under the Acts.

Apply The Secretary, OLD PARK HALL.

Telegrams: "RETREAT, WALSALL."

Southport Private Convalescent HOME for LADIES.—Hysterical, Weak-minded, and Nervous cases treated. Massage under Medical supervision. Weir-Mitchell treatment.—Misses Marriott and Browne, Trained Nurses, Knypersley House, Park-road.

DORCHESTER ASYLUM.

PRIVATE PATIENTS. New Department. Female cases can be received at once, male cases shortly. The building is of fireproof construction lighted by electricity. Contains large dining and drawing-rooms, and is quite distinct from the main Asylum. Situation elevated and healthy, with extensive recreation gardens. Charge from £1 1s. per week not to include clothing.—Address, HERRISON, DORCHESTER; 3½ hours from London; 50 minutes from Bournemouth; ¼ hour from Weymouth.—Full particulars on application to Dr. MAC DONALD.

FOLKESTONE, KENT.

Sharühen House, Earls-avenue.—In this Establishment, which is presided over by a Lady who is a Trained Nurse and the daughter of a Medical Man, it is sought to provide a refined, comfortable Home for Ladies and Gentlemen requiring rest, change, or nursing.

Resident Qualified Medical Electrician (gentleman, sixteen years' experience). Electric Baths, Massage, Weir-Mitchell treatment, &c., if required. Highest references.

A Medical Attendant and Masseur can take cases into his own home—Mental, Nervous, or Dipso. Every comfort and attention, terms moderate. House in healthy suburb. All treatment under medical supervision. Highest testimonials.—Address, Medical, 37, Hewitt-road, Harringay, London, N.

"Northlands," 10 and 12, North-street, Old Wandsworth, Surrey.—HOME for Ladies suffering from Hysteria, Intemperance, Epilepsy, Paralysis, Nervousness, Weak Intellect, &c. Careful supervision. Established twenty-five years. Large garden, situation cheerful and healthy, near several parks and commons; five miles from London on L.S.W.R. Medical references. Terms from £50 a year.—Mrs. Rutley.

A Medical Man, of lengthened and very successful experience in the treatment of Mental Cases and Hysteria, has a Vacancy in his family circle. The house is thoroughly well appointed, beautifully situated in the Midland Counties, and an easy distance from town. References to former patients and their relatives.—R. B. K., THE LANCET Office, 423, Strand, W.C.

OVERDALE ASYLUM

(Late CLIFTON HALL), WHITEFIELD, LANCASHIRE.

Licensed for a limited number of PATIENTS of the Upper and Middle Classes. It is beautifully situated in a retired neighbourhood, and has all the comforts of home life.—For terms, &c., apply to J. HOLMES, M.D., Resident Medical Superintendent.

Resident Patients.—A List of Medical Men in all parts willing to receive into their houses Resident Patients, together with a full description of the accommodation offered, terms, &c., can be had without charge from Mr. G. B. Stocker, 8, Lancaster-place, Strand, W.C.

Resident Patient.—A Medical Man, married, without family, has a VACANCY for one of the above (Gentleman). Large, comfortable house in a seaport town on the South Coast of England. Climate specially adapted for patients with weak chests. Private sitting-room if required. Terms according to requirements.—Address, Felix, THE LANCET Office, 423, Strand, W.C.

Resident Patients.—Margate.—M.D. Lond., F.R.C.S. Eng. (married), residing in a commodious house facing the sea, in best position, has accommodation for one or two of the above. Drainage guaranteed perfect. Terms moderate, according to requirements.—Address, Dr. Crook, Dalby-square, Margate.

A Medical Man of long experience in Nervous, Eye, Ear, and Throat Diseases, residing in a large house near London, has a vacancy for a RESIDENT PATIENT. Cases of Accouchement carefully attended. Monthly Nurses on the premises. Situation high. Gravel soil. Every comfort. Carriage, &c.—Address, Alpha, THE LANCET Office, 423, Strand, W.C.

KINGSDOWN HOUSE, BOX, WILTS.

A Sanatorium for the Treatment and Cure of Mental and Nervous Disorders.

The Commissioners in Lunacy report in favour of this Institution as being one where suitable accommodation can be obtained for a moderate charge. It is situated in lovely country, having fine golf links close to the house, and being five miles from the city of Bath and fifteen minutes' walk from Box Station.

Voluntary patients or boarders received on their own personal application. For terms apply to H. C. MACBRYAN,

Joint Proprietor and Medical Superintendent.

Home for Backward and Feeble-minded Children. Tuition combined with home comforts. Large secluded grounds.

Principal, Woodside Court, Croydon.

THE HUGUENOTS,

EAST HILL, WANDSWORTH. ESTABLISHED 1874.

A Home for Ladies suffering from mental and nervous diseases. Boarders not under certificates also received for care and treatment. A Mental Specialist visits. The house has large grounds and is healthily situated near several commons. Terms moderate.

Resident Licensee, Mrs. Leech.

WEST MALLING PLACE. KENT INSTITUTION.

FOR RESIDENCE, CARE, AND CURE OF LADIES AND GENTLEMEN OF UNSOUND MIND. VOLUNTARY BOARDERS RECEIVED.

TELEGRAPH ADDRESS—

RESIDENT PHYSICIAN, WEST MALLING.

Winter Abroad.—San Remo.—A Swiss-French Doctor, experienced, speaking English well, is willing to receive in his family two or three delicate Ladies. No consumptive cases. Highest references given and required.—Apply to Mad. Du Pontet, French Parsonage, Bayswater, London, W.; or to Dr. E. de la Harpe, Villa Catherina I, San Remo.

FLOWER HOUSE,

CATFORD, S.E.

A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.

N.B.—Under the New Act voluntary boarders can be received on their own personal application.

Apply to Dr. MERCIER, Resident Medical Superintendent

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WIMBLEDON HOME HOSPITAL FOR PAYING PATIENTS,

St. John's House, Spencer Hill, Wimbledon, Surrey.

Invalids and Convalescents received under the care of their own Physician, or otherwise. Apply to the Lady Superintendent.

Trained NURSES for Maternity, Medical, Surgical, and Nerve Cases sent out to private families any distance at a moment's notice.

Address Telegrams, "SAGRADA, LONDON."

HYDROPATHY.

SMEDLEY'S—MATLOCK.

Railway Station—MATLOCK BRIDGE.
Telegraph Office—MATLOCK BANK.
W. C. SHARPE, M.B.,
and a House Physician.

TURKISH, RUSSIAN, and other BATHS. WEIR-MITCHELL METHOD and ELECTRIC TREATMENT.

WONFORD HOUSE.

HOSPITAL FOR THE INSANE, near EXETER.

A REGISTERED HOSPITAL FOR THE UPPER AND MIDDLE CLASSES.

This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter.

There is comfortable accommodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea air and a mild and salubrious climate.

Private Rooms and Special Attendants provided, if required.

Voluntary Patients or Boarders also received without certificates.

For terms &c. apply to
P. MAURY DEAS, M.B., M.S. Lond.,
Resident Medical Superintendent.

PERITEAU,

WINCHELSEA, SUSSEX.

Small Private Asylum, near Hastings, for a few LADIES only. It is situated in a most picturesque and healthy locality, and the sanitary arrangements are perfect. The appointments are those of a private house, and the surroundings most comfortable and home-like, and there is an utter absence of anything that could remind the patients that they are under care. Each patient has a lady as her companion-attendant. Terms from £5 5s. per week. Apply, Proprietress, Periteau Winchelsea.

TREATMENT OF INEBRIETY.

HIGH SHOT HOUSE,

ST. MARGARETS, TWICKENHAM.

For Gentlemen under the Acts and Privately.

For terms, &c., apply to
F. H. BROMHEAD, M.B. Camb., M.R.C.S. Eng., &c.
Resident Medical Superintendent.

Aberystwith, "The Biarritz of WALES," is highly recommended for INVALIDS. It possesses the most equable temperature, its shore being swept by the Gulf Stream and the S.W. breezes of the Atlantic. The drainage is perfect, and the town is supplied with the purest water from Plinlimmon.

The late Sir James Clarke, M.D., says:—"A fortnight in Aberystwith is equivalent to a month's residence in most watering-places."

WYKE HOUSE,

ISLEWORTH, MIDDLESEX.

A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to
F. MURCHISON, M.A., M.B., Resident Proprietor.

ACCOUCHEMENT.

Ladies received in the houses of a Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a skilled and practised Obstetrician.—For terms, &c., address M. O. S., care of Messrs. Gale & Co., 15, Bouverie-street, London, E.C.

Atlantic air.—Medical man, married, living in modern well-appointed house, standing in its own grounds in the West of England, four miles from coast, 500 ft. above sea level, can receive a RESIDENT PATIENT. Eminently suitable for nervous cases or those addicted to alcohol or morphia habit. Highest references, professional and otherwise.—Atlantic, THE LANCET Office, 423, Strand, W.C.

Wye House Asylum, Buxton, Derbyshire, for the middle and upper classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.

The Women's Temperance Home at Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

Australia. — An M.B. Lond. (married), leaving London by large steamer viâ Las Palmas and the Cape in January next for Melbourne, Australia, would be glad to take charge of one or two Invalids or delicate youths for the voyage, or to take them in residence on his estate of 2000 acres there. Magnificent climate; plenty of sport, and instruction, if necessary, in Sheep, Flower, or Dairy Farming. Highest testimonials.—For terms, &c., apply to Victorian, care of Messrs. Trinder, Anderson, & Co., 4, St. Mary-axe, London, E.C.

A Trained Nurse, going to Nice on or about 6th January, wishes to take Charge of an Invalid on the journey.—Address, Mrs. Ewens, 47, Charlotte-street, Portland-place.

To Nurses and Assistant Nurses.—Wanted, at the NORTHERN FEVER HOSPITAL, Winchmore-hill, N. (under the Metropolitan Asylums Board), CHARGE NURSES, who must be at least twenty-five years of age, and possess a certificate of three years' training. Salary £36, rising to £40, board, lodging, washing and uniform.

SECOND ASSISTANT NURSES, who must be at least twenty-two years of age (no training necessary.) Salary £20, rising to £24, board, lodging, washing, and uniform.

Apply to the Matron at the Hospital, either personally (10 to 1) or by letter, with copies of testimonials.

December 24th, 1895.

To Nurses and Assistant Nurses.—Wanted, at the GORE FARM FEVER HOSPITAL, Darenth, near Dartford, Kent (under the Metropolitan Asylums Board), CHARGE NURSES, who must be at least twenty-five years of age and possess a certificate of three years' training. Salary £36, rising to £40, board, lodging, washing, and uniform.

FIRST ASSISTANT NURSES, who must be at least twenty-three years of age, and possess a certificate of one year's training. Salary £24, rising to £28, board, lodging, washing, and uniform.

Apply to the Matron at the hospital, by letter, with copies of testimonials.

24th December, 1895.

City of Dublin Hospital.—HOUSEKEEPER.—Applications in the candidates' handwriting for the post of Housekeeper to the City of Dublin Hospital shou'd be sent on or before Jan. 15th, 1896, to the Secretary at the Hospital, Upper Baggot-street, Dublin, together with particulars as to age, and whether married or single. Salary £40 per annum, with furnished apartments, board, fuel, light, and washing. Selected candidates will be advised of the date of the election, when they will be required to attend. Other things being equal, preference will be given to a lady who has had previous experience in the management of a hospital or other large institution.

Infirmary Matron.—The Guardians of the CITY of LONDON UNION invite applications for the post of MATRON to their Infirmary for 645 beds, situate in the Bow-road, London, E. Candidates must be under forty years of age, and produce evidence of having received a thorough training of not less than three years in a general hospital, of their competency to undertake the control and instruction of the nursing staff, and of having had practical experience in a household management, and in the duties of the office generally. The Guardians will also require from the candidate to be appointed the possession of a certificate of competence in midwifery. The salary will be £100 per annum, with furnished apartments, board, attendance, and washing.

Applications, stating age and experience, accompanied by testimonials of recent date, marked outside "Application for Matron" should be sent in on or before noon on Dec. 30th, inst., to the undersigned. Further particulars are given upon forms of application, which can be obtained at the office, 61, Bartholomew Close, E.C. The appointment will be made subject to the approval of the Local Government Board. Application for forms will not be received after Dec. 27th, inst.

(Signed) F. W. CRANE, Clerk to the Guardians.

61, Bartholomew Close. 13th December, 1895.

The New Hospital for Women.—Wanted, a fully qualified Medical Woman as CLINICAL ASSISTANT for the Out-patient Department. To attend on Thursdays. The appointment is for one year. Applications, with three copies of each testimonial to be sent in by January 3rd.

144, Euston-road, N.W. MARGARET M. BAGSTER, Secretary.

Poplar Hospital for Accidents, Blackwall.—There is a vacancy for a RESIDENT ASSISTANT HOUSE SURGEON. Candidates must hold double qualifications in Medicine and Surgery, and be registered under the Medical Act. Salary £80 per annum, with board and lodging.

Applications, with three recent testimonials, to be sent to the Secretary on or before the 8th January, 1896. Second Assistant is a candidate. EDWARD FENERAN, Lt.-Col., Secretary.

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University of London. — The

REGISTRARSHIP of this University will shortly become vacant by the retirement of the present Registrar.

Candidates for the appointment are requested to send in their applications not later than January 25th, 1896.

The salary of the office commences at £800, and rises by annual increments to £1000 per annum.

The newly-appointed Registrar will be expected to enter upon his duties on the 1st of May, 1896.

Information as to the duties of the office, and all further particulars, may be obtained on application to the undersigned.

ARTHUR MILMAN, M.A., LL.D., Registrar.

University of London, Burlington-gardens, W.
December 23rd, 1895

The Victoria Hospital for Sick

CHILDREN, Queen-road, Chelsea, S.W.—The Managing Committee are prepared to receive applications for the office of HOUSE SURGEON to the in-patients of this hospital, which will become vacant on the 1st of February, 1896.

Every candidate for the office of House Surgeon must be a Fellow or Member of the Royal College of Surgeons of England, and a Licentiate of the Society of Apothecaries or of the Royal College of Physicians, or a Graduate of Medicine of any University recognised by the Medical Council. He will receive an honorarium of £50 per annum, and will be provided with board and lodging in the hospital.

He will be elected for twelve months, during the first four of which he will have charge of out-patients, and during the remaining eight months in-patients.

Applications, with testimonials, &c., must be sent in on or before Saturday, the 11th of January, to the Secretary, at the Hospital.

By order,
Commander BLOUNT, R.N., Secretary.

The Victoria Hospital for Sick

CHILDREN, Queen's-road, Chelsea, S.W.—The Managing Committee are prepared to receive applications for the office of HOUSE PHYSICIAN to the in-patients of this Hospital, which will become vacant on the 1st of February, 1896.

Every Candidate for the office of House Physician must be a Fellow or Member of the Royal College of Surgeons of England and Licentiate of the Society of Apothecaries, or of the Royal College of Physicians, or a Graduate of Medicine of any University recognised by the Medical Council; he will be elected for eight months, and will receive an honorarium at the rate of £50 per annum, and will be provided with board and lodging in the Hospital.

Applications, with testimonials, &c., must be sent in on or before Saturday, the 11th January, to the Secretary at the Hospital

By order.
Commander BLOUNT, R.N., Secretary.

City of London Union Infirmary.—

DISPENSER wanted. The Guardians of the City of London Union invite applications for the post of Dispenser at the Infirmary, Bow-road, E. Candidates must be between twenty-five and forty years of age. No candidate will be qualified to be appointed unless he be a Licentiate of the Society of Apothecaries of London or hold a certificate of that Society to act as an assistant in compounding and dispensing medicines, or be a compounder of medicines duly qualified in accordance with the Regulations for the Army Medical Corps, or duly registered under the Pharmacy Act, 1868, the Pharmacy (Ireland) Act (1875) Amendment Act, 1890. The salary is £100 per annum and dinner daily. Application forms and further particulars of the duties, &c., may be obtained at my office as below. Applications for forms will not be received after Dec. 27th. By Order.

F. W. CRANE, Clerk to the Guardians.

61, Bartholomew Close, E.C. Dec. 13th, 1895.

The Post of Demonstrator in the

BACTERIOLOGICAL LABORATORY at KING'S COLLEGE, London, is now Vacant. For conditions of appointment apply to

WALTER SMITH, Secretary.

West-End Hospital for Diseases of

the NERVOUS SYSTEM, Welbeck-street, W.—PHYSICIAN required. A vacancy on the Staff having occurred through the resignation of Dr. Hughes Bennett on account of ill-health, the Committee will be glad to receive applications for the appointment. Candidates must be Fellows or Members of the Royal College of Physicians of London, and Graduates of a British University.—Applications to be addressed to H. Heckstall-Smith, Secretary, at the Hospital, on or before January 13th, 1896.

Resident Medical Officer. — North

LONDON HOSPITAL for CONSUMPTION, Hampstead, N.W.—Required, in February next, a Resident Medical Officer having a duly registered medical and surgical diploma.

The appointment is for a period of one year (subject to three months' notice on either side), but the elected candidate will be eligible for re-election.

Honorarium £40 per annum, with board, lodging, &c., in the Hospital.

Applications, with copies (not originals) of recent testimonials, to be sent to the Secretary on or before 6th January next.

W. G. FARRANCE-BOSWORTH, Secretary,

Offices: 41, Fitzroy-square, W.

Hospital for Consumption and

DISEASES of the CHEST, Brompton.—Vacancies for four CLINICAL ASSISTANTS in the Out-patient Department, and for CLINICAL CLERKS to the In-patient physicians. Candidates may be qualified or unqualified.

Names to be sent in to the Secretary of the Hospital, on or before December 31st, from whom also forms of application can be obtained.

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The Hospital for Women, Soho-

square, London, W.—A Vacancy is hereby declared for a REGISTRAR, who must be a Graduate in Medicine of some recognised University. Appointment for twelve months. Honorarium 25 guineas. Applications, with copies of testimonials, to be forwarded on or before January 14th, to DAVID CANNON, Secretary.

The Hospital for Women (The

LONDON SCHOOL of GYNÆCOLOGY), Soho-square, W.—There are Vacancies for CLINICAL ASSISTANTS. Open to Gentlemen in Practice and Students after their Fourth year.—Application to the Dean.

County Asylum, Prestwich, near

Manchester.—ASSISTANT MEDICAL OFFICER wanted, unmarried. Salary commences at £100 a year, increasing to £200, with apartments, board, attendance and washing.—Applications to be forwarded to the Superintendent.

County Asylum, Rainhill, near Liver-

pool.—ASSISTANT MEDICAL OFFICER wanted. Candidates must be unmarried, and not more than thirty years of age. Salary commences at £100 a year, with prospect of an annual rise of £25 up to £200, with further increase according to promotion, together with furnished apartments, board, attendance, and washing.—Applications, with testimonials and full particulars, to be forwarded to the Medical Superintendent.

The Royal Albert Hospital, Devon-

port.—Wanted, ASSISTANT HOUSE SURGEON for six months. No salary; board, residence, and washing provided.—Applications, with not less three original testimonials (to be returned) and stating age, to be sent to the Secretary, Medical Committee, not later than first post on Friday, January 11th, 1896.

Wolverhampton and Staffordshire

GENERAL HOSPITAL, Wolverhampton. — The office of RESIDENT ASSISTANT is now vacant. A qualified man preferred. The appointment is held for six months, and a certificate of attendance is given. Board, lodging, and washing provided.

Testimonials, sealed and addressed to the Chairman of the Medical Committee, must be received not later than Monday, December 30th, 1895.

All applications to be inscribed, "Application for Resident Assistant."

By order.
EDWIN A. WHITE, House Governor and Secretary.

Wolverhampton, Dec. 10th, 1895.

Brighton and Hove Lying-in Insti-

TUTION and HOSPITAL for WOMEN.—HOUSE SURGEON wanted for the above. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London, or of the Apothecaries' Company in London, and duly registered under the Medical Act; and must be able to commence duty on or before 1st March next. Salary £80 per annum, with furnished quarters and board, gas, coals, and attendance. Applicants must be unmarried, and when elected, under thirty years of age. Diplomas, testimonials, and copy of registration must be forwarded to the Honorary Secretary before December 31st, 1895. The election will take place on Friday, January 10th, 1896.

H. B. CHALMERS, Hon. Secretary.

76, West-street, Brighton, Dec. 14th, 1895.

York County Hospital.—Wanted,

an ASSISTANT HOUSE SURGEON who must have double qualifications and be registered. Salary £60 per annum, with board, rooms, washing, &c.—Applications, with copies of not more than three recent testimonials, to be sent to the undersigned on or before Wednesday, 1st January, 1896.

York, Dec. 17th, 1895. FRED. W. HOWELL, Secretary and Manager.

Owens College, Manchester. — A

JUNIOR DEMONSTRATORSHIP in PHYSIOLOGY and HISTOLOGY is vacant. Annual salary £100. Duties to commence on January 7th next. Applications, with testimonials or references, should be sent on or before January 4th next to the Registrar, who will furnish further information. SYDNEY CHAFFERS, Registrar.

Wanted, for Parish of Rousay and

EGILSHAY, a RESIDENT MEDICAL OFFICER. Salary £51 sterling per annum.—For further particulars, apply to Inspector of Poor, Ronsay, Orkney, on or before January 15th, 1896.

MEDICAL ACCOUNTANCY.

In connexion with Mr. Percival Turner.
INVESTIGATION of PRACTICES for PURCHASERS.
DEBTS COLLECTED, BOOKS POSTED, and AUDITED.
PARTNERSHIP ACCOUNTS ADJUSTED &c.
Mr. F. G. KEMBLE, F.S.A.A. (Incorporated Accountant),
4, Adam-street, Adelphi, London, W.C.

MEDICAL ACCOUNTANCY.

In connexion with the S. C. and Medical Association, Limited.
INVESTIGATION OF PRACTICES.
ARBITRATIONS.
DEBTS COLLECTED.
BOOKS POSTED AND AUDITED.
PARTNERSHIP ACCOUNTS ADJUSTED.
Mr. MORRIS, F.S.A.A., 8, Lancaster-place, W.C.

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THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1880 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The Association undertakes the SALE of PRACTICES and PARTNERSHIPS; the Introduction of LOCUM TENENS and ASSISTANTS; MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will be sent on application to—MR. G. B. STOCKER, MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London."

FOR SALE.

(1) **EASTERN COUNTIES.**—UNOPPOSED PRACTICE.—Very old established, and held by present incumbent twenty-one years. The average cash receipts are over £800 per annum, including £260 from appointments. Two horses required. Small but convenient house, with garden and stabling, which must be purchased with the practice. Premium for practice and house £1650.

(2) **SOUTH WEST OF ENGLAND.**—Country Town PRACTICE of about £1000 per annum, including club appointments of about £200. Visiting fees 2s. 6d. to 10s. 6d. Six months introduction. Premium £1260.

(3) **LONDON, W.**—PARTNERSHIP in a mixed Practice (largely ready money). Cash receipts for 1895 will amount to not less than £1150. Visiting fees 1s. 6d. to £1 1s. Midwifery fees, £1 11s. 6d. and £2 2s., about forty cases annually. One-half Share would be sold for £700, or one-third for £450, with prospect of succession to whole in a few years.

(4) **LANCASHIRE.**—A third PARTNER is required for middle and working-class PRACTICE in a manufacturing town. £500 per annum guaranteed for two years. Premium £1040.

(5) **NORTH OF ENGLAND.**—A working and middle-class PRACTICE in a large seaport town. The cash receipts for 1895 at the rate of £1350, including club appointments worth £114. Visiting fees 2s. 6d. to 3s. 6d. Midwifery fees 15s. to £1 1s.; over 200 cases annually. One horse. Good house with stabling; rent £85 per annum. Premium £1865.

(6) **WEST OF LONDON.**—Mixed PRACTICE in a main thoroughfare of about £400 per annum. Visiting fees 1s. 6d. to 3s. 6d. Midwifery fees 15s. to £2 2s.; about 100 cases annually. Rent £55; premium £400, to include lamp, drugs, fixtures, &c.

(7) **EASTERN COUNTIES.**—PARTNERSHIP, with view to Succession, in a country Practice of £1000 per annum. Price, for one-third share, £450. Small house, rent £16, suitable for a bachelor.

(8) PARTNERSHIP (with View to Succession in two years) in a Practice of over £2000 per annum, including £500 from good appointments. Large and important town. Middle and working class. Purchaser must have £3000, or security for that amount.

(9) **LARGE TOWN.**—NORTH MIDLANDS.—PRACTICE of about £800 per annum, including clubs of £120. No horse required. Rent £50. Price one year's purchase.

(10) PARTNERSHIP, with view to Succession in two years to a Practice of over £1000 per annum, in a large town in the north of England. Good working- and middle-class. Price for one-third Share £600.

(11) **LONDON, N.**—Old-established Middle-class PRACTICE of £1000 per annum. Visiting fees chiefly 3s. 6d. and 5s. No midwifery under £1 1s. Ten-roomed house. Six months' introduction. Price £1125.

(12) **SOUTH-WESTERN SUBURB.**—PRACTICE of £650 per annum (about one-fourth ready money). Visiting fees 2s. 6d. to 5s. Midwifery £1 1s. upwards. Working expenses very light. House (eight rooms) £40 per annum. Price one and a quarter year's purchase.

(13) PARTNERSHIP in an old-established PRACTICE of £1400 to £1500, largely amongst well-to-do working- and middle-class patients in a small town in the South-west of England. One-third share at first and a half in three years. One and a half year's purchase.

(14) **LONDON, S.E.**—PARTNERSHIP with view to Succession in twelve months. A capital Middle-class Practice of about £1500 per annum. Old established. Visiting fees mostly 3s. 6d. Midwifery fees chiefly 2 and 2½ guineas. Good house, in main thoroughfare. Rent £75 per annum. Premium £1850, with twelve months' partnership introduction.

(15) PARTNERSHIP in a good-class outlying suburban Practice of £875 per annum, with view to succession in two years. Price £1033, and a similar sum upon succession.

(16) **HOME COUNTIES.**—Unopposed PRACTICE of over £400 in a very pleasant neighbourhood. Very good house, garden, paddock, &c.; rent £80. Premium £650. Purchaser should have small private means or resident patient.

(17) **LONDON, N.W.**—Suburban PRACTICE of £500 to £600 per annum, non-dispensing. Scope increase. Fine house, stabling, and garden, which must be purchased. Inclusive price £2250, £1000 of which may be left on mortgage.

(18) **LONDON NORTHERN SUBURB.**—Good Middle-class PRACTICE of over £1100 per annum. Visiting fees, 2s. 6d. to 7s. 6d. Midwifery, £1 1s. to £3 3s. One horse required. No assistant. Very good house with stabling and garden. Rent £100 per annum. Premium, one and a quarter year's purchase.

(19) **OUTLYING SUBURB, E.**—PRACTICE of £610. Cash receipts nearly all ready money. Price £550, including drugs and surgery fittings. Exceptionally good residence. Neighbourhood rapidly increasing.

FOR SALE (*continued*).

(20) **LONDON, N.**—SUBURBAN PRACTICE. Receipts for last twelve months, £446. Visiting fees 2s. 6d. to 5s. (a few at 1s. 6d.). No horse. The house is well situated; large garden and stabling, rent £72 (stabling let off for £30 per annum). Premium £300 to £350.

(21) **LANCS.**—PRACTICE of £350 to £400 in a small manufacturing town for Sale through ill health of present incumbent. Expenses light. Rent of house £40. Premium £300.

(22) **LANCS.**—PRACTICE in a manufacturing district. Cash receipts last year £550. Visiting fees 3s. 6d., midwifery 15s. to 1½ gs. Good house, rent £40. Premium £500, part payable by instalments if secured.

(23) **MIDLANDS.**—Old-established PRACTICE of about £400 in one of the smaller manufacturing towns. Good small hospital. Ten-roomed house, well situated; rent £40. Premium £500.

(24) **SOUTH LONDON.**—PRACTICE in a thickly populated residential suburb. Cash receipts average £724 per annum. Club appointments £85 per annum. Fees 1s. to 5s.; midwifery mostly £1 1s., sixty to seventy cases annually. Rent of surgery £60 per annum (15s. per week let off). Taking over of private residence optional. Premium £600.

(25) **NORTH MIDLANDS.**—Unopposed country PRACTICE of about £450, including appointments of over £100. Rent of house (four bedrooms), with stabling and small garden, £22. Premium £560.

(26) UNOPPOSED COUNTRY PRACTICE in WALES (not necessary to speak Welsh) of over £300, with scope to £600 or £700. Agricultural district. Premium £250. Suitable for a bachelor.

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(29) **CORNWALL.**—UNOPPOSED COUNTRY PRACTICE of £330 per annum, including transferable appointments (parish and club). One horse. Rent of house (four bedrooms), with stabling, garden, and field, £14. Premium £400, to include drugs, horse, &c.

(30) DISPENSARY PRACTICE.—PARTNERSHIP.—TWO-THIRDS SHARE of a PRACTICE of about £800 per annum, with attendance only four days a week. Premium £650.

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WANTED TO PURCHASE.

(33) **WANTED, a COUNTRY PRACTICE or PARTNERSHIP of £800 per annum upward, within sixty miles of London. Purchaser is a M.B., B.S., T.C.D. Married, experienced, and can invest ample capital.**

(34) **A GOOD PARTNERSHIP** (income of £700 or more to begin with) in a Practice with partnership introduction in London or large Provincial Town with hospital. Purchaser is a graduate in Arts and Medicine of Oxford, and can invest up to £5000.

(35) **WANTED, a good-class PRACTICE in a country town or the West-end of London. Surgical work preferred. Purchaser is an M.D. London, M.R.C.S., and Guy's, and can invest ample capital.**

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Mr. Herbert Needes (son of the late Mrs. Needes, and for more than ten years associated with her in the management of this old Agency) is still carrying on the Business, and will be glad to negotiate the Transfer of PRACTICES and PARTNERSHIPS on the usual terms. No connexion with any other office.

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Advice as to Choice of Schools.— The SCHOLASTIC, CLERICAL, and MEDICAL ASSOCIATION gives ADVICE and ASSISTANCE, without charge, to Parents and Guardians in the Selection of Schools (for Boys or Girls, and Tutors for all Examinations at Home or Abroad.—A statement of requirements should be sent the Manager, 8, Lancaster-place, Strand.

Overdue Accounts.—Cash at once paid from 5 per cent. upwards (free of interest) on debts sent for collection. Debts of every description, large or small, recovered throughout the United Kingdom. Many special advantages. Particulars, post free, of the Secretary, General Mercantile Finance Co., 19 and 20, Railway-approach, London-bridge, S.E. Bankers: Mercantile Bank of London, Limited.

To Medical Men and others.—Com- MANDING CORNER RESIDENCE within one minute of West Kensington Station and ten minutes of High-street, Kensington, close to omnibus route to City and West End. Redecorated throughout, three reception-, eight bed- and dressing-rooms, bath-room (h. and c) (constant supply) and capital offices. Rapidly growing neighbourhood, eight trains per hour, thirty minutes to City, and to Charing-cross twenty minutes. Modern drainage. Rent on lease £100.—Apply to Messrs. Vallance and Vallance, Solicitors, 20, Essex-street, Strand, or of Clarke & Co., Estate Agents, Baron's-court-road, West Kensington, close to residence.

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Wanted, a Practice or Partnership of from £300 to £800 a year, in a pleasant town on south or south-west coast where there are good yachting facilities.—Address, P. F., THE LANCET Office, 423, Strand, W.C.

Wanted, a Practice in a country town not more than eighty miles from London. Income from £600 to £1000 per annum. A Partnership would be entertained.—Apply, R. V. W., THE LANCET Office, 423, Strand, W.C.

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Branch Practice for Sale, Club attached; capital Nucleus for beginner. Situated four miles from principal. Mixed population. North Kent. Premium small. Introduction given.—Address, Dr. Rhodes, 19, Kashgar-road, Plumstead.

Practice or Partnership wanted in Country Town or at Seaside (not rural). Income about £400 to £500.—A. A., 9, Wellington-crescent, Ramsgate.

Practice or Nucleus wanted in the West-end, near Oxford-circus preferred. State full particulars.—Address, B. R., THE LANCET Office, 423, Strand, W.C.

Can invest £1000 in a Partnership. Advertiser has had seven years' experience in Private Practice. Unmarried; thirty-four; drive; riding about 12 stone. References and interview necessary. Ignore agents.—Licentiate, THE LANCET Office, 423, Strand, W.C.

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Assistants and Locum Tenens supplied on the shortest notice. Apply to G. B. Stocker, Esq., Secretary, Medical &c. Assn., Ld., 8, Lancaster-place, Strand, W.C. The rule of the Association is that no Assistant shall be recommended till direct inquiries have been made as to his antecedents. Names of the Committee of Management and descriptive pamphlet on application."—Telegraphic address, "Triform, London."

Locum Tenens or temporary Assistant.—A registered Medical Practitioner of experience, who is well received by all classes, wishes to act as above in Jersey or South of England.—Address, Zeta, THE LANCET Office, 423, Strand, W.C.

Fully qualified Medical Man having spare time from 12 to 6 P.M. daily, would either take charge of Surgery or Visit during these hours. Terms moderate. Resident in London.—Address, M. M., THE LANCET Office, 423, Strand, W.C.

Assistants and Medical Men failing to obtain what they require should apply to ADAMS & PARKES (B.A. Cantab.), Medical Agents, 14, Southampton-street, Strand. No charges are made for unsuccessful service.

An M.D.Edin., not at present in practice, but wishing to keep in touch with professional work, would give some SERVICES in return for board and lodging, to a Medical Man, with whom he could have the opportunity of seeing some practice. Easy access to a good hospital desirable. — Address, Stethoscope, The LANCET Office, 423, Strand, W.C.

Required, by an M.R.C.S., L.R.C.P. (St. Bart.'s), aged twenty-seven, married, MANAGEMENT of a Branch Practice, or out-door ASSISTANTSHIP in good class Practice. Disengaged January 7th.—Address, Tempest, THE LANCET Office, 423, Strand, W.C.

A doubly qualified Gentleman, with several years' experience, disengaged shortly, would like a permanent ASSISTANTSHIP (South preferred). Ride and drive; single. References to present and past principals.—Please address, stating terms and class of Practice, to M.R.C.S., care of Dr. Godfrey, 5, Compton-terrace, Highbury, N.

Trebly-qualified, registered Gentleman, age thirty-three, desires ASSISTANCY or Management of Branch. Experienced in every class of practice; very strictly temperate; popular with patients; energetic and fond of work; good appearance; Churchman; native of Derbyshire. Good references. At liberty for immediate engagement.—Address, stating remuneration, Dr. Rhodes, 21, Indlewood-grove, Upper Brook-street, Manchester.

Assistant (single, in-door, qualified) wanted at once, to Visit, Dispense, and keep Books.—Please apply by letter, stating age and what salary required, to W. R. Hains, 1, Ashchurch-terrace, Shepherd's-bush.

Wanted, in Colliery Practice in Glamorganshire, qualified ASSISTANT, out-door, to Visit, Dispense, &c. Usual bond.—Apply, giving references and salary required, to Gwalia, THE LANCET Office, 423, Strand, W.C.

Wanted, for abroad, a first-class Man as ASSISTANT. Salary £240, £250, and £260 per annum for the first, second and third years respectively, with free board, lodging, washing, &c. Protestant. Abstainer. Unmarried. Not under twenty-five. Must have surgical ability, experience, and highest references as to character, reliability, and disposition. Satisfactory English references given.—For fuller details address, M.D., THE LANCET Office, 423, Strand, W.C.

Wanted, a well-qualified out-door ASSISTANT, to Visit, Dispense, and attend Midwifery.—For further particulars apply, Beech House, Middleton, near Manchester.

Wanted, a fully qualified Assistant (in-door), to Visit, Dispense, and attend Midwifery.—Apply, sending testimonials, photo, &c., and stating salary, to West Riding, THE LANCET Office, 423, Strand, W.C.

Wanted, early in January, an ASSISTANCY, either in-door or out-door, by trebly qualified man, well connected and generally well received by patients. Would suit an elderly gentleman or one in failing health; is not afraid of work. Single; age thirty; good horseman. Three years' experience of Club and General Practice.—Apply, stating salary, Ycrep, Vicarage, Bamton.

Usual Bond.—Richardson's Medical ASSISTANT'S AGREEMENT for SERVICES. "This is a form of agreement which principals may find useful in engaging Assistants. It is very explicit."—THE LANCET, February 9th, 1895. It contains all the conditions of the usual bond as well as several useful and necessary clauses. Stamped copies, price 11s. Entered at the Stationers' Hall, and can only be obtained from RICHARDSON BROS. & CO., Medical Agents, Liverpool. ASSISTANTS and LOCUM TENENS supplied.

NOTICE.

WITH regard to advertisements affecting unqualified assistants, the Proprietors of THE LANCET think it right to point out that they obviously cannot guarantee that each individual advertiser offers his services under such conditions as would be approved by the General Medical Council. The Proprietors consider that inconvenience to practitioners and hardship to unqualified assistants may be caused by the entire exclusion of these advertisements from the columns of THE LANCET. The General Medical Council do not, it is understood, object to unqualified assistants being employed by practitioners when resident in or near their employers' houses, but the Council will not allow unqualified persons to conduct branch practices, or dispensaries which are situated at a distance from the principal's house and are not under his immediate supervision.

Wanted, Student who can Dispense, Visit occasionally, and attend Midwifery case if required. Plenty of time for reading. Board, lodging, and washing in lieu of salary.—Address, Yorkshire, THE LANCET Office, 423, Strand, W.C.

Wanted, in a Country Practice, a Gentleman to Dispense, and occasionally Visit and attend Midwifery. Plenty of time for reading.—Address, stating salary (in- and out-doors), references, &c., Kirkwood, THE LANCET Office, 423, Strand, W.C.



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LLANGAMMARCH WELLS, CENTRAL WALES.

Telegraphic Address—"BARIUM, LLANGAMMARCH WELLS."] **[For Terms apply to MANAGERESS.**

(CENTRAL WALES.) **BARIUM SPRINGS.** (ALTITUDE 600 ft.)

THE LLANGAMMARCH WELLS, PUMP HOUSE, LAKE HOTEL AND BATHS. This first-class Hotel standing in its own ornamental grounds, is situated on the slope of the Eppynt Hills, looking down one of the most beautiful valleys of Wales. All the rooms have been furnished with every regard to the comfort of visitors; special attention has also been given to the sanitary drainage and water supply, which has been carried out on the most modern principles. There is splendid Salmon and Trout Fishing to be obtained in the River Irfon, over two miles of this charming tributary of the Wye flowing through the hotel grounds and is reserved for visitors, who also have the privilege of shooting over several thousand acres of Mountain and Moorland, while the picturesque lake affords every facility for boating.

It has been stated in a recently published work on Chronic Diseases of the Heart, as the result of experiment, that the Mineral Waters of Llangammarch, employed as baths as well as taken internally, exercise healing effects similar to those of the celebrated springs of Nauheim in Germany. The Proprietors of the Llangammarch Wells have secured the attendance at the Pump Room and Bath House of a Physician, who is practically acquainted with the methods employed by Dr. Schott at Nauheim for the relief of Gout, Rheumatism, and Heart Affections, during the Season from June to October.

RESULT OF ANALYSIS BY DR. DUPRÉ, August, 1883:—

"A Sample contained in two Winchester quart bottles, stoppered, from Llangammarch Springs. The water is clear, slightly saline taste.

Chloride of Sodium	189·56
Chloride of Calcium	84·66
Chloride of Magnesium	24·31
CHLORIDE OF BARIUM	6·26
Carbonate of Calcium	2·60
Silicia	1·40
	308·89 grains per gallon.

"The characteristic feature of the water is the presence of a notable quantity of **BARIUM CHLORIDE** and a consequent total absence of sulphates. **BARIUM** is a rare constituent of Mineral Waters.

"*Westminster Hospital, August 23rd, 1883.*" "A. DUPRÉ.

As a remedial agent **BARIUM** ranks high in cases of Strumous Disease in its protean forms, Glandular Enlargements, Scrofula, Chronic Rheumatism, Epilepsy, and Diseases of the Heart. It is also useful in other Diseases, such as Liver Derangements, &c.

Extract from THE LANCET, Nov. 24th, 1894:—

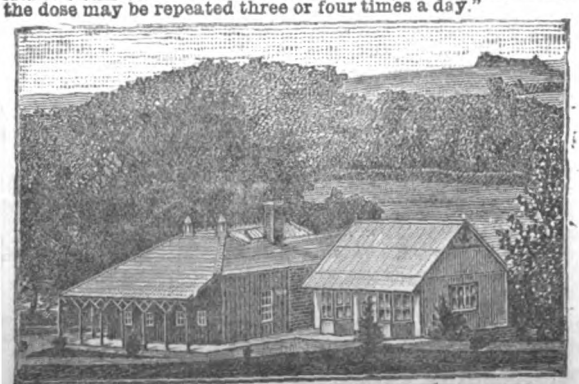
"A sample of the barium water was obtained, sealed, and despatched to THE LANCET Laboratory for detailed examination, and the results may be compared with the analysis of the sample first submitted. In the following analyses Sample 1 is the sample obtained by ourselves, and Sample 2 the sample first submitted. The results are expressed in grains per gallon (70,000 grains):—

	No. 1.		No. 2.
Chloride of barium	6·749	.....	6·490
Chloride of sodium	186·200	.....	185·900
Chloride of calcium	85·160	.....	85·470
Chloride of magnesium	20·100	.....	20·315
Chloride of lithium	0·847	.....	0·910
Chloride of ammonium	0·262	.....	0·262
Alumina and silica	3·340	.....	3·100
Bromine as bromide	Distinct traces	.....	Distinct traces
Total mineral matters	302·658	.....	302·447

"It is important and interesting to observe that the quantity of barium salt has varied only within very small limits during the last ten years, as in 1883 Dr. Dupré made an analysis, in which he found 6·26 grains of barium chloride per gallon. The amount of chloride of barium may therefore be fairly regarded as constant—a fact which is of especial importance in view of the powerful action of barium salts. ..... The quantity of barium present renders the internal administration of the Llangammarch waters quite safe, and no harm could result from drinking the water in reasonably large amounts. One tumblerful is a sufficient dose in most cases and two tumblerfuls should seldom, if ever, be exceeded, though the dose may be repeated three or four times a day."



THE LAKE, LLANGAMMARCH WELLS.



THE BARIUM SPRINGS.

Extract from the MEDICAL ANNUAL, 1890:—

"*Heart—new treatment.*—Continued trial has affirmed the efficacy of **BARIUM CHLORIDE** as a cardiac tonic. It has been found to slacken and regulate the heart-beat and to augment the amplitude of the pulse without producing as much increase in the arterial tension as does digitalis. Da Costa and Hare have both added their experience of the drug to the published statements of Boelm, Kobert, Bacey, Lauder Brunton, and Bartholm on this subject. Da Costa finds that it can be taken for a long time without disordering the stomach, that it has some diuretic action, and that it has the valuable property of lessening cardiac pain—a statement which Hare confirms. The latter has obtained good results from the use of Barium Chloride in both mitral diseases, in acute dilatation of the heart, and in functional derangement of the heart. H. A. Haze (JOURNAL DE MÉDECINE DE PARIS) has obtained good results from its use in all the above diseases, and also in aortic diseases.

"*Glandular Enlargement.*—An eminent London Physician writes:—'My experience in the two cases which I sent to Llangammarch has been eminently satisfactory, and the well-recognised efficacy of the Kreuznach waters in glandular enlargement encourages the hope that the waters of Llangammarch may prove to be of signal and widespread benefit in the future.'"

BARIUM WATER is supplied, both Still and Aërated, by the London Agents—

INGRAM & ROYLE, Ltd., 52, Farringdon St., E.C. ["Telegraphic Address: "Ingram Royle, London

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SILVER MEDAL for Excellence, PARIS, 1889.

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(REGISTERED).

Per Ounce 4s. 0d.

INGLUVIN in SPAIN.—The following letter on Ingluvin was recently received by Vilanova, Hermanas, & Co., of Barcelona, from Dr. F. VIDAL SOLARES:—

"I have to acknowledge duly having received the Ingluvin which you were good enough to send me for the purpose of proving the therapeutic effects of this excellent medicine amongst my clients, from Messrs. W. R. Warner & Co.

"The results which I have obtained in my dispensary for sick children, together with my private cases, have been extremely satisfactory. In fact, I have treated various cases of dyspepsia, in which the patients, fully prostrated and without power to digest their food, have, thanks to the use of Ingluvin, been rapidly cured.

"In the case of 'apepsia,' or loss of appetite, in children, accompanied with diarrhœa, I have obtained good results from the use of Ingluvin, which therapeutic agent is extracted by the house of Warner & Co. from the stomach of the chicken.

"I have also found Ingluvin useful in the organic complaints of the stomach, and in the indomitable vomiting and painful dyspepsia to which women are subject during pregnancy. I have employed the agent, moreover, in the convalescent state of many patients, when I have not only noted the alteration of the gastric secretions, but of the extreme instability of the stomach.

"I have not the least doubt that the Ingluvin, of which you have the sale in Spain, will in a short time become a substitute for pepsin on account of its being more active than the latter; but, as is only logical, you should obtain a rapid result by bringing this preparation to be known in all Spain by the opportune measure you usually adopt.

"Hoping you will have the justice to manifest to the manufacturer the results I have obtained in my practice with Ingluvin, I am," &c.

PARVULES
(REGISTERED).

A new class of medicines (minute pills), designed for the administration of small doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses given at short intervals exert a more salutary effect. The elegance and efficiency of Parvules leave nothing to be desired. The dose of any of the Parvules will vary from one to four, according to age or the frequency of their administration. For instance, one Parvule every hour, or two every two hours, or three every three hours, and so on for adults. For children, one three times a day is the minimum dose. We mention Parvules as a class of remedies very highly esteemed by Physicians for their unvarying activity, solubility, and accuracy. (Parvules are not pink Granules.) See Parvules of Aloin, 1.10 gr.; Parvules of Calomel, 1.20 gr.; Parvules of Podophyllin, 1.40 gr.

COATED PILLS (SOLUBLE).

Pills and their Coating.—An experience of over a quarter of a century has demonstrated that sugar, as applied by our process without heat, is the most suitable and soluble substance for coating pills. In this assertion we are sustained by the highest medical authorities, who have tried them repeatedly and verified our claims. Our principal claims are solubility and compatibility under all circumstances. This is not so with gelatin coating, which is insoluble where coffee, astringent fruits, or wines containing tannin are taken. These facts entitle us to the confidence of the Medical Profession, and justify us in asking assistance in our endeavours to maintain the integrity of WARNER & Co.'s Preparations.

N.B.—☞ It is pre-eminently the right of Physicians to designate a choice. The leading Druggists throughout the country keep Warner & Co.'s Preparations.—W. R. WARNER & CO.

Sole Depôt for Great Britain—F. NEWBERY & SONS, 1 & 3, King Edward Street, LONDON, E.C. (*Established A.D. 1746. 135 Years in St. Paul's Churchyard.*)

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BROMIDIA.

"ALTHOUGH opposed to the use of pharmaceutical specialities I was struck with the formula of **BROMIDIA** (Battle), and, knowing the action of its ingredients, could not bring myself to believe in its possessing greater therapeutic power than its component parts. However, I determined to try it in a severe case of Mammary Neuralgia which had proved refractory to an infinitude of other remedies. The result was brilliant, and far beyond my expectations. I then made experiments with a preparation made according to the formula of **BROMIDIA** by an experienced pharmacist, but whether due to the greater purity of your drugs, or special mode of combining, the results were not to be compared with those of **BROMIDIA** (Battle).

"DR. ORAZIO SATARIANO.

"*Barrafranca, Italy.*"

CAUTION.

The great reputation of BROMIDIA has frequently caused cheap and inefficient imitations to be dispensed as Bromidia. Some of these substitutes are not only worthless, but absolutely harmful.

As a precaution, it is not only necessary to specify BATTLE'S BROMIDIA, but also to see that the patient obtains the genuine preparation.

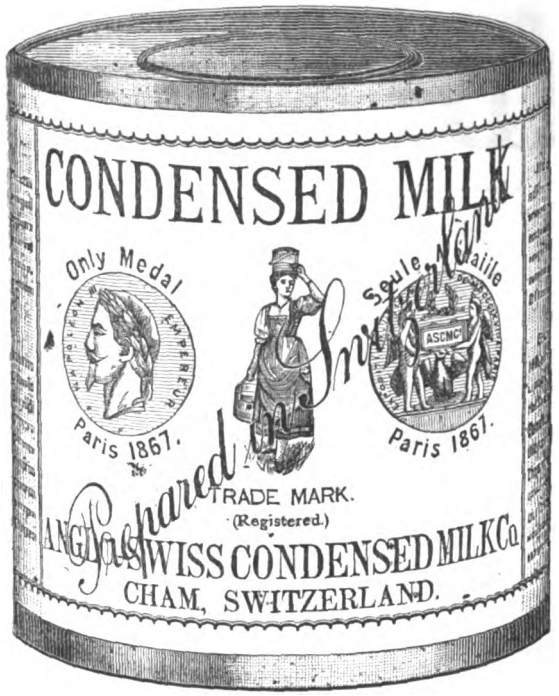
A Sample Bottle of BROMIDIA and Pamphlet will be forwarded free of charge to Medical Men on application to

ROBERTS & CO., 76, New Bond Street, London.

GENERAL DEPOT FOR GREAT BRITAIN.

BATTLE & CO., ST. LOUIS, MO. U.S.A.

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MILKMAID BRAND CONDENSED MILK

THE ORIGINAL & BEST.

Percentage of BUTTER FAT in "MILKMAID" and other Brands.

Five samples of Milkmaid Brand, analysed by Dr. BERNARD DYER, Secretary, and Mr. OTTO HEHNER, late President of the Society of Public Analysts, averaged ..	11·15 per cent.
Seventeen samples of skimmed brands (Irish, Dutch, and Saxon), analysed by Dr. DYER, averaged	1·14 per cent.
Difference in favour of the Milkmaid Brand	**10·01 per cent.**

SAMPLES FREE TO THE PROFESSION.

ANGLO-SWISS CONDENSED MILK CO., 10, MARK LANE, LONDON, E.C.

Cadbury's COCOA.

No Alkalies used, as in many of the so-called "pure" foreign cocoas.

THE LANCET, referring to a thorough recent examination of Cadbury's Cocoa, says :—"The results leave no doubt of its purity and excellence, and show that there has been no treatment with fixed alkalies, or with ammonia. . . It represents therefore the standard of highest purity at present attainable in regard to cocoa."

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OSTEOMALACIA

SUCCESSFULLY TREATED BY

EXTRACT OF BONE MARROW.

AT the autumnal meeting of the North of England Branch of the British Medical Association, Dr. ALLISON of Newcastle reported in detail a severe and prolonged case of Osteomalacia, which he treated "with satisfactory results by Glycerine Extract of Bone Marrow (BRADY & MARTIN)." The disease first commenced in the patient (a woman forty-three years of age) when she was thirteen, and for over twenty years before the Bone Marrow treatment was adopted she had been a bed ridden cripple. The full history of the case and the condition of the patient, before and after treatment, are detailed in the NORTHUMBERLAND AND DURHAM MEDICAL JOURNAL for October, 1895. The Bone Marrow Extract was given in doses of half to one and a half drachms three times daily after food, and Dr. ALLISON reports that:—

"Improvement was felt on taking the second dose, 'a feeling of warmth going through the bones,' and the severe pains from which the patient suffered (the nasal first) began, after preliminary intensity, to gradually pass away, and have now entirely disappeared."

"Visible improvement soon appeared, also the appearance of the patient brightening considerably, and deformity began markedly and progressively to disappear—the parts last affected, generally speaking, improving first."

"But the most striking improvement was shown in the limbs. In the first week the bones of the extremities commenced, and have continued since, to rotate into place, the rigid articulations 'going off in cracks' audible to the patient and other persons in the room, and causing sharp pain for the time. Latterly, however, movements towards the normal have become practically painless."

"Consequent on these changes the patient has now comparatively good use of all her limbs, voluntary activity having returned to all, and she is able to grasp the bedhead with her left hand and touch it with her right, lying in the old attitude on her back."

"In another direction, too, improvement is shown. So much strength has returned to the leg-bones that the patient feels they are quite able to support the trunk; but the patellæ being still quite clear of their proper articular surfaces, until they become replaced, although flexion is free, the legs cannot be extended sufficiently to permit of standing or walking. The patient, notwithstanding, is making efforts to regain the upright position."

Measurements to show the marked change in the patient's condition are given, and Dr. ALLISON sums up the case as possessing the following points of interest:—

"1. The early onset and chronic course of the disease."
"2. Its being associated with puberty, but not with pregnancy."
"3. There being great deformity, but no fracture of the bones."
"4. The pelvis having given way behind rather than in front."
"5. The association of extreme kyphosis, with marked lateral curvature."
"6. The general course of the disease from below upward, most marked in the right limbs, and the correspondence of deformity in the lower and upper extremities."
"7. The *striking effects of the treatment*, and the tendency of the skeleton, under its influence, to revert, without the aid of the muscular system, to the normal type. The urine shows a decrease in the quantity of the earthy phosphates, but the total quantity of phosphates is about the same."

Dr. ALLISON concludes by stating that in view of the terrible condition and the hopelessness of medical and surgical treatment of this formidable disease he is justified in bringing this *promising form of treatment* to the notice of the medical profession.

Glycerine Extract of Bone Marrow (Brady & Martin) used in the above case. Price 1/- per ounce.
Tabellæ of Bone Marrow. Price 5/- per 100.

Bone Marrow Extract has also been used in the treatment of Pernicious Anæmia, Chlorosis, and Anæmia, and would probably be of use in all cases in which there is defective nutrition dependant on imperfect blood metabolism.

OTHER ANIMAL EXTRACTS.

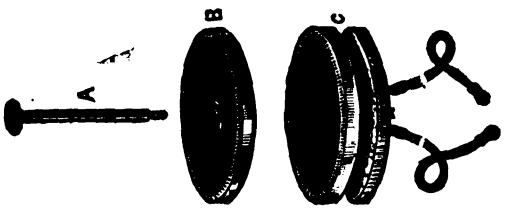
Cerebrine Alpha, Subcutaneous	per drachm	3/6	Supra-renal Capsule Extract, Internal	per drachm	2/6
Do. do Tabellæ	per 100	5/-	Do. do. Tabellæ...	per 100	4/6
Myeline Alpha, Subcutaneous	per drachm	5/-	Thyroid Extract (B. & M.), Internal	per drachm	1/9
Orchitic Fluid (Testiculine)	per ounce	5/-	Do. do. do. Subcutaneous	per drachm	1/9
Do. do. Tabellæ	per 100	1/6	Thyroid Extract Powder (B. & M.)	per ounce	10/6
			Do. do. Tabellæ...	per 100	2/6

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MANUFACTURING PHARMACISTS AND ANALYTICAL CHEMISTS, NEWCASTLE-ON-TYNE.

NOTE.—BRADY and MARTIN are the original makers of Thyroid preparations, and the first English Pharmacists to make Animal Extracts. They do not, however, make them as secret preparations or proprietary articles, every detail of their composition and manufacture having been described either in the original papers by the medical men who have written on the uses of the Extracts, or else in the Pharmaceutical Journals in papers by the partners (Mr. N. H. MARTIN and Mr. C. E. STUART, B.Sc.), neither do BRADY & MARTIN advertise these preparations to chemists and the general public, nor put them up in forms intended to foster the pernicious habit of self-medication on the part of patients. The Extracts are only supplied to and through medical men, to whom every information and assistance—pharmaceutical and chemical—will be given in carrying out investigations upon the scientific preparation of remedies for the treatment of disease.

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A New Instrument for assisting the Ear in determining the various Sounds in the Human Body
Invented by Professors BAZZI and BIANCHI.

The above is a combination of the principle of the Phonograph and the Double Stethoscope, and by its use in auscultation the various sounds, whether natural or morbid, are intensified and rendered more distinct. Many of the sounds produced by the internal organs which can only be imperfectly heard, or are even not at all detectable, by the ordinary stethoscope can be heard with the greatest ease by means of this new instrument. Most of the normal and abnormal sounds of the heart and lungs can be easily detected through the clothes of a person in ordinary dress. Many of the sounds of deep-seated organs which cannot be heard with any instrument before in use can now be detected by the Phonendoscope, and it is expected by the inventors that this instrument will be of the greatest value to the physician and surgeon in helping to elucidate obscure points of diagnosis.

Price, with full instructions, in Case, 25/- post free.

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A NON-POISONOUS ANTISEPTIC SOAP.

8d. A TABLET. **BALSAMIC** 8d. A TABLET.

(MEDICAL)

VINOLIA SOAP

Is a good antiseptic Soap, perfectly pure, non-irritating, and free from the evils incident to the use of mercurial soaps.

2S. PER BOX OF 3 TABLETS.

We also supply CARBOLIC "VINOLIA" SOAP, TEREBENE "VINOLIA" SOAP, and COAL TAR "VINOLIA" SOAP.

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SPECIAL TERMS TO MEDICAL MEN.

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6d.



PREMIER VINOLIA SOAP.

For Delicate, Sensitive, Irritable Skins.

1/- per box of 3 Tablets.

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FLORAL VINOLIA SOAP.

Keeps the Skin as Soft as Velvet.

1/6 per box of 3 Tablets.

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BALSAMIC VINOLIA SOAP.

For the Bath.

Recommended by the Medical Profession.

2/- per box of 3 Tablets.

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TOILET (OTTO) "VINOLIA" SOAP.

For the Toilet scented with choice Otto of Roses.

2/6 per box of 3 Tablets.

2/6



VESTAL VINOLIA SOAP.

This is Supreme. Exquisitely Perfumed.

7/6 per box of 3 Tablets.



VINOLIA UNSCENTED SOAP.

Guaranteed Pure.

Keeps the Complexion Clear.

10½d. per Box of 3 tablets.

1/- 2/-



2/6

FLAT CAKES.

Causes no blotches under the skin.
Yields a splendid lather.
Premier 1/-, Toilet 2/-, Vestal 2/6.



BLONDEAU FAVOURITE PERFUME SOAPS.

You can now have VINOLIA SOAP perfumed with any scent you may prefer:—

BABY SOAP	MUSK LAVENDER SOAP
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Natural and very lasting.

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BLONDEAU PERFUMES.

Concentrated, Delicate, Pure.
In 30 kinds.
1/3, 1/9, 3/-, 5/-, and 9/- per bottle.



VINOLIA MEDICATED SOAPS.

Made with Vinolia Soap basis.

Coal Tar
Terebene
Sulphur
Carbolic.

1/- per box of 3 Tablets.



"VINOLIA" SHAVING STICK.

Makes shaving a pleasure.
Does not eat into or irritate the skin.
Premier, 6d.
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2/- 3/6



VINOLIA POMADE.

Natural to the Hair and Scalp.
Imparts a fine silkiness to the Hair.
In White Opal Vase, 2/-.
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VINOLIA EAU DE COLOGNE.

Fragrant, Refreshing.

Contains the finest essential oils.

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VINOLIA BRILLIANTINE.

Does not leave the Hair Greasy and Sticky.

The Oil in this is in a state of solution.

For the Hair, 1/-, 2/-, 3/6.

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For Itching, Face Spots, and the Skin in Health and Disease.

1/1½, 1/9, 3/6, and 6/- per box.



For Redness, Roughness, Toilet, Nursery, &c.

In White, Pink, and Cream Tints, 1/-, 1/9, 3/6, and 6/-.



VINOLIA DENTIFRICE.

Keeps the teeth ivory white.
Soothing to tender gums and sensitive teeth.

PREMIER, IN METAL BOXES,		6d. & 1/-
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ENGLISH... ...	...	2/6, 7/6, 13/6
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LIQUID VINOLIA DENTIFRICE.

Whitens the Teeth Beautifully

1/-, 1/9.



LYPSYL.

A Coralline Emollient

For Dry, Rough, Cracked, or Pallid Lips.

Rose Red and White.

Flat Boxes ... 6d.

Silver Metal Tubes, 6d. and 1/-.

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Angier's Petroleum Emulsion.

WITH HYPOPHOSPHITES LIME AND SODA

WILL RELIEVE THE MOST

Stubborn Coughs.

It has been found especially efficacious in the treatment of chronic congested conditions of the tracheal and pulmonary mucous membrane attended by hypersecretion of mucus. In these cases the expectoration becomes more free, the pulmonic circulation is assisted, the respiration is easier, the troublesome cough is relieved, and the character of the sputa is altered.

It also appears to have some special soothing and quieting power to relieve the persistent, harsh, and irritating cough so common after Influenza, and often quickly affords relief after every other remedy has failed.

All Wholesale Chemists and Principal Retail Chemists keep it. Free Samples on application.

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BRAIN-FAG.

BRAIN FAG is an expression used to convey the idea of that condition of the brain where it is tired, worn out or broken down from various causes, such as worry, anxiety, over-work and excesses of various kinds. In cases of this kind the first impulse is to resort to stimulants, which may give temporary relief, but wherever there is stimulation there is bound to be a reaction which leaves the sufferers in a far worse condition than they were before.

WORRY, ANXIETY, OVER-WORK.

CELERINA!

GENTLE, NATURAL STIMULANT.

What we want in these cases is a brain food combined with a stimulant that will not react. Stimulation without reaction is apparently an anomaly, but the experience of the medical profession all over the world proves that in **CELERINA** we have such a combination. Besides being a gentle and natural stimulant, it also serves as a food to the shattered nervous system, and soon restores and maintains it in its normal condition.

RIO CHEMICAL CO., ST. LOUIS, MO., U. S. A.

The above Preparation is Prepared Exclusively for the Prescriptions of Medical Men. A Sample will be Sent Free to any Medical Man who desires to test it, on application to

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MEDICINAL PREPARATIONS.

NAME.	PROPERTIES.	DOSE.
ANTINOSINE	Iodoform substitute, being the sodium salt of Nosophen, a blue powder soluble in water.	As gargle and for irrigation in 0·1 to 0·25 per cent. solution, or undiluted in powder form like iodoform.
CARNIFERRINE	Iron salt of phospho-carnic acid, containing 30 per cent. iron in an active and easily assimilable form.	8 grains daily for adults, 3 to 5 grains for children, as a powder or in tablets or pills.
CREOLIN	A refined preparation of JEYES' FLUID for medicinal purposes, forming an emulsion with water, used as a powerful non-irritating antiseptic.	In ½ to 2 per cent. solution.
EUDOXINE	A reddish-brown tasteless powder, insoluble in water, combining the properties of Nosophen and Bismuth. Used as an internal antiseptic.	5 to 8 grains thrice daily; children ¾ to 3 grains thrice daily according to age; infants ⅛th to ¾ grains thrice daily. Best given in powder or pills.
JEYES' FLUID	A coal-tar disinfectant of uniform, constant, and active composition, used as a general disinfectant.	In 2 to 5 per cent. solutions, and in soaps, disinfectant powders, &c.
JEYES' SOLUBLE FLUID	A refined preparation of JEYES' FLUID, forming a clear solution with water; for sterilisation of surgical instruments and as a general antiseptic.	For sterilisation purposes, in 2 to 3 per cent. solution; for irrigations, in ½ to 1 per cent. solution.
LYSIDINE	A colourless liquid and uric acid solvent in gouty disorders.	30 to 150 minims in a pint of aërated water, given daily.
MIGRAININE	A powder easily soluble in water, combining the action of antipyrine and caffeine. Used in neuralgia, migraine, and sick headaches.	16½ grains, best given in water and taken on an empty stomach, after which two hours' rest should be enjoyed. A second dose should only be given in exceptional cases, and not before the lapse of two hours after taking the first dose.
NOSOPHEN	Tetra - iodo - phenolphtalein, a greenish - yellow powder, insoluble in water, tasteless, and odourless, containing 61·7 per cent. iodine. A powerful substitute for iodoform, free from poisonous and irritant properties.	Used undiluted, and also diluted in the form of powder, ointments, paste, gauze, &c. Internally in doses of 5 to 8 grains.
SYMPHOROL N **" L** **" S**	The sodium, lithium, and strontium salts of caffeine-sulphonic acid. A white powder soluble in water, used as a powerful diuretic.	15 grains four times a day, given in water.

SAMPLES AND LITERATURE FREE ON APPLICATION.

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ANALYSIS of Professor JOHANN MOLNÁR,
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SULPHATE OF POTASSIUM	0·104
SULPHATE OF AMMONIA	0·061
SULPHATE OF SODIUM	139·063
SULPHATE OF MAGNESIUM	172·805
SULPHATE OF CALCIUM	20·788
CHLORIDE OF SODIUM	29·047
CARBONATE OF SODIUM	9·989
CARBONATE OF IRON	0·097
CARBONATE OF MANGANESE	0·429
ALUMINA	0·349
SILICIC ACID	0·092
TOTAL	372·894

"I prescribe Æsculap in preference to all other saline waters in cases of Portal Congestion and in the treatment of Habitual Constipation, and excellent results have been shown by its use.

"Prof. ERNST SCHWIMMER, Budapest."

"Æsculap possesses the decided advantage of being not so unpleasant to take as many other aperient waters, and is free from organic impurity.

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Samples Free to Members of the Medical Profession.

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AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

Liquor Pancreaticus (Benger).

For the preparation of peptonised or partially digested milk and other articles of food.

Simple directions for use enclosed. In 4 oz., 8 oz., and 16 oz. Bottles.

The *British Medical Journal* of April 1st, 1882, in an article on Benger's Preparations, says:—"Time and use have justified the claims put forward for these preparations."

The *London Medical Record* of March 15th, 1882, says:—"These are undoubtedly a great advance on any previous attempt in this direction. . . . The introduction of these preparations is a distinct advance in therapeutics."

The *Medical Times and Gazette* of September 8th, 1883, says:—"Benger's Preparations have deservedly a very high reputation, and are all largely used."

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An exceedingly active fluid pepsine, without disagreeable taste.

DOSE.—One or two teaspoonfuls with meals. In 4 oz., 8 oz., and 16 oz. Bottles.

Benger's Peptonised Beef Jelly.

A delicious quick restorative for Invalids and the Aged. In patent glass jars, no metallic contamination possible. · Retail, 2s. each.

The Lancet says:—"It is a most valuable form of concentrated food."

The *London Medical Record* says:—"Invaluable for old people; also in convalescence from acute diseases."

A Physician writes:—"I feel I cannot express my gratitude to you sufficiently, as your Beef Jelly is the only thing my niece can retain, and it has certainly kept her alive for the last week."

Benger's Peptonised Chicken Jelly.

In similar glass jars. Retail, 2s. each.

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The *Medical Press* says:—"Few modern improvements in pharmacy have done so much as Benger's Preparations to assist the physician in the treatment of the sick."

Benger's Preparations may be obtained through all Retail and Wholesale Houses and Shippers, or of the Manufacturers—

F. B. BENGER & CO., LTD., Otter Works, Manchester.

TELEGRAPHIC ADDRESS—"Benger's, Manchester."

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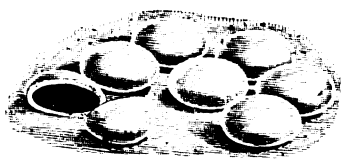
Tabellæ and Hypoderms.

Compressed Medicines.



Tabellæ.—Since 1876 ALLEN & HANBURYS have manufactured drugs in the compressed form, and have from time to time introduced various improvements. Those composed of sparingly soluble substances, such as *Sulphonal*, &c., are made to speedily disintegrate on coming in contact with moisture; those made of bitter drugs, such as Cascara Laxative, Quinine, &c., are *sugarcoated*, unless otherwise ordered.

Made in hundreds of Formulæ.



SUGAR-COATED CASCARA TABELLÆ.

SOME OF THE MORE IMPORTANT TABELLÆ ARE:—

*Arsenious Acid, 1-100, 1-50
Aconite Tinct., min. 1
*Aloin Comp.
{Aloin, 1-5
{Strych., 1-60
{Ext. Bellad., 1-8
{Ipecac., 1-6
Ammon. Brom., gr. 5 and 10
,, Chlor., gr. 3 and 5
Antacid
Antifebrin, gr. 3
Antim. Tart. and Ipecac., gr. 1-100 each
Antipyrin, gr. 5
Bismuth and Soda
,, Carb., gr. 5
,, Soda and Ginger.
,, Subnit., gr. 5
Caffeine Cit., gr. 1 and 2
,, Hydrobrom., gr. 2
Calcium Sulphide, gr. 1-10, 1-4, and 1-2
Calomel, gr. 1-10, 1-4, 1-2, and 1
Carbo Lig., gr. 5 and 10
Cascara Ext., gr. 2
Cascara Comp.
{Ext. Cascara, gr. 1
{Euonymin, gr. ½
{Ext. Hyoscyamus, 1-3
{Nux Vomica, 1-16
Chloral Hydrate, gr. 5
Cocain, 1-20, 1-10, 1-8, 1-5, 1-4½
Cupri Arsenitis, 1-50
Dover's Powder, gr. 5
*Easton's (1=1 dr. Syrup)
*Ergotin, gr. 3
Exalgine, gr. 1-8, 1-2, 1, and 3
Euonymin, gr. 1-4 and 1
Blaud Ferrugin, gr. 5
Gummi Rub. c. Cocain, 1-20
Hyd. c. Creta, 1-4, 1-3, 1-2, and 1 gr.
*Ichthyol, gr. 2½
Ipecac. Pulv., gr. 1-30, 1-20, 1-10, 1-4, and 5
Lithia Co. (Mr. Hugh Lane's revised formula)
Lithia Salicylas, gr. 2
Sulphur Precip., gr. 2
Quinine Salicyl., gr. 1-3
Morphia Sulphate, gr. 1-8, 1-4, 1-3, 1-2
Nitro-Glycerine, gr. 1-100th
Papain, gr. 1, 2, 3, 5
Papain, gr. 1, and Pepsin, gr. 2
Papain, gr. 2, and Pepsin, gr. 3
*Pepsin, gr. 2
*Peptonic
Phenacetin, gr. 5
Pot. Chlor.
,, ,, Borax
,, ,, ,, and Cocain, gr. 1-100th or 1-20th
Podophyllin, gr. 1-8, 1-4, & 1-2
*Quinine Bisulph., gr. 1-10, 1-2, 1, 2, 3, 5
Rhei Zingib. and Soda
Saccharin, gr. ½
Salicin, gr. 5
Salipyrin, gr. 5
Salol, gr. 5
*Santonin, gr. 1; Calomel, gr. 1
Soda Mint
Sodii Bromid., gr. 5
Sod. Salicyl., pure, gr. 5
,, ,, natural, gr. 5
Sulphonal, gr. 5
Sulphur Comp. gr. 5
Thyroidin
Urethane, grs. 3 and 5

Those marked with an asterisk are Sugar-coated, unless otherwise ordered.

Compressed Medicines—(*Continued*).

All Tabellæ sold in *bulk* and conveniently put up in Vinaigrette Bottles for the pocket; with name and trade-mark (a plough) on label

at 1/-, 2/6, and 4/6 each,

except **Saccharin,** which are

9d., 2/-, and 4/-.

Sublimate Tabellæ, for quickly preparing Solutions for sprays and lotions of definite strength, are sold in bottles (retail) **at 9d. and 1/6.**

They will be found more readily soluble than any Sublimate Tabellæ previously offered to the profession. They produce a clear, faint-blue solution, thus distinguishing them from Tabellæ, which are swallowed, and avoiding the possibility of mistake.

"Hypoderms" is the name applied by ALLEN & HANBURYS to their Tabellæ for quickly preparing **Hypodermic Solutions** (without the aid of heat or trituration). Careful observation proves that the materials used in their manufacture do not produce the slightest irritation, and more important still, do not in the least affect the properties of the alkaloid or other drug used. Improved methods of manufacture have now enabled us to produce "HYPODERMS" which do not deliquesce in a moist atmosphere, and which preserve the active properties of the drug unaltered and unimpaired for any length of time.

Further advantages are:—

The dose is exactly known, and they can be dissolved in the syringe itself.

All the more important drugs and alkaloids may be obtained in the form of "Hypoderms." For complete list see pp. 83-84 in **"Notes on some New and Recent Remedies,"** post free to the Medical Profession on request.

In tubes at 7/- per doz.

Also **Hypodermic Pocket Cases,** containing best English made Syringe, Needle, &c., and space for "Hypoderms."

Full particulars on application.



Saccharin.

A Sugarless sweetener for the food and beverage of those suffering from Gout, Diabetes, Dyspepsia, &c. Supplied in bottles for the pocket as

Compressed Tabellæ,

at -/9, 2/- and 4/- each,

and **Soluble Salt,**

at 1/-, 2/4, and 4/6 each.

Also in the liquid form **Elixir,**

at 1/-, 2/6, and 5/-.

☞ Physicians when prescribing ALLEN & HANBURYS' Tabellæ or other preparations, such as Malt Extract, Saccharin, and its preparations, Soluble Gelatine-coated Pills, Improved Capsules, &c., which are not known by any distinctive or registered name, can indicate their intentions by the addition of the initials "A. & H.," which, for convenience in prescribing, ALLEN & HANBURYS have registered as a Trade-mark, thus:—

℞. Tab. antipyrin gr. v. A & H.

Allen & Hanburys, Ltd. Plough Court, Lombard Street, London.

Laboratories & Warehouse: BETHNAL GREEN, LONDON, E. *West End Branch:* VERE ST., CAVENDISH SQUARE, W.
Cod Liver Oil Factories: LONGVA & KJERSTAD, NORWAY. *Australian Agency:* 484, COLLINS ST., MELBOURNE.

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"The maintenance of Nutrition is the KEYNOTE of the successful treatment of Phthisis."—THE LANCET.

Bynol. "The Perfected" Malt & Oil.

Physiology.

This can be best considered by taking separately its two constituents:—

1. The **Malt Extract** used contains an amylolytic ferment called diastase, of the fullest activity. Its special function of converting starchy foods into a soluble sugar which can be easily absorbed renders this preparation at once invaluable for aiding assimilation.

In weakly and cachectic conditions the activity of the natural allied ferment ptyaline becomes greatly deficient, with the consequence that much ingested material is never digested.

The Malt Extract being semi-fluid, and possessing a characteristic sweet taste, is therefore physically a very convenient vehicle for emulsifying and disguising the slight taste of the other constituent—**Cod Liver Oil.**

2. The physiological properties and fate of the latter body are complex; its equivalent in heat-units as regards the animal body is at least two-and-a-half times that of Meat Extract (Liebig); that is to say, it is at least two-and-a-half times as valuable as Meat Extract in maintaining the body weight.

Long use has shown that, in atrophic conditions of the absorbing mechanism of the bowel, Cod Liver Oil is not only more easily emulsified, but more easily taken up by the villi of the small intestines and passed on to the lacteals.

In the **"Perfected" Cod Liver Oil,** where the formation of certain oxidation products irritating to the stomach is avoided, we have perhaps the ideal form of fat-food.

Milk, cream, etc., are liable to produce butyric and other allied fatty acids, of little use except to irritate the gastric and intestinal mucous membrane.

To more perfectly understand the part played by Cod Liver Oil, the digestion of fat-foods is roughly as follows:

In the stomach slightly, but chiefly in the duodenum, by the action of the pancreatic ferment, fats are—

1. *Emulsified*, that is, broken up into minute oil globules, each surrounded by what is known as a haptogen membrane. In this physical state absorption is possible by the villi, the oils being unaltered.

2. *Saponified*, that is, split into fatty acids and glycerine, both capable of absorption by the intestine.

Therapeutics.

The above considerations enable us to understand more clearly the immense use Malt Extract and Cod Liver Oil, especially in combination, have in wasting diseases.

In *Phthisis*, for example, the digestive ferments are of lowered activity, and the introduction of a modicum of artificial ferment not only increases the actual amount of food assimilated, but the power of the enfeebled ferments to assimilate.

The almost constant rise of temperature above the normal is maintained chiefly at the expense of the fatty constituents of the body; hence the wasting. This, experience has shown, can best (putting aside questions of hygiene) be combatted by increasing considerably the amount of fat-food and carbohydrate food.

When absorbed, the part played by fat-food is practically two-fold:—

1. It becomes the source from which the surplus fat stored up in various parts of the body may be replenished.

2. Fat-food is one of the chief sources of animal heat, as shown above.

As we have seen, the Cod Liver Oil is the best of the class of fat-foods, especially in an enfeebled condition, and, combined with Malt Extract, as in Bynol, further assists the assimilation of the extra carbohydrate ingested.

That what is physiologically is also clinically true cannot be better illustrated than in the remarks made by the late Sir ANDREW CLARK in a lecture at the London Hospital:—

"I have said that these fibroid cases are poor creatures, thin and white, and have what may be called nutritive debility, and the question is, What am I to do with them? You cannot do better than endeavour to make the patient walk in the way of physiological righteousness. But that sometimes will not do. Some people may be physiologically well behaved, and somehow they do not thrive on it. Can you do anything in those cases? There are two remedies which sometimes do succeed where the ordinary diet will not succeed in nourishing the patient—the one is Cod Liver Oil and Malt given with food—a preparation called Bynol—and the other is the remedy called Bynin Emulsion, consisting of Hypophosphites, Oil, and Malt; both are prepared by Messrs. ALLEN & HANBURYS. These are two good nutritive agents in promoting nutrition."

☞ *"A perfect combination of Malt Extract and Cod Liver Oil."*—BRITISH MEDICAL JOURNAL.

Allen & Hanburys, Ltd. Plough Court, Lombard Street, London.

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GOLD MEDAL, World's Exhibition, AMSTERDAM, 1895.

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= TERRŌL =

THE TASTELESS COD LIVER OIL SUBSTITUTE.

THIS remarkable Drug is nothing but a very refined, odourless product of Petroleum. Its superiority over Cod Liver Oil and any Compounds, Mixtures, and Emulsions of that Oil is as follows:—

TERRŌL never becomes rancid, nor will it ferment like malt and oil!
It has absolutely no taste or odour. It does not repeat or nauseate!
It never becomes repugnant! It is not aperient!
It does not upset the stomach or bowels! It is soothing and antiseptic!
It can be administered to the youngest child or to the weakest patient!
Its dose is so small; and it is much cheaper than the finest Cod Liver Oil and all the highly advertised mixtures, emulsions, or malt preparations.

These are not only the opinions of the Company, but of the entire Profession in the United States and large numbers of the Profession in the United Kingdom who have yet prescribed the drug.

INDICATIONS.—Asthma, Bronchitis, Phthisis in every stage, Pneumonia, Cough, Sore-throat, Whooping-cough, Laryngitis, Marasmus, Influenza, and the General Debility following any illness.

IT IS NOT A PATENT MEDICINE, NOSTRUM, COMPOUND, OR EMULSION, BUT A PURE, SIMPLE BODY.

THE HISTORY OF A NEGLECTED SAMPLE.

"TOOTING, November 4th, 1895.

"*The Manager, the Terrōl Co.*

"DEAR SIR,—

"I have had by me a sample bottle of 'Terrōl' for some months. The other day a phthisical man came and asked me if I could give him anything that would allay his distressing cough at night. He had been an out-patient at Brompton Hospital for some time past; he could get no relief, and even the Cod Liver Oil he had turned against, as it produced scarcely any effect on his nutrition—certainly none on his cough. I gave him the bottle of your preparation, just thinking to give it a trial, and not expecting any extraordinary result from its use. He came two days afterwards and told me it was the first real relief he had had. Nothing he had ever taken did him so much good. In the face of this fact I am anxious to give it a further trial in three cases under my care. I should be obliged if you would send me a further supply of 'Terrōl. I thought it right that you should know the above facts, and I think that I can safely say that I shall always recommend it.

"Yours very truly,

"——, M.D.

"The way in which the Terrōl acted was as an expectorant of the highest order, and giving a feeling of great relief, subsequently, of the coughing fit."

TERRŌL obtainable through all Chemists. In bottles, 4/6 (1 lb., 128 doses) and 1/6 (5 oz., 40 doses); thus costing less than ½d. per dose to the patient.

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CARNRICK'S PEPTONOIDS.

CARNRICK'S BEEF PEPTONOIDS
(POWDER).

THIS preparation contains the albuminous and nutritive constituents of the choicest beef, wheat, and milk, in a concentrated and palatable form. By reason of its composition and of the method of preparation, it possesses a nutritive value that has long been recognised as incontestably greater than that of any other preparation of beef. As a fine, dry powder, free from moisture and inert material, "Beef Peptonoids" has obviously a higher proportion of nutritive constituents than any of the liquid preparations of beef. It is not only as a *Concentrated Food*, however, that it has claims upon the support of the Profession. It furnishes a very assimilable form of nourishment, being *partially* peptonised, and thus, while free from the objections sometimes raised to peptones, it is yet adapted for use in cases where easily digested food is alone admissible. This fact, together with its concentrated character, opens up a wide field of usefulness for "Beef Peptonoids." Another characteristic that deserves mention is that the constituents of "Beef Peptonoids" are carefully sterilised during manufacture. "Beef Peptonoids" as an *aseptic* food, one, moreover, that is absorbed from the stomach, leaving no residue to occasion trouble in the bowel, is admirably adapted for use in Typhoid Fever. In fact, both the "Beef Peptonoids" and "Liquid Peptonoids" have achieved notable successes in that connexion. The uses of such a nutritious and restorative food as "Beef Peptonoids" will naturally suggest themselves to the Physician. We may say that clinical experience on an unusually large scale has demonstrated its great services in the treatment of Fevers generally, in convalescence, and in the dieting of phthisical patients. Whenever there is wasting or mal-nutrition, "Beef Peptonoids" seems worthy of trial, since it



"Contains in a highly concentrated form the elements of a complete food—nitrogen, fat, saccharine matter, mineral salts, phosphoric acid, and iron."—Prof. C. MÉHU, Paris.

"It is by far the most nutritious and concentrated food I have ever met with."—Prof. ATTFIELD, London.

LIQUID PEPTONOIDS

Is a solution of the Beef Peptonoids powder in the form of an exceptionally palatable cordial. Liquid Peptonoids contains both the stimulating and nutritious properties of Beef, is readily assimilated, affords a large amount of nutriment in small bulk, and exercises a marked influence on the appetite and strength of the patient. It is rendered *aseptic* by sterilisation, and its stimulating effect on the digestive organs, whereby it contributes to improved nutrition, is not its least valuable feature.

"A very powerful and agreeable tonic and stimulant. A very valuable CONDENSED FOOD."—THE LANCET.

We also put up Liquid Peptonoids with Coca, and Peptonoids Iron and Wine.

SAMPLES FREE OF CHARGE AND CARRIAGE PAID TO MEDICAL MEN.

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"LANOLINE,"

The Discovery of Professor LIEBREICH,

WILL REPLACE THE

NATURAL FAT OF THE SKIN,

AND IS WIDELY

Prescribed by Physicians and Surgeons for all Ointments,

AS IT

is aseptic;

does not turn rancid;

is rapidly absorbed by the skin;

AND

can be mixed with any proportion of water.

A striking illustration of the power of "LANOLINE" of resisting influences which tend to decompose ordinary fats is afforded by some experiments carried out in 1890 by Surgeon-Major M. G. KING, with the design of obtaining a preparation of vaccine lymph which should withstand the destructive action of the heat in India. KING tried preparations with glycerine, boroglycerine, soft paraffin and "LANOLINE."

The mixtures containing glycerine decomposed in a week, those of boroglycerine in a fortnight and sometimes sooner, while 1 part of lymph with 4 parts of "LANOLINE" kept completely for at least 40 days.

Dr. A. GOTTSTEIN showed that "LANOLINE" not only was free from germs, but also **PREVENTED** their growth.

Dr. S. ECCLES said that he preferred "LANOLINE" to soft paraffin and other preparations.—BRIT. MED. ASSOC., 1887.

Dr. W. G. SMITH proves the virtue of "LANOLINE" in acne and chapped hands.—BRIT. MED. JOUR., June 12th, 1886.

Dr. SHOEMAKER describes "LANOLINE" as a mild and soft ointment, valuable for a great number of obstinate skin diseases.—BRIT. MED. ASSOC., 1886.

Professor ROSENBACH speaks highly of "LANOLINE" for the prevention and relief of decubitus.

Prof. NILS O. GADDE prescribes "LANOLINE" in Frostbites with great success.

Dr. R. KLEIN calls attention to the value of a "LANOLINE" cooling ointment containing 50 per cent. water for the successful relief of the itching of measles, scarlatina, chicken-pock, or of any origin.

Dr. STELLWAGON considers "LANOLINE" indispensable in psoriasis.

Dr. NEWTH treated obstinate ulcers of the irritated kind with "LANOLINE" ointments.

Dr. MACKEY used it in all skin diseases, and particularly in chronic joint affections of rheumatic origin.—BRIT. MED. ASSOC., 1886.

Physicians should always prescribe "LANOLINE" diluted with about one-third of its weight of soft paraffin; or they can prescribe this mixture of "LANOLINE" and soft paraffin under the name of

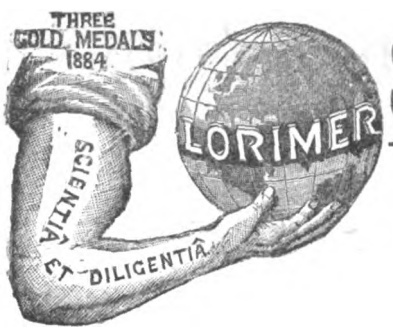
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½-lb. bottles, unstamped to the Profession - - - - - - - 21/- doz.
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Winch. Quarts - - - - - - - 2/6 lb.

Is not a quack preparation or secret nostrum; the formula is printed on every label.

The formula is original, founded upon scientific principles, and has stood the test of practical experience. There is no other preparation of the hypophosphites which contains so large a proportion (about six grains to the fluid drachm) of the salts employed.

All its constituents are in perfect and permanent solution, the last dose being identical, under all circumstances, with the first. There is consequently no possibility of danger from the precipitation of strychnine, as is the case with preparations that require shaking to distribute the dose.

It is neutral, or very slightly alkaline, and can therefore be taken without ill effect by persons afflicted with sensitive stomachs, which would probably reject acid or strongly alkaline preparations.

Other preparations of similar name are either strongly acid, of unknown composition (varying from half to three grains Hypophosphites to the drachm), or **deposit their active ingredients on standing;** *many* have all these faults.

CAUTION.

As we have had several cases brought under our notice where inefficient imitations have been dispensed instead of our Syrup, causing much disappointment and annoyance, Physicians will oblige by writing "Syr. Hypophosph. Co. (Lorimer)."

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REPORT OF THE ACADÉMIE DE MÉDECINE OF FRANCE.

Apollinaris

"THE QUEEN OF TABLE WATERS."

"The results of the recent investigations "in Paris and the Report of the Académie "de Médecine of France have placed "Apollinaris Water at the head of all the "waters examined for purity and freedom "from disease germs."

BULLOCK'S PEPSINA PORCI.

DOSE—2 to 4 grains.

BULLOCK'S ACID GLYCERINE OF PEPSINE.

DOSE—1 to 2 drms.

In this preparation advantage has been taken of the solubility of Pepsine in Glycerine to produce a convenient and desirable *liquid form* of this valuable medicine; whilst the preservative qualities of the menstruum confer upon the Acid Glycerine of Pepsine the property of keeping for any length of time.

May be prescribed with most substances compatible with Acids. In 4-oz., 8-oz., and 16-oz. Bottles, and in Bulk.

The published experiments of G. F. DOWDESWELL, Esq., M.A.Cantab., F.C.S., F.L.S., &c., Dr. PAVY, Professor TUSON, the late Professor GARROD, Dr. ARNOLD LEES, and others, conclusively demonstrate the excellence, high digestive power, and medicinal value of the above preparations.

In prescribing either of the above preparations it is suggested to insert in parenthesis as follows (BULLOCK).

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FAT FOR CHILDREN.

"VIROL."

A PREPARATION OF

BONE-MARROW.

"Ideal form of FAT for Children and Invalids."—THE LANCET.



9d., 2s. 6d., 3s. 6d., and 21s.

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Food for Infants.

"Fat is wanted for every tissue formed and forming, especially for brain and nerve cell, and for the marrow cells. In children who are fed upon a deficient amount of fat, the bony structures are imperfect and slow of growth; in a word, deficiency of fat in the food (of infants) is one of the chief factors in the production of rickets."—CHEADLE.

FAT.—"The importance of a sufficiency of fat in the dietary of children cannot be over-estimated."—MILNER FOTHERGILL.

"OUR TREASURES, AND HOW TO KEEP THEM."

This little book deals essentially with the value of **Fat** and **Iron** in Infant Feeding, and, having a few copies left, will send to first applicants.

VIROL {INFANT'S FOOD, Rich in FAT and IRON.}

"A preparation containing the Red and Yellow Bone-Marrow, with the fats and proteids of Raw Eggs, combined with Extract of Malt in physiological proportions."—THE LANCET.

"For children and invalids requiring a supply of fat material in addition to their ordinary food, 'Virol' appears to be well devised to serve a useful purpose."—BRITISH MEDICAL JOURNAL.

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"Virol occupies the unique position amongst food-stuffs in being a link between the diet of infancy and adolescence, so that a sudden transition is easily avoided. If added to Cow's Milk, Virol renders it far more like human milk than the cumbersome and complicated method of Liebig or the more homely and delusive one of adding water and sugar."

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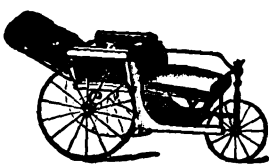
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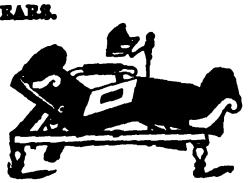
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A laxative, refreshing, and medicated Fruit Lozenge, very agreeable to take, and never causing irritation. Its physiological action assures the immediate relief and effectual cure of

CONSTIPATION,

HÆMORRHOIDS, BILE, CEREBRAL CONGESTION, HEADACHE, LOSS OF APPETITE, INTESTINAL OBSTRUCTIONS, &c.,

By augmenting the peristaltic movement of the intestine without producing undue secretion of the liquids. Unlike pills and the usual purgatives, it does not predispose to intestinal sluggishness; and the same dose always produces the same effect—that is to say, never needs increasing.

It is recommended by the most eminent physicians of Paris, notably Drs. BELIN and TARDIEU, who prescribe it constantly for the above complaints, and with most marked success.

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An Ideal Purely Vegetable Digestive Ferment with TONIC *and* ANTISEPTIC *action.*

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Typhoid IMMEDIATE *relief in all forms of* DYSPEPSIA.

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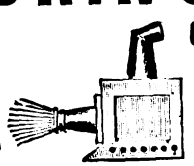
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See PAVY on Diabetes, p. 245, THE LANCET, June 9th, 1877, Report, and recommended by all leading authorities on the subject.

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(Signed) "ISABEL SOMERSET."

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— SURGICAL ELASTIC STOCKINGS and KNEE-CAPS, pervious, light in texture, yielding an efficient and unvarying support without the trouble of lacing. Likewise a strong, low-priced article for Hospitals and the Working Classes.

ABDOMINAL SUPPORTING BELTS.—These for Ladies' use before and after accouchement are admirably adapted for giving adequate support with *extreme lightness*, a point hitherto little attended to.

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Ladies' 3-fold Collars from 3/6 per doz.; Gents' 4-fold, 4/11 per doz.; Cuffs for Ladies or Gentlemen from 5/11 per dozen; MATCHLESS SHIRTS, best quality Long Cloth, with 4-fold Linen Fronts and Cuffs, 35/6 the half-dozen (to measure 2/- extra).

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UNIVERSAL TUBULAR WATER AND AIR BED

Prize Medals Sanitary Congress, 1878. Industrial Exhibition, York, 1879. Certificate of Honour, Sanitary Congress, 1879.

Brighton, 1881. International, 1881. Kensington, 1882.



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Patentees and Sole Manufacturers,

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Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.

1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
3. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bedpan.
8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.
9. It is free from noise and surging, so disagreeable to the invalid on changing his position on a water bed.
10. In case of injury to a tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed, if injured in any part (from being in one compartment), is rendered useless.
11. In the treatment of invalids, especially the insane, who are paralysed and have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.

ITS ADVANTAGES OVER ORDINARY WATER OR AIR BEDS ARE AS ABOVE.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

HUXLEY'S HYPOGASTRIC CEINTURE, OR UTERINE SUPPORT FOR HORSEWOMEN.

Dr. E. J. M. C. contributed the following letter to THE LANCET and BRITISH MEDICAL JOURNAL on October 15th, 1887:—

NEW UTERINE SUPPORT FOR HORSEWOMEN.

"Shortly after my association with the 'Wild West,' I asked the frontier girls whether the violent riding did not shake them considerably, and was told that at times they suffered a great deal of pain. I advised them to get abdominal belts to keep themselves together whilst riding; they did so, and felt great benefits therefrom. On talking the matter over with Mr. E. HUXLEY, of Old Cavendish-street, he suggested a uterine support, which consists of a peculiar-shaped pad, with two straps which cross over the sacrum, and are brought to the front and fastened with any amount of tightness the wearer may find desirable. I got him to make one for each of the girls, and they say they are such a comfort and support that they will never ride without them. I think the belt will prove a great blessing to ladies in the hunting-field, as well as to professional riders.

"98, Earls-court-road." "R. J. M——— C———, F.R.C.P.Ed.

Measures required—Circumference of Pelvis, or lower part of body, as for a truss. Price 25s.

HUXLEY'S SUPPORT FOR INJURY TO THE LARGE MUSCLE OF THE THIGH (RIDER'S SPRAIN).

Until this contrivance was devised the straining of the adductor muscles had met with no effectual relief. This apparatus is immovable when in use and simply perfect in action. *Measures required—Size of top of thigh and round pelvis, stating for which leg.*

E. HUXLEY, *13, OLD CAVENDISH STREET, W.*

DR. CALDECOTT writes to THE LANCET:—"To the Editor of THE LANCET.—Sir,—Observing letters on the above in THE LANCET of July 29th and August 5th, I venture, through your columns, to recommend sufferers from the injury to give a trial to 'Huxley's Support for Injury to the Large Muscle of the Thigh,' advertised in THE LANCET of August 5th. I first injured the muscle at polo about four years ago, and suffered off and on from the injury for three years, at times having to give up riding altogether for three weeks or so. The bandage roller ordinarily used in the hunting-field gave a certain amount of support, but even with it anything like a hard game of polo made riding the following day almost an impossibility. Last year my attention was drawn to the advertisement of Mr. Huxley, 13, Old Cavendish-street, W., and I sent for one of his supports. Within a week or two after commencing to wear it, my leg was, to all intents and purposes, well, and I have had no return of the injury though I have played polo regularly during the last twelve months. I still wear the support at polo as a precautionary measure, but after using it for a month I was able to discard it for ordinary riding. I cannot too strongly recommend a trial of the support to any sufferers from the injury.

"East Indies, August 28th, 1882." "I remain, Sir, yours faithfully, R. CALDECOTT, Surg.-Maj., Central India Horse."

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